LAUREL ISLAND

PLANNED UNIT DEVELOPMENT

Charleston, South Carolina

Applicants:
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Owners:
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Planned Unit Development
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Section 1: Relationship to Zoning Ordinance

The Development Guidelines and Land Use Plan for the Laurel Island Planned Unit Development (PUD), attached hereto and made a part hereof, are part of the PUD Master Plan application submitted in accordance with the Zoning Ordinance of the City of Charleston, Article 2, Part 7 Sections 54-250, et seq. The Zoning Ordinance of the City of Charleston is incorporated herein by reference, except as amended herein.

a. Consistency with the City's Century V Plan, as the underlying property is designated Peninsula;
b. Better achieving the goals of the Century V Plan and all adopted plans for the subject property than the current zoning, as the PUD tailors the uses and plans to better meet the community's input and serve its needs;
c. Consistency with the City's adopted master road plan as modeled herein;
d. Better protecting and preserving natural and cultural resources, if any, than the existing primarily Heavy Industrial zoning resulting in more green space and more compatible uses with neighboring properties;
e. Compatibility with the density and maximum building height of adjacent developed neighborhoods, by adjusting the height from the maximum currently allowed and considering the height of the Ravenel Bridge and other nearby uses, heights, and densities;
f. Creating connectivity with the existing network of public streets in adjacent neighborhoods and areas by including provisions for public and private connections;
g. Providing for adequate parking for residents and users;
h. Confirming accommodation by existing and planned public facilities including but not limited to, roads, sewer, water, schools, and parks as is evidenced by the included traffic study, coordination letters, and newly proposed usable open space;
i. Providing for new public facilities, including open space and recreational amenities as well as locations for other governmental services;
j. Adequately providing for the continued maintenance of common areas, open space, and other public facilities not dedicated to the City by making the foregoing an obligation of the current and any future property owner; and
k. Providing for a mixture of residential, commercial, conservation, and other uses.

No person shall erect or alter any building, structure, or sign on any tract of land or use any tract of land within the Laurel Island PUD except in conformance with these guidelines and regulations. Unless modified herein, definitions of terms used in the Laurel Island PUD Development Guidelines shall follow definitions listed in the Zoning Ordinance of the City of Charleston, as amended from time to time. Administration and enforcement of the adopted Laurel Island PUD Master Plan shall follow Article 9 of the Zoning Ordinance of the City of Charleston.

The Laurel Island PUD Master Plan was approved by Charleston City Council on _____, Ordinance Number_____.

Section 2: Introduction and Background Information

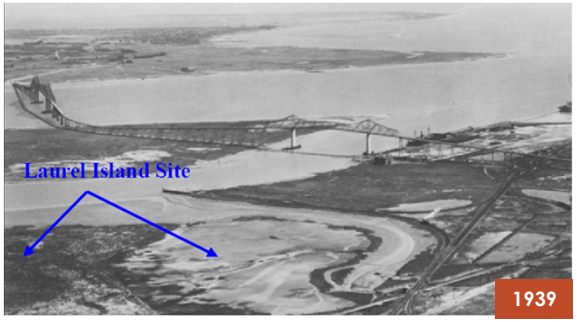
2.1 Background and Ownership

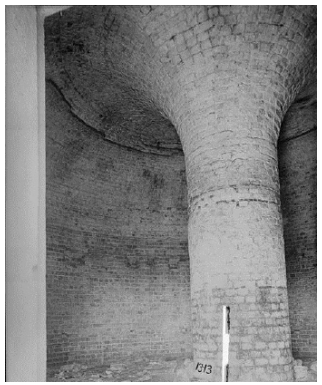
Laurel Island's PUD includes six (6) parcels totaling 196.1 acres and composed of 165.3 acres of highland (84%) and 30.8 acres of wetlands and marsh. Three of the parcels are contiguous (I, II, and VI), hereinafter, the Laurel Island Site, and described collectively. The remaining three parcels (III, IV, and V) are described individually, as further set forth in the table below.

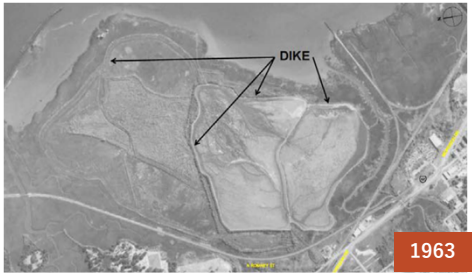
The Laurel Island Site has a robust history, notably serving as the Rumney Distillery in the 1790's, leading to its main access point of "Rumney Street". It later served as the Armory for the State of South Carolina, containing gun powder magazines during the Civil War, before ultimately becoming the Romney and Holston Landfills in the 1970's. A history of Laurel Island is presented in **Figure 1**.

The landfills ceased operating in the 1980s and were purchased by Lubert Adler in 2003. Lubert Adler began working to create a full-service resort on the site, but was ultimately unsuccessful due to several factors, including the Great Recession of 2008 and the site's environmental conditions. In 2013, the Port of South Carolina began looking to use the site as a new port facility but has since decided to not build a new terminal facility. A summary of the planning related to Laurel Island is presented in **Figure 2**.

History







1827 – Robert Mills built Laurel Island Powder Magazines consisting of 9 brick, brownstone, and slate powder magazines

1910 – Standard Oil Building built for loading/unloading oil as part of a pier system

1915 – Powder Magazines partially demolished for railroad line to Charleston's Union Station

1918 – Dredging required for Standard Oil Building

1950 – Powder Magazines demolished

Mid 1960s - Laurel Island became a landfill

Saltwater Marsh

Disposal of Dredge Spoils

1984 – Holston Landfill (South Site) stopped receiving waste

1987 – Holston Landfill Final Closure

1989 - Romney/Beach Landfill (North Site) stopped receiving waste

1995 - Romney/Beach Landfill Final Closure

2003 – Lubert Adler purchased Laurel Island

1820 | 1830 | 1840 | 1850 | 1860 | 1870 | 1880 | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000

Figure 1: Laurel Island History

Laurel Island – 12 Years of Planning

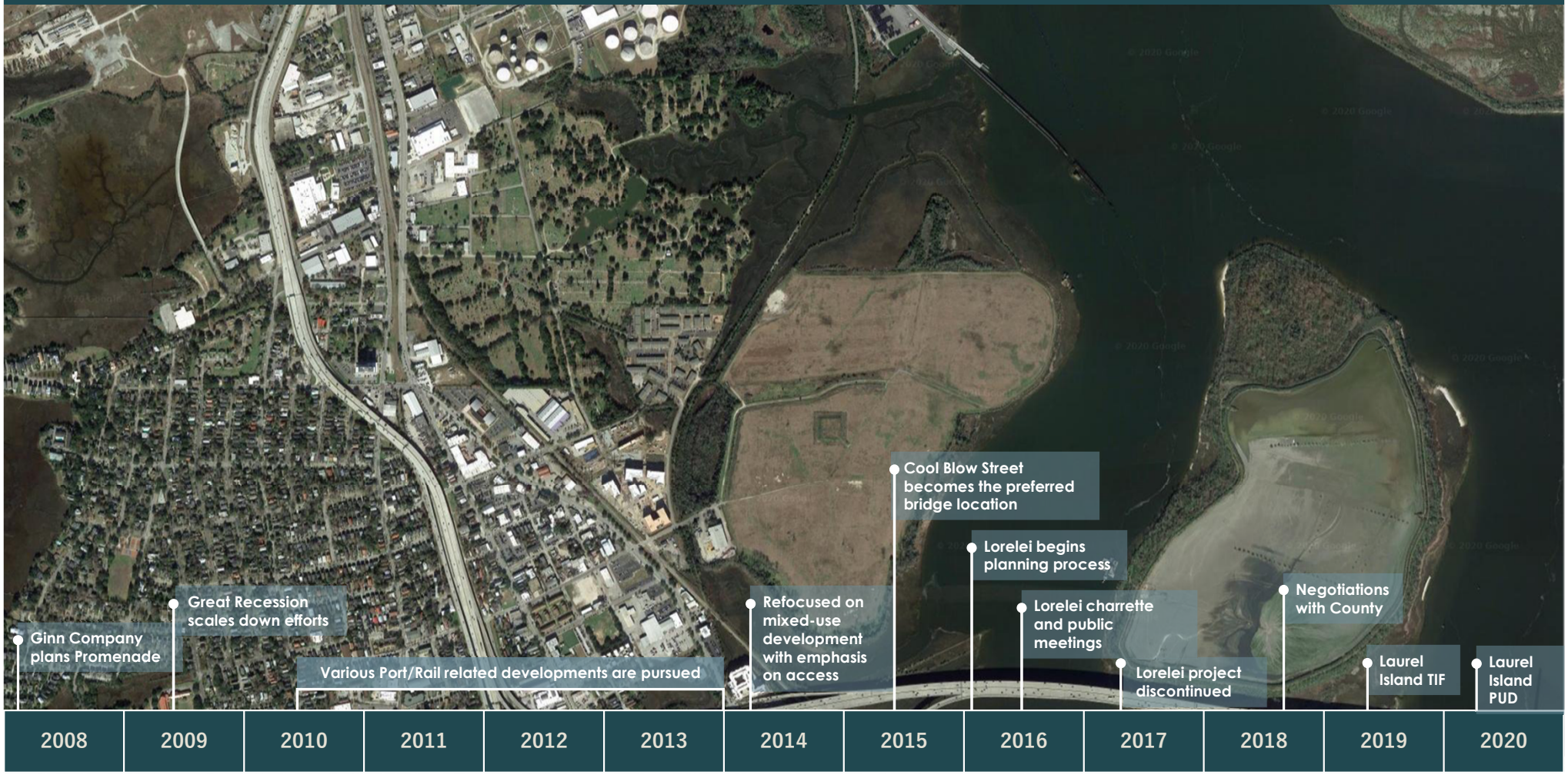


Figure 2: Laurel Island Planning

Given the significant increase in the cost of housing across Charleston, it is submitted that the best use of this site will be a mixed-use community, comprised with a heavy component of workforce housing. The current Heavy Industrial zoning on the majority of the site does not allow for this use, and as such, the property is proposed to be re-zoned as a Planned Unit Development.

Current ownership of the property is as follows:

Laurel Island PUD Project Parcels			
Parcel ID	TMS#	Owner	Acreage
I	4640000006	LRA Promenade North LLC	69.04
II	4640000002	LRA Promenade LLC	114.22
III	4590200013	LRA Promenade North LLC	1.42
IV	4640000038	LRA Promenade North LLC	0.40
V	4611393924	Charleston County (995 Morrison)	8.01
VI	4640000023	Charleston County (Recycling Center)	3.01
Total Acreage			**196.1**

2.2 Current Zoning

The current Zoning for the parcels is set forth below, and allows a broad range of residential, commercial, and industrial uses and activities.

Parcel ID	TMS Number	Current Zoning	Height Limits
I	4640000006	Heavy Industrial	W Height District
II	4640000002	Heavy Industrial	W Height District
III	4590200013	Upper Peninsula	4-12 Story Height District
IV	4640000038	Diverse Residential 3	50'/ 3 stories
V	4611303024	General Business	85' (Tech Cooridor Overlay)
VI	4640000023	Heavy Industrial	W Height District

The Laurel Island Site is bounded by roadways and railways on three sides of the site, with the fourth side being bounded by Town Creek and the Cooper River.

2.3 Development Goals

Development within the Laurel Island PUD shall follow these Guiding Principles:

Connection to the Environment
The unique nature of the site as an island should be celebrated. As such, the street grid will be oriented with the environment in mind where possible and will provide view corridors to the water at the ends of the majority of streets.

A network of public parks will be integral to the overall plan. A public pedestrian and bike path will encircle the majority of the island's edge, and other direct public accesses to the water will be provided via paths and docks.

Sustainable and Resilient Practices
As the project is a high-density development to be built on former landfill site within downtown Charleston, it provides an option to sprawl-like development further from the city center. In addition, an emphasis on connections to public transportation and the incorporation of bicycle and pedestrian routes will reduce energy consumption and should serve to limit the demands of further traffic entering from outside the peninsula.

Building designs will employ sustainable practices through their orientation, materials and architectural elements. Critical infrastructure will be designed with resiliency as a goal. Bridges, utilities and drainage pipes will be able to stand the test of time and remain high, dry and connected as the climate changes and natural disasters occur.

Social and Economic Diversity
The diverse social and economic community of Charleston will be reflected. Toward that end, a significant amount of affordable/workforce housing will be provided. The other land types will include an overlapping of commercial office, multi-family, retail, and entertainment uses, allowing for a mix of race, income and age, and creating a true community.

Quality of the Public Realm
Laurel Island will be organized around a public realm that supports a high quality pedestrian experience. Similar to Charleston, the streets will be arranged as primary and secondary streets, depending on their primary uses and orientations and will incorporate a mix of uses. Public parks, plazas and other open spaces will be woven into the street grid and overall plan, and the design of buildings will activate and engage the public realm.

Authenticity
It is important that a true, authentic "place" is created, and many of the elements in the other principles will contribute toward this goal. The organization of the street plan itself will be drawn from the constraints and character of the site rather than from a random pattern. The layout will be orderly but flexible, allowing for the development to grow and adapt organically, just as a true community does.

Laurel Island will be inspired from Charleston's defining elements—but will also be guided by more recently-developed practices in site planning and building design. The existing historic sites will be preserved and celebrated, with some to be publicly accessible.

2.4 Workforce Housing

At all times from the enactment of the Laurel Island PUD, during the development of the Laurel Island Site, upon the completion of the development thereof, and at all times thereafter no less than ten (10%) percent of all residential dwelling units located on the Laurel Island Site shall be Workforce Housing (the "Permanent Workforce Housing"). Furthermore, from the date of the issuance of a certificate of occupancy for any newly-constructed residential dwelling unit and for a period of ten (10) years thereafter (the "Amortization Period"), a number of new or existing residential dwelling units equal to an additional ten (10%) percent of such newly-constructed residential dwelling units located on the Laurel Island Site shall also be Workforce Housing (the "Amortized Workforce Housing"). Upon permitting for 1,278 residential dwelling units on the Laurel Island Site, the Laurel Island PUD shall have achieved the cumulative total of the twenty (20%) Workforce Housing Units as set forth above. Upon permitting for 2,556 residential dwelling units on the Laurel Island Site, the Laurel Island PUD shall have achieved the cumulative total of the twenty (20%) Workforce Housing Units as set forth above.

Workforce Housing, whether Permanent Workforce Housing or Amortized Workforce Housing shall mean Rental Workforce Housing Units to Qualified Households for Affordable Rent, as such terms are defined below. Nothing herein shall prevent or prohibit the relocation, replacement, or reduction (of the overall percentage) of Workforce Housing within the Laurel Island Site from time to time, provided the overall percentage of Permanent Workforce Housing shall not, upon completion of the development of the Laurel Island Site, be less than ten (10%) percent of all dwelling units located on the Laurel Island Site and the Amortized Workforce Housing shall not, during the applicable Amortization Period, be less than ten (10%) percent of the total of all of the non-Permanent Workforce Housing dwelling units located on the Laurel Island Site.

Rental Workforce Housing Unit: A dwelling unit, where occupants have, in the aggregate, household income less than or equal to eighty (80%) percent of the area median income (AMI) for rental units.

Qualified Household: Households where occupants have, in the aggregate a household income less than or equal to eighty (80%) percent of the area median income (AMI) for rental workforce housing units.

Affordable Rent: An amount equal to thirty (30%) percent of eighty (80%) percent of the annual Income Limits as published by the City of Charleston Department of Housing and Community Development, or its successors, for the median household size. In the absence of such information, the annual rent charged by the owner shall not exceed thirty (30%) percent of the annual household income.

Household Income: All sources of financial support, both cash and in kind, of adult occupants of the housing unit, to include wages, salaries, tips, commissions, all forms of self-employment income, interest, dividends, net rental income, income from estates or trusts, Social Security benefits, railroad retirement benefits, Supplemental Security income, Aid to Families with Dependent Children or other public assistance welfare programs, other sources of income regularly received, including Veterans' (VA) payments, unemployment compensation and alimony, and awards, prizes, government or institutional or eleemosynary loans, grants or subsidies and contributions made by the household members' families for medical, personal or educational needs.

Area Median Income (AMI): Area median income (AMI) shall be as determined annually by the City of Charleston Department of Housing and Community Development, or its successors.

Section 3: Land Use

3.1 Area Breakdown

Below is a breakdown of the Laurel Island PUD's total project acreage, marsh/wetland/open water area, and remaining developable area.

Total Project Area	196.1 ac.	
Total Marsh/Wetland/Open Water Area	30.8 ac.	15.7% of Total Area
Total Developed Area (Blocks, Parks, & R/W)	165.3 ac.	84.3% of Total Area
Sum =	196.1 ac.	100.0% of Total Area

The Laurel Island PUD proposes significantly more open space and usable open space than the required minimums. Further detail regarding open space allocations is provided in Section 5.1

3.2 Net Density and Calculations

The Laurel Island PUD is a mixed-use development incorporating flexibility to accommodate appropriate development over time. The Laurel Island PUD is based on the Mixed-Use Zoning

defined in Section 4.2. The table below summarizes the overall net density for the Laurel Island PUD*:

Zoning	Land Use	Area	Units
Mixed Use	Retail	276,500 sf	-
Mixed Use	Office	2,200,000 sf	-
Mixed Use	Park	39.2 acres	
Mixed Use	Hotel	-	400 rooms
Mixed Use	Residential	-	4,260 dwelling units
Mixed Use	Movie Theatre		8 screens

* These densities/intensities represent the anticipated square footages or unit counts anticipated in the Laurel Island PUD. Should it be desired for one or more land use densities or intensities to increase, a corresponding reduction in densities or intensities for other uses shall be required pursuant to the Land Intensity Conversion Matrix provided in **Appendix B**, or, at the Laurel Island Architectural Review Board's (LIBAR) option and upon approval of the City, an updated traffic study addressing so much of Laurel Island deemed relevant by the traffic engineer to determine. An updated traffic study shall be based on factors deemed relevant by such engineer to determine the amount permissible for such land use densities or intensities increase and corresponding decrease, if any. In addition, to enable flexibility over the duration of development, the net densities or intensities of a specific Land Use may be converted to a different specific Land Use utilizing the Institute of Traffic Engineer's Handbook, 10th edition (the "ITE") equivalence.

As an example of the flexibility of using the ITE equivalence, assume a use change is proposed from 10,000 sf of retail space to residential dwelling units. Based on the ITE equivalence, 87 residential dwelling units (DU) could be substituted in exchange for the reduction of 10,000 sf of retail space. The calculations based on the ITE Conversion Matrix are shown below:

10,000 sf/1,000sf=10 10*8.659=87 residential DU substitution for 10,000 sf of retail space

As parcels are platted, the City shall be notified by the LIBAR of the specific land use density/intensity assigned under each conveyance. Unless restricted in such conveyance, density/intensity may, by default, be converted using the ITE Conversion Matrix by a licensed engineer.

To reach the development density identified above, three roadway access points are required. In addition to an existing access point from Romney Street, construction of a bridge from Cool Blow Street as well as an access from Brigade Street will occur. The following table summarizes the development threshold required for each access point.

Development Threshold by Access Point Provided Schedule*	
Access Point	**Percentage of development before subsequent access point is required (%)[3,4]**
1. Romney Street[1]	0 - 30 %
2. Cool Blow Street[2]	30 - 60 %
3. Brigade Street	60 + %

[1] Analysis of development threshold for Romney Street access was based on point of unacceptable LOS E, per HCM 2010 methodology of the Morrison Drive & Romney Street intersection (with proposed improvements, per the traffic study).

[2] Analysis of development threshold for Cool Blow Street access was based on point of unacceptable LOS E, per HCM 2010 methodology of the intersection of Meeting Street & Cool Blow Street (with proposed improvements, per the traffic study).

[3] Percentage of development corresponds to the percentage of development required to produce said percentage of PM peak hour trips, assuming a 1:1 ratio of development percentage to PM peak hour trip generation percentage. In other words, 30% of development is assumed to produce 30% of the total projected PM peak hour generated trips given the full buildout condition. PM peak hour trips were used in this analysis as the generation of trips is higher in the PM peak hour than the AM peak hour, generally causing worse delay throughout the study area.

[4] Percentage of development indicates the percentage at which the access point (and any previous access points) are acceptable. So, Romney Street as the sole access to the site is acceptable (according to the methodology described in footnotes 1 and 3 above) for up to 30% of the planned development on the site. Beyond 30% development, the intersection of Morrison Drive & Romney Street becomes over capacity, requiring the subsequent access point along Cool Blow Street to be available to patrons of the site. The Romney Street and Cool Blow Street access points to the site provide acceptable levels of delay at the entrance intersections until 60% development is reached, beyond which the third access point, along Brigade Street, is needed to mitigate delay at the other access point intersections.

** This table assumes that other improvements throughout the study area, as indicated in the traffic study, are completed as needed and warranted throughout the development of the site.*

Provided that all road connections have been completed that necessary to allow for at least 220,000 square feet of office space and 27,650 square feet of retail/commercial space, such office and retail/commercial square footage shall have been constructed prior to the permitting of the 2,130th residential dwelling unit to be located on the Laurel Island Site.

Special event uses such as athletic and performance venues shall not be deemed to create and shall be excluded from any calculations of new, external trips and shall instead be subject to a traffic management plan.

3.3 Adequate Public Facilities

No infrastructure is currently present on the Laurel Island Site. Coordination with public facility providers is provided in **Appendix D**. New infrastructure shall be constructed in a timeframe such that adequate pubic facilities are provided for new development.

Section 4. Zoning Criteria

The development of the Laurel Island Site and properties within the Laurel Island PUD must maintain flexibility to accommodate specific soil conditions, environmental concerns, physical

constraints, market conditions, and design parameters. As such, the exact locations of boundary lines between development tracts, the locations and sizes of land uses in the development areas and the preliminary planning concepts for the tracts and uses are not indicated on the Land Use Plan.

4.1 Development Standards

Below is a breakdown of development standards in the Laurel Island PUD. All amenity areas, facilities and public streets shall be subject to ADA requirements, as applicable. More details will be provided in the Laurel Island Design Principles as approved by the process outlined in Section 13:

Development Standards Summary	
Lot Requirements	
Lot Size	No minimum
Accessory Building	NA: addressed in Design Principles
Loading Docks	NA: addressed in Design Principles
Minimum Setbacks*	
Setbacks and Frontage	Street Side: 0 feet Side Yard: 0 feet Rear Yard: 0 feet
Maximum Height**	
Building Height District	Entertainment Height District LI 2 (See Sec. 54-306._ to be established) Height District 2.5-3.5 (See Sec. 54-306.C.) Height District 8 (See Sec. 54-306.H.) Height District LI 12 (See Sec. 54-306. to be established)

See **Appendix A** for the Height District Plan. Height district locations may be adjusted to abut future rights-of-way, whether inward or outward. Such district adjustments and any references in the height district text of the Zoning Ordinance to the BAR shall refer to and be approved by the LIBAR.

* Encroachments such as canopies, arcades, and awnings may project into the right-of-way but must be minimum of 2'-0" clear of any parking or travel lane, and must be 8'-0" minimum above grade to the underside of the encroachment. The Laurel Island Design Principles shall address front setbacks.

** Parcels in the Laurel Island PUD are outside the Old City Height District:

- Non-habitable structures are not subject to height limits;
- Usable ground floor to second floor height shall be in excess of 12 feet for non-residential structures;
- Architectural features and roof structures (screening elements, spires, cupolas, elevator penthouses, HVAC, etc.) are excluded from height limits. The Laurel Island Design Principles shall address individual story height based on use; and
- All future structures shall have a fire protection plan in accordance with the Charleston Fire Department, Fire Marshal site plan review standards.

4.2 Permitted Uses; Hours

Permitted uses in the Laurel Island PUD (hereinafter, "Mixed-Use Zoning"), shall be any and all permitted, conditional, and special exception uses provided for in the General Business and Upper Peninsula zoning classifications and any overlay districts thereon, set forth in the City of Charleston Zoning Ordinance Article 2, Part 3 as amended through approval date of August 19, 2020, with the exception of the excluded uses listed below. Hours of Operation shall not be restricted by zoning and uses, but shall be determined by the Laurel Island Property Association ("LIPA"). Any outdoor concert venue on Laurel Island shall be permitted to play amplified music until 11:30 pm.

4.2.1 Excluded Uses

Excluded or prohibited uses in the Laurel Island PUD shall be any and all: Dairy farms, Mobile home dealers, Motor vehicle dealers (provided electric and alternative powered vehicles sales and repairs shall be permitted), Automotive repair shops, Fish hatcheries and preserves, Recreational and utility trailer dealers, Cemeteries, Stables, Sewage treatment systems, Crematories, Tattooing services, Mining/Quarrying of nonmetallic minerals, except fuels, Gas Production and Distribution, Petroleum and petroleum products wholesalers, Gasoline service stations, Shipping container storage, Indoor shooting range, Firearm sales, Adult Uses, as defined in the City of Charleston Zoning ordinance, Casinos, as defined in the City of Charleston Zoning ordinance.

4.3 Parking Standards

In implementing the Laurel Island development goals, specifically sustainable and resilient practices, there shall be no minimum or maximum parking standards for the properties included in the Laurel Island PUD. These sustainable and resilient practices place an emphasis on the use of bicycles, busing, bus rapid transit, water ferries and taxis, and other alternatives to the automobile, each of which is anticipated to negatively impact (reduce the need for) traditional use-based minimum parking space requirements. As Laurel Island is more fully developed, it is anticipated that the mix of uses, sustainable and resilient practices, alternative means of transportation, and other influences will further reduce the need for automobiles and automobile parking. Design of outdoor parking areas shall be addressed in the Laurel Island Design Principles (see Section 13) and overseen by the LIBAR.

Section 5. Outdoor Space and Buffers

5.1 Outdoor Space Requirements

The Laurel Island PUD envisions a significant area of public open space throughout the site. The majority of this acreage will be found on the waterfront, creating a continuous park that stretches into the marsh around the development.

As per the Open Space plan presented in **Appendix A**, the Laurel Island PUD will provide significantly more open space and usable open space than the required minimums. The development of the Total Open Space Area and Total Usable Open Space Area may occur over

the course of many years and in many phases and in differing proportions than the final developed proportions set forth in the Area Breakdown below, but never falling below the minimum requirements set forth.

Total Open Space Area:

Laurel Island PUD fully developed expected Open Space Area	**70.0 ac**	**36% of Total Area**
Minimum Ordinance required Open Space Area (Parks, Marsh, River, Creeks, etc.)	*39.2 ac*	*20% of Total Area*

Total Usable Open Space Area:

Laurel Island PUD fully developed expected Usable Open Space Area	**39.2 ac**	**56% of Total Open Space** **20% of Total Area**
Minimum Ordinance required Usable Open Space Area (Parks, Paths, and Trails, Including all Walking and Cycling Trails, Public Piers and Docks)	*9.8 ac*	*25% of Total Open Space*

Neighborhood/pocket parks will be provided and are included in the usable open space area calculation, above.

Any increase in the fully developed expected acreage of the Laurel Island PUD Open Space or Usable Open Space shall not require a PUD amendment; any reduction in the fully developed expected acreage of the Laurel Island PUD Open Space or Usable Open Space shall require a PUD amendment pursuant to Section 54-260.a. of the Zoning Ordinance, unless due to acts of god or federal or state regulatory changes or restrictions.

Ownership and Maintenance: Open spaces that are, in whole or in part, improved and/or maintained with Tax Increment Finance revenue, may be owned by and dedicated to the City of Charleston (as approved by the City). Open spaces not dedicated to the City of Charleston will be owned by LIPA and shall be open to the public. Nothing herein shall prohibit LIPA or the City of Charleston from establishing regular park/open space hours of operation.

5.2 Outdoor Space Types

As stated in the Laurel Island Guiding Principles, the open space will be unique to Charleston, will include a public pedestrian and bike path that will encircle the majority of the island's edge, and will provide other direct public accesses to the water via paths and docks. A pier that will allow for ferry service as well as a separate crabbing pier is planned. The history of the site will be recalled through the Robert Mills Interpretive Trail and paths providing views of the Standard Oil Building Ruins.

Additional open space types at Laurel Island may be designed using the following City definitions as stipulated in Section 54-284 of the Zoning Ordinance:

Neighborhood Greens—Open green spaces intended to serve as the social center of the community and provide a location for civic activities and outdoor community functions. Neighborhood greens shall:

- Be predominantly planted areas, but may have some paved surfaces; and
- Be centrally located within the gathering place.

Plazas/Squares—Enclosed spaces that are urban in nature and designed to serve as meeting places for area residents and workers. Plazas and squares shall:

- Be predominantly paved surfaces, but may have some planted areas;
- Include pedestrian lighting and pedestrian-level details, such as variations in paving types;
- Be landscaped and incorporate amenities such as benches, fountains, monuments, and formal or informal gardens;
- Be located within denser, more urban areas of the gathering place, either at the intersection of streets or within a developed block; and
- Be mostly enclosed by building frontages;

Neighborhood Parks—Large open areas designed to provide recreational facilities and spaces for the entire gathering place, or smaller green spaces designed to serve smaller areas within the gathering place. These parks may be designed as part of a Neighborhood Green, and shall:

- Contain grassy fields, playground equipment, designated sports facilities, or picnic areas;
- Be landscaped throughout;
- Be designed for active and passive recreational purposes; and
- Be directly connected to any bicycle and pedestrian network

Section 6. Buffers

Buffers are not required internal to the Laurel Island PUD between land uses. There shall be a 40' buffer from the critical line and 10' additional building setback. Section 54-347 of the City of Charleston Zoning ordinance shall govern the landscape buffer adjacent to the OCRM critical line. Pedestrian amenities may be located within buffers and setbacks. Refer to **Appendix F, Exhibit 5**. Notwithstanding critical line buffers and setbacks, the existing dikes shall be preserved, maintained, and improved as may be reasonable or necessary, or both.

Section 7. Tree Summary

There is minimal tree cover on the Laurel Island Site – refer to **Appendix F, Exhibit 2**: Aerial. Existing trees are primarily located in the critical line buffer zone. Tree protection shall be in compliance with the City of Charleston Zoning Ordinance. Due to the nature of Laurel Island previously being a landfill, the planting of trees on Laurel Island shall be determined by the LIBAR and shall not follow or be bound by the requirements of the Ordinance. Within City owned and maintained property, plantings shall be approved by the City of Charleston Parks Department. Parcels not on the Laurel Island Site (Parcels III, IV, and V) shall be subject to City tree planting requirements.

Section 8. Right-Of-Way

Within the Laurel Island Site there are plans to establish a new roadway network with typical street types (see **Appendix A**). Roadways constructed to City standards shall be dedicated public streets unless it is in the best interest of the developer to privately maintain. Any roadways not dedicated as a public street shall be permitted to utilize gravel, dirt, or boardwalk surfaces. East-West streets shall have view corridors extending to Town Creek. No dedicated public streets in the Laurel Island PUD shall be limited by gates (nothing herein shall prohibit gates on private property such as for a parking lot or garage).

As stated in Section 4.1, ADA compliance shall be provided, by providing, at a minimum, accessible routes between right-of-way, parking, public transportation, amenities, and entrances. Vehicles, public transportation, bicycles, and pedestrians will be accommodated by the new roadway infrastructure. Public facilities such as new sidewalks on Romney Street (5-feet wide on the north and 10-feet wide on the south side) are proposed as a part of the project. Transit infrastructure will be required and shall be approved as part of site plan review based on requirements set forth in the Zoning Code. Sight distance visibility at all exits and/or intersections will be maintained in accordance with SCDOT's Access and Roadside Management Standards Manual.

Section 9. Drainage Basin Analysis

9.1 Flood Zone

A copy of the 2004 FEMA flood maps as well as the 2016 Preliminary Maps can be found in **Appendix F**. The 2004 FIRM (Flood Insurance Rate Map) identifies the Laurel Island Site within Flood Zones X, AE-13, and AE-14 (NGVD-29). The existing elevation of the Laurel Island Site upland of the existing dike to remain ranges from 8 to 22 NAVD 88 (see **Appendix F, Exhibit 4**). While the outer edges of the Laurel Island Site within or near the critical line will be subject to the base flood elevation, the developable highland of the site is above the surrounding base flood elevation. The existing dike, which was built to contain dredge spoil and municipal solid waste, ranges in elevation from 8 to 15 NAVD 88, with the highest elevations on the east side of the Laurel Island site adjacent to Town Creek. Parcels III, IV, and V are in Zone AE-13 (NGVD-29) per the 2004 FIRM. All construction will comply with the current City of Charleston Building Code.

9.2 Existing Topography and Drainage

The Laurel Island Site currently is a pervious landform with existing drainage conveyed by overland flow and swales to its release to adjacent marshland of Town and Newmarket Creeks as illustrated on **Appendix F, Exhibit 6**. Parcel V (995 Morrison / County parcel) is primarily impervious with existing ground at approximately elevation 6 with runoff collected by existing stormwater infrastructure maintained by the City or the SCDOT. Parcel III (railroad parcel) is primarily impervious with ground elevations of approximately 7 and drained by overland flow by an adjacent drainage ditch contributory to Newmarket Creek. The Brigade Street access parcel

(parcel IV) is currently a compacted gravel roadway. Runoff is currently drained by a swale that runs through the property.

9.3 Wetlands Verification

The existing wetlands, critical line, and required buffers are identified on **Appendix F, Exhibit 5**. The Ocean Coastal Resource Management (ORCM) critical line and wetlands have been delineated by a professional natural resources consultant, identified on a plat by a licensed surveyor, and approved by the appropriate regulatory agencies (see **Appendix E**).

9.4 Preliminary Stormwater Techniques

The proposed stormwater management system on the Laurel Island Site will be developed in consultation with the City of Charleston MS4. Drainage infrastructure on parcels I, II, and VI, as identified above, will include new conveyance piping, quality treatment practices, and outfalls to Town Creek/Cooper River. For stormwater quantity peak rates and volumes, proposed development will retain natural drainage features where possible and deploy lower-impact techniques to control and promote reductions to a practical extent; however, stormwater detention ponds will not be part of the management plan.

Should rates and or volumes exceed pre-development conditions, variance to this requirement within the City Design Manual will be proposed on the grounds that 1) excavation for detention ponds into the landfill cap and underlying municipal solid waste or within any part of the perimeter containment dike is not authorized by DHEC's Bureau of Land and Waste Management and 2) the downstream receiving waterbody is Town Creek and Charleston Harbor which does not present a flooding risk or create adverse conditions to adjacent properties.

Coordination with the City shall be required to determine design requirements in relation to the City of Charleston's Stormwater Design Standards Manual. Primary water quality treatment will be accomplished with engineered devices that do not rely on infiltration and will minimize leaching into the existing underlying municipal solid waste layer. Green infrastructure practices that can retain, treat, and release stormwater without coming in contact with the underlying layer shall be implemented to provide water quality treatment. Proposed road rights-of-way will include trees and streetscape planted within filtration enclosures that are connected to the main conveyance system. Additionally, to maintain compliance with the City's Flooding & Sea Level Rise Strategy, which suggests designing for sea level rise of 2 to 3 feet in the next 50 years, outfalls shall be located at an elevation such that they are not tidally influenced and allow for energy dissipation and additional quality treatment through vegetation prior to release from the Site.

Stormwater management on the other three properties included in this PUD (Parcels, III, IV, and V) shall be subject to the stormwater requirements of the City that are current at the time of project submission, absent a separate agreement between the Property Owner and City specifying the required improvements for development of the Property.

Per Section 54-822(c) of the Zoning Code, easements, when required for drainage or sewage for the area to be subdivided, shall be of such width as necessary to permit proper construction of drainage facilities based on the drainage system of the area. No subdivision shall block or obstruct

the natural drainage of an adjoining area. Existing natural drainage shall be maintained or replaced where possible or feasible.

Storm drainage during construction shall be designed to meet or exceed local, state and federal regulations involving stormwater flows, siltation, erosion control, and water quality which are prevailing at the time. Appropriate best management practices (BMPs) shall be installed and maintained to preserve water quality of adjacent water bodies as a part of the Stormwater Pollution Prevention Plan.

Section 10. Traffic Study

A traffic impact analysis was conducted for the Laurel Island project in accordance with SCDOT and The City of Charleston guidelines. Access to the development is provided through one existing intersection along Morrison Drive via Romney Street, one proposed entry/exit via Brigade Street (upon completion of a proposed bridge over the existing parallel rail tracks), and one proposed entry/exit via Cool Blow Street (upon completion of a proposed Cool Blow Bridge over Morrison Drive and the existing parallel rail tracks).

The results of the intersection analyses indicate that thirteen of the study intersections currently experience or are projected to experience undesirable delay during the peak periods with or without the Laurel Island project. Therefore, improvements were evaluated. Recommended improvements can be found in **Appendix B**.

Section 11. Cultural Resources Study

A cultural resources reconnaissance survey of Laurel Island has been conducted. The Historic Resources Impact Assessment includes a visual impact analysis to identify potential adverse effects of the proposed development. The analysis examined potential impacts to the William Enston Home, Magnolia Cemetery, the Immigration Center, and the Charleston City Railway Car House. Please refer to **Appendix C** for the full report.

Section 12. Letters of Coordination

Letters of coordination from the North Charleston Sewer District, Charleston Water System, Dominion, AT&T, and Charleston County School District are included as **Appendix D**.

Section 13. Additional Information

13.1 Design Review and Modifications

The Laurel Island Design Principles shall be established by the developer and administered by the POA in the form of an internal architectural review board (the "LIBAR"), which shall be established prior to the commencement of development in the Laurel Island PUD. The LIBAR Rules and Regulations are included as **Appendix G**. LIBAR approvals and enforcement shall continue during construction, future maintenance, and alterations of all development within the Laurel Island PUD.

The Laurel Island Design Principles shall be approved by the City of Charleston Board of Architectural Review (BAR-L) and these guidelines shall be used for evaluation of individual projects and signage by the LIBAR and City staff. City staff shall review and approve all projects for design principle compliance prior to a project receiving final TRC (Technical Review Committee) approval. Any appeal by an individual property owner of any decision of the LIBAR shall be appealed to the BAR-L, pursuant to the LIBAR Rules and Regulations. Any further appeal from the BAR-L shall be as provided by the Zoning Ordinance and the South Carolina Code of Laws. The Laurel Island Design Principles shall cover the following elements: Architectural Design; Impact on Cultural Resources; Site and Exterior Building Lighting; Exterior Signage; Landscape Design; and Parking Standards.

Laurel Island Design Review Process

Design Principles/Architectural Guidelines Approval Process

Development of Laurel Island Design Principles

↓

Laurel Island Design Principles Approval
(City of Charleston Board of Architectural Review Large (BAR-L))

Project Approval Process

Project Conception

↓

Laurel Island Board of Architectural Review (LIBAR)

↓

Board of Architectural Review (BAR-L) (in the event of appeal)

↓

City TRC Approval

↓

PERMIT

13.2 Laurel Island Conceptual Master Plan

See **Appendix A** for Laurel Island Detailed Land Use Plan.

APPENDIX A

Figures

BASE PLAN
8.19.2020

MASTER PLAN
for
LAUREL ISLAND

BELLO | GARRIS
ARCHITECTS

LAND USE PLAN

8.19.2020

MASTER PLAN *for* LAUREL ISLAND

BELLO | GARRIS ARCHITECTS

DETAILED LAND USE PLAN

8.19.2020

MASTER PLAN
for
LAUREL ISLAND

BELLO | GARRIS
ARCHITECTS

HEIGHT DISTRICT PLAN
8.19.2020

MASTER PLAN
for
LAUREL ISLAND

BELLO | GARRIS
ARCHITECTS

OPEN SPACE PLAN
8.19.2020

MASTER PLAN
for
LAUREL ISLAND

BELLO | GARRIS
ARCHITECTS

PEDESTRIAN/BICYCLE CIRCULATION PLAN

8.19.2020

MASTER PLAN

for

LAUREL ISLAND

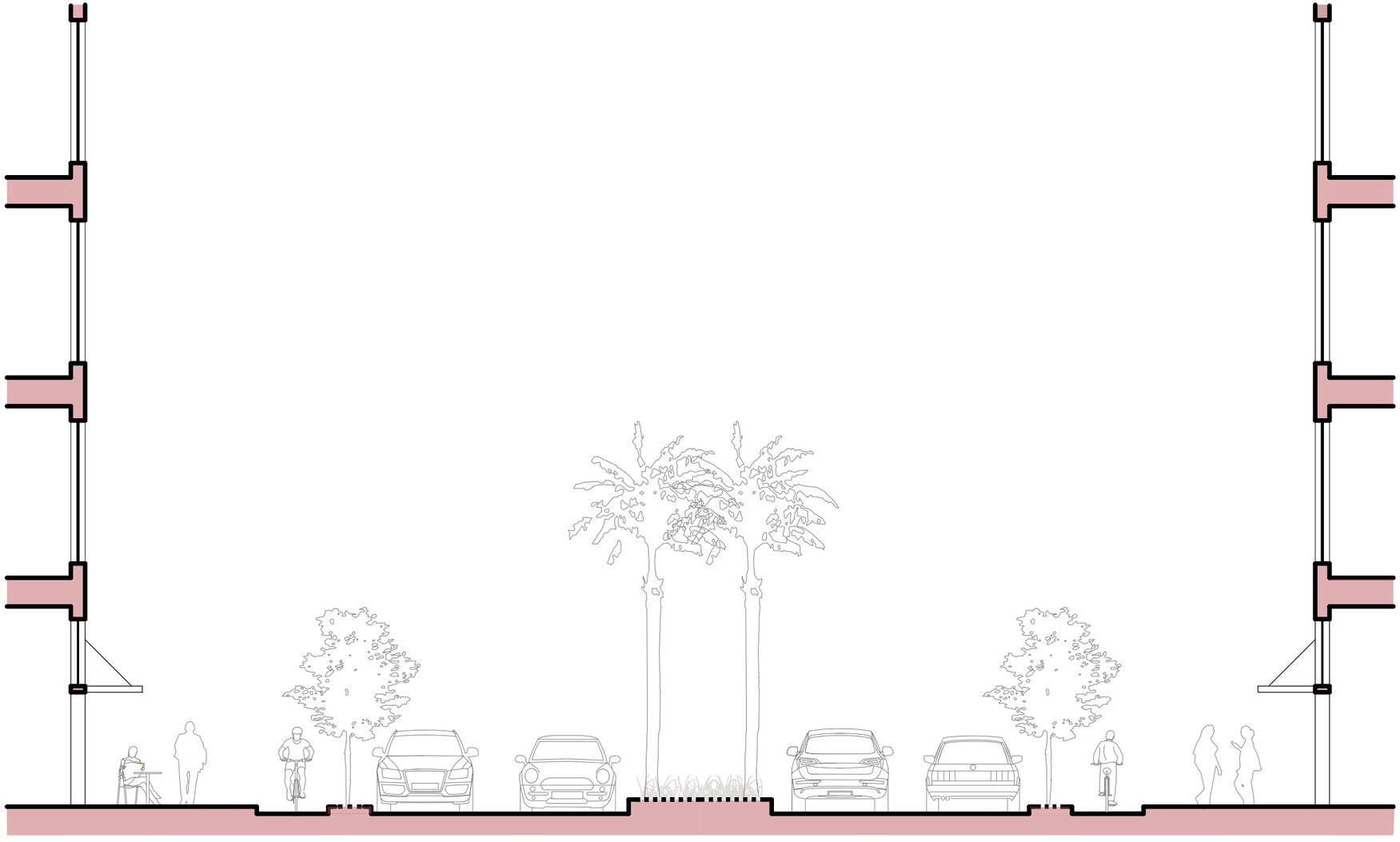
BELLO | GARRIS

ARCHITECTS

STREET TYPES PLAN
8.19.2020

MASTER PLAN
for
LAUREL ISLAND

BELLO | GARRIS
ARCHITECTS



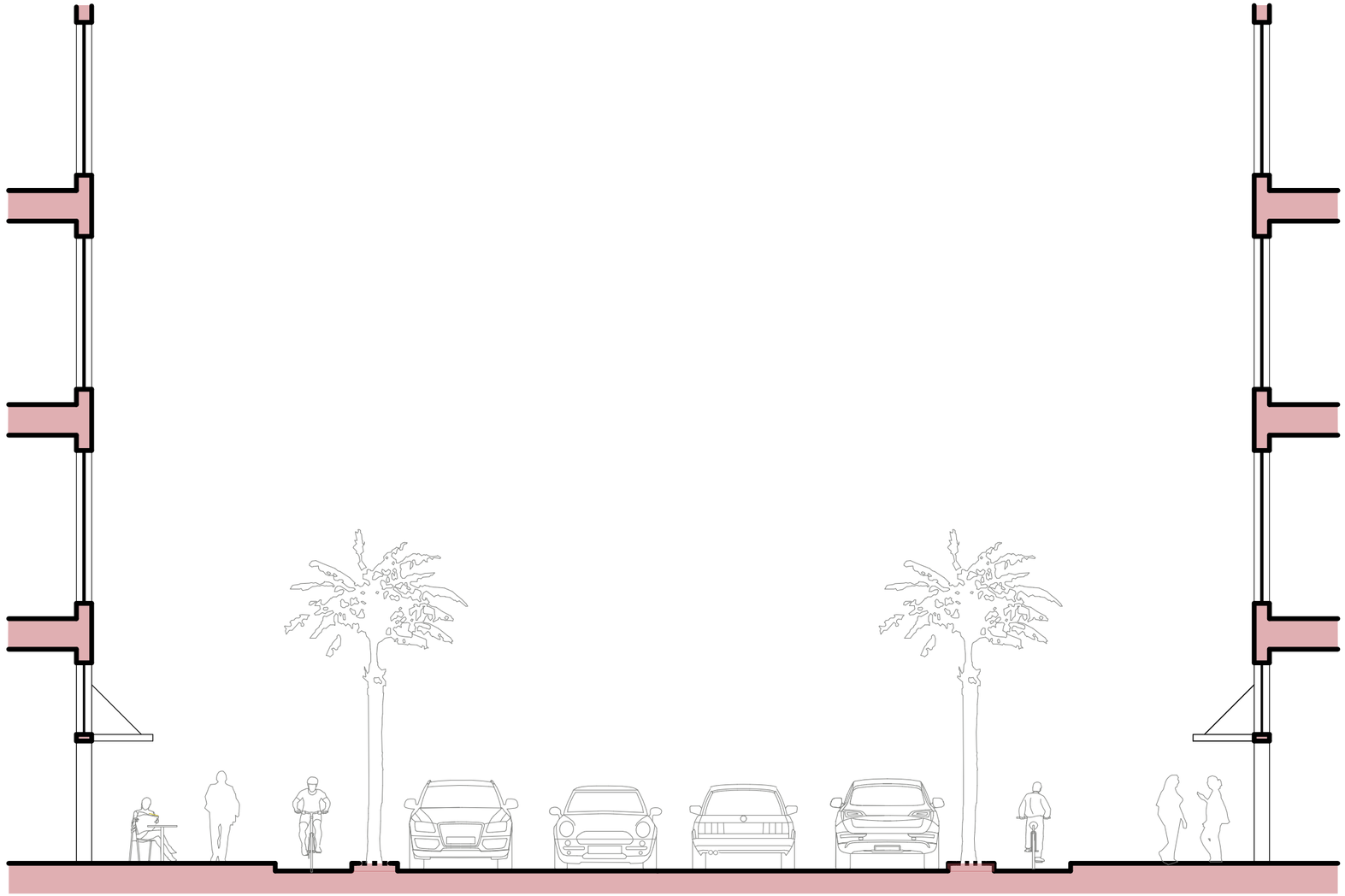
Boulevard

STREET TYPE SECTIONS

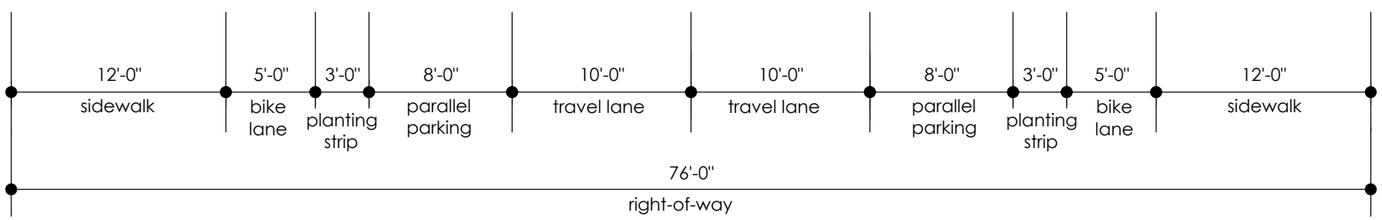
8.19.20

MASTER PLAN
for
LAUREL ISLAND

BELLO | GARRIS
ARCHITECTS



Primary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sidewalk
5'-0"
bike lane
3'-0"
planting strip
8'-0"
parallel parking
10'-0"
travel lane
10'-0"
travel lane
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parallel parking
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planting strip
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bike lane
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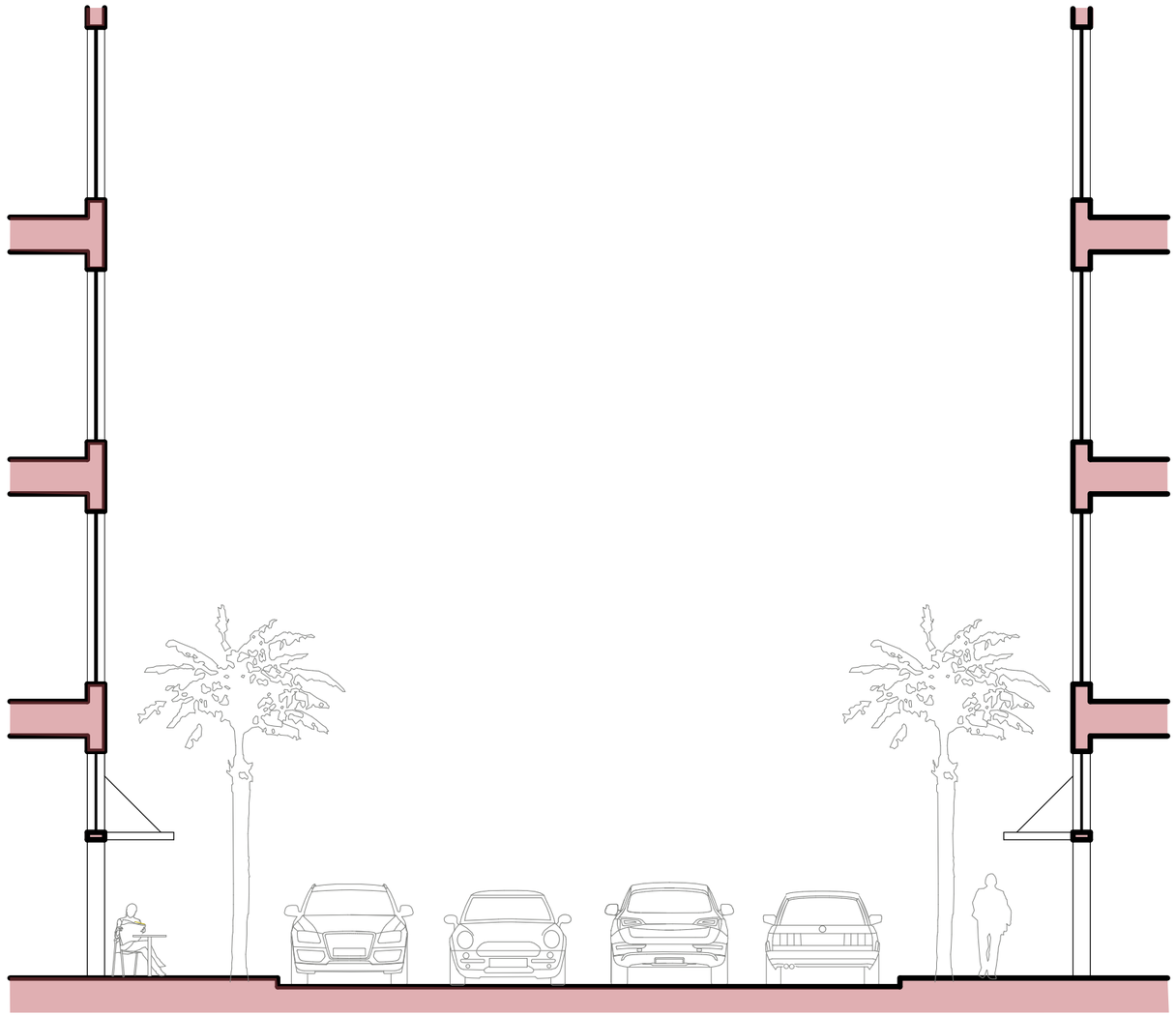
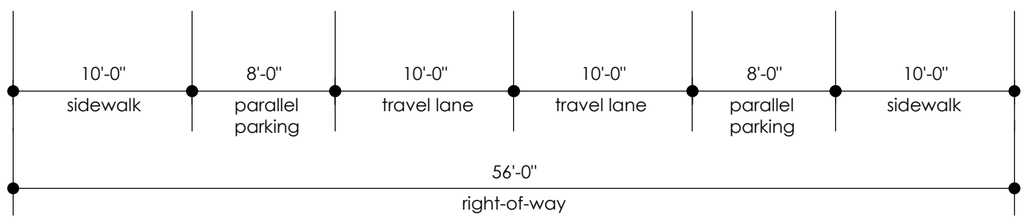
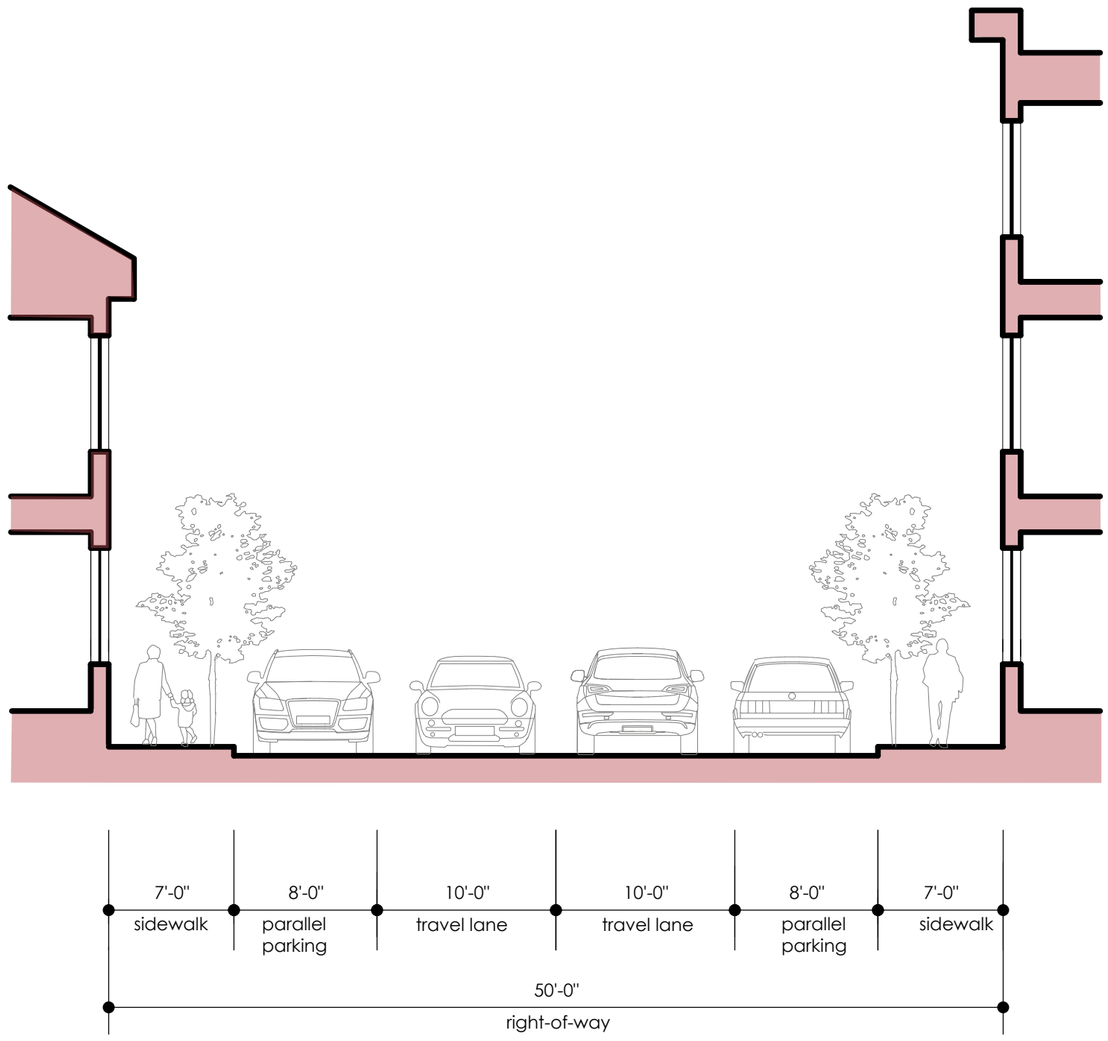
sidewalk
76'-0"
right-of-way




10'-0"
sidewalk
8'-0"
parallel
parking
10'-0"
travel lane
10'-0"
travel lane
8'-0"
parallel
parking
10'-0"
sidewalk
56'-0"
right-of-way

Secondary



Neighborhood

APPENDIX B

Traffic Models

ITE 10th Edition Conversion Matrix
(By PM Peak Hour Average Rate)

					Converting To					
	LUC				221	310	411	444	710	820
		Description			Multifamily Housing (Mid-Rise)	Hotel	Public Park	Movie Theater	General Office Building	Shopping Center
			Unit		DU	Rooms	Acres	Screens	ksf	ksf
				PM Peak Hour Trip Rate	0.44	0.60	0.11	6.17	1.15	3.81
Converting From	221	Multifamily Housing (Mid-Rise)	1 DU	0.44	1.000	0.733	4.000	0.071	0.383	0.115
	310	Hotel	1 Room	0.60	1.364	1.000	5.455	0.097	0.522	0.157
	411	Public Park	1 Acre	0.11	0.250	0.183	1.000	0.018	0.096	0.029
	444	Movie Theater	1 Screen	6.17	14.023	10.283	56.091	1.000	5.365	1.619
	710	General Office Building	1 ksf	1.15	2.614	1.917	10.455	0.186	1.000	0.302
	820	Shopping Center	1 ksf	3.81	8.659	6.350	34.636	0.618	3.313	1.000

LAUREL ISLAND
TRAFFIC IMPACT ANALYSIS

Charleston County, South Carolina

Stantec

Prepared for:
Laurel Island Development, LLC

Prepared by:
Stantec Consulting Services Inc.

July 2020

LAUREL ISLAND
TRAFFIC IMPACT ANALYSIS

Charleston County, South Carolina

Prepared for:
Laurel Island Development, LLC

Prepared by:
Stantec Consulting Services Inc.
4969 Centre Pointe Drive, Suite
200 North Charleston, South
Carolina Phone: (843) 740-7700
Fax: (843) 740-7707

July 2020
Project No. 171002138

_____

Signature *Date*

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D) ANALYSIS WORKSHEETS 2018 EXISTING CONDITIONS

E) ANALYSIS WORKSHEETS 2043 NO BUILD CONDITIONS

F) ANALYSIS WORKSHEETS 2043 BUILD CONDITIONS

EXECUTIVE SUMMARY

A traffic impact analysis was conducted for the Laurel Island Development in accordance with SCDOT and The City of Charleston guidelines. The analysis also includes the 995 Morrison Drive Development located east of N Hanover Street and West of Morrison Drive, south of Conroy Street.

The proposed Laurel Island Development is located north of US 17 and east of Morrison Drive in Charleston, South Carolina. The Laurel Island Development will consist of 3,955 mid-rise multifamily housing units, a 400-room hotel, 10 acres of public park, an 8-screen movie theater, 1,950,000 square feet of office, and 250,000 square feet of retail. Access to the development is provided through one existing intersection along Morrison Drive via Romney Street, one proposed entry/exit via Brigade Street, and one proposed entry/exit via Cool Blow Street (upon completion of a proposed Cool Blow Bridge over Morrison Drive and the existing parallel rail tracks).

The 995 Morrison Drive Development will consist of 305 mid-rise multifamily housing units, 250,000 square feet of office, and 26,500 square feet of retail. Access to the development is provided through two proposed full access driveways along an extension of Cedar Street (south of the development), two proposed full access driveways along Conroy Street (north of the development), and one full access driveway along N. Hanover Street.

The results of the intersection analyses indicate that thirteen of the study intersections currently experience or are projected to experience undesirable delay during the peak periods with or without the Laurel Island and 995 Morrison Developments. Therefore, improvements were evaluated. The following is a list of improvements recommended with consideration of the Laurel Island and 995 Morrison Developments:

1) At the intersection of **Meeting Street & Brigade Street**, install a traffic signal when warranted. Along Meeting Street, install a 350-foot northbound left-turn lane and a 150-foot southbound left-turn lane. Along Brigade Street at the westbound approach, restripe to consist of shared through/right-turn lane and one left-turn only lane.
2) At the intersection of **Morrison Drive & Romney Street**, install a traffic signal when warranted. Along Morrison Drive, install a 150-foot northbound left-turn lane and a 150-foot southbound left-turn lane. Along Romney Street, install a 150-foot eastbound left-turn lane, and provide exclusive westbound 150-foot right-turn and 150-foot left-turn lanes.
3) At the intersection of **Meeting Street & Cool Blow Street**, install a traffic signal when warranted. Along Meeting Street, install a 150-foot northbound right-turn lane (maintaining service as the existing bus-pull out), and alter the southbound approach to consist of one through lane and one left-turn only lane. Along Cool Blow Street, install a 250-foot westbound left-turn lane, maintaining an additional lane at the approach as a shared left/right-turn lane.
4) At the intersection of **Meeting Street & US 17 NB**, install a traffic signal when warranted.
5) At the intersection of Morrison Drive & Huger Street, install a traffic signal when warranted. Along Morrison Drive, install a 100-foot southbound right-turn lane.
6) At the intersection of the **I-26 EB Off-Ramp & Mt. Pleasant Street**, install a traffic signal when warranted.

7) At the intersection of **Meeting Street & Cunnington Street**, install a 150-foot southbound left-turn lane along Meeting Street, maintaining enough median width south of the intersection to allow for vehicle storage for two-stage westbound left-turns from Cunnington Street. Along Cunnington Street, install a 150-foot westbound right-turn lane.
8) At the intersection of **Morrison Drive & Brigade Street**, install a 150-foot southbound left-turn lane and a 150-foot northbound left-turn lane along Morrison Drive. Along Brigade Street, install a 150-foot eastbound left-turn lane, and restripe the westbound approach to consist of a shared through/right-turn lane and a left-turn only lane.
9) At the intersection of **Meeting Street & Romney Street**, install a 150-foot southbound left-turn lane and a 150-foot northbound left-turn lane along Meeting Street.
10) At the intersection of **N Hanover Street & Cool Blow Street**, install a traffic signal when warranted.
11) At the intersection of **Meeting Street & US 17 SB**, install a 200-foot westbound right-turn lane along the US 17 SB ramp, with channelized, yield-control at the intersection.
12) At the intersection of **Meeting Street & US 17 NB**, install a 100-foot northbound right-turn lane along Meeting Street, with channelized, free-control at the intersection. Install 700' of additional pavement to the US 17 NB ramp from the intersection to the beginning of the ramp structure, to provide for two eastbound receiving lanes, which merge down to one lane prior to the structure.
13) At the intersection of **Meeting Street & Huger Street**, add a protected phase to the eastbound left-turn (providing permitted + protected phasing) and remove the protected phase from the southbound left-turn. Along Huger Street, install a 200-foot westbound right-turn lane, with channelized, yield-control at the intersection, and add a 150-foot westbound left-turn lane.
14) At the intersection of **Brigade Street & Huguenin Avenue**, install a 350-foot westbound right-turn lane along Brigade Street. Along Brigade Street, install median width east of the intersection to allow for two-stage southbound left-turns from Huguenin Avenue.

1.0 Introduction

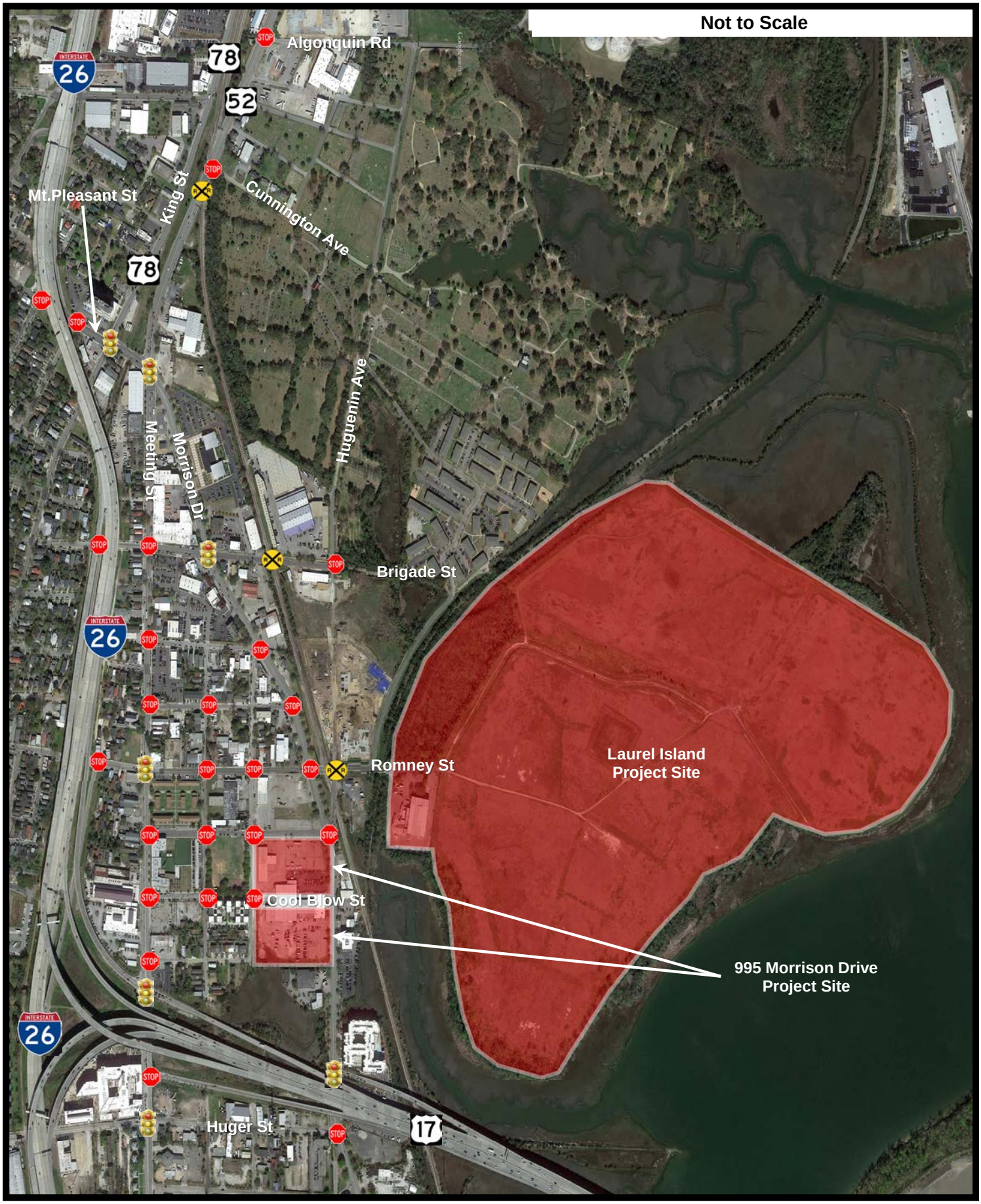
The purpose of this report is to document a traffic impact analysis for the Laurel Island Development located in The City of Charleston, South Carolina in accordance with SCDOT and The City of Charleston guidelines. The analysis also includes the 995 Morrison Drive Development located east of N Hanover Street and West of Morrison Drive, south of Conroy Street. This report summarizes the procedures and findings of the traffic impact analysis.

1.1 PROJECT BACKGROUND

A traffic impact analysis was conducted for the Laurel Island Development in accordance with SCDOT and The City of Charleston guidelines. The proposed Laurel Island Development is located north of US 17 and east of Morrison Drive in Charleston, South Carolina. The Laurel Island Development will consist of 3,955 mid-rise multifamily housing units, a 400-room hotel, 10 acres of public park, an 8-screen movie theater, 1,950,000 square feet of office, and 250,000 square feet of retail. Access to the development is provided through one existing intersection along Morrison Drive, one proposed entry/exit via Brigade Street, and one proposed entry/exit via Cool Blow Street (upon completion of a proposed Cool Blow Bridge over Morrison Drive and the existing parallel rail tracks). The 995 Morrison Drive Development will consist of 305 mid-rise multifamily housing units, 250,000 square feet of office, and 26,500 square feet of retail. Access to the development is provided through two proposed full access driveways along an extension of Cedar Street (south of the development), two proposed full access driveways along Conroy street (north of the development), and one full access driveway along N. Hanover Street.

The traffic impact analysis considers the weekday AM peak hour (between 7:00 AM and 9:00 AM) and the weekday PM peak hour (between 4:00 PM and 6:00 PM) as the study time frames. The extent of the existing roadway network to be studied consists of the thirty (30) intersections of:

1. Meeting Street & Algonquin Road;
2. Meeting Street & Cunnington Avenue;
3. I-26 EB Ramp & Mt. Pleasant Street;
4. I-26 WB Ramp & Mt. Pleasant Street;
5. King Street & Mt. Pleasant Street;
6. Meeting Street & Morrison Drive;
7. I-26 On Ramp & Cypress Street;
8. Meeting Street & Brigade Street;
9. Morrison Drive & Brigade Street;
10. Meeting Street & Williman Street;
11. Morrison Drive & Williman Street;
12. Meeting Street & Isabella Street;
13. Morrison Drive & Isabella Street;
14. Meeting Street & Romney Street;
15. Morrison Drive & Romney Street;
16. Meeting Street & Conroy Street;
17. Morrison Drive & Conroy Street;
18. N. Hanover Street & Cool Blow Street;
19. Meeting Street & Cool Blow Street;
20. N Nassau Street & Cool Blow Street;
21. Meeting Street & US 17 SB;
22. Meeting Street & US 17 NB;
23. Meeting Street & Huger Street;
24. Morrison Drive & Huger Street;
25. Morrison Drive & US 17 SB;
26. N Nassau Street & Isabella Street;
27. N Hanover Street & Romney Street;
28. Brigade Street & Huguenin Avenue;
29. Meeting Street & Cedar Street; and
30. Morrison Drive & Cedar Street Ext.


Not to Scale
Algonquin Rd
78
52
26
Mt.Pleasant St
King St
Cunnington Ave
78
Huguenin Ave
Meeting St
Morrison Dr
Brigade St
26
Romney St
Laurel Island
Project Site
Cool Blow St
995 Morrison Drive
Project Site
26
Huger St
17

HEIGHT DISTRICTS
5.28.20

MASTER PLAN
FOR
LAUREL ISLAND

ARCHITECTS

Stantec

Laurel Island - Traffic Impact Analysis

Exhibit 1.2 - Laurel Island Development Site Plan- PAGE 3

CONCEPTUAL MASTER PLAN

DEVELOPMENT SUMMARY

		/1000)
		3/1000)
		1.5/un)
Parking Needed		1,343 sp
Parking Provided		1,343 sp
Deck	1,275 sp	
Street	68 sp	

Office over ground level retail, 5 story, +/- 125,000 sf

Proposed Cool Blow bridge ROW thru site

Multi-family residential, 5 story +/- 175 un

Office over ground level retail, 5 story, +/- 125,000 sf

Multi-family residential, 5 story +/- 130 un

Preserved salt water wetland

Existing Cedar Street extended to Morrison Parkway

0 25 50 100 200 400

11 SEPTEMBER 2019

LAUREL ISLAND - MORRISON PKWY

CHARLESTON

CP 1

NELSON
WAKEFIELD BEASLEY & ASSOCIATES

Not to Scale

1.2 EXISTING ROADWAY CONDITIONS

King Street is a two-lane, undivided minor arterial roadway that serves primarily residential and commercial land uses. The posted speed limit is 25 mph and the 2018 AADT was 9,500 vpd. Based upon existing turning movement counts, the approximate percentage of heavy vehicles along King Street is 4%.

Meeting Street is a four-lane principal arterial (at the north and south ends of the study area) and a two-lane principal arterial (in the middle of the study area) that primarily serves commercial and residential land uses. The posted speed limit is 30 mph and the 2018 AADT was 19,400 vpd. Based upon existing turning movement counts, the approximate percentage of heavy vehicles along Meeting Street is 4%.

Morrison Drive is a four-lane minor arterial that primarily serves commercial and residential land uses. The posted speed limit is 35 mph and the 2018 AADT was 17,400 vpd. Based upon existing turning movement counts, the approximate percentage of heavy vehicles along Meeting Street is 3%.

Mt. Pleasant Street is a four-lane major collector (between I-26 and Meeting Street) that primarily serves commercial and residential land uses. The 2018 AADT was 13,800 vpd. Based upon existing turning movement counts, the approximate percentage of heavy vehicles along Mt. Pleasant Street is 4%.

Romney Street is a two-lane local road that primarily serves commercial and residential land uses. The 2018 AADT was 6,300 vpd. Based upon existing turning movement counts, the approximate percentage of heavy vehicles along Romney Street is 5%.

Huger Street is a two-lane local road that primarily serves commercial and residential land uses. The 2018 AADT was 4,200 vpd. Based upon existing turning movement counts, the approximate percentage of heavy vehicles along Huger Street is 2%.

2.0 Driveway Spacing Review

Access to the development is provided through one existing intersection along Morrison Drive at Romney Street, one proposed entry/exit via Brigade Street, and one proposed entry/exit via Cool Blow Street (upon completion of a proposed Cool Blow Bridge over Morrison Drive and the existing parallel rail tracks). Due to the access being provided via existing intersections, a driveway spacing review is not applicable.

3.0 Project Traffic

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the Laurel Island Development and the 995 Morrison Drive Development. These trips were distributed and assigned throughout the study roadway network.

3.1 PROPOSED LAND USES

The Laurel Island Development will consist of 3,955 mid-rise multifamily housing units, a 400-room hotel, 10 acres of public park, an 8-screen movie theater, 1,950,000 square feet of office, and 250,000 square feet of retail. The 995 Morrison Drive Development will consist of 305 mid-rise multifamily housing units, 250,000 square feet of office, and 26,500 square feet of retail.

3.2 TRIP GENERATION ESTIMATES

The trip generation potential for the development was estimated using information contained in ITE's *Trip Generation Manual*, 10th Edition (2018) reference. The estimates utilized land use code (LUC) 221 – Multifamily Housing (Mid-Rise), LUC 310 – Hotel, LUC 411 – Public Park, LUC 444 – Movie Theater, LUC 710 – General Office Building, and LUC 820 – Shopping Center, and were developed for the weekday daily, the weekday AM peak hour of the adjacent street, and the weekday PM peak hour of the adjacent street time periods.

Due to the nature of the development, internal capture and a mode split reduction was also considered in the trip generation estimates. Internal capture considers interaction between multiple uses in a development and was limited to 20%. Internal capture traffic was estimated using information contained in ITE's Trip Generation Handbook, 3rd Edition (2014) reference. Modal split is a percentage of trips using a particular mode to travel (such as vehicles, bicycles, and walking). Based upon the Peninsula Mobility Report (2014) sponsored by the City of Charleston and the Historic Charleston Foundation and according to data from the U.S. Census, 36.5% of workers did not use a vehicle as a means of transportation to work in the five-year period between 2008 and 2012. Furthermore, the report recommends a goal of 54% non-vehicular travel for work by 2024. Therefore, based upon the site's location near the Charleston peninsula, its adjacency to higher-density, urbanized land uses, as well as adjacency to the future bus-rapid-transit (BRT) line and future *Lowcountry Low Line*, a conservative 10% non-vehicular modal split was utilized in the traffic analysis.

The trip generation estimates for the Laurel Island Development is shown in Table 3.1 and documented in Appendix A.

Table 3.1 – Laurel Island Trip Generation Estimates

Land Use	ITE LUC	Scale	Daily	Weekday AM Peak Hour		Weekday PM Peak Hour	
				Enter	Exit	Enter	Exit
Multifamily Housing (Mid-Rise)	221	3,955 Dwelling Units	21,554	330	945	942	605
Hotel	310	400 Rooms	3,664	112	78	127	121
Public Park	411	10 Acres	96	27	19	20	16
TBD	TBD	TBD	362	4	8	19	13
Movie Theater	444	8 Screens	1,760	0	0	52	66
General Office Building	710	1,950 ksf	19,326	1,646	268	318	1,661
Shopping Center	820	250 ksf	11,210	172	106	514	556
		Gross Trips:	57,972	2,291	1,424	1,992	3,038
		-Internal Capture:	-5,312	-77	-77	-234	-234
		-10% Mode Split:	-3,506	-221	-135	-176	-280
		New, External Trips:	**47,394**	**1,993**	**1,212**	**1,582**	**2,524**

Table 3.2 –995 Morrison Drive Trip Generation Estimates

Land Use	ITE LUC	Scale	Daily	Weekday AM Peak Hour		Weekday PM Peak Hour	
				Enter	Exit	Enter	Exit
Multifamily Housing (Mid-Rise)	221	305 Dwelling Units	1,664	25	75	79	51
General Office Building	710	250 ksf	2,586	225	37	44	228
Shopping Center	820	26.5 ksf	2,438	103	63	98	106
		Gross Trips:	6,688	353	175	221	385
		-Internal Capture:	-1,186	-17	-17	-53	-53
		-10% Mode Split:	-582	-32	-16	-17	-33
		New, External Trips:	**4,920**	**304**	**142**	**151**	**299**

3.3 TRIP DISTRIBUTION & ASSIGNMENT

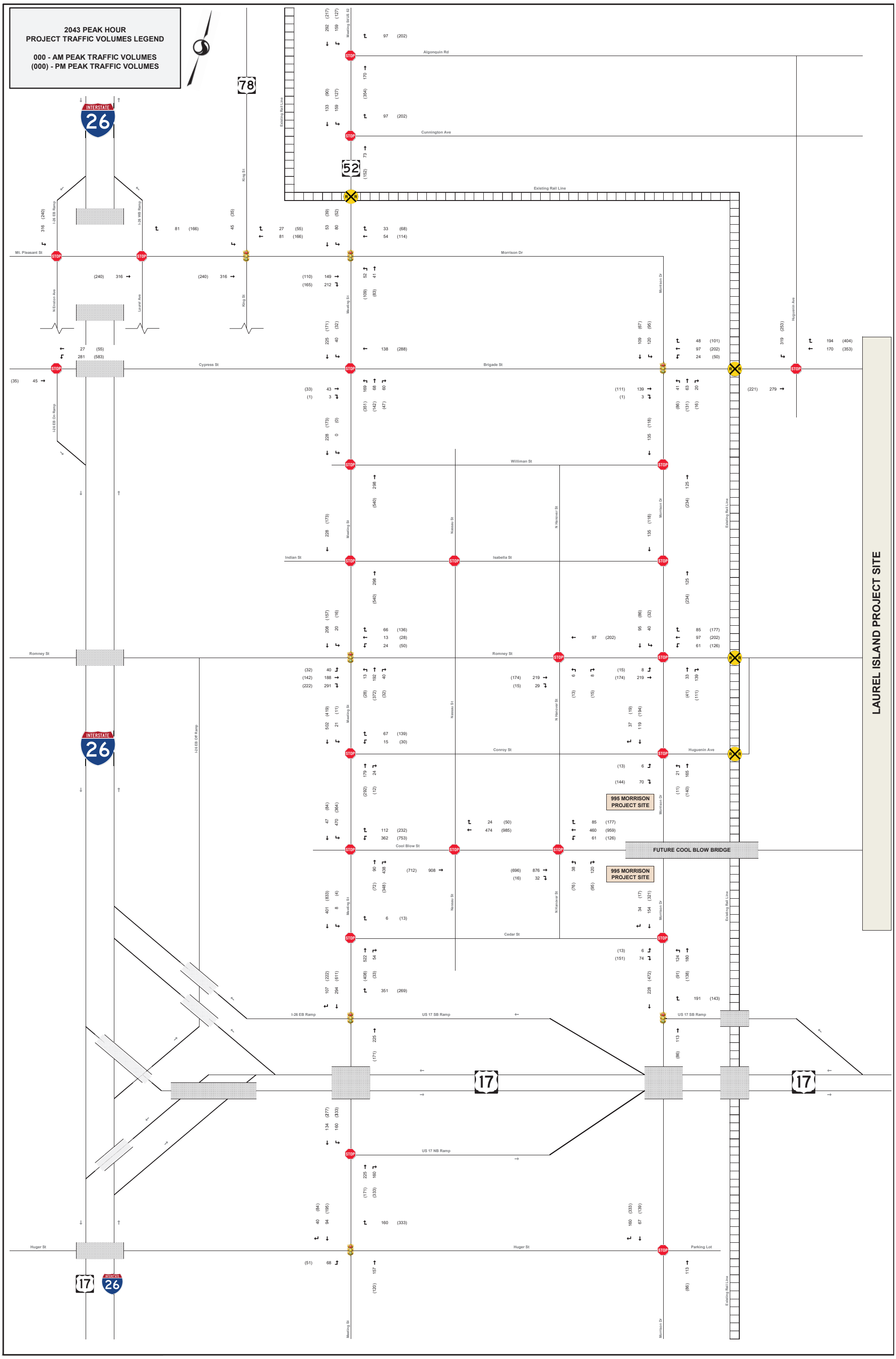
New external traffic expected to be generated by the Laurel Island Development and the 995 Morrison Drive Development was distributed and assigned to the roadway network based upon existing travel patterns in the area. The general distribution of new project trips was assumed to be the following:

- 20% to/from the north via Meeting Street/US 52;
- 2% to/from the north via King Street/US 78;
- 14% to/from the north via I-26;
- 2% to/from the west via Cypress Street;
- 2% to/from the west via Romney Street;
- 3% to/from the west via Huger Street;
- 21% to/from the south via I-26/US 17
- 7% to/from the south via Meeting Street;
- 5% to/from the south via Morrison Drive; and
- 24% to/from the east via US 17.

Exhibits 3.1 shows the 2043 AM and PM peak hour project traffic volumes.

2043 PEAK HOUR
PROJECT TRAFFIC VOLUMES LEGEND

000 - AM PEAK TRAFFIC VOLUMES
(000) - PM PEAK TRAFFIC VOLUMES



4.0 Traffic Volume Development

Existing traffic volumes were collected in December of 2018. The future-year traffic volumes consisted of 2018 existing traffic volumes adjusted by an annual growth rate and projected traffic volumes of the Laurel Island Development and 995 Morrison Development.

4.1 EXISTING TRAFFIC VOLUMES

The traffic impact analysis considers the weekday AM peak hour (between 7:00 AM and 9:00 AM) and the weekday PM peak hour (between 4:00 PM and 6:00 PM) as the study time frames. The extent of the existing roadway network to be studied consists of the thirty (30) intersections of:

1. Meeting Street & Algonquin Road;
2. Meeting Street & Cunnington Avenue;
3. I-26 EB Ramp & Mt. Pleasant Street;
4. I-26 WB Ramp & Mt. Pleasant Street;
5. King Street & Mt. Pleasant Street;
6. Meeting Street & Morrison Drive;
7. I-26 On Ramp & Cypress Street;
8. Meeting Street & Brigade Street;
9. Morrison Drive & Brigade Street;
10. Meeting Street & Williman Street;
11. Morrison Drive & Williman Street;
12. Meeting Street & Isabella Street;
13. Morrison Drive & Isabella Street;
14. Meeting Street & Romney Street;
15. Morrison Drive & Romney Street;
16. Meeting Street & Conroy Street;
17. Morrison Drive & Conroy Street;
18. N. Hanover Street & Cool Blow Street;
19. Meeting Street & Cool Blow Street;
20. N Nassau Street & Cool Blow Street;
21. Meeting Street & US 17 SB;
22. Meeting Street & US 17 NB;
23. Meeting Street & Huger Street;
24. Morrison Drive & Huger Street;
25. Morrison Drive & US 17 SB;
26. N Nassau Street & Isabella Street;
27. N Hanover Street & Romney Street;
28. Brigade Street & Huguenin Avenue;
29. Meeting Street & Cedar Street; and
30. Morrison Drive & Cedar Street Ext.

The raw traffic volume counts are provided in Appendix B and the 2018 existing traffic volumes are illustrated in Exhibit 4.1 and documented in Appendix D.

4.2 FUTURE TRAFFIC VOLUME PROJECTIONS

4.2.1 Historical Growth Rates

To develop an annual background growth rate for use in the analysis, historical count data along Meeting Street, Morrison Drive, Huger Street, Romney Street, Mt. Pleasant Street (SCDOT count stations #145, #147, #171, #177, #422, #549, #717, and #718) was reviewed over the past 12 years, according to the completion date of the new Arthur Ravenel Jr. Bridge. It was determined that the roadways have experienced a collective annual growth of 1.11%. Therefore, in an effort to be conservative, a 1.5% annual growth rate was utilized to develop 2043 No Build traffic volumes.

4.2.2 Nearby Development Traffic Volume Projections

In addition to the background growth rates, a separate project is currently proposed adjacent to the Laurel Island Development and was considered in the analysis. The *Foundry Point* development consisting of 275 apartments and 6,000 square feet of specialty retail is located on a site between Brigade Street and Romney Street east of Morrison Drive. The traffic volumes from the adjacent project were added to the 2043 No Build and Build traffic volumes for consideration in the future traffic projections.

4.2.3 No Build Traffic Volumes

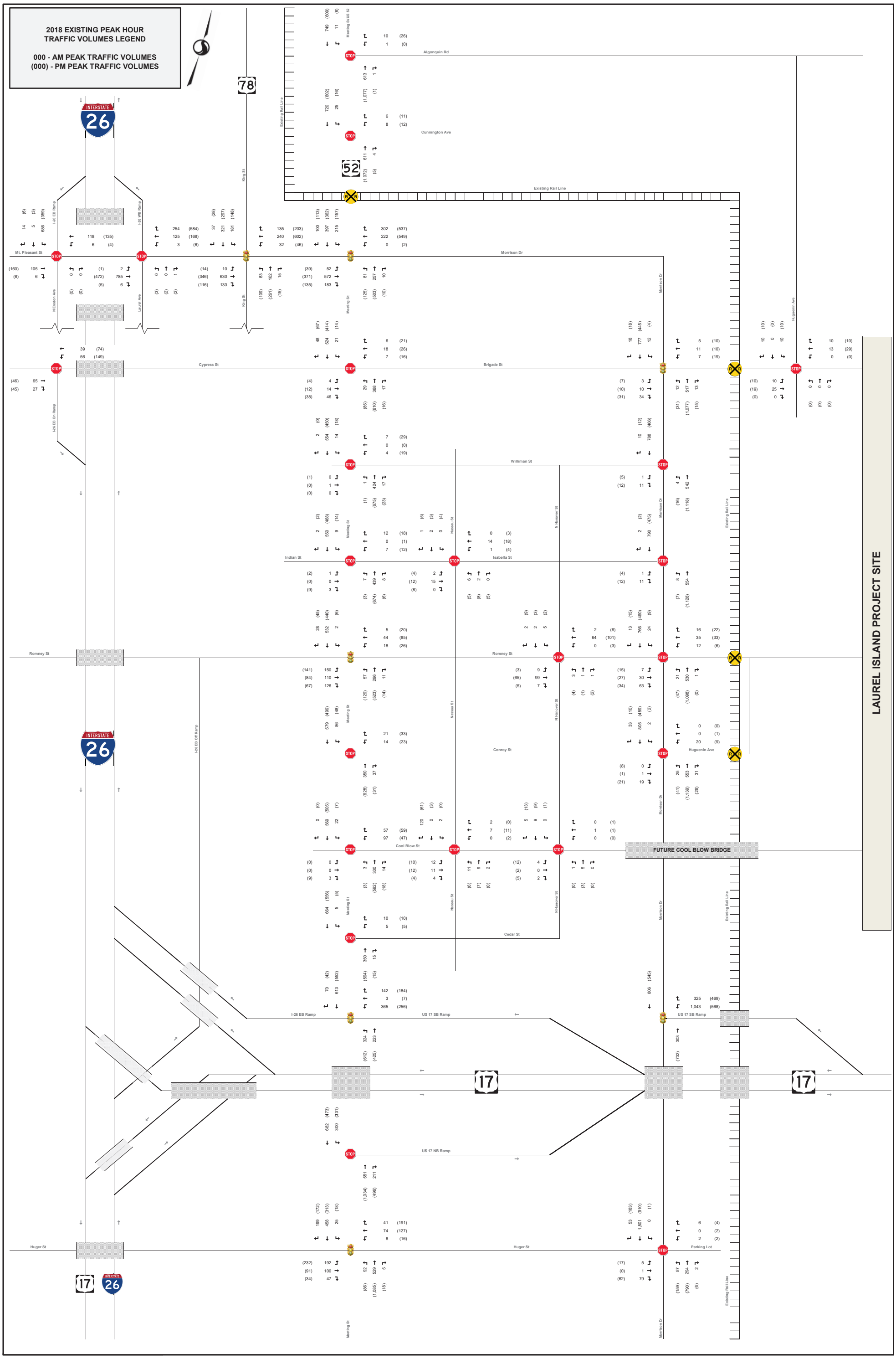
The 2043 No Build traffic volumes, which include consideration of the background growth rates and nearby development traffic volumes, are illustrated in Exhibit 4.2 and documented in Appendix E.

4.2.4 Build Traffic Volumes

The Laurel Island Development and 995 Morrison Drive Development traffic volumes were added to the 2043 No Build traffic volumes to develop 2043 Build traffic volumes, which are illustrated in Exhibit 4.3 and documented in Appendix F.

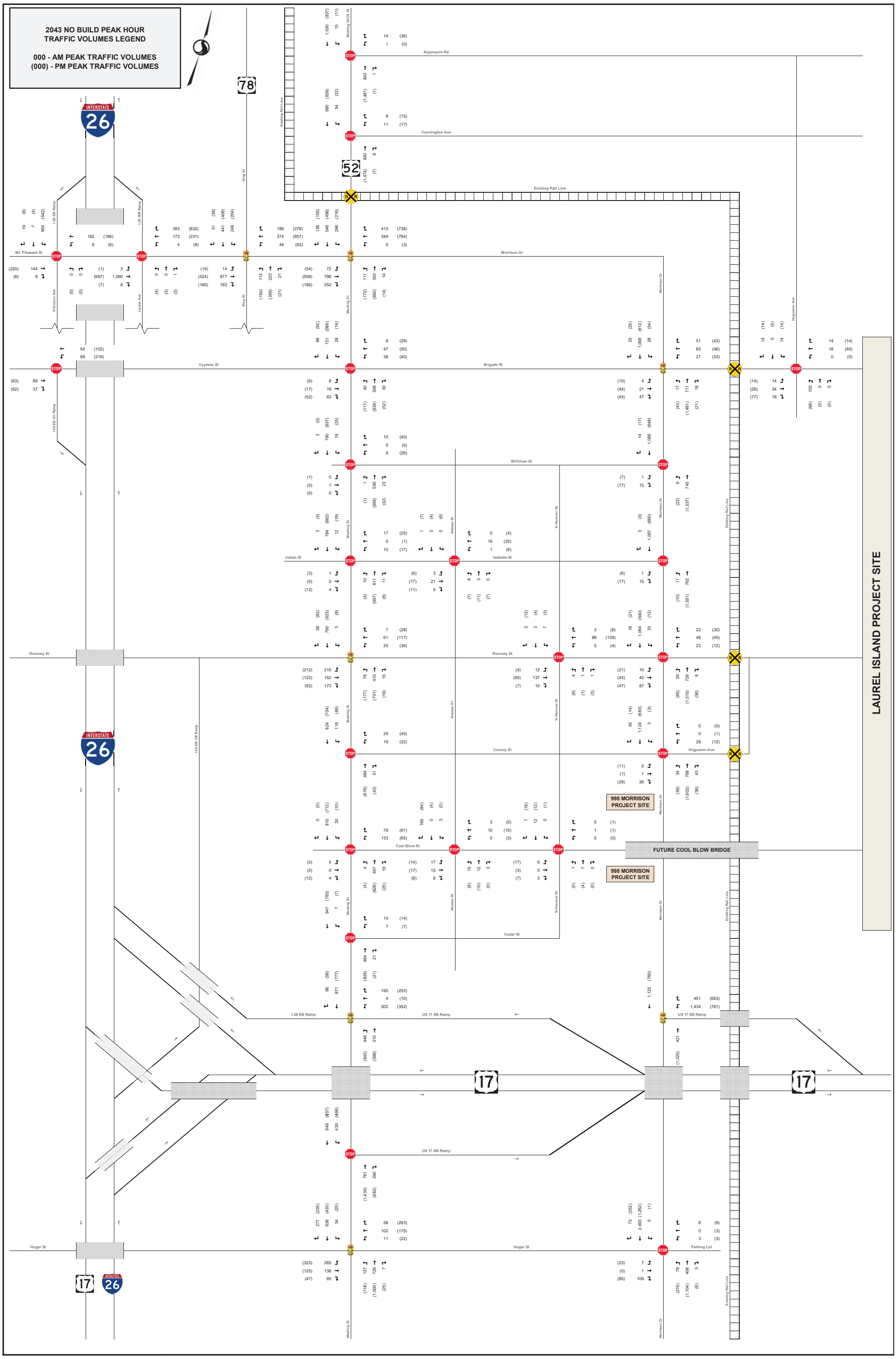
2018 EXISTING PEAK HOUR TRAFFIC VOLUMES LEGEND

000 - AM PEAK TRAFFIC VOLUMES
(000) - PM PEAK TRAFFIC VOLUMES



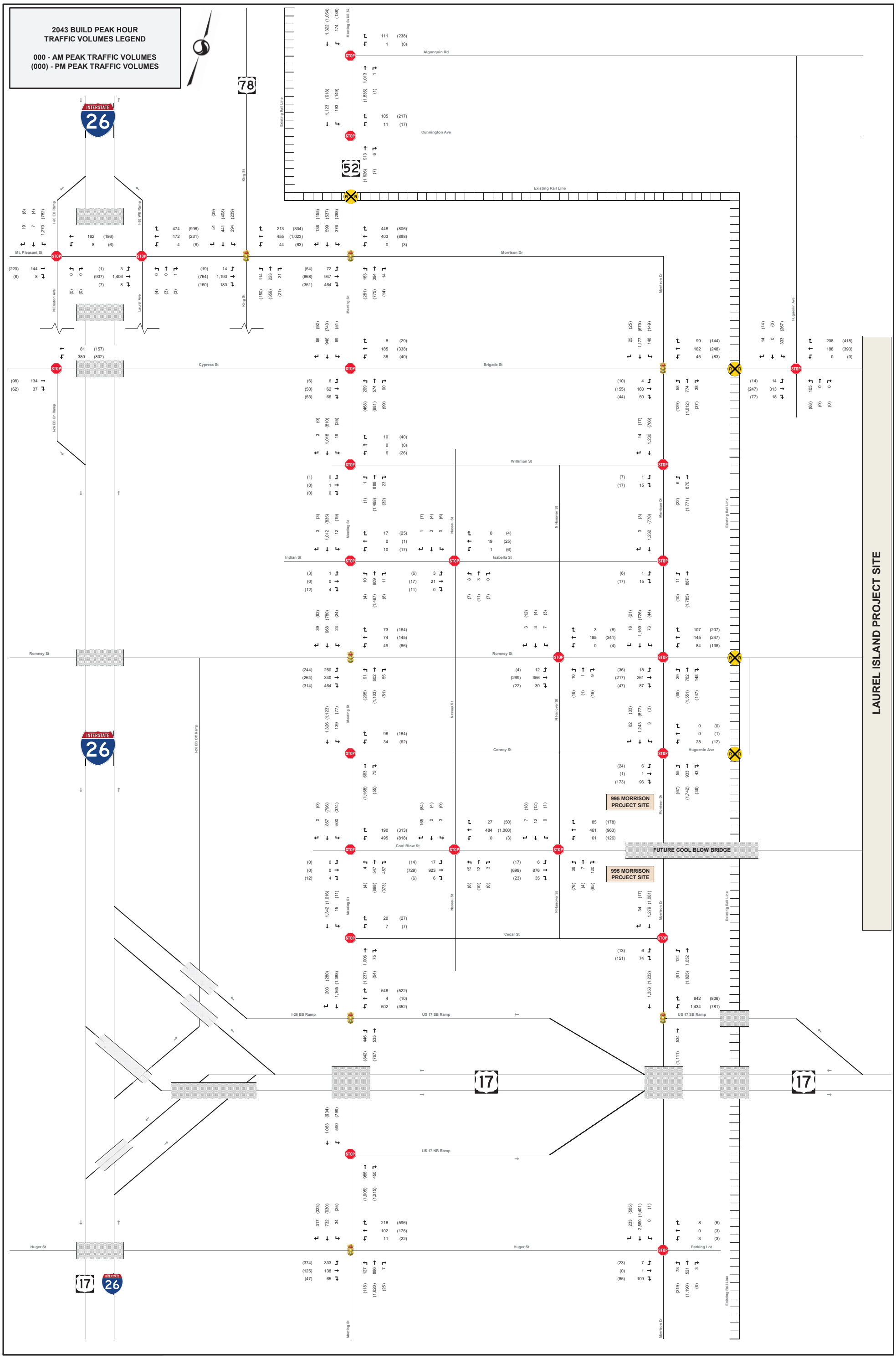
2043 NO BUILD PEAK HOUR TRAFFIC VOLUMES LEGEND

000 - AM PEAK TRAFFIC VOLUMES
(000) - PM PEAK TRAFFIC VOLUMES



2043 BUILD PEAK HOUR TRAFFIC VOLUMES LEGEND

000 - AM PEAK TRAFFIC VOLUMES
(000) - PM PEAK TRAFFIC VOLUMES



5.0 Traffic Impact Analysis

Using the existing and projected traffic volumes previously discussed, intersection analyses were conducted for the study and project driveway intersections considering 2018 Existing, 2043 No Build, and 2043 Build conditions. This analysis was conducted using the Transportation Research Board's *Highway Capacity Manual 2010 (HCM 2010)* methodologies of the *Synchro*, Version 10 software for intersection analysis.

Intersection level of service (LOS) grades range from LOS A to LOS F, which are directly related to the level of control delay at the intersection and characterize the operational conditions of the intersection traffic flow. LOS A operations typically represent ideal, free-flow conditions where vehicles experience little to no delays, and LOS F operations typically represent poor, forced-flow (bumper-to-bumper) conditions with high vehicular delays, and are generally considered undesirable. Table 5.1 summarizes the *HCM 2010* control delay thresholds associated with each LOS grade for unsignalized and signalized intersections.

Table 5.1 – *HCM 2010* LOS Criteria for Unsignalized & Signalized Intersections

Unsignalized Intersections	
LOS	**Control Delay Per Vehicle (seconds)**
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Signalized Intersections	
LOS	**Control Delay Per Vehicle (seconds)**
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

5.1 INTERSECTION LOS ANALYSIS

As part of the intersection analysis, SCDOT's default *Synchro* parameters were utilized. Existing peak-hour factors (PHF) were utilized in the analysis of existing and future conditions and a minimum PHF of 0.90 and maximum PHF of 0.95 being considered for future-year conditions. Existing heavy vehicle percentages, as previously discussed, were utilized in the analysis, with a minimum percentage of 2% considered. The existing lane geometry was also utilized for the analysis of existing conditions and future-year scenarios.

Using the *Synchro* software, intersection analyses were conducted for 2018 Existing, 2043 No Build, and 2043 Build conditions for the weekday AM peak-hour and the weekday PM peak-hour time periods. For the unsignalized intersections, the LOS and delay results are shown for the worst-case minor-street approaches only, as based upon the *HCM 2010* methodologies for two-way stop-controlled intersections. Improvements were evaluated for each intersection based on if the intersection experienced an undesirable level of service. The results of the intersection analyses for existing and future-year conditions for the

weekday AM and PM peak-hour time periods are summarized in Table 5.2 (on page 17 and continued onto page 18).

In Table 5.2, the intersection analysis results of the 2018 Existing, 2043 No Build, and 2043 Build Conditions is shown. In this table, a column is also shown for Build Conditions with recommended improvements to demonstrate the effects of each improvement on LOS conditions.

Table 5.2 – Intersection Analysis Results – 2018 Existing and 2043 Future Conditions

	Intersection	Exst. Ctrl.	2018 Existing		2043 No Build		2043 Build		2043 Build (Improved)	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Meeting Street & Algonquin Road	STOP	12.4 (WB) B	13.1 (WB) B	14.5 (WB) B	17.0 (WB) C	16.0 (WB) C	95.5 (WB) F	16.0 (WB) C	95.5 (WB) F
2	Meeting Street & Cunnington Avenue	STOP	19.3 (WB) C	28.3 (WB) D	36.3 (WB) E	89.2 (WB) F	14.5 (WB) B	>300 (WB) F	19.8 (WB) C	51.0 (WB) F
3	I-26 EB Ramp & Mt. Pleasant Street	STOP	16.2 (SB) C	10.6 (SB) B	66.7 (WB) F	17.1 (SB) C	166.2 (SB) F	39.7 (SB) E	17.3 B	21.8 C
4	I-26 WB Ramp & Mt. Pleasant Street	STOP	11.4 (NB) B	14.1 (NB) B	13.2 (NB) B	21.3 (NB) C	15.8 (NB) C	36.2 (NB) E	12.1 (NB) C	15.7 (NB) C
5	King Street & Mt. Pleasant Street	SIGNAL	18.0 B	16.2 B	31.6 C	27.1 C	39.3 D	31.8 C	26.3 C	22.8 C
6	Meeting Street & Morrison Drive	SIGNAL	21.4 C	24.4 C	28.1 C	28.7 C	29.0 C	24.4 C	29.0 C	22.6 C
7	I-26 On Ramp & Cypress Street	STOP	4.5 (WB) A	5.1 (WB) A	5.0 (WB) A	5.4 (WB) A	7.3 (WB) A	9.4 (WB) A	7.3 (WB) A	9.4 (WB) A
8	Meeting Street & Brigade Street	STOP	26.2 (WB) D	50.3 (WB) F	259.1 (WB) F	>300 (WB) F	>300 (WB) F	>300 (WB) F	29.4 C	56.7 E
9	Morrison Drive & Brigade Street	SIGNAL	5.0 A	5.7 A	9.1 A	8.4 A	26.8 C	82.6 F	15.5 B	28.4 C
10	Meeting Street & Williman Street	STOP	22.6 (EB) C	31.9 (EB) D	38.7 (EB) E	74.3 (EB) F	85.1 (EB) F	>300 (EB) F	85.1 (EB) F	>300 (WB) F
11	Morrison Drive & Williman Street	STOP	11.8 (EB) B	11.4 (EB) B	14.3 (EB) B	22.2 (EB) C	15.9 (EB) C	13.2 (EB) B	15.9 (EB) C	23.2 (EB) C
12	Meeting Street & Isabella Street	STOP	16.6 (WB) C	22.5 (WB) C	28.3 (WB) D	56.0 (WB) F	74.6 (WB) F	>300 (WB) F	74.6 (WB) F	>300 (WB) F
13	Morrison Drive & Isabella Street	STOP	12.0 (EB) B	10.2 (EB) B	15.1 (EB) C	13.4 (EB) B	17.0 (EB) C	20.5 (EB) C	16.2 (EB) C	13.7 (EB) B
14	Meeting Street & Romney Street	SIGNAL	10.0 B	7.8 A	16.0 B	17.9 B	43.2 D	76.8 E	48.3 D	29.6 C
15	Morrison Drive & Romney Street	STOP	36.5 (WB) E	74.2 (WB) F	>300 (WB) F	>300 (WB) F	>300 (WB) F	>300 (WB) F	16.3 B	13.0 B
16	Meeting Street & Conroy Street	STOP	9.8 (WB) A	10.4 (WB) B	11.4 (WB) B	15.7 (WB) C	69.6 (WB) F	38.2 (WB) E	31.5 (WB) D	185.3 (WB) F
17	Morrison Drive & Conroy Street	STOP	19.9 (WB) C	25.1 (WB) D	44.0 (WB) E	>300 (WB) F	191.5 (WB) F	>300 (WB) F	40.3 (WB) E	>300 (WB) F
18	N. Hanover Street & Cool Blow Street	STOP	8.6 (EB) A	8.6 (EB) A	8.6 (NB) A	8.7 (NB) A	>300 (NB) F	>300 (NB) F	8.1 A	14.8 B
19	Meeting Street & Cool Blow Street	STOP	11.1 (WB) B	10.7 (WB) B	28.7 (WB) D	14.4 (WB) B	>300 (WB) F	>300 (WB) F	36.8 D	38.0 D
20	N Nassau Street & Cool Blow Street	STOP	10.2 (NB) B	9.6 (NB) A	10.1 (NB) B	9.7 (NB) A	110.9 (NB) F	209.6 (NB) F	110.9 (NB) F	209.6 (NB) F
21	Meeting Street & US 17 SB	SIGNAL	18.7 C	17.7 B	27.8 C	37.9 D	86.5 F	117.1 F	42.9 D	53.3 D
22	Meeting Street & US 17 NB	STOP	3.1 (SB) A	15.4 (SB) C	5.1 (SB) A	>300 (SB) F	39.4 (SB) E	>300 (SB) F	0.8 A	19.8 B

Table 5.2 Cont. – Intersection Analysis Results – 2018 Existing and 2043 Future Conditions

Intersection	Exst. Ctrl.	2018 Existing		2043 No Build		2043 Build		2043 Build (Improved)	
		AM	PM	AM	PM	AM	PM	AM	PM
23 Meeting Street & Huger Street		13.4 B	26.9 C	20.1 C	82.9 F	47.5 D	243.6 F	24.2 C	54.7 D
24 Morrison Drive & Huger Street	STOP	20.7 (EB) C	52.6 (WB) F	57.9 (EB) F	>300 (EB) F	>300 (EB) F	>300 (EB) F	27.4 C	14.1 B
25 Morrison Drive & US 17 SB		30.2 C	18.2 C	70.5 E	32.2 C	116.3 F	47.7 D	112.0 F	46.3 D
26 N Nassau Street & Isabella Street	STOP	9.0 (SB) A	9.1 (NB) A	9.1 (SB) A	9.3 (NB) A	9.1 (SB) A	9.3 (NB) A	9.1 (SB) A	9.3 (NB) A
27 N Hanover Street & Romney Street	STOP	10.2 (SB) B	9.6 (NB) A	10.6 (SB) B	10.1 (NB) B	14.5 (SB) B	13.4 (NB) B	14.5 (SB) B	13.4 (NB) B
28 Brigade Street & Huguenin Avenue	STOP	8.7 (SB) A	8.8 (SB) A	8.9 (NB) A	8.9 (SB) A	68.0 (SB) F	192.9 (SB) F	22.7 (SB) C	29.4 (NB) D
29 Meeting Street & Cedar Street	STOP	9.4 (WB) A	9.8 (WB) A	10.0 (WB) B	10.9 (WB) B	12.0 (WB) B	14.9 (WB) C	12.5 (WB) B	15.3 (WB) C
30 Morrison Drive & Cedar Street Ext.	STOP	NA	NA	NA	NA	77.5 (EB) F	33.3 (EB) D	15.1 (EB) C	27.2 (EB) D

The results of the 2043 future conditions analysis indicate the study area intersections currently operate and are anticipated to continue to operate at acceptable levels of service with the following exceptions:

The intersection of Meeting Street & Algonquin Road is projected to experience undesirable LOS conditions in the PM peak hour with the developments. The projected delay is likely due in part to the conservative nature of the *HCM 2010* unsignalized methodology and is not uncommon for the minor approach of a two-way-stop-controlled intersection. Therefore, no improvements are recommended.

The intersection of Meeting Street and Cunnington Avenue is projected to experience undesirable LOS conditions in the peak hours with or without the developments. However, the anticipated project traffic from the Laurel Island Development is expected to increase delays at this intersection considerably such that improvements are likely to be required. Therefore, in an effort to improve the operation of this intersection, it is recommended to install an exclusive westbound right-turn lane along Cunnington Avenue and install an exclusive southbound left-turn lane along Meeting Street, maintaining additional width south of the intersection to allow for vehicle storage for two-stage westbound left-turns from Cunnington Avenue.

The intersection of the I-26 EB Ramp & Mt. Pleasant Street is projected to experience undesirable LOS conditions in the AM peak hour with or without the Laurel Island developments, such that a signal will likely be warranted. Therefore, based upon projected peak hour volumes, and in an effort to improve the operations at this intersection, it is recommended to install a traffic signal at the intersection of I-26 EB Ramp & Mt. Pleasant Street when warrants are satisfied.

The intersection of I-26 WB Ramp & Mt. Pleasant Street is projected to experience undesirable LOS conditions in the PM peak hour with the developments. The projected delay is likely due in part to the conservative nature of the *HCM 2010* unsignalized methodology and is not uncommon for the minor approach of a two-way-stop-controlled intersection. Therefore, no improvements are recommended.

The intersection of Meeting Street & Brigade Street currently experiences and is projected to continue to experience undesirable LOS conditions during the peak hours with or without the developments. However, the anticipated project traffic from the Laurel Island Development is expected to increase delays at this intersection considerably such that a signal will likely be warranted at this intersection. Therefore, based upon projected peak hour volumes, and in an effort to improve the operations at this intersection, it is recommended to install a traffic signal at the intersection of Meeting Street & Brigade Street when warrants are satisfied. In conjunction with this signal installation, it is recommended to install exclusive northbound and southbound left-turn lanes along Meeting Street and restripe the existing westbound approach lanes to consist of a left-turn only lane and a shared through-right.

