ATJ Copy

85- 418

ASSIGNMENT OF DEVELOPER RIGHTS

THIS ASSIGNMENT OF DEVELOPER RIGHTS is made and entered into this 12th day of December, 1984, by and between the undersigned Transferor and Transferee.

W I T N E S S E T H :

WHEREAS, the undersigned Transferor is the Developer under the terms of a certain Developer Agreement and Addendum to Developer Agreement dated the 29th day of March, 1983 by and between itself and the City of Margate, providing for utility service and a reservation of capacity therefor for that certain real property described upon Exhibit "A" attached hereto and made a part hereof; and

WHEREAS, the undersigned Transferee has acquired title to the aforedescribed real property; and

WHEREAS, the undersigned Transferor wishes to assign its rights and obligations under the terms of that certain Developer Agreement and Addendum to Developer Agreement described above and a portion of its reserved capacity as provided for thereunder; and

WHEREAS, the undersigned Transferee is desirous of accepting such assignment and assuming the obligations attendant thereto.

NOW, THEREFORE, in consideration of the mutual convenants herein contained and other good and valuable considerations, the parties hereto agree as follows:

1. That that which is set forth above is true and correct and incorporated herein as if fully set forth herein.

2. That the undersigned Transferor does hereby transfer and assign its right, title and interest, duties and responsibilities, as contained in the Developer Agreement and Addendum to Developer Agreement, copies of which are attached hereto and made a part of this document and referred to as Exhibit "B".

3. The undersigned Transferee accepts the aforedescribed assignment and agrees to assume those obligations attendant thereto under the provisions of the aforedescribed Developer Agreement and Addendum to Developer Agreement.

RECORDED IN OFFICIAL RECORDS BOOK OF BROWARD COUNTY, FLORIDA
DEC 12 1984 12236 PAGE 200

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MARGATE, FL 33063

4. The undersigned Transferee recognizes and acknowledges that in connection with the aforedescribed assignment of reserve capacity, since the Transferor elected the deferred payment alternative provided for under the Developer Agreement and Addendum to Developer Agreement, it is the undersigned Transferee's obligation to provide a letter of credit/certificate of deposit to the City of Margate which shall be assigned to the Florida Coast Bank as security for the undersigned Transferee's assumption of obligations in connection with the aforedescribed reserve capacity.

5. The undersigned Transferor and Transferee each represent to the City that this assignment of capacity is being transferred "at cost" as that term is defined under the provisions of the aforedescribed Developer Agreement and Addendum to Developer Agreement.

6. The undersigned Transferor and Transferee understand and acknowledge that this assignment and transfer of capacity shall only be effective upon the satisfaction of the following items:

A. The City of Margate's consent to the agreement in writing.

B. The Transferee has furnished a letter of credit/certificate of deposit and same has been accepted by the Florida Coast Bank.

IN WITNESS WHEREOF, Transferor has executed this agreement this 7th day of December, 1984.

Witnesses:

(Thomas S. Zalewski)

Martha R. Allord

1957 MARGARET WOODSON FISHER TRUST

By: _____
SAN W. ORR, JR., as Trustee

"Transferor"

STATE OF WISCONSIN
COUNTY OF MARATHON

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgements, personally appeared SAN W. ORR, JR., as Trustee, to me well known to be the person who executed the foregoing instrument as an officer of 1957 MARGARET WOODSON FISHER TRUST, and he acknowledged before me that he executed the same for the purposes set forth herein.

WITNESS my hand and official seal this 7th day of December, 1984.

_____
Notary Public
State of Wisconsin
My commission expires 8/28/88

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MARGATE, FL 33063

REC 12236 PAGE 211

Witnesses:

441 SOUTH LTD., II, a Florida Limited Partnership

By: _____
ROBERT W. BUCK, sole general partner "Transferree"

STATE OF FLORIDA
COUNTY OF

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgements, personally appeared ROBERT W. BUCK, to me well known to be the person who executed the foregoing instrument as an officer of 441 South Ltd., II, a Florida Limited Partnership, and he acknowledged before me that he executed the same for the purposes set forth herein.

WITNESS my hand and official seal this 12 day of December, 1984.

_____
Notary Public
State of Florida At Large

My Commission Expires: _____

Notary Public, State of Florida
My Commission Expires Oct. 22, 1985
Bonded Thru Troy Fain-Insurance, Inc.

REC 12236 PAGE 202

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MARGATE, FL 33063

CONSENT TO ASSIGNMENT OF DEVELOPER RIGHTS

The undersigned consent to the foregoing instrument as set forth above and more specifically consent to the assignment and transfer of 139 Equivalent Residential Connections of reserve capacity by the aforesaid Transferor to the aforedescribed Transferee and further acknowledges the release of the Transferor as to those obligations attendant to the assigned reserve capacity.

Witness:

CITY OF MARGATE

BY: _____
Mayor

BY: _____
City Manager

OR 12236 PAGE 203

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MARGATE, FL 33063

EXHIBIT "A"

LEGAL DESCRIPTION OF PROPERTY WHICH CONSTITUTES THE SUBJECT MATTER OF THIS AGREEMENT

The South 672.85 feet (as measured at right angles) of Tract "C" of a subdivision of Section 1, Township 49 South, Range 41 East, according to the plat thereof recorded in Plat Book 26, page 21, of the public records of Broward County, Florida, containing 40 acres, and known as the Riding Stable.

OFF REC 12236 PAGE 204

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MARGATE, FL 33063

12/17/82

EXHIBIT "B"

CITY OF MARGATE

DEVELOPER AGREEMENT

THIS AGREEMENT made and entered into this 29th day of March, 1983, by and between 1957 Margaret Woodson Fisher Trust hereinafter referred to as "Developer" and the CITY OF MARGATE, a municipal corporation organized and existing under the laws of the State of Florida, hereinafter referred to as "City".

WHEREAS, Developer owns or controls lands located in Broward County, Florida, and described in Exhibit "A", attached hereto and made a part hereof as if fully set out in this paragraph and hereinafter referred to as "Property" and Developer has or is about to develop the Property by erecting thereon such improvements as are in accord with the zoning laws an land use plans of the City of Margate, Broward County or City of Coconut Creek, and

WHEREAS, in order to meet the financing and general requirements of certain private agencies and certain Federal, State and Local government agencies, such as but not limited to, the State Board of Health, the Department of Environmental Regulations, the Veterans' Administration, the Federal Housing Administration, and ppivate lending institutions, it is necessary that adequate water and sewage facilities and services be provided to serve the Property and to serve the occupants of each residence building, or unit constructed or located on the Property, and

WHEREAS, Developer is not desirous of providing water and sewage facilities to serve the Property, but is desirous of promoting the construc tion of central water and sewage facilities by City so occupants of each residence, building, or unit constructed or located thereon will receive adequate water and sewage service, and

WHEREAS, City is the owner and operator of public water treatmen and/or sewage treatment plant, together with water distribution and/or sewage collection facility, and City is willing to operate such facilities so that the occupants of each residence, building, or unit constructed on the property will receive an adequate water supply and sewage disposal service from City for the benefit of the public as determined by the City, and

WHEREAS, Developer is desirous of the City to expand its central water and sewage facilities so as to serve the property of the developer, a

WHEREAS, it is the intention of the City to provide exclusive water and sewage facilities within the service area wherein the Property of Developer lies,

NOW, THEREFORE, for and in consideration of the mutual covenants and undertakings of the parties hereto, and other good and valuable considerations, the parties hereto covenant and agree, each with the other as follows:

1. The foregoing statements are true and correct and are incorpo ated herein by reference.

2. The following definitions and references are given for the purpose of interpreting the terms as used in this agreement and apply unles the context indicates a difference meaning:

a. Property - All the land described in Exhibit "A" and all the land to which City shall provide water and sewage service.

b. Stage Area - Refers to a part of the Property which is being or is to be developed as a unit.

OFF REC 12236 PAGE 205

CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

c. Lot or Tract - Each building site as platted for record or as shown on the master plan and plat.

d. Service - The readiness and ability on the part of the City to furnish water or sewage service to each lot. Thus, the maintenance by City of adequate pressure at the point of delivery shall constitute the rendering of water service, and the maintenance of a connection providing for the removal and disposal of sewage service. Sewage service refers to sanitary sewer service.

e. Point of Delivery - The point where the pipes or meters of City are connected with the pipes of the consumer. Unless otherwise indicated, point of delivery shall be at the point on the consumer's lot line.

f. Consumer Installation - All facilities on the consumer's side of the point of delivery.

g. Contribution in Aid-of-Construction - The sum of money and/or the value of propery represented by the cost of the water distribution and sewage collection systems including lift stations and treatment plants by a Developer, or owner, of the utility, which Developer or owner transfer, or agrees to transfer, to City in order to induce City to provide utility service to the Property.

h. Water and Sewer Extension Policy - The Document creating a uniform method of determining the contribution in aid of construction to be borne by property owners, builders or developers within the service area, all as more particularly set forth in Exhibit "B" attached hereto and made a part hereof by reference and as same may be amended from time to time.

i. Developer - The owner of the parcel of land described in Exhibit "A".

ARTICLE I

(A) It will be the obligation of the Developer, at his expense to design, construct and install water distribution and sewage collection lines, over, through, under and across Developer's Property in accordance with plans, specifications and engineering data as submitted by a Florida registered engineer, to be approved by the City's engineers and/or administrator and said water distribution and sewage collection lines will be installed and connected to City's existing water and sewage collection lines, all of which work shall be paid for by Developer. Such water facilities to be installed at Developer's expense shall include, but not be limited to all services, distribution mains, and transmission mains required for the furnishing of service to Developer's Property. Such sewage facilities to be installed at Developer's expense shall include, but not be limited to all, services, gravity flow mains, force mains and lift stations required for the furnishing of service to Developer's Property.

(B) Developer shall, at his expense, retain the services of a registered professional engineer for the purpose of providing necessary inspection and supervision of the construction work to insure that construction is at all times in compliance with accepted sanitary engineering practices and the approved plans and specifications.

(C) Prior to approval of said plans and specifications, however the City shall receive written verification that:

(1) If the Property is required by law to be platted prior to building construction, the platted area which the water and sewer facilities are to serve has been approved by all required City and County agencies and recorded in the Official Records of Broward County, Florida.

(2) If the property is not required to be platted, a Property Development Plan or similar plan has been approved by the City of Margate or the City of Coconut Creek or Broward County for the Property in question.

(D) The work to be performed by Developer, as above provided for, may not be commenced until all plans and specifications covering the work to be performed are approved in writing by City's engineers and/or administrator

OFF. REC. 12236 PG 206

CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

(E) The work to be performed by Developer, pursuant to the provisions set forth herein, shall be in accordance with all requirements of the regulatory agencies having jurisdiction of the subject matter of this agreement.

(F) Developer will notify City before any construction is begun and at the times when inspections will be required. Said notification shall be made in writing and shall be received by the City at least twenty-four (24) hours in advance.

(G) During construction and at the time when periodic inspections are required, City's engineers and/or administrator, or his authorized representative, together with Developer's engineer, will be present to observe and jointly witness tests for determination of conformance to approved plans and specifications.

(H) As and when the water service and sewage collection systems have been satisfactory installed, inspected, tested and approved in writing by the Developer's engineer, together with the City's engineers and/or administrator, the City will thereafter maintain the water service system and sewage collection system without cost to Developer; provided, the obligation of the City to maintain the water service system and sewage collection system will not take affect until such time as Developer has conveyed title to said systems to City and furnished the As-Built drawings described in Paragraph (I below.

(I) Developer will, at his expense, furnish to the City one complete set of reproducible as-built drawings prepared by the engineer who designed the water service and sewage collection systems. Said as-built drawings shall also be certified by the engineer and must show all pertinent information as to the correct location of all mains, services, pumps, valves, manholes, laterals, easements, etc. affecting the water service and sewage collection systems as constructed in the field.

(J) The Developer will pay to the City the applicable charges (as set by City from time to time) for water meters and meter installations, meter security deposits, connection charges and capacity reservation charges and contributions in aid-of-construction as set forth in the Water and Sewer Extension Policy (Attached as Exhibit "A") as same may be modified from time to time. Schedules of current meter fees and connection charges are attached as Exhibits "C"

(K) Failure of the Developer to execute this agreement within thirty (30) days after submission to the Developer, shall result in its withdrawal.

(L) Under no circumstances shall the City provide water and sewer service to a stage area encompassed under a Developer's agreement when, in fact, that stage area has not been completed, tested, as-built drawings provided, certified, approved and accepted by City.

(M) Developer hereby agrees to make full disclosure to any party purchasing all or any part of the Property encompassed by this agreem as to the terms hereof, with particular reference to the charges set forth and of the rates set forth in Exhibits "B", and C, attached hereto and made a part hereof.

(N) If for unseen circumstances including, but not limited to actions of any other governmental or regulatory agency, the proposed development is abandoned, terminated or caused to be cancelled short of full completion, it is mutually agreed by the parties hereto that the monies paid to City shall constitute liquidated damages to City. No refund of any type, monetary or otherwise, shall be made to Developer and this agreement shall be thereafter null and void. Failure to continue or proceed with constructic in a meaningful manner for a consecutive period of one hundred and eighty (180) days shall be deemed to be an abandonment or termination. "Meaningful' as used herein is defined as proceeding with construction in the normal manne customary and common to the trade.

OFF REC 12233 PAGE 207

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MARGATE, FL 33063

ARTICLE II

Upon completion, approval and acceptance of the work required to be done, Developer will, without cost to City:

(1) Within a period of thirty (30) days after the execution of this contract, at the expense of Developer, Developer agrees to either deliver to City an Abstract of Title brought up to date, which abstract shall be retained by City and remain the property of City, or to furnish City an opinion of title from a qualified attorney with respect to the Property, which opinion shall include a current report on the status of the title setting out the name of the legal title holders, the outstanding mortgages, taxes liens and covenants. The Developer agrees to provide City at the expense of Developer, title insurance in connection with all Warranty Deed conveyances of lift station sites or easements covering areas in which water or sewer lines have been installed. The provisions of this paragraph are for the purpose of evidencing Developer's legal right to grant the exclusive rights of service contained in this agreement. Any mortgage or lien holder having an interest in the property shall be required to join in the grant of exclusive service rights set forth in this agreement.

(2) Convey to City, in a form acceptable to City's attorney, by good and sufficient easement deed a perpetual right, easement and privilege to operate and maintain all water and sewer mains, pipes, connections, pumps and meters, in connection with supplying water and sewer service to the inhabitants, occupants and customers in Developer's property, together with a perpetual right, easement and privilege unto City and its successors and assigns, to go in, under and upon the land or lands where said water and sewer mains, pipes, connections, pumps and pumping stations, if any, are located in order for City and its successors and assigns, to maintain, repair or replace the same.

(3) Transfer to City by Bill of Sale Absolute all Developer's right, title and interest in and to all of the water and sewer supply lines, mains, pumps, connections, pipes, valves, meters and equipment installed within the lands described in Exhibit "A" attached hereto and made a part hereof for the purpose of supplying of water service and sewage collection for the inhabitants, occupants, and customers in Developer's Property.

(4) Furnish construction costs of all utility facilities constructed by Developer and proposed to be transferred to City.

(5) Furnish City with an affidavit that all persons, firms, or corporations who furnished labor or material used directed or indirectly in the prosecution of the work required to be performed by this agreement have been paid.

(6) Furnish City with a satisfactory warranty or bond guaranteeing the facilities installed pursuant to this agreement against defects in materials, equipment or construction for a period of not less than one (1) year from date of acceptance of same by City.

OFF REC 12236 PAGE 208

ARTICLE III

City further convenants and agrees with Developer as follows:

City shall provide service meeting the standards required by the Florida Department of Health and Rehabilitative Services, Department of Evironmental Regulation, and any other regulatory agency having jurisdiction. The obligation of the City to furnish service other than construction water shall not arise until Developer has performed pursuant to this Agreement.

ARTICLE IV

It is mutually convenanted and agreed by and between the parties hereto, as follows:

(1) City shall have the exclusive right to furnish water and sewer collection service to consumers within the area covered by this agreement; and

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MARGATE, FL 33063

(2) Developer shall do all things and make all installations and perform all work in accordance with the terms of this agreement; and

(3) Any sale, assignment or transfer of Developer's interest in this agreement is hereby prohibited without written consent of the City; and

(4) Developer, his successors and assigns, and the owners and occupants of buildings on Developer's Property are hereby prohibited from installing or maintaining any water wells except for irrigation purposes; and

(5) Developer, his successors and assigns, and the owners and occupants of buildings on Developer's Property are hereby prohibited from installing, maintaining or using septic tanks in connection with the disposal of sewage from said buildings; and

(6) City shall have the right to promulgate from time to time reasonable rules and regulations relating to the furnishing of water service and sewage collection service to consumers within the area encompasse by this agreement. Such rules and regulations may relate to but are not limited to, rates, desposits, connection charges, prepayment of connection charges, capacity reservation charges and the right to discontinue services under certain conditions.

(7) City shall not be liable or responsible for the maintenance or operation of any pipes, pipelines, valves, fixtures or equipment on any of the properties of the Developer or customer.

(8) Each customer of water service and/or sewage collection service on Developer's Property shall keep all water pipes, service lines, connections and necessary fixtures and equipment on the premises occupied by said customer; and within the interior lines of the lot occupied by the customer in good order and condition. The sale of water by City to the customer shall occur at the customer's side of the meter; and

(9) No water from City's water distribution system is to be used or disbursed through fire hydrants or water mains by any person, firm, corporation or agency, public or private, unless there has first been made adequate provisions for compensating City for such water; and

(10) Any temporary cessations or interruptions of the furnishing of water and sewer service to the property described herein at any time caused by an Act of God, fires, strikes, casualties, accidents, power failures, necessary maintenance work, breakdowns, damage to equipment or mains, Civil or Military authority, riots or other cause beyond the control of the City shall not constitute a breach of the provisions contained herein or impose liability upon the City by the Developer, his successors and assigr nor shall any cessation of service or additional connections for service due to action by any governmental regulatory agency having jurisdiction over the City constitute said breach or impose liability upon City; and

(11) If any section, subsection, sentence, clause, phrase or portion of this agreement is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate distinct and independent provision and such holding shall not affect the validity of the remaining portions hereof.

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RECORDED IN OFFICIAL RECORDS BOOK
12236 PAGE 209

ARTICLE V

(A) The provisions of this Agreement shall be binding upon and inure to the benefits of the successors and assigns of the parties hereto.

(B) This agreement is being recorded among the public records of Broward County, Florida, for the particular purpose of placing all owners or occupants of properties in Developer's Property connected to or to be connected to said water and sewer systems of City upon notice of each a every one of the provisions herein contained to the same extent and with the same force and effect as if said owners and occupants had joined with the parties to the Agreement in the execution thereof; and the acquisition or occupancy of property in Developer's property connected to or to be connected to the said water and sewage systems of City shall be deemed conclusive evidence of the fact that the said owners or occupants have consented to and

and accepted the agreement herein contained and have become bound thereby.

ARTICLE VI

Whenever either party desires to give notice unto the other, it must be given by written notice, sent by registered United States mail, with return receipt requested, addressed to the party for whom it is intended, at the place last specified as the place for giving of notice, shall remain such until it shall have been changed by written notice in compliance with the provisions of this paragraph. For the present, the parties designate the following as the respective places for the giving of notice; to wit:

For City: 5790 Margate Boulevard
Margate, Florida 33063

For Developer: P. O. Box 65
Wausau, Wisconsin 54401

Notice so addressed and sent by registered mail, with return receipt requested, shall be deemed given when it shall have been so deposited in the United States Registered Mail.

ARTICLE VII

(A) It is mutually agreed that the City shall be held harmless from any and all liability for damages if City's obligations under this agreement cannot be fulfilled as a result of any ruling or order by any other governmental or regulatory agency having jurisdiction over the subject matter hereof; and in such event this agreement shall be null and void, and unenforceable by either party.

(B) The rights, privileges, obligations and covenants of Developer and City shall survive the completion of the work of Developer with respect to completing the water and sewer facilities and services to any stage area and to the Property as a whole.

(C) This agreement supersedes all previous agreement or representations, either verbal or written heretofore in effect between the Developer and City made with respect to the matters herein contained, and when duly executed, constitutes the agreement between the Developer and City. No additions, alterations or variations of the terms of this agreement shall be valid, nor can provisions of this agreement be waived by either party unless such additions, alterations, variations or waivers are expressed in writing and duly signed by both parties.

ARTICLE VIII

That the City reserves unto itself the right to increase plant capacity deemed necessary in order to provide water and/or sewer services for new users. In so doing the City shall require specific reservation of capacity and prepayment of such connection charges as are necessary to construct expanded facilities along with a procedure to implement same. Same shall be attached and made a part of this agreement as an addendum.

IN WITNESS WHEREOF, Developer and City have executed or have caused this agreement, with the named Exhibits attached, to be duly executed in several counterparts, each of which counterpart shall be considered an original copy of this agreement.

Witnesses:

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CITY OF MARGATE, FLORIDA

BY _____
Mayor

BY _____
City Manager

Developer: 1957 Margaret Woodson Fisher Trust

BY _____
Sam W. Orr, Jr., Trustee

BY _____

Approved as to Form:

EUGENE M. STEINFELD, City Attorney

Notice to Developer: _____

OFF REC 12236 PAGE 210

EXHIBIT "A"

LEGAL DESCRIPTION OF PROPERTY WHICH
CONSTITUTES THE SUBJECT MATTER OF THIS AGREEMENT

The South 672.85 feet (as measured at right angles) of Tract "C" of a subdivision of Section 1, Township 49 South, Range 41 East, according to the plat thereof recorded in Plat Book 26, page 21, of the public records of Broward County, Florida, containing 40 acres, and known as the Riding Stable.

OFF REC 12236 PG 211

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MARGATE, FL 33063

12/17/82

ADDENDUM TO DEVELOPER AGREEMENT

THIS ADDENDUM to Agreement made and entered into this 29th day of March, 1983, by and between 1957 Margaret Woodson Fisher Trus hereinafter referred to as "Developer" and the City of Margate, a municipal corporation, organized and existing under the laws of the State of Florida, hereinafter referred to as "City"

WHEREAS, Developer entered into a Developer Agreement with the City of Margate or its predecessor in interest, the Margate Utility Authority, Inc. or one of its predecessors in interest, and

WHEREAS, City has the exclusive right to provide water and sewer services within the service area of the Utility Department of the City of Margate, Florida, and

WHEREAS, the City Commission of the City of Margate, Florida, has commissioned a study in order to properly provide for the planning and implementation of the construction of water and sewer services in the service area of the Utility Department of the City of Margate, Florida, and

WHEREAS, the City Commission of the City of Margate, Florida, has determined that the cost of the construction of the expanded water and sewer facilities for the service area of the Utility Department of the City of Margate, Florida shall not be at the cost of nor subsidized by the rates of the present users in the system, and

WHEREAS, the Florida Supreme Court in Contractors and Builders vs. the City of Dunedin, 329 So.2d 314 (Fla. 1976), has stated that a municipality need not resort to deficit financing in order to raise capital, and

WHEREAS, the City of Margate or its predecessor in interest has contracted with Developer to provide water and sewer facilities for certain properties which are more properly described in the Developer Agreeme between the City and/or its predecessor in interest which this Addendum shall be attached, and

WHEREAS, the City Commission of the City of Margate, the policy and rate-making body controlling the service area of the Utility Department of the City of Margate, wishes to only construct that water and sewer capacit which is necessary as determined by the Developers who have signed a Developer Agreement with the City of Margate or its predecessors, and

WHEREAS, the City Commission of the City of Margate, wishes to construct water and sewer facilities in a phase constructed manner at the time that the Developers in the Margate service area have need of said water and sewer services with enough time for the City of Margate to construc facilities for said water and sewer services with the understanding that the cost of construction of said facilities for expanded water and sewer services shall not be paid for nor supported by a pledge against the rates of the present water and sewer users, and

WHEREAS, the City of Margate by ordinance has provided for establishment of rates and charges intended to defray the costs of construc of expanded water and sewer facilities in the service area of the Utility Department of the Cityof Margate, and

WHEREAS, the City Commission of the City of Margate wishes at all times to foster the orderly development of land within the City of Margate, and to foster the construction of only those water and sewer facilit which are specifically needed and to have the prospective users of the anticipated expanded constructed facilities for water and sewer within the Utility System of the Utility Department of the City of Margate pay the cost of the construction of said facility, and

WHEREAS, the Developer herein wishes to reserve specific capacity for all or a certain portion of the property which is described in the original Developer Agreement with the City of Margate or its predecessors in interest, and

OFF REC 12236 PAGE 212

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CITY CLERK
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5790 MARGATE BLVD.
MARGATE, FL 33063

WHEREAS, the Developer wishes to have the City of Margate construct that specific capacity which it wishes to reserve with the understanding that the City of Margate is at or near capacity for sewer and/or water service presently within the service area,

NOW, THEREFORE, for and in consideration of the mutual covenants and undertakings of the parties hereto and other good and valuable considerations, the parties hereto covenant and agree each with the other as follows:

The foregoing statements are true and correct and are incorporated herein by reference.

A. CONNECTION CHARGES - PREPAYMENTS

The parties recognize that pursuant to the City's Uniform Extension Policy, and the ordinances of the City, the City has established a uniform connection charge to defray the cost corresponding to and allocable to each equivalent residential connection (ERC) proposed to be added to the system and for which capacity is herein expressly reserved. As of the date of the agreement, said connection charges are:

Water ERC - $ 450.00

Sewer ERC - $ 800.00

Total $1,250.00

Developer herein agrees to pay said connection charges in accordance with the terms and conditions and at the times set forth herein.

Further, pursuant to the ordinances of the City same requires the advance payment of said connection charges if it deems the same to be necessary in conjunction with the construction of utility facilities. City has advised Developer herein, and Developer acknowledges, that City has deemed that it requires that a portion of the connection charge be prepaid in order that a fund may thereby be created from which the immediate construction of new wastewater treatment plant facilities and the longer term construction of certain other utility facilities may be accomplished. Accordinly, Developer shall be obligated to prepay the sum of $940.00 for each ERC reserved pursuant to the terms of this Agreement.

Be these presents, Developer herein expressly reserves 139 ERC's of water and sewer treatment plant capacity for its project, calculated as follows:

Unless the deferred payment alternatives set forth herein are adopted by Developer concurrently with the signing of this Agreement, Developer shall pay to City, the sum of $940,00 x _____ equalling _____.

The parties further recognize that the sum of $310.00 per ERC reserved will remain to be paid by Developer to City in order that the full connection charge be ultimately collected. Developer agrees to pay said remaining sum of $310.00 per ERC as and when it requests of City, a building permit for buildings, units or residences, and such payment shall be for that number of ERC's corresponding to the improvement proposed to be constructed.

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B. DEFERRED PAYMENT ALTERNATIVE

Developer is hereby advised that City has entered into a loan agreeemnt with the Florida Coast Banks, the terms and conditions of which are designed to afford developers participating in the City's Phase I capacity reservation program to obtain the benefits of deferred payment of the protion of the connection charges ($940.00 per ERC) to which developer is obligated to City. Developer may elect to defer to City, an irrevocable letter of credit issued by a banking institution approved by Florida

OR 12236 PG 213

Coast Banks. Said letter of credit shall be issued on Forms approved by counsel to Florida Coast Banks. Said letter of credit will indicate their assignability by the City to Florida Coast Bank. City agrees to borrow from Florida Coast Bank, a principal sum of money which corresponds to $940.00 for each ERC reserved, which reservation shall be supported by the promises contained in this agreement and by the said letter of credit guaranteeing payment therefore.

Developer's letter of credit may be for a term not to exceed five years and may contain a schedule of partial payments to be made on any anniversary date during said five (5) year period.

Prior to the closing of said loan between City and Florida Coast Bank, Developer shall be advised of the revised amount of the connection charges which shall have been calculated after adding interest and financing costs, taking into account, the date or dates of payment specified by Developer and included in said letter of credit.

Notwithstanding the payment provisions contained in said letter of credit, Developer may, at any time, elect to prepay the then remaining amount due to City and City and Bank shall allow to Developer, a credit on the amount of connection charges corresponding to the savings in interest cost enuring to the benefit of the City by virtue of said prepayment.

C. CONNECTIONS AVAILABLE

Notwithstanding that Developer may have elected to participate in the "Deferred Payment Alternative", the connection charges corresponding to the number of ERC's reserved herein shall be deemed to be prepaid based upon Developer's posting of said irrevocable letter of creeit. Further, notwithstanding that Developer's letter of credit may have provided for actual payment in the fifth year, Developer shall be entitled to connect ERC's at a prior date without accelerating said payment.

Developer expressly recognizes, however, that the portion of the total connection charge ($310.00 per ERC) which will not have been prepaid pursuant to the terms of this agreement shall be paid as each buildin permit is requested from City in accordance with the provisions hereof.

D. CONNECTION CHARGE COST FOR PHASE I FIXED

Developer herein and other developers reserving capacity in the City's Phase I expansion program will not be subject to escalation in the cost of connection charges which may occur subsequent to the date hereof, but at all times limited to that number of ERC's specifically reserved herein. In the event that City shall reduce the cost of connection charges for others not participating in the Phase I expansion program, then, in that event, only Developer herein shall be entitled to a retroactive adjustment in said connection charge cost. Developer shall never be entitled to retroactive adjustments for interest which may have been paid or accured upon the payment or prepayment of connection charges.

E. INTERIM AND PERMANENT CAPACITY

Developer herein (and all other developers participating in the Phase I expansion program) recognizes that the ultimate and permanent capacity reserved is represented by and part of the construction of new wastewater treatment facilities which City commits to build for and on behalf of participants in said Phase I expansion program. City has advised participating developers that the design and construction of expanded facilities will commence immediately following the execution of Phase I Developer Agreements and the closing of the City's loan pertaining thereto. City has estimated that expanded wastewater treatment facilities will be completed in approximately 18 months, subject always to matters of force majeure. City recognizes that the prepayment of connection charges in cash or pursuant to the deferred payment alternative, constitutes valuable consideration, without which City would not have undertaken said expansion. Accordingly, City grants to Developer, full and complete rights and benefits to that portion of the plant facilities corresponding to the capacity reserved herein, and in no event will City permit any diversion or use of said capacity to the detriment of Developer herein. It is the intention of the City to confer upon the Developer herein, the benefits of third party beneficiary status in the construction of Phase I expansion facilities to the end that Developer may be absolutely assured that such

CLERK
OF MARGATE
MARGATE BLVD
MARGATE, FL 3306

OFF REC 12236 PAGE 214

permanent capacity belongs to Developer, its successors and assigns in proportion to the total capacity to be available out of said Phase I expansion.

City further agrees that it will cause said expanded facilities to be continually operated in accordance with the rules and regulations of regulatory agencies having jurisdiction over such matters, and to be maintained in such a manner so as to preserve and protect the capacities reserved to Developer herein, and the City will take no action which would in any way impair the reservation or ability of the capacity granted herein.

City declares to Developer that the basic City policy shall be that capacity shall not be available generally, except to those who have subscribed for same in the Phase I expansion program. City has advised all owners, developers and prospective consumers within its service area that it has effectively reached the limit of its present treatment plant capabilities and has offered equally and uniformly to all such property owners, developers and prospective consumers, the opportunity to participate on an equal basis in the reservation of capacity in this Phase I expansion program.

Developer herein understands that City cannot guarantee the availability of interim capacity in any specific quantity prior to the completion of Phase I expanded facilities. Any capacities which may be available subsequent to the execution of these agreements and prior to the completion of expanded facilities shall be made availble to participating developers on a first come, first serve basis for as long as such capacities may remain available. Such interim capacities will only be made available in quantities corresponding to actual construction proposed to be immediately commenced. City agrees to use its best efforts to conserve available capacities for and utilization in connection with this provision, and will further seek to obtain from regulatory agencies, temporary advance capacity allocations for the system in contemplation of the completion of Phase I expanded facilities. Developer herein recognizes that it has been given the opportunity to independently assess the prospects of the availability of interim capacity and has elected to proceed with this agreement with knowledge of such facts.

F. EXPANSION SIZE - REQUIRED CASH FLOW

City hereby advises Developer that the Phase I expanded facilitie proposed to be constructed have been sized as nearly as practicable to provide for the capacity reservations which in the aggregate have been subscribed to by Phase I participants. Excess capacities which, of engineering necessity, may remain over and above Developers' subscriptions shall be considered to be in the capacity portfolio of City and shall be utilized at the discretion of the City Commission only in such circumstances where great public interest, preservation of the integrity of its service area and equity to individual applicants requires that capacity be allocated from such City portfolio. City has advised Developer herein that it is not the intention of City to reserve substantial capacities for the potential benefit of non-participating developers. Subject only to the exceptions set forth herein, non-participating developers shall be afforded capacity from subsequent expansions to utility facilities which will, from time to time, be undertaken by City after analyzing such requests and aggregating subscriptons therefor.

City has used its best efforts to match the anticipated cost of construction with the aggregate total of connection charge advances. In the event that the cost of the construction program exceeds the aggregate value or prepaid connection charges, then such excess construction cost shall be advanced by City and no further advance shall be required by Developer herein.

OFF. REC. 12236 PAGE 215

TO:
CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

J. CAPACITY RESERVATION FEES

In accordance with the ordinances of the City, same requires the payment of capacity reservation fees in order to fully or partially defray City's cost in maintaining and administering to plant facilities held for future use. Such fees are payable until such time as an ultimate owner/occupant connects to the system and commences paying revenue to the system.

City has recognized that Developer herein and all developers participating in the Phase I expansion program have prepaid (in cash or credit) connection charges corresponding to the determined cost of facilities to be constructed in the future. Such prepayment will relieve City of the burden of carrying the captial cost of reserved future facilities. Accordingly, City has determined that the portion of the total fixed and non-variable cost of administering to and maintaining plant facilities held for future use is a sum equal to forty seven percent (47%) of its service availability (monthly minimum) charge to consumers. City further recognizes that it has encouraged the participation of developers in its Phase I expansion program in order that the most cost effective level of new capacity can be constructed. In recognition of the participation of developers whose projects and capacity utilization may extend over a term of years, the City has established the following formula for the calculation of capacity reservation fees:

1. All capacity reserved is subject to capacity reservation fees.

2. The first 100 ERC's or part thereof reserved by Developer shall be charged one hundred percent (100%) of the capacity reservation fee.

3. ERC's 101 to 200 reserved by Developer shall be charged fifty percent (50%) of the capacity reservation fee.

4. All ERC's above 200 shall be charged one-third (1/3) of the capacity reservation fee.

Capacity reservation fees shall be calculated and prepaid on the quarterly date (January 1st, April 1, July 1st or October 1st) most nearly corresponding to the date of this agreement. On such date, one year's capacity reservation fees thus calculated shall be prepaid. Thereafter on each succeeding anniversary date, Developer's capacity reservation shall be reviewed and recalculated in accordance with the formula set forth above, and the new capacity reservation charges thus calculated shall be prepaid for the next succeeding year. City has advised Developer that it will not commence the imposition of capacity reservation charges for Developer herein until such time as the quarterly date following the completion of the Phase I construction program, said date being the date on which permanent capacity reserved hereunder may be fully enjoyed by Developer.

The prepayment of capacity reservation fees one year in advance as provided for herein contemplates and allows for partial refunds to Developer equal to the number of ERC's actually connected during said twelve (12) month period and the number of actual whole months that each of such ERC's and the consumers occupying the premises shall have paid actual revenues to the City.

K. CONSTRUCTION OF PHASE II

City agrees that should a Developer, individually or along with any other developers who have signed developer agreements with City and who are willing to commit to plant capacity of 3,000 ERC's or more show interest commiting to a prepayment program of similar nature as set forth in this addendum, City represents that it will cause a program to be implemented similar to this one providing for the additional plant capacity for users over and above that requested in Phase I. Same shall be based upon such requirements and costs as are determined by City at the time of the implementation of the Phase II program and shall be manifested in additional addendums to developer agreements.

Notwithstanding the above, City reserves the right to commence Phase II of expansion of its plant with commitments of developers evidencing less than 3,000 ERC's.

OFF REC 12236 PAGE 216
RETURN TO:
CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

IN WITNESS WHEREOF, Developer and City have executed or have caused this Addendum to Developer Agreement to be duly executed in several counterparts, each of which counterpart shall be considered an original executed copy of this Addendum to Developer Agreement.

ATTEST:

CITY OF MARGATE, FLORIDA

BY _____
MAYOR

BY _____
CITY MANAGER

WITNESS:

DEVELOPER:
1957 Margaret Woodson Fisher Trust

BY _____
San W. Orr, Jr., Trustee

BY _____

APPROVED AS TO FORM:

EUGENE M. STEINFELD
City Attorney

RECORDED IN THE OFFICIAL RECORDS BOOK
OF BROWARD COUNTY, FLORIDA
F. T. JOHNSON
COUNTY ADMINISTRATOR

DEC 1 12236 PAGE 217

RETURN TO:
CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

This Instrument prepared by
and record and return to:

Jon Jay Ferdinand, Esquire
Ferdinand & Sullivan, P.A.
100 W. Cypress Creek Road
Suite 910
Fort Lauderdale, Florida 33309
Florida Bar #180250

INSTR # 101407765
OR BK 32244 PG 1880
RECORDED 10/17/2001 09:13 AM
COMMISSION
BROWARD COUNTY
DEPUTY CLERK 2000

ASSIGNMENT OF DEVELOPER RIGHTS

THIS ASSIGNMENT OF DEVELOPER RIGHTS ("**Assignment**") made this 10th day of July, 2001, by and between **WILMINGTON TRUST COMPANY, as Successor Trustee of the 1957 MARGARET WOODSON FISHER TRUST** ("**Assignor**"), whose post office address is 1100 North Market Street, Wilmington, DE 19890-0001, and **777 PROPERTIES, INC., a Florida corporation** (the "**Assignee**"), whose post office address is 777 South State Road 7, Margate, FL 30063.

WITNESSETH:

WHEREAS, Assignor and Assignee entered into that certain Agreement for Purchase and Sale with effective date of November 16, 2000 ("**Agreement**"), with respect to that certain real property lying, being and situate in Broward County, Florida, more particularly described in the Agreement and attached hereto as Exhibit "A" ("**Real Property**");

and,

WHEREAS, Assignor was the Developer under the terms of a certain Developer Agreement and Addendum to Developer Agreement dated March 29, 1983, and recorded July 16, 1984 in Official Records Book 11858, at Page 375 of the Public Records of Broward County, Florida (collectively the "Developer Agreement"), by and between Assignor and the City of Margate, providing for utility service and a reservation of capacity therefore, for that certain real property described therein (the "Property"); and

and

WHEREAS, Assignor sold the Property and assigned its right, title and interest under the Developer's Agreement as an appurtenance to the Property pursuant to an Assignment of Developer Rights executed December 7, 1984 and recorded Janaury 2, 1985 in Official Records Book 12236, at Page 200 of the Public Records of Broward County, Florida; and

WHEREAS, Assignor reacquired fee simple title to a portion of the Property and further had transferred back to it all of the Developer Rights under the terms of the Developer Agreement, including the reserved capacity for utilities as provided for thereunder as an appurtenance to the Property pursuant to that certain Corrective Assignment of Developer Rights dated September 23, 1991 and recorded March 17, 1992 in Official Records Book 19275, at Page 960 of the Public Records of Broward County, Florida; and

WHEREAS, the Agreement provided for the purchase and sale of the Real Property, together with any other property and rights described therein as the Land and used in connection therewith, including the assignment of Assignor's reserved capacity for utilities from the City of Margate, Florida; and,

WHEREAS, Assignor desires to assign and confirm unto Assignee all of its right, title and interest in and to transfer to Assignee all of the Developer Rights under the terms of the Developer Agreement, including the reserved capacity for utilities as provided for thereunder as an appurtenance to the Property; and

NOW THEREFORE, in consideration of Ten Dollars ($10.00) and other good and valuable consideration, the receipt, adequacy and sufficiency of which is hereby acknowledged, the parties intending to be legally bound hereby do agree as follows:

1. The recitations set forth hereinabove of this Assignment are true and correct and incorporated herein by this reference.

2. That Assignor represents and warrants to Assignee, which representations and warranties shall survive the delivery of this Assignment from Assignor to Assignee:

A. That Assignor is the only entity entitled to claim any interest in and to the equivalent residential connections of reserve water and sewer treatment plant capacity described in the Developer Agreement as to the Real Property.

B. Assignor has full power and authority and legal right to assign the Developer's rights under the Developer Agreement and to execute this Assignment. Such assignment will not conflict with, or result in a breach of, or constitute a default under any agreement to which Assignor is a party or by which Assignor or the Developer Agreement are subject.

C. The Developer's rights under the Developer Agreement as to the Real Property have not been further assigned by Assignor to any other party, such rights are free and clear of all mortgages, security interests, agreements, liens and encumbrances of any kind whatsoever.

D. That this Assignment shall act to transfer and confirm to Assignee, valid title to all heretofore unused rights under the Developer Agreement and any amendments, expansions, supplements and additions thereto, free and clear of all mortgages, liens, security interests, agreements, claims and encumbrances of every kind whatsoever, and Assignor hereby fully warrants title to all such rights described or arising under the Developer Agreement, and will defend the same against the lawful claims of all persons whomsoever.

3. Assignor hereby transfers, and assigns all rights, title, interest and claim in or under the Developer Agreement to Assignee and its successors and assigns, including its rights to all unused equivalent residential connections of reserve water and sewer treatment plant capacity reserved for or as an appurtenance to the Property and to confirm in Assignee as the purchaser of the Real Property, all rights of the Developer remaining under the developer Agreement or appurtenant to the Property.

4. Assignee does hereby accept the foregoing Assignment subject to the terms and conditions herein contained.

5. This Assignment shall be binding upon and inure to the benefit of Assignor, Assignee and their respective successors and assigns.

IN WITNESS WHEREOF, Assignor and Assignee have executed this Assignment.

ASSIGNOR:

WILMINGTON TRUST COMPANY, as Successor Trustee of the 1957 MARGARET WOODSON FISHER TRUST

Witness

STEPHEN T. JOVES
Printed or typed name

Witness

JAMES P. BIERBAUM
Printed or typed name

By: _____
FRANK J. TAYLOR, Trustee

STATE OF DELAWARE)
COUNTY OF New Castle)

The foregoing instrument was acknowledged before me this 10th day of July, 2001, by **FRANK J. TAYLOR, on behalf of WILMINGTON TRUST COMPANY, as Successor Trustee of the 1957 MARGARET WOODSON FISHER TRUST.** who is personally known to me ~~or who has produced _____ as identification.~~

WITNESS my hand and official seal.

Susanne P. Foote
NOTARY PUBLIC, STATE OF ~~FLORIDA~~ Delaware
~~JON JAY FERDINAND~~
~~COMMISSION NUMBER CC 689771~~
SUSANNE P. FOOTE
NOTARY PUBLIC
My Commission Expires September 30, 2002

My commission expires:

ASSIGNEE:

777 PROPERTIES, INC.
a Florida corporation,

Witness

ROBERT V. MEEHAN
Printed or typed name

Witness

Joseph C. Leuchtor
Printed or typed name

By: _____
MICHAEL SHOOSTER,
ITS President

STATE OF FLORIDA)

COUNTY OF BROWARD)

The foregoing instrument was acknowledged before me this 10th day of July, 2001, by MICHAEL SHOOSTER, as President of 777 PROPERTIES, INC., a Florida corporation, who is personally known to me.

WITNESS my hand and official seal.

NOTARY PUBLIC, STATE OF FLORIDA
JON JAY FERDINAND
COMMISSION NUMBER CC 689771

My commission expires:

JON JAY FERDINAND
MY COMMISSION # CC 689771
EXPIRES: November 12, 2001
1-800-8-NOTARY Fla. Notary Service & Bonding Co.

2000-1231\docs\assignmentdevlopright s

CONSENT TO ASSIGNMENT OF DEVELOPER RIGHTS

The undersigned consent to the foregoing Assignment of Developer Rights by and between **WILMINGTON TRUST COMPANY, as Successor Trustee** of the 1957 **MARGARET WOODSON FISHER TRUST** ("Assignor"), and 777 **PROPERTIES, INC., a Florida corporation** ("Assignee"), to which this consent is attached, including, but not limited to, the assignment and transfer of 109.58 equivalent residential connections of reserve water and sewer treatment capacity from Transferor to Transferee.