The intersection of Morrison Drive & Brigade Street is projected to experience undesirable delay in the PM peak hour with the developments. Therefore, in an effort to improve the operation of the intersection, it is recommended to install exclusive southbound and northbound left-turn lanes along Morrison Drive, install an eastbound left-turn lane along Brigade Street, and restripe the existing westbound approach to consist of a shared through-right-turn lane and one left-only lane.

The intersections of Meeting Street & Williman Street and Meeting Street & Isabella Street are anticipated to experience undesirable LOS conditions in the peak hours with or without the developments. The projected delay is likely due in part to the conservative nature of the *HCM 2010* unsignalized methodology and is not uncommon for the minor approach of a two-way-stop-controlled intersection. Therefore, no improvements are recommended at these intersections.

The intersection of Meeting Street & Romney Street is projected to experience undesirable delay in the PM peak hour with the developments. Therefore, in an effort to improve the operation of the intersection, it is recommended to install exclusive southbound and northbound left-turn lanes along Meeting Street.

The intersection of Morrison Drive & Romney Street currently experiences and is projected to continue to experience undesirable LOS conditions during the peak hours with or without the developments. However, the anticipated project traffic from the Laurel Island Development is expected to increase delays at this intersection considerably such that a signal will likely be warranted at this intersection. Therefore, based upon projected peak hour volumes, and in an effort to improve the operations at this intersection, it is recommended to install a traffic signal at the intersection of Morrison Drive & Romney Street when warrants are satisfied. In conjunction with this signal installation, it is recommended to install exclusive northbound and southbound left-turn lanes along Morrison Drive, as well as installing an exclusive left-turn lane at the eastbound approach along Romney Street. At the westbound approach along Romney Street, it is recommended to install exclusive left-turn, through, and right-turn lanes.

The intersection of Meeting Street & Conroy Street is projected to experience undesirable LOS conditions in the peak hours with the developments. The projected delay is likely due in part to the conservative nature of the *HCM 2010* unsignalized methodology and is not uncommon for the minor approach of a two-way-stop-controlled intersection. Therefore, no improvements are recommended.

The intersection of Morrison Drive & Conroy Street is projected to experience undesirable LOS conditions in the peak hours with or without the developments. The projected delay is likely due in part to the conservative nature of the *HCM 2010* unsignalized methodology and is not uncommon for the minor approach of a two-way-stop-controlled intersection. Additionally, the improvement proposed at Morrison Drive & Romney Street would provide a signalized access point for vehicles currently using this intersection. Therefore, no improvements are recommended.

The intersection of N Hanover Street & Cool Blow Street is anticipated to experience undesirable LOS conditions in the peak hours with the developments, such that a signal will likely be warranted at this intersection. Therefore, based upon projected peak hour volumes, and in an effort to improve the operations at this intersection, it is recommended to install a traffic signal at the intersection of N Hanover Street & Cool Blow Street when warrants are satisfied.

The intersection of Meeting Street & Cool Blow Street is anticipated to experience undesirable LOS conditions in the peak hours with the developments, such that a signal will likely be warranted at this intersection. Therefore, based upon projected peak hour volumes, and in an effort to improve the operations at this intersection, it is recommended to install a traffic signal at the intersection of Meeting Street & Cool Blow Street when warrants are satisfied. In conjunction with this signal installation, it is recommended to restripe the existing southbound approach along Meeting Street to consist of one through lane and one left-turn lane only. It is also recommended to install a northbound right-turn lane along Meeting Street utilizing the existing pavement of the bus-pull out (which will continue to serve a double purpose as a bus-pull out in the future). Finally, at the westbound approach along Cool Blow Street, it is also recommended to install an exclusive left-turn lane and a shared left-/right-turn lane, in order to provide dual left-turns from Cool Blow Street onto Meeting Street traveling southbound.

The intersection of N Nassau Street & Cool Blow Street is projected to experience undesirable LOS conditions in the peak hours with the developments. The projected delay is likely due in part to the conservative nature of the *HCM 2010* unsignalized methodology and is not uncommon for the minor approach of a two-way-stop-controlled intersection. Therefore, no improvements are recommended.

The intersection of Meeting Street & US 17 SB is projected to experience undesirable LOS conditions in the peak hours with the developments. Therefore, in an effort to improve the operations at this intersection, it is recommended to install a channelized, yield-controlled, exclusive westbound right-turn lane along the US 17 SB off-ramp.

The intersection of Meeting Street and US 17 NB is projected to experience undesirable LOS conditions in the PM peak hour with or without the developments, such that a signal will likely be warranted at the intersection. Therefore, based upon projected peak hour volumes, and in an effort to improve the operations at this intersection (and to mitigate potential queueing along Meeting Street in the southbound direction

caused by queue spill-back from the southbound left-turning movement), it is recommended to install a traffic signal at the intersection of Meeting Street and US 17 NB when warrants are satisfied.

The intersection of Meeting Street & Huger Street is projected to experience undesirable LOS conditions in the PM peak hour with or without the developments. Therefore, in an effort to improve the operations at this intersection, it is recommended to add a protected phase to the eastbound left-turn (providing permitted + protected phasing), remove the protected phase from the southbound left-turn, add a channelized, yield-controlled westbound right-turn lane, and add a westbound left-turn lane.

The intersection of Morrison Drive & Huger Street is projected to experience undesirable LOS conditions in the peak hours with or without the developments. The projected delay is likely due in part to the conservative nature of the *HCM 2010* unsignalized methodology and is not uncommon for the minor approach of a two-way-stop-controlled intersection. Therefore, no improvements are recommended.

The intersection of Morrison Drive & US 17 SB is projected to experience undesirable LOS conditions in the AM peak hour with or without the developments. Due to the right-of-way and structural limitations of the intersection approaches, no improvements are recommended.

The intersection of Brigade Street & Huguenin Avenue is projected to experience undesirable LOS conditions in the peak hours with the developments. Therefore, in an effort to improve the operation of the intersection, it is recommended to add an exclusive westbound right-turn lane, maintaining median width east of the intersection to allow for two-stage left-turning for southbound left-turns from Huguenin Avenue onto Brigade Street.

The intersection of Morrison Drive & Cedar Street Extension is projected to experience undesirable LOS conditions in the AM peak hour with the developments. The projected delay is likely due in part to the conservative nature of the *HCM 2010* unsignalized methodology and is not uncommon for the minor approach of a two-way-stop-controlled intersection. Therefore, no improvements are recommended.

Based upon the results of the intersection analyses with consideration of the Laurel Island Development and 995 Morrison Drive Development, improvements were evaluated. The following is a list of improvements recommended:

1) At the intersection of **Meeting Street & Brigade Street**, install a traffic signal when warranted. Along Meeting Street, install a 350-foot northbound left-turn lane and a 150-foot southbound left-turn lane. Along Brigade Street at the westbound approach, restripe to consist of shared through/right-turn lane and one left-turn only lane.
2) At the intersection of **Morrison Drive & Romney Street**, install a traffic signal when warranted. Along Morrison Drive, install a 150-foot northbound left-turn lane and a 150-foot southbound left-turn lane. Along Romney Street, install a 150-foot eastbound left-turn lane, and provide exclusive westbound 150-foot right-turn and 150-foot left-turn lanes.
3) At the intersection of **Meeting Street & Cool Blow Street**, install a traffic signal when warranted. Along Meeting Street, install a 150-foot northbound right-turn lane (maintaining service as the existing bus-pull out), and alter the southbound approach to consist of one through lane and one left-turn only lane. Along Cool Blow Street, install a 250-foot westbound left-turn lane, maintaining an additional lane at the approach as a shared left/right-turn lane.
4) At the intersection of **Meeting Street & US 17 NB**, install a traffic signal when warranted.
5) At the intersection of Morrison Drive & Huger Street, install a traffic signal when warranted. Along Morrison Drive, install a 100-foot southbound right-turn lane.
6) At the intersection of the **I-26 EB Off-Ramp & Mt. Pleasant Street**, install a traffic signal when warranted.
7) At the intersection of **Meeting Street & Cunnington Street**, install a 150-foot southbound left-turn lane along Meeting Street, maintaining enough median width south of the intersection to allow for vehicle storage for two-stage westbound left-turns from Cunnington Street. Along Cunnington Street, install a 150-foot westbound right-turn lane.
8) At the intersection of **Morrison Drive & Brigade Street**, install a 150-foot southbound left-turn lane and a 150-foot northbound left-turn lane along Morrison Drive. Along Brigade Street, install a 150-foot eastbound left-turn lane, and restripe the westbound approach to consist of a shared through/right-turn lane and a left-turn only lane.
9) At the intersection of **Meeting Street & Romney Street**, install a 150-foot southbound left-turn lane and a 150-foot northbound left-turn lane along Meeting Street.
10) At the intersection of **N Hanover Street & Cool Blow Street**, install a traffic signal when warranted.
11) At the intersection of **Meeting Street & US 17 SB**, install a 200-foot westbound right-turn lane along the US 17 SB ramp, with channelized, yield-control at the intersection.
12) At the intersection of **Meeting Street & US 17 NB**, install a 100-foot northbound right-turn lane along Meeting Street, with channelized, free-control at the intersection. Install 700’ of additional pavement to the US 17 NB ramp from the intersection to the beginning of the ramp structure, to provide for two eastbound receiving lanes, which merge down to one lane prior to the structure.
13) At the intersection of **Meeting Street & Huger Street**, add a protected phase to the eastbound left-turn (providing permitted + protected phasing) and remove the protected phase from the

southbound left-turn. Along Huger Street, install a 200-foot westbound right-turn lane, with channelized, yield-control at the intersection, and add a 150-foot westbound left-turn lane.

14) At the intersection of **Brigade Street & Huguenin Avenue**, install a 350-foot westbound right-turn lane along Brigade Street. Along Brigade Street, install median width east of the intersection to allow for two-stage southbound left-turns from Huguenin Avenue.

Worksheets documenting the intersection analyses are provided in Appendix D for 2018 Existing conditions, Appendix E for 2043 No Build conditions, Appendix F for 2043 Build conditions, and Appendix G for 2043 Build (Improved) conditions.

5.2 TURN LANE ANALYSIS

Due to the fact that the Laurel Island Development does not have new driveways on existing roadways, project access points were not analyzed for turn lane requirements per the SCDOT *Roadway Design Manual* (2017). Instead, improvements were evaluated on an intersection-by-intersection basis to mitigate degradations to existing and future no-build levels of service and operation caused by project traffic. For intersections which required installation of new turn lanes, turn lane storage lengths were determined according to SCDOT's *ARMS* manual (2008) and the *Roadway Design Manual* (2017). If the turn lengths according to these guidelines could not be provided due to physical limitations and constraints (i.e. block length), *Synchro's* 95 percentile queue lengths were reviewed in an attempt to provide enough storage to match. If these storage lengths could not be provided, *Synchro's* 50th percentile queue lengths were reviewed.

Listed below are the intersections for which turn lanes are recommended. Each turn lane is evaluated for storage length according to the process described above. All intersection volumes and *Synchro* queue lengths considered are taken under the 2043 Full Build Conditions, in order to ensure storage length provision under the worst case.

Meeting Street & Brigade Street

Northbound Left-Turn Lane: according to SCDOT *RDM*, the required left-turn lane length is 350 feet. This is plausible given the spacing to the next intersection upstream and is therefore recommended.

Southbound Left-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 150 feet. This length is plausible given the spacing to the next intersection upstream and is therefore recommended.

Morrison Drive & Romney Street

Northbound Left-Turn Lane: according to SCDOT *RDM*, the required left-turn lane length is 150 feet. This length is plausible given the spacing to the next intersection upstream and is therefore recommended.

Southbound Left-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 150 feet. This length is plausible given the spacing to the next intersection upstream and is therefore recommended.

Eastbound Left-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 150 feet. This length is plausible given the spacing to the next intersection upstream and is therefore recommended.

Westbound Left-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 150 feet and is therefore recommended.

Westbound Right-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 150 feet and is therefore recommended.

Meeting Street & Cool Blow Street

Northbound Right-Turn Lane: According to the SCDOT *RDM*, the required left-turn lane length is 350 feet. It would be a challenge to provide this length, given the constrains of the proximity of the Cedar Street and US 17 SB intersections. Therefore, it is recommended to utilize the existing length of the bus-pull out: approximately 150 feet.

Westbound Left-Turn Lane: According to the SCDOT *RDM*, the required left-turn lane length is 350 feet. It would be a challenge to provide this length, given the constrains of the proximity of the Nassau Street intersection. The greatest (PM Peak Hour) *Synchro* 95th percentile and 50th percentile queue lengths are also greater than the block distance between Nassau Street and Meeting Street. Therefore, while the feasible turn lane length will likely need to be verified in design, it is recommended to install a 250-foot left-turn lane in order to allow for sufficient distance from the upstream intersection.

Morrison Drive & Huger Street

Southbound Right-Turn Lane: According to the SCDOT *RDM*, the required left-turn lane length is 350 feet. This length is not feasible due to the proximity of the Morrison Drive & US 17 SB intersection. The greatest (AM Peak Hour) *Synchro* 95th percentile queue length is less than 50 feet, due to the fact that traffic is metered by the upstream signal. Therefore, while the feasible turn lane length will likely need to be verified in design, it is recommended to install a 100-foot right-turn lane in order to allow for sufficient distance from the upstream intersection and satisfy the minimum right-turn length required in the SCDOT *RDM*.

Meeting Street & Cunnington Street

Southbound Left-Turn Lane: According to the SCDOT *RDM*, the required left-turn lane length is 150 feet. This length is plausible given the distance to the next upstream intersection and is therefore recommended.

Westbound Right-Turn Lane: According to the SCDOT *RDM*, the required left-turn lane length is 150 feet. This length would likely require right-of-way acquisition; however, it is plausible given physical constraints at the intersection, and is therefore recommended.

Morrison Drive & Brigade Street

Northbound Left-Turn Lane: according to SCDOT *RDM*, the required left-turn lane length is 150 feet. This length is plausible given the spacing to the next intersection upstream and is therefore recommended.

Southbound Left-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 150 feet. This length is plausible given the spacing to the next intersection upstream and is therefore recommended.

Eastbound Left-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 150 feet. This length is plausible given the spacing to the next intersection upstream and is therefore recommended.

Meeting Street & Romney Street

Northbound Left-Turn Lane: according to SCDOT *RDM*, the required left-turn lane length is 150 feet. This length is plausible given the spacing to the next intersection upstream and is therefore recommended.

Southbound Left-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 150 feet. This length is plausible given the spacing to the next intersection upstream and is therefore recommended.

Meeting Street & US 17 SB

Westbound Right-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 350 feet. This length is not feasible given the necessary improvements to the off-ramp structure that would be required. Given that the *Synchro* 95th percentile queues are also greater than the available length, it is recommended to match the length of the existing westbound left-turn lane: approximately 200 feet.

Meeting Street & US 17 NB

Northbound Right-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 350 feet. This length is not feasible given the proximity of the Meeting Street & Huger Street intersection. Therefore, based on the physical constraints of this intersection spacing, it is recommended to provide a northbound right-turn lane of 100 feet in order to allow for sufficient distance from the upstream intersection and satisfy the minimum right-turn length required in the SCDOT *RDM*.

Meeting Street & Huger Street

Westbound Right-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 350 feet. Providing this length would present a challenge due to the proximity of the next upstream intersection. Therefore, while the feasible turn lane length will likely need to be verified in design (due in addition to the new construction in the northeast quadrant of the intersection), it is recommended to provide a 200-foot westbound right-turn lane in order to allow for sufficient distance from the upstream intersection.

Westbound Left-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 150 feet. This length is plausible given the spacing to the next intersection upstream and is therefore recommended.

Brigade Street & Huguenin Avenue

Westbound Right-Turn Lane: according to the SCDOT *RDM*, the required left-turn lane length is 350 feet. This length is plausible given the spacing to the next intersection upstream and is therefore recommended.

6.0 Trip Generation Conversion Table

Due to the considerable scale and timeframe for completion of the Laurel Island Development, it is conceivable that changes to the development's land uses may be desirable to the developer. Table 6.1 was developed to provide a means for revising the land use plan while maintaining equivalent peak hour trips generated for the development as a whole. The table provides development unit equivalencies for each of the proposed land uses for the Laurel Island Development for both AM and PM peak hour trips.

Table 6.1 – Laurel Island Land Use Trip Generation Conversion Table

Land Use		Multifamily Housing (Mid-Rise) 1 D.U.		Hotel 1 Room		Public Park Acre		Movie Theatre Screen		General Office Building 1,000 ft²		Shopping Center 1,000 ft²	
Peak Hour		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Multifamily Housing (Mid-Rise) [221]	1 D.U. is equivalent to	1.000	1.000	0.766	0.733	18.000	4.000	1.636	0.071	0.310	0.383	0.383	0.115
Hotel [310]	1 Room is equivalent to	1.306	1.364	1.000	1.000	23.500	5.455	2.136	0.097	0.405	0.522	0.500	0.157
Public Park [411]	1 Acre is equivalent to	0.056	0.250	0.043	0.183	1.000	1.000	0.091	0.018	0.017	0.096	0.021	0.029
Movie Theater [444]	1 Screen is equivalent to	0.611	14.023	0.468	10.283	11.000	56.091	1.000	1.000	0.190	5.365	0.234	1.619
General Office Building [710]	1,000 SF is equivalent to	3.222	2.614	2.468	1.917	58.000	10.455	5.273	0.186	1.000	1.000	1.234	0.302
Shopping Center [820]	1,000 SF is equivalent to	2.611	8.659	2.000	6.350	47.000	34.636	4.273	0.618	0.810	3.313	1.000	1.000

** Conversion rates based on AM & PM peak hour of adjacent street trip rates from ITE's Trip Generation, 10th Edition*

7.0 Summary of Findings and Recommendations

A traffic impact analysis was conducted for the Laurel Island Development in accordance with SCDOT and The City of Charleston guidelines. The analysis also includes the 995 Morrison Drive Development located east of N Hanover Street and West of Morrison Drive, south of Conroy Street.

The proposed Laurel Island Development is located north of US 17 and east of Morrison Drive in Charleston, South Carolina. The Laurel Island Development will consist of 3,955 mid-rise multifamily housing units, a 400-room hotel, 10 acres of public park, an 8-screen movie theater, 1,950,000 square feet of office, and 250,000 square feet of retail. Access to the development is provided through one existing intersection along Morrison Drive via Romney Street, one proposed entry/exit via Brigade Street, and one proposed entry/exit via Cool Blow Street (upon completion of a proposed Cool Blow Bridge over Morrison Drive and the existing parallel rail tracks).

The 995 Morrison Drive Development will consist of 260 mid-rise multifamily housing units, 250,000 square feet of office, and 26,500 square feet of retail. Access to the development is provided through two proposed full access driveways along an extension of Cedar Street (south of the development), two proposed full access driveways along Conroy Street (north of the development), and one full access driveway along N. Hanover Street.

The results of the intersection analyses indicate that thirteen of the study intersections currently experience or are projected to experience undesirable delay during the peak periods with or without the Laurel Island and 995 Morrison Developments. Therefore, improvements were evaluated. The following is a list of improvements recommended with consideration of the Laurel Island and 995 Morrison Developments:

1) At the intersection of **Meeting Street & Brigade Street**, install a traffic signal when warranted. Along Meeting Street, install a 350-foot northbound left-turn lane and a 150-foot southbound left-turn lane. Along Brigade Street at the westbound approach, restripe to consist of shared through/right-turn lane and one left-turn only lane.
2) At the intersection of **Morrison Drive & Romney Street**, install a traffic signal when warranted. Along Morrison Drive, install a 150-foot northbound left-turn lane and a 150-foot southbound left-turn lane. Along Romney Street, install a 150-foot eastbound left-turn lane, and provide exclusive westbound 150-foot right-turn and 150-foot left-turn lanes.
3) At the intersection of **Meeting Street & Cool Blow Street**, install a traffic signal when warranted. Along Meeting Street, install a 150-foot northbound right-turn lane (maintaining service as the existing bus-pull out), and alter the southbound approach to consist of one through lane and one left-turn only lane. Along Cool Blow Street, install a 250-foot westbound left-turn lane, maintaining an additional lane at the approach as a shared left/right-turn lane.
4) At the intersection of **Meeting Street & US 17 NB**, install a traffic signal when warranted.
5) At the intersection of Morrison Drive & Huger Street, install a traffic signal when warranted. Along Morrison Drive, install a 100-foot southbound right-turn lane.
6) At the intersection of the **I-26 EB Off-Ramp & Mt. Pleasant Street**, install a traffic signal when warranted.

7) At the intersection of **Meeting Street & Cunnington Street**, install a 150-foot southbound left-turn lane along Meeting Street, maintaining enough median width south of the intersection to allow for vehicle storage for two-stage westbound left-turns from Cunnington Street. Along Cunnington Street, install a 150-foot westbound right-turn lane.
8) At the intersection of **Morrison Drive & Brigade Street**, install a 150-foot southbound left-turn lane and a 150-foot northbound left-turn lane along Morrison Drive. Along Brigade Street, install a 150-foot eastbound left-turn lane, and restripe the westbound approach to consist of a shared through/right-turn lane and a left-turn only lane.
9) At the intersection of **Meeting Street & Romney Street**, install a 150-foot southbound left-turn lane and a 150-foot northbound left-turn lane along Meeting Street.
10) At the intersection of **N Hanover Street & Cool Blow Street**, install a traffic signal when warranted.
11) At the intersection of **Meeting Street & US 17 SB**, install a 200-foot westbound right-turn lane along the US 17 SB ramp, with channelized, yield-control at the intersection.
12) At the intersection of **Meeting Street & US 17 NB**, install a 100-foot northbound right-turn lane along Meeting Street, with channelized, free-control at the intersection. Install 700’ of additional pavement to the US 17 NB ramp from the intersection to the beginning of the ramp structure, to provide for two eastbound receiving lanes, which merge down to one lane prior to the structure.
13) At the intersection of **Meeting Street & Huger Street**, add a protected phase to the eastbound left-turn (providing permitted + protected phasing) and remove the protected phase from the southbound left-turn. Along Huger Street, install a 200-foot westbound right-turn lane, with channelized, yield-control at the intersection, and add a 150-foot westbound left-turn lane.
14) At the intersection of **Brigade Street & Huguenin Avenue**, install a 350-foot westbound right-turn lane along Brigade Street. Along Brigade Street, install median width east of the intersection to allow for two-stage southbound left-turns from Huguenin Avenue.

Appendix A

Trip Generation Worksheet

2043 BUILDOUT
TRIP GENERATION ESTIMATES (DRAFT - 11/19/19)
Laurel Island Development Site

Weekday Daily

TRIP GENERATION CHARACTERISTICS						DIRECT. DISTRIB.		GROSS TRIPS			INTERNAL CAPTURE TRIPS				NEW EXTERNAL TRIPS		
Land Use	**Ed.**	**LUC**	**Scale**	**Unit**	**Equation/Rate**	**In**	**Out**	**In**	**Out**	**Total**	**%**	**In**	**Out**	**Trips**	**In**	**Out**	**Total**
Multifamily Housing (Mid-Rise)	10th	221	3,955	DU	∑ PH1, PH2, PH3	50%	50%	10,777	10,777	21,554	9%	1,012	1,012	2,024	9,765	9,765	19,530
Hotel	10th	310	400	rooms	∑ PH1, PH2, PH3	50%	50%	1,832	1,832	3,664	11%	206	206	412	1,626	1,626	3,252
Public Park	10th	411	10	acres	∑ PH1, PH2, PH3	50%	50%	48	48	96	0%	0	0	0	48	48	96
TBD	10th	TBD	TBD	TBD	∑ PH1, PH2, PH3	50%	50%	181	181	362	0%	0	0	0	181	181	362
Movie Theater	10th	444	8	screens	∑ PH1, PH2, PH3	50%	50%	880	880	1,760	0%	47	47	94	833	833	1,666
General Office Building	10th	710	1950	ksf	∑ PH1, PH2, PH3	50%	50%	9,663	9,663	19,326	5%	480	480	960	9,183	9,183	18,366
Shopping Center	10th	820	250	ksf	∑ PH1, PH2, PH3	50%	50%	5,605	5,605	11,210	0%	911	911	1,822	4,694	4,694	9,388
						Total:		**28,986**	**28,986**	**57,972**	**9%**	**2,656**	**2,656**	**5,312**	**26,330**	**26,330**	**52,660**
						NEW EXTERNAL TRIPS (with assumed 10% Mode Split Reduction):									**23,697**	**23,697**	**47,394**

Weekday AM Peak Hour

TRIP GENERATION CHARACTERISTICS						DIRECT. DISTRIB.		GROSS TRIPS			INTERNAL CAPTURE TRIPS				NEW EXTERNAL TRIPS		
Land Use	**Ed.**	**LUC**	**Scale**	**Unit**	**Equation/Rate**	**In**	**Out**	**In**	**Out**	**Total**	**%**	**In**	**Out**	**Trips**	**In**	**Out**	**Total**
Multifamily Housing (Mid-Rise)	10th	221	3,955	DU	∑ PH1, PH2, PH3	26%	74%	330	945	1,272	2%	1	21	22	329	924	1,250
Hotel	10th	310	400	rooms	∑ PH1, PH2, PH3	59%	41%	112	78	190	19%	0	36	36	112	42	154
Public Park	10th	411	10	acres	∑ PH1, PH2, PH3	59%	41%	27	19	46	0%	0	0	0	27	19	46
TBD	10th	TBD	TBD	TBD	∑ PH1, PH2, PH3	33%	67%	4	8	12	0%	0	0	0	4	8	12
Movie Theater	10th	444	8	screens	∑ PH1, PH2, PH3	N/A	N/A	0	0	0	0%	0	0	0	0	0	0
General Office Building	10th	710	1950	ksf	∑ PH1, PH2, PH3	86%	14%	1,646	268	1,914	4%	57	10	67	1,589	258	1,847
Shopping Center	10th	820	250	ksf	∑ PH1, PH2, PH3	62%	38%	172	106	278	0%	19	10	29	153	96	249
						Total:		**2,291**	**1,424**	**3,712**	**4%**	**77**	**77**	**154**	**2,214**	**1,347**	**3,558**
						NEW EXTERNAL TRIPS (with assumed 10% Mode Split Reduction):									**1,993**	**1,212**	**3,205**

*** Used maximum average rate per ITE Trip Generation Manual*

Weekday PM Peak Hour

TRIP GENERATION CHARACTERISTICS						DIRECT. DISTRIB.		GROSS TRIPS			INTERNAL CAPTURE TRIPS				NEW EXTERNAL TRIPS		
Land Use	**Ed.**	**LUC**	**Scale**	**Unit**	**Equation/Rate**	**In**	**Out**	**In**	**Out**	**Total**	**%**	**In**	**Out**	**Trips**	**In**	**Out**	**Total**
Multifamily Housing (Mid-Rise)	10th	221	3,955	DU	∑ PH1, PH2, PH3	61%	39%	942	605	1,551	11%	99	68	167	843	537	1,384
Hotel	10th	310	400	rooms	∑ PH1, PH2, PH3	51%	49%	127	121	248	12%	20	9	29	107	112	219
Public Park	10th	411	10	acres	∑ PH1, PH2, PH3	56%	44%	20	16	36	0%	0	0	0	20	16	36
TBD	10th	TBD	TBD	TBD	∑ PH1, PH2, PH3	59%	41%	19	13	32	0%	0	0	0	19	13	32
Movie Theater	10th	444	8	screens	∑ PH1, PH2, PH3	44%	56%	52	66	118	0%	0	6	6	52	60	112
General Office Building	10th	710	1950	ksf	∑ PH1, PH2, PH3	16%	84%	318	1,661	1,984	5%	34	67	101	284	1,594	1,883
Shopping Center	10th	820	250	ksf	∑ PH1, PH2, PH3	48%	52%	514	556	1,070	0%	81	84	165	433	472	905
						Total:		**1,992**	**3,038**	**5,039**	**9%**	**234**	**234**	**468**	**1,758**	**2,804**	**4,571**
						NEW EXTERNAL TRIPS (with assumed 10% Mode Split Reduction):									**1,582**	**2,524**	**4,106**

*** Used maximum average rate per ITE Trip Generation Manual*

2043 BUILDOUT
TRIP GENERATION ESTIMATES (DRAFT - 11/19/19)
995 Morrison Site

Weekday Daily

TRIP GENERATION CHARACTERISTICS						DIRECT. DISTRIB.		GROSS TRIPS			INTERNAL CAPTURE TRIPS				NEW EXTERNAL TRIPS		
Land Use	**Ed.**	**LUC**	**Scale**	**Unit**	**Equation/Rate**	**In**	**Out**	**In**	**Out**	**Total**	**%**	**In**	**Out**	**Trips**	**In**	**Out**	**Total**
Multifamily Housing (Mid-Rise)	10th	221	305	DU	T = 5.45*(X) - 1.75	50%	50%	832	832	1,664	29%	244	244	488	588	588	1,176
General Office Building	10th	710	250	ksf	Ln(T) = 0.97*Ln(X)+2.50	50%	50%	1,293	1,293	2,586	7%	86	86	171	1,208	1,208	2,415
Shopping Center	10th	820	26.5	ksf	Ln(T) = 0.68*Ln(X)+5.57	50%	50%	1,219	1,219	2,438	23%	281	281	562	938	938	1,876
						Total:		**3,344**	**3,344**	**6,688**	**18%**	**611**	**611**	**1,221**	**2,734**	**2,734**	**5,467**
						NEW EXTERNAL TRIPS (with assumed 10% Mode Split Reduction):									**2,460**	**2,460**	**4,920**

Weekday AM Peak Hour

TRIP GENERATION CHARACTERISTICS						DIRECT. DISTRIB.		GROSS TRIPS			INTERNAL CAPTURE TRIPS				NEW EXTERNAL TRIPS		
Land Use	**Ed.**	**LUC**	**Scale**	**Unit**	**Equation/Rate**	**In**	**Out**	**In**	**Out**	**Total**	**%**	**In**	**Out**	**Trips**	**In**	**Out**	**Total**
Multifamily Housing (Mid-Rise)	10th	221	305	DU	Ln(T)=0.98*Ln(X) - 0.98	26%	74%	27	75	102	2%	0	2	2	27	73	100
General Office Building	10th	710	250	ksf	T = 0.94*(X) +26.49	86%	14%	225	37	262	6%	8	8	16	217	29	246
Shopping Center	10th	820	26.5	ksf	T = 0.50*(X) + 151.78	62%	38%	103	63	166	10%	9	7	16	94	56	150
						Total:		**355**	**175**	**530**	**6%**	**17**	**17**	**34**	**338**	**158**	**496**
						NEW EXTERNAL TRIPS (with assumed 10% Mode Split Reduction):									**304**	**142**	**446**

*** Used maximum average rate per ITE Trip Generation Manual*

Weekday PM Peak Hour

TRIP GENERATION CHARACTERISTICS						DIRECT. DISTRIB.		GROSS TRIPS			INTERNAL CAPTURE TRIPS				NEW EXTERNAL TRIPS		
Land Use	**Ed.**	**LUC**	**Scale**	**Unit**	**Equation/Rate**	**In**	**Out**	**In**	**Out**	**Total**	**%**	**In**	**Out**	**Trips**	**In**	**Out**	**Total**
Multifamily Housing (Mid-Rise)	10th	221	305	DU	Ln(T)=0.96*Ln(X) - 0.63	61%	39%	79	51	130	33%	31	12	43	48	39	87
General Office Building	10th	710	250	ksf	Ln(T)=0.95*Ln(X)+0.36	16%	84%	44	228	272	6%	4	11	15	40	217	257
Shopping Center	10th	820	26.5	ksf	Ln(T)=0.74*Ln(X)+2.89	48%	52%	98	106	204	24%	18	30	48	80	76	156
						Total:		**221**	**385**	**606**	**17%**	**53**	**53**	**106**	**168**	**332**	**500**
						NEW EXTERNAL TRIPS (with assumed 10% Mode Split Reduction):									**151**	**299**	**450**

*** Used maximum average rate per ITE Trip Generation Manual*

Appendix B

Traffic Count Data

Prepared by National Data & Surveying Services

Meeting St & Algonquin Rd

Peak Hour Turning Movement Count

ID: 18-09725-001
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS		COUNT PERIODS
07:15 AM - 08:15 AM	AM	07:00 AM - 09:00 AM
NONE	NOON	NONE
05:00 PM - 06:00 PM	PM	04:00 PM - 06:00 PM

Meeting St — SOUTHBOUND

AM	0	749	11	0	623
NOON	0	0	0	0	0
PM	0	609	8	0	1103
	0	2	0	0	

Algonquin Rd — EASTBOUND

	AM	NOON	PM	
	0	0	0	
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0

Algonquin Rd — WESTBOUND

	PM	NOON	AM
0	26	0	10
1	0	0	0
0	0	0	1
0	0	0	0
	9	0	12

CONTROL

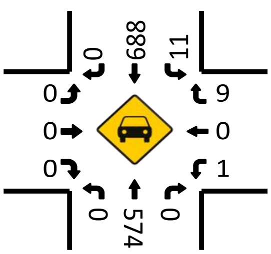
1-Way Stop(WB)

	AM	NOON	PM
TEV	1385	0	1721
PHF	0.86		0.96

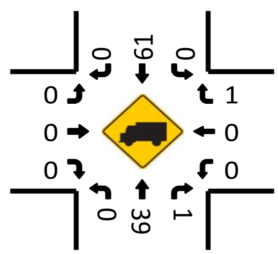
Meeting St — NORTHBOUND

		0	0	2	0	
PM	609	0	0	1077	1	PM
NOON	0	0	0	0	0	NOON
AM	750	0	0	613	1	AM

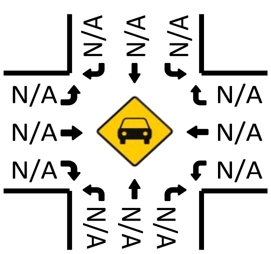
Cars (AM)



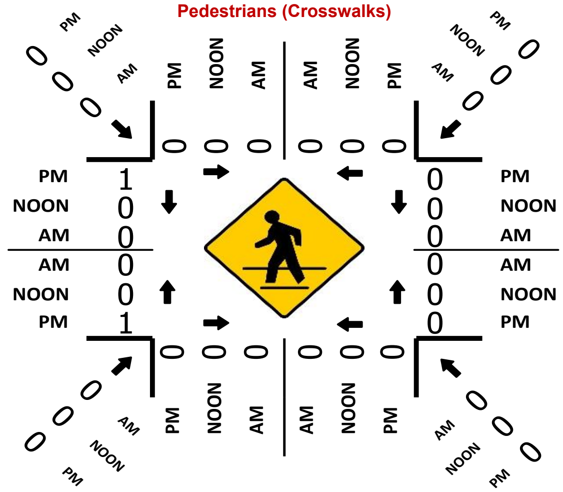
HT (AM)



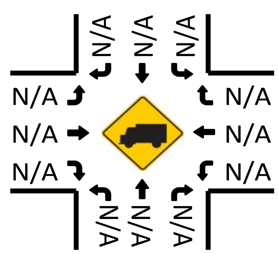
Cars (NOON)



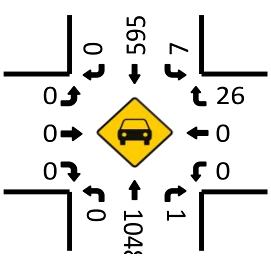
Pedestrians (Crosswalks)



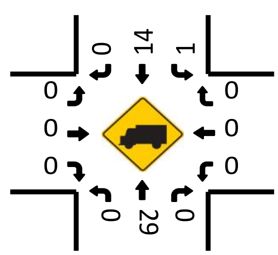
HT (NOON)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Meeting St & Cunnington Ave

Peak Hour Turning Movement Count

ID: 18-09725-002
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS		COUNT PERIODS
AM	07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

Meeting St — SOUTHBOUND

	U-turn	Left	Through	Right	Exit
AM	0	720	25	0	617
NOON	0	0	0	0	0
PM	0	602	16	0	1083
Lanes	0	1	0	0	

Cunnington Ave — EASTBOUND

	AM	NOON	PM	Lanes
Exit	0	0	0	
U-turn	0	0	0	0
Left	0	0	0	0
Through	0	0	0	0
Right	0	0	0	0

Cunnington Ave — WESTBOUND

	PM	NOON	AM	Lanes
Left	11	0	6	0
Through	0	0	0	1
Right	12	0	8	0
U-turn	0	0	0	0
Exit	21	0	29	

CONTROL

1-Way Stop(WB)

	AM	NOON	PM
TEV	1374	0	1719
PHF	0.90		0.96

Meeting St — NORTHBOUND

	Exit	U-turn	Left	Through	Right
Lanes		0	0	1	0
PM	615	1	0	1072	5
NOON	0	0	0	0	0
AM	728	0	0	611	4

Cars (AM)

Approach	U-turn	Left	Through	Right
Southbound	0	662	25	
Eastbound		0	0	0
Westbound		6	0	8
Northbound	0		573	4

HT (AM)

Approach	U-turn	Left	Through	Right
Southbound	0	58	0	
Eastbound		0	0	0
Westbound		0	0	0
Northbound	0		38	0

Cars (NOON)

All movements: N/A

HT (NOON)

All movements: N/A

Cars (PM)

Approach	U-turn	Left	Through	Right
Southbound	0	588	16	
Eastbound		0	0	0
Westbound		11	0	12
Northbound	0		104:	5

HT (PM)

Approach	U-turn	Left	Through	Right
Southbound	0	14	0	
Eastbound		0	0	0
Westbound		0	0	0
Northbound	0		30	0

Pedestrians (Crosswalks)

All crosswalks and diagonal crossings: AM 0, NOON 0, PM 0.

Prepared by National Data & Surveying Services

I-26 EB Ramp/Enston Ave & Mt. Pleasant St

Peak Hour Turning Movement Count

ID: 18-09725-003
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:00 PM - 05:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

I-26 EB Ramp/Enston Ave — SOUTHBOUND

AM	14	5	686	0	0	AM
NOON	0	0	0	0	0	NOON
PM	6	3	359	0	0	PM

Mt. Pleasant St — EASTBOUND

AM	NOON	PM	
132	0	141	⇦
0	0	0	0 ↶
0	0	0	0 ↱
105	0	160	1 →
6	0	6	0 ↷
AM	NOON	PM	

CONTROL

1-Way Stop(SB)

TEV	940	0	673
	AM	NOON	PM
PHF	0.89		0.95

Mt. Pleasant St — WESTBOUND

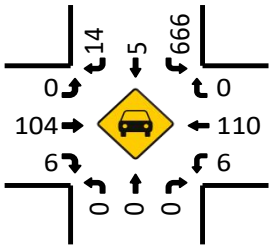
PM	NOON	AM	
0	0	0	0 ↶
135	0	118	1 ←
4	0	6	0 ↰
0	0	0	0 ↩
519	0	791	⇨
PM	NOON	AM	

I-26 EB Ramp/Enston Ave — NORTHBOUND

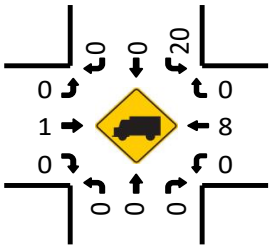
PM	13	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	17	0	0	0	0	AM

0 1.3 0.3 0.3

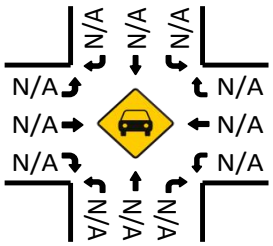
Cars (AM)



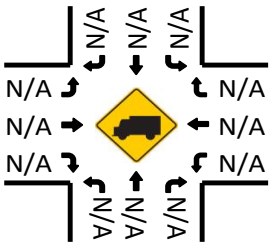
HT (AM)



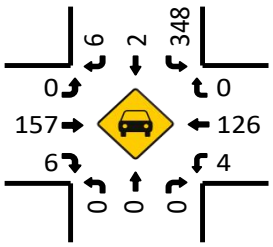
Cars (NOON)



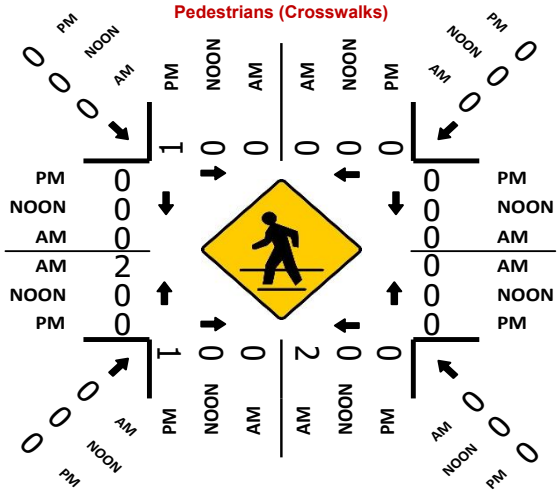
HT (NOON)



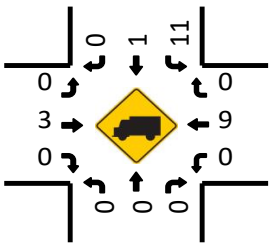
Cars (PM)



Pedestrians (Crosswalks)



HT (PM)



Prepared by National Data & Surveying Services

I-26 WB Ramp/Laurel Ave & Mt. Pleasant St

Peak Hour Turning Movement Count

ID: 18-09725-004
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

I-26 WB Ramp/Laurel Ave — SOUTHBOUND

AM	0	0	0	0	256	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	587	PM

EASTBOUND — Mt. Pleasant St

AM	NOON	PM		
125	0	171	⇦	
0	0	0	↰	0
2	0	1	↑	0
785	0	472	→	2
6	0	5	↱	0
AM	NOON	PM		

WESTBOUND — Mt. Pleasant St

PM	NOON	AM		
584	0	254	↱	0
168	0	125	←	2
6	0	2	↑	0
0	0	1	↰	0
474	0	787	⇨	
PM	NOON	AM		

CONTROL: 1-Way Stop(NB)

TEV	1176 AM	0 NOON	1243 PM
PHF	0.90		0.97

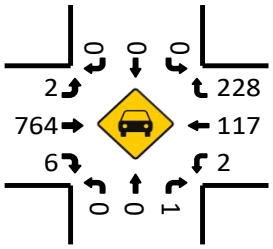
NORTHBOUND — I-26 WB Ramp/Laurel Ave

PM	11	0	3	2	2	PM
NOON	0	0	0	0	0	NOON
AM	8	0	0	0	1	AM

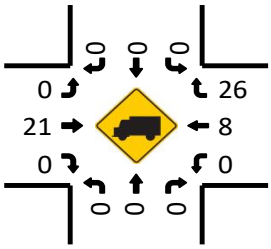
↰	↑	↱
0	0	1

↰	↑	↱
0	0	0

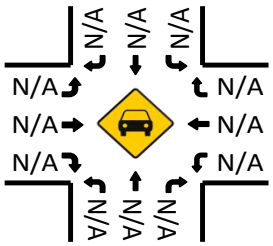
Cars (AM)



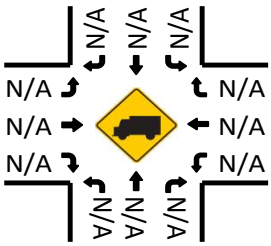
HT (AM)



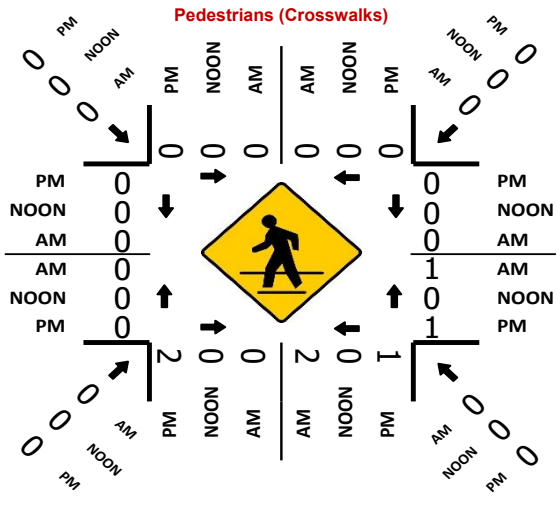
Cars (NOON)



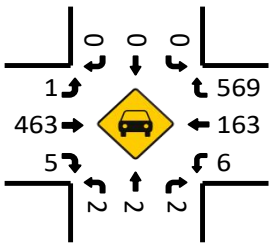
HT (NOON)



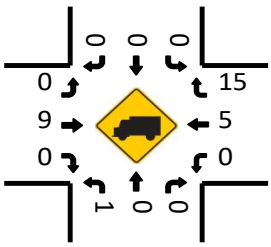
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

King St & Mt. Pleasant St

Peak Hour Turning Movement Count

ID: 18-09725-005
City: Charleston

Day: Wednesday
Date: 12/12/2018

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

King St — SOUTHBOUND

	Right	Through	Left	U-Turn	Exit
AM	37	321	181	0	307
NOON	0	0	0	0	0
PM	28	297	148	0	478
Lanes	0.5	0.5	1	0	

Mt. Pleasant St — EASTBOUND

	AM	NOON	PM	Lanes
Exit	360	0	739	
U-Turn	0	0	0	0
Left	10	0	14	0.5
Through	630	0	346	1
Right	133	0	116	0.5

Mt. Pleasant St — WESTBOUND

	PM	NOON	AM	Lanes
Right	203	0	135	1
Through	602	0	240	1.5
Left	46	0	32	0.5
U-Turn	0	0	0	0
Exit	509	0	826	

King St — NORTHBOUND

	Exit	U-Turn	Left	Through	Right
Lanes		0	1	0.5	0.5
PM	459	0	109	261	15
NOON	0	0	0	0	0
AM	486	0	83	162	15

CONTROL: Signalized

	AM	NOON	PM
TEV	1979	0	2185
PHF	0.91		0.95

Cars (AM)

Approach	Left	Through	Right
Southbound	167	308	36
Eastbound	9	611	132
Westbound	32	212	127
Northbound	78	156	14

HT (AM)

Approach	Left	Through	Right
Southbound	14	13	1
Eastbound	1	19	1
Westbound	0	28	8
Northbound	5	6	1

Cars (NOON)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

HT (NOON)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Cars (PM)

Approach	Left	Through	Right
Southbound	145	294	28
Eastbound	13	341	114
Westbound	45	587	197
Northbound	104	257	15

HT (PM)

Approach	Left	Through	Right
Southbound	3	3	0
Eastbound	1	5	2
Westbound	1	15	6
Northbound	5	4	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (westward)	1	0	0
North leg (eastward)	0	0	0
West leg (southward)	1	0	0
West leg (northward)	0	0	1
East leg (southward)	0	0	0
East leg (northward)	1	0	0
South leg (eastward)	4	0	3
South leg (westward)	2	0	3
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

Prepared by National Data & Surveying Services

Meeting St & Morrison Dr/Mt Pleasant St

Peak Hour Turning Movement Count

ID: 18-09725-006
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Meeting St — SOUTHBOUND

AM	100	397	215	0	611	AM
NOON	0	0	0	0	0	NOON
PM	113	362	157	0	1079	PM
	1	2	1	0		

Morrison Dr/Mt Pleasant St — EASTBOUND

AM	NOON	PM		
403	0	787		
0	0	0	0	
52	0	39	1	
572	0	371	1.5	
183	0	135	0.5	
AM	NOON	PM		

CONTROL

Signalized

TEV	2391 AM	0 NOON	2903 PM
PHF	0.93		0.98

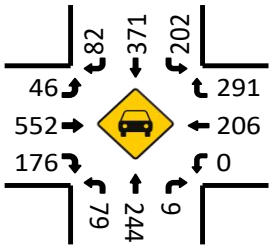
Morrison Dr/Mt Pleasant St — WESTBOUND

PM	NOON	AM	
537	0	302	1
549	0	222	1.5
2	0	0	0.5
0	0	0	0
538	0	797	
PM	NOON	AM	

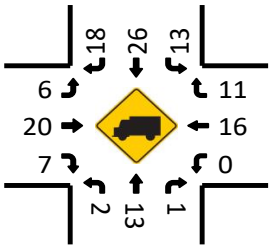
Meeting St — NORTHBOUND

PM	499	0	125	503	10	PM
NOON	0	0	0	0	0	NOON
AM	580	0	81	257	10	AM
		0	1	2	0	

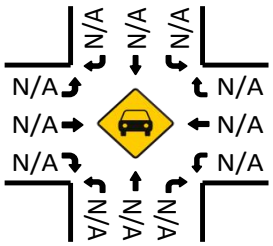
Cars (AM)



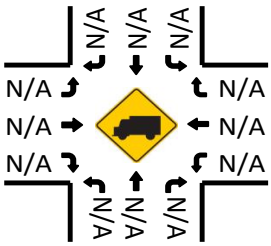
HT (AM)



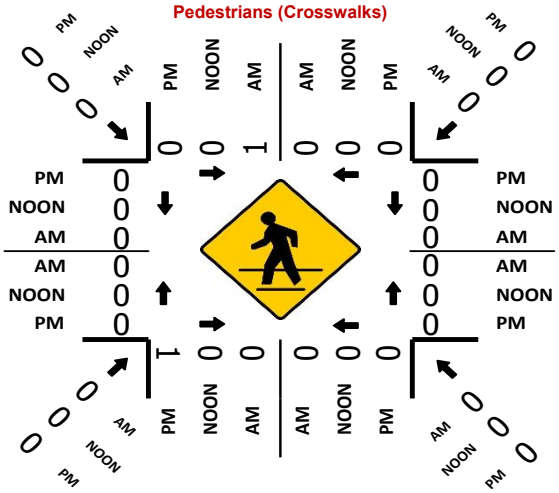
Cars (NOON)



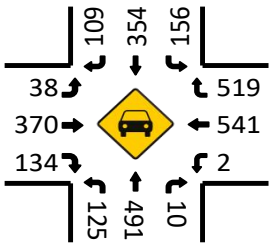
HT (NOON)



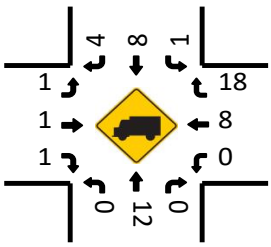
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

I-26 On Ramp & Cypress St

Peak Hour Turning Movement Count

ID: 18-09725-007
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:00 PM - 05:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

I-26 On Ramp — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Cypress St — EASTBOUND

AM	NOON	PM	
40	0	74	⇦
1	0	0	↰ 0
0	0	0	↱ 0
65	0	46	→ 1
27	0	45	↱ 0

WESTBOUND — Cypress St

PM	NOON	AM	
0	0	0	↰ 0
74	0	39	← 1
149	0	56	↰ 0
0	0	0	↱ 0
46	0	65	⇨

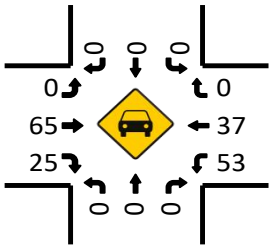
CONTROL: No Control

TEV	188	0	314
	AM	NOON	PM
PHF	0.90		0.96

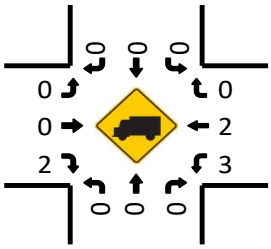
NORTHBOUND — I-26 On Ramp

PM	194	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	83	0	0	0	0	AM

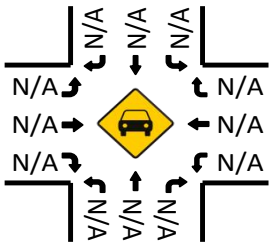
Cars (AM)



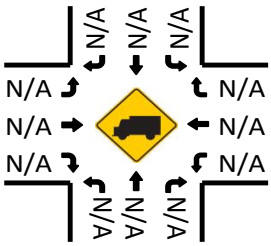
HT (AM)



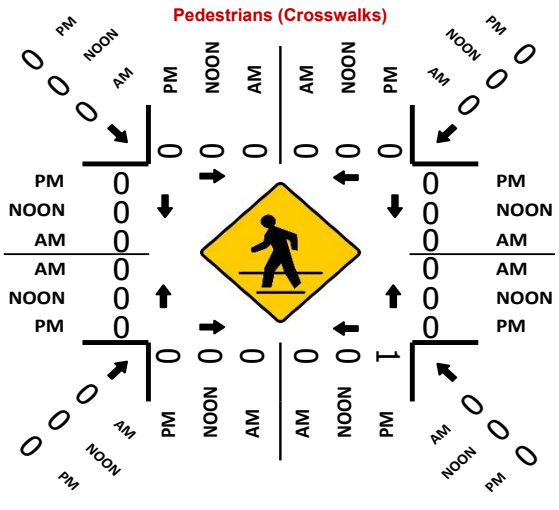
Cars (NOON)



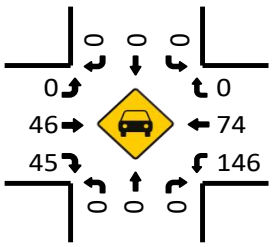
HT (NOON)



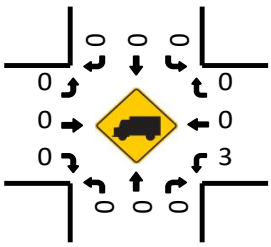
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Meeting St & Brigade St

Peak Hour Turning Movement Count

ID: 18-09725-008
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Meeting St — SOUTHBOUND

AM	48	524	21	0	378	AM
NOON	0	0	0	0	0	NOON
PM	67	414	13	1	636	PM

EASTBOUND — Brigade St

AM	NOON	PM		
95	0	178		
0	0	0	0	
4	0	4	1	
14	0	12	0.5	
46	0	38	0.5	
AM	NOON	PM		

WESTBOUND — Brigade St

PM	NOON	AM	
21	0	6	1
26	0	18	0.5
16	0	7	0.5
0	0	0	0
41	0	52	
PM	NOON	AM	

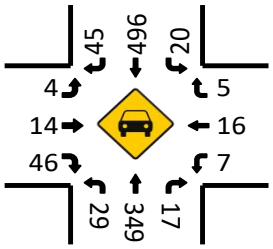
NORTHBOUND — Meeting St

PM	468	0	85	610	16	PM
NOON	0	0	0	0	0	NOON
AM	577	0	29	368	17	AM

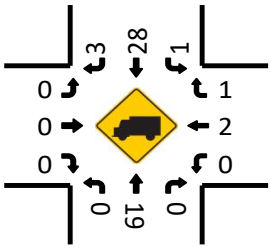
CONTROL: 2-Way Stop(EB/WB)

	AM	NOON	PM
TEV	1102	0	1323
PHF	0.94		0.91

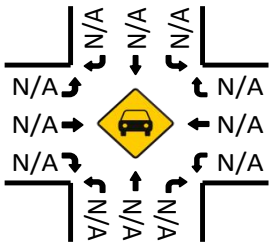
Cars (AM)



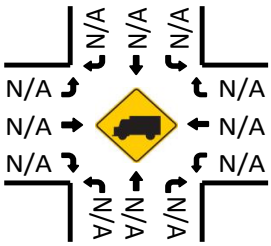
HT (AM)



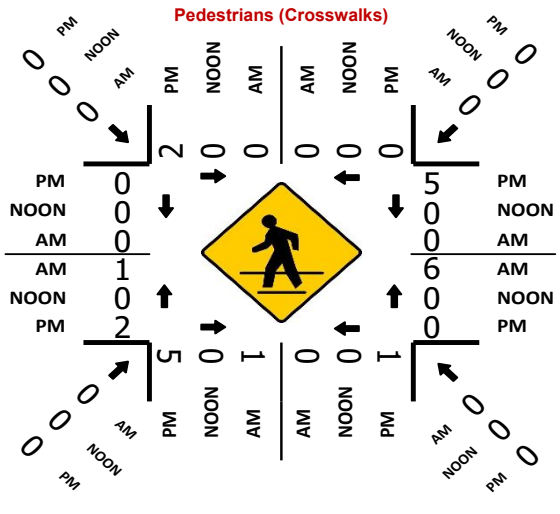
Cars (NOON)



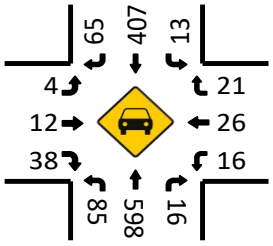
HT (NOON)



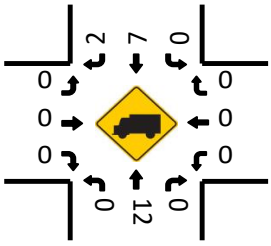
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Morrison Dr & Brigade St

Peak Hour Turning Movement Count

ID: 18-09725-009
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

SOUTHBOUND (Morrison Dr)

AM	18	777	12	0	525	AM
NOON	0	0	0	0	0	NOON
PM	18	445	4	0	1094	PM

EASTBOUND (Brigade St)

AM	NOON	PM	
41	0	57	
0	0	0	0
3	0	7	0.3
10	0	10	0.3
34	0	31	0.3

WESTBOUND (Brigade St)

PM	NOON	AM	
10	0	5	1
10	0	11	0.5
19	0	7	0.5
0	0	0	0
29	0	35	

NORTHBOUND (Morrison Dr)

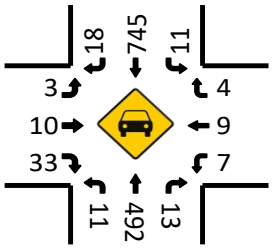
PM	497	2	29	1077	15	PM
NOON	0	0	0	0	0	NOON
AM	818	0	12	517	13	AM

CONTROL

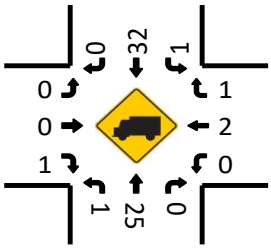
Signalized

TEV	1419 AM	0 NOON	1677 PM
PHF	0.92		0.95

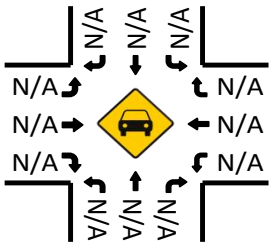
Cars (AM)



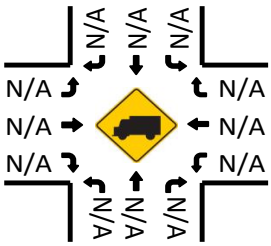
HT (AM)



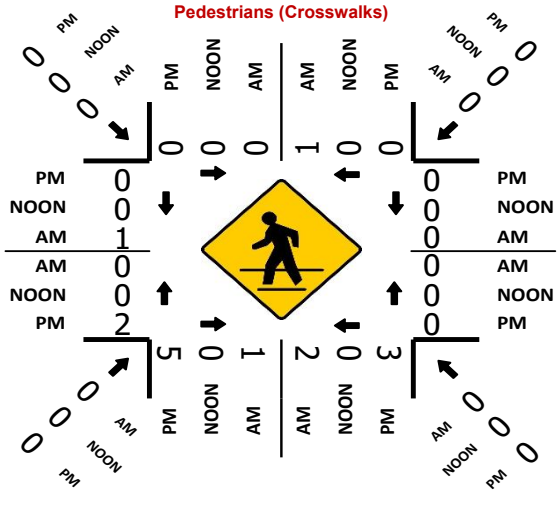
Cars (NOON)



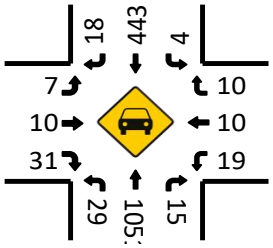
HT (NOON)



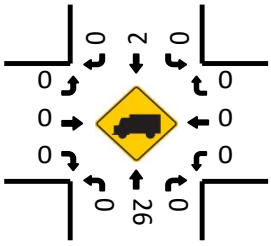
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Meeting St & Williman St

Peak Hour Turning Movement Count

ID: 18-09725-010
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Meeting St — SOUTHBOUND

AM	2	554	14	0	431	AM
NOON	0	0	0	0	0	NOON
PM	0	450	18	0	705	PM

Williman St — EASTBOUND

AM	NOON	PM	
2	0	0	
0	0	0	0
0	0	1	0
1	0	0	1
0	0	0	0
AM	NOON	PM	

Williman St — WESTBOUND

PM	NOON	AM	
29	0	7	0
0	0	0	1
19	0	4	0
0	0	0	0
41	0	32	
PM	NOON	AM	

CONTROL: 1-Way Stop(WB)

TEV	1024 AM	0 NOON	1216 PM
PHF	0.93		0.95

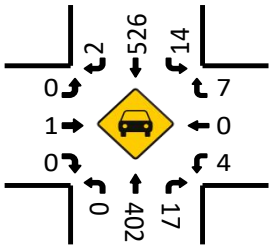
Meeting St — NORTHBOUND

PM	470	1	0	675	23	PM
NOON	0	0	0	0	0	NOON
AM	559	1	0	424	17	AM

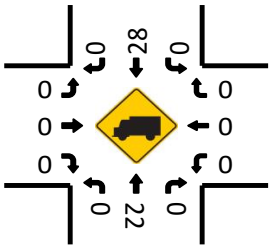
0 1 0 0 | 0 0 1 0

Meeting St

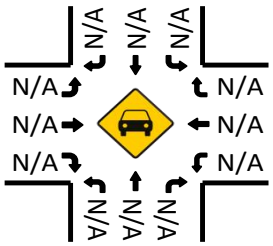
Cars (AM)



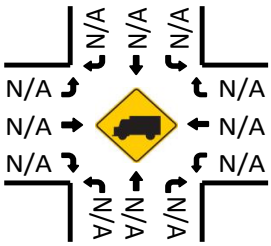
HT (AM)



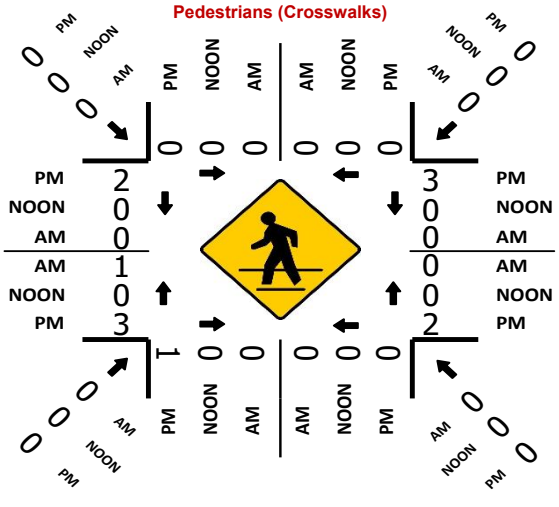
Cars (NOON)



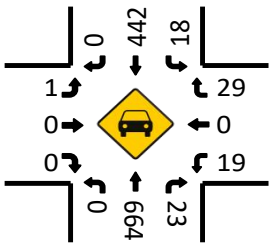
HT (NOON)



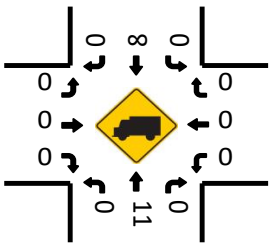
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Morrison Dr & Williman St

Peak Hour Turning Movement Count

ID: 18-09725-011
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Morrison Dr — SOUTHBOUND

AM	10	788	0	0	543	AM
NOON	0	0	0	0	0	NOON
PM	12	466	0	1	1124	PM

EASTBOUND — Williman St

AM	NOON	PM	
14	0	29	
0	0	1	0
1	0	5	0
0	0	0	1
11	0	12	0

WESTBOUND — Williman St

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	

CONTROL

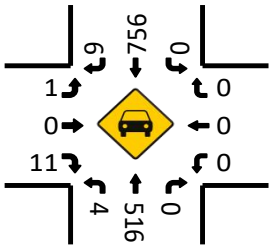
1-Way Stop(EB)

TEV	1358 AM	0 NOON	1631 PM
PHF	0.94		0.94

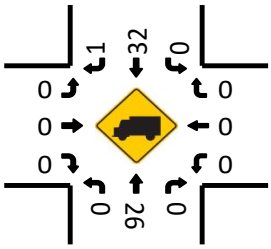
NORTHBOUND — Morrison Dr

PM	478	0	16	1118	0	PM
NOON	0	0	0	0	0	NOON
AM	801	2	4	542	0	AM

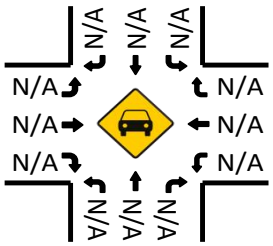
Cars (AM)



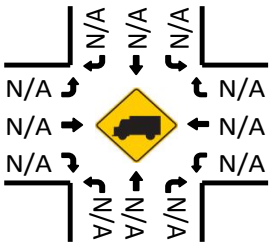
HT (AM)



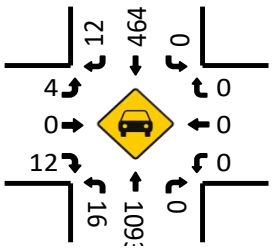
Cars (NOON)



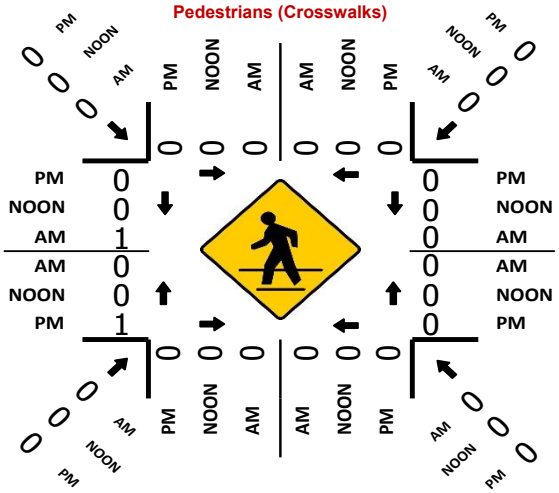
HT (NOON)



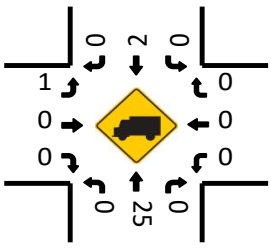
Cars (PM)



Pedestrians (Crosswalks)



HT (PM)



Prepared by National Data & Surveying Services

Meeting St & Isabella St/Indian St

Peak Hour Turning Movement Count

ID: 18-09725-012
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Meeting St — SOUTHBOUND

AM	2	550	9	0	452	AM
NOON	0	0	0	0	0	NOON
PM	2	468	14	0	694	PM

Isabella St/Indian St — EASTBOUND

AM	NOON	PM	
9	0	6	
0	0	0	0
1	0	2	0
0	0	0	1
3	0	9	0

Isabella St/Indian St — WESTBOUND

PM	NOON	AM	
18	0	12	0
1	0	0	1
12	0	7	0
0	0	0	0
20	0	17	

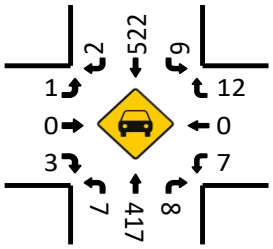
CONTROL: 2-Way Stop(EB/WB)

	AM	NOON	PM
TEV	1038	0	1209
PHF	0.94		0.95

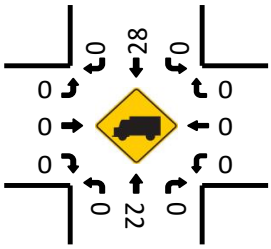
Meeting St — NORTHBOUND

PM	489	0	3	674	6	PM
NOON	0	0	0	0	0	NOON
AM	560	0	7	439	8	AM

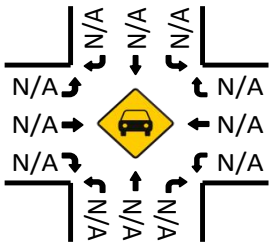
Cars (AM)



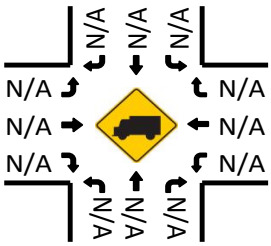
HT (AM)



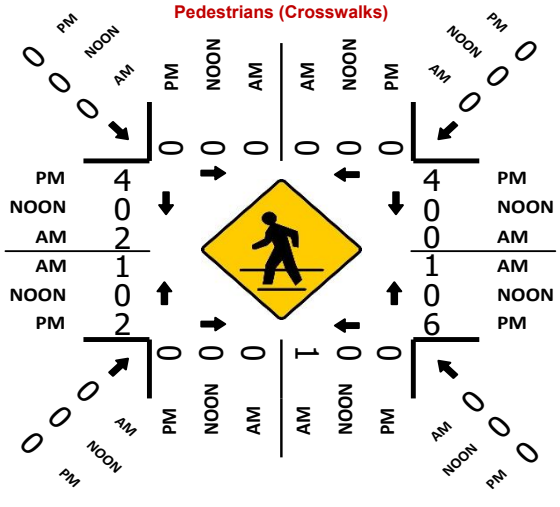
Cars (NOON)



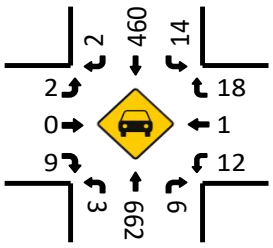
HT (NOON)



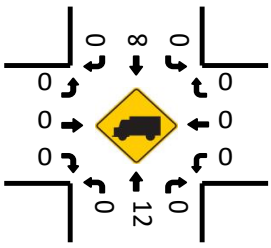
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Morrison Dr & Isabella St

Peak Hour Turning Movement Count

ID: 18-09725-013
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS	
AM	07:30 AM - 08:30 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS	
AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Morrison Dr — SOUTHBOUND

	Right	Thru	Left	U-Turn	Outbound
AM	2	790	0	0	555
NOON	0	0	0	0	0
PM	2	475	0	0	1132
Peds/Bikes	0	2	0	0	

Isabella St — EASTBOUND

	AM	NOON	PM	
Outbound	10	0	9	
U-Turn	0	0	0	0
Left	1	0	4	0
Thru	0	0	0	1
Right	11	0	12	0

Isabella St — WESTBOUND

		PM	NOON	AM
Right	0	0	0	0
Thru	0	0	0	0
Left	0	0	0	0
U-Turn	0	0	0	0
Outbound		0	0	0

Morrison Dr — NORTHBOUND

	Outbound	U-Turn	Left	Thru	Right
Peds/Bikes		0	0	2	0
PM	487	0	7	1128	0
NOON	0	0	0	0	0
AM	801	0	8	554	0

CONTROL

1-Way Stop(EB)

	AM	NOON	PM
TEV	1366	0	1628
PHF	0.95		0.95

Cars (AM)

Approach	Left	Thru	Right
SB	0	760	2
EB	1	0	10
WB	0	0	0
NB	8	527	0

HT (AM)

Approach	Left	Thru	Right
SB	0	30	0
EB	0	0	1
WB	0	0	0
NB	0	27	0

Cars (NOON)

Approach	Left	Thru	Right
SB	N/A	N/A	N/A
EB	N/A	N/A	N/A
WB	N/A	N/A	N/A
NB	N/A	N/A	N/A

HT (NOON)

Approach	Left	Thru	Right
SB	N/A	N/A	N/A
EB	N/A	N/A	N/A
WB	N/A	N/A	N/A
NB	N/A	N/A	N/A

Cars (PM)

Approach	Left	Thru	Right
SB	0	473	2
EB	4	0	12
WB	0	0	0
NB	7	1104	0

HT (PM)

Approach	Left	Thru	Right
SB	0	2	0
EB	0	0	0
WB	0	0	0
NB	0	24	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg	0	0	0
North leg (east side)	0	0	0
West leg (north half)	1	0	0
West leg (south half)	0	0	1
East leg (north half)	0	0	0
East leg (south half)	0	0	0
South leg	0	0	0
South leg (east side)	0	0	0
NW corner	0	0	0
NE corner	0	0	0
SW corner	0	0	0
SE corner	0	0	0

Prepared by National Data & Surveying Services

Meeting St & Romney St

Peak Hour Turning Movement Count

ID: 18-09725-014
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Meeting St — SOUTHBOUND

AM	28	532	2	0	451	AM
NOON	0	0	0	0	0	NOON
PM	45	440	6	0	684	PM

Romney St — EASTBOUND

AM	NOON	PM		
129	0	259	⇦	
0	0	0	↶	0
150	0	141	↱	1
110	0	84	→	1
126	0	67	↷	0
AM	NOON	PM		

Romney St — WESTBOUND

PM	NOON	AM		
20	0	5	↰	0.5
85	0	44	←	0.5
26	0	18	↰	1
0	0	0	↶	0
104	0	123	⇨	
PM	NOON	AM		

	0	2	0	0
	0	0	2	0

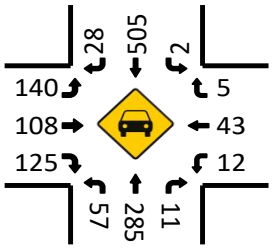
CONTROL: Signalized

TEV	1379 AM	0 NOON	1580 PM
PHF	0.95		0.96

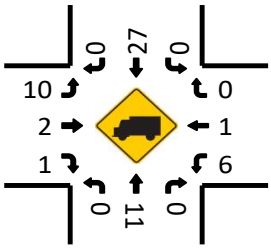
Meeting St — NORTHBOUND

PM	533	0	129	523	14	PM
NOON	0	0	0	0	0	NOON
AM	676	0	57	296	11	AM

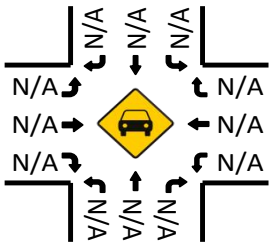
Cars (AM)



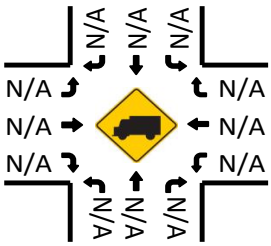
HT (AM)



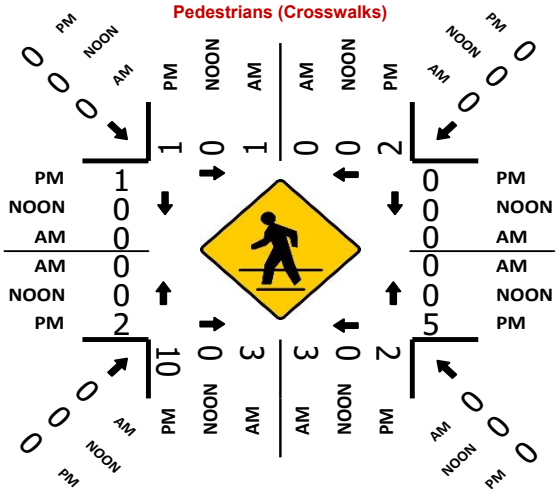
Cars (NOON)



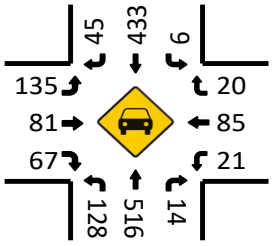
HT (NOON)



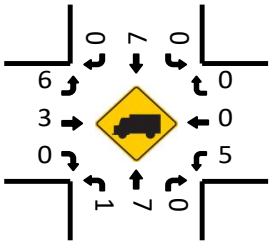
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



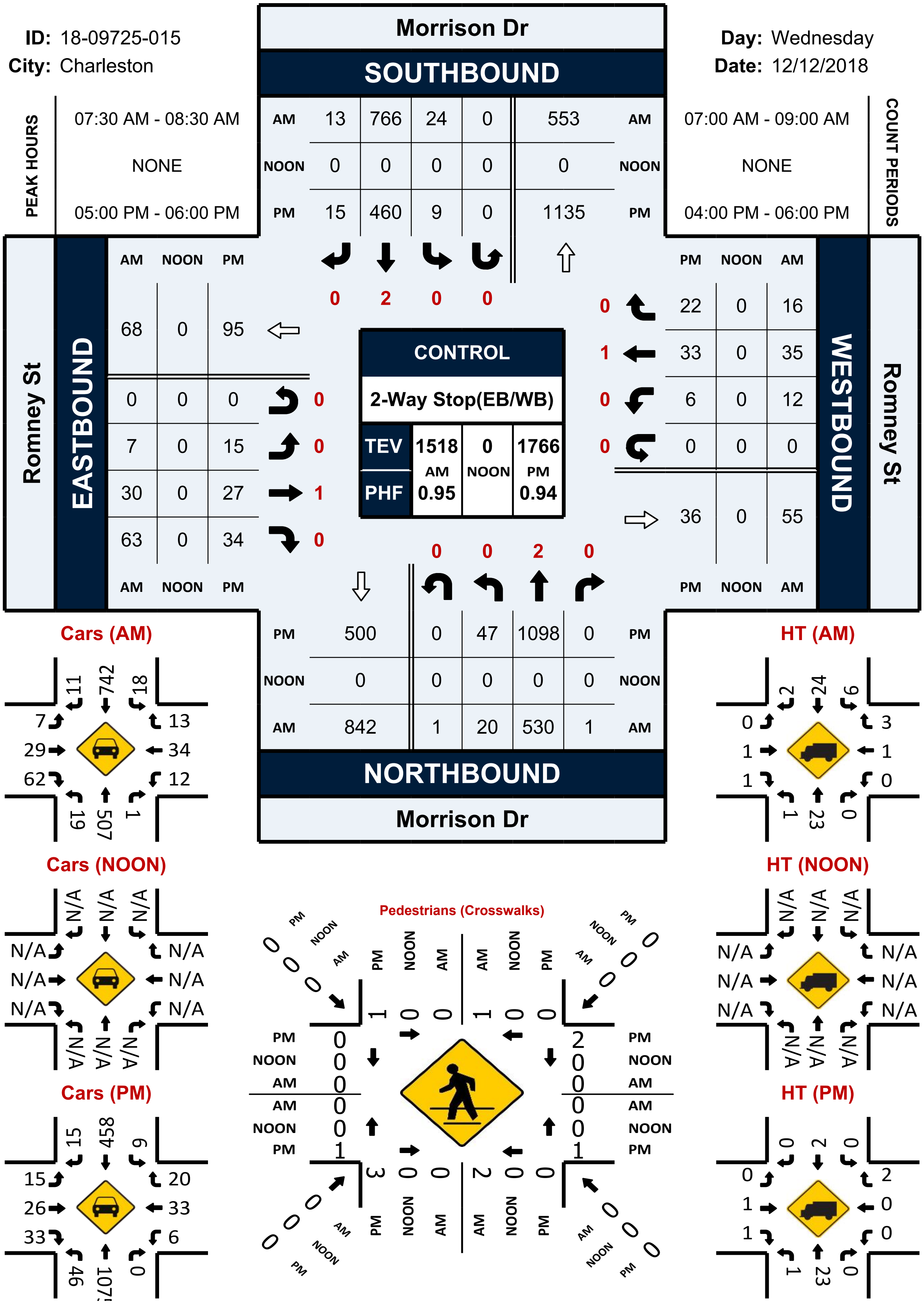
Prepared by National Data & Surveying Services

Morrison Dr & Romney St

Peak Hour Turning Movement Count

ID: 18-09725-015
City: Charleston

Day: Wednesday
Date: 12/12/2018



Prepared by National Data & Surveying Services

Meeting St & Conroy St

Peak Hour Turning Movement Count

ID: 18-09725-016
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Meeting St — SOUTHBOUND

AM	0	579	86	0	371	AM
NOON	0	0	0	0	0	NOON
PM	0	499	48	0	661	PM

EASTBOUND — Conroy St

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND — Conroy St

PM	NOON	AM	
33	0	21	0
0	0	0	1
23	0	14	0
0	0	0	0
79	0	123	
PM	NOON	AM	

CONTROL

1-Way Stop(WB)

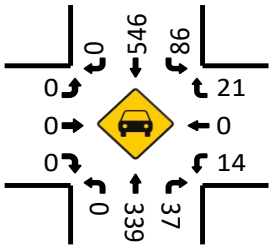
TEV	1087 AM	0 NOON	1262 PM
PHF	0.89		0.93

NORTHBOUND — Meeting St

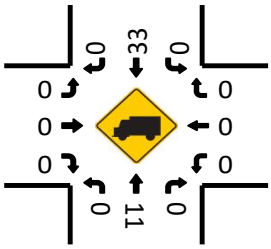
PM	522	0	0	628	31	PM
NOON	0	0	0	0	0	NOON
AM	593	0	0	350	37	AM

0 2 0 0 (EB) — 0 0 2 0 (NB)

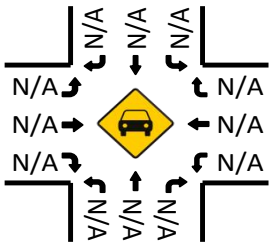
Cars (AM)



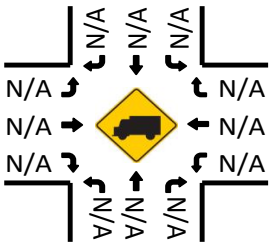
HT (AM)



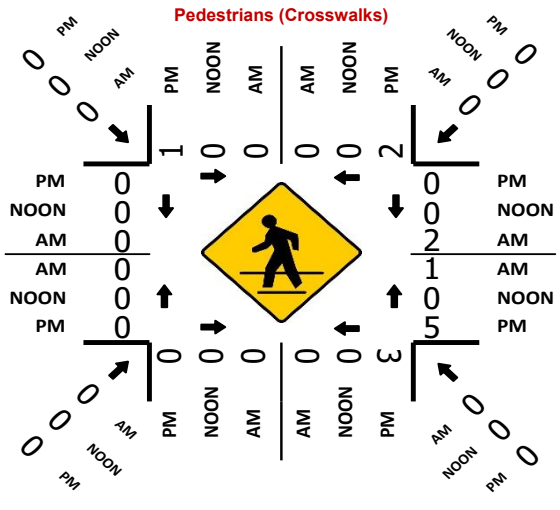
Cars (NOON)



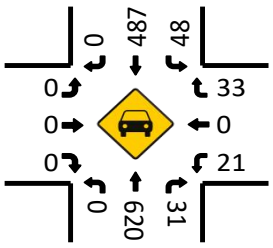
HT (NOON)



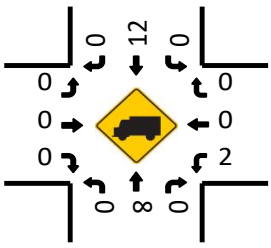
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Morrison Dr & Conroy St/Huguenin Ave

Peak Hour Turning Movement Count

ID: 18-09725-017
City: Charleston

Day: Wednesday
Date: 12/12/2018

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

Morrison Dr — SOUTHBOUND

	U-Turn	Left	Thru	Right	Total (Exit)
AM	0	2	805	33	553
NOON	0	0	0	0	0
PM	0	2	489	10	1147
Peds/Bikes	0	0	2	0	

Conroy St/Huguenin Ave — EASTBOUND

	AM	NOON	PM	
Exit	58	0	51	
U-Turn	0	0	0	0
Left	0	0	8	0
Thru	1	0	1	1
Right	19	0	21	0

Conroy St/Huguenin Ave — WESTBOUND

	PM	NOON	AM	
Right	0	0	0	0
Thru	1	0	0	1
Left	9	0	20	0
U-Turn	0	0	0	0
Exit	29	0	34	

Morrison Dr — NORTHBOUND

	Total (Exit)	U-Turn	Left	Thru	Right
Peds/Bikes		0	0	2	0
PM	520	1	40	1139	26
NOON	0	0	0	0	0
AM	844	0	25	553	31

CONTROL: 2-Way Stop(EB/WB)

	AM	NOON	PM
TEV	1489	0	1747
PHF	0.92		0.92

Cars (AM)

SB: Right 33, Thru 781, Left 2; EB: U-Turn 0, Thru 1, Right 19; WB: U-Turn 0, Thru 0, Left 20; NB: Left 21, Thru 529, Right 29

HT (AM)

SB: 0, 24, 0; EB: 0, 0, 0; WB: 0, 0, 0; NB: 4, 24, 2

Cars (NOON)

All movements: N/A

HT (NOON)

All movements: N/A

Cars (PM)

SB: Right 10, Thru 486, Left 2; EB: Left 8, Thru 1, Right 21; WB: U-Turn 0, Thru 1, Left 9; NB: Left 36, Thru 111(, Right 25

HT (PM)

SB: 0, 3, 0; EB: 0, 0, 0; WB: 0, 0, 0; NB: 4, 23, 1

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (west side)	0	0	0
North leg (east side)	1	0	0
West leg (north side)	1	0	0
West leg (south side)	0	0	0
East leg (north side)	0	0	0
East leg (south side)	0	0	0
South leg (west side)	0	0	0
South leg (east side)	0	0	0
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

Prepared by National Data & Surveying Services

N Hanover St & Cool Blow St

Peak Hour Turning Movement Count

ID: 18-09725-018
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM	07:45 AM - 08:45 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

N Hanover St — SOUTHBOUND

AM	5	9	0	0	9	AM
NOON	0	0	0	0	0	NOON
PM	13	9	1	0	16	PM

EASTBOUND — Cool Blow St

AM	NOON	PM		
7	0	14	⇦	
0	0	0	↱	0
4	0	12	↱	0
0	0	2	→	1
2	0	5	↳	0

WESTBOUND — Cool Blow St

				PM	NOON	AM
			⇨	3	0	0
			↰	1	0	0
			←	1	0	1
			↰	0	0	0
			↰	0	0	0

CONTROL

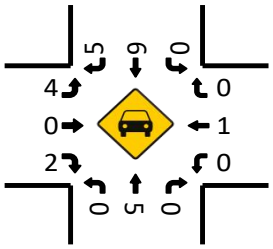
1-Way Stop(EB)

TEV	27 AM	0 NOON	47 PM
PHF	0.75		0.84

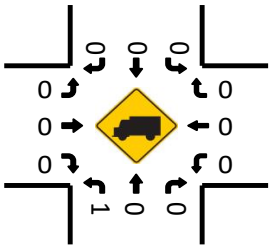
N Hanover St — NORTHBOUND

PM	14	0	0	3	0	PM
NOON	0	0	0	0	0	NOON
AM	11	0	1	5	0	AM

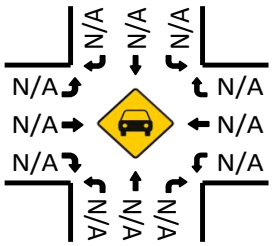
Cars (AM)



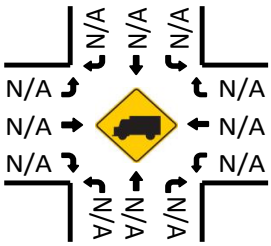
HT (AM)



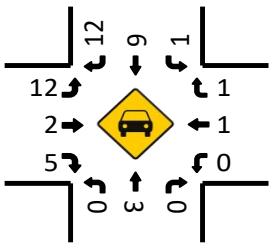
Cars (NOON)



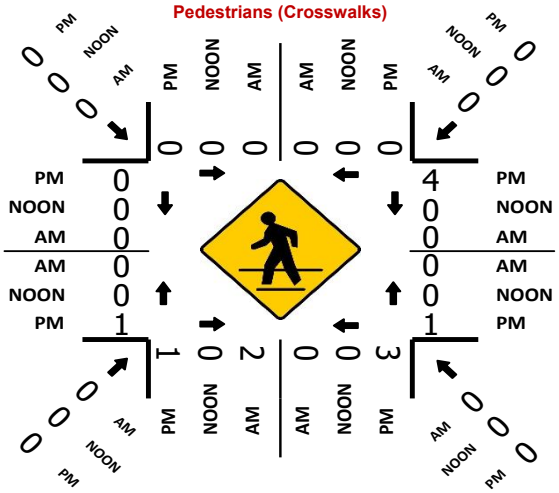
HT (NOON)



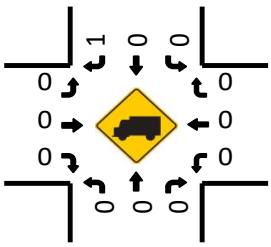
Cars (PM)



Pedestrians (Crosswalks)



HT (PM)



Prepared by National Data & Surveying Services

Meeting St & Cool Blow St

Peak Hour Turning Movement Count

ID: 18-09725-019
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Meeting St — SOUTHBOUND

AM	0	569	22	0	387	AM
NOON	0	0	0	0	0	NOON
PM	0	505	7	0	651	PM

Cool Blow St — EASTBOUND

AM	NOON	PM		
3	0	3		
0	0	0	0	
0	0	0	0	
0	0	0	1	
3	0	9	0	
AM	NOON	PM		

CONTROL

2-Way Stop (EB/WB)

TEV	1095 AM	0 NOON	1240 PM
PHF	0.87		0.93

Cool Blow St — WESTBOUND

PM	NOON	AM	
59	0	57	0
0	0	0	1
47	0	97	0
0	0	0	0
25	0	36	
PM	NOON	AM	

Meeting St — NORTHBOUND

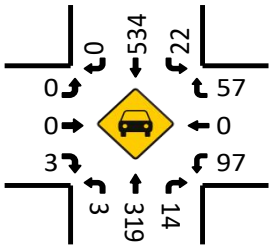
PM	561	0	3	592	18	PM
NOON	0	0	0	0	0	NOON
AM	669	0	3	330	14	AM

Meeting St

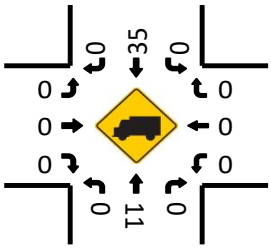
0 0 2 0

0 2 0 0

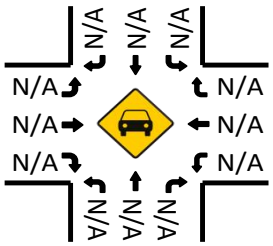
Cars (AM)



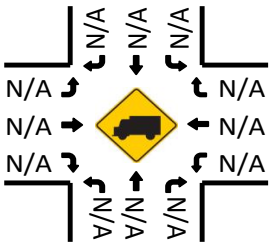
HT (AM)



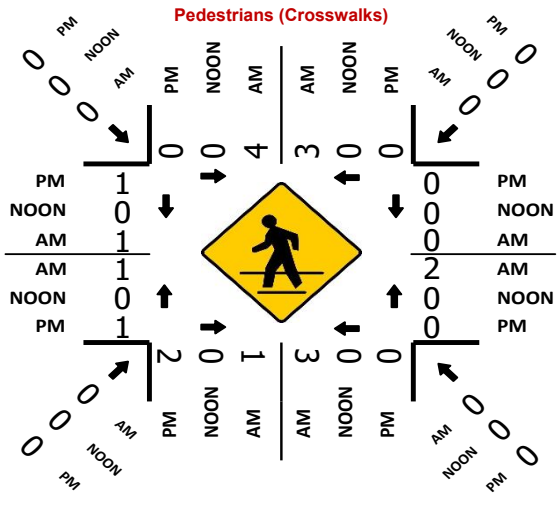
Cars (NOON)



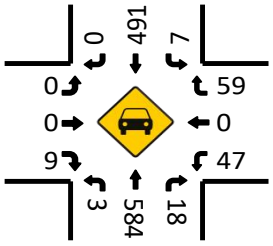
HT (NOON)



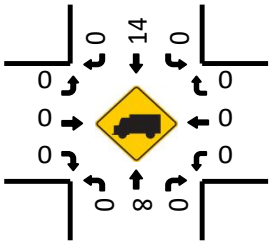
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Nassau St & Cool Blow St

Peak Hour Turning Movement Count

ID: 18-09725-020
City: Charleston

Day: Wednesday
Date: 12/12/2018

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Nassau St — SOUTHBOUND

	Right	Thru	Left	U-Turn	Exit (NB)
AM	120	0	2	0	23
NOON	0	0	0	0	0
PM	61	3	0	0	17
	0	1	0	0	

Cool Blow St — EASTBOUND

	AM	NOON	PM	
Exit (WB)	138	0	78	
U-Turn	0	0	0	0
Left	12	0	10	0
Thru	11	0	12	1
Right	4	0	4	0

Cool Blow St — WESTBOUND

		PM	NOON	AM
Right	0	0	0	2
Thru	1	11	0	7
Left	0	2	0	0
U-Turn	0	0	0	0
Exit (EB)		12	0	15

Nassau St — NORTHBOUND

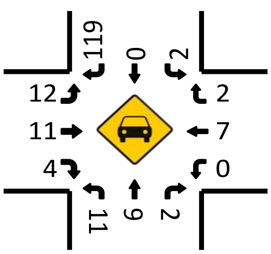
	Exit (SB)	U-Turn	Left	Thru	Right
		0	0	1	0
PM	9	0	6	7	0
NOON	0	0	0	0	0
AM	4	0	11	9	2

CONTROL

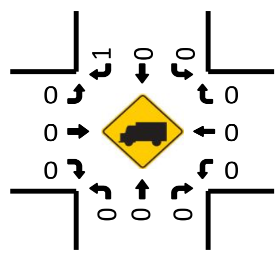
2-Way Stop (EB/WB)

	AM	NOON	PM
TEV	180	0	116
PHF	0.61		0.74

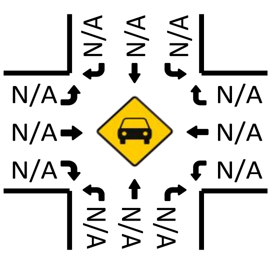
Cars (AM)



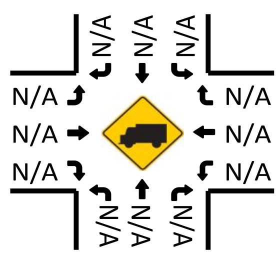
HT (AM)



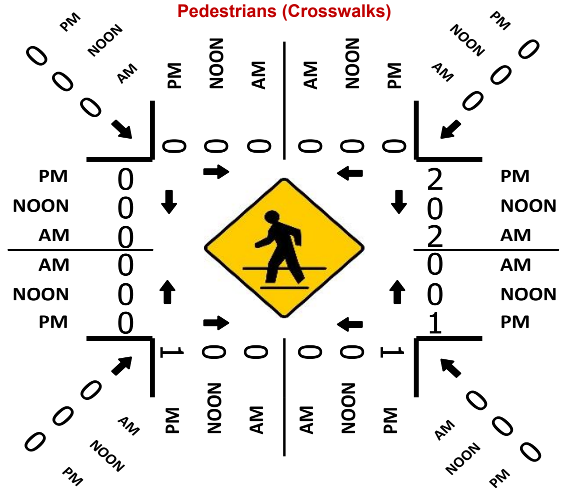
Cars (NOON)



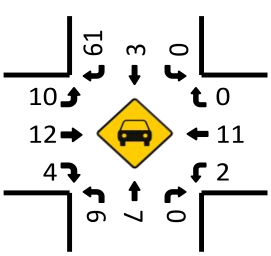
HT (NOON)



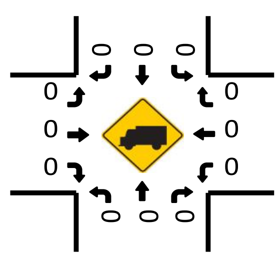
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Meeting St & US-17 SB Ramps

Peak Hour Turning Movement Count

ID: 18-09725-021
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS		COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Meeting St – SOUTHBOUND

	Right	Through	Left	U-Turn	Outbound
AM	70	613	0	0	365
NOON	0	0	0	0	0
PM	42	552	0	0	609
Lanes	0.5	1.5	0	0	

US-17 SB Ramps – WESTBOUND

Movement	Lanes	PM	NOON	AM
Right	0.3	184	0	142
Through	0.3	7	0	3
Left	1.3	256	0	365
U-Turn	0	0	0	0
Outbound		0	0	0

US-17 SB Ramps – EASTBOUND

Movement	AM	NOON	PM	Lanes
Outbound	397	0	661	
U-Turn	0	0	0	0
Left	0	0	0	0
Through	0	0	0	0
Right	0	0	0	0

Meeting St – NORTHBOUND

	Outbound	U-Turn	Left	Through	Right
Lanes		0	2	2	0
PM	808	0	612	425	0
NOON	0	0	0	0	0
AM	978	0	324	223	0

CONTROL

Signalized

	AM	NOON	PM
TEV	1740	0	2078
PHF	0.90		0.91

Cars (AM)

Approach	Left	Through	Right	U-Turn
Southbound	0	579	70	0
Eastbound	0	0	0	
Westbound	359	3	136	
Northbound	311	217	0	0

HT (AM)

Approach	Left	Through	Right	U-Turn
Southbound	0	34	0	0
Eastbound	0	0	0	
Westbound	6	0	6	
Northbound	13	6	0	0

Cars (NOON)

All movements: N/A

HT (NOON)

All movements: N/A

Cars (PM)

Approach	Left	Through	Right	U-Turn
Southbound	0	536	42	0
Eastbound	0	0	0	
Westbound	253	7	180	
Northbound	602	420	0	0

HT (PM)

Approach	Left	Through	Right	U-Turn
Southbound	0	16	0	0
Eastbound	0	0	0	
Westbound	3	0	4	
Northbound	10	5	0	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North (west half)	0	0	0
North (east half)	0	0	0
West (north half)	1	0	0
West (south half)	2	0	1
East (north half)	0	0	2
East (south half)	1	0	5
South (west half)	0	0	0
South (east half)	0	0	0
Northwest diagonal	0	0	0
Northeast diagonal	0	0	0
Southwest diagonal	0	0	0
Southeast diagonal	0	0	0

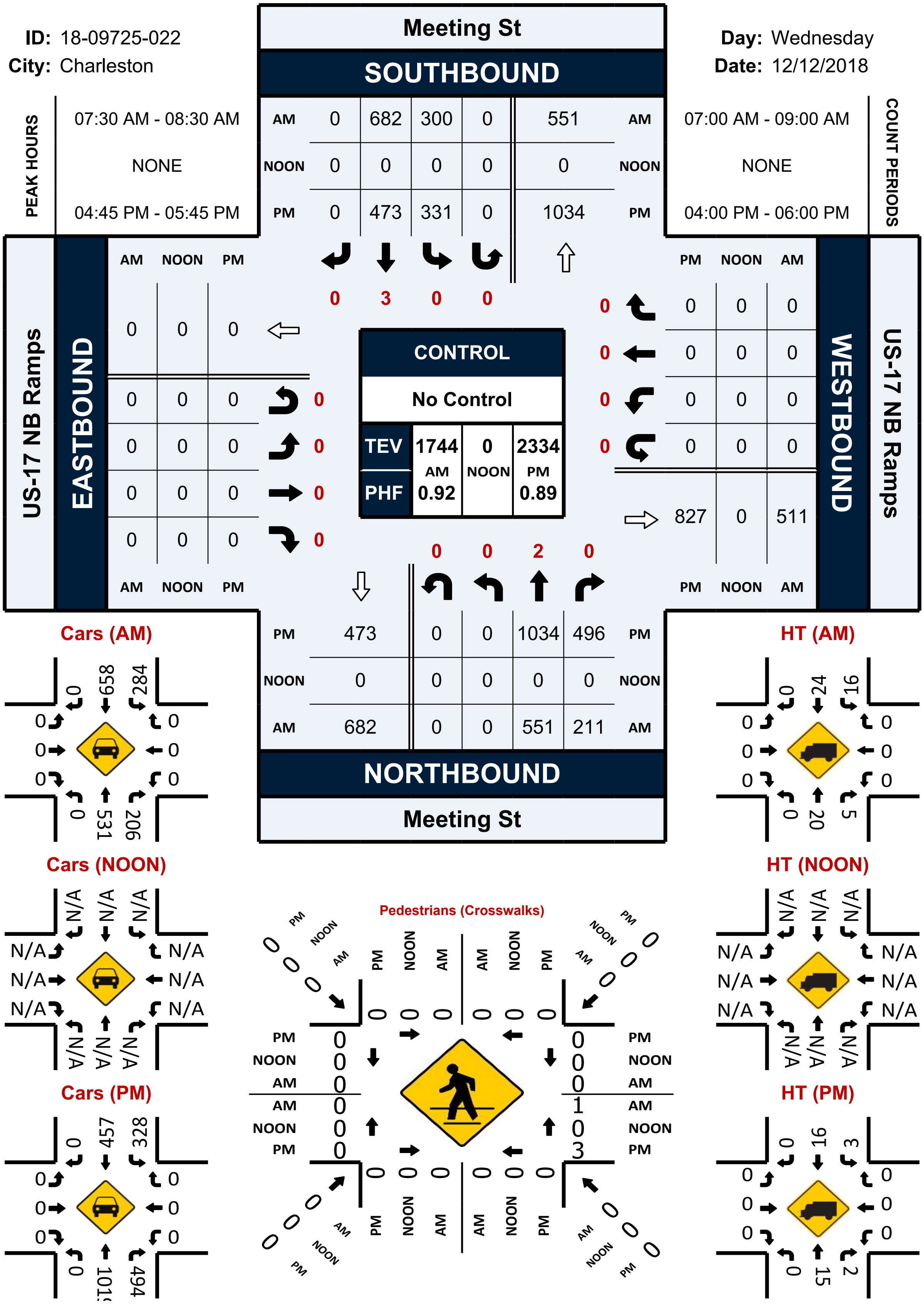
Prepared by National Data & Surveying Services

Meeting St & US-17 NB Ramps

Peak Hour Turning Movement Count

ID: 18-09725-022
City: Charleston

Day: Wednesday
Date: 12/12/2018



Prepared by National Data & Surveying Services

Meeting St & Huger St

Peak Hour Turning Movement Count

ID: 18-09725-023
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Meeting St — SOUTHBOUND

AM	199	458	25	0	762	AM
NOON	0	0	0	0	0	NOON
PM	172	313	18	0	1508	PM
	0	2	1	0		

EASTBOUND — Huger St

AM	NOON	PM	
365	0	385	
0	0	0	0
192	0	232	1
100	0	91	0.5
47	0	34	0.5
AM	NOON	PM	

WESTBOUND — Huger St

PM	NOON	AM	
191	0	41	0.5
127	0	74	0.5
16	0	8	1
0	0	0	0
127	0	130	
PM	NOON	AM	

CONTROL: Signalized

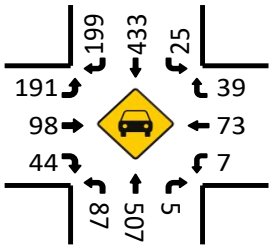
TEV	1770 AM	0 NOON	2383 PM
PHF	0.89		0.92

Meeting St — NORTHBOUND

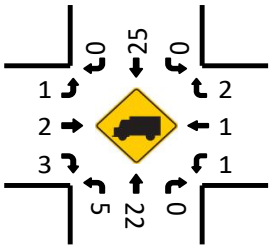
PM	363	0	86	1085	18	PM
NOON	0	0	0	0	0	NOON
AM	513	0	92	529	5	AM
	0	1	2	0		

Meeting St

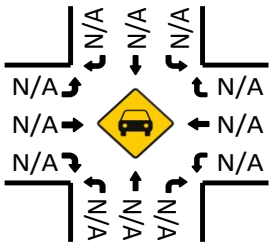
Cars (AM)



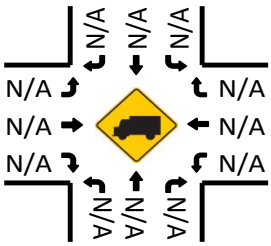
HT (AM)



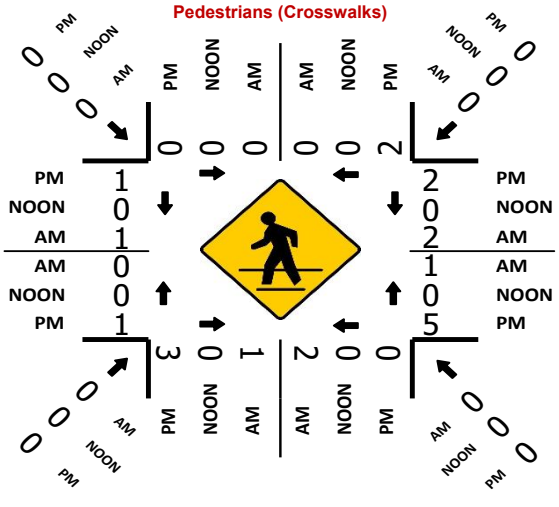
Cars (NOON)



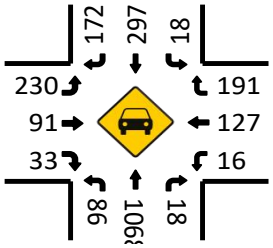
HT (NOON)



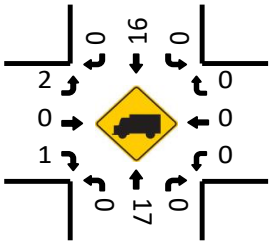
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Morrison Dr & Huger St

Peak Hour Turning Movement Count

ID: 18-09725-024
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Morrison Dr — SOUTHBOUND

AM	53	1801	0	0	305	AM
NOON	0	0	0	0	0	NOON
PM	183	910	1	0	811	PM

EASTBOUND — Huger St

AM	NOON	PM		
109	0	344		
0	0	0	0	
5	0	17	1	
1	0	0	0	
79	0	62	1	
AM	NOON	PM		

WESTBOUND — Huger St

PM	NOON	AM	
4	0	6	1
2	0	0	0
2	0	2	0
0	0	0	0
7	0	3	
PM	NOON	AM	

CONTROL

2-Way Stop (EB/WB)

TEV	2300 AM	0 NOON	2136 PM
PHF	0.94		0.95

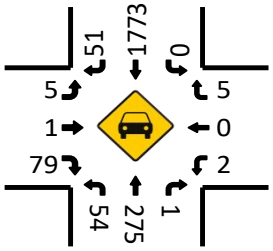
Morrison Dr — NORTHBOUND

PM	974	0	159	790	6	PM
NOON	0	0	0	0	0	NOON
AM	1883	1	56	294	2	AM

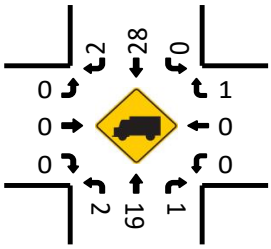
0 0 2 0

0 2 0 0

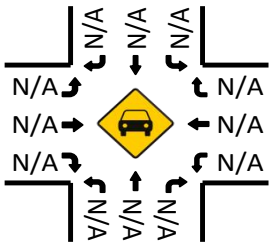
Cars (AM)



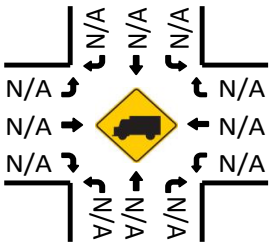
HT (AM)



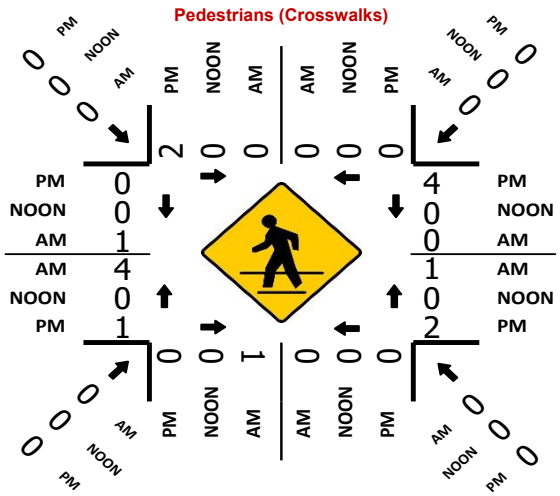
Cars (NOON)



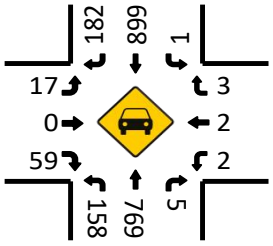
HT (NOON)



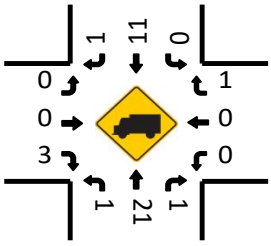
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Morrison Dr & US-17 SB Ramp

Peak Hour Turning Movement Count

ID: 18-09725-025
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Morrison Dr)

AM	0	806	0	0	628	AM
NOON	0	0	0	0	0	NOON
PM	0	545	0	0	1201	PM

EASTBOUND (US-17 SB Ramp)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (US-17 SB Ramp)

PM	NOON	AM	
469	0	325	0.5
0	0	0	0
568	0	1043	1.5
0	0	0	0
0	0	0	
PM	NOON	AM	

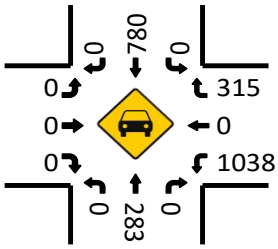
NORTHBOUND (Morrison Dr)

PM	1113	0	0	732	0	PM
NOON	0	0	0	0	0	NOON
AM	1850	1	0	303	0	AM

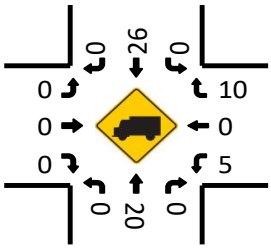
0	2	0	0
0	0	2	0

CONTROL			
Signalized			
TEV	2478	0	2314
	AM	NOON	PM
PHF	0.94		0.95

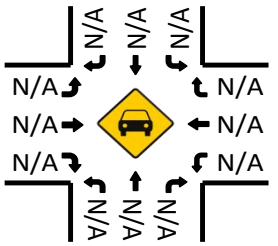
Cars (AM)



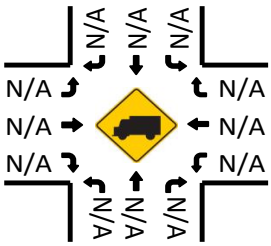
HT (AM)