Witnesses:

Carol DiLorenzo
Witness

CAROL DiLORENZO
Printed or typed name

Janet L. Randolph
Witness

JANET L. RANDOLPH
Printed or typed name

Katherine Finkel
Witness

KATHARINE FINKEL
Printed or typed name

Nancy L. Popick
Witness

Nancy L. Popick
Printed or typed name

CITY OF MARGATE

BY: _____
Name: Arthur J. Bross
Title: Mayor

BY: Leonard B. Golub
Name: Leonard B. Golub
Title: City Manager

2000-1133/docs/Margate consent

EXHIBIT "A"
LEGAL DESCRIPTION

The South one-half (S1/2) of Parcel "A", 441 SOUTH LTD., II, according to the plat thereof recorded in Plat Book 124, Page 41, of the public records of Broward County, Florida;

TOGETHER WITH: Parcel "A", THE FOREST, according to the plat thereof recorded in Plat Book 129, Page 16, of the Public Records of Broward County, Florida;

AND ALSO TOGETHER WITH: The South 672.85 feet (as measured at right angles) of Parcel "C", less the East 1957.03 feet thereof (as measured on the South line), SUBDIVISION OF SECTION 1, TOWNSHIP 49 SOUTH, RANGE 41 EAST, according to the plat thereof recorded in Plat Book 26, Page 21, of the Public Records of Broward County, Florida.

91349746

ASSIGNMENT OF DEVELOPER RIGHTS

THIS ASSIGNMENT OF DEVELOPER RIGHTS is made and entered into this 13th day of May, 1991, by and between 441 South Ltd., II, a dissolved Florida limited partnership, through its partners, Robert W. Buck, Ann Susan Buck and the estate of Walter M.S. Buck, by its executors, Robert W. Buck, W. Bruce Buck, and Northern Trust Bank, N.A., ("Transferor"), and the 1957 Margaret Woodson Fisher Trust ("Transferee").

W I T N E S S E T H :

WHEREAS, Transferee was the Developer under the terms of a certain Developer Agreement and Addendum to Developer Agreement dated March 29, 1983, and recorded July 16, 1984 in Official Records Book 11858, Page 375, Public Records of Broward County, Florida (collectively, the "Developer Agreement"), by and between itself and the City of Margate, providing for utility service and a reservation of capacity therefor, for that certain real property described therein (the "Property"); and

WHEREAS, Transferee sold the Property to Transferor and in connection therewith Transferor acquired title to the Property and Transferee assigned its rights, title and interest, duties and responsibilities under the Developer Agreement to Transferor as an appurtenance to the Property pursuant to an Assignment of Developer Rights executed December 7, 1984 between Transferor and Transferee and recorded January 2, 1985 in Official Records Book 12236, Page 200, Public Records of Broward County, Florida; and

WHEREAS, as of the date hereof, Transferee has reacquired fee simple title to the portion of the Property described in Exhibit "A" attached hereto from Transferor;

WHEREAS, Transferor wishes to reassign and confirm to Transferee its rights and obligations under the terms of the Developer Agreement, including its reserved capacity for utilities as provided for thereunder as an appurtenance to the Property; and

WHEREAS, Transferee desires to accept such assignment.

NOW, THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, the parties hereto agree as follows:

1. The recitals set forth above are true and correct and incorporated herein as if fully set forth herein.

2. Transferor represents and warrants to Transferee, which representations and warranties shall survive the delivery of this Assignment from Transferor to Transferee:

'91 SEP 3 PM 3:35

BK18709PG0902

RETURN TO:
CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

A. Robert W. Buck, Ann Susan Buck and Robert W. Buck, W. Bruce Buck and Northern Trust Bank, N.A., as personal representatives of the Estate of Walter M.S. Buck, constitute all the partners of 441 South Ltd., II, a dissolved Florida limited partnership, who have, are entitled to or claim, any interest in the partnership or any of the partnership assets.

B. Transferor has full power and authority and legal right to assign the Developer Agreement and execute this Assignment, and such assignment and execution will not conflict with, or result in a breach of, or constitute a default under any agreement to which Transferor is a party or by which Transferor or the Developer Agreement are subject.

C. The execution of this Assignment has been duly authorized by Transferor.

D. The Developer Agreement has not been assigned by Transferor to any other party, is free and clear of all mortgages, security interests, agreements, liens and encumbrances of any kind whatsoever, except for the mortgage dated December 12, 1984 in favor of Transferee and recorded in O.R. Book 12192, Page 62 of the Public Records of Broward County, Florida, and this Assignment will transfer and confirm to Transferee, valid title to the rights granted to the developer under the Developer Agreement, free and clear of all mortgages, liens, security agreements, claims and encumbrances of every kind. Transferor hereby fully warrants title to the rights and will defend the same against the lawful claims of all persons whomsoever.

3. Transferor does hereby transfer and assign all its right, title and interest in the Developer Agreement to Transferee and its successors and assigns, including its right to equivalent residential connections of reserve water and sewer treatment plant capacity, and Transferee accepts said assignment.

IN WITNESS WHEREOF, Transferor has executed this agreement this 23rd day of May, 1991.

441 SOUTH LTD. II, a dissolved Florida Limited Partnership, by ROBERT W. BUCK, its sole general partner, ANN SUSAN BUCK, the estate of WALTER M.S. BUCK, by its executors, NORTHERN TRUST BANK, N.A., ROBERT W. BUCK and W. BRUCE BUCK

By: _____
ROBERT W. BUCK, sole general partner and as an executor of the estate of Walter M.S. Buck

_____
Name: Sharon T. Fornes

_____
Name: Raymond M. Wood

RETURN TO:
CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

EXHIBIT 709PG0903

Barbara Bernat
Name: Barbara Bernat

Mary Beth Biddle
Name: Mary Beth Biddle

By: Ann Susan Buck
ANN SUSAN BUCK, as a limited partner of 441 South Ltd. II, a dissolved Florida limited partnership

Name: _____

Name: _____

By: _____, as _____ of Northern Trust Bank, N.A., an executor of the estate of Walter M.S. Buck

Barbara Bernat
Name: Barbara Bernat

Mary Beth Biddle
Name: Mary Beth Biddle

By: W. Bruce Buck
W. BRUCE BUCK, as an executor of the estate of Walter M.S. Buck

STATE OF Pennsylvania
COUNTY OF Delaware

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared ANN SUSAN BUCK, to me well known to be the person who executed the foregoing instrument as a limited partner of 441 South Ltd II, a dissolved Florida limited partnership, and she acknowledged before me that she executed the same for the purposes set forth herein.

WITNESS my hand and official seal this 23rd day of May, 1991.

NOTARIAL SEAL
WILLIAM W. RICE III, Notary Public
Wayne, Delaware County
My Commission Expires Feb. 15, 1992

Name: _____
Notary Public State of _____
My Commission Expires: _____
[SEAL]

BK18709PG0904

RETURN TO:
CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

STATE OF _____
COUNTY OF _____

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared _____ the _____ of Northern Trust Bank, N.A., to me well known to be the person who executed the foregoing instrument on behalf of Northern Trust Bank, N.A., an executor of the estate of Walter M.S. Buck, and ___ acknowledged before me that ___ executed the same for the purposes set forth herein.

WITNESS my hand and official seal this ____ day of May, 1991.

_____
Name:_____
Notary Public State of _____
My Commission Expires:_____
[SEAL]

STATE OF FLORIDA
COUNTY OF BROWARD

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared ROBERT W. BUCK, to me well known to be the person who executed the foregoing instrument as the sole general partner of 441 South Ltd. II, a dissolved Florida limited partnership, and an executor of the estate of Walter M.S. Buck, and he acknowledged before me that he executed the same for the purposes set forth herein.

WITNESS my hand and official seal this 23rd day of May, 1991.

Sharon T. Fornes
Name: Sharon T. Fornes
Notary Public State of Florida
My Commission Expires:_____
[SEAL]

NOTARY PUBLIC, STATE OF FLORIDA;
MY COMMISSION EXPIRES: APRIL 11, 1992.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

RETURN TO:
CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

RR18709PG0905

STATE OF Pennsylvania
COUNTY OF Delaware

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared W. BRUCE BUCK, to me well known to be the person who executed the foregoing instrument as an executor of the estate of Walter M.S. Buck and he acknowledged before me that he executed the same for the purposes set forth herein.

WITNESS my hand and official seal this 23rd day of May, 1991.

NOTARIAL SEAL
WILLIAM W. RICE III, Notary Public
Wayne, Delaware County
My Commission Expires Feb. 15, 1992

Name:
Notary Public State of
My Commission Expires:
[SEAL]

Witnesses:

Name: Thomas S. Zalewski

Name: Julie A. Williams

1957 MARGARET WOODSON FISHER TRUST

By:
SAN W. ORR, JR., as Trustee

"Transferee"

RECORDED
87098C0906

RETURN TO:
CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

STATE OF WISCONSIN
COUNTY OF MARATHON

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared San W. Orr, Jr., a Trustee of the 1957 Margaret Woodson Fisher Trust, to me well known to be the person who executed the foregoing instrument as trustee of the 1957 MARGARET WOODSON FISHER TRUST, and he acknowledged before me that he executed the same for the purposes set forth herein.

WITNESS my hand and official seal this 15th day of ~~May~~ July, 1991.

Ann M. DuBore

Name: Ann M. DuBore
Notary Public State of Wisconsin
My Commission expires: 12-26-93
[SEAL]

BK18709PG0907

RETURN TO:
CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

CONSENT TO ASSIGNMENT OF DEVELOPER RIGHTS

The undersigned consent to the foregoing Assignment of Developer Rights by and between 441 South Ltd. II ("Transferor") and 1957 Margaret Woodson Fisher Trust ("Transferee"), to which this consent is attached, including, but not limited to, the assignment and transfer of 109.58 equivalent residential connections of reserve water and sewer treatment capacity from Transferor to Transferee.

Witnesses:

Gertrude Levin
Name: GERTRUDE LEVIN

Pearl Grossman
Name: Pearl Grossman

Carol Di Lorenzo.
Name: CAROL DiLorenzo

Ana A. Colon
Name: Ana A. Colon

CITY OF MARGATE

By: _____
Name:
Title: Mayor

By: _____
Name:
Title: City Manager (Acting)

CITY SEAL

BK18709PG0908

RETURN TO:
CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

The South 672.85 feet (as measured at right angles) of Tract C of the Subdivision of Section 1, Township 49 South, Range 41 East, according to the Plat thereof recorded in Plat Book 26, Page 21, of Broward County Records, LESS right of way for State Road 7 on the East boundary line, and

LESS AND EXCEPT

The North one-half of the East 1042.03 feet, as measured along the South line of Tract "C", of the South 672.85 feet, as measured at right angles to said South line of Tract "C", a Subdivision of Section 1, Township 49 South, Range 41 East, Broward County, Florida, according to the plat thereof, recorded in Plat Book 26, Page 21 of the Public Records of Broward County, Florida.

AUG 23 RECD

RECORDED IN THE OFFICIAL RECORDS BOOK
OF BROWARD COUNTY, FLORIDA
COUNTY ADMINISTRATOR

RETURN TO:
CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

EXHIBIT A

BK8709PG0909

92112362

MAR 17 3 09 PM '92

CORRECTIVE ASSIGNMENT OF DEVELOPER RIGHTS

THIS CORRECTIVE ASSIGNMENT OF DEVELOPER RIGHTS is made and entered into this 23rd day of September, 1991, by and between 441 South Ltd. II, a dissolved Florida limited partnership, through its partners, Robert W. Buck and W. Bruce Buck, and Robert W. Buck, individually, and W. Bruce Buck, individually ("Transferor"), to John E. Forester, Frederick W. Fisher and San W. Orr, Jr., as Trustees of the 1957 Margaret Woodson Fisher Trust (collectively "Transferee").

W I T N E S S E T H :

WHEREAS, Transferee was the Developer under the terms of a certain Developer Agreement and Addendum to Developer Agreement dated March 29, 1983, and recorded July 16, 1984 in Official Records Book 11858, Page 375 of the Public Records of Broward County, Florida (collectively, the "Developer Agreement"), by and between Transferee and the City of Margate, providing for utility service and a reservation of capacity therefor, for that certain real property described therein (the "Property"); and

WHEREAS, Transferee sold the Property to Transferor and in connection therewith Transferor acquired title to the Property and Transferee assigned its right, title and interest under the Developer Agreement to Transferor as an appurtenance to the Property pursuant to an Assignment of Developer Rights executed December 7, 1984 between Transferor and Transferee and recorded January 2, 1985 in Official Records Book 12236, Page 200 of the Public Records of Broward County, Florida; and

WHEREAS, as of the date hereof, Transferee has reacquired fee simple title to the portion of the Property described in Exhibit "A" attached hereto;

WHEREAS, Transferor wishes to confirm to Transferee the transfer of all of the Developer rights under the terms of the Developer Agreement, including the reserved capacity for utilities as provided for thereunder as an appurtenance to the Property; and

BK19275PG0960

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CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

29.00 4.00 TIF

NOW, THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, the parties hereto agree as follows:

1. The recitals set forth above are true and correct and incorporated herein as if fully set forth herein.

2. Transferor represents and warrants to Transferee, which representations and warranties shall survive the delivery of this Assignment from Transferor to Transferee:

A. Robert W. Buck and W. Bruce Buck are the partners, general and limited, of 441 South Ltd. II, a dissolved Florida limited partnership, and are the only persons who have, are entitled to or claim, any interest in the partnership or any of the partnership assets, including the right to equivalent residential connections of reserve water and sewer treatment plant capacity described in the Developer Agreement.

B. Transferor has full power and authority and legal right to assign the Developer's rights under the Development Agreement and to execute this Corrective Assignment. Such assignment will not conflict with, or result in a breach of, or constitute a default under any agreement to which Transferor is a party or by which Transferor or the Developer Agreement are subject.

C. The Developer's rights under the Developer Agreement have not been assigned by Transferor to any other party, such rights are free and clear of all mortgages, security interests, agreements, liens and encumbrances of any kind whatsoever, except for the mortgage dated December 12, 1984 in favor of Transferee and recorded in O.R. Book 12192, Page 62 of the Public Records of Broward County, Florida, and Transferor's rights described and acquired in the foreclosure proceedings related thereto. The purpose of this Corrective Assignment is to transfer and confirm to Transferee, valid title to all heretofore unused rights granted to, purchased or acquired by 441 South Ltd. II or its partners, successors and assigns, under the Developer Agreement and any amendments, expansions, supplements and additions thereto, free and clear of all mortgages, liens, security agreements, claims and encumbrances of every kind. Transferor hereby fully warrants title to all such rights described or arising under the Developer Agreement and prior to July 29, 1991, and will defend the same against the lawful claims of all persons whomsoever.

3. Each person named as Transferor hereby transfers, and assigns all rights, title, interest and claim in or under the Developer Agreement to Transferee and its successors and assigns,

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MARGATE, FL 33063

including its right to all unused equivalent residential connections of reserve water and sewer treatment plant capacity reserved for or as an appurtenance to the Property. It is the express intent of Transferor, by this Corrective Assignment, to correct any deficiencies or errors contained in that certain Assignment of the Developer Rights dated May 23, 1991 and to confirm in Transferee, as owner of the Property, all rights of the Developer remaining under the Development Agreement or appurtenant to the Property.

IN WITNESS WHEREOF, Transferor has executed this agreement this 23rd day of September, 1991.

Sharon T. Fornes
Name: Sharon T. Fornes

Raymond M. Wood
Name: Raymond M. Wood

Barbara Bernat
Name: Barbara Bernat

Kathleen M. Jermacans
Name: Kathleen M. Jermacans

441 SOUTH LTD. II, a dissolved Florida Limited Partnership, by ROBERT W. BUCK, its sole general partner, and as a limited partner

By: Robert W. Buck
ROBERT W. BUCK, its sole general partner and as a limited partner by virtue of his purchase of the limited partnership interest formerly owned by Walter M.S. Buck, deceased

By: W. Bruce Buck
W. BRUCE BUCK, as a limited partner by virtue of the transfer from Ann Susan Buck of Ann Susan Buck's, limited partnership interest

Sharon T. Fornes
Name: Sharon T. Fornes

Raymond M. Wood
Name: Raymond M. Wood

Barbara Bernat
Name: Barbara Bernat

Kathleen M. Jermacans
Name: Kathleen M. Jermacans

Robert W. Buck
ROBERT W. BUCK, individually

W. Bruce Buck
W. BRUCE BUCK, individually

"Transferor"

BK 16275PG0962

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CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

STATE OF FLORIDA
COUNTY OF BROWARD

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared ROBERT W. BUCK, to me well known to be the person who executed the foregoing instrument individually, and as a limited partner and the sole general partner of 441 South Ltd. II, a dissolved Florida limited partnership, and he acknowledged before me that he executed the same for the purposes set forth herein.

WITNESS my hand and official seal this 23 day of September, 1991.

Sharon T. Fornes

Name: Sharon T. Fornes
Notary Public State of Florida
My Commission Expires: _____
[SEAL]

NOTARY PUBLIC, STATE OF FLORIDA
MY COMMISSION EXPIRES: APRIL 11, 1992.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

BK19275PG0963

RETURN TO:
CITY CLERK
CITY OF MARGATE
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MARGATE, FL 33063

STATE OF PENNSYLVANIA
COUNTY OF CHESTER

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared W. BRUCE BUCK, to me well known to be the person who executed the foregoing instrument individually and as a limited partner of 441 South Ltd. II, a dissolved Florida limited partnership, and he acknowledged before me that he executed the same for the purposes set forth herein.

WITNESS my hand and official seal this 25th day of September, 1991.

Notarial Seal
Carol Ann Porter, Notary Public
Middletown Twp., Delaware County
My Commission Expires Oct. 28, 1993
Member, Pennsylvania Association of Notaries

Carol Ann Porter
Name: CAROL ANN PORTER
Notary Public State of PA
My Commission Expires: 10/28/93
[SEAL]

Witnesses:

Donna Hoefs
Name: Donna Hoefs

Julie A. Williams
Name: Julie A. Williams

Donna Hoefs
Name: Donna Hoefs
Trustee

Julie A. Williams
Name: Julie A. Williams

Donna Hoefs
Name: Donna Hoefs

Julie A. Williams
Name: Julie A. Williams

1957 MARGARET WOODSON FISHER TRUST, through its trustees, JOHN E. FORESTER, FREDERICK W. FISHER and SAN W. ORR, JR.

By: John E. Forester
JOHN E. FORESTER, as Trustee

By: Frederick W. Fisher
FREDERICK W. FISHER, as

By:
SAN W. ORR, JR., as Trustee

"Transferee"

BK1927SPG0964

RETURN TO:
CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

STATE OF WISCONSIN
COUNTY OF MARATHON

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared JOHN E. FORESTER, as a Trustee of the 1957 Margaret Woodson Fisher Trust, to me well known to be the person who executed the foregoing instrument as trustee of the 1957 MARGARET WOODSON FISHER TRUST, and he acknowledged before me that he executed the same for the purposes set forth herein.

WITNESS my hand and official seal this 10th day of ~~September~~ October, 1991.

Ann M. DuBore
Name: Ann M. DuBore
Notary Public State of Wisconsin
My Commission expires: 12-26-93
[SEAL]

STATE OF WISCONSIN
COUNTY OF MARATHON

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared FREDERICK W. FISHER, as a Trustee of the 1957 Margaret Woodson Fisher Trust, to me well known to be the person who executed the foregoing instrument as trustee of the 1957 MARGARET WOODSON FISHER TRUST, and he acknowledged before me that he executed the same for the purposes set forth herein.

WITNESS my hand and official seal this 22nd day of September, October, 1991.

Ann M. DuBore
Name: Ann M. DuBore
Notary Public State of Wisconsin
My Commission expires: 12-26-93
[SEAL]

BK19275PG0965

STATE OF WISCONSIN
COUNTY OF MARATHON

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared SAN W. ORR JR., a Trustee of the 1957 Margaret Woodson Fisher Trust, to me well known to be the person who executed the foregoing instrument as trustee of the 1957 MARGARET WOODSON FISHER TRUST, and he acknowledged before me that he executed the same for the purposes set forth herein.

WITNESS my hand and official seal this 22nd day of October, 1991.

Ann M. DuBore
Name: Ann M. DuBore
Notary Public State of Wisconsin
My Commission expires: 12-26-93
[SEAL]

RETURN TO:
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CONSENT TO ASSIGNMENT OF DEVELOPER RIGHTS

The undersigned consent to the foregoing Assignment of Developer Rights by and between 441 South Ltd. II, a dissolved Florida limited partnership, through its general and limited partners, and Robert W. Buck and W. Bruce Buck, individually ("Transferor") and John E. Forester, Frederick W. Fisher and San W. Orr, Jr., as trustee of the 1957 Margaret Woodson Fisher Trust ("Transferee"), to which this consent is attached, including, but not limited to, the assignment and transfer of 109.58 equivalent residential connections of reserve water and sewer treatment capacity from Transferor to Transferee.

Witnesses:

Name: Shirley J. Baughman

Name:

Name: Debra J. Doré

Name:

CITY OF MARGATE

By:
Name: Joseph Varsalone
Title: Mayor

By:
Name: Leonard B. Golub
Title: City Manager

BK 19275PG0966

RECORDED IN THE OFFICIAL RECORDS BOOK
OF BROWARD COUNTY FLORIDA
COUNTY ADMINISTRATOR

RETURN TO:
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MARGATE, FL 33063

Florida Department of Transportation

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JARED W. PERDUE, P.E.
SECRETARY

March 13, 2023

THIS PRE-APPLICATION LETTER IS VALID UNTIL – March 13, 2024
THIS LETTER IS NOT A PERMIT APPROVAL

Karl Peterson
KBP Consulting, Inc.
8400 N. University Drive Suite 309 Tamarac, FL 33321

Dear Karl Peterson:
RE: Pre-application Review for **Category D Driveway,** Pre-application Meeting Date: **March 9, 2023**
Broward County - Margate; SR 7; Sec. # 86100000; MP: 17.19; Access Class - 5;
Posted Speed - 45; SIS - No; FDOT Ref. Project: FM 439891.5-Vanita Saini-ITS COMMUNICATION SYSTEM, FM 446096.1-Kris McKirdy-RESURFACING, FM 446096.1-Kris McKirdy-RESURFACING

Request: Existing right-turn in / right-turn out only on the west side of SR 7, approximately 550 feet south of SW 7th Avenue

SITE SPECIFIC INFORMATION
Project Name & Address: **REZ SR 7 Multifamily – 777 S. State Road 7, Margate, FL**
Property Owner: **777 Properties Inc.**; Parcel Size: **12.42 Acres**
Development Size: **315 Multi-family DU (Proposed); 73,500 SF Office (Existing)**

REQUEST APPROVED/DISAPPROVED

This decision is based on your presentation of the facts, site plan and survey - please see the conditions and comments below. You may choose to review this concept further with the District Access Management Review Committee (AMRC).

Conditions:
- **A minimum driveway length of 50 feet, as measured from the ultimate right-of-way line to the first conflict point shall be provided.**
- **If a gate is proposed, a minimum driveway length of 100 feet to the call box and/or gate house, and a turnaround area before the gate are required.**
- **A southbound right turn lane on the west side of SR 7 is required and shall meet the minimum requirements in the Florida Design Manual (FDM) and shall provide space for a buffered bicycle lane.**
- **A traffic study will be required at the time of permit to evaluate any needs for improvements at the intersection of SW 7th St and SR 7 due to project traffic.**

Comments:
- All driveways not approved in this letter must be fully removed and the area restored.
- A Drainage Permit is required for any stormwater impacts within FDOT right-of-way (i.e. increased runoff or reduction of existing storage).
- The applicant shall donate property to the Department if right-of-way dedication is required to implement the improvements.
- Dimensions between driveways are measured from the near edge of pavement to near edge of pavement and for median openings are measured from centerline to centerline unless otherwise indicated.

The purpose of this Pre-Application letter is to document the conceptual review of the approximate location of driveway(s) to the State Highway System and to note required improvements, if any. This letter shall be submitted with any further reviews and for permitting. The Department's personnel shall review permit plans for compliance with this letter as well as current Department standards and/or specifications. Final design must consider the existing roadway profile and any impacts to the existing drainage system. **Note, this letter does not guarantee permit approval**. The permit may be denied based on the review of the submitted engineering plans. Be aware that any approved median openings may be modified (or closed) in the future, at the sole discretion of the Department. For right-of-way dedication requirements go to: https://osp.fdot.gov; click on Statewide Permit News; Scroll down to District 4; Scroll down to Additional Information and Examples and choose Right-of-way Donations/Dedications.
Please contact the Access Management Manager - Tel. # 954-777-4363 or e-mail: D4AccessManagement@dot.state.fl.us with any questions regarding the Pre-Approval Letter.

Sincerely,

Kollol Shams, P.E.
District Access Management Manager

cc: Anthony Beecher
File: S:\Transportation Operations\Traffic Operations\Access Management\1. Pre-Apps and Variance\2023-03-09\4. 86100000 MP 17.2 SR 7_REZ SR 7 Multifamily\86100 MP 17.2 SR 7_REZ SR 7 Multifamily.docx

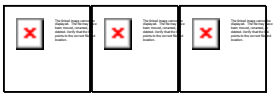
Amanda Martinez

From: Robert Hely <rhely@win-waste.com>
Sent: Tuesday, April 9, 2024 10:47 AM
To: Amanda Martinez
Subject: Re: Margate Development-Capacity Confirmation

We have sufficient capacity to handle the increase in units.

Bob Hely, Market Manager

Tel (954) 581-6606 | Cell 954 980-6998
4400 South State Road 7 Fort Lauderdale, Florida 33314
Email : RHely@Win-Waste.com



On Apr 9, 2024, at 10:27 AM, Amanda Martinez <amartinez@miskelbackman.com> wrote:

You don't often get email from amartinez@miskelbackman.com. Learn why this is important

EXTERNAL Email: Only open links or attachments from TRUSTED sources.

Good Morning Robert,

You provided the below email confirmation last April regarding a proposed multi-family residential development located at 777 S. State Rd. 7 in the City of Margate. Since requesting this confirmation, the number of dwelling units in the project has increased from 310 to 338. Can you please provide confirmation that the landfill has the capacity to service the project with 338 multi-family residential dwelling units?

Thank you,

Amanda Martinez, Land Planner
Miskel Backman, LLP
14 SE 4th Street, Suite 36
Boca Raton, FL 33432
Tel (cell): (954)304-7755
E-mail: amartinez@miskelbackman.com

<image005.png>

We are pleased to announce that as of March 2, 2024, the name of our firm was changed to Miskel Backman LLP. My new email address is amartinez@Miskelbackman.com. If you would please make a note.

From: Robert Hely <rhely@win-waste.com>
Sent: Tuesday, April 11, 2023 11:48 AM
To: Amanda Martinez <amartinez@dmbblaw.com>
Subject: RE: Margate Development-Capacity Confirmation

Win- Waste Innovations is the solid waste processor for the City of Margate. We have ample capacity to handle the solid waste anticipated to be generated by your proposed development project

<image001.jpg>

Bob Hely/ Market Manager
Office (954) 581-6606 x 285
Cell (954) 980-6998
4400 South State Road 7, Fort Lauderdale, Fl 33314
www.win-waste.com

<image002.png>

<image003.png>

<image004.png>

From: Amanda Martinez <amartinez@dmbblaw.com>
Sent: Tuesday, April 11, 2023 11:44 AM
To: Robert Hely <rhely@win-waste.com>
Subject: Margate Development-Capacity Confirmation

EXTERNAL Email: Only open links or attachments from TRUSTED sources.

Hi Bob,

I am working on a project located at 777 S. State Road 7 (folio number 494101310011) in the City of Margate. The property is currently vacant and the applicant is proposing to develop the property with a multi-family residential development containing 310 dwelling units. Can you please provide confirmation that the landfill has the capacity to the service the project?

Amanda Martinez, Land Planner
Dunay, Miskel and Backman, LLP
14 SE 4th Street, Suite 36
Boca Raton, FL 33432
Tel (direct): (954)304-7755
Tel(main): 561-405-3300
Fax: (561)409-2341
E-mail: amartinez@dmbblaw.com

CONFIDENTIALITY NOTICE: This message originates from WIN Waste Innovations. This message and any attachments are solely for the use of the intended recipient(s) and may

contain privileged and/or confidential information or other information protected from disclosure. If you are not the intended recipient, you are hereby notified that you received this email in error and that any review, dissemination, distribution or copying of this email and any attachment is strictly prohibited. If you have received this email in error, please contact the sender and delete the message and any attachments from your system.Privacy Policy

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GreenspoonMarder LLP

Matthew H. Scott, Partner
PNC Building
200 East Broward Boulevard, Suite 1800
Fort Lauderdale, Florida 33301
Phone: 954.491.1120 ext. 3472
Direct: 954.333.4372
Fax: 954.771.9264
Email: matthew.scott@gmlaw.com

The Forest Apartments
787 S. State Road 7
Plat Note Amendment Narrative

Rez SE Land, LLC ("Applicant"), with authorization from 777 Properties, Inc., owner of the parcel located at 787 S. State Road 7, hereby submits this request to amend the restrictive note on the 441 South LTD., II Plat ("Plat"). Applicant is seeking to amend the note on the Plat in association with a site plan application, special exception application, and subdivision resurvey application. The overarching objective of these applications is to allow for development of a 338-unit multifamily development on the vacant south side of the Plat. There is an existing office development on the north side of the Plat.

The restrictive note on the Plat currently is as follows:

"This plat is restricted to 146,000 square feet of office use."

The Applicant proposes amending the note language as follows:

"This plat is restricted to 146,000 square feet of office use and 338 mid-rise units."

Concurrency Compliance

1. **Project description: Applicant, location, land use and zoning, density or intensity, project phasing and other pertinent information as determined by the applicant needed to properly review the application.**

   Name, address and telephone number of the applicant
   Rez SE Land, LLC
   1000 Brickell Plaza 34104
   Miami, FL 33131-383 UN
   Contact: Saul Perez
   Telephone: 305-562-4704
   Email: Saul@rezfl.com

   Location
   The Property is located on the west side of S. State Road 7 between SW 7th St. and Anderson Rd. It is identified by Parcel Control Number 494101310020.

   Land Use & Zoning

   The City and Broward County Future Land Use Plan designation for the Property is Activity Center and the zoning designation is G (Gateway).

Density

The Property is located within the Margate Activity Center. The permitted uses for this activity center include the following:

- *Commercial Land Uses: 4,454,894 square feet*
- *Industrial Land Uses: 1,830,884 square feet*
- *Office Land Uses: 1,371,159 square feet*
- *Residential Land Uses: 3,565 dwelling units*
- *Hotel: 555 rooms*
- *Recreation and Open Space: 35 acres (minimum)*

As with all activity centers, the density is not determined by the size of the parcel based on a per acre basis. Rather, the units are taken from the pool of available units or flex units. As such, Applicant proposes obtaining the units via concurrent request for flex units.

Project Phasing

There is no phasing proposed with this development. All of the units will be developed in one stage.

2. **Transportation system: An analysis performed by Broward County or prepared in accordance with the Broward County TRIPS model, as amended from time to time.**

A traffic study has been included with this submittal that demonstrates that the proposed development is projected to generate approximately 1,566 daily trips, approximately 137 AM peak hour trips and approximately 132 trips during the typical afternoon peak period. Furthermore, The project driveway is projected to operate at level of service "A" as proposed. Please refer to the traffic impact study for more details.

3. **Drainage, solid waste, water and wastewater: Documentation from the appropriate service provider regarding provision of services.**

Drainage, Water & Wastewater

The City of Margate Engineering Department will not provide the letter until the application has reached the DRC review stage. A request for the letter will be sent to the Engineering Department as that time.

Solid Waste

An e-mail correspondence from Bob Hely with Waste Innovations confirming the landfill capacity and a letter from Republic Services confirming capacity to service the project has been provided with this submittal (Please see Documents Titled, ADOC-Republic Trash Service Confirmation & ADOC-Landfill Capacity Email).

Community Parks Level of Service

Per the City's Comprehensive Plan, the adopted level of service for parks/open space is 3 acres per 1,000 population. The table below shows the community parks demand generated by the Project based on the City's level of service standards.

Current Use		
Development Intensity	**Generation Rate**	**Demand**
Vacant Land	3 acres/1,000 people	0 acres
Proposed Use		
Development Intensity	**Generation Rate**	**Demand**
338 Dwelling Units (2.5 per capita)	3 acres/1,000 people	2.53 Acres
NET CHANGE: +2.53 acres		

The County projects that the City's population will be approximately 66,641 in 2040 and 68,660 in 2045. The certified community parks inventory tables indicate that there are 197.74 acres of open space existing in the City that can be used to meet the adopted level of service. Based on these figures, the City will be operating below level of service standards beginning in 2040, where 199.9 acres will be required and a total of 206 acres will be needed in 2045 to meet level of service standards.

While the Project generates a demand of 2.53 acres of community parks, the community parks acreage demand was accounted for when the land use plan amendment for the Activity Center area was adopted. At this time, the demand generated by, and the community parks acreage available for all 3,565 residential units proposed for the properties located within the Activity Center boundaries was demonstrated on the land use plan amendment. As such, the community parks demand generated by the Project was accounted for in the adoption of the land use plan amendment for the Activity Center and does not negatively impact the City's level of service.

Additionally, the Project is providing an urban greenway with a multi-modal path running along State Rd. 7, with connectivity to an outdoor public plaza. This area provides a public trail to be utilized for non-motorized forms of transportation that will connect to a continuing trail that will be constructed as other properties are redeveloped in the G district in the future. As the Property is the last parcel to the south included in the Activity Center boundaries, the public plaza acts as a terminus point and resting stop for the multi-modal path and urban greenway.

CITY OF MARGATE

DEVELOPER AGREEMENT

84247459

THIS AGREEMENT made and entered into this 29th day of March, 1983, by and between 1957 Margaret Woodson Fisher Trust hereinafter referred to as "Developer" and the CITY OF MARGATE, a municipal corporation organized and existing under the laws of the State of Florida, hereinafter referred to as "City".

WHEREAS, Developer owns or controls lands located in Broward County, Florida, and described in Exhibit "A", attached hereto and made a part hereof as if fully set out in this paragraph and hereinafter referred to as "Property" and Developer has or is about to develop the Property by erecting thereon such improvements as are in accord with the zoning laws and land use plans of the City of Margate, Broward County or City of Coconut Creek, and

WHEREAS, in order to meet the financing and general requirements of certain private agencies and certain Federal, State and Local governmental agencies, such as but not limited to, the State Board of Health, the Department of Environmental Regulations, the Veterans' Administration, the Federal Housing Administration, and private lending institutions, it is necessary that adequate water and sewage facilities and services be provided to serve the Property and to serve the occupants of each residence, building, or unit constructed or located on the Property, and

WHEREAS, Developer is not desirous of providing water and sewage facilities to serve the Property, but is desirous of promoting the construction of central water and sewage facilities by City so occupants of each residence, building, or unit constructed or located thereon will receive adequate water and sewage service, and

WHEREAS, City is the owner and operator of public water treatment and/or sewage treatment plant, together with water distribution and/or sewage collection facility, and City is willing to operate such facilities so that the occupants of each residence, building, or unit constructed on the property will receive an adequate water supply and sewage disposal service from City for the benefit of the public as determined by the City, and

WHEREAS, Developer is desirous of the City to expand its central water and sewage facilities so as to serve the property of the developer, and

WHEREAS, it is the intention of the City to provide exclusive water and sewage facilities within the service area wherein the Property of Developer lies,

NOW, THEREFORE, for and in consideration of the mutual covenants and undertakings of the parties hereto, and other good and valuable considerations, the parties hereto covenant and agree, each with the other as follows:

1. The foregoing statements are true and correct and are incorporated herein by reference.

2. The following definitions and references are given for the purpose of interpreting the terms as used in this agreement and apply unless the context indicates a difference meaning:

a. Property - All the land described in Exhibit "A" and all the land to which City shall provide water and sewage service.

b. Stage Area - Refers to a part of the Property which is being or is to be developed as a unit.

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CITY CLERK
CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

OFF REC 11858 PAGE 375

c. Lot or Tract - Each building site as platted for record or as shown on the master plan and plat.

d. Service - The readiness and ability on the part of the City to furnish water or sewage service to each lot. Thus, the maintenance by City of adequate pressure at the point of delivery shall constitute the rendering of water service, and the maintenance of a connection providing for the removal and disposal of sewage service. Sewage service refers to sanitary sewer service.

e. Point of Delivery - The point where the pipes or meters of City are connected with the pipes of the consumer. Unless otherwise indicated, point of delivery shall be at the point on the consumer's lot line,

f. Consumer Installation - All facilities on the consumer's side of the point of delivery.

g. Contribution in Aid-of-Construction - The sum of money and/or the value of propery represented by the cost of the water distribution and sewage collection systems including lift stations and treatment plants by a Developer, or owner, of the utility, which Developer or owner transfer, or agrees to transfer, to City in order to induce City to provide utility service to the Property.

h. Water and Sewer Extension Policy - The Document creating a uniform method of determining the contribution in aid of construction to be borne by property owners, builders or developers within the service area, all as more particularly set forth in Exhibit "B" attached hereto and made a part hereof by reference and as same may be amended from time to time.

i. Developer - The owner of the parcel of land described in Exhibit "A".

ARTICLE I

(A) It will be the obligation of the Developer, at his expense to design, construct and install water distribution and sewage collection lines, over, through, under and across Developer's Property in accordance with plans, specifications and engineering data as submitted by a Florida registered engineer, to be approved by the City's engineers and/or administrator and said water distribution and sewage collection lines will be installed and connected to City's existing water and sewage collection lines, all of which work shall be paid for by Developer. Such water facilities to be installed at Developer's expense shall include, but not be limited to all services, distribution mains, and transmission mains required for the furnishing of service to Developer's Property. Such sewage facilities to be installed at Developer's expense shall include, but not be limited to all, services, gravity flow mains, force mains and lift stations required for the furnishing of service to Developer's Property.

(B) Developer shall, at his expense, retain the services of a registered professional engineer for the purpose of providing necessary inspection and supervision of the construction work to insure that construction is at all times in compliance with accepted sanitary engineering practices and the approved plans and specifications.

(C) Prior to approval of said plans and specifications, however the City shall receive written verification that:

(1) If the Property is required by law to be platted prior to building construction, the platted area which the water and sewer facilities are to serve has been approved by all required City and County agencies and recorded in the Official Records of Broward County, Florida.

(2) If the property is not required to be platted, a Property Development Plan or similar plan has been approved by the City of Margate or the City of Coconut Creek or Broward County for the Property in question.

(D) The work to be performed by Developer, as above provided for, may not be commenced until all plans and specifications covering the work to be performed are approved in writing by City's engineers and/or administrator.

OFF REC 11858 PAGE 376

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MARGATE, FL 33063

(E) The work to be performed by Developer, pursuant to the provisions set forth herein, shall be in accordance with all requirements of the regulatory agencies having jurisdiction of the subject matter of this agreement.

(F) Developer will notify City before any construction is begun and at the times when inspections will be required. Said notification shall be made in writing and shall be received by the City at least twenty-four (24) hours in advance.

(G) During construction and at the time when periodic inspections are required, City's engineers and/or administrator, or his authorized representative, together with Developer's engineer, will be present to observe and jointly witness tests for determination of conformance to approved plans and specifications.

(H) As and when the water service and sewage collection systems have been satisfactory installed, inspected, tested and approved in writing by the Developer's engineer, together with the City's engineers and/or administrator, the City will thereafter maintain the water service system and sewage collection system without cost to Developer; provided, the obligation of the City to maintain the water service system and sewage collection system will not take affect until such time as Developer has conveyed title to said systems to City and furnished the As-Built drawings described in Paragraph (I) below.

(I) Developer will, at his expense, furnish to the City one complete set of reproducible as-built drawings prepared by the engineer who designed the water service and sewage collection systems. Said as-built drawings shall also be certified by the engineer and must show all pertinent information as to the correct location of all mains, services, pumps, valves, manholes, laterals, easements, etc. affecting the water service and sewage collection systems as constructed in the field.

(J) The Developer will pay to the City the applicable charges (as set by City from time to time) for water meters and meter installations, meter security deposits, connection charges and capacity reservation charges and contributions in aid-of-construction as set forth in the Water and Sewer Extension Policy (Attached as Exhibit "A") as same may be modified from time to time. Schedules of current meter fees and connection charges are attached as Exhibits "C"

(K) Failure of the Developer to execute this agreement within thirty (30) days after submission to the Developer, shall result in its withdrawal.

(L) Under no circumstances shall the City provide water and sewer service to a stage area encompassed under a Developer's agreement when, in fact, that stage area has not been completed, tested, as-built drawings provided, certified, approved and accepted by City.

(M) Developer hereby agrees to make full disclosure to any party purchasing all or any part of the Property encompassed by this agreement as to the terms hereof, with particular reference to the charges set forth and of the rates set forth in Exhibits "B", and C, attached hereto and made a part hereof.

(N) If for unseen circumstances including, but not limited to actions of any other governmental or regulatory agency, the proposed development is abandoned, terminated or caused to be cancelled short of full completion, it is mutually agreed by the parties hereto that the monies paid to City shall constitute liquidated damages to City. No refund of any type, monetary or otherwise, shall be made to Developer and this agreement shall be thereafter null and void. Failure to continue or proceed with construction in a meaningful manner for a consecutive period of one hundred and eighty (180) days shall be deemed to be an abandonment or termination. "Meaningful" as used herein is defined as proceeding with construction in the normal manner customary and common to the trade.

OFF REC 11858 PAGE 3772

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ARTICLE II

Upon completion, approval and acceptance of the work required to be done, Developer will, without cost to City:

(1) Within a period of thirty (30) days after the execution of this contract, at the expense of Developer, Developer agrees to either deliver to City an Abstract of Title brought up to date, which abstract shall be retained by City and remain the property of City, or to furnish City an opinion of title from a qualified attorney with respect to the Property, which opinion shall include a current report on the status of the title setting out the name of the legal title holders, the outstanding mortgages, taxes liens and covenants. The Developer agrees to provide City at the expense of Developer, title insurance in connection with all Warranty Deed conveyances of lift station sites or easements covering areas in which water or sewer lines have been installed. The provisions of this paragraph are for the purpose of evidencing Developer's legal right to grant the exclusive rights of service contained in this agreement. Any mortgage or lien holder having an interest in the property shall be required to join in the grant of exclusive service rights set forth in this agreement.

(2) Convey to City, in a form acceptable to City's attorney, by good and sufficient easement deed a perpetual right, easement and privilege to operate and maintain all water and sewer mains, pipes, connections, pumps, and meters, in connection with supplying water and sewer service to the inhabitants, occupants and customers in Developer's property, together with a perpetual right, easement and privilege unto City and its successors and assigns, to go in, under and upon the land or lands where said water and sewer mains, pipes, connections, pumps and pumping stations, if any, are located in order for City and its successors and assigns, to maintain, repair or replace the same.

(3) Transfer to City by Bill of Sale Absolute all Developer's right, title and interest in and to all of the water and sewer supply lines, mains, pumps, connections, pipes, valves, meters and equipment installed within the lands described in Exhibit "A" attached hereto and made a part hereof for the purpose of supplying of water service and sewage collection for the inhabitants, occupants, and customers in Developer's Property.

(4) Furnish construction costs of all utility facilities constructed by Developer and proposed to be transferred to City.

(5) Furnish City with an affidavit that all persons, firms, or corporations who furnished labor or material used directed or indirectly in the prosecution of the work required to be performed by this agreement have been paid.

(6) Furnish City with a satisfactory warranty or bond guaranteeing the facilities installed pursuant to this agreement against defects in materials, equipment or construction for a period of not less than one (1) year from date of acceptance of same by City.

OFF REC 11858 PAGE 378

ARTICLE III

City further convenants and agrees with Developer as follows:

City shall provide service meeting the standards required by the Florida Department of Health and Rehabilitative Services, Department of Evironmental Regulation, and any other regulatory agency having jurisdiction. The obligation of the City to furnish service other than construction water shall not arise until Developer has performed pursuant to this Agreement.