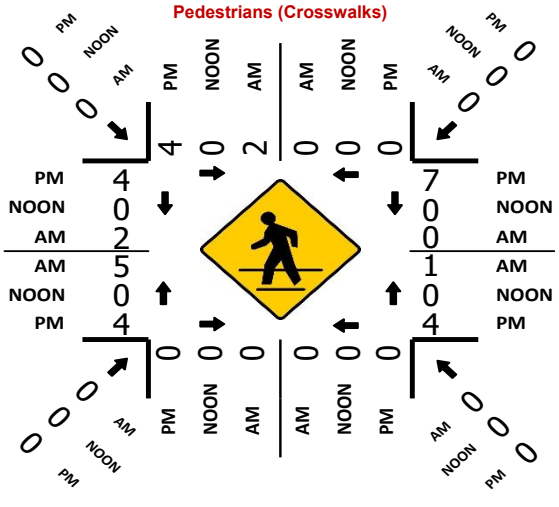
Cars (NOON)



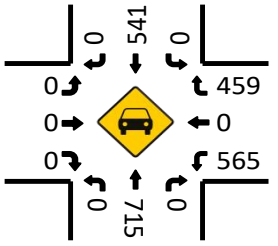
HT (NOON)



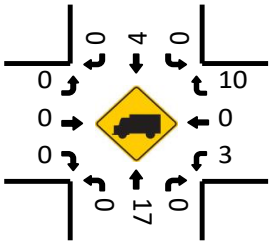
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Nassau St & Isabella St

Peak Hour Turning Movement Count

ID: 18-09725-026
City: Charleston

Day: Wednesday
Date: 12/12/2018

PEAK HOURS

AM: 08:00 AM - 09:00 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Nassau St — SOUTHBOUND

AM	1	2	0	0	4	AM
NOON	0	0	0	0	0	NOON
PM	5	3	4	0	15	PM

EASTBOUND — Isabella St

AM	NOON	PM	
21	0	28	
0	0	0	0
2	0	4	0
15	0	12	1
0	0	8	0
AM	NOON	PM	

WESTBOUND — Isabella St

PM	NOON	AM	
3	0	0	0
18	0	14	1
3	0	1	0
1	0	0	0
22	0	15	
PM	NOON	AM	

CONTROL

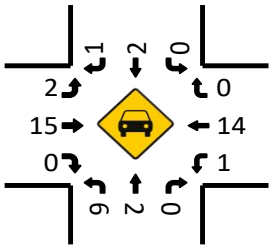
2-Way Stop (NB/SB)

TEV	43 AM	0 NOON	79 PM
PHF	0.83		0.90

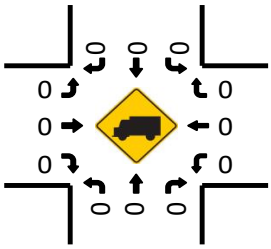
NORTHBOUND — Nassau St

PM	14	0	5	8	5	PM
NOON	0	0	0	0	0	NOON
AM	3	0	6	2	0	AM

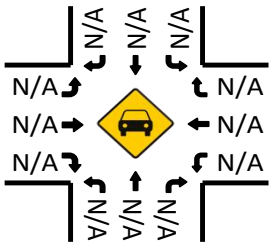
Cars (AM)



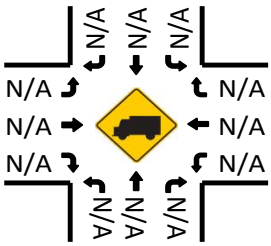
HT (AM)



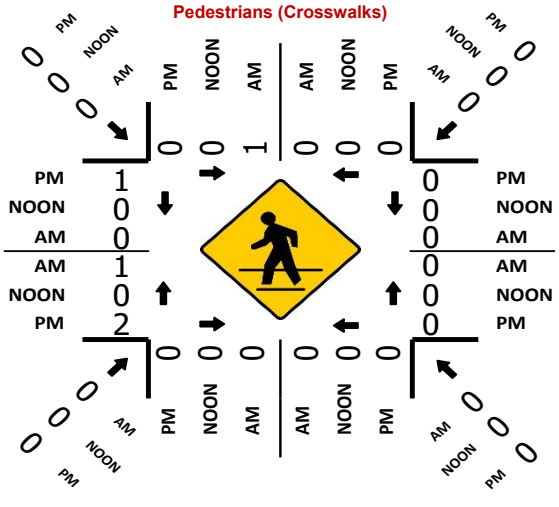
Cars (NOON)



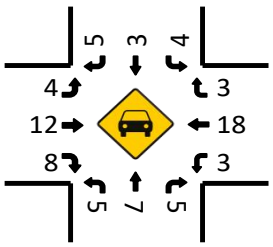
HT (NOON)



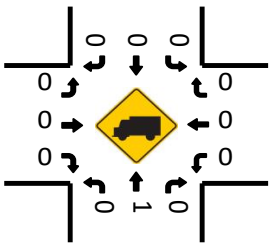
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

N Hanover St & Romney St

Peak Hour Turning Movement Count

ID: 18-09725-027
City: Charleston

Day: Wednesday
Date: 12/12/2018

	PEAK HOURS	COUNT PERIODS
AM	07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

N Hanover St — SOUTHBOUND

	Right	Through	Left	U-Turn	Exiting
AM	2	2	5	0	12
NOON	0	0	0	0	0
PM	9	3	2	0	10
Lanes	0	1	0	0	

Romney St — EASTBOUND

	AM	NOON	PM	Lanes
Exiting	69	0	114	
U-Turn	0	0	0	0
Left	9	0	3	0
Through	99	0	65	1
Right	7	0	5	0

Romney St — WESTBOUND

	PM	NOON	AM	Lanes
Right	6	0	2	0
Through	101	0	64	1
Left	3	0	0	0
U-Turn	0	0	0	0
Exiting	69	0	105	

N Hanover St — NORTHBOUND

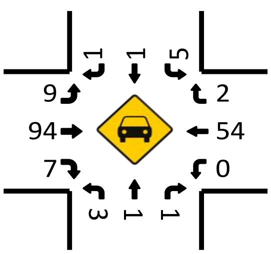
	Exiting	U-Turn	Left	Through	Right
Lanes		0	0	1	0
PM	11	0	4	1	2
NOON	0	0	0	0	0
AM	9	0	3	1	1

CONTROL

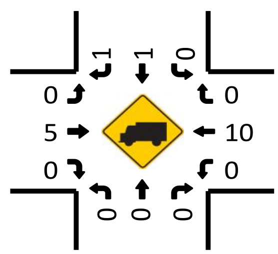
2-Way Stop (NB/SB)

	AM	NOON	PM
TEV	195	0	204
PHF	0.80		0.96

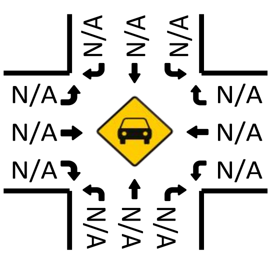
Cars (AM)



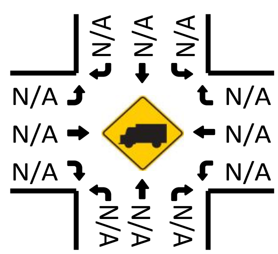
HT (AM)



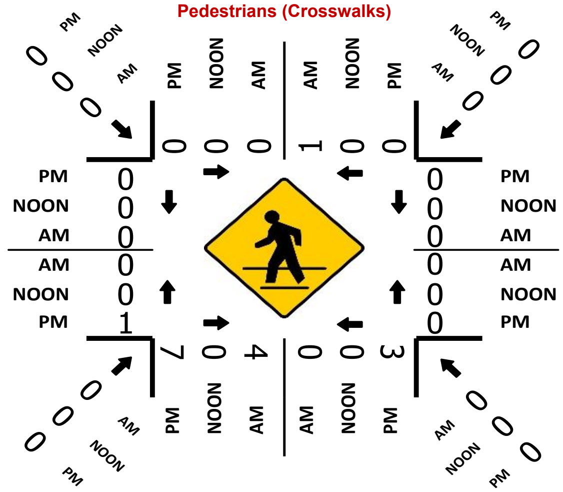
Cars (NOON)



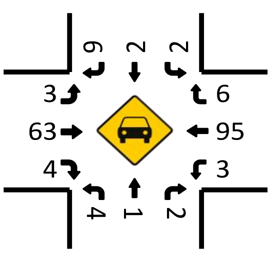
HT (NOON)



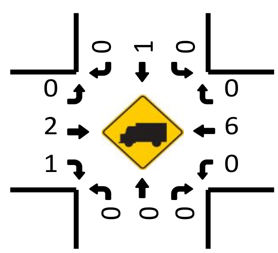
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Appendix C

Traffic Volume Development Worksheets

1 - MEETING ST & ALGONQUIN RD

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:15 AM - 8:15 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**0**	**1**	**0**	**10**	**0**	**613**	**1**	**11**	**749**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	0	0	4	0	230	0	4	281	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**1**	**0**	**14**	**0**	**843**	**1**	**15**	**1,030**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	25	0	0	53	0
2043 INBOUND PROJECT TRAFFIC %										8%	12%	
2043 OUTBOUND PROJECT TRAFFIC %						8%		12%				
2043 PROJECT TRAFFIC	0	0	0	0	0	97	0	145	0	159	239	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**0**	**1**	**0**	**111**	**0**	**1,013**	**1**	**174**	**1,322**	**0**

1 - MEETING ST & ALGONQUIN RD

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**0**	**0**	**0**	**26**	**0**	**1,077**	**1**	**8**	**609**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	0	0	10	0	404	0	3	228	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**0**	**0**	**36**	**0**	**1,481**	**1**	**11**	**837**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	51	0	0	27	0
2043 INBOUND PROJECT TRAFFIC %										8%	12%	
2043 OUTBOUND PROJECT TRAFFIC %						8%		12%				
2043 PROJECT TRAFFIC	0	0	0	0	0	202	0	303	0	127	190	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**0**	**0**	**0**	**238**	**0**	**1,835**	**1**	**138**	**1,054**	**0**

2 - MEETING ST & CUNNINGTON AVE

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:15 AM - 8:15 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**0**	**8**	**0**	**6**	**0**	**611**	**4**	**25**	**720**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	3	0	2	0	229	2	9	270	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**11**	**0**	**8**	**0**	**840**	**6**	**34**	**990**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	25	0	0	53	0
2043 INBOUND PROJECT TRAFFIC %										8%	4%	
2043 OUTBOUND PROJECT TRAFFIC %						8%		4%				
2043 PROJECT TRAFFIC	0	0	0	0	0	97	0	48	0	159	80	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**0**	**11**	**0**	**105**	**0**	**913**	**6**	**193**	**1,123**	**0**

2 - MEETING ST & CUNNINGTON AVE

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**0**	**12**	**0**	**11**	**1**	**1,072**	**5**	**16**	**602**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	5	0	4	0	402	2	6	226	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**17**	**0**	**15**	**1**	**1,474**	**7**	**22**	**828**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	51	0	0	27	0
2043 INBOUND PROJECT TRAFFIC %										8%	4%	
2043 OUTBOUND PROJECT TRAFFIC %						8%		4%				
2043 PROJECT TRAFFIC	0	0	0	0	0	202	0	101	0	127	63	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**0**	**17**	**0**	**217**	**1**	**1,626**	**7**	**149**	**918**	**0**

3 - I-26 EB RAMP/ENSTON AVE & MT. PLEASANT ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**105**	**6**	**6**	**118**	**0**	**0**	**0**	**0**	**686**	**5**	**14**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	39	2	2	44	0	0	0	0	257	2	5
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	11	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**144**	**8**	**8**	**162**	**0**	**0**	**0**	**0**	**954**	**7**	**19**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	0	0	37	0	0
2043 INBOUND PROJECT TRAFFIC %										14%		
2043 OUTBOUND PROJECT TRAFFIC %												
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	0	0	279	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**144**	**8**	**8**	**162**	**0**	**0**	**0**	**0**	**1,270**	**7**	**19**

3 - I-26 EB RAMP/ENSTON AVE & MT. PLEASANT ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 4:00 PM - 5:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**160**	**6**	**4**	**135**	**0**	**0**	**0**	**0**	**359**	**3**	**6**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	60	2	2	51	0	0	0	0	135	1	2
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	48	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**220**	**8**	**6**	**186**	**0**	**0**	**0**	**0**	**542**	**4**	**8**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	0	0	19	0	0
2043 INBOUND PROJECT TRAFFIC %										14%		
2043 OUTBOUND PROJECT TRAFFIC %												
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	0	0	221	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**220**	**8**	**6**	**186**	**0**	**0**	**0**	**0**	**782**	**4**	**8**

4 - I-26 WB RAMP/LAUREL AVE & MT. PLEASANT ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**2**	**785**	**6**	**3**	**125**	**254**	**0**	**0**	**1**	**0**	**0**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	1	294	2	1	47	95	0	0	0	0	0	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	11	0	0	0	44	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**3**	**1,090**	**8**	**4**	**172**	**393**	**0**	**0**	**1**	**0**	**0**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	37	0	0	0	8	0	0	0	0	0	0
2043 INBOUND PROJECT TRAFFIC %		14%										
2043 OUTBOUND PROJECT TRAFFIC %						6%						
2043 PROJECT TRAFFIC	0	279	0	0	0	73	0	0	0	0	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**3**	**1,406**	**8**	**4**	**172**	**474**	**0**	**0**	**1**	**0**	**0**	**0**

4 - I-26 WB RAMP/LAUREL AVE & MT. PLEASANT ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 4:30 PM - 5:30 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**1**	**472**	**5**	**6**	**168**	**584**	**3**	**2**	**2**	**0**	**0**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	177	2	2	63	219	1	1	1	0	0	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	48	0	0	0	29	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**1**	**697**	**7**	**8**	**231**	**832**	**4**	**3**	**3**	**0**	**0**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	19	0	0	0	15	0	0	0	0	0	0
2043 INBOUND PROJECT TRAFFIC %		14%										
2043 OUTBOUND PROJECT TRAFFIC %						6%						
2043 PROJECT TRAFFIC	0	221	0	0	0	151	0	0	0	0	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**1**	**937**	**7**	**8**	**231**	**998**	**4**	**3**	**3**	**0**	**0**	**0**

5 - KING ST & MT. PLEASANT ST

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**10**	**630**	**133**	**32**	**240**	**135**	**83**	**162**	**15**	**181**	**321**	**37**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	4	236	50	12	90	51	31	61	6	68	120	14
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	11	0	0	44	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**14**	**877**	**183**	**44**	**374**	**186**	**114**	**223**	**21**	**249**	**441**	**51**
2043 995 MORRISON PROJECT TRAFFIC	0	37	0	0	8	3	0	0	0	5	0	0
2043 INBOUND PROJECT TRAFFIC %		14%								2%		
2043 OUTBOUND PROJECT TRAFFIC %					6%	2%						
2043 PROJECT TRAFFIC	0	279	0	0	73	24	0	0	0	40	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**14**	**1,193**	**183**	**44**	**455**	**213**	**114**	**223**	**21**	**294**	**441**	**51**

5 - KING ST & MT. PLEASANT ST

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 4:30 PM - 5:30 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**14**	**346**	**116**	**46**	**602**	**203**	**109**	**261**	**15**	**148**	**297**	**28**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	5	130	44	17	226	76	41	98	6	56	111	11
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	48	0	0	29	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**19**	**524**	**160**	**63**	**857**	**279**	**150**	**359**	**21**	**204**	**408**	**39**
2043 995 MORRISON PROJECT TRAFFIC	0	19	0	0	15	5	0	0	0	3	0	0
2043 INBOUND PROJECT TRAFFIC %		14%								2%		
2043 OUTBOUND PROJECT TRAFFIC %					6%	2%						
2043 PROJECT TRAFFIC	0	221	0	0	151	50	0	0	0	32	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**19**	**764**	**160**	**63**	**1,023**	**334**	**150**	**359**	**21**	**239**	**408**	**39**

6 - MEETING ST & MT. PLEASANT ST/MORRISON DR

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**52**	**572**	**183**	**0**	**222**	**302**	**81**	**257**	**10**	**215**	**397**	**100**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	20	215	69	0	83	113	30	96	4	81	149	38
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	11	0	0	44	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**72**	**798**	**252**	**0**	**349**	**415**	**111**	**353**	**14**	**296**	**546**	**138**
2043 995 MORRISON PROJECT TRAFFIC	0	29	13	0	6	9	4	17	0	40	13	0
2043 INBOUND PROJECT TRAFFIC %		6%	10%							2%	2%	
2043 OUTBOUND PROJECT TRAFFIC %					4%	2%	4%	2%				
2043 PROJECT TRAFFIC	0	120	199	0	48	24	48	24	0	40	40	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**72**	**947**	**464**	**0**	**403**	**448**	**163**	**394**	**14**	**376**	**599**	**138**

6 - MEETING ST & MT. PLEASANT ST/MORRISON DR

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**39**	**371**	**135**	**2**	**549**	**537**	**125**	**503**	**10**	**157**	**362**	**113**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	15	139	51	1	206	201	47	189	4	59	136	42
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	48	0	0	29	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**54**	**558**	**186**	**3**	**784**	**738**	**172**	**692**	**14**	**216**	**498**	**155**
2043 995 MORRISON PROJECT TRAFFIC	0	15	7	0	13	18	8	33	0	20	7	0
2043 INBOUND PROJECT TRAFFIC %		6%	10%							2%	2%	
2043 OUTBOUND PROJECT TRAFFIC %					4%	2%	4%	2%				
2043 PROJECT TRAFFIC	0	95	158	0	101	50	101	50	0	32	32	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**54**	**668**	**351**	**3**	**898**	**806**	**281**	**775**	**14**	**268**	**537**	**155**

7 - I-26 ON RAMP & CYPRESS ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**1**	**65**	**27**	**56**	**39**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	24	10	21	15	0	0	0	0	0	0	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	22	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**1**	**89**	**37**	**99**	**54**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	5	0	27	3	0	0	0	0	0	0	0
2043 INBOUND PROJECT TRAFFIC %		2%										
2043 OUTBOUND PROJECT TRAFFIC %				21%	2%							
2043 PROJECT TRAFFIC	0	40	0	254	24	0	0	0	0	0	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**1**	**134**	**37**	**380**	**81**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

7 - I-26 ON RAMP & CYPRESS ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 4:00 PM - 5:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**46**	**45**	**149**	**74**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	17	17	56	28	0	0	0	0	0	0	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	14	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**63**	**62**	**219**	**102**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	3	0	53	5	0	0	0	0	0	0	0
2043 INBOUND PROJECT TRAFFIC %		2%										
2043 OUTBOUND PROJECT TRAFFIC %				21%	2%							
2043 PROJECT TRAFFIC	0	32	0	530	50	0	0	0	0	0	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**98**	**62**	**802**	**157**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

8 - MEETING ST & BRIGADE ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**4**	**14**	**46**	**7**	**18**	**6**	**29**	**368**	**17**	**21**	**524**	**48**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	2	5	17	3	7	2	11	138	6	8	197	18
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	28	22	0	0	0	7	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**6**	**19**	**63**	**38**	**47**	**8**	**40**	**506**	**30**	**29**	**721**	**66**
2043 995 MORRISON PROJECT TRAFFIC	0	3	3	0	5	0	24	20	0	0	26	0
2043 INBOUND PROJECT TRAFFIC %		2%							3%	2%	10%	
2043 OUTBOUND PROJECT TRAFFIC %					11%		12%	4%				
2043 PROJECT TRAFFIC	0	40	0	0	133	0	145	48	60	40	199	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**6**	**62**	**66**	**38**	**185**	**8**	**209**	**574**	**90**	**69**	**946**	**66**

8 - MEETING ST & BRIGADE ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**4**	**12**	**38**	**16**	**26**	**21**	**85**	**610**	**16**	**14**	**414**	**67**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	2	5	14	6	10	8	32	229	6	5	155	25
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	18	14	0	0	0	30	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**6**	**17**	**52**	**40**	**50**	**29**	**117**	**839**	**52**	**19**	**569**	**92**
2043 995 MORRISON PROJECT TRAFFIC	0	1	1	0	10	0	48	41	0	0	13	0
2043 INBOUND PROJECT TRAFFIC %		2%							3%	2%	10%	
2043 OUTBOUND PROJECT TRAFFIC %					11%		12%	4%				
2043 PROJECT TRAFFIC	0	32	0	0	278	0	303	101	47	32	158	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**6**	**50**	**53**	**40**	**338**	**29**	**468**	**981**	**99**	**51**	**740**	**92**

9 - MORRISON DR & BRIGADE ST

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**3**	**10**	**34**	**7**	**11**	**5**	**12**	**517**	**13**	**12**	**777**	**18**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	1	4	13	3	4	2	5	194	5	5	291	7
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	7	0	11	50	44	0	0	0	11	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**4**	**21**	**47**	**21**	**65**	**51**	**17**	**711**	**18**	**28**	**1,068**	**25**
2043 995 MORRISON PROJECT TRAFFIC	0	0	3	0	0	0	5	15	0	0	69	0
2043 INBOUND PROJECT TRAFFIC %		7%							1%	6%	2%	
2043 OUTBOUND PROJECT TRAFFIC %				2%	8%	4%	3%	4%				
2043 PROJECT TRAFFIC	0	139	0	24	97	48	36	48	20	120	40	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**4**	**160**	**50**	**45**	**162**	**99**	**58**	**774**	**38**	**148**	**1,177**	**25**

9 - MORRISON DR & BRIGADE ST

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**7**	**10**	**31**	**19**	**10**	**10**	**31**	**1,077**	**15**	**4**	**445**	**18**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	3	4	12	7	4	4	12	404	6	2	167	7
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	30	0	7	32	29	0	0	0	48	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**10**	**44**	**43**	**33**	**46**	**43**	**43**	**1,481**	**21**	**54**	**612**	**25**
2043 995 MORRISON PROJECT TRAFFIC	0	0	1	0	0	0	10	30	0	0	35	0
2043 INBOUND PROJECT TRAFFIC %		7%							1%	6%	2%	
2043 OUTBOUND PROJECT TRAFFIC %				2%	8%	4%	3%	4%				
2043 PROJECT TRAFFIC	0	111	0	50	202	101	76	101	16	95	32	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**10**	**155**	**44**	**83**	**248**	**144**	**129**	**1,612**	**37**	**149**	**679**	**25**

10 - MEETING ST & WILLIMAN ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**1**	**0**	**4**	**0**	**7**	**1**	**424**	**17**	**14**	**554**	**2**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	2	0	3	0	159	6	5	208	1
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	7	0	0	28	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**1**	**0**	**6**	**0**	**10**	**1**	**590**	**23**	**19**	**790**	**3**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	44	0	0	29	0
2043 INBOUND PROJECT TRAFFIC %								3%			10%	
2043 OUTBOUND PROJECT TRAFFIC %								16%				
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	254	0	0	199	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**1**	**0**	**6**	**0**	**10**	**1**	**888**	**23**	**19**	**1,018**	**3**

10 - MEETING ST & WILLIMAN ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**1**	**0**	**0**	**19**	**0**	**29**	**1**	**675**	**23**	**18**	**450**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	7	0	11	0	253	9	7	169	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	30	0	0	18	0
2043 NO-BUILD TRAFFIC VOLUMES	**1**	**0**	**0**	**26**	**0**	**40**	**1**	**958**	**32**	**25**	**637**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	89	0	0	15	0
2043 INBOUND PROJECT TRAFFIC %								3%			10%	
2043 OUTBOUND PROJECT TRAFFIC %								16%				
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	451	0	0	158	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**1**	**0**	**0**	**26**	**0**	**40**	**1**	**1,498**	**32**	**25**	**810**	**0**

11 - MORRISON DR & WILLIMAN ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**1**	**0**	**11**	**0**	**0**	**0**	**4**	**542**	**0**	**0**	**788**	**10**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	4	0	0	0	2	203	0	0	296	4
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	11	0
2043 NO-BUILD TRAFFIC VOLUMES	**1**	**0**	**15**	**0**	**0**	**0**	**6**	**745**	**0**	**0**	**1,095**	**14**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	20	0	0	71	0
2043 INBOUND PROJECT TRAFFIC %								1%			2%	
2043 OUTBOUND PROJECT TRAFFIC %								7%			2%	
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	105	0	0	64	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**1**	**0**	**15**	**0**	**0**	**0**	**6**	**870**	**0**	**0**	**1,230**	**14**

11 - MORRISON DR & WILLIMAN ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**5**	**0**	**12**	**0**	**0**	**0**	**16**	**1,118**	**0**	**0**	**466**	**12**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	2	0	5	0	0	0	6	419	0	0	175	5
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	7	0
2043 NO-BUILD TRAFFIC VOLUMES	**7**	**0**	**17**	**0**	**0**	**0**	**22**	**1,537**	**0**	**0**	**648**	**17**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	41	0	0	36	0
2043 INBOUND PROJECT TRAFFIC %								1%			2%	
2043 OUTBOUND PROJECT TRAFFIC %								7%			2%	
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	193	0	0	82	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**7**	**0**	**17**	**0**	**0**	**0**	**22**	**1,771**	**0**	**0**	**766**	**17**

12 - MEETING ST & ISABELLA ST/INDIAN ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	1	0	3	7	0	12	7	439	8	9	550	2
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	1	3	0	5	3	165	3	3	206	1
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	7	0	0	28	0
2043 NO-BUILD TRAFFIC VOLUMES	1	0	4	10	0	17	10	611	11	12	784	3
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	44	0	0	29	0
2043 INBOUND PROJECT TRAFFIC %								3%			10%	
2043 OUTBOUND PROJECT TRAFFIC %								16%				
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	254	0	0	199	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	1	0	4	10	0	17	10	909	11	12	1,012	3

12 - MEETING ST & ISABELLA ST/INDIAN ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	2	0	9	12	1	18	3	674	6	14	468	2
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	1	0	3	5	0	7	1	253	2	5	176	1
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	30	0	0	18	0
2043 NO-BUILD TRAFFIC VOLUMES	3	0	12	17	1	25	4	957	8	19	662	3
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	89	0	0	15	0
2043 INBOUND PROJECT TRAFFIC %								3%			10%	
2043 OUTBOUND PROJECT TRAFFIC %								16%				
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	451	0	0	158	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	3	0	12	17	1	25	4	1,497	8	19	835	3

13 - MORRISON DR & ISABELLA ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**1**	**0**	**11**	**0**	**0**	**0**	**8**	**554**	**0**	**0**	**790**	**2**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	4	0	0	0	3	208	0	0	296	1
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	11	0
2043 NO-BUILD TRAFFIC VOLUMES	**1**	**0**	**15**	**0**	**0**	**0**	**11**	**762**	**0**	**0**	**1,097**	**3**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	20	0	0	71	0
2043 INBOUND PROJECT TRAFFIC %								1%			2%	
2043 OUTBOUND PROJECT TRAFFIC %								7%			2%	
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	105	0	0	64	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**1**	**0**	**15**	**0**	**0**	**0**	**11**	**887**	**0**	**0**	**1,232**	**3**

13 - MORRISON DR & ISABELLA ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**4**	**0**	**12**	**0**	**0**	**0**	**7**	**1,128**	**0**	**0**	**475**	**2**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	2	0	5	0	0	0	3	423	0	0	178	1
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	7	0
2043 NO-BUILD TRAFFIC VOLUMES	**6**	**0**	**17**	**0**	**0**	**0**	**10**	**1,551**	**0**	**0**	**660**	**3**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	41	0	0	36	0
2043 INBOUND PROJECT TRAFFIC %								1%			2%	
2043 OUTBOUND PROJECT TRAFFIC %								7%			2%	
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	193	0	0	82	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**6**	**0**	**17**	**0**	**0**	**0**	**10**	**1,785**	**0**	**0**	**778**	**3**

14 - MEETING ST & ROMNEY ST

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**150**	**110**	**126**	**18**	**44**	**5**	**57**	**296**	**11**	**2**	**532**	**28**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	56	41	47	7	17	2	21	111	4	1	200	11
2043 VESTED TRAFFIC (FOUNDRY POINT)	4	1	0	0	0	0	0	3	0	0	28	0
2043 NO-BUILD TRAFFIC VOLUMES	**210**	**152**	**173**	**25**	**61**	**7**	**78**	**410**	**15**	**3**	**760**	**39**
2043 995 MORRISON PROJECT TRAFFIC	0	29	32	0	1	5	1	39	0	0	29	0
2043 INBOUND PROJECT TRAFFIC %	2%	8%	13%					1%	2%	1%	9%	
2043 OUTBOUND PROJECT TRAFFIC %				2%	1%	5%	1%	11%				
2043 PROJECT TRAFFIC	40	159	259	24	12	61	12	153	40	20	179	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**250**	**340**	**464**	**49**	**74**	**73**	**91**	**602**	**55**	**23**	**968**	**39**

14 - MEETING ST & ROMNEY ST

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**141**	**84**	**67**	**26**	**85**	**20**	**129**	**523**	**14**	**6**	**440**	**45**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	53	32	25	10	32	8	48	196	5	2	165	17
2043 VESTED TRAFFIC (FOUNDRY POINT)	18	6	0	0	0	0	0	12	0	0	18	0
2043 NO-BUILD TRAFFIC VOLUMES	**212**	**122**	**92**	**36**	**117**	**28**	**177**	**731**	**19**	**8**	**623**	**62**
2043 995 MORRISON PROJECT TRAFFIC	0	15	16	0	3	10	3	79	0	0	15	0
2043 INBOUND PROJECT TRAFFIC %	2%	8%	13%					1%	2%	1%	9%	
2043 OUTBOUND PROJECT TRAFFIC %				2%	1%	5%	1%	11%				
2043 PROJECT TRAFFIC	32	127	206	50	25	126	25	293	32	16	142	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**244**	**264**	**314**	**86**	**145**	**164**	**205**	**1,103**	**51**	**24**	**780**	**62**

15 - MORRISON DR & ROMNEY ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**7**	**30**	**63**	**12**	**35**	**16**	**21**	**530**	**1**	**24**	**766**	**13**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	3	11	24	5	13	6	8	199	0	9	287	5
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	1	0	6	0	0	0	0	8	0	11	0
2043 NO-BUILD TRAFFIC VOLUMES	**10**	**42**	**87**	**23**	**48**	**22**	**29**	**729**	**9**	**33**	**1,064**	**18**
2043 995 MORRISON PROJECT TRAFFIC	8	0	0	0	0	0	0	13	0	0	71	0
2043 INBOUND PROJECT TRAFFIC %		11%						1%	7%	2%		
2043 OUTBOUND PROJECT TRAFFIC %				5%	8%	7%					2%	
2043 PROJECT TRAFFIC	0	219	0	61	97	85	0	20	139	40	24	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**18**	**261**	**87**	**84**	**145**	**107**	**29**	**762**	**148**	**73**	**1,159**	**18**

15 - MORRISON DR & ROMNEY ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**15**	**27**	**34**	**6**	**33**	**22**	**47**	**1,098**	**0**	**9**	**460**	**15**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	6	10	13	2	12	8	18	412	0	3	173	6
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	6	0	4	0	0	0	0	36	0	7	0
2043 NO-BUILD TRAFFIC VOLUMES	**21**	**43**	**47**	**12**	**45**	**30**	**65**	**1,510**	**36**	**12**	**640**	**21**
2043 995 MORRISON PROJECT TRAFFIC	15	0	0	0	0	0	0	25	0	0	36	0
2043 INBOUND PROJECT TRAFFIC %		11%						1%	7%	2%		
2043 OUTBOUND PROJECT TRAFFIC %				5%	8%	7%					2%	
2043 PROJECT TRAFFIC	0	174	0	126	202	177	0	16	111	32	50	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**36**	**217**	**47**	**138**	**247**	**207**	**65**	**1,551**	**147**	**44**	**726**	**21**

16 - MEETING ST & CONROY ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**0**	**14**	**0**	**21**	**0**	**350**	**37**	**86**	**579**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	5	0	8	0	131	14	32	217	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	3	0	0	28	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**19**	**0**	**29**	**0**	**484**	**51**	**118**	**824**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	15	0	19	0	22	24	21	40	0
2043 INBOUND PROJECT TRAFFIC %								3%			22%	
2043 OUTBOUND PROJECT TRAFFIC %						4%		8%			2%	
2043 PROJECT TRAFFIC	0	0	0	0	0	48	0	157	0	0	462	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**0**	**34**	**0**	**96**	**0**	**663**	**75**	**139**	**1,326**	**0**

16 - MEETING ST & CONROY ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**0**	**23**	**0**	**33**	**0**	**628**	**31**	**48**	**499**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	9	0	12	0	236	12	18	187	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	12	0	0	18	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**32**	**0**	**45**	**0**	**876**	**43**	**66**	**704**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	30	0	38	0	43	12	11	20	0
2043 INBOUND PROJECT TRAFFIC %								3%			22%	
2043 OUTBOUND PROJECT TRAFFIC %						4%		8%			2%	
2043 PROJECT TRAFFIC	0	0	0	0	0	101	0	249	0	0	399	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**0**	**62**	**0**	**184**	**0**	**1,168**	**55**	**77**	**1,123**	**0**

17 - MORRISON DR & CONROY ST/HUGUENIN AVE

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**1**	**19**	**20**	**0**	**0**	**25**	**553**	**31**	**2**	**805**	**33**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	7	8	0	0	9	207	12	1	302	12
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	8	0	0	17	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**1**	**26**	**28**	**0**	**0**	**34**	**768**	**43**	**3**	**1,124**	**45**
2043 995 MORRISON PROJECT TRAFFIC	6	0	9	0	0	0	21	6	0	0	34	37
2043 INBOUND PROJECT TRAFFIC %								8%				
2043 OUTBOUND PROJECT TRAFFIC %			5%								7%	
2043 PROJECT TRAFFIC	0	0	61	0	0	0	0	159	0	0	85	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**6**	**1**	**96**	**28**	**0**	**0**	**55**	**933**	**43**	**3**	**1,243**	**82**

17 - MORRISON DR & CONROY ST/HUGUENIN AVE

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**8**	**1**	**21**	**9**	**1**	**0**	**41**	**1,139**	**26**	**2**	**489**	**10**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	3	0	8	3	0	0	15	427	10	1	183	4
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	36	0	0	11	0
2043 NO-BUILD TRAFFIC VOLUMES	**11**	**1**	**29**	**12**	**1**	**0**	**56**	**1,602**	**36**	**3**	**683**	**14**
2043 995 MORRISON PROJECT TRAFFIC	13	0	18	0	0	0	11	13	0	0	17	19
2043 INBOUND PROJECT TRAFFIC %								8%				
2043 OUTBOUND PROJECT TRAFFIC %			5%								7%	
2043 PROJECT TRAFFIC	0	0	126	0	0	0	0	127	0	0	177	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**24**	**1**	**173**	**12**	**1**	**0**	**67**	**1,742**	**36**	**3**	**877**	**33**

18 - N HANOVER ST & COOL BLOW ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:45 AM - 8:45 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**4**	**0**	**2**	**0**	**1**	**0**	**1**	**5**	**0**	**0**	**9**	**5**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	2	0	1	0	0	0	0	2	0	0	3	2
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**6**	**0**	**3**	**0**	**1**	**0**	**1**	**7**	**0**	**0**	**12**	**7**
2043 995 MORRISON PROJECT TRAFFIC	0	0	32	0	0	0	38	0	0	0	0	0
2043 INBOUND PROJECT TRAFFIC %		44%							6%			
2043 OUTBOUND PROJECT TRAFFIC %				5%	38%	7%						
2043 PROJECT TRAFFIC	0	876	0	61	460	85	0	0	120	0	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**6**	**876**	**35**	**61**	**461**	**85**	**39**	**7**	**120**	**0**	**12**	**7**

18 - N HANOVER ST & COOL BLOW ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 4:30 PM - 5:30 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**12**	**2**	**5**	**0**	**1**	**1**	**0**	**3**	**0**	**1**	**9**	**13**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	5	1	2	0	0	0	0	1	0	0	3	5
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**17**	**3**	**7**	**0**	**1**	**1**	**0**	**4**	**0**	**1**	**12**	**18**
2043 995 MORRISON PROJECT TRAFFIC	0	0	16	0	0	0	76	0	0	0	0	0
2043 INBOUND PROJECT TRAFFIC %		44%							6%			
2043 OUTBOUND PROJECT TRAFFIC %				5%	38%	7%						
2043 PROJECT TRAFFIC	0	696	0	126	959	177	0	0	95	0	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**17**	**699**	**23**	**126**	**960**	**178**	**76**	**4**	**95**	**1**	**12**	**18**

19 - MEETING ST & COOL BLOW ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**3**	**97**	**0**	**57**	**3**	**330**	**14**	**22**	**569**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	1	36	0	21	1	124	5	8	213	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	3	0	0	28	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**4**	**133**	**0**	**78**	**4**	**457**	**19**	**30**	**810**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	23	0	15	0	30	0	32	23	0
2043 INBOUND PROJECT TRAFFIC %								3%	22%	22%		
2043 OUTBOUND PROJECT TRAFFIC %				28%		8%					2%	
2043 PROJECT TRAFFIC	0	0	0	339	0	97	0	60	438	438	24	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**4**	**495**	**0**	**190**	**4**	**547**	**457**	**500**	**857**	**0**

19 - MEETING ST & COOL BLOW ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**9**	**47**	**0**	**59**	**3**	**592**	**18**	**7**	**505**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	3	18	0	22	1	222	7	3	189	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	12	0	0	18	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**12**	**65**	**0**	**81**	**4**	**826**	**25**	**10**	**712**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	46	0	30	0	25	0	16	34	0
2043 INBOUND PROJECT TRAFFIC %								3%	22%	22%		
2043 OUTBOUND PROJECT TRAFFIC %				28%		8%					2%	
2043 PROJECT TRAFFIC	0	0	0	707	0	202	0	47	348	348	50	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**12**	**818**	**0**	**313**	**4**	**898**	**373**	**374**	**796**	**0**

20 - NASSAU ST & COOL BLOW ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**12**	**11**	**4**	**0**	**7**	**2**	**11**	**9**	**2**	**2**	**0**	**120**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	5	4	2	0	3	1	4	3	1	1	0	45
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**17**	**15**	**6**	**0**	**10**	**3**	**15**	**12**	**3**	**3**	**0**	**165**
2043 995 MORRISON PROJECT TRAFFIC	0	32	0	0	38	0	0	0	0	0	0	0
2043 INBOUND PROJECT TRAFFIC %		44%										
2043 OUTBOUND PROJECT TRAFFIC %					36%	2%						
2043 PROJECT TRAFFIC	0	876	0	0	436	24	0	0	0	0	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**17**	**923**	**6**	**0**	**484**	**27**	**15**	**12**	**3**	**3**	**0**	**165**

20 - NASSAU ST & COOL BLOW ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 4:45 PM - 5:45 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**10**	**12**	**4**	**2**	**11**	**0**	**6**	**7**	**0**	**0**	**3**	**61**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	4	5	2	1	4	0	2	3	0	0	1	23
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**14**	**17**	**6**	**3**	**15**	**0**	**8**	**10**	**0**	**0**	**4**	**84**
2043 995 MORRISON PROJECT TRAFFIC	0	16	0	0	76	0	0	0	0	0	0	0
2043 INBOUND PROJECT TRAFFIC %		44%										
2043 OUTBOUND PROJECT TRAFFIC %					36%	2%						
2043 PROJECT TRAFFIC	0	696	0	0	909	50	0	0	0	0	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**14**	**729**	**6**	**3**	**1,000**	**50**	**8**	**10**	**0**	**0**	**4**	**84**

21 - MEETING ST & US 17 SB RAMPS

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**0**	**365**	**3**	**142**	**324**	**223**	**0**	**0**	**613**	**70**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	137	1	53	122	84	0	0	230	26
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	3	0	0	28	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**502**	**4**	**195**	**446**	**310**	**0**	**0**	**871**	**96**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	32	0	26	0	0	28	10
2043 INBOUND PROJECT TRAFFIC %						16%		10%				
2043 OUTBOUND PROJECT TRAFFIC %											22%	8%
2043 PROJECT TRAFFIC	0	0	0	0	0	319	0	199	0	0	266	97
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**0**	**502**	**4**	**546**	**446**	**535**	**0**	**0**	**1,165**	**203**

21 - MEETING ST & US 17 SB RAMPS

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 4:45 PM - 5:45 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**0**	**256**	**7**	**184**	**612**	**425**	**0**	**0**	**552**	**42**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	96	3	69	230	159	0	0	207	16
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	12	0	0	18	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**352**	**10**	**253**	**842**	**596**	**0**	**0**	**777**	**58**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	16	0	13	0	0	56	20
2043 INBOUND PROJECT TRAFFIC %						16%		10%				
2043 OUTBOUND PROJECT TRAFFIC %											22%	8%
2043 PROJECT TRAFFIC	0	0	0	0	0	253	0	158	0	0	555	202
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**0**	**352**	**10**	**522**	**842**	**767**	**0**	**0**	**1,388**	**280**

22 - MEETING ST & US 17 NB RAMPS

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**551**	**211**	**300**	**682**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	0	0	0	0	207	79	113	256	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	3	0	17	11	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**761**	**290**	**430**	**949**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	26	15	15	13	0
2043 INBOUND PROJECT TRAFFIC %								10%				
2043 OUTBOUND PROJECT TRAFFIC %									12%	12%	10%	
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	199	145	145	121	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**986**	**450**	**590**	**1,083**	**0**

22 - MEETING ST & US 17 NB RAMPS

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 4:45 PM - 5:45 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,034**	**496**	**331**	**473**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	0	0	0	0	388	186	124	177	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	12	0	11	7	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,434**	**682**	**466**	**657**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	13	30	30	25	0
2043 INBOUND PROJECT TRAFFIC %								10%				
2043 OUTBOUND PROJECT TRAFFIC %									12%	12%	10%	
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	158	303	303	252	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,605**	**1,015**	**799**	**934**	**0**

23 - MEETING ST & HUGER ST

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**192**	**100**	**47**	**8**	**74**	**41**	**92**	**529**	**5**	**25**	**458**	**199**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	72	38	18	3	28	15	35	198	2	9	172	75
2043 VESTED TRAFFIC (FOUNDRY POINT)	1	0	0	0	0	0	0	2	0	0	8	3
2043 NO-BUILD TRAFFIC VOLUMES	**265**	**138**	**65**	**11**	**102**	**56**	**127**	**729**	**7**	**34**	**638**	**277**
2043 995 MORRISON PROJECT TRAFFIC	8	0	0	0	0	15	0	18	0	0	9	4
2043 INBOUND PROJECT TRAFFIC %	3%							7%				
2043 OUTBOUND PROJECT TRAFFIC %						12%					7%	3%
2043 PROJECT TRAFFIC	60	0	0	0	0	145	0	139	0	0	85	36
2043 FULL BUILDOUT TRAFFIC VOLUMES	**333**	**138**	**65**	**11**	**102**	**216**	**127**	**886**	**7**	**34**	**732**	**317**

23 - MEETING ST & HUGER ST

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**232**	**91**	**34**	**16**	**127**	**191**	**86**	**1,085**	**18**	**18**	**313**	**172**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	87	34	13	6	48	72	32	407	7	7	117	65
2043 VESTED TRAFFIC (FOUNDRY POINT)	4	0	0	0	0	0	0	8	0	0	5	2
2043 NO-BUILD TRAFFIC VOLUMES	**323**	**125**	**47**	**22**	**175**	**263**	**118**	**1,500**	**25**	**25**	**435**	**239**
2043 995 MORRISON PROJECT TRAFFIC	4	0	0	0	0	30	0	9	0	0	18	8
2043 INBOUND PROJECT TRAFFIC %	3%							7%				
2043 OUTBOUND PROJECT TRAFFIC %						12%					7%	3%
2043 PROJECT TRAFFIC	47	0	0	0	0	303	0	111	0	0	177	76
2043 FULL BUILDOUT TRAFFIC VOLUMES	**374**	**125**	**47**	**22**	**175**	**596**	**118**	**1,620**	**25**	**25**	**630**	**323**

24 - MORRISON DR & HUGER ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**5**	**1**	**79**	**2**	**0**	**6**	**57**	**294**	**2**	**0**	**1801**	**53**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	2	0	30	1	0	2	21	110	1	0	675	20
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	4	0	0	17	0
2043 NO-BUILD TRAFFIC VOLUMES	**7**	**1**	**109**	**3**	**0**	**8**	**78**	**408**	**3**	**0**	**2,493**	**73**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	13	0	0	6	15
2043 INBOUND PROJECT TRAFFIC %								5%				
2043 OUTBOUND PROJECT TRAFFIC %											5%	12%
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	100	0	0	61	145
2043 FULL BUILDOUT TRAFFIC VOLUMES	**7**	**1**	**109**	**3**	**0**	**8**	**78**	**521**	**3**	**0**	**2,560**	**233**

24 - MORRISON DR & HUGER ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 4:30 PM - 5:30 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**17**	**0**	**62**	**2**	**2**	**4**	**159**	**790**	**6**	**1**	**910**	**183**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	6	0	23	1	1	2	60	296	2	0	341	69
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	18	0	0	11	0
2043 NO-BUILD TRAFFIC VOLUMES	**23**	**0**	**85**	**3**	**3**	**6**	**219**	**1,104**	**8**	**1**	**1,262**	**252**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	7	0	0	13	30
2043 INBOUND PROJECT TRAFFIC %								5%				
2043 OUTBOUND PROJECT TRAFFIC %											5%	12%
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	79	0	0	126	303
2043 FULL BUILDOUT TRAFFIC VOLUMES	**23**	**0**	**85**	**3**	**3**	**6**	**219**	**1,190**	**8**	**1**	**1,401**	**585**

25 - MORRISON DR & US 17 SB RAMP

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**0**	**1043**	**0**	**325**	**1**	**303**	**0**	**0**	**806**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	391	0	122	0	114	0	0	302	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	4	0	4	0	0	17	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**1,434**	**0**	**451**	**1**	**421**	**0**	**0**	**1,125**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	32	0	13	0	0	22	0
2043 INBOUND PROJECT TRAFFIC %						8%		5%				
2043 OUTBOUND PROJECT TRAFFIC %											17%	
2043 PROJECT TRAFFIC	0	0	0	0	0	159	0	100	0	0	206	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**0**	**1,434**	**0**	**642**	**1**	**534**	**0**	**0**	**1,353**	**0**

25 - MORRISON DR & US 17 SB RAMP

TRAFFIC CONTROL: Signalized **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**0**	**0**	**0**	**568**	**0**	**469**	**0**	**732**	**0**	**0**	**545**	**0**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	213	0	176	0	275	0	0	204	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	18	0	18	0	0	11	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**781**	**0**	**663**	**0**	**1,025**	**0**	**0**	**760**	**0**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	16	0	7	0	0	43	0
2043 INBOUND PROJECT TRAFFIC %						8%		5%				
2043 OUTBOUND PROJECT TRAFFIC %											17%	
2043 PROJECT TRAFFIC	0	0	0	0	0	127	0	79	0	0	429	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**0**	**0**	**0**	**781**	**0**	**806**	**0**	**1,111**	**0**	**0**	**1,232**	**0**

26 - NASSAU ST & ISABELLA ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 8:00 AM - 9:00 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**2**	**15**	**0**	**1**	**14**	**0**	**6**	**2**	**0**	**0**	**2**	**1**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	1	6	0	0	5	0	2	1	0	0	1	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**3**	**21**	**0**	**1**	**19**	**0**	**8**	**3**	**0**	**0**	**3**	**1**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	0	0	0	0	0
2043 INBOUND PROJECT TRAFFIC %												
2043 OUTBOUND PROJECT TRAFFIC %												
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	0	0	0	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**3**	**21**	**0**	**1**	**19**	**0**	**8**	**3**	**0**	**0**	**3**	**1**

26 - NASSAU ST & ISABELLA ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**4**	**12**	**8**	**4**	**18**	**3**	**5**	**8**	**5**	**4**	**3**	**5**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	2	5	3	2	7	1	2	3	2	2	1	2
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**6**	**17**	**11**	**6**	**25**	**4**	**7**	**11**	**7**	**6**	**4**	**7**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	0	0	0	0	0
2043 INBOUND PROJECT TRAFFIC %												
2043 OUTBOUND PROJECT TRAFFIC %												
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	0	0	0	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**6**	**17**	**11**	**6**	**25**	**4**	**7**	**11**	**7**	**6**	**4**	**7**

27 - N HANOVER ST & ROMNEY ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

AM PEAK HOUR 7:45 AM - 8:45 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**9**	**99**	**7**	**0**	**64**	**2**	**3**	**1**	**1**	**5**	**2**	**2**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	3	37	3	0	24	1	1	0	0	2	1	1
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	1	0	0	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**12**	**137**	**10**	**0**	**88**	**3**	**4**	**1**	**1**	**7**	**3**	**3**
2043 995 MORRISON PROJECT TRAFFIC	0	0	29	0	0	0	6	0	8	0	0	0
2043 INBOUND PROJECT TRAFFIC %		11%										
2043 OUTBOUND PROJECT TRAFFIC %					8%							
2043 PROJECT TRAFFIC	0	219	0	0	97	0	0	0	0	0	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**12**	**356**	**39**	**0**	**185**	**3**	**10**	**1**	**9**	**7**	**3**	**3**

27 - N HANOVER ST & ROMNEY ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** December 12, 2018

PM PEAK HOUR 4:45 PM - 5:45 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**3**	**65**	**5**	**3**	**101**	**6**	**4**	**1**	**2**	**2**	**3**	**9**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	1	24	2	1	38	2	2	0	1	1	1	3
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	6	0	0	0	0	0	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**4**	**95**	**7**	**4**	**139**	**8**	**6**	**1**	**3**	**3**	**4**	**12**
2043 995 MORRISON PROJECT TRAFFIC	0	0	15	0	0	0	13	0	15	0	0	0
2043 INBOUND PROJECT TRAFFIC %		11%										
2043 OUTBOUND PROJECT TRAFFIC %					8%							
2043 PROJECT TRAFFIC	0	174	0	0	202	0	0	0	0	0	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**4**	**269**	**22**	**4**	**341**	**8**	**19**	**1**	**18**	**3**	**4**	**12**

28 - HUGUENIN AVE & BRIGADE ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** NA

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**10**	**25**			**13**	**10**				**10**		**10**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	4	9	0	0	5	4	0	0	0	4	0	4
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	18	0	0	0	105	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**14**	**34**	**18**	**0**	**18**	**14**	**105**	**0**	**0**	**14**	**0**	**14**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	0	0	0	0	0
2043 INBOUND PROJECT TRAFFIC %		14%								16%		
2043 OUTBOUND PROJECT TRAFFIC %					14%	16%						
2043 PROJECT TRAFFIC	0	279	0	0	170	194	0	0	0	319	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**14**	**313**	**18**	**0**	**188**	**208**	**105**	**0**	**0**	**333**	**0**	**14**

28 - HUGUENIN AVE & BRIGADE ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** NA

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES	**10**	**19**			**29**	**10**				**10**		**10**
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	4	7	0	0	11	4	0	0	0	4	0	4
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	77	0	0	0	68	0	0	0	0	0
2043 NO-BUILD TRAFFIC VOLUMES	**14**	**26**	**77**	**0**	**40**	**14**	**68**	**0**	**0**	**14**	**0**	**14**
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	0	0	0	0	0	0	0
2043 INBOUND PROJECT TRAFFIC %		14%								16%		
2043 OUTBOUND PROJECT TRAFFIC %					14%	16%						
2043 PROJECT TRAFFIC	0	221	0	0	353	404	0	0	0	253	0	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**14**	**247**	**77**	**0**	**393**	**418**	**68**	**0**	**0**	**267**	**0**	**14**

29 - MEETING ST & CEDAR ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** NA

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES				5		10		350	15	5	664	
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	2	0	4	0	131	6	2	249	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	3	0	0	28	0
2043 NO-BUILD TRAFFIC VOLUMES	0	0	0	7	0	14	0	484	21	7	941	0
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	6	0	24	34	8	38	0
2043 INBOUND PROJECT TRAFFIC %								25%	1%			
2043 OUTBOUND PROJECT TRAFFIC %											30%	
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	498	20	0	363	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	0	0	0	7	0	20	0	1,006	75	15	1,342	0

29 - MEETING ST & CEDAR ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** NA

PM PEAK HOUR 4:45 PM - 5:45 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES				5		10		594	15	5	556	
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	2	0	4	0	223	6	2	209	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	12	0	0	18	0
2043 NO-BUILD TRAFFIC VOLUMES	0	0	0	7	0	14	0	829	21	7	783	0
2043 995 MORRISON PROJECT TRAFFIC	0	0	0	0	0	13	0	12	17	4	76	0
2043 INBOUND PROJECT TRAFFIC %								25%	1%			
2043 OUTBOUND PROJECT TRAFFIC %											30%	
2043 PROJECT TRAFFIC	0	0	0	0	0	0	0	396	16	0	757	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	0	0	0	7	0	27	0	1,237	54	11	1,616	0

29 - MORRISON DR & CEDAR ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** NA

AM PEAK HOUR 7:30 AM - 8:30 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES								628			806	
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	0	0	0	0	236	0	0	302	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	8	0	0	17	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**872**	**0**	**0**	**1,125**	**0**
2043 995 MORRISON PROJECT TRAFFIC	6	0	13	0	0	0	24	21	0	0	9	34
2043 INBOUND PROJECT TRAFFIC %							5%	8%				
2043 OUTBOUND PROJECT TRAFFIC %			5%								12%	
2043 PROJECT TRAFFIC	0	0	61	0	0	0	100	159	0	0	145	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**6**	**0**	**74**	**0**	**0**	**0**	**124**	**1,052**	**0**	**0**	**1,279**	**34**

29 - MORRISON DR & CEDAR ST

TRAFFIC CONTROL: TWSC **DATE COUNTED:** NA

PM PEAK HOUR 5:00 PM - 6:00 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2018 TRAFFIC VOLUMES								1,201			545	
YEARS TO FULL BUILD	25	25	25	25	25	25	25	25	25	25	25	25
YEARLY GROWTH RATE	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
2043 BACKGROUND TRAFFIC GROWTH	0	0	0	0	0	0	0	450	0	0	204	0
2043 VESTED TRAFFIC (FOUNDRY POINT)	0	0	0	0	0	0	0	36	0	0	11	0
2043 NO-BUILD TRAFFIC VOLUMES	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,687**	**0**	**0**	**760**	**0**
2043 995 MORRISON PROJECT TRAFFIC	13	0	25	0	0	0	12	11	0	0	18	17
2043 INBOUND PROJECT TRAFFIC %							5%	8%				
2043 OUTBOUND PROJECT TRAFFIC %			5%								12%	
2043 PROJECT TRAFFIC	0	0	126	0	0	0	79	127	0	0	303	0
2043 FULL BUILDOUT TRAFFIC VOLUMES	**13**	**0**	**151**	**0**	**0**	**0**	**91**	**1,825**	**0**	**0**	**1,081**	**17**

Appendix D

2018 Existing Analysis Worksheets

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	10	613	1	11	749
Future Vol, veh/h	1	10	613	1	11	749
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	9	9	7	7	8	8
Mvmt Flow	1	12	713	1	13	871

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1176	357	0	0	714	0
Stage 1	714	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Critical Hdwy	6.98	7.08	-	-	4.26	-
Critical Hdwy Stg 1	5.98	-	-	-	-	-
Critical Hdwy Stg 2	5.98	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.28	-
Pot Cap-1 Maneuver	174	620	-	-	843	-
Stage 1	428	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	169	620	-	-	843	-
Mov Cap-2 Maneuver	169	-	-	-	-	-
Stage 1	415	-	-	-	-	-
Stage 2	581	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	499	843	-
HCM Lane V/C Ratio	-	-	0.026	0.015	-
HCM Control Delay (s)	-	-	12.4	9.3	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	6	611	4	25	710
Future Vol, veh/h	8	6	611	4	25	710
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	6	8	8
Mvmt Flow	9	7	679	4	28	789

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1132	342	0	0	683	0
Stage 1	681	-	-	-	-	-
Stage 2	451	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.26	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.28	-
Pot Cap-1 Maneuver	197	654	-	-	867	-
Stage 1	464	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	186	654	-	-	867	-
Mov Cap-2 Maneuver	186	-	-	-	-	-
Stage 1	438	-	-	-	-	-
Stage 2	609	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.3	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	268	867	-
HCM Lane V/C Ratio	-	-	0.058	0.032	-
HCM Control Delay (s)	-	-	19.3	9.3	0.2
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	12.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	105	6	6	118	0	0	0	0	686	5	14
Future Vol, veh/h	0	105	6	6	118	0	0	0	0	686	5	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	6	6	6	0	0	0	3	3	3
Mvmt Flow	0	118	7	7	133	0	0	0	0	771	6	16

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	125	0	0	269	272	133
Stage 1	-	-	-	-	-	-	147	147	-
Stage 2	-	-	-	-	-	-	122	125	-
Critical Hdwy	-	-	-	4.16	-	-	6.43	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	5.43	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	-	-	-	2.254	-	-	3.527	4.027	3.327
Pot Cap-1 Maneuver	0	-	-	1437	-	0	~ 718	633	913
Stage 1	0	-	-	-	-	0	878	774	-
Stage 2	0	-	-	-	-	0	901	791	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1437	-	-	~ 714	0	913
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 714	0	-
Stage 1	-	-	-	-	-	-	874	0	-
Stage 2	-	-	-	-	-	-	901	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.4	16.2
HCM LOS			C

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1437	-	714	5751
HCM Lane V/C Ratio	-	-	0.005	-	0.72	0.048
HCM Control Delay (s)	-	-	7.5	0	21.9	5.7
HCM Lane LOS	-	-	A	A	C	A
HCM 95th %tile Q(veh)	-	-	0	-	6.2	0.2

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

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	785	6	3	125	254	0	0	1	0	0	0
Future Vol, veh/h	2	785	6	3	125	254	0	0	1	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	9	9	9	2	2	2	2	2	2
Mvmt Flow	2	872	7	3	139	282	0	0	1	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	421	0	0	879	0	0	1166	1307	440
Stage 1	-	-	-	-	-	-	880	880	-
Stage 2	-	-	-	-	-	-	286	427	-
Critical Hdwy	4.145	-	-	4.235	-	-	6.63	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	5.83	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	2.2285	-	-	2.2855	-	-	3.519	4.019	3.319
Pot Cap-1 Maneuver	1226	-	-	731	-	-	223	174	566
Stage 1	-	-	-	-	-	-	367	364	-
Stage 2	-	-	-	-	-	-	860	651	-
Platoon blocked, %	1	-	-		-	-	1	1	
Mov Cap-1 Maneuver	1226	-	-	731	-	-	221	0	566
Mov Cap-2 Maneuver	-	-	-	-	-	-	221	0	-
Stage 1	-	-	-	-	-	-	364	0	-
Stage 2	-	-	-	-	-	-	860	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	566	1226	-	-	731	-	-
HCM Lane V/C Ratio	0.002	0.002	-	-	0.005	-	-
HCM Control Delay (s)	11.4	7.9	0	-	9.9	0	-
HCM Lane LOS	B	A	A	-	A	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	630	133	32	240	135	83	162	15	181	321	37
Future Volume (veh/h)	10	630	133	32	240	135	83	162	15	181	321	37
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1743	1743	1810	1810	1900	1810	1810	1900
Adj Flow Rate, veh/h	11	692	146	35	264	0	91	178	16	199	353	41
Adj No. of Lanes	0	2	0	0	2	1	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	9	9	9	5	5	5	5	5	5
Cap, veh/h	66	1007	210	126	792	531	380	709	64	539	690	80
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.00	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	14	2809	587	135	2211	1482	958	1636	147	1150	1592	185
Grp Volume(v), veh/h	457	0	392	119	180	0	91	0	194	199	0	394
Grp Sat Flow(s),veh/h/ln	1835	0	1575	839	1507	1482	958	0	1784	1150	0	1777
Q Serve(g_s), s	0.0	0.0	12.8	1.0	5.2	0.0	4.6	0.0	4.1	8.0	0.0	9.7
Cycle Q Clear(g_c), s	12.7	0.0	12.8	13.7	5.2	0.0	14.3	0.0	4.1	12.1	0.0	9.7
Prop In Lane	0.02		0.37	0.29		1.00	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	719	0	564	378	540	531	380	0	773	539	0	770
V/C Ratio(X)	0.64	0.00	0.69	0.31	0.33	0.00	0.24	0.00	0.25	0.37	0.00	0.51
Avail Cap(c_a), veh/h	719	0	564	378	540	531	380	0	773	539	0	770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.97	0.97	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.4	0.0	16.4	13.9	14.0	0.0	17.6	0.0	10.8	14.7	0.0	12.4
Incr Delay (d2), s/veh	4.3	0.0	6.9	2.1	1.6	0.0	1.5	0.0	0.8	1.9	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	6.5	1.6	2.4	0.0	1.4	0.0	2.2	2.8	0.0	5.2
LnGrp Delay(d),s/veh	20.7	0.0	23.3	16.0	15.6	0.0	19.1	0.0	11.6	16.6	0.0	14.8
LnGrp LOS	C		C	B	B		B		B	B		B
Approach Vol, veh/h		849			299			285			593	
Approach Delay, s/veh		21.9			15.8			14.0			15.4	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		32.5		27.5		32.5		27.5
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s		26.0		21.5		26.0		21.5
Max Q Clear Time (g_c+I1), s		14.1		14.8		16.3		15.7
Green Ext Time (p_c), s		2.3		2.2		0.9		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	572	183	0	222	302	81	257	10	215	397	100
Future Volume (veh/h)	52	572	183	0	222	302	81	257	10	215	397	100
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1810	1810	1810	1810	1900	1759	1759	1759
Adj Flow Rate, veh/h	56	615	197	0	239	325	87	276	0	231	427	108
Adj No. of Lanes	1	2	0	0	2	1	1	2	0	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	5	5	5	5	5	5	8	8	8
Cap, veh/h	335	805	257	0	1070	747	110	418	0	294	780	347
Arrive On Green	0.62	0.62	0.62	0.00	0.31	0.31	0.06	0.12	0.00	0.18	0.23	0.23
Sat Flow, veh/h	826	2586	827	0	3529	1534	1723	3529	0	1675	3343	1488
Grp Volume(v), veh/h	56	412	400	0	239	325	87	276	0	231	427	108
Grp Sat Flow(s),veh/h/ln	826	1736	1678	0	1719	1534	1723	1719	0	1675	1671	1488
Q Serve(g_s), s	2.3	10.3	10.3	0.0	3.1	0.0	3.0	4.6	0.0	7.9	6.7	3.6
Cycle Q Clear(g_c), s	5.3	10.3	10.3	0.0	3.1	0.0	3.0	4.6	0.0	7.9	6.7	3.6
Prop In Lane	1.00		0.49	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	335	540	522	0	1070	747	110	418	0	294	780	347
V/C Ratio(X)	0.17	0.76	0.77	0.00	0.22	0.43	0.79	0.66	0.00	0.79	0.55	0.31
Avail Cap(c_a), veh/h	335	540	522	0	1070	747	158	418	0	341	780	347
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.7	9.7	9.7	0.0	15.3	10.0	27.7	25.2	0.0	23.7	20.2	19.0
Incr Delay (d2), s/veh	0.8	7.1	7.4	0.0	0.5	1.8	15.8	7.9	0.0	10.1	2.8	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.6	5.5	0.0	1.5	3.8	1.9	2.6	0.0	4.5	3.4	1.7
LnGrp Delay(d),s/veh	10.4	16.9	17.2	0.0	15.8	11.9	43.5	33.1	0.0	33.7	23.0	21.3
LnGrp LOS	B	B	B		B	B	D	C		C	C	C
Approach Vol, veh/h		868			564			363			766	
Approach Delay, s/veh		16.6			13.5			35.6			26.0	
Approach LOS		B			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	13.8		27.2	12.3	20.5		27.2
Change Period (Y+Rc), s	8.5	6.5		8.5	8.5	6.5		8.5
Max Green Setting (Gmax), s	12.3	7.3		17.0	5.5	14.0		17.0
Max Q Clear Time (g_c+I1), s	7.3	6.6		5.1	5.0	8.7		12.3
Green Ext Time (p_c), s	0.2	0.1		2.1	0.0	1.2		1.8

Intersection Summary			
HCM 2010 Ctrl Delay		21.4	
HCM 2010 LOS		C	

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	65	27	56	39	0	0	0	0	0	0	0
Future Vol, veh/h	0	65	27	56	39	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	90	90	90	90	92	90	92	90	92	92	92
Heavy Vehicles, %	2	2	2	5	5	2	2	2	2	2	2	2
Mvmt Flow	0	72	30	62	43	0	0	0	0	0	0	0

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	102	0	0			-	269	-
Stage 1	-	-	-	-	-	-			-	167	-
Stage 2	-	-	-	-	-	-			-	102	-
Critical Hdwy	-	-	-	4.15	-	-			-	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-			-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			-	5.52	-
Follow-up Hdwy	-	-	-	2.245	-	-			-	4.018	-
Pot Cap-1 Maneuver	0	-	-	1471	-	0			0	637	0
Stage 1	0	-	-	-	-	0			0	760	0
Stage 2	0	-	-	-	-	0			0	811	0
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	-	-	-	1471	-	-			-	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-			-	0	-
Stage 1	-	-	-	-	-	-			-	0	-
Stage 2	-	-	-	-	-	-			-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	4.5	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	1471	-	-
HCM Lane V/C Ratio	-	-	0.042	-	-
HCM Control Delay (s)	-	-	7.6	0	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	14	46	7	18	6	29	368	17	21	527	48
Future Vol, veh/h	4	14	46	7	18	6	29	368	17	21	527	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	10	10	10	5	5	5	5	5	5
Mvmt Flow	4	15	49	7	19	6	31	391	18	22	561	51

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1106	1102	587	1125	1118	400	612	0	0	409	0	0
Stage 1	631	631	-	462	462	-	-	-	-	-	-	-
Stage 2	475	471	-	663	656	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.2	6.6	6.3	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.2	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.2	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.59	4.09	3.39	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	188	212	510	176	200	633	953	-	-	1134	-	-
Stage 1	469	474	-	565	551	-	-	-	-	-	-	-
Stage 2	570	560	-	438	450	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	162	197	510	142	186	633	953	-	-	1134	-	-
Mov Cap-2 Maneuver	162	197	-	142	186	-	-	-	-	-	-	-
Stage 1	449	460	-	541	528	-	-	-	-	-	-	-
Stage 2	521	536	-	372	437	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.4	26.2	0.6	0.3
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	953	-	-	162	372	171	633	1134	-	-
HCM Lane V/C Ratio	0.032	-	-	0.026	0.172	0.156	0.01	0.02	-	-
HCM Control Delay (s)	8.9	0	-	27.8	16.7	29.9	10.7	8.2	0	-
HCM Lane LOS	A	A	-	D	C	D	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.6	0.5	0	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	10	34	7	11	5	12	517	13	12	777	18
Future Volume (veh/h)	3	10	34	7	11	5	12	517	13	12	777	18
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1681	1681	1900	1810	1900	1900	1827	1900
Adj Flow Rate, veh/h	3	11	37	8	12	5	13	562	14	13	845	20
Adj No. of Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	13	13	13	5	5	5	4	4	4
Cap, veh/h	68	29	89	112	84	102	81	2337	57	72	2391	56
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.71	0.71	0.71	0.71	0.71	0.71
Sat Flow, veh/h	58	406	1226	381	1161	1418	26	3286	81	15	3363	79
Grp Volume(v), veh/h	51	0	0	20	0	5	306	0	283	460	0	418
Grp Sat Flow(s),veh/h/ln	1689	0	0	1542	0	1418	1760	0	1632	1808	0	1648
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	3.6	0.0	0.0	5.9
Cycle Q Clear(g_c), s	1.7	0.0	0.0	0.7	0.0	0.2	3.5	0.0	3.6	5.8	0.0	5.9
Prop In Lane	0.06		0.73	0.40		1.00	0.04		0.05	0.03		0.05
Lane Grp Cap(c), veh/h	186	0	0	195	0	102	1314	0	1161	1348	0	1172
V/C Ratio(X)	0.27	0.00	0.00	0.10	0.00	0.05	0.23	0.00	0.24	0.34	0.00	0.36
Avail Cap(c_a), veh/h	539	0	0	502	0	402	1314	0	1161	1348	0	1172
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.6	0.0	0.0	26.1	0.0	25.9	3.0	0.0	3.0	3.3	0.0	3.4
Incr Delay (d2), s/veh	1.7	0.0	0.0	0.5	0.0	0.4	0.4	0.0	0.5	0.7	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.3	0.0	0.1	1.9	0.0	1.7	3.1	0.0	2.8
LnGrp Delay(d),s/veh	28.3	0.0	0.0	26.6	0.0	26.3	3.4	0.0	3.5	4.0	0.0	4.2
LnGrp LOS	C			C		C	A		A	A		A
Approach Vol, veh/h		51			25			589			878	
Approach Delay, s/veh		28.3			26.6			3.5			4.1	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		49.7		10.3		49.7		10.3
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0
Max Green Setting (Gmax), s		30.0		17.0		30.0		17.0
Max Q Clear Time (g_c+I1), s		7.9		3.7		5.6		2.7
Green Ext Time (p_c), s		5.9		0.2		3.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	5.0
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↱			↰	
Traffic Vol, veh/h	0	1	0	4	0	7	1	424	17	14	554	2
Future Vol, veh/h	0	1	0	4	0	7	1	424	17	14	554	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	0	1	0	4	0	8	1	456	18	15	596	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1098	1103	597	1095	1095	465	598	0	0	474	0	0
Stage 1	627	627	-	467	467	-	-	-	-	-	-	-
Stage 2	471	476	-	628	628	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	190	211	503	191	214	597	964	-	-	1072	-	-
Stage 1	471	476	-	576	562	-	-	-	-	-	-	-
Stage 2	573	557	-	471	476	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	184	206	503	187	209	597	964	-	-	1072	-	-
Mov Cap-2 Maneuver	184	206	-	187	209	-	-	-	-	-	-	-
Stage 1	471	466	-	575	561	-	-	-	-	-	-	-
Stage 2	565	556	-	460	466	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.6	16.2	0	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	964	-	-	206	332	1072	-	-
HCM Lane V/C Ratio	0.001	-	-	0.005	0.036	0.014	-	-
HCM Control Delay (s)	8.7	-	-	22.6	16.2	8.4	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	11	4	542	788	10
Future Vol, veh/h	1	11	4	542	788	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	5	5	4	4
Mvmt Flow	1	12	4	577	838	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1141	425	849	0	-	0
Stage 1	844	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.2	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.25	-	-	-
Pot Cap-1 Maneuver	*311	578	766	-	-	-
Stage 1	*382	-	-	-	-	-
Stage 2	*816	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*308	578	766	-	-	-
Mov Cap-2 Maneuver	*308	-	-	-	-	-
Stage 1	*379	-	-	-	-	-
Stage 2	*816	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	766	-	539	-	-
HCM Lane V/C Ratio	0.006	-	0.024	-	-
HCM Control Delay (s)	9.7	0	11.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

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

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↗		↕	
Traffic Vol, veh/h	1	0	3	7	0	12	7	439	8	9	550	2
Future Vol, veh/h	1	0	3	7	0	12	7	439	8	9	550	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	1	0	3	7	0	13	7	467	9	10	585	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1098	1096	586	1089	1088	467	587	0	0	476	0	0
Stage 1	606	606	-	481	481	-	-	-	-	-	-	-
Stage 2	492	490	-	608	607	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	190	213	510	193	216	596	973	-	-	1071	-	-
Stage 1	484	487	-	566	554	-	-	-	-	-	-	-
Stage 2	558	549	-	483	486	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	183	208	510	188	211	596	973	-	-	1071	-	-
Mov Cap-2 Maneuver	183	208	-	188	211	-	-	-	-	-	-	-
Stage 1	479	480	-	560	548	-	-	-	-	-	-	-
Stage 2	541	544	-	473	479	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.3	16.6	0.1	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	973	-	-	353	331	1071	-	-
HCM Lane V/C Ratio	0.008	-	-	0.012	0.061	0.009	-	-
HCM Control Delay (s)	8.7	0	-	15.3	16.6	8.4	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Intersection	
Int Delay, s/veh	0.2

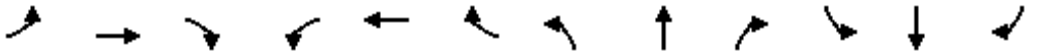
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	11	8	554	790	2
Future Vol, veh/h	1	11	8	554	790	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	8	5	5	4	4
Mvmt Flow	1	12	8	583	832	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1141	417	834	0	-	0
Stage 1	833	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.96	7.06	4.2	-	-	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.38	2.25	-	-	-
Pot Cap-1 Maneuver	*300	568	776	-	-	-
Stage 1	*372	-	-	-	-	-
Stage 2	*802	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*296	568	776	-	-	-
Mov Cap-2 Maneuver	*296	-	-	-	-	-
Stage 1	*366	-	-	-	-	-
Stage 2	*802	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	776	-	528	-	-
HCM Lane V/C Ratio	0.011	-	0.024	-	-
HCM Control Delay (s)	9.7	0.1	12	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	110	126	18	44	5	57	296	11	2	532	28
Future Volume (veh/h)	150	110	126	18	44	5	57	296	11	2	532	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1727	1727	1900	1900	1845	1900	1900	1810	1900
Adj Flow Rate, veh/h	158	116	133	19	46	5	60	312	12	2	560	29
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	10	10	10	3	3	3	5	5	5
Cap, veh/h	353	157	179	183	305	33	334	1697	67	61	2173	112
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	1.00	1.00	1.00	0.67	0.67	0.67
Sat Flow, veh/h	1335	785	900	1044	1531	166	381	2543	100	1	3256	168
Grp Volume(v), veh/h	158	0	249	19	0	51	185	0	199	312	0	279
Grp Sat Flow(s),veh/h/ln	1335	0	1686	1044	0	1698	1363	0	1661	1808	0	1617
Q Serve(g_s), s	6.6	0.0	8.3	1.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	4.2
Cycle Q Clear(g_c), s	8.1	0.0	8.3	9.4	0.0	1.5	4.2	0.0	0.0	4.2	0.0	4.2
Prop In Lane	1.00		0.53	1.00		0.10	0.33		0.06	0.01		0.10
Lane Grp Cap(c), veh/h	353	0	336	183	0	338	989	0	1108	1267	0	1079
V/C Ratio(X)	0.45	0.00	0.74	0.10	0.00	0.15	0.19	0.00	0.18	0.25	0.00	0.26
Avail Cap(c_a), veh/h	599	0	646	375	0	651	989	0	1108	1267	0	1079
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.2	0.0	22.6	27.0	0.0	19.8	0.0	0.0	0.0	4.0	0.0	4.0
Incr Delay (d2), s/veh	0.9	0.0	3.2	0.2	0.0	0.2	0.4	0.0	0.4	0.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	4.2	0.3	0.0	0.7	0.1	0.0	0.1	2.2	0.0	2.0
LnGrp Delay(d),s/veh	24.1	0.0	25.8	27.2	0.0	20.0	0.4	0.0	0.4	4.5	0.0	4.6
LnGrp LOS	C		C	C		C	A		A	A		A
Approach Vol, veh/h		407			70			384			591	
Approach Delay, s/veh		25.1			22.0			0.4			4.5	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		44.0		16.0		44.0		16.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		29.0		23.0		29.0		23.0
Max Q Clear Time (g_c+I1), s		6.2		10.3		6.2		11.4
Green Ext Time (p_c), s		2.5		1.6		3.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	7	30	63	12	35	16	21	530	1	24	766	13
Future Vol, veh/h	7	30	63	12	35	16	21	530	1	24	766	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	6	6	6	4	4	4	4	4	4
Mvmt Flow	7	32	66	13	37	17	22	558	1	25	806	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1205	1466	410	1072	1473	280	820	0	0	559	0	0
Stage 1	863	863	-	603	603	-	-	-	-	-	-	-
Stage 2	342	603	-	469	870	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.62	6.62	7.02	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.62	5.62	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.62	5.62	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.56	4.06	3.36	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	*189	151	591	238	145	*905	792	-	-	1233	-	-
Stage 1	*316	370	-	683	635	-	-	-	-	-	-	-
Stage 2	*864	642	-	533	358	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*138	140	591	165	134	*905	792	-	-	1233	-	-
Mov Cap-2 Maneuver	*138	140	-	165	134	-	-	-	-	-	-	-
Stage 1	*303	356	-	655	609	-	-	-	-	-	-	-
Stage 2	*765	616	-	415	345	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.7	36.5	0.6	0.3
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	792	-	-	269	179	1233	-	-
HCM Lane V/C Ratio	0.028	-	-	0.391	0.37	0.02	-	-
HCM Control Delay (s)	9.7	0.2	-	26.7	36.5	8	0.1	-
HCM Lane LOS	A	A	-	D	E	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.8	1.6	0.1	-	-

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

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	21	350	37	86	579
Future Vol, veh/h	14	21	350	37	86	579
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	3	3	5	5
Mvmt Flow	16	24	393	42	97	651

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	934	218	0	0	435	0
Stage 1	414	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.2	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.25	-
Pot Cap-1 Maneuver	*698	*964	-	-	1288	-
Stage 1	*818	-	-	-	-	-
Stage 2	*811	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*616	*964	-	-	1288	-
Mov Cap-2 Maneuver	*616	-	-	-	-	-
Stage 1	*721	-	-	-	-	-
Stage 2	*811	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	1.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	786	1288	-
HCM Lane V/C Ratio	-	-	0.05	0.075	-
HCM Control Delay (s)	-	-	9.8	8	0.4
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-

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

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	0	1	19	20	0	0	25	553	31	2	805	33
Future Vol, veh/h	0	1	19	20	0	0	25	553	31	2	805	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	3	3	3
Mvmt Flow	0	1	21	22	0	0	27	601	34	2	875	36

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1252	1586	456	1114	1587	318	911	0	0	635	0	0
Stage 1	897	897	-	672	672	-	-	-	-	-	-	-
Stage 2	355	689	-	442	915	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.23	-	-
Pot Cap-1 Maneuver	*216	141	551	288	141	*865	725	-	-	1248	-	-
Stage 1	*301	357	-	729	657	-	-	-	-	-	-	-
Stage 2	*815	644	-	564	350	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*206	132	551	263	132	*865	725	-	-	1248	-	-
Mov Cap-2 Maneuver	*206	132	-	263	132	-	-	-	-	-	-	-
Stage 1	*284	356	-	687	619	-	-	-	-	-	-	-
Stage 2	*768	606	-	540	349	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.9	19.9	0.7	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	725	-	-	476	263	1248	-	-
HCM Lane V/C Ratio	0.037	-	-	0.046	0.083	0.002	-	-
HCM Control Delay (s)	10.2	0.3	-	12.9	19.9	7.9	0	-
HCM Lane LOS	B	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.3	0	-	-

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

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	2	1	5	9	5
Future Vol, veh/h	4	2	1	5	9	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	2	2	17	17	2	2
Mvmt Flow	5	3	1	7	12	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	25	16	19	0	-	0
Stage 1	16	-	-	-	-	-
Stage 2	9	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.27	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.353	-	-	-
Pot Cap-1 Maneuver	991	1063	1505	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	1014	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	990	1063	1505	-	-	-
Mov Cap-2 Maneuver	990	-	-	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	1014	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1505	-	1013	-	-
HCM Lane V/C Ratio	0.001	-	0.008	-	-
HCM Control Delay (s)	7.4	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	97	0	57	3	330	14	22	569	0
Future Vol, veh/h	0	0	3	97	0	57	3	330	14	22	569	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	6	6	6
Mvmt Flow	0	0	3	111	0	66	3	379	16	25	654	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	900	1105	327	770	1097	198	654	0	0	395	0	0
Stage 1	704	704	-	393	393	-	-	-	-	-	-	-
Stage 2	196	401	-	377	704	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.16	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.23	-	-	2.26	-	-
Pot Cap-1 Maneuver	*698	459	*860	*698	466	*964	1234	-	-	1331	-	-
Stage 1	*704	640	-	*828	744	-	-	-	-	-	-	-
Stage 2	*909	737	-	*810	640	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*634	444	*860	*678	450	*964	1234	-	-	1331	-	-
Mov Cap-2 Maneuver	*634	444	-	*678	450	-	-	-	-	-	-	-
Stage 1	*702	621	-	*826	742	-	-	-	-	-	-	-
Stage 2	*844	735	-	*783	621	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	11.1	0.1	0.4
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1234	-	-	860	762	1331	-	-
HCM Lane V/C Ratio	0.003	-	-	0.004	0.232	0.019	-	-
HCM Control Delay (s)	7.9	0	-	9.2	11.1	7.8	0.1	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.9	0.1	-	-

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

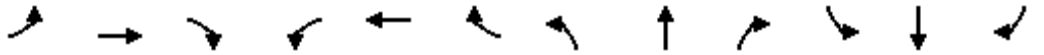
Intersection	
Int Delay, s/veh	8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	11	4	0	7	2	11	9	2	2	0	120
Future Vol, veh/h	12	11	4	0	7	2	11	9	2	2	0	120
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	61	61	61	61	61	61	61	61	61
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	18	7	0	11	3	18	15	3	3	0	197

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	14	0	0	25	0	0	173	76	22	84	78	13
Stage 1	-	-	-	-	-	-	62	62	-	13	13	-
Stage 2	-	-	-	-	-	-	111	14	-	71	65	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1604	-	-	1589	-	-	790	814	1055	903	812	1067
Stage 1	-	-	-	-	-	-	949	843	-	1007	885	-
Stage 2	-	-	-	-	-	-	894	884	-	939	841	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1604	-	-	1589	-	-	638	803	1055	879	801	1067
Mov Cap-2 Maneuver	-	-	-	-	-	-	638	803	-	879	801	-
Stage 1	-	-	-	-	-	-	937	832	-	994	885	-
Stage 2	-	-	-	-	-	-	729	884	-	908	830	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.2	0	10.2	9.2
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	725	1604	-	-	1589	-	-	1063
HCM Lane V/C Ratio	0.05	0.012	-	-	-	-	-	0.188
HCM Control Delay (s)	10.2	7.3	0	-	0	-	-	9.2
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	365	3	142	324	223	0	0	613	70
Future Volume (veh/h)	0	0	0	365	3	142	324	223	0	0	613	70
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1845	1845	0	0	1810	1900
Adj Flow Rate, veh/h				284	174	158	360	248	0	0	681	78
Adj No. of Lanes				1	1	0	2	2	0	0	2	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	3	3	0	0	5	5
Cap, veh/h				424	215	196	474	2199	0	0	1311	150
Arrive On Green				0.24	0.24	0.24	0.14	0.63	0.00	0.00	0.56	0.56
Sat Flow, veh/h				1774	901	818	3408	3597	0	0	3200	356
Grp Volume(v), veh/h				284	0	332	360	248	0	0	376	383
Grp Sat Flow(s),veh/h/ln				1774	0	1718	1704	1752	0	0	1719	1747
Q Serve(g_s), s				8.7	0.0	10.9	6.1	1.7	0.0	0.0	8.1	8.2
Cycle Q Clear(g_c), s				8.7	0.0	10.9	6.1	1.7	0.0	0.0	8.1	8.2
Prop In Lane				1.00		0.48	1.00		0.00	0.00		0.20
Lane Grp Cap(c), veh/h				424	0	411	474	2199	0	0	725	737
V/C Ratio(X)				0.67	0.00	0.81	0.76	0.11	0.00	0.00	0.52	0.52
Avail Cap(c_a), veh/h				532	0	516	568	2199	0	0	725	737
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				20.7	0.0	21.5	24.9	4.5	0.0	0.0	9.4	9.4
Incr Delay (d2), s/veh				2.3	0.0	7.5	4.9	0.1	0.0	0.0	2.6	2.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.5	0.0	6.0	3.2	0.9	0.0	0.0	4.3	4.4
LnGrp Delay(d),s/veh				23.0	0.0	29.0	29.7	4.6	0.0	0.0	12.1	12.0
LnGrp LOS				C		C	C	A			B	B
Approach Vol, veh/h					616			608			759	
Approach Delay, s/veh					26.2			19.5			12.0	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		41.7			12.4	29.3		18.3
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		34.0			10.0	20.0		18.0
Max Q Clear Time (g_c+I1), s		3.7			8.1	10.2		12.9
Green Ext Time (p_c), s		1.7			0.3	3.4		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.7
HCM 2010 LOS	B

Notes

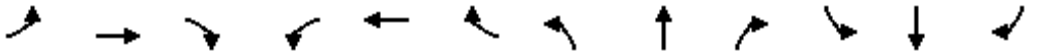
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑						↑↑↱		↰	↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	0	551	221	300	682	0
Future Vol, veh/h	0	0	0	0	0	0	0	551	221	300	682	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	145	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	3	3	4	4	2
Mvmt Flow	0	0	0	0	0	0	0	599	240	326	741	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	2232	-	-	0	0	839	0	0
Stage 1	-	1393	-	-	-	-	-	-	-
Stage 2	-	839	-	-	-	-	-	-	-
Critical Hdwy	-	6.54	-	-	-	-	4.18	-	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.02	-	-	-	-	2.24	-	-
Pot Cap-1 Maneuver	0	44	0	0	-	-	1006	-	0
Stage 1	0	207	0	0	-	-	-	-	0
Stage 2	0	540	0	0	-	-	-	-	0
Platoon blocked, %		1			-	-	1	-	
Mov Cap-1 Maneuver	-	0	-	-	-	-	1006	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	3.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1006	-
HCM Lane V/C Ratio	-	-	-	0.324	-
HCM Control Delay (s)	-	-	0	10.3	-
HCM Lane LOS	-	-	A	B	-
HCM 95th %tile Q(veh)	-	-	-	1.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	100	47	8	74	41	92	529	5	25	458	199
Future Volume (veh/h)	192	100	47	8	74	41	92	529	5	25	458	199
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	216	112	53	9	83	46	103	594	6	28	515	224
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	3	3	3	4	4	4	4	4	4
Cap, veh/h	383	321	152	352	300	166	447	1784	18	488	1126	487
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.05	0.51	0.51	0.02	0.48	0.48
Sat Flow, veh/h	1256	1197	566	1204	1117	619	1740	3521	36	1740	2360	1022
Grp Volume(v), veh/h	216	0	165	9	0	129	103	293	307	28	378	361
Grp Sat Flow(s),veh/h/ln	1256	0	1763	1204	0	1735	1740	1736	1821	1740	1736	1647
Q Serve(g_s), s	9.8	0.0	4.5	0.4	0.0	3.5	1.8	6.0	6.0	0.5	8.7	8.8
Cycle Q Clear(g_c), s	13.4	0.0	4.5	4.9	0.0	3.5	1.8	6.0	6.0	0.5	8.7	8.8
Prop In Lane	1.00		0.32	1.00		0.36	1.00		0.02	1.00		0.62
Lane Grp Cap(c), veh/h	383	0	473	352	0	466	447	880	923	488	828	785
V/C Ratio(X)	0.56	0.00	0.35	0.03	0.00	0.28	0.23	0.33	0.33	0.06	0.46	0.46
Avail Cap(c_a), veh/h	465	0	588	430	0	578	526	880	923	561	828	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	17.7	19.7	0.0	17.3	7.8	8.8	8.8	7.7	10.5	10.5
Incr Delay (d2), s/veh	1.3	0.0	0.4	0.0	0.0	0.3	0.3	1.0	1.0	0.0	1.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	2.3	0.1	0.0	1.7	0.9	3.1	3.2	0.2	4.5	4.3
LnGrp Delay(d),s/veh	23.9	0.0	18.2	19.7	0.0	17.7	8.0	9.8	9.8	7.8	12.3	12.4
LnGrp LOS	C		B	B		B	A	A	A	A	B	B
Approach Vol, veh/h		381			138			703			767	
Approach Delay, s/veh		21.4			17.8			9.5			12.2	
Approach LOS		C			B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	34.4		20.1	7.3	32.6		20.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	24.0		20.0	6.0	22.0		20.0
Max Q Clear Time (g_c+I1), s	2.5	8.0		15.4	3.8	10.8		6.9
Green Ext Time (p_c), s	0.0	3.3		0.7	0.0	3.6		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1	79	2	0	6	57	294	2	0	1801	53
Future Vol, veh/h	5	1	79	2	0	6	57	294	2	0	1801	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	13	13	13	6	6	6	2	2	2
Mvmt Flow	5	1	84	2	0	6	61	313	2	0	1916	56

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2223	2381	986	1395	2408	158	1972	0	0	-	-	0
Stage 1	1944	1944	-	436	436	-	-	-	-	-	-	-
Stage 2	279	437	-	959	1972	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.76	6.76	7.16	4.22	-	-	-	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.76	5.76	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.76	5.76	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.63	4.13	3.43	2.26	-	-	-	-	-
Pot Cap-1 Maneuver	*123	*69	*352	*322	*57	826	*518	-	-	0	-	-
Stage 1	*332	*291	-	*541	*551	-	-	-	-	0	-	-
Stage 2	*704	*578	-	*322	*283	-	-	-	-	0	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	*111	*61	*352	*220	*50	826	*518	-	-	-	-	-
Mov Cap-2 Maneuver	*111	*61	-	*220	*50	-	-	-	-	-	-	-
Stage 1	*293	*291	-	*477	*486	-	-	-	-	-	-	-
Stage 2	*616	*510	-	*244	*283	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.7	12.5	2.1	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBT	SBR
Capacity (veh/h)	* 518	-	-	111	332	489	-	-
HCM Lane V/C Ratio	0.117	-	-	0.048	0.256	0.017	-	-
HCM Control Delay (s)	12.9	-	-	39.1	19.5	12.5	-	-
HCM Lane LOS	B	-	-	E	C	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	1	0.1	-	-

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1043	325	303	0	0	806
Future Volume (veh/h)	1043	325	303	0	0	806
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1891	1928	1776	0	0	1845
Adj Flow Rate, veh/h	728	755	322	0	0	857
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	7	0	0	3
Cap, veh/h	825	751	1125	0	0	1168
Arrive On Green	0.46	0.46	0.33	0.00	0.00	0.33
Sat Flow, veh/h	1801	1639	3551	0	0	3689
Grp Volume(v), veh/h	728	755	322	0	0	857
Grp Sat Flow(s),veh/h/ln	1801	1639	1687	0	0	1752
Q Serve(g_s), s	22.1	27.5	4.2	0.0	0.0	12.9
Cycle Q Clear(g_c), s	22.1	27.5	4.2	0.0	0.0	12.9
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	825	751	1125	0	0	1168
V/C Ratio(X)	0.88	1.00	0.29	0.00	0.00	0.73
Avail Cap(c_a), veh/h	825	751	1125	0	0	1168
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	14.8	16.3	14.7	0.0	0.0	17.6
Incr Delay (d2), s/veh	11.0	34.0	0.6	0.0	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.2	19.4	2.1	0.0	0.0	6.9
LnGrp Delay(d),s/veh	25.8	50.3	15.4	0.0	0.0	21.8
LnGrp LOS	C	F	B			C
Approach Vol, veh/h	1483		322			857
Approach Delay, s/veh	38.3		15.4			21.8
Approach LOS	D		B			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		26.0		34.0		26.0		
Change Period (Y+Rc), s		6.0		6.5		6.0		
Max Green Setting (Gmax), s		20.0		27.5		20.0		
Max Q Clear Time (g_c+I1), s		14.9		29.5		6.2		
Green Ext Time (p_c), s		1.9		0.0		1.2		

Intersection Summary	
HCM 2010 Ctrl Delay	30.2
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	2	15	0	1	14	0	6	2	0	0	2	1
Future Vol, veh/h	2	15	0	1	14	0	6	2	0	0	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	18	0	1	17	0	7	2	0	0	2	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	17	0	0	18	0	0	43	41	18	42	41	17
Stage 1	-	-	-	-	-	-	22	22	-	19	19	-
Stage 2	-	-	-	-	-	-	21	19	-	23	22	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1600	-	-	1599	-	-	960	851	1061	961	851	1062
Stage 1	-	-	-	-	-	-	996	877	-	1000	880	-
Stage 2	-	-	-	-	-	-	998	880	-	995	877	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1600	-	-	1599	-	-	955	849	1061	957	849	1062
Mov Cap-2 Maneuver	-	-	-	-	-	-	955	849	-	957	849	-
Stage 1	-	-	-	-	-	-	995	876	-	999	879	-
Stage 2	-	-	-	-	-	-	993	879	-	991	876	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.5	8.9	9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	926	1600	-	-	1599	-	-	910
HCM Lane V/C Ratio	0.01	0.002	-	-	0.001	-	-	0.004
HCM Control Delay (s)	8.9	7.3	0	-	7.3	0	-	9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	99	7	0	64	2	3	1	1	5	2	2
Future Vol, veh/h	9	99	7	0	64	2	3	1	1	5	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	4	4	4	15	15	15	2	2	2	22	22	22
Mvmt Flow	11	124	9	0	80	3	4	1	1	6	3	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	83	0	0	133	0	0	236	234	129	234	237	82
Stage 1	-	-	-	-	-	-	151	151	-	82	82	-
Stage 2	-	-	-	-	-	-	85	83	-	152	155	-
Critical Hdwy	4.14	-	-	4.25	-	-	7.12	6.52	6.22	7.32	6.72	6.42
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.32	5.72	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.32	5.72	-
Follow-up Hdwy	2.236	-	-	2.335	-	-	3.518	4.018	3.318	3.698	4.198	3.498
Pot Cap-1 Maneuver	1501	-	-	1375	-	-	718	666	921	681	631	925
Stage 1	-	-	-	-	-	-	851	772	-	879	789	-
Stage 2	-	-	-	-	-	-	923	826	-	805	733	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1501	-	-	1375	-	-	709	661	921	675	626	925
Mov Cap-2 Maneuver	-	-	-	-	-	-	709	661	-	675	626	-
Stage 1	-	-	-	-	-	-	844	766	-	872	789	-
Stage 2	-	-	-	-	-	-	918	826	-	796	727	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	10	10.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	732	1501	-	-	1375	-	-	705
HCM Lane V/C Ratio	0.009	0.007	-	-	-	-	-	0.016
HCM Control Delay (s)	10	7.4	0	-	0	-	-	10.2
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	25	13	10	10	10
Future Vol, veh/h	10	25	13	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	13	13	4	4
Mvmt Flow	11	27	14	11	11	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	25	0	-	0	69	20
Stage 1	-	-	-	-	20	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	4.12	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.218	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	1589	-	-	-	931	1052
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	968	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1589	-	-	-	924	1052
Mov Cap-2 Maneuver	-	-	-	-	924	-
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	968	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1589	-	-	-	984
HCM Lane V/C Ratio	0.007	-	-	-	0.022
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	10	350	15	5	664
Future Vol, veh/h	5	10	350	15	5	664
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	5	5	3	3
Mvmt Flow	6	11	402	17	6	763

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	805	210	0	0	419	0
Stage 1	411	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.16	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.23	-
Pot Cap-1 Maneuver	*649	*964	-	-	1321	-
Stage 1	*821	-	-	-	-	-
Stage 2	*762	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*644	*964	-	-	1321	-
Mov Cap-2 Maneuver	*650	-	-	-	-	-
Stage 1	*815	-	-	-	-	-
Stage 2	*762	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	830	1321	-
HCM Lane V/C Ratio	-	-	0.021	0.004	-
HCM Control Delay (s)	-	-	9.4	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Notes

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

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	2	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	1021	1084
Stage 1	-	0	0	-	1022	-
Stage 2	-	0	0	-	1022	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	1021	1084
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1022	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	26	1077	1	8	609
Future Vol, veh/h	0	26	1077	1	8	609
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	0	27	1122	1	8	634

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1456	562	0	0	1123	0
Stage 1	1123	-	-	-	-	-
Stage 2	333	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	121	470	-	-	618	-
Stage 1	273	-	-	-	-	-
Stage 2	698	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	119	470	-	-	618	-
Mov Cap-2 Maneuver	119	-	-	-	-	-
Stage 1	268	-	-	-	-	-
Stage 2	698	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	470	618	-
HCM Lane V/C Ratio	-	-	0.058	0.013	-
HCM Control Delay (s)	-	-	13.1	10.9	0.1
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	11	1072	5	16	602
Future Vol, veh/h	12	11	1072	5	16	602
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	13	11	1117	5	17	627

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1468	561	0	0	1122	0
Stage 1	1120	-	-	-	-	-
Stage 2	348	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	118	471	-	-	618	-
Stage 1	274	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	113	471	-	-	618	-
Mov Cap-2 Maneuver	113	-	-	-	-	-
Stage 1	262	-	-	-	-	-
Stage 2	686	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.3	0	0.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	178	618	-
HCM Lane V/C Ratio	-	-	0.135	0.027	-
HCM Control Delay (s)	-	-	28.3	11	0.2
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	160	6	4	135	0	0	0	0	359	3	6
Future Vol, veh/h	0	160	6	4	135	0	0	0	0	359	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	6	6	6	2	2	2	3	3	3
Mvmt Flow	0	168	6	4	142	0	0	0	0	378	3	6

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	174	0	0			321	324	142
Stage 1	-	-	-	-	-	-			150	150	-
Stage 2	-	-	-	-	-	-			171	174	-
Critical Hdwy	-	-	-	4.16	-	-			6.43	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-			5.43	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.43	5.53	-
Follow-up Hdwy	-	-	-	2.254	-	-			3.527	4.027	3.327
Pot Cap-1 Maneuver	0	-	-	1379	-	0			671	592	903
Stage 1	0	-	-	-	-	0			875	771	-
Stage 2	0	-	-	-	-	0			857	753	-
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	-	-	-	1379	-	-			669	0	903
Mov Cap-2 Maneuver	-	-	-	-	-	-			669	0	-
Stage 1	-	-	-	-	-	-			872	0	-
Stage 2	-	-	-	-	-	-			857	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.2	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1379	-	669	37148
HCM Lane V/C Ratio	-	-	0.003	-	0.377	0.004
HCM Control Delay (s)	-	-	7.6	0	13.6	5.1
HCM Lane LOS	-	-	A	A	B	A
HCM 95th %tile Q(veh)	-	-	0	-	1.8	0

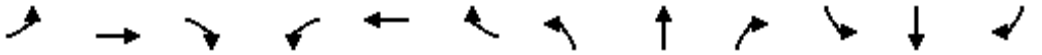
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	472	5	6	168	584	3	2	2	0	0	0
Future Vol, veh/h	1	472	5	6	168	584	3	2	2	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	3	3	3	14	14	14	2	2	2
Mvmt Flow	1	487	5	6	173	602	3	2	2	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	775	0	0	492	0	0	978	1279	246
Stage 1	-	-	-	-	-	-	492	492	-
Stage 2	-	-	-	-	-	-	486	787	-
Critical Hdwy	4.13	-	-	4.145	-	-	6.81	6.71	7.11
Critical Hdwy Stg 1	-	-	-	-	-	-	6.01	5.71	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.61	5.71	-
Follow-up Hdwy	2.219	-	-	2.2285	-	-	3.633	4.133	3.433
Pot Cap-1 Maneuver	946	-	-	1063	-	-	314	184	724
Stage 1	-	-	-	-	-	-	553	522	-
Stage 2	-	-	-	-	-	-	732	455	-
Platoon blocked, %	1	-	-		-	-	1	1	
Mov Cap-1 Maneuver	946	-	-	1063	-	-	310	0	724
Mov Cap-2 Maneuver	-	-	-	-	-	-	310	0	-
Stage 1	-	-	-	-	-	-	546	0	-
Stage 2	-	-	-	-	-	-	732	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	402	946	-	-	1063	-	-
HCM Lane V/C Ratio	0.018	0.001	-	-	0.006	-	-
HCM Control Delay (s)	14.1	8.8	0	-	8.4	0	-
HCM Lane LOS	B	A	A	-	A	A	-
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	346	116	46	602	203	109	261	15	148	297	28
Future Volume (veh/h)	14	346	116	46	602	203	109	261	15	148	297	28
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1845	1845	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	15	364	122	48	634	0	115	275	16	156	313	29
Adj No. of Lanes	0	2	0	0	2	1	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	76	899	292	117	1133	562	434	755	44	474	728	67
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.00	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	36	2509	814	135	3160	1568	1034	1743	101	1083	1679	156
Grp Volume(v), veh/h	269	0	232	356	326	0	115	0	291	156	0	342
Grp Sat Flow(s),veh/h/ln	1814	0	1545	1701	1595	1568	1034	0	1845	1083	0	1835
Q Serve(g_s), s	0.0	0.0	6.8	1.3	9.9	0.0	5.2	0.0	6.4	6.8	0.0	7.8
Cycle Q Clear(g_c), s	6.5	0.0	6.8	9.4	9.9	0.0	13.0	0.0	6.4	13.2	0.0	7.8
Prop In Lane	0.06		0.53	0.13		1.00	1.00		0.05	1.00		0.08
Lane Grp Cap(c), veh/h	713	0	554	678	571	562	434	0	799	474	0	795
V/C Ratio(X)	0.38	0.00	0.42	0.52	0.57	0.00	0.27	0.00	0.36	0.33	0.00	0.43
Avail Cap(c_a), veh/h	713	0	554	678	571	562	434	0	799	474	0	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.80	0.80	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.4	0.0	14.5	15.3	15.5	0.0	16.4	0.0	11.4	15.9	0.0	11.8
Incr Delay (d2), s/veh	1.5	0.0	2.3	2.3	3.3	0.0	1.5	0.0	1.3	1.8	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	3.3	5.1	4.9	0.0	1.6	0.0	3.5	2.3	0.0	4.3
LnGrp Delay(d),s/veh	16.0	0.0	16.9	17.6	18.8	0.0	17.9	0.0	12.7	17.7	0.0	13.5
LnGrp LOS	B		B	B	B		B		B	B		B
Approach Vol, veh/h		501			682			406			498	
Approach Delay, s/veh		16.4			18.2			14.2			14.8	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		32.5		27.5		32.5		27.5
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s		26.0		21.5		26.0		21.5
Max Q Clear Time (g_c+I1), s		15.2		8.8		15.0		11.9
Green Ext Time (p_c), s		1.8		1.8		1.4		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	371	135	2	549	537	125	503	10	157	362	113
Future Volume (veh/h)	39	371	135	2	549	537	125	503	10	157	362	113
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	40	379	138	2	560	548	128	513	0	160	369	115
Adj No. of Lanes	1	2	0	0	2	1	1	2	0	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	745	268	61	1012	657	165	684	0	219	672	301
Arrive On Green	0.58	0.58	0.58	0.29	0.29	0.29	0.09	0.19	0.00	0.12	0.19	0.19
Sat Flow, veh/h	507	2553	917	2	3468	1583	1774	3632	0	1774	3539	1583
Grp Volume(v), veh/h	40	261	256	301	261	548	128	513	0	160	369	115
Grp Sat Flow(s),veh/h/ln	507	1770	1701	1860	1610	1583	1774	1770	0	1774	1770	1583
Q Serve(g_s), s	3.9	5.2	5.4	0.0	8.2	11.2	4.2	8.2	0.0	5.2	5.7	3.8
Cycle Q Clear(g_c), s	12.1	5.2	5.4	8.2	8.2	11.2	4.2	8.2	0.0	5.2	5.7	3.8
Prop In Lane	1.00		0.54	0.01		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	198	516	496	603	470	657	165	684	0	219	672	301
V/C Ratio(X)	0.20	0.51	0.52	0.50	0.55	0.83	0.77	0.75	0.00	0.73	0.55	0.38
Avail Cap(c_a), veh/h	198	516	496	603	470	657	287	684	0	281	672	301
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	9.9	10.0	18.0	18.0	15.7	26.6	22.8	0.0	25.3	22.0	21.2
Incr Delay (d2), s/veh	2.1	3.2	3.5	2.9	4.7	11.9	7.5	7.4	0.0	6.9	3.2	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.9	2.9	4.7	4.2	6.9	2.4	4.7	0.0	3.0	3.1	2.0
LnGrp Delay(d),s/veh	16.8	13.2	13.5	20.9	22.6	27.6	34.1	30.2	0.0	32.2	25.2	24.9
LnGrp LOS	B	B	B	C	C	C	C	C		C	C	C
Approach Vol, veh/h		557			1110			641			644	
Approach Delay, s/veh		13.6			24.6			31.0			26.9	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.9	18.1		26.0	14.1	19.9		26.0
Change Period (Y+Rc), s	8.5	6.5		8.5	8.5	* 8.5		8.5
Max Green Setting (Gmax), s	9.5	11.6		15.4	9.7	* 11		15.4
Max Q Clear Time (g_c+I1), s	7.2	10.2		13.2	6.2	7.7		14.1
Green Ext Time (p_c), s	0.1	0.4		1.2	0.1	0.8		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	46	45	149	74	0	0	0	0	0	0	0
Future Vol, veh/h	0	46	45	149	74	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	96	96	96	96	92	96	92	96	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	48	47	155	77	0	0	0	0	0	0	0

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	95	0	0			-	482	-
Stage 1	-	-	-	-	-	-			-	387	-
Stage 2	-	-	-	-	-	-			-	95	-
Critical Hdwy	-	-	-	4.12	-	-			-	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-			-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			-	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-			-	4.018	-
Pot Cap-1 Maneuver	0	-	-	1499	-	0			0	484	0
Stage 1	0	-	-	-	-	0			0	610	0
Stage 2	0	-	-	-	-	0			0	816	0
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	-	-	-	1499	-	-			-	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-			-	0	-
Stage 1	-	-	-	-	-	-			-	0	-
Stage 2	-	-	-	-	-	-			-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	5.1	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	1499	-	-
HCM Lane V/C Ratio	-	-	0.104	-	-
HCM Control Delay (s)	-	-	7.7	0	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	-	-

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	12	38	16	26	21	85	610	16	14	414	67
Future Vol, veh/h	4	12	38	16	26	21	85	610	16	14	414	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	13	42	18	29	23	93	670	18	15	455	74

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1413	1396	492	1415	1424	679	529	0	0	688	0	0
Stage 1	522	522	-	865	865	-	-	-	-	-	-	-
Stage 2	891	874	-	550	559	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	115	141	577	115	136	452	1038	-	-	906	-	-
Stage 1	538	531	-	348	371	-	-	-	-	-	-	-
Stage 2	337	367	-	519	511	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	77	118	577	85	113	452	1038	-	-	906	-	-
Mov Cap-2 Maneuver	77	118	-	85	113	-	-	-	-	-	-	-
Stage 1	460	518	-	298	317	-	-	-	-	-	-	-
Stage 2	249	314	-	458	499	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.4	50.3	1.1	0.3
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1038	-	-	77	298	100	452	906	-	-
HCM Lane V/C Ratio	0.09	-	-	0.057	0.184	0.462	0.051	0.017	-	-
HCM Control Delay (s)	8.8	0	-	54.6	19.8	68.7	13.4	9	0	-
HCM Lane LOS	A	A	-	F	C	F	B	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	0.7	2	0.2	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	10	31	19	10	10	31	1077	15	4	445	18
Future Volume (veh/h)	7	10	31	19	10	10	31	1077	15	4	445	18
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	7	11	33	20	11	11	33	1134	16	4	468	19
Adj No. of Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	32	79	156	60	114	96	2423	34	64	2403	97
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.71	0.71	0.71	0.71	0.71	0.71
Sat Flow, veh/h	150	443	1088	798	827	1571	46	3408	47	5	3380	136
Grp Volume(v), veh/h	51	0	0	31	0	11	614	0	569	258	0	233
Grp Sat Flow(s),veh/h/ln	1681	0	0	1624	0	1571	1814	0	1687	1850	0	1671
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.0	0.4	0.0	0.0	8.8	0.0	0.0	2.8
Cycle Q Clear(g_c), s	1.7	0.0	0.0	0.9	0.0	0.4	8.5	0.0	8.8	2.8	0.0	2.8
Prop In Lane	0.14		0.65	0.65		1.00	0.05		0.03	0.02		0.08
Lane Grp Cap(c), veh/h	190	0	0	216	0	114	1353	0	1199	1376	0	1188
V/C Ratio(X)	0.27	0.00	0.00	0.14	0.00	0.10	0.45	0.00	0.47	0.19	0.00	0.20
Avail Cap(c_a), veh/h	539	0	0	531	0	445	1353	0	1199	1376	0	1188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.6	0.0	0.0	26.3	0.0	26.0	3.7	0.0	3.8	2.9	0.0	2.9
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.6	0.0	0.8	1.1	0.0	1.3	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.5	0.0	0.2	4.7	0.0	4.4	1.5	0.0	1.4
LnGrp Delay(d),s/veh	28.2	0.0	0.0	26.9	0.0	26.8	4.8	0.0	5.1	3.2	0.0	3.3
LnGrp LOS	C			C		C	A		A	A		A
Approach Vol, veh/h		51			42			1183			491	
Approach Delay, s/veh		28.2			26.9			5.0			3.2	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		49.7		10.3		49.7		10.3
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0
Max Green Setting (Gmax), s		30.0		17.0		30.0		17.0
Max Q Clear Time (g_c+I1), s		4.8		3.7		10.8		2.9
Green Ext Time (p_c), s		3.0		0.2		8.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	5.7
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	0	19	0	29	1	675	23	18	450	0
Future Vol, veh/h	1	0	0	19	0	29	1	675	23	18	450	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	20	0	31	1	711	24	19	474	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1253	1249	474	1237	1237	723	474	0	0	735	0	0
Stage 1	512	512	-	725	725	-	-	-	-	-	-	-
Stage 2	741	737	-	512	512	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	149	173	590	153	176	426	1088	-	-	870	-	0
Stage 1	545	536	-	416	430	-	-	-	-	-	-	0
Stage 2	408	425	-	545	536	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	135	167	590	149	170	426	1088	-	-	870	-	-
Mov Cap-2 Maneuver	135	167	-	149	170	-	-	-	-	-	-	-
Stage 1	544	520	-	415	429	-	-	-	-	-	-	-
Stage 2	378	424	-	529	520	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	31.9	23.5	0	0.4
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	1088	-	-	135	245	870	-
HCM Lane V/C Ratio	0.001	-	-	0.008	0.206	0.022	-
HCM Control Delay (s)	8.3	-	-	31.9	23.5	9.2	0
HCM Lane LOS	A	-	-	D	C	A	A
HCM 95th %tile Q(veh)	0	-	-	0	0.8	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	12	16	1118	466	12
Future Vol, veh/h	5	12	16	1118	466	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	6	6	2	2	2	2
Mvmt Flow	5	13	17	1189	496	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1132	255	509	0	-	0
Stage 1	503	-	-	-	-	-
Stage 2	629	-	-	-	-	-
Critical Hdwy	6.92	7.02	4.14	-	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	2.22	-	-	-
Pot Cap-1 Maneuver	*407	732	1052	-	-	-
Stage 1	*561	-	-	-	-	-
Stage 2	*615	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*388	732	1052	-	-	-
Mov Cap-2 Maneuver	*388	-	-	-	-	-
Stage 1	*534	-	-	-	-	-
Stage 2	*615	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1052	-	581	-	-
HCM Lane V/C Ratio	0.016	-	0.031	-	-
HCM Control Delay (s)	8.5	0.2	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	9	12	1	18	3	674	6	14	468	2
Future Vol, veh/h	2	0	9	12	1	18	3	674	6	14	468	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	9	13	1	19	3	709	6	15	493	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1252	1245	494	1244	1240	709	495	0	0	715	0	0
Stage 1	524	524	-	715	715	-	-	-	-	-	-	-
Stage 2	728	721	-	529	525	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	149	174	575	151	175	434	1069	-	-	885	-	-
Stage 1	537	530	-	422	434	-	-	-	-	-	-	-
Stage 2	415	432	-	533	529	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	139	169	575	145	170	434	1069	-	-	885	-	-
Mov Cap-2 Maneuver	139	169	-	145	170	-	-	-	-	-	-	-
Stage 1	534	518	-	420	432	-	-	-	-	-	-	-
Stage 2	394	430	-	512	517	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.2	22.5	0	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1069	-	-	366	238	885	-	-
HCM Lane V/C Ratio	0.003	-	-	0.032	0.137	0.017	-	-
HCM Control Delay (s)	8.4	0	-	15.2	22.5	9.1	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.5	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

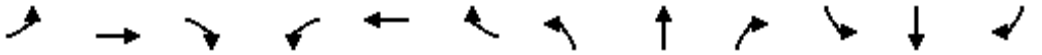
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	12	7	1128	472	2
Future Vol, veh/h	4	12	7	1128	472	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	13	7	1187	497	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1106	250	499	0	-	0
Stage 1	498	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	*622	750	1061	-	-	-
Stage 1	*576	-	-	-	-	-
Stage 2	*623	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*610	750	1061	-	-	-
Mov Cap-2 Maneuver	*610	-	-	-	-	-
Stage 1	*565	-	-	-	-	-
Stage 2	*623	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1061	-	709	-	-
HCM Lane V/C Ratio	0.007	-	0.024	-	-
HCM Control Delay (s)	8.4	0.1	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	84	67	26	85	20	129	523	14	6	440	45
Future Volume (veh/h)	141	84	67	26	85	20	129	523	14	6	440	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	147	88	70	27	89	21	134	545	15	6	458	47
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	4	4	4	2	2	2	2	2	2
Cap, veh/h	320	201	160	276	301	71	409	1580	44	67	2075	210
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	1.00	1.00	1.00	0.66	0.66	0.66
Sat Flow, veh/h	1266	953	758	1200	1430	337	493	2408	67	8	3163	320
Grp Volume(v), veh/h	147	0	158	27	0	110	315	0	379	271	0	240
Grp Sat Flow(s),veh/h/ln	1266	0	1711	1200	0	1767	1284	0	1683	1853	0	1639
Q Serve(g_s), s	6.6	0.0	4.8	1.2	0.0	3.1	0.5	0.0	0.0	0.0	0.0	3.6
Cycle Q Clear(g_c), s	9.8	0.0	4.8	6.0	0.0	3.1	4.1	0.0	0.0	3.5	0.0	3.6
Prop In Lane	1.00		0.44	1.00		0.19	0.43		0.04	0.02		0.20
Lane Grp Cap(c), veh/h	320	0	361	276	0	372	928	0	1104	1277	0	1075
V/C Ratio(X)	0.46	0.00	0.44	0.10	0.00	0.30	0.34	0.00	0.34	0.21	0.00	0.22
Avail Cap(c_a), veh/h	476	0	570	424	0	589	928	0	1104	1277	0	1075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	20.6	23.2	0.0	19.9	0.0	0.0	0.0	4.2	0.0	4.2
Incr Delay (d2), s/veh	1.0	0.0	0.8	0.2	0.0	0.4	1.0	0.0	0.9	0.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	2.4	0.4	0.0	1.6	0.3	0.0	0.3	1.9	0.0	1.7
LnGrp Delay(d),s/veh	25.1	0.0	21.4	23.4	0.0	20.4	1.0	0.0	0.9	4.5	0.0	4.6
LnGrp LOS	C		C	C		C	A		A	A		A
Approach Vol, veh/h		305			137			694			511	
Approach Delay, s/veh		23.2			21.0			0.9			4.6	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		43.4		16.6		43.4		16.6
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		32.0		20.0		32.0		20.0
Max Q Clear Time (g_c+I1), s		6.1		11.8		5.6		8.0
Green Ext Time (p_c), s		5.1		0.9		3.3		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	7.8
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	27	34	6	33	22	47	1098	0	9	460	15
Future Vol, veh/h	15	27	34	6	33	22	47	1098	0	9	460	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	16	29	36	6	35	23	50	1168	0	10	489	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1219	1785	253	1547	1793	584	505	0	0	1168	0	0
Stage 1	517	517	-	1268	1268	-	-	-	-	-	-	-
Stage 2	702	1268	-	279	525	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*201	93	743	104	92	*657	1056	-	-	*987	-	-
Stage 1	*507	529	-	503	466	-	-	-	-	-	-	-
Stage 2	*620	466	-	701	525	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*114	79	743	64	79	*657	1056	-	-	*987	-	-
Mov Cap-2 Maneuver	*114	79	-	64	79	-	-	-	-	-	-	-
Stage 1	*439	522	-	435	403	-	-	-	-	-	-	-
Stage 2	*472	403	-	621	518	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	56.6	74.2	0.8	0.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1056	-	-	146	112	* 987	-	-
HCM Lane V/C Ratio	0.047	-	-	0.554	0.579	0.01	-	-
HCM Control Delay (s)	8.6	0.5	-	56.6	74.2	8.7	0.1	-
HCM Lane LOS	A	A	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.8	2.8	0	-	-

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

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	33	628	31	48	499
Future Vol, veh/h	23	33	628	31	48	499
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	4	4	2	2	2	2
Mvmt Flow	25	35	675	33	52	537

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1065	354	0	0	708	0
Stage 1	692	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.14	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.22	-
Pot Cap-1 Maneuver	*646	*854	-	-	1171	-
Stage 1	*726	-	-	-	-	-
Stage 2	*855	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*605	*854	-	-	1171	-
Mov Cap-2 Maneuver	*605	-	-	-	-	-
Stage 1	*680	-	-	-	-	-
Stage 2	*855	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	731	1171	-
HCM Lane V/C Ratio	-	-	0.082	0.044	-
HCM Control Delay (s)	-	-	10.4	8.2	0.2
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Notes

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

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	1	21	9	1	0	41	1139	26	2	489	10
Future Vol, veh/h	8	1	21	9	1	0	41	1139	26	2	489	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	1	23	10	1	0	45	1238	28	2	532	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1252	1898	272	1613	1889	633	543	0	0	1266	0	0
Stage 1	542	542	-	1342	1342	-	-	-	-	-	-	-
Stage 2	710	1356	-	271	547	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*574	129	726	242	131	*609	1022	-	-	*910	-	-
Stage 1	*492	518	-	538	479	-	-	-	-	-	-	-
Stage 2	*574	468	-	712	516	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*503	109	726	206	111	*609	1022	-	-	*910	-	-
Mov Cap-2 Maneuver	*503	109	-	206	111	-	-	-	-	-	-	-
Stage 1	*418	516	-	457	407	-	-	-	-	-	-	-
Stage 2	*486	397	-	686	514	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.9	25.1	0.9	0
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1022	-	-	556	190	* 910	-	-
HCM Lane V/C Ratio	0.044	-	-	0.059	0.057	0.002	-	-
HCM Control Delay (s)	8.7	0.6	-	11.9	25.1	9	0	-
HCM Lane LOS	A	A	-	B	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.2	0	-	-

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

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	5	0	3	9	13
Future Vol, veh/h	12	5	0	3	9	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	14	6	0	4	11	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	23	19	26	0	-	0
Stage 1	19	-	-	-	-	-
Stage 2	4	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	993	1059	1588	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	1019	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	993	1059	1588	-	-	-
Mov Cap-2 Maneuver	993	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	1019	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1588	-	1012	-	-
HCM Lane V/C Ratio	-	-	0.02	-	-
HCM Control Delay (s)	0	-	8.6	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	0	0	9	47	0	59	3	592	18	7	505	0
Future Vol, veh/h	0	0	9	47	0	59	3	592	18	7	505	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	3	3	3
Mvmt Flow	0	0	10	51	0	63	3	637	19	8	543	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	884	1221	272	941	1212	328	543	0	0	656	0	0
Stage 1	559	559	-	653	653	-	-	-	-	-	-	-
Stage 2	325	662	-	288	559	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.23	-	-
Pot Cap-1 Maneuver	*649	441	*912	*649	449	*860	1274	-	-	1232	-	-
Stage 1	*753	683	-	*767	682	-	-	-	-	-	-	-
Stage 2	*810	674	-	*859	683	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*595	435	*912	*636	443	*860	1274	-	-	1232	-	-
Mov Cap-2 Maneuver	*595	435	-	*636	443	-	-	-	-	-	-	-
Stage 1	*750	677	-	*764	679	-	-	-	-	-	-	-
Stage 2	*748	671	-	*843	677	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	10.7	0	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1274	-	-	912	744	1232	-	-
HCM Lane V/C Ratio	0.003	-	-	0.011	0.153	0.006	-	-
HCM Control Delay (s)	7.8	0	-	9	10.7	7.9	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.5	0	-	-

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

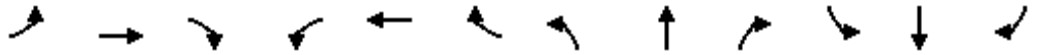
Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	12	4	2	11	0	6	7	0	0	3	61
Future Vol, veh/h	10	12	4	2	11	0	6	7	0	0	3	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	16	5	3	15	0	8	9	0	0	4	82

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	15	0	0	21	0	0	111	68	19	72	70	15
Stage 1	-	-	-	-	-	-	47	47	-	21	21	-
Stage 2	-	-	-	-	-	-	64	21	-	51	49	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1603	-	-	1595	-	-	867	823	1059	919	821	1065
Stage 1	-	-	-	-	-	-	967	856	-	998	878	-
Stage 2	-	-	-	-	-	-	947	878	-	962	854	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1603	-	-	1595	-	-	790	814	1059	903	812	1065
Mov Cap-2 Maneuver	-	-	-	-	-	-	790	814	-	903	812	-
Stage 1	-	-	-	-	-	-	958	848	-	989	876	-
Stage 2	-	-	-	-	-	-	868	876	-	943	846	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.8	1.1	9.6	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	803	1603	-	-	1595	-	-	1050
HCM Lane V/C Ratio	0.022	0.008	-	-	0.002	-	-	0.082
HCM Control Delay (s)	9.6	7.3	0	-	7.3	0	-	8.7
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	256	7	184	612	425	0	0	552	42
Future Volume (veh/h)	0	0	0	256	7	184	612	425	0	0	552	42
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1845	1900
Adj Flow Rate, veh/h				246	58	202	673	467	0	0	607	46
Adj No. of Lanes				1	1	0	2	2	0	0	2	0
Peak Hour Factor				0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %				2	2	2	2	2	0	0	3	3
Cap, veh/h				359	74	258	1139	2351	0	0	881	67
Arrive On Green				0.20	0.20	0.20	0.33	0.66	0.00	0.00	0.53	0.53
Sat Flow, veh/h				1774	365	1273	3442	3632	0	0	3395	250
Grp Volume(v), veh/h				246	0	260	673	467	0	0	322	331
Grp Sat Flow(s),veh/h/ln				1774	0	1638	1721	1770	0	0	1752	1801
Q Serve(g_s), s				7.7	0.0	9.0	9.8	3.1	0.0	0.0	8.1	8.2
Cycle Q Clear(g_c), s				7.7	0.0	9.0	9.8	3.1	0.0	0.0	8.1	8.2
Prop In Lane				1.00		0.78	1.00		0.00	0.00		0.14
Lane Grp Cap(c), veh/h				359	0	331	1139	2351	0	0	467	480
V/C Ratio(X)				0.69	0.00	0.78	0.59	0.20	0.00	0.00	0.69	0.69
Avail Cap(c_a), veh/h				473	0	437	1139	2351	0	0	467	480
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				22.2	0.0	22.7	16.7	3.9	0.0	0.0	12.2	12.2
Incr Delay (d2), s/veh				2.7	0.0	6.7	0.8	0.2	0.0	0.0	8.0	7.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.0	0.0	4.7	4.7	1.6	0.0	0.0	4.8	4.9
LnGrp Delay(d),s/veh				24.8	0.0	29.4	17.5	4.1	0.0	0.0	20.2	20.1
LnGrp LOS				C		C	B	A			C	C
Approach Vol, veh/h					506			1140			653	
Approach Delay, s/veh					27.2			12.0			20.1	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.9			23.9	20.0		16.1
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		36.0			16.0	16.0		16.0
Max Q Clear Time (g_c+I1), s		5.1			11.8	10.2		11.0
Green Ext Time (p_c), s		3.4			1.1	2.0		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Notes

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑						↑↑↱		↰	↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	0	1034	496	331	473	0
Future Vol, veh/h	0	0	0	0	0	0	0	1034	496	331	473	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	145	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	89	92	89	92	89	89	89	89	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	1162	557	372	531	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	2994	-	-	0	0	1719	0	0
Stage 1	-	1275	-	-	-	-	-	-	-
Stage 2	-	1719	-	-	-	-	-	-	-
Critical Hdwy	-	6.54	-	-	-	-	4.14	-	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.02	-	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	8	0	0	-	-	464	-	0
Stage 1	0	236	0	0	-	-	-	-	0
Stage 2	0	221	0	0	-	-	-	-	0
Platoon blocked, %		1			-	-	1	-	
Mov Cap-1 Maneuver	-	0	-	-	-	-	464	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	15.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	464	-
HCM Lane V/C Ratio	-	-	-	0.802	-
HCM Control Delay (s)	-	-	0	37.3	-
HCM Lane LOS	-	-	A	E	-
HCM 95th %tile Q(veh)	-	-	-	7.4	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	91	34	16	127	191	86	1085	18	18	313	172
Future Volume (veh/h)	232	91	34	16	127	191	86	1085	18	18	313	172
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	252	99	37	17	138	208	93	1179	20	20	340	187
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	329	474	177	512	246	371	330	1306	22	246	831	448
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.06	0.37	0.37	0.07	0.38	0.38
Sat Flow, veh/h	1031	1294	484	1248	672	1012	1774	3561	60	1757	2200	1187
Grp Volume(v), veh/h	252	0	136	17	0	346	93	586	613	20	269	258
Grp Sat Flow(s),veh/h/ln	1031	0	1777	1248	0	1684	1774	1770	1852	1757	1752	1635
Q Serve(g_s), s	12.2	0.0	3.1	0.6	0.0	9.8	2.2	18.8	18.8	0.0	6.8	7.0
Cycle Q Clear(g_c), s	22.0	0.0	3.1	3.7	0.0	9.8	2.2	18.8	18.8	0.0	6.8	7.0
Prop In Lane	1.00		0.27	1.00		0.60	1.00		0.03	1.00		0.73
Lane Grp Cap(c), veh/h	329	0	652	512	0	617	330	649	679	246	662	617
V/C Ratio(X)	0.77	0.00	0.21	0.03	0.00	0.56	0.28	0.90	0.90	0.08	0.41	0.42
Avail Cap(c_a), veh/h	329	0	652	512	0	617	409	649	679	246	662	617
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	0.0	13.0	14.3	0.0	15.1	14.8	18.0	18.0	25.9	13.7	13.8
Incr Delay (d2), s/veh	10.3	0.0	0.2	0.0	0.0	1.1	0.5	18.2	17.6	0.1	1.9	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	1.6	0.2	0.0	4.7	1.1	12.4	12.9	0.3	3.6	3.5
LnGrp Delay(d),s/veh	35.3	0.0	13.2	14.3	0.0	16.3	15.3	36.2	35.6	26.0	15.6	15.9
LnGrp LOS	D		B	B		B	B	D	D	C	B	B
Approach Vol, veh/h		388			363			1292			547	
Approach Delay, s/veh		27.5			16.2			34.4			16.1	
Approach LOS		C			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	26.0		26.0	7.3	26.7		26.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	22.0		22.0	6.0	20.0		22.0
Max Q Clear Time (g_c+I1), s	2.0	20.8		24.0	4.2	9.0		11.8
Green Ext Time (p_c), s	0.0	0.9		0.0	0.0	2.5		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.8

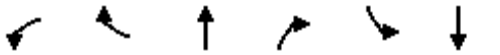
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	62	2	2	4	159	790	6	1	910	183
Future Vol, veh/h	17	0	62	2	2	4	159	790	6	1	910	183
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	13	13	13	2	2	2	2	2	2
Mvmt Flow	18	0	65	2	2	4	167	832	6	1	958	193

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1808	2229	576	1650	2322	419	1151	0	0	838	0	0
Stage 1	1057	1057	-	1169	1169	-	-	-	-	-	-	-
Stage 2	751	1172	-	481	1153	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.76	6.76	7.16	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.76	5.76	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.76	5.76	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.63	4.13	3.43	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	93	49	*707	*132	36	553	911	-	-	792	-	-
Stage 1	632	562	-	*188	244	-	-	-	-	-	-	-
Stage 2	364	260	-	*650	471	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	75	40	*707	*103	29	553	911	-	-	792	-	-
Mov Cap-2 Maneuver	75	40	-	*103	29	-	-	-	-	-	-	-
Stage 1	517	560	-	*154	199	-	-	-	-	-	-	-
Stage 2	292	212	-	*588	470	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.8	52.6	1.6	0
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	911	-	-	75	707	84	792	-	-
HCM Lane V/C Ratio	0.184	-	-	0.239	0.092	0.1	0.001	-	-
HCM Control Delay (s)	9.8	-	-	67.4	10.6	52.6	9.6	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	0.8	0.3	0.3	0	-	-

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	568	469	732	0	0	545
Future Volume (veh/h)	568	469	732	0	0	545
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1891	1928	1863	0	0	1863
Adj Flow Rate, veh/h	546	550	771	0	0	574
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2	0	0	2
Cap, veh/h	708	644	1411	0	0	1411
Arrive On Green	0.39	0.39	0.40	0.00	0.00	0.40
Sat Flow, veh/h	1801	1639	3725	0	0	3725
Grp Volume(v), veh/h	546	550	771	0	0	574
Grp Sat Flow(s),veh/h/ln	1801	1639	1770	0	0	1770
Q Serve(g_s), s	15.8	18.4	10.0	0.0	0.0	7.0
Cycle Q Clear(g_c), s	15.8	18.4	10.0	0.0	0.0	7.0
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	708	644	1411	0	0	1411
V/C Ratio(X)	0.77	0.85	0.55	0.00	0.00	0.41
Avail Cap(c_a), veh/h	825	751	1411	0	0	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	15.9	16.6	13.9	0.0	0.0	12.9
Incr Delay (d2), s/veh	3.9	8.4	1.5	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	9.8	5.1	0.0	0.0	3.5
LnGrp Delay(d),s/veh	19.7	25.0	15.4	0.0	0.0	13.8
LnGrp LOS	B	C	B			B
Approach Vol, veh/h	1096		771			574
Approach Delay, s/veh	22.4		15.4			13.8
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		29.9		30.1		29.9		
Change Period (Y+Rc), s		6.0		6.5		6.0		
Max Green Setting (Gmax), s		20.0		27.5		20.0		
Max Q Clear Time (g_c+I1), s		9.0		20.4		12.0		
Green Ext Time (p_c), s		2.0		3.2		2.4		

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Notes

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	12	8	4	18	3	5	8	5	4	3	5
Future Vol, veh/h	4	12	8	4	18	3	5	8	5	4	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	6	6	6	2	2	2
Mvmt Flow	4	13	9	4	20	3	6	9	6	4	3	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	23	0	0	22	0	0	60	57	18	63	60	22
Stage 1	-	-	-	-	-	-	26	26	-	30	30	-
Stage 2	-	-	-	-	-	-	34	31	-	33	30	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.16	6.56	6.26	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.554	4.054	3.354	3.518	4.018	3.318
Pot Cap-1 Maneuver	1592	-	-	1593	-	-	926	826	1049	932	831	1055
Stage 1	-	-	-	-	-	-	981	866	-	987	870	-
Stage 2	-	-	-	-	-	-	972	861	-	983	870	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1592	-	-	1593	-	-	914	821	1049	915	826	1055
Mov Cap-2 Maneuver	-	-	-	-	-	-	914	821	-	915	826	-
Stage 1	-	-	-	-	-	-	978	863	-	984	867	-
Stage 2	-	-	-	-	-	-	960	858	-	965	867	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	1.2	9.1	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	901	1592	-	-	1593	-	-	942
HCM Lane V/C Ratio	0.022	0.003	-	-	0.003	-	-	0.014
HCM Control Delay (s)	9.1	7.3	0	-	7.3	0	-	8.9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	65	5	3	101	6	4	1	2	2	3	9
Future Vol, veh/h	3	65	5	3	101	6	4	1	2	2	3	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	5	5	5	2	2	2	7	7	7
Mvmt Flow	3	68	5	3	105	6	4	1	2	2	3	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	111	0	0	73	0	0	197	194	71	192	193	108
Stage 1	-	-	-	-	-	-	77	77	-	114	114	-
Stage 2	-	-	-	-	-	-	120	117	-	78	79	-
Critical Hdwy	4.14	-	-	4.15	-	-	7.12	6.52	6.22	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.17	5.57	-
Follow-up Hdwy	2.236	-	-	2.245	-	-	3.518	4.018	3.318	3.563	4.063	3.363
Pot Cap-1 Maneuver	1466	-	-	1508	-	-	762	701	991	757	693	932
Stage 1	-	-	-	-	-	-	932	831	-	879	792	-
Stage 2	-	-	-	-	-	-	884	799	-	919	820	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1466	-	-	1508	-	-	750	698	991	752	690	932
Mov Cap-2 Maneuver	-	-	-	-	-	-	750	698	-	752	690	-
Stage 1	-	-	-	-	-	-	930	829	-	877	790	-
Stage 2	-	-	-	-	-	-	870	797	-	914	818	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	9.6	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	797	1466	-	-	1508	-	-	840
HCM Lane V/C Ratio	0.009	0.002	-	-	0.002	-	-	0.017
HCM Control Delay (s)	9.6	7.5	0	-	7.4	0	-	9.4
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	19	29	10	10	10
Future Vol, veh/h	10	19	29	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	20	31	11	11	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	42	0	-	0	79	37
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	42	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1567	-	-	-	924	1035
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	980	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1567	-	-	-	918	1035
Mov Cap-2 Maneuver	-	-	-	-	918	-
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	980	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1567	-	-	-	973
HCM Lane V/C Ratio	0.007	-	-	-	0.022
HCM Control Delay (s)	7.3	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	10	594	15	5	556
Future Vol, veh/h	5	10	594	15	5	556
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	3	3
Mvmt Flow	5	11	639	16	5	598

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	956	328	0	0	655	0
Stage 1	647	-	-	-	-	-
Stage 2	309	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.16	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.23	-
Pot Cap-1 Maneuver	*600	*860	-	-	1233	-
Stage 1	*780	-	-	-	-	-
Stage 2	*811	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*596	*860	-	-	1233	-
Mov Cap-2 Maneuver	*632	-	-	-	-	-
Stage 1	*775	-	-	-	-	-
Stage 2	*811	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	768	1233	-
HCM Lane V/C Ratio	-	-	0.021	0.004	-
HCM Control Delay (s)	-	-	9.8	7.9	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Notes

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

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	2	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	1021	1084
Stage 1	-	0	0	-	1022	-
Stage 2	-	0	0	-	1022	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	1021	1084
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1022	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Appendix E

2043 No Build Analysis Worksheets

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	14	843	1	15	1030
Future Vol, veh/h	1	14	843	1	15	1030
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	9	9	7	7	8	8
Mvmt Flow	1	16	937	1	17	1144

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1544	469	0	0	938	0
Stage 1	938	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Critical Hdwy	6.98	7.08	-	-	4.26	-
Critical Hdwy Stg 1	5.98	-	-	-	-	-
Critical Hdwy Stg 2	5.98	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.28	-
Pot Cap-1 Maneuver	98	522	-	-	690	-
Stage 1	325	-	-	-	-	-
Stage 2	488	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	91	522	-	-	690	-
Mov Cap-2 Maneuver	91	-	-	-	-	-
Stage 1	303	-	-	-	-	-
Stage 2	488	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	397	690	-
HCM Lane V/C Ratio	-	-	0.042	0.024	-
HCM Control Delay (s)	-	-	14.5	10.3	0.3
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	8	840	6	34	990
Future Vol, veh/h	11	8	840	6	34	990
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	6	8	8
Mvmt Flow	12	9	933	7	38	1100

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1563	470	0	0	940	0
Stage 1	937	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.26	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.28	-
Pot Cap-1 Maneuver	102	540	-	-	689	-
Stage 1	342	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	88	540	-	-	689	-
Mov Cap-2 Maneuver	88	-	-	-	-	-
Stage 1	293	-	-	-	-	-
Stage 2	495	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	36.3	0	1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	136	689	-
HCM Lane V/C Ratio	-	-	0.155	0.055	-
HCM Control Delay (s)	-	-	36.3	10.5	0.7
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0.2	-

Intersection	
Int Delay, s/veh	50.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	144	8	8	162	0	0	0	0	954	7	19
Future Vol, veh/h	0	144	8	8	162	0	0	0	0	954	7	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	6	6	6	0	0	0	3	3	3
Mvmt Flow	0	160	9	9	180	0	0	0	0	1060	8	21

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	169	0	0	363	367	180
Stage 1	-	-	-	-	-	-	198	198	-
Stage 2	-	-	-	-	-	-	165	169	-
Critical Hdwy	-	-	-	4.16	-	-	6.43	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	5.43	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	-	-	-	2.254	-	-	3.527	4.027	3.327
Pot Cap-1 Maneuver	0	-	-	1385	-	0	~ 634	560	860
Stage 1	0	-	-	-	-	0	~ 833	735	-
Stage 2	0	-	-	-	-	0	~ 862	757	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1385	-	-	~ 630	0	860
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 630	0	-
Stage 1	-	-	-	-	-	-	~ 827	0	-
Stage 2	-	-	-	-	-	-	~ 862	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.4	66.7
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1385	-	630	1523
HCM Lane V/C Ratio	-	-	0.006	-	1.122	0.251
HCM Control Delay (s)	-	-	7.6	0	98.4	8.2
HCM Lane LOS	-	-	A	A	F	A
HCM 95th %tile Q(veh)	-	-	0	-	21.8	1

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

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1090	8	4	172	393	0	0	1	0	0	0
Future Vol, veh/h	3	1090	8	4	172	393	0	0	1	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	9	9	9	2	2	2	2	2	2
Mvmt Flow	3	1211	9	4	191	437	0	0	1	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	628	0	0	1220	0	0	1640	1858	610
Stage 1	-	-	-	-	-	-	1222	1222	-
Stage 2	-	-	-	-	-	-	418	636	-
Critical Hdwy	4.145	-	-	4.235	-	-	6.63	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	5.83	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	2.2285	-	-	2.2855	-	-	3.519	4.019	3.319
Pot Cap-1 Maneuver	1086	-	-	539	-	-	114	80	438
Stage 1	-	-	-	-	-	-	242	251	-
Stage 2	-	-	-	-	-	-	827	569	-
Platoon blocked, %	1	-	-		-	-	1	1	
Mov Cap-1 Maneuver	1086	-	-	539	-	-	112	0	438
Mov Cap-2 Maneuver	-	-	-	-	-	-	112	0	-
Stage 1	-	-	-	-	-	-	237	0	-
Stage 2	-	-	-	-	-	-	827	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	438	1086	-	-	539	-	-
HCM Lane V/C Ratio	0.003	0.003	-	-	0.008	-	-
HCM Control Delay (s)	13.2	8.3	0	-	11.7	0	-
HCM Lane LOS	B	A	A	-	B	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	877	183	44	374	186	114	223	21	249	441	51
Future Volume (veh/h)	14	877	183	44	374	186	114	223	21	249	441	51
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1743	1743	1810	1810	1900	1810	1810	1900
Adj Flow Rate, veh/h	15	964	201	48	411	0	125	245	23	274	485	56
Adj No. of Lanes	0	2	0	0	2	1	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	9	9	9	5	5	5	5	5	5
Cap, veh/h	42	1275	263	103	794	673	219	704	66	422	688	79
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.00	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	19	2806	579	123	1746	1482	837	1630	153	1075	1593	184
Grp Volume(v), veh/h	633	0	547	107	352	0	125	0	268	274	0	541
Grp Sat Flow(s),veh/h/ln	1828	0	1576	363	1507	1482	837	0	1783	1075	0	1777
Q Serve(g_s), s	3.3	0.0	31.9	8.5	18.3	0.0	15.8	0.0	11.1	25.2	0.0	27.4
Cycle Q Clear(g_c), s	31.5	0.0	31.9	40.4	18.3	0.0	43.1	0.0	11.1	36.2	0.0	27.4
Prop In Lane	0.02		0.37	0.45		1.00	1.00		0.09	1.00		0.10
Lane Grp Cap(c), veh/h	864	0	717	212	685	673	219	0	770	422	0	767
V/C Ratio(X)	0.73	0.00	0.76	0.51	0.51	0.00	0.57	0.00	0.35	0.65	0.00	0.71
Avail Cap(c_a), veh/h	864	0	717	212	685	673	219	0	770	422	0	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.95	0.95	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.9	0.0	25.1	29.2	21.3	0.0	43.1	0.0	20.9	33.0	0.0	25.5
Incr Delay (d2), s/veh	5.5	0.0	7.6	7.9	2.6	0.0	10.4	0.0	1.2	7.6	0.0	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.1	0.0	15.3	3.5	8.0	0.0	4.3	0.0	5.7	8.3	0.0	14.5
LnGrp Delay(d),s/veh	30.4	0.0	32.6	37.1	23.9	0.0	53.6	0.0	22.1	40.6	0.0	30.9
LnGrp LOS	C		C	D	C		D		C	D		C
Approach Vol, veh/h		1180			459			393			815	
Approach Delay, s/veh		31.4			27.0			32.1			34.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		54.0		56.0		54.0		56.0
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s		47.5		50.0		47.5		50.0
Max Q Clear Time (g_c+I1), s		38.2		33.9		45.1		42.4
Green Ext Time (p_c), s		3.0		5.3		0.5		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	798	252	0	349	415	111	353	14	296	546	138
Future Volume (veh/h)	72	798	252	0	349	415	111	353	14	296	546	138
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1810	1810	1810	1810	1900	1759	1759	1759
Adj Flow Rate, veh/h	77	858	271	0	375	446	119	380	0	318	587	148
Adj No. of Lanes	1	2	0	0	2	1	1	2	0	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	5	5	5	5	5	5	8	8	8
Cap, veh/h	293	1093	345	0	1447	989	146	491	0	373	939	418
Arrive On Green	0.84	0.84	0.84	0.00	0.42	0.42	0.08	0.14	0.00	0.22	0.28	0.28
Sat Flow, veh/h	651	2597	819	0	3529	1535	1723	3529	0	1675	3343	1489
Grp Volume(v), veh/h	77	573	556	0	375	446	119	380	0	318	587	148
Grp Sat Flow(s),veh/h/ln	651	1736	1680	0	1719	1535	1723	1719	0	1675	1671	1489
Q Serve(g_s), s	5.1	16.9	17.0	0.0	7.8	0.0	7.5	11.7	0.0	20.0	16.8	8.7
Cycle Q Clear(g_c), s	12.9	16.9	17.0	0.0	7.8	0.0	7.5	11.7	0.0	20.0	16.8	8.7
Prop In Lane	1.00		0.49	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	293	730	707	0	1447	989	146	491	0	373	939	418
V/C Ratio(X)	0.26	0.78	0.79	0.00	0.26	0.45	0.82	0.77	0.00	0.85	0.63	0.35
Avail Cap(c_a), veh/h	293	730	707	0	1447	989	193	491	0	419	939	418
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.55	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.6	6.4	6.4	0.0	20.7	9.8	49.5	45.4	0.0	41.0	34.5	31.6
Incr Delay (d2), s/veh	1.2	4.7	4.9	0.0	0.4	1.5	18.0	11.3	0.0	14.2	3.1	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.3	8.0	0.0	3.8	7.1	4.3	6.3	0.0	10.8	8.2	3.8
LnGrp Delay(d),s/veh	8.8	11.1	11.3	0.0	21.1	11.3	67.5	56.8	0.0	55.2	37.6	33.9
LnGrp LOS	A	B	B		C	B	E	E		E	D	C
Approach Vol, veh/h		1206			821			499			1053	
Approach Delay, s/veh		11.0			15.8			59.3			42.4	
Approach LOS		B			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	22.2		54.8	17.8	37.4		54.8
Change Period (Y+Rc), s	8.5	6.5		8.5	8.5	6.5		8.5
Max Green Setting (Gmax), s	27.5	15.7		43.3	12.3	30.9		43.3
Max Q Clear Time (g_c+I2), s	22.0	13.7		9.8	9.5	18.8		19.0
Green Ext Time (p_c), s	0.6	0.4		4.4	0.1	2.9		6.6

Intersection Summary			
HCM 2010 Ctrl Delay		28.1	
HCM 2010 LOS		C	

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	89	37	99	54	0	0	0	0	0	0	0
Future Vol, veh/h	1	89	37	99	54	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	90	90	90	90	92	90	92	90	92	92	92
Heavy Vehicles, %	2	2	2	5	5	2	2	2	2	2	2	2
Mvmt Flow	1	99	41	110	60	0	0	0	0	0	0	0

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	60	0	0	140	0	0			-	422	-
Stage 1	-	-	-	-	-	-			-	280	-
Stage 2	-	-	-	-	-	-			-	142	-
Critical Hdwy	4.12	-	-	4.15	-	-			-	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-			-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			-	5.52	-
Follow-up Hdwy	2.218	-	-	2.245	-	-			-	4.018	-
Pot Cap-1 Maneuver	1544	-	-	1425	-	0			0	523	0
Stage 1	-	-	-	-	-	0			0	679	0
Stage 2	-	-	-	-	-	0			0	779	0
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	1544	-	-	1425	-	-			-	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-			-	0	-
Stage 1	-	-	-	-	-	-			-	0	-
Stage 2	-	-	-	-	-	-			-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	5	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	1544	-	-	1425	-	-
HCM Lane V/C Ratio	0.001	-	-	0.077	-	-
HCM Control Delay (s)	7.3	-	-	7.7	0	0
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	-	-

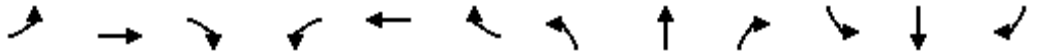
Intersection	
Int Delay, s/veh	17.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	19	63	38	47	8	40	506	30	29	721	66
Future Vol, veh/h	6	19	63	38	47	8	40	506	30	29	721	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	10	10	10	5	5	5	5	5	5
Mvmt Flow	6	20	67	40	50	9	43	538	32	31	767	70

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1534	1520	802	1548	1539	554	837	0	0	570	0	0
Stage 1	864	864	-	640	640	-	-	-	-	-	-	-
Stage 2	670	656	-	908	899	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.2	6.6	6.3	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.2	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.2	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.59	4.09	3.39	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	95	119	384	89	111	517	784	-	-	988	-	-
Stage 1	349	371	-	451	458	-	-	-	-	-	-	-
Stage 2	446	462	-	319	347	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	50	103	384	56	96	517	784	-	-	988	-	-
Mov Cap-2 Maneuver	50	103	-	56	96	-	-	-	-	-	-	-
Stage 1	321	349	-	414	421	-	-	-	-	-	-	-
Stage 2	355	425	-	233	326	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	33.1	259.1	0.7	0.3
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	784	-	-	50	235	73	517	988	-	-
HCM Lane V/C Ratio	0.054	-	-	0.128	0.371	1.239	0.016	0.031	-	-
HCM Control Delay (s)	9.9	0	-	87.3	29.1	282.3	12.1	8.8	0	-
HCM Lane LOS	A	A	-	F	D	F	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	1.6	7	0.1	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	21	47	21	65	51	17	711	18	28	1068	25
Future Volume (veh/h)	4	21	47	21	65	51	17	711	18	28	1068	25
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1681	1681	1900	1810	1900	1900	1827	1900
Adj Flow Rate, veh/h	4	23	51	23	71	55	18	773	20	30	1161	27
Adj No. of Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	13	13	13	5	5	5	4	4	4
Cap, veh/h	37	43	86	64	112	118	66	2556	66	73	2610	60
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.80	0.80	0.80	0.80	0.80	0.80
Sat Flow, veh/h	30	515	1029	279	1341	1414	40	3202	82	48	3268	75
Grp Volume(v), veh/h	78	0	0	94	0	55	413	0	398	627	0	591
Grp Sat Flow(s),veh/h/ln	1573	0	0	1620	0	1414	1691	0	1632	1743	0	1649
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	7.1	0.0	0.0	12.4
Cycle Q Clear(g_c), s	6.1	0.0	0.0	6.0	0.0	4.1	6.6	0.0	7.1	11.6	0.0	12.4
Prop In Lane	0.05		0.65	0.24		1.00	0.04		0.05	0.05		0.05
Lane Grp Cap(c), veh/h	166	0	0	176	0	118	1385	0	1303	1426	0	1317
V/C Ratio(X)	0.47	0.00	0.00	0.54	0.00	0.47	0.30	0.00	0.31	0.44	0.00	0.45
Avail Cap(c_a), veh/h	362	0	0	354	0	283	1385	0	1303	1426	0	1317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.4	0.0	0.0	49.0	0.0	48.1	2.9	0.0	3.0	3.4	0.0	3.5
Incr Delay (d2), s/veh	4.4	0.0	0.0	5.3	0.0	6.0	0.6	0.0	0.6	1.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	3.0	0.0	1.8	3.4	0.0	3.4	6.1	0.0	6.0
LnGrp Delay(d),s/veh	52.8	0.0	0.0	54.3	0.0	54.1	3.4	0.0	3.6	4.4	0.0	4.6
LnGrp LOS	D			D		D	A		A	A		A
Approach Vol, veh/h		78			149			811			1218	
Approach Delay, s/veh		52.8			54.2			3.5			4.5	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		94.8		15.2		94.8		15.2
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0
Max Green Setting (Gmax), s		75.0		22.0		75.0		22.0
Max Q Clear Time (g_c+I1), s		14.4		8.1		9.1		8.0
Green Ext Time (p_c), s		11.9		0.4		6.5		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	0	6	0	10	1	590	23	19	790	3
Future Vol, veh/h	0	1	0	6	0	10	1	590	23	19	790	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	0	1	0	6	0	11	1	634	25	20	849	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1545	1552	851	1540	1541	647	852	0	0	659	0	0
Stage 1	891	891	-	649	649	-	-	-	-	-	-	-
Stage 2	654	661	-	891	892	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	93	113	360	94	115	471	774	-	-	915	-	-
Stage 1	337	361	-	458	466	-	-	-	-	-	-	-
Stage 2	456	460	-	337	360	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	88	108	360	90	110	471	774	-	-	915	-	-
Mov Cap-2 Maneuver	88	108	-	90	110	-	-	-	-	-	-	-
Stage 1	336	346	-	457	465	-	-	-	-	-	-	-
Stage 2	445	459	-	322	345	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	38.7	26.8	0	0.2
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	774	-	-	108	182	915	-	-
HCM Lane V/C Ratio	0.001	-	-	0.01	0.095	0.022	-	-
HCM Control Delay (s)	9.7	-	-	38.7	26.8	9	0	-
HCM Lane LOS	A	-	-	E	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	15	6	745	1095	14
Future Vol, veh/h	1	15	6	745	1095	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	5	5	4	4
Mvmt Flow	1	16	6	793	1165	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1582	590	1180	0	-	0
Stage 1	1173	-	-	-	-	-
Stage 2	409	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.2	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.25	-	-	-
Pot Cap-1 Maneuver	*159	451	571	-	-	-
Stage 1	*256	-	-	-	-	-
Stage 2	*751	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*156	451	571	-	-	-
Mov Cap-2 Maneuver	*156	-	-	-	-	-
Stage 1	*251	-	-	-	-	-
Stage 2	*751	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.3	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	571	-	403	-	-
HCM Lane V/C Ratio	0.011	-	0.042	-	-
HCM Control Delay (s)	11.4	0.1	14.3	-	-
HCM Lane LOS	B	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

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

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↗		↕	
Traffic Vol, veh/h	1	0	4	10	0	17	10	611	11	12	784	3
Future Vol, veh/h	1	0	4	10	0	17	10	611	11	12	784	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	1	0	4	11	0	18	11	650	12	13	834	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1549	1546	836	1536	1535	650	837	0	0	662	0	0
Stage 1	862	862	-	672	672	-	-	-	-	-	-	-
Stage 2	687	684	-	864	863	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	93	114	367	95	116	469	784	-	-	912	-	-
Stage 1	350	372	-	445	454	-	-	-	-	-	-	-
Stage 2	437	449	-	349	372	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	86	109	367	90	110	469	784	-	-	912	-	-
Mov Cap-2 Maneuver	86	109	-	90	110	-	-	-	-	-	-	-
Stage 1	342	362	-	435	444	-	-	-	-	-	-	-
Stage 2	411	439	-	336	362	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	28.3	0.2	0.1
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	784	-	-	222	183	912	-	-
HCM Lane V/C Ratio	0.014	-	-	0.024	0.157	0.014	-	-
HCM Control Delay (s)	9.7	0	-	21.6	28.3	9	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.5	0	-	-

Intersection	
Int Delay, s/veh	0.3

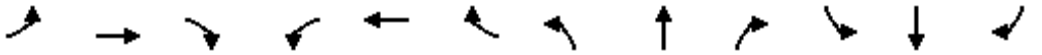
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	15	11	792	1097	3
Future Vol, veh/h	1	15	11	792	1097	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	8	5	5	4	4
Mvmt Flow	1	16	12	834	1155	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1598	579	1158	0	-	0
Stage 1	1157	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Critical Hdwy	6.96	7.06	4.2	-	-	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.38	2.25	-	-	-
Pot Cap-1 Maneuver	*114	444	582	-	-	-
Stage 1	*249	-	-	-	-	-
Stage 2	*712	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*110	444	582	-	-	-
Mov Cap-2 Maneuver	*110	-	-	-	-	-
Stage 1	*240	-	-	-	-	-
Stage 2	*712	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.1	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	582	-	373	-	-
HCM Lane V/C Ratio	0.02	-	0.045	-	-
HCM Control Delay (s)	11.3	0.2	15.1	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	152	173	25	61	7	78	410	15	3	760	39
Future Volume (veh/h)	210	152	173	25	61	7	78	410	15	3	760	39
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1727	1727	1900	1900	1845	1900	1900	1810	1900
Adj Flow Rate, veh/h	221	160	182	26	64	7	82	432	16	3	800	41
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	10	10	10	3	3	3	5	5	5
Cap, veh/h	391	199	227	163	386	42	273	1458	56	53	2062	105
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.21	0.21	0.21	0.63	0.63	0.63
Sat Flow, veh/h	1311	789	897	959	1530	167	321	2301	89	2	3257	166
Grp Volume(v), veh/h	221	0	342	26	0	71	229	0	301	445	0	399
Grp Sat Flow(s),veh/h/ln	1311	0	1686	959	0	1698	1048	0	1663	1808	0	1617
Q Serve(g_s), s	11.1	0.0	13.3	1.8	0.0	2.3	6.5	0.0	10.6	0.0	0.0	8.4
Cycle Q Clear(g_c), s	13.4	0.0	13.3	15.1	0.0	2.3	14.9	0.0	10.6	8.4	0.0	8.4
Prop In Lane	1.00		0.53	1.00		0.10	0.36		0.05	0.01		0.10
Lane Grp Cap(c), veh/h	391	0	426	163	0	429	734	0	1053	1197	0	1024
V/C Ratio(X)	0.57	0.00	0.80	0.16	0.00	0.17	0.31	0.00	0.29	0.37	0.00	0.39
Avail Cap(c_a), veh/h	566	0	650	290	0	655	734	0	1053	1197	0	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.6	0.0	24.5	31.6	0.0	20.4	15.6	0.0	14.4	6.2	0.0	6.2
Incr Delay (d2), s/veh	1.3	0.0	4.2	0.5	0.0	0.2	1.1	0.0	0.7	0.9	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	6.7	0.5	0.0	1.1	4.1	0.0	5.1	4.4	0.0	4.0
LnGrp Delay(d),s/veh	26.9	0.0	28.8	32.1	0.0	20.6	16.7	0.0	15.0	7.1	0.0	7.4
LnGrp LOS	C		C	C		C	B		B	A		A
Approach Vol, veh/h		563			97			530			844	
Approach Delay, s/veh		28.0			23.7			15.8			7.2	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		48.3		21.7		48.3		21.7
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0		27.0		35.0		27.0
Max Q Clear Time (g_c+I1), s		16.9		15.4		10.4		17.1
Green Ext Time (p_c), s		3.5		2.3		5.8		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	47.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	10	42	87	23	48	22	29	729	9	33	1064	18
Future Vol, veh/h	10	42	87	23	48	22	29	729	9	33	1064	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	6	6	6	4	4	4	4	4	4
Mvmt Flow	11	44	92	24	51	23	31	767	9	35	1120	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1671	2038	570	1486	2043	388	1139	0	0	776	0	0
Stage 1	1200	1200	-	834	834	-	-	-	-	-	-	-
Stage 2	471	838	-	652	1209	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.62	6.62	7.02	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.62	5.62	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.62	5.62	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.56	4.06	3.36	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	*105	68	465	156	65	*787	598	-	-	*1181	-	-
Stage 1	*196	256	-	691	618	-	-	-	-	-	-	-
Stage 2	*751	621	-	414	246	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*16	56	465	39	54	*787	598	-	-	*1181	-	-
Mov Cap-2 Maneuver	*16	56	-	39	54	-	-	-	-	-	-	-
Stage 1	*178	235	-	628	561	-	-	-	-	-	-	-
Stage 2	*603	565	-	248	226	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 416	$ 434.6	0.9	0.5
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	598	-	-	89	62	* 1181	-	-
HCM Lane V/C Ratio	0.051	-	-	1.644	1.579	0.029	-	-
HCM Control Delay (s)	11.3	0.5	-	$ 416	$ 434.6	8.1	0.3	-
HCM Lane LOS	B	A	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	11.8	8.7	0.1	-	-

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

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	29	484	51	118	824
Future Vol, veh/h	19	29	484	51	118	824
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	3	5	5
Mvmt Flow	21	32	538	57	131	916

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1287	298	0	0	595	0
Stage 1	567	-	-	-	-	-
Stage 2	720	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.2	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.25	-
Pot Cap-1 Maneuver	*534	*891	-	-	1231	-
Stage 1	*801	-	-	-	-	-
Stage 2	*715	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*418	*891	-	-	1231	-
Mov Cap-2 Maneuver	*418	-	-	-	-	-
Stage 1	*627	-	-	-	-	-
Stage 2	*715	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	615	1231	-
HCM Lane V/C Ratio	-	-	0.087	0.107	-
HCM Control Delay (s)	-	-	11.4	8.3	0.7
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.4	-

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

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	26	28	0	0	34	768	43	3	1124	45
Future Vol, veh/h	0	1	26	28	0	0	34	768	43	3	1124	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	3	3	3
Mvmt Flow	0	1	28	30	0	0	37	835	47	3	1222	49

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1745	2209	636	1551	2210	441	1271	0	0	882	0	0
Stage 1	1253	1253	-	933	933	-	-	-	-	-	-	-
Stage 2	492	956	-	618	1277	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.23	-	-
Pot Cap-1 Maneuver	*95	50	421	150	50	*768	526	-	-	1132	-	-
Stage 1	*182	242	-	647	584	-	-	-	-	-	-	-
Stage 2	*724	565	-	443	236	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*84	42	421	122	42	*768	526	-	-	1132	-	-
Mov Cap-2 Maneuver	*84	42	-	122	42	-	-	-	-	-	-	-
Stage 1	*157	240	-	557	503	-	-	-	-	-	-	-
Stage 2	*624	487	-	408	234	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.6	44	1.2	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	526	-	-	316	122	1132	-	-
HCM Lane V/C Ratio	0.07	-	-	0.093	0.249	0.003	-	-
HCM Control Delay (s)	12.4	0.8	-	17.6	44	8.2	0	-
HCM Lane LOS	B	A	-	C	E	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	0.9	0	-	-

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

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	3	1	7	12	7
Future Vol, veh/h	6	3	1	7	12	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	17	17	2	2
Mvmt Flow	7	3	1	8	13	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	27	17	21	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	10	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.27	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.353	-	-	-
Pot Cap-1 Maneuver	988	1062	1503	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	1013	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	987	1062	1503	-	-	-
Mov Cap-2 Maneuver	987	-	-	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	1013	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1503	-	1011	-	-
HCM Lane V/C Ratio	0.001	-	0.01	-	-
HCM Control Delay (s)	7.4	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	4	133	0	78	4	457	19	30	810	0
Future Vol, veh/h	0	0	4	133	0	78	4	457	19	30	810	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	6	6	6
Mvmt Flow	0	0	4	148	0	87	4	508	21	33	900	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1228	1503	450	1043	1493	265	900	0	0	529	0	0
Stage 1	966	966	-	527	527	-	-	-	-	-	-	-
Stage 2	262	537	-	516	966	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.16	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.23	-	-	2.26	-	-
Pot Cap-1 Maneuver	*205	153	*757	*296	155	*936	*1128	-	-	1220	-	-
Stage 1	*633	572	-	*735	675	-	-	-	-	-	-	-
Stage 2	*883	667	-	*714	572	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*177	144	*757	*281	146	*936	*1128	-	-	1220	-	-
Mov Cap-2 Maneuver	*177	144	-	*281	146	-	-	-	-	-	-	-
Stage 1	*630	541	-	*731	672	-	-	-	-	-	-	-
Stage 2	*797	664	-	*672	541	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	28.7	0.1	0.5
HCM LOS	A	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 1128	-	-	757	379	1220	-	-
HCM Lane V/C Ratio	0.004	-	-	0.006	0.619	0.027	-	-
HCM Control Delay (s)	8.2	0	-	9.8	28.7	8	0.2	-
HCM Lane LOS	A	A	-	A	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	4	0.1	-	-

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

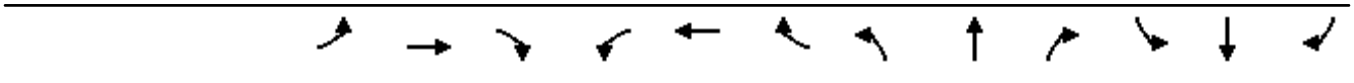
Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	15	6	0	10	3	15	12	3	3	0	165
Future Vol, veh/h	17	15	6	0	10	3	15	12	3	3	0	165
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	17	7	0	11	3	17	13	3	3	0	183

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	14	0	0	24	0	0	163	73	21	80	75	13
Stage 1	-	-	-	-	-	-	59	59	-	13	13	-
Stage 2	-	-	-	-	-	-	104	14	-	67	62	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1604	-	-	1591	-	-	802	817	1056	908	815	1067
Stage 1	-	-	-	-	-	-	953	846	-	1007	885	-
Stage 2	-	-	-	-	-	-	902	884	-	943	843	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1604	-	-	1591	-	-	658	807	1056	885	805	1067
Mov Cap-2 Maneuver	-	-	-	-	-	-	658	807	-	885	805	-
Stage 1	-	-	-	-	-	-	942	836	-	995	885	-
Stage 2	-	-	-	-	-	-	747	884	-	914	833	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.3	0	10.1	9.1
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	741	1604	-	-	1591	-	-	1063
HCM Lane V/C Ratio	0.045	0.012	-	-	-	-	-	0.176
HCM Control Delay (s)	10.1	7.3	0	-	0	-	-	9.1
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	502	4	195	446	310	0	0	871	96
Future Volume (veh/h)	0	0	0	502	4	195	446	310	0	0	871	96
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1845	1845	0	0	1810	1900
Adj Flow Rate, veh/h				390	240	217	496	344	0	0	968	107
Adj No. of Lanes				1	1	0	2	2	0	0	2	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	3	3	0	0	5	5
Cap, veh/h				507	258	233	580	2103	0	0	1163	129
Arrive On Green				0.29	0.29	0.29	0.17	0.60	0.00	0.00	0.75	0.75
Sat Flow, veh/h				1774	903	816	3408	3597	0	0	3213	345
Grp Volume(v), veh/h				390	0	457	496	344	0	0	533	542
Grp Sat Flow(s),veh/h/ln				1774	0	1719	1704	1752	0	0	1719	1749
Q Serve(g_s), s				14.1	0.0	18.1	9.9	3.0	0.0	0.0	14.5	14.6
Cycle Q Clear(g_c), s				14.1	0.0	18.1	9.9	3.0	0.0	0.0	14.5	14.6
Prop In Lane				1.00		0.47	1.00		0.00	0.00		0.20
Lane Grp Cap(c), veh/h				507	0	491	580	2103	0	0	641	652
V/C Ratio(X)				0.77	0.00	0.93	0.85	0.16	0.00	0.00	0.83	0.83
Avail Cap(c_a), veh/h				507	0	491	584	2103	0	0	641	652
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				22.9	0.0	24.3	28.2	6.2	0.0	0.0	7.4	7.4
Incr Delay (d2), s/veh				7.1	0.0	24.5	11.8	0.2	0.0	0.0	12.0	11.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.8	0.0	11.9	5.6	1.5	0.0	0.0	8.3	8.4
LnGrp Delay(d),s/veh				30.0	0.0	48.9	40.0	6.4	0.0	0.0	19.4	19.3
LnGrp LOS				C		D	D	A			B	B
Approach Vol, veh/h					847			840			1075	
Approach Delay, s/veh					40.2			26.2			19.4	
Approach LOS					D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		46.0			15.9	30.1		24.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		42.0			12.0	26.0		20.0
Max Q Clear Time (g_c+I1), s		5.0			11.9	16.6		20.1
Green Ext Time (p_c), s		2.5			0.0	4.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C

Notes

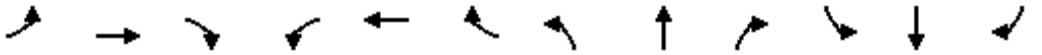
Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑						↑↑↱		↰	↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	0	761	290	430	949	0
Future Vol, veh/h	0	0	0	0	0	0	0	761	290	430	949	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	145	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	3	3	4	4	2
Mvmt Flow	0	0	0	0	0	0	0	827	315	467	1032	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	3108	-	-	0	0	1142	0	0
Stage 1	-	1966	-	-	-	-	-	-	-
Stage 2	-	1142	-	-	-	-	-	-	-
Critical Hdwy	-	6.54	-	-	-	-	4.18	-	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.02	-	-	-	-	2.24	-	-
Pot Cap-1 Maneuver	0	8	0	0	-	-	781	-	0
Stage 1	0	107	0	0	-	-	-	-	0
Stage 2	0	404	0	0	-	-	-	-	0
Platoon blocked, %		1			-	-	1	-	
Mov Cap-1 Maneuver	-	0	-	-	-	-	781	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	5.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	781	-
HCM Lane V/C Ratio	-	-	-	0.598	-
HCM Control Delay (s)	-	-	0	16.2	-
HCM Lane LOS	-	-	A	C	-
HCM 95th %tile Q(veh)	-	-	-	4.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	265	138	65	11	102	56	127	729	7	34	638	277
Future Volume (veh/h)	265	138	65	11	102	56	127	729	7	34	638	277
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	294	153	72	12	113	62	141	810	8	38	709	308
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	4	4	4	4	4	4
Cap, veh/h	428	412	194	385	385	211	312	1604	16	346	982	427
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.07	0.46	0.46	0.03	0.42	0.42
Sat Flow, veh/h	1205	1199	564	1140	1121	615	1740	3522	35	1740	2358	1024
Grp Volume(v), veh/h	294	0	225	12	0	175	141	399	419	38	522	495
Grp Sat Flow(s),veh/h/ln	1205	0	1763	1140	0	1736	1740	1736	1821	1740	1736	1646
Q Serve(g_s), s	16.5	0.0	6.7	0.6	0.0	5.2	3.1	11.4	11.4	0.9	17.6	17.6
Cycle Q Clear(g_c), s	21.7	0.0	6.7	7.3	0.0	5.2	3.1	11.4	11.4	0.9	17.6	17.6
Prop In Lane	1.00		0.32	1.00		0.35	1.00		0.02	1.00		0.62
Lane Grp Cap(c), veh/h	428	0	605	385	0	596	312	790	829	346	723	686
V/C Ratio(X)	0.69	0.00	0.37	0.03	0.00	0.29	0.45	0.51	0.51	0.11	0.72	0.72
Avail Cap(c_a), veh/h	444	0	630	400	0	620	342	790	829	393	723	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	17.3	20.0	0.0	16.8	12.9	13.5	13.5	11.5	17.0	17.0
Incr Delay (d2), s/veh	4.2	0.0	0.4	0.0	0.0	0.3	1.0	2.3	2.2	0.1	6.2	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	3.3	0.2	0.0	2.5	1.6	5.9	6.2	0.4	9.6	9.2
LnGrp Delay(d),s/veh	28.9	0.0	17.7	20.1	0.0	17.1	13.9	15.8	15.7	11.7	23.2	23.5
LnGrp LOS	C		B	C		B	B	B	B	B	C	C
Approach Vol, veh/h		519			187			959			1055	
Approach Delay, s/veh		24.0			17.2			15.5			22.9	
Approach LOS		C			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	35.9		28.0	8.8	33.2		28.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	29.0		25.0	6.0	27.0		25.0
Max Q Clear Time (g_c+I1), s	2.9	13.4		23.7	5.1	19.6		9.3
Green Ext Time (p_c), s	0.0	4.7		0.4	0.0	3.9		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	8.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	1	109	3	0	8	78	408	3	0	2493	73
Future Vol, veh/h	7	1	109	3	0	8	78	408	3	0	2493	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	13	13	13	6	6	6	2	2	2
Mvmt Flow	7	1	116	3	0	9	83	434	3	0	2652	78

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3074	3294	1365	1929	3332	219	2730	0	0	-	-	0
Stage 1	2691	2691	-	602	602	-	-	-	-	-	-	-
Stage 2	383	603	-	1327	2730	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.76	6.76	7.16	4.22	-	-	-	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.76	5.76	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.76	5.76	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.63	4.13	3.43	2.26	-	-	-	-	-
Pot Cap-1 Maneuver	*0	*0	*~ 41	*38	*0	752	*~ 60	-	-	0	-	-
Stage 1	*39	*34	-	*427	*461	-	-	-	-	0	-	-
Stage 2	*611	*487	-	*38	*33	-	-	-	-	0	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	-	*0	*~ 41	-	*0	752	*~ 60	-	-	-	-	-
Mov Cap-2 Maneuver	-	*0	-	-	*0	-	-	-	-	-	-	-
Stage 1	*39	*34	-	*427	*0	-	-	-	-	-	-	-
Stage 2	-	*0	-	-	*33	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			57.9	0
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBT	SBR
Capacity (veh/h)	~ * 60	-	-	-	41	-	-	-
HCM Lane V/C Ratio	1.383	-	-	-	2.854	-	-	-
HCM Control Delay (s)	$ 362.7	-	-	-	$ 1045.6	-	-	-
HCM Lane LOS	F	-	-	-	F	-	-	-
HCM 95th %tile Q(veh)	7.2	-	-	-	12.9	-	-	-

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1434	451	421	0	0	1125
Future Volume (veh/h)	1434	451	421	0	0	1125
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1891	1928	1776	0	0	1845
Adj Flow Rate, veh/h	1003	1040	448	0	0	1197
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	7	0	0	3
Cap, veh/h	990	902	1135	0	0	1179
Arrive On Green	0.55	0.55	0.34	0.00	0.00	0.34
Sat Flow, veh/h	1801	1639	3551	0	0	3689
Grp Volume(v), veh/h	1003	1040	448	0	0	1197
Grp Sat Flow(s),veh/h/ln	1801	1639	1687	0	0	1752
Q Serve(g_s), s	60.5	60.5	11.2	0.0	0.0	37.0
Cycle Q Clear(g_c), s	60.5	60.5	11.2	0.0	0.0	37.0
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	990	902	1135	0	0	1179
V/C Ratio(X)	1.01	1.15	0.39	0.00	0.00	1.02
Avail Cap(c_a), veh/h	990	902	1135	0	0	1179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	24.8	27.9	0.0	0.0	36.5
Incr Delay (d2), s/veh	31.8	81.8	1.0	0.0	0.0	30.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	38.5	47.5	5.4	0.0	0.0	22.8
LnGrp Delay(d),s/veh	56.5	106.5	29.0	0.0	0.0	66.6
LnGrp LOS	F	F	C			F
Approach Vol, veh/h	2043		448			1197
Approach Delay, s/veh	82.0		29.0			66.6
Approach LOS	F		C			E

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		43.0		67.0		43.0		
Change Period (Y+Rc), s		6.0		6.5		6.0		
Max Green Setting (Gmax), s		37.0		60.5		37.0		
Max Q Clear Time (g_c+I1), s		39.0		62.5		13.2		
Green Ext Time (p_c), s		0.0		0.0		2.0		

Intersection Summary	
HCM 2010 Ctrl Delay	70.5
HCM 2010 LOS	E

Notes

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	21	0	1	19	0	8	3	0	0	3	1
Future Vol, veh/h	3	21	0	1	19	0	8	3	0	0	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	23	0	1	21	0	9	3	0	0	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	21	0	0	23	0	0	54	52	23	54	52	21
Stage 1	-	-	-	-	-	-	29	29	-	23	23	-
Stage 2	-	-	-	-	-	-	25	23	-	31	29	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1595	-	-	1592	-	-	944	839	1054	944	839	1056
Stage 1	-	-	-	-	-	-	988	871	-	995	876	-
Stage 2	-	-	-	-	-	-	993	876	-	986	871	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1595	-	-	1592	-	-	938	836	1054	939	836	1056
Mov Cap-2 Maneuver	-	-	-	-	-	-	938	836	-	939	836	-
Stage 1	-	-	-	-	-	-	986	869	-	993	875	-
Stage 2	-	-	-	-	-	-	987	875	-	980	869	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.4	9	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	908	1595	-	-	1592	-	-	882
HCM Lane V/C Ratio	0.013	0.002	-	-	0.001	-	-	0.005
HCM Control Delay (s)	9	7.3	0	-	7.3	0	-	9.1
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	12	137	10	0	88	3	4	1	1	7	3	3
Future Vol, veh/h	12	137	10	0	88	3	4	1	1	7	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	4	4	4	15	15	15	2	2	2	22	22	22
Mvmt Flow	13	152	11	0	98	3	4	1	1	8	3	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	101	0	0	163	0	0	287	285	158	285	289	100
Stage 1	-	-	-	-	-	-	184	184	-	100	100	-
Stage 2	-	-	-	-	-	-	103	101	-	185	189	-
Critical Hdwy	4.14	-	-	4.25	-	-	7.12	6.52	6.22	7.32	6.72	6.42
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.32	5.72	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.32	5.72	-
Follow-up Hdwy	2.236	-	-	2.335	-	-	3.518	4.018	3.318	3.698	4.198	3.498
Pot Cap-1 Maneuver	1479	-	-	1340	-	-	665	624	887	629	589	904
Stage 1	-	-	-	-	-	-	818	747	-	859	775	-
Stage 2	-	-	-	-	-	-	903	811	-	773	708	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1479	-	-	1340	-	-	654	618	887	623	583	904
Mov Cap-2 Maneuver	-	-	-	-	-	-	654	618	-	623	583	-
Stage 1	-	-	-	-	-	-	810	740	-	850	775	-
Stage 2	-	-	-	-	-	-	896	811	-	763	701	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	10.4	10.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	677	1479	-	-	1340	-	-	660
HCM Lane V/C Ratio	0.01	0.009	-	-	-	-	-	0.022
HCM Control Delay (s)	10.4	7.5	0	-	0	-	-	10.6
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	34	18	14	14	14
Future Vol, veh/h	14	34	18	14	14	14
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, %	2	2	13	13	4	4
Mvmt Flow	15	37	20	15	15	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	35	0	-	0	95	28
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	67	-
Critical Hdwy	4.12	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.218	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	1576	-	-	-	905	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	954	-
Platoon blocked, %		-	-	-	1	
Mov Cap-1 Maneuver	1576	-	-	-	896	1041
Mov Cap-2 Maneuver	-	-	-	-	896	-
Stage 1	-	-	-	-	979	-
Stage 2	-	-	-	-	954	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1576	-	-	-	963
HCM Lane V/C Ratio	0.01	-	-	-	0.032
HCM Control Delay (s)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	14	484	21	7	941
Future Vol, veh/h	7	14	484	21	7	941
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	5	5	3	3
Mvmt Flow	8	16	538	23	8	1046

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1089	281	0	0	561	0
Stage 1	550	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.16	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.23	-
Pot Cap-1 Maneuver	*491	*891	-	-	1288	-
Stage 1	*820	-	-	-	-	-
Stage 2	*673	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*484	*891	-	-	1288	-
Mov Cap-2 Maneuver	*548	-	-	-	-	-
Stage 1	*808	-	-	-	-	-
Stage 2	*673	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	737	1288	-
HCM Lane V/C Ratio	-	-	0.032	0.006	-
HCM Control Delay (s)	-	-	10	7.8	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

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

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	2	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	1021	1084
Stage 1	-	0	0	-	1022	-
Stage 2	-	0	0	-	1022	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	1021	1084
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1022	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	36	1481	1	11	837
Future Vol, veh/h	0	36	1481	1	11	837
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	0	38	1559	1	12	881

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2025	780	0	0	1560	0
Stage 1	1560	-	-	-	-	-
Stage 2	465	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	50	338	-	-	420	-
Stage 1	159	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	47	338	-	-	420	-
Mov Cap-2 Maneuver	47	-	-	-	-	-
Stage 1	150	-	-	-	-	-
Stage 2	599	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	338	420	-
HCM Lane V/C Ratio	-	-	0.112	0.028	-
HCM Control Delay (s)	-	-	17	13.8	0.4
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	15	1474	7	22	828
Future Vol, veh/h	17	15	1474	7	22	828
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	18	16	1552	7	23	872

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2038	780	0	0	1559	0
Stage 1	1556	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	49	338	-	-	420	-
Stage 1	160	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	44	338	-	-	420	-
Mov Cap-2 Maneuver	44	-	-	-	-	-
Stage 1	143	-	-	-	-	-
Stage 2	587	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	89.2	0	1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	74	420	-
HCM Lane V/C Ratio	-	-	0.455	0.055	-
HCM Control Delay (s)	-	-	89.2	14.1	0.7
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	1.8	0.2	-

Intersection	
Int Delay, s/veh	9.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	220	8	6	186	0	0	0	0	542	4	8
Future Vol, veh/h	0	220	8	6	186	0	0	0	0	542	4	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	6	6	6	2	2	2	3	3	3
Mvmt Flow	0	232	8	6	196	0	0	0	0	571	4	8

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	240	0	0	444	448	196
Stage 1	-	-	-	-	-	-	208	208	-
Stage 2	-	-	-	-	-	-	236	240	-
Critical Hdwy	-	-	-	4.16	-	-	6.43	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	5.43	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	-	-	-	2.254	-	-	3.527	4.027	3.327
Pot Cap-1 Maneuver	0	-	-	1304	-	0	~ 570	504	843
Stage 1	0	-	-	-	-	0	824	728	-
Stage 2	0	-	-	-	-	0	801	705	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1304	-	-	~ 567	0	843
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 567	0	-
Stage 1	-	-	-	-	-	-	820	0	-
Stage 2	-	-	-	-	-	-	801	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.2	17.1
HCM LOS			C

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1304	-	567	10209
HCM Lane V/C Ratio	-	-	0.005	-	0.671	0.02
HCM Control Delay (s)	-	-	7.8	0	23.3	5.4
HCM Lane LOS	-	-	A	A	C	A
HCM 95th %tile Q(veh)	-	-	0	-	5	0.1

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

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	697	7	8	231	832	4	3	3	0	0	0
Future Vol, veh/h	1	697	7	8	231	832	4	3	3	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	3	3	3	14	14	14	2	2	2
Mvmt Flow	1	734	7	8	243	876	4	3	3	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1119	0	0	741	0	0	1437	1875	371
Stage 1	-	-	-	-	-	-	740	740	-
Stage 2	-	-	-	-	-	-	697	1135	-
Critical Hdwy	4.13	-	-	4.145	-	-	6.81	6.71	7.11
Critical Hdwy Stg 1	-	-	-	-	-	-	6.01	5.71	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.61	5.71	-
Follow-up Hdwy	2.219	-	-	2.2285	-	-	3.633	4.133	3.433
Pot Cap-1 Maneuver	717	-	-	858	-	-	164	74	598
Stage 1	-	-	-	-	-	-	409	400	-
Stage 2	-	-	-	-	-	-	640	324	-
Platoon blocked, %	1	-	-		-	-	1	1	
Mov Cap-1 Maneuver	717	-	-	858	-	-	158	0	598
Mov Cap-2 Maneuver	-	-	-	-	-	-	158	0	-
Stage 1	-	-	-	-	-	-	395	0	-
Stage 2	-	-	-	-	-	-	640	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	21.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	231	717	-	-	858	-	-
HCM Lane V/C Ratio	0.046	0.001	-	-	0.01	-	-
HCM Control Delay (s)	21.3	10	0	-	9.2	0	-
HCM Lane LOS	C	B	A	-	A	A	-
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	524	160	63	857	279	150	359	21	204	408	39
Future Volume (veh/h)	19	524	160	63	857	279	150	359	21	204	408	39
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1845	1845	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	20	552	168	66	902	0	158	378	22	215	429	41
Adj No. of Lanes	0	2	0	0	2	1	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	50	1064	342	104	1255	713	333	824	48	386	791	76
Arrive On Green	0.45	0.45	0.44	0.45	0.45	0.00	0.47	0.47	0.45	0.47	0.47	0.45
Sat Flow, veh/h	35	2341	753	146	2761	1568	919	1743	101	980	1674	160
Grp Volume(v), veh/h	393	0	347	439	529	0	158	0	400	215	0	470
Grp Sat Flow(s),veh/h/ln	1572	0	1557	1313	1595	1568	919	0	1845	980	0	1834
Q Serve(g_s), s	1.8	0.0	17.4	16.2	29.8	0.0	16.2	0.0	16.1	20.8	0.0	20.0
Cycle Q Clear(g_c), s	31.5	0.0	17.4	33.6	29.8	0.0	36.2	0.0	16.1	36.9	0.0	20.0
Prop In Lane	0.05		0.48	0.15		1.00	1.00		0.05	1.00		0.09
Lane Grp Cap(c), veh/h	749	0	708	634	725	713	333	0	872	386	0	867
V/C Ratio(X)	0.52	0.00	0.49	0.69	0.73	0.00	0.47	0.00	0.46	0.56	0.00	0.54
Avail Cap(c_a), veh/h	749	0	708	634	725	713	333	0	872	386	0	867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.77	0.77	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	21.5	25.6	24.5	0.0	33.4	0.0	19.6	32.0	0.0	20.6
Incr Delay (d2), s/veh	2.6	0.0	2.4	4.7	4.9	0.0	4.8	0.0	1.7	5.7	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	0.0	8.0	12.2	14.1	0.0	4.6	0.0	8.5	6.2	0.0	10.7
LnGrp Delay(d),s/veh	23.6	0.0	23.9	30.4	29.4	0.0	38.2	0.0	21.3	37.7	0.0	23.1
LnGrp LOS	C		C	C	C		D		C	D		C
Approach Vol, veh/h		740			968			558			685	
Approach Delay, s/veh		23.7			29.8			26.1			27.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		56.0		54.0		56.0		54.0
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s		49.5		48.0		49.5		48.0
Max Q Clear Time (g_c+I1), s		38.9		33.5		38.2		35.6
Green Ext Time (p_c), s		2.7		3.0		2.2		3.8

Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	558	186	3	784	738	172	692	14	216	498	155
Future Volume (veh/h)	54	558	186	3	784	738	172	692	14	216	498	155
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	57	587	196	3	825	777	181	728	0	227	524	163
Adj No. of Lanes	1	2	0	0	2	1	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	1007	336	34	1337	979	277	965	0	412	1236	553
Arrive On Green	0.77	0.77	0.69	0.39	0.39	0.39	0.16	0.27	0.00	0.23	0.35	0.35
Sat Flow, veh/h	316	2609	869	4	3463	1583	1774	3632	0	1774	3539	1583
Grp Volume(v), veh/h	57	398	385	444	384	777	181	728	0	227	524	163
Grp Sat Flow(s),veh/h/ln	316	1770	1709	1857	1610	1583	1774	1770	0	1774	1770	1583
Q Serve(g_s), s	19.0	10.2	11.7	0.0	21.2	14.9	10.5	20.7	0.0	12.4	12.4	8.2
Cycle Q Clear(g_c), s	40.2	10.2	11.7	21.1	21.2	14.9	10.5	20.7	0.0	12.4	12.4	8.2
Prop In Lane	1.00		0.51	0.01		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	683	660	749	621	979	277	965	0	412	1236	553
V/C Ratio(X)	0.45	0.58	0.58	0.59	0.62	0.79	0.65	0.75	0.00	0.55	0.42	0.29
Avail Cap(c_a), veh/h	127	683	660	749	621	979	316	965	0	452	1236	553
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	8.9	10.7	27.2	27.2	15.7	43.6	36.6	0.0	37.2	27.4	26.0
Incr Delay (d2), s/veh	9.3	3.0	3.1	3.4	4.6	6.6	4.0	5.5	0.0	1.2	1.1	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	5.4	5.9	11.6	10.2	7.9	5.5	10.8	0.0	6.2	6.2	3.8
LnGrp Delay(d),s/veh	31.7	11.9	13.8	30.7	31.8	22.4	47.6	42.1	0.0	38.3	28.4	27.3
LnGrp LOS	C	B	B	C	C	C	D	D		D	C	C
Approach Vol, veh/h		840			1605			909			914	
Approach Delay, s/veh		14.1			26.9			43.2			30.7	
Approach LOS		B			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	29.6	34.0		46.4	21.2	42.4		46.4
Change Period (Y+Rc), s	8.5	6.5		8.5	8.5	6.5		8.5
Max Green Setting (Gmax), s	23.5	27.5		35.5	15.1	35.9		35.5
Max Q Clear Time (g_c+I1), s	14.4	22.7		23.2	12.5	14.4		42.2
Green Ext Time (p_c), s	0.6	1.6		6.5	0.2	3.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.7
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	63	62	219	102	0	0	0	0	0	0	0
Future Vol, veh/h	0	63	62	219	102	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	66	65	231	107	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	131	0	0	-	700	-
Stage 1	-	-	-	-	-	-	-	569	-
Stage 2	-	-	-	-	-	-	-	131	-
Critical Hdwy	-	-	-	4.12	-	-	-	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	-	4.018	-
Pot Cap-1 Maneuver	0	-	-	1454	-	0	0	363	0
Stage 1	0	-	-	-	-	0	0	506	0
Stage 2	0	-	-	-	-	0	0	788	0
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1454	-	-	-	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	5.4	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	1454	-	-
HCM Lane V/C Ratio	-	-	0.159	-	-
HCM Control Delay (s)	-	-	7.9	0	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.6	-	-

Intersection	
Int Delay, s/veh	69.4

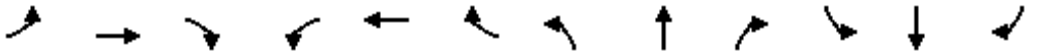
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	17	52	40	50	29	117	839	52	19	569	92
Future Vol, veh/h	6	17	52	40	50	29	117	839	52	19	569	92
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	19	57	44	55	32	129	922	57	21	625	101

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1970	1955	676	1965	1977	951	726	0	0	979	0	0
Stage 1	718	718	-	1209	1209	-	-	-	-	-	-	-
Stage 2	1252	1237	-	756	768	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	47	64	453	47	62	315	877	-	-	705	-	-
Stage 1	420	433	-	223	256	-	-	-	-	-	-	-
Stage 2	211	248	-	400	411	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	41	453	~ 20	~ 40	315	877	-	-	705	-	-
Mov Cap-2 Maneuver	-	41	-	~ 20	~ 40	-	-	-	-	-	-	-
Stage 1	283	411	-	150	172	-	-	-	-	-	-	-
Stage 2	87	167	-	317	390	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		$ 1086.3	1.1	0.3
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	877	-	-	-	130	28	315	705	-	-
HCM Lane V/C Ratio	0.147	-	-	-	0.583	3.532	0.101	0.03	-	-
HCM Control Delay (s)	9.8	0	-	-	65.3	$ 1430.6	17.7	10.3	0	-
HCM Lane LOS	A	A	-	-	F	F	C	B	A	-
HCM 95th %tile Q(veh)	0.5	-	-	-	2.9	12	0.3	0.1	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	44	43	33	46	43	43	1481	21	54	612	25
Future Volume (veh/h)	10	44	43	33	46	43	43	1481	21	54	612	25
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	11	46	45	35	48	45	45	1559	22	57	644	26
Adj No. of Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	82	73	105	110	164	88	2751	39	168	1937	80
Arrive On Green	0.10	0.10	0.09	0.10	0.10	0.10	0.82	0.82	0.80	0.82	0.82	0.80
Sat Flow, veh/h	101	784	699	558	1050	1570	65	3344	47	156	2353	98
Grp Volume(v), veh/h	102	0	0	83	0	45	841	0	785	281	0	446
Grp Sat Flow(s),veh/h/ln	1585	0	0	1608	0	1570	1769	0	1687	929	0	1678
Q Serve(g_s), s	2.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	17.0	3.9	0.0	7.1
Cycle Q Clear(g_c), s	7.2	0.0	0.0	5.2	0.0	2.9	16.0	0.0	17.0	20.9	0.0	7.1
Prop In Lane	0.11		0.44	0.42		1.00	0.05		0.03	0.20		0.06
Lane Grp Cap(c), veh/h	202	0	0	214	0	164	1490	0	1388	804	0	1381
V/C Ratio(X)	0.51	0.00	0.00	0.39	0.00	0.27	0.56	0.00	0.57	0.35	0.00	0.32
Avail Cap(c_a), veh/h	334	0	0	336	0	285	1490	0	1388	804	0	1381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.5	0.0	0.0	46.3	0.0	45.4	3.1	0.0	3.2	2.6	0.0	2.4
Incr Delay (d2), s/veh	4.1	0.0	0.0	2.4	0.0	1.9	1.6	0.0	1.7	1.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.0	2.5	0.0	1.3	8.6	0.0	8.3	2.0	0.0	3.5
LnGrp Delay(d),s/veh	51.7	0.0	0.0	48.8	0.0	47.3	4.7	0.0	4.9	3.8	0.0	3.0
LnGrp LOS	D			D		D	A		A	A		A
Approach Vol, veh/h		102			128			1626			727	
Approach Delay, s/veh		51.7			48.3			4.8			3.3	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		94.5		15.5		94.5		15.5
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0
Max Green Setting (Gmax), s		79.0		18.0		79.0		18.0
Max Q Clear Time (g_c+I1), s		22.9		9.2		19.0		7.2
Green Ext Time (p_c), s		7.0		0.4		20.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	8.4
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	0	26	0	40	1	958	32	25	637	0
Future Vol, veh/h	1	0	0	26	0	40	1	958	32	25	637	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	27	0	42	1	1008	34	26	671	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1771	1767	671	1750	1750	1025	671	0	0	1042	0	0
Stage 1	723	723	-	1027	1027	-	-	-	-	-	-	-
Stage 2	1048	1044	-	723	723	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	65	84	456	67	86	285	919	-	-	667	-	0
Stage 1	417	431	-	283	312	-	-	-	-	-	-	0
Stage 2	275	306	-	417	431	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	53	79	456	64	80	285	919	-	-	667	-	-
Mov Cap-2 Maneuver	53	79	-	64	80	-	-	-	-	-	-	-
Stage 1	416	404	-	282	311	-	-	-	-	-	-	-
Stage 2	234	305	-	391	404	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	74.3	68.8	0	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	919	-	-	53	121	667	-
HCM Lane V/C Ratio	0.001	-	-	0.02	0.574	0.039	-
HCM Control Delay (s)	8.9	-	-	74.3	68.8	10.6	0
HCM Lane LOS	A	-	-	F	F	B	A
HCM 95th %tile Q(veh)	0	-	-	0.1	2.8	0.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	17	22	1537	648	17
Future Vol, veh/h	7	17	22	1537	648	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	6	6	2	2	2	2
Mvmt Flow	7	18	23	1635	689	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1562	354	707	0	-	0
Stage 1	698	-	-	-	-	-
Stage 2	864	-	-	-	-	-
Critical Hdwy	6.92	7.02	4.14	-	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	2.22	-	-	-
Pot Cap-1 Maneuver	*129	631	887	-	-	-
Stage 1	*444	-	-	-	-	-
Stage 2	*430	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*93	631	887	-	-	-
Mov Cap-2 Maneuver	*93	-	-	-	-	-
Stage 1	*318	-	-	-	-	-
Stage 2	*430	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.2	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	887	-	235	-	-
HCM Lane V/C Ratio	0.026	-	0.109	-	-
HCM Control Delay (s)	9.2	1.3	22.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

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

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	0	12	17	1	25	4	957	8	19	662	3
Future Vol, veh/h	3	0	12	17	1	25	4	957	8	19	662	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	13	18	1	26	4	1007	8	20	697	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1772	1762	699	1760	1755	1007	700	0	0	1015	0	0
Stage 1	739	739	-	1015	1015	-	-	-	-	-	-	-
Stage 2	1033	1023	-	745	740	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	65	84	440	66	85	292	897	-	-	683	-	-
Stage 1	409	424	-	287	316	-	-	-	-	-	-	-
Stage 2	281	313	-	406	423	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	56	79	440	61	80	292	897	-	-	683	-	-
Mov Cap-2 Maneuver	56	79	-	61	80	-	-	-	-	-	-	-
Stage 1	405	404	-	284	313	-	-	-	-	-	-	-
Stage 2	252	310	-	375	403	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.1	56	0	0.3
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	897	-	-	186	114	683	-	-
HCM Lane V/C Ratio	0.005	-	-	0.085	0.397	0.029	-	-
HCM Control Delay (s)	9	0	-	26.1	56	10.4	0	-
HCM Lane LOS	A	A	-	D	F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	1.7	0.1	-	-

Intersection	
Int Delay, s/veh	0.6

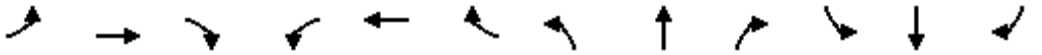
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	17	10	1551	660	3
Future Vol, veh/h	6	17	10	1551	660	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	18	11	1633	695	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1536	349	698	0	-	0
Stage 1	697	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	*283	647	894	-	-	-
Stage 1	*455	-	-	-	-	-
Stage 2	*408	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*245	647	894	-	-	-
Mov Cap-2 Maneuver	*245	-	-	-	-	-
Stage 1	*395	-	-	-	-	-
Stage 2	*408	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	894	-	453	-	-
HCM Lane V/C Ratio	0.012	-	0.053	-	-
HCM Control Delay (s)	9.1	0.6	13.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	122	92	36	117	28	177	731	19	8	623	62
Future Volume (veh/h)	212	122	92	36	117	28	177	731	19	8	623	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	223	128	97	38	123	29	186	769	20	8	656	65
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	4	4	4	2	2	2	2	2	2
Cap, veh/h	300	265	201	235	389	92	338	1417	38	36	2116	208
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	1.00	1.00	1.00	0.67	0.67	0.67
Sat Flow, veh/h	1218	975	739	1129	1430	337	448	2113	57	14	3155	310
Grp Volume(v), veh/h	223	0	225	38	0	152	384	0	591	385	0	344
Grp Sat Flow(s),veh/h/ln	1218	0	1714	1129	0	1767	932	0	1685	1839	0	1640
Q Serve(g_s), s	25.0	0.0	15.4	4.1	0.0	9.6	13.8	0.0	0.0	0.0	0.0	12.2
Cycle Q Clear(g_c), s	34.6	0.0	15.4	19.5	0.0	9.6	26.0	0.0	0.0	12.0	0.0	12.2
Prop In Lane	1.00		0.43	1.00		0.19	0.48		0.03	0.02		0.19
Lane Grp Cap(c), veh/h	300	0	467	235	0	481	664	0	1130	1260	0	1100
V/C Ratio(X)	0.74	0.00	0.48	0.16	0.00	0.32	0.58	0.00	0.52	0.31	0.00	0.31
Avail Cap(c_a), veh/h	368	0	563	298	0	581	664	0	1130	1260	0	1100
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.3	0.0	42.7	50.8	0.0	40.6	1.6	0.0	0.0	9.6	0.0	9.6
Incr Delay (d2), s/veh	6.3	0.0	0.8	0.3	0.0	0.4	3.6	0.0	1.7	0.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.0	7.4	1.3	0.0	4.7	4.5	0.0	0.5	6.3	0.0	5.8
LnGrp Delay(d),s/veh	60.7	0.0	43.5	51.2	0.0	40.9	5.2	0.0	1.7	10.2	0.0	10.3
LnGrp LOS	E		D	D		D	A		A	B		B
Approach Vol, veh/h		448			190			975			729	
Approach Delay, s/veh		52.0			43.0			3.1			10.3	
Approach LOS		D			D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		97.9		42.1		97.9		42.1
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		86.0		46.0		86.0		46.0
Max Q Clear Time (g_c+I1), s		28.0		36.6		14.2		21.5
Green Ext Time (p_c), s		10.0		1.5		5.5		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	21	43	47	12	45	30	65	1510	36	12	640	21
Future Vol, veh/h	21	43	47	12	45	30	65	1510	36	12	640	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	22	46	50	13	48	32	69	1606	38	13	681	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1683	2500	352	2153	2492	822	703	0	0	1644	0	0
Stage 1	718	718	-	1763	1763	-	-	-	-	-	-	-
Stage 2	965	1782	-	390	729	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*433	~ 32	641	82	~ 33	*459	890	-	-	*689	-	-
Stage 1	*384	429	-	384	347	-	-	-	-	-	-	-
Stage 2	*433	332	-	603	424	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	-	~ 2	641	-	~ 2	*459	890	-	-	*689	-	-
Mov Cap-2 Maneuver	-	~ 2	-	-	~ 2	-	-	-	-	-	-	-
Stage 1	*~ 21	416	-	21	~ 19	-	-	-	-	-	-	-
Stage 2	-	~ 18	-	479	411	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			4.2	0.4
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	890	-	-	-	-	* 689	-	-
HCM Lane V/C Ratio	0.078	-	-	-	-	0.019	-	-
HCM Control Delay (s)	9.4	4.1	-	-	-	10.3	0.2	-
HCM Lane LOS	A	A	-	-	-	B	A	-
HCM 95th %tile Q(veh)	0.3	-	-	-	-	0.1	-	-

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

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	45	876	43	66	704
Future Vol, veh/h	32	45	876	43	66	704
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	4	4	2	2	2	2
Mvmt Flow	34	48	942	46	71	757

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1486	494	0	0	988	0
Stage 1	965	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.14	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.22	-
Pot Cap-1 Maneuver	*299	*715	-	-	*1076	-
Stage 1	*675	-	-	-	-	-
Stage 2	*738	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*264	*715	-	-	*1076	-
Mov Cap-2 Maneuver	*264	-	-	-	-	-
Stage 1	*598	-	-	-	-	-
Stage 2	*738	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.7	0	1.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	418 *	1076	-
HCM Lane V/C Ratio	-	-	0.198	0.066	-
HCM Control Delay (s)	-	-	15.7	8.6	0.4
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

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

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	11	1	29	12	1	0	56	1602	36	3	683	14
Future Vol, veh/h	11	1	29	12	1	0	56	1602	36	3	683	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1	32	13	1	0	61	1741	39	3	742	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1749	2658	379	2261	2646	890	757	0	0	1780	0	0
Stage 1	756	756	-	1883	1883	-	-	-	-	-	-	-
Stage 2	993	1902	-	378	763	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*408	19	619	61	20	*433	850	-	-	*647	-	-
Stage 1	*366	414	-	311	292	-	-	-	-	-	-	-
Stage 2	*408	279	-	616	411	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	-	0	619	-	0	*433	850	-	-	*647	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	*366	411	-	311	0	-	-	-	-	-	-	-
Stage 2	-	0	-	578	408	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			4.6	0
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	850	-	-	-	-	* 647	-	-
HCM Lane V/C Ratio	0.072	-	-	-	-	0.005	-	-
HCM Control Delay (s)	9.6	4.5	-	-	-	10.6	0	-
HCM Lane LOS	A	A	-	-	-	B	A	-
HCM 95th %tile Q(veh)	0.2	-	-	-	-	0	-	-

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

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	7	0	4	12	18
Future Vol, veh/h	17	7	0	4	12	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	19	8	0	4	13	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	27	23	33	0	-	0
Stage 1	23	-	-	-	-	-
Stage 2	4	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	988	1054	1579	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	1019	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	988	1054	1579	-	-	-
Mov Cap-2 Maneuver	988	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	1019	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1579	-	1006	-	-
HCM Lane V/C Ratio	-	-	0.027	-	-
HCM Control Delay (s)	0	-	8.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	0	0	12	65	0	81	4	826	25	10	712	0
Future Vol, veh/h	0	0	12	65	0	81	4	826	25	10	712	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	3	3	3
Mvmt Flow	0	0	13	70	0	87	4	888	27	11	766	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1240	1711	383	1315	1698	458	766	0	0	915	0	0
Stage 1	788	788	-	910	910	-	-	-	-	-	-	-
Stage 2	452	923	-	405	788	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.23	-	-
Pot Cap-1 Maneuver	*419	*367	*786	*419	*367	*742	*1176	-	-	*1105	-	-
Stage 1	*741	*650	-	*699	*613	-	-	-	-	-	-	-
Stage 2	*699	*613	-	*741	*650	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*364	*358	*786	*405	*358	*742	*1176	-	-	*1105	-	-
Mov Cap-2 Maneuver	*364	*358	-	*405	*358	-	-	-	-	-	-	-
Stage 1	*736	*639	-	*694	*609	-	-	-	-	-	-	-
Stage 2	*613	*609	-	*717	*639	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	14.4	0	0.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 1176	-	-	786	541	* 1105	-	-
HCM Lane V/C Ratio	0.004	-	-	0.016	0.29	0.01	-	-
HCM Control Delay (s)	8.1	0	-	9.7	14.4	8.3	0.1	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.2	0	-	-

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

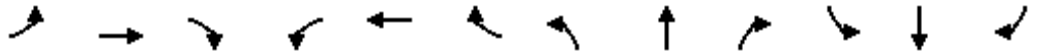
Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	17	6	3	15	0	8	10	0	0	4	84
Future Vol, veh/h	14	17	6	3	15	0	8	10	0	0	4	84
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	19	7	3	17	0	9	11	0	0	4	93

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	17	0	0	26	0	0	127	78	23	83	81	17
Stage 1	-	-	-	-	-	-	55	55	-	23	23	-
Stage 2	-	-	-	-	-	-	72	23	-	60	58	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1600	-	-	1588	-	-	846	812	1054	904	809	1062
Stage 1	-	-	-	-	-	-	957	849	-	995	876	-
Stage 2	-	-	-	-	-	-	938	876	-	951	847	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1600	-	-	1588	-	-	761	802	1054	886	799	1062
Mov Cap-2 Maneuver	-	-	-	-	-	-	761	802	-	886	799	-
Stage 1	-	-	-	-	-	-	947	841	-	985	874	-
Stage 2	-	-	-	-	-	-	850	874	-	929	839	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.8	1.2	9.7	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	783	1600	-	-	1588	-	-	1046
HCM Lane V/C Ratio	0.026	0.01	-	-	0.002	-	-	0.093
HCM Control Delay (s)	9.7	7.3	0	-	7.3	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	352	10	253	842	596	0	0	777	58
Future Volume (veh/h)	0	0	0	352	10	253	842	596	0	0	777	58
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1845	1900
Adj Flow Rate, veh/h				338	80	278	925	655	0	0	854	64
Adj No. of Lanes				1	1	0	2	2	0	0	2	0
Peak Hour Factor				0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %				2	2	2	2	2	0	0	3	3
Cap, veh/h				426	88	306	1213	2487	0	0	1063	80
Arrive On Green				0.24	0.24	0.24	0.35	0.70	0.00	0.00	0.64	0.64
Sat Flow, veh/h				1774	366	1272	3442	3632	0	0	3398	248
Grp Volume(v), veh/h				338	0	358	925	655	0	0	453	465
Grp Sat Flow(s),veh/h/ln				1774	0	1638	1721	1770	0	0	1752	1801
Q Serve(g_s), s				25.0	0.0	29.7	33.3	9.5	0.0	0.0	26.7	26.7
Cycle Q Clear(g_c), s				25.0	0.0	29.7	33.3	9.5	0.0	0.0	26.7	26.7
Prop In Lane				1.00		0.78	1.00		0.00	0.00		0.14
Lane Grp Cap(c), veh/h				426	0	394	1213	2487	0	0	563	579
V/C Ratio(X)				0.79	0.00	0.91	0.76	0.26	0.00	0.00	0.80	0.80
Avail Cap(c_a), veh/h				482	0	445	1213	2487	0	0	563	579
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				49.9	0.0	51.7	40.1	7.6	0.0	0.0	21.7	21.7
Incr Delay (d2), s/veh				7.9	0.0	21.0	2.9	0.3	0.0	0.0	11.6	11.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				13.2	0.0	15.7	16.3	4.6	0.0	0.0	14.4	14.7
LnGrp Delay(d),s/veh				57.9	0.0	72.7	43.0	7.9	0.0	0.0	33.3	33.0
LnGrp LOS				E		E	D	A			C	C
Approach Vol, veh/h					696			1580			918	
Approach Delay, s/veh					65.5			28.4			33.2	
Approach LOS					E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		102.4			53.4	49.0		37.6
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		94.0			45.0	45.0		38.0
Max Q Clear Time (g_c+I1), s		11.5			35.3	28.7		31.7
Green Ext Time (p_c), s		5.4			2.8	5.5		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	37.9
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	118.3

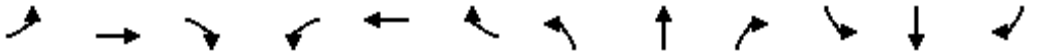
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑						↑↑↳		↰	↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	0	1434	682	466	657	0
Future Vol, veh/h	0	0	0	0	0	0	0	1434	682	466	657	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	145	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	1593	758	518	730	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	4117	-	-	0	0	2351	0	0
Stage 1	-	1766	-	-	-	-	-	-	-
Stage 2	-	2351	-	-	-	-	-	-	-
Critical Hdwy	-	6.54	-	-	-	-	4.14	-	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.02	-	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	0	0	-	-	~ 191	-	0
Stage 1	0	135	0	0	-	-	-	-	0
Stage 2	0	79	0	0	-	-	-	-	0
Platoon blocked, %		1			-	-	1	-	
Mov Cap-1 Maneuver	-	0	-	-	-	-	~ 191	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	$ 341.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	~ 191	-
HCM Lane V/C Ratio	-	-	-	2.711	-
HCM Control Delay (s)	-	-	0	$ 822.5	-
HCM Lane LOS	-	-	A	F	-
HCM 95th %tile Q(veh)	-	-	-	45.1	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	323	125	47	22	175	263	118	1500	25	25	435	239
Future Volume (veh/h)	323	125	47	22	175	263	118	1500	25	25	435	239
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	351	136	51	24	190	286	128	1630	27	27	473	260
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	301	619	232	549	322	484	264	1451	24	102	818	447
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.06	0.41	0.41	0.03	0.37	0.37
Sat Flow, veh/h	914	1293	485	1192	672	1012	1774	3563	59	1757	2189	1197
Grp Volume(v), veh/h	351	0	187	24	0	476	128	808	849	27	378	355
Grp Sat Flow(s),veh/h/ln	914	0	1777	1192	0	1684	1774	1770	1852	1757	1752	1633
Q Serve(g_s), s	38.2	0.0	8.6	1.7	0.0	28.8	6.6	57.0	57.0	0.0	24.1	24.3
Cycle Q Clear(g_c), s	67.0	0.0	8.6	10.3	0.0	28.8	6.6	57.0	57.0	0.0	24.1	24.3
Prop In Lane	1.00		0.27	1.00		0.60	1.00		0.03	1.00		0.73
Lane Grp Cap(c), veh/h	301	0	851	549	0	806	264	720	754	102	655	611
V/C Ratio(X)	1.17	0.00	0.22	0.04	0.00	0.59	0.48	1.12	1.13	0.27	0.58	0.58
Avail Cap(c_a), veh/h	301	0	851	549	0	806	319	720	754	102	655	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	0.0	21.3	24.3	0.0	26.5	30.8	41.5	41.5	66.1	35.0	35.1
Incr Delay (d2), s/veh	104.4	0.0	0.1	0.0	0.0	1.1	1.4	72.4	72.9	1.4	3.7	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.4	0.0	4.2	0.6	0.0	13.6	3.3	42.3	44.4	1.1	12.3	11.6
LnGrp Delay(d),s/veh	158.6	0.0	21.4	24.3	0.0	27.7	32.2	113.9	114.4	67.4	38.7	39.1
LnGrp LOS	F		C	C		C	C	F	F	E	D	D
Approach Vol, veh/h		538			500			1785			760	
Approach Delay, s/veh		110.9			27.5			108.3			39.9	
Approach LOS		F			C			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	61.0		71.0	12.7	56.3		71.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	57.0		67.0	13.0	48.0		67.0
Max Q Clear Time (g_c+I1), s	2.0	59.0		69.0	8.6	26.3		30.8
Green Ext Time (p_c), s	0.0	0.0		0.0	0.1	4.9		3.8

Intersection Summary		
HCM 2010 Ctrl Delay		82.9
HCM 2010 LOS		F

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	0	85	3	3	6	219	1104	8	1	1262	252
Future Vol, veh/h	23	0	85	3	3	6	219	1104	8	1	1262	252
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	13	13	13	2	2	2	2	2	2
Mvmt Flow	24	0	89	3	3	6	231	1162	8	1	1328	265

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2508	3095	797	2294	3223	585	1593	0	0	1170	0	0
Stage 1	1463	1463	-	1628	1628	-	-	-	-	-	-	-
Stage 2	1045	1632	-	666	1595	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.76	6.76	7.16	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.76	5.76	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.76	5.76	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.63	4.13	3.43	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 16	5	*569	*30	3	428	644	-	-	593	-	-
Stage 1	475	430	-	*95	142	-	-	-	-	-	-	-
Stage 2	241	155	-	*523	322	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	-	3	*569	*18	~ 2	428	644	-	-	593	-	-
Mov Cap-2 Maneuver	-	3	-	*18	~ 2	-	-	-	-	-	-	-
Stage 1	304	421	-	*61	91	-	-	-	-	-	-	-
Stage 2	147	99	-	*432	316	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		$ 1371.4	2.2	0
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	644	-	-	-	569	7	593	-	-
HCM Lane V/C Ratio	0.358	-	-	-	0.157	1.805	0.002	-	-
HCM Control Delay (s)	13.7	-	-	-	12.3	$ 1371.4	11.1	-	-
HCM Lane LOS	B	-	-	-	B	F	B	-	-
HCM 95th %tile Q(veh)	1.6	-	-	-	0.6	2.6	0	-	-

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	781	663	1025	0	0	760
Future Volume (veh/h)	781	663	1025	0	0	760
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1891	1928	1863	0	0	1863
Adj Flow Rate, veh/h	760	764	1079	0	0	800
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2	0	0	2
Cap, veh/h	931	811	1451	0	0	1451
Arrive On Green	0.52	0.49	0.41	0.00	0.00	0.41
Sat Flow, veh/h	1801	1639	3725	0	0	3725
Grp Volume(v), veh/h	760	764	1079	0	0	800
Grp Sat Flow(s),veh/h/ln	1801	1639	1770	0	0	1770
Q Serve(g_s), s	38.8	48.5	28.5	0.0	0.0	19.0
Cycle Q Clear(g_c), s	38.8	48.5	28.5	0.0	0.0	19.0
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	931	811	1451	0	0	1451
V/C Ratio(X)	0.82	0.94	0.74	0.00	0.00	0.55
Avail Cap(c_a), veh/h	966	842	1451	0	0	1451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	22.2	26.3	27.5	0.0	0.0	24.7
Incr Delay (d2), s/veh	5.4	18.2	3.5	0.0	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.6	26.0	14.6	0.0	0.0	9.5
LnGrp Delay(d),s/veh	27.5	44.5	31.0	0.0	0.0	26.3
LnGrp LOS	C	D	C			C
Approach Vol, veh/h	1524		1079			800
Approach Delay, s/veh	36.1		31.0			26.3
Approach LOS	D		C			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		49.1		60.9		49.1		
Change Period (Y+Rc), s		6.0		6.5		6.0		
Max Green Setting (Gmax), s		41.0		56.5		41.0		
Max Q Clear Time (g_c+I1), s		21.0		50.5		30.5		
Green Ext Time (p_c), s		3.8		3.9		4.1		

Intersection Summary	
HCM 2010 Ctrl Delay	32.2
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	17	11	6	25	4	7	11	7	6	4	7
Future Vol, veh/h	6	17	11	6	25	4	7	11	7	6	4	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	6	6	6	2	2	2
Mvmt Flow	7	19	12	7	28	4	8	12	8	7	4	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	32	0	0	31	0	0	89	85	25	93	89	30
Stage 1	-	-	-	-	-	-	39	39	-	44	44	-
Stage 2	-	-	-	-	-	-	50	46	-	49	45	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.16	6.56	6.26	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.554	4.054	3.354	3.518	4.018	3.318
Pot Cap-1 Maneuver	1580	-	-	1582	-	-	886	798	1040	891	801	1044
Stage 1	-	-	-	-	-	-	966	855	-	970	858	-
Stage 2	-	-	-	-	-	-	953	849	-	964	857	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1580	-	-	1582	-	-	869	790	1040	867	793	1044
Mov Cap-2 Maneuver	-	-	-	-	-	-	869	790	-	867	793	-
Stage 1	-	-	-	-	-	-	961	851	-	965	854	-
Stage 2	-	-	-	-	-	-	936	845	-	938	853	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	1.2	9.3	9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	871	1580	-	-	1582	-	-	911
HCM Lane V/C Ratio	0.032	0.004	-	-	0.004	-	-	0.021
HCM Control Delay (s)	9.3	7.3	0	-	7.3	0	-	9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	95	22	4	139	8	6	1	3	3	4	12
Future Vol, veh/h	4	95	22	4	139	8	6	1	3	3	4	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	5	5	5	2	2	2	7	7	7
Mvmt Flow	4	100	23	4	146	8	6	1	3	3	4	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	154	0	0	123	0	0	287	282	112	280	289	150
Stage 1	-	-	-	-	-	-	120	120	-	158	158	-
Stage 2	-	-	-	-	-	-	167	162	-	122	131	-
Critical Hdwy	4.14	-	-	4.15	-	-	7.12	6.52	6.22	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.17	5.57	-
Follow-up Hdwy	2.236	-	-	2.245	-	-	3.518	4.018	3.318	3.563	4.063	3.363
Pot Cap-1 Maneuver	1414	-	-	1446	-	-	665	627	941	662	613	883
Stage 1	-	-	-	-	-	-	884	796	-	833	758	-
Stage 2	-	-	-	-	-	-	835	764	-	870	778	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1414	-	-	1446	-	-	649	623	941	656	609	883
Mov Cap-2 Maneuver	-	-	-	-	-	-	649	623	-	656	609	-
Stage 1	-	-	-	-	-	-	881	794	-	831	756	-
Stage 2	-	-	-	-	-	-	816	762	-	863	776	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	10.1	9.8
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	712	1414	-	-	1446	-	-	768
HCM Lane V/C Ratio	0.015	0.003	-	-	0.003	-	-	0.026
HCM Control Delay (s)	10.1	7.6	0	-	7.5	0	-	9.8
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	26	40	14	14	14
Future Vol, veh/h	14	26	40	14	14	14
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	27	42	15	15	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	57	0	-	0	107	50
Stage 1	-	-	-	-	50	-
Stage 2	-	-	-	-	57	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1547	-	-	-	896	1018
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	969	-
Platoon blocked, %		-	-	-	1	
Mov Cap-1 Maneuver	1547	-	-	-	887	1018
Mov Cap-2 Maneuver	-	-	-	-	887	-
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	969	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1547	-	-	-	948
HCM Lane V/C Ratio	0.01	-	-	-	0.031
HCM Control Delay (s)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	14	829	21	7	783
Future Vol, veh/h	7	14	829	21	7	783
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	3	3
Mvmt Flow	8	15	891	23	8	842

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1340	457	0	0	914	0
Stage 1	903	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.16	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.23	-
Pot Cap-1 Maneuver	*398	*742	-	-	*1105	-
Stage 1	*700	-	-	-	-	-
Stage 2	*721	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*393	*742	-	-	*1105	-
Mov Cap-2 Maneuver	*499	-	-	-	-	-
Stage 1	*690	-	-	-	-	-
Stage 2	*721	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	638	* 1105	-
HCM Lane V/C Ratio	-	-	0.035	0.007	-
HCM Control Delay (s)	-	-	10.9	8.3	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

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

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	2	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	1021	1084
Stage 1	-	0	0	-	1022	-
Stage 2	-	0	0	-	1022	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	1021	1084
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1022	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Appendix F

2043 Build Conditions Analysis Worksheets

Intersection	
Int Delay, s/veh	4.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	111	1013	1	174	1322
Future Vol, veh/h	1	111	1013	1	174	1322
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	9	9	7	7	8	8
Mvmt Flow	1	123	1126	1	193	1469

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2248	564	0	0	1127	0
Stage 1	1127	-	-	-	-	-
Stage 2	1121	-	-	-	-	-
Critical Hdwy	6.98	7.08	-	-	4.26	-
Critical Hdwy Stg 1	5.98	-	-	-	-	-
Critical Hdwy Stg 2	5.98	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.28	-
Pot Cap-1 Maneuver	32	451	-	-	582	-
Stage 1	257	-	-	-	-	-
Stage 2	259	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	451	-	-	582	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	259	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16	0	6.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	451	582	-
HCM Lane V/C Ratio	-	-	0.276	0.332	-
HCM Control Delay (s)	-	-	16	14.2	5.6
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	1.1	1.4	-

Intersection	
Int Delay, s/veh	4.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	105	913	6	193	1123
Future Vol, veh/h	11	105	913	6	193	1123
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	6	8	8
Mvmt Flow	12	117	1014	7	214	1248

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2070	511	0	0	1021	0
Stage 1	1018	-	-	-	-	-
Stage 2	1052	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.26	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.28	-
Pot Cap-1 Maneuver	47	508	-	-	641	-
Stage 1	310	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	508	-	-	641	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	297	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	6.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	508	641	-
HCM Lane V/C Ratio	-	-	0.254	0.335	-
HCM Control Delay (s)	-	-	14.5	13.4	5
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	1	1.5	-

Intersection	
Int Delay, s/veh	133.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	144	8	8	162	0	0	0	0	1270	7	19
Future Vol, veh/h	0	144	8	8	162	0	0	0	0	1270	7	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	6	6	6	0	0	0	3	3	3
Mvmt Flow	0	160	9	9	180	0	0	0	0	1411	8	21

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	169	0	0	363	367	180
Stage 1	-	-	-	-	-	-	198	198	-
Stage 2	-	-	-	-	-	-	165	169	-
Critical Hdwy	-	-	-	4.16	-	-	6.43	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	5.43	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	-	-	-	2.254	-	-	3.527	4.027	3.327
Pot Cap-1 Maneuver	0	-	-	1385	-	0	~ 634	560	860
Stage 1	0	-	-	-	-	0	~ 833	735	-
Stage 2	0	-	-	-	-	0	~ 862	757	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1385	-	-	~ 630	0	860
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 630	0	-
Stage 1	-	-	-	-	-	-	~ 827	0	-
Stage 2	-	-	-	-	-	-	~ 862	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.4	166.2
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1385	-	630	1146
HCM Lane V/C Ratio	-	-	0.006	-	1.493	0.436
HCM Control Delay (s)	-	-	7.6	0	248.8	10.5
HCM Lane LOS	-	-	A	A	F	B
HCM 95th %tile Q(veh)	-	-	0	-	46.4	2.3