ARTICLE IV

It is mutually convenanted and agreed by and between the parties hereto, as follows:

(1) City shall have the exclusive right to furnish water and sewer collection service to consumers within the area covered by this agreement; and

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MARGATE, FL 33063

(2) Developer shall do all things and make all installations and perform all work in accordance with the terms of this agreement; and

(3) Any sale, assignment or transfer of Developer's interest in this agreement is hereby prohibited without written consent of the City; and

(4) Developer, his successors and assigns, and the owners and occupants of buildings on Developer's Property are hereby prohibited from installing or maintaining any water wells except for irrigation purposes; and

(5) Developer, his successors and assigns, and the owners and occupants of buildings on Developer's Property are hereby prohibited from installing, maintaining or using septic tanks in connection with the disposal of sewage from said buildings; and

(6) City shall have the right to promulgate from time to time reasonable rules and regulations relating to the furnishing of water service and sewage collection service to consumers within the area encompassed by this agreement. Such rules and regulations may relate to but are not limited to, rates, desposits, connection charges, prepayment of connection charges, capacity reservation charges and the right to discontinue services under certain conditions.

(7) City shall not be liable or responsible for the maintenance or operation of any pipes, pipelines, valves, fixtures or equipment on any of the properties of the Developer or customer.

(8) Each customer of water service and/or sewage collection service on Developer's Property shall keep all water pipes, service lines, connections and necessary fixtures and equipment on the premises occupied by said customer; and within the interior lines of the lot occupied by the customer in good order and condition. The sale of water by City to the customer shall occur at the customer's side of the meter; and

(9) No water from City's water distribution system is to be used or disbursed through fire hydrants or water mains by any person, firm, corporation or agency, public or private, unless there has first been made adequate provisions for compensating City for such water; and

(10) Any temporary cessations or interruptions of the furnishing of water and sewer service to the property described herein at any time caused by an Act of God, fires, strikes, casualties, accidents, power failures, necessary maintenance work, breakdowns, damage to equipment or mains, Civil or Military authority, riots or other cause beyond the control of the City shall not constitute a breach of the provisions contained herein or impose liability upon the City by the Developer, his successors and assigns nor shall any cessation of service or additional connections for service due to action by any governmental regulatory agency having jurisdiction over the City constitute said breach or impose liability upon City; and

(11) If any section, subsection, sentence, clause, phrase or portion of this agreement is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate distinct and independent provision and such holding shall not affect the validity of the remaining portions hereof.

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ARTICLE V

(A) The provisions of this Agreement shall be binding upon and inure to the benefits of the successors and assigns of the parties hereto.

(B) This agreement is being recorded among the public records of Broward County, Florida, for the particular purpose of placing all owners or occupants of properties in Developer's Property connected to or to be connected to said water and sewer systems of City upon notice of each and every one of the provisions herein contained to the same extent and with the same force and effect as if said owners and occupants had joined with the parties to the Agreement in the execution thereof; and the acquisition or occupancy of property in Developer's property connected to or to be connected to the said water and sewage systems of City shall be deemed conclusive evidence of the fact that the said owners or occupants have consented to and

OR BK 11858 PAGE 379

and accepted the agreement herein contained and have become bound thereby.

ARTICLE VI

Whenever either party desires to give notice unto the other, it must be given by written notice, sent by registered United States mail, with return receipt requested, addressed to the party for whom it is intended, at the place last specified as the place for giving of notice, shall remain such until it shall have been changed by written notice in compliance with the provisions of this paragraph. For the present, the parties designate the following as the respective places for the giving of notice; to wit:

For City: 5790 Margate Boulevard
Margate, Florida 33063

For Developer: P. O. Box 65
Wausau, Wisconsin 54401

Notice so addressed and sent by registered mail, with return receipt requested, shall be deemed given when it shall have been so deposited in the United States Registered Mail.

ARTICLE VII

(A) It is mutually agreed that the City shall be held harmless from any and all liability for damages if City's obligations under this agreement cannot be fulfilled as a result of any ruling or order by any other governmental or regulatory agency having jurisdiction over the subject matter hereof; and in such event this agreement shall be null and void, and unenforceable by either party.

(B) The rights, privileges, obligations and covenants of Developer and City shall survive the completion of the work of Developer with respect to completing the water and sewer facilities and services to any stage area and to the Property as a whole.

(C) This agreement supersedes all previous agreement or representations, either verbal or written heretofore in effect between the Developer and City made with respect to the matters herein contained, and when duly executed, constitutes the agreement between the Developer and City. No additions, alterations or variations of the terms of this agreement shall be valid, nor can provisions of this agreement be waived by either party unless such additions, alterations, variations or waivers are expressed in writing and duly signed by both parties.

ARTICLE VIII

That the City reserves unto itself the right to increase plant capacity deemed necessary in order to provide water and/or sewer services for new users. In so doing the City shall require specific reservation of capacity and prepayment of such connection charges as are necessary to construct expanded facilities along with a procedure to implement same. Same shall be attached and made a part of this agreement as an addendum.

IN WITNESS WHEREOF, Developer and City have executed or have caused this agreement, with the named Exhibits attached, to be duly executed in several counterparts, each of which counterpart shall be considered an original copy of this agreement.

OFF. REC. 11858 PAGE 380

Witnesses:

RETURN TO:
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57[illegible] BLVD.
[illegible]

CITY OF MARGATE, FLORIDA

BY _____
Mayor

BY _____
City Manager

Developer: 1957 Margaret Woodson Fisher Trust

BY _____
San W. Orr, Jr., Trustee

BY _____

Approved as to Form:

EUGENE M. STEINFELD, City Attorney

Notice to Developer: _____

EXHIBIT "A"

LEGAL DESCRIPTION OF PROPERTY WHICH
CONSTITUTES THE SUBJECT MATTER OF THIS AGREEMENT

The South 672.85 feet (as measured at right angles) of Tract "C" of a subdivision of Section 1, Township 49 South, Range 41 East, according to the plat thereof recorded in Plat Book 26, page 21, of the public records of Broward County, Florida, containing 40 acres, and known as the Riding Stable.

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OFF REC 11858 PAGE 381

EXHIBIT B

WATER AND SEWER EXTENSION POLICY

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MARGATE, FL 33063

PURPOSE

The City of Margate, Florida, hereinafter referred to as "City" hereby establishes this Extension Policy for the purpose of creating a uniform method of determining the contribution in aid of construction to be borne by property owners, builders or developers within the service area to defray or partially defray the costs of on-site water distribution and sewage collection system; the allocable share of off-site water distribution and sewage collection system; and allocable shares of treatment plant costs. City declares that this Extension Policy has as its goal, the establishment of a uniform method of computing or determining such contributions to the end that all such contributions shall be non-discriminatory amongst consumers in the area and shall be applied as nearly as possible with uniformity to all consumers and prospective consumers within the present or future service area.

AVAILABILITY

The provisions of this Extension Policy area available to consumers and property owners throughout the service area of the City of Margate Utility Department, subject only to matters of economic feasibility which shall always allow to the utility an amount to provide coverage test ratios as indicated in the City's Trust Indenture.

APPLICABILITY OF CONTRIBUTION IN AID OF CONSTRUCTION

City requires the payment of contributions in aid of construction, either by cash payments or through the installation of water distribution and sewage collection facilities, by the developer, with title to such facilities transferred to City or a combination of both forms of contributions. The requirement of City for such contributions is declared to be for the purpose of defraying the cost of the water distribution and sewage collection system and to defray the cost of construction of water and wastewater treatment plant facilities.

The payment by developer, builder and/or owner of such contributions to City shall be a condition precedent to the rendering of service by City.

The aggregate value of contributions in aid of construction required by City either in cash or by utility system construction donated to City shall be computed and determined as follows:

On Site Facilities Each developer, owner or builder (hereinafter referred to as Developer), shall be responsible for the design, installation, inspection and testing of the complete water distribution and sewage collection system located in the street or streets adjoining or within the boundaries of Developer's Property.

The term "complete water distribution and sewage collection system", as used herein, shall include all component parts of a water distribution system, including valves, fittings, laterals, hydrants and all appurtenances as shown upon the approved design of such water distribution system. The sewage collection system shall include all collection lines, manholes, force mains, lift or pumping stations, including the site for same, and all other appurtenances as shown upon the approved design for the installation of such sewage collection system.

City's requirement for the installation of over-sized lines or facilities, located on Developer's Property and designed to provide service for other properties, shall be the subject of a Developer's Agreement which may include refunding provisions as set forth hereafter in this Extension Policy.

The limited size of Developer's Property, for which service has been requested may indicate to City the desirability of having City design and install the water distribution and sewage collection system. In such event, City reserves the right to compute the estimated cost of such extension and to require developer to pay such cost of construction in lieu of Developer's installation of the water distribution and sewage collection system.

DEC. 11858 PAGE 382

Off-Site Water Distribution and Sewage Collection System - Hydraulic Share: The location, size or proposed density of Developer's Property may make service to such Property dependent upon the extension of off-site water distribution and sewage collection facilities. For the purpose of this Extension Policy, the term off-site shall be defined as those main water transmission lines, sewage collection lines, sewage force mains and/or pumping stations necessary to connect Developer's Property with facilities of City adequate in size to transmit to Developer's Property, an adequate quantity of water under adequate pressure and/or transmit sewage collected on developer's property to the treatment plant or disposal site of City.

It is City policy to apportion the cost of main transmission and collection lines and pumping stations pro rata against the properties receiving service from such main transmission lines located off site as to Developer's Property.

Since each Developer draws from the hydraulic capacity of such lines, City will require that developer pay his Property's hydraulic share of the cost of the off site main transmission and collection facilities through which service is rendered to Developer's Property. This portion of City's extension policy is referred to as Developer's "hydraulic share of off-site facilities."

It is further declared and established that City will compute such hydraulic share of off site facilities based upon two major factors which will contribute to the engineering determination:

(a) The quantum area of Developer's land, and
(b) The density and estimated consumption to be generated from the property as it is proposed to be developed.

City further declares that the charge for Developer's hydaulic share of off site facilities will be applicable to Developer's property whether or not the main transmission lines and/or pumping stations have been previously constructed. It is the intent of this section to apportion the cost of main transmission lines and pumping stations on a fair share basis irrespective of whether such transmission lines and pumping stations have been previously constructed or are proposed to be constructed.

Developers may be required to advance all or a portion of the main transmission lines and pumping stations in order to provide a physical interconnection of Developer's property with the facilities of City at their then present terminus. Such eventualities are covered by provisions in this Extension Policy under the heading of "Refundable Advances."

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FL 33063

CONNECTION CHARGES

In order to defray costs relating to construction of: production, certain transmission, storage, pumping, and treatment facilities for water supply service, and wastewater collection, coveyance, pumping, treatment, and disposal facilities, there shall be paid by landowner/developer connecting into the water and/or wastewater system, at the time application is made for a building permit, water and wastewater connection charges as listed in Tables 1, 2 and 3 of Section 24-73 of Chapter 24, Article V of the City of Margate Code of Ordinances; provided, however, that the City may require and accept the prepayment of connection charges whenever it shall determine that such prepayments are required in the funding of all or part of the capital costs of new utility facilities.

OFF REC 8585 PAGE 383

All connection charges shall be paid by the landowner/developer on the basis of the number of equivalent residential connections (ERC's) proposed to be connected into the water or wastewater system. An ERC equates all classes of utility users to a common denominator (i.e., a detached single family residential unit has a value of 1.0 ERC). All other types and classes of users shall be equated to this value as listed in Tables 1, 2, and 3.

The established connection charges as set forth in Tables 1, 2, and 3 are fixed until 31 March 1983 and each 31 March thereafter, or at such time as is deemed appropriate by the City Commission of Margate, each connection charge shall be adjusted as reflected by the Engineering News Record (ENR) Construction Cost Index (CCI). The adjustment factor for each connection charge shall be computed by dividing the ENR CCI given in the March issue by the CCI given for the approximate same time one year before and multiplying

the result by the appropriate connection charge. When deemed necessary by the City Commission and duly adopted by ordinance, connection charges may be further adjusted, and the landowner/developer agrees to be bound by such adjustments.

CAPACITY RESERVATION CHARGE

A capacity reservation charge (CRC) will be paid by the landowner/developer for each ERC on which connection charges have been prepaid. The CRC will be applicable to the landowner/developer in every case in which the City has provided available capacity, and the landowner/developer has not yet connected to the water and/or sewer system. The CRC (also known as a guaranteed revenue charge) is a method of equitably charging new utility system customers for whom capacity is being reserved those costs which are fixed and non-flow variable (such as maintenance and administration costs - i.e., all costs not varying with commodity costs). The CRC is a monthly charge which is prepaid annually.

The CRC will be payable one (1) year in advance, from the time that additional system capacity becomes available, and each year thereafter until connection is made into the system. Upon connection of each ERC into the system, a corresponding CRC will be terminated. At the end of each year, the landowner/developer will receive credit for those CRC's terminated during the previous year, and a new advance payment will be made for the following year until the landowner's/developer's prepaid ERC commitment is exhausted.

Upon payment of the CRC, the City will guarantee that the landowner/developer will not be subject to any future increases in connection charges, to the extent that CRC's are currently paid up. Monthly CRC rates as listed in the tariff schedule in Section 1, Section 24-71 of Chapter 24, Article V, of the City of Margate Code of Ordinances shall apply, and the landowner/developer agrees to be bound by the provisions of the aforesaid ordinance.

OBLIGATIONS OF THE CITY

City shall maintain copies of this Extension Policy along with all applicable ordinances, rules and regulations available for the inspection of any property owner, developer, builder or prospective consumer desiring information regarding all elements of the cost of connecting to the water and sewer facilities of City.

City shall maintain "as-built" information on its water and sewer facilities in its office or in the office of its designated representatives for the purpose of providing reasonable information concerning the location of its water and sewer facilities.

City shall install all meters upon the request of prospective consumers providing the contributions in aid of construction as described herein and meter installation fees as set forth below have been paid in accordance with the provisions of this Extension Policy.

In instances where City undertakes the installation of water distribution and sewage collection lines, at the cost and expense of developer in lieu of developer's installation of such facilities, City will provide laterals for water and sewer service to developer's lot line ready for plumber's "hook-up" and the installation of meters.

OBLIGATIONS OF DEVELOPER

It shall be developer's obligation to furnish to City accurate information with regard to matters of engineering, construction of buildings and dwellings and proposed densities. Developers who increase their density factors and/or consumption requirements during the course of construction of the project are exposed to an adjustment in their hydraulic share for off-site facilities and/or an increase in connection charges applicable to developer's project. Developer is responsible for errors or changes in engineering information furnished to City when such error or change results in increased cost to City for any construction which City may undertake in connection with installing water distribution or sewage collection facilities or which would necessitate a new design or re-design of water distribution or sewage collection plans.

OFF REC 11858 PAGE 384

RETURN TO:
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EASEMENTS AND RIGHTS OF WAY

As a pre-requisite to the construction of any water distribution or sewage

collection system proposed to be connected to the facilities of City, Developer shall grant to City such easements or rights of way corresponding with the installation of the proposed facilities. Such grant or conveyance shall be in form satisfactory to counsel of City. Such conveyance, when located on the property of Developer, shall be made without cost to City. City reserves the right to require such easement or right of way to the point at which the meter is proposed to be installed or at the "point of delivery of service" being the point at which the facilities of City joins with consumer's own installation.

SYSTEM DESIGN - INDEPENDENT ENGINEERS

City shall recognize the design of water and sewer facilities prepared by a registered professional engineer regularly engaged in the field of sanitary engineering, covering the design of Developer's on-site water distribution and sewage collection system. Provided, however, that each design shall be fully subject to the approval of City's engineer and shall conform in all respects to the criteria of City governing the installation of utility facilities ultimately to be accepted by City for ownership, operation and maintenance. City reserves the right to charge a fee commensurate with the cost to City of reviewing such engineering plans and furnishing to Developer's engineer, various information regarding location and criteria. All designs of water distribution and sewage collection facilities are at all times subject to the approval of other agencies having jurisdiction over such design.

SYSTEM DESIGN - CITY'S ENGINEER

City maintains a relationship with its engineer to provide utility design services to Developers for the purpose of facilitating the design of Developer's on-site distribution and sewage collection system. Designs prepared by City's engineer are acceptable to City, but are at all times subject to the approval of other governmental agencies having jurisdiction over the subject matter of such design. The cost of plans prepared by City's engineer shall be borne by Developer. However, in such cases, Developer will not be required to pay the charge for review of such plans as provided for in the foregoing paragraph.

INSPECTION FEES

City reserves the right to inspect the installation of all water distribution or sewage collection facilities installed by Developer or Developer's contractors, which facilities are proposed to be transferred to City for ownership, operation and control. Such inspection is designed to insure City that water and sewer lines and/or lift stations are installed in accordance with approved designs and are further consistent with the criteria and specifications governing the kind and quality of such installation. City further reserves the right to be present at tests of component parts of water distribution or sewage collection systems for the purpose of determining that the system, as constructed, conforms to City's criteria for exfiltration, infiltration, pressure testing, line and grade. Such tests will be performed by Developer or Developer's constractor, but only under the direct supervision of City's engineer or authorized inspector.

City reserves the right to charge an inspection fee not to exceed two percent (2%) of the cost, either actual or estimated, of the subject water and sewer facilities as installed by Developer. City maintains full time inspection availability and the cost for inspection services as set forth herein is and shall continue to be designed to defray the actual cost of conducting such inspections and testing.

INSPECTIONS OF PLUMBER'S HOOK-UP

It shall be the responsibility of Developer or its plumbing contractor to connect Developer's plumbing installation with the sewage collection facilities of City. This connection is generally made "at the point of delivery of service" as defined elsewhere in this Extension Policy. City reserves the right to inspect all such connections to be assured that the same are properly made in accordance with City's rules governing such connections and that the connection, as made, is free from infiltration. City maintains inspection personnel for the purpose of inspecting these plumbing hook-ups and will provide such inspection service for Developer without cost.

OFF REC 11858 PAGE 385

RETURN TO:
CITY CLERK
CITY OF MARGATE
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MARGATE, FL 33063

Developer shall be required to notify City of any proposed interconnection with the facilities of City and connection may be made without the presence of City's inspector. However, such connection shall remain open until inspected by City and until notice of the approval of such connection is furnished to Developer in accordance with the practices and procedures of City. Any plumber's connection covered over without the benefit of inspection will result in Developer being required to reopen the connection for subsequent inspection.

METER INSTALLATION FEES

City will charge to each prospective consumer requesting water service, a meter installation fee to defray City's cost of the meter, meter appurtenances and cost of installation. City will require the payment of such meter installation fee concurrently with the request by prospective consumers for the meter installation. The meter installation fee shall be charged only one time for the installation of a meter at any one location, provided, however, that requests to exchange existing meters for meters of a larger size will result in a charge to the prospective consumer of a difference between the existing smaller size meter and the requested larger size meter.

TRANSFER OF CONTRIBUTED PROPERTY - BILLS OF SALE

Each developer who has constructed portions of the water distribution and sewage collection system on Developer's own property prior to interconnnection with City's existing facilities, shall convey such component parts of water distribution and sewage collection system to City by bill of sale in form satisfactory to City's attorney, together with distribution system proposed to be transferred to City is free of all liens and encumbrances.

Any facilities in the category of "consumer's lines" or "plumber's lines" located on the discharge side of the water meter or on the consumer's side of the point of delivery of service shall not be transferred to City and shall remain the property of Developer, a subsequent owner-occupant or their successors and assigns. Such "consumer's lines" or "plumber's lines" shall remain the maintenance responsibility of Developer or subsequent consumers.

City shall not be required to accept title to any component part of the water distributuion or sewage collection system as constructed by Developer until City's engineer has approved the construction of said lines, accepted the tests to determine that such construction is in accordance with the criteria established by City and thereby has evidenced its acceptance of such lines for City's ownership, operation and maintenance.

Developer shall maintain accurate cost records establishing the construction costs of all utility facilities constructed by developer and proposed to be transferred to City. Such cost information shall be furnished to City concurrently with the bill of sale and such cost information shall be a prerequisite for the acceptance by City of the portion of the water distribution and sewage collection system constructed by Developer.

City reserves the right to refuse connection and to deny the commencement of service to any consumer seeking to be connected to portions of the water distribution and sewage collection system installed by Developer until such time as the provisions of this paragraph have been fully met by Developer or Developer's successors or assigns.

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REFUNDABLE ADVANCES

City may require, in addition to the contribution provisions set forth herein, a refundable advance by developer to further temporarily defray the cost of any "off-site" extension of water and/or sewer mains and pumping stations necessary to connect the Developer's property with the then terminus of City's water and sewer facilities adequate in size to provide service to the subject property. As set forth elsewhere in this Extension Policy, Developer shall always be responsible for his "hydraulic share" of the cost of off-site facilities. However, this Extension Policy recognizes instances in which a Developer may be required to advance the hydraulic share applicable to other undeveloped property in order that "off-site" facilities may be constucted to serve Developer's Property and at the same time be sized in accordance with City's master plan. All amounts expended by Developer, over and able Developer's hydraulic share for "off-site"

11858 PAGE 89

facilities shall be refunded to Developer in accordance with the terms and conditions of a refunding agreement which City will execute with Developer. The refund agreement shall provide for a plan of refund based upon the connection of other properties, to the extent of their hydraulic share, which properties will be served by the "off-site" facilities installed by developer. Notwithstanding the provisions of this section, City may limit the life of such refund agreement to a term of not more than seven years, after which time any portion of the refund not made to developer by the terms and conditions of the refund agreement will have lapsed and thereafter, such refund agreement will be cancelled. In no event shall Developer recover an amount greater than the difference between the capitalized cost of such "off-site" improvements and developers own hydraulic share of such improvements. City shall not include any interest upon the refund of Developer's advance.

DEVELOPER AGREEMENTS REQUIRED

Owner, builder, or Developer may be required to execute a "Developer's agreement" setting forth such reasonable provisions governing Developer and City responsibility pertaining to the installation of plumber's lines with the facilities of City, the manner and method of payment of contributions in aid of construction; matters of exclusive service rights by City; standards of construction or specifications; time commitments to "take and use water and sewer services"; engineering errors and omissions; rules, regulations and procedures of City's facilities and other matters normally associated with and contained in Developer agreements. Nothing contained in such Developer agreements shall be in conflict with this Extension Policy, nor ordinances of City. City may require that Developer in addition to the contribution formulas set forth herein, bear the cost of the preparation of Developer agreements by independent counsel or persons qualified to draft and prepare such agreements. Said charge shall not exceed that amount normally to be contemplated for such services.

EXENSIONS OUTSIDE SERVICE AREA

Owners, builders, or Developers being potential consumers wherein the subject property lies outside the City's area may paply to City for the extension of water distribution and sewage collection mains to said property. City shall not be obligated to provide service outside of its franchised area, but may elect to do so upon terms and conditions similar to those contained in this Extension Policy provided, however, City may require additional contributions in aid of construction should the same be reasonably required in order to maintain the same level of economic feasibility then in effect within the franchised area.

EXTENSION POLICY - COPIES AVAILABLE

Copies of this Extension Policy shall be maintained at City Hall and shall be available to all prospective consumers upon requrest, either in person or by mail, addressed to the City.

OFF REC 11858 PAGE 387

RETURN TO:
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CITY OF MARGATE
5790 MARGATE BLVD.
MARGATE, FL 33063

EXHIBIT C

SCHEDULE OF PROPOSED METER FEES

WATER

AVAILABILITY - AVAILABLE THROUGHOUT THE AREA SERVED BY THE CITY.

APPLICABILITY - TO ALL CLASSIFICATIONS OF CUSTOMERS FOR THE INITIAL COMMENCEMENT OF SERVICE AT ANY GIVEN LOCATION.

RATE -	(METER FEE)	
	5/8" Meter	$115.00
	3/4" Meter	150.00
	1 " Meter	225.00
	1 1/2"Meter	400.00
	2 " Meter	525.00

ALL OVER 2" BY AGREEMENT WITH THE CITY.

TERMS OF PAYMENT - PAYMENT TO BE MADE PRIOR TO SERVICE BEING RENDERED TO PROPERTY.

DEPOSITS REQUIRED AT TIME OF PAYMENT OF METER FEES

	Meter Size				
	5/8"	1"	1½"	2"	3"
Residential	$ 60.00	$100.00	$200.00	$300.00	_ _ _
Multifamily	----------$35.00 per unit----------				
Commerical	70.00	150.00	$250.00	$325.00	*

Over 2" shall be by agreement

OFF REC 11858 PAGE 388

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12/17/82

ADDENDUM TO DEVELOPER AGREEMENT

THIS ADDENDUM to Agreement made and entered into this 29th day of March, 1983, by and between 1957 Margaret Woodson Fisher Trust hereinafter referred to as "Developer" and the City of Margate, a municipal corporation, organized and existing under the laws of the State of Florida, hereinafter referred to as "City"

WHEREAS, Developer entered into a Developer Agreement with the City of Margate or its predecessor in interest, the Margate Utility Authority, Inc. or one of its predecessors in interest, and

WHEREAS, City has the exclusive right to provide water and sewer services within the service area of the Utility Department of the City of Margate, Florida, and

WHEREAS, the City Commission of the City of Margate, Florida, has commissioned a study in order to properly provide for the planning and implementation of the construction of water and sewer services in the service area of the Utility Department of the City of Margate, Florida, and

WHEREAS, the City Commission of the City of Margate, Florida, has determined that the cost of the construction of the expanded water and sewer facilities for the service area of the Utility Department of the City of Margate, Florida shall not be at the cost of nor subsidized by the rates of the present users in the system, and

WHEREAS, the Florida Supreme Court in Contractors and Builders vs. the City of Dunedin, 329 So.2d 314 (Fla. 1976), has stated that a municipality need not resort to deficit financing in order to raise capital, and

WHEREAS, the City of Margate or its predecessor in interest has contracted with Developer to provide water and sewer facilities for certain properties which are more properly described in the Developer Agreement between the City and/or its predecessor in interest which this Addendum shall be attached, and

WHEREAS, the City Commission of the City of Margate, the policy and rate-making body controlling the service area of the Utility Department of the City of Margate, wishes to only construct that water and sewer capacity which is necessary as determined by the Developers who have signed a Developer Agreement with the City of Margate or its predecessors, and

WHEREAS, the City Commission of the City of Margate, wishes to construct water and sewer facilities in a phase constructed manner at the time that the Developers in the Margate service area have need of said water and sewer services with enough time for the City of Margate to construct facilities for said water and sewer services with the understanding that the cost of construction of said facilities for expanded water and sewer services shall not be paid for nor supported by a pledge against the rates of the present water and sewer users, and

WHEREAS, the City of Margate by ordinance has provided for establishment of rates and charges intended to defray the costs of construction of expanded water and sewer facilities in the service area of the Utility Department of the Cityof Margate, and

WHEREAS, the City Commission of the City of Margate wishes at all times to foster the orderly development of land within the City of Margate, and to foster the construction of only those water and sewer facilities which are specifically needed and to have the prospective users of the anticipated expanded constructed facilities for water and sewer within the Utility System of the Utility Department of the City of Margate pay the cost of the construction of said facility, and

WHEREAS, the Developer herein wishes to reserve specific capacity for all or a certain portion of the property which is described in the original Developer Agreement with the City of Margate or its predecessors in interest, and

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BROWARD COUNTY, FLA.
RECORDED IN OFFICIAL RECORD BOOK
11858 PAGE 389

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MARGATE, FL 33063

WHEREAS, the Developer wishes to have the City of Margate construct that specific capacity which it wishes to reserve with the understanding that the City of Margate is at or near capacity for sewer and/or water service presently within the service area,

NOW, THEREFORE, for and in consideration of the mutual covenants and undertakings of the parties hereto and other good and valuable considerations, the parties hereto covenant and agree each with the other as follows:

The foregoing statements are true and correct and are incorporated herein by reference.

A. CONNECTION CHARGES - PREPAYMENTS

The parties recognize that pursuant to the City's Uniform Extension Policy, and the ordinances of the City, the City has established a uniform connection charge to defray the cost corresponding to and allocable to each equivalent residential connection (ERC) proposed to be added to the system and for which capacity is herein expressly reserved. As of the date of the agreement, said connection charges are:

Water ERC - $ 450.00

Sewer ERC - $ 800.00

Total $1,250.00

Developer herein agrees to pay said connection charges in accordance with the terms and conditions and at the times set forth herein.

Further, pursuant to the ordinances of the City same requires the advance payment of said connection charges if it deems the same to be necessary in conjunction with the construction of utility facilities. City has advised Developer herein, and Developer acknowledges, that City has deemed that it requires that a portion of the connection charge be prepaid in order that a fund may thereby be created from which the immediate construction of new wastewater treatment plant facilities and the longer term construction of certain other utility facilities may be accomplished. Accordinly, Developer shall be obligated to prepay the sum of $940.00 for each ERC reserved pursuant to the terms of this Agreement.

Be these presents, Developer herein expressly reserves 139 ERC's of water and sewer treatment plant capacity for its project, calculated as follows:

Unless the deferred payment alternatives set forth herein are adopted by Developer concurrently with the signing of this Agreement, Developer shall pay to City, the sum of $940,00 x _____ equalling _____.

The parties further recognize that the sum of $310.00 per ERC reserved will remain to be paid by Developer to City in order that the full connection charge be ultimately collected. Developer agrees to pay said remaining sum of $310.00 per ERC as and when it requests of City, a building permit for buildings, units or residences, and such payment shall be for that numbcr of ERC's corresponding to the improvement proposed to be constructed.

OFF REC 11858 PAGE 390
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B. DEFERRED PAYMENT ALTERNATIVE

Developer is hereby advised that City has entered into a loan agreeemnt with the Florida Coast Banks, the terms and conditions of which are designed to afford developers participating in the City's Phase I capacity reservation program to obtain the benefits of deferred payment of the protion of the connection charges ($940.00 per ERC) to which developer is obligated to City. Developer may elect to defer to City, an irrevocable letter of credit issued by a banking institution approved by Florida

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Coast Banks. Said letter of credit shall be issued on Forms approved by counsel to Florida Coast Banks. Said letter of credit will indicate their assignability by the City to Florida Coast Bank. City agrees to borrow from Florida Coast Bank, a principal sum of money which corresponds to $940.00 for each ERC reserved, which reservation shall be supported by the promises contained in this agreement and by the said letter of credit guaranteeing payment therefore.

Developer's letter of credit may be for a term not to exceed five years and may contain a schedule of partial payments to be made on any anniversary date during said five (5) year period.

Prior to the closing of said loan between City and Florida Coast Bank, Developer shall be advised of the revised amount of the connection charges which shall have been calculated after adding interest and financing costs, taking into account, the date or dates of payment specified by Developer and included in said letter of credit.

Notwithstanding the payment provisions contained in said letter of credit, Developer may, at any time, elect to prepay the then remaining amount due to City and City and Bank shall allow to Developer, a credit on the amount of connection charges corresponding to the savings in interest cost enuring to the benefit of the City by virtue of said prepayment.

C. CONNECTIONS AVAILABLE

Notwithstanding that Developer may have elected to participate in the "Deferred Payment Alternative", the connection charges corresponding to the number of ERC's reserved herein shall be deemed to be prepaid based upon Developer's posting of said irrevocable letter of creeit. Further, notwithstanding that Developer's letter of credit may have provided for actual payment in the fifth year, Developer shall be entitled to connect ERC's at a prior date without accelerating said payment.

Developer expressly recognizes, however, that the portion of the total connection charge ($310.00 per ERC) which will not have been prepaid pursuant to the terms of this agreement shall be paid as each building permit is requested from City in accordance with the provisions hereof.

D. CONNECTION CHARGE COST FOR PHASE I FIXED

Developer herein and other developers reserving capacity in the City's Phase I expansion program will not be subject to escalation in the cost of connection charges which may occur subsequent to the date hereof, but at all times limited to that number of ERC's specifically reserved herein. In the event that City shall reduce the cost of connection charges for others not participating in the Phase I expansion program, then, in that event, only Developer herein shall be entitled to a retroactive adjustment in said connection charge cost. Developer shall never be entitled to retroactive adjustments for interest which may have been paid or accured upon the payment or prepayment of connection charges.

E. INTERIM AND PERMANENT CAPACITY

Developer herein (and all other developers participating in the Phase I expansion program) recognizes that the ultimate and permanent capacity reserved is represented by and part of the construction of new wastewater treatment facilities which City commits to build for and on behalf of participants in said Phase I expansion program. City has advised participating developers that the design and construction of expanded facilities will commence immediately following the execution of Phase I Developer Agreements and the closing of the City's loan pertaining thereto. City has estimated that expanded wastewater treatment facilities will be completed in approximately 18 months, subject always to matters of force majeure. City recognizes that the prepayment of connection charges, in cash or pursuant to the deferred payment alternative, constitutes valuable consideration, without which City would not have undertaken said expansion. Accordingly, City grants to Developer, full and complete rights and benefits to that portion of the plant facilities corresponding to the capacity reserved herein, and in no event will City permit any diversion or use of said capacity to the detriment of Developer herein. It is the intention of the City to confer upon the Developer herein, the benefits of third party beneficiary status in the construction of Phase I expansion facilities to the end that Developer may be absolutely assured that such

OFF REC 11858 PAGE 391

permanent capacity belongs to Developer, its successors and assigns in proportion to the total capacity to be available out of said Phase I expansion.

City further agrees that it will cause said expanded facilities to be continually operated in accordance with the rules and regulations of regulatory agencies having jurisdiction over such matters, and to be maintained in such a manner so as to preserve and protect the capacities reserved to Developer herein, and the City will take no action which would in any way impair the reservation or ability of the capacity granted herein.

City declares to Developer that the basic City policy shall be that capacity shall not be available generally, except to those who have subscribed for same in the Phase I expansion program. City has advised all owners, developers and prospective consumers within its service area that it has effectively reached the limit of its present treatment plant capabilities and has offered equally and uniformly to all such property owners, developers and prospective consumers, the opportunity to participate on an equal basis in the reservation of capacity in this Phase I expansion program.

Developer herein understands that City cannot guarantee the availability of interim capacity in any specific quantity prior to the completion of Phase I expanded facilities. Any capacities which may be available subsequent to the execution of these agreements and prior to the completion of expanded facilities shall be made availble to participating developers on a first come, first serve basis for as long as such capacities may remain available. Such interim capacities will only be made available in quantities corresponding to actual construction proposed to be immediately commenced. City agrees to use its best efforts to conserve available capacities for and utilization in connection with this provision, and will further seek to obtain from regulatory agencies, temporary advance capacity allocations for the system in contemplation of the completion of Phase I expanded facilities. Developer herein recognizes that it has been given the opportunity to independently assess the prospects of the availability of interim capacity and has elected to proceed with this agreement with knowledge of such facts.

F. EXPANSION SIZE - REQUIRED CASH FLOW

City hereby advises Developer that the Phase I expanded facilities proposed to be constructed have been sized as nearly as practicable to provide for the capacity reservations which in the aggregate have been subscribed to by Phase I participants. Excess capacities which, of engineering necessity, may remain over and above Developers' subscriptions shall be considered to be in the capacity portfolio of City and shall be utilized at the discretion of the City Commission only in such circumstances where great public interest, preservation of the integrity of its service area and equity to individual applicants requires that capacity be allocated from such City portfolio. City has advised Developer herein that it is not the intention of City to reserve substantial capacities for the potential benefit of non-participating developers. Subject only to the exceptions set forth herein, non-participating developers shall be afforded capacity from subsequent expansions to utility facilities which will, from time to time, be undertaken by City after analyzing such requests and aggregating subscriptons therefor.

City has used its best efforts to match the anticipated cost of construction with the aggregate total of connection charge advances. In the event that the cost of the construction program exceeds the aggregate value or prepaid connection charges, then such excess construction cost shall be advanced by City and no further advance shall be required by Developer herein.

OFF REC 11858 PAGE 392

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G. UTILIZATION AND ASSIGNMENT OF CAPACITY

Capacities reserved herein are primarily intended for use on the property of Developer described in Exhibit A attached hereto and made a part hereof. Notwithstanding this basic policy, Developer shall be entitled to transfer all or a portion of the capacity reserved herein to another property within the service area owned by Developer herein, or an affiliated company in which Developer has an interest. Developer shall further be entitled to assign all or a portion of the capacity reserved herein to another person, firm or corporation for use on another property provided the following conditions are met:

1. The transfer of capacity is at the cost to Developer. In this context, "the cost" may include interest carrying charges or costs of money.

2. All such transfers shall be evidenced by written documents entitled "Assignment of Treatment Plant Capacity". Such assignment shall be submitted to City for review. The purpose of this provision is to enable City and any other party in interest to identify the holder or holders of all its capacity rights at all times.

3. The transferor and the transferee shall each submit a sworn statement to the City indicating clearly that the capacity is transferred "at cost", as that term is used herein.

In the event the proposed transferor has participated in the "Deferred Payment Alternative", then such transfer may not be made unless and until a substitute letter of credit has been furnished by the proposed transferee and the same has been accepted in substitution by the bank. Proposed transferees shall be entitled to prepay in cash the amount of the connection charge advance corresponding to the capacity assignment, thereby avoiding the necesssity to post a substitute letter of credit.

Capacities may also be transferred, in like manner, in the event that the property described in Developer Agreement to which this is attached, is sold by Developer to a third party owner.

H. EQUIVALENT CAPACITIES

The parties recognize that the City's ordinances contain capacity equivalents for various types of construction which have been used in the calculation of the number of ERC's. For example, townhouse construction has been deemed to represent less of a capacity demand upon the system than single family construction. Accordingly, each townhouse represents .7142 of 1 ERC. In the event Developer herein alters its development plan so as to build a type of unit not originally contemplated, then the equivalency factor of the newly proposed construction shall be utilized in reduction of and application of capacity reserved herein.

For the purpose of this Developer AGreement and the capacity reserved hereunder, equivalents set forth in the ordinances of the City and in effect on the date of the execution of this agreement are incorporated herein by reference and shall remain the capacity equivalents which pertain to Developer's project, notwithstanding that the same may be amended by City from time to time in the future.

OFF REC 11858 PAGE 393

I. CONSTRUCTION FUND

All prepaid connection charges reserved by City in cash, and the proceeds of the loan from Florida Coast Bank shall be reserved exclusively for the construction of the Phase I expanded facilities designed to provide the capacities reserved herein. City agrees that up to and including the completion of construction of Phase I expanded facilities, it will not divert or utilize any of the funds represented by prepaid connection charges for any other purpose whatsoever. If any funds remain from the principal amount of connection charge prepayments, after Phase I improvements have been completed, then the City shall transfer such remaining funds to its general construction account for use in future contemplated capital improvements to the system.

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J. CAPACITY RESERVATION FEES

In accordance with the ordinances of the City, same requires the payment of capacity reservation fees in order to fully or partially defray City's cost in maintaining and administering to plant facilities held for future use. Such fees are payable until such time as an ultimate owner/occupant connects to the system and commences paying revenue to the system.

City has recognized that Developer herein and all developers participating in the Phase I expansion program have prepaid (in cash or credit) connection charges corresponding to the determined cost of facilities to be constructed in the future. Such prepayment will relieve City of the burden of carrying the captial cost of reserved future facilities. Accordingly, City has determined that the portion of the total fixed and non-variable cost of administering to and maintaining plant facilities held for future use is a sum equal to forty seven percent (47%) of its service availability (monthly minimum) charge to consumers. City further recognizes that it has encouraged the participation of developers in its Phase I expansion program in order that the most cost effective level of new capacity can be constructed. In recognition of the participation of developers whose projects and capacity utilization may extend over a term of years, the City has established the following formula for the calculation of capacity reservation fees:

1. All capacity reserved is subject to capacity reservation fees.

2. The first 100 ERC's or part thereof reserved by Developer shall be charged one hundred percent (100%) of the capacity reservation fee.

3. ERC's 101 to 200 reserved by Developer shall be charged fifty percent (50%) of the capacity reservation fee.

4. All ERC's above 200 shall be charged one-third (1/3) of the capacity reservation fee.

Capacity reservation fees shall be calculated and prepaid on the quarterly date (January 1st, April 1, July 1st or October 1st) most nearly corresponding to the date of this agreement. On such date, one year's capacity reservation fees thus calculated shall be prepaid. Thereafter on each succeeding anniversary date, Developer's capacity reservation shall be reviewed and recalculated in accordance with the formula set forth above, and the new capacity reservation charges thus calculated shall be prepaid for the next succeeding year. City has advised Developer that it will not commence the imposition of capacity reservation charges for Developer herein until such time as the quarterly date following the completion of the Phase I construction program, said date being the date on which permanent capacity reserved hereunder may be fully enjoyed by Developer.

The prepayment of capacity reservation fees one year in advance as provided for herein contemplates and allows for partial refunds to Developer equal to the number of ERC's actually connected during said twelve (12) month period and the number of actual whole months that each of such ERC's and the consumers occupying the premises shall have paid actual revenues to the City.

REC 11858 PAGE 394

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[illegible] BLVD.

K. CONSTRUCTION OF PHASE II

City agrees that should a Developer, individually or along with any other developers who have signed developer agreements with City and who are willing to commit to plant capacity of 3,000 ERC's or more show interest in commiting to a prepayment program of similar nature as set forth in this addendum, City represents that it will cause a program to be implemented simila to this one providing for the additional plant capacity for users over and abo that requested in Phase I. Same shall be based upon such requirements and cos as are determined by City at the time of the implementation of the Phase II program and shall be manifested in additional addendums to developer agreement

Notwithstanding the above,City reserves the right to commence Phase II of expansion of its plant with commitments of developers evidencing less than 3,000 ERC's.

IN WITNESS WHEREOF, Developer and City have executed or have caused this Addendum to Developer Agreement to be duly executed in several counterparts, each of which counterpart shall be considered an original executed copy of this Addendum to Developer Agreement.

ATTEST:

CITY OF MARGATE, FLORIDA

BY _____
MAYOR

BY _____
CITY MANAGER

WITNESS:

DEVELOPER:
1957 Margaret Woodson Fisher Trust

BY _____
San W. Orr, Jr., Trustee

BY _____

APPROVED AS TO FORM:

EUGENE M. STEINFELD
City Attorney

RECORDED IN THE OFFICIAL RECORDS BOOK OF BROWARD COUNTY, FLORIDA
F. T. JOHNSON

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OFF REC 11858 PAGE 395

BROWARD COUNTY Planning Council

February 27, 2023

Amanda Martinez, Land Planner
Dunay, Miskel & Backman, LLP
14 Southeast 4 Street, Suite 36
Boca Raton, Florida 33432

Via Email Only

Dear Ms. Martinez:

Re: Platting requirements for a parcel legally described as Parcel B, "Mini Mart Development Corp. Subdivision," according to the Plat thereof, as recorded in Plat Book 81, Page 49, of the Public Records of Broward County, Florida, together with Parcel A, "441 South, LTD., II," according to the Plat thereof, as recorded in Plat Book 124, Page 41, of the Public Records of Broward County, Florida, together with a portion of Parcel A, "The Forest," according to the Plat thereof, as recorded in Plat Book 129, Page 16, of the Public Records of Broward County, Florida. This parcel is generally located on the west side of State Road 7/U.S. 441, between Southwest 7 Street and Anderson Road, in the City of Margate.

This letter is in response to your request regarding the Broward County Land Use Plan's platting requirements for a proposed multi-family residential development on the above referenced parcel.

Planning Council staff has determined that replatting **would not be required** by Policy 2.13.1 of the Broward County Land Use Plan (BCLUP). Policy 2.13.1 would not require replatting of parcels included in plats approved by the Broward County Commission and recorded after June 4, 1953. Information from the Broward County Records, Taxes and Treasury Division indicates that the above referenced plats were recorded on January 25, 1974, August 16, 1985, and November 3, 1986, respectively. Land platted after June 4, 1953 may be divided by metes and bounds and developed in accordance with local regulations and the effective land use plan, unless local regulations are more restrictive and would require platting. The City of Margate's platting requirements should be investigated.

According to Article 4.4(A)(2) of the *Administrative Rules Document: BrowardNext*, compliance with the Broward County Trafficways Plan is required for all proposed development, but parcels that have been platted subsequent to June 4, 1953, are excepted and are subject to BCLUP Policy 2.17.6, which states:

> In order to protect the transportation corridors identified on the Broward County Trafficways Plan, local governments shall require that development is set back from identified rights-of-way when issuing development orders while providing an administrative relief process to ensure such set back does not deny all beneficial use of the property proposed for development.