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

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1406	8	4	172	474	0	0	1	0	0	0
Future Vol, veh/h	3	1406	8	4	172	474	0	0	1	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	9	9	9	2	2	2	2	2	2
Mvmt Flow	3	1562	9	4	191	527	0	0	1	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	718	0	0	1571	0	0	2036	2299	786
Stage 1	-	-	-	-	-	-	1573	1573	-
Stage 2	-	-	-	-	-	-	463	726	-
Critical Hdwy	4.145	-	-	4.235	-	-	6.63	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	5.83	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	2.2285	-	-	2.2855	-	-	3.519	4.019	3.319
Pot Cap-1 Maneuver	997	-	-	392	-	-	59	39	336
Stage 1	-	-	-	-	-	-	157	170	-
Stage 2	-	-	-	-	-	-	785	513	-
Platoon blocked, %	1	-	-		-	-	1	1	
Mov Cap-1 Maneuver	997	-	-	392	-	-	57	0	336
Mov Cap-2 Maneuver	-	-	-	-	-	-	57	0	-
Stage 1	-	-	-	-	-	-	150	0	-
Stage 2	-	-	-	-	-	-	785	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0.1	15.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	336	997	-	-	392	-	-
HCM Lane V/C Ratio	0.003	0.003	-	-	0.011	-	-
HCM Control Delay (s)	15.8	8.6	0.1	-	14.3	0	-
HCM Lane LOS	C	A	A	-	B	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1193	183	44	455	213	114	223	21	294	441	51
Future Volume (veh/h)	14	1193	183	44	455	213	114	223	21	294	441	51
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1743	1743	1810	1810	1900	1810	1810	1900
Adj Flow Rate, veh/h	15	1311	201	48	500	0	125	245	23	323	485	56
Adj No. of Lanes	0	2	0	0	2	1	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	9	9	9	5	5	5	5	5	5
Cap, veh/h	41	1483	224	96	753	741	164	630	59	364	616	71
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.00	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	14	2966	448	60	1507	1482	837	1630	153	1075	1593	184
Grp Volume(v), veh/h	810	0	717	48	500	0	125	0	268	323	0	541
Grp Sat Flow(s),veh/h/ln	1829	0	1600	60	1507	1482	837	0	1783	1075	0	1777
Q Serve(g_s), s	12.3	0.0	44.7	10.3	27.3	0.0	13.0	0.0	11.9	30.6	0.0	29.5
Cycle Q Clear(g_c), s	43.5	0.0	44.7	55.0	27.3	0.0	42.5	0.0	11.9	42.5	0.0	29.5
Prop In Lane	0.02		0.28	1.00		1.00	1.00		0.09	1.00		0.10
Lane Grp Cap(c), veh/h	948	0	800	96	753	741	164	0	689	364	0	687
V/C Ratio(X)	0.85	0.00	0.90	0.50	0.66	0.00	0.76	0.00	0.39	0.89	0.00	0.79
Avail Cap(c_a), veh/h	948	0	800	96	753	741	164	0	689	364	0	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.90	0.90	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.5	0.0	24.9	51.7	20.6	0.0	49.9	0.0	24.4	40.9	0.0	29.8
Incr Delay (d2), s/veh	9.7	0.0	14.8	16.0	4.1	0.0	27.9	0.0	1.7	25.8	0.0	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.4	0.0	22.8	1.9	12.1	0.0	5.1	0.0	6.2	12.4	0.0	16.1
LnGrp Delay(d),s/veh	34.3	0.0	39.7	67.7	24.7	0.0	77.8	0.0	26.0	66.6	0.0	38.7
LnGrp LOS	C		D	E	C		E		C	E		D
Approach Vol, veh/h		1527			548			393			864	
Approach Delay, s/veh		36.8			28.5			42.5			49.1	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		49.0		61.0		49.0		61.0
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s		42.5		55.0		42.5		55.0
Max Q Clear Time (g_c+I1), s		44.5		46.7		44.5		57.0
Green Ext Time (p_c), s		0.0		4.8		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	947	464	0	403	448	163	394	14	376	599	138
Future Volume (veh/h)	72	947	464	0	403	448	163	394	14	376	599	138
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1810	1810	1810	1810	1900	1759	1759	1759
Adj Flow Rate, veh/h	77	1018	499	0	433	482	175	424	0	404	644	148
Adj No. of Lanes	1	2	0	0	2	1	1	2	0	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	5	5	5	5	5	5	8	8	8
Cap, veh/h	667	2346	1121	0	3538	1942	230	422	0	393	808	360
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.12	0.00	0.23	0.24	0.24
Sat Flow, veh/h	596	2280	1089	0	3529	1537	1723	3529	0	1675	3343	1488
Grp Volume(v), veh/h	77	769	748	0	433	482	175	424	0	404	644	148
Grp Sat Flow(s),veh/h/ln	596	1736	1634	0	1719	1537	1723	1719	0	1675	1671	1488
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	10.8	13.5	0.0	25.8	19.9	9.2
Cycle Q Clear(g_c), s	2.5	0.0	0.0	0.0	0.0	0.0	10.8	13.5	0.0	25.8	19.9	9.2
Prop In Lane	1.00		0.67	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	667	1786	1681	0	3538	1942	230	422	0	393	808	360
V/C Ratio(X)	0.12	0.43	0.45	0.00	0.12	0.25	0.76	1.00	0.00	1.03	0.80	0.41
Avail Cap(c_a), veh/h	667	1786	1681	0	3538	1942	230	422	0	393	808	360
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.26	0.26	0.26	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	45.9	48.3	0.0	42.1	39.2	35.1
Incr Delay (d2), s/veh	0.1	0.2	0.2	0.0	0.1	0.3	13.7	45.0	0.0	52.8	8.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.1	0.0	0.0	0.2	6.0	9.0	0.0	17.7	10.1	4.1
LnGrp Delay(d),s/veh	0.1	0.2	0.2	0.0	0.1	0.3	59.6	93.3	0.0	94.9	47.2	38.6
LnGrp LOS	A	A	A		A	A	E	F		F	D	D
Approach Vol, veh/h		1594			915			599			1196	
Approach Delay, s/veh		0.2			0.2			83.5			62.2	
Approach LOS		A			A			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.3	22.0		123.7	23.2	33.1		123.7
Change Period (Y+Rc), s	8.5	* 8.5		8.5	8.5	6.5		8.5
Max Green Setting (Gmax), s	25.8	* 14		47.2	12.7	26.6		47.2
Max Q Clear Time (g_c+I1), s	27.8	15.5		2.0	12.8	21.9		4.5
Green Ext Time (p_c), s	0.0	0.0		5.1	0.0	1.7		11.9

Intersection Summary	
HCM 2010 Ctrl Delay	29.0
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	134	37	380	81	0	0	0	0	0	0	0
Future Vol, veh/h	1	134	37	380	81	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	90	90	90	90	92	90	92	90	92	92	92
Heavy Vehicles, %	2	2	2	5	5	2	2	2	2	2	2	2
Mvmt Flow	1	149	41	422	90	0	0	0	0	0	0	0

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	90	0	0	190	0	0			-	1126	-
Stage 1	-	-	-	-	-	-			-	934	-
Stage 2	-	-	-	-	-	-			-	192	-
Critical Hdwy	4.12	-	-	4.15	-	-			-	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-			-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			-	5.52	-
Follow-up Hdwy	2.218	-	-	2.245	-	-			-	4.018	-
Pot Cap-1 Maneuver	1505	-	-	1366	-	0			0	205	0
Stage 1	-	-	-	-	-	0			0	345	0
Stage 2	-	-	-	-	-	0			0	742	0
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	1505	-	-	1366	-	-			-	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-			-	0	-
Stage 1	-	-	-	-	-	-			-	0	-
Stage 2	-	-	-	-	-	-			-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	7.3	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	1505	-	-	1366	-	-
HCM Lane V/C Ratio	0.001	-	-	0.309	-	-
HCM Control Delay (s)	7.4	-	-	8.8	0	0
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0	-	-	1.3	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	62	66	38	185	8	209	574	90	69	946	66
Future Vol, veh/h	6	62	66	38	185	8	209	574	90	69	946	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	10	10	10	5	5	5	5	5	5
Mvmt Flow	6	66	70	40	197	9	222	611	96	73	1006	70

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2393	2338	1041	2358	2325	659	1076	0	0	707	0	0
Stage 1	1187	1187	-	1103	1103	-	-	-	-	-	-	-
Stage 2	1206	1151	-	1255	1222	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.2	6.6	6.3	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.2	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.2	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.59	4.09	3.39	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	23	~ 37	279	~ 23	~ 35	450	637	-	-	878	-	-
Stage 1	230	262	-	247	278	-	-	-	-	-	-	-
Stage 2	224	272	-	202	243	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 12	279	-	~ 11	450	637	-	-	878	-	-
Mov Cap-2 Maneuver	-	~ 12	-	-	~ 11	-	-	-	-	-	-	-
Stage 1	96	207	-	103	~ 116	-	-	-	-	-	-	-
Stage 2	-	113	-	81	~ 192	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			3.3	0.6
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	637	-	-	-	24	-	450	878	-	-
HCM Lane V/C Ratio	0.349	-	-	-	5.674	-	0.019	0.084	-	-
HCM Control Delay (s)	13.7	0	-	-	$ 2426.8	-	13.2	9.5	0	-
HCM Lane LOS	B	A	-	-	F	-	B	A	A	-
HCM 95th %tile Q(veh)	1.6	-	-	-	17	-	0.1	0.3	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	160	50	45	162	99	58	774	38	148	1177	25
Future Volume (veh/h)	4	160	50	45	162	99	58	774	38	148	1177	25
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1681	1681	1900	1810	1900	1900	1827	1900
Adj Flow Rate, veh/h	4	174	54	49	176	108	63	841	41	161	1279	27
Adj No. of Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	13	13	13	5	5	5	4	4	4
Cap, veh/h	33	201	61	72	188	285	104	1580	86	202	1623	37
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.68	0.68	0.68	0.68	0.68	0.68
Sat Flow, veh/h	0	1004	305	160	940	1423	97	2318	127	237	2380	54
Grp Volume(v), veh/h	232	0	0	225	0	108	419	0	526	647	0	820
Grp Sat Flow(s),veh/h/ln	1309	0	0	1100	0	1423	917	0	1624	1018	0	1653
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	7.2	12.5	0.0	16.8	49.3	0.0	34.4
Cycle Q Clear(g_c), s	22.0	0.0	0.0	22.0	0.0	7.2	47.0	0.0	16.8	66.1	0.0	34.4
Prop In Lane	0.02		0.23	0.22		1.00	0.15		0.08	0.25		0.03
Lane Grp Cap(c), veh/h	295	0	0	260	0	285	663	0	1107	735	0	1127
V/C Ratio(X)	0.79	0.00	0.00	0.87	0.00	0.38	0.63	0.00	0.47	0.88	0.00	0.73
Avail Cap(c_a), veh/h	295	0	0	260	0	285	663	0	1107	735	0	1127
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.4	0.0	0.0	43.0	0.0	38.1	11.0	0.0	8.2	21.0	0.0	11.0
Incr Delay (d2), s/veh	15.0	0.0	0.0	26.6	0.0	1.8	4.5	0.0	1.5	14.3	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	0.0	8.7	0.0	3.0	6.1	0.0	7.9	20.7	0.0	16.8
LnGrp Delay(d),s/veh	55.4	0.0	0.0	69.6	0.0	39.9	15.5	0.0	9.7	35.3	0.0	15.2
LnGrp LOS	E			E		D	B		A	D		B
Approach Vol, veh/h		232			333			945			1467	
Approach Delay, s/veh		55.4			59.9			12.3			24.0	
Approach LOS		E			E			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		82.0		28.0		82.0		28.0
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0
Max Green Setting (Gmax), s		75.0		22.0		75.0		22.0
Max Q Clear Time (g_c+I1), s		68.1		24.0		49.0		24.0
Green Ext Time (p_c), s		5.2		0.0		7.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.8
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	0	6	0	10	1	888	23	19	1018	3
Future Vol, veh/h	0	1	0	6	0	10	1	888	23	19	1018	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	0	1	0	6	0	11	1	955	25	20	1095	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2112	2119	1097	2107	2108	968	1098	0	0	980	0	0
Stage 1	1137	1137	-	970	970	-	-	-	-	-	-	-
Stage 2	975	982	-	1137	1138	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	37	50	259	37	51	308	625	-	-	693	-	-
Stage 1	245	277	-	304	331	-	-	-	-	-	-	-
Stage 2	303	327	-	245	276	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	34	46	259	34	47	308	625	-	-	693	-	-
Mov Cap-2 Maneuver	34	46	-	34	47	-	-	-	-	-	-	-
Stage 1	244	257	-	303	330	-	-	-	-	-	-	-
Stage 2	291	326	-	226	256	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	85.1	64.7	0	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	625	-	-	46	77	693	-	-
HCM Lane V/C Ratio	0.002	-	-	0.023	0.223	0.029	-	-
HCM Control Delay (s)	10.8	-	-	85.1	64.7	10.4	0	-
HCM Lane LOS	B	-	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.8	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	15	6	870	1230	14
Future Vol, veh/h	1	15	6	870	1230	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	5	5	4	4
Mvmt Flow	1	16	6	926	1309	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1792	662	1324	0	-	0
Stage 1	1317	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.2	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.25	-	-	-
Pot Cap-1 Maneuver	*116	404	502	-	-	-
Stage 1	*215	-	-	-	-	-
Stage 2	*699	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*113	404	502	-	-	-
Mov Cap-2 Maneuver	*113	-	-	-	-	-
Stage 1	*210	-	-	-	-	-
Stage 2	*699	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.9	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	502	-	348	-	-
HCM Lane V/C Ratio	0.013	-	0.049	-	-
HCM Control Delay (s)	12.3	0.2	15.9	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

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

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↗		↕	
Traffic Vol, veh/h	1	0	4	10	0	17	10	909	11	12	1012	3
Future Vol, veh/h	1	0	4	10	0	17	10	909	11	12	1012	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	1	0	4	11	0	18	11	967	12	13	1077	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2109	2106	1079	2096	2095	967	1080	0	0	979	0	0
Stage 1	1105	1105	-	989	989	-	-	-	-	-	-	-
Stage 2	1004	1001	-	1107	1106	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	37	51	265	38	52	308	635	-	-	693	-	-
Stage 1	256	286	-	297	325	-	-	-	-	-	-	-
Stage 2	291	321	-	255	286	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	33	47	265	35	48	308	635	-	-	693	-	-
Mov Cap-2 Maneuver	33	47	-	35	48	-	-	-	-	-	-	-
Stage 1	246	273	-	286	313	-	-	-	-	-	-	-
Stage 2	264	309	-	239	273	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	39.4	74.6	0.1	0.1
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	635	-	-	110	79	693	-	-
HCM Lane V/C Ratio	0.017	-	-	0.048	0.364	0.018	-	-
HCM Control Delay (s)	10.8	0	-	39.4	74.6	10.3	0	-
HCM Lane LOS	B	A	-	E	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	1.4	0.1	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	15	11	887	1232	3
Future Vol, veh/h	1	15	11	887	1232	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	8	5	5	4	4
Mvmt Flow	1	16	12	934	1297	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1790	650	1300	0	-	0
Stage 1	1299	-	-	-	-	-
Stage 2	491	-	-	-	-	-
Critical Hdwy	6.96	7.06	4.2	-	-	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.38	2.25	-	-	-
Pot Cap-1 Maneuver	*81	398	513	-	-	-
Stage 1	*209	-	-	-	-	-
Stage 2	*686	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*77	398	513	-	-	-
Mov Cap-2 Maneuver	*77	-	-	-	-	-
Stage 1	*199	-	-	-	-	-
Stage 2	*686	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	513	-	316	-	-
HCM Lane V/C Ratio	0.023	-	0.053	-	-
HCM Control Delay (s)	12.2	0.3	17	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	340	464	49	74	73	91	602	55	23	968	39
Future Volume (veh/h)	250	340	464	49	74	73	91	602	55	23	968	39
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1727	1727	1900	1900	1845	1900	1900	1810	1900
Adj Flow Rate, veh/h	263	358	488	52	78	77	96	634	58	24	1019	41
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	10	10	10	3	3	3	5	5	5
Cap, veh/h	625	344	469	103	388	383	102	795	85	64	1210	51
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.13	0.13	0.13	0.40	0.40	0.40
Sat Flow, veh/h	1215	708	966	601	799	789	89	1988	213	25	3026	128
Grp Volume(v), veh/h	263	0	846	52	0	155	342	0	446	564	0	520
Grp Sat Flow(s),veh/h/ln	1215	0	1674	601	0	1588	650	0	1641	1555	0	1624
Q Serve(g_s), s	11.0	0.0	34.0	0.0	0.0	3.9	8.2	0.0	18.2	6.3	0.0	19.8
Cycle Q Clear(g_c), s	14.9	0.0	34.0	34.0	0.0	3.9	28.0	0.0	18.2	24.4	0.0	19.8
Prop In Lane	1.00		0.58	1.00		0.50	0.28		0.13	0.04		0.08
Lane Grp Cap(c), veh/h	625	0	813	103	0	771	326	0	656	676	0	650
V/C Ratio(X)	0.42	0.00	1.04	0.51	0.00	0.20	1.05	0.00	0.68	0.83	0.00	0.80
Avail Cap(c_a), veh/h	625	0	813	103	0	771	326	0	656	676	0	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.5	0.0	18.0	35.0	0.0	10.3	32.4	0.0	26.1	19.1	0.0	18.5
Incr Delay (d2), s/veh	0.5	0.0	42.5	4.0	0.0	0.1	63.2	0.0	5.6	11.6	0.0	10.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	25.2	1.1	0.0	1.7	12.0	0.0	9.3	12.4	0.0	10.6
LnGrp Delay(d),s/veh	15.0	0.0	60.5	39.0	0.0	10.4	95.6	0.0	31.7	30.8	0.0	28.5
LnGrp LOS	B		F	D		B	F		C	C		C
Approach Vol, veh/h		1109			207			788			1084	
Approach Delay, s/veh		49.7			17.6			59.4			29.7	
Approach LOS		D			B			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		32.0		38.0		32.0		38.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		28.0		34.0		28.0		34.0
Max Q Clear Time (g_c+I1), s		30.0		36.0		26.4		36.0
Green Ext Time (p_c), s		0.0		0.0		1.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	43.2
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	18	261	87	84	145	107	29	762	148	73	1159	18
Future Vol, veh/h	18	261	87	84	145	107	29	762	148	73	1159	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	6	6	6	4	4	4	4	4	4
Mvmt Flow	19	275	92	88	153	113	31	802	156	77	1220	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1924	2404	620	1844	2335	479	1239	0	0	958	0	0
Stage 1	1384	1384	-	942	942	-	-	-	-	-	-	-
Stage 2	540	1020	-	902	1393	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.62	6.62	7.02	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.62	5.62	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.62	5.62	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.56	4.06	3.36	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	40	~ 33	431	~ 44	~ 34	522	547	-	-	701	-	-
Stage 1	151	~ 209	-	275	331	-	-	-	-	-	-	-
Stage 2	494	312	-	291	200	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 19	431	-	~ 19	522	547	-	-	701	-	-
Mov Cap-2 Maneuver	-	~ 19	-	-	~ 19	-	-	-	-	-	-	-
Stage 1	132	~ 135	-	240	289	-	-	-	-	-	-	-
Stage 2	160	~ 273	-	-	~ 129	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.9	2.2
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	547	-	-	-	-	701	-	-
HCM Lane V/C Ratio	0.056	-	-	-	-	0.11	-	-
HCM Control Delay (s)	12	0.7	-	-	-	10.8	1.7	-
HCM Lane LOS	B	A	-	-	-	B	A	-
HCM 95th %tile Q(veh)	0.2	-	-	-	-	0.4	-	-

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

Intersection	
Int Delay, s/veh	6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	96	663	75	139	1326
Future Vol, veh/h	34	96	663	75	139	1326
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	3	5	5
Mvmt Flow	38	107	737	83	154	1473

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1824	410	0	0	820	0
Stage 1	779	-	-	-	-	-
Stage 2	1045	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.2	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.25	-
Pot Cap-1 Maneuver	*239	*802	-	-	1129	-
Stage 1	*756	-	-	-	-	-
Stage 2	*504	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*59	*802	-	-	1129	-
Mov Cap-2 Maneuver	*59	-	-	-	-	-
Stage 1	*188	-	-	-	-	-
Stage 2	*504	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	69.6	0	3.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	187	1129	-
HCM Lane V/C Ratio	-	-	0.772	0.137	-
HCM Control Delay (s)	-	-	69.6	8.7	2.7
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	5.2	0.5	-

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

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	6	1	96	28	0	0	55	933	43	3	1243	82
Future Vol, veh/h	6	1	96	28	0	0	55	933	43	3	1243	82
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	3	3	3
Mvmt Flow	7	1	104	30	0	0	60	1014	47	3	1351	89

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2029	2583	720	1840	2604	531	1440	0	0	1061	0	0
Stage 1	1402	1402	-	1158	1158	-	-	-	-	-	-	-
Stage 2	627	1181	-	682	1446	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.23	-	-
Pot Cap-1 Maneuver	*53	23	370	87	22	*712	452	-	-	1016	-	-
Stage 1	*147	205	-	515	483	-	-	-	-	-	-	-
Stage 2	*672	467	-	406	195	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*39	15	370	44	14	*712	452	-	-	1016	-	-
Mov Cap-2 Maneuver	*39	15	-	44	14	-	-	-	-	-	-	-
Stage 1	*99	202	-	347	325	-	-	-	-	-	-	-
Stage 2	*452	314	-	285	192	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	38.6	191.5	2.7	0.1
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	452	-	-	215	44	1016	-	-
HCM Lane V/C Ratio	0.132	-	-	0.521	0.692	0.003	-	-
HCM Control Delay (s)	14.2	2.1	-	38.6	191.5	8.6	0.1	-
HCM Lane LOS	B	A	-	E	F	A	A	-
HCM 95th %tile Q(veh)	0.5	-	-	2.7	2.6	0	-	-

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

Intersection	
Int Delay, s/veh	31.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	876	35	61	461	85	39	7	120	0	12	7
Future Vol, veh/h	6	876	35	61	461	85	39	7	120	0	12	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	17	17	2	2	2	2
Mvmt Flow	7	973	39	68	512	94	43	8	133	0	13	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	606	0	0	1012	0	0	1713	1749	993	1772	1721	559
Stage 1	-	-	-	-	-	-	1007	1007	-	695	695	-
Stage 2	-	-	-	-	-	-	706	742	-	1077	1026	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.27	6.67	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.27	5.67	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.27	5.67	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.653	4.153	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	972	-	-	685	-	-	65	79	298	65	89	529
Stage 1	-	-	-	-	-	-	272	300	-	433	444	-
Stage 2	-	-	-	-	-	-	404	401	-	265	312	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	972	-	-	685	-	-	48	66	298	29	74	529
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	66	-	29	74	-
Stage 1	-	-	-	-	-	-	267	295	-	426	377	-
Stage 2	-	-	-	-	-	-	326	340	-	140	307	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.1	$ 310.3	46.3
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	126	972	-	-	685	-	-	108
HCM Lane V/C Ratio	1.464	0.007	-	-	0.099	-	-	0.195
HCM Control Delay (s)	$ 310.3	8.7	0	-	10.8	0	-	46.3
HCM Lane LOS	F	A	A	-	B	A	-	E
HCM 95th %tile Q(veh)	12.7	0	-	-	0.3	-	-	0.7

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

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	0	0	4	495	0	190	4	547	457	500	857	0
Future Vol, veh/h	0	0	4	495	0	190	4	547	457	500	857	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	6	6	6
Mvmt Flow	0	0	4	550	0	211	4	608	508	556	952	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2376	3188	476	2458	2934	558	952	0	0	1116	0	0
Stage 1	2064	2064	-	870	870	-	-	-	-	-	-	-
Stage 2	312	1124	-	1588	2064	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.16	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.23	-	-	2.26	-	-
Pot Cap-1 Maneuver	*26	4	*757	~ 19	9	850	1062	-	-	706	-	-
Stage 1	*71	107	-	~ 484	487	-	-	-	-	-	-	-
Stage 2	*840	354	-	~ 187	107	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	-	0	*757	-	0	850	1062	-	-	706	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	*70	0	-	~ 478	481	-	-	-	-	-	-	-
Stage 2	*624	350	-	-	0	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0	13.4
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1062	-	-	-	-	706	-	-
HCM Lane V/C Ratio	0.004	-	-	-	-	0.787	-	-
HCM Control Delay (s)	8.4	0	-	-	-	26.2	6	-
HCM Lane LOS	A	A	-	-	-	D	A	-
HCM 95th %tile Q(veh)	0	-	-	-	-	7.8	-	-

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

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	923	6	0	484	27	15	12	3	3	0	165
Future Vol, veh/h	17	923	6	0	484	27	15	12	3	3	0	165
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	1026	7	0	538	30	17	13	3	3	0	183

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	568	0	0	1033	0	0	1713	1636	1030	1629	1624	553
Stage 1	-	-	-	-	-	-	1068	1068	-	553	553	-
Stage 2	-	-	-	-	-	-	645	568	-	1076	1071	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1004	-	-	673	-	-	71	101	283	82	102	533
Stage 1	-	-	-	-	-	-	268	298	-	517	514	-
Stage 2	-	-	-	-	-	-	461	506	-	266	297	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1004	-	-	673	-	-	45	97	283	70	98	533
Mov Cap-2 Maneuver	-	-	-	-	-	-	45	97	-	70	98	-
Stage 1	-	-	-	-	-	-	256	285	-	494	514	-
Stage 2	-	-	-	-	-	-	302	506	-	240	284	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	110.9	17.3
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	64	1004	-	-	673	-	-	477
HCM Lane V/C Ratio	0.521	0.019	-	-	-	-	-	0.391
HCM Control Delay (s)	110.9	8.7	0	-	0	-	-	17.3
HCM Lane LOS	F	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	2.1	0.1	-	-	0	-	-	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	502	4	546	446	535	0	0	1165	203
Future Volume (veh/h)	0	0	0	502	4	546	446	535	0	0	1165	203
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1845	1845	0	0	1810	1900
Adj Flow Rate, veh/h				558	4	607	496	594	0	0	1294	226
Adj No. of Lanes				1	1	0	2	2	0	0	2	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	3	3	0	0	5	5
Cap, veh/h				507	3	450	487	2103	0	0	1173	203
Arrive On Green				0.29	0.29	0.29	0.14	0.60	0.00	0.00	0.80	0.80
Sat Flow, veh/h				1774	10	1575	3408	3597	0	0	3022	507
Grp Volume(v), veh/h				558	0	611	496	594	0	0	754	766
Grp Sat Flow(s),veh/h/ln				1774	0	1585	1704	1752	0	0	1719	1720
Q Serve(g_s), s				20.0	0.0	20.0	10.0	5.7	0.0	0.0	28.0	28.0
Cycle Q Clear(g_c), s				20.0	0.0	20.0	10.0	5.7	0.0	0.0	28.0	28.0
Prop In Lane				1.00		0.99	1.00		0.00	0.00		0.29
Lane Grp Cap(c), veh/h				507	0	453	487	2103	0	0	688	688
V/C Ratio(X)				1.10	0.00	1.35	1.02	0.28	0.00	0.00	1.10	1.11
Avail Cap(c_a), veh/h				507	0	453	487	2103	0	0	688	688
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				25.0	0.0	25.0	30.0	6.7	0.0	0.0	7.0	7.0
Incr Delay (d2), s/veh				70.4	0.0	171.3	45.6	0.3	0.0	0.0	63.6	69.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				19.6	0.0	30.2	7.7	2.8	0.0	0.0	23.6	25.2
LnGrp Delay(d),s/veh				95.4	0.0	196.3	75.6	7.1	0.0	0.0	70.6	76.9
LnGrp LOS				F		F	F	A			F	F
Approach Vol, veh/h					1169			1090			1520	
Approach Delay, s/veh					148.1			38.3			73.8	
Approach LOS					F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		46.0			14.0	32.0		24.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		42.0			10.0	28.0		20.0
Max Q Clear Time (g_c+I1), s		7.7			12.0	30.0		22.0
Green Ext Time (p_c), s		4.6			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	86.5
HCM 2010 LOS	F

Notes

Intersection	
Int Delay, s/veh	21.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑						↑↑↱		↰	↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	0	986	450	590	1083	0
Future Vol, veh/h	0	0	0	0	0	0	0	986	450	590	1083	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	145	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	3	3	4	4	2
Mvmt Flow	0	0	0	0	0	0	0	1072	489	641	1177	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	4020	-	-	0	0	1561	0	0
Stage 1	-	2459	-	-	-	-	-	-	-
Stage 2	-	1561	-	-	-	-	-	-	-
Critical Hdwy	-	6.54	-	-	-	-	4.18	-	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.02	-	-	-	-	2.24	-	-
Pot Cap-1 Maneuver	0	1	0	0	-	-	~ 558	-	0
Stage 1	0	60	0	0	-	-	-	-	0
Stage 2	0	281	0	0	-	-	-	-	0
Platoon blocked, %		1			-	-	1	-	
Mov Cap-1 Maneuver	-	0	-	-	-	-	~ 558	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	39.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	~ 558	-
HCM Lane V/C Ratio	-	-	-	1.149	-
HCM Control Delay (s)	-	-	0	111.9	-
HCM Lane LOS	-	-	A	F	-
HCM 95th %tile Q(veh)	-	-	-	21.6	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	333	138	65	11	102	216	127	886	7	34	732	317
Future Volume (veh/h)	333	138	65	11	102	216	127	886	7	34	732	317
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	370	153	72	12	113	240	141	984	8	38	813	352
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	4	4	4	4	4	4
Cap, veh/h	401	531	250	515	233	496	202	1159	9	225	776	335
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.06	0.33	0.33	0.06	0.33	0.33
Sat Flow, veh/h	1024	1199	564	1140	527	1120	1740	3529	29	1740	2363	1020
Grp Volume(v), veh/h	370	0	225	12	0	353	141	484	508	38	597	568
Grp Sat Flow(s),veh/h/ln	1024	0	1763	1140	0	1647	1740	1736	1822	1740	1736	1647
Q Serve(g_s), s	20.4	0.0	5.7	0.5	0.0	10.6	4.0	18.2	18.2	0.0	23.0	23.0
Cycle Q Clear(g_c), s	31.0	0.0	5.7	6.2	0.0	10.6	4.0	18.2	18.2	0.0	23.0	23.0
Prop In Lane	1.00		0.32	1.00		0.68	1.00		0.02	1.00		0.62
Lane Grp Cap(c), veh/h	401	0	781	515	0	729	202	570	599	225	570	541
V/C Ratio(X)	0.92	0.00	0.29	0.02	0.00	0.48	0.70	0.85	0.85	0.17	1.05	1.05
Avail Cap(c_a), veh/h	401	0	781	515	0	729	202	570	599	225	570	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	12.5	14.4	0.0	13.8	21.6	21.9	21.9	30.3	23.5	23.5
Incr Delay (d2), s/veh	26.8	0.0	0.2	0.0	0.0	0.5	10.0	14.6	14.0	0.4	50.3	52.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	0.0	2.8	0.2	0.0	4.9	1.4	10.9	11.4	0.7	18.9	18.3
LnGrp Delay(d),s/veh	53.6	0.0	12.7	14.4	0.0	14.3	31.6	36.5	35.9	30.6	73.8	76.1
LnGrp LOS	D		B	B		B	C	D	D	C	F	F
Approach Vol, veh/h		595			365			1133			1203	
Approach Delay, s/veh		38.1			14.3			35.6			73.5	
Approach LOS		D			B			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	27.0		35.0	8.0	27.0		35.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	23.0		31.0	4.0	23.0		31.0
Max Q Clear Time (g_c+I1), s	2.0	20.2		33.0	6.0	25.0		12.6
Green Ext Time (p_c), s	0.0	1.7		0.0	0.0	0.0		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	47.5
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	80

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	1	109	3	0	8	78	521	3	0	2560	233
Future Vol, veh/h	7	1	109	3	0	8	78	521	3	0	2560	233
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	13	13	13	6	6	6	2	2	2
Mvmt Flow	7	1	116	3	0	9	83	554	3	0	2723	248

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3290	3570	1486	2084	3693	279	2971	0	0	-	-	0
Stage 1	2847	2847	-	722	722	-	-	-	-	-	-	-
Stage 2	443	723	-	1362	2971	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.76	6.76	7.16	4.22	-	-	-	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.76	5.76	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.76	5.76	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.63	4.13	3.43	2.26	-	-	-	-	-
Pot Cap-1 Maneuver	*0	*0	*~ 13	*12	0	686	~ 11	-	-	0	-	-
Stage 1	*12	*11	-	*360	404	-	-	-	-	0	-	-
Stage 2	*564	*429	-	*12	6	-	-	-	-	0	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	-	*0	*~ 13	-	0	686	~ 11	-	-	-	-	-
Mov Cap-2 Maneuver	-	*0	-	-	0	-	-	-	-	-	-	-
Stage 1	*12	*11	-	*360	0	-	-	-	-	-	-	-
Stage 2	-	*0	-	-	6	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			$ 468.4	0
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBT	SBR
Capacity (veh/h)	~ 11	-	-	-	13	-	-	-
HCM Lane V/C Ratio	7.544	-	-	-	9.002	-	-	-
HCM Control Delay (s)	$ 3615.3	-	-	-	$ 4171.1	-	-	-
HCM Lane LOS	F	-	-	-	F	-	-	-
HCM 95th %tile Q(veh)	11.7	-	-	-	15.8	-	-	-

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1434	642	534	0	0	1353
Future Volume (veh/h)	1434	642	534	0	0	1353
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1891	1928	1776	0	0	1845
Adj Flow Rate, veh/h	1104	1135	568	0	0	1439
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	7	0	0	3
Cap, veh/h	958	872	1196	0	0	1243
Arrive On Green	0.53	0.53	0.35	0.00	0.00	0.35
Sat Flow, veh/h	1801	1639	3551	0	0	3689
Grp Volume(v), veh/h	1104	1135	568	0	0	1439
Grp Sat Flow(s),veh/h/ln	1801	1639	1687	0	0	1752
Q Serve(g_s), s	58.5	58.5	14.4	0.0	0.0	39.0
Cycle Q Clear(g_c), s	58.5	58.5	14.4	0.0	0.0	39.0
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	958	872	1196	0	0	1243
V/C Ratio(X)	1.15	1.30	0.47	0.00	0.00	1.16
Avail Cap(c_a), veh/h	958	872	1196	0	0	1243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	25.7	25.8	27.6	0.0	0.0	35.5
Incr Delay (d2), s/veh	80.8	144.3	1.4	0.0	0.0	80.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	50.2	61.1	6.9	0.0	0.0	32.7
LnGrp Delay(d),s/veh	106.6	170.0	28.9	0.0	0.0	116.0
LnGrp LOS	F	F	C			F
Approach Vol, veh/h	2239		568			1439
Approach Delay, s/veh	138.7		28.9			116.0
Approach LOS	F		C			F

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		45.0		65.0		45.0		
Change Period (Y+Rc), s		6.0		6.5		6.0		
Max Green Setting (Gmax), s		39.0		58.5		39.0		
Max Q Clear Time (g_c+I1), s		41.0		60.5		16.4		
Green Ext Time (p_c), s		0.0		0.0		2.6		

Intersection Summary	
HCM 2010 Ctrl Delay	116.3
HCM 2010 LOS	F

Notes

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	21	0	1	19	0	8	3	0	0	3	1
Future Vol, veh/h	3	21	0	1	19	0	8	3	0	0	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	23	0	1	21	0	9	3	0	0	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	21	0	0	23	0	0	54	52	23	54	52	21
Stage 1	-	-	-	-	-	-	29	29	-	23	23	-
Stage 2	-	-	-	-	-	-	25	23	-	31	29	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1595	-	-	1592	-	-	944	839	1054	944	839	1056
Stage 1	-	-	-	-	-	-	988	871	-	995	876	-
Stage 2	-	-	-	-	-	-	993	876	-	986	871	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1595	-	-	1592	-	-	938	836	1054	939	836	1056
Mov Cap-2 Maneuver	-	-	-	-	-	-	938	836	-	939	836	-
Stage 1	-	-	-	-	-	-	986	869	-	993	875	-
Stage 2	-	-	-	-	-	-	987	875	-	980	869	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.4	9	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	908	1595	-	-	1592	-	-	882
HCM Lane V/C Ratio	0.013	0.002	-	-	0.001	-	-	0.005
HCM Control Delay (s)	9	7.3	0	-	7.3	0	-	9.1
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	12	356	39	0	185	3	10	1	9	7	3	3
Future Vol, veh/h	12	356	39	0	185	3	10	1	9	7	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	4	4	4	15	15	15	2	2	2	22	22	22
Mvmt Flow	13	396	43	0	206	3	11	1	10	8	3	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	209	0	0	439	0	0	655	653	418	657	673	208
Stage 1	-	-	-	-	-	-	444	444	-	208	208	-
Stage 2	-	-	-	-	-	-	211	209	-	449	465	-
Critical Hdwy	4.14	-	-	4.25	-	-	7.12	6.52	6.22	7.32	6.72	6.42
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.32	5.72	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.32	5.72	-
Follow-up Hdwy	2.236	-	-	2.335	-	-	3.518	4.018	3.318	3.698	4.198	3.498
Pot Cap-1 Maneuver	1350	-	-	1055	-	-	379	387	635	352	352	784
Stage 1	-	-	-	-	-	-	593	575	-	750	694	-
Stage 2	-	-	-	-	-	-	791	729	-	552	531	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1350	-	-	1055	-	-	371	382	635	342	347	784
Mov Cap-2 Maneuver	-	-	-	-	-	-	371	382	-	342	347	-
Stage 1	-	-	-	-	-	-	585	568	-	740	694	-
Stage 2	-	-	-	-	-	-	784	729	-	535	524	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	13.3	14.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	457	1350	-	-	1055	-	-	395
HCM Lane V/C Ratio	0.049	0.01	-	-	-	-	-	0.037
HCM Control Delay (s)	13.3	7.7	0	-	0	-	-	14.5
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	21.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	313	18	0	188	208	105	0	0	333	0	14
Future Vol, veh/h	14	313	18	0	188	208	105	0	0	333	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	13	13	13	2	2	2	2	2	2
Mvmt Flow	15	340	20	0	204	226	114	0	0	362	0	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	430	0	0	360	0	0	705	810	350	697	707	317
Stage 1	-	-	-	-	-	-	380	380	-	317	317	-
Stage 2	-	-	-	-	-	-	325	430	-	380	390	-
Critical Hdwy	4.12	-	-	4.23	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.317	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1129	-	-	1172	-	-	386	317	817	392	376	724
Stage 1	-	-	-	-	-	-	736	656	-	694	654	-
Stage 2	-	-	-	-	-	-	687	583	-	736	647	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	1129	-	-	1172	-	-	373	312	817	387	370	724
Mov Cap-2 Maneuver	-	-	-	-	-	-	373	312	-	387	370	-
Stage 1	-	-	-	-	-	-	724	645	-	682	654	-
Stage 2	-	-	-	-	-	-	673	583	-	724	636	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	18.9	68
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	373	1129	-	-	1172	-	-	394
HCM Lane V/C Ratio	0.306	0.013	-	-	-	-	-	0.957
HCM Control Delay (s)	18.9	8.2	0	-	0	-	-	68
HCM Lane LOS	C	A	A	-	A	-	-	F
HCM 95th %tile Q(veh)	1.3	0	-	-	0	-	-	10.9

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	20	1006	75	15	1342
Future Vol, veh/h	7	20	1006	75	15	1342
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	3	6	6
Mvmt Flow	8	22	1118	83	17	1491

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1940	601	0	0	1201	0
Stage 1	1160	-	-	-	-	-
Stage 2	780	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.22	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.26	-
Pot Cap-1 Maneuver	*281	*668	-	-	914	-
Stage 1	*619	-	-	-	-	-
Stage 2	*504	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*251	*668	-	-	914	-
Mov Cap-2 Maneuver	*350	-	-	-	-	-
Stage 1	*552	-	-	-	-	-
Stage 2	*504	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	541	914	-
HCM Lane V/C Ratio	-	-	0.055	0.018	-
HCM Control Delay (s)	-	-	12	9	0.5
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

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

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	74	124	1052	1279	34
Future Vol, veh/h	6	74	124	1052	1279	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	80	135	1143	1390	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2251	714	1427	0	-	0
Stage 1	1409	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	35	374	473	-	-	-
Stage 1	192	-	-	-	-	-
Stage 2	383	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	8	374	473	-	-	-
Mov Cap-2 Maneuver	8	-	-	-	-	-
Stage 1	42	-	-	-	-	-
Stage 2	383	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	77.5	6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	473	-	8	374	-	-
HCM Lane V/C Ratio	0.285	-	0.815	0.215	-	-
HCM Control Delay (s)	15.6	4.9$	821.8	17.2	-	-
HCM Lane LOS	C	A	F	C	-	-
HCM 95th %tile Q(veh)	1.2	-	1.5	0.8	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	2	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	1021	1084
Stage 1	-	0	0	-	1022	-
Stage 2	-	0	0	-	1022	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	1021	1084
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1022	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	11.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	238	1835	1	138	1054
Future Vol, veh/h	0	238	1835	1	138	1054
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	0	251	1932	1	145	1109

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2778	967	0	0	1933	0
Stage 1	1933	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	15	254	-	-	301	-
Stage 1	99	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	254	-	-	301	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	382	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	95.5	0	12.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	254	301	-
HCM Lane V/C Ratio	-	-	0.986	0.483	-
HCM Control Delay (s)	-	-	95.5	27.6	10.9
HCM Lane LOS	-	-	F	D	B
HCM 95th %tile Q(veh)	-	-	9.5	2.5	-

Intersection	
Int Delay, s/veh	345.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	217	1626	7	149	918
Future Vol, veh/h	17	217	1626	7	149	918
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	18	228	1712	7	157	966

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2513	860	0	0	1719	0
Stage 1	1716	-	-	-	-	-
Stage 2	797	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	23	299	-	-	364	-
Stage 1	130	-	-	-	-	-
Stage 2	404	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 2	299	-	-	364	-
Mov Cap-2 Maneuver	~ 2	-	-	-	-	-
Stage 1	~ 9	-	-	-	-	-
Stage 2	404	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 4287	0	9.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	25	364	-
HCM Lane V/C Ratio	-	-	9.853	0.431	-
HCM Control Delay (s)	-	-	$ 4287	22.2	7.8
HCM Lane LOS	-	-	F	C	A
HCM 95th %tile Q(veh)	-	-	30.7	2.1	-

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

Intersection	
Int Delay, s/veh	26

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	220	8	6	186	0	0	0	0	782	4	8
Future Vol, veh/h	0	220	8	6	186	0	0	0	0	782	4	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	6	6	6	2	2	2	3	3	3
Mvmt Flow	0	232	8	6	196	0	0	0	0	823	4	8

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	240	0	0	444	448	196
Stage 1	-	-	-	-	-	-	208	208	-
Stage 2	-	-	-	-	-	-	236	240	-
Critical Hdwy	-	-	-	4.16	-	-	6.43	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	5.43	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	-	-	-	2.254	-	-	3.527	4.027	3.327
Pot Cap-1 Maneuver	0	-	-	1304	-	0	~ 570	504	843
Stage 1	0	-	-	-	-	0	824	728	-
Stage 2	0	-	-	-	-	0	~ 801	705	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1304	-	-	~ 567	0	843
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 567	0	-
Stage 1	-	-	-	-	-	-	~ 820	0	-
Stage 2	-	-	-	-	-	-	~ 801	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.2	39.7
HCM LOS			E

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1304	-	567	3651
HCM Lane V/C Ratio	-	-	0.005	-	0.968	0.079
HCM Control Delay (s)	-	-	7.8	0	57.2	6.1
HCM Lane LOS	-	-	A	A	F	A
HCM 95th %tile Q(veh)	-	-	0	-	13.3	0.3

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

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	937	7	8	231	998	4	3	3	0	0	0
Future Vol, veh/h	1	937	7	8	231	998	4	3	3	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	3	3	3	14	14	14	2	2	2
Mvmt Flow	1	986	7	8	243	1051	4	3	3	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1294	0	0	993	0	0	1777	2302	497
Stage 1	-	-	-	-	-	-	992	992	-
Stage 2	-	-	-	-	-	-	785	1310	-
Critical Hdwy	4.13	-	-	4.145	-	-	6.81	6.71	7.11
Critical Hdwy Stg 1	-	-	-	-	-	-	6.01	5.71	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.61	5.71	-
Follow-up Hdwy	2.219	-	-	2.2285	-	-	3.633	4.133	3.433
Pot Cap-1 Maneuver	591	-	-	689	-	-	87	35	493
Stage 1	-	-	-	-	-	-	299	303	-
Stage 2	-	-	-	-	-	-	556	253	-
Platoon blocked, %	1	-	-		-	-	1	1	
Mov Cap-1 Maneuver	591	-	-	689	-	-	81	0	493
Mov Cap-2 Maneuver	-	-	-	-	-	-	81	0	-
Stage 1	-	-	-	-	-	-	277	0	-
Stage 2	-	-	-	-	-	-	556	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	36.2
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	126	591	-	-	689	-	-
HCM Lane V/C Ratio	0.084	0.002	-	-	0.012	-	-
HCM Control Delay (s)	36.2	11.1	0	-	10.3	0	-
HCM Lane LOS	E	B	A	-	B	A	-
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	764	160	63	1023	334	150	359	21	239	408	39
Future Volume (veh/h)	19	764	160	63	1023	334	150	359	21	239	408	39
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1845	1845	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	20	804	168	66	1077	0	158	378	22	252	429	41
Adj No. of Lanes	0	2	0	0	2	1	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	45	1146	274	91	1279	753	244	689	40	295	661	63
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.00	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	16	2387	572	105	2664	1568	919	1743	101	980	1674	160
Grp Volume(v), veh/h	525	0	467	489	654	0	158	0	400	252	0	470
Grp Sat Flow(s),veh/h/ln	1384	0	1591	1174	1595	1568	919	0	1845	980	0	1834
Q Serve(g_s), s	5.0	0.0	21.6	18.3	36.2	0.0	16.9	0.0	16.8	22.7	0.0	20.8
Cycle Q Clear(g_c), s	41.2	0.0	21.6	39.9	36.2	0.0	37.7	0.0	16.8	39.5	0.0	20.8
Prop In Lane	0.04		0.36	0.14		1.00	1.00		0.05	1.00		0.09
Lane Grp Cap(c), veh/h	702	0	764	604	765	753	244	0	729	295	0	725
V/C Ratio(X)	0.75	0.00	0.61	0.81	0.85	0.00	0.65	0.00	0.55	0.85	0.00	0.65
Avail Cap(c_a), veh/h	702	0	764	604	765	753	244	0	729	295	0	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.59	0.59	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.7	0.0	19.1	23.9	22.9	0.0	39.9	0.0	23.4	39.9	0.0	24.6
Incr Delay (d2), s/veh	7.1	0.0	3.6	6.9	7.4	0.0	12.6	0.0	3.0	25.7	0.0	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	0.0	10.3	13.5	17.4	0.0	5.2	0.0	9.0	9.0	0.0	11.3
LnGrp Delay(d),s/veh	26.9	0.0	22.8	30.8	30.3	0.0	52.6	0.0	26.3	65.6	0.0	29.1
LnGrp LOS	C		C	C	C		D		C	E		C
Approach Vol, veh/h		992			1143			558			722	
Approach Delay, s/veh		25.0			30.5			33.8			41.8	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		46.0		54.0		46.0		54.0
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s		39.5		48.0		39.5		48.0
Max Q Clear Time (g_c+I1), s		41.5		43.2		39.7		41.9
Green Ext Time (p_c), s		0.0		2.1		0.0		3.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	668	351	3	898	806	281	775	14	268	537	155
Future Volume (veh/h)	54	668	351	3	898	806	281	775	14	268	537	155
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	57	703	369	3	945	848	296	816	0	282	565	163
Adj No. of Lanes	1	2	0	0	2	1	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	333	2296	1204	38	3543	1884	399	832	0	298	701	313
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.22	0.23	0.00	0.17	0.20	0.20
Sat Flow, veh/h	262	2246	1178	2	3467	1583	1774	3632	0	1774	3539	1583
Grp Volume(v), veh/h	57	554	518	508	440	848	296	816	0	282	565	163
Grp Sat Flow(s),veh/h/ln	262	1770	1655	1858	1610	1583	1774	1770	0	1774	1770	1583
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	15.5	22.9	0.0	15.7	15.2	9.2
Cycle Q Clear(g_c), s	3.4	0.0	0.0	0.0	0.0	0.0	15.5	22.9	0.0	15.7	15.2	9.2
Prop In Lane	1.00		0.71	0.01		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	1809	1691	1935	1646	1884	399	832	0	298	701	313
V/C Ratio(X)	0.17	0.31	0.31	0.26	0.27	0.45	0.74	0.98	0.00	0.95	0.81	0.52
Avail Cap(c_a), veh/h	333	1809	1691	1935	1646	1884	399	832	0	298	701	313
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	36.0	38.0	0.0	41.2	38.3	35.9
Incr Delay (d2), s/veh	0.7	0.3	0.3	0.3	0.4	0.8	7.2	27.0	0.0	37.9	9.6	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.2	0.2	0.4	8.4	14.3	0.0	10.8	8.4	4.6
LnGrp Delay(d),s/veh	0.8	0.3	0.3	0.3	0.4	0.8	43.3	65.0	0.0	79.1	47.9	41.9
LnGrp LOS	A	A	A	A	A	A	D	E		E	D	D
Approach Vol, veh/h		1129			1796			1112			1010	
Approach Delay, s/veh		0.3			0.6			59.2			55.6	
Approach LOS		A			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.3	32.0		112.7	31.0	26.3		112.7
Change Period (Y+Rc), s	8.5	* 8.5		8.5	8.5	6.5		8.5
Max Green Setting (Gmax), s	16.8	* 24		36.2	20.5	19.8		36.2
Max Q Clear Time (g_c+I1), s	17.7	24.9		2.0	17.5	17.2		5.4
Green Ext Time (p_c), s	0.0	0.0		12.2	0.3	0.9		7.7

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	98	62	802	157	0	0	0	0	0	0	0
Future Vol, veh/h	0	98	62	802	157	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	95	95	95	95	92	95	92	95	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	103	65	844	165	0	0	0	0	0	0	0

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	168	0	0			-	2021	-
Stage 1	-	-	-	-	-	-			-	1853	-
Stage 2	-	-	-	-	-	-			-	168	-
Critical Hdwy	-	-	-	4.12	-	-			-	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-			-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			-	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-			-	4.018	-
Pot Cap-1 Maneuver	0	-	-	1410	-	0			0	58	0
Stage 1	0	-	-	-	-	0			0	124	0
Stage 2	0	-	-	-	-	0			0	759	0
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	-	-	-	1410	-	-			-	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-			-	0	-
Stage 1	-	-	-	-	-	-			-	0	-
Stage 2	-	-	-	-	-	-			-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	9.4	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	1410	-	-
HCM Lane V/C Ratio	-	-	0.599	-	-
HCM Control Delay (s)	-	-	11.3	0	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	4.2	-	-

Intersection	
Int Delay, s/veh	3.4

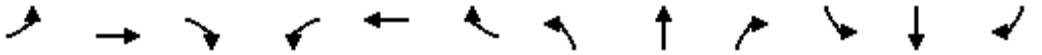
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	50	53	40	338	29	468	981	99	51	740	92
Future Vol, veh/h	6	50	53	40	338	29	468	981	99	51	740	92
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	55	58	44	371	32	514	1078	109	56	813	101

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3338	3191	864	3193	3187	1133	914	0	0	1187	0	0
Stage 1	976	976	-	2161	2161	-	-	-	-	-	-	-
Stage 2	2362	2215	-	1032	1026	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 5	~ 10	354	~ 6	~ 10	247	746	-	-	588	-	-
Stage 1	302	329	-	62	~ 86	-	-	-	-	-	-	-
Stage 2	47	81	-	281	~ 312	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	354	-	0	247	746	-	-	588	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	302	264	-	62	0	-	-	-	-	-	-	-
Stage 2	-	0	-	149	~ 250	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			6	0.7
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	746	-	-	-	354	-	247	588	-	-
HCM Lane V/C Ratio	0.689	-	-	-	0.32	-	0.129	0.095	-	-
HCM Control Delay (s)	19.8	0	-	-	19.9	-	21.7	11.8	0	-
HCM Lane LOS	C	A	-	-	C	-	C	B	A	-
HCM 95th %tile Q(veh)	5.6	-	-	-	1.4	-	0.4	0.3	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	155	44	83	248	144	129	1612	37	149	679	25
Future Volume (veh/h)	10	155	44	83	248	144	129	1612	37	149	679	25
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	11	163	46	87	261	152	136	1697	39	157	715	26
Adj No. of Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	38	177	47	91	174	331	140	1652	41	95	1078	40
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	0	841	222	218	830	1577	149	2503	62	39	1633	60
Grp Volume(v), veh/h	220	0	0	348	0	152	820	0	1052	172	0	726
Grp Sat Flow(s),veh/h/ln	1063	0	0	1047	0	1577	1030	0	1684	48	0	1684
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	8.4	40.3	0.0	56.6	9.4	0.0	25.7
Cycle Q Clear(g_c), s	21.0	0.0	0.0	21.0	0.0	8.4	66.0	0.0	56.6	66.0	0.0	25.7
Prop In Lane	0.05		0.21	0.25		1.00	0.17		0.04	0.91		0.04
Lane Grp Cap(c), veh/h	261	0	0	265	0	331	722	0	1111	101	0	1112
V/C Ratio(X)	0.84	0.00	0.00	1.31	0.00	0.46	1.14	0.00	0.95	1.71	0.00	0.65
Avail Cap(c_a), veh/h	261	0	0	265	0	331	722	0	1111	101	0	1112
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.8	0.0	0.0	40.6	0.0	34.5	25.8	0.0	15.4	46.3	0.0	10.2
Incr Delay (d2), s/veh	23.1	0.0	0.0	165.3	0.0	2.1	77.7	0.0	16.8	357.9	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	0.0	19.5	0.0	3.9	35.4	0.0	30.9	12.8	0.0	12.6
LnGrp Delay(d),s/veh	58.9	0.0	0.0	206.0	0.0	36.7	103.5	0.0	32.2	404.2	0.0	13.1
LnGrp LOS	E			F		D	F		C	F		B
Approach Vol, veh/h		220			500			1872			898	
Approach Delay, s/veh		58.9			154.5			63.4			88.1	
Approach LOS		E			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		73.0		27.0		73.0		27.0
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0
Max Green Setting (Gmax), s		66.0		21.0		66.0		21.0
Max Q Clear Time (g_c+I1), s		68.0		23.0		68.0		23.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	82.6
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	18.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	0	26	0	40	1	1498	32	25	810	0
Future Vol, veh/h	1	0	0	26	0	40	1	1498	32	25	810	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	27	0	42	1	1577	34	26	853	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2522	2518	853	2501	2501	1594	853	0	0	1611	0	0
Stage 1	905	905	-	1596	1596	-	-	-	-	-	-	-
Stage 2	1617	1613	-	905	905	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	19	28	359	~ 19	29	132	786	-	-	405	-	0
Stage 1	331	355	-	134	166	-	-	-	-	-	-	0
Stage 2	130	163	-	331	355	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	12	24	359	~ 17	25	132	786	-	-	405	-	-
Mov Cap-2 Maneuver	12	24	-	~ 17	25	-	-	-	-	-	-	-
Stage 1	327	312	-	132	164	-	-	-	-	-	-	-
Stage 2	87	161	-	291	312	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 332.1	$ 675.6	0	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	786	-	-	12	36	405	-
HCM Lane V/C Ratio	0.001	-	-	0.088	1.93	0.065	-
HCM Control Delay (s)	9.6	-	-	$ 332.1	$ 675.6	14.5	0
HCM Lane LOS	A	-	-	F	F	B	A
HCM 95th %tile Q(veh)	0	-	-	0.2	7.6	0.2	-

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

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	17	22	1771	766	17
Future Vol, veh/h	7	17	22	1771	766	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	6	6	2	2	2	2
Mvmt Flow	7	18	23	1884	815	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1812	417	833	0	-	0
Stage 1	824	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Critical Hdwy	6.92	7.02	4.14	-	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	2.22	-	-	-
Pot Cap-1 Maneuver	*314	574	796	-	-	-
Stage 1	*381	-	-	-	-	-
Stage 2	*314	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*314	574	796	-	-	-
Mov Cap-2 Maneuver	*314	-	-	-	-	-
Stage 1	*381	-	-	-	-	-
Stage 2	*314	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	796	-	462	-	-
HCM Lane V/C Ratio	0.029	-	0.055	-	-
HCM Control Delay (s)	9.7	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

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

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↗		↕	
Traffic Vol, veh/h	3	0	12	17	1	25	4	1497	8	19	835	3
Future Vol, veh/h	3	0	12	17	1	25	4	1497	8	19	835	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	13	18	1	26	4	1576	8	20	879	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2523	2513	881	2511	2506	1576	882	0	0	1584	0	0
Stage 1	921	921	-	1584	1584	-	-	-	-	-	-	-
Stage 2	1602	1592	-	927	922	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	19	28	346	19	29	135	767	-	-	415	-	-
Stage 1	324	349	-	136	168	-	-	-	-	-	-	-
Stage 2	133	167	-	322	349	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	13	24	346	~ 16	25	135	767	-	-	415	-	-
Mov Cap-2 Maneuver	13	24	-	~ 16	25	-	-	-	-	-	-	-
Stage 1	310	316	-	130	161	-	-	-	-	-	-	-
Stage 2	102	160	-	281	316	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	90.8	$ 470.3	0	0.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	767	-	-	57	33	415	-	-
HCM Lane V/C Ratio	0.005	-	-	0.277	1.372	0.048	-	-
HCM Control Delay (s)	9.7	0	-	90.8	$ 470.3	14.1	0	-
HCM Lane LOS	A	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	1	5	0.2	-	-

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

Intersection	
Int Delay, s/veh	0.3

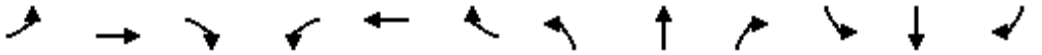
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	17	10	1785	778	3
Future Vol, veh/h	6	17	10	1785	778	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	18	11	1879	819	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1783	411	822	0	-	0
Stage 1	821	-	-	-	-	-
Stage 2	962	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	*99	590	803	-	-	-
Stage 1	*393	-	-	-	-	-
Stage 2	*318	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*99	590	803	-	-	-
Mov Cap-2 Maneuver	*99	-	-	-	-	-
Stage 1	*393	-	-	-	-	-
Stage 2	*318	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.5	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	803	-	257	-	-
HCM Lane V/C Ratio	0.013	-	0.094	-	-
HCM Control Delay (s)	9.5	0	20.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	264	314	86	145	164	205	1103	51	24	780	62
Future Volume (veh/h)	244	264	314	86	145	164	205	1103	51	24	780	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	257	278	331	91	153	173	216	1161	54	25	821	65
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	4	4	4	2	2	2	2	2	2
Cap, veh/h	325	313	372	108	319	361	181	1082	56	31	1222	128
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	1039	768	915	793	784	886	272	2020	105	8	2282	239
Grp Volume(v), veh/h	257	0	609	91	0	326	571	0	860	462	0	449
Grp Sat Flow(s),veh/h/ln	1039	0	1683	793	0	1670	721	0	1677	876	0	1653
Q Serve(g_s), s	33.9	0.0	47.1	9.9	0.0	20.1	50.8	0.0	68.4	6.6	0.0	24.2
Cycle Q Clear(g_c), s	54.0	0.0	47.1	57.0	0.0	20.1	75.0	0.0	68.4	75.0	0.0	24.2
Prop In Lane	1.00		0.54	1.00		0.53	0.38		0.06	0.05		0.14
Lane Grp Cap(c), veh/h	325	0	685	108	0	680	422	0	898	496	0	885
V/C Ratio(X)	0.79	0.00	0.89	0.84	0.00	0.48	1.36	0.00	0.96	0.93	0.00	0.51
Avail Cap(c_a), veh/h	325	0	685	108	0	680	422	0	898	496	0	885
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.5	0.0	38.6	66.9	0.0	30.6	46.7	0.0	31.0	35.7	0.0	20.7
Incr Delay (d2), s/veh	12.4	0.0	13.6	42.6	0.0	0.5	174.9	0.0	21.3	26.5	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	0.0	24.4	4.8	0.0	9.3	36.8	0.0	36.8	17.0	0.0	11.5
LnGrp Delay(d),s/veh	62.8	0.0	52.2	109.5	0.0	31.1	221.6	0.0	52.2	62.1	0.0	22.8
LnGrp LOS	E		D	F		C	F		D	E		C
Approach Vol, veh/h		866			417			1431			911	
Approach Delay, s/veh		55.3			48.2			119.9			42.7	
Approach LOS		E			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		79.0		61.0		79.0		61.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		75.0		57.0		75.0		57.0
Max Q Clear Time (g_c+I1), s		77.0		56.0		77.0		59.0
Green Ext Time (p_c), s		0.0		0.6		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	76.8
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	36	217	47	138	247	207	65	1551	147	44	726	21
Future Vol, veh/h	36	217	47	138	247	207	65	1551	147	44	726	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	38	231	50	147	263	220	69	1650	156	47	772	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1972	2821	397	2462	2754	903	794	0	0	1806	0	0
Stage 1	877	877	-	1866	1866	-	-	-	-	-	-	-
Stage 2	1095	1944	-	596	888	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 37	~ 17	600	~ 15	~ 19	278	823	-	-	337	-	-
Stage 1	308	362	-	~ 74	~ 119	-	-	-	-	-	-	-
Stage 2	226	~ 109	-	455	358	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 13	600	-	~ 14	278	823	-	-	337	-	-
Mov Cap-2 Maneuver	-	~ 13	-	-	~ 14	-	-	-	-	-	-	-
Stage 1	308	271	-	~ 74	~ 119	-	-	-	-	-	-	-
Stage 2	-	~ 109	-	~ 46	268	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.4	2.7
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	823	-	-	-	-	337	-	-
HCM Lane V/C Ratio	0.084	-	-	-	-	0.139	-	-
HCM Control Delay (s)	9.8	0	-	-	-	17.4	1.9	-
HCM Lane LOS	A	A	-	-	-	C	A	-
HCM 95th %tile Q(veh)	0.3	-	-	-	-	0.5	-	-

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

Intersection	
Int Delay, s/veh	4.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	62	184	1168	55	77	1123
Future Vol, veh/h	62	184	1168	55	77	1123
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	4	4	2	2	2	2
Mvmt Flow	67	198	1256	59	83	1208

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2056	658	0	0	1315	0
Stage 1	1286	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.14	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.22	-
Pot Cap-1 Maneuver	*227	*604	-	-	*909	-
Stage 1	*570	-	-	-	-	-
Stage 2	*570	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*164	*604	-	-	*909	-
Mov Cap-2 Maneuver	*164	-	-	-	-	-
Stage 1	*412	-	-	-	-	-
Stage 2	*570	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	38.2	0	1.6
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	360	* 909	-
HCM Lane V/C Ratio	-	-	0.735	0.091	-
HCM Control Delay (s)	-	-	38.2	9.4	1.1
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	5.6	0.3	-

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

Intersection	
Int Delay, s/veh	10.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	24	1	173	12	1	0	67	1742	36	3	877	33
Future Vol, veh/h	24	1	173	12	1	0	67	1742	36	3	877	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	1	188	13	1	0	73	1893	39	3	953	36

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2070	3055	495	2542	3054	966	989	0	0	1932	0	0
Stage 1	977	977	-	2059	2059	-	-	-	-	-	-	-
Stage 2	1093	2078	-	483	995	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*228	3	520	22	3	*368	695	-	-	*550	-	-
Stage 1	*269	327	-	256	242	-	-	-	-	-	-	-
Stage 2	*347	229	-	534	321	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*162	3	520	~ 10	3	*368	695	-	-	*550	-	-
Mov Cap-2 Maneuver	*162	3	-	~ 10	3	-	-	-	-	-	-	-
Stage 1	*269	323	-	256	242	-	-	-	-	-	-	-
Stage 2	*345	229	-	336	317	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	75.1	$ 1249.8	0.4	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	695	-	-	243	8	* 550	-	-
HCM Lane V/C Ratio	0.105	-	-	0.886	1.766	0.006	-	-
HCM Control Delay (s)	10.8	0	-	75.$	$ 1249.8	11.6	0.1	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.4	-	-	7.4	2.7	0	-	-

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

Intersection	
Int Delay, s/veh	546

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	17	699	23	126	960	178	76	4	95	1	12	18
Future Vol, veh/h	17	699	23	126	960	178	76	4	95	1	12	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	92	90	92	92	92	90	90	92	92	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	4	4
Mvmt Flow	19	760	26	137	1043	193	84	4	103	1	13	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1236	0	0	786	0	0	2241	2321	773	2279	2238	1140
Stage 1	-	-	-	-	-	-	811	811	-	1414	1414	-
Stage 2	-	-	-	-	-	-	1430	1510	-	865	824	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.54	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.036	3.336
Pot Cap-1 Maneuver	564	-	-	833	-	-	~ 30	37	399	28	42	242
Stage 1	-	-	-	-	-	-	373	393	-	171	202	-
Stage 2	-	-	-	-	-	-	167	183	-	348	385	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	564	-	-	833	-	-	~ 6	15	399	9	17	242
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 6	15	-	9	17	-
Stage 1	-	-	-	-	-	-	351	369	-	161	88	-
Stage 2	-	-	-	-	-	-	~ 57	80	-	240	362	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1	$ 6767.3	$ 317.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	13	564	-	-	833	-	-	35
HCM Lane V/C Ratio	14.781	0.033	-	-	0.164	-	-	0.983
HCM Control Delay (s)	$ 6767.3	11.6	0	-	10.2	0	-	$ 317.5
HCM Lane LOS	F	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	25.2	0.1	-	-	0.6	-	-	3.6

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

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	0	0	0	818	0	313	0	898	373	374	796	0
Future Vol, veh/h	0	0	0	818	0	313	0	898	373	374	796	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	3	3	3
Mvmt Flow	0	0	0	880	0	337	0	966	401	402	856	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2143	3027	428	2399	2827	684	856	0	0	1367	0	0
Stage 1	1660	1660	-	1167	1167	-	-	-	-	-	-	-
Stage 2	483	1367	-	1232	1660	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.23	-	-
Pot Cap-1 Maneuver	*55	6	*764	~ 24	12	*719	*1143	-	-	675	-	-
Stage 1	*159	202	-	~ 493	469	-	-	-	-	-	-	-
Stage 2	*678	345	-	~ 371	202	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	-	0	*764	-	0	*719	*1143	-	-	675	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	*159	0	-	~ 493	469	-	-	-	-	-	-	-
Stage 2	*361	345	-	-	0	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0		0	8.8
HCM LOS	A	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 1143	-	-	-	-	675	-	-
HCM Lane V/C Ratio	-	-	-	-	-	0.596	-	-
HCM Control Delay (s)	0	-	-	0	-	17.9	4.6	-
HCM Lane LOS	A	-	-	A	-	C	A	-
HCM 95th %tile Q(veh)	0	-	-	-	-	4	-	-

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

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	729	6	3	1000	50	8	10	0	0	4	84
Future Vol, veh/h	14	729	6	3	1000	50	8	10	0	0	4	84
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	810	7	3	1111	56	9	11	0	0	4	93

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1167	0	0	817	0	0	2040	2019	814	1996	1994	1139
Stage 1	-	-	-	-	-	-	846	846	-	1145	1145	-
Stage 2	-	-	-	-	-	-	1194	1173	-	851	849	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	599	-	-	811	-	-	42	58	378	45	60	245
Stage 1	-	-	-	-	-	-	357	378	-	243	274	-
Stage 2	-	-	-	-	-	-	228	266	-	355	377	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	599	-	-	811	-	-	23	55	378	36	56	245
Mov Cap-2 Maneuver	-	-	-	-	-	-	23	55	-	36	56	-
Stage 1	-	-	-	-	-	-	340	359	-	231	271	-
Stage 2	-	-	-	-	-	-	137	263	-	327	359	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	209.6	35.7
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	34	599	-	-	811	-	-	212
HCM Lane V/C Ratio	0.588	0.026	-	-	0.004	-	-	0.461
HCM Control Delay (s)	209.6	11.2	0	-	9.5	0	-	35.7
HCM Lane LOS	F	B	A	-	A	A	-	E
HCM 95th %tile Q(veh)	2	0.1	-	-	0	-	-	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	352	10	522	842	767	0	0	1388	280
Future Volume (veh/h)	0	0	0	352	10	522	842	767	0	0	1388	280
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1845	1900
Adj Flow Rate, veh/h				387	11	574	925	843	0	0	1525	308
Adj No. of Lanes				1	1	0	2	2	0	0	2	0
Peak Hour Factor				0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %				2	2	2	2	2	0	0	3	3
Cap, veh/h				431	7	378	762	2477	0	0	1314	259
Arrive On Green				0.24	0.24	0.24	0.22	0.70	0.00	0.00	0.90	0.90
Sat Flow, veh/h				1774	30	1558	3442	3632	0	0	3013	575
Grp Volume(v), veh/h				387	0	585	925	843	0	0	899	934
Grp Sat Flow(s),veh/h/ln				1774	0	1588	1721	1770	0	0	1752	1743
Q Serve(g_s), s				29.6	0.0	34.0	31.0	13.1	0.0	0.0	63.0	63.0
Cycle Q Clear(g_c), s				29.6	0.0	34.0	31.0	13.1	0.0	0.0	63.0	63.0
Prop In Lane				1.00		0.98	1.00		0.00	0.00		0.33
Lane Grp Cap(c), veh/h				431	0	386	762	2477	0	0	789	784
V/C Ratio(X)				0.90	0.00	1.52	1.21	0.34	0.00	0.00	1.14	1.19
Avail Cap(c_a), veh/h				431	0	386	762	2477	0	0	789	784
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				51.3	0.0	53.0	54.5	8.3	0.0	0.0	7.0	7.0
Incr Delay (d2), s/veh				21.2	0.0	245.7	108.1	0.4	0.0	0.0	77.9	98.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				17.0	0.0	41.2	26.2	6.5	0.0	0.0	43.4	48.0
LnGrp Delay(d),s/veh				72.5	0.0	298.7	162.6	8.6	0.0	0.0	84.9	105.4
LnGrp LOS				E		F	F	A			F	F
Approach Vol, veh/h					972			1768			1833	
Approach Delay, s/veh					208.6			89.2			95.4	
Approach LOS					F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		102.0			35.0	67.0		38.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		98.0			31.0	63.0		34.0
Max Q Clear Time (g_c+I1), s		15.1			33.0	65.0		36.0
Green Ext Time (p_c), s		7.5			0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		117.1
HCM 2010 LOS		F

Notes

Intersection	
Int Delay, s/veh	1327.5

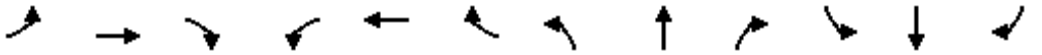
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑						↑↑↳		↰	↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	0	1605	1015	799	934	0
Future Vol, veh/h	0	0	0	0	0	0	0	1605	1015	799	934	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	145	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	1783	1128	888	1038	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	5725	-	-	0	0	2911	0	0
Stage 1	-	2814	-	-	-	-	-	-	-
Stage 2	-	2911	-	-	-	-	-	-	-
Critical Hdwy	-	6.54	-	-	-	-	4.14	-	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.02	-	-	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	0	0	-	-	~ 53	-	0
Stage 1	0	39	0	0	-	-	-	-	0
Stage 2	0	15	0	0	-	-	-	-	0
Platoon blocked, %		1			-	-	1	-	
Mov Cap-1 Maneuver	-	0	-	-	-	-	~ 53	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	$ 3334.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	~ 53	-
HCM Lane V/C Ratio	-	-	-	16.751	-
HCM Control Delay (s)	-	-	$	7232.2	-
HCM Lane LOS	-	-	A	F	-
HCM 95th %tile Q(veh)	-	-	-	107.4	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	374	125	47	22	175	596	118	1620	25	25	630	323
Future Volume (veh/h)	374	125	47	22	175	596	118	1620	25	25	630	323
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	407	136	51	24	190	648	128	1761	27	27	685	351
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	141	748	280	682	215	733	127	1132	17	84	657	337
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.04	0.32	0.32	0.02	0.29	0.29
Sat Flow, veh/h	653	1293	485	1192	372	1267	1774	3568	55	1757	2245	1150
Grp Volume(v), veh/h	407	0	187	24	0	838	128	872	916	27	535	501
Grp Sat Flow(s),veh/h/ln	653	0	1777	1192	0	1639	1774	1770	1853	1757	1752	1642
Q Serve(g_s), s	19.3	0.0	6.9	1.4	0.0	61.7	6.0	44.4	44.4	1.5	41.0	41.0
Cycle Q Clear(g_c), s	81.0	0.0	6.9	8.3	0.0	61.7	6.0	44.4	44.4	1.5	41.0	41.0
Prop In Lane	1.00		0.27	1.00		0.77	1.00		0.03	1.00		0.70
Lane Grp Cap(c), veh/h	141	0	1028	682	0	948	127	561	588	84	513	481
V/C Ratio(X)	2.88	0.00	0.18	0.04	0.00	0.88	1.00	1.55	1.56	0.32	1.04	1.04
Avail Cap(c_a), veh/h	141	0	1028	682	0	948	127	561	588	102	513	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.9	0.0	13.9	15.8	0.0	25.4	42.9	47.8	47.8	39.7	49.5	49.5
Incr Delay (d2), s/veh	864.4	0.0	0.1	0.0	0.0	9.9	80.8	257.7	259.8	2.2	51.1	52.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	39.4	0.0	3.4	0.5	0.0	30.3	4.8	61.8	65.1	0.8	27.1	25.6
LnGrp Delay(d),s/veh	928.2	0.0	14.0	15.9	0.0	35.3	123.8	305.5	307.6	41.9	100.6	102.0
LnGrp LOS	F		B	B		D	F	F	F	D	F	F
Approach Vol, veh/h		594			862			1916			1063	
Approach Delay, s/veh		640.4			34.8			294.4			99.8	
Approach LOS		F			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.6	48.4		85.0	10.0	45.0		85.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	43.0		81.0	6.0	41.0		81.0
Max Q Clear Time (g_c+I1), s	3.5	46.4		83.0	8.0	43.0		63.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		6.6

Intersection Summary		
HCM 2010 Ctrl Delay		243.6
HCM 2010 LOS		F

Intersection	
Int Delay, s/veh	59

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	0	85	3	3	6	219	1190	8	1	1401	585
Future Vol, veh/h	23	0	85	3	3	6	219	1190	8	1	1401	585
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	13	13	13	2	2	2	2	2	2
Mvmt Flow	24	0	89	3	3	6	231	1253	8	1	1475	616

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2875	3508	1046	2459	3812	631	2091	0	0	1261	0	0
Stage 1	1785	1785	-	1719	1719	-	-	-	-	-	-	-
Stage 2	1090	1723	-	740	2093	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.76	6.76	7.16	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.76	5.76	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.76	5.76	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.63	4.13	3.43	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 4	1	*518	*19	~ 0	398	300	-	-	547	-	-
Stage 1	257	265	-	*83	128	-	-	-	-	-	-	-
Stage 2	226	139	-	*477	125	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1		1	-	-		-	-
Mov Cap-1 Maneuver	~ 2	0	*518	*6	0	398	300	-	-	547	-	-
Mov Cap-2 Maneuver	~ 2	0	-	*6	0	-	-	-	-	-	-	-
Stage 1	59	265	-	*19	29	-	-	-	-	-	-	-
Stage 2	46	32	-	*394	125	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	1780.2	$ 431.3	7.4	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	300	-	-	2	518	17	547	-	-
HCM Lane V/C Ratio	0.768	-	-	12.105	0.173	0.743	0.002	-	-
HCM Control Delay (s)	47.7	-	-	$ 8309.8	13.4	$ 431.3	11.6	-	-
HCM Lane LOS	E	-	-	F	B	F	B	-	-
HCM 95th %tile Q(veh)	5.9	-	-	4.7	0.6	1.9	0	-	-

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	781	806	1111	0	0	1232
Future Volume (veh/h)	781	806	1111	0	0	1232
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1891	1928	1863	0	0	1863
Adj Flow Rate, veh/h	822	848	1169	0	0	1297
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2	0	0	2
Cap, veh/h	909	828	1310	0	0	1310
Arrive On Green	0.50	0.50	0.37	0.00	0.00	0.37
Sat Flow, veh/h	1801	1639	3725	0	0	3725
Grp Volume(v), veh/h	822	848	1169	0	0	1297
Grp Sat Flow(s),veh/h/ln	1801	1639	1770	0	0	1770
Q Serve(g_s), s	41.6	50.5	31.1	0.0	0.0	36.4
Cycle Q Clear(g_c), s	41.6	50.5	31.1	0.0	0.0	36.4
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	909	828	1310	0	0	1310
V/C Ratio(X)	0.90	1.02	0.89	0.00	0.00	0.99
Avail Cap(c_a), veh/h	909	828	1310	0	0	1310
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	22.5	24.7	29.6	0.0	0.0	31.3
Incr Delay (d2), s/veh	12.3	37.6	9.5	0.0	0.0	22.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.7	31.2	16.8	0.0	0.0	21.8
LnGrp Delay(d),s/veh	34.9	62.4	39.2	0.0	0.0	54.0
LnGrp LOS	C	F	D			D
Approach Vol, veh/h	1670		1169			1297
Approach Delay, s/veh	48.8		39.2			54.0
Approach LOS	D		D			D

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		43.0		57.0		43.0		
Change Period (Y+Rc), s		6.0		6.5		6.0		
Max Green Setting (Gmax), s		37.0		50.5		37.0		
Max Q Clear Time (g_c+I1), s		38.4		52.5		33.1		
Green Ext Time (p_c), s		0.0		0.0		2.2		

Intersection Summary	
HCM 2010 Ctrl Delay	47.7
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	6	17	11	6	25	4	7	11	7	6	4	7
Future Vol, veh/h	6	17	11	6	25	4	7	11	7	6	4	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	6	6	6	2	2	2
Mvmt Flow	7	19	12	7	28	4	8	12	8	7	4	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	32	0	0	31	0	0	89	85	25	93	89	30
Stage 1	-	-	-	-	-	-	39	39	-	44	44	-
Stage 2	-	-	-	-	-	-	50	46	-	49	45	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.16	6.56	6.26	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.554	4.054	3.354	3.518	4.018	3.318
Pot Cap-1 Maneuver	1580	-	-	1582	-	-	886	798	1040	891	801	1044
Stage 1	-	-	-	-	-	-	966	855	-	970	858	-
Stage 2	-	-	-	-	-	-	953	849	-	964	857	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1580	-	-	1582	-	-	869	790	1040	867	793	1044
Mov Cap-2 Maneuver	-	-	-	-	-	-	869	790	-	867	793	-
Stage 1	-	-	-	-	-	-	961	851	-	965	854	-
Stage 2	-	-	-	-	-	-	936	845	-	938	853	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	1.2	9.3	9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	871	1580	-	-	1582	-	-	911
HCM Lane V/C Ratio	0.032	0.004	-	-	0.004	-	-	0.021
HCM Control Delay (s)	9.3	7.3	0	-	7.3	0	-	9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	269	22	4	341	8	19	1	18	3	4	12
Future Vol, veh/h	4	269	22	4	341	8	19	1	18	3	4	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	5	5	5	2	2	2	7	7	7
Mvmt Flow	4	283	23	4	359	8	20	1	19	3	4	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	367	0	0	306	0	0	683	678	295	684	685	363
Stage 1	-	-	-	-	-	-	303	303	-	371	371	-
Stage 2	-	-	-	-	-	-	380	375	-	313	314	-
Critical Hdwy	4.14	-	-	4.15	-	-	7.12	6.52	6.22	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.17	5.57	-
Follow-up Hdwy	2.236	-	-	2.245	-	-	3.518	4.018	3.318	3.563	4.063	3.363
Pot Cap-1 Maneuver	1181	-	-	1238	-	-	363	374	744	356	364	671
Stage 1	-	-	-	-	-	-	706	664	-	639	611	-
Stage 2	-	-	-	-	-	-	642	617	-	687	647	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1181	-	-	1238	-	-	351	371	744	344	361	671
Mov Cap-2 Maneuver	-	-	-	-	-	-	351	371	-	344	361	-
Stage 1	-	-	-	-	-	-	703	661	-	636	609	-
Stage 2	-	-	-	-	-	-	623	615	-	666	644	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	13.4	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	469	1181	-	-	1238	-	-	504
HCM Lane V/C Ratio	0.085	0.004	-	-	0.003	-	-	0.04
HCM Control Delay (s)	13.4	8.1	0	-	7.9	0	-	12.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	37.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	14	247	77	0	393	418	68	0	0	267	0	14
Future Vol, veh/h	14	247	77	0	393	418	68	0	0	267	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	260	81	0	414	440	72	0	0	281	0	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	854	0	0	341	0	0	973	1185	301	965	1005	634
Stage 1	-	-	-	-	-	-	331	331	-	634	634	-
Stage 2	-	-	-	-	-	-	642	854	-	331	371	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	785	-	-	1238	-	-	228	170	850	~ 231	229	479
Stage 1	-	-	-	-	-	-	768	683	-	467	473	-
Stage 2	-	-	-	-	-	-	463	375	-	768	651	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	785	-	-	1238	-	-	216	166	850	~ 227	224	479
Mov Cap-2 Maneuver	-	-	-	-	-	-	216	166	-	~ 227	224	-
Stage 1	-	-	-	-	-	-	749	667	-	456	473	-
Stage 2	-	-	-	-	-	-	449	375	-	749	636	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	29.7	192.9
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	216	785	-	-	1238	-	-	233
HCM Lane V/C Ratio	0.331	0.019	-	-	-	-	-	1.269
HCM Control Delay (s)	29.7	9.7	0	-	0	-	-	192.9
HCM Lane LOS	D	A	A	-	A	-	-	F
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0	-	-	15.2

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

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	27	1237	54	11	1616
Future Vol, veh/h	7	27	1237	54	11	1616
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	3	3
Mvmt Flow	8	29	1330	58	12	1738

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2252	694	0	0	1388	0
Stage 1	1359	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.16	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.23	-
Pot Cap-1 Maneuver	*133	*563	-	-	*838	-
Stage 1	*531	-	-	-	-	-
Stage 2	*384	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*78	*563	-	-	*838	-
Mov Cap-2 Maneuver	*190	-	-	-	-	-
Stage 1	*312	-	-	-	-	-
Stage 2	*384	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.9	0	2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	401	* 838	-
HCM Lane V/C Ratio	-	-	0.091	0.014	-
HCM Control Delay (s)	-	-	14.9	9.4	1.9
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

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

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	151	91	1825	1081	17
Future Vol, veh/h	13	151	91	1825	1081	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	164	99	1984	1175	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2374	597	1193	0	-	0
Stage 1	1184	-	-	-	-	-
Stage 2	1190	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	29	446	581	-	-	-
Stage 1	253	-	-	-	-	-
Stage 2	251	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	29	446	581	-	-	-
Mov Cap-2 Maneuver	29	-	-	-	-	-
Stage 1	253	-	-	-	-	-
Stage 2	251	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	33.3	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	581	-	29	446	-	-
HCM Lane V/C Ratio	0.17	-	0.487	0.368	-	-
HCM Control Delay (s)	12.5	0	215.1	17.7	-	-
HCM Lane LOS	B	A	F	C	-	-
HCM 95th %tile Q(veh)	0.6	-	1.6	1.7	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	2	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	1021	1084
Stage 1	-	0	0	-	1022	-
Stage 2	-	0	0	-	1022	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	1021	1084
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1022	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Appendix G

2043 Build (Improved) Conditions Analysis Worksheets

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	111	1013	1	174	1322
Future Vol, veh/h	1	111	1013	1	174	1322
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	9	9	7	7	8	8
Mvmt Flow	1	123	1126	1	193	1469

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2248	564	0	0	1127	0
Stage 1	1127	-	-	-	-	-
Stage 2	1121	-	-	-	-	-
Critical Hdwy	6.98	7.08	-	-	4.26	-
Critical Hdwy Stg 1	5.98	-	-	-	-	-
Critical Hdwy Stg 2	5.98	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.28	-
Pot Cap-1 Maneuver	32	451	-	-	582	-
Stage 1	257	-	-	-	-	-
Stage 2	259	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	451	-	-	582	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	259	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16	0	1.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	451	582	-
HCM Lane V/C Ratio	-	-	0.276	0.332	-
HCM Control Delay (s)	-	-	16	14.2	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.1	1.4	-

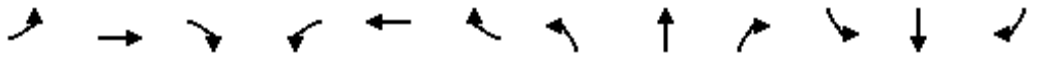
Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	105	913	6	193	1123
Future Vol, veh/h	11	105	913	6	193	1123
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	6	8	8
Mvmt Flow	12	117	1014	7	214	1248

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2070	511	0	0	1021	0
Stage 1	1018	-	-	-	-	-
Stage 2	1052	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.26	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.28	-
Pot Cap-1 Maneuver	47	508	-	-	641	-
Stage 1	310	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	31	508	-	-	641	-
Mov Cap-2 Maneuver	65	-	-	-	-	-
Stage 1	206	-	-	-	-	-
Stage 2	297	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.8	0	2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	65	508	641	-
HCM Lane V/C Ratio	-	-	0.188	0.23	0.335	-
HCM Control Delay (s)	-	-	72.8	14.2	13.4	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.6	0.9	1.5	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	144	8	8	162	0	0	0	0	1270	7	19
Future Volume (veh/h)	0	144	8	8	162	0	0	0	0	1270	7	19
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1900	1792	0				1845	1845	1900
Adj Flow Rate, veh/h	0	160	9	9	180	0				1417	0	0
Adj No. of Lanes	0	1	0	0	1	0				2	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	6	6	0				3	3	3
Cap, veh/h	0	243	14	39	225	0				2491	1308	0
Arrive On Green	0.00	0.14	0.14	0.05	0.05	0.00				0.71	0.00	0.00
Sat Flow, veh/h	0	1747	98	31	1616	0				3514	1845	0
Grp Volume(v), veh/h	0	0	169	189	0	0				1417	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1845	1648	0	0				1757	1845	0
Q Serve(g_s), s	0.0	0.0	9.5	3.1	0.0	0.0				21.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	9.5	12.7	0.0	0.0				21.6	0.0	0.0
Prop In Lane	0.00		0.05	0.05		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	0	257	264	0	0				2491	1308	0
V/C Ratio(X)	0.00	0.00	0.66	0.72	0.00	0.00				0.57	0.00	0.00
Avail Cap(c_a), veh/h	0	0	403	402	0	0				2491	1308	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	44.9	50.9	0.0	0.0				7.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.9	3.6	0.0	0.0				0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	5.1	6.0	0.0	0.0				10.6	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	47.7	54.6	0.0	0.0				8.7	0.0	0.0
LnGrp LOS			D	D						A		
Approach Vol, veh/h		169			189						1417	
Approach Delay, s/veh		47.7			54.6						8.7	
Approach LOS		D			D						A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				19.3		82.0		19.3
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				24.0		78.0		24.0
Max Q Clear Time (g_c+I1), s				11.5		23.6		14.7
Green Ext Time (p_c), s				0.7		7.6		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Notes

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1406	8	4	172	474	0	0	1	0	0	0
Future Vol, veh/h	3	1406	8	4	172	474	0	0	1	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	9	9	9	2	2	2	2	2	2
Mvmt Flow	3	1562	9	4	191	527	0	0	1	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	718	0	0	1571	0	0	2036	2299	786
Stage 1	-	-	-	-	-	-	1573	1573	-
Stage 2	-	-	-	-	-	-	463	726	-
Critical Hdwy	4.145	-	-	4.235	-	-	6.63	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	5.83	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	2.2285	-	-	2.2855	-	-	3.519	4.019	3.319
Pot Cap-1 Maneuver	997	-	-	*736	-	-	*246	*83	*506
Stage 1	-	-	-	-	-	-	*478	*418	-
Stage 2	-	-	-	-	-	-	*785	*513	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1
Mov Cap-1 Maneuver	997	-	-	*736	-	-	*238	*0	*506
Mov Cap-2 Maneuver	-	-	-	-	-	-	*238	*0	-
Stage 1	-	-	-	-	-	-	*462	*0	-
Stage 2	-	-	-	-	-	-	*785	*0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0.1	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	506	997	-	-	* 736	-	-
HCM Lane V/C Ratio	0.002	0.003	-	-	0.006	-	-
HCM Control Delay (s)	12.1	8.6	0.1	-	9.9	0	-
HCM Lane LOS	B	A	A	-	A	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1193	183	44	455	213	114	223	21	294	441	51
Future Volume (veh/h)	14	1193	183	44	455	213	114	223	21	294	441	51
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1743	1743	1810	1810	1900	1810	1810	1900
Adj Flow Rate, veh/h	15	1311	201	48	500	0	125	245	23	323	485	56
Adj No. of Lanes	0	2	0	0	2	1	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	9	9	9	5	5	5	5	5	5
Cap, veh/h	41	1483	224	120	1189	741	164	630	59	364	616	71
Arrive On Green	1.00	1.00	1.00	0.50	0.50	0.00	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	14	2966	448	161	2379	1482	837	1630	153	1075	1593	184
Grp Volume(v), veh/h	810	0	717	235	313	0	125	0	268	323	0	541
Grp Sat Flow(s),veh/h/ln	1829	0	1600	1033	1507	1482	837	0	1783	1075	0	1777
Q Serve(g_s), s	0.0	0.0	0.0	1.8	14.4	0.0	13.0	0.0	11.9	30.6	0.0	29.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	9.5	14.4	0.0	42.5	0.0	11.9	42.5	0.0	29.5
Prop In Lane	0.02		0.28	0.20		1.00	1.00		0.09	1.00		0.10
Lane Grp Cap(c), veh/h	948	0	800	556	753	741	164	0	689	364	0	687
V/C Ratio(X)	0.85	0.00	0.90	0.42	0.42	0.00	0.76	0.00	0.39	0.89	0.00	0.79
Avail Cap(c_a), veh/h	948	0	800	556	753	741	164	0	689	364	0	687
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.90	0.90	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	15.9	17.4	0.0	49.9	0.0	24.4	40.9	0.0	29.8
Incr Delay (d2), s/veh	9.7	0.0	14.8	2.1	1.5	0.0	27.9	0.0	1.7	25.8	0.0	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	3.3	4.5	6.3	0.0	5.1	0.0	6.2	12.4	0.0	16.1
LnGrp Delay(d),s/veh	9.7	0.0	14.8	18.0	18.9	0.0	77.8	0.0	26.0	66.6	0.0	38.7
LnGrp LOS	A		B	B	B		E		C	E		D
Approach Vol, veh/h		1527			548			393			864	
Approach Delay, s/veh		12.1			18.5			42.5			49.1	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		49.0		61.0		49.0		61.0
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s		42.5		55.0		42.5		55.0
Max Q Clear Time (g_c+I1), s		44.5		2.0		44.5		16.4
Green Ext Time (p_c), s		0.0		10.4		0.0		3.3

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	947	464	0	403	448	163	394	14	376	599	138
Future Volume (veh/h)	72	947	464	0	403	448	163	394	14	376	599	138
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1810	1810	1810	1810	1900	1759	1759	1759
Adj Flow Rate, veh/h	77	1018	499	0	433	482	175	424	0	404	644	148
Adj No. of Lanes	1	2	0	0	2	1	1	2	0	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	5	5	5	5	5	5	8	8	8
Cap, veh/h	667	2346	1121	0	3538	1942	230	422	0	393	808	360
Arrive On Green	1.00	1.00	1.00	0.00	1.00	1.00	0.13	0.12	0.00	0.23	0.24	0.24
Sat Flow, veh/h	596	2280	1089	0	3529	1537	1723	3529	0	1675	3343	1488
Grp Volume(v), veh/h	77	769	748	0	433	482	175	424	0	404	644	148
Grp Sat Flow(s),veh/h/ln	596	1736	1634	0	1719	1537	1723	1719	0	1675	1671	1488
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	10.8	13.5	0.0	25.8	19.9	9.2
Cycle Q Clear(g_c), s	2.5	0.0	0.0	0.0	0.0	0.0	10.8	13.5	0.0	25.8	19.9	9.2
Prop In Lane	1.00		0.67	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	667	1786	1681	0	3538	1942	230	422	0	393	808	360
V/C Ratio(X)	0.12	0.43	0.45	0.00	0.12	0.25	0.76	1.00	0.00	1.03	0.80	0.41
Avail Cap(c_a), veh/h	667	1786	1681	0	3538	1942	230	422	0	393	808	360
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.26	0.26	0.26	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	45.9	48.3	0.0	42.1	39.2	35.1
Incr Delay (d2), s/veh	0.1	0.2	0.2	0.0	0.1	0.3	13.7	45.0	0.0	52.8	8.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.1	0.0	0.0	0.2	6.0	9.0	0.0	17.7	10.1	4.1
LnGrp Delay(d),s/veh	0.1	0.2	0.2	0.0	0.1	0.3	59.6	93.3	0.0	94.9	47.2	38.6
LnGrp LOS	A	A	A		A	A	E	F		F	D	D
Approach Vol, veh/h		1594			915			599			1196	
Approach Delay, s/veh		0.2			0.2			83.5			62.2	
Approach LOS		A			A			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.3	22.0		123.7	23.2	33.1		123.7
Change Period (Y+Rc), s	8.5	* 8.5		8.5	8.5	6.5		8.5
Max Green Setting (Gmax), s	25.8	* 14		47.2	12.7	26.6		47.2
Max Q Clear Time (g_c+I1), s	27.8	15.5		2.0	12.8	21.9		4.5
Green Ext Time (p_c), s	0.0	0.0		5.1	0.0	1.7		11.9

Intersection Summary	
HCM 2010 Ctrl Delay	29.0
HCM 2010 LOS	C

Notes

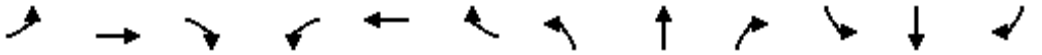
Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	134	37	380	81	0	0	0	0	0	0	0
Future Vol, veh/h	1	134	37	380	81	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	5	5	2	2	2	2	2	2	2
Mvmt Flow	1	149	41	422	90	0	0	0	0	0	0	0

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	90	0	0	190	0	0			-	1126	-
Stage 1	-	-	-	-	-	-			-	934	-
Stage 2	-	-	-	-	-	-			-	192	-
Critical Hdwy	4.12	-	-	4.15	-	-			-	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-			-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			-	5.52	-
Follow-up Hdwy	2.218	-	-	2.245	-	-			-	4.018	-
Pot Cap-1 Maneuver	1505	-	-	1366	-	0			0	205	0
Stage 1	-	-	-	-	-	0			0	345	0
Stage 2	-	-	-	-	-	0			0	742	0
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	1505	-	-	1366	-	-			-	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-			-	0	-
Stage 1	-	-	-	-	-	-			-	0	-
Stage 2	-	-	-	-	-	-			-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	7.3	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	1505	-	-	1366	-	-
HCM Lane V/C Ratio	0.001	-	-	0.309	-	-
HCM Control Delay (s)	7.4	-	-	8.8	0	0
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0	-	-	1.3	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	62	66	38	185	8	209	574	90	69	946	66
Future Volume (veh/h)	6	62	66	38	185	8	209	574	90	69	946	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1727	1727	1900	1810	1810	1900	1810	1810	1900
Adj Flow Rate, veh/h	6	66	70	40	197	9	222	611	96	73	1006	70
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	10	10	10	5	5	5	5	5	5
Cap, veh/h	147	127	135	196	251	11	229	1118	176	536	1010	70
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.14	1.00	1.00	0.60	0.60	0.60
Sat Flow, veh/h	1171	829	879	1157	1639	75	1723	1527	240	717	1673	116
Grp Volume(v), veh/h	6	0	136	40	0	206	222	0	707	73	0	1076
Grp Sat Flow(s),veh/h/ln	1171	0	1708	1157	0	1714	1723	0	1767	717	0	1789
Q Serve(g_s), s	0.3	0.0	5.1	2.3	0.0	8.1	4.6	0.0	0.0	3.1	0.0	41.9
Cycle Q Clear(g_c), s	8.4	0.0	5.1	7.4	0.0	8.1	4.6	0.0	0.0	3.1	0.0	41.9
Prop In Lane	1.00		0.51	1.00		0.04	1.00		0.14	1.00		0.07
Lane Grp Cap(c), veh/h	147	0	262	196	0	263	229	0	1294	536	0	1080
V/C Ratio(X)	0.04	0.00	0.52	0.20	0.00	0.78	0.97	0.00	0.55	0.14	0.00	1.00
Avail Cap(c_a), veh/h	235	0	390	283	0	392	229	0	1294	536	0	1080
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.67	0.00	0.67	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	0.0	27.3	30.7	0.0	28.5	18.8	0.0	0.0	6.1	0.0	13.8
Incr Delay (d2), s/veh	0.1	0.0	1.6	0.3	0.0	4.1	50.8	0.0	1.7	0.5	0.0	26.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.5	0.8	0.0	4.1	7.4	0.0	0.6	0.7	0.0	28.3
LnGrp Delay(d),s/veh	32.7	0.0	28.9	31.0	0.0	32.6	69.6	0.0	1.7	6.6	0.0	40.3
LnGrp LOS	C		C	C		C	E		A	A		D
Approach Vol, veh/h		142			246			929			1149	
Approach Delay, s/veh		29.0			32.4			17.9			38.1	
Approach LOS		C			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		55.3		14.7	9.0	46.3		14.7
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s		46.0		16.0	5.0	37.0		16.0
Max Q Clear Time (g_c+I1), s		2.0		10.4	6.6	43.9		10.1
Green Ext Time (p_c), s		6.1		0.3	0.0	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	160	50	45	162	99	58	774	38	148	1177	25
Future Volume (veh/h)	4	160	50	45	162	99	58	774	38	148	1177	25
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1681	1681	1900	1810	1810	1900	1827	1827	1900
Adj Flow Rate, veh/h	4	174	54	49	176	108	63	841	41	161	1279	27
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	13	13	13	5	5	5	4	4	4
Cap, veh/h	105	286	89	163	205	126	261	2242	109	478	2335	49
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	1.00	1.00	1.00	0.67	0.67	0.67
Sat Flow, veh/h	1091	1363	423	1035	975	598	408	3337	163	615	3476	73
Grp Volume(v), veh/h	4	0	228	49	0	284	63	433	449	161	638	668
Grp Sat Flow(s),veh/h/ln	1091	0	1786	1035	0	1573	408	1719	1781	615	1736	1814
Q Serve(g_s), s	0.4	0.0	12.7	5.0	0.0	19.1	6.3	0.0	0.0	12.8	21.0	21.0
Cycle Q Clear(g_c), s	19.5	0.0	12.7	17.7	0.0	19.1	27.3	0.0	0.0	12.8	21.0	21.0
Prop In Lane	1.00		0.24	1.00		0.38	1.00		0.09	1.00		0.04
Lane Grp Cap(c), veh/h	105	0	375	163	0	330	261	1155	1196	478	1166	1219
V/C Ratio(X)	0.04	0.00	0.61	0.30	0.00	0.86	0.24	0.38	0.38	0.34	0.55	0.55
Avail Cap(c_a), veh/h	183	0	503	237	0	443	261	1155	1196	478	1166	1219
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.00	0.96	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	0.0	39.3	47.3	0.0	41.9	3.9	0.0	0.0	8.0	9.4	9.4
Incr Delay (d2), s/veh	0.3	0.0	3.3	2.2	0.0	16.3	2.2	0.9	0.9	1.9	1.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	6.6	1.5	0.0	9.8	0.9	0.3	0.3	2.4	10.5	11.0
LnGrp Delay(d),s/veh	51.6	0.0	42.6	49.5	0.0	58.2	6.1	0.9	0.9	9.9	11.2	11.1
LnGrp LOS	D		D	D		E	A	A	A	A	B	B
Approach Vol, veh/h		232			333			945			1467	
Approach Delay, s/veh		42.8			56.9			1.3			11.0	
Approach LOS		D			E			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		80.9		29.1		80.9		29.1
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0
Max Green Setting (Gmax), s		66.0		31.0		66.0		31.0
Max Q Clear Time (g_c+I1), s		23.0		21.5		29.3		21.1
Green Ext Time (p_c), s		16.3		1.2		8.4		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	0	6	0	10	1	888	23	19	1018	3
Future Vol, veh/h	0	1	0	6	0	10	1	888	23	19	1018	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	0	1	0	6	0	11	1	955	25	20	1095	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2112	2119	1097	2107	2108	968	1098	0	0	980	0	0
Stage 1	1137	1137	-	970	970	-	-	-	-	-	-	-
Stage 2	975	982	-	1137	1138	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	37	50	259	37	51	308	625	-	-	693	-	-
Stage 1	245	277	-	304	331	-	-	-	-	-	-	-
Stage 2	303	327	-	245	276	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	34	46	259	34	47	308	625	-	-	693	-	-
Mov Cap-2 Maneuver	34	46	-	34	47	-	-	-	-	-	-	-
Stage 1	244	257	-	303	330	-	-	-	-	-	-	-
Stage 2	291	326	-	226	256	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	85.1	64.7	0	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	625	-	-	46	77	693	-	-
HCM Lane V/C Ratio	0.002	-	-	0.023	0.223	0.029	-	-
HCM Control Delay (s)	10.8	-	-	85.1	64.7	10.4	0	-
HCM Lane LOS	B	-	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.8	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	15	6	870	1230	14
Future Vol, veh/h	1	15	6	870	1230	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	5	5	4	4
Mvmt Flow	1	16	6	926	1309	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1792	662	1324	0	-	0
Stage 1	1317	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.2	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.25	-	-	-
Pot Cap-1 Maneuver	*116	404	502	-	-	-
Stage 1	*215	-	-	-	-	-
Stage 2	*699	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*113	404	502	-	-	-
Mov Cap-2 Maneuver	*113	-	-	-	-	-
Stage 1	*210	-	-	-	-	-
Stage 2	*699	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.9	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	502	-	348	-	-
HCM Lane V/C Ratio	0.013	-	0.049	-	-
HCM Control Delay (s)	12.3	0.2	15.9	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

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

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	1	0	4	10	0	17	10	909	11	12	1012	3
Future Vol, veh/h	1	0	4	10	0	17	10	909	11	12	1012	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	1	0	4	11	0	18	11	967	12	13	1077	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2109	2106	1079	2096	2095	967	1080	0	0	979	0	0
Stage 1	1105	1105	-	989	989	-	-	-	-	-	-	-
Stage 2	1004	1001	-	1107	1106	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	37	51	265	38	52	308	635	-	-	693	-	-
Stage 1	256	286	-	297	325	-	-	-	-	-	-	-
Stage 2	291	321	-	255	286	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	33	47	265	35	48	308	635	-	-	693	-	-
Mov Cap-2 Maneuver	33	47	-	35	48	-	-	-	-	-	-	-
Stage 1	246	273	-	286	313	-	-	-	-	-	-	-
Stage 2	264	309	-	239	273	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	39.4	74.6	0.1	0.1
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	635	-	-	110	79	693	-	-
HCM Lane V/C Ratio	0.017	-	-	0.048	0.364	0.018	-	-
HCM Control Delay (s)	10.8	0	-	39.4	74.6	10.3	0	-
HCM Lane LOS	B	A	-	E	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	1.4	0.1	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	15	11	887	1232	3
Future Vol, veh/h	1	15	11	887	1232	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	8	5	5	4	4
Mvmt Flow	1	16	12	934	1297	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1790	650	1300	0	-	0
Stage 1	1299	-	-	-	-	-
Stage 2	491	-	-	-	-	-
Critical Hdwy	6.96	7.06	4.2	-	-	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.38	2.25	-	-	-
Pot Cap-1 Maneuver	*111	398	513	-	-	-
Stage 1	*209	-	-	-	-	-
Stage 2	*686	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*105	398	513	-	-	-
Mov Cap-2 Maneuver	*105	-	-	-	-	-
Stage 1	*199	-	-	-	-	-
Stage 2	*686	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.2	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	513	-	339	-	-
HCM Lane V/C Ratio	0.023	-	0.05	-	-
HCM Control Delay (s)	12.2	0.3	16.2	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	340	464	49	74	73	91	602	55	23	968	39
Future Volume (veh/h)	250	340	464	49	74	73	91	602	55	23	968	39
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1727	1727	1900	1845	1845	1900	1810	1810	1900
Adj Flow Rate, veh/h	263	358	488	52	78	77	96	634	58	24	1019	41
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	10	10	10	3	3	3	5	5	5
Cap, veh/h	505	324	441	103	263	259	203	1392	127	298	1059	43
Arrive On Green	0.07	0.46	0.46	0.33	0.33	0.33	0.11	0.86	0.86	0.10	0.10	0.10
Sat Flow, veh/h	1757	708	966	601	799	789	1757	3248	297	727	3369	136
Grp Volume(v), veh/h	263	0	846	52	0	155	96	342	350	24	520	540
Grp Sat Flow(s),veh/h/ln	1757	0	1674	601	0	1588	1757	1752	1792	727	1719	1786
Q Serve(g_s), s	0.0	0.0	32.0	0.0	0.0	5.1	0.0	3.2	3.2	2.1	21.1	21.1
Cycle Q Clear(g_c), s	0.0	0.0	32.0	23.0	0.0	5.1	0.0	3.2	3.2	5.3	21.1	21.1
Prop In Lane	1.00		0.58	1.00		0.50	1.00		0.17	1.00		0.08
Lane Grp Cap(c), veh/h	505	0	765	103	0	522	203	751	768	298	540	561
V/C Ratio(X)	0.52	0.00	1.11	0.51	0.00	0.30	0.47	0.45	0.46	0.08	0.96	0.96
Avail Cap(c_a), veh/h	505	0	765	103	0	522	203	751	768	298	540	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	0.0	19.0	35.0	0.0	17.5	29.2	3.1	3.1	25.4	31.0	31.0
Incr Delay (d2), s/veh	1.0	0.0	65.3	4.0	0.0	0.3	1.7	2.0	1.9	0.5	30.4	29.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	28.6	1.1	0.0	2.2	1.7	1.7	1.8	0.5	14.6	15.0
LnGrp Delay(d),s/veh	22.9	0.0	84.3	39.0	0.0	17.8	30.9	5.1	5.0	25.9	61.4	60.7
LnGrp LOS	C		F	D		B	C	A	A	C	E	E
Approach Vol, veh/h		1109			207			788			1084	
Approach Delay, s/veh		69.8			23.1			8.2			60.3	
Approach LOS		E			C			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		34.0		36.0	8.0	26.0	9.0	27.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		30.0		32.0	4.0	22.0	5.0	23.0
Max Q Clear Time (g_c+I1), s		5.2		34.0	2.0	23.1	2.0	25.0
Green Ext Time (p_c), s		4.6		0.0	0.0	0.0	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	48.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	261	87	84	145	107	29	762	148	73	1159	18
Future Volume (veh/h)	18	261	87	84	145	107	29	762	148	73	1159	18
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1792	1792	1792	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	19	275	92	88	153	113	31	802	156	77	1220	19
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	6	6	6	4	4	4	4	4	4
Cap, veh/h	323	398	133	178	534	454	255	1825	355	385	2203	34
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.84	0.84	0.84	0.63	0.63	0.63
Sat Flow, veh/h	1109	1337	447	973	1792	1524	439	2899	564	572	3498	54
Grp Volume(v), veh/h	19	0	367	88	153	113	31	480	478	77	605	634
Grp Sat Flow(s),veh/h/ln	1109	0	1784	973	1792	1524	439	1736	1727	572	1736	1817
Q Serve(g_s), s	1.5	0.0	20.0	9.7	7.2	6.2	3.7	7.8	7.8	7.5	21.8	21.8
Cycle Q Clear(g_c), s	8.7	0.0	20.0	29.7	7.2	6.2	25.5	7.8	7.8	15.4	21.8	21.8
Prop In Lane	1.00		0.25	1.00		1.00	1.00		0.33	1.00		0.03
Lane Grp Cap(c), veh/h	323	0	531	178	534	454	255	1093	1088	385	1093	1144
V/C Ratio(X)	0.06	0.00	0.69	0.49	0.29	0.25	0.12	0.44	0.44	0.20	0.55	0.55
Avail Cap(c_a), veh/h	396	0	649	242	652	554	255	1093	1088	385	1093	1144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	0.0	34.2	47.3	29.7	29.3	10.5	4.0	4.0	12.4	11.6	11.6
Incr Delay (d2), s/veh	0.1	0.0	2.4	2.1	0.3	0.3	1.0	1.3	1.3	1.2	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	10.2	2.7	3.6	2.6	0.5	4.1	4.0	1.3	11.0	11.5
LnGrp Delay(d),s/veh	33.1	0.0	36.5	49.4	30.0	29.6	11.5	5.2	5.2	13.6	13.6	13.5
LnGrp LOS	C		D	D	C	C	B	A	A	B	B	B
Approach Vol, veh/h		386			354			989			1316	
Approach Delay, s/veh		36.4			34.7			5.4			13.6	
Approach LOS		D			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		73.3		36.7		73.3		36.7
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		62.0		40.0		62.0		40.0
Max Q Clear Time (g_c+I1), s		23.8		31.7		27.5		22.0
Green Ext Time (p_c), s		11.8		1.1		7.8		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	96	663	75	139	1326
Future Vol, veh/h	34	96	663	75	139	1326
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	3	5	5
Mvmt Flow	38	107	737	83	154	1473

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1824	410	0	0	820	0
Stage 1	779	-	-	-	-	-
Stage 2	1045	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.2	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.25	-
Pot Cap-1 Maneuver	*392	*802	-	-	1129	-
Stage 1	*756	-	-	-	-	-
Stage 2	*504	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*97	*802	-	-	1129	-
Mov Cap-2 Maneuver	*97	-	-	-	-	-
Stage 1	*188	-	-	-	-	-
Stage 2	*504	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.5	0	0.8
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	276	1129	-
HCM Lane V/C Ratio	-	-	0.523	0.137	-
HCM Control Delay (s)	-	-	31.5	8.7	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	2.8	0.5	-