It is recommended that you contact Broward County's Urban Planning Division at 954-357-6666, to inquire about whether additional County review, such as a plat note modification, may be required.

The contents of this letter are not a judgment as to whether this development proposal complies with State or local vehicular access provisions, the Broward County Trafficways Plan, permitted uses and densities, local zoning, the land development regulations of the municipality or the development review requirements of the BCLUP, including concurrency requirements.

If you have any additional questions concerning the BCLUP's platting requirements, please contact Huda Ashwas at your convenience.

Respectfully,



Barbara Blake Boy
Executive Director

BBB:HHA

cc/email: Cale Curtis, City Manager
City of Margate

Elizabeth Taschereau, Director, Development Services
City of Margate

Amanda Martinez

From: Morrison, Karen <KMorrison@republicservices.com>
Sent: Wednesday, May 31, 2023 9:20 AM
To: Saul Perez; Rafael Valdettaro; Stadtlander, Mike; Turgot, Jean-Pierre
Cc: Eliana Izza; Woods, James; Childs, Mo
Subject: RE: Project: 777 SR 7
Attachments: 265XP-265XPE Precision Series Compactor.pdf

Good morning Saul. We recommend the 35yd self-contained compactor to fit the enclosure – please see the attached for compactor specifications. With 300 units you'll need service once per week.

Thank you,
-Karen

Karen Morrison
Territory Executive
Commercial and Industrial Sales and Retention
Was I helpful today? Please take a quick minute to leave me a Google review here

Is compacting for you? Compactor Rental Solutions
Who are we? https://www.youtube.com/channel/UCfpPxmX8j04YOCNtE0njz0w

751 NW 31st Avenue
e kmorrison@republicservices.com
o (954) 327-9540 c (954) 205-0720
f (954) 327-9521 w www.republicservices.com



We'll handle it from here.™



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From: Saul Perez <saul@rezfl.com>
Sent: Thursday, May 25, 2023 6:58 PM
To: Rafael Valdettaro <RValdettaro@margatefl.com>; Stadtlander, Mike <MStadtlander@republicservices.com>; Turgot, Jean-Pierre <JTurgot@republicservices.com>

Cc: Eliana Izza <EIzza@msaarchitectsinc.com>; Morrison, Karen <KMorrison@republicservices.com>; Woods, James <JWoods@republicservices.com>; Childs, Mo <MChilds@republicservices.com>
Subject: RE: Project: 777 SR 7

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Dear all,

Please find trash area detail and site plan attached. As you can see we have a dedicated compactor and a trash area in three of the five buildings. Look forward to your feedback.

Best,

Saul Perez
R | E | Z Florida
d: (305) 562-4704
f: (305) 397-1447
e: Saul@rezfl.com

Sent from my iPhone

CONFIDENTIALITY NOTICE: The information contained in this communication, including any attachments, is confidential and is intended only for the use of the named recipient(s). If you are not a named recipient(s), please notify Saulo R. Perez by replying to this email or contacting him at (305) 562-4704 and deleting the original message, attachment(s), and any copy of it from your computer system. Unauthorized use may be unlawful. Please conduct a virus check before opening any attachment.

From: Rafael Valdettaro <RValdettaro@margatefl.com>
Sent: Thursday, May 25, 2023 3:09 PM
To: Stadtlander, Mike <MStadtlander@republicservices.com>; Jean-Pierre Turgot <JTurgot@republicservices.com>; Saul Perez <saul@rezfl.com>
Cc: Eliana Izza <EIzza@msaarchitectsinc.com>; Morrison, Karen <KMorrison@republicservices.com>; Woods, James <JWoods@republicservices.com>; Morris Mo Childs <mchilds@republicservices.com>
Subject: RE: Project: 777 SR 7

Apologies Mike,

My previous email was incorrect.

Saul is sending his plans to Karen, and Karen will inform Saul of what she needs once she receives the plans.

Best Regards,
Rafael Valdettaro
Solid Waste & Recycling Coordinator
City of Margate
Dept. of Environmental & Engineering Services
901 N.W. 66th Avenue, Suite A
Margate, FL 33063

RValdettaro@margatefl.com

Main: (954) 972-0828
Direct: (954) 884-3642
Fax: (954) 978-7349

From: Stadtlander, Mike <MStadtlander@republicservices.com>
Sent: Thursday, May 25, 2023 1:53 PM
To: Rafael Valdettaro <RValdettaro@margatefl.com>; Jean-Pierre Turgot <JTurgot@republicservices.com>; Saul Perez <saul@rezfl.com>
Cc: Eliana Izza <EIzza@msaarchitectsinc.com>; Morrison, Karen <KMorrison@republicservices.com>; Woods, James <JWoods@republicservices.com>; Morris Mo Childs <mchilds@republicservices.com>
Subject: RE: Project: 777 SR 7

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Thanks sir.

Thanks,
Mike Stadtlander
Construction Account Manager
954-288-1386 – cell

Google Reviews

We appreciate customer feedback. Please leave us a Google review here

From: Rafael Valdettaro <RValdettaro@margatefl.com>
Sent: Thursday, May 25, 2023 1:52 PM
To: Stadtlander, Mike <MStadtlander@republicservices.com>; Turgot, Jean-Pierre <JTurgot@republicservices.com>; Saul Perez <saul@rezfl.com>
Cc: Eliana Izza <EIzza@msaarchitectsinc.com>; Morrison, Karen <KMorrison@republicservices.com>; Woods, James <JWoods@republicservices.com>; Childs, Mo <MChilds@republicservices.com>
Subject: RE: Project: 777 SR 7

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Thank you Mike,

Saul with REZ spoke to Karen Morrison and she is sending him the plans. She will update us on anything Saul needs once she receives the plans.

Best Regards,

Rafael Valdettaro
Solid Waste & Recycling Coordinator
City of Margate
Dept. of Environmental & Engineering Services
901 N.W. 66th Avenue, Suite A
Margate, FL 33063
RValdettaro@margatefl.com

Main: (954) 972-0828
Direct: (954) 884-3642
Fax: (954) 978-7349

From: Stadtlander, Mike <MStadtlander@republicservices.com>
Sent: Thursday, May 25, 2023 9:16 AM
To: Rafael Valdettaro <RValdettaro@margatefl.com>; Jean-Pierre Turgot <JTurgot@republicservices.com>; Saul Perez <saul@rezfl.com>
Cc: Eliana Izza <EIzza@msaarchitectsinc.com>; Morrison, Karen <KMorrison@republicservices.com>; Woods, James <JWoods@republicservices.com>; Morris Mo Childs <mchilds@republicservices.com>
Subject: Re: Project: 777 SR 7

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Anytime Tomm or afternoon today and I'm good.

Get Outlook for iOS

From: Rafael Valdettaro <RValdettaro@margatefl.com>
Sent: Thursday, May 25, 2023 9:14:11 AM
To: Stadtlander, Mike <MStadtlander@republicservices.com>; Turgot, Jean-Pierre <JTurgot@republicservices.com>; Saul Perez <saul@rezfl.com>
Cc: Eliana Izza <EIzza@msaarchitectsinc.com>; Morrison, Karen <KMorrison@republicservices.com>; Woods, James <JWoods@republicservices.com>; Childs, Mo <MChilds@republicservices.com>
Subject: RE: Project: 777 SR 7

This Message Is From an External Sender
This message came from outside your organization.
Report Suspicious

Thank you for responding Jean and Michael.

If Friday works better(for Michael) than today, please let us know.

Best Regards,

Rafael Valdettaro
Solid Waste & Recycling Coordinator
City of Margate
Dept. of Environmental & Engineering Services
901 N.W. 66th Avenue, Suite A
Margate, FL 33063
RValdettaro@margatefl.com

Main: (954) 972-0828
Direct: (954) 884-3642
Fax: (954) 978-7349

From: Stadtlander, Mike <MStadtlander@republicservices.com>
Sent: Thursday, May 25, 2023 8:23 AM
To: Jean-Pierre Turgot <JTurgot@republicservices.com>; Saul Perez <saul@rezfl.com>; Rafael Valdettaro <RValdettaro@margatefl.com>
Cc: Eliana Izza <EIzza@msaarchitectsinc.com>; Morrison, Karen <KMorrison@republicservices.com>; Woods, James <JWoods@republicservices.com>; Morris Mo Childs <mchilds@republicservices.com>
Subject: RE: Project: 777 SR 7

This message has originated from an **External Source outside of Margate**. Please use proper judgment and caution when opening attachments, clicking links, or responding to this email.

Good morning…I am unavailable from 10am-1pm today due to Dr. appts…otherwise I am open.

Thanks,

Mike Stadtlander
Construction Account Manager
954-288-1386 – cell

Google Reviews ★★★★★

We appreciate customer feedback. Please leave us a Google review here

From: Turgot, Jean-Pierre <JTurgot@republicservices.com>
Sent: Thursday, May 25, 2023 7:44 AM
To: Saul Perez <saul@rezfl.com>; Rafael Valdettaro <RValdettaro@margatefl.com>
Cc: Eliana Izza <EIzza@msaarchitectsinc.com>; Morrison, Karen <KMorrison@republicservices.com>; Woods, James <JWoods@republicservices.com>; Childs, Mo <MChilds@republicservices.com>; Stadtlander, Mike <MStadtlander@republicservices.com>
Subject: RE: Project: 777 SR 7

Good Morning,
I am available today, tomorrow, and on Monday and Tuesday next week.
Please let me know when the best time is for you and I will be glad to be on this call.
Best Regards,

Jean-Pierre Turgot

751 NW 31st Ave
Ft. Lauderdale, Fl 33311
e jturgot@republicservices.com
o 954-327-9555
c 954-279-9293
w RepublicServices.com



Sustainability in Action

From: Saul Perez <saul@rezfl.com>
Sent: Wednesday, May 24, 2023 5:56 PM
To: Rafael Valdettaro <RValdettaro@margatefl.com>
Cc: Eliana Izza <EIzza@msaarchitectsinc.com>; Morrison, Karen <KMorrison@republicservices.com>; Woods, James <JWoods@republicservices.com>; Turgot, Jean-Pierre <JTurgot@republicservices.com>; Childs, Mo <MChilds@republicservices.com>
Subject: Re: Project: 777 SR 7

This Message Is From an Untrusted Sender
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Thanks, Rafael. We are available either day. Look forward to discussing this matter.

Saul Perez
R | E | Z Florida
d: (305) 562-4704

f: (305) 397-1447
e: Saul@rezfl.com

Sent from my iPhone

CONFIDENTIALITY NOTICE: The information contained in this communication, including any attachments, is confidential and is intended only for the use of the named recipient(s). If you are not a named recipient(s), please notify Saulo R. Perez by replying to this email or contacting him at (305) 562-4704 and deleting the original message, attachment(s), and any copy of it from your computer system. Unauthorized use may be unlawful. Please conduct a virus check before opening any attachment.

On May 24, 2023, at 10:50 AM, Rafael Valdettaro <RValdettaro@margatefl.com> wrote:

Good Morning Karen, James & Jean-Pierre,

Saul is working on a pre-construction for a 300 unit apartment building in Margate. Since it is an apartment building they will be included in the exclusive franchise agreement.

Can either of you make yourselves available for a Teams meeting this week to make sure that we help Saul confirm he is building enough accommodations for the anticipated amount of waste volume the apartment building will generate?

Please feel reply to all and let me know when you all can be available.

Thank you,

Rafael Valdettaro
Solid Waste & Recycling Coordinator
City of Margate
Dept. of Environmental & Engineering Services
901 N.W. 66th Avenue, Suite A
Margate, FL 33063
RValdettaro@margatefl.com

Main: (954) 972-0828
Direct: (954) 884-3642
Fax: (954) 978-7349

<image001.png>

From: Saul Perez <saul@rezfl.com>
Sent: Tuesday, May 16, 2023 4:48 PM
To: Rafael Valdettaro <RValdettaro@margatefl.com>
Cc: Eliana Izza <EIzza@msaarchitectsinc.com>
Subject: Project: 777 SR 7

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Good afternoon Mr. Valdettaro,

I recently completed my preapplication meeting and was told to review my trash plan and design with you. Do you have a few minutes for a zoom call this week?

Thanks,

Saul Perez
R | E | Z Florida
d: (305) 562-4704
f: (305) 397-1447
e: Saul@rezfl.com

Sent from my iPhone

CONFIDENTIALITY NOTICE: The information contained in this communication, including any attachments, is confidential and is intended only for the use of the named recipient(s). If you are not a named recipient(s), please notify Saulo R. Perez by replying to this email or contacting him at (305) 562-4704 and deleting the original message, attachment(s), and any copy of it from your computer system. Unauthorized use may be unlawful. Please conduct a virus check before opening any attachment.

Please Note: The City of Margate is a public entity subject to Chapter 119 of the Florida Statutes concerning public records. Under Florida law, e-mail addresses are public records. If you do not want your e-mail address released in response to a public records request, do not send electronic mail to this entity. All e-mail messages sent and received are captured by our server and retained as public records.

265XP PRECISION SERIES
SELF-CONTAINED COMPACTOR

WASTEQUIP®



Introducing the first ever Precision Series self-contained compactor that's designed and engineered for performance

GUARDIAN CONTROL SYSTEM

» Automatic maintenance tracking

» Superior 24 volt controls and NEMA 4 rated enclosure

LARGEST ACCESS OPENING FOR MAINTENANCE / SERVICE

» Easy to inspect and access cylinders and hoses

PRECISION GUIDED RAM

» Glides smoothly above floor on UHMW guides

» Ram penetrates 7" into container to minimize spring-back

LONGEST STANDARD WARRANTY

» 5-year structural warranty

Patent Number 9,358,745

IDEAL FOR:

Supermarkets



Malls



Hospitals



Restaurants



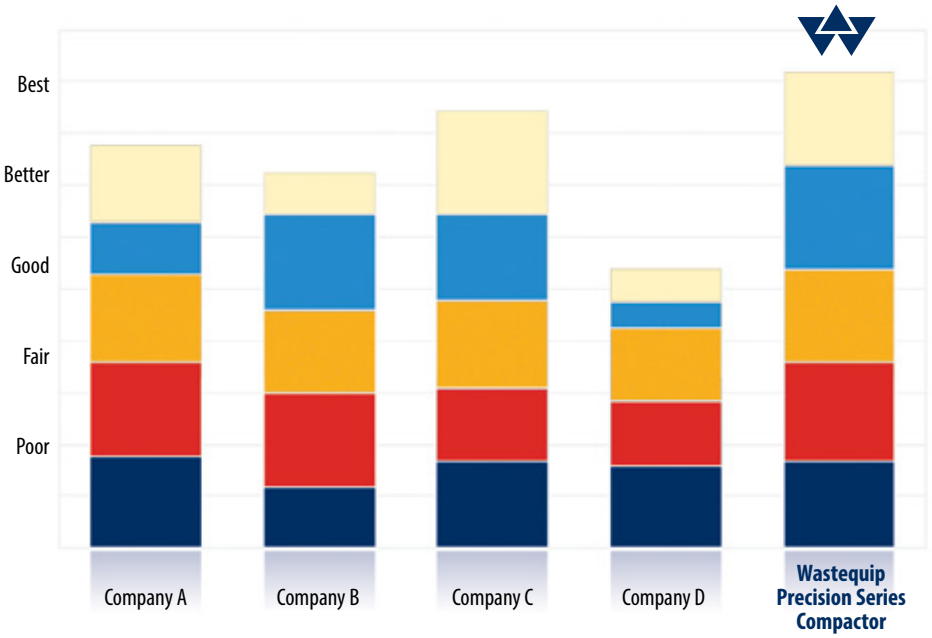
Office Buildings



Retail Establishments



BEST-IN-CLASS BENCHMARK TESTING



OVERALL RANKING

- Jam Test
- Cycle Test
- Container
- Power Unit
- Compactor Head

TESTING CRITERIA

COMPACTOR HEAD
Ram base, face, floor plate, ram travel, and sidewall

POWER UNIT
Oil reservoir, pressure switch or transducer, directional valve, pump size and PLC

CONTAINER
Capacity, door sheet, side wall, door seal, hinge system and shipping height

JAM TEST
Flex/twist, ram rack and damage

CYCLE TEST
Operation, wear and reliability

FEATURING OUR GUARDIAN CONTROL SYSTEM

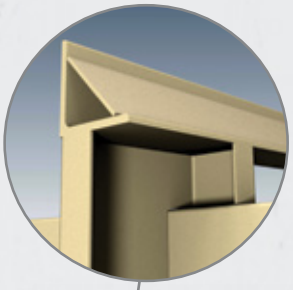
Value-Added Standard Features	Wastequip Guardian Control System	Competitor A	Competitor B
Power unit runs any brand compactor	✓		
Automatically alerts when maintenance is due	✓		
NEMA 4 rated control panel	✓		
Low temperature oil	✓		
Push button controls	✓		✓
Pack-out override	✓		
Watch Dog timer	✓	✓	
24 volt controls	✓		✓
Programmable logic controller	✓	✓	✓
Multi-cycle timer	✓	✓	✓
Full light	✓	✓	



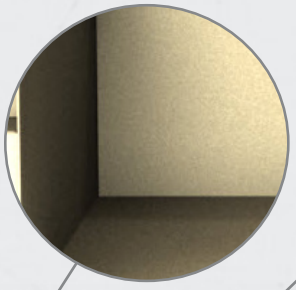
PRECISION GUIDED RAM

5 YEAR Structural Warranty

Breaker bar is engineered for increased strength and is designed for additional structural support.



Ram is suspended above chamber floor and glides on near frictionless UHMW guides.

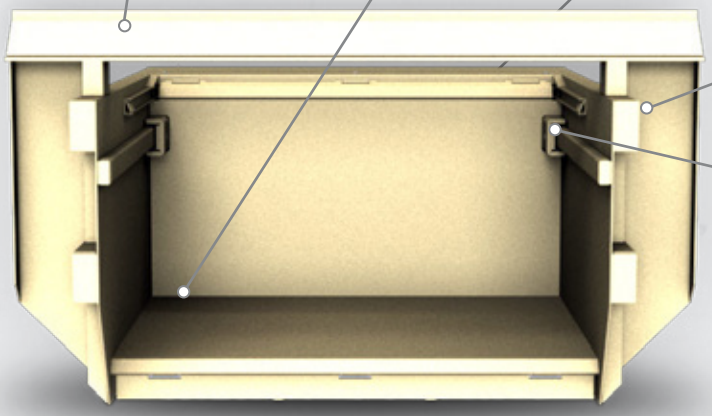


Large 40" X 60" clear top opening is WASTEC rated at 1.48 cubic yards



7" penetration into the container reduces spring-back of material into charge chamber



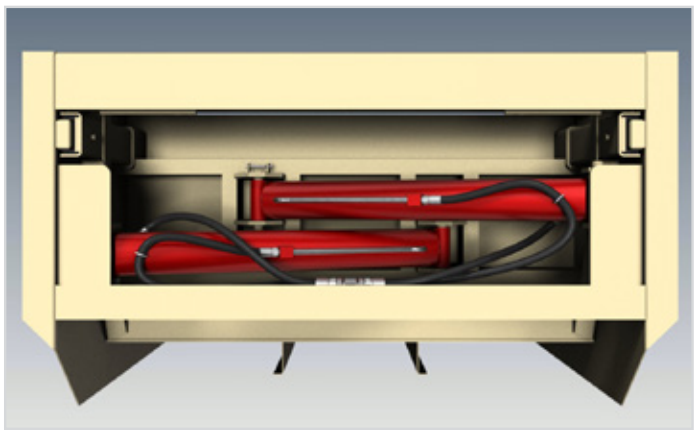


UHMW guides are long lasting and can be easily replaced



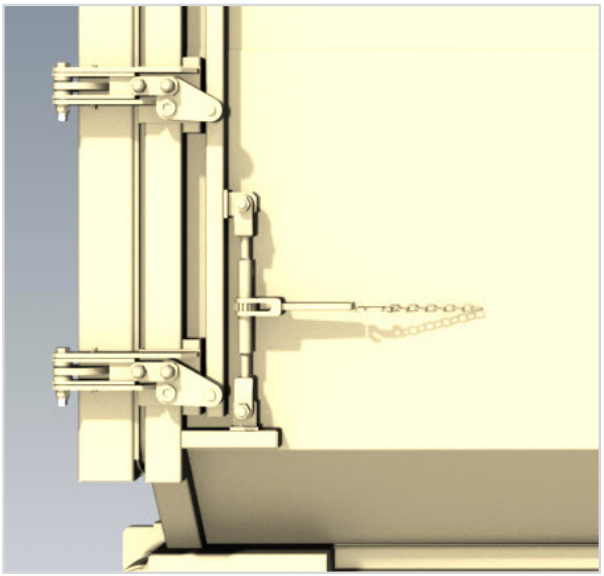
LARGEST MAINTENANCE ACCESS IN THE INDUSTRY

- Large 49" X 18" access opening
- Hydraulic hoses are easy to inspect /replace
- Clean out area designed to drain excessive liquid
- Up to 33% less time to change cylinders



ADJUSTABLE SLIDING HINGE

- Adjustable sliding hinge draws door in evenly
- Heavy-duty design and full door seal



SELF-CONTAINED COMPACTORS

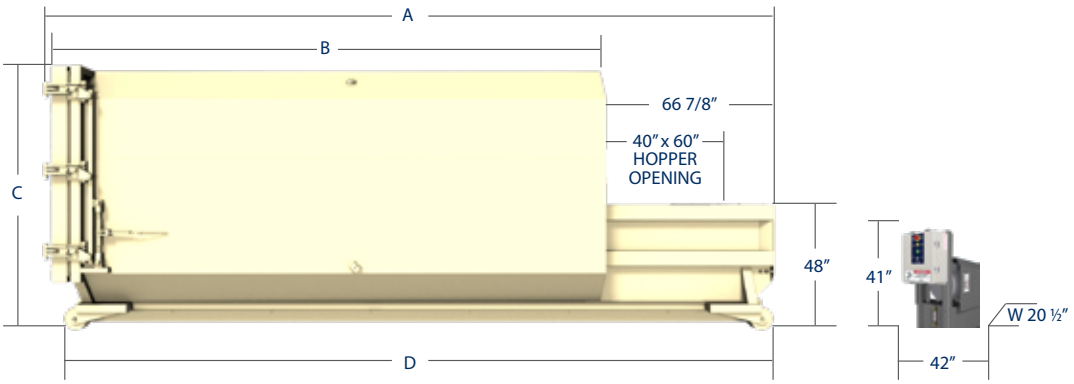
FEATURES

STANDARD

- Precision guided ram system
- Guardian Control System
- Automatic Maintenance Scheduler (AMS)
- NEMA 4 enclosure
- Controls in panel face
- 5-year structural warranty
- 33-second cycle time
- Full container light
- Low temperature oil
- Multi-cycle timer
- Operational and service manual
- Primed and painted in several colors

OPTIONS

- Advance warning light
- Pressure gauge - color coded
- Controls on remote pendant in lieu of mounting in panel face
- Guide rails with stops
- Oil heater
- Photo electric eye
- Odor control system
- Container lifter
- HT (Hinged Tailgate) models



Compactor Models	265XP model (cu. yds.)	Overall length (A) (in.)	Container length (B) (in.)	Overall height (C) (in.)	Floor length (D) (in.)*	Width (in.)	Weight (lbs.)
	20	188	121-1/8	100	187	102	8,500
	25	218	148-1/8		217		8,850
	30	248	178-1/8		246		9,450
	35	278	208-1/8		277		10,000
	38	299	229-1/8		298		10,500

* Bullnose to bullnose

GO TO PARTS™ Replacement parts available online at www.gotoparts.com.

SPECIFICATIONS

Charge Box
- Wastequip rating - 2.00 cubic yards
- Wastec rating - 1.48 cubic yards
- Clear top opening - 40″ Length x 60″ Width

Ram
- 1/4″ steel construction with engineered structural reinforcements and precision guided ram system

Compactor Head
- Floor - 3/8″ with two 5″ channel supports
- Sides - 3/16″ side plates with 6″ x 3″ formed steel stiffener
- Top rail - 6″ x 3″ formed steel stiffener
- Breaker bar - 6″ x 6″ x 1/2″ angle steel
- Sump - 12″ height

Electrical
- Electric motor - 10 hp TEFC (Totally Enclosed Fan Cooled)
- Voltage - 208/230/460, 3 phase, 60 HZ (optional 575V)
- Power box - NEMA 4 rated, UL listed
- Automated cycle operation - turn key switch-ram extends, retracts and stops automatically

Hydraulic Specifications
- Pump - 11.7 gpm
- Ram penetration - 7″
- Cycle time - 33 seconds
- Hydraulic cylinder - (2), cylinder bore - 4″
- Cylinder rod - 2.5″
- Hydraulic oil tank - 20 gallon reservoir
- Power unit location - remote

Hydraulic Performance

Ram face pressure
- Normal - 39,800 lbs
- Maximum - 49,500 lbs

Ram psi
- Normal - 25.00 psi
- Maximum - 31.73 psi

Operating pressure
- Normal - 1,850 psi
- Maximum - 2,300 psi

Container
- 7 gauge floor with 3″ channel crossmember
- 6″ x 2″ x 1/4″ tube rails, 36-1/2″ I.D. between rails
- Solid steel bullnose and hook at both ends
- 4″ diameter rollers, 4-1/2″ long
- Length, Width and Height - see chart above

NOTE: XPE models include 1/2″ ram and compactor head floor, 1/4″ container floor, 3/8″ push plate, stainless steel cylinder pins, hydraulic hose guards and fully welded (inside/outside) container sidewalls

Standard Color Choices*

White | Gray | Black | Teal | Med. Blue | Dark Blue | Med. Green | Dark Green | Cream | Yellow | Orange | Red | Burgundy | Brown

Colors shown are as accurate as printing allows. The actual color is subject to variation from the printed color sample. Color choices vary by plant location. Please contact your local sales representative for available colors. Custom colors are available upon request and are subject to an additional charge.

WASTEQUIP®

Tel: 877.468.9278 | sales@wastequip.com | www.wastequip.com

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WQP081-062018

REPUBLIC SERVICES

751 NW 31st Avenue, Fort Lauderdale, FL 33311
O (954) 583-1830; F (954) 327-9521 republicservices.com

April 19, 2023

Dunay, Miskel and Backman, LLP
Attn: Amanda Martinez
14 SE 4th Street, Suite 36
Boca Raton, FL 33432

RE: 777 and 767 S State Road 7, Margate, FL

To Whom It May Concern,

This is to confirm that Republic Services, as the franchise trash hauler for the city of Margate, will provide trash and recycle services at the referenced addresses.

We are proud to be the city's service provider and are available to answer any questions or provide further assistance.

Sincerely,
Karen Morrison
Territory Executive
e kmorrison@republicservices.com
o (954) 327-9540 c (954) 205-0720

GreenspoonMarder LLP

Matthew H. Scott, Partner
PNC Building
200 East Broward Boulevard, Suite 1800
Fort Lauderdale, Florida 33301
Phone: 954.491.1120 ext. 3472
Direct: 954.333.4372
Fax: 954.771.9264
Email: matthew.scott@gmlaw.com

January 29, 2024

Curt A. Keyser, P.E., Director
City of Margate
Dept. of Environmental & Engineering Services
901 NW 66th Ave., Suite A
Margate, Florida 33063

RE: Forest Apartments – Water/Sewer Capacity Credits and Off-Site Drainage
DRC Application #s 23-00400045, 23-00400047, 23-00400043, 23-00400046, 23-00400044

Dear Mr. Keyser:

The undersigned attorney represents Rez SE Land, LLC, applicant for a proposed multifamily project to be developed on the site commonly known as the "Shooster Property" which is located on the west side of US 441, 1 block south of SW 7th Street. This letter aims to provide brief explanations regarding the property's water and sewer capacity reservations and status of drainage permitting with Broward County.

With regard to the water and sewer capacity reservations, the recorded documents allocating "ERCs" to the Shooster Property have been uploaded with the most recent application submittals. In summary, in 1983 a prior owner of the property entered into a developer agreement with the City for ERCs for water and sewer treatment plant capacity. These ERCs were transferred and assigned to different owners of the subject property over the years, with the latest assignment occurring in 2001 to the current property owner, 777 Properties, Inc. This latest assignment identifies 109.58 ERCs allocated to the property.

As for the status of the drainage permitting with Broward County, the Surface Water Management Permit from 1985 was uploaded with the most recent application submittals. This permit authorizes the subject property to drain into the conservation area directly west of the property. In mid-January 2024, Applicant and its agents attended a virtual meeting with County staff from the Surface Water Management Department and Property Management Department. The participants at the meeting acknowledged Applicant's entitlement to drain into the conservation area. The Surface Water Management Department asked for updating drawings allowing the County to confirm 100% of the water draining into the conservation area will be pre-treated prior to entering the conservation area. Applicant's engineer is in the process of submitting drawings to the County to allow them to complete their review.

Please feel free to contact the undersigned should you have any questions.

Sincerely,

Matthew H. Scott, Esq.

The School Board of Broward County, Florida

PRELIMINARY SCHOOL CAPACITY AVAILABILITY DETERMINATION (SCAD)

SITE PLAN
SBBC-3516-2023
Municipality Number: N/A
Folio #: 494101310020
Shooster Property Multi-family Residential
April 8, 2024

SCAD Expiration Date: October 5, 2024

Growth Management
Facility Planning and Real Estate Department
600 SE 3rd Avenue, 8th Floor
Fort Lauderdale, Florida 33301
Tel: (754) 321-2177 Fax: (754) 321-2179
www.browardschools.com

PRELIMINARY SCHOOL CAPACITY AVAILABILITY DETERMINATION
SITE PLAN

PROJECT INFORMATION	NUMBER & TYPE OF PROPOSED UNITS		OTHER PROPOSED USES	STUDENT IMPACT	
Date: April 8, 2024	**Single-Family:**			Elementary:	3
Name: Shooster Property Multi-family Residential	**Townhouse:**			Middle:	3
SBBC Project Number: SBBC-3516-2023	**Garden Apartments:**				
County Project Number: N/A	**Mid-Rise:**	338		High:	12
Municipality Project Number: N/A	**High-Rise:**				
Owner/Developer: 777 Properties, Inc.	**Mobile Home:**				
Jurisdiction: Margate	**Total:**	338		Total:	18

SHORT RANGE - 5-YEAR IMPACT

Currently Assigned Schools	Gross Capacity	LOS * Capacity	Benchmark** Enrollment	Over/Under LOS	Classroom Equivalent Needed to Meet LOS	% of LOS*** Capacity	Cumulative Reserved Seats
Atlantic West	**1,009**	**1,009**	**615**	**-394**	**-21**	**61.0%**	**3**
Margate Middle	**1,328**	**1,439**	**1,033**	**-406**	**-18**	**71.8%**	**3**
Coconut Creek High	**2,884**	**2,884**	**1,956**	**-928**	**-37**	**67.8%**	**12**

Currently Assigned Schools	Adjusted Benchmark	Over/Under LOS-Adj. Benchmark Enrollment	% LOS Cap. Adj. Benchmark	Projected Enrollment				
				24/25	25/26	26/27	27/28	28/29
Atlantic West	**618**	**-391**	**61.2%**	**601**	**590**	**579**	**567**	**555**
Margate Middle	**1,036**	**-403**	**72%**	**973**	**953**	**921**	**892**	**932**
Coconut Creek High	**1,968**	**-342**	**68.2%**	**1,958**	**1,996**	**2,022**	**2,049**	**2,074**

Students generated are based on the student generation rates contained in the currently adopted Broward County Land Development Code. Information contained herein is current as of the date of review.
A traditional cohort survival methodology is used to project school-by-school District traditional school enrollment out over the next five years, and a proportional share of charter school enrollment is used to project future charter school enrollment by school level Districtwide. For more information: https://www.browardschools.com/Page/34040. The annual benchmark enrollment is taken on the Monday following Labor Day and is used to apply individual charter school enrollment impacts against school facility review processes.
*This number represents the higher of: 100% gross capacity or 110% permanent capacity. **The first Monday following Labor Day. ***Greater than 100% exceeds the adopted Level of Service (LOS).

CHARTER SCHOOL INFORMATION

Charter Schools within 2-mile radius	2023-24 Contract Permanent Capacity	2023-24 Benchmark Enrollment	Over/(Under)	Projected Enrollment		
				24/25	25/26	26/27
Ascend Career Academy	1.000	222	-778	**222**	**222**	**222**
Imagine At N Lauderdale	700	425	-275	**425**	**425**	**425**
Somerset Prep Charter @ N Lauderdale	1.000	731	-269	**731**	**731**	**731**
Somerset Prep Charter @ N Lauderdale 9-12	1.000	346	-654	**346**	**346**	**346**
Suned High North Broward	550	321	-229	**321**	**321**	**321**
West Broward Academy	910	636	-274	**636**	**636**	**636**

PLANNED AND FUNDED CAPACITY ADDITIONS IN THE ADOPTED DISTRICT EDUCATIONAL FACILITIES PLAN

School(s)	Description of Improvements
Atlantic West	There are no capacity additions scheduled in the ADEFP that will increase the reflected FISH capacity of the school.
Margate Middle	There are no capacity additions scheduled in the ADEFP that will increase the reflected FISH capacity of the school.
Coconut Creek High	There are no capacity additions scheduled in the ADEFP that will increase the reflected FISH capacity of the school.

Students generated are based on the student generation rates contained in the currently adopted Broward County Land Development Code. Information contained herein is current as of the date of review.
A traditional cohort survival methodology is used to project school-by-school District traditional school enrollment out over the next five years, and a proportional share of charter school enrollment is used to project future charter school enrollment by school level Districtwide. For more information: https://www.browardschools.com/Page/34040. The benchmark enrollment count taken on the first Monday following Labor Day is used to apply individual charter school enrollment impacts against school facility review processes.

Comments

Staff previously reviewed the project and issued a Preliminary School Capacity Availability Determination Letter for 300 (135 one-bedroom or less and 165 two-bedroom) mid-rise units, which vests the project for the anticipated student impact of 17 (4 elementary, 3 middle, and 10 high school) students. This application proposes 338 (186 one-bedroom or less and 152 two-bedroom) mid-rise units, which are anticipated to generate 18 (3 elementary, 3 middle, and 12 high school) students in Broward County Public Schools, resulting in a net increase of 1 student.

The school Concurrency Service Areas (CSA) serving the project site in the 2023/24 school year include Atlantic West Elementary, Margate Middle, and Coconut Creek High Schools. Based on the Public School Concurrency Document (PSCPD), all three schools are currently operating below the Level of Service Standard (LOS), which is established as the higher of 100% gross capacity or 110% permanent capacity. Incorporating the cumulative students anticipated from this project as well as approved and vested developments anticipated to be built within the next three years (2023/24- 2025/26), these schools are expected to maintain their current status through the 2025/26 school year. Additionally, the school capacity or Florida Inventory of School Houses (FISH) for the impacted schools reflects compliance with the class size constitutional amendment.

Charter schools located within a two-mile radius of the site in the 2023/24 school year are depicted above. Students returning, attending, or anticipated to attend charter schools are factored into the five-year student enrollment projections for District schools. Enrollment projections are adjusted for all elementary, middle, and high schools impacted by a charter school until the charter school reaches full enrollment status.

To ensure maximum utilization of the impacted CSA, the Board may utilize school boundary changes to accommodate students generated from developments in the County.

Capital Improvements scheduled in the currently Adopted District Educational Facilities Plan (DEFP), Fiscal Years 2023/24 to 2027/28 regarding pertinent impacted schools are depicted above.

This application satisfies public school concurrency on the basis that there is adequate school capacity anticipated to be available to support the project as proposed. This preliminary determination shall be valid for either the end of the current school year or 180 days, whichever is greater for a maximum of 338 (186 one-bedroom or less and 152 two-bedroom) mid-rise units, and conditioned upon final approval by the applicable governmental body. As such, this Preliminary School Capacity Availability Determination (SCAD) Letter will expire on October 5, 2024. This preliminary school concurrency determination shall be deemed to be void unless prior to the referenced expiration of the preliminary SCAD, notification of final approval to the District has been provided, and/or an extension of this preliminary SCAD has been requested in writing and granted by the School District. Please be advised that the expiration of the SCAD will require the submission of a new application and fee for a new public school concurrency determination. Upon the District’s receipt of sufficient evidence of final approval, which shall minimally specify the number, type, and bedroom mix for the approved residential units, the District will issue and provide a final SCAD letter for the approved units, which shall ratify and commence the vesting period for the approved residential project.

Please be advised that if a change is proposed to the development, which increases the number of students generated by the project, the additional students will not be considered vested for public school concurrency.

SBBC-3516-2023 Meets Public School Concurrency Requirements ☒ Yes ☐ No

Reviewed By:

4/8/2024

Date

Glennika D. Gordon

Signature

Glennika D. Gordon, AICP

Name

Planner

Title



Detail by Entity Name

Florida Profit Corporation
777 PROPERTIES, INC.

Filing Information

Document Number	P94000006479
FEI/EIN Number	65-0479721
Date Filed	01/21/1994
State	FL
Status	ACTIVE
Last Event	AMENDMENT
Event Date Filed	09/04/2018
Event Effective Date	NONE

Principal Address

541 S STATE RD 7
Ste 11
MARGATE, FL 33068

Changed: 04/24/2020

Mailing Address

541 S STATE RD 7
Ste 11
MARGATE, FL 33068

Changed: 04/24/2020

Registered Agent Name & Address

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MARGATE, FL 33068

Name Changed: 04/24/2020

Address Changed: 04/24/2020

Officer/Director Detail

Name & Address

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Title S

SHOOSTER, MICHAEL
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Title VP

SHOOSTER, STEPHEN
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Title VP

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MARGATE, FL 33068

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Detail by Entity Name

Florida Limited Liability Company
REZ SE LAND, LLC

Filing Information

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State	FL
Status	ACTIVE

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Registered Agent Name & Address

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1000 BRICKELL PLAZA, MIAMI, FL, USA
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MIAMI, FL 33131

Authorized Person(s) Detail

Name & Address

Title MGR

REZ VENTURES LLC
1000 BRICKELL PLAZA
MIAMI, FL 33133, FL 33155 UN

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Detail by Entity Name

Florida Limited Liability Company
REZ VENTURES, LLC

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FEI/EIN Number	84-2735185
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State	FL
Status	ACTIVE

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Changed: 06/30/2020

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MIAMI, FL 33131

Changed: 06/30/2020

Registered Agent Name & Address

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#4104
MIAMI, FL 33131

Address Changed: 06/30/2020

Authorized Person(s) Detail

Name & Address

Title MGR

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This Instrument was prepared by:
James N. Bush, Esq.
4900 SW 64th Avenue
Davie, Florida 33314

Parcel ID Number: **19101-33-00100, 19101-31-00200, 19101-01-00310**

TRUSTEE'S DEED

This Indenture, Made this **11th** Day of July, 2001 Between WILMINGTON TRUST COMPANY, as Successor Trustee of the 1957 MARGARET WOODSON FISHER TRUST, (Taxpayers identification number -

grantors* whose post office address is 1100 North Market Street, Wilmington, DE 19890-0001

and 777 Properties, Inc., a Florida corporation, grantees*

whose postoffice address is 777 South State Road 7, Margate, Fl. 33063

*"grantor and grantee" are used for singular or plural, as context requires

Witnesseth: **that the grantor, for and in consideration of the sum of Ten and 00/100 ($10.00) Dollars and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in Broward County, Florida**

EXHIBIT "A" ATTACHED

Subject to: (1) Zoning and/or restrictions and probititions imposed by governmental authority;
(2) taxes for the year 2001 and subsequent years.
Grantor does hereby fully warrant title to said real property and will defend the same against the lawful claims of all persons whomsoever.

Where used herein the terms "GRANTOR", "GRANTEE", "TRUSTEE", "CO-TRUSTEE (S)', shall be construed as singular or plural as the context requires. The term "TRUSTEE" shall include the terms "CO-TRUSTEE(S) or "CO-TRUSTEE(S) or "SUCCESSOR TRUSTEE(S)" as the context requires.

Pursuant to the provision of section 689.071, Florida Statues, WILMINGTON TRUST, as TRUSTEE, shall have the power and authority either to protect, conserve and to sell or to lease, or to encumber, or otherwise to manage and dispose of the real property conveyed by this deed.

EXHIBIT "A"
LEGAL DESCRIPTION

The South one-half (S1/2) of Parcel "A", 441 SOUTH LTD., II, according to the plat thereof recorded in Plat Book 124, Page 41, of the public records of Broward County, Florida;

TOGETHER WITH: Parcel "A", THE FOREST, according to the plat thereof recorded in Plat Book 129, Page 16, of the Public Records of Broward County, Florida;

AND ALSO TOGETHER WITH: The South 672.85 feet (as measured at right angles) of Parcel "C", less the East 1957.03 feet thereof (as measured on the South line), SUBDIVISION OF SECTION 1, TOWNSHIP 49 SOUTH, RANGE 41 EAST, according to the plat thereof recorded in Plat Book 26, Page 21, of the Public Records of Broward County, Florida.

IN WITNESS WHEREOF, the Grantor has hereunto set Grantor's hand and seal the day and year first above written.
Signed, sealed and delivered in our presence:

WILMINGTON TRUST COMPANY, as Successor Trustee for of the 1957 MARGARET-WOODSON FISHER TRUST,

FRANK J. TAYLOR, Trustee

Witness STEPHEN T. JONES

Witness JAMES P. BIERBAUM

STATE OF DELAWARE)
COUNTY OF **NEW CASTLE**)

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid to take acknowledgments, personally appeared

FRANK J. TAYLOR, as Trustee

who is personally known to me to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 10th day of July A.D. 2001.

Susanne P. Foote
Notary Public, State of Delaware

Susanne P. Foote
Printed Signature
SUSANNE P. FOOTE
NOTARY PUBLIC
My Commission Expires September 30, 2002

My Commission expires:

The Forest Apartments

787 S. State Road 7
Margate, Florida

TRAFFIC IMPACT STUDY

prepared for:
REZ SE Land, LLC

KBP CONSULTING, INC.

July 2023
Updated April 2024

The Forest Apartments

787 S. State Road 7

Margate, Florida

Traffic Impact Study

July 2023
Updated April 2024

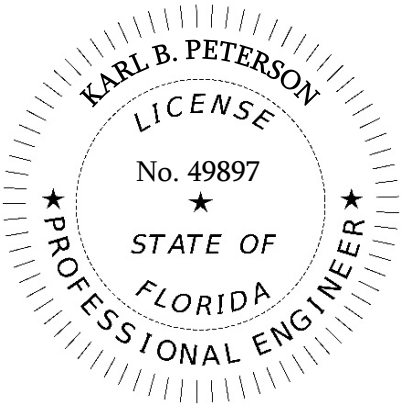
Prepared for:

REZ SE Land, LLC

Prepared by:

KBP Consulting, Inc.

APPROVED BY:



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED
AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL.
PRINTED COPIES OF THIS DOCUMENT ARE NOT
CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST
BE VERIFIED ON ANY ELECTRONIC COPIES.

KBP CONSULTING, INC.
8400 N. UNIVERSITY DRIVE, SUITE 309
TAMARAC, FLORIDA 33321
PH: 954-560-7103
KARL B. PETERSON, P.E. NO. 49897

TABLE OF CONTENTS

INTRODUCTION 1

INVENTORY 3
Existing Land Use and Access 3
Proposed Land Use and Access 3

EXISTING CONDITIONS 4
Roadway System 4
Study Intersections 4
Transit Service 5

TRAFFIC COUNTS 7

TRIP GENERATION 10

TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT 11

TRAFFIC IMPACT ANALYSES 15
Future Conditions Traffic Volumes 15
Level of Service Analyses – Intersections 21

SUMMARY & CONCLUSIONS 29

LIST OF FIGURES

FIGURE 1 – Project Location Map 2
FIGURE 2 – Existing Lane Geometry 6
FIGURE 3 – Existing (2023) AM Peak Hour Traffic Counts 8
FIGURE 4 – Existing (2023) PM Peak Hour Traffic Counts 9
FIGURE 5 – Trip Distribution 12
FIGURE 6 – New Project Traffic Assignment – AM Peak Hour 13
FIGURE 7 – New Project Traffic Assignment – PM Peak Hour 14
FIGURE 8 – Future (2026) Background (w/out Project) Traffic Volumes – AM Peak Hour 17
FIGURE 9 – Future (2026) Background (w/out Project) Traffic Volumes – PM Peak Hour 18
FIGURE 10 – Future (2026) Total (w/Project) Traffic Volumes – AM Peak Hour 19
FIGURE 11 – Future (2026) Total (w/Project) Traffic Volumes – PM Peak Hour 20

LIST OF TABLES

TABLE 1 – Trip Generation Summary 10
TABLE 2 – Signalized Intersection Levels of Service 22
TABLE 3 – Signalized Intersection Levels of Service Detail – SR 7 & SW 7th Street 23
TABLE 4 – Signalized Intersection Levels of Service Detail – SR 7 & Southgate Blvd 24
TABLE 5 – Unsignalized Intersection Levels of Service 25

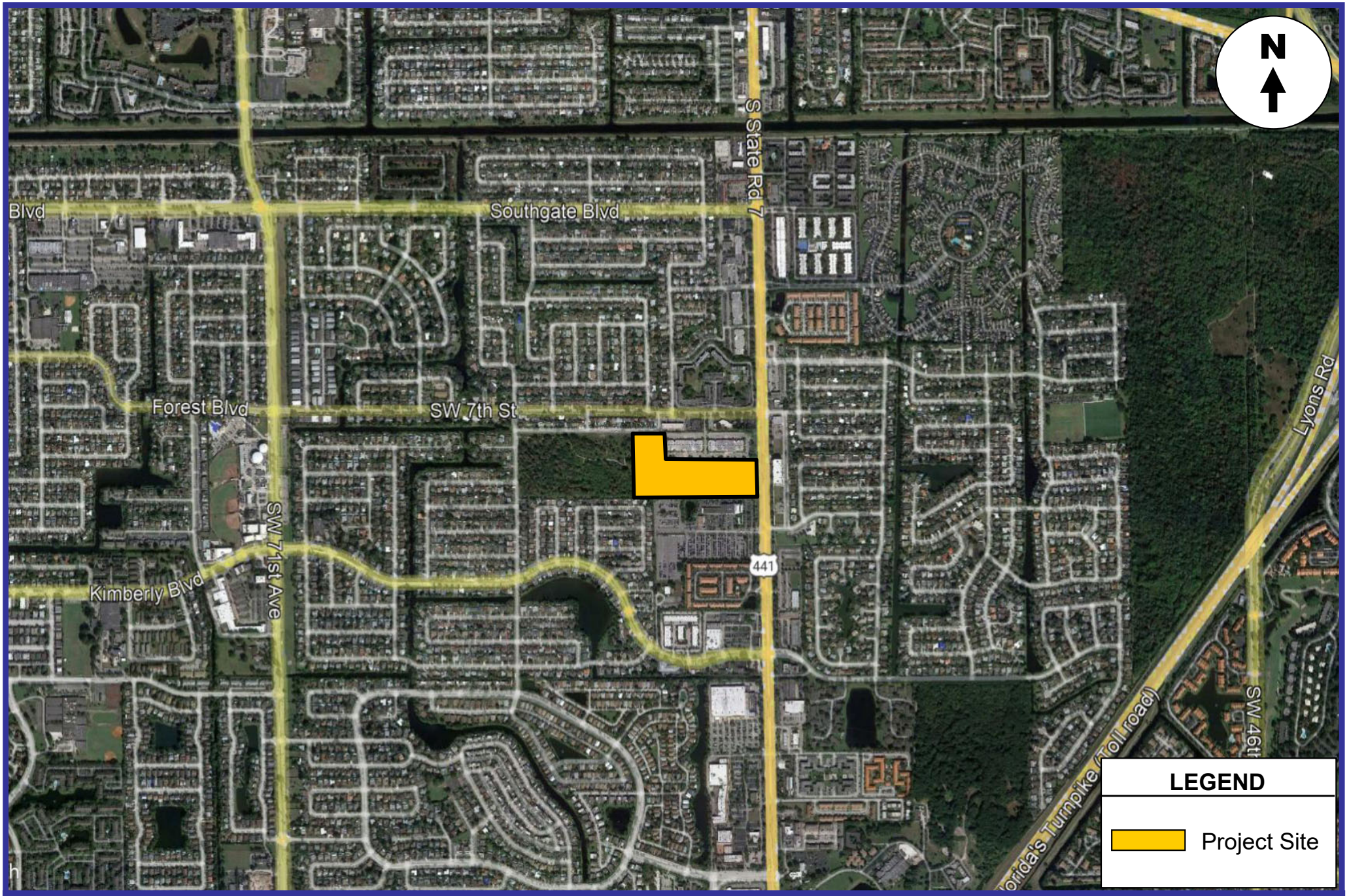
INTRODUCTION

There are two (2) vacant parcels of land located on the west side of S. State Road 7 (US 441) approximately one-half mile to the south of Southgate Boulevard in Margate, Broward County, Florida. More specifically, the site is located at 787 S. State Road 7 and the Broward County Property ID Numbers for the site are 4941 01 31 0020 and 4941 01 33 0010. This site is proposed to be developed with a multifamily residential community to be known as The Forest Apartments. The location of this project site is illustrated in Figure 1 on the following page.

KBP Consulting, Inc. has been retained by REZ SE Land, LLC to prepare a traffic impact study in connection with the proposed development of this property. This study addresses trip generation characteristics and the traffic impacts created by the proposed project on the nearby transportation network.

This study is divided into seven (7) sections, as listed below:

1. Inventory
2. Existing Conditions
3. Traffic Counts
4. Trip Generation
5. Trip Distribution and Assignment
6. Traffic Analyses
7. Summary & Conclusions



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Project Location Map

FIGURE 1
The Forest Apartments
Margate, Florida

Existing Land Use and Access

The subject site has a total land area of approximately 7.14 acres (+/- 310,988 square feet) and as mentioned previously, is currently vacant / undeveloped. Vehicular access to the site is provided by a right-turn in / right-turn out only driveway with an exclusive southbound right-turn lane on S. State Road 7. This driveway also provides access to an existing office development on the adjacent parcel to the north.

Proposed Land Use and Access

The subject site will be developed with a multifamily residential community consisting of 338 dwelling units within multiple five-story (mid-rise) buildings. Vehicular access to the site will be provided via the existing right-turn in / right-turn out only driveway on S. State Road 7 and via a cross-access connection with the existing office development on the north side of the site. This driveway connects to SW 7th Street. Appendix A contains the preliminary site plan and data table for the proposed residential community and the buildout year for the project is anticipated to be 2026. A gated vehicular entry point is proposed approximately 450 feet to the west of State Road 7.

EXISTING CONDITIONS

This section of the report addresses the transportation system located in the immediate vicinity of The Forest Apartments site.

Roadway System

S. State Road 7 (US 441) is located along the eastern boundary of the site. In this area, S. State Road 7 is a six-lane divided state-maintained principal arterial roadway with three (3) through lanes in the northbound direction and three (3) through lanes in the southbound direction. The posted speed limit along this section of S. State Road 7 is 45 miles per hour (mph) and the Florida Department of Transportation (FDOT) access classification is "5 – Restrictive". SW 7th Street to the north is a locally maintained two-lane roadway.

Study Intersections

Fifteen (15) nearby intersections were identified as the locations to be evaluated as part of this analysis. These intersections are:

- S. State Road 7 and Broadview Boulevard / SW 17th Street (signalized)
- S. State Road 7 and Boulevard of Champions (signalized)
- S. State Road 7 and Kimberly Boulevard / SW 11th Street (signalized)
- S. State Road 7 and Project Driveway (unsignalized)
- S. State Road 7 and SW 7th Street (signalized)
- S. State Road 7 and Southgate Boulevard / SW 2nd Court (signalized)
- S. State Road 7 and W. Atlantic Boulevard (signalized)
- Rock Island Road and Southgate Boulevard (signalized)
- Rock Island Road and SW 7th Street (signalized)
- Rock Island Road and Kimberly Boulevard (signalized)
- SW 7th Street and Existing Driveway (unsignalized – 500 feet west of SR 7)
- SW 7th Street and SW 61st Terrace (unsignalized)
- SW 7th Street and SW 64th Terrace (all-way stop)
- Kimberly Boulevard and SW 64th Terrace (roundabout)
- Southgate Boulevard and SW 61st Avenue (unsignalized)

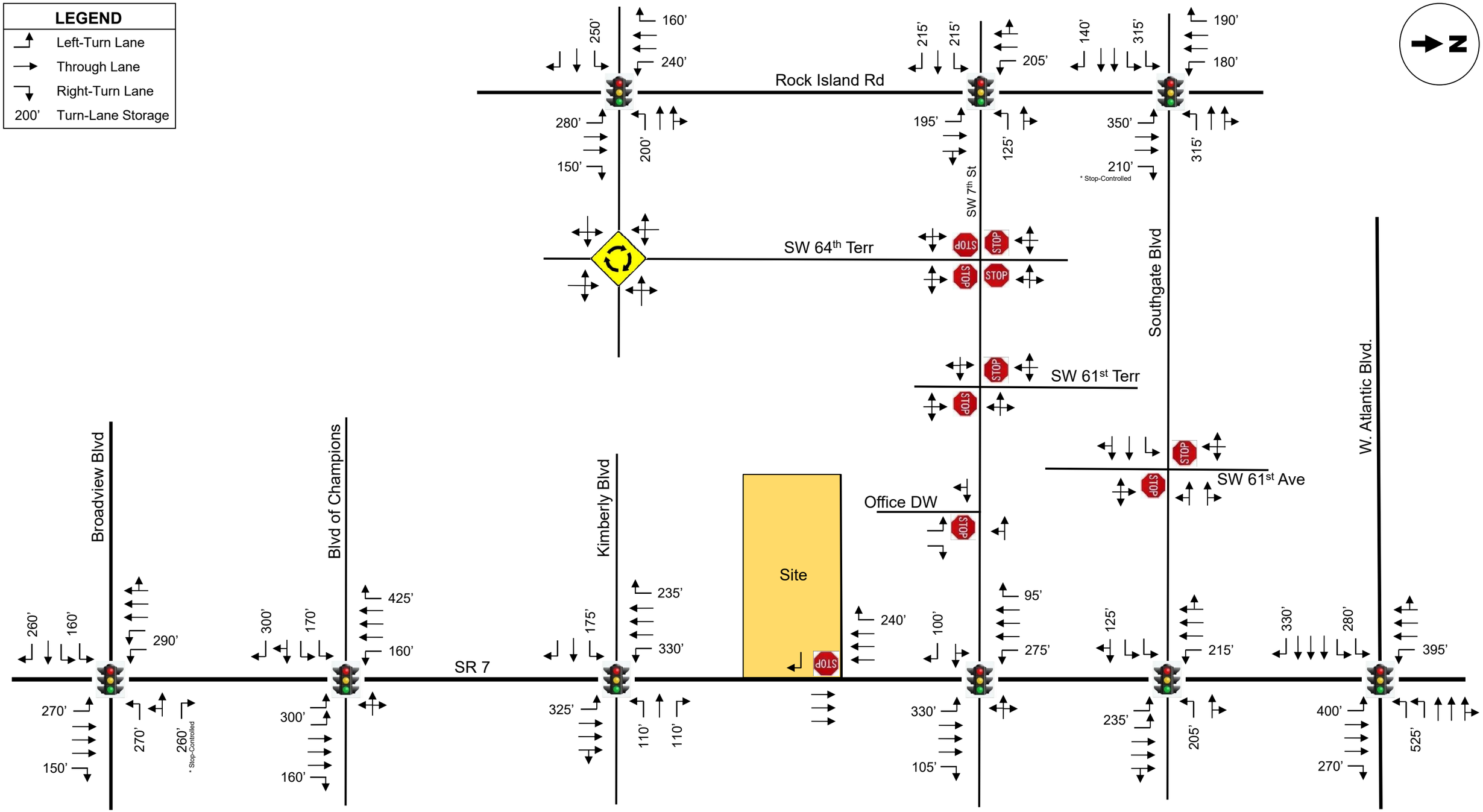
Figure 2 on the following page depicts the existing lane geometry of the fifteen (15) intersections identified for analysis purposes.

Transit Service

Broward County Transit (BCT) provides bus service in the State Road 7 corridor. In this area, Route 19 and the 441 Breeze (Route 441) provide transit service with bus stops immediately to the north at SW 7th Street and immediately to the south at SW 8th Court.

LEGEND

- Left-Turn Lane
- Through Lane
- Right-Turn Lane
- 200’ Turn-Lane Storage



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Existing Lane Geometry

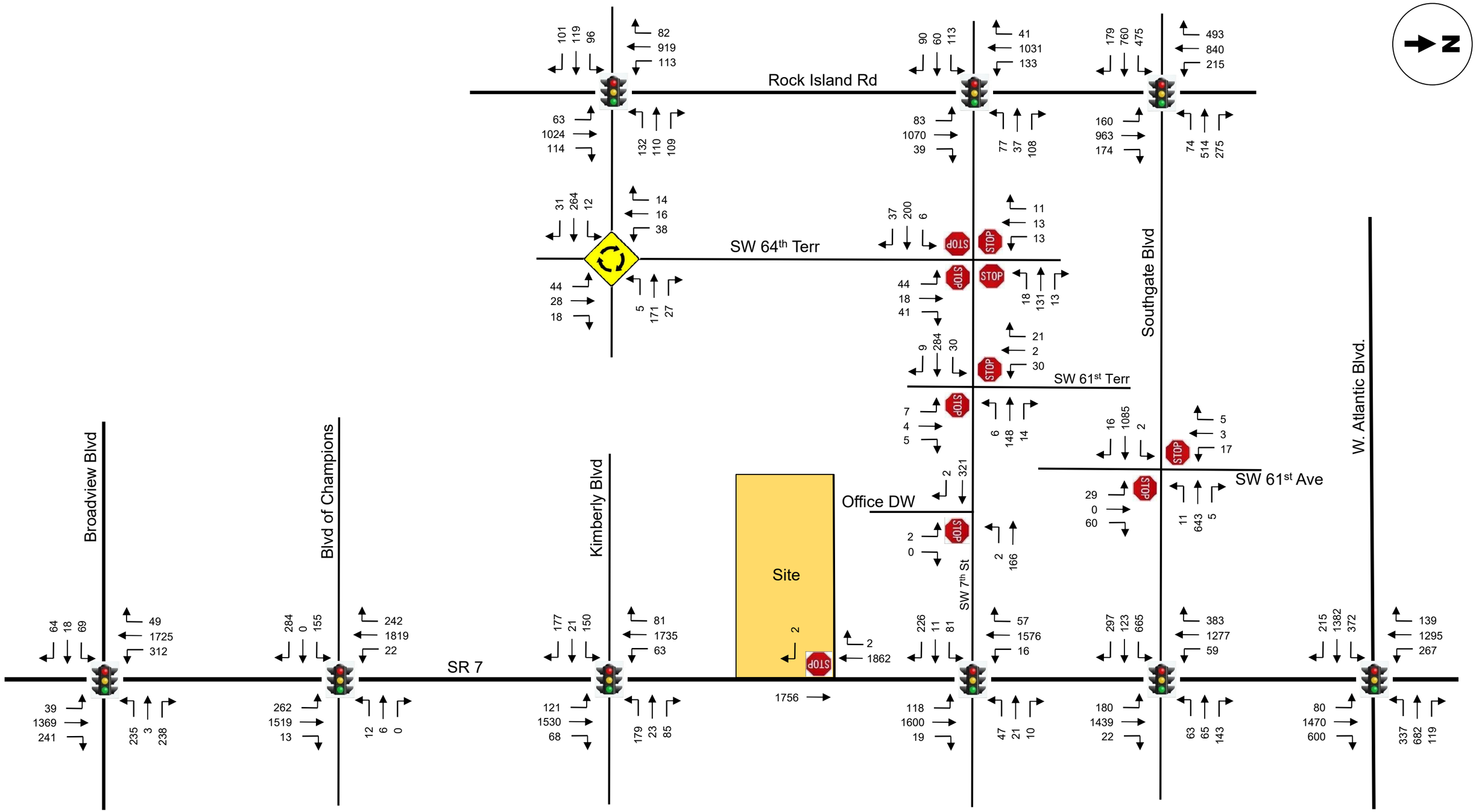
FIGURE 2
The Forest Apartments
Margate, Florida

TRAFFIC COUNTS

KBP Consulting, Inc., in association with Traffic Survey Specialists, Inc., collected traffic data at the following locations:

- **Intersections**
  - S. State Road 7 and Broadview Boulevard / SW 17th Street
  - S. State Road 7 and Boulevard of Champions
  - S. State Road 7 and Kimberly Boulevard / SW 11th Street
  - S. State Road 7 and Project Driveway
  - S. State Road 7 and SW 7th Street
  - S. State Road 7 and Southgate Boulevard / SW 2nd Court
  - S. State Road 7 and W. Atlantic Boulevard
  - Rock Island Road and Southgate Boulevard
  - Rock Island Road and SW 7th Street
  - Rock Island Road and Kimberly Boulevard
  - SW 7th Street and Existing Driveway (500 feet west of SR 7)
  - SW 7th Street and SW 61st Terrace
  - SW 7th Street and SW 64th Terrace
  - Kimberly Boulevard and SW 64th Terrace
  - Southgate Boulevard and SW 61st Avenue

The intersection turning movement counts were collected on Tuesday, May 9, 2023, during the AM peak period (7:00 AM to 9:00 AM) and the PM peak period (4:00 PM to 6:00 PM). Figures 3 and 4 summarize the results of this traffic data collection effort. Appendix B contains the traffic data as collected in the field. Given that these counts were collected during early-May, a peak season conversion factor of 1.02 has been applied. (Please see Appendix C for the 2022 peak season factor category report published by the Florida Department of Transportation (FDOT) for this area of Broward County.)

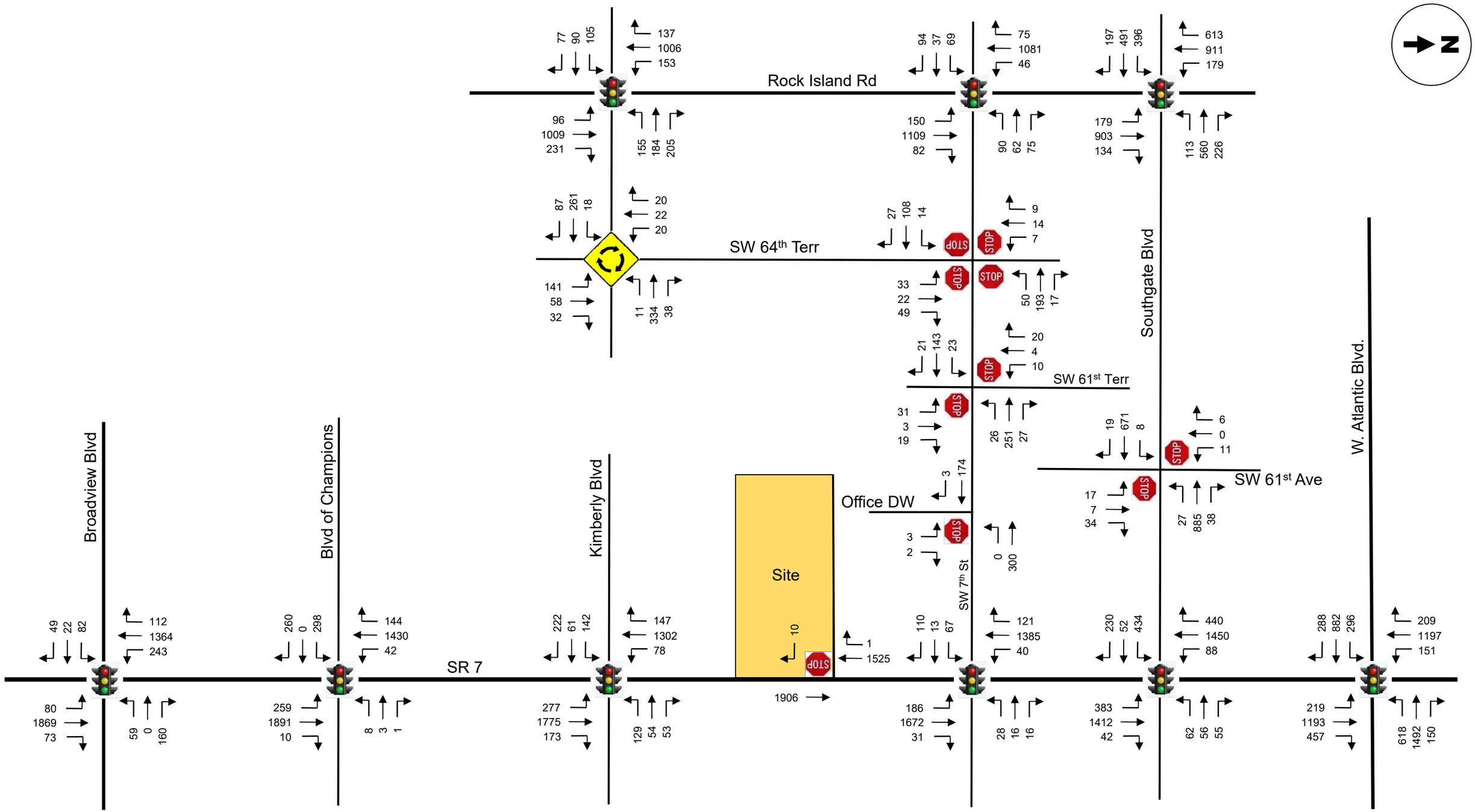


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Existing (2023) AM Peak Hour Traffic Counts

Source: Traffic Survey Specialists, Inc.
Adjusted for Average Peak Season Conditions

FIGURE 3
The Forest Apartments
Margate, Florida



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Existing (2023) PM Peak Hour Traffic Counts

Source: Traffic Survey Specialists, Inc.
Adjusted for Average Peak Season Conditions

FIGURE 4
The Forest Apartments
Margate, Florida

TRIP GENERATION

A trip generation analysis has been conducted for the proposed development. The analysis was performed utilizing the trip generation rates and equations published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (11th Edition)*. The trip generation analysis was undertaken for daily, AM, and PM peak hour conditions. According to the referenced ITE manual, the most appropriate land use category and corresponding trip generation equations for the proposed development are presented below. Relevant excerpts from the ITE manual are presented in Appendix D.

ITE Land Use #221 – Multifamily Housing (Mid-Rise)

- Weekday: T = 4.77 (X) – 46.46
  where T = number of trips and X = number of dwelling units
- AM Peak Hour: T = 0.44 (X) – 11.61 (23% in / 77% out)
- PM Peak Hour: T = 0.39 (X) + 0.34 (61% in / 39% out)

Utilizing the above-listed trip generation equations from the referenced ITE manual, a trip generation analysis was undertaken for the proposed residential development on the subject site. The results of this effort are documented in Table 1 below.

Table 1
The Forest Apartments
Trip Generation Summary
Margate, Florida

Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Proposed								
Multifamily Housing (Mid-Rise)	338 DU	1,566	32	105	137	81	51	132

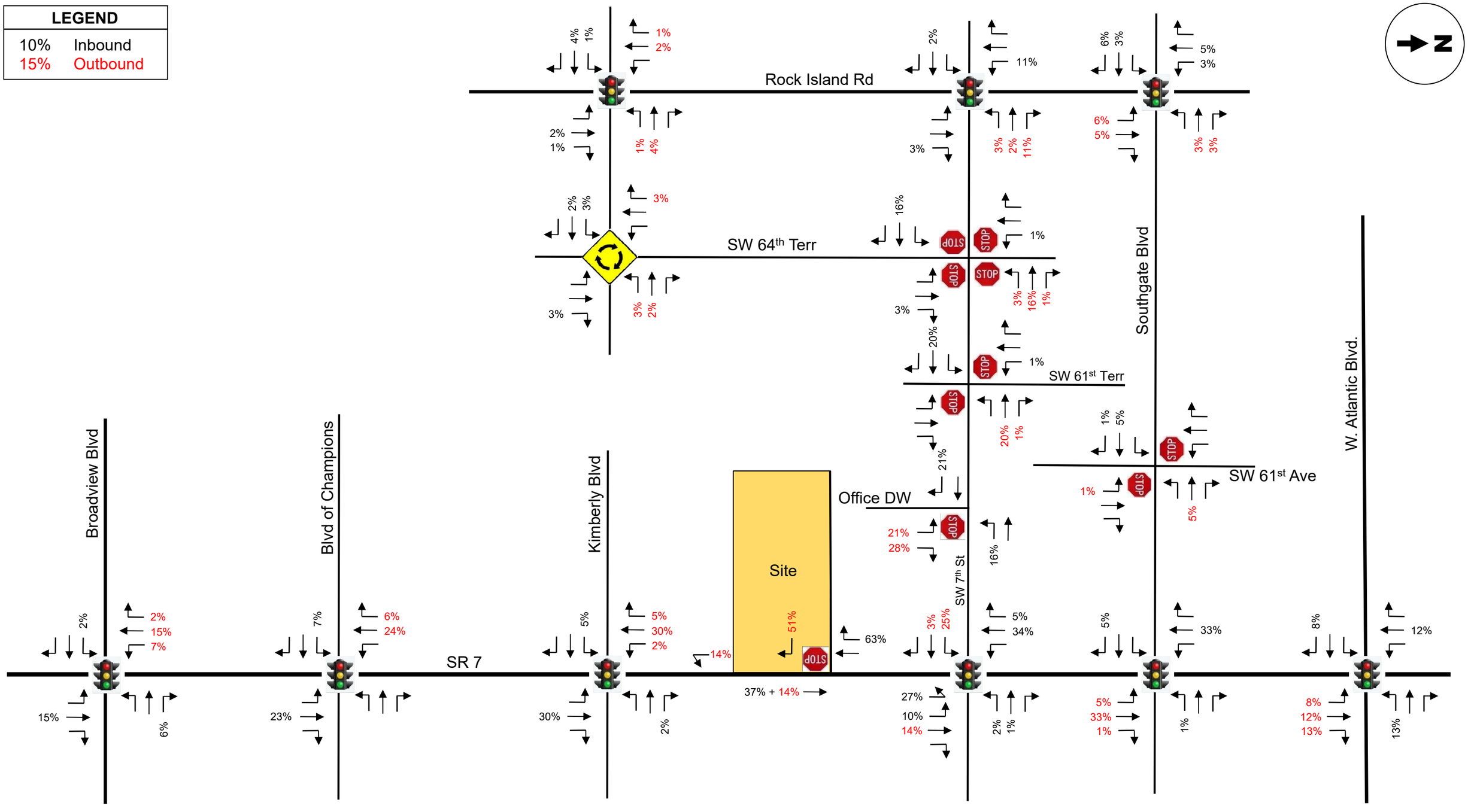
Source: KBP Consulting, Inc., April 2024.
Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition).

As indicated in Table 1, the proposed project is anticipated to generate 1,566 daily vehicle trips, 137 AM peak hour vehicle trips (32 inbound and 105 outbound), and 132 vehicle trips (81 inbound and 51 outbound) during the typical afternoon peak hour.

TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

The trip distribution and traffic assignment for The Forest Apartments project was developed based upon knowledge of the study area, examination of the surrounding roadway network characteristics, review of current traffic volumes / patterns, and existing land use patterns. The resulting trip distribution for the project trips is presented in Figure 5. The anticipated AM and PM peak hour trip assignment for the project is based upon the estimated trip distribution patterns and presented in Figures 6 and 7.

LEGEND	
10%	Inbound
15%	Outbound



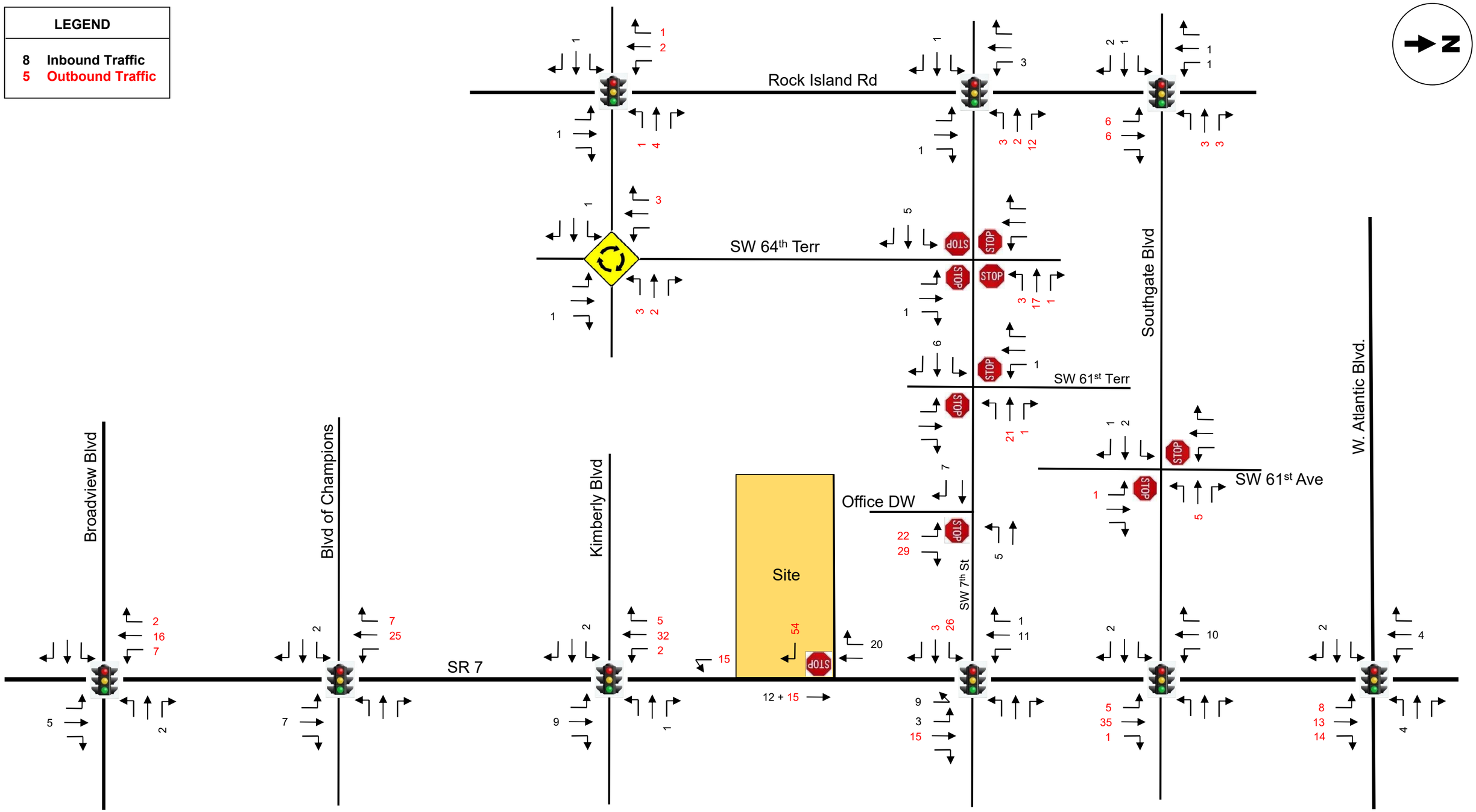
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Trip Distribution

FIGURE 5
The Forest Apartments
Margate, Florida

LEGEND

8 Inbound Traffic
5 Outbound Traffic



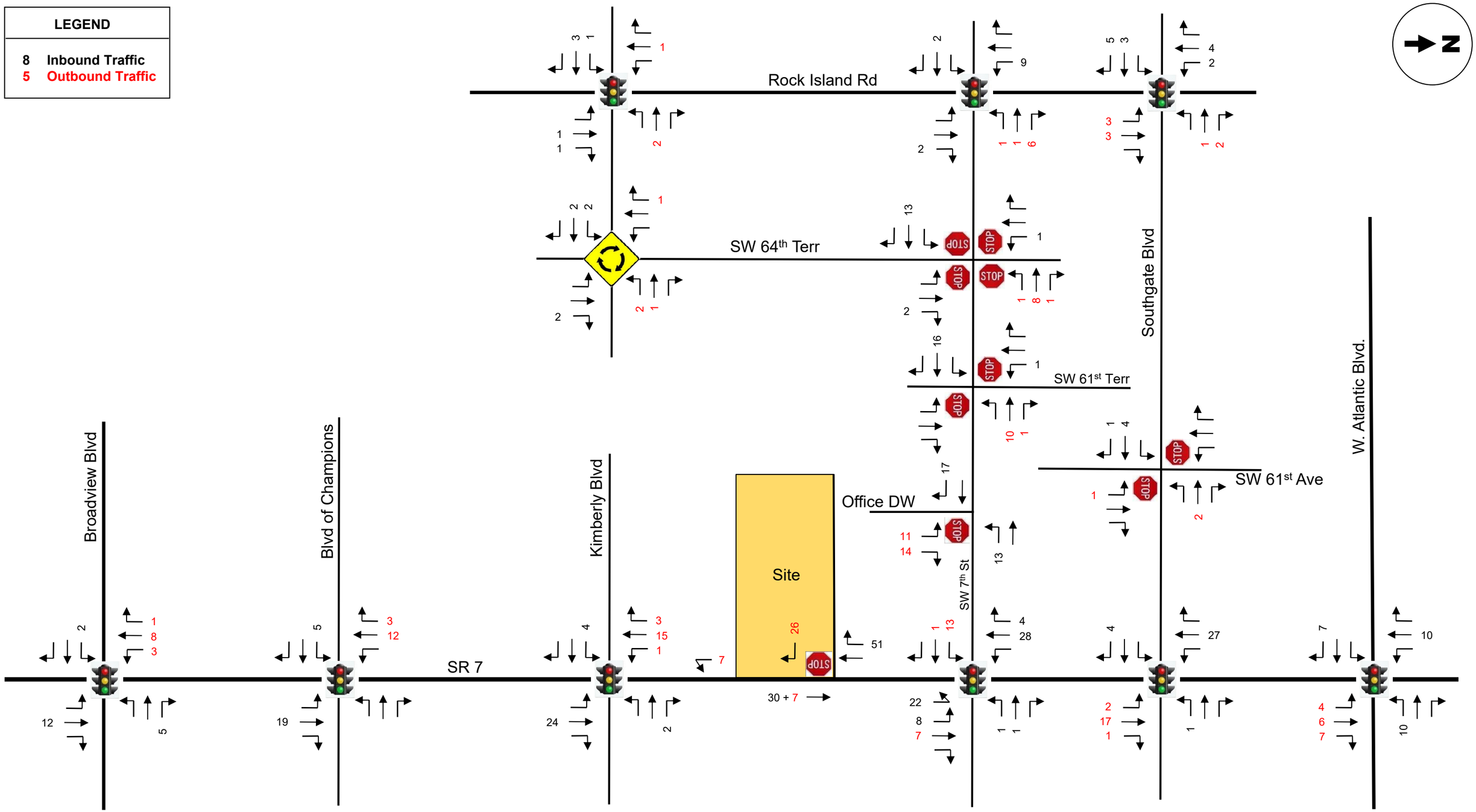
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Project Traffic Assignment
AM Peak Hour

FIGURE 6
The Forest Apartments
Margate, Florida

LEGEND

8 **Inbound Traffic**
5 **Outbound Traffic**



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Project Traffic Assignment
PM Peak Hour

FIGURE 7
The Forest Apartments
Margate, Florida

This section of the study is divided into two (2) primary parts. The first part of this section involves the development of the future build-out year (2026) traffic volumes for the study area. The second part of this section includes level-of-service analyses for existing and future conditions.

Future Conditions Traffic Volumes

Future, build-out year (2026) traffic volumes were developed for the project study area in the following manner:

- **Average Peak Season Conversion Factor:** Traffic data collected on Tuesday, May 9, 2023, was reviewed with respect to average peak season conditions. Based on FDOT's Peak Season Factor Category report (see Appendix C), the adjustment factor for data collected during this time period is 1.02.

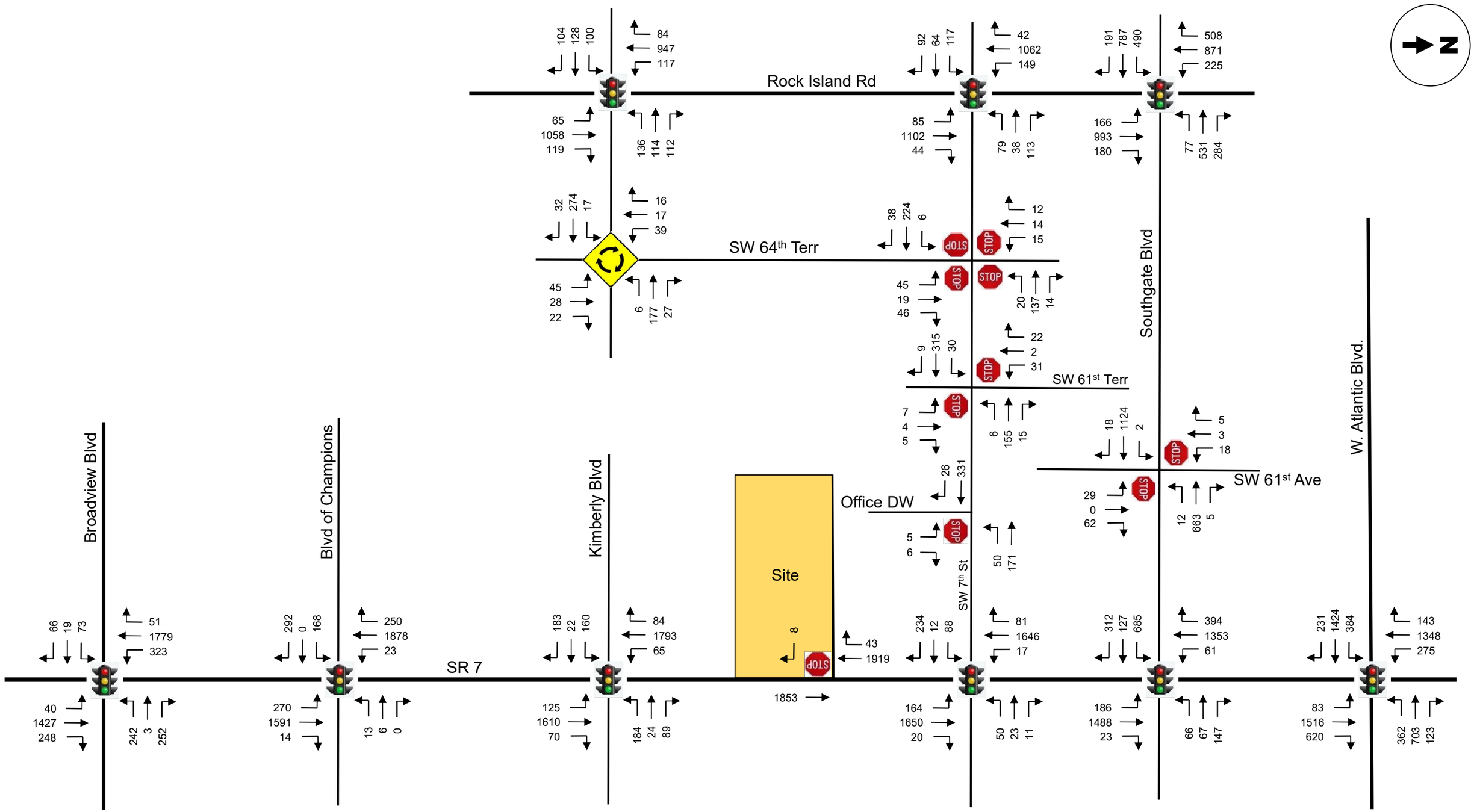
- **Historic Traffic Growth:** Research relative to the background traffic growth in the area was conducted. Historic traffic count data (i.e. the past 5 years) was obtained from the FDOT and is presented in Appendix E of this report. Traffic growth on the following roadway segments was considered for this analysis:

    - State Road 814 / Atlantic Boulevard east of SR 7 / US 441
    - State Road 7 south of Southgate Boulevard
    - County Road 814 / Atlantic Boulevard west of SR 7 / US 441
    - State Road 7 north of Bailey Road
    - State Road 7 south of Atlantic Boulevard
    - Southgate Boulevard west of State Road 7
    - Kimberly Boulevard west of State Road 7

    The referenced data indicates that the study area has exhibited a moderate decrease (-1.31%) in traffic volumes for the five-year period between 2018 and 2022. For the purposes of this analysis, a +1.0% annual growth rate has been applied.

- **Existing Office Development:** As referenced previously, the subject site shares access with and is adjacent to an existing office development. Since the pandemic, employees within this office complex have generally been working remotely which has impacted the site's existing trip generation characteristics. In order to account for the potential return of these employees in the future and their associated vehicle trips, this development has been treated as a "committed development" for the purposes of this analysis. Appendix F contains documentation concerning the development intensity of this site, the trip generation data and analysis, trip distribution and traffic assignment for the AM and PM peak hour trips.

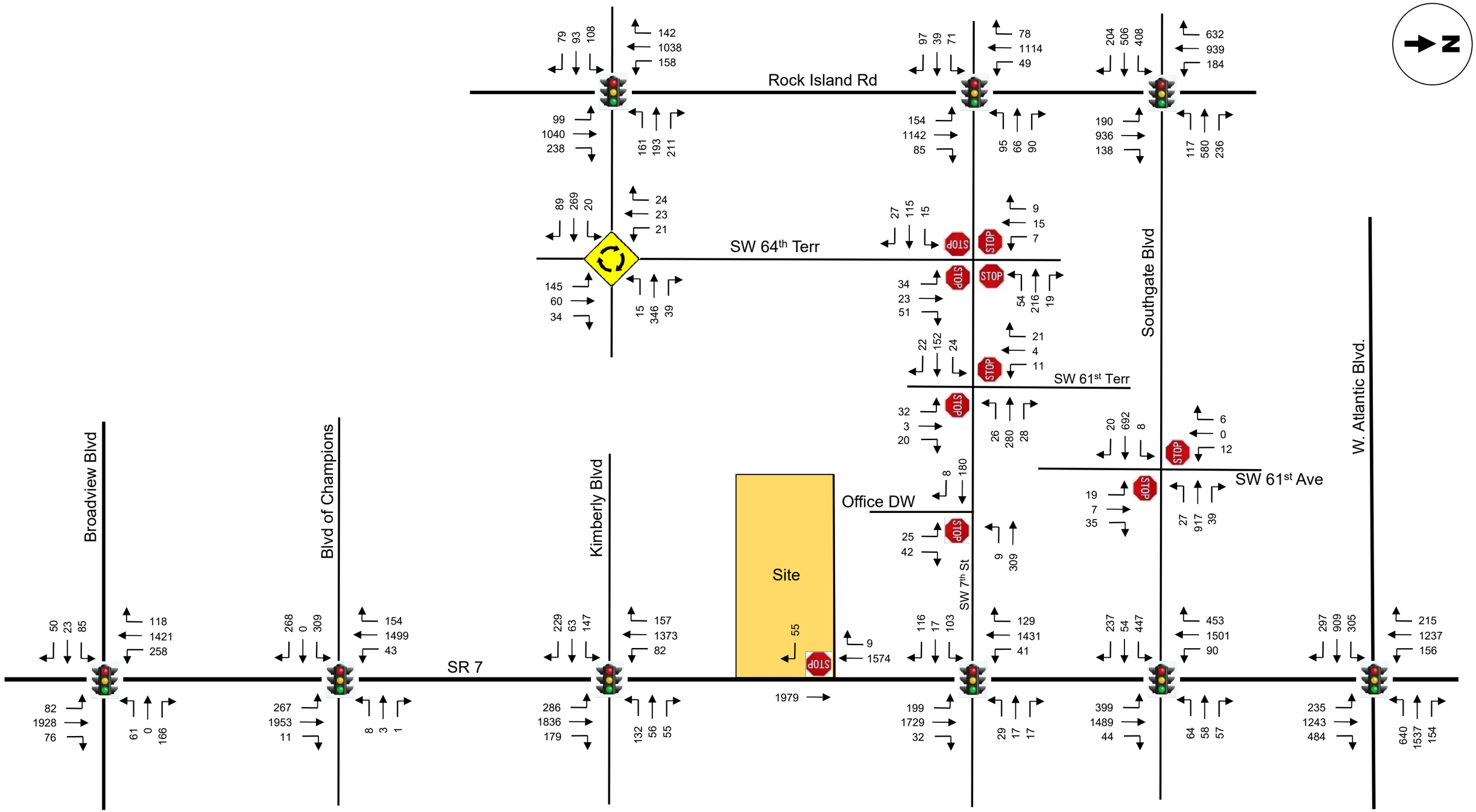
The future traffic calculations (peak season adjustments, background traffic growth, committed office development and the traffic associated with The Forest Apartments residential development) for the study intersections and project driveways are contained in Appendix G in tabular format. Figures 8 through 11 present the future traffic volumes for the study area. Figures 8 and 9 include future background traffic only (without the proposed residential development) and Figures 10 and 11 include the additional traffic anticipated to be generated by The Forest Apartments development.