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

Intersection	
Int Delay, s/veh	1.8

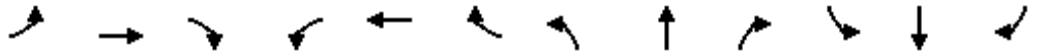
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	6	1	96	28	0	0	55	933	43	3	1243	82
Future Vol, veh/h	6	1	96	28	0	0	55	933	43	3	1243	82
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	3	3	3
Mvmt Flow	7	1	104	30	0	0	60	1014	47	3	1351	89

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2029	2583	720	1840	2604	531	1440	0	0	1061	0	0
Stage 1	1402	1402	-	1158	1158	-	-	-	-	-	-	-
Stage 2	627	1181	-	682	1446	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.16	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.23	-	-
Pot Cap-1 Maneuver	*102	*24	*572	*199	22	*712	811	-	-	1016	-	-
Stage 1	*540	*473	-	*515	483	-	-	-	-	-	-	-
Stage 2	*672	*467	-	*540	446	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*87	*19	*572	*132	18	*712	811	-	-	1016	-	-
Mov Cap-2 Maneuver	*87	*19	-	*132	18	-	-	-	-	-	-	-
Stage 1	*441	*466	-	*421	395	-	-	-	-	-	-	-
Stage 2	*549	*382	-	*433	439	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.7	40.3	1.2	0.1
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	811	-	-	356	132	1016	-	-
HCM Lane V/C Ratio	0.074	-	-	0.314	0.231	0.003	-	-
HCM Control Delay (s)	9.8	0.8	-	19.7	40.3	8.6	0.1	-
HCM Lane LOS	A	A	-	C	E	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1.3	0.8	0	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	876	35	61	461	85	39	7	120	0	12	7
Future Volume (veh/h)	6	876	35	61	461	85	39	7	120	0	12	7
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1900	1900	1790	1900	1900	1863	1900
Adj Flow Rate, veh/h	7	973	39	68	512	94	43	8	133	0	13	8
Adj No. of Lanes	0	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	17	17	17	2	2	2
Cap, veh/h	84	1145	46	434	989	182	143	31	189	0	187	115
Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.65	0.17	0.17	0.17	0.00	0.17	0.17
Sat Flow, veh/h	3	1773	71	555	1532	281	242	177	1094	0	1080	665
Grp Volume(v), veh/h	1019	0	0	68	0	606	184	0	0	0	0	21
Grp Sat Flow(s),veh/h/ln	1846	0	0	555	0	1813	1513	0	0	0	0	1745
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	7.9	2.7	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	19.2	0.0	0.0	3.7	0.0	7.9	5.0	0.0	0.0	0.0	0.0	0.4
Prop In Lane	0.01		0.04	1.00		0.16	0.23		0.72	0.00		0.38
Lane Grp Cap(c), veh/h	1274	0	0	434	0	1171	363	0	0	0	0	302
V/C Ratio(X)	0.80	0.00	0.00	0.16	0.00	0.52	0.51	0.00	0.00	0.00	0.00	0.07
Avail Cap(c_a), veh/h	1586	0	0	529	0	1478	643	0	0	0	0	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	6.2	0.0	0.0	3.4	0.0	4.2	17.1	0.0	0.0	0.0	0.0	15.3
Incr Delay (d2), s/veh	2.4	0.0	0.0	0.2	0.0	0.4	1.1	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	0.0	0.0	0.4	0.0	4.0	2.2	0.0	0.0	0.0	0.0	0.2
LnGrp Delay(d),s/veh	8.6	0.0	0.0	3.6	0.0	4.5	18.2	0.0	0.0	0.0	0.0	15.4
LnGrp LOS	A			A		A	B					B
Approach Vol, veh/h		1019			674			184			21	
Approach Delay, s/veh		8.6			4.4			18.2			15.4	
Approach LOS		A			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		32.5		11.6		32.5		11.6
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		36.0		16.0		36.0		16.0
Max Q Clear Time (g_c+I1), s		21.2		2.4		9.9		7.0
Green Ext Time (p_c), s		7.3		0.0		5.4		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	8.1
HCM 2010 LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	495	190	547	457	500	857
Future Volume (veh/h)	495	190	547	457	500	857
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1845	1845	1792	1792
Adj Flow Rate, veh/h	380	393	608	508	556	952
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	3	3	6	6
Cap, veh/h	431	392	1102	493	625	1152
Arrive On Green	0.24	0.24	0.10	0.10	0.54	1.00
Sat Flow, veh/h	1774	1615	3597	1568	1707	1792
Grp Volume(v), veh/h	380	393	608	508	556	952
Grp Sat Flow(s),veh/h/ln	1774	1615	1752	1568	1707	1792
Q Serve(g_s), s	14.4	17.0	11.5	22.0	10.9	0.0
Cycle Q Clear(g_c), s	14.4	17.0	11.5	22.0	10.9	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	431	392	1102	493	625	1152
V/C Ratio(X)	0.88	1.00	0.55	1.03	0.89	0.83
Avail Cap(c_a), veh/h	431	392	1102	493	625	1152
HCM Platoon Ratio	1.00	1.00	0.33	0.33	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	26.5	26.7	31.4	12.1	0.0
Incr Delay (d2), s/veh	18.8	45.9	2.0	48.7	14.9	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	12.5	5.9	16.2	10.3	2.2
LnGrp Delay(d),s/veh	44.3	72.4	28.7	80.1	27.0	6.8
LnGrp LOS	D	F	C	F	C	A
Approach Vol, veh/h	773		1116			1508
Approach Delay, s/veh	58.6		52.1			14.3
Approach LOS	E		D			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	23.0	26.0				49.0		21.0
Change Period (Y+Rc), s	4.0	4.0				4.0		4.0
Max Green Setting (Gmax), s	19.0	22.0				45.0		17.0
Max Q Clear Time (g_c+I1), s	12.9	24.0				2.0		19.0
Green Ext Time (p_c), s	1.1	0.0				10.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	923	6	0	484	27	15	12	3	3	0	165
Future Vol, veh/h	17	923	6	0	484	27	15	12	3	3	0	165
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	1026	7	0	538	30	17	13	3	3	0	183

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	568	0	0	1033	0	0	1713	1636	1030	1629	1624	553
Stage 1	-	-	-	-	-	-	1068	1068	-	553	553	-
Stage 2	-	-	-	-	-	-	645	568	-	1076	1071	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1004	-	-	673	-	-	71	101	283	82	102	533
Stage 1	-	-	-	-	-	-	268	298	-	517	514	-
Stage 2	-	-	-	-	-	-	461	506	-	266	297	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1004	-	-	673	-	-	45	97	283	70	98	533
Mov Cap-2 Maneuver	-	-	-	-	-	-	45	97	-	70	98	-
Stage 1	-	-	-	-	-	-	256	285	-	494	514	-
Stage 2	-	-	-	-	-	-	302	506	-	240	284	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	110.9	17.3
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	64	1004	-	-	673	-	-	477
HCM Lane V/C Ratio	0.521	0.019	-	-	-	-	-	0.391
HCM Control Delay (s)	110.9	8.7	0	-	0	-	-	17.3
HCM Lane LOS	F	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	2.1	0.1	-	-	0	-	-	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	502	4	546	446	535	0	0	1165	203
Future Volume (veh/h)	0	0	0	502	4	546	446	535	0	0	1165	203
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1845	1845	0	0	1810	1900
Adj Flow Rate, veh/h				561	0	0	496	594	0	0	1294	226
Adj No. of Lanes				2	0	1	2	2	0	0	2	0
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	3	3	0	0	5	5
Cap, veh/h				687	0	306	655	2426	0	0	1298	225
Arrive On Green				0.19	0.00	0.00	0.06	0.23	0.00	0.00	0.15	0.15
Sat Flow, veh/h				3548	0	1583	3408	3597	0	0	3022	507
Grp Volume(v), veh/h				561	0	0	496	594	0	0	754	766
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1704	1752	0	0	1719	1720
Q Serve(g_s), s				10.6	0.0	0.0	10.0	9.7	0.0	0.0	30.6	31.0
Cycle Q Clear(g_c), s				10.6	0.0	0.0	10.0	9.7	0.0	0.0	30.6	31.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.29
Lane Grp Cap(c), veh/h				687	0	306	655	2426	0	0	761	762
V/C Ratio(X)				0.82	0.00	0.00	0.76	0.24	0.00	0.00	0.99	1.01
Avail Cap(c_a), veh/h				862	0	385	655	2426	0	0	761	762
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	0.33	0.33
Upstream Filter(I)				1.00	0.00	0.00	0.45	0.45	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.0	0.0	0.0	31.2	12.1	0.0	0.0	29.7	29.9
Incr Delay (d2), s/veh				5.0	0.0	0.0	2.4	0.1	0.0	0.0	30.3	34.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.6	0.0	0.0	4.9	4.8	0.0	0.0	21.0	21.9
LnGrp Delay(d),s/veh				32.0	0.0	0.0	33.5	12.2	0.0	0.0	60.1	64.0
LnGrp LOS				C			C	B			E	F
Approach Vol, veh/h					561			1090			1520	
Approach Delay, s/veh					32.0			21.9			62.0	
Approach LOS					C			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		52.5			17.5	35.0		17.5
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		45.0			10.0	31.0		17.0
Max Q Clear Time (g_c+I1), s		11.7			12.0	33.0		12.6
Green Ext Time (p_c), s		4.5			0.0	0.0		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	42.9
HCM 2010 LOS	D

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	986	450	590	1083
Future Volume (veh/h)	0	0	986	450	590	1083
Number			2	12	1	6
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1845	1900	1827	1827
Adj Flow Rate, veh/h			1072	0	641	1177
Adj No. of Lanes			2	0	1	2
Peak Hour Factor			0.92	0.92	0.92	0.92
Percent Heavy Veh, %			3	3	4	4
Cap, veh/h			2554	0	751	3273
Arrive On Green			1.00	0.00	0.31	1.00
Sat Flow, veh/h			3689	0	1740	3563
Grp Volume(v), veh/h			1072	0	641	1177
Grp Sat Flow(s),veh/h/ln			1752	0	1740	1736
Q Serve(g_s), s			0.0	0.0	6.8	0.0
Cycle Q Clear(g_c), s			0.0	0.0	6.8	0.0
Prop In Lane				0.00	1.00	
Lane Grp Cap(c), veh/h			2554	0	751	3273
V/C Ratio(X)			0.42	0.00	0.85	0.36
Avail Cap(c_a), veh/h			2554	0	1149	3273
HCM Platoon Ratio			2.00	2.00	2.00	2.00
Upstream Filter(I)			0.74	0.00	0.19	0.19
Uniform Delay (d), s/veh			0.0	0.0	1.9	0.0
Incr Delay (d2), s/veh			0.4	0.0	0.8	0.1
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.1	0.0	7.8	0.0
LnGrp Delay(d),s/veh			0.4	0.0	2.7	0.1
LnGrp LOS			A		A	A
Approach Vol, veh/h			1072			1818
Approach Delay, s/veh			0.4			1.0
Approach LOS			A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	15.0	55.0				70.0		
Change Period (Y+Rc), s	4.0	4.0				4.0		
Max Green Setting (Gmax), s	27.0	35.0				66.0		
Max Q Clear Time (g_c+I1), s	8.8	2.0				2.0		
Green Ext Time (p_c), s	2.2	9.6				12.5		

Intersection Summary	
HCM 2010 Ctrl Delay	0.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	333	138	65	11	102	216	127	886	7	34	732	317
Future Volume (veh/h)	333	138	65	11	102	216	127	886	7	34	732	317
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	370	153	72	12	113	0	141	984	8	38	813	352
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	3	3	4	4	4	4	4	4
Cap, veh/h	348	317	149	209	171	145	319	2193	18	366	1198	517
Arrive On Green	0.11	0.26	0.26	0.09	0.09	0.00	0.06	0.62	0.62	0.51	0.51	0.51
Sat Flow, veh/h	1774	1199	564	1140	1845	1568	1740	3529	29	554	2363	1020
Grp Volume(v), veh/h	370	0	225	12	113	0	141	484	508	38	597	568
Grp Sat Flow(s),veh/h/ln	1774	0	1763	1140	1845	1568	1740	1736	1822	554	1736	1647
Q Serve(g_s), s	8.0	0.0	7.5	0.7	4.1	0.0	2.5	10.2	10.2	2.7	18.1	18.2
Cycle Q Clear(g_c), s	8.0	0.0	7.5	0.7	4.1	0.0	2.5	10.2	10.2	4.9	18.1	18.2
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.02	1.00		0.62
Lane Grp Cap(c), veh/h	348	0	466	209	171	145	319	1079	1132	366	880	835
V/C Ratio(X)	1.06	0.00	0.48	0.06	0.66	0.00	0.44	0.45	0.45	0.10	0.68	0.68
Avail Cap(c_a), veh/h	348	0	705	363	422	358	319	1079	1132	366	880	835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.98	0.98	0.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	27.6	0.0	21.7	29.1	30.7	0.0	10.5	7.0	7.0	10.4	13.0	13.0
Incr Delay (d2), s/veh	65.6	0.0	0.8	0.1	4.2	0.0	1.0	1.4	1.3	0.5	4.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	0.0	3.8	0.2	2.3	0.0	1.3	5.2	5.5	0.5	9.6	9.2
LnGrp Delay(d),s/veh	93.1	0.0	22.5	29.2	34.9	0.0	11.4	8.3	8.2	10.9	16.9	17.2
LnGrp LOS	F		C	C	C		B	A	A	B	B	B
Approach Vol, veh/h		595			125			1133			1203	
Approach Delay, s/veh		66.4			34.3			8.7			16.9	
Approach LOS		E			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		47.5		22.5	8.0	39.5	12.0	10.5
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		28.0	4.0	26.0	8.0	16.0
Max Q Clear Time (g_c+I1), s		12.2		9.5	4.5	20.2	10.0	6.1
Green Ext Time (p_c), s		6.8		1.2	0.0	3.7	0.0	0.4

Intersection Summary		
HCM 2010 Ctrl Delay		24.2
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1	109	3	0	8	78	521	3	0	2560	233
Future Volume (veh/h)	7	1	109	3	0	8	78	521	3	0	2560	233
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1681	1900	1792	1792	1900	1900	1863	1863
Adj Flow Rate, veh/h	7	1	116	3	0	9	83	554	3	0	2723	248
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	0	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	13	13	13	6	6	6	2	2	2
Cap, veh/h	161	1	143	4	0	12	123	2740	15	0	2544	1138
Arrive On Green	0.09	0.09	0.09	0.01	0.00	0.01	0.03	0.79	0.79	0.00	1.00	1.00
Sat Flow, veh/h	1774	14	1572	367	0	1101	1707	3473	19	0	3632	1583
Grp Volume(v), veh/h	7	0	117	12	0	0	83	272	285	0	2723	248
Grp Sat Flow(s),veh/h/ln	1774	0	1585	1469	0	0	1707	1703	1789	0	1770	1583
Q Serve(g_s), s	0.4	0.0	8.0	0.9	0.0	0.0	1.3	4.4	4.4	0.0	79.1	0.0
Cycle Q Clear(g_c), s	0.4	0.0	8.0	0.9	0.0	0.0	1.3	4.4	4.4	0.0	79.1	0.0
Prop In Lane	1.00		0.99	0.25		0.75	1.00		0.01	0.00		1.00
Lane Grp Cap(c), veh/h	161	0	144	16	0	0	123	1343	1411	0	2544	1138
V/C Ratio(X)	0.04	0.00	0.81	0.73	0.00	0.00	0.68	0.20	0.20	0.00	1.07	0.22
Avail Cap(c_a), veh/h	258	0	231	214	0	0	128	1343	1411	0	2544	1138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.95	0.00	0.95	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.09	0.09
Uniform Delay (d), s/veh	45.6	0.0	49.1	54.2	0.0	0.0	32.9	2.9	2.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	10.4	46.7	0.0	0.0	12.8	0.3	0.3	0.0	32.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.9	0.6	0.0	0.0	2.3	2.2	2.3	0.0	11.5	0.0
LnGrp Delay(d),s/veh	45.7	0.0	59.4	100.9	0.0	0.0	45.7	3.3	3.2	0.0	32.5	0.0
LnGrp LOS	D		E	F			D	A	A		F	A
Approach Vol, veh/h		124			12			640			2971	
Approach Delay, s/veh		58.7			100.9			8.8			29.8	
Approach LOS		E			F			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	7.7	83.1		5.2		90.8		14.0
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s	4.0	58.0		16.0		66.0		16.0
Max Q Clear Time (g_c+I1), s	3.3	81.1		2.9		6.4		10.0
Green Ext Time (p_c), s	0.0	0.0		0.0		3.6		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	27.4
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1434	642	534	0	0	1353
Future Volume (veh/h)	1434	642	534	0	0	1353
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1891	1928	1776	0	0	1845
Adj Flow Rate, veh/h	1104	1135	568	0	0	1439
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	7	0	0	3
Cap, veh/h	958	872	1196	0	0	1243
Arrive On Green	0.53	0.53	0.71	0.00	0.00	0.47
Sat Flow, veh/h	1801	1639	3551	0	0	3689
Grp Volume(v), veh/h	1104	1135	568	0	0	1439
Grp Sat Flow(s),veh/h/ln	1801	1639	1687	0	0	1752
Q Serve(g_s), s	58.5	58.5	8.1	0.0	0.0	39.0
Cycle Q Clear(g_c), s	58.5	58.5	8.1	0.0	0.0	39.0
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	958	872	1196	0	0	1243
V/C Ratio(X)	1.15	1.30	0.47	0.00	0.00	1.16
Avail Cap(c_a), veh/h	958	872	1196	0	0	1243
HCM Platoon Ratio	1.00	1.00	2.00	1.00	1.00	1.33
Upstream Filter(I)	1.00	1.00	0.99	0.00	0.00	1.00
Uniform Delay (d), s/veh	25.7	25.8	11.5	0.0	0.0	29.1
Incr Delay (d2), s/veh	80.8	144.3	1.3	0.0	0.0	80.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	50.2	61.1	3.9	0.0	0.0	32.6
LnGrp Delay(d),s/veh	106.6	170.0	12.8	0.0	0.0	109.6
LnGrp LOS	F	F	B			F
Approach Vol, veh/h	2239		568			1439
Approach Delay, s/veh	138.7		12.8			109.6
Approach LOS	F		B			F

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		45.0		65.0		45.0		
Change Period (Y+Rc), s		6.0		6.5		6.0		
Max Green Setting (Gmax), s		39.0		58.5		39.0		
Max Q Clear Time (g_c+I1), s		41.0		60.5		10.1		
Green Ext Time (p_c), s		0.0		0.0		2.7		

Intersection Summary	
HCM 2010 Ctrl Delay	112.0
HCM 2010 LOS	F

Notes

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	21	0	1	19	0	8	3	0	0	3	1
Future Vol, veh/h	3	21	0	1	19	0	8	3	0	0	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	23	0	1	21	0	9	3	0	0	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	21	0	0	23	0	0	54	52	23	54	52	21
Stage 1	-	-	-	-	-	-	29	29	-	23	23	-
Stage 2	-	-	-	-	-	-	25	23	-	31	29	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1595	-	-	1592	-	-	944	839	1054	944	839	1056
Stage 1	-	-	-	-	-	-	988	871	-	995	876	-
Stage 2	-	-	-	-	-	-	993	876	-	986	871	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1595	-	-	1592	-	-	938	836	1054	939	836	1056
Mov Cap-2 Maneuver	-	-	-	-	-	-	938	836	-	939	836	-
Stage 1	-	-	-	-	-	-	986	869	-	993	875	-
Stage 2	-	-	-	-	-	-	987	875	-	980	869	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.4	9	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	908	1595	-	-	1592	-	-	882
HCM Lane V/C Ratio	0.013	0.002	-	-	0.001	-	-	0.005
HCM Control Delay (s)	9	7.3	0	-	7.3	0	-	9.1
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	12	356	39	0	185	3	10	1	9	7	3	3
Future Vol, veh/h	12	356	39	0	185	3	10	1	9	7	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	4	4	4	15	15	15	2	2	2	22	22	22
Mvmt Flow	13	396	43	0	206	3	11	1	10	8	3	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	209	0	0	439	0	0	655	653	418	657	673	208
Stage 1	-	-	-	-	-	-	444	444	-	208	208	-
Stage 2	-	-	-	-	-	-	211	209	-	449	465	-
Critical Hdwy	4.14	-	-	4.25	-	-	7.12	6.52	6.22	7.32	6.72	6.42
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.32	5.72	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.32	5.72	-
Follow-up Hdwy	2.236	-	-	2.335	-	-	3.518	4.018	3.318	3.698	4.198	3.498
Pot Cap-1 Maneuver	1350	-	-	1055	-	-	379	387	635	352	352	784
Stage 1	-	-	-	-	-	-	593	575	-	750	694	-
Stage 2	-	-	-	-	-	-	791	729	-	552	531	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1350	-	-	1055	-	-	371	382	635	342	347	784
Mov Cap-2 Maneuver	-	-	-	-	-	-	371	382	-	342	347	-
Stage 1	-	-	-	-	-	-	585	568	-	740	694	-
Stage 2	-	-	-	-	-	-	784	729	-	535	524	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	13.3	14.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	457	1350	-	-	1055	-	-	395
HCM Lane V/C Ratio	0.049	0.01	-	-	-	-	-	0.037
HCM Control Delay (s)	13.3	7.7	0	-	0	-	-	14.5
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↰	↗		↕			↕	
Traffic Vol, veh/h	14	313	18	0	188	208	105	0	0	333	0	14
Future Vol, veh/h	14	313	18	0	188	208	105	0	0	333	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	200	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	13	13	13	2	2	2	2	2	2
Mvmt Flow	15	340	20	0	204	226	114	0	0	362	0	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	430	0	0	360	0	0	705	810	350	584	594	204
Stage 1	-	-	-	-	-	-	380	380	-	204	204	-
Stage 2	-	-	-	-	-	-	325	430	-	380	390	-
Critical Hdwy	4.12	-	-	4.23	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.317	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1129	-	-	1172	-	-	386	317	817	488	454	837
Stage 1	-	-	-	-	-	-	736	656	-	798	733	-
Stage 2	-	-	-	-	-	-	687	583	-	736	647	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	1129	-	-	1172	-	-	374	312	817	482	446	837
Mov Cap-2 Maneuver	-	-	-	-	-	-	374	312	-	563	512	-
Stage 1	-	-	-	-	-	-	724	645	-	784	733	-
Stage 2	-	-	-	-	-	-	675	583	-	724	636	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	18.8	22.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	374	1129	-	-	1172	-	-	571
HCM Lane V/C Ratio	0.305	0.013	-	-	-	-	-	0.661
HCM Control Delay (s)	18.8	8.2	0	-	0	-	-	22.7
HCM Lane LOS	C	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	1.3	0	-	-	0	-	-	4.9

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	20	1006	75	15	1342
Future Vol, veh/h	7	20	1006	75	15	1342
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	3	6	6
Mvmt Flow	8	22	1118	83	17	1491

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1940	601	0	0	1201	0
Stage 1	1160	-	-	-	-	-
Stage 2	780	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.22	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.26	-
Pot Cap-1 Maneuver	*156	*668	-	-	914	-
Stage 1	*619	-	-	-	-	-
Stage 2	*504	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*140	*668	-	-	914	-
Mov Cap-2 Maneuver	*300	-	-	-	-	-
Stage 1	*552	-	-	-	-	-
Stage 2	*504	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	507	914	-
HCM Lane V/C Ratio	-	-	0.059	0.018	-
HCM Control Delay (s)	-	-	12.5	9	0.5
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

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

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	74	124	1052	1279	34
Future Vol, veh/h	6	74	124	1052	1279	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	80	135	1143	1390	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2251	714	1427	0	-	0
Stage 1	1409	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	*155	*572	840	-	-	-
Stage 1	*540	-	-	-	-	-
Stage 2	*619	-	-	-	-	-
Platoon blocked, %	1	1	1	-	-	-
Mov Cap-1 Maneuver	*87	*572	840	-	-	-
Mov Cap-2 Maneuver	*87	-	-	-	-	-
Stage 1	*302	-	-	-	-	-
Stage 2	*619	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.1	2.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	840	-	87	572	-	-
HCM Lane V/C Ratio	0.16	-	0.075	0.141	-	-
HCM Control Delay (s)	10.1	1.8	49.7	12.3	-	-
HCM Lane LOS	B	A	E	B	-	-
HCM 95th %tile Q(veh)	0.6	-	0.2	0.5	-	-

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

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	2	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	1021	1084
Stage 1	-	0	0	-	1022	-
Stage 2	-	0	0	-	1022	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	1021	1084
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1022	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	8.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	238	1835	1	138	1054
Future Vol, veh/h	0	238	1835	1	138	1054
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	0	251	1932	1	145	1109

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2778	967	0	0	1933	0
Stage 1	1933	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	15	254	-	-	301	-
Stage 1	99	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	254	-	-	301	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	382	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	95.5	0	3.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	254	301	-
HCM Lane V/C Ratio	-	-	0.986	0.483	-
HCM Control Delay (s)	-	-	95.5	27.6	-
HCM Lane LOS	-	-	F	D	-
HCM 95th %tile Q(veh)	-	-	9.5	2.5	-

Intersection	
Int Delay, s/veh	5.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	217	1626	7	149	918
Future Vol, veh/h	17	217	1626	7	149	918
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	18	228	1712	7	157	966

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2513	860	0	0	1719	0
Stage 1	1716	-	-	-	-	-
Stage 2	797	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	23	299	-	-	364	-
Stage 1	130	-	-	-	-	-
Stage 2	404	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 13	299	-	-	364	-
Mov Cap-2 Maneuver	56	-	-	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	404	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	51	0	3.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	56	299	364	-
HCM Lane V/C Ratio	-	-	0.32	0.764	0.431	-
HCM Control Delay (s)	-	-	97	47.4	22.2	-
HCM Lane LOS	-	-	F	E	C	-
HCM 95th %tile Q(veh)	-	-	1.1	5.8	2.1	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	220	8	6	186	0	0	0	0	782	4	8
Future Volume (veh/h)	0	220	8	6	186	0	0	0	0	782	4	8
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1900	1792	0				1845	1845	1900
Adj Flow Rate, veh/h	0	232	8	6	196	0				826	0	0
Adj No. of Lanes	0	1	0	0	1	0				2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	6	6	0				3	3	3
Cap, veh/h	0	294	10	43	255	0				2030	1066	0
Arrive On Green	0.00	0.16	0.16	0.05	0.05	0.00				0.58	0.00	0.00
Sat Flow, veh/h	0	1790	62	13	1554	0				3514	1845	0
Grp Volume(v), veh/h	0	0	240	202	0	0				826	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1852	1567	0	0				1757	1845	0
Q Serve(g_s), s	0.0	0.0	11.2	0.6	0.0	0.0				11.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	11.2	11.8	0.0	0.0				11.7	0.0	0.0
Prop In Lane	0.00		0.03	0.03		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	0	304	299	0	0				2030	1066	0
V/C Ratio(X)	0.00	0.00	0.79	0.68	0.00	0.00				0.41	0.00	0.00
Avail Cap(c_a), veh/h	0	0	617	596	0	0				2030	1066	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	36.1	40.4	0.0	0.0				10.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.5	2.7	0.0	0.0				0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.1	5.2	0.0	0.0				5.8	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	40.6	43.0	0.0	0.0				11.1	0.0	0.0
LnGrp LOS			D	D						B		
Approach Vol, veh/h		240			202						826	
Approach Delay, s/veh		40.6			43.0						11.1	
Approach LOS		D			D						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				18.8		56.0		18.8
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				30.0		52.0		30.0
Max Q Clear Time (g_c+I1), s				13.2		13.7		13.8
Green Ext Time (p_c), s				1.2		3.5		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	937	7	8	231	998	4	3	3	0	0	0
Future Vol, veh/h	1	937	7	8	231	998	4	3	3	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	3	3	3	14	14	14	2	2	2
Mvmt Flow	1	986	7	8	243	1051	4	3	3	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1294	0	0	993	0	0	1777	2302	497
Stage 1	-	-	-	-	-	-	992	992	-
Stage 2	-	-	-	-	-	-	785	1310	-
Critical Hdwy	4.13	-	-	4.145	-	-	6.81	6.71	7.11
Critical Hdwy Stg 1	-	-	-	-	-	-	6.01	5.71	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.61	5.71	-
Follow-up Hdwy	2.219	-	-	2.2285	-	-	3.633	4.133	3.433
Pot Cap-1 Maneuver	601	-	-	*1030	-	-	*269	*52	*668
Stage 1	-	-	-	-	-	-	*632	*555	-
Stage 2	-	-	-	-	-	-	*577	*259	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1
Mov Cap-1 Maneuver	601	-	-	*1030	-	-	*255	*0	*668
Mov Cap-2 Maneuver	-	-	-	-	-	-	*255	*0	-
Stage 1	-	-	-	-	-	-	*599	*0	-
Stage 2	-	-	-	-	-	-	*577	*0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	347	601	-	-	* 1030	-	-
HCM Lane V/C Ratio	0.03	0.002	-	-	0.008	-	-
HCM Control Delay (s)	15.7	11	0	-	8.5	0	-
HCM Lane LOS	C	B	A	-	A	A	-
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	764	160	63	1023	334	150	359	21	239	408	39
Future Volume (veh/h)	19	764	160	63	1023	334	150	359	21	239	408	39
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1845	1845	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	20	804	168	66	1077	0	158	378	22	252	429	41
Adj No. of Lanes	0	2	0	0	2	1	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	53	1264	273	107	1442	749	237	668	39	288	642	61
Arrive On Green	0.96	0.96	0.96	0.48	0.48	0.00	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	25	2645	572	130	3018	1568	919	1743	101	980	1674	160
Grp Volume(v), veh/h	525	0	467	567	576	0	158	0	400	252	0	470
Grp Sat Flow(s),veh/h/ln	1652	0	1591	1554	1595	1568	919	0	1845	980	0	1834
Q Serve(g_s), s	5.5	0.0	2.8	15.3	26.5	0.0	15.4	0.0	15.4	19.1	0.0	19.1
Cycle Q Clear(g_c), s	32.1	0.0	2.8	25.4	26.5	0.0	34.5	0.0	15.4	34.5	0.0	19.1
Prop In Lane	0.04		0.36	0.12		1.00	1.00		0.05	1.00		0.09
Lane Grp Cap(c), veh/h	831	0	760	787	762	749	237	0	707	288	0	703
V/C Ratio(X)	0.63	0.00	0.61	0.72	0.76	0.00	0.67	0.00	0.57	0.87	0.00	0.67
Avail Cap(c_a), veh/h	831	0	760	787	762	749	237	0	707	288	0	703
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.51	0.51	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	1.4	0.0	1.1	18.3	19.2	0.0	37.4	0.0	21.9	37.1	0.0	23.0
Incr Delay (d2), s/veh	3.6	0.0	3.7	3.0	3.6	0.0	13.9	0.0	3.3	28.7	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	1.6	11.8	12.3	0.0	4.8	0.0	8.4	8.5	0.0	10.6
LnGrp Delay(d),s/veh	5.1	0.0	4.8	21.3	22.8	0.0	51.2	0.0	25.1	65.8	0.0	28.0
LnGrp LOS	A		A	C	C		D		C	E		C
Approach Vol, veh/h		992			1143			558			722	
Approach Delay, s/veh		5.0			22.1			32.5			41.2	
Approach LOS		A			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		41.0		49.0		41.0		49.0
Change Period (Y+Rc), s		6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s		34.5		43.0		34.5		43.0
Max Q Clear Time (g_c+I1), s		36.5		34.1		36.5		28.5
Green Ext Time (p_c), s		0.0		3.2		0.0		5.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	668	351	3	898	806	281	775	14	268	537	155
Future Volume (veh/h)	54	668	351	3	898	806	281	775	14	268	537	155
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	57	703	369	3	945	848	296	816	0	282	565	163
Adj No. of Lanes	1	2	0	0	2	1	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	354	2399	1258	42	3702	1958	404	834	0	300	704	315
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.23	0.24	0.00	0.17	0.20	0.20
Sat Flow, veh/h	262	2246	1178	2	3467	1583	1774	3632	0	1774	3539	1583
Grp Volume(v), veh/h	57	554	518	508	440	848	296	816	0	282	565	163
Grp Sat Flow(s),veh/h/ln	262	1770	1655	1859	1610	1583	1774	1770	0	1774	1770	1583
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	0.0	13.9	20.6	0.0	14.1	13.7	8.3
Cycle Q Clear(g_c), s	2.7	0.0	0.0	0.0	0.0	0.0	13.9	20.6	0.0	14.1	13.7	8.3
Prop In Lane	1.00		0.71	0.01		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	354	1890	1767	2025	1719	1958	404	834	0	300	704	315
V/C Ratio(X)	0.16	0.29	0.29	0.25	0.26	0.43	0.73	0.98	0.00	0.94	0.80	0.52
Avail Cap(c_a), veh/h	354	1890	1767	2025	1719	1958	404	834	0	300	704	315
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	32.2	34.2	0.0	37.0	34.4	32.2
Incr Delay (d2), s/veh	0.6	0.3	0.3	0.3	0.4	0.7	6.7	26.4	0.0	36.6	9.4	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.2	0.2	0.4	7.6	13.1	0.0	9.9	7.6	4.1
LnGrp Delay(d),s/veh	0.7	0.3	0.3	0.3	0.4	0.7	38.9	60.6	0.0	73.6	43.8	38.2
LnGrp LOS	A	A	A	A	A	A	D	E		E	D	D
Approach Vol, veh/h		1129			1796			1112			1010	
Approach Delay, s/veh		0.3			0.5			54.8			51.2	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.7	29.7		106.6	29.0	24.4		106.6
Change Period (Y+Rc), s	8.5	* 8.5		8.5	8.5	6.5		8.5
Max Green Setting (Gmax), s	15.2	* 21		30.1	18.5	17.9		30.1
Max Q Clear Time (g_c+I1), s	16.1	22.6		2.0	15.9	15.7		4.7
Green Ext Time (p_c), s	0.0	0.0		11.4	0.3	0.8		7.3

Intersection Summary		
HCM 2010 Ctrl Delay		22.6
HCM 2010 LOS		C

Notes

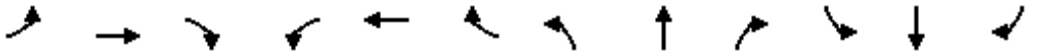
Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	98	62	802	157	0	0	0	0	0	0	0
Future Vol, veh/h	0	98	62	802	157	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	95	95	95	95	92	95	92	95	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	103	65	844	165	0	0	0	0	0	0	0

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	168	0	0			-	2021	-
Stage 1	-	-	-	-	-	-			-	1853	-
Stage 2	-	-	-	-	-	-			-	168	-
Critical Hdwy	-	-	-	4.12	-	-			-	6.52	-
Critical Hdwy Stg 1	-	-	-	-	-	-			-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			-	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-			-	4.018	-
Pot Cap-1 Maneuver	0	-	-	1410	-	0			0	58	0
Stage 1	0	-	-	-	-	0			0	124	0
Stage 2	0	-	-	-	-	0			0	759	0
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	-	-	-	1410	-	-			-	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-			-	0	-
Stage 1	-	-	-	-	-	-			-	0	-
Stage 2	-	-	-	-	-	-			-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	9.4	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	1410	-	-
HCM Lane V/C Ratio	-	-	0.599	-	-
HCM Control Delay (s)	-	-	11.3	0	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	4.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	50	53	40	338	29	468	981	99	51	740	92
Future Volume (veh/h)	6	50	53	40	338	29	468	981	99	51	740	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	7	55	58	44	371	32	514	1078	109	56	813	101
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	159	167	236	323	28	469	1226	124	288	768	95
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.45	1.00	1.00	0.47	0.47	0.47
Sat Flow, veh/h	978	831	877	1275	1691	146	1774	1665	168	470	1625	202
Grp Volume(v), veh/h	7	0	113	44	0	403	514	0	1187	56	0	914
Grp Sat Flow(s),veh/h/ln	978	0	1708	1275	0	1837	1774	0	1833	470	0	1827
Q Serve(g_s), s	0.0	0.0	6.3	3.4	0.0	21.0	25.0	0.0	0.0	7.8	0.0	52.0
Cycle Q Clear(g_c), s	21.0	0.0	6.3	9.7	0.0	21.0	25.0	0.0	0.0	7.8	0.0	52.0
Prop In Lane	1.00		0.51	1.00		0.08	1.00		0.09	1.00		0.11
Lane Grp Cap(c), veh/h	65	0	326	236	0	351	469	0	1350	288	0	864
V/C Ratio(X)	0.11	0.00	0.35	0.19	0.00	1.15	1.10	0.00	0.88	0.19	0.00	1.06
Avail Cap(c_a), veh/h	65	0	326	236	0	351	469	0	1350	288	0	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.20	0.00	0.20	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.0	0.0	38.6	42.8	0.0	44.5	23.9	0.0	0.0	17.4	0.0	29.0
Incr Delay (d2), s/veh	0.7	0.0	0.6	0.1	0.0	74.1	70.5	0.0	8.4	1.5	0.0	47.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.0	1.2	0.0	17.8	23.0	0.0	3.2	1.1	0.0	37.5
LnGrp Delay(d),s/veh	55.7	0.0	39.2	42.8	0.0	118.6	94.4	0.0	8.4	18.9	0.0	76.2
LnGrp LOS	E		D	D		F	F		A	B		F
Approach Vol, veh/h		120			447			1701			970	
Approach Delay, s/veh		40.2			111.1			34.4			72.9	
Approach LOS		D			F			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		85.0		25.0	29.0	56.0		25.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s		81.0		21.0	25.0	52.0		21.0
Max Q Clear Time (g_c+I1), s		2.0		23.0	27.0	54.0		23.0
Green Ext Time (p_c), s		19.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	56.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	155	44	83	248	144	129	1612	37	149	679	25
Future Volume (veh/h)	10	155	44	83	248	144	129	1612	37	149	679	25
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	163	46	87	261	152	136	1697	39	157	715	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	264	74	175	208	121	495	2358	54	265	2322	84
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	1.00	1.00	1.00	0.67	0.67	0.67
Sat Flow, veh/h	968	1397	394	1165	1103	643	715	3537	81	277	3483	127
Grp Volume(v), veh/h	11	0	209	87	0	413	136	847	889	157	363	378
Grp Sat Flow(s),veh/h/ln	968	0	1791	1165	0	1746	715	1770	1848	277	1770	1840
Q Serve(g_s), s	0.0	0.0	9.6	6.7	0.0	17.0	3.1	0.0	0.0	39.1	7.7	7.8
Cycle Q Clear(g_c), s	17.0	0.0	9.6	16.3	0.0	17.0	10.8	0.0	0.0	39.1	7.7	7.8
Prop In Lane	1.00		0.22	1.00		0.37	1.00		0.04	1.00		0.07
Lane Grp Cap(c), veh/h	80	0	338	175	0	330	495	1180	1232	265	1180	1227
V/C Ratio(X)	0.14	0.00	0.62	0.50	0.00	1.25	0.27	0.72	0.72	0.59	0.31	0.31
Avail Cap(c_a), veh/h	80	0	338	175	0	330	495	1180	1232	265	1180	1227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.00	0.94	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	0.0	33.5	41.0	0.0	36.5	0.7	0.0	0.0	11.5	6.3	6.3
Incr Delay (d2), s/veh	1.6	0.0	4.6	4.6	0.0	136.2	1.4	3.8	3.7	9.4	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	5.2	2.4	0.0	20.6	0.8	1.2	1.3	3.7	4.0	4.1
LnGrp Delay(d),s/veh	46.6	0.0	38.2	45.6	0.0	172.7	2.1	3.8	3.7	20.9	7.0	6.9
LnGrp LOS	D		D	D		F	A	A	A	C	A	A
Approach Vol, veh/h		220			500			1872			898	
Approach Delay, s/veh		38.6			150.6			3.6			9.4	
Approach LOS		D			F			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		67.0		23.0		67.0		23.0
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0
Max Green Setting (Gmax), s		60.0		17.0		60.0		17.0
Max Q Clear Time (g_c+I1), s		41.1		19.0		12.8		19.0
Green Ext Time (p_c), s		8.9		0.0		24.5		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		28.4
HCM 2010 LOS		C

Intersection	
Int Delay, s/veh	18.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	0	26	0	40	1	1498	32	25	810	0
Future Vol, veh/h	1	0	0	26	0	40	1	1498	32	25	810	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	27	0	42	1	1577	34	26	853	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2522	2518	853	2501	2501	1594	853	0	0	1611	0	0
Stage 1	905	905	-	1596	1596	-	-	-	-	-	-	-
Stage 2	1617	1613	-	905	905	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	19	28	359	~ 19	29	132	786	-	-	405	-	0
Stage 1	331	355	-	134	166	-	-	-	-	-	-	0
Stage 2	130	163	-	331	355	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	12	24	359	~ 17	25	132	786	-	-	405	-	-
Mov Cap-2 Maneuver	12	24	-	~ 17	25	-	-	-	-	-	-	-
Stage 1	327	312	-	132	164	-	-	-	-	-	-	-
Stage 2	87	161	-	291	312	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 332.1	$ 675.6	0	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	786	-	-	12	36	405	-
HCM Lane V/C Ratio	0.001	-	-	0.088	1.93	0.065	-
HCM Control Delay (s)	9.6	-	-	$ 332.1	$ 675.6	14.5	0
HCM Lane LOS	A	-	-	F	F	B	A
HCM 95th %tile Q(veh)	0	-	-	0.2	7.6	0.2	-

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

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	17	22	1771	766	17
Future Vol, veh/h	7	17	22	1771	766	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	6	6	2	2	2	2
Mvmt Flow	7	18	23	1884	815	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1812	417	833	0	-	0
Stage 1	824	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Critical Hdwy	6.92	7.02	4.14	-	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	2.22	-	-	-
Pot Cap-1 Maneuver	*90	574	796	-	-	-
Stage 1	*381	-	-	-	-	-
Stage 2	*332	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*90	574	796	-	-	-
Mov Cap-2 Maneuver	*90	-	-	-	-	-
Stage 1	*381	-	-	-	-	-
Stage 2	*332	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.2	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	796	-	223	-	-
HCM Lane V/C Ratio	0.029	-	0.114	-	-
HCM Control Delay (s)	9.7	0	23.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

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

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	3	0	12	17	1	25	4	1497	8	19	835	3
Future Vol, veh/h	3	0	12	17	1	25	4	1497	8	19	835	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	13	18	1	26	4	1576	8	20	879	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2523	2513	881	2511	2506	1576	882	0	0	1584	0	0
Stage 1	921	921	-	1584	1584	-	-	-	-	-	-	-
Stage 2	1602	1592	-	927	922	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	19	28	346	19	29	135	767	-	-	415	-	-
Stage 1	324	349	-	136	168	-	-	-	-	-	-	-
Stage 2	133	167	-	322	349	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	13	24	346	~ 16	25	135	767	-	-	415	-	-
Mov Cap-2 Maneuver	13	24	-	~ 16	25	-	-	-	-	-	-	-
Stage 1	310	316	-	130	161	-	-	-	-	-	-	-
Stage 2	102	160	-	281	316	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	90.8	$ 470.3	0	0.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	767	-	-	57	33	415	-	-
HCM Lane V/C Ratio	0.005	-	-	0.277	1.372	0.048	-	-
HCM Control Delay (s)	9.7	0	-	90.8	$ 470.3	14.1	0	-
HCM Lane LOS	A	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	1	5	0.2	-	-

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

Intersection	
Int Delay, s/veh	0.2

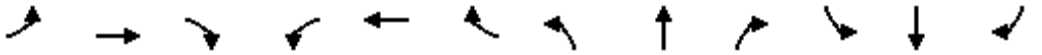
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	17	10	1785	778	3
Future Vol, veh/h	6	17	10	1785	778	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	18	11	1879	819	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1783	411	822	0	-	0
Stage 1	821	-	-	-	-	-
Stage 2	962	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	*254	590	803	-	-	-
Stage 1	*393	-	-	-	-	-
Stage 2	*336	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*254	590	803	-	-	-
Mov Cap-2 Maneuver	*254	-	-	-	-	-
Stage 1	*393	-	-	-	-	-
Stage 2	*336	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	803	-	439	-	-
HCM Lane V/C Ratio	0.013	-	0.055	-	-
HCM Control Delay (s)	9.5	0	13.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	264	314	86	145	164	205	1103	51	24	780	62
Future Volume (veh/h)	244	264	314	86	145	164	205	1103	51	24	780	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	257	278	331	91	153	173	216	1161	54	25	821	65
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	4	4	4	2	2	2	2	2	2
Cap, veh/h	340	342	408	112	292	330	305	1659	77	226	1163	92
Arrive On Green	0.04	0.45	0.45	0.37	0.37	0.37	0.19	0.96	0.96	0.12	0.12	0.12
Sat Flow, veh/h	1757	768	915	793	784	886	1774	3444	160	458	3323	263
Grp Volume(v), veh/h	257	0	609	91	0	326	216	596	619	25	437	449
Grp Sat Flow(s),veh/h/ln	1757	0	1683	793	0	1670	1774	1770	1834	458	1770	1816
Q Serve(g_s), s	0.0	0.0	34.6	6.4	0.0	16.7	8.5	4.1	4.1	5.4	26.2	26.2
Cycle Q Clear(g_c), s	0.0	0.0	34.6	41.0	0.0	16.7	8.5	4.1	4.1	5.4	26.2	26.2
Prop In Lane	1.00		0.54	1.00		0.53	1.00		0.09	1.00		0.14
Lane Grp Cap(c), veh/h	340	0	750	112	0	623	305	853	884	226	619	636
V/C Ratio(X)	0.76	0.00	0.81	0.81	0.00	0.52	0.71	0.70	0.70	0.11	0.71	0.71
Avail Cap(c_a), veh/h	404	0	811	112	0	623	313	853	884	226	619	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	0.0	26.5	53.4	0.0	26.9	20.9	1.1	1.1	34.0	43.2	43.2
Incr Delay (d2), s/veh	6.7	0.0	5.9	35.3	0.0	0.8	7.0	4.7	4.6	1.0	6.6	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	17.3	3.9	0.0	7.8	4.6	2.4	2.5	0.8	14.0	14.3
LnGrp Delay(d),s/veh	48.6	0.0	32.4	88.6	0.0	27.7	27.9	5.9	5.7	35.0	49.8	49.7
LnGrp LOS	D		C	F		C	C	A	A	D	D	D
Approach Vol, veh/h		866			417			1431			911	
Approach Delay, s/veh		37.2			41.0			9.1			49.4	
Approach LOS		D			D			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		57.0		53.0	14.5	42.5	8.0	45.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		49.0		53.0	11.0	34.0	8.0	41.0
Max Q Clear Time (g_c+I1), s		6.1		36.6	10.5	28.2	2.0	43.0
Green Ext Time (p_c), s		11.1		4.0	0.0	2.9	0.4	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	217	47	138	247	207	65	1551	147	44	726	21
Future Volume (veh/h)	36	217	47	138	247	207	65	1551	147	44	726	21
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	38	231	50	147	263	220	69	1650	156	47	772	22
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	2	2	2
Cap, veh/h	222	408	88	235	512	436	441	2073	194	244	2226	63
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	1.00	1.00	1.00	0.63	0.63	0.63
Sat Flow, veh/h	900	1470	318	1083	1845	1568	681	3273	306	259	3515	100
Grp Volume(v), veh/h	38	0	281	147	263	220	69	883	923	47	389	405
Grp Sat Flow(s),veh/h/ln	900	0	1789	1083	1845	1568	681	1770	1809	259	1770	1845
Q Serve(g_s), s	3.3	0.0	12.1	12.1	10.8	10.6	1.8	0.0	0.0	7.3	9.3	9.3
Cycle Q Clear(g_c), s	14.2	0.0	12.1	24.2	10.8	10.6	11.1	0.0	0.0	7.3	9.3	9.3
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.17	1.00		0.05
Lane Grp Cap(c), veh/h	222	0	497	235	512	436	441	1121	1146	244	1121	1169
V/C Ratio(X)	0.17	0.00	0.57	0.63	0.51	0.51	0.16	0.79	0.81	0.19	0.35	0.35
Avail Cap(c_a), veh/h	222	0	497	235	512	436	441	1121	1146	244	1121	1169
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	0.0	27.8	38.2	27.4	27.3	0.9	0.0	0.0	7.4	7.8	7.8
Incr Delay (d2), s/veh	0.4	0.0	1.5	5.1	0.9	0.9	0.8	5.6	6.1	1.7	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	6.1	4.0	5.6	4.7	0.4	1.8	1.9	0.6	4.8	5.0
LnGrp Delay(d),s/veh	33.7	0.0	29.3	43.3	28.2	28.2	1.7	5.6	6.1	9.1	8.6	8.6
LnGrp LOS	C		C	D	C	C	A	A	A	A	A	A
Approach Vol, veh/h		319			630			1875			841	
Approach Delay, s/veh		29.9			31.8			5.7			8.6	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		61.0		29.0		61.0		29.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		57.0		25.0		57.0		25.0
Max Q Clear Time (g_c+I1), s		11.3		26.2		13.1		16.2
Green Ext Time (p_c), s		7.5		0.0		22.7		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	17.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	62	184	1168	55	77	1123
Future Vol, veh/h	62	184	1168	55	77	1123
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	4	4	2	2	2	2
Mvmt Flow	67	198	1256	59	83	1208

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2056	658	0	0	1315	0
Stage 1	1286	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.14	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.22	-
Pot Cap-1 Maneuver	*103	*588	-	-	*885	-
Stage 1	*555	-	-	-	-	-
Stage 2	*582	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*74	*588	-	-	*885	-
Mov Cap-2 Maneuver	*74	-	-	-	-	-
Stage 1	*397	-	-	-	-	-
Stage 2	*582	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	185.3	0	1.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	214	* 885	-
HCM Lane V/C Ratio	-	-	1.236	0.094	-
HCM Control Delay (s)	-	-	185.3	9.5	1.2
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	13.6	0.3	-

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

Intersection	
Int Delay, s/veh	11.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	24	1	173	12	1	0	67	1742	36	3	877	33
Future Vol, veh/h	24	1	173	12	1	0	67	1742	36	3	877	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	1	188	13	1	0	73	1893	39	3	953	36

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2070	3055	495	2542	3054	966	989	0	0	1932	0	0
Stage 1	977	977	-	2059	2059	-	-	-	-	-	-	-
Stage 2	1093	2078	-	483	995	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*50	8	*733	*14	8	*356	1072	-	-	*533	-	-
Stage 1	*683	600	-	*279	256	-	-	-	-	-	-	-
Stage 2	*336	242	-	*691	585	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*45	8	*733	*~ 9	8	*356	1072	-	-	*533	-	-
Mov Cap-2 Maneuver	*45	8	-	*~ 9	8	-	-	-	-	-	-	-
Stage 1	*683	592	-	*279	256	-	-	-	-	-	-	-
Stage 2	*335	242	-	*506	577	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	100.1	$ 1080.1	0.3	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1072	-	-	221	9	* 533	-	-
HCM Lane V/C Ratio	0.068	-	-	0.974	1.57	0.006	-	-
HCM Control Delay (s)	8.6	0	-	100.9	$ 1080.1	11.8	0.1	-
HCM Lane LOS	A	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.2	-	-	8.6	2.6	0	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	699	23	126	960	178	76	4	95	1	12	18
Future Volume (veh/h)	17	699	23	126	960	178	76	4	95	1	12	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1900	1900	1863	1900	1900	1828	1900
Adj Flow Rate, veh/h	19	760	26	137	1043	193	84	4	103	1	13	20
Adj No. of Lanes	0	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.92	0.90	0.92	0.92	0.92	0.90	0.90	0.92	0.92	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	4	4
Cap, veh/h	53	1143	38	279	1156	214	149	17	122	46	101	146
Arrive On Green	0.76	0.76	0.76	0.76	0.76	0.76	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	13	1512	51	686	1530	283	584	114	816	12	672	977
Grp Volume(v), veh/h	805	0	0	137	0	1236	191	0	0	34	0	0
Grp Sat Flow(s),veh/h/ln	1575	0	0	686	0	1813	1513	0	0	1661	0	0
Q Serve(g_s), s	7.2	0.0	0.0	3.8	0.0	44.3	8.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	51.5	0.0	0.0	55.3	0.0	44.3	10.3	0.0	0.0	1.5	0.0	0.0
Prop In Lane	0.02		0.03	1.00		0.16	0.44		0.54	0.03		0.59
Lane Grp Cap(c), veh/h	1234	0	0	279	0	1370	288	0	0	293	0	0
V/C Ratio(X)	0.65	0.00	0.00	0.49	0.00	0.90	0.66	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	1276	0	0	295	0	1414	346	0	0	357	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	0.0	0.0	13.7	0.0	7.9	34.9	0.0	0.0	31.2	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	1.3	0.0	8.2	3.6	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	0.0	3.0	0.0	24.4	4.6	0.0	0.0	0.7	0.0	0.0
LnGrp Delay(d),s/veh	6.4	0.0	0.0	15.1	0.0	16.1	38.5	0.0	0.0	31.4	0.0	0.0
LnGrp LOS	A			B		B	D			C		
Approach Vol, veh/h		805			1373			191			34	
Approach Delay, s/veh		6.4			16.0			38.5			31.4	
Approach LOS		A			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		68.0		16.7		68.0		16.7
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		66.0		16.0		66.0		16.0
Max Q Clear Time (g_c+I1), s		53.5		3.5		57.3		12.3
Green Ext Time (p_c), s		5.0		0.1		6.7		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	818	313	898	373	374	796
Future Volume (veh/h)	818	313	898	373	374	796
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1845	1845
Adj Flow Rate, veh/h	608	628	966	401	402	856
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	2	2	3	3
Cap, veh/h	645	587	1285	575	432	1040
Arrive On Green	0.36	0.36	0.73	0.73	0.22	0.75
Sat Flow, veh/h	1774	1615	3632	1583	1757	1845
Grp Volume(v), veh/h	608	628	966	401	402	856
Grp Sat Flow(s),veh/h/ln	1774	1615	1770	1583	1757	1845
Q Serve(g_s), s	36.5	40.0	18.1	15.5	15.4	33.4
Cycle Q Clear(g_c), s	36.5	40.0	18.1	15.5	15.4	33.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	645	587	1285	575	432	1040
V/C Ratio(X)	0.94	1.07	0.75	0.70	0.93	0.82
Avail Cap(c_a), veh/h	645	587	1285	575	511	1040
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	35.0	12.1	11.7	19.3	10.2
Incr Delay (d2), s/veh	22.3	57.1	4.1	6.9	22.0	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.7	27.1	9.3	7.6	14.3	18.5
LnGrp Delay(d),s/veh	56.2	92.1	16.2	18.6	41.2	17.6
LnGrp LOS	E	F	B	B	D	B
Approach Vol, veh/h	1236		1367			1258
Approach Delay, s/veh	74.4		16.9			25.1
Approach LOS	E		B			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	22.1	43.9				66.0		44.0
Change Period (Y+Rc), s	4.0	4.0				4.0		4.0
Max Green Setting (Gmax), s	23.0	35.0				62.0		40.0
Max Q Clear Time (g_c+I1), s	17.4	20.1				35.4		42.0
Green Ext Time (p_c), s	0.7	7.4				7.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.0
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	729	6	3	1000	50	8	10	0	0	4	84
Future Vol, veh/h	14	729	6	3	1000	50	8	10	0	0	4	84
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	810	7	3	1111	56	9	11	0	0	4	93

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1167	0	0	817	0	0	2040	2019	814	1996	1994	1139
Stage 1	-	-	-	-	-	-	846	846	-	1145	1145	-
Stage 2	-	-	-	-	-	-	1194	1173	-	851	849	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	599	-	-	811	-	-	42	58	378	45	60	245
Stage 1	-	-	-	-	-	-	357	378	-	243	274	-
Stage 2	-	-	-	-	-	-	228	266	-	355	377	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	599	-	-	811	-	-	23	55	378	36	56	245
Mov Cap-2 Maneuver	-	-	-	-	-	-	23	55	-	36	56	-
Stage 1	-	-	-	-	-	-	340	359	-	231	271	-
Stage 2	-	-	-	-	-	-	137	263	-	327	359	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	209.6	35.7
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	34	599	-	-	811	-	-	212
HCM Lane V/C Ratio	0.588	0.026	-	-	0.004	-	-	0.461
HCM Control Delay (s)	209.6	11.2	0	-	9.5	0	-	35.7
HCM Lane LOS	F	B	A	-	A	A	-	E
HCM 95th %tile Q(veh)	2	0.1	-	-	0	-	-	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	352	10	522	842	767	0	0	1388	280
Future Volume (veh/h)	0	0	0	352	10	522	842	767	0	0	1388	280
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1863	1863	0	0	1845	1900
Adj Flow Rate, veh/h				395	0	0	925	843	0	0	1525	308
Adj No. of Lanes				2	0	1	2	2	0	0	2	0
Peak Hour Factor				0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %				2	2	2	2	2	0	0	3	3
Cap, veh/h				479	0	214	1006	2804	0	0	1354	266
Arrive On Green				0.13	0.00	0.00	0.20	0.53	0.00	0.00	0.93	0.93
Sat Flow, veh/h				3548	0	1583	3442	3632	0	0	3013	575
Grp Volume(v), veh/h				395	0	0	925	843	0	0	899	934
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1721	1770	0	0	1752	1743
Q Serve(g_s), s				11.9	0.0	0.0	29.0	14.6	0.0	0.0	51.0	51.0
Cycle Q Clear(g_c), s				11.9	0.0	0.0	29.0	14.6	0.0	0.0	51.0	51.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.33
Lane Grp Cap(c), veh/h				479	0	214	1006	2804	0	0	812	808
V/C Ratio(X)				0.82	0.00	0.00	0.92	0.30	0.00	0.00	1.11	1.16
Avail Cap(c_a), veh/h				710	0	317	1006	2804	0	0	812	808
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	0.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				46.3	0.0	0.0	43.0	8.8	0.0	0.0	4.0	4.0
Incr Delay (d2), s/veh				5.1	0.0	0.0	1.5	0.0	0.0	0.0	64.8	83.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.2	0.0	0.0	14.0	7.2	0.0	0.0	33.6	37.7
LnGrp Delay(d),s/veh				51.4	0.0	0.0	44.5	8.8	0.0	0.0	68.8	87.9
LnGrp LOS				D			D	A			F	F
Approach Vol, veh/h					395			1768			1833	
Approach Delay, s/veh					51.4			27.5			78.6	
Approach LOS					D			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		91.2			36.2	55.0		18.8
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		80.0			25.0	51.0		22.0
Max Q Clear Time (g_c+I1), s		16.6			31.0	53.0		13.9
Green Ext Time (p_c), s		7.5			0.0	0.0		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	53.3
HCM 2010 LOS	D

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1605	1015	799	934
Future Volume (veh/h)	0	0	1605	1015	799	934
Number			2	12	1	6
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1900	1863	1863
Adj Flow Rate, veh/h			1783	0	888	1038
Adj No. of Lanes			2	0	1	2
Peak Hour Factor			0.90	0.90	0.90	0.90
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			2220	0	764	3411
Arrive On Green			1.00	0.00	0.60	1.00
Sat Flow, veh/h			3725	0	1774	3632
Grp Volume(v), veh/h			1783	0	888	1038
Grp Sat Flow(s),veh/h/ln			1770	0	1774	1770
Q Serve(g_s), s			0.0	0.0	33.0	0.0
Cycle Q Clear(g_c), s			0.0	0.0	33.0	0.0
Prop In Lane				0.00	1.00	
Lane Grp Cap(c), veh/h			2220	0	764	3411
V/C Ratio(X)			0.80	0.00	1.16	0.30
Avail Cap(c_a), veh/h			2220	0	764	3411
HCM Platoon Ratio			2.00	2.00	2.00	2.00
Upstream Filter(I)			0.09	0.00	0.09	0.09
Uniform Delay (d), s/veh			0.0	0.0	7.7	0.0
Incr Delay (d2), s/veh			0.3	0.0	74.6	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.1	0.0	36.2	0.0
LnGrp Delay(d),s/veh			0.3	0.0	82.2	0.0
LnGrp LOS			A		F	A
Approach Vol, veh/h			1783			1926
Approach Delay, s/veh			0.3			37.9
Approach LOS			A			D

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	37.0	73.0				110.0		
Change Period (Y+Rc), s	4.0	4.0				4.0		
Max Green Setting (Gmax), s	33.0	69.0				106.0		
Max Q Clear Time (g_c+I1), s	35.0	2.0				2.0		
Green Ext Time (p_c), s	0.0	27.4				10.3		

Intersection Summary	
HCM 2010 Ctrl Delay	19.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	374	125	47	22	175	596	118	1620	25	25	630	323
Future Volume (veh/h)	374	125	47	22	175	596	118	1620	25	25	630	323
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	407	136	51	24	190	0	128	1761	27	27	685	351
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	244	317	119	217	237	202	375	2432	37	162	1349	691
Arrive On Green	0.08	0.25	0.25	0.13	0.13	0.00	0.04	0.68	0.68	0.60	0.60	0.60
Sat Flow, veh/h	1774	1293	485	1192	1863	1583	1774	3568	55	261	2245	1150
Grp Volume(v), veh/h	407	0	187	24	190	0	128	872	916	27	535	501
Grp Sat Flow(s),veh/h/ln	1774	0	1777	1192	1863	1583	1774	1770	1853	261	1752	1642
Q Serve(g_s), s	9.0	0.0	9.8	2.0	10.9	0.0	2.9	34.0	34.2	8.0	19.3	19.3
Cycle Q Clear(g_c), s	9.0	0.0	9.8	2.0	10.9	0.0	2.9	34.0	34.2	33.4	19.3	19.3
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.03	1.00		0.70
Lane Grp Cap(c), veh/h	244	0	436	217	237	202	375	1206	1263	162	1053	987
V/C Ratio(X)	1.67	0.00	0.43	0.11	0.80	0.00	0.34	0.72	0.73	0.17	0.51	0.51
Avail Cap(c_a), veh/h	244	0	792	455	610	518	425	1206	1263	162	1053	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.79	0.79	0.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	42.6	0.0	35.0	42.7	46.6	0.0	9.4	11.0	11.0	24.3	12.6	12.6
Incr Delay (d2), s/veh	317.5	0.0	0.7	0.2	4.9	0.0	0.5	3.8	3.7	2.1	1.7	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	30.9	0.0	4.9	0.7	5.9	0.0	1.4	17.7	18.6	0.7	9.7	9.1
LnGrp Delay(d),s/veh	360.1	0.0	35.7	42.9	51.6	0.0	9.9	14.8	14.7	26.4	14.3	14.4
LnGrp LOS	F		D	D	D		A	B	B	C	B	B
Approach Vol, veh/h		594			214			1916			1063	
Approach Delay, s/veh		257.9			50.6			14.4			14.6	
Approach LOS		F			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		79.0		31.0	8.9	70.1	13.0	18.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		53.0		49.0	8.0	41.0	9.0	36.0
Max Q Clear Time (g_c+I1), s		36.2		11.8	4.9	35.4	11.0	12.9
Green Ext Time (p_c), s		12.0		1.2	0.1	3.4	0.0	1.1

Intersection Summary		
HCM 2010 Ctrl Delay		54.7
HCM 2010 LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	0	85	3	3	6	219	1190	8	1	1401	585
Future Volume (veh/h)	23	0	85	3	3	6	219	1190	8	1	1401	585
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1681	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	24	0	89	3	3	6	231	1253	8	1	1475	616
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	0	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	13	13	13	2	2	2	2	2	2
Cap, veh/h	134	0	119	4	4	9	653	2806	18	40	1427	772
Arrive On Green	0.08	0.00	0.08	0.01	0.01	0.01	0.32	0.78	0.78	0.82	0.82	0.82
Sat Flow, veh/h	1740	0	1553	382	382	764	1774	3605	23	0	3472	1583
Grp Volume(v), veh/h	24	0	89	12	0	0	231	615	646	792	684	616
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1528	0	0	1774	1770	1859	1862	1610	1583
Q Serve(g_s), s	1.2	0.0	5.1	0.7	0.0	0.0	4.5	10.6	10.6	4.2	37.0	24.4
Cycle Q Clear(g_c), s	1.2	0.0	5.1	0.7	0.0	0.0	4.5	10.6	10.6	37.0	37.0	24.4
Prop In Lane	1.00		1.00	0.25		0.50	1.00		0.01	0.00		1.00
Lane Grp Cap(c), veh/h	134	0	119	18	0	0	653	1377	1447	805	662	772
V/C Ratio(X)	0.18	0.00	0.75	0.68	0.00	0.00	0.35	0.45	0.45	0.98	1.03	0.80
Avail Cap(c_a), veh/h	309	0	276	272	0	0	653	1377	1447	805	662	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.98	0.00	0.98	1.00	0.00	0.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	38.9	0.0	40.7	44.3	0.0	0.0	21.4	3.4	3.4	8.6	8.0	5.4
Incr Delay (d2), s/veh	0.6	0.0	8.7	37.5	0.0	0.0	0.3	1.0	1.0	6.3	20.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.5	0.5	0.0	0.0	4.2	5.5	5.8	20.8	18.5	11.1
LnGrp Delay(d),s/veh	39.5	0.0	49.4	81.9	0.0	0.0	21.7	4.4	4.4	14.9	28.7	6.3
LnGrp LOS	D		D	F			C	A	A	B	F	A
Approach Vol, veh/h		113			12			1492			2092	
Approach Delay, s/veh		47.3			81.9			7.1			16.9	
Approach LOS		D			F			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	13.1	41.0		5.0		74.1		10.9
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s	5.0	37.0		16.0		46.0		16.0
Max Q Clear Time (g_c+I1), s	6.5	39.0		2.7		12.6		7.1
Green Ext Time (p_c), s	0.0	0.0		0.0		10.4		0.3

Intersection Summary		
HCM 2010 Ctrl Delay		14.1
HCM 2010 LOS		B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	781	806	1111	0	0	1232
Future Volume (veh/h)	781	806	1111	0	0	1232
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1891	1928	1863	0	0	1863
Adj Flow Rate, veh/h	822	848	1169	0	0	1297
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2	0	0	2
Cap, veh/h	878	800	1321	0	0	1321
Arrive On Green	0.49	0.49	0.75	0.00	0.00	0.12
Sat Flow, veh/h	1801	1639	3725	0	0	3725
Grp Volume(v), veh/h	822	848	1169	0	0	1297
Grp Sat Flow(s),veh/h/ln	1801	1639	1770	0	0	1770
Q Serve(g_s), s	38.7	43.9	22.2	0.0	0.0	32.9
Cycle Q Clear(g_c), s	38.7	43.9	22.2	0.0	0.0	32.9
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	878	800	1321	0	0	1321
V/C Ratio(X)	0.94	1.06	0.88	0.00	0.00	0.98
Avail Cap(c_a), veh/h	878	800	1321	0	0	1321
HCM Platoon Ratio	1.00	1.00	2.00	1.00	1.00	0.33
Upstream Filter(I)	1.00	1.00	0.88	0.00	0.00	1.00
Uniform Delay (d), s/veh	21.7	23.0	10.0	0.0	0.0	39.1
Incr Delay (d2), s/veh	16.9	49.1	8.0	0.0	0.0	20.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.1	30.7	11.5	0.0	0.0	20.0
LnGrp Delay(d),s/veh	38.7	72.2	17.9	0.0	0.0	59.9
LnGrp LOS	D	F	B			E
Approach Vol, veh/h	1670		1169			1297
Approach Delay, s/veh	55.7		17.9			59.9
Approach LOS	E		B			E

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		39.6		50.4		39.6		
Change Period (Y+Rc), s		6.0		6.5		6.0		
Max Green Setting (Gmax), s		33.6		43.9		33.6		
Max Q Clear Time (g_c+I1), s		34.9		45.9		24.2		
Green Ext Time (p_c), s		0.0		0.0		4.1		

Intersection Summary	
HCM 2010 Ctrl Delay	46.3
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	17	11	6	25	4	7	11	7	6	4	7
Future Vol, veh/h	6	17	11	6	25	4	7	11	7	6	4	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	6	6	6	2	2	2
Mvmt Flow	7	19	12	7	28	4	8	12	8	7	4	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	32	0	0	31	0	0	89	85	25	93	89	30
Stage 1	-	-	-	-	-	-	39	39	-	44	44	-
Stage 2	-	-	-	-	-	-	50	46	-	49	45	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.16	6.56	6.26	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.554	4.054	3.354	3.518	4.018	3.318
Pot Cap-1 Maneuver	1580	-	-	1582	-	-	886	798	1040	891	801	1044
Stage 1	-	-	-	-	-	-	966	855	-	970	858	-
Stage 2	-	-	-	-	-	-	953	849	-	964	857	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1580	-	-	1582	-	-	869	790	1040	867	793	1044
Mov Cap-2 Maneuver	-	-	-	-	-	-	869	790	-	867	793	-
Stage 1	-	-	-	-	-	-	961	851	-	965	854	-
Stage 2	-	-	-	-	-	-	936	845	-	938	853	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	1.2	9.3	9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	871	1580	-	-	1582	-	-	911
HCM Lane V/C Ratio	0.032	0.004	-	-	0.004	-	-	0.021
HCM Control Delay (s)	9.3	7.3	0	-	7.3	0	-	9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	269	22	4	341	8	19	1	18	3	4	12
Future Vol, veh/h	4	269	22	4	341	8	19	1	18	3	4	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	5	5	5	2	2	2	7	7	7
Mvmt Flow	4	283	23	4	359	8	20	1	19	3	4	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	367	0	0	306	0	0	683	678	295	684	685	363
Stage 1	-	-	-	-	-	-	303	303	-	371	371	-
Stage 2	-	-	-	-	-	-	380	375	-	313	314	-
Critical Hdwy	4.14	-	-	4.15	-	-	7.12	6.52	6.22	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.17	5.57	-
Follow-up Hdwy	2.236	-	-	2.245	-	-	3.518	4.018	3.318	3.563	4.063	3.363
Pot Cap-1 Maneuver	1181	-	-	1238	-	-	363	374	744	356	364	671
Stage 1	-	-	-	-	-	-	706	664	-	639	611	-
Stage 2	-	-	-	-	-	-	642	617	-	687	647	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1181	-	-	1238	-	-	351	371	744	344	361	671
Mov Cap-2 Maneuver	-	-	-	-	-	-	351	371	-	344	361	-
Stage 1	-	-	-	-	-	-	703	661	-	636	609	-
Stage 2	-	-	-	-	-	-	623	615	-	666	644	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	13.4	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	469	1181	-	-	1238	-	-	504
HCM Lane V/C Ratio	0.085	0.004	-	-	0.003	-	-	0.04
HCM Control Delay (s)	13.4	8.1	0	-	7.9	0	-	12.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↱		↕			↕	
Traffic Vol, veh/h	14	247	77	0	393	418	68	0	0	267	0	14
Future Vol, veh/h	14	247	77	0	393	418	68	0	0	267	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	200	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	260	81	0	414	440	72	0	0	281	0	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	854	0	0	341	0	0	973	1185	301	745	785	414
Stage 1	-	-	-	-	-	-	331	331	-	414	414	-
Stage 2	-	-	-	-	-	-	642	854	-	331	371	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	785	-	-	1235	-	-	228	171	839	348	327	638
Stage 1	-	-	-	-	-	-	760	680	-	616	593	-
Stage 2	-	-	-	-	-	-	463	375	-	760	649	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	785	-	-	1235	-	-	218	167	839	342	319	638
Mov Cap-2 Maneuver	-	-	-	-	-	-	218	167	-	456	425	-
Stage 1	-	-	-	-	-	-	742	664	-	601	593	-
Stage 2	-	-	-	-	-	-	452	375	-	742	633	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	29.4	25.5
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	218	785	-	-	1235	-	-	463
HCM Lane V/C Ratio	0.328	0.019	-	-	-	-	-	0.639
HCM Control Delay (s)	29.4	9.7	0	-	0	-	-	25.5
HCM Lane LOS	D	A	A	-	A	-	-	D
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0	-	-	4.4

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	27	1237	54	11	1616
Future Vol, veh/h	7	27	1237	54	11	1616
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	3	3
Mvmt Flow	8	29	1330	58	12	1738

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2252	694	0	0	1388	0
Stage 1	1359	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.16	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.23	-
Pot Cap-1 Maneuver	*66	*563	-	-	*839	-
Stage 1	*532	-	-	-	-	-
Stage 2	*397	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*39	*563	-	-	*839	-
Mov Cap-2 Maneuver	*175	-	-	-	-	-
Stage 1	*312	-	-	-	-	-
Stage 2	*397	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.3	0	2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	387	* 839	-
HCM Lane V/C Ratio	-	-	0.094	0.014	-
HCM Control Delay (s)	-	-	15.3	9.4	1.9
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

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

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	151	91	1825	1081	17
Future Vol, veh/h	13	151	91	1825	1081	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	164	99	1984	1175	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2374	597	1193	0	-	0
Stage 1	1184	-	-	-	-	-
Stage 2	1190	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	*31	*630	*942	-	-	-
Stage 1	*595	-	-	-	-	-
Stage 2	*304	-	-	-	-	-
Platoon blocked, %	1	1	1	-	-	-
Mov Cap-1 Maneuver	*31	*630	*942	-	-	-
Mov Cap-2 Maneuver	*31	-	-	-	-	-
Stage 1	*595	-	-	-	-	-
Stage 2	*304	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.2	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	* 942	-	31	630	-	-
HCM Lane V/C Ratio	0.105	-	0.456	0.261	-	-
HCM Control Delay (s)	9.3	0	195.7	12.7	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	0.4	-	1.5	1	-	-

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

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	2	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	1021	1084
Stage 1	-	0	0	-	1022	-
Stage 2	-	0	0	-	1022	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	1021	1084
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1022	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

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

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	894	1084	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	894	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

APPENDIX C

Cultural Resources Study

Cultural Resources Impact Analysis
Laurel Island
Charleston, South Carolina
S&ME Project No. 4213-19-011

PREPARED FOR:

Laurel Island Development, LLC
3340 Peachtree Road, Suite 1660
Atlanta, Georgia 30326

PREPARED BY:

S&ME, Inc.
620 Wando Park Boulevard
Mount Pleasant, SC 29464

August 19, 2019

August 19, 2020

Laurel Island Development, LLC
3340 Peachtree Road, Suite 1660
Atlanta, Georgia 30326

Attention: Jennilee Covucci, P.E. - Senior Civil Engineer

Reference: **Cultural Resources Impact Analysis**
Laurel Island
Charleston, South Carolina
S&ME Project No. 4213-19-011

Dear Ms. Covucci:

S&ME, Inc. (S&ME), on behalf of Laurel Island Development, LLC, has conducted a Historic Resources Impact Assessment and Archaeological survey for the Laurel Island property in Charleston, Charleston County, South Carolina. The enclosed report presents our research design and methods, the results of our investigation, an analysis of effects the proposed development may have on historic properties, and recommendations.

Sincerely,

S&ME, Inc.

Aaron Brummitt, RPA
Senior Archaeologist

Heather L. Carpini
Senior Architectural Historian

Executive Summary

S&ME, Inc. (S&ME), on behalf of Laurel Island Development, LLC, has conducted a Historic Resources Impact Assessment for an approximately 200-acre Project Area, located in Charleston, Charleston County, South Carolina, and an Intensive Archaeological Survey of an approximately two-acre portion of the tract. Laurel Island Development, LLC, is planning a mixed-use development that will include residential and commercial spaces.

The development plan includes construction of multi-story buildings, as well as other areas to be used for residential, and commercial developments, parking spaces, recreation, and green space. The Historic Resources Impact Assessment includes a visual impact analysis to identify potential adverse effects of the proposed development. This analysis examined potential impacts to the William Enston Home, Magnolia Cemetery, the Immigration Center, and the Charleston City Railway Car House. The historic viewshed from the William Enston Home has been compromised by Interstate 26 and the on-ramp to the Arthur Ravenel Bridge. The view from the Charleston City Railway Car House is obstructed by existing office buildings, trees, and overhead powerlines. The proposed development will have no effect on these resources. The high-rise structures will be visible from portions of Magnolia Cemetery, where there are no other visible intrusions, and the Immigration Center; it is also likely that the non-high-rise residential and commercial structures may be visible from these locations, depending on their placement on the tract. Therefore, it is S&ME's opinion that the proposed development will have an adverse effect on these resources.

The archaeological survey efforts examined an approximately two-acre portion of the former Holston Landfill Tract. The remainder of the Project Area consisted of the former landfill, was covered with hardscaped surfaces, or otherwise would not have been conducive to archaeological survey efforts. This survey identified one archaeological site (38CH2141). Site 38CH2141 consists of the ruins of three powder magazines from the State Powder Magazine complex designed by Robert Mills. The paucity of subsurface architectural debris, combined with the shallow soils, confirms the demolition and subsequent clearing of the site, which involved pushing the brick rubble to the edges of the site to form an approximately one-meter tall berm. The State Powder Magazine complex no longer possesses the integrity of design, setting, materials, or workmanship that the Historic American Building Survey (HABS) documented in 1934. It is our opinion that the near total destruction of these structures makes them ineligible for inclusion on the National Register of Historic Places (NRHP). Furthermore, archaeological investigation at this property would be unable to contribute important information or add to the in-depth description of this complex that was developed during the last century. Since the site received such thorough documentation by HABS in the 1930s, when the buildings were still standing, we do not recommend additional investigation.

Also identified during the intensive survey were the Standard Oil Buildings, located along the western bank of the Cooper River, at the eastern edge of the Project Area. Individually, these structures are not eligible for inclusion on the NRHP. However, it is our opinion that collectively they are significant and eligible for inclusion under Criterion A. The proposed development of the Project Area leaves these structures in place, with a newly constructed boardwalk walking area designed around them. As these designs are preliminary, we are unable to offer an opinion on the nature of potential effects at this time. We recommend that consideration of potential effects be included in more mature development planning.

Based on the field investigations for the proposed project, it is S&ME's opinion that the development, as currently designed, will have an adverse effect on multiple NRHP listed and eligible resources within the project's viewshed. The potential for effects to the viewshed of four resources were documented during this study. If the project will need federal permits or funding, S&ME recommends consultation with the State Historic Preservation Office (SHPO) and other interested consulting parties to develop a mitigation plan that addresses these adverse effects and identifies measures that will be taken to minimize or mitigate them. Methods to minimize adverse effects may include, but are not limited to, redesigning the site plans to minimize building heights; utilizing design guidelines and architectural details that reflect the historic character of the area; and using vegetative screening. Potential mitigation measures for adverse effects may include, but are not limited to, developing educational and interpretive materials about the history of the development tract, the affected resources, or related historic contexts; sponsoring survey efforts for underrepresented types of resources within the City of Charleston; or creating digital archives for documents associated with resources that will be adversely affected by the proposed project.

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1.0 Introduction

S&ME, on behalf of Laurel Island Development, LLC, has conducted a Historic Resources Impact Assessment for an approximately 200-acre Project Area, located in Charleston, Charleston County, South Carolina, and an Intensive Archaeological Survey of an approximately two-acre portion of the tract. Laurel Island Development, LLC, is planning a mixed-use development that will include residential and commercial spaces. The development plan includes multi-story buildings, as well as other areas to be used for residential, and commercial developments, parking spaces, recreation, and green space.

This survey was conducted to assess the potential impacts that the planned development may have on significant cultural resources and to develop recommendations regarding additional work that may be required under Section 106 of the National Historic Preservation Act and the South Carolina Coastal Zone Management Act. An earlier version of this study was carried out in general accordance with S&ME Proposal Number 34-06-236 dated September 28, 2006; our current update was conducted in general accordance with S&ME Proposal Number 42-1900040, dated January 10, 2019.

Heather Carpini served as the Senior Archaeological/Historian. Aaron Brummitt, RPA served as the Senior Archaeologist. The archaeological fieldwork was led by John P. McCarthy, RPA and Monica Beck. Patrick Morgan, RPA and Logan Seamon assisted in the archaeological fieldwork. Jacob Foose and Richard Demille served as pilots while conducting the visual impact analyses. Richard Demille and Terry Richburg served as spotters during the visual impact analyses. Larry Jackson assisted with the production of figures used in this report.

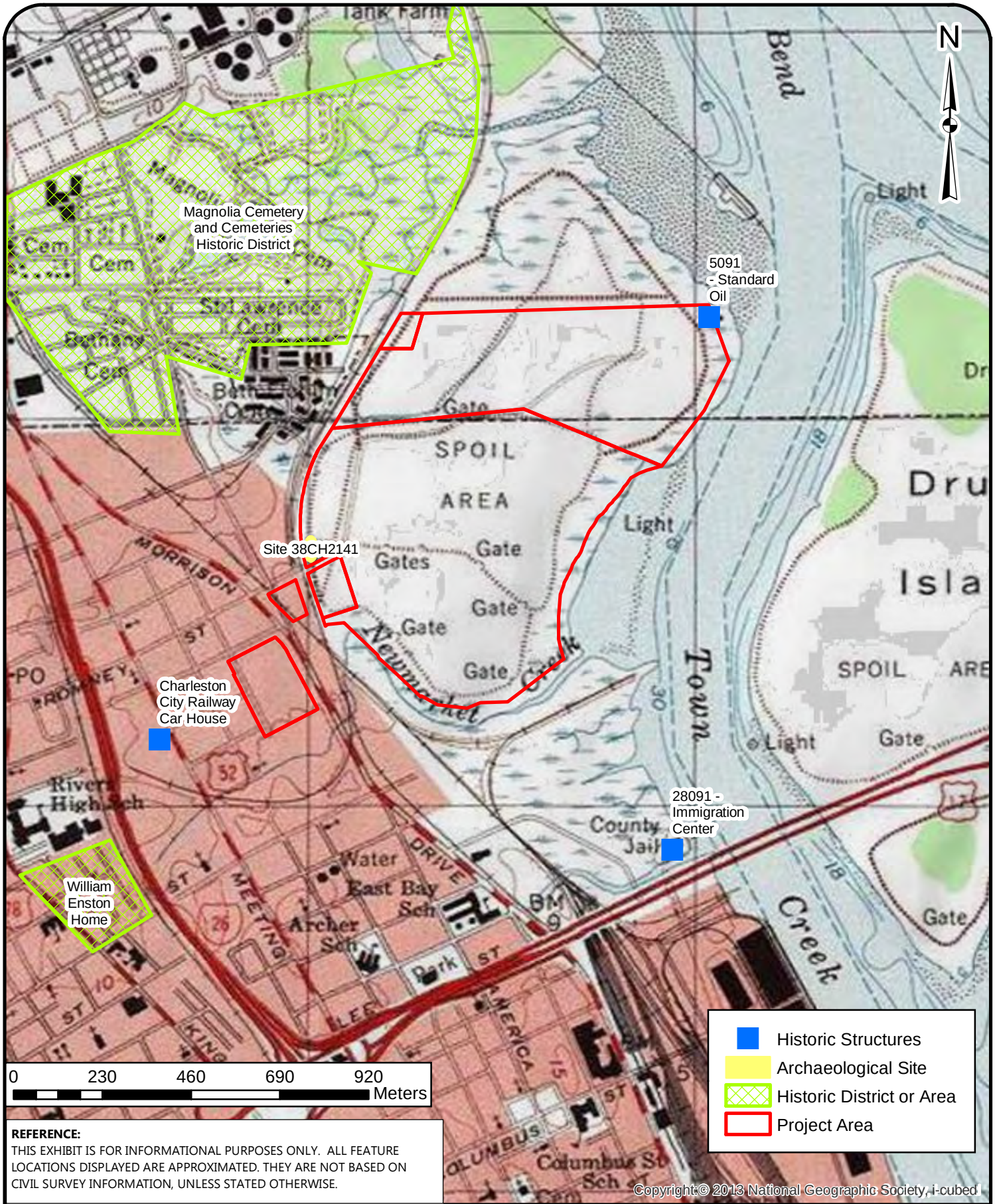
This report consists of this introduction followed by five chapters of text, a listing of references cited, and attached appendices. The text presents, in turn, the research design and methods, background, the results of the archaeological survey, the results of historic resources survey, an analysis of impacts on the viewshed, and conclusions and recommendations.

Description of the Project Area

The Project Area is generally located at the eastern end of Romney Street, on the Charleston peninsula. The Project Area consist of seven parcels and covers an area of approximately 200 acres. The parcels comprising the Project Area and their ownership are:

- TMS #4640000002 – Laurel Island South (117 acres)
- TMS #4640000006 – Laurel Island North (70 acres)
- TMS #4640000007 – Holston Land Co. (1.1 acres)
- TMS #4590200013 – Lubert Adler N. Romney St Property (1.4 acres)
- TMS #4640000023 – Charleston County Recycling Center (3 acres)
- TMS #461103024 – Charleston County 995 Morrison (8 acres)
- TMS #4640000038 – Ginn-LA Fund IV Promenade North LLC (0.4 acres)

The Project Area consists primarily of the former Romney Street landfill and the former Beach Company Landfill. The remaining parcels are currently developed as a recycling center, a Charleston County municipal complex, and a former City of Charleston vehicle lot.



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Location of the Project Area and Assessed Resources

Laurel Island
Charleston, Charleston County, South Carolina

SCALE: 1:13,000
DATE: 3/5/2019
PROJECT NUMBER 4213-19-011
FIGURE NO. 1

REFERENCE:
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Location of the Project Area and Assessed Resources

Laurel Island
Charleston, Charleston County, South Carolina

SCALE: 1:13,000

DATE: 3/5/2019

PROJECT NUMBER 4213-19-011

FIGURE NO. 2

2.0 Research Goals and Methods

This section presents the project's research goals and methods. The overall goals and objectives are discussed, followed by a discussion of research methods for background research, archaeological survey investigations, historic resources survey, and view-shed analysis.

The work was undertaken in general accordance with the *South Carolina Survey Manual: Statewide Survey of Historic Properties* (2018), *South Carolina Standards and Guidelines for Archaeological Investigations* (2013), the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (1983 and later), and National Park Service guidance concerning the National Register of Historic Places. These guidelines include National Register Bulletins #15 *How to Apply the National Register Criteria for Evaluation* (2002) and #36 *Guidelines for Evaluating and Registering Archaeological Properties* (2003).

Research Goals and Objectives

The goal of the investigations was assess the potential impacts that the planned development may have on significant cultural resources and to develop recommendations to assist the client in planning for the development. Background research and field investigations were carried out to collect information about known and potential resources and to identify previously unidentified resources.

Cultural resources that are significant are eligible for listing on the NRHP in accordance with the National Register's Criteria of Evaluation (36 CFR Part 60), which states:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- **A.** That are associated with events that have made a significant contribution to the broad patterns of our history; or
- **B.** That are associated with the lives of persons significant in our past; or
- **C.** That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- **D.** That has yielded, or may be likely to yield, information important in prehistory or history. A resource need only satisfy one of these criteria in order to be significant.

Archaeological resources are generally considered significant under Criterion D, for their research value.

Background Research Methods

Background literature review and records search consisted of reviewing available historic maps; ArchSite, a GIS-based Cultural Resource Information System; records of previously recorded historic and archaeological resources on file at the South Carolina Department of Archives and History (SCDAH) and the South Carolina Institute of Archaeology and Anthropology (SCIAA); and the SCDAH *Finding Aid* for previous archaeological and architectural surveys.

Archaeological Survey Methods

The field investigations for the archaeological survey were undertaken in two sub-phases of field effort: 1) pedestrian reconnaissance of the Project Area, and 2) excavation of shovel test pits. Shovel test pits were 30 cm by 30 cm and excavated to the water table, culturally sterile subsoil, or to a minimum of 80 centimeters below the surface (cmbs) if no artifacts were recovered.

Field personnel screened the soil from the shovel tests through ¼-inch wire mesh to ensure uniform recovery of cultural materials, which were placed in bags labeled with standard provenience information. The location of each shovel test and surface find was recorded on a map of the Project Area. The nature of the soils encountered and their contents was noted in a standardized manner, in weatherproof field journals.

We recorded the single identified site with digital color photography and documented its presence with a South Carolina Archaeological Site form. In addition to the shovel test notes, the field crew took general notes on survey methods, observations made during the survey, and relevant environmental factors.

The artifacts, notes, photographs, maps, and other project-related materials were returned to the S&ME laboratory in Mt. Pleasant for processing. Artifacts were washed, accessioned, identified as to function and temporal and/or cultural affiliation, as appropriate to project goals, and curated temporarily. An artifact inventory is attached as Appendix B.

Historic Resources Survey Methods

The field investigations for the historic resources survey consisted of revisiting locations of previously recorded structures that are eligible for or listed in the NRHP. Because of the project location, on the Charleston peninsula, additional survey to locate previously unrecorded aboveground resources was not conducted, since this area has been subject to numerous cultural and historic resource surveys over the previous 20 years.

Visual Impact Analysis

In order to identify the potential for adverse effects to historic resources identified during the background investigation, S&ME conducted a visual impact analysis. To achieve this goal we used an Unmanned Aerial Systems (UAS); 36-inch balloons were suspended with a 10-feet long tether underneath the UAS. The UAS was utilized to position balloons at the location that will be the top of the high-rise building (Appendix A). S&ME then attempted to photograph the balloons, if visible, from the location of surrounding NRHP eligible and listed resources in the project vicinity.

3.0 Background

The Background of this investigation includes the environmental setting of the Project Area, its cultural context (including prehistoric and historic contexts and the history of Charleston County and the Project Area), previously identified cultural resources near the Project Area, and an assessment of the Project Area's archaeological sensitivity. Each of these topics is discussed below.

Environmental Setting

In this chapter, we discuss the past and current environment of the region in general and the Project Area in particular. Included in the category of environment is a generalized summary of the geology, plant and animal communities, and soils.

The geology of coastal South Carolina was formed beginning in the Pliocene (as long as 5.5 million years ago) and through the Pleistocene (from approximately 1.8 million to 11,500 years ago) in processes associated with repeated marine transgressions resulting from fluctuating sea levels and tectonic adjustments. These activities produced a coastal plain of sedimentary rock and terrace landforms that extends as far as approximately 96 km inland from the present coast.

In the Late Pleistocene, sea levels had fallen to approximately 90 m below present levels. Beginning about 17,000 years ago, sea levels began to rise significantly and by about 7,000 years ago had risen to within about 6 m of current levels (Colquhoun and Brooks 1986). The change in sea level was not a linear change through time, but instead has fluctuated between zero and four m below current levels over the last 6,000 years. During the same time, forests in the region were beginning to resemble those that are now present, as drier, warmer conditions were established (Watts 1980).

The climate of the Project Area is temperate to sub-tropical and particularly favorable for the production of vegetables, livestock, soybeans, and forest products. It is warm and humid with heavy rainfall, approximately 48 inches, with slightly more rain days in the summer than the winter months. The growing season (average frost-free days) is 294 days long. Coastal woodlands, adjoining river valleys and associated swamps, and other wetlands support a rich range of plant and animal communities now and in the past, including deer, numerous small mammals, birds, reptiles, etc. For example, over 275 species of birds have been documented nearby at the Cape Romain National Wildlife Refuge (Meyer 1991). Of these, many plants and animals represented significant food resources for native and early historic populations.

Topography in the Project Area is generally level, with the ground surface slightly higher than the adjacent street and marsh. The United States Department of Agriculture (USDA) identifies the soils as comprised of the Urban Land-Yauhannah-Yemassee-Ogeechee association. This soil association describes a developed urban landscape on level ground with less than 10 percent natural soil.

Cultural Context

Scholars have created the capacity to differentiate the material remains of the diverse prehistoric cultural groups by more than fifty years of continuous, systematic study in the state of South Carolina (Figure 3). Beginning with Waring and Holder's (1968) study at the Refuge site, the chronological and typological placement of various pottery types has become ever more refined. For this study, we follow a synthesis of other detailed ceramic

studies in the region (Anderson 1994, 1996; Steen et al. 2002). For the identification of stone tools and debris, we rely on a variety of extra-local typologies (Coe 1964; Sassaman et al. 1990; Oliver 1985).

The prehistoric past in South Carolina is generally divided into four periods representing distinct cultural adaptations and lifeways, over time, as follows: the Paleoindian to ca. 12,000 years before present (B.P.); the Archaic to ca. 10,000 B.P.; the Woodland to ca. 2,500 B.P.; and the Mississippian to ca. 1,000 B.P. In addition, the Protohistoric Period, or Contact Period, refers to the time following initial European contact with the native people of the region in the early 1500s, but preceding permanent European settlement, which in South Carolina dates from 1670.

The actual dates applied to the Paleoindian period are currently being debated. The most commonly accepted theory about the peopling of North America dates the arrival of migrant bands of hunter-gatherers to approximately 12,000 years ago. This date corresponds with the exposure of a land bridge linking Asia to North America (Driver 1998). However, researchers have also suggested that this migration occurred as much as 15,000 to 20,000 years ago and was led by seagoing travelers (Steele and Powell 1993, 1994). Such discoveries as Kennewick Man, a skeleton recovered in Washington, and the Gordon Creek Woman, recovered from a site in northern Colorado, support these recent theories. The Kennewick Man skeleton has been determined to be over 11,000 years old (Morell 1998; Preston 1997; and Slayman 1997). The Gordon Creek Woman has been dated to 9,700 years BC or nearly 11,700 years old (Swedlund and Anderson 1999). Other discoveries, such as the Monte Verde site in South America that has been dated to 10,500 BC (Dillehay 1997), continue to fuel this controversy. In South Carolina, a possible pre-Paleoindian component is being evaluated in Allendale County.

Paleoindian

The initial human settlement of Southeastern North America is generally accepted as having occurred during the last glacial period, sometime between 15,000 and 11,000 years before the present (Anderson et al 1996). The end of the Pleistocene epoch is characterized by the retreat of the Laurentide Ice Sheet, the resulting change to the vegetational makeup, and the simultaneous extinction of the Pleistocene megafauna.

The Clovis point is the best-known item in the Paleo-Indian toolkit, and typically is recognized as the earliest diagnostic tool form on the continent. While the distinctive toolkit of the period (fluted projectile points and a well-developed blade technology) has been found in association with the remains of megafauna, most commonly in western North America and occasionally in the East (Webb et al. 1984), current interpretations suggest that a more generalized subsistence strategy was in effect in the Southeast (Ward 1983:64-65).

Archaic Period

As the environment began to change with the retreat of the last (Wisconsin) glaciation, humans adapted to more modern forest conditions. Through this period, the inhabitants of the region developed increasingly efficient strategies for exploiting the resources of the oak-hickory forest and coastal environments. Archaic people are thought to have been seasonally mobile, probably within a regular territory in response to the availability of various wild foodstuffs. Based on his extensive research in the North Carolina Piedmont, Coe (1964) divided the Archaic into phases associated with stone tool forms. Researchers have confirmed this sequence over much of the Southeast.

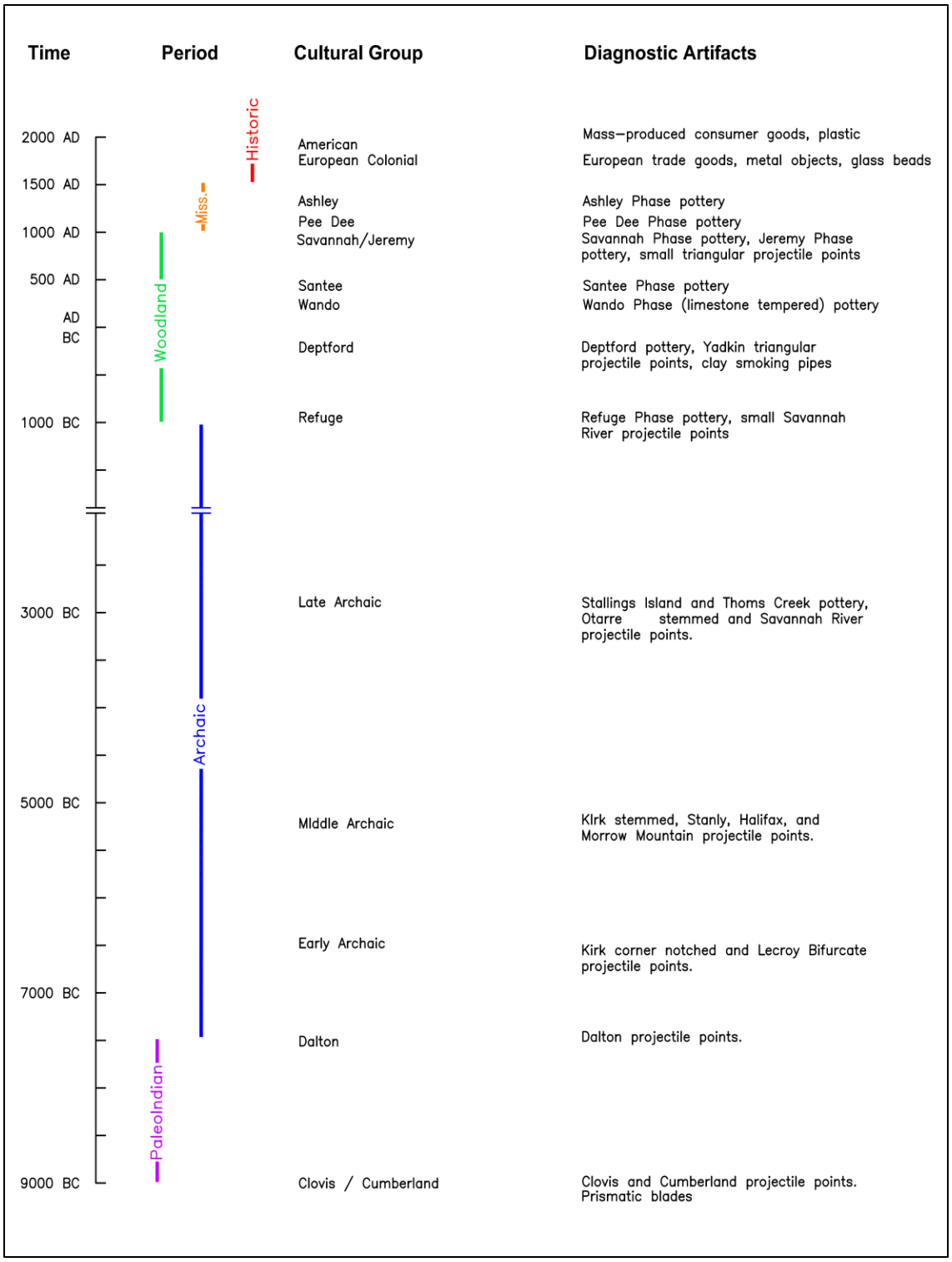


Figure 3. General culture history of the region.

During the Early Archaic (ca. 10,000 – 8,000 B.P.) small groups moved in routine migrations within major river drainages. Anderson and Hanson (1988) have hypothesized that, in order to take advantage of seasonally available resources, Early Archaic use of the Lower Coastal Plain was limited to spring foraging camps with winter base camps located near the Fall Line. Conversely, Daniel (1998; 2001) interprets site and artifact distribution data from the Early Archaic as reflexive of a tethering to lithic raw material sources.

As populations grew in size in the Middle Archaic (ca. 8,000 – 4,500 B.P.), group mobility decreased and territoriality increased. Material culture of the Middle Archaic is characterized by the increasing use of "expedient" or "situational" stone tools and reliance on local lithic raw materials. Blanton and Sassaman interpreted these trends as a reflection of adaptive flexibility in the face of changing environmental conditions that included variable precipitation and sea level rise affecting the types of resources available year-to-year (1989). This less predictable nature of resources required the adoption of more flexible subsistence strategies by Middle Archaic populations (Ward and Davis 1999).

By the Late Archaic, (ca. 4,500 – 3,500 B.P.) sedentary village settlements begin to appear along the South Carolina coast as evidenced by shell middens, suggestive of relatively long-term habitation. In addition, extensive trade networks linked these settlements and the first evidence for the development and use of pottery dates from this time (Sassaman 2004).

The sea level fluctuation has been used to explain the near absence of Early and Middle Archaic sites on the coast. However, more recent research suggests not a complete lack of human occupation but more likely, sites that are ephemeral and difficult to detect using standard survey techniques (Steen et al. 2002).

Woodland Period

The material marker of Woodland period cultures is the widespread adoption of the use of pottery. More is known about stylistic change and temporal variability, principally concerning particular pottery traditions (see Cable 1993, Steen et al. 2002), than the under-lying cultural process that gave rise to material change. Early Woodland Period cultures seem to be culturally similar to those of the Late Archaic (Saunders and Hays 2004; Stephenson et al. 2002)

In the Middle Woodland (ca. 2,200 – 1,500 B.P.) settlements became smaller, more numerous, and more dispersed along the coast, as sea levels rose to within approximately a meter of current levels and estuaries expanded, increasing the dispersion of some critical food resources (Brooks et al. 1989). While shellfish and estuarine fish were major food sources, forest foods such as chestnuts, hickory nuts, and acorns remained important. The Late Woodland (ca. 1,500 – 800 B.P.) is not well documented in the region. While people living in other parts of the region began intensifying their agricultural production in the Carolinas, it seems that Native populations continued essentially the same lifeways they had observed for the preceding 500 to 700 years (Trinkley 1989).

Mississippian

The Mississippian period began around A.D. 1000 (Smith 1990:1). Mississippian societies possessed a number of traits that set them apart from the earlier Late Woodland period cultures. Increased levels of political organization, higher population density, hereditary-based social ranking, and a shared ideological system are some of the defining characteristics of the Mississippian period. Cultures of this time also had an increased reliance on maize

agriculture and relatively larger and more permanent settlements compared to those of the preceding Woodland period (Hudson 1999:77-97).

The rapid social transformation and general uniformity of Mississippian period cultures is attributed to the existence of far-reaching communication and exchange networks. The Mississippian Period pottery in the Charleston watershed is very much like that from other areas across the region, ranging from the Irene (9Ch1) site near Savannah, Georgia to the Town Creek site (31Mg2) in Montgomery County, North Carolina.

Contact / Protohistoric Period

The European powers of the fifteenth century, and later, had well-developed bureaucracies and record-keeping systems. Accordingly, the history of South Carolina, at least the part of the region's past documented principally from written records, begins with European interest in the region dating, as noted above, from the early 1500s.

Likely around 1514, and definitely by 1521, Spanish explorers made landfall in what is now South Carolina and found a number of Muskhogean-speaking Native groups along the coast (Edgar 1998). The Europeans brought trade goods and new diseases leading to acculturation and depopulation, eventually resulting in the disintegration of Mississippian society. While the Mississippian center of Cofitachequi on the Wateree River remained important into the late seventeenth century, outlying villages had already suffered debilitating epidemics when Hernando de Soto visited in 1540 (Edgar 1998).

The coastal Native groups were collectively referred to as the Cusabos, although this term may only refer to the Native groups who were resident between the Charleston area and the Savannah River (Swanton 1979). There were four distinct native groups known to have lived along the PeeDee drainage during the mid-sixteenth century: the Keawee, Saraw, Pedee, and Wineau. It seems that many place names in South Carolina derive from the names of formerly local Native groups (Kovacik and Winberry 1987).

While there may have been occasional alliances, the groups tended to be independent from one another, maintaining separate identities. In contrast, the Catawba were a loosely structured confederacy of unrelated groups; the term arose about 1715 to refer to Native communities on the upper reaches of the Catawba River. Over time, these Natives adopted this term themselves. They were able to maintain their population by accepting refugees of the smaller coastal groups displaced by European settlement. By the middle of the eighteenth century, very few natives remained in the coastal area (Anderson and Logan 1981). Pressure from the hostile Iroquois from the north and west and colonists from the east pushed these diverse groups together resulting in the formation of the Catawba Nation (Merrill 1989).

As Kupperman (2000) observed, formerly widely-held notions that Native life was egalitarian and communitarian, and that Natives were overwhelmed by individualistic Europeans, are romantic. The truth is likely more akin to the accounts of the first colonists, who reported the Natives as having powerful rulers who were, at least in some cases, members of an elite class who were prepared to use force to sustain territorial and trade claims. The Natives are now seen as having actively and creatively reacted to the changing circumstances that contact with Europeans wrought.

Historic Period

Although earlier attempts had been made to establish permanent settlements in the Carolina colony, Charles Towne became the first successful colonization attempt in 1670. Ten years later, the colonists moved the initial

settlement on the Ashley River to Oyster Point, at the merge of the Cooper and Ashley Rivers in the Charleston Harbor, to take advantage of its more easily defended position and its superior port possibilities (Poston 1997). The city grew and, by the 1690s, Charleston had more than 100 houses and numerous government and commercial buildings; after the American Revolution, Charleston continued to expand both its population and territory and by 1826 it contained more than 5,000 buildings and 40,000 residents (Poston 1997; Mills 1826). Charleston became an important commercial center for South Carolina, especially since it was the primary port, exporting the agricultural products that were produced nearby, including rice, indigo, and cotton, as well as lumber and naval stores (Mills 1826).

In 1682, Charleston was located within Berkeley County, which encompassed all the land from the Stono River to Awendaw Creek (then Seewee Creek); later Berkeley County was divided, with the coastal area becoming Charleston District in 1769. Eventually, the Charleston District would be divided into counties, including Colleton in 1800, Berkeley in 1882, and Dorchester in 1897, leaving only a thin strip of coastal land to Charleston County (Stauffer 1998). For much of the colonial period, the counties of South Carolina were simply designations of location, while most of the state governmental and legal functions were concentrated in Charleston. In 1706, the province of South Carolina was divided into religious/clerical parishes, which would provide some local government functions for their residents, and the peninsula containing the city of Charleston was designated as St. Philips Parish (Stauffer 1998). Later, as the population of the city grew, St. Philips Parish was split and St. Michael's Parish was established in 1751 (Poston 1997; Edgar 1998).

Despite taking on some local governmental functions, especially the keeping of records, and serving as election districts, these Anglican parishes were not the only religious establishments in Charleston. South Carolina's policy of basic religious tolerance allowed for numerous religious groups to establish themselves within the Charleston area in the late 18th century, and build places of worship; among the denominations present within Charleston were Baptists, Congregationalists, Huguenots, Jews, and Presbyterians (Edgar 1998). The residents of Charleston, no matter their religious affiliation, generally followed colonial burial practices, interring their dead in their churchyard cemeteries and marked graves with tombstones carved in contemporary fashions (Poston 1997). This practice continued through the turn of the nineteenth century, until spatial and sanitary concerns, combined with a nationwide rural cemetery movement, ended these historical burial practices. In addition to the publicly accessible Magnolia Cemetery, other religious denominations also established burial grounds outside the city limits (Poston 1997).

After the Civil War, Charleston had a difficult time reestablishing its antebellum commercial importance. Consistent shelling of the city had left many of its buildings in poor condition and, because of poor economic circumstances, many Charlestonians retained these structures and made efforts to repair them instead of building new homes and businesses. When two natural disasters, a hurricane and an earthquake, took their toll on the city in the late nineteenth century, residents again repaired their old buildings, mostly out of necessity, instead of beginning anew (Poston 1997). Even the William Enston Homes, one of the major public works projects of the late 1800s, was financed by money that successful businessman Enston had earned prior to the Civil War and bequeathed to the city of Charleston upon his 1860 death (HABS 1993). In Charleston, the preservationist movement developed by the beginning of the twentieth century and private citizens took steps to save and rehabilitate many older homes. This preservation ethic led to the first local historic preservation ordinance and the creation of the first historic district, in 1931, and, because of the uniqueness of its historic structures and atmosphere, Charleston has become one of the most popular tourist destinations in the Southeast (Poston 1997).

Although Charleston is known for its preservation of historic structures, and many of its unique architectural treasures survive, most of the early colonial structures were destroyed by a series of fires in the late seventeenth

and early eighteenth centuries. One that does remain is the original powder magazine of the city, which was constructed in 1713, with groin vaulting and 36-inch thick brick walls, as an attempt to provide proper storage for munitions (Poston 1997). After the American Revolution, as the defense needs of the state changed, South Carolina made an effort to update its military facilities and other magazines and munitions storage facilities were built, including one complex on Charleston Neck in the 1820s. Since Charleston had already suffered numerous destructive fires, the location of this new magazine site was placed outside the city as a safeguard. With its original purpose superseded, the colonial Powder Magazine (constructed in 1713) was returned to descendants of the original landowners in the 1800s, after which it was utilized for a variety of purposes, before becoming one of the first buildings to be preserved and restored at the turn of the twentieth century (Poston 1997).

Previously Recorded Resources

One previously recorded archaeological site, the State Powder Magazine Complex (31CH2141), and one previously aboveground resource, the Standard Oil Buildings, are located on the tracts of land that comprise the current Laurel Island Project Area. The Standard Oil Buildings were identified during the previous S&ME survey in 2006, but were not recorded with the SHPO or given a survey number. Additionally, seven NRHP listed or eligible aboveground resources are located within a 0.5-mile radius of the proposed project: the William Enston Home (19-0075; NRHP listed 1996), Magnolia Cemetery (31-077; NRHP listed 1978), the Charleston Cemeteries Historic District (NRHP listed 2017); East Bay Elementary School (4257; NRHP eligible); the Immigration Center (2809; NRHP eligible); the Colin McKissick Grant Home (2810; NRHP eligible); and the Charleston City Railway Car House (2830; NRHP listed 2017).

State Powder Magazine Complex

The State Powder Magazine Complex (31CH2141), located on the Charleston Neck, was designed by Robert Mills. Robert Mills was born in Charleston, in 1781, and he considered himself "the first native born American to study to become an architect" (Bryan 2001:2). As the youngest son of a middle-class Charleston tailor, Mills could not rely on monetary stability as a way to establish himself in a planter society. Instead, he decided to build upon his early training in architecture, possibly provided by his brother Thomas or any number of other instructors in Charleston who advertised their services in teaching architectural principles to young men, or obtained by traveling to Washington D. C. to study under James Hoban, who had been working in Charleston during Mills' youth. During the next decade, Robert Mills cultivated friendships and working relationships with the likes of Thomas Jefferson, Charles Bulfinch, and Benjamin Henry Latrobe, all of whom helped to expand Mills' knowledge of architectural styles and traditions (Bryan 2001).