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Future (2026) Background (w/out Project) Traffic Volumes
AM Peak Hour

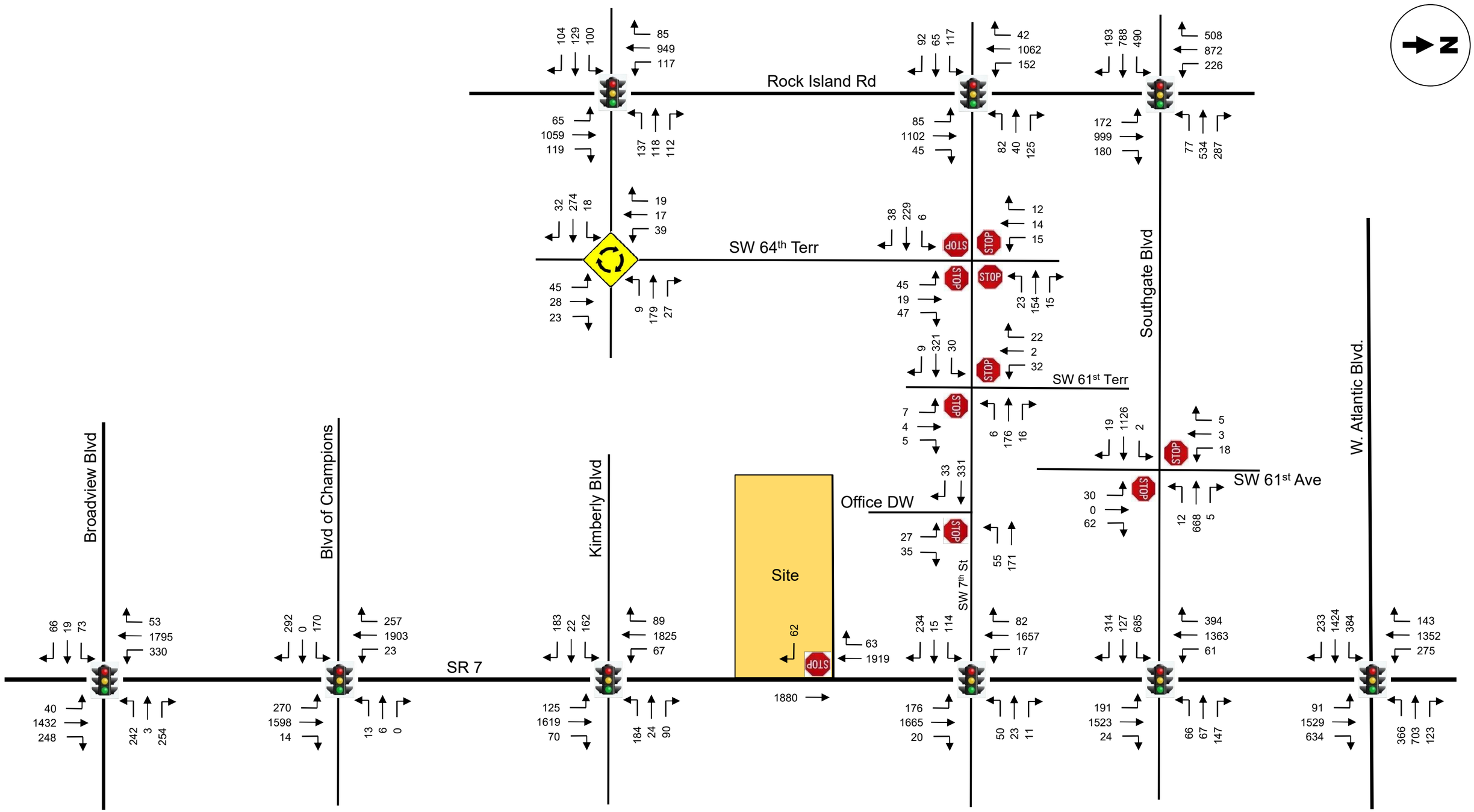
FIGURE 8
The Forest Apartments
Margate, Florida



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Future (2026) Background (w/out Project) Traffic Volumes
PM Peak Hour

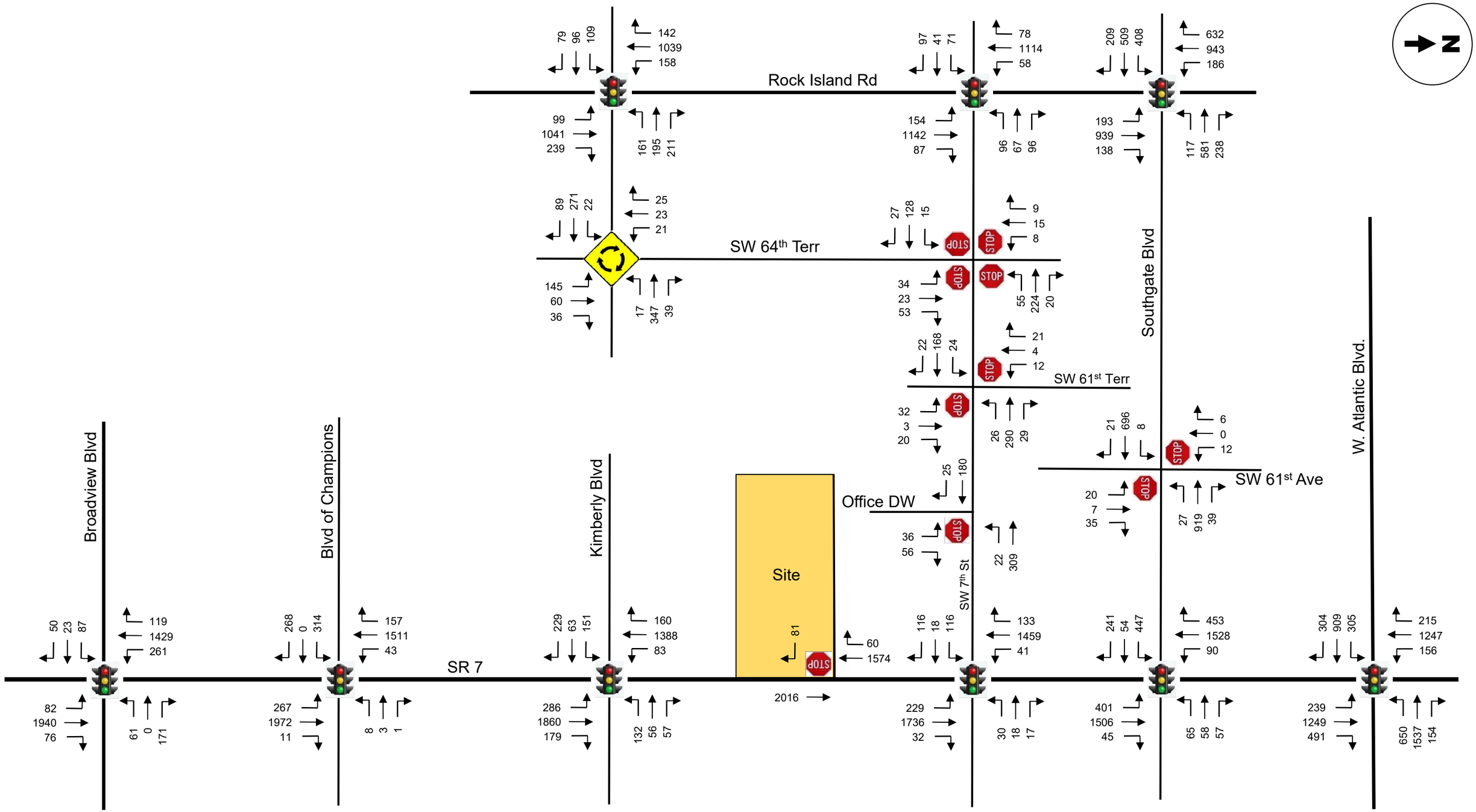
FIGURE 9
The Forest Apartments
Margate, Florida



KBP
CONSULTING, INC.

Future (2026) Total (w/ Project) Traffic Volumes
AM Peak Hour

FIGURE 10
The Forest Apartments
Margate, Florida



KBP
CONSULTING, INC.

Future (2026) Total (w/ Project) Traffic Volumes
PM Peak Hour

FIGURE 11
The Forest Apartments
Margate, Florida

Level of Service (LOS) Analyses – Intersections

Intersection capacity / level of service (LOS) analyses were conducted for the study intersections and the project driveways. These analyses were undertaken following the capacity / level of service procedures outlined in the 6th Edition of the Highway Capacity Manual (HCM) using the Synchro software. The results of the ***signalized*** intersection capacity analyses are summarized in Table 2 on the following page.

As indicated in Table 2, with the exception of the intersection at S. State Road 7 and W. Atlantic Boulevard and the intersection at Rock Island Road and Southgate Boulevard, each of the signalized study intersections is currently operating at an acceptable Level of Service (LOS) and will continue to do so in the buildout year of 2026 both with and without the project traffic associated with The Forest Apartments development.

SR 7 and W. Atlantic Boulevard. Concerning the intersection at State Road 7 and W. Atlantic Boulevard, this intersection is currently operating at LOS "E" in the AM and PM peak hours. In the buildout year of 2026, this intersection is projected to operate at LOS "F" with the project traffic. A minimal increase in vehicle delay (+2.1 seconds / vehicle in the AM peak hour and +1.4 seconds / vehicle in the PM peak hour) is attributed to The Forest Apartments project traffic. The signal timings for this intersection were optimized by holding the cycle length constant and adjusting the signal timing splits. The purpose of this effort is to determine if the future signal timings can be adjusted in order to improve the overall intersection operations.

In the AM peak hour, the overall intersection delay for the future buildout conditions can be improved to LOS "E" with an intersection delay of 71.1 seconds / vehicle. This represents a reduction of 12.2 seconds / vehicle which more than offsets the additional intersection delay attributed to The Forest Apartments project. In the PM peak hour, the overall intersection delay for the future buildout conditions can be improved to LOS "E" with an intersection delay of 75.8 seconds / vehicle. This represents a reduction of 7.4 seconds / vehicle which also more than offsets the additional intersection delay attributed to the subject project.

Table 2
The Forest Apartments
Signalized Intersection Levels of Service
Margate, Florida

Intersection / Movement	Existing (2023) Conditions AM Peak Hour	Existing (2023) Conditions PM Peak Hour	Future (2026) Conditions Without Project Traffic AM Peak Hour	Future (2026) Conditions Without Project Traffic PM Peak Hour	Future (2026) Conditions With Project Traffic AM Peak Hour	Future (2026) Conditions With Project Traffic PM Peak Hour
Signalized Intersections						
State Road 7 / Broadview Blvd	**C (28.6)**	**C (30.2)**	**C (29.3)**	**C (31.1)**	**C (29.5)**	**C (31.4)**
- Northbound Approach	C (23.1)	C (21.2)	C (24.4)	C (22.1)	C (24.6)	C (22.4)
- Southbound Approach	B (19.6)	C (31.6)	C (20.0)	C (32.4)	C (20.3)	C (32.8)
- Eastbound Approach	E (73.5)	E (73.4)	E (73.3)	E (73.3)	E (73.3)	E (73.3)
- Westbound Approach	E (72.5)	E (72.9)	E (72.2)	E (72.8)	E (72.2)	E (72.8)
State Road 7 / Blvd of Champions	**C (20.9)**	**C (26.2)**	**C (21.6)**	**C (26.6)**	**C (21.6)**	**C (26.8)**
- Northbound Approach	B (17.4)	C (25.2)	B (18.3)	C (26.2)	B (18.3)	C (26.7)
- Southbound Approach	B (12.9)	B (15.2)	B (13.6)	B (15.7)	B (13.6)	B (15.9)
- Eastbound Approach	E (71.1)	E (60.3)	E (70.4)	E (59.3)	E (70.4)	E (58.6)
- Westbound Approach	E (79.6)	E (79.2)	F (80.8)	E (79.2)	F (80.8)	E (79.2)
State Road 7 / Kimberly Blvd	**C (28.4)**	**D (35.1)**	**C (29.3)**	**D (36.8)**	**C (29.5)**	**D (37.0)**
- Northbound Approach	C (23.1)	C (30.3)	C (24.0)	C (32.7)	C (24.2)	C (32.9)
- Southbound Approach	C (24.8)	C (32.2)	C (25.9)	C (33.5)	C (26.3)	C (33.6)
- Eastbound Approach	E (55.8)	E (62.2)	E (55.8)	E (63.3)	E (55.7)	E (63.2)
- Westbound Approach	D (50.2)	D (51.0)	D (50.5)	D (50.6)	D (50.6)	D (50.6)
State Road 7 / SW 7th Street	**A (10.0)**	**A (6.3)**	**B (10.9)**	**A (8.9)**	**B (12.2)**	**B (10.2)**
- Northbound Approach	A (3.1)	A (1.9)	A (4.1)	A (4.3)	A (5.6)	A (6.1)
- Southbound Approach	A (3.4)	A (1.8)	A (4.5)	A (4.4)	A (6.1)	A (5.2)
- Eastbound Approach	E (67.8)	E (66.6)	E (67.0)	E (61.9)	E (62.5)	E (60.5)
- Westbound Approach	E (67.3)	E (69.2)	E (67.6)	E (67.3)	E (68.0)	E (66.9)
State Road 7 / Southgate Blvd	**D (46.3)**	**D (43.6)**	**D (48.6)**	**D (46.0)**	**D (48.9)**	**D (46.5)**
- Northbound Approach	C (33.6)	D (40.6)	C (35.4)	D (44.2)	C (35.9)	D (44.5)
- Southbound Approach	D (37.0)	C (34.6)	D (40.7)	D (37.0)	D (41.3)	D (37.8)
- Eastbound Approach	E (73.5)	E (71.7)	E (74.6)	E (72.2)	E (74.7)	E (72.7)
- Westbound Approach	E (73.6)	E (61.7)	E (74.6)	E (61.7)	E (74.7)	E (61.7)
State Road 7 / W. Atlantic Blvd	**E (75.0)**	**E (75.1)**	**E (81.2)**	**F (81.8)**	**F (83.3)**	**F (83.2)**
- Northbound Approach	F (87.6)	E (69.7)	F (95.2)	F (80.1)	F (99.9)	F (82.5)
- Southbound Approach	D (54.4)	E (70.0)	E (57.7)	E (75.4)	E (58.6)	E (76.6)
- Eastbound Approach	E (71.3)	E (73.6)	E (75.7)	E (78.6)	E (75.7)	E (79.9)
- Westbound Approach	F (88.4)	F (83.9)	F (99.6)	F (89.9)	F (101.5)	F (90.5)
Rock Island Rd / Southgate Blvd	**E (61.6)**	**E (59.8)**	**E (65.8)**	**E (65.6)**	**E (66.4)**	**E (66.1)**
- Northbound Approach	D (35.9)	D (35.3)	D (37.9)	D (38.5)	D (38.5)	D (39.2)
- Southbound Approach	D (40.4)	E (55.9)	D (46.5)	E (66.7)	D (48.0)	E (67.8)
- Eastbound Approach	F (90.6)	E (68.6)	F (95.4)	E (71.6)	F (95.2)	E (71.4)
- Westbound Approach	F (85.4)	F (86.1)	F (87.8)	F (89.1)	F (88.4)	F (89.3)
Rock Island Rd / SW 7th Street	**C (20.9)**	**B (16.3)**	**C (22.1)**	**B (17.8)**	**C (23.5)**	**B (18.3)**
- Northbound Approach	B (12.7)	A (7.4)	B (14.3)	A (8.7)	B (15.6)	A (9.2)
- Southbound Approach	B (10.9)	A (8.3)	A (11.9)	A (9.7)	B (13.0)	B (10.0)
- Eastbound Approach	E (61.8)	E (66.7)	E (61.6)	E (65.3)	E (60.7)	E (64.8)
- Westbound Approach	E (71.2)	E (66.9)	E (72.0)	E (68.9)	E (74.5)	E (69.8)
Rock Island Rd / Kimberly Blvd	**C (24.5)**	**C (24.9)**	**C (25.0)**	**C (25.5)**	**C (25.1)**	**C (25.6)**
- Northbound Approach	B (18.6)	B (14.9)	B (19.3)	B (15.8)	B (19.4)	B (15.9)
- Southbound Approach	B (16.4)	B (13.6)	B (16.8)	B (14.4)	B (16.9)	B (14.5)
- Eastbound Approach	D (50.0)	E (56.9)	D (50.1)	E (56.5)	D (50.2)	E (56.5)
- Westbound Approach	D (47.8)	E (60.0)	D (47.8)	E (60.2)	D (47.9)	E (60.2)

Source: Highway Capacity Manual and SYNCHRO.
Legend: D (37.7) = LOS (Average Delay - Seconds / Vehicle)

Rock Island Road and Southgate Boulevard. Concerning the intersection at Rock Island Road and Southgate Boulevard, this intersection is currently operating at LOS "E" in the AM and PM peak hours and will continue to do so in the 2026 buildout year both with and without the project traffic. A minimal increase in vehicle delay (+0.6 seconds / vehicle in the AM peak hour and +0.5 seconds / vehicle in the PM peak hour) is attributed to The Forest Apartments project traffic. The signal timings for this intersection were optimized for the purpose of determining if the future signal timings can be adjusted in order to improve the overall intersection operations.

In the AM peak hour, the overall intersection delay for the future buildout conditions can be improved with an intersection delay of 65.3 seconds / vehicle. This represents a reduction of 1.1 seconds / vehicle which more than offsets the additional intersection delay attributed to The Forest Apartments project. In the PM peak hour, the overall intersection delay for the future buildout conditions can be improved with an intersection delay of 65.7 seconds / vehicle. This represents a reduction of 0.4 seconds / vehicle which is nearly equivalent to the additional delay (+0.5 seconds / vehicle) attributed to the subject project.

SR 7 and SW 7th Street. Given the proximity of the site to the intersection at S. State Road 7 and SW 7th Street, the operational details by movement are presented in Table 3 below.

Table 3
The Forest Apartments
Signalized Intersection Levels of Service Detail - SR 7 & SW 7th Street
Margate, Florida

	Existing (2023) Conditions		Future (2026) Conditions Without Project Traffic		Future (2026) Conditions With Project Traffic	
Intersection / Movement	**AM Peak Hour**	**PM Peak Hour**	**AM Peak Hour**	**PM Peak Hour**	**AM Peak Hour**	**PM Peak Hour**
State Road 7 / SW 7th Street	**A (10.0)**	**A (6.3)**	**B (10.9)**	**A (8.9)**	**B (12.2)**	**B (10.2)**
- Northbound Approach	A (3.1)	A (1.9)	A (4.1)	A (4.3)	A (5.6)	A (6.1)
- Northbound Left-Turn	*A (8.1)*	*A (6.5)*	*B (12.6)*	*B (11.4)*	*B (17.7)*	*B (19.2)*
- Northbound Through	*A (2.7)*	*A (1.4)*	*A (3.3)*	*A (3.6)*	*A (4.5)*	*A (4.5)*
- Northbound Right-Turn	*A (2.0)*	*A (0.9)*	*A (2.4)*	*A (2.6)*	*A (3.2)*	*A (3.2)*
- Southbound Approach	A (3.4)	A (1.8)	A (4.5)	A (4.4)	A (6.1)	A (5.2)
- Southbound Left-Turn	*A (7.8)*	*A (5.9)*	*A (8.7)*	*A (8.4)*	*B (10.1)*	*A (9.3)*
- Southbound Through	*A (3.4)*	*A (1.7)*	*A (4.5)*	*A (4.3)*	*A (6.1)*	*A (5.2)*
- Southbound Right-Turn	*A (2.8)*	*A (1.6)*	*A (3.7)*	*A (3.8)*	*A (4.9)*	*A (4.5)*
- Eastbound Approach	E (67.8)	E (66.6)	E (67.0)	E (61.9)	E (62.5)	E (60.5)
- Eastbound Through / Left-Turn	*E (60.8)*	*E (66.5)*	*E (60.1)*	*E (63.9)*	*E (59.4)*	*E (62.9)*
- Eastbound Right-Turn	*E (70.6)*	*E (66.6)*	*E (70.0)*	*E (59.9)*	*E (64.2)*	*E (57.8)*
- Westbound Approach	E (67.3)	E (69.2)	E (67.6)	E (67.3)	E (68.0)	E (66.9)
- Westbound Left / Through / Right	*E (67.3)*	*E (69.2)*	*E (67.6)*	*E (67.3)*	*E (68.0)*	*E (66.9)*

Source: Highway Capacity Manual and SYNCHRO.
Legend: D (37.7) = LOS (Average Delay - Seconds / Vehicle)

As noted, the overall Level of Service (LOS) for this intersection is projected to be "B" in the AM and PM peak hours. It is noted that the side-street delays at this intersection are currently in excess of 60.0 seconds / vehicle (i.e. LOS "E") for both approaches (EB and WB). This is a typical condition on major arterial roadways and minor signalized sidestreets. This condition is attributed to the maintaining agencies (in this case, Broward County Traffic Engineering) and their priority for the traffic volumes on the major street. By giving the traffic volumes on the major street preferential treatment, the overall roadway network is optimized, more users are served more efficiently, and traffic progression is maintained from one signalized intersection to the next. Since this intersection is functioning well (LOS "A/B") it is unlikely that Broward County will significantly alter the signal timings. However, once The Forest Apartments project is complete and occupied, a signal timing review and optimization analysis can be requested on behalf of the project and the City of Margate.

SR 7 and Southgate Boulevard. Given the proximity of the site to the intersection at S. State Road 7 and Southgate Boulevard, the operational details by movement are presented in Table 4 below.

Table 4
The Forest Apartments
Signalized Intersection Levels of Service Detail - SR 7 & Southgate Boulevard
Margate, Florida

	Existing (2023) Conditions		Future (2026) Conditions Without Project Traffic		Future (2026) Conditions With Project Traffic	
Intersection / Movement	**AM Peak Hour**	**PM Peak Hour**	**AM Peak Hour**	**PM Peak Hour**	**AM Peak Hour**	**PM Peak Hour**
State Road 7 / Southgate Blvd	**D (46.3)**	**D (43.6)**	**D (48.6)**	**D (46.0)**	**D (48.9)**	**D (46.5)**
- Northbound Approach	C (33.6)	D (40.6)	C (35.4)	D (44.2)	C (35.9)	D (44.5)
- Northbound Left-Turn	*E (74.4)*	*F (118.2)*	*E (74.2)*	*F (130.8)*	*E (74.2)*	*F (132.2)*
- Northbound Through	*C (28.0)*	*B (19.8)*	*C (29.9)*	*C (21.2)*	*C (30.4)*	*C (21.3)*
- Northbound Right-Turn	*C (29.7)*	*C (20.9)*	*C (31.9)*	*C (22.5)*	*C (32.5)*	*C (22.7)*
- Southbound Approach	D (37.0)	C (34.6)	D (40.7)	D (37.0)	D (41.3)	D (37.8)
- Southbound Left-Turn	*E (78.3)*	*E (74.3)*	*E (77.7)*	*E (73.8)*	*E (77.6)*	*E (73.8)*
- Southbound Through	*C (34.5)*	*C (31.6)*	*C (38.1)*	*C (33.8)*	*C (38.6)*	*C (34.4)*
- Southbound Right-Turn	*D (37.6)*	*D (35.1)*	*D (42.2)*	*D (38.4)*	*D (43.0)*	*D (39.7)*
- Eastbound Approach	E (73.5)	E (71.7)	E (74.6)	E (72.2)	E (74.7)	E (72.7)
- Eastbound Left-Turn	*F (83.3)*	*E (75.9)*	*F (84.3)*	*E (76.4)*	*F (84.3)*	*E (76.4)*
- Eastbound Through / Right-Turn	*E (58.0)*	*E (65.4)*	*E (59.4)*	*E (65.8)*	*E (59.8)*	*E (67.0)*
- Westbound Approach	E (73.6)	E (61.7)	E (74.6)	E (61.7)	E (74.7)	E (61.7)
- Westbound Left-Turn	*D (54.5)*	*E (56.8)*	*D (54.2)*	*E (56.6)*	*D (54.3)*	*E (56.6)*
- Westbound Through / Right-Turn	*E (79.4)*	*E (64.5)*	*F (80.9)*	*E (64.5)*	*F (80.9)*	*E (64.5)*

Source: Highway Capacity Manual and SYNCHRO.
Legend: D (37.7) = LOS (Average Delay - Seconds / Vehicle)

The results of the unsignalized intersection capacity analyses are summarized in Table 5 below.

Table 5
The Forest Apartments
Unsignalized Intersection Levels of Service
Margate, Florida

Intersection / Movement	Existing (2023) Conditions AM Peak Hour	Existing (2023) Conditions PM Peak Hour	Future (2026) Conditions Without Project Traffic AM Peak Hour	Future (2026) Conditions Without Project Traffic PM Peak Hour	Future (2026) Conditions With Project Traffic AM Peak Hour	Future (2026) Conditions With Project Traffic PM Peak Hour
Unsignalized Intersections						
SW 7th Street / SW 61st Terrace						
- Northbound Approach	B (10.1)	B (10.5)	B (10.3)	B (10.7)	B (10.4)	B (10.9)
- Southbound Approach	A (9.9)	A (9.9)	B (10.1)	B (10.1)	B (10.2)	B (10.3)
- Eastbound Left-Turn	A (7.6)	A (7.9)	A (7.6)	A (8.0)	A (7.7)	A (8.1)
- Westbound Left-Turn	A (7.9)	A (7.7)	A (8.0)	A (7.7)	A (8.0)	A (7.7)
SW 7th Street / SW 64th Terrace						
- Northbound Approach	A (8.9)	A (8.8)	A (9.2)	A (9.0)	A (9.3)	A (9.2)
- Southbound Approach	A (8.5)	A (8.4)	A (8.7)	A (8.5)	A (8.8)	A (8.6)
- Eastbound Approach	A (10.0)	A (8.9)	B (10.6)	A (9.1)	B (10.8)	A (9.3)
- Westbound Approach	A (9.2)	B (10.3)	A (9.5)	B (10.9)	A (9.8)	B (11.2)
Southgate Blvd / SW 61st Ave						
- Northbound Approach	C (16.0)	B (14.4)	C (16.7)	C (15.0)	C (16.9)	C (15.2)
- Southbound Approach	C (18.7)	C (16.3)	C (19.7)	C (17.2)	C (19.8)	C (17.2)
- Eastbound Left-Turn	A (9.1)	B (10.2)	A (9.2)	B (10.4)	A (9.2)	B (10.4)
- Westbound Left-Turn	B (11.4)	A (9.3)	B (11.7)	A (9.3)	B (11.7)	A (9.4)
Roundabout Intersection						
Kimberly Blvd / SW 64th Terrace	A (5.1)	A (7.2)	A (5.2)	A (7.5)	A (5.3)	A (7.6)
Project Driveways						
State Road 7 / Project Driveway						
- Eastbound Approach	B (11.9)	B (10.9)	B (12.2)	B (11.5)	B (13.1)	B (11.8)
SW 7th Street / Project Driveway						
- Northbound Approach	B (10.2)	A (9.6)	B (10.2)	A (9.4)	B (10.4)	A (9.7)
- Westbound Left-Turn	A (8.1)	A (0.0)	A (8.3)	A (7.7)	A (8.3)	A (7.7)

Source: Highway Capacity Manual and SYNCHRO.
Legend: D (37.7) = LOS (Average Delay - Seconds / Vehicle)

As indicated in Table 5 above, each of the unsignalized study intersections (i.e. individual approaches) is currently operating at an acceptable LOS and will continue to do so in the buildout year of 2026 both with and without the project traffic associated with The Forest Apartments project.

U-Turns on State Road 7. As noted in the project traffic assignment figures (Figures 5 though 7), it is estimated that approximately 14% of the exiting traffic will travel south on State Road 7 and perform a U-Turn at the first median opening in order to travel north on State Road 7. The first median opening south of the site is located at SW 8th Court – approximately 500 feet south of the project driveway. (During heavily congested time periods, it may be difficult to weave across three travel lanes within 500 feet. As such, the next opportunity to perform the referenced U-Turn will be at Santa Catalina Circle which is approximately 600 feet south of SW 8th Court). The number of vehicles expected to perform this U-Turn maneuver is relatively low (15 vehicles in the AM peak hour and 7 vehicles in the PM peak hour). Not only are these U-Turn volumes relatively low, the available storage capacities of the southbound turn lanes are substantial (approximately 375 feet at SW 8th Court and approximately 275 at Santa Catalina Circle). As such, these movements are expected to function adequately.

Signal Timing Optimization. Previously in this section of the report, it was noted that the intersection at S. State Road 7 and W. Atlantic Boulevard and the intersection at Rock Island Road and Southgate Boulevard were both optimized for the purposes of reducing the anticipated vehicular delay. This is achieved by holding the overall traffic signal cycle length constant *(this is required in order to maintain signal progression within the overall roadway corridor)* and adjusting the green times allocated to the individual approaches and movements. In other words, the amount of green time provided to these approaches and movements is reassigned to correspond with the vehicular demand thereby reducing the overall intersection delay. In both cases, the overall intersection delay can be reduced through this technique. The output for these analyses is presented in Appendix I.

The signal timing data obtained from Broward County Traffic Engineering is presented in Appendix H and the Synchro intersection analysis printouts of the intersection capacity analyses are contained in Appendix I.

State Road 7 – Road Safety Audit. The Florida Department of Transportation (FDOT) has conducted a Road Safety Audit of SR-7 / US 441 from Kimberly Boulevard / SW 11th Street to NW 31st Street (Coral Way Boulevard) in Broward County, Florida. This study was completed in February 2024. The purpose of this study is *"identify deficiencies and implement countermeasures to enhance the safety for all road users based on the analysis of historical crash data and field reviews."* Of specific interest to this project are the report's findings relative to the intersection at S. State Road 7 and SW 7th Street. The report identified the following areas of concern and potential solutions:

- **Northbound and southbound left-turn crashes.** Based upon the number of crashes associated with these movements, the report recommends evaluating the feasibility of providing protected-only left-turn phases for these approaches. The short-term recommendation is for the FDOT to conduct a feasibility study for these protected-only left-turn phases. If this measure appears to be feasible, the FDOT would be required to also conduct a structural analysis of the required modifications to the signal installation. The report also concludes that this measure is not recommended as a stand-alone project but rather an element of a much larger corridor-wide scope.
- **Northbound and southbound left-turn crashes.** Again, based upon the number of crashes associated with these movements, the report recommends evaluating the feasibility of increasing offset for the northbound and southbound left-turn lanes. The short-term recommendation is for the FDOT to conduct a feasibility study for this potential construction activity.
- **Left-turn vehicles conflicting with pedestrians.** During field reviews, it was noted that many eastbound and westbound left-turning vehicles did not yield to pedestrians in the crosswalk. The report recommends evaluating the feasibility of providing a protected phase for the eastbound and westbound left-turning traffic to clear the traffic before giving pedestrians the right-of-way. If feasible, this would require lane and signal modifications. The short-term recommendation is for the FDOT to conduct a feasibility study for this potential construction activity.

- **Left-turn vehicles conflicting with pedestrians.** Consistent with the previously noted conditions, the report recommends evaluating the feasibility of providing hardened centerlines on the north-south median noses which will reduce turning speeds and increase visibility of pedestrians in the crosswalks. The short-term recommendation is for the FDOT to conduct a feasibility study for this potential construction activity.

Since none of these recommended safety measures has undergone a feasibility analysis, it would be premature to assume the viability of any of these measures or to participate in their implementation at this time. However, it is important to note that the proposed project will not preclude the ability of these measures to be implemented by the FDOT in the future. Relevant excerpts from the referenced report are included in Appendix J.

SUMMARY & CONCLUSIONS

There are two (2) vacant parcels of land located on the west side of S. State Road 7 (US 441) approximately one-half mile to the south of Southgate Boulevard in Margate, Broward County, Florida. The subject site has a total land area of approximately 7.14 acres (+/- 310,988 square feet). Vehicular access to the site is provided by a right-turn in / right-turn out only driveway with an exclusive southbound right-turn lane on S. State Road 7. This driveway also provides access to an existing office development on the adjacent parcel to the north.

The subject site will be developed with a multifamily residential community (to be known as The Forest Apartments) consisting of 338 dwelling units within multiple five-story (mid-rise) buildings. Vehicular access to the site will be provided via the existing right-turn in / right-turn out only driveway on S. State Road 7 and via a cross-access connection with the existing office development on the north side of the site. This driveway connects to SW 7th Street. The buildout year for the project is anticipated to be 2026.

The Forest Apartments development is anticipated to generate 1,566 daily vehicle trips, 137 AM peak hour vehicle trips (32 inbound and 105 outbound), and 132 vehicle trips (81 inbound and 51 outbound) during the typical afternoon peak hour.

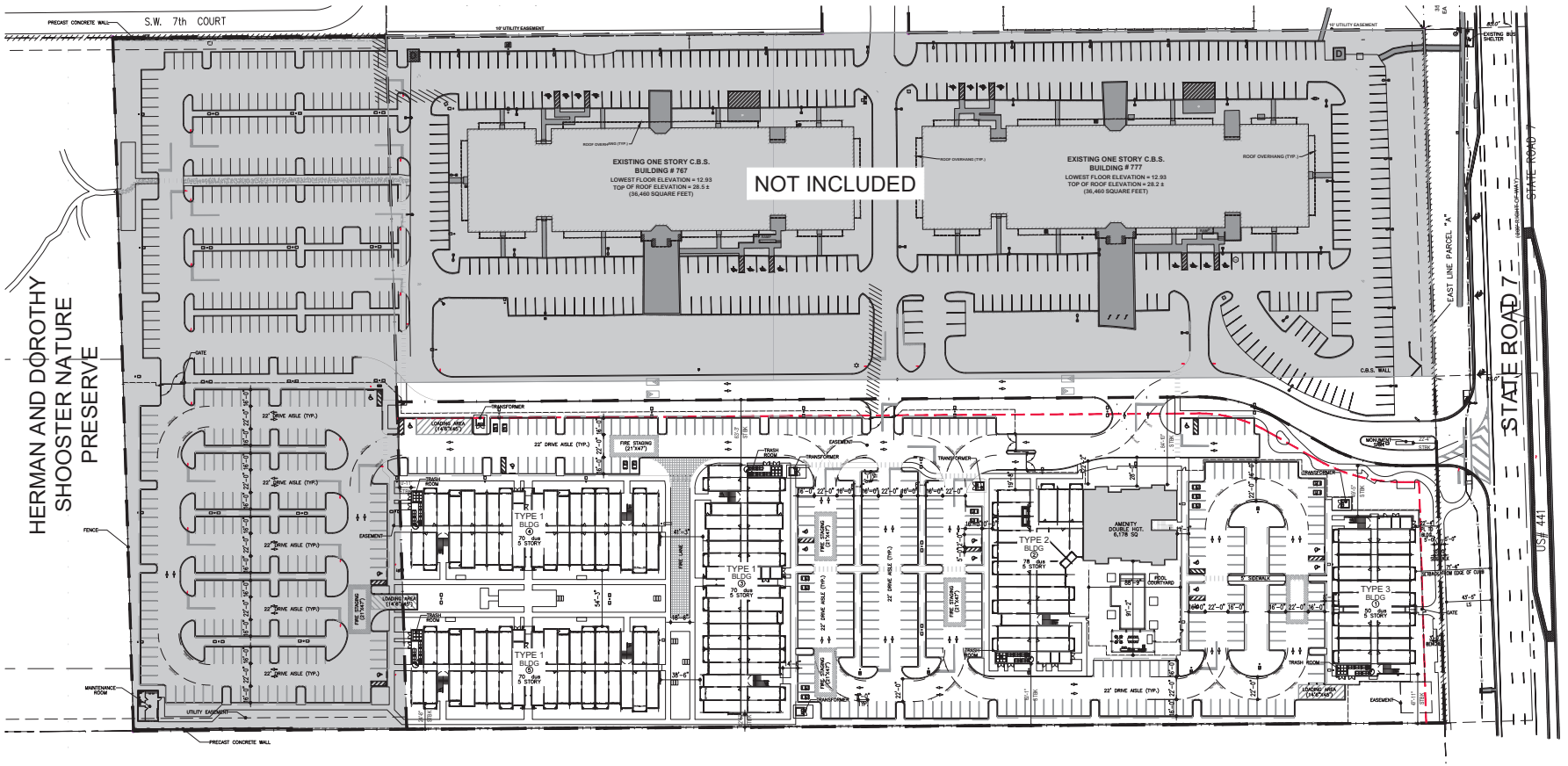
With the exception of the intersection at S. State Road 7 and W. Atlantic Boulevard and the intersection at Rock Island Road and Southgate Boulevard, each of the signalized study intersections is currently operating at an acceptable Level of Service (LOS) and will continue to do so in the buildout year of 2026 both with and without the project traffic associated with The Forest Apartments development. By optimizing the signal timing plans for these two (2) intersections, the LOS can be improved, and the intersection delay can be reduced to offset the additional vehicle delay attributed to the subject project.

Each of the unsignalized study intersections (i.e. individual approaches) within the project study area is currently operating at an acceptable LOS and will continue to do so in the buildout year of 2026 both with and without the project traffic associated with The Forest Apartments development.

APPENDIX A

The Forest Apartments – Margate, FL

Site Plan



SITE INFORMATION		
Site Area:	310,988 SF	7.11 ac.
	Proposed	
Density:	338 Units (42 dus/ac)	
Building Setbacks		
A. Front	Required (Residential Structures)	Provided (Residential Structures)
East (SR 7)	18'-0"	22'-4"
B. Side		
North	16'-0"	30'-4"
West NW 95th st	0'-0"	0'-0"
South	0'-0"	13'-3"
	Required	Provided
Building Height	9' (6 Stories) Max.	58' (5 stories)

SITE CALCULATIONS		
Open Space	Required	Froposed
	3% of Acreage 0.2136 ac (9,304 SF)	119,092 sf

PROJECT CODE/ CONSTRUCTION REQUIREMENTS	
Occupancy Classifications	Group R, Residential R-2
Construction Type	FBC-B 8TH ED. (2023) TYPE III-BRESIDENTIAL GROUP R-2
Codes Used	FBC-B 8TH ED. (2023)
	FAR HOUSING ACT DESIGN MANUAL
	FIRE PROTECTION 8TH ED (2023)

SR 7 MARGATE - DEVELOPMENT SUMMARY							
Residential:							
Unit Types	NRSF/Unit	Building Types			Total Units	Leasable (NRSF)	% of Totals
		Type I	Type II	Type III			
Studio							
ST1	576 sf	0	16	0	16 units	9,216 sf	5%
Sub-total	576 sf	0	16	0	16 units	9,216 sf	
1BD							
A1	811 sf	32	12	32	140 units	113,540 sf	50%
A1-MOD	732 sf	0	10	10	20 units	14,640 sf	
A2	779 sf	0	10	0	10 units	7,790 sf	
Sub-total	2,322 sf	32	32	42	170 units	135,970 sf	
2BD							
B1	1,159 sf	15	12	0	57 units	66,063 sf	41%
B2	1,091 sf	10	0	0	30 units	32,730 sf	
B3	1,119 sf	8	8	8	40 units	44,760 sf	
B4	1,123 sf	0	0	0	units	sf	
B5	1,168 sf	0	10	0	10 units	11,680 sf	
Sub-total	5,660 sf	33	30	8	137 units	155,233 sf	
3BD							
C1	1,359 sf	5	0	0	15 units	20,385 sf	4%
Sub-total	1,359 sf	5	0	0	15 units	20,385 sf	
# of Units/Bldg		70 units	78 units	50 units		320,804 sf	100.0%
# of Bldgs		3 bldgs	1 bldgs	1 bldgs	5 bldgs		
Total Units		210 units	78 units	50 units	338 units		
						949 avg sf/unit	

PARKING		
Required		
	# of units or SF	# Spaces
Studio @ 2 sp/du	16 units	32 sp
1 BD @ 2 sp/du	170 units	340 sp
2 BD @ 2 sp/du	137 units	274 sp
3BD @ 3 sp/du	15 units	45 sp
Guest @ 15%		104 sp
Sub-Total	338 units	795 sp
Total Required	795 sp	
Reduction #1	10%	79 sp
Total Required	715 sp	
Provided		
	Standard	HC
Surface Parking	299 sp	12 sp
Garage Parking	sp	sp
Residential Total	299 sp	12 sp
Shared off-site Parking	230 sp	sp
Dedicated off-site Parking	180 sp	3 sp
Sub-Total	709 sp	15 sp
Grand Total	724 sp	2.1 sp/du
EV Spaces: 15 sp (2%)		
Bicycle Parking: 15 sp		

NORTH

SITE PLAN

SCALE: 1"=50'

ARCHITECT'S BUILDING CODE STATEMENT: TO THE BEST OF THE ARCHITECT'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE FLORIDA BUILDING CODE SEVENTH EDITION (2020) AND THE APPLICABLE FIRE SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY AND CHAPTER 633 FLORIDA STATUTES.

MSA ARCHITECTS
ARCHITECTURE & PLANNING
MSA ARCHITECTS, INC.
AAC000895
8950 SW 74th COURT
SUITE 1513
MIAMI, FLORIDA 33156
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BY

SR-7 MARGATE
FOR:
REZ_SE_LAND
LOCATED AT:
787 S. STATE ROAD 7, MARGATE, FLORIDA

JOSE I. SAUMELL
AR0013085

DRAWN	
CONTRACT DATE	**/**/**
SCALE	AS SHOWN
JOB NO.	2168.PRJ
SHEET TITLE:	SITE PLAN
SHEET NUMBER:	SP-1

APPENDIX B

Traffic Counts

Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

WEST ATLANTIC BOULEVARD & SR 7
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : atlantic blvd & sr 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

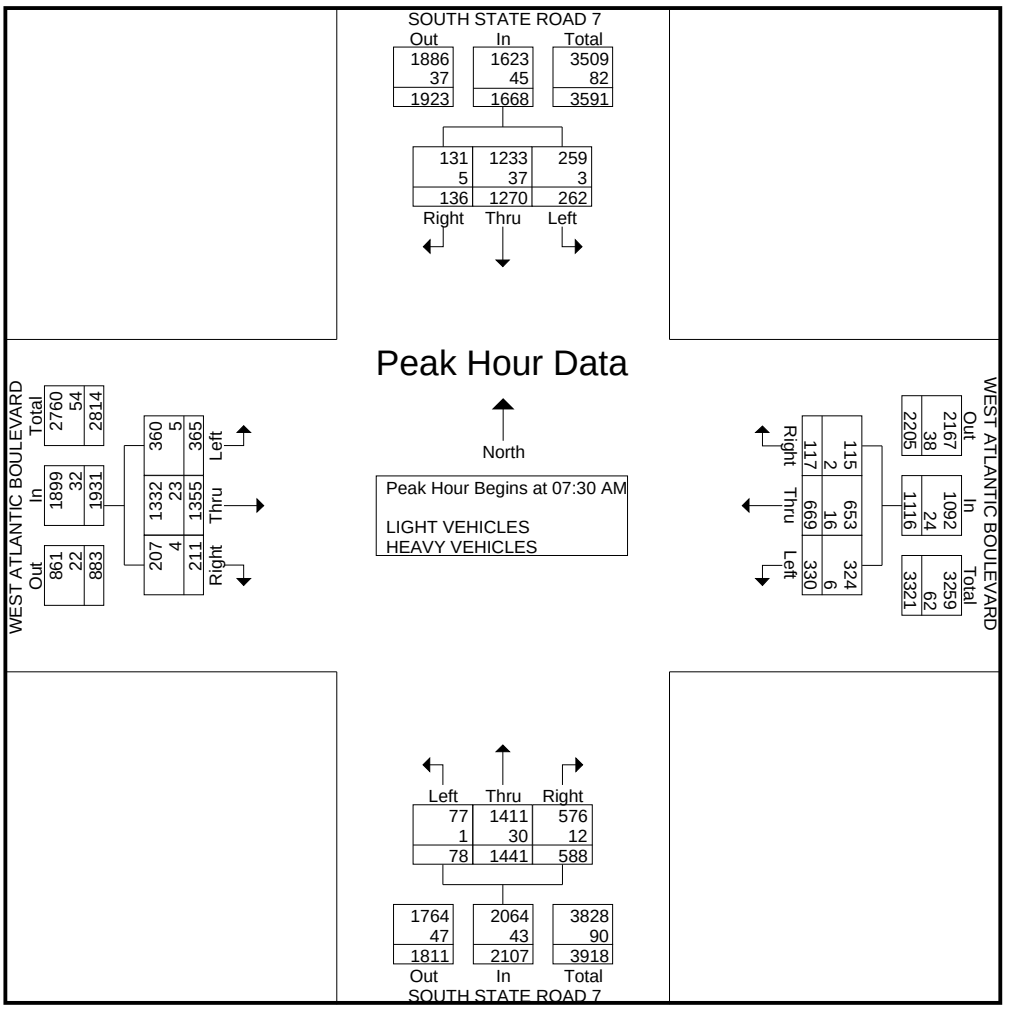
	SOUTH STATE ROAD 7 From North				WEST ATLANTIC BOULEVARD From East				SOUTH STATE ROAD 7 From South				WEST ATLANTIC BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	2	63	246	28	0	70	130	39	0	26	346	159	1	65	329	46	1550
07:15 AM	2	55	247	30	0	82	171	35	0	22	338	166	0	81	393	40	1662
07:30 AM	0	77	325	33	0	84	150	31	2	21	376	146	0	88	331	47	1711
07:45 AM	0	63	301	38	0	84	187	26	1	15	322	152	0	95	396	58	1738
Total	4	258	1119	129	0	320	638	131	3	84	1382	623	1	329	1449	191	6661
08:00 AM	3	58	297	30	0	89	168	30	2	13	351	156	2	90	314	44	1647
08:15 AM	1	60	347	35	1	72	164	30	1	23	392	134	0	90	314	62	1726
08:30 AM	4	63	263	43	1	91	183	31	3	29	301	115	1	105	311	65	1609
08:45 AM	2	44	326	47	2	86	149	24	2	28	376	146	2	114	249	57	1654
Total	10	225	1233	155	4	338	664	115	8	93	1420	551	5	399	1188	228	6636
04:00 PM	5	34	263	23	1	175	328	37	6	40	286	83	0	88	246	73	1688
04:15 PM	2	36	320	40	2	143	327	35	4	50	322	109	0	62	197	96	1745
04:30 PM	4	41	305	48	2	162	335	43	4	40	262	114	5	73	210	58	1706
04:45 PM	4	32	279	61	2	172	309	38	7	39	335	122	2	80	151	52	1685
Total	15	143	1167	172	7	652	1299	153	21	169	1205	428	7	303	804	279	6824
05:00 PM	3	44	292	57	1	141	369	40	9	52	277	109	2	59	250	87	1792
05:15 PM	2	30	302	40	2	166	376	36	2	41	288	137	4	78	217	71	1792
05:30 PM	2	27	299	62	2	156	318	38	2	53	321	107	4	78	189	63	1721
05:45 PM	2	38	281	46	0	138	400	33	3	53	284	95	1	64	209	61	1708
Total	9	139	1174	205	5	601	1463	147	16	199	1170	448	11	279	865	282	7013
Grand Total	38	765	4693	661	16	1911	4064	546	48	545	5177	2050	24	1310	4306	980	27134
Apprch %	0.6	12.4	76.2	10.7	0.2	29.2	62.2	8.4	0.6	7	66.2	26.2	0.4	19.8	65	14.8	
Total %	0.1	2.8	17.3	2.4	0.1	7	15	2	0.2	2	19.1	7.6	0.1	4.8	15.9	3.6	
LIGHT VEHICLES	38	755	4595	648	16	1876	4008	535	48	539	5071	2003	24	1294	4230	963	26643
% LIGHT VEHICLES	100	98.7	97.9	98	100	98.2	98.6	98	100	98.9	98	97.7	100	98.8	98.2	98.3	98.2
HEAVY VEHICLES	0	10	98	13	0	35	56	11	0	6	106	47	0	16	76	17	491
% HEAVY VEHICLES	0	1.3	2.1	2	0	1.8	1.4	2	0	1.1	2	2.3	0	1.2	1.8	1.7	1.8

Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

WEST ATLANTIC BOULEVARD & SR 7
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : atlantic blvd & sr 7
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	SOUTH STATE ROAD 7 From North					WEST ATLANTIC BOULEVARD From East					SOUTH STATE ROAD 7 From South					WEST ATLANTIC BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	**77**	325	33	435	0	84	150	**31**	265	**2**	21	376	146	545	0	88	331	47	466	1711
07:45 AM	0	63	301	**38**	402	0	84	**187**	26	**297**	1	15	322	152	490	0	**95**	**396**	58	**549**	**1738**
08:00 AM	**3**	58	297	30	388	0	**89**	168	30	287	2	13	351	**156**	522	**2**	90	314	44	450	1647
08:15 AM	1	60	**347**	35	**443**	**1**	72	164	30	267	1	**23**	**392**	134	**550**	0	90	314	**62**	466	1726
Total Volume	4	258	1270	136	1668	1	329	669	117	1116	6	72	1441	588	2107	2	363	1355	211	1931	6822
% App. Total	0.2	15.5	76.1	8.2		0.1	29.5	59.9	10.5		0.3	3.4	68.4	27.9		0.1	18.8	70.2	10.9		
PHF	.333	.838	.915	.895	.941	.250	.924	.894	.944	.939	.750	.783	.919	.942	.958	.250	.955	.855	.851	.879	.981
LIGHT VEHICLES			1233										1411					1332			
% LIGHT VEHICLES	100	98.8	97.1	96.3	97.3	100	98.2	97.6	98.3	97.8	100	98.6	97.9	98.0	98.0	100	98.6	98.3	98.1	98.3	97.9
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	1.2	2.9	3.7	2.7	0	1.8	2.4	1.7	2.2	0	1.4	2.1	2.0	2.0	0	1.4	1.7	1.9	1.7	2.1

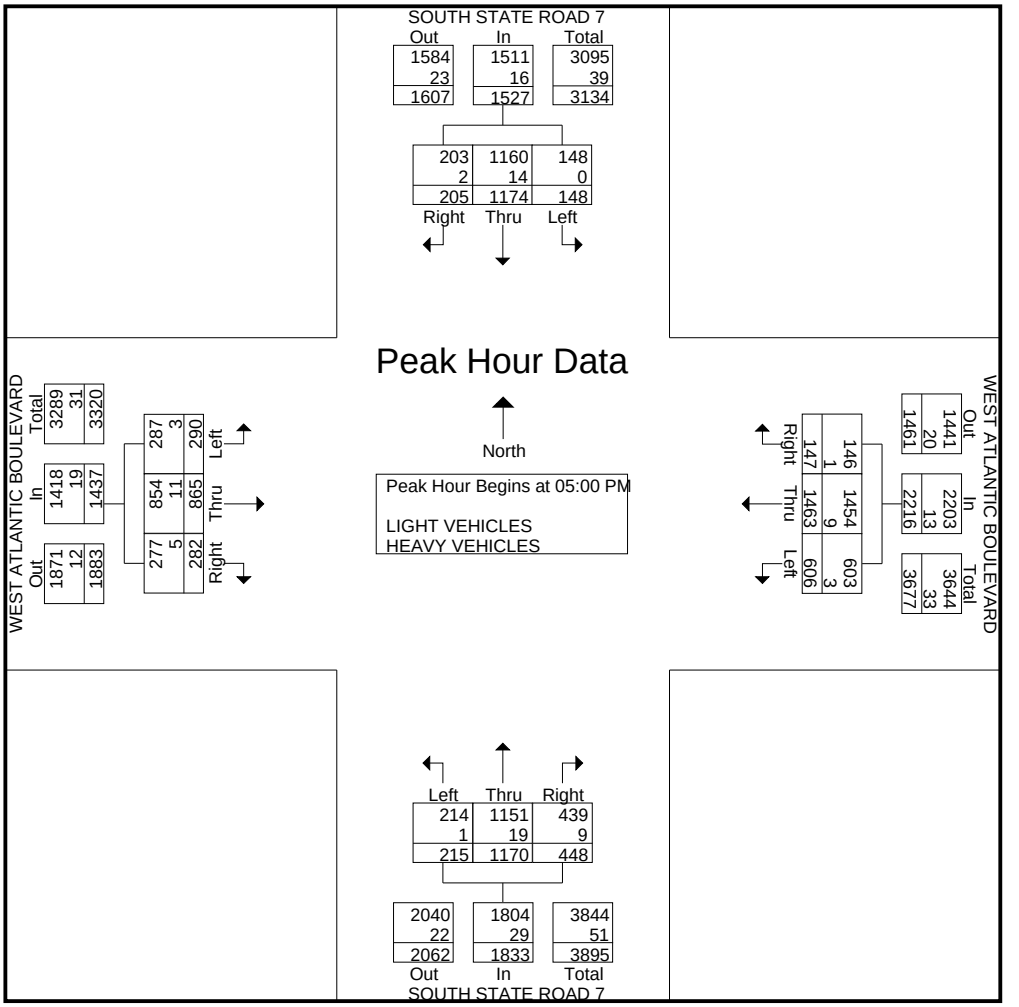


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WEST ATLANTIC BOULEVARD & SR 7
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : atlantic blvd & sr 7
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	SOUTH STATE ROAD 7 From North					WEST ATLANTIC BOULEVARD From East					SOUTH STATE ROAD 7 From South					WEST ATLANTIC BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	**3**	**44**	292	57	**396**	1	141	369	**40**	551	**9**	52	277	109	447	2	59	**250**	**87**	**398**	**1792**
05:15 PM	2	30	**302**	40	374	**2**	**166**	376	36	**580**	2	41	288	**137**	468	**4**	**78**	217	71	370	1792
05:30 PM	2	27	299	**62**	390	2	156	318	38	514	2	**53**	**321**	107	**483**	4	78	189	63	334	1721
05:45 PM	2	38	281	46	367	0	138	**400**	33	571	3	53	284	95	435	1	64	209	61	335	1708
Total Volume	9	139	1174	205	1527	5	601	1463	147	2216	16	199	1170	448	1833	11	279	865	282	1437	7013
% App. Total	0.6	9.1	76.9	13.4		0.2	27.1	66	6.6		0.9	10.9	63.8	24.4		0.8	19.4	60.2	19.6		
PHF	.750	.790	.972	.827	.964	.625	.905	.914	.919	.955	.444	.939	.911	.818	.949	.688	.894	.865	.810	.903	.978
LIGHT VEHICLES			1160					1454					1151								
% LIGHT VEHICLES	100	100	98.8	99.0	99.0	100	99.5	99.4	99.3	99.4	100	99.5	98.4	98.0	98.4	100	98.9	98.7	98.2	98.7	98.9
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	1.2	1.0	1.0	0	0.5	0.6	0.7	0.6	0	0.5	1.6	2.0	1.6	0	1.1	1.3	1.8	1.3	1.1



Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

WEST ATLANTIC BOULEVARD & SR 7
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : atlantic blvd & sr 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	SOUTH STATE ROAD 7 From North				WEST ATLANTIC BOULEVARD From East				SOUTH STATE ROAD 7 From South				WEST ATLANTIC BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0	0	4
04:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3
Grand Total	0	0	1	0	0	1	3	0	1	2	0	0	0	0	1	0	9
Apprch %	0	0	100	0	0	25	75	0	33.3	66.7	0	0	0	0	100	0	
Total %	0	0	11.1	0	0	11.1	33.3	0	11.1	22.2	0	0	0	0	11.1	0	

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85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
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WEST ATLANTIC BOULEVARD & SR 7
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : atlantic blvd & sr 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	SOUTH STATE ROAD 7 From North				WEST ATLANTIC BOULEVARD From East				SOUTH STATE ROAD 7 From South				WEST ATLANTIC BOULEVARD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	0	0	0	0	1	0	2	0	0	0	0	0	0	0	3	0	6
07:15 AM	0	0	3	0	0	0	1	0	1	0	1	0	2	0	0	0	8
07:30 AM	0	0	1	0	3	0	2	0	1	0	0	0	0	0	2	0	9
07:45 AM	2	0	0	0	1	0	1	0	5	0	0	0	3	0	1	0	13
Total	2	0	4	0	5	0	6	0	7	0	1	0	5	0	6	0	36
08:00 AM	5	0	0	0	2	0	2	0	7	0	0	0	2	0	0	0	18
08:15 AM	1	0	1	0	4	0	0	0	5	0	0	0	1	0	2	0	14
08:30 AM	9	0	0	0	2	0	3	0	6	0	1	0	7	0	2	0	30
08:45 AM	12	0	1	0	8	0	1	0	0	0	3	0	3	0	3	0	31
Total	27	0	2	0	16	0	6	0	18	0	4	0	13	0	7	0	93
04:00 PM	19	0	0	0	9	0	4	0	10	0	7	0	27	0	4	0	80
04:15 PM	2	0	1	0	3	0	1	0	4	0	0	0	3	0	3	0	17
04:30 PM	9	0	1	0	5	0	2	0	6	0	0	0	4	0	1	0	28
04:45 PM	5	0	0	0	6	0	2	0	4	0	1	0	8	0	0	0	26
Total	35	0	2	0	23	0	9	0	24	0	8	0	42	0	8	0	151
05:00 PM	7	0	1	0	3	0	6	0	2	0	0	0	4	0	2	0	25
05:15 PM	4	0	2	0	3	0	1	0	6	0	0	0	3	0	2	0	21
05:30 PM	2	0	0	0	5	0	2	0	5	0	2	0	2	0	3	0	21
05:45 PM	6	0	2	0	12	0	1	0	3	0	0	0	0	0	1	0	25
Total	19	0	5	0	23	0	10	0	16	0	2	0	9	0	8	0	92
Grand Total	83	0	13	0	67	0	31	0	65	0	15	0	69	0	29	0	372
Apprch %	86.5	0	13.5	0	68.4	0	31.6	0	81.2	0	18.8	0	70.4	0	29.6	0	
Total %	22.3	0	3.5	0	18	0	8.3	0	17.5	0	4	0	18.5	0	7.8	0	

Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

SOUTHGATE BOULEVARD & SR 7
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : southgate & SR 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

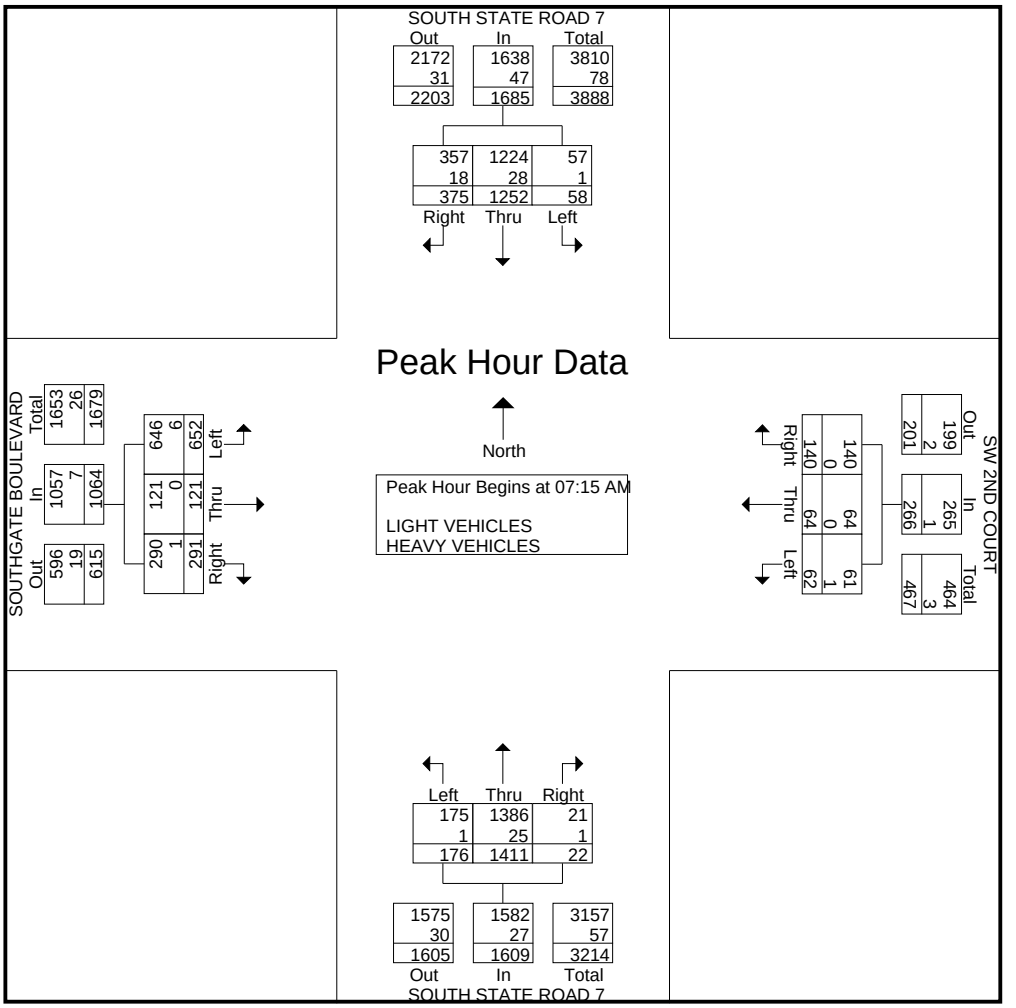
	SOUTH STATE ROAD 7 From North				SW 2ND COURT From East				SOUTH STATE ROAD 7 From South				SOUTHGATE BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	3	11	253	80	0	14	9	30	0	49	310	0	0	178	27	59	1023
07:15 AM	2	5	294	106	0	14	14	42	0	52	375	5	0	157	31	57	1154
07:30 AM	6	9	297	94	0	15	23	30	1	50	346	4	0	176	30	86	1167
07:45 AM	6	15	342	96	0	13	12	42	1	39	328	5	1	173	38	73	1184
Total	17	40	1186	376	0	56	58	144	2	190	1359	14	1	684	126	275	4528
08:00 AM	5	10	319	79	0	20	15	26	0	33	362	8	0	145	22	75	1119
08:15 AM	6	10	320	92	0	17	13	31	2	33	385	3	0	131	25	82	1150
08:30 AM	4	18	380	96	0	16	10	30	0	45	347	1	0	124	26	56	1153
08:45 AM	7	13	341	68	0	9	10	30	0	44	374	6	1	159	19	67	1148
Total	22	51	1360	335	0	62	48	117	2	155	1468	18	1	559	92	280	4570
04:00 PM	3	13	353	97	0	12	17	17	3	67	325	6	0	86	16	49	1064
04:15 PM	4	22	372	116	0	12	7	9	2	54	295	9	0	133	8	57	1100
04:30 PM	8	10	389	130	0	9	11	15	2	86	367	10	0	110	16	37	1200
04:45 PM	8	16	310	102	0	12	11	9	5	74	284	10	0	97	14	50	1002
Total	23	61	1424	445	0	45	46	50	12	281	1271	35	0	426	54	193	4366
05:00 PM	5	19	371	114	0	17	9	11	5	60	329	6	0	99	13	52	1110
05:15 PM	4	19	360	110	0	13	16	14	7	97	374	12	0	105	17	52	1200
05:30 PM	2	16	326	95	0	14	15	17	5	108	314	10	0	123	14	60	1119
05:45 PM	6	15	365	112	0	17	15	12	6	87	367	13	0	98	7	61	1181
Total	17	69	1422	431	0	61	55	54	23	352	1384	41	0	425	51	225	4610
Grand Total	79	221	5392	1587	0	224	207	365	39	978	5482	108	2	2094	323	973	18074
Apprch %	1.1	3	74.1	21.8	0	28.1	26	45.9	0.6	14.8	83	1.6	0.1	61.7	9.5	28.7	
Total %	0.4	1.2	29.8	8.8	0	1.2	1.1	2	0.2	5.4	30.3	0.6	0	11.6	1.8	5.4	
LIGHT VEHICLES	78	218	5286	1549	0	221	206	364	39	967	5365	107	1	2053	322	968	17744
% LIGHT VEHICLES	98.7	98.6	98	97.6	0	98.7	99.5	99.7	100	98.9	97.9	99.1	50	98	99.7	99.5	98.2
HEAVY VEHICLES	1	3	106	38	0	3	1	1	0	11	117	1	1	41	1	5	330
% HEAVY VEHICLES	1.3	1.4	2	2.4	0	1.3	0.5	0.3	0	1.1	2.1	0.9	50	2	0.3	0.5	1.8

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SOUTHGATE BOULEVARD & SR 7
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : southgate & SR 7
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	SOUTH STATE ROAD 7 From North					SW 2ND COURT From East					SOUTH STATE ROAD 7 From South					SOUTHGATE BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	2	5	294	**106**	407	0	14	14	**42**	**70**	0	**52**	**375**	5	**432**	0	157	31	57	245	1154
07:30 AM	**6**	9	297	94	406	0	15	**23**	30	68	**1**	50	346	4	401	0	**176**	30	**86**	**292**	1167
07:45 AM	6	**15**	**342**	96	**459**	0	13	12	42	67	1	39	328	5	373	**1**	173	**38**	73	285	**1184**
08:00 AM	5	10	319	79	413	0	**20**	15	26	61	0	33	362	**8**	403	0	145	22	75	242	1119
Total Volume	19	39	1252	375	1685	0	62	64	140	266	2	174	1411	22	1609	1	651	121	291	1064	4624
% App. Total	1.1	2.3	74.3	22.3		0	23.3	24.1	52.6		0.1	10.8	87.7	1.4		0.1	61.2	11.4	27.3		
PHF	.792	.650	.915	.884	.918	.000	.775	.696	.833	.950	.500	.837	.941	.688	.931	.250	.925	.796	.846	.911	.976
LIGHT VEHICLES			1224										1386								
% LIGHT VEHICLES	100	97.4	97.8	95.2	97.2	0	98.4	100	100	99.6	100	99.4	98.2	95.5	98.3	100	99.1	100	99.7	99.3	98.2
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	2.6	2.2	4.8	2.8	0	1.6	0	0	0.4	0	0.6	1.8	4.5	1.7	0	0.9	0	0.3	0.7	1.8

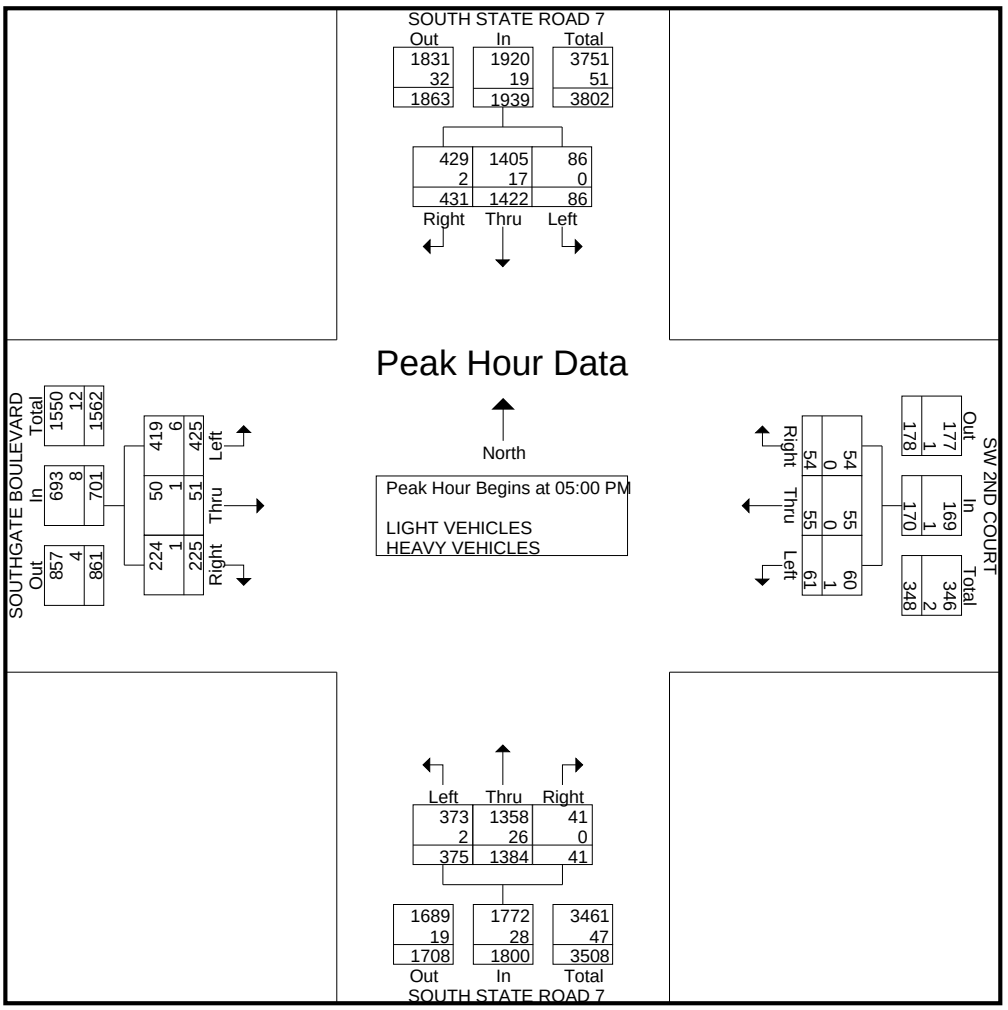


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SOUTHGATE BOULEVARD & SR 7
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : southgate & SR 7
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	SOUTH STATE ROAD 7 From North					SW 2ND COURT From East					SOUTH STATE ROAD 7 From South					SOUTHGATE BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	5	**19**	**371**	**114**	**509**	0	**17**	9	11	37	5	60	329	6	400	0	99	13	52	164	1110
05:15 PM	4	19	360	110	493	0	13	**16**	14	43	**7**	97	**374**	12	**490**	0	105	**17**	52	174	**1200**
05:30 PM	2	16	326	95	439	0	14	15	**17**	**46**	5	**108**	314	10	437	0	**123**	14	60	**197**	1119
05:45 PM	**6**	15	365	112	498	0	17	15	12	44	6	87	367	**13**	473	0	98	7	**61**	166	1181
Total Volume	17	69	1422	431	1939	0	61	55	54	170	23	352	1384	41	1800	0	425	51	225	701	4610
% App. Total	0.9	3.6	73.3	22.2		0	35.9	32.4	31.8		1.3	19.6	76.9	2.3		0	60.6	7.3	32.1		
PHF	.708	.908	.958	.945	.952	.000	.897	.859	.794	.924	.821	.815	.925	.788	.918	.000	.864	.750	.922	.890	.960
LIGHT VEHICLES			1405										1358								
% LIGHT VEHICLES	100	100	98.8	99.5	99.0	0	98.4	100	100	99.4	100	99.4	98.1	100	98.4	0	98.6	98.0	99.6	98.9	98.8
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	1.2	0.5	1.0	0	1.6	0	0	0.6	0	0.6	1.9	0	1.6	0	1.4	2.0	0.4	1.1	1.2



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MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : southgate & SR 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	SOUTH STATE ROAD 7 From North				SW 2ND COURT From East				SOUTH STATE ROAD 7 From South				SOUTHGATE BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Grand Total	0	0	2	0	0	0	0	0	0	0	2	0	0	0	1	1	6
Apprch %	0	0	100	0	0	0	0	0	0	0	100	0	0	0	50	50	
Total %	0	0	33.3	0	0	0	0	0	0	0	33.3	0	0	0	16.7	16.7	

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SOUTHGATE BOULEVARD & SR 7
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : southgate & SR 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	SOUTH STATE ROAD 7 From North				SW 2ND COURT From East				SOUTH STATE ROAD 7 From South				SOUTHGATE BOULEVARD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	1	0	0	0	1	0	0	0	1	0	0	0	1	0	3	0	7
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	4
07:30 AM	1	0	0	0	3	0	0	0	4	0	0	0	0	0	0	0	8
07:45 AM	2	0	0	0	0	0	1	0	2	0	0	0	0	0	2	0	7
Total	4	0	0	0	4	0	1	0	8	0	0	0	2	0	7	0	26
08:00 AM	0	0	1	0	0	0	0	0	3	0	0	0	1	0	0	0	5
08:15 AM	0	0	0	0	0	0	1	0	4	0	1	0	0	0	0	0	6
08:30 AM	1	0	0	0	0	0	0	0	3	0	0	0	1	0	1	0	6
08:45 AM	1	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	4
Total	2	0	1	0	1	0	2	0	10	0	1	0	2	0	2	0	21
04:00 PM	1	0	1	0	0	0	1	0	1	0	0	0	1	0	1	0	6
04:15 PM	1	0	1	0	1	0	0	0	4	0	0	0	3	0	3	0	13
04:30 PM	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4
04:45 PM	2	0	0	0	0	0	0	0	5	0	0	0	3	0	0	0	10
Total	6	0	2	0	1	0	1	0	12	0	0	0	7	0	4	0	33
05:00 PM	3	0	0	0	0	0	3	0	0	0	1	0	1	0	2	0	10
05:15 PM	6	0	0	0	0	0	1	0	2	0	0	0	2	0	3	0	14
05:30 PM	1	0	0	0	2	0	1	0	1	0	0	0	3	0	0	0	8
05:45 PM	9	0	0	0	0	0	2	0	4	0	1	0	4	0	2	0	22
Total	19	0	0	0	2	0	7	0	7	0	2	0	10	0	7	0	54
Grand Total	31	0	3	0	8	0	11	0	37	0	3	0	21	0	20	0	134
Apprch %	91.2	0	8.8	0	42.1	0	57.9	0	92.5	0	7.5	0	51.2	0	48.8	0	
Total %	23.1	0	2.2	0	6	0	8.2	0	27.6	0	2.2	0	15.7	0	14.9	0	

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SW 7TH STREET & SR 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : 7th & sr7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

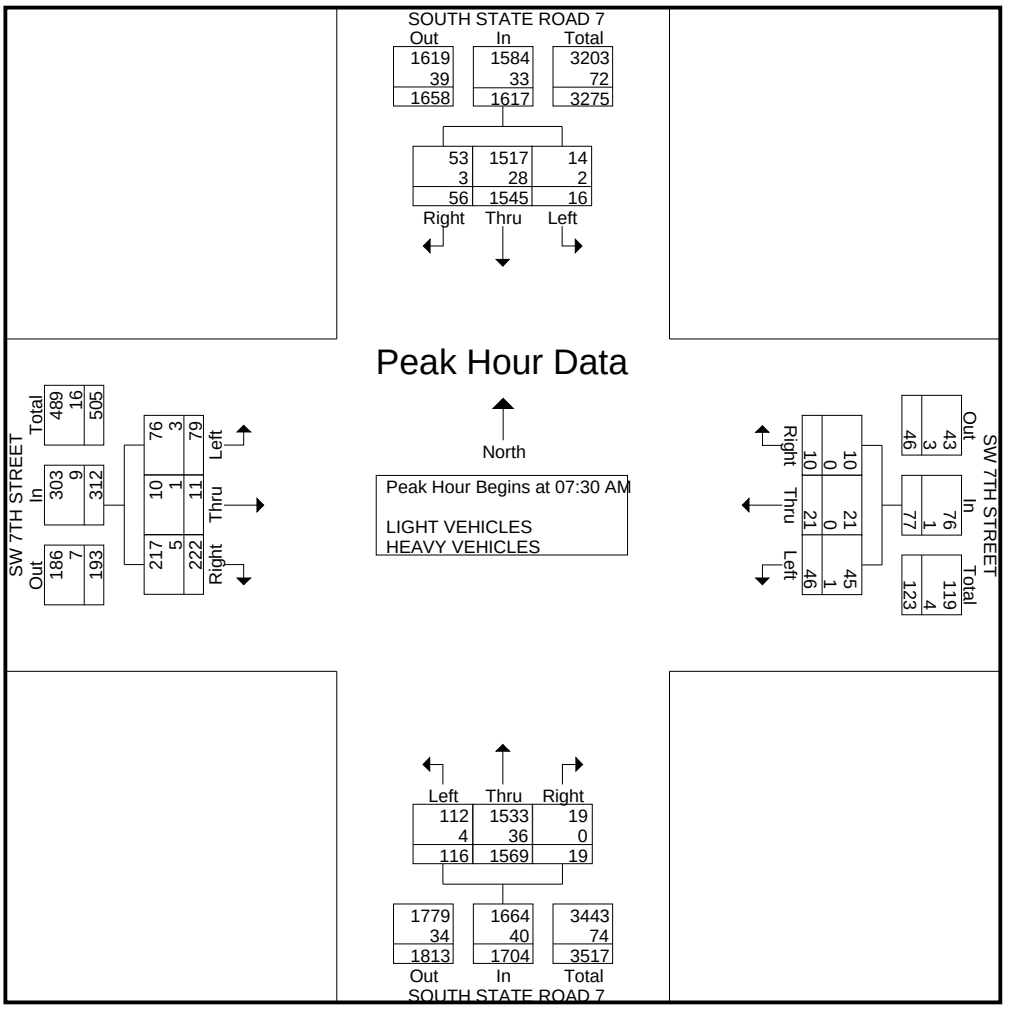
	SOUTH STATE ROAD 7 From North				SW 7TH STREET From East				SOUTH STATE ROAD 7 From South				SW 7TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	2	319	11	0	7	2	4	0	13	281	4	0	28	1	35	707
07:15 AM	0	2	343	12	0	3	5	3	2	20	313	3	0	23	1	47	777
07:30 AM	0	1	373	11	0	12	4	2	2	23	372	4	0	27	2	67	900
07:45 AM	0	2	409	12	0	11	6	2	1	17	418	8	1	25	2	58	972
Total	0	7	1444	46	0	33	17	11	5	73	1384	19	1	103	6	207	3356
08:00 AM	1	6	361	18	0	14	5	4	1	32	371	4	0	12	5	51	885
08:15 AM	1	5	402	15	0	9	6	2	8	32	408	3	1	13	2	46	953
08:30 AM	1	5	418	16	0	10	6	2	1	37	357	3	0	11	5	28	900
08:45 AM	2	7	345	20	0	9	13	3	2	32	384	7	0	20	3	42	889
Total	5	23	1526	69	0	42	30	11	12	133	1520	17	1	56	15	167	3627
04:00 PM	1	9	307	33	0	10	3	5	1	36	390	8	0	11	1	25	840
04:15 PM	2	8	374	35	0	9	3	3	3	21	328	6	0	10	3	21	826
04:30 PM	0	4	363	22	0	6	2	2	1	46	372	8	0	17	1	26	870
04:45 PM	1	2	324	19	0	12	0	2	1	35	335	7	0	17	0	8	763
Total	4	23	1368	109	0	37	8	12	6	138	1425	29	0	55	5	80	3299
05:00 PM	1	4	364	25	0	9	2	5	5	32	377	7	0	17	4	22	874
05:15 PM	1	8	333	29	0	5	5	5	0	38	442	8	0	13	3	31	921
05:30 PM	2	14	334	32	0	6	4	2	3	56	392	3	0	18	4	25	895
05:45 PM	2	7	327	33	0	7	5	4	0	48	428	12	0	18	2	30	923
Total	6	33	1358	119	0	27	16	16	8	174	1639	30	0	66	13	108	3613
Grand Total	15	86	5696	343	0	139	71	50	31	518	5968	95	2	280	39	562	13895
Apprch %	0.2	1.4	92.8	5.6	0	53.5	27.3	19.2	0.5	7.8	90.3	1.4	0.2	31.7	4.4	63.6	
Total %	0.1	0.6	41	2.5	0	1	0.5	0.4	0.2	3.7	43	0.7	0	2	0.3	4	
LIGHT VEHICLES	15	83	5598	333	0	138	69	49	30	509	5859	92	2	272	36	549	13634
% LIGHT VEHICLES	100	96.5	98.3	97.1	0	99.3	97.2	98	96.8	98.3	98.2	96.8	100	97.1	92.3	97.7	98.1
HEAVY VEHICLES	0	3	98	10	0	1	2	1	1	9	109	3	0	8	3	13	261
% HEAVY VEHICLES	0	3.5	1.7	2.9	0	0.7	2.8	2	3.2	1.7	1.8	3.2	0	2.9	7.7	2.3	1.9

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SW 7TH STREET & SR 7
NORTH LAUDERDALE, FLORIDA
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SIGNALIZED

File Name : 7th & sr7
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	SOUTH STATE ROAD 7 From North					SW 7TH STREET From East					SOUTH STATE ROAD 7 From South					SW 7TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	1	373	11	385	0	12	4	2	18	2	23	372	4	401	0	**27**	2	**67**	**96**	900
07:45 AM	0	2	**409**	12	**423**	0	11	**6**	2	19	1	17	**418**	**8**	444	**1**	25	2	58	86	**972**
08:00 AM	**1**	**6**	361	**18**	386	0	**14**	5	**4**	**23**	1	**32**	371	4	408	0	12	**5**	51	68	885
08:15 AM	1	5	402	15	423	0	9	6	2	17	**8**	32	408	3	**451**	1	13	2	46	62	953
Total Volume	2	14	1545	56	1617	0	46	21	10	77	12	104	1569	19	1704	2	77	11	222	312	3710
% App. Total	0.1	0.9	95.5	3.5		0	59.7	27.3	13		0.7	6.1	92.1	1.1		0.6	24.7	3.5	71.2		
PHF	.500	.583	.944	.778	.956	.000	.821	.875	.625	.837	.375	.813	.938	.594	.945	.500	.713	.550	.828	.813	.954
LIGHT VEHICLES			1517										1533								
% LIGHT VEHICLES	100	85.7	98.2	94.6	98.0	0	97.8	100	100	98.7	91.7	97.1	97.7	100	97.7	100	96.1	90.9	97.7	97.1	97.8
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	14.3	1.8	5.4	2.0	0	2.2	0	0	1.3	8.3	2.9	2.3	0	2.3	0	3.9	9.1	2.3	2.9	2.2

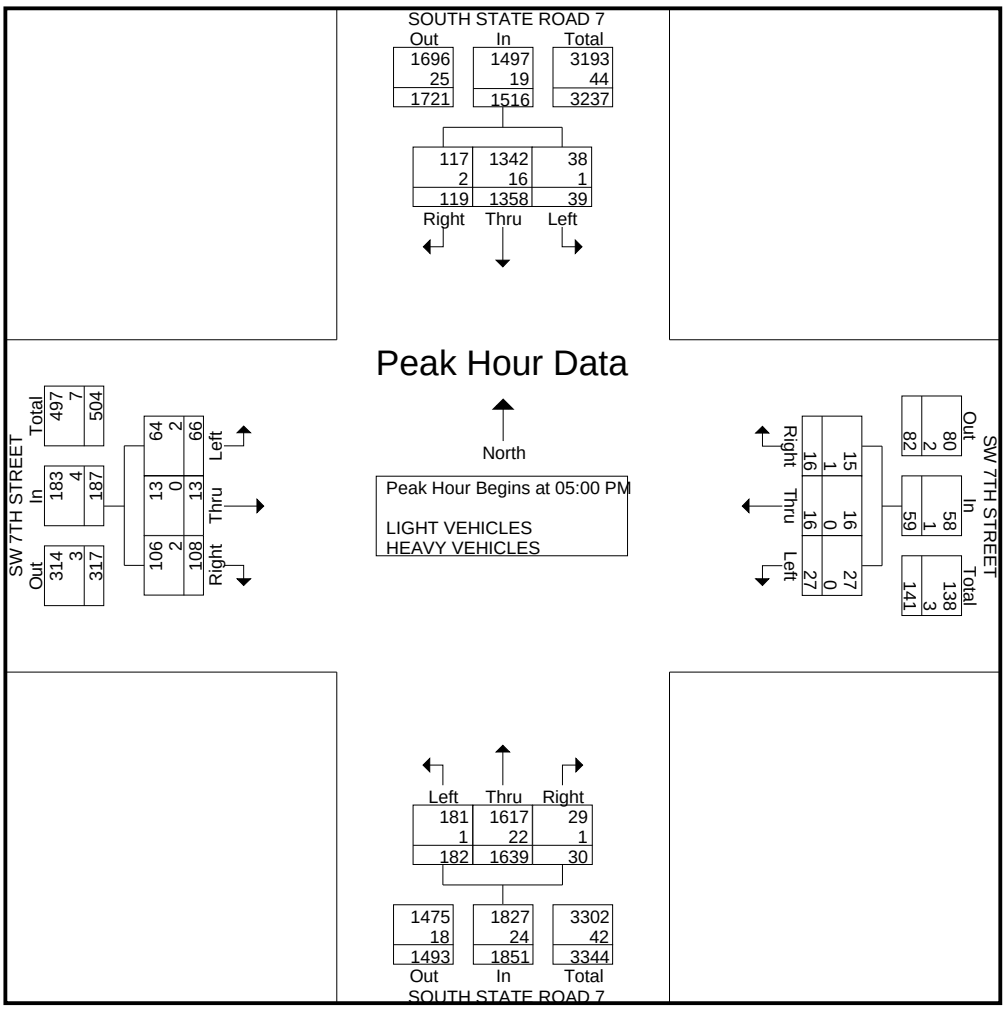


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SW 7TH STREET & SR 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : 7th & sr7
Site Code : 230081
Start Date : 5/9/2023

	SOUTH STATE ROAD 7 From North					SW 7TH STREET From East					SOUTH STATE ROAD 7 From South					SW 7TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	1	4	**364**	25	**394**	0	**9**	2	**5**	**16**	**5**	32	377	7	421	0	17	**4**	22	43	874
05:15 PM	1	8	333	29	371	0	5	**5**	5	15	0	38	**442**	8	**488**	0	13	3	**31**	47	921
05:30 PM	**2**	**14**	334	32	382	0	6	4	2	12	3	**56**	392	3	454	0	**18**	4	25	47	895
05:45 PM	2	7	327	**33**	369	0	7	5	4	16	0	48	428	**12**	488	0	18	2	30	**50**	**923**
Total Volume	6	33	1358	119	1516	0	27	16	16	59	8	174	1639	30	1851	0	66	13	108	187	3613
% App. Total	0.4	2.2	89.6	7.8		0	45.8	27.1	27.1		0.4	9.4	88.5	1.6		0	35.3	7	57.8		
PHF	.750	.589	.933	.902	.962	.000	.750	.800	.800	.922	.400	.777	.927	.625	.948	.000	.917	.813	.871	.935	.979
LIGHT VEHICLES			1342										1617								
% LIGHT VEHICLES	100	97.0	98.8	98.3	98.7	0	100	100	93.8	98.3	100	99.4	98.7	96.7	98.7	0	97.0	100	98.1	97.9	98.7
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	3.0	1.2	1.7	1.3	0	0	0	6.3	1.7	0	0.6	1.3	3.3	1.3	0	3.0	0	1.9	2.1	1.3



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Start Date : 5/9/2023
Page No : 1

Groups Printed- BICYCLES ON THE ROAD

	SOUTH STATE ROAD 7 From North				SW 7TH STREET From East				SOUTH STATE ROAD 7 From South				SW 7TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
08:45 AM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
Total	0	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	4
Grand Total	0	0	3	0	0	0	0	0	0	0	3	1	0	0	0	0	7
Apprch %	0	0	100	0	0	0	0	0	0	0	75	25	0	0	0	0	
Total %	0	0	42.9	0	0	0	0	0	0	0	42.9	14.3	0	0	0	0	

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SW 7TH STREET & SR 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : 7th & sr7
Site Code : 230081
Start Date : 5/9/2023
Page No : 1