Although Mills was best known as an architect, he also had a keen interest in other topics, including mechanical engineering, technological innovation, and geography. In addition to working on plans for steam engines and canals, one of the issues that defined Robert Mills' career was the creation of fireproof buildings. Fire could be devastating to a city, with its closely packed buildings, as was demonstrated by a series of conflagrations that swept through Charleston during the eighteenth and early nineteenth centuries. Government offices especially desired fireproof buildings, in part to serve as a safeguard for the valuable records they held. This need became readily apparent when the building that housed the Patent office was destroyed by fire in December 1836 and over 10,000 records were lost (Bryan 2001). In the majority of his buildings, Mills utilized masonry vaulting to achieve fireproof status, creating rows of groin-vaulted rooms flanking a central barrel-vaulted corridor; to increase the fireproofing of the building, Mills preferred to eschew the use of wood completely, instead suggesting applying plaster directly to the masonry. This architectural pattern became the most recognizable characteristic of Robert Mills' public buildings, including numerous courthouses around South Carolina, the

County Records Office (Fireproof Building) in Charleston, and his Fireproof Office addition for the Treasury Department in Washington D.C (Bryan 2001).

In addition to public offices and records buildings, fire also posed a significant problem for powder magazines, which were used to store gunpowder for both private organizations and the state militias. In 1817, Baltimore experienced the true devastation that could be caused by such a disaster when the Levering & Company gunpowder factory, eight miles outside of town, exploded, destroying nearby buildings and breaking glass in windows up to three miles away. Mills believed that the safest location for a powder magazine was outside of the city, in an area accessible by a navigable waterway. He volunteered to submit a design for a fireproof magazine with a circular plan. This idea was based on plans Benjamin Latrobe had submitted for other munitions storage facilities, with which Mills would have been familiar (Bryan 2001). Although Baltimore never acted on these plans, Mills, while working as the Superintendent of Public Buildings in South Carolina and then later as the Commissioner of Public Buildings for Charleston District, would adapt them and oversee the construction of a magazine complex that conformed to them.

The State Powder Magazine Complex, located on the Charleston Neck, was designed by Robert Mills and constructed between 1822 and 1827, with John Howard completing at least some of the work (South Carolina General Assembly [SCGA] 1827). The new State Magazines conformed to the characteristics of Mills' earlier plan for the Baltimore magazine: outside of town, on a navigable waterway, fireproof construction, masonry vaulted, and a circular plan. Located on the Charleston Neck, the magazines were built on a five-acre property called Laurel Island, which was bounded by Town and New Market Creeks. The complex, as completed, consisted of nine circular brick magazines and was laid out with a large magazine, approximately 20 feet in diameter, situated in the center and eight smaller magazines, with a diameter of 16-feet, surrounding it to form a square (Figure 4; Appendix C). Between each of the individual magazines there was approximately 130 feet of space, which would provide some protection for the remaining depots should an explosion occur in one of the buildings (Bryan 2001).

Although one source (Whitelaw and Levkoff 1975) dates the construction of the nine powder magazines in Charleston Neck to the War of 1812 and attributes them to General William Fishburne, this information is generally believed to be inaccurate. The majority of sources, including the Historic American Building Survey (HABS) report completed in 1934, attribute these structures to a design by Robert Mills and date their construction to the 1820s. In *Statistics of South Carolina* (1826), Mills provides corroboration for the later construction date, stating that 'the state is now erecting powder magazines upon a new and permanent plan…distant, about two miles four furlongs N.W. of the courthouse, situate on an island formed by a creek," a description that matches the description of archaeological site 38CH2141 (Mills 1826:421).

The large central magazine, with a capacity of 4,000 powder kegs, was designated for the storage of public powder, while the smaller magazines, each able to hold 1,000 kegs, were utilized by private powder importers ([HABS 1934). The magazines were circular, drum-like structures, topped with domical vaulted interior ceilings (Figure 5); the public magazine had a central support column that gave the building the appearance of a mushroom vault (Figure 6). The original design for this larger magazine must have posed a structural problem since, in 1827, the South Carolina state legislature commented on John Howard's petition to receive payment for the "pulling down and rebuilding of the Centre Magazine," referring the matter to the Commission of Public Buildings for Charleston District (SCGA 1827). These buildings, with their conical slate roofs covering the interior vaulting and two-foot thick walls, were designed to be fireproof (Bryan 2001; HABS 1934). This construction, combined with the site plan that served to divide the stores of powder among the buildings, helped create the "bomb proof" design for the entire complex that Mills had intended (Gallagher 1935:161; HABS 1934:3).

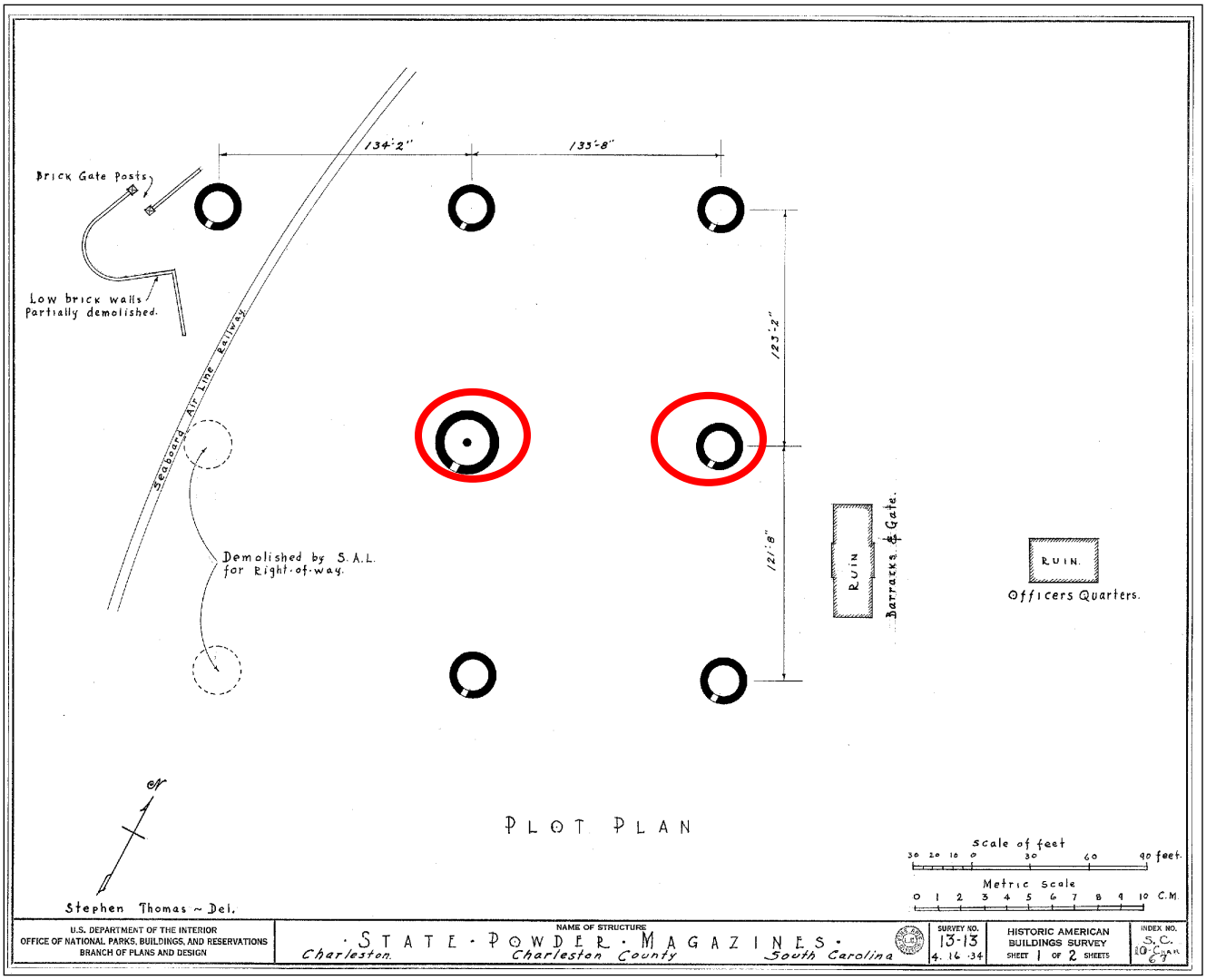


Figure 4. Plan of Powder Magazine Site. Drawn by Stephen Thomas (HABS 1934). Ruins found during the archaeological investigation are circled in red.

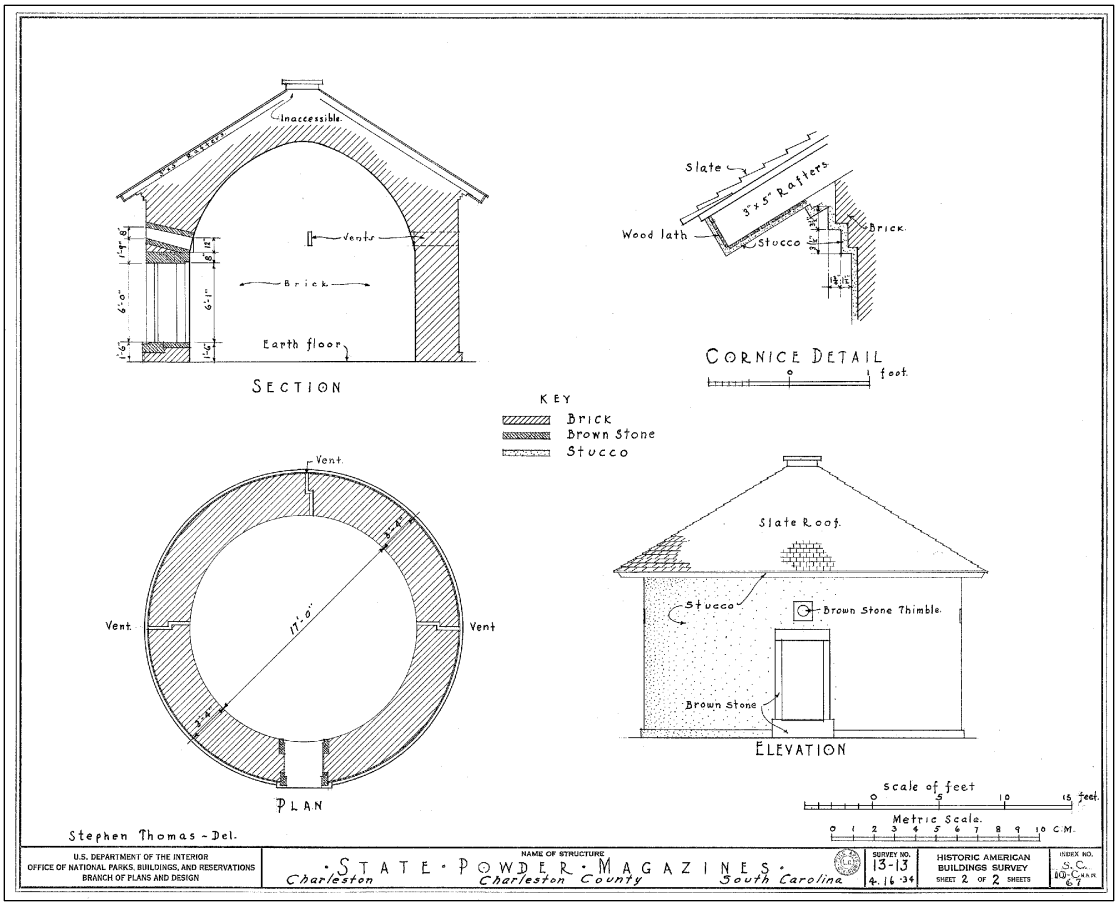


Figure 5. Detail of smaller magazines, drawn by Stephen Thomas (HABS 1934).

In addition to the magazines, the Powder Magazine Complex also included a combined barracks and gate, which was considered architecturally significant (Figure 4). In his 1826 description of the magazines, Robert Mills also discussed this gatehouse and the other structures on the site, including the barracks and officers' quarters: "Against the outside of the east wall of enclosure, a range of barracks is erected, two stories high, and covering the grand gateway leading into the magazine court, [separate] from that of the officers', where the boat landing is. Close by this landing stands the officers' and magazine-keepers' quarters" (Mills 1826:422). Although it had fallen into disrepair during the early twentieth century and had been completely destroyed by 1940, later descriptions of the gatehouse agree with Mills statements, indicating that it was a triumphal arch, but it also included two stories of barracks to house the regiment that was stationed there. It likely served as the inspiration for the 1852 gatehouse, designed by Edward Brickell White, at the College of Charleston (Bryan 2001:191-192).

By 1829, the State Magazine complex was experiencing problems and the General Assembly approved $5,000 for the "repair and re-roofing of six of the magazines, and of the officers quarters, and in improving the navigation of the Creek," to make it easier to transport powder to and from the complex (SCGA 1829). These repairs were carried out between 1829 and 1830 (SCGA 1829). In 1871, the state government, under the direction of the Commissioner of Sinking Funds, W. J. Whipper, auctioned off the land containing the magazines and gatehouse, referred to as the Powder Magazine Tract, through the firm of Leitch and Brown (Barbot 1871). Years after that

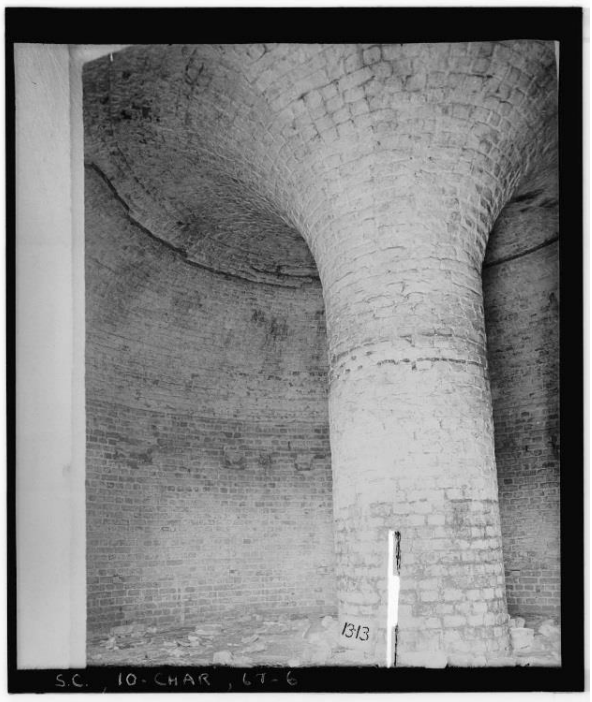


Figure 6. Central Magazine. Taken by M. B. Paine (HABS 1934:10-CHAR 67-6).

sale, however, at least some Charleston residents continued to refer to the land as "Magazine Island" (Simons 1883).

In 1934, HABS recorded the Powder Magazine Complex, including photographs and measured drawings of the site (Appendix B). At the time, the property, containing the magazines and the ruins of the guardhouse, was owned by Seaboard Air Line Railroad. Two of the magazines had already been demolished by the time the structures were recorded by HABS and most of the others were in various states of disrepair. Presently, the remains of three of the magazine structures can be found and it appears that the location of the Officer's Quarters and the Barracks & Gate are beneath the former Holston Landfill. S&ME identified the ruins of the Powder Magazine Complex in 2006 and recorded the ruins as archaeological site 31CH2141; additional information on the archaeological investigations of the site are included in chapter four.

Standard Oil Buildings

On the former Beach Company Landfill tract, near the Cooper River, are the remains of three buildings that were built and used by the Standard Oil Company (Figure 7). They were part of a pier complex that Standard Oil likely used to receive shipments. The central building is approximately 37 feet long by 18 ½ feet wide and is flanked by two smaller buildings. The three buildings are brick, constructed in American common bond, and the northern two are raised on concrete and wooden piers, as a measure to keep the floors above the high tide line. In May 1918, Standard Oil had the property surveyed and water depth readings taken at different points on the Cooper River. The plat from this survey shows the three structures, connected to the shoreline by a 250-foot walkway leading to the southernmost building. Additionally, the depth readings on the river are recorded and an area is labeled for dredging (McCrady Brothers and Cheves 1918). Presumably, this area was dredged to make the pier accessible to ships to load and unload oil shipments.

Figure 7. Standard Oil Buildings, view to the north.

The Standard Oil buildings were identified by S&ME during a 2006 survey of the Project Area (Resource No. 5091). Currently, the structures are unused and have fallen into disrepair. The northern two structures are missing large parts of their walls, although the southern structure appears to retain its four walls; the buildings have deteriorated since they were originally identified by S&ME in 2006. Although the structures have lost much integrity of design and workmanship through deterioration, they represent a significant period in the industrial history of the area and demonstrate early twentieth century construction techniques adapted to the challenging conditions of the swampy Cooper River shoreline. Individually, the Standard Oil Buildings are not eligible for inclusion on the NRHP. However it is our opinion that collectively they are significant and eligible for inclusion under Criterion A. The proposed development of the Project Area will constitute an adverse effect to the remains of the Standard Oil Buildings.

William Enston Home

The William Enston Home (Figure 8), located on approximately 12 acres of land along King and Huger Streets, is a complex of 24 cottages and five additional structures: Memorial Hall, the Infirmary, the Water Tower, the Entrance Gate, and the Engine house. The Enston Home is an early example of private philanthropy aimed at assisting poor, elderly residents of Charleston. The funding for the complex came from a bequest by William Enston, a prominent Charleston businessman, in his 1859 will (HABS 1993). During his life, he recognized the growing number of elderly residents, many of whom were poor and could not support themselves. Ostensibly basing his idea on the almshouses he witnessed as a youth in Canterbury, England, Enston specified that his development include "cottages…built of brick, in rows, neat and convenient, two stories high, having each two rooms and a kitchen," constructed on "not less than eight acres of ground…for each cottage must have a small garden to busy the occupant" (HABS 1993:9).

Figure 8. William Enston Home, view to the south.

Although William Enston died in 1860, the settlement of his estate and the Civil War delayed the construction of the complex until the 1880s, when Charleston mayor William A. Courtneay provided a significant impetus for the commencement of the project (Poston 1995:8). Mayor Courtneay took a great interest in the project, overseeing many of its details. The design and execution of the complex was entrusted to many notable local and national figures. Charleston architect W. B. W. Howe, Charleston contractor Colin P. Grant, and Charleston mason/contractor Robert McArrel worked on the design and construction of the buildings and landscape. Philadelphia engineer Rudolph Hering was contracted to design a sewage and plumbing system to help make the low-lying tract of land more healthy for its future elderly inhabitants (Poston 1995; HABS 1993).

The original 19 cottages, built between 1887 and 1889, are Romanesque Revival style. Following Enston's instructions, they were constructed of brick, using a stretcher bond, and they utilized red mortar to blend with the red brick. The original cottages were identical: two stories, with hipped roofs and cross gables, three chimneys with corbelled caps, and molded concrete decorative details (Poston 1995). In 1927, an additional five cottages were added to the site, designed in a style mirroring the original structures but containing contemporary architectural elements. These cottages were also of red brick with a stretcher bond, but they were held together using white mortar; the new cottages also had only two chimneys, more plain than the corbelled ones of the nineteenth century structures (Poston 1995).

Additional buildings, beyond the residences, were built on the site throughout the late nineteenth and early twentieth centuries. Two of these buildings were constructed in 1888-1889, as part of the original water and sewer system for the Enston Home: the Engine House and the Water Tower. The Engine House is a simple, utilitarian, brick building with a hipped roof and concrete accents, designed to blend with the rest of the structures (Poston

1995). The Water Tower is a cylindrical brick tower with a pedimented entrance portico. Beltcourses separate the lower level from the upper level, which is octagonal with decorative concrete accents (HABS 1993).

Memorial Hall, which was completed in 1889 and built in the Romanesque Revival style, is a red brick structure with common bonding, decorative concrete elements, and a tall bell tower with a pyramidal roof (Poston 1995). It was designed as a memorial to William Enston, the benefactor of the complex. The Entrance Gate, a central archway flanked on either side by a single-story octagonal tower, was constructed of uncoursed granite rubble in the Richardson Romanesque style and completed in 1893 (Poston 1995). In 1933, the Enston Home added an infirmary for the residents of the complex funded by a bequest from Miss Harriet E. Dawson. The Dawson Infirmary is one and one-half stories and includes red brick with white mortar, concrete decorative elements and a gabled roofline. The Infirmary was designed to complement the nineteenth century structures, although it exhibits some influences from the contemporary Craftsmen/Bungalow style. Since the mid-1970s, the Dawson Infirmary building has been used as housing for the superintendent of the William Enston Home (HABS 1993).

In 1989, Hurricane Hugo struck Charleston causing significant damage to many historic properties. The William Enston Home was affected by the hurricane, which damaged the roofs of many of its structures. After Hugo, the roofing materials on the cottages were replaced with composition shingles; the bell tower of Memorial Hall and portions of the Dawson Infirmary were also damaged during the storm (Poston 1995).

The William Enston Home is significant to Charleston because of its historical association with philanthropy and the support of the elderly poor of the city. Additionally, it is one of the few examples of Romanesque Revival architecture in Charleston, a city which is dominated by architectural styles that date to earlier periods. It is listed in the NRHP under Criteria A and C (Poston 1995).

Magnolia Cemetery

Magnolia Cemetery (Figure 9), which was formally dedicated on November 19, 1850, is a significant example of the "rural cemetery" concept that became popular during the mid-nineteenth century (McNulty and Dixon 1976:8). With the increasing industrialization and burgeoning populations of cities during the 1800s, space was becoming scarce in graveyards within city limits and new medical knowledge caused people to question the health risks associated with burial grounds placed so close to residential areas (French 1974:42). Additionally, in many cities these sacred areas "were not safe from the next wave of residential and industrial expansion" (Bender 1974:202). For instance, "in Philadelphia until the 1820s, sites for graveyards were simply temporarily vacant lots to serve the needs of the day, which were soon obliterated by the expanding city as if they had never existed" (French 1974:39-40). Newer rural cemeteries were located outside of the city limits, but still within easy traveling distance; 1831 they were designed utilizing landscaping concepts that would encourage visitors to come and linger within the natural setting they offered (Bender 1974). This was in stark contrast to the earlier churchyard or private graveyards, which were often untended, overcrowded lots with numerous rows of headstones depicting harsh, depressing images of death. Early colonial attitudes about death and burial were changing, and the perception of a cemetery altered as well, from an uninviting, but necessary, place avoided by the living, to a picturesque rural paradise, serving as a retreat from the urban environment. (Bender 1974; French 1974).

Magnolia Cemetery is an important part of that movement, which began with the founding of Mount Auburn Cemetery in 1831, outside of Boston (French 1974). In 1849, after purchasing the land for the cemetery, which was a portion of the former Magnolia Umbra Farms and Village, six men (Edward Sebring, William C. Dukes, George V. Reynolds Junior, William S. Walker, Frederic Richards, and W. D. Porter) submitted a petition to the South Carolina legislature for permission to incorporate as the Magnolia Cemetery Company. In this petition, they stated "that the

Figure 9. A portion of Magnolia Cemetery Home, facing south.

establishment of a place of extra mural burial is regarded as a great public want," and that they wished to incorporate "in order to give…security to those purchasing lots that the grounds can never be used for any purposes than those proposed," and the company charter "shall contain a clause solemnly devoting the said grounds to the purposes of a Cemetery or burial place forever" (Magnolia Cemetery Company 1850).

To create an ideal rural cemetery, the Magnolia Cemetery Corporation hired Edward C. Jones, a noted South Carolina architect, to survey the grounds and design a plan for the cemetery, including landscaping (McNulty and Dixon 1976). Conditions today are similar to the nineteenth century plan and the design continues to beckons the visitor to explore the landscaped grounds on the winding paths that meander through the property. A small lake dominates the central portion of the cemetery, with bridges that allow visitors to stroll across the water. Live oaks provide shade and enhance the solemn beauty of the property. The varied architecture of Magnolia's many buildings, tombs, and monuments serves to enhance the natural beauty of the cemetery. Headstones decorated with Gothic details stand alongside massive tombs of Egyptian Revival style, including the Vanderhorst mausoleum and the W. B. Smith mausoleum. Greek Revival architecture can be seen on the Colonel William Washington monument, dating to 1856, while decorative Victorian ironwork encloses many family plots. In the midst of this setting stands the superintendent's house, dating from around the turn of the nineteenth century; it is a building remaining from the original Magnolia Umbra plantation (McNulty and Dixon 1976).

The combination of the landscape and architectural features of Magnolia Cemetery demonstrates one of the primary principles of the rural cemetery movement: education. The new rural cemetery was conceptualized as an "instructional institution and inculcator of morality," which allowed "the plenitude and beauties of nature combined with art would convert the graveyard from a shunned place of horror into an enchanting place of succor and instruction" that "would create 'legacies of imperishable moral wealth' which would provide a strong

and improving influence on all members of society" (French 1974:46-47, 52). Visitors who came to Magnolia were meant to feel enlightened by the experience of the rural cemetery, which would serve to balance their daily lives within the city.

In addition to the significant landscaping and architectural features, Magnolia Cemetery is notable for many of the people who have been buried there. William Aiken, former governor of South Carolina and member United States House of Representatives, was buried there in 1887. Horace Lawson Hunley, one of the financers of the Confederate submarine, the *H. L. Hunley*, was interred at Magnolia after he died when the *Hunley* sank during a training run in Charleston Harbor. The *H.L. Hunley* was recovered and a new crew accomplished its mission, ultimately sinking the *USS Housatonic* on February 17, 1864, although both the submarine and crew were lost at sea. The submarine was recovered in 2000; on April 17, 2004, over 140 years after their final mission, the eight crew members of the *Hunley* were also interred at Magnolia Cemetery (Friends of the *Hunley* 2006). Other notable people buried in the cemetery include United States Congressmen: Langdon Cheves, William John Grayson, George Swinton Legare, Hugh Swinton Legare, William Turner Logan, Burnet Rhett Maybank, Thomas Sanders McMillan, R. Barnwell Rhett, Richard Smith Whaley; United States Congresswoman Clara Gooding McMillan; and writers: John Bennett, Frank B. Gilbreth, Jr., Josephine Lyons Pinckney, Beatrice Witte Ravenel, and William Gilmore Simms (Phillips 1995).

The Charleston Cemeteries Historic District

The Charleston Cemeteries Historic District encompasses 23 cemeteries that are laid out on the former Magnolia Umbra Plantation lands on the northern portion of the Charleston peninsula (Hyder and Parris 2017). These cemeteries, beginning with Magnolia Cemetery in 1850, were established over a 106 year period and represent over a century of burial practices and funerary art that is associated with a number of different cultural and religious groups. The cemeteries within the 107 acre district are: Magnolia Cemetery (1850), St. Lawrence Cemetery (1852), Brith Shalom Cemetery (1855), Bethany Cemetery (1856), Brotherly Association Cemetery (1856), Friendly Union Cemetery (1856), Christian Benevolent Society Cemetery (1856), Unity and Friendship Cemetery (1856), Humane and Friendly Society Cemetery (1856), Bethel UMC Cemetery (1873), Calhoun AME (Old Emanuel Church) Cemetery (1874), Lewis Christian Union Cemetery (1879), Reserved Fellowship Society Cemetery (1884), Jenkins (Trinity AME Church #1) Cemetery (1886), Kahal Kadosh Beth Elohim Cemetery (1884), Old Morris Brown AME Cemetery (1887), Trinity AME/Harleston-Boags Cemetery (ca. 1900), Trinity AME Church #2 Cemetery (1905), Beth Israel Cemetery (1911), New Emanuel AME Church Cemetery (1926), Greek Orthodox Cemetery (1936), New Morris Brown AME Cemetery (1945), and Brown Fellowship Society Cemetery (1956). The Charleston Cemeteries Historic District is listed in the NRHP under Criterion A, for its ties to the social history of burial practices of many different segments of the Charleston population over more than 100 years, and under Criterion C, for its funerary art and landscaping.

East Bay Elementary

East Bay Elementary School, now Sanders-Clyde Elementary School, is located at 805 Morrison Drive; it was constructed in 1955 as part of the South Carolina School Equalization program (Dobrasko 2005). The equalization program developed from a 1951 bond referendum and three-cent sales tax that was championed by new state governor James Byrnes. The funds from these programs were designed to support a statewide school construction campaign that was mean to equalize white and black schools throughout the state; the program was developed in direct response to Supreme Court decisions concerning school segregation in Texas and Oklahoma and the challenge to South Carolina's segregated schools of *Briggs v. Elliott*. Overseen by the Educational Finance Commission, the program resulted in the consolidation of many school districts and the construction of new

school facilities for both black and white students. The design of East Bay Elementary was developed by educational consulting firm Englehardt, Englehardt, and Leggett, as were the plans for the new Memminger Elementary and the addition to Buist Elementary; the school was designed by the architecture firm of Simons and Lapham. East Bay Elementary, as constructed in the 1950s, included 30 classrooms, a library, a cafeteria, and a visual-aids room, as well as open corridors. East Bay Elementary was determined to be eligible for the NRHP under Criteria A and C.

Immigration Center

The Immigration Center (Resource No. 28091) is located at 49 Immigration Street, along the Cooper River; it is a classical revival style structure (Figure 10) that was built in 1911, by Charleston architecture firm Walker and Borden, under the supervision of U.S. Department of the Treasury architect James Knox Taylor. The structure presents a wide front façade, with 15 bays of single windows across the upper story; the lower story has a central entry door located beneath a flat-roofed portico that is supported by brick columns. The Immigration Center spans 10 bays of single windows on the side elevations. On each elevation, the lower story windows have stone sills and lintels, while the upper story windows, excluding the three central windows on the front elevation, have only stone sills and lintels made up of soldier-course bricks. A brick trim band runs above the upper tory windows. The wide eave overhang of the flat roof has modillions. Brick piers with a shorter wall-structure between, including a decorative medallion in the central section, create a parapet roofline; this parapet is mirrored in the roofline of the entry portico. The building sits on a raised basement level that has a stone beltcourse above it, differentiating it from the upper stories. Although the windows and entry doors on the building have been replaced, it retains integrity of location, design, setting, feeling, and association and has historic materials and workmanship outside of the windows. The building was originally constructed to serve as a Federal Immigration Station that would serve to hold and process immigrants through the port of Charleston, but its utility for this purpose was limited by only a small number of immigrants coming through Charleston. Although not used for its original purpose for much of its history, the Immigration Center has had multiple purposes, including as a manufacturing location for overalls during World War I and serving 28 years as the Charleston County Jail, from 1940 through 1968, when it was nicknamed the "Seabreeze Hotel" by local residents. The Immigration Center has been determined eligible for the NRHP under Criteria A and C.

Colin McKissick Grant Home

The Colin McKissick Grant Home is located at the southwest corner of Meeting and Huger Streets; it is a collection of six identical residences and an entry gate to the home property that were constructed to house aged Presbyterian city residents. The buildings were designed by architect David B. Hyer and constructed by builder T. W. Worthy; the charitable organization that owned the structures was chartered in 1920 and construction began on the buildings in 1923. The housing units are two-stories in a simple interpretation of the Italian Renaissance style. They each have a main hipped roof with a front-gabled section and inset, one-story porch with three-arched openings and a flat roof, which decorative balustrade between brick columns. The hipped-roof section is three bays wide, with an entry door and two single windows on the lower story and three single windows on the upper story; the front-gabled portion is two bays wide, with single windows on both the upper and lower stories. Each building is constructed of American common bond masonry, with rows of headers separated by six rows of stretchers. The structures sit on raised basements and there is a beltcourse between the basement and first story, as well as between the first and second levels. The front-gabled section has an enclosed pediment and a rectangular, louvered attic vent. The rear of each building has a two-story, one-bay, shed-roofed projection, a central, hip-roofed dormer, and a two-story porch that is less decorative than the front porch structure. The Colin McKissick Grant Home has been determined eligible for the NRHP under Criterion C.

Figure 10. The Immigration Center, facing north.

Charleston City Railway Car House

Charleston City Railway Car House (Figure 11) is located at 649 Meeting Street, just west of the intersection of Meeting and Cool Blow Streets. The two-story brick structure was built in 1897 to house electric trolley cars for the Charleston City Railway; in the late 1930s, it was altered to convert it to a bus barn for city busses. The Car House is a front-gabled, masonry structure with a unique raised gable façade. The building, which has a rectangular form, is constructed of American common bond masonry, with six rows of stretchers separating the rows of headers. The raking cornice of the roofline has brick laid in a diagonal pattern, creating the illusion of decorative stringcourses and a recessed panel. The Car House has a raised central section, with clerestory windows on the side elevations. A decorative circular window is centered in the upper story, above a stone panel that reads "CAR HOUSE CHARLESTON CITY R'Y CO 1897." The first story is dominated by five multi-pane, metal framed windows, with the central bay including a double entry door, that have adapted the garage door bays that were previously on the front elevation; between and above these windows are iron support beams. To the north of the structure is an attached, small, single story addition that has an arched entry door and arched window opening; to the south, a larger, single story, brick addition with arched window openings projects forward from the main structure and also spans much of the southern elevation. These additions and alterations were mostly completed in the 1930s through 1975, while the building was used to house the city bus fleet. Since 2016, the building has been home to offices and classrooms for the American College of the Building arts. The Charleston City Railway Car House was listed in the NRHP under Criterion C in 2017.

Figure 11. The Charleston City Railway Car House, facing west.

Previously Recorded Archaeological Resources

A review of Archsite indicated two previously recorded archaeological sites are located within a 0.5-mile radius of the Project Area (Figure 1). Site 38CH66 is an unknown period artifact scatter which was incompletely recorded in the 1920s. Notations in the site file questioned the ability to locate the site. Site 38CH1452 is a scatter of prehistoric ceramic sherds that was recommended as ineligible for listing in the NRHP. These sites are not located within the Project Area, and will not be impacted by the proposed development.

Archaeological site 38CH2141 was identified on the former Holston Landfill tract. S&ME identified this site during an earlier phase of the current study and it is located in the Project Area.

Current Use of the Project Area

The majority of the Project Area consists of two former landfills. The majority of the property was saltwater marshlands until the early 1940s when the area began to be used for disposal of dredge spoils. Dredge spoil disposal continued until the mid-1960s. The area was then used as an unregulated trash/waste dump for approximately 10 years until the mid-1970s. Charleston County began to lease the Holston Landfill in 1973 and received a permit to operate a landfill (Permit No. DWP-061) from the South Carolina Department of Health and Environmental Control (SCDHEC). Later in 1976, Charleston County also began to lease the Beach Company Landfill and received a permit to operate a landfill (Permit No. DWP-079) from the SCDHEC. As regulated landfills,

both landfills received shredded municipal waste. Reportedly, the Beach Company Landfill also received petroleum contaminated soil, sludge, unshredded waste, and building demolition and land clearing debris. The Holston Landfill stopped accepting waste in 1984 and Charleston County placed a 1-foot soil cover atop the waste as part of the landfill closure. The SCDHEC granted the Holston Landfill final closure in January 1987. The Beach Company Landfill stopped accepting waste in 1989. In the early 1990s, Charleston County constructed a 3-foot clay/topsoil cover and a passive methane venting system at the Beach Company Landfill as part of the landfill closure. The SCDHEC granted the Beach Company Landfill final closure in December 1995. The former landfills have been vacant since landfilling operations ceased in the 1980s.

4.0 Archaeological Survey Results

S&ME initiated the study reported herein in 2006. At that time, we conducted an archaeological survey of the portions of the Project Area that had not been subject to ground disturbance associated with the former landfills. These efforts documented the ruins of the powder magazine and recorded the ruins as archaeological site 38CH2141.

Summary of 38CH2141

Site Number: 38CH2141	**NRHP Recommendation**: Potentially Eligible
Site Type: Historic Artifact Scatter and Ruins	**Elevation:** 10 ft. AMSL
Components: Unknown	**Landform:** Plain
UTM Coordinates: E0598972, N3630452 (NAD 27)	**Soil Type**: Tidal Marsh and artificial fill
Site Dimensions: 120 N/S x 75 E/W m	**Vegetation:** Young trees and English Ivy
Artifact Depth: 0–40 cmbs	**No. of STPs/Positive STPs:** 26/3

From October 31 through November 4, 2006, S&ME conducted an intensive archaeological survey of an approximately two-acre portion of the former Holston Landfill tract that was not disturbed by past landfill activities. This property is located north of the city recycling center on Romney Street and east of the railroad tracks (Figure 1). The powder magazine ruins are visible on this small portion of the tract in a 1941 aerial, taken seven years after the 1934 HABS documentation project (Figure 12). A HABS index card, updated in October 1975, noted that the magazines were demolished in 1950 (Appendix A). A 1973 plat supports this information, as it depicts a rectangular berm, referred to as the "Old Dike," around the magazine area, which separates this area from the land being used as a landfill (Figure 13). As the elevation of the landfill rose over time, the ground surface of the powder magazine site appears to have remained untouched, apart from the 1950s demolition. The archaeological survey was conducted within the area protected by the berms, which is currently approximately five meters (15 feet) below the surface of the landfill to the east.

A total of 26 shovel tests, ranging from a depth of 25-40 cm, were excavated across the surveyed area (Figures 14 and 15). The shallow soil was comprised of approximately 15 cm of very dark grayish brown (10YR 3/2) loamy sand overlying 15-25 cm of grayish brown (10YR 3/3) loamy sand. The substantial absence of surface and subsurface brick rubble, combined with the shallow soils, confirmed that a portion of the site had been demolished and the area cleared and pushed to the edges to form the brick rubble berm. Several brick push piles were noted west of Transect 3 (Figure 16) and in an area that, based on the HABS information, was once the location of one of the magazines. The rubble pile measured approximately 15 x 13 m in diameter and was located approximately 40 m northwest of the exposed brick foundation. Three features, a circular brick foundation, a large circular brick ruin, and a larger brick pile/scatter, were discovered during the field investigation.

Site 38CH2141 measures 120 m north/south by 75 m east/west. Vegetation at the site consists of relatively young trees (approximately 15-30 years old) and is predominantly covered with English Ivy (Figure 17). Artifacts noted on the ground surface, where visible, included slate pieces, possibly from the magazine roofs, brick rubble, and large brownstone pieces, possibly from the doorways of the magazines. Modern trash associated with the landfills was also scattered in the area.

To delineate the boundaries of the site, field personnel excavated a cruciform pattern of shovel test pits at 10-m intervals radiating out from the edges of the brick foundations, until two negative shovel tests, when possible,

Figure 12. 1941 Aerial photograph of the Holston Landfill Site.

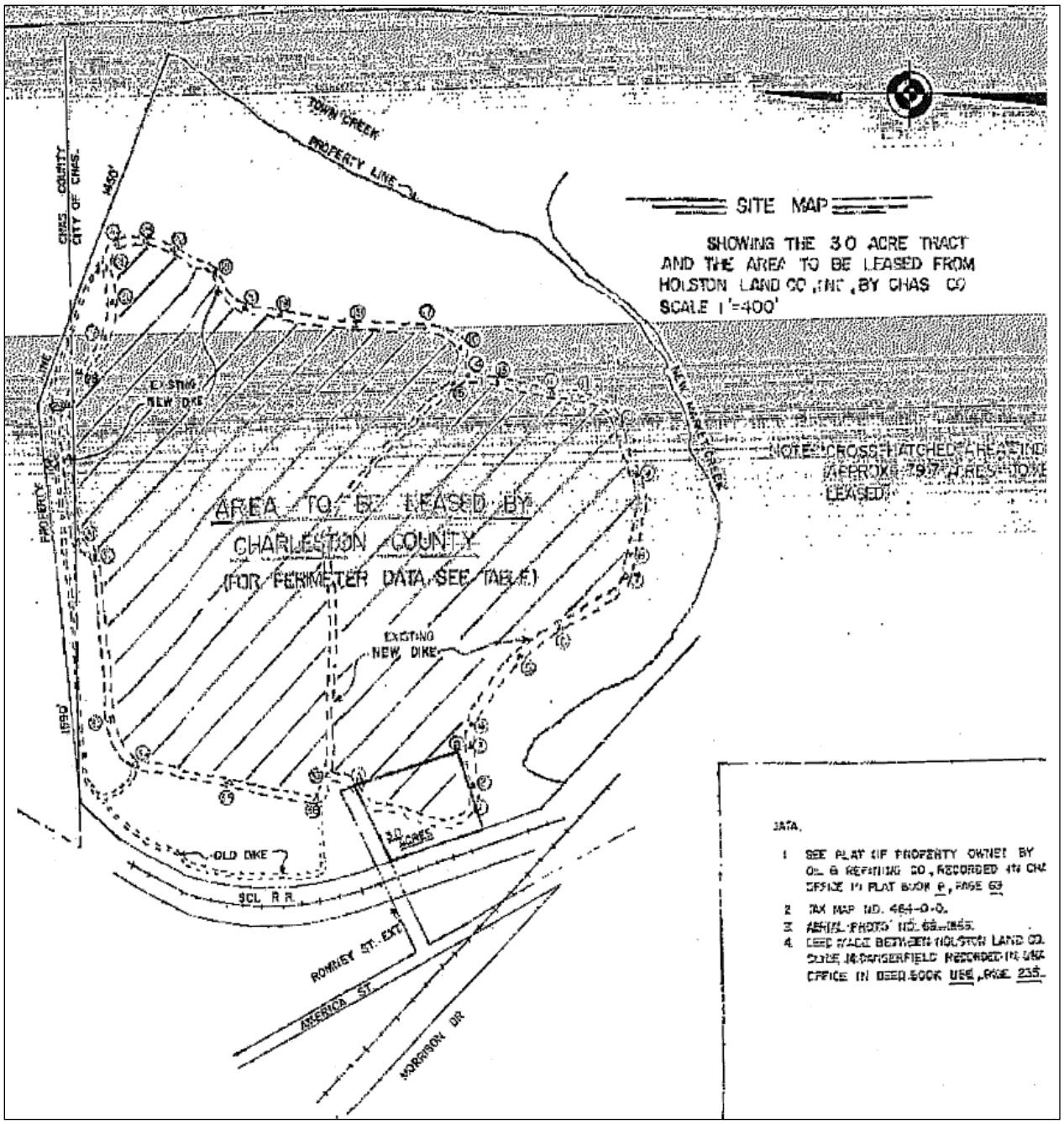
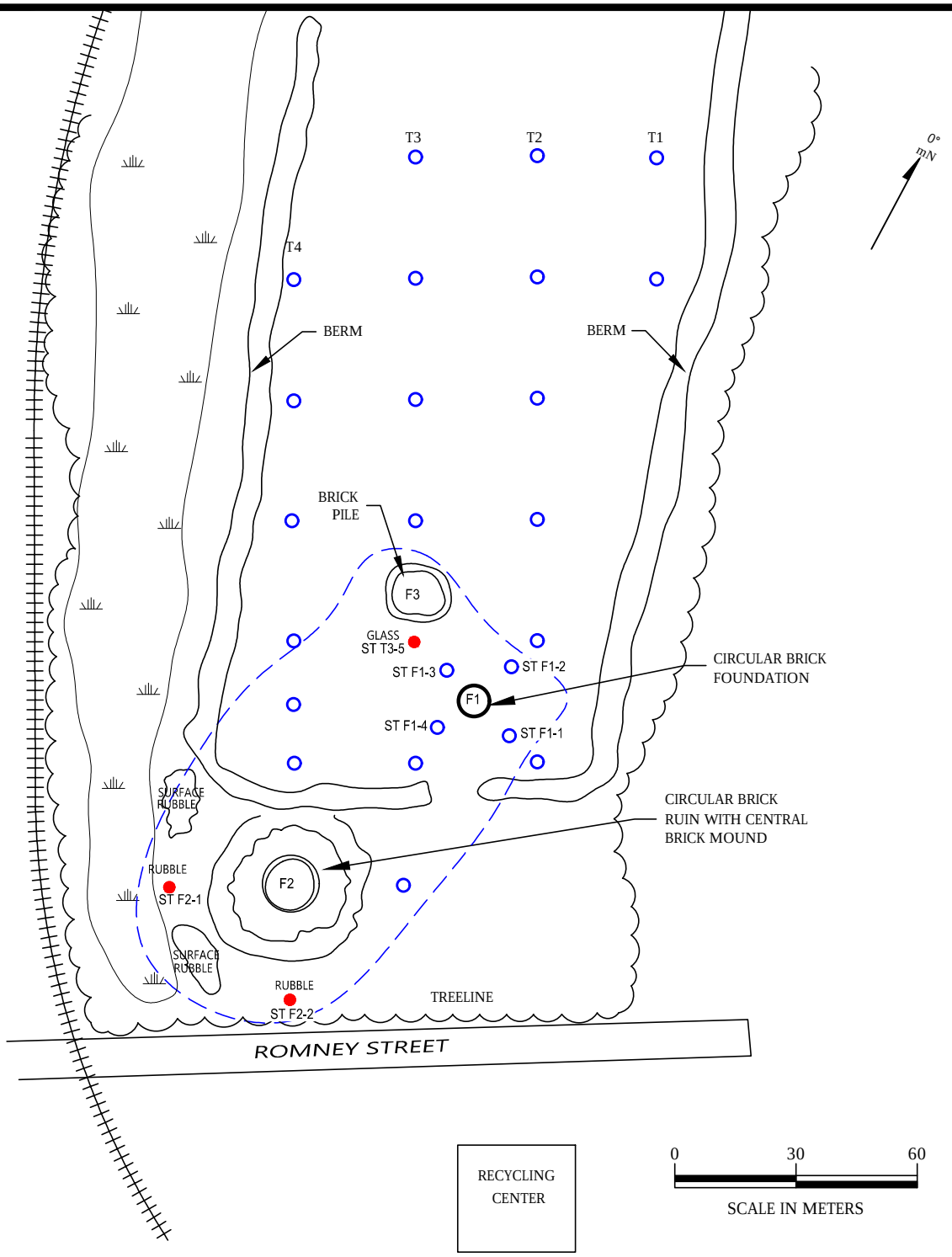


Figure 13. 1973 Plat of the Holston Landfill Tract showing the "Old Dike."



LEGEND

- POSITIVE SHOVEL TEST PIT
- NEGATIVE SHOVEL TEST PIT
- BRICK PILES
- SITE BOUNDARY

	STATE POWDER MAGAZINE SITE 38CH2141	SCALE: AS SHOWN	FIGURE NO. 14
	LAUREL ISLAND CHARLESTON, SOUTH CAROLINA	DATE: 2-12-2019 PROJECT NUMBER 4213-19-11	

Figure 15. Field conditions at site 38CH2141.

Figure 16. Photograph of Feature 1, taken during our 2006 field investigation.

Figure 17. Photograph of Feature 2, facing east.

were excavated. The additional shovel test pits excavated around F1 and F3 did not recover artifacts, while the shovel tests around F2 recovered one mortar fragment and four brick fragments.

Negative shovel tests bound the site to the northeast and northwest, while standing water forms the boundary along the southeastern and southwestern portion of the site. A total of 15 shovel test pits were excavated within the site, between and around the magazine locations. Three of the shovel test pits recovered artifacts; artifacts were found between 0–20 cm below the current surface. A total of eight artifacts, consisting of four brick fragments, one mortar fragment, and three pieces of clear curved glass were recovered from 38CH2141.

Based on the HABS documentation, the larger ruin is similar to the size of the central magazine and the smaller brick foundation and brick piles are possibly the remains of two of the eight smaller magazines, specifically the magazines located northeast of the central magazine in the first and middle rows.

The smaller magazine foundation ruin, designated as Feature 1 (F1), is visible and had been demolished and cleared to a level slightly above the ground surface (Figure 12). A small push pile of brick rubble and large brownstone pieces was noted approximately 12 m to the east of the foundation. F1 measured 5.2 m in diameter, which coincides with the 17-foot measurement from the 1934 HABS documentation of the smaller magazines.

The larger ruin, designated as Feature 2 (F2), was located outside of and formed part of the southwest corner of the brick berm. This ruin measured approximately 40 m in diameter and was covered in English Ivy (Figures 13 and 17). Two large brick piles were noted to the west of F2. Based on the diameter and location, F2 is likely the larger central magazine described in the HABS documentation. F2 is composed of an outer rubble ring with an interior brick mound, which are the remains of the circular foundation and the remains of the central vaulted roof support.

A large scatter of brick rubble around several small brick piles was noted in the area where the northernmost magazine would have been located, based on the HABS information and the location of the exposed magazine foundation. This brick pile and scatter, designated as Feature 3 (F3), measured approximately 15 x 13 m in diameter.

The State Powder Magazine complex no longer possesses the integrity of design, setting, materials, workmanship, or feeling that HABS documented in 1934. It is our opinion that the near total destruction of these structures makes them ineligible for inclusion on the NRHP. Furthermore, archaeological investigation at this property would be unable to contribute important information or add to the in-depth description of this complex documented during the last century. Since the site received such thorough documentation by HABS in the 1930s we do not recommend further work on this site. .

5.0 Visual Impact Analysis

On January 31, 2019 and September 16, 2019, S&ME conducted a visual impact analyses on selected historic resources that are NRHP listed or eligible within a 0.5-mile radius of the proposed Project Area; since multiple significant resources share the same viewshed, once potential impacts were identified, a visual analysis from other resources located in the vicinity was not pursued. The visual impact analysis had a goal of identifying potential impacts to the viewshed of significant historic resources in the vicinity of the Project Area; to achieve this goal, we used a DJI Phantom 4 Pro Unmanned Aerial System (UAS) with either one or two 36-inch balloons, suspended with a 10-feet long tether under the UAS. The UAS was utilized to position balloons at the location that will be the top of the high-rise building (Appendix A). S&ME then attempted to photograph the balloons, if visible, from the location of surrounding NRHP-listed and eligible resources, to determine whether the development will be visible from each of those locations. These results are contingent on the placement and height of the development; changes to current plans may alter the visibility of the structure.

The results at each resource are described below.

William Enston Home

Photographs taken from the rear of the William Enston Home, which is the portion of the property closest to the proposed Project Area, verify that the planned development will not be visible from this location (Figure 18). Additionally, the historic viewshed from this property has already been compromised by Interstate 26 and the on ramp to the Arthur Ravenel Bridge.

Figure 18. Photograph from the rear of the William Enston Home, facing east towards the Project Area.

Magnolia Cemetery

Magnolia Cemetery covers an expanse of land in excess of 90 acres. Originally designed as an urban refuge, habitational and industrial operations now neighbor the cemetery. Although within the midst of Charleston, the expansive acreage, landscaping, and mature vegetation shield the majority of the cemetery and provides an isolated park environment. Currently, the interior portion of the site is landscaped and has old growth vegetation, while the smaller portion of the site that borders the marshes along Town Creek has views of the marsh, as well as the Arthur Ravenel Bridge, The Channel 2 broadcasting tower, and structures associated with the adjacent petroleum operation.

Because the vegetation varies throughout the site, photographs were taken from multiple locations on the property. From the cemetery entrance, the Project Area will not be visible because of the prevalent trees and vegetation that dominate the landscape (Figure 19). Along the east boundary of the cemetery is a large section of marshland, which provides some trees to help screen the Project Area from this portion of the property (Figure 20). The proposed high-rise structures, and likely other parts of the planned development, will be visible from this vantage; the Arthur Ravenel Bridge and the Channel 2 broadcasting tower are also visible (Figure 21). However, because of the importance of the surrounding environment and the landscape and viewshed for the original purpose and design of Magnolia Cemetery, additional intrusions on the viewshed beyond the existing view of the bridge may alter this important aspect of the cemetery's integrity. Additionally, the high-rise structure will be visible from portion of the cemetery where there are no other visible intrusions (Figure 20). Therefore, it is S&ME's opinion that the proposed development will have an adverse effect on Magnolia Cemetery.

Figure 19. Magnolia Cemetery front gate, facing the Project Area.

Figure 20. View from rear of Magnolia Cemetery towards the Project Area. The arrow is pointing to the balloon.

Figure 21. Northern marsh edge view from Magnolia Cemetery.

Immigration Center

The Immigration Center (Resource No. 28091) is located along the Cooper River, approximately 0.5-mile southeast of the proposed development (Figure 1). The proposed high-rise, and potentially additional structures on the site, will be readily visible from the Immigration Center (Figure 22). Although the viewshed of the Immigration Center has been altered by the addition of the raised Highway 17 ramp to the Arthur Ravenel Bridge, the majority of the setting surrounding the Immigration Center retains the riverfront and port setting that was important to its earliest intended use, to house immigrants that were coming through the port of Charleston. Because of the flat landscape between the Immigration Center and the proposed development, with mashes and a lack of mature tall vegetation, large portions of the development will dominate the landscape to the north of the Immigration Center. Therefore, it is S&ME's opinion that the proposed development will have an adverse effect on the Immigration Center.

Figure 22. View from the Immigration Center, facing northwest toward the Project Area. The arrow points to the balloon.

Charleston City Railway Car House

Charleston City Railway Car House is located at the western end of Cool Blow Street, approximately 0.5-mile west of the proposed Project Area (Figure 1). Although the Charleston City Railway Car House is located within a developed area of the City, the flat terrain to the east, along Cool Blow Street, may provide a relatively unimpeded view of the proposed development (Figure 23). There has been some industrial development along this portion of Meeting Street since the construction of the Charleston City Railway Car House, much of it occurred during the period of significance of the Car House, which dates through the mid-twentieth century, and is compatible with the historical use of the building. However, based on the current proposed location of the high-rise structures (Appendix A), they would not be visible from the Charleston City Railway Car House, as an existing multi-story office building along the south side of Cool Blow Street provides a visual shield for the newly proposed structures (Figure 23). Therefore, it is S&ME's opinion that the proposed development, as currently planned will have no adverse effect on the Charleston City Railway Car House. However, if the location of the high-rise buildings on the property changes, the visual impact analysis may have to be revisited based on the new locations of these buildings.

Figure 23. The view from Charleston City Railway Car House, facing east towards the Project Area. The balloon is obscured by the office buildings along Cool Blow Street.

6.0 Conclusions and Recommendations

S&ME, on behalf of Laurel Island Development, LLC, has conducted a Historic Resources Impact Assessment for an approximately 200-acre Project Area, located in Charleston, Charleston County, South Carolina, and an Intensive Archaeological Survey of an approximately two-acre portion of the tract. The current development plan includes construction of multi-story buildings, as well as other areas to be used for residential, and commercial developments, parking spaces, and green space.

The archaeological survey efforts examined an approximately two-acre portion of the former Holston Landfill Tract. The remainder of the Project Area consisted of the former landfill, was covered with hardscaped surfaces, or otherwise would not have been conducive to archaeological survey efforts. This survey identified archaeological site 38CH2141. Site 38CH2141 consists of the ruins of three powder magazines from the State Powder Magazine complex designed by Robert Mills. The State Powder Magazine complex no longer possesses the integrity of design, setting, materials, or workmanship that the HABS documented in 1934. It is our opinion that the near total destruction of these structures makes them ineligible for inclusion on the NRHP and archaeological investigation at this property would be unable to contribute important information or add to the in-depth description of this complex that was developed during the last century. Since the site received such thorough documentation by HABS in the 1930s we do not recommend additional investigation.

The Standard Oil Buildings (Resource No. 5091), located along the western bank of the Cooper River, are at the eastern edge of the Project Area. Individually, these structures are not eligible for inclusion on the NRHP. However it is our opinion that collectively they are significant and eligible for inclusion under Criterion A. The proposed development of the Project Area leaves these structures in place, with a newly constructed boardwalk walking area designed around them. As these designs are preliminary, we are unable to offer an opinion on the nature of potential effects at this time. We recommend that consideration of potential effects be included in more mature development planning.

This analysis examined potential impacts to the William Enston Home, Magnolia Cemetery, the Immigration Center, and the Charleston City Railway Car House. The historic viewshed from the William Enston Home has been compromised by Interstate 26 and the on ramp to the Arthur Ravenel Bridge. The view from the Charleston City Railway Car House is obstructed by existing office buildings, trees, and overhead powerlines. The proposed development will have no effect on these resources. The high-rise structure will be visible from portions of Magnolia Cemetery, where there are no other visible intrusions, and the Immigration Center; it is also likely that the non-high-rise residential and commercial structures may be visible from these locations, depending on their placement on the tract. Therefore, it is S&ME's opinion that the proposed development will have an adverse effect on these resources.

Based on the results of this study, it is S&ME's opinion that the development, as currently designed, will have an adverse effect on multiple NRHP listed and eligible resources within the project's viewshed. The potential for effects to the viewshed of four resources were documented during this study. If the project will need federal permits or funding, S&ME recommends consultation with the SHPO and other interested consulting parties to develop a mitigation plan that addresses these adverse effects and identifies measures that will be taken to minimize or mitigate them. Methods to minimize adverse effects may include, but are not limited to, redesigning the site plans to minimize building heights; utilizing design guidelines and architectural details that reflect the historic character of the area; and using vegetative screening. Potential mitigation measures for adverse effects may include, but are not limited to, developing educational and interpretive materials about the history of the

development tract, the affected resources, or related historic contexts; sponsoring survey efforts for underrepresented types of resources within the City of Charleston; or creating digital archives for documents associated with resources that will be adversely affected by the proposed development.

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Appendix A: Client Provided Conceptual Design Drawing

HEIGHT DISTRICT PLAN
8.19.2020

MASTER PLAN
for
LAUREL ISLAND

BELLO | GARRIS
ARCHITECTS

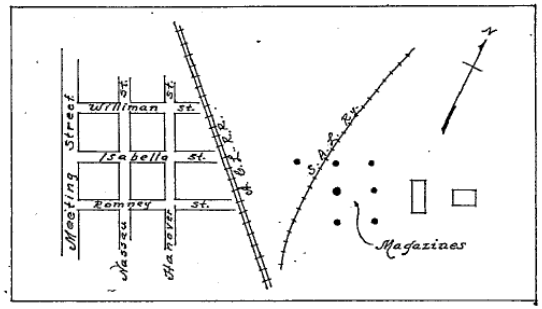
Appendix B: The State Powder Magazine Complex – HABS File

Sfafe Powder Magazines

Exfreme N. E. Section of City

Beyond End of Isabella Sfreef

Charlesfon, S. C.



Sketch Map

Showing Location.

Erecfed 1826

Architecf Robf. Mills.

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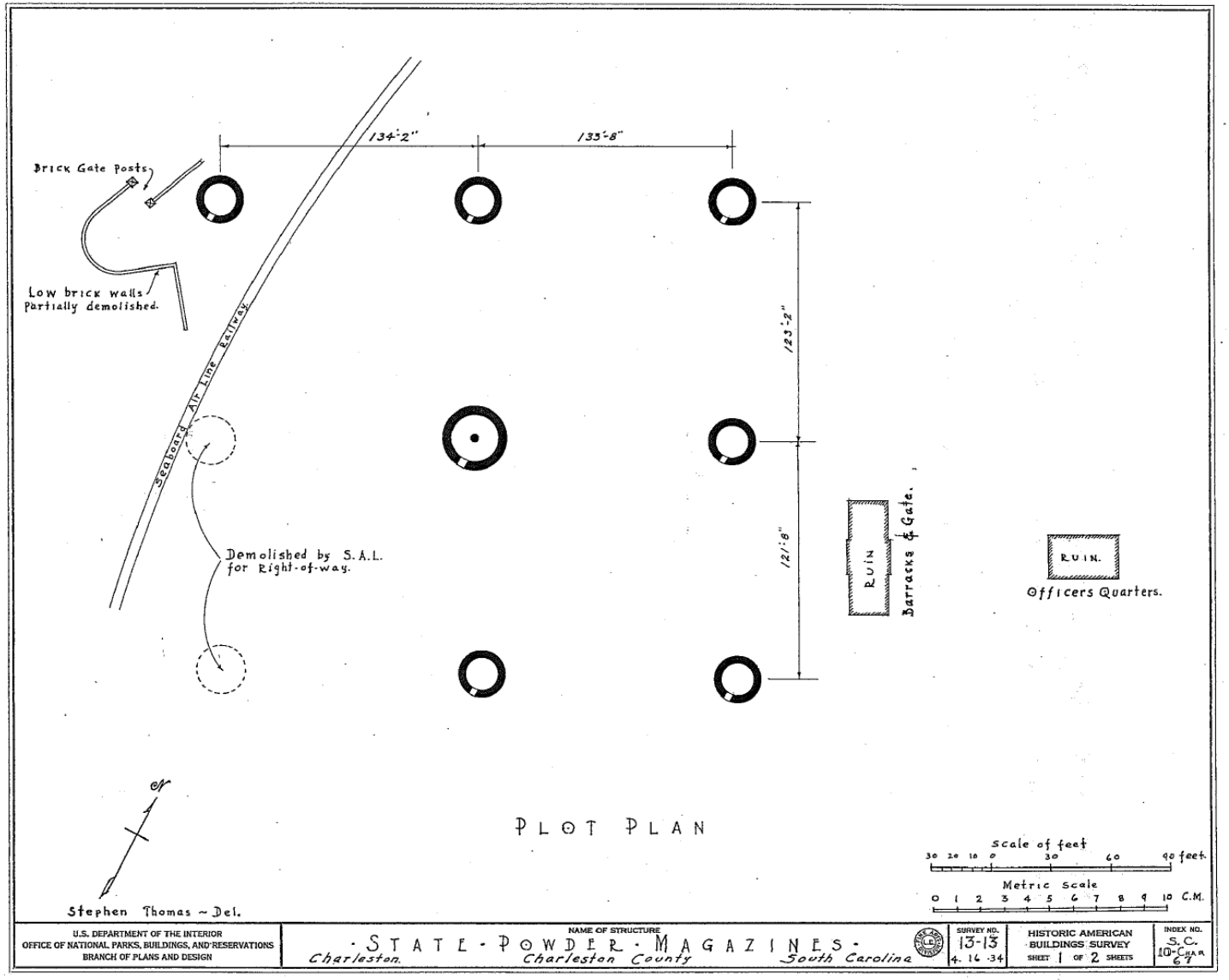

U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS
BRANCH OF PLANS AND DESIGN

NAME OF STRUCTURE
· STATE · POWDER · MAGAZINES ·
Charleston. Charleston County South Carolina

SURVEY NO. 13-13
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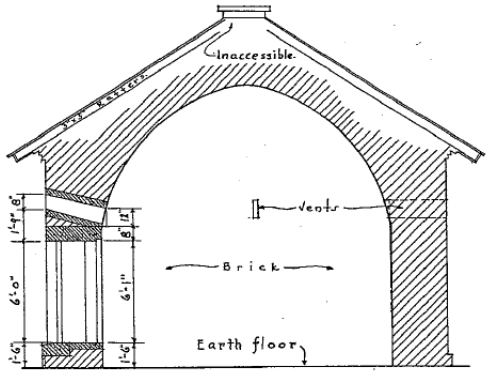
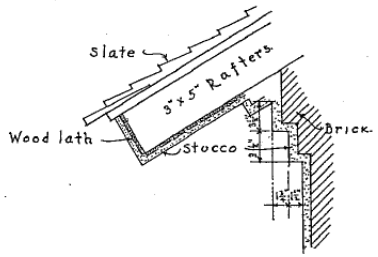
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 1 OF 2 SHEETS

INDEX NO. S.C. 10-CHA R 67



SECTION

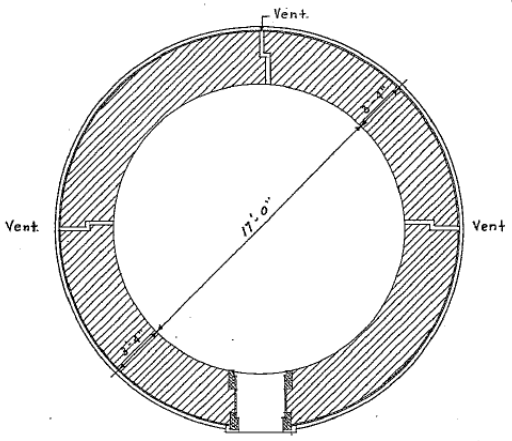


CORNICE DETAIL

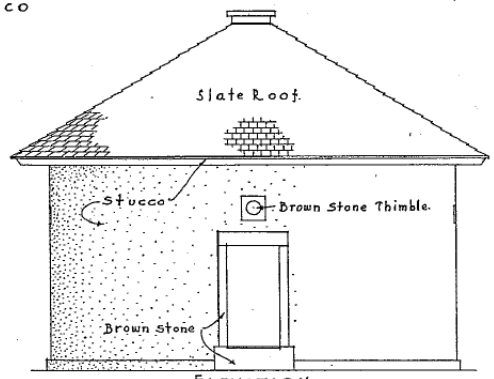
0 1 foot

KEY

Brick
Brown Stone
Stocco



PLAN



ELEVATION

scale of feet
0 5 10 15 feet.

Metric Scale.
0 1 2 3 4 5 6 7 8 9 10 C.M.

Stephen Thomas - Del.

U.S. DEPARTMENT OF THE INTERIOR OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS BRANCH OF PLANS AND DESIGN	NAME OF STRUCTURE • STATE • POWDER • MAGAZINES • Charleston Charleston County South Carolina	SURVEY NO. 13-13 4.16.34	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 2 OF 2 SHEETS	INDEX NO. S.C. 10-CHAR 67

HABS
SC
10-CHAR
6-1-

STATE POWDER MAGAZINE
and
Administration Buildings
Charleston, Charleston County
South Carolina

Owner: Seaboard Air Line Railroad.

Date of Erection: 1826 (text); 1820-30 (card).

Architect: Robert Mills.

Builder:

Present Condition: Some buildings in ruin, others going to ruin.

Number of Stories: Administration Buildings, two; magazines, one.

Materials of Construction: Brick and stucco.

Other Existing Records: See text.

Additional Data: See following pages.

S.C.
19-CHAR
47

STATE POWDER MAGAZINE
CHARLESTON, S. C.

SURVEY NO. 13-13

This group of magazines for the storage of public and private powder (resembling a collection of assorted pill boxes) was constructed in 1826 by Robert Mills, on an island in the northeast portion of the city of Charleston. At that time this island, formed by Town Creek, New Market Creek and the marshes adjacent to same, was accessible only by water. Today, due to the reclamation of the marsh land and the increased alluvial deposits in the New Market Creek bed on account of the filling in of its northern and western branches, the site is now part of the mainland.

There were originally nine magazines, an officers' house and a barracks combined with a gateway. Two magazines have been destroyed when the Seaboard Air Line's right of way was run through the property, and the remaining seven are in various stages of dilapidation. The barracks and officers' quarters are in ruins with practically only one gable end of each building rising to the original height.

Mills' account of these magazines in his "Statistics" gives the impression that the barracks were constructed in combination with a gateway, which formed the eastern boundary of the magazine section proper and which was continued with a wall of some nature around all the magazines. Traces of this wall have now entirely disappeared, although the barracks ruin shows fragments of two Roman arches down its

center, which would indicate the gateway. The existing gate posts and wall fragments at the western end of the magazine enclosure, as shown on the plot plan, are not mentioned in his account, but may have been the water entrance for unloading the powder when brought to the site by boat.

The central (larger) magazine has a supporting center column of brick work, carrying a mushroom brick vault (see photograph). The outer roof of this central magazine has vanished. Hills stated, however, that it was a "bomb proof" roof. The six smaller magazines have no central pier, the parabolic brick vaults springing from the circular exterior walls without any central support. Their construction is of brick, stuccoed on the exterior, all the doors trimmed with brownstone. The round thimble ventilators over the doors are cut out of brownstone, while the other ventilators at the quadrant points are rectangular openings in the brick work, having a traverse to prevent a direct passage to the outside. The roofs are of slate carried on wood joists, which in turn rest on the brick vaults.

Hills states in his "Statistics" that the large central magazine was for the public powder and had a capacity of four thousand kegs; the smaller ones had a capacity of one thousand kegs and were to be assigned to different importers of powder.

The magazines are now owned by the Seaboard Air Line Railroad.

4 S.

S.C.
13-CHAR.
67-

Sources of material: "Statistics of South Caroline", by Robert Mills
"Robert Mills, Architect", by C. C. Wilson, in the Bulletin of the University of South Caroline, No. 77, February, 1919.

Data by Dist. Officers
Approved
District Officer #13

Reviewed 1936, M.C.F.

S.C.,10-CHAR,67

SOUTH CAROLINA | Charleston (10) | CHARLESTON | 2 9 7 8 3 d

State | County | Town or Vicinity

Structure: State Powder Magazines and Administration Buildings (13-13)

Charleston Neck. Brick and stucco, one story. Built 1824; demolished c. 1950. Robert Mills, architect. 2 sheets (1934, including plot plan, typical unit); 6 ext. photos (1934), 1 int. photo (1934); 4 data pages (1936).

Card prepared Oct. 1975.

Ref: Statistics of S.C. Robt. Mills-1826

F N-6

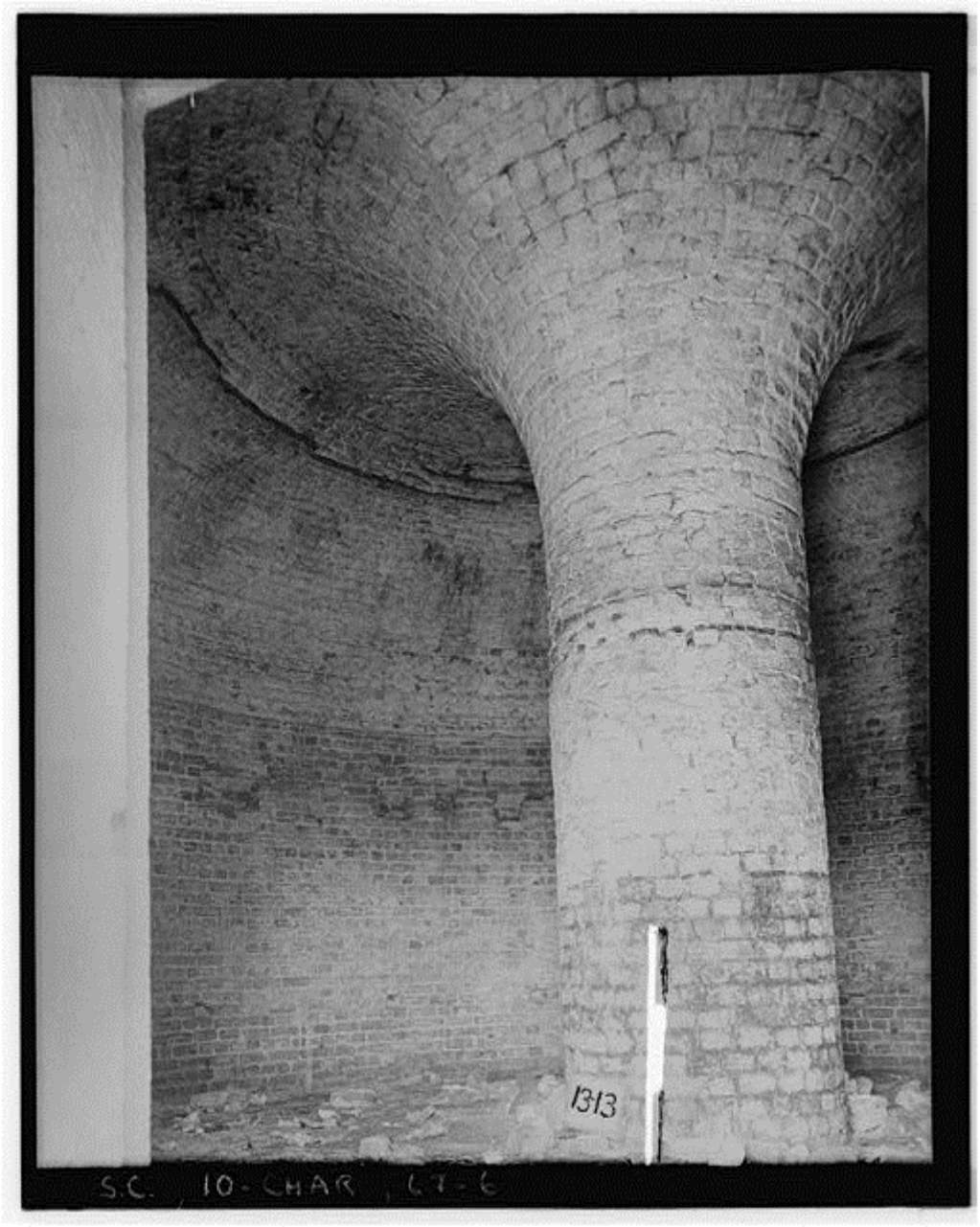
Form 10-444 (2/62) HISTORIC AMERICAN BUILDINGS SURVEY

S.C. , 10-CHAR , 67-2

S.C. , 10-CHAR , 67-3

13-13
S.C., 10-CHAR, 67-4

13-13
S.C., 10-CHAR, 67-5


1313
S.C. 10-CHAR, 67-6

13-13

NOTE:
Survey number HABS SC-13-13

Unprocessed field note material exists for this structure (6).

Building/structure dates: 1820 initial construction

COLLECTION:
Historic American Buildings Survey (Library of Congress)

REPOSITORY:
Library of Congress, Prints and Photograph Division, Washington, D.C. 20540 USA

DIGID:
http://hdl.loc.gov/loc.pnp/hhh.sc0224

CONTENTS:
Photograph caption(s):
1. Historic American Buildings Survey, M.B. Paine, Photographer April, 1934 GENERAL VIEW LOOKING EAST (NORTH HALF OF SITE).
2. Historic American Buildings Survey, M.B. Paine, Photographer April, 1934 GENERAL VIEW LOOKING EAST (SOUTH HALF OF SITE).
3. Historic American Buildings Survey, M.B. Paine, Photographer April, 1934 DETAIL ENTRANCE GATE-POST, LOOKING EAST.
4. Historic American Buildings Survey, M.B. Paine, Photographer April, 1934 ELEVATION CENTRAL MAGAZINE LOOKING NORTHWEST.
5. Historic American Buildings Survey, M.B. Paine, Photographer April, 1934 ELEVATION TYPICAL MAGAZINE (BARRACKS RUIN IN RIGHT REAR).
6. Historic American Buildings Survey, M.B. Paine, Photographer April, 1934 INTERIOR DETAIL OF CENTRAL MAGAZINE.
7. Historic American Buildings Survey, M.B. Paine, Photographer April, 1934 DOORWAY DETAIL, TYPICAL MAGAZINE.

CARD #:
SC0224

Appendix C: Survey Card for Resource No. 5091

Statewide Survey of Historic Properties

State Historic Preservation Office
South Carolina Department of Archives and History
8301 Parklane Road
Columbia, SC 29223-4905 (803) 896-6100

Site No. 5091.1 Status U Revisit

Quadrangle Name: Charleston

Tax Map No. 4640000006

SURVEY FORM

Identification

Historic Name: Standard Oil Building #1

Common Name:

Address/Location: end of Romney Street; on bank of Cooper River

City: Charleston Vicinity of County: Charleston

Ownership: Private Category: Structure Other:

Historical Use: Industry

Current Use: Vacant/Not in use

SHPO National Register
Determination of Eligibility:

Property Description

Other:

Construction Date: circa 1910 Construction: Masonry

Historic Core Shape: Rectangular Exterior Walls: Brick

Other: Foundation: Concrete block

Commercial Form: Roof Shape: Missing

Other: Roof Material: Other

Stories: 1 story Porch Shape:

Other: Porch Width:

Description/Significant Features:

The central building in a grouping of three; approximately 60 feet long by 40 feet wide. The building is brick masonry construction, constructed in American common bond, and is raised on concrete and wooden piers, as a measure to keep the floors above the high tide line. The building had recessed windows with concrete sills and a beltcourse trim above the windows. Much of the building is significantly deteriorated.

Alterations (include date(s), if known):

Architect(s)/Builder(s):

Historical Information

Historical Information:

In May 1918, Standard Oil had the property surveyed and water depth readings taken at different points on the Cooper River. The plat from this survey shows the three structures, connected to the shoreline by a 250-foot walkway leading to the southernmost building. Additionally, the depth readings on the river are recorded and an area is labeled for dredging.

Source(s) of Information:

McCrady Brothers and Cheves. 1918. Standard Oil Company's Pier on the Cooper River. Plat Collection of John McCrady, Plat 2833. South Carolina Department of Archives and History, Columbia.

Digital Photo ID(s)

File Name:	View:	Other:
05091001.tif	Facing East	
05091002.tif	Facing Northeast	
05091003.tif	Facing East	

Program Management

Recorded by:	Organization:	Date Recorded:
Heather L. Carpini	S&ME, Inc.	01/30/2019

Statewide Survey of Historic Properties

State Historic Preservation Office
South Carolina Department of Archives and History
8301 Parklane Road
Columbia, SC 29223-4905 (803) 896-6100

Site No. 5091.2 Status U Revisit

Quadrangle Name: Charleston

Tax Map No. 4640000006

SURVEY FORM

Identification

Historic Name: Standard Oil Building #2

Common Name:

Address/Location: end of Romney Street; on bank of Cooper River

City: Charleston Vicinity of County: Charleston

Ownership: Private Category: Structure Other:

Historical Use: Industry

Current Use: Vacant/Not in use

SHPO National Register
Determination of Eligibility:

Property Description

Other:

Construction Date: circa 1910 Construction: Masonry

Historic Core Shape: Rectangular Exterior Walls: Brick

Other: Foundation: Concrete block

Commercial Form: Roof Shape: Flat

Other: Roof Material: Other

Stories: 1 story Porch Shape:

Other: Porch Width:

Description/Significant Features:

The northern building in a grouping of three; approximately 37 feet long by 18 ½ feet wide. The building is brick masonry construction, constructed in American common bond, and is raised on concrete and wooden piers, as a measure to keep the floors above the high tide line. The building had recessed windows with concrete sills and lintels; the windows were located in recessed panels created by pilasters and a beltcourse trim above the windows. Much of the building is significantly deteriorated.

Alterations (include date(s), if known):

Architect(s)/Builder(s):

Historical Information

Historical Information:

In May 1918, Standard Oil had the property surveyed and water depth readings taken at different points on the Cooper River. The plat from this survey shows the three structures, connected to the shoreline by a 250-foot walkway leading to the southernmost building. Additionally, the depth readings on the river are recorded and an area is labeled for dredging.

Source(s) of Information:

McCrady Brothers and Cheves. 1918. Standard Oil Company's Pier on the Cooper River. Plat Collection of John McCrady, Plat 2833. South Carolina Department of Archives and History, Columbia.

Digital Photo ID(s)

File Name:	View:	Other:
05091001.tif	Facing East	
05091002.tif	Facing Northeast	
05091003.tif	Facing East	

Program Management

Recorded by:	Organization:	Date Recorded:
Heather L. Carpini	S&ME, Inc.	01/30/2019

Statewide Survey of Historic Properties

State Historic Preservation Office
South Carolina Department of Archives and History
8301 Parklane Road
Columbia, SC 29223-4905 (803) 896-6100

Site No. 5091.3 Status U Revisit

Quadrangle Name: Charleston

Tax Map No. 4640000006

SURVEY FORM

Identification

Historic Name: Standard Oil Building #3

Common Name:

Address/Location: end of Romney Street; on bank of Cooper River

City: Charleston Vicinity of County: Charleston

Ownership: Private Category: Structure Other:

Historical Use: Industry

Current Use: Vacant/Not in use

SHPO National Register
Determination of Eligibility:

Property Description

Other:

Construction Date: circa 1910 Construction: Masonry

Historic Core Shape: Rectangular Exterior Walls: Brick

Other: Foundation: Concrete block

Commercial Form: Roof Shape: Flat

Other: Roof Material: Other

Stories: 1 story Porch Shape:

Other: Porch Width:

Description/Significant Features:

The southern building in a grouping of three; approximately 25 feet long by 20feet wide. The building is brick masonry construction, constructed in American common bond, and is raised on a concrete foundation, as a measure to keep the floors above the high tide line. The building had recessed windows with concrete sills and lintels; the windows were located in recessed panels created by pilasters and a beltcourse trim above the windows. Of three structures, this is the most intact, although it has also undergone some deterioration.

Alterations (include date(s), if known):

Architect(s)/Builder(s):

Historical Information

Historical Information:

In May 1918, Standard Oil had the property surveyed and water depth readings taken at different points on the Cooper River. The plat from this survey shows the three structures, connected to the shoreline by a 250-foot walkway leading to the southernmost building. Additionally, the depth readings on the river are recorded and an area is labeled for dredging.

Source(s) of Information:

McCrady Brothers and Cheves. 1918. Standard Oil Company's Pier on the Cooper River. Plat Collection of John McCrady, Plat 2833. South Carolina Department of Archives and History, Columbia.

Digital Photo ID(s)

File Name:	View:	Other:
05091001.tif	Facing East	
05091002.tif	Facing Northeast	
05091003.tif	Facing East	

Program Management

Recorded by:	Organization:	Date Recorded:
Heather L. Carpini	S&ME, Inc.	01/30/2019

APPENDIX D

Letters of Coordination

NORTH CHARLESTON SEWER DISTRICT

Safeguarding today, preserving tomorrow

7225 Stall Road /P.O. Box 63009 North Charleston, SC 29419 843.764.3072

September 18, 2019

Reveer Group
2971 West Montague Avenue
Suite 101
North Charleston, SC 29418

Attn: Mr. Rhett Reidenbach

Re: Sanitary Sewer Service for Proposed Laurel Island P.U.D.

Dear Mr. Reidenbach,

Please be advised that North Charleston Sewer District has the means and will to accept sanitary sewer flow from the proposed Laurel Island P.U.D. NCSD has the capacity to accept the overall project proposed flow of 1,378,170 GPD for the development. However, it is noted that projected Phase 1 flows will have to connect at our existing sanitary sewer infrastructure located near the intersection of King Street Extension and Monrovia Street. Future flows beyond those of Phase 1 will need to be routed directly to our Felix C. Davis Wastewater Treatment Plant located at 1000 Herbert Street. The property owner is responsible for any sewer line modifications including but not limited to pump station upgrade/relocation, gravity extension, force main installation, etc. to serve the proposed P.U.D.

If you have any questions, please let me know.

Sincerely,

Phillip T. Sexton

Phillip T. Sexton, PE
Capital Projects Director

Cc: Jarred R. Jones
file

at&t

September 10, 2019

Reever Group/Jennilee Covucci
2971 W Montague Ave, Ste 101
North Charleston, SC
(843) 297-4103

Jennilee,

This letter is in response to your request for information on the availability of service at the proposed development of Laurel Island (TM# 4640000006, 4640000002, 4590200013, 4640000038, 4611303024, 4640000023, 4640000007,) in Charleston, SC by AT&T.

This letter acknowledges that the above referenced address is located in an area served by AT&T. Any service arrangements for the new building will be subject to later discussions and agreements between the developer and AT&T. Please be advised that this letter is not a commitment by AT&T to provide service, but an acknowledgement that we have service in this area.

Please contact me at 843-745-4440 with any questions.

Thank you for contacting AT&T.

Sincerely,

Henry Domingo
OSP Design Engineer
AT&T Southeast

USA Proud Sponsor of the U.S. Olympic Team

Charleston County SCHOOL DISTRICT
excellence is our standard

STUDENTS ARE THE HEART OF OUR WORK!

March 3, 2020

Reveer Group
Attn: Jennilee Covucci
2971 W Montague Ave, Suite 101
North Charleston, SC 29418

Parcel #'s: 459-02-00-013, 461-13-03-024 & 464-00-00-002 (Morrison Drive), 464-00-00-006 (Huguenin Ave), 464-00-00-023 & 038 (Romney/ N Romney St)
Total # of Acres: 199.64
Downtown Charleston, SC

Operations Division

Gerrita Postlewait, Ed.D.
Superintendent of Schools

Jeffrey Borowy, P.E.
Chief Operating Officer

Dear Ms. Covucci:

Please accept this letter as "Proof of Coordination" and adequate capacity to service the PUD (Planned Unit Development) for the proposed Laurel Island Project consisting of a maximum of 4,260 multi-family units.

To determine an estimate of additional students any development will create, the following formula is used: on an average of .4 students per single-family unit and .2 students per multi-family unit which is then divided by the number of kindergarten through twelfth grade levels (which is a total of 13 levels) to get a grade level average. That average is multiplied by the number of grade levels per school level and rounded to the nearest whole number.

On the basis of the location supplied to us, we anticipate little impact to enrollment from a capacity standpoint to Simmons Pinckney Middle and Burke High. However, Sander's Clyde Elementary will be significantly impacted until a new school is built or rezoning occurs.

Please contact me at (843) 566-1995 if you have any questions and/or concerns.

Sincerely,

Angela Barnette, M.Ed.
Director of Planning & Real Estate

Charleston Water System

PO Box B
Charleston, SC 29402
103 St. Philip Street (29403)

(843) 727-6800
www.charlestonwater.com

Board of Commissioners
Thomas B. Pritchard, Chairman
David E. Rivers, Vice Chairman
Kathleen G. Wilson, Commissioner
Mayor John J. Tecklenburg, (Ex-Officio)
Councilmember Perry K. Waring, (Ex-Officio)

Officers
Kin Hill, P.E., Chief Executive Officer
Mark Cline, P.E., Assistant Chief Executive Officer
Dorothy Harrison, Chief Administrative Officer
Wesley Ropp, CMA, Chief Financial Officer
Russell Huggins, P.E., Capital Projects Officer

July 30, 2020

Rhett Reidenbach, PE
Chief Executive Officer
The Reveer Group
2971 West Montague Avenue, Suite 101
North Charleston, SC 29418

Re: Laurel Island Will-Serve Letter Request

Dear Mr. Reidenbach:

Charleston Water System (CWS) is in receipt of your request to provide a letter regarding its willingness to provide water and wastewater service to a Planned Unit Development generally located on a tract of land located off of Morrison Drive in the City of Charleston, Charleston County, South Carolina, which is further identified via tax map parcels 464-00-00-002 (Holston Landfill Site) and 464-00-00-006 (Romney Street Landfill Site), and hereinafter referred to as Laurel Island.

Whereas Laurel Island is a former dredge disposal site; and whereas Laurel Island is the site of two former landfills, Holston and Romney; and whereas each former landfill site is subject to a Voluntary Cleanup Contract (VCC) between the current owners and SC DHEC (Holston VCC 03-5413-NRP and Romney VCC 06-5645-NRP); and whereas Laurel Island lies within CWS' statutory water service area; and whereas that portion of Laurel Island identified as tax map parcel 464-00-00-002 lies within CWS' statutory wastewater service area, this letter serves as CWS' willingness to provide service to those areas of Laurel Island within CWS' respective water and wastewater service areas, subject to the following conditions and the final terms to be defined in the subsequent Development Agreement for this project:

- Water and wastewater plans shall be designed and constructed in accordance with CWS' Minimum Standards for the Design & Construction of Water and Wastewater Systems, latest revision;
- As a condition of final approval of the water and wastewater plans, CWS reserves the right to specify additional requirements, as it deems appropriate in its sole discretion;
- CWS reserves the right to engage the services of an engineering firm of its choosing to assist CWS in its review of the water and wastewater plans and to advise CWS regarding additional requirements;

- As a condition of acceptance for operation and maintenance, an SC DHEC approved operations and maintenance plan (Stewardship Plan) for VCC 03-5413-NRP and VCC 06-5645-NRP shall be provided to CWS. The Stewardship Plan as approved by SC DHEC shall not contain any health and safety requirements imposed by SC DHEC as applicable to a water or wastewater utility provider outside of those procedures customarily employed by such water and wastewater utility provider in the Charleston area.

CWS offers this willingness to provide water and wastewater service only insofar as its rights allow. Should access to our existing water and wastewater infrastructure be denied by appropriate governing authorities, CWS will have no other option than to deny service. This letter does not supplant any other review as required by governing authorities and municipalities.

Please be advised any extensions or modifications of CWS water and wastewater infrastructure to provide service to Laurel Island will be a developer expense. All fees and costs associated with providing water and wastewater service to Laurel Island will also be a developer expense and charged at the rates in effect at the time services are provided. This letter does not reserve capacity in the Charleston Water System infrastructure and it is incumbent upon the developer or his agent to confirm the willingness and availability herein granted past 12 months from the date of this correspondence.

We appreciate the opportunity to participate in the planning of Laurel Island. Please contact Don Benjamin, PE, Director of Engineering & Construction, Lydia Owens, New Development Program Manager, or myself if you have any questions regarding CWS services for Laurel Island.

Sincerely,
Charleston Water System

Russell L. Huggins, Jr., PE
Capital Projects Officer

cc: CWS Commissioners
CWS Officers
Don Benjamin, PE - CWS
Lydia Owens - CWS

Commercial Letter of Availability

August 13, 2020

J. Rhett Reidenbach
Reveer Group
2971 W. Montague Ave. Ste. 101
North Charleston, South Carolina 29418

Re: Laurel Island / Charleston County TMS# 464-00-00-002 & 006

Dear Mr. Reidenbach:

I am pleased to inform you that Dominion Energy will be able to provide electric service to the above referenced project. Electric service will be provided in accordance with Dominion Energy General Terms and Conditions, other documents on file with the South Carolina Public Service Commission, and the company's standard operating policies and procedures. In order to begin engineering work for the project, the following information will need to be provided:

1.) Detailed utility site plan (AutoCAD format preferred) showing water, sewer, and storm drainage as well as requested service point/transformer location.
2.) Additional drawings that indicate wetlands boundaries, tree survey with barricade plan and buffer zones (if required), as well as any existing or additional easements will also be needed.
3.) Electric load breakdown by type with riser diagrams and desired metering specifications.
4.) Signed copy of this letter acknowledging its receipt and responsibility for its contents and authorization to begin engineering work with the understanding that Dominion Energy intends to serve the referenced project.

Dominion Energy construction standards and specifications are available upon request. Please note that for multi-occupancy residential developments per SC Public Service Commission Regulation 103-327(A): *All service delivered to new multi-occupancy residential premises at which units of such premises are separately rented, leased or owned shall be delivered by an electric utility on the basis of individual meter measurement for each dwelling*. For more information or questions, contact me by phone at (843-576-8447) or at Steven.Morillo@dominionenergy.com.

Sincerely,

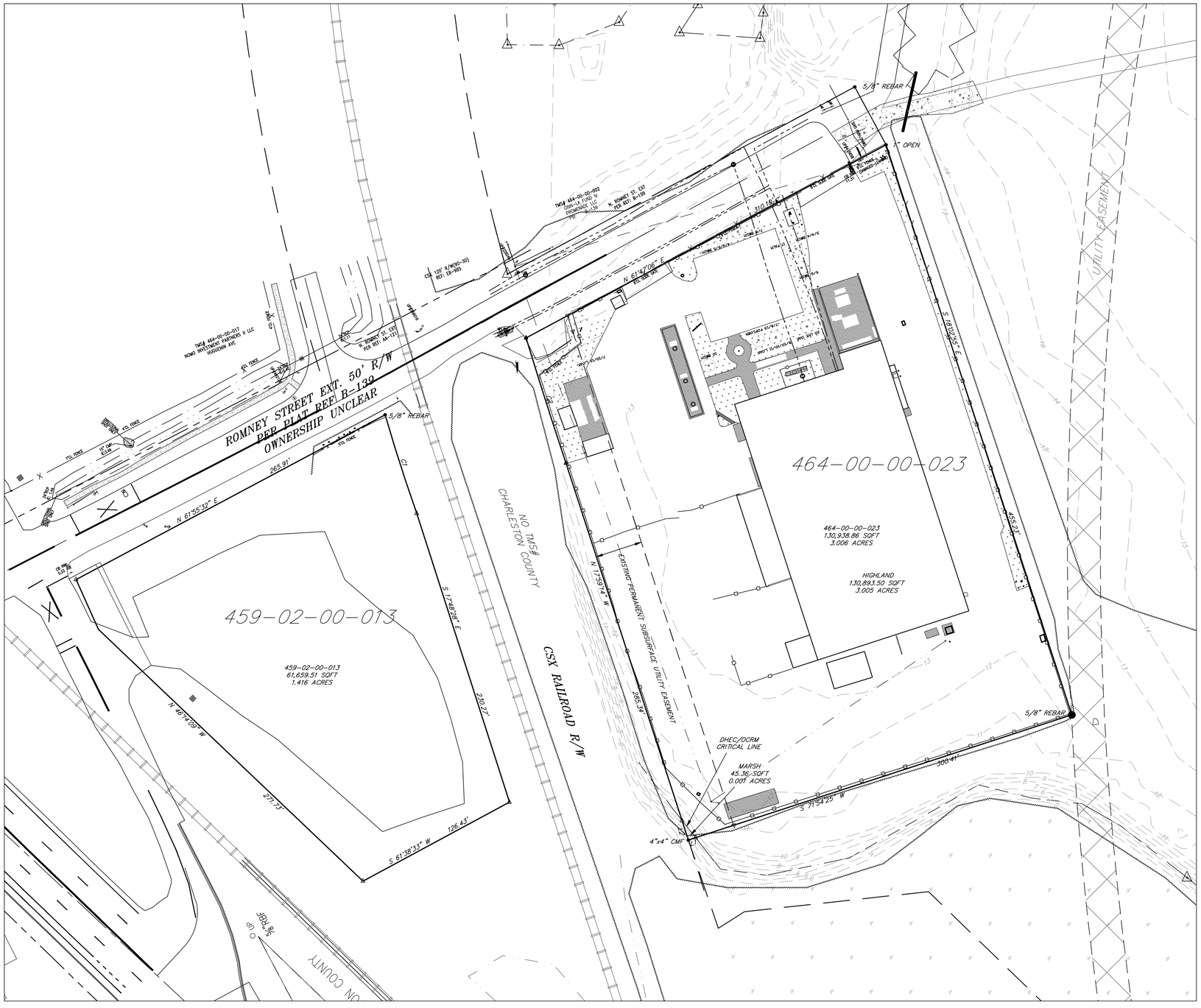
Steven M. Morillo
Account Manager

AUTHORIZED SIGNATURE: _____ DATE: _____

TITLE: _____ PHONE: _____

APPENDIX E

Survey



REFERENCES:

1. PLAT SHOWING THE RELEASE OF PORTIONS OF A PERMANENT SUBSURFACE UTILITY EASEMENT PREPARED FOR THE COMMISSIONERS OF PUBLIC WORKS THROUGH THE PROPERTY OF S.C. STATES PORTS AUTHORITY, CHARLESTON COUNTY, CITY OF CHARLESTON, SOUTH CAROLINA, DATED OCTOBER 16, 2006 BY JODDIE R. PORTH SCPLS NO 16820. RECORDED IN PLAT BOOK EK, PAGE 199.

2. PLAT SHOWING TMS NO. 464-00-00-002 CONTAINING 116.653 ACRES, CSXPROPERTY ID NO. 45019-0037, OWNED BY HOLSTON LAND COMPANY, INC., LOCATED IN THE CITY OF CHARLESTON, CHARLESTON COUNTY, SOUTH CAROLINA, DATED NOVEMBER 20, 2002 BY RICHARD D. LACEY SCPLS NO. 16120. RECORDED IN PLAT BOOK EG, PAGE 619.

3. PLAT OF A 25' PERMANENT SUBSURFACE UTILITY EASEMENT PREPARED FOR THE COMMISSIONERS OF PUBLIC WORKS THROUGH THE PROPERTY OF GINN-LA IV PROMENADE, LLC., CHARLESTON COUNTY, CITY OF CHARLESTON, SOUTH CAROLINA, DATED NOVEMBER 30, 2005 BY JODDIE R. PORTH SCPLS NO 16820. RECORDED IN PLAT BOOK EK, PAGES 177-179.

4. PLAT OF 70.19 ACRES ABOUT TO BE CONVEYED TO THE BEACH CO., IN THE CITY OF CHARLESTON, AND NORTH CHARLESTON CONSOLIDATED PUBLIC SERV. DIST., CHARLESTON, SOUTH CAROLINA, DATED AUGUST 1976 BY H. EXO HILTON SCPLS NO. 2552, RECORDED IN PLAT BOOK S, PAGE 69.

5. PLAT OF A PERMANENT SUBSURFACE UTILITY EASEMENT PREPARED FOR THE COMMISSIONERS OF PUBLIC WORKS THROUGH THE PROPERTY OF S.C. STATES PORTS AUTHORITY, CHARLESTON COUNTY, CITY OF CHARLESTON, SOUTH CAROLINA, DATED OCTOBER 17, 2006 BY JODDIE R. PORTH SCPLS NO 16820. RECORDED IN PLAT BOOK EK, PAGE 195.

6. PLAT OF A PERMANENT SUBSURFACE UTILITY EASEMENT PREPARED FOR THE COMMISSIONERS OF PUBLIC WORKS THROUGH THE PROPERTY OF CHARLESTON COUNTY, CHARLESTON COUNTY, CITY OF CHARLESTON, SOUTH CAROLINA, DATED NOVEMBER 30, 2005 BY JODDIE R. PORTH SCPLS NO 16820. RECORDED IN PLAT BOOK EJ, PAGE 941.

7. PLAT OF ROMNEY STREET EXTENSION CONTAING 0.350 AC. (15231 SQ.FT.), OWNED BY CHARLESTON COUNTY TO BE DEDICATED TO THE PUBLIC. LOCATED IN THE CITY OF CHARLESTON, CHARLESTON COUNTY, SOUTH CAROLINA, DATED FEBRUARY 1, 1991 LAST REVISED JUNE 25, 1997 BY JOHN S. LESTER SCPLS NO. 8746, RECORDED IN PLAT BOOK EB, PAGE 985.

NOTES:

1. ANYTHING SHOWN OUTSIDE THE DEFINED BOUNDARY OF THIS PLAT ARE FOR DESCRIPTIVE PURPOSES ONLY.

2. AREA DETERMINED BY COORDINATE METHOD.

3. THE PUBLIC RECORDS REFERENCED ON THIS PLAT ARE ONLY THOSE USED FOR THE ESTABLISHMENT OF THE BOUNDARY OF THIS PROPERTY. THEY ARE NOT AND DO NOT CONSTITUTE A TITLE SEARCH.

4. TOPOGRAPHIC INFORMATION SHOWN IS BASED ON NAVD 88 DATUM AND WAS PROVIDED BY OTHERS.

CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	DELTA	DIRECTION	CHORD
C1	78.63'	1462.69'	39.32'	3°04'48"	S 17°47'40" E	78.62'
C2	99.75'	3171.52'	49.88'	1°48'08"	S 17°40'22" E	99.75'

LINE TABLE

LINE	BEARING	LENGTH
L1	N 71°54'25" E	5.80'
L2	N 17°59'14" W	15.65'

N

SC NAD83 (2011)

LEGEND

- PROPERTY LINE WITH PROPERTY CORNER FOUND (AS DESCRIBED)
- PROPERTY LINE WITH PROPERTY CORNER SET
- CALCULATED POINT, NO CORNER SET
- RIGHT OF WAY LINE
- CENTER LINE
- ADJACENT PROPERTY LINE
- MARSH
- FRESH WATER WETLAND

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

THE AREA SHOWN ON THIS PLAT IS A REPRESENTATION OF DEPARTMENT PERMIT AUTHORITY ON THE SUBJECT PROPERTY. CRITICAL AREAS BY THEIR NATURE ARE DYNAMIC AND SUBJECT TO CHANGE OVER TIME. BY DELINEATING THE PERMIT AUTHORITY OF THE DEPARTMENT, THE OFFICE IN NO WAY WAIVES THE RIGHT TO ASSERT PERMIT JURISDICTION AT ANY TIME IN ANY CRITICAL AREA ON THE SUBJECT PROPERTY, WHETHER SHOWN HEREIN OR NOT.

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SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR 5933 Tier B ANDREW C. GILLETTE

ANDREW C. GILLETTE P.L.S. 5933-B

NO.	DATE	REVISIONS

TITLE

AN EXHIBIT SHOWING
TMS 464-00-00-023
PROPERTY OF CHARLESTON COUNTY &
TMS 459-02-00-013
PROPERTY OF GINN-LA FUND IV PROMENADE NORTH LLC
LOCATED IN THE CITY OF CHARLESTON
CHARLESTON COUNTY, SOUTH CAROLINA

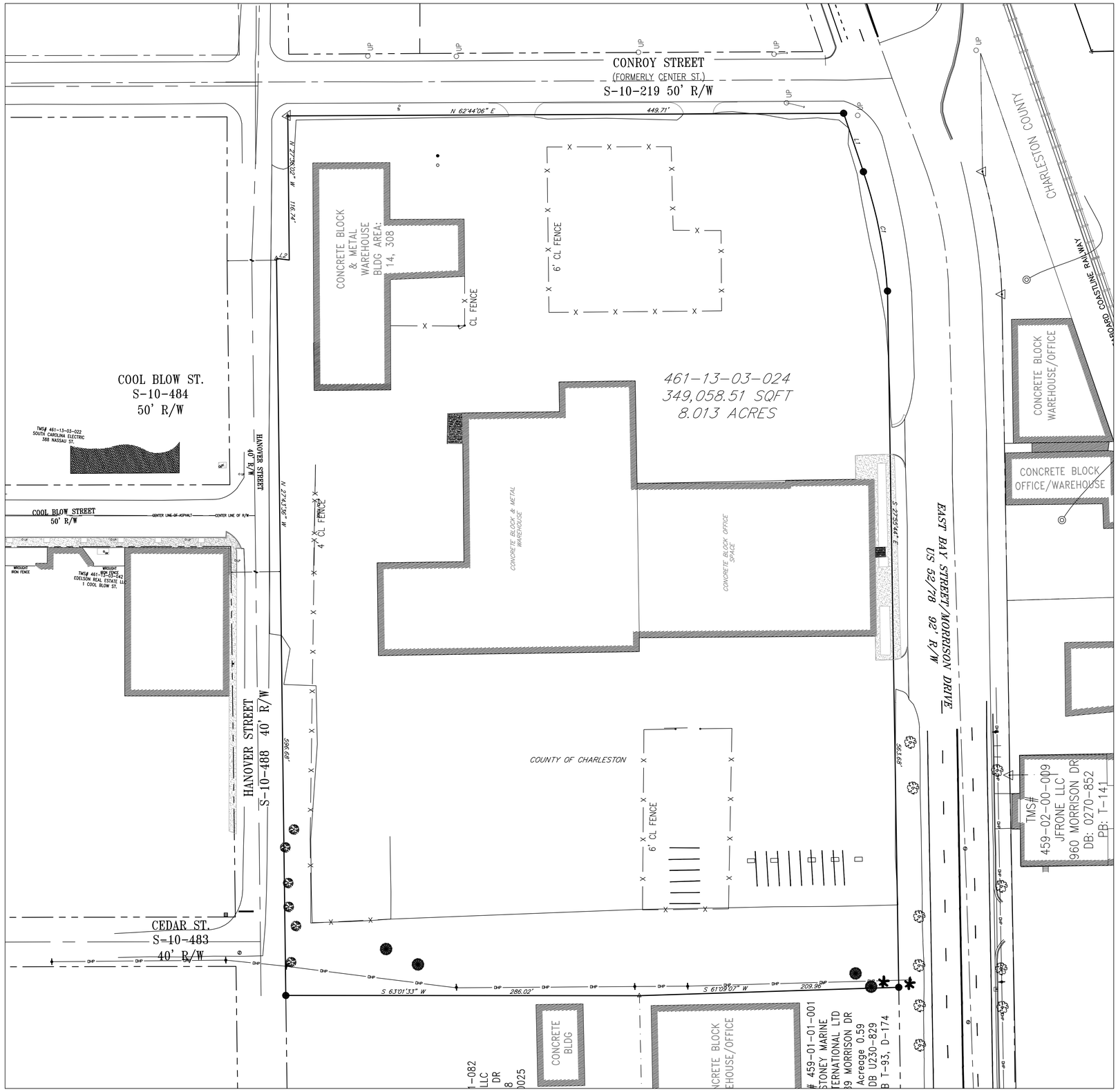
SOUTH CAROLINA BOARD OF LAND SURVEYING NO. 3874 CERTIFICATE OF AUTHORIZATION

Parker Land Surveying, LLC
5910 Griffin Street
Hanahan, SC 29410
Phone: (843) 554-7777
Fax: (843) 554-7779

PLS

DESIGNED :	—
DRAWN :	CAC
CHECKED :	ACG
APPROVED :	ACG
SCALE :	1" = 40'
DATE :	4/1/2019
PROJECT NO. :	19-021
SHEET	1 OF 1

Z:\Share\Client Files\Survey\19021 - Laurel Island\LDI\Laurel Island\dwg\19021 - TMS 459-02-00-013.dwg, 1/21/2020 10:42:53 AM, by Cliff Colwell



REFERENCES:

1. PLAT SHOWING THE RELEASE OF PORTIONS OF A PERMANENT SUBSURFACE UTILITY EASEMENT PREPARED FOR THE COMMISSIONERS OF PUBLIC WORKS THROUGH THE PROPERTY OF S.C. STATES PORTS AUTHORITY, CHARLESTON COUNTY, CITY OF CHARLESTON, SOUTH CAROLINA, DATED OCTOBER 16, 2006 BY JODDIE R. PORTH SCPLS NO 16820. RECORDED IN PLAT BOOK EK, PAGE 199.

2. PLAT SHOWING TMS NO. 464-00-00-002 CONTAINING 116.653 ACRES, CSXPROPERTY ID NO. 45019-0037, OWNED BY HOLSTON LAND COMPANY, INC., LOCATED IN THE CITY OF CHARLESTON, CHARLESTON COUNTY, SOUTH CAROLINA, DATED NOVEMBER 20, 2002 BY RICHARD D. LACEY SCPLS NO. 16120. RECORDED IN PLAT BOOK EG, PAGE 619.

3. PLAT OF A 25' PERMANENT SUBSURFACE UTILITY EASEMENT PREPARED FOR THE COMMISSIONERS OF PUBLIC WORKS THROUGH THE PROPERTY OF GINN-LA IV PROMENADE, LLC., CHARLESTON COUNTY, CITY OF CHARLESTON, SOUTH CAROLINA, DATED NOVEMBER 30, 2005 BY JODDIE R. PORTH SCPLS NO 16820. RECORDED IN PLAT BOOK EK, PAGES 177-179.

4. PLAT OF 70.19 ACRES ABOUT TO BE CONVEYED TO THE BEACH CO., IN THE CITY OF CHARLESTON, AND NORTH CHARLESTON CONSOLIDATED PUBLIC SERV. DIST., CHARLESTON, SOUTH CAROLINA, DATED AUGUST 1976 BY H. EXO HILTON SCPLS NO. 2552, RECORDED IN PLAT BOOK S, PAGE 69.

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6. PLAT OF A PERMANENT SUBSURFACE UTILITY EASEMENT PREPARED FOR THE COMMISSIONERS OF PUBLIC WORKS THROUGH THE PROPERTY OF CHARLESTON COUNTY, CHARLESTON COUNTY, CITY OF CHARLESTON, SOUTH CAROLINA, DATED NOVEMBER 30, 2005 BY JODDIE R. PORTH SCPLS NO 16820. RECORDED IN PLAT BOOK EJ, PAGE 941.

7. PLAT OF ROMNEY STREET EXTENSION CONTAING 0.350 AC. (15231 SQ.FT.), OWNED BY CHARLESTON COUNTY TO BE DEDICATED TO THE PUBLIC. LOCATED IN THE CITY OF CHARLESTON, CHARLESTON COUNTY, SOUTH CAROLINA, DATED FEBRUARY 1, 1991 LAST REVISED JUNE 25, 1997 BY JOHN S. LESTER SCPLS NO. 8746, RECORDED IN PLAT BOOK EB, PAGE 985.

8. PLAT OF TWO TRACTS OF LAND ON MORRISON DRIVE, CHARLESTON, SOUTH CAROLINA OWNED BY ATLANTIC COAST LINE RAILROAD COMPANY, SURVEYED BY CUMMINGS & MCCRADY, INC. DATED MARCH 1964. RECORDED IN PLAT BOOK 1, PAGE 93

NOTES:

1. ANYTHING SHOWN OUTSIDE THE DEFINED BOUNDARY OF THIS PLAT ARE FOR DESCRIPTIVE PURPOSES ONLY.

2. AREA DETERMINED BY COORDINATE METHOD.

3. THE PUBLIC RECORDS REFERENCED ON THIS PLAT ARE ONLY THOSE USED FOR THE ESTABLISHMENT OF THE BOUNDARY OF THIS PROPERTY. THEY ARE NOT AND DO NOT CONSTITUTE A TITLE SEARCH.

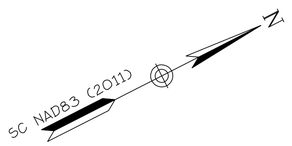
4. TOPOGRAPHIC INFORMATION SHOWN IS BASED ON NAVD 88 DATUM AND WAS PROVIDED BY OTHERS.

CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	DELTA	DIRECTION	CHORD
C1	78.63'	1462.69'	39.32'	3°04'48"	S 17°47'40" E	78.62'
C2	99.75'	3171.52'	49.88'	1°48'08"	S 17°40'22" E	99.75'

LINE TABLE

LINE	BEARING	LENGTH
L1	N 71°54'25" E	5.80'
L2	N 17°59'14" W	15.65'



LEGEND

- *PROPERTY LINE WITH PROPERTY CORNER FOUND (AS DESCRIBED)*
- *PROPERTY LINE WITH PROPERTY CORNER SET*
- *CALCULATED POINT, NO CORNER SET*
- *RIGHT OF WAY LINE*
- *CENTER LINE*
- *ADJACENT PROPERTY LINE*
- *MARSH*
- *FRESH WATER WETLAND*

40 0 20 40 80 160

(IN FEET)

1 inch = 40 Ft.

I HEREBY STATE TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS A SURVEY AS SPECIFIED THEREIN.

ANDREW C. GILLETTE P.L.S. 5933-B

NO.	DATE	REVISIONS

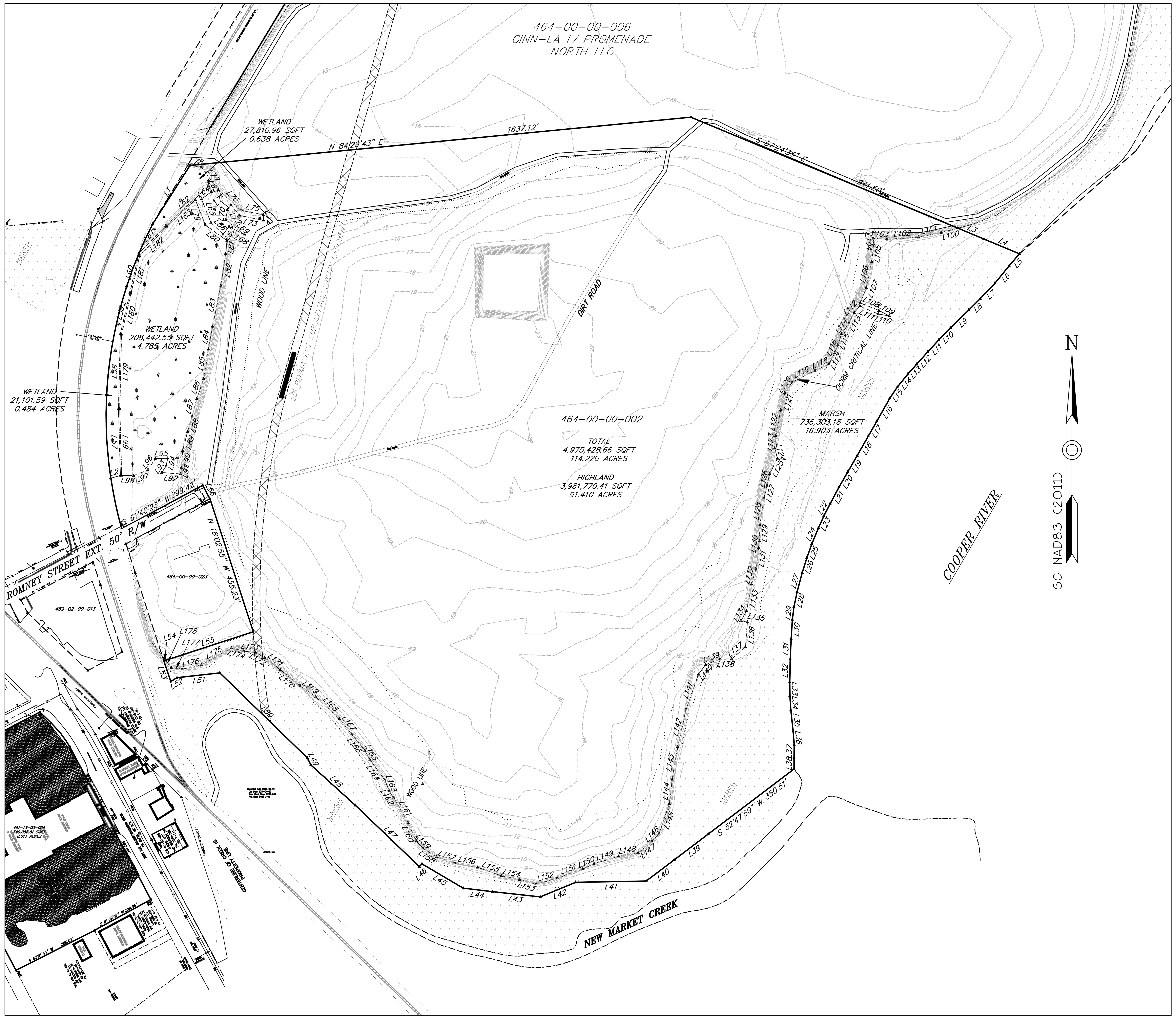
TITLE

AN EXHIBIT SHOWING
TMS 461-13-03-024
PROPERTY OF COUNTY OF CHARLESTON
LOCATED IN THE CITY OF CHARLESTON
CHARLESTON COUNTY, SOUTH CAROLINA

SOUTH CAROLINA NOTICE OF CERTIFICATE (SURVEYOR AND ENGINEERING) No. 3914

Parker Land Surveying, LLC
5910 Griffin Street
Hanahan, SC 29410
Phone: (843) 554-7777
Fax: (843) 554-7779

DESIGNED :	—
DRAWN :	CAC
CHECKED :	ACC
APPROVED :	ACC
SCALE :	1" = 40'
DATE :	4/1/2019
PROJECT NO. :	19-021
SHEET	1 OF 1



LINE TABLE		
LINE	BEARING	LENGTH
L1	S 32°32'16" W	217.89'
L2	S 32°32'16" W	7.35'
L3	N 67°24'35" W	89.72'
L4	N 67°24'35" W	127.26'
L5	N 40°32'59" E	51.63'
L6	N 39°21'46" E	73.01'
L7	N 43°36'45" E	69.30'
L8	N 45°01'32" E	53.11'
L9	N 45°35'24" E	83.58'
L10	N 44°10'07" E	54.06'
L11	N 42°56'07" E	53.53'
L12	N 42°04'03" E	53.92'
L13	N 41°37'01" E	41.59'
L14	N 38°48'14" E	55.61'
L15	N 34°02'53" E	43.75'
L16	N 29°22'23" E	85.68'
L17	N 29°43'57" E	56.13'
L18	N 29°42'46" E	72.45'
L19	N 30°00'38" E	62.66'
L20	N 29°53'03" E	55.81'
L21	N 28°15'58" E	60.73'
L22	N 26°47'24" E	46.17'
L23	N 24°37'41" E	42.06'
L24	N 22°34'03" E	57.58'
L25	N 19°26'21" E	48.17'
L26	N 17°26'40" E	49.76'
L27	N 14°50'05" E	64.08'
L28	N 12°07'16" E	50.96'
L29	N 06°58'18" E	40.97'
L30	N 03°41'33" E	62.99'
L31	N 02°12'40" E	66.95'
L32	N 01°25'33" E	74.32'
L33	N 00°42'08" W	45.08'
L34	N 04°04'40" W	46.60'
L35	N 05°57'07" W	69.14'
L36	N 04°47'16" W	44.13'
L37	N 00°46'28" E	41.09'
L38	N 00°06'41" E	37.56'
L39	S 52°48'39" W	139.04'
L40	S 52°48'33" W	114.50'
L41	S 89°03'41" W	229.31'
L42	S 67°37'21" W	125.01'
L43	N 83°43'43" W	156.21'
L44	N 83°11'37" W	96.05'
L45	N 59°30'12" W	155.65'
L46	S 43°47'36" W	12.18'
L47	N 46°14'32" W	288.33'
L48	N 47°43'29" W	195.64'
L49	N 25°53'33" W	24.93'
L50	N 45°50'09" W	397.99'
L51	S 83°46'30" W	140.48'
L52	S 57°34'24" W	23.57'
L53	N 18°43'41" W	70.75'
L54	N 71°54'25" E	5.80'
L55	N 71°54'25" E	300.41'
L56	S 28°21'37" E	50.02'
L57	N 45°47'01" W	90.86'
L58	N 27°22'12" W	18.25'
L59	N 53°14'11" E	40.39'
L60	N 21°54'36" W	81.85'
L61	N 45°52'24" W	55.50'
L62	N 31°24'57" W	24.11'
L63	S 54°03'50" E	87.32'
L64	S 21°32'39" E	87.42'
L65	N 47°10'56" E	126.98'
L66	N 42°44'58" E	130.36'
L67	N 12°48'39" E	125.46'
L68	N 13°01'55" E	137.26'
L69	N 01°23'08" E	242.55'
L70	N 01°37'16" W	216.98'
L71	N 89°27'39" W	39.30'
L72	S 68°57'03" W	48.80'
L73	S 33°21'51" W	45.27'
L74	S 88°27'19" W	40.26'
L75	N 12°01'21" E	26.01'
L76	N 33°02'59" E	25.40'
L77	N 85°57'18" W	61.30'
L78	S 07°24'46" W	19.45'
L79	S 04°20'23" W	56.49'
L80	S 14°30'13" W	64.32'
L81	S 16°42'27" W	51.86'
L82	S 14°47'15" W	59.22'
L83	S 18°52'18" W	68.93'
L84	S 09°08'42" W	97.27'
L85	S 10°12'26" W	75.48'
L86	S 11°32'23" W	136.53'
L87	S 08°23'42" W	104.31'
L88	S 07°16'12" W	89.30'
L89	N 61°28'28" W	58.80'
L90	S 51°06'40" E	79.59'
L91	S 08°02'40" W	32.57'
L92	S 36°57'08" W	19.89'
L93	N 39°42'49" W	43.90'
L94	N 78°03'55" W	79.54'
L95	S 02°36'36" E	18.48'
L96	S 78°41'29" E	74.67'
L97	S 47°25'15" E	98.60'
L98	S 37°20'03" E	92.83'
L99	S 81°06'36" E	36.56'
L100	N 75°26'26" E	56.50'
L101	N 78°34'51" E	74.80'
L102	N 85°55'02" E	103.37'
L103	S 85°50'53" E	44.95'
L104	N 05°16'05" W	18.88'
L105	N 06°16'35" E	57.89'
L106	N 11°50'11" E	86.57'
L107	N 21°32'52" E	52.68'
L108	N 67°32'14" W	65.38'
L109	N 62°40'53" W	38.93'
L110	S 79°50'51" E	37.21'
L111	S 66°25'35" E	65.14'
L112	N 41°02'35" E	28.16'
L113	N 26°27'41" E	38.30'
L114	N 34°51'54" E	42.75'
L115	N 18°04'17" E	38.97'
L116	N 21°50'33" E	28.08'
L117	N 27°15'15" E	39.75'
L118	N 65°04'55" E	49.96'
L119	N 62°45'48" E	83.77'
L120	N 35°09'24" E	41.02'

REFERENCES:

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CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	DELTA	DIRECTION	CHORD
C1	801.91'	1357.86'	413.03'	33°50'14"	S 01°09'55" W	790.31'
C2	221.49'	1356.20'	110.99'	9°21'27"	S 22°43'54" W	221.25'

LINE TABLE		
LINE	BEARING	LENGTH
L121	N 13°32'03" E	56.94'
L122	N 10°49'45" E	87.00'
L123	N 05°13'57" E	41.11'
L124	N 15°52'59" W	34.00'
L125	N 27°13'55" E	56.31'
L126	N 11°42'45" E	39.01'
L127	N 14°03'10" E	41.89'
L128	N 08°33'22" E	88.45'
L129	N 01°56'39" E	52.96'
L130	N 07°23'15" E	21.42'
L131	N 07°16'13" E	68.40'
L132	N 15°36'09" E	52.91'
L133	N 10°36'09" E	88.01'
L134	N 29°19'55" E	38.90'
L135	N 81°00'07" W	22.07'
L136	N 04°27'03" E	81.70'
L137	N 49°38'32" E	59.40'
L138	N 89°15'34" E	37.29'
L139	N 69°06'56" E	49.76'
L140	N 36°46'49" E	40.14'
L141	N 19°23'46" E	120.53'
L142	N 12°33'59" E	125.28'
L143	N 09°40'08" E	107.62'
L144	N 06°38'31" E	79.88'
L145	N 18°59'23" E	101.71'
L146	N 42°40'06" E	35.63'
L147	N 49°20'39" E	58.04'
L148	N 80°19'20" E	65.33'
L149	N 73°01'55" E	82.93'
L150	N 65°11'43" E	39.93'
L151	N 70°17'17" E	88.82'
L152	N 74°00'31" E	71.41'
L153	S 74°28'00" E	54.99'
L154	S 78°16'34" E	61.37'
L155	S 70°22'50" E	82.39'
L156	S 79°38'24" E	74.69'
L157	S 71°41'46" E	63.17'
L158	S 56°36'13" E	52.95'
L159	S 43°11'05" E	31.20'
L160	S 23°48'05" E	63.58'
L161	S 30°18'07" E	94.62'
L162	S 32°51'04" E	28.43'
L163	S 21°14'15" E	37.46'
L164	S 36°05'22" E	83.30'
L165	S 28°55'00" E	33.81'
L166	S 39°02'13" E	67.31'
L167	S 38°41'49" E	64.71'
L168	S 47°12'12" E	104.51'
L169	S 53°40'41" E	63.68'
L170	S 51°27'37" E	82.54'
L171	S 52°02'18" E	63.67'
L172	S 60°07'43" E	34.19'
L173	S 83°36'08" E	38.69'
L174	S 75°55'47" E	41.37'
L175	N 60°30'43" E	112.75'
L176	N 78°08'34" E	64.07'
L177	S 82°24'03" E	35.41'
L178	S 38°19'46" E	30.37'

LEGEND

- PROPERTY LINE WITH PROPERTY CORNER FOUND (AS DESCRIBED)
- PROPERTY LINE WITH PROPERTY CORNER SET
- CALCULATED POINT, NO CORNER SET
- RIGHT OF WAY LINE
- CENTER LINE
- ADJACENT PROPERTY LINE
- MARSH
- FRESH WATER WETLAND

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

THE AREA SHOWN ON THIS PLAT IS A REPRESENTATION OF DEPARTMENT PERMIT AUTHORITY ON THE SUBJECT PROPERTY. CRITICAL AREAS BY THEIR NATURE ARE DYNAMIC AND SUBJECT TO CHANGE OVER TIME. BY DELINEATING THE PERMIT AUTHORITY OF THE DEPARTMENT, THE OFFICE IN NO WAY WAIVES THE RIGHT TO ASSERT PERMIT JURISDICTION AT ANY TIME IN ANY CRITICAL AREA ON THE SUBJECT PROPERTY, WHETHER SHOWN HEREIN OR NOT.

SIGNATURE DATE

The critical line shown on this plat is valid for five years from the date of this signature, subject to the cautionary language above.

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SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR No. 5933 Tier B ANDREW C. GILLETTE

ANDREW C. GILLETTE P.L.S. 5933-B

NO.	DATE	REVISIONS

TITLE

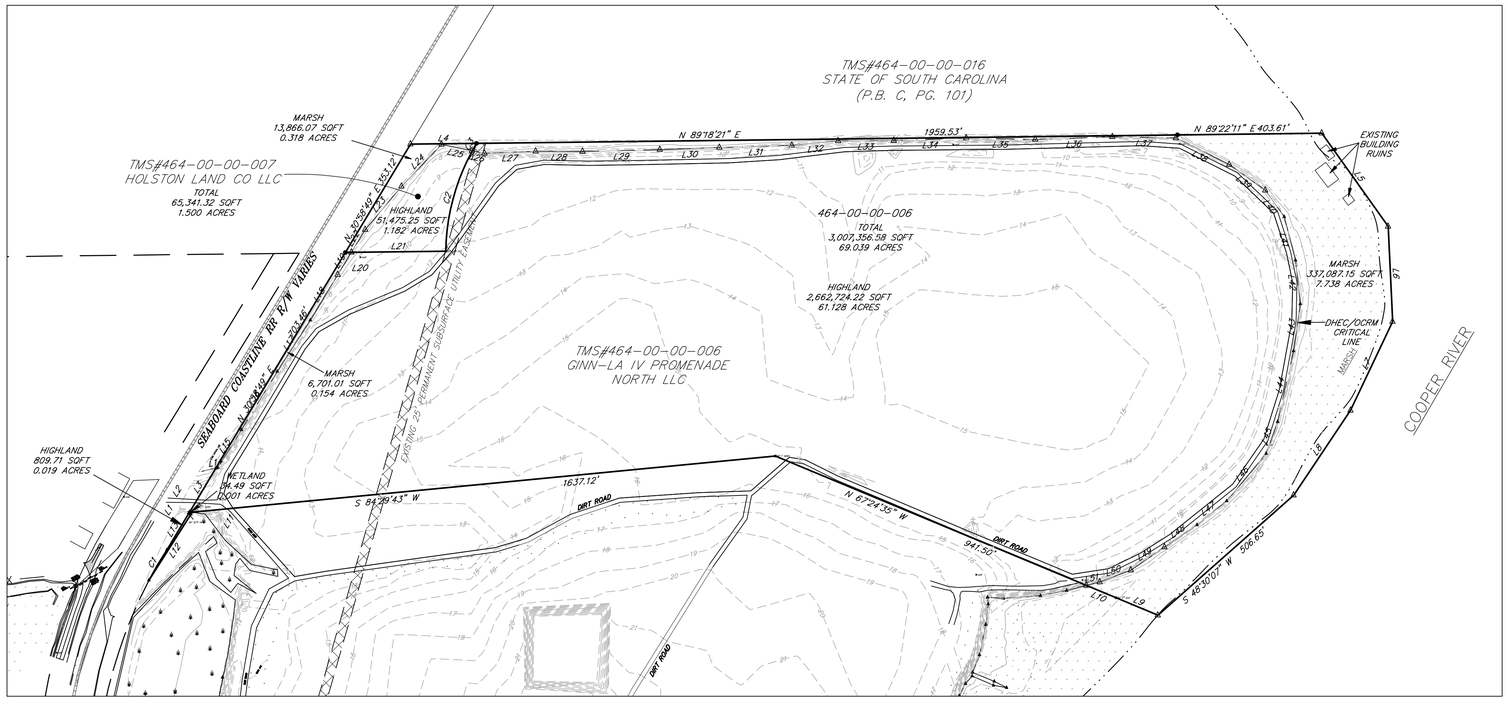
AN EXHIBIT SHOWING
4TMS 464-00-00-002
PROPERTY OF GINN-LA FUND IV PROMENADE NORTH LLC
LOCATED IN THE CITY OF CHARLESTON
CHARLESTON COUNTY, SOUTH CAROLINA

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION PARKER LAND SURVEYING, LLC No. 3814

Parker Land Surveying, LLC
5910 Griffin Street
Hanahan, SC 29410
Phone: (843) 554-7777
Fax: (843) 554-7779

DESIGNED : —
DRAWN : CAC
CHECKED : ACG
APPROVED : ACG
SCALE : 1" = 200'
DATE : 3/29/2019
PROJECT NO. : 19-021
SHEET 1 OF 1

Z:\Share\Client Files\Survey\19021 - Laurel Island\LD\Laurel Island\dwg\19021 - TMS 464-00-00-002.dwg, 1/21/2020 10:45:13 AM, by Cliff Colwell



N

SC NAD83 (2011)

REFERENCES:

1. PLAT SHOWING THE RELEASE OF PORTIONS OF A PERMANENT SUBSURFACE UTILITY EASEMENT PREPARED FOR THE COMMISSIONERS OF PUBLIC WORKS THROUGH THE PROPERTY OF S.C. STATES PORTS AUTHORITY, CHARLESTON COUNTY, CITY OF CHARLESTON, SOUTH CAROLINA, DATED OCTOBER 16, 2006 BY JODDIE R. PORTH SCPLS NO 16820. RECORDED IN PLAT BOOK EK, PAGE 199.

2. PLAT SHOWING TMS NO. 464-00-00-002 CONTAINING 116.653 ACRES, CSXPROPERTY ID NO. 45019-0037, OWNED BY HOLSTON LAND COMPANY, INC., LOCATED IN THE CITY OF CHARLESTON, CHARLESTON COUNTY, SOUTH CAROLINA, DATED NOVEMBER 20, 2002 BY RICHARD D. LACEY SCPLS NO. 16120. RECORDED IN PLAT BOOK EG, PAGE 619.

3. PLAT OF A 25' PERMANENT SUBSURFACE UTILITY EASEMENT PREPARED FOR THE COMMISSIONERS OF PUBLIC WORKS THROUGH THE PROPERTY OF GINN-LA IV PROMENADE, LLC., CHARLESTON COUNTY, CITY OF CHARLESTON, SOUTH CAROLINA, DATED NOVEMBER 30, 2005 BY JODDIE R. PORTH SCPLS NO 16820. RECORDED IN PLAT BOOK EK, PAGES 177-179.

4. PLAT OF 70.19 ACRES ABOUT TO BE CONVEYED TO THE BEACH CO., IN THE CITY OF CHARLESTON, AND NORTH CHARLESTON CONSOLIDATED PUBLIC SERV. DIST., CHARLESTON, SOUTH CAROLINA, DATED AUGUST 1976 BY H. EXO HILTON SCPLS NO. 2552, RECORDED IN PLAT BOOK S, PAGE 69.

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7. PLAT OF ROMNEY STREET EXTENSION CONTAING 0.350 AC. (15231 SQ.FT.), OWNED BY CHARLESTON COUNTY TO BE DEDICATED TO THE PUBLIC. LOCATED IN THE CITY OF CHARLESTON, CHARLESTON COUNTY, SOUTH CAROLINA, DATED FEBRUARY 1, 1991 LAST REVISED JUNE 25, 1997 BY JOHN S. LESTER SCPLS NO. 8746, RECORDED IN PLAT BOOK EB, PAGE 985.

NOTES:

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2. AREA DETERMINED BY COORDINATE METHOD.

3. THE PUBLIC RECORDS REFERENCED ON THIS PLAT ARE ONLY THOSE USED FOR THE ESTABLISHMENT OF THE BOUNDARY OF THIS PROPERTY. THEY ARE NOT AND DO NOT CONSTITUTE A TITLE SEARCH.

4. TOPOGRAPHIC INFORMATION SHOWN BASED ON NAVD 88 DATUM AND WAS PROVIDED BY OTHERS.

REVISIONS	DATE	NO.

TITLE

AN EXHIBIT SHOWING
TMS 464-00-00-007
PROPERTY OF HOLSTON LAND CO INC &
TMS 464-00-00-006
PROPERTY OF GINN-LA FUND IV PROMENADE NORTH LLC
LOCATED IN THE CITY OF CHARLESTON
CHARLESTON COUNTY, SOUTH CAROLINA

LINE TABLE		
LINE	BEARING	LENGTH
L1	N 30°58'49" E	3.87'
L2	N 30°58'49" E	3.09'
L3	N 30°58'49" E	142.51'
L4	N 89°19'01" E	184.09'
L5	S 35°29'14" E	319.78'
L6	S 02°39'51" E	266.55'
L7	S 25°22'13" W	274.81'
L8	S 33°49'52" W	285.13'
L9	N 67°24'35" W	127.26'
L10	N 67°24'35" W	89.72'
L11	S 32°32'16" W	7.35'
L12	S 32°32'16" W	217.89'
L13	N 30°58'49" E	117.36'
L14	S 77°09'12" W	5.29'
L15	S 31°55'06" W	125.12'
L16	S 31°34'38" W	191.02'
L17	S 32°50'53" W	170.92'
L18	S 31°03'35" W	148.34'
L19	S 31°18'54" W	73.19'
L20	N 89°19'01" E	16.52'
L21	N 89°19'01" E	263.31'
L22	S 31°18'54" W	74.20'
L23	S 40°01'15" W	158.11'
L24	S 43°39'16" W	161.98'
L25	N 78°21'52" W	87.17'
L26	N 78°21'52" W	35.34'
L27	S 87°51'45" W	143.25'
L28	N 89°54'48" W	130.95'
L29	S 88°42'18" W	216.34'
L30	S 87°53'52" W	166.52'
L31	S 88°18'31" W	202.41'
L32	S 84°24'41" W	130.11'
L33	S 89°45'39" W	155.42'
L34	S 87°56'53" W	202.63'
L35	N 88°43'10" W	193.37'
L36	S 88°00'31" W	215.54'
L37	N 88°54'59" W	177.69'
L38	N 63°35'30" W	165.91'
L39	N 54°27'51" W	123.96'
L40	N 35°34'06" W	91.25'
L41	N 14°25'02" W	125.33'
L42	N 06°26'23" W	122.67'
L43	N 08°19'00" E	132.98'
L44	N 12°37'11" E	202.83'
L45	N 19°51'27" E	94.67'
L46	N 39°39'44" E	172.36'
L47	N 51°09'30" E	106.52'
L48	N 55°37'52" E	109.97'
L49	N 55°34'06" E	114.04'
L50	N 69°17'38" E	92.97'
L51	N 75°26'26" E	39.22'

CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	DELTA	DIRECTION	CHORD
C1	98.13'	1335.37'	49.09'	4°12'37"	S 30°37'53" W	98.10'
C2	293.47'	600.00'	149.73'	28°01'26"	S 14°46'50" W	290.55'
C3	23.85'	600.00'	11.93'	2°16'40"	S 29°55'53" W	23.85'

THE AREA SHOWN ON THIS PLAT IS A REPRESENTATION OF DEPARTMENT PERMIT AUTHORITY ON THE SUBJECT PROPERTY. CRITICAL AREAS BY THEIR NATURE ARE DYNAMIC AND SUBJECT TO CHANGE OVER TIME. BY DELINEATING THE PERMIT AUTHORITY OF THE DEPARTMENT, THE OFFICE IN NO WAY WAIVES THE RIGHT TO ASSERT PERMIT JURISDICTION AT ANY TIME IN ANY CRITICAL AREA ON THE SUBJECT PROPERTY, WHETHER SHOWN HEREIN OR NOT.

SIGNATURE DATE

The critical line shown on this plat is valid for five years from the date of this signature, subject to the cautionary language above.

I HEREBY STATE TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS A SURVEY AS SPECIFIED THEREIN.

ANDREW C. GILLETTE *P.L.S. 5933-B*

SOUTH CAROLINA 5933 Tier B ANDREW C. GILLETTE

Parker Land Surveying, LLC
5910 Griffin Street
Hanahan, SC 29410
Phone: (843) 554-7777
Fax: (843) 554-7779

SOUTH CAROLINA — CERTIFICATE OF AUTHORIZATION — PARKER LAND SURVEYING, LLC — NO. 3814

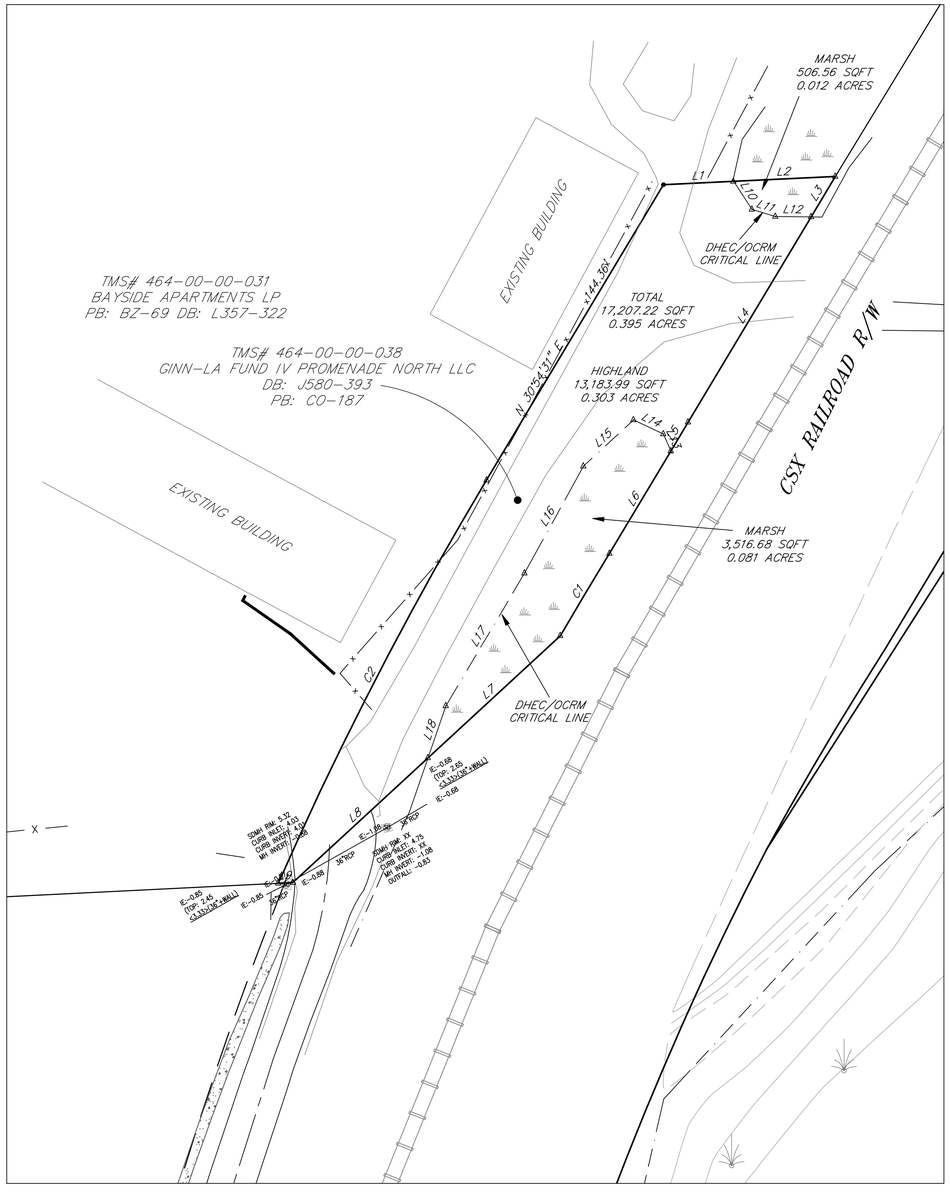
LEGEND

- PROPERTY LINE WITH PROPERTY CORNER FOUND (AS DESCRIBED)
- PROPERTY LINE WITH PROPERTY CORNER SET
- CALCULATED POINT, NO CORNER SET
- RIGHT OF WAY LINE
- CENTER LINE
- ADJACENT PROPERTY LINE
- MARSH
- FRESH WATER WETLAND

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

DESIGNED :	—
DRAWN :	CAC
CHECKED :	ACC
APPROVED :	ACC
SCALE :	1" = 200'
DATE :	3/30/2019
PROJECT NO. :	19-021
SHEET	1 OF 1



LINE TABLE		
LINE	BEARING	LENGTH
L1	S 87°15'42" W	29.46'
L2	S 87°15'42" W	42.66'
L3	S 30°54'31" W	19.76'
L4	S 30°54'31" W	100.36'
L5	S 30°54'31" W	14.03'
L6	S 30°54'31" W	50.14'
L7	N 47°18'24" E	75.51'
L8	N 47°18'24" E	77.07'
L9	N 87°09'46" E	6.09'
L10	S 33°06'14" E	14.02'
L11	S 72°48'15" E	10.31'
L12	S 89°31'06" E	14.95'
L13	N 23°51'26" W	7.79'
L14	N 64°43'46" W	13.84'
L15	S 47°15'22" W	28.60'
L16	S 28°48'46" W	51.15'
L17	S 30°41'02" W	64.71'
L18	S 18°56'44" W	23.09'

CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	DELTA	DIRECTION	CHORD
C1	40.15'	1455.37'	20.08'	1°34'51"	S 30°50'40" W	40.15'
C2	190.38'	1515.37'	95.31'	7°11'53"	S 27°18'34" W	190.25'

REFERENCES:
1. PLAT SHOWING THE RELEASE OF PORTIONS OF A PERMANENT SUBSURFACE UTILITY EASEMENT PREPARED FOR THE COMMISSIONERS OF PUBLIC WORKS THROUGH THE PROPERTY OF S.C. STATES PORTS AUTHORITY, CHARLESTON COUNTY, CITY OF CHARLESTON, SOUTH CAROLINA, DATED OCTOBER 16, 2006 BY JODDIE R. PORTH SCPLS NO 16820. RECORDED IN PLAT BOOK EK, PAGE 199.

2. PLAT SHOWING TMS NO. 464-00-00-002 CONTAINING 116.653 ACRES, CSXPROPERTY ID NO. 45019-0037, OWNED BY HOLSTON LAND COMPANY, INC., LOCATED IN THE CITY OF CHARLESTON, CHARLESTON COUNTY, SOUTH CAROLINA, DATED NOVEMBER 20, 2002 BY RICHARD D. LACEY SCPLS NO. 16120. RECORDED IN PLAT BOOK EG, PAGE 619.

3. PLAT OF A 25' PERMANENT SUBSURFACE UTILITY EASEMENT PREPARED FOR THE COMMISSIONERS OF PUBLIC WORKS THROUGH THE PROPERTY OF GINN-LA IV PROMENADE, LLC., CHARLESTON COUNTY, CITY OF CHARLESTON, SOUTH CAROLINA, DATED NOVEMBER 30, 2005 BY JODDIE R. PORTH SCPLS NO 16820. RECORDED IN PLAT BOOK EK, PAGES 177-179.

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8. PLAT OF 0.407 ACRES (AREA A,B,C,D,E,F & G) PROPERTY OF BAYSIDE GARDENS (A PARTNERSHIP) ABOUT TO BE RELEASE FROM MORTGAGE HELD BY FEDERAL NATIONAL MORTGAGE ASSOCIATION, CITY OF CHARLESTON, CHARLESTON COUNTY, SOUTH CAROLINA, DATED AUGUST 20, 1991 BY H EXO HILTON SCPLS NO. 2552. RECORDED IN PLAT BOOK CO PAGE 187.

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4. TOPOGRAPHIC INFORMATION SHOWN IS BASED ON NAVD 88 DATUM AND WAS PROVIDED BY OTHERS.

N

SC NAD83 (2011)

LEGEND

- PROPERTY LINE WITH PROPERTY CORNER FOUND (AS DESCRIBED)
- PROPERTY LINE WITH PROPERTY CORNER SET
- CALCULATED POINT, NO CORNER SET
- RIGHT OF WAY LINE
- CENTER LINE
- ADJACENT PROPERTY LINE
- MARSH
- FRESH WATER WETLAND

40 0 20 40 80 160

(IN FEET)
1 inch = 40 Ft.

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SIGNATURE DATE

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ANDREW C. GILLETTE P.L.S. 5933-B

SOUTH CAROLINA PROFESSIONAL ENGINEER 5933 Tier B ANDREW C. GILLETTE

REVISIONS

NO.	DATE

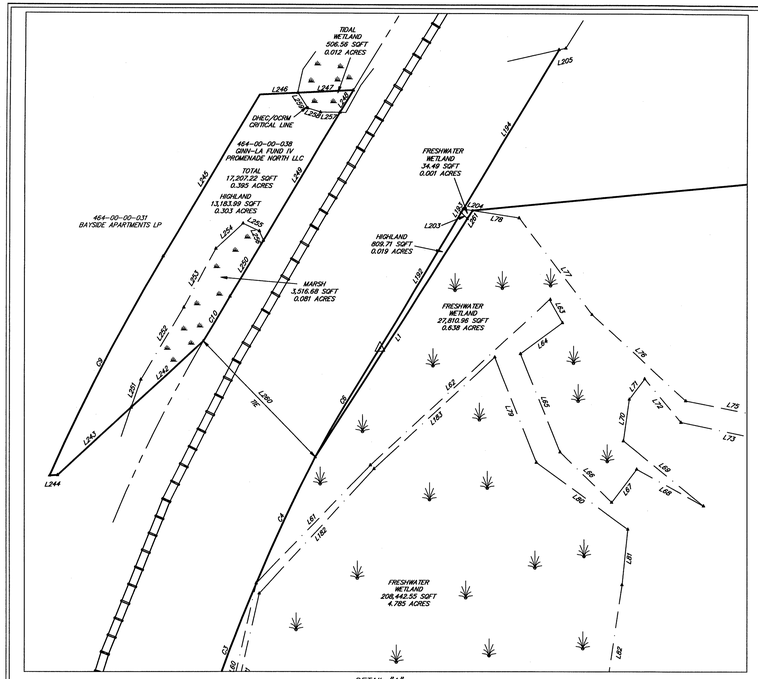
TITLE
AN EXHIBIT SHOWING
TMS 464-00-00-038
PROPERTY OF GINN-LA FUND IV PROMENADE NORTH LLC
LOCATED IN THE CITY OF CHARLESTON
CHARLESTON COUNTY, SOUTH CAROLINA

SOUTH CAROLINA PROFESSIONAL LAND SURVEYING CORPORATION No. 3911 CERTIFICATE OF AUTHORIZATION NO.

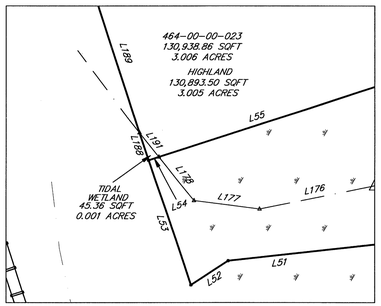
Parker Land Surveying, LLC
5910 Griffin Street
Hanahan, SC 29410
Phone: (843) 554-7777
Fax: (843) 554-7779

DESIGNED :	--
DRAWN :	CAC
CHECKED :	ACG
APPROVED :	ACG
SCALE :	1" = 40'
DATE :	4/1/2019
PROJECT NO. :	19-021
SHEET	1 OF 1

Z:\Shared\Client Files\Survey\19021 - Laurel Island\LDI\Laurel Island\dwg\19021 - THS 464-00-00-038.dwg, 1/21/2020 10:47:50 AM, by Cliff Colwell



DETAIL "A"
NOT TO SCALE



DETAIL "B"
NOT TO SCALE

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LEGEND

- PROPERTY LINE WITH PROPERTY CORNER FOUND
- PROPERTY LINE WITH PROPERTY CORNER SET
- CALCULATED POINT, NO CORNER SET
- RIGHT OF WAY LINE
- CENTER LINE
- ADJACENT PROPERTY LINE
- MARSH
- FRESH WATER WETLAND

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SIGNATURE DATE 2/24/20

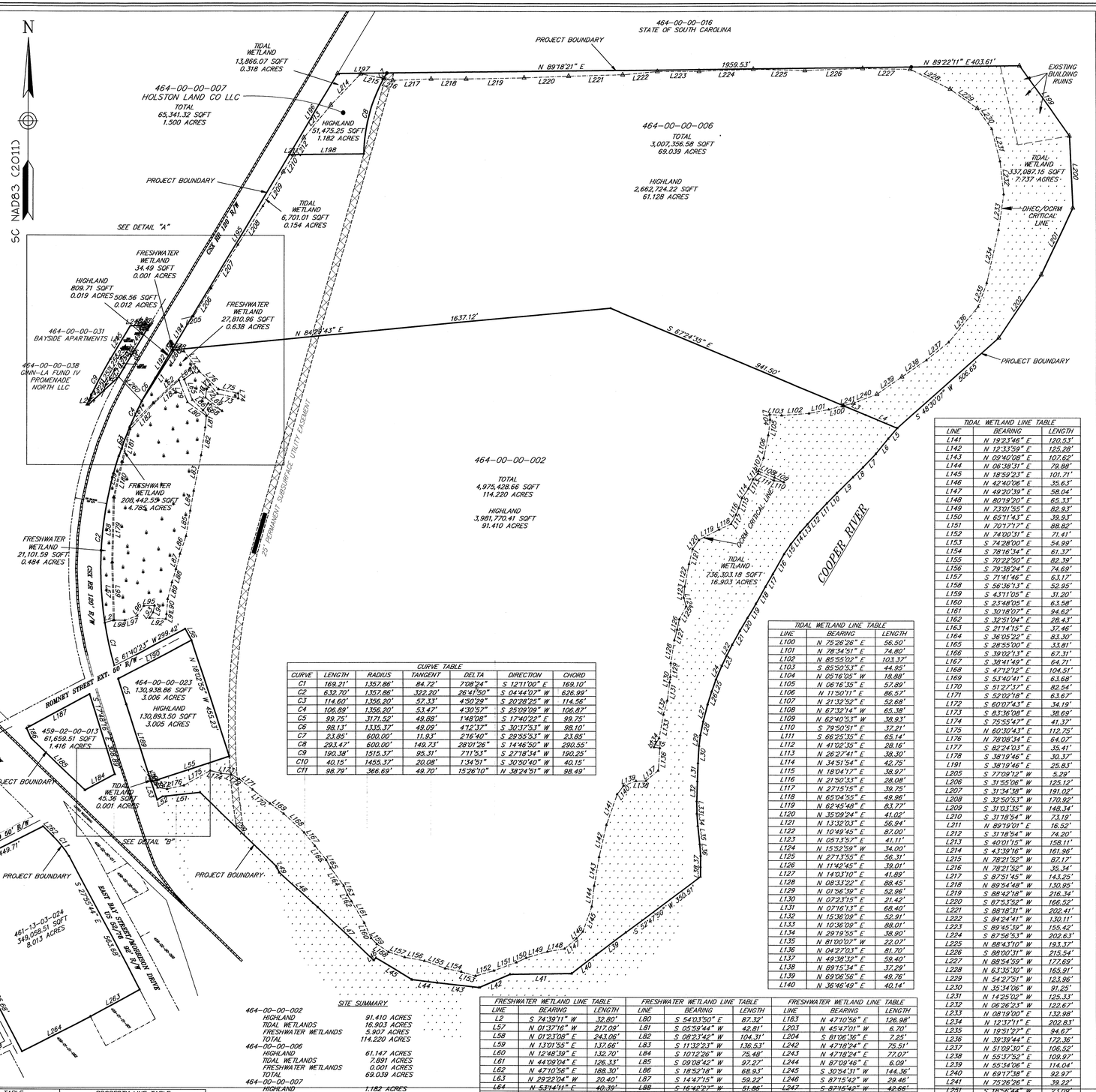
The britical line shown on this plat is valid for five years from the date of this signature, subject to the cautionary language above.

I HEREBY STATE TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS A SURVEY AS SPECIFIED THEREIN.

ANDREW C. GILLETTE P.L.S. 5933-B

SOUTH CAROLINA REGISTERED PROFESSIONAL LAND SURVEYOR 5933 Class A ANDREW C. GILLETTE

Z:\Shared\Client Files\Survey\139021 - Laurel Island\LPU\Laurel Island\Dwg\139021 - Laurel Island Wetland.dwg, 2/24/2020 10:18:46 AM, by Cliff Colwell



SITE SUMMARY

464-00-00-002	
HIGHLAND	91.410 ACRES
TIDAL WETLANDS	16.903 ACRES
FRESHWATER WETLANDS	5.907 ACRES
TOTAL	114.220 ACRES
464-00-00-006	
HIGHLAND	61.147 ACRES
TIDAL WETLANDS	7.891 ACRES
FRESHWATER WETLANDS	0.001 ACRES
TOTAL	69.039 ACRES
464-00-00-007	
HIGHLAND	1.182 ACRES
TIDAL WETLANDS	0.318 ACRES
TOTAL	1.500 ACRES
464-00-00-038	
HIGHLAND	0.303 ACRES
TIDAL WETLANDS	0.093 ACRES
TOTAL	0.396 ACRES
464-00-00-023	
HIGHLAND	3.005 ACRES
TIDAL WETLANDS	0.001 ACRES
TOTAL	3.006 ACRES
459-02-00-013	1.416 ACRES
461-13-03-024	8.013 ACRES
SITE TOTAL	
HIGHLAND	166.476 ACRES
TIDAL WETLANDS	25.206 ACRES
FRESHWATER WETLANDS	5.908 ACRES
TOTAL	197.590 ACRES

CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	DELTA	DIRECTION	CHORD
C1	169.21'	1357.86'	84.72'	7°08'24"	S 12°11'00" E	169.10'
C2	632.70'	1357.86'	322.20'	26°41'50"	S 04°44'07" W	626.99'
C3	114.60'	1356.20'	57.33'	4°50'39"	S 20°28'25" W	114.56'
C4	106.89'	1356.20'	53.42'	4°30'57"	S 25°09'09" W	106.87'
C5	99.75'	3171.52'	49.88'	1°48'08"	S 17°40'22" E	99.75'
C6	98.13'	1335.37'	49.09'	4°12'37"	S 30°37'53" W	98.10'
C7	23.85'	600.00'	11.93'	2°16'40"	S 29°55'53" W	23.85'
C8	293.47'	600.00'	149.73'	28°01'26"	S 14°46'50" W	290.55'
C9	190.38'	1515.37'	95.31'	7°11'53"	S 27°18'34" W	190.25'
C10	40.15'	1455.37'	20.08'	1°34'51"	S 30°50'40" W	40.15'
C11	98.79'	366.69'	49.70'	15°26'10"	N 38°24'51" W	98.49'

TIDAL WETLAND LINE TABLE

LINE	BEARING	LENGTH
L100	N 75°26'26" E	56.50'
L101	N 78°34'51" E	74.80'
L102	N 85°56'02" E	103.37'
L103	S 85°20'53" E	44.92'
L104	N 05°16'05" W	18.88'
L105	N 06°16'35" E	57.89'
L106	N 11°50'11" E	86.57'
L107	N 21°32'52" E	52.68'
L108	N 67°32'14" W	65.38'
L109	N 62°40'53" W	38.93'
L110	S 79°50'51" E	37.21'
L111	S 66°25'35" E	65.14'
L112	N 41°02'35" E	28.16'
L113	N 26°27'41" E	38.30'
L114	N 14°51'54" E	43.75'
L115	N 18°04'17" E	38.97'
L116	N 21°50'33" E	28.08'
L117	N 27°15'15" E	39.75'
L118	N 65°04'55" E	49.96'
L119	N 62°45'48" E	83.77'
L120	N 35°09'24" E	41.02'
L121	N 13°32'03" E	56.94'
L122	N 10°49'45" E	87.00'
L123	N 05°13'57" E	41.11'
L124	N 15°52'59" W	34.00'
L125	N 27°55'51" E	56.31'
L126	N 11°42'45" E	39.01'
L127	N 14°03'10" E	41.89'
L128	N 08°33'22" E	88.45'
L129	N 01°56'39" E	52.96'
L130	N 07°21'57" E	21.42'
L131	N 07°16'13" E	68.40'
L132	N 15°36'09" E	52.91'
L133	N 10°36'09" E	88.01'
L134	N 29°19'55" E	38.90'
L135	N 81°00'27" W	22.07'
L136	N 04°27'03" E	81.70'
L137	N 49°38'32" E	59.40'
L138	N 89°15'34" E	37.29'
L139	N 69°06'56" E	49.76'
L140	N 36°46'49" E	40.14'

FRESHWATER WETLAND LINE TABLE

LINE	BEARING	LENGTH
L2	S 74°39'11" W	32.80'
L57	N 01°37'16" W	217.09'
L58	N 01°23'08" E	243.06'
L59	N 13°01'55" E	137.66'
L60	N 12°48'39" E	132.70'
L61	N 44°09'04" E	126.33'
L62	N 47°10'56" E	188.30'
L63	N 29°22'04" W	20.40'
L64	N 83°34'51" E	40.30'
L65	N 21°34'36" W	81.85'
L66	N 45°52'24" W	55.50'
L67	S 37°20'01" W	31.99'
L68	N 61°28'28" W	58.80'
L69	S 51°06'40" E	78.59'
L70	S 08°02'40" W	32.57'
L71	S 36°57'08" W	19.89'
L72	N 39°42'49" W	43.90'
L73	N 78°03'55" W	78.54'
L74	S 02°36'36" E	18.48'
L75	S 78°41'29" E	74.67'
L76	S 47°25'15" E	98.60'
L77	S 37°20'03" E	92.83'
L78	S 81°06'36" E	36.56'
L79	S 21°32'39" E	87.42'
L80	S 54°03'50" E	87.32'
L81	S 05°59'44" W	42.81'
L82	S 08°23'42" W	104.31'
L83	S 11°32'21" W	136.53'
L84	S 10°12'26" W	75.48'
L85	S 09°08'42" W	97.27'
L86	S 18°52'18" W	68.93'
L87	S 14°47'15" W	59.22'
L88	S 16°40'37" W	51.86'
L89	S 14°30'13" W	64.32'
L90	S 04°20'23" W	56.49'
L91	S 07°24'46" W	19.45'
L92	N 85°57'18" W	61.30'
L93	N 33°02'59" E	25.40'
L94	N 12°01'21" E	26.01'
L95	S 88°27'19" W	40.26'
L96	S 33°21'51" W	45.27'
L97	S 68°57'03" W	48.80'
L98	N 89°27'39" W	39.30'
L99	N 01°37'16" W	216.98'
L179	N 01°23'08" E	242.55'
L180	N 13°01'55" E	137.26'
L181	N 12°48'39" E	125.46'
L182	N 42°44'58" E	130.36'

FRESHWATER WETLAND LINE TABLE

LINE	BEARING	LENGTH
L80	S 54°03'50" E	87.32'
L81	S 05°59'44" W	42.81'
L82	S 08°23'42" W	104.31'
L83	S 11°32'21" W	136.53'
L84	S 10°12'26" W	75.48'
L85	S 09°08'42" W	97.27'
L86	S 18°52'18" W	68.93'
L87	S 14°47'15" W	59.22'
L88	S 16°40'37" W	51.86'
L89	S 14°30'13" W	64.32'
L90	S 04°20'23" W	56.49'
L91	S 07°24'46" W	19.45'
L92	N 85°57'18" W	61.30'
L93	N 33°02'59" E	25.40'
L94	N 12°01'21" E	26.01'
L95	S 88°27'19" W	40.26'
L96	S 33°21'51" W	45.27'
L97	S 68°57'03" W	48.80'
L98	N 89°27'39" W	39.30'
L99	N 01°37'16" W	216.98'
L179	N 01°23'08" E	242.55'
L180	N 13°01'55" E	137.26'
L181	N 12°48'39" E	125.46'
L182	N 42°44'58" E	130.36'

FRESHWATER WETLAND LINE TABLE

LINE	BEARING	LENGTH
L183	N 47°10'56" E	126.98'
L203	N 45°47'01" W	6.70'
L204	S 81°06'36" E	7.25'
L242	N 47°19'24" E	75.51'
L243	N 47°18'24" E	77.07'
L244	N 87°09'46" E	6.09'
L245	S 30°54'31" W	144.36'
L246	S 87°15'42" W	29.46'
L247	S 87°15'42" W	42.66'
L248	S 30°54'31" W	19.76'
L249	S 30°54'31" W	114.39'
L250	S 30°54'31" W	50.14'
L261	S 32°32'16" W	7.35'

PROPERTY LINE TABLE

LINE	BEARING	LENGTH
L1	S 32°32'16" W	217.89'
L3	N 67°24'35" W	89.22'
L4	N 67°24'35" W	127.26'
L5	N 40°32'59" E	51.63'
L6	N 39°21'46" E	73.01'
L7	N 43°36'45" E	69.30'
L8	N 45°01'32" E	53.11'
L9	N 45°35'24" E	83.58'
L10	N 44°10'07" E	54.06'
L11	N 42°56'07" E	53.53'
L12	N 42°04'03" E	53.92'
L13	N 41°37'01" E	41.59'
L14	N 39°48'14" E	55.61'
L15	N 34°02'53" E	43.75'
L16	N 29°22'23" E	85.68'
L17	N 29°43'57" E	56.13'
L18	N 29°42'46" E	72.45'
L19	N 30°00'39" E	62.66'
L20	N 29°53'03" E	55.81'
L21	N 28°15'58" E	60.73'
L22	N 26°47'24" E	46.17'
L23	N 24°37'41" E	42.06'
L24	N 22°34'03" E	57.58'
L25	N 19°26'21" E	48.17'
L26	N 17°26'40" E	49.76'
L27	N 14°50'05" E	64.08'
L28	N 12°07'16" E	50.96'
L29	N 06°58'18" E	40.97'
L30	N 03°41'33" E	62.99'
L31	N 02°12'40" E	66.95'
L32	N 01°25'33" E	74.32'
L33	N 00°42'08" W	45.08'
L34	N 04°04'40" W	46.60'
L35	N 05°57'07" W	69.14'
L36	N 04°47'16" W	44.13'
L37	N 00°46'28" E	41.09'
L38	N 00°06'41" E	12.56'
L39	S 52°48'39" W	139.04'
L40	S 52°48'33" W	114.50'
L41	S 89°03'41" W	229.31'
L42	S 67°37'21" W	125.01'
L43	N 83°43'43" W	156.21'
L44	N 83°11'37" W	96.05'
L45	N 59°30'12" W	155.65'
L46	S 43°47'36" W	12.18'
L47	N 46°14'32" W	288.33'
L48	N 47°43'29" W	195.64'
L49	N 25°31'33" W	24.83'
L50	N 45°50'09" W	397.99'
L51	S 83°46'30" W	140.48'
L52	S 57°34'24" W	23.57'
L53	N 18°43'41" W	70.75'
L54	N 71°54'25" E	5.80'
L55	N 71°54'25" E	300.41'
L56	S 28°21'37" E	50.02'
L184	S 61°38'33" W	126.43'
L185	N 46°24'56" W	277.13'
L186	N 24°13'30" W	41.60'
L187	N 61°55'32" E	265.91'
L188	N 17°59'14" W	15.65'
L189	N 17°59'14" W	285.14'
L190	N 61°47'06" E	310.10'
L192	N 30°58'49" E	121.24'
L193	N 30°58'49" E	3.09'
L194	N 30°58'49" E	142.51'
L195	N 30°58'49" E	703.46'
L196	N 30°58'49" E	353.12'
L197	N 89°19'01" E	184.09'
L198	N 89°19'01" E	263.31'
L199	S 35°29'14" E	319.78'
L200	S 02°39'51" E	266.55'
L201	S 25°22'13" W	274.91'
L202	S 33°49'52" W	285.13'
L260	N 43°59'35" W	124.47'

PROPERTY LINE TABLE

LINE	BEARING	LENGTH
L262	S 45°40'14" E	49.96'
L263	S 61°29'02" W	209.96'
L264	S 63°01'33" W	286.02'
L265	N 70°19'55" E	10.42'
L266	N 27°36'02" W	116.74'

PROPERTY LINE TABLE

LINE	BEARING	LENGTH
L204	N 83°34'51" E	40.30'
L205	N 00°42'08" W	45.08'
L206	N 04°04'40" W	46.60'
L207	N 05°57'07" W	69.14'
L208	N 04°47'16" W	44.13'
L209	N 00°46'28" E	41.09'
L210	N 00°06'41" E	12.56'
L211	N 89°19'01" E	184.09'
L212	N 89°19'01" E	263.31'
L213	N 89°19'01" E	158.11'
L214	N 43°39'16" W	161.96'
L215	N 78°21'52" W	87.17'
L216	N 78°21'52" W	35.34'
L217	S 87°51'45" W	143.25'
L218	N 89°54'48" W	130.95'
L219	S 88°42'18" W	216.34'
L220	S 87°53'52" W	166.52'
L221	S 88°18'31" W	202.41'
L222	S 84°24'41" W	130.11'
L223	S 89°45'39" W	155.42'
L224	S 87°56'53" W	202.63'
L225	N 88°43'10" W	193.37'
L226	S 88°00'31" W	215.54'
L227	S 88°54'29" W	177.69'
L228	N 63°35'30" W	165.91'
L229	N 54°27'51" W	123.96'
L230	N 35°34'06" W	91.25'
L231	N 14°25'02" W	125.33'
L232	N 08°26'23" W	122.67'
L233	N 08°19'00" E	132.98'
L234	N 12°37'11" E	202.83'
L235	N 19°51'27" E	94.67'
L236	N 39°39'44" E	172.36'
L237	N 51°09'30" E	106.52'
L238	N 55°37'52" E	109.97'
L239	N 55°34'06" E	114.04'
L240	N 69°17'38" E	92.97'
L241	N 75°26'26" E	39.22'
L251	S 18°58'44" W	23.09'
L252	S 30°41'02" W	64.71'
L253	S 28°48'46" W	51.15'
L254	S 47°15'22" W	28.60'
L255	N 64°43'46" W	13.84'
L256	N 23°51'26" W	7.79'
L257	S 89°31'08" E	14.96'
L258	S 12°48'15" E	10.31'
L259	S 33°06'14" E	14.02'

200 0 100 200 400 800
(IN FEET)
1 inch = 200 ft.

NO.	DATE	REVISIONS

TITLE
WETLAND SURVEY SHOWING
464-00-00-002, 006, 007, 023, 038 & 459-02-00-013
PROPERTY OF GINN-LA FUND IV PROMENADE NORTH LLC
LOCATED IN THE CITY OF CHARLESTON
CHARLESTON COUNTY, SOUTH CAROLINA

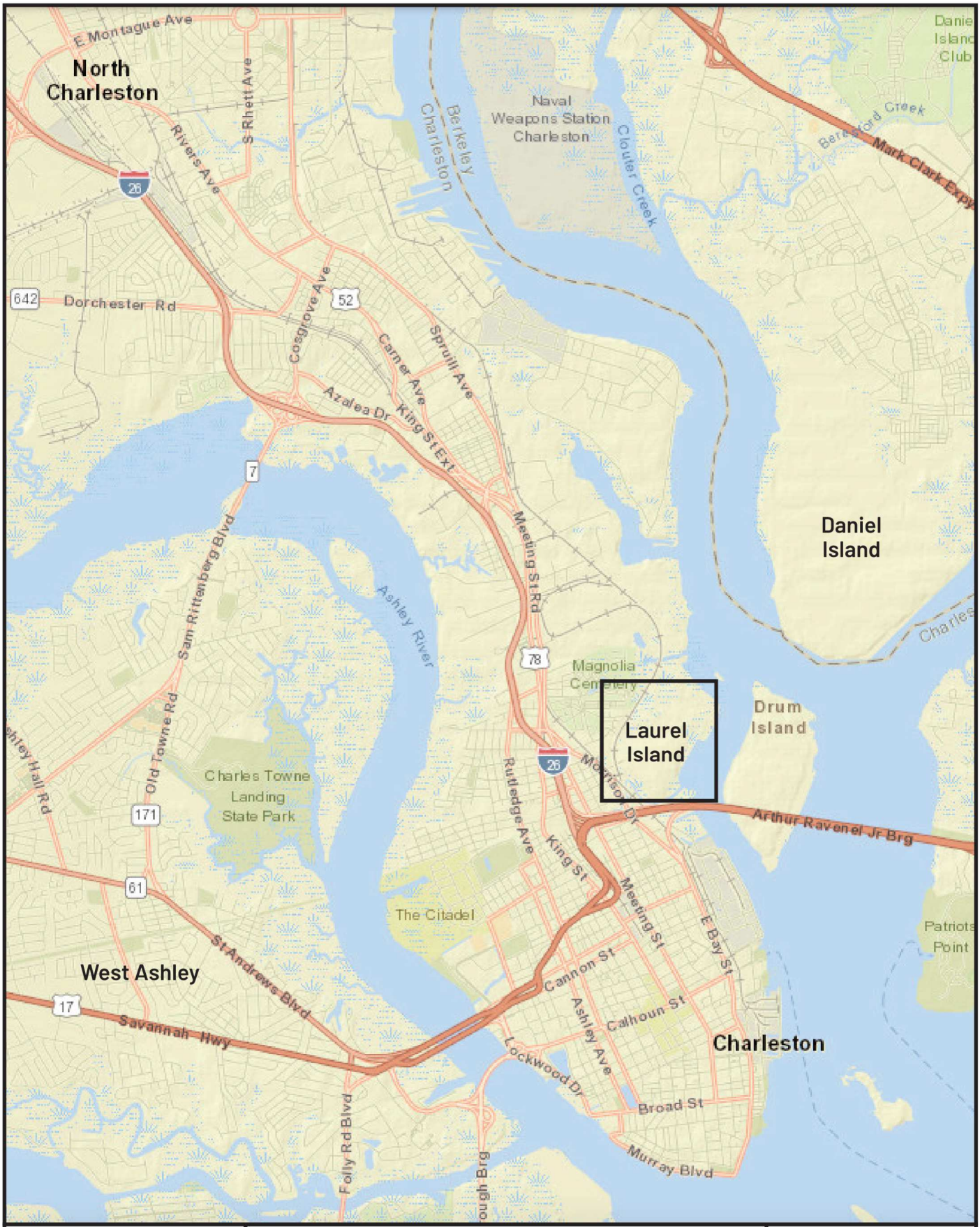
SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION NUMBER LAND SURVEYING C.A. NO. 5933

Parker Land Surveying, LLC
5910 Griffin Street
Hanahan, SC 29410
Phone: (843) 554-7777
Fax: (843) 554-7779

DESIGNED :	—
DRAWN :	CAC
CHECKED :	ACG
APPROVED :	ACG
SCALE :	1" = 200'
DATE :	2/20/2020
PROJECT NO. :	19-021
SHEET	1 OF 1

APPENDIX F

Additional Drawings



LAUREL ISLAND

Exhibit 1: Location Map

Owner/Developer: Laurel Island Development, LLC
Prepared by: Reveer Group, LLC
September 10, 2019

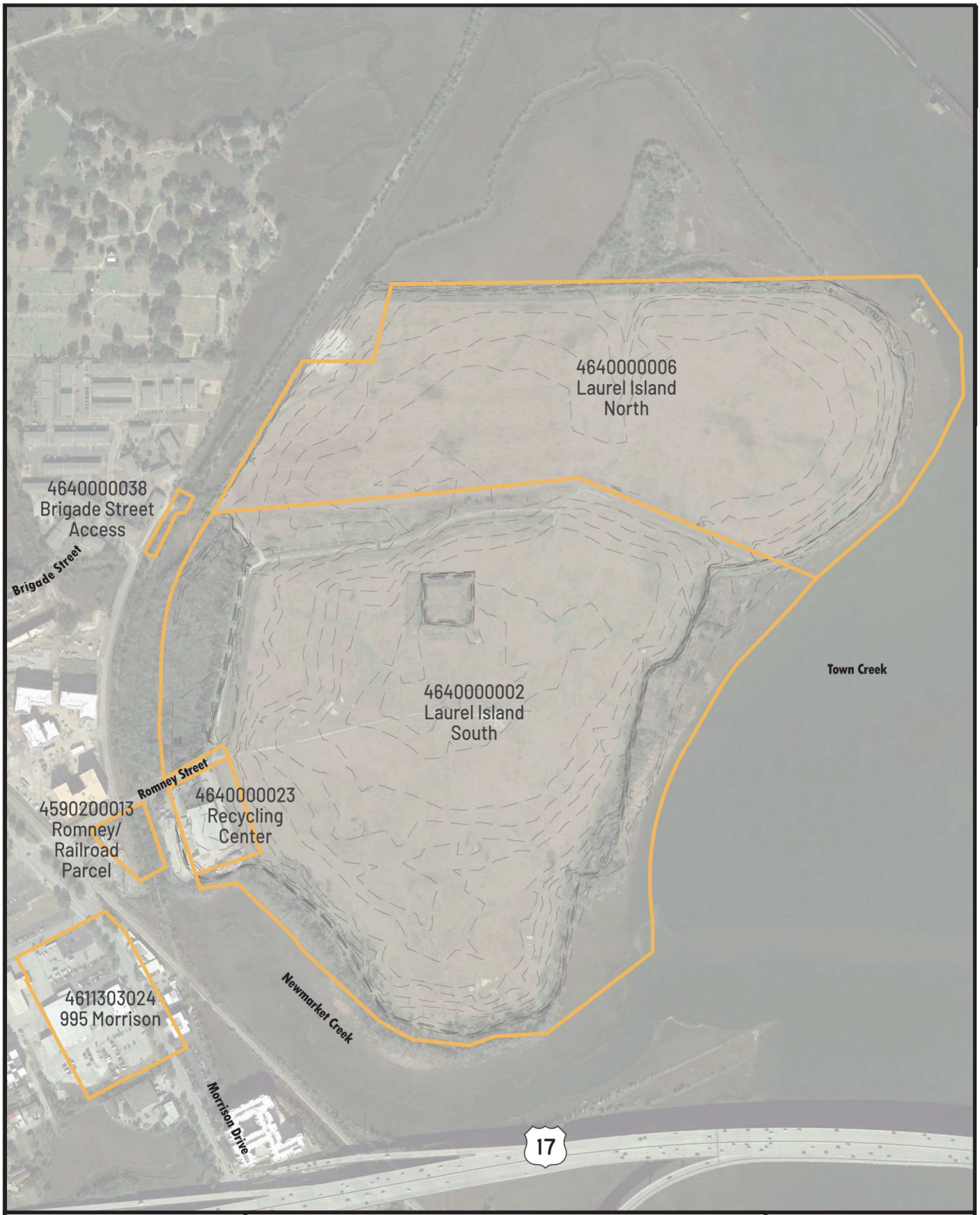
not to scale

LAUREL ISLAND

Exhibit 2: Aerial

Owner/Developer: Laurel Island Development, LLC
Prepared by: Reveer Group, LLC
January 15, 2020

0 600' 1200'
SCALE: 1" = 600'

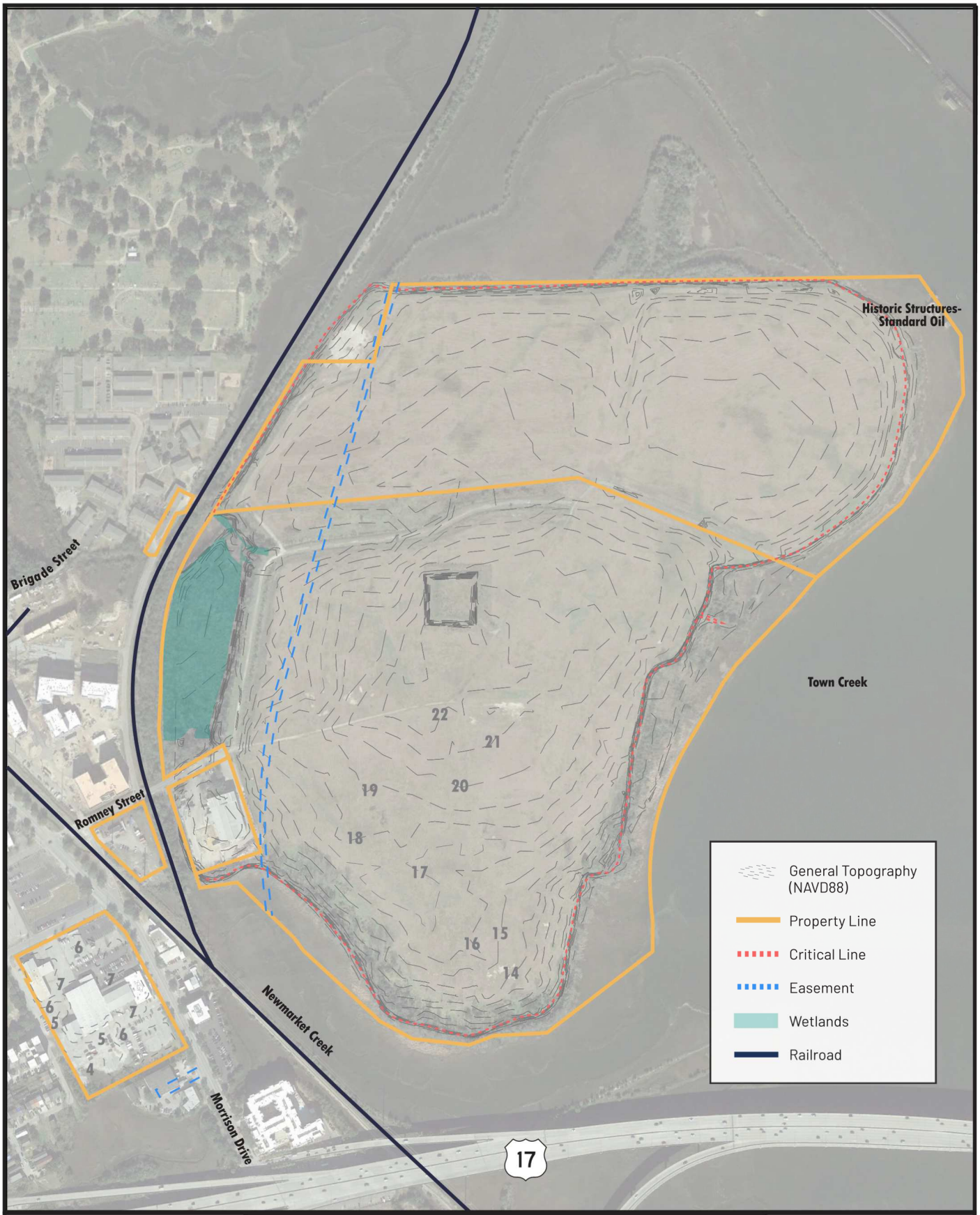


LAUREL ISLAND

Exhibit 3: Project Parcels

Owner/Developer: Laurel Island Development, LLC
Prepared by: Reveer Group, LLC
January 15, 2020

0 600' 1200'
SCALE: 1" = 600'



LAUREL ISLAND

Exhibit 4: Existing Conditions

Owner/Developer: Laurel Island Development, LLC
Prepared by: Reveer Group, LLC
January 23, 2020

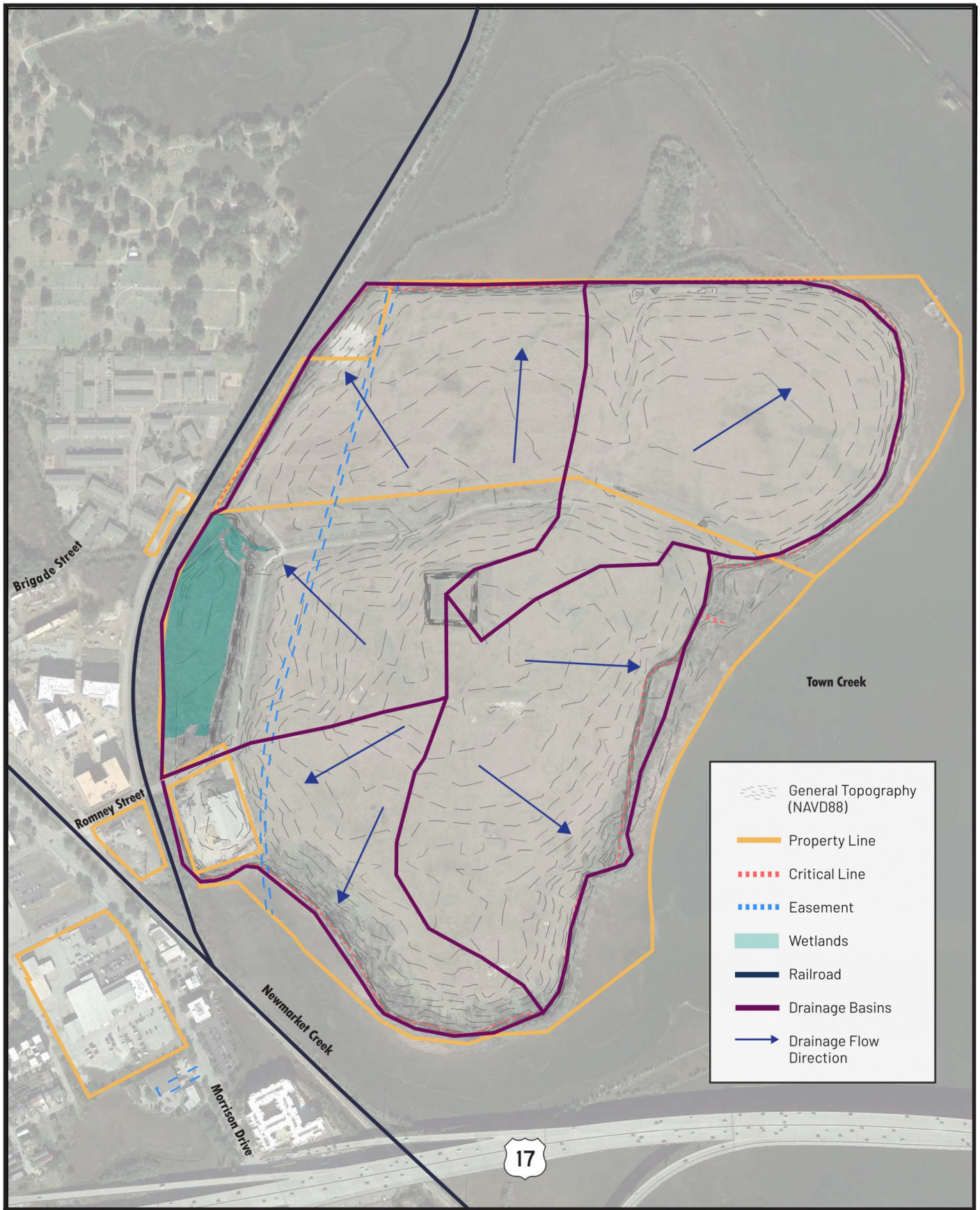
0 600' 1200'
SCALE: 1" = 600'

LAUREL ISLAND

Exhibit 5: Wetlands and Critical Lines

Owner/Developer: Laurel Island Development, LLC
Prepared by: Reveer Group, LLC
January 15, 2020

0 600' 1200'
SCALE: 1" = 600'

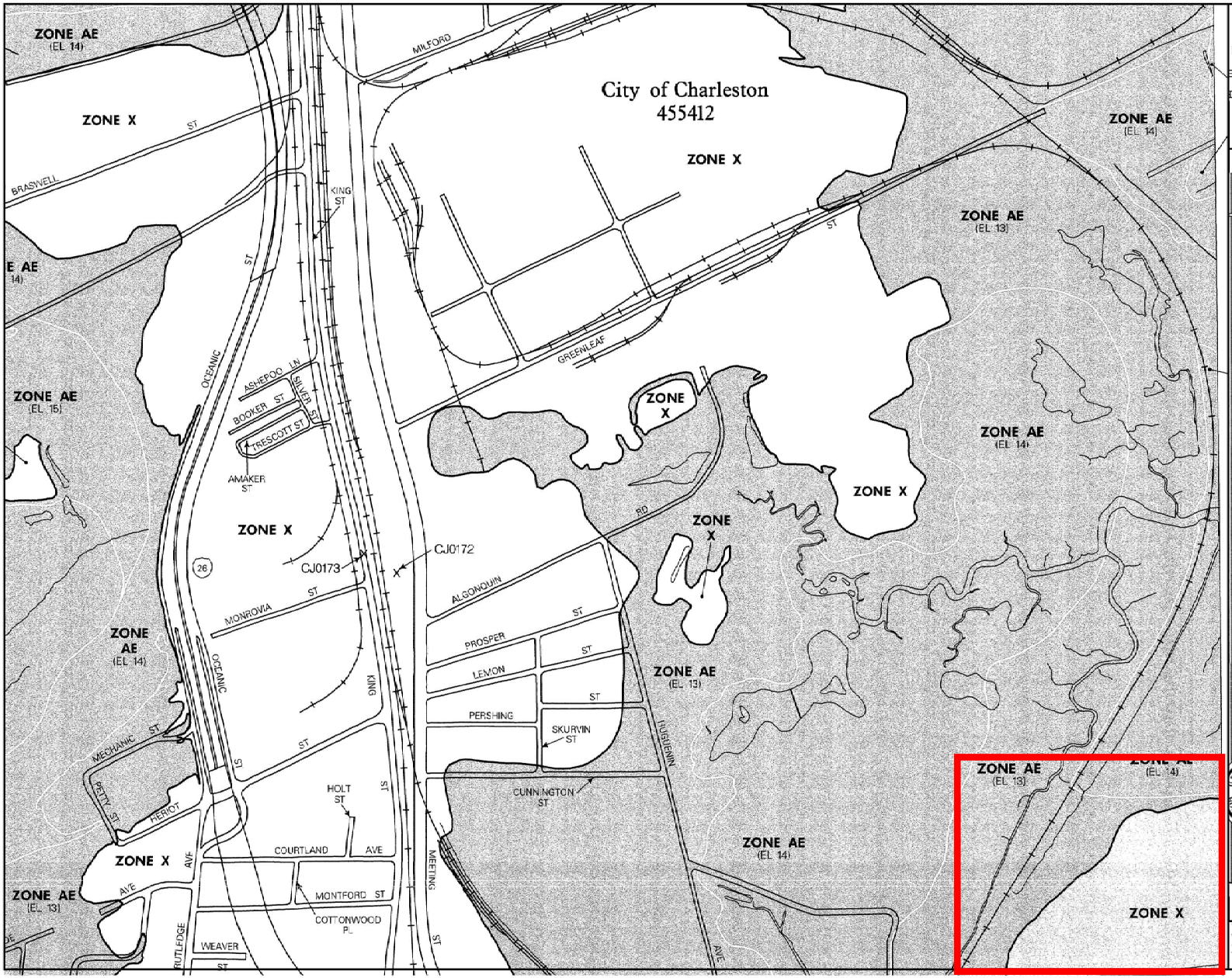


LAUREL ISLAND

Exhibit 6: Drainage

Owner/Developer: Laurel Island Development, LLC
Prepared by: Reveer Group, LLC
January 15, 2020

0 600' 1200'
SCALE: 1" = 600'



APPROXIMATE SCALE

MAP SCALE 1" = 500'

0 500 1000 FEET

METERS

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CHARLESTON COUNTY, SOUTH CAROLINA AND INCORPORATED AREAS

PANEL 504 OF 855

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHARLESTON, CITY OF	455412	0504	J
CHARLESTON COUNTY	455413	0504	J
NORTH CHARLESTON, CITY OF	450042	0504	J

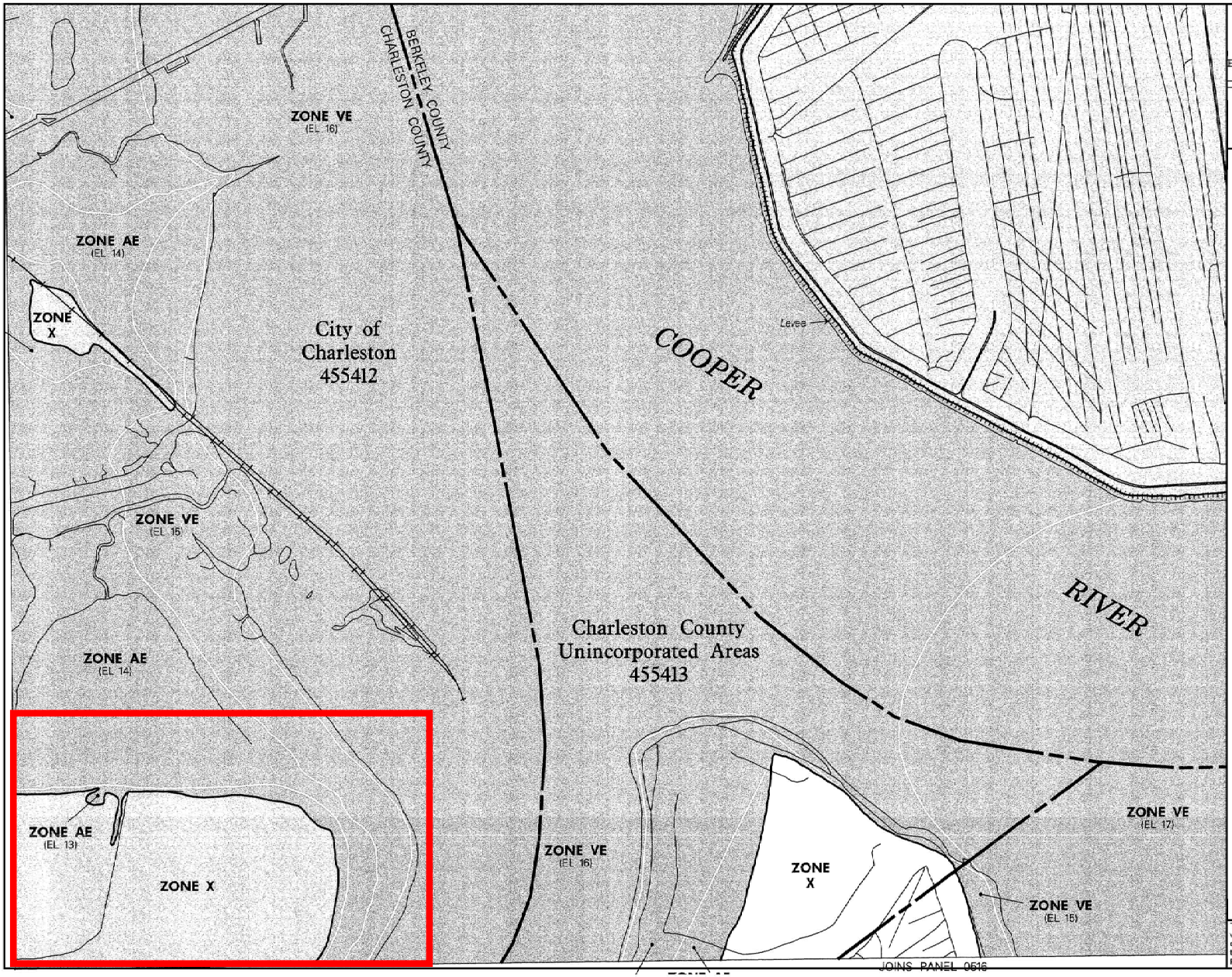
Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER
45019C0504J

EFFECTIVE DATE:
NOVEMBER 17, 2004

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



APPROXIMATE SCALE

MAP SCALE 1" = 500'

0 500 1000 FEET

0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CHARLESTON COUNTY,
SOUTH CAROLINA
AND INCORPORATED AREAS

PANEL 508 OF 855

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHARLESTON, CITY OF	455412	0508	J
CHARLESTON COUNTY	455413	0508	J
MOUNT PLEASANT, TOWN OF	455417	0508	J
NORTH CHARLESTON, CITY OF	450042	0508	J

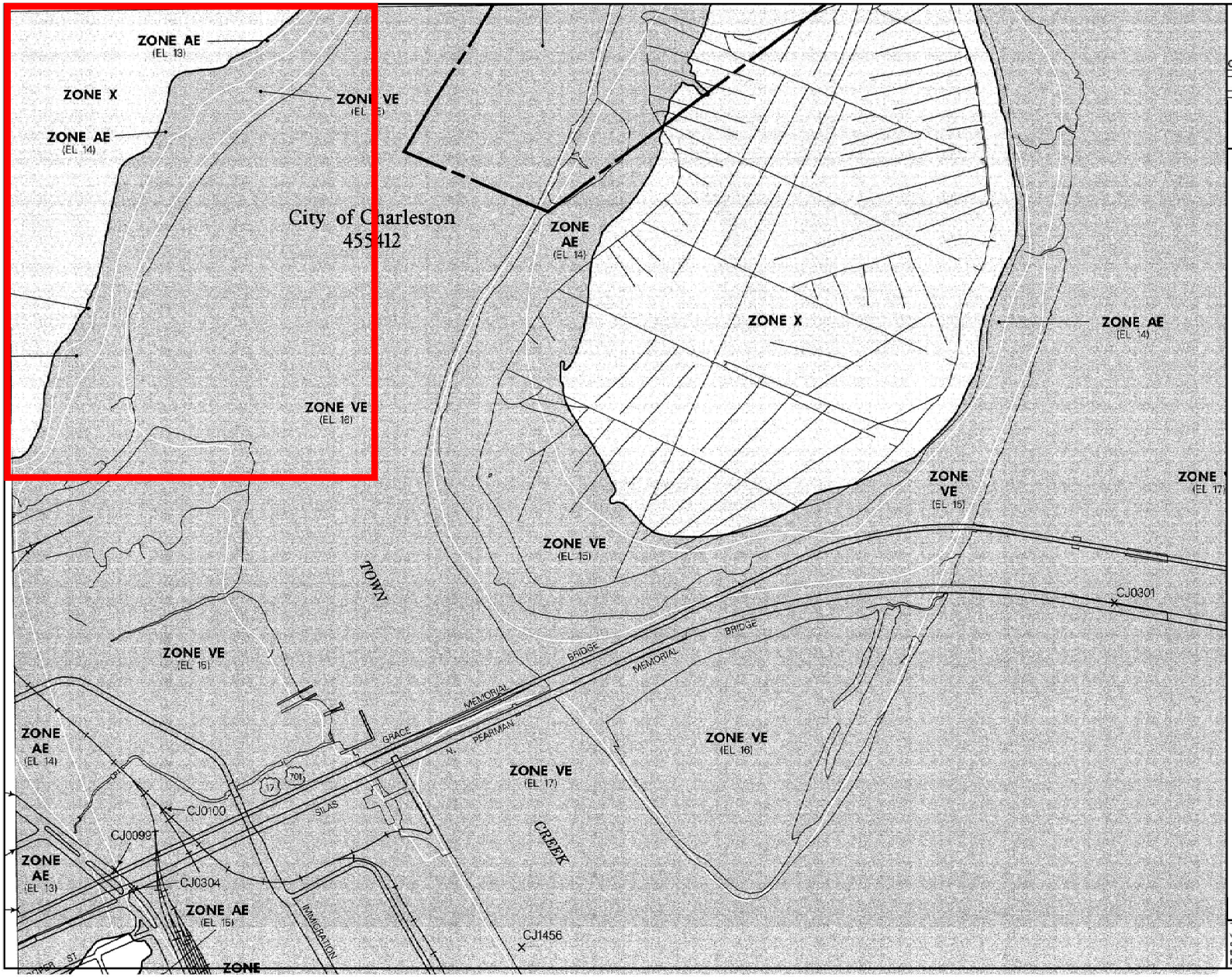
Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER
45019C0508J

EFFECTIVE DATE:
NOVEMBER 17, 2004

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



APPROXIMATE SCALE

MAP SCALE 1" = 500'

0 0 500 1000 FEET

ME

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CHARLESTON COUNTY,
SOUTH CAROLINA
AND INCORPORATED AREAS

PANEL 516 OF 855

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHARLESTON, CITY OF	455412	0516	J
CHARLESTON, COUNTY	455413	0516	J
MOUNT PLEASANT, TOWN OF	455417	0516	J

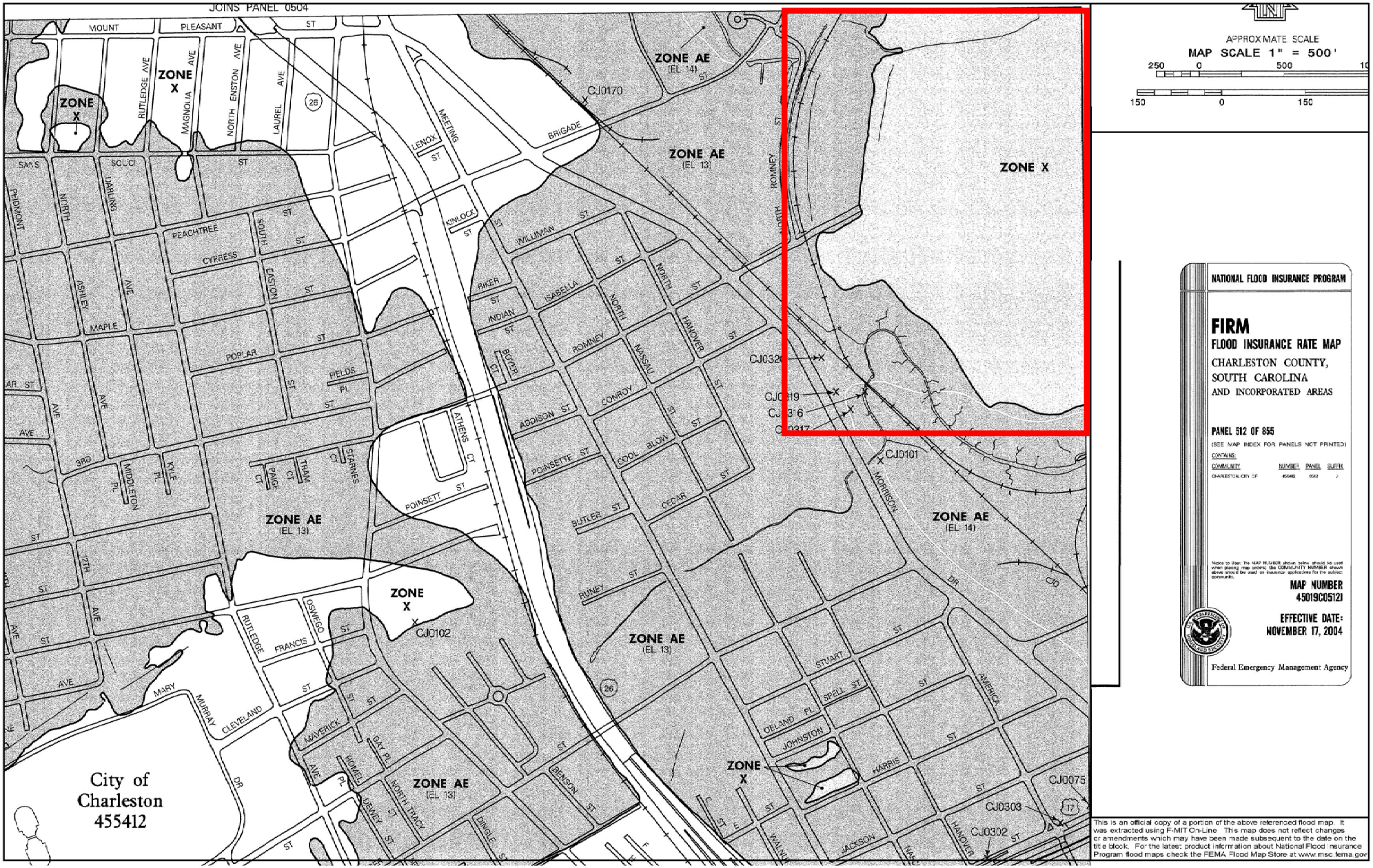
Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER
45019C0516J

EFFECTIVE DATE:
NOVEMBER 17, 2004

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CHARLESTON COUNTY,
SOUTH CAROLINA
AND INCORPORATED AREAS

PANEL 512 OF 855

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHARLESTON, CITY OF	455412	0512	J

Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER
45019C0512J

EFFECTIVE DATE:
NOVEMBER 17, 2004

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

The AE Zone category has been divided by a **Limit of Moderate Wave Action.** The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was State Plane South Carolina FIPS 3900. The **horizontal datum** was NAD 83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by Charleston County, South Carolina.

This map may reflect more detailed or up-to-date **stream channel configurations** than those shown on the previous FIRM. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations and improved topographic data. The profile baselines depicted on this map represent the hydraulic modeling baselines that match the flood profiles and Floodway Data Tables if applicable, in the FIS report. As a result, the profile baselines may deviate significantly from the new base map channel representation and may appear outside of the floodplain.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

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If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/national-flood-insurance-program.

This digital Flood Insurance Rate Map (FIRM) was produced through a unique cooperative partnership between the State of South Carolina and the Federal Emergency Management Agency (FEMA). The State of South Carolina has implemented a long-term approach of floodplain management to decrease the costs associated with flooding. This is demonstrated by the State's commitment to map floodplain areas at the local level. As a part of this effort the State of South Carolina has joined in a Cooperating Technical State agreement with FEMA to produce and maintain this digital FIRM.

http://www.dnr.state.sc.us/

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D Boundary
- CBRS and OPA Boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths and flood velocities.
- Limit of Moderate Wave Action
- 513 (EL 987) — Base Flood Elevation line and value; elevation in feet* / Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A — A: Cross section line
- 21 — 23: Transect line
- Culvert, Flume, Penstock, or Aqueduct
- Bridge
- Footbridge
- 97° 07' 30", 32° 22' 30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 76000mE — 1000-meter Universal Transverse Mercator grid ticks, zone 17
- 500000 FT — 5000-foot grid values: South Caroline State Plane coordinate system, (FIPSZONE 3900), Lambert Projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
November 17, 2004

September 9, 9999 -

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
SEE NOTICE TO FLOOD INSURANCE USERS IN THE FIS REPORT

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0504K

FIRM
FLOOD INSURANCE RATE MAP

CHARLESTON COUNTY, SOUTH CAROLINA
AND INCORPORATED AREAS

PANEL 504 OF 855

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHARLESTON, CITY OF	455412	0504	K
CHARLESTON COUNTY	455413	0504	K
NORTH CHARLESTON, CITY OF	450042	0504	K

PRELIMINARY
SEPTEMBER 9, 2016

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
45019C0504K

MAP REVISED

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

The AE Zone category has been divided by a **Limit of Moderate Wave Action.** The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was State Plane South Carolina FIPS 3900. The **horizontal datum** was NAD 83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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http://www.dnr.state.sc.us/

LEGEND

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- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
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- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D Boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths and flood velocities.
- Limit of Moderate Wave Action
- 513 (EL 987) Base Flood Elevation line and value; elevation in feet* / Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A — A: Cross section line
- 21 — 23: Transect line
- Culvert, Flume, Penstock, or Aqueduct
- Bridge
- Footbridge
- 97° 07' 30", 32° 22' 30" / 76°00"E: Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
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- 600000 FT: 5000-foot grid values: South Caroline State Plane coordinate system, (FIPSZONE 3900), Lambert Projection
- DX5510: Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5: River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
November 17, 2004

September 9, 9999 -

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
SEE NOTICE TO FLOOD INSURANCE USERS IN THE FIS REPORT

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MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0508K

FIRM

FLOOD INSURANCE RATE MAP

CHARLESTON COUNTY, SOUTH CAROLINA
AND INCORPORATED AREAS

PANEL 508 OF 855

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHARLESTON, CITY OF	455412	0508	K
CHARLESTON COUNTY	455413	0508	K
MOUNT PLEASANT, TOWN OF	455417	0508	K
NORTH CHARLESTON, CITY OF	450042	0508	K

PRELIMINARY
SEPTEMBER 9, 2016

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MAP NUMBER
45019C0508K

MAP REVISED

Federal Emergency Management Agency

NOTES TO USERS

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Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

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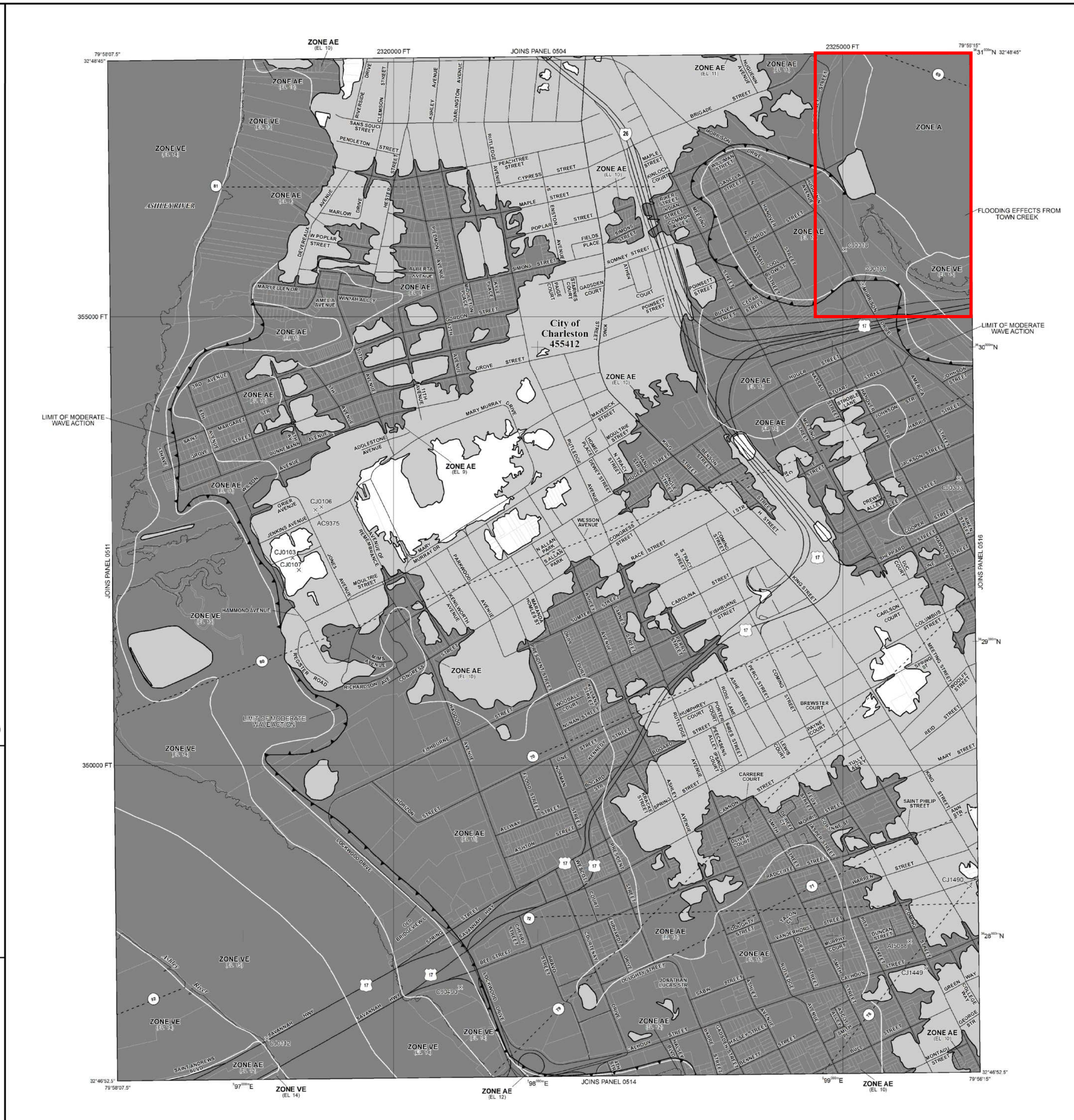
http://www.dnr.state.sc.us/



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

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COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

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	Floodplain boundary
	Floodway boundary
	Zone D Boundary
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	Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths and flood velocities.
	Limit of Moderate Wave Action
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

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A — A	Cross section line
23 - - - - 23	Transect line
	Culvert, Flume, Penstock, or Aqueduct
	Bridge
	Footbridge
97° 07' 30", 32° 22' 30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
42 76 000m E	1000-meter Universal Transverse Mercator grid ticks, zone 17
600000 FT	5000-foot grid values: South Carolina State Plane coordinate system, (FIPSZONE 3900), Lambert Projection
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5	River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
November 17, 2004

September 9, 9999 -

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0512K

FIRM
FLOOD INSURANCE RATE MAP

CHARLESTON COUNTY, SOUTH CAROLINA AND INCORPORATED AREAS

PANEL 512 OF 855

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHARLESTON, CITY OF	455412	0512	K

PRELIMINARY
SEPTEMBER 9, 2016

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
45019C0512K

MAP REVISED

Federal Emergency Management Agency

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Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was State Plane South Carolina FIPS 3900. The **horizontal datum** was NAD 83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by Charleston County, South Carolina.

This map may reflect more detailed or up-to-date **stream channel configurations** than those shown on the previous FIRM. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations and improved topographic data. The profile baselines depicted on this map represent the hydraulic modeling baselines that match the flood profiles and Floodway Data Tables if applicable, in the FIS report. As a result, the profile baselines may deviate significantly from the new base map channel representation and may appear outside of the floodplain.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

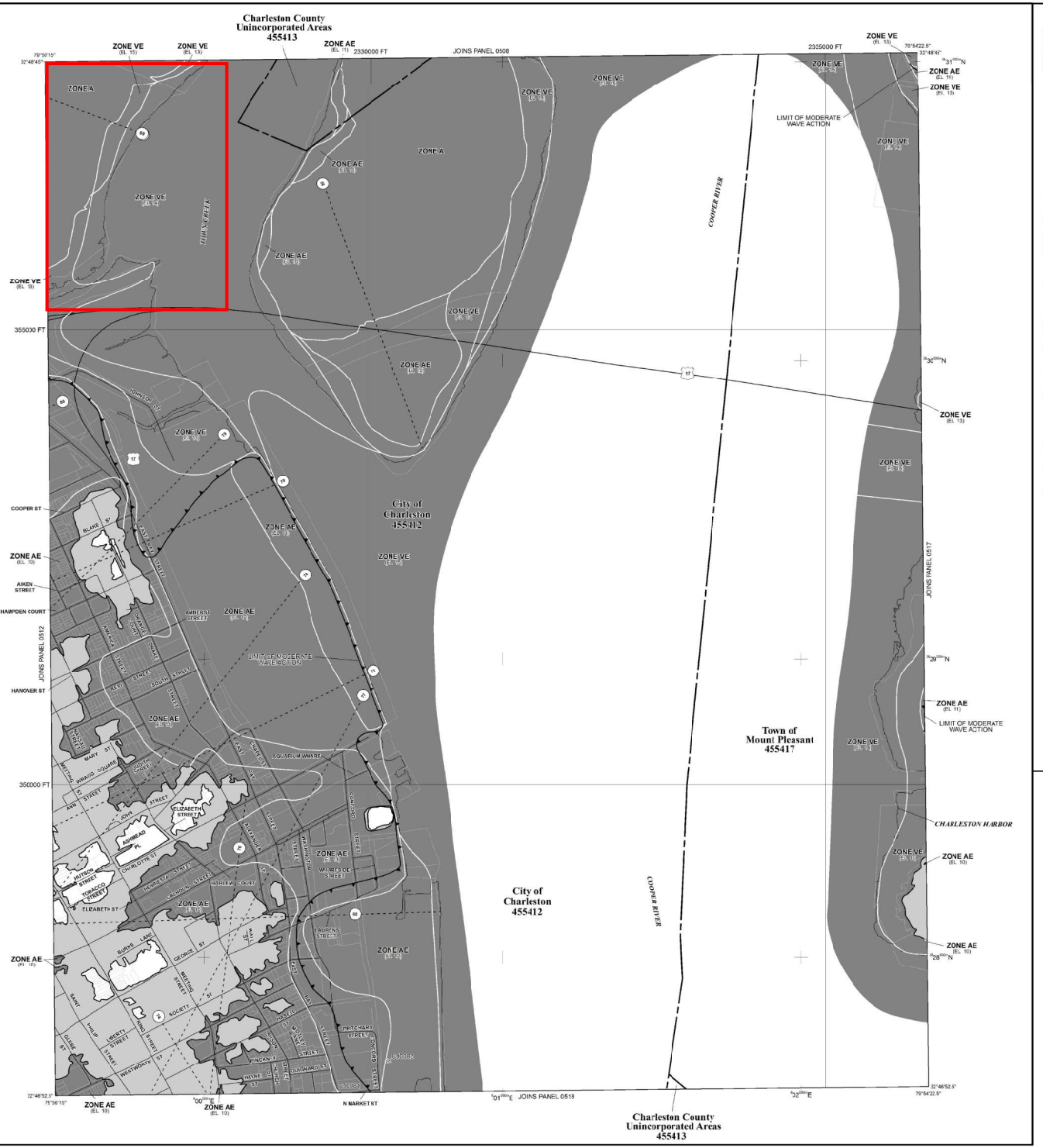
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Information eXchange (FMIX)** at 1-877-336-2627 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FMIX may also be reached by Fax at 1-800-358-9620 and their website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/national-flood-insurance-program.

This digital Flood Insurance Rate Map (FIRM) was produced through a unique cooperative partnership between the State of South Carolina and the Federal Emergency Management Agency (FEMA). The State of South Carolina has implemented a long-term approach of floodplain management to decrease the costs associated with flooding. This is demonstrated by the State's commitment to map floodplain areas at the local level. As a part of this effort the State of South Carolina has joined in a Cooperating Technical State agreement with FEMA to produce and maintain this digital FIRM.

http://www.dnr.state.sc.us/



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D Boundary
- CBRS and OPA Boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths and flood velocities.
- Limit of Moderate Wave Action
- 513 (EL 987) Base Flood Elevation line and value; elevation in feet* / Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A — A: Cross section line
- 21 — 23: Transect line
- Culvert, Flume, Penstock, or Aqueduct
- Bridge
- Footbridge
- 97° 07' 30", 32° 22' 30" / 76000mE: Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 1000-meter Universal Transverse Mercator grid ticks, zone 17
- 500000 FT: 5000-foot grid values: South Carolina State Plane coordinate system, (FIPSZONE 3900), Lambert Projection
- DX5510: Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5: River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
November 17, 2004

September 9, 9999 -

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
SEE NOTICE TO FLOOD INSURANCE USERS IN THE FIS REPORT

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0516K

FIRM
FLOOD INSURANCE RATE MAP

CHARLESTON COUNTY, SOUTH CAROLINA
AND INCORPORATED AREAS

PANEL 516 OF 855

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHARLESTON, CITY OF	455412	0516	K
CHARLESTON COUNTY	455413	0516	K
MOUNT PLEASANT, TOWN OF	455417	0516	K

PRELIMINARY
SEPTEMBER 9, 2016

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
45019C0516K

MAP REVISED

Federal Emergency Management Agency

APPENDIX G

LIBAR Rules and Regulations

LIBAR
Laurel Island Board of Architectural Review
Rules of Procedure and Regulations

Article I. Organization

Section 1. - Rules. These Rules of Procedure and Regulations (these "Rules and Regulations") are adopted by the City of Charleston City Council in accordance with the provisions of S.C. Code § 6-29-740, § 6-29-870, and Section 54-256 of the City of Charleston Zoning Ordinance.

Section 2. - Members of the Board. The Board shall consist of five (5) members, three (3) shall be designated by the Laurel Island Property Owners' Association (LIPA), and two (2) shall be designated by the City of Charleston. The members designated by the City and at least two (2) of the members designated by LIPA shall have demonstrated experience in at least one of the following fields: fine arts, architecture, structural engineering, landscape architecture, civil engineering, urban design, city planning, preservation, construction, real estate, law, or associated disciplines. Each board shall elect from its members a chairperson, vice-chairperson, and secretary. The term of office shall be three years.

Section 3. - Officers. The officers of the Board shall be a chairperson, vice-chairperson, and a secretary elected at the first meeting of the Board in each calendar year.

3.1 **Chairperson.** The Chairperson, or in his absence, the vice-chairperson, shall be a voting member of the board and shall:

a. Call meetings of the Board;

b. Preside at meetings and hearings;

c. Act as spokesman for the board;

d. Sign documents for the Board;

e. Have, or cause to have, decisions of the Board served on parties;

f. Manage discussion at meetings to assure that it remains pertinent to matters subject to the jurisdiction of the Board; and

g. Perform other duties approved by the Board.

3.2 **Vice-Chairperson.** The vice-chairperson shall exercise the duties of the chairperson in the absence, disability, or disqualification of the chairperson. In the absence of the chairperson and the vice-chairperson, an acting chairperson shall be designated by the members present.

3.3 **Secretary.** The secretary shall:

a. Provide and publish notice of applications, appeals, and meetings;

b. Prepare the agenda;

c. Properly post the agenda;

d. Keep minutes of hearings and meetings;

e. Maintain Board records as public records;

f. Notice parties of Board decisions;

g. Attend to Board correspondence; and

h. Perform other duties normally carried out by a secretary.

Section 4. - Terms of Office. The chairperson and vice-chairperson shall serve for one year or until they are re-elected, or their successors are elected and qualified.

Article II. Meetings

Section 1. - Time and Place. The Board shall meet at such time and place as may be called by the Board upon five (5) days prior notice, posted and delivered to all members and published on the City of Charleston's website. Meetings shall be open to the public.

Section 2. - Agenda. A written agenda shall be furnished by the secretary to each member of the Board and shall be posted on the City of Charleston's website at least five (5) days prior to each regular meeting. Items may be removed from the agenda, or postponed at a meeting, by a majority vote.

Section 3. - Quorum. A majority of the members of the Board shall constitute a quorum. A quorum shall be present before any business is conducted other than rescheduling the meeting.

Section 4. - Rules of Order. *Robert's Rules of Order* shall govern the conduct of meetings except as otherwise provided by these Rules of Procedure.

Section 5. - Public Notice. Each applicant whose application is to be heard will be notified of the date of the meeting at least five (5) days prior to the meeting by letter from the secretary. The property that is the subject of the application shall be posted with a sign at least five (5) days prior to the meeting. The sign shall contain a description of the matter to be heard and specify the appropriate city department to contact concerning information regarding the application. The sign shall also specify the time, date and location of the meeting.

Article III. Appeals Procedure

Section 1. - Appeal of Board Decision to Board of Architectural Review - Large. A person who may have material interest in any decision of the Board may appeal from a decision of the board to the Board of Architectural Review – Large by filing such appeal with the City of Charleston in the form of a petition, in writing,

setting forth plainly, fully, and distinctly why the decision is contrary to the Laurel Island Design Principals and law. The appeal must be filed within ten (10) days of the decision of the Board.

Article IV. Hearing Procedure

Section 1. - Compliance with Zoning. Except as may be otherwise provided by Ordinance, applications are not to be considered by the Board unless they satisfy all zoning requirements concerning the use of the property, parking, setbacks or other zoning requirements that would affect the size and placement of building. Any Board approval of plans that are determined not to comply with zoning shall render the Board approval null and void; provided however, this rule may be waived by the Board.

The deadline for applications is noon, no later than ten days prior to the requested review date.

Section 2. - Appearances. The applicant or any party may appear in person or by agent or by attorney. The Board may postpone, or proceed to dispose of a matter on the record before it in the absence of an applicant, or his representative.

Section 3. - Conduct of Hearing. The normal order of hearing, subject to modification by the Chairperson, shall be:

a. Statement of matter to be heard (Chairperson or Secretary);

b. Presentation of the project by the applicant (10 – 15 minutes);

c. Board and staff questions to, and responses from, the applicant;

d. Public comment (20-minute limit total, or as determined by the Chairperson), followed by responses from Applicant;

e. Full Board discussion;

f. Applicant points of clarification;

g. Board action

Section 4. - Disposition. The Board may deliberate and make a final disposition of a matter by majority vote of members present at the hearing and qualified to vote; provided that no less than a quorum are qualified to vote. The vote may be taken at the same or subsequent meeting. Deliberations shall be conducted and votes taken in public. A member need not recuse herself or abstain from voting because a member has an ownership interest in property located within the Laurel Island PUD, or has been employed by a person with such an ownership interest.

Section 5. - Decisions of the Board. In order to provide guidance and insight into desirable goals and objectives for the Laurel Island PUD for desirable types of development, and for the maintenance of consistent policies in guiding the

building public toward better standards of design, decisions of the Board shall be guided by the Laurel Island Design Principles (see Article VII).

A decision of the Board shall be issued disposing of a matter by granting approval, denying approval or granting approval with such conditions as may be deemed necessary. The secretary shall notify the applicant upon execution of the decision of the Board. The Board may defer action on an application when, in its discretion, a project requires additional study.

Article V. Records

Section 1. - Minutes. The Secretary shall prepare minutes of all meetings and hearings of the Board.

Section 2. - Decisions. The Secretary shall assist in the preparation and notice of all decisions of the Board in appropriate form. Copies of all notices, correspondence, documentary evidence, minutes, decisions, and forms shall be maintained as public records by the City of Charleston.

Section 3. - Policies of the board. The Board may adopt guidelines and policies at its discretion.

Article VI. Amendment.

Section 1. - Amendment. These rules may be amended at any regular meeting of the Board by majority vote of the members of the Board.

Article VII. Laurel Island Design Principles

To be approved by BAR-L and inserted herein upon approval.