Groups Printed- PEDESTRIANS & BIKES

	SOUTH STATE ROAD 7 From North				SW 7TH STREET From East				SOUTH STATE ROAD 7 From South				SW 7TH STREET From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
07:15 AM	1	0	0	0	0	0	1	0	3	0	0	0	5	0	1	0	11
07:30 AM	2	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	13
07:45 AM	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	3
Total	3	0	0	0	1	0	1	0	4	0	0	0	18	0	1	0	28
08:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	5	0	1	0	0	0	1	0	0	0	0	0	3	0	0	0	10
08:30 AM	0	0	0	0	1	0	1	0	0	0	0	0	2	0	0	0	4
08:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3
Total	6	0	1	0	2	0	2	0	0	0	0	0	7	0	0	0	18
04:15 PM	2	0	0	0	3	0	1	0	2	0	2	0	1	0	0	0	11
04:30 PM	3	0	0	0	0	0	1	0	2	0	1	0	1	0	0	0	8
04:45 PM	1	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	4
Total	6	0	1	0	4	0	2	0	4	0	3	0	2	0	1	0	23
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
05:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	0	5
05:45 PM	1	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	4
Total	1	0	1	0	1	0	1	0	3	0	0	0	5	0	0	0	12
Grand Total	16	0	3	0	8	0	6	0	11	0	3	0	32	0	2	0	81
Apprch %	84.2	0	15.8	0	57.1	0	42.9	0	78.6	0	21.4	0	94.1	0	5.9	0	
Total %	19.8	0	3.7	0	9.9	0	7.4	0	13.6	0	3.7	0	39.5	0	2.5	0	

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PROJECT DRIVEWAY & SOUTH STATE ROAD 7
MARGATE, FLORIDA
VIDEO COUNT (south of SW 7th Street)
NOT SIGNALIZED

File Name : project driveway & SR 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

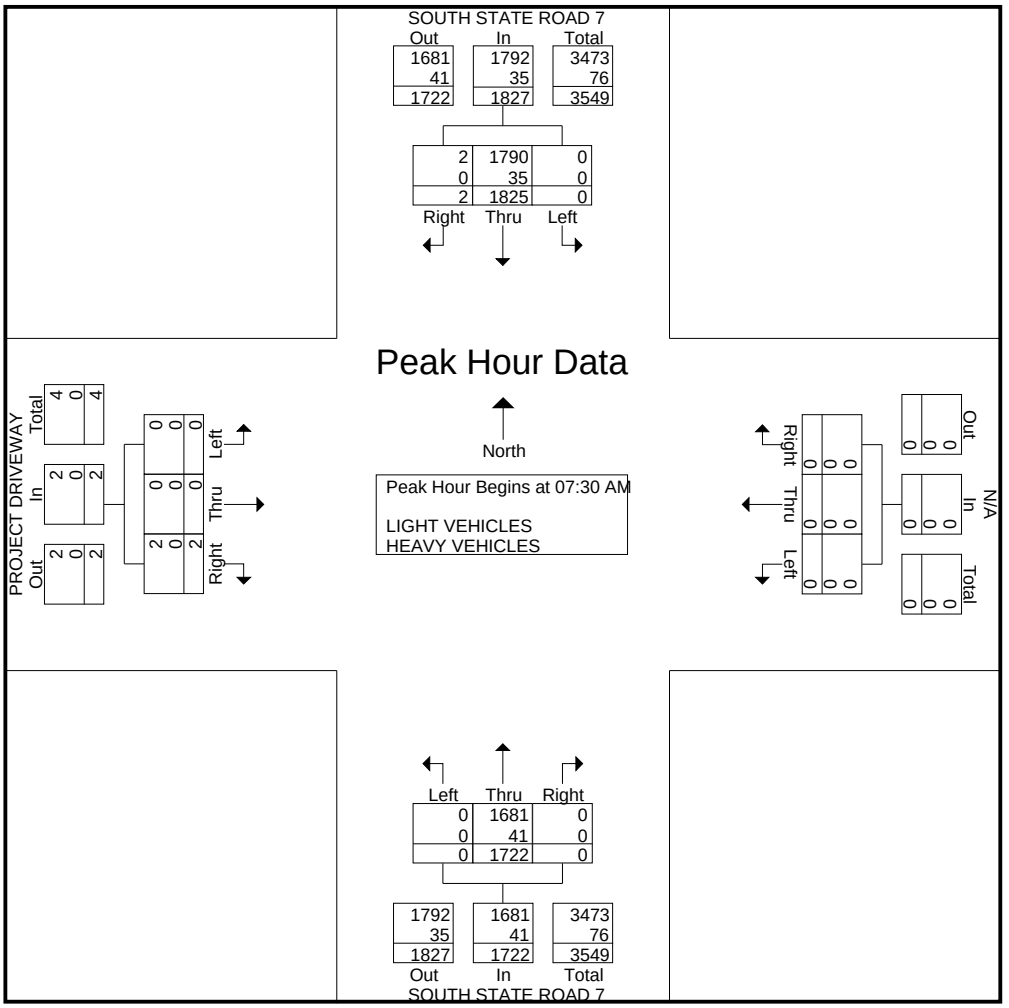
	SOUTH STATE ROAD 7 From North				N/A From East				SOUTH STATE ROAD 7 From South				PROJECT DRIVEWAY From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	0	369	1	0	0	0	0	0	0	309	0	0	0	0	1	680
07:15 AM	0	0	397	0	0	0	0	0	0	0	319	0	0	0	0	0	716
07:30 AM	0	0	464	0	0	0	0	0	0	0	417	0	0	0	0	1	882
07:45 AM	0	0	479	0	0	0	0	0	0	0	436	0	0	0	0	0	915
Total	0	0	1709	1	0	0	0	0	0	0	1481	0	0	0	0	2	3193
08:00 AM	0	0	422	1	0	0	0	0	0	0	427	0	0	0	0	1	851
08:15 AM	0	0	460	1	0	0	0	0	0	0	442	0	0	0	0	0	903
08:30 AM	0	0	461	1	0	0	0	0	0	0	396	0	0	0	0	0	858
08:45 AM	0	0	418	0	0	0	0	0	0	0	411	0	0	0	0	0	829
Total	0	0	1761	3	0	0	0	0	0	0	1676	0	0	0	0	1	3441
04:00 PM	0	0	337	0	0	0	0	0	0	0	434	0	0	0	0	1	772
04:15 PM	0	0	405	0	0	0	0	0	0	0	352	0	0	0	0	0	757
04:30 PM	0	0	393	0	0	0	0	0	0	0	421	0	0	0	0	3	817
04:45 PM	0	0	351	2	0	0	0	0	0	0	375	0	0	0	0	2	730
Total	0	0	1486	2	0	0	0	0	0	0	1582	0	0	0	0	6	3076
05:00 PM	0	0	400	0	0	0	0	0	0	0	430	0	0	0	0	4	834
05:15 PM	0	0	366	0	0	0	0	0	0	0	486	0	0	0	0	4	856
05:30 PM	0	0	369	1	0	0	0	0	0	0	483	0	0	0	0	2	855
05:45 PM	0	0	360	0	0	0	0	0	0	0	470	0	0	0	0	0	830
Total	0	0	1495	1	0	0	0	0	0	0	1869	0	0	0	0	10	3375
Grand Total	0	0	6451	7	0	0	0	0	0	0	6608	0	0	0	0	19	13085
Apprch %	0	0	99.9	0.1	0	0	0	0	0	0	100	0	0	0	0	100	
Total %	0	0	49.3	0.1	0	0	0	0	0	0	50.5	0	0	0	0	0.1	
LIGHT VEHICLES	0	0	6338	7	0	0	0	0	0	0	6484	0	0	0	0	19	12848
% LIGHT VEHICLES	0	0	98.2	100	0	0	0	0	0	0	98.1	0	0	0	0	100	98.2
HEAVY VEHICLES	0	0	113	0	0	0	0	0	0	0	124	0	0	0	0	0	237
% HEAVY VEHICLES	0	0	1.8	0	0	0	0	0	0	0	1.9	0	0	0	0	0	1.8

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PROJECT DRIVEWAY & SOUTH STATE ROAD 7
MARGATE, FLORIDA
VIDEO COUNT (south of SW 7th Street)
NOT SIGNALIZED

File Name : project driveway & SR 7
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	SOUTH STATE ROAD 7 From North					N/A From East					SOUTH STATE ROAD 7 From South					PROJECT DRIVEWAY From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	464	0	464	0	0	0	0	0	0	0	417	0	417	0	0	0	**1**	**1**	882
07:45 AM	0	0	**479**	0	**479**	0	0	0	0	0	0	0	436	0	436	0	0	0	0	0	**915**
08:00 AM	0	0	422	**1**	423	0	0	0	0	0	0	0	427	0	427	0	0	0	1	1	851
08:15 AM	0	0	460	1	461	0	0	0	0	0	0	0	**442**	0	**442**	0	0	0	0	0	903
Total Volume	0	0	1825	2	1827	0	0	0	0	0	0	0	1722	0	1722	0	0	0	2	2	3551
% App. Total	0	0	99.9	0.1		0	0	0	0		0	0	100	0		0	0	0	100		
PHF	.000	.000	.953	.500	.954	.000	.000	.000	.000	.000	.000	.000	.974	.000	.974	.000	.000	.000	.500	.500	.970
LIGHT VEHICLES			1790										1681								
% LIGHT VEHICLES	0	0	98.1	100	98.1	0	0	0	0	0	0	0	97.6	0	97.6	0	0	0	100	100	97.9
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	1.9	0	1.9	0	0	0	0	0	0	0	2.4	0	2.4	0	0	0	0	0	2.1

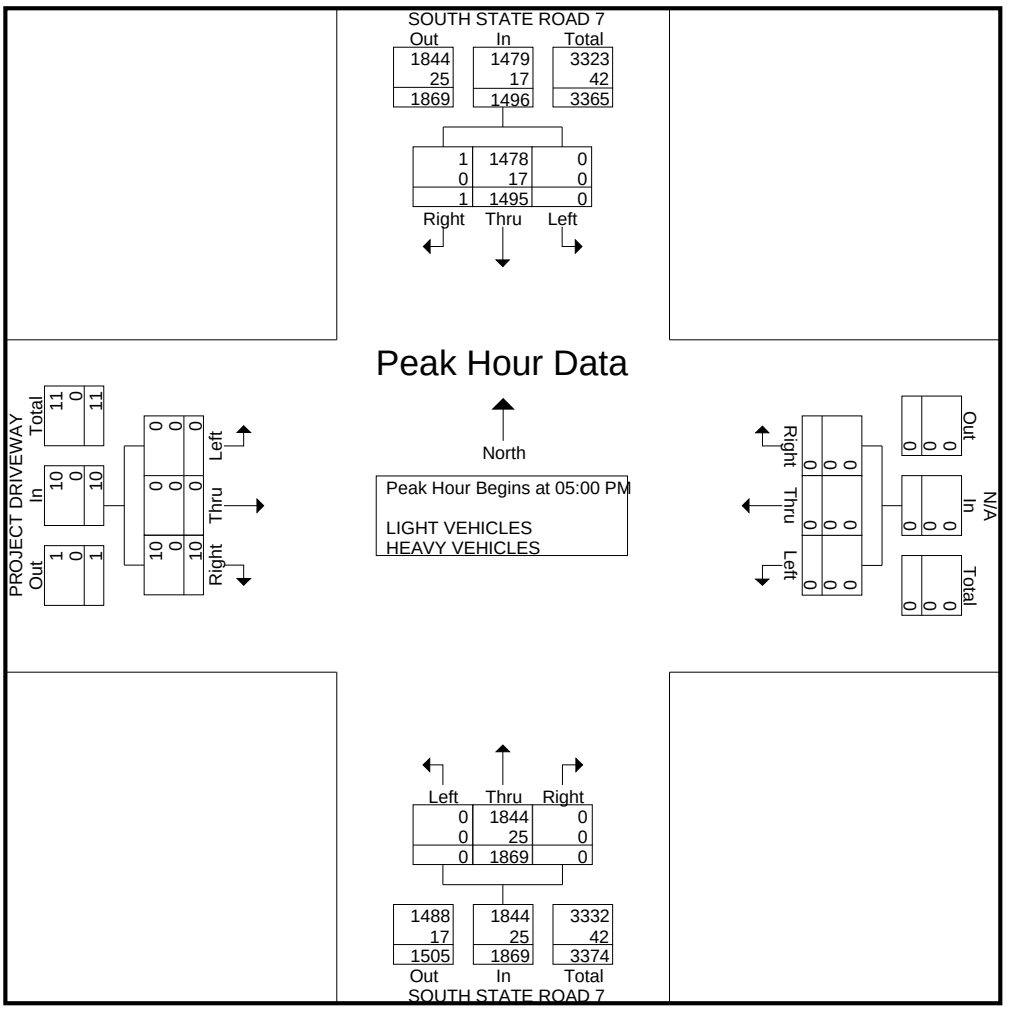


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PROJECT DRIVEWAY & SOUTH STATE ROAD 7
MARGATE, FLORIDA
VIDEO COUNT (south of SW 7th Street)
NOT SIGNALIZED

File Name : project driveway & SR 7
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	SOUTH STATE ROAD 7 From North					N/A From East					SOUTH STATE ROAD 7 From South					PROJECT DRIVEWAY From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	**400**	0	**400**	0	0	0	0	0	0	0	430	0	430	0	0	0	**4**	**4**	834
05:15 PM	0	0	366	0	366	0	0	0	0	0	0	0	**486**	0	**486**	0	0	0	4	4	**856**
05:30 PM	0	0	369	**1**	370	0	0	0	0	0	0	0	483	0	483	0	0	0	2	2	855
05:45 PM	0	0	360	0	360	0	0	0	0	0	0	0	470	0	470	0	0	0	0	0	830
Total Volume	0	0	1495	1	1496	0	0	0	0	0	0	0	1869	0	1869	0	0	0	10	10	3375
% App. Total	0	0	99.9	0.1		0	0	0	0		0	0	100	0		0	0	0	100		
PHF	.000	.000	.934	.250	.935	.000	.000	.000	.000	.000	.000	.000	.961	.000	.961	.000	.000	.000	.625	.625	.986
LIGHT VEHICLES			1478										1844								
% LIGHT VEHICLES	0	0	98.9	100	98.9	0	0	0	0	0	0	0	98.7	0	98.7	0	0	0	100	100	98.8
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	1.1	0	1.1	0	0	0	0	0	0	0	1.3	0	1.3	0	0	0	0	0	1.2



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PROJECT DRIVEWAY & SOUTH STATE ROAD 7
MARGATE, FLORIDA
VIDEO COUNT (south of SW 7th Street)
NOT SIGNALIZED

File Name : project driveway & SR 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	SOUTH STATE ROAD 7 From North				N/A From East				SOUTH STATE ROAD 7 From South				PROJECT DRIVEWAY From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
08:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	3
Grand Total	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0	5
Apprch %	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	
Total %	0	0	40	0	0	0	0	0	0	0	60	0	0	0	0	0	

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PROJECT DRIVEWAY & SOUTH STATE ROAD 7
MARGATE, FLORIDA
VIDEO COUNT (south of SW 7th Street)
NOT SIGNALIZED

File Name : project driveway & SR 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	SOUTH STATE ROAD 7 From North				N/A From East				SOUTH STATE ROAD 7 From South				PROJECT DRIVEWAY From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
07:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	0	0	0	0	0	0	0	0	2	0	4	0	7
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
04:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	4
Total	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	4
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Grand Total	1	0	0	0	2	0	0	0	0	0	0	0	5	0	5	0	13
Apprch %	100	0	0	0	100	0	0	0	0	0	0	0	50	0	50	0	
Total %	7.7	0	0	0	15.4	0	0	0	0	0	0	0	38.5	0	38.5	0	

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SW 7TH STREET & SW 61ST TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : sw 7 street & sw 61 terr
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

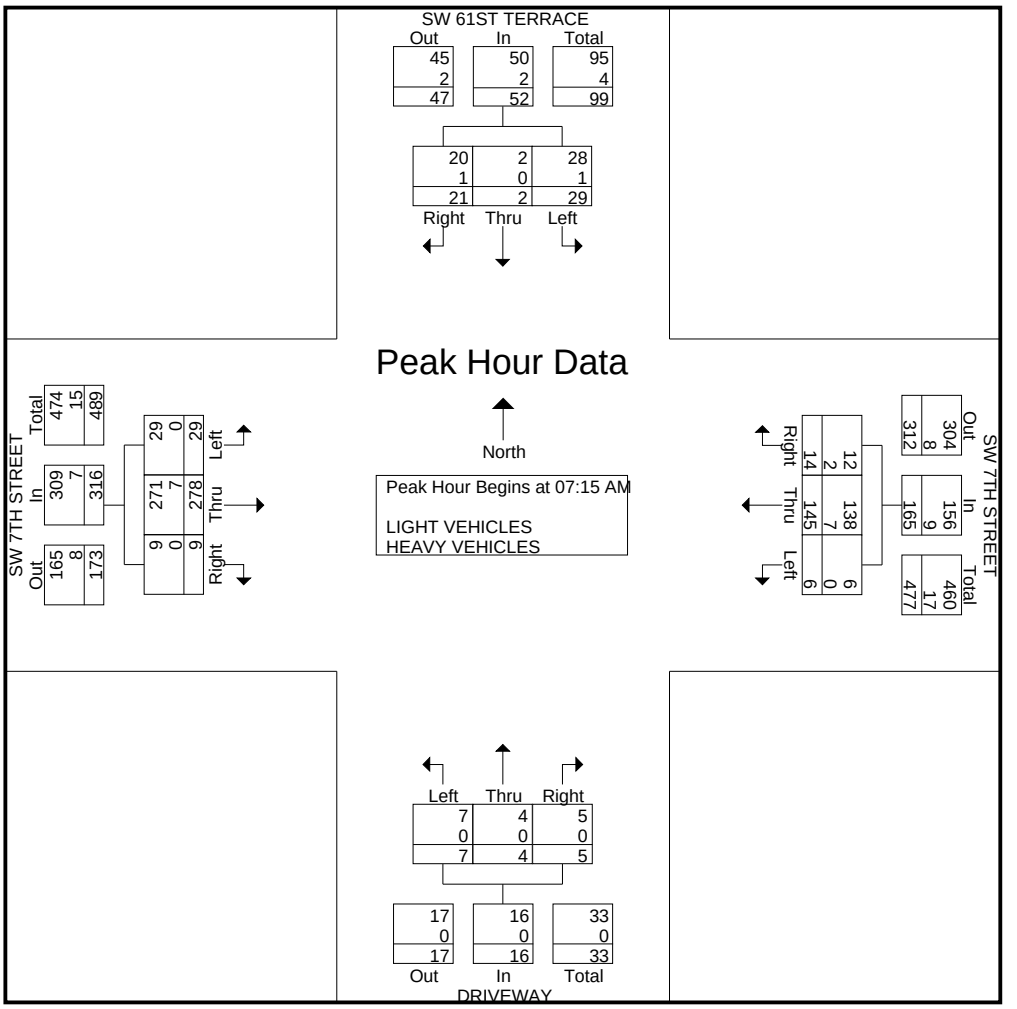
	SW 61ST TERRACE From North				SW 7TH STREET From East				DRIVEWAY From South				SW 7TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	4	0	2	0	0	21	5	0	1	0	2	0	2	47	2	86
07:15 AM	0	11	1	7	0	0	36	3	0	2	0	3	0	5	62	3	133
07:30 AM	0	4	0	4	0	3	35	1	0	2	1	0	0	5	85	1	141
07:45 AM	0	9	1	5	0	3	31	2	0	3	2	0	0	10	70	3	139
Total	0	28	2	18	0	6	123	11	0	8	3	5	0	22	264	9	499
08:00 AM	0	5	0	5	0	0	43	8	0	0	1	2	0	9	61	2	136
08:15 AM	0	8	0	7	0	3	34	9	0	0	1	2	0	9	43	3	119
08:30 AM	0	4	1	8	0	4	55	5	0	3	2	4	0	7	37	4	134
08:45 AM	0	9	0	6	0	4	54	4	0	1	2	3	0	8	50	5	146
Total	0	26	1	26	0	11	186	26	0	4	6	11	0	33	191	14	535
04:00 PM	0	4	0	8	0	3	54	8	0	3	1	6	0	7	24	4	122
04:15 PM	0	4	0	4	0	4	44	10	0	5	0	1	0	5	25	6	108
04:30 PM	0	4	4	9	0	2	59	5	0	8	0	4	0	8	35	0	138
04:45 PM	0	5	1	7	0	5	41	4	0	5	3	1	0	4	40	5	121
Total	0	17	5	28	0	14	198	27	0	21	4	12	0	24	124	15	489
05:00 PM	0	2	1	4	0	6	49	4	0	5	0	9	0	6	29	5	120
05:15 PM	0	4	3	8	0	5	54	5	0	4	2	2	0	5	37	1	130
05:30 PM	0	1	0	6	0	10	72	7	0	10	0	4	0	4	36	8	158
05:45 PM	0	3	0	2	0	4	71	10	0	11	1	4	0	8	38	7	159
Total	0	10	4	20	0	25	246	26	0	30	3	19	0	23	140	21	567
Grand Total	0	81	12	92	0	56	753	90	0	63	16	47	0	102	719	59	2090
Apprch %	0	43.8	6.5	49.7	0	6.2	83.8	10	0	50	12.7	37.3	0	11.6	81.7	6.7	
Total %	0	3.9	0.6	4.4	0	2.7	36	4.3	0	3	0.8	2.2	0	4.9	34.4	2.8	
LIGHT VEHICLES	0	78	12	88	0	56	737	86	0	63	16	47	0	102	699	59	2043
% LIGHT VEHICLES	0	96.3	100	95.7	0	100	97.9	95.6	0	100	100	100	0	100	97.2	100	97.8
HEAVY VEHICLES	0	3	0	4	0	0	16	4	0	0	0	0	0	0	20	0	47
% HEAVY VEHICLES	0	3.7	0	4.3	0	0	2.1	4.4	0	0	0	0	0	0	2.8	0	2.2

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SW 7TH STREET & SW 61ST TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : sw 7 street & sw 61 terr
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	SW 61ST TERRACE From North					SW 7TH STREET From East					DRIVEWAY From South					SW 7TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	**11**	**1**	**7**	**19**	0	0	36	3	39	0	2	0	**3**	**5**	0	5	62	**3**	70	133
07:30 AM	0	4	0	4	8	0	**3**	35	1	39	0	2	1	0	3	0	5	**85**	1	**91**	**141**
07:45 AM	0	9	1	5	15	0	3	31	2	36	0	**3**	**2**	0	5	0	**10**	70	3	83	139
08:00 AM	0	5	0	5	10	0	0	**43**	**8**	**51**	0	0	1	2	3	0	9	61	2	72	136
Total Volume	0	29	2	21	52	0	6	145	14	165	0	7	4	5	16	0	29	278	9	316	549
% App. Total	0	55.8	3.8	40.4		0	3.6	87.9	8.5		0	43.8	25	31.2		0	9.2	88	2.8		
PHF	.000	.659	.500	.750	.684	.000	.500	.843	.438	.809	.000	.583	.500	.417	.800	.000	.725	.818	.750	.868	.973
LIGHT VEHICLES																					
% LIGHT VEHICLES	0	96.6	100	95.2	96.2	0	100	95.2	85.7	94.5	0	100	100	100	100	0	100	97.5	100	97.8	96.7
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	3.4	0	4.8	3.8	0	0	4.8	14.3	5.5	0	0	0	0	0	0	0	2.5	0	2.2	3.3

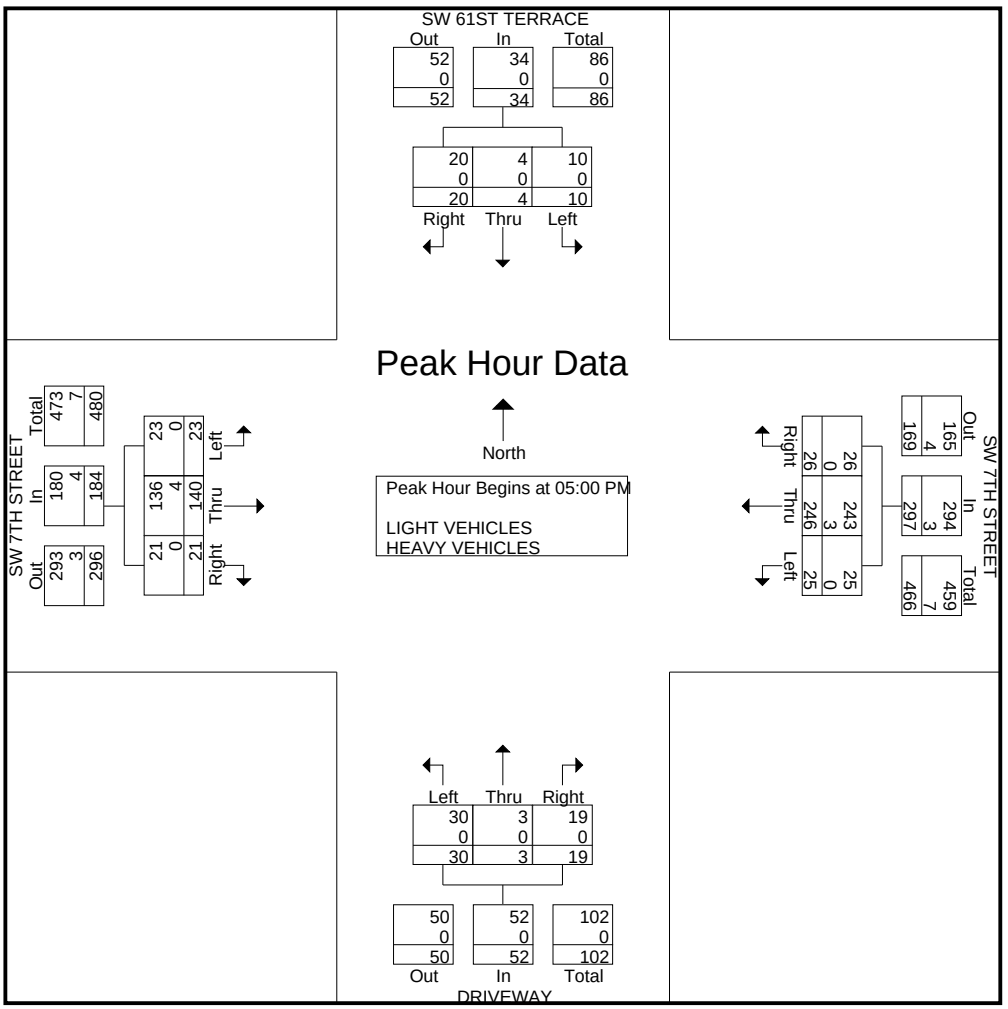


Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

SW 7TH STREET & SW 61ST TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : sw 7 street & sw 61 terr
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	SW 61ST TERRACE From North					SW 7TH STREET From East					DRIVEWAY From South					SW 7TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	2	1	4	7	0	6	49	4	59	0	5	0	**9**	14	0	6	29	5	40	120
05:15 PM	0	**4**	**3**	**8**	**15**	0	5	54	5	64	0	4	**2**	2	8	0	5	37	1	43	130
05:30 PM	0	1	0	6	7	0	**10**	**72**	7	**89**	0	10	0	4	14	0	4	36	**8**	48	158
05:45 PM	0	3	0	2	5	0	4	71	**10**	85	0	**11**	1	4	**16**	0	**8**	**38**	7	**53**	**159**
Total Volume	0	10	4	20	34	0	25	246	26	297	0	30	3	19	52	0	23	140	21	184	567
% App. Total	0	29.4	11.8	58.8		0	8.4	82.8	8.8		0	57.7	5.8	36.5		0	12.5	76.1	11.4		
PHF	.000	.625	.333	.625	.567	.000	.625	.854	.650	.834	.000	.682	.375	.528	.813	.000	.719	.921	.656	.868	.892
LIGHT VEHICLES																					
% LIGHT VEHICLES	0	100	100	100	100	0	100	98.8	100	99.0	0	100	100	100	100	0	100	97.1	100	97.8	98.8
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	0	0	0	0	0	1.2	0	1.0	0	0	0	0	0	0	0	2.9	0	2.2	1.2



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SW 7TH STREET & SW 61ST TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : sw 7 street & sw 61 terr
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	SW 61ST TERRACE From North				SW 7TH STREET From East				DRIVEWAY From South				SW 7TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
05:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
Total	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	3
Grand Total	0	0	1	1	0	0	0	0	0	0	1	0	0	1	0	0	4
Apprch %	0	0	50	50	0	0	0	0	0	0	100	0	0	100	0	0	
Total %	0	0	25	25	0	0	0	0	0	0	25	0	0	25	0	0	

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SW 7TH STREET & SW 61ST TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : sw 7 street & sw 61 terr
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	SW 61ST TERRACE From North				SW 7TH STREET From East				DRIVEWAY From South				SW 7TH STREET From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
07:30 AM	1	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Total	1	0	0	0	0	0	1	0	6	0	1	0	1	0	0	0	10
08:00 AM	0	0	0	0	0	0	0	0	3	0	2	0	1	0	0	0	6
08:15 AM	2	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	4
08:30 AM	2	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	6
08:45 AM	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	4
Total	5	0	0	0	7	0	0	0	5	0	2	0	1	0	0	0	20
04:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	1	0	1	0	0	0	1	0	3	0	1	0	0	0	0	0	7
04:30 PM	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	5
04:45 PM	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
Total	4	0	1	0	0	0	1	0	6	0	4	0	0	0	0	0	16
05:00 PM	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	3
05:15 PM	0	0	2	0	2	0	0	0	3	0	0	0	1	0	1	0	9
05:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
Total	0	0	2	0	4	0	0	0	7	0	0	0	2	0	1	0	16
Grand Total	10	0	3	0	11	0	2	0	24	0	7	0	4	0	1	0	62
Apprch %	76.9	0	23.1	0	84.6	0	15.4	0	77.4	0	22.6	0	80	0	20	0	
Total %	16.1	0	4.8	0	17.7	0	3.2	0	38.7	0	11.3	0	6.5	0	1.6	0	

Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

SW 7TH STREET & PROJECT DRIVEWAY
NORTH LAUDERDALE
VIDEO COUNT (550' west of SR7)
NOT SIGNALIZED

File Name : sw 7th street & project driveway
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

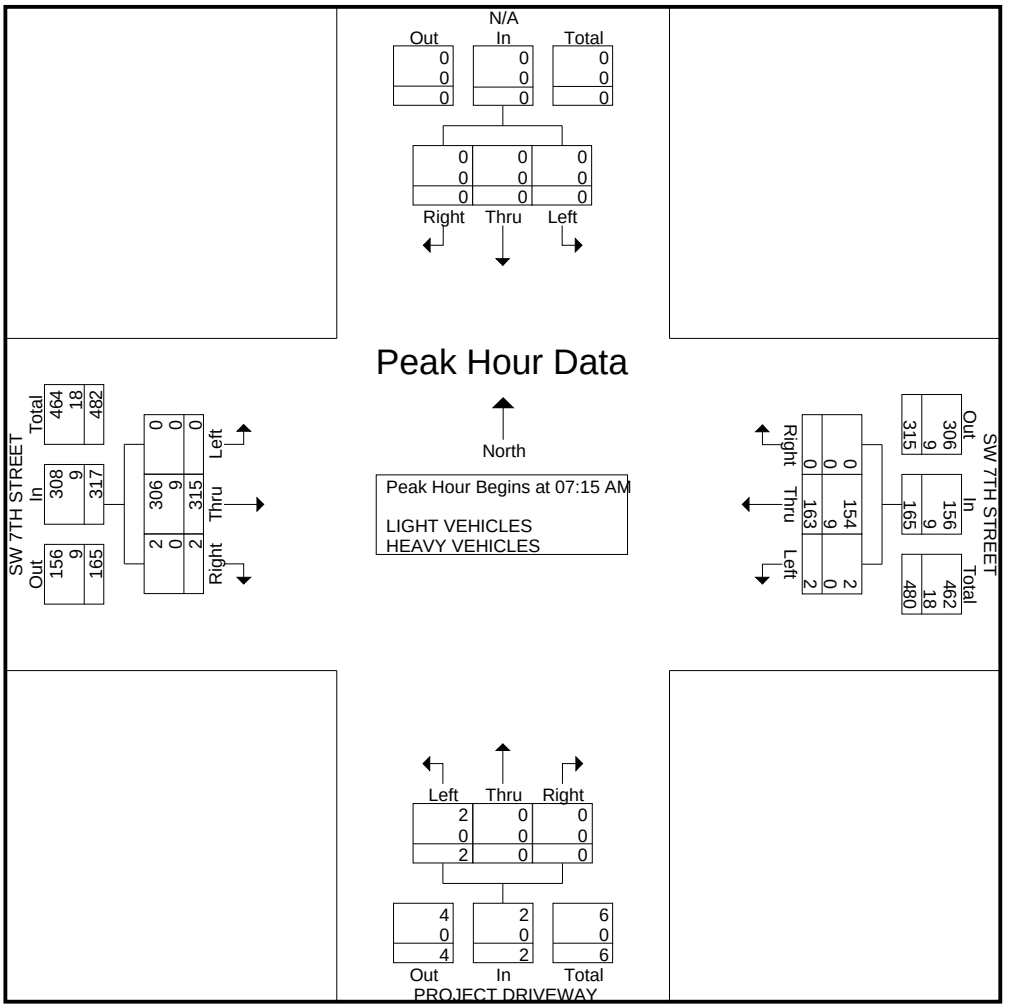
	N/A From North				SW 7TH STREET From East				PROJECT DRIVEWAY From South				SW 7TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	0	0	0	26	0	0	0	0	0	0	0	56	0	82
07:15 AM	0	0	0	0	0	0	39	0	0	0	0	0	0	0	76	0	115
07:30 AM	0	0	0	0	0	0	39	0	0	0	0	0	0	0	94	1	134
07:45 AM	0	0	0	0	0	0	36	0	0	0	0	0	0	0	80	0	116
Total	0	0	0	0	0	0	140	0	0	0	0	0	0	0	306	1	447
08:00 AM	0	0	0	0	0	2	49	0	0	2	0	0	0	0	65	1	119
08:15 AM	0	0	0	0	0	0	47	0	0	0	0	0	0	0	54	1	102
08:30 AM	0	0	0	0	0	0	64	0	0	0	0	0	0	0	42	3	109
08:45 AM	0	0	0	0	0	4	61	0	0	2	0	0	0	0	57	6	130
Total	0	0	0	0	0	6	221	0	0	4	0	0	0	0	218	11	460
04:00 PM	0	0	0	0	0	0	65	0	0	0	0	0	0	0	35	0	100
04:15 PM	0	0	0	0	0	1	58	0	0	0	0	0	0	0	28	1	88
04:30 PM	0	0	0	0	0	2	60	0	0	5	0	2	1	0	43	0	113
04:45 PM	0	0	0	0	0	0	51	0	0	1	0	4	0	0	46	0	102
Total	0	0	0	0	0	3	234	0	0	6	0	6	1	0	152	1	403
05:00 PM	0	0	0	0	0	0	57	0	0	1	0	0	0	0	39	1	98
05:15 PM	0	0	0	0	0	0	64	0	0	1	0	1	0	0	44	1	111
05:30 PM	0	0	0	0	0	0	89	0	0	1	0	1	0	0	42	0	133
05:45 PM	0	0	0	0	0	0	84	0	0	0	0	0	0	0	46	1	131
Total	0	0	0	0	0	0	294	0	0	3	0	2	0	0	171	3	473
Grand Total	0	0	0	0	0	9	889	0	0	13	0	8	1	0	847	16	1783
Apprch %	0	0	0	0	0	1	99	0	0	61.9	0	38.1	0.1	0	98	1.9	
Total %	0	0	0	0	0	0.5	49.9	0	0	0.7	0	0.4	0.1	0	47.5	0.9	
LIGHT VEHICLES	0	0	0	0	0	9	869	0	0	13	0	8	1	0	823	16	1739
% LIGHT VEHICLES	0	0	0	0	0	100	97.8	0	0	100	0	100	100	0	97.2	100	97.5
HEAVY VEHICLES	0	0	0	0	0	0	20	0	0	0	0	0	0	0	24	0	44
% HEAVY VEHICLES	0	0	0	0	0	0	2.2	0	0	0	0	0	0	0	2.8	0	2.5

Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

SW 7TH STREET & PROJECT DRIVEWAY
NORTH LAUDERDALE
VIDEO COUNT (550' west of SR7)
NOT SIGNALIZED

File Name : sw 7th street & project driveway
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	N/A From North					SW 7TH STREET From East					PROJECT DRIVEWAY From South					SW 7TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	0	0	0	0	0	0	39	0	39	0	0	0	0	0	0	0	76	0	76	115
07:30 AM	0	0	0	0	0	0	0	39	0	39	0	0	0	0	0	0	0	**94**	**1**	**95**	**134**
07:45 AM	0	0	0	0	0	0	0	36	0	36	0	0	0	0	0	0	0	80	0	80	116
08:00 AM	0	0	0	0	0	0	**2**	**49**	0	**51**	0	**2**	0	0	**2**	0	0	65	1	66	119
Total Volume	0	0	0	0	0	0	2	163	0	165	0	2	0	0	2	0	0	315	2	317	484
% App. Total	0	0	0	0		0	1.2	98.8	0		0	100	0	0		0	0	99.4	0.6		
PHF	.000	.000	.000	.000	.000	.000	.250	.832	.000	.809	.000	.250	.000	.000	.250	.000	.000	.838	.500	.834	.903
LIGHT VEHICLES																					
% LIGHT VEHICLES	0	0	0	0	0	0	100	94.5	0	94.5	0	100	0	0	100	0	0	97.1	100	97.2	96.3
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	0	0	0	0	0	5.5	0	5.5	0	0	0	0	0	0	0	2.9	0	2.8	3.7



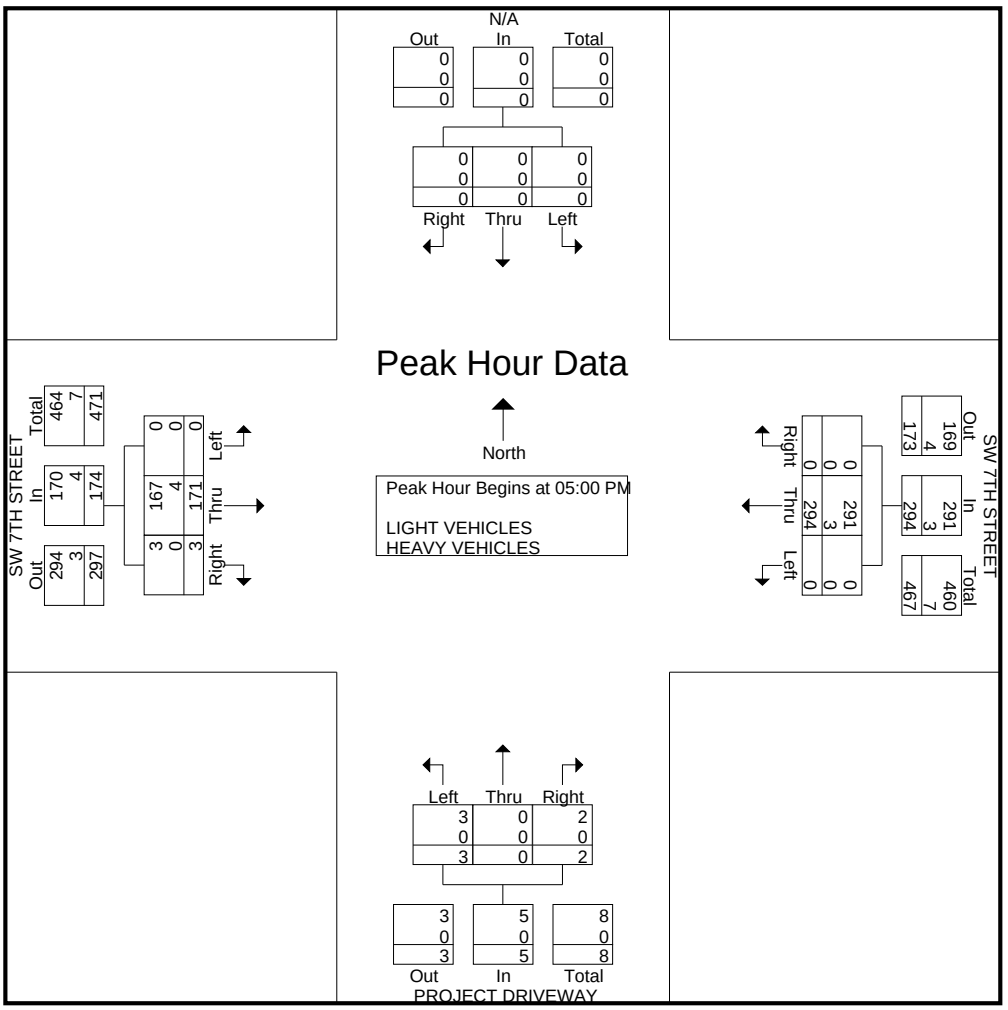
Traffic Survey Specialists, Inc.

85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

SW 7TH STREET & PROJECT DRIVEWAY
NORTH LAUDERDALE
VIDEO COUNT (550' west of SR7)
NOT SIGNALIZED

File Name : sw 7th street & project driveway
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	N/A From North					SW 7TH STREET From East					PROJECT DRIVEWAY From South					SW 7TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	0	0	57	0	57	0	**1**	0	0	1	0	0	39	**1**	40	98
05:15 PM	0	0	0	0	0	0	0	64	0	64	0	1	0	**1**	**2**	0	0	44	1	45	111
05:30 PM	0	0	0	0	0	0	0	**89**	0	**89**	0	1	0	1	2	0	0	42	0	42	**133**
05:45 PM	0	0	0	0	0	0	0	84	0	84	0	0	0	0	0	0	0	**46**	1	**47**	131
Total Volume	0	0	0	0	0	0	0	294	0	294	0	3	0	2	5	0	0	171	3	174	473
% App. Total	0	0	0	0		0	0	100	0		0	60	0	40		0	0	98.3	1.7		
PHF	.000	.000	.000	.000	.000	.000	.000	.826	.000	.826	.000	.750	.000	.500	.625	.000	.000	.929	.750	.926	.889
LIGHT VEHICLES																					
% LIGHT VEHICLES	0	0	0	0	0	0	0	99.0	0	99.0	0	100	0	100	100	0	0	97.7	100	97.7	98.5
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	0	0	0	0	0	1.0	0	1.0	0	0	0	0	0	0	0	2.3	0	2.3	1.5



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SW 7TH STREET & PROJECT DRIVEWAY
NORTH LAUDERDALE
VIDEO COUNT (550' west of SR7)
NOT SIGNALIZED

File Name : sw 7th street & project driveway
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	N/A From North				SW 7TH STREET From East				PROJECT DRIVEWAY From South				SW 7TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	3
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	5
Apprch %	0	0	0	0	0	0	0	0	0	100	0	0	0	0	100	0	
Total %	0	0	0	0	0	0	0	0	0	80	0	0	0	0	20	0	

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SW 7TH STREET & PROJECT DRIVEWAY
NORTH LAUDERDALE
VIDEO COUNT (550' west of SR7)
NOT SIGNALIZED

File Name : sw 7th street & project driveway
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	N/A From North				SW 7TH STREET From East				PROJECT DRIVEWAY From South				SW 7TH STREET From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:15 AM	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	4
07:30 AM	1	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	6
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	2	0	0	0	1	0	0	0	8	0	0	0	0	0	0	0	11
08:00 AM	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
08:30 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
Total	5	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	10
04:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	1	0	0	0	0	0	0	0	3	0	2	0	0	0	0	0	6
04:30 PM	2	0	0	0	0	0	0	0	3	0	3	0	1	0	0	0	9
04:45 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	6	0	0	0	0	0	0	0	6	0	5	0	1	0	0	0	18
05:15 PM	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	3
05:30 PM	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:45 PM	4	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	7
Total	6	0	3	0	0	0	0	0	4	0	0	0	0	0	0	0	13
Grand Total	19	0	3	0	1	0	0	0	23	0	5	0	1	0	0	0	52
Apprch %	86.4	0	13.6	0	100	0	0	0	82.1	0	17.9	0	100	0	0	0	
Total %	36.5	0	5.8	0	1.9	0	0	0	44.2	0	9.6	0	1.9	0	0	0	

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KIMBERLY BOULEVARD & SR 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : kimberly boulevard & sr 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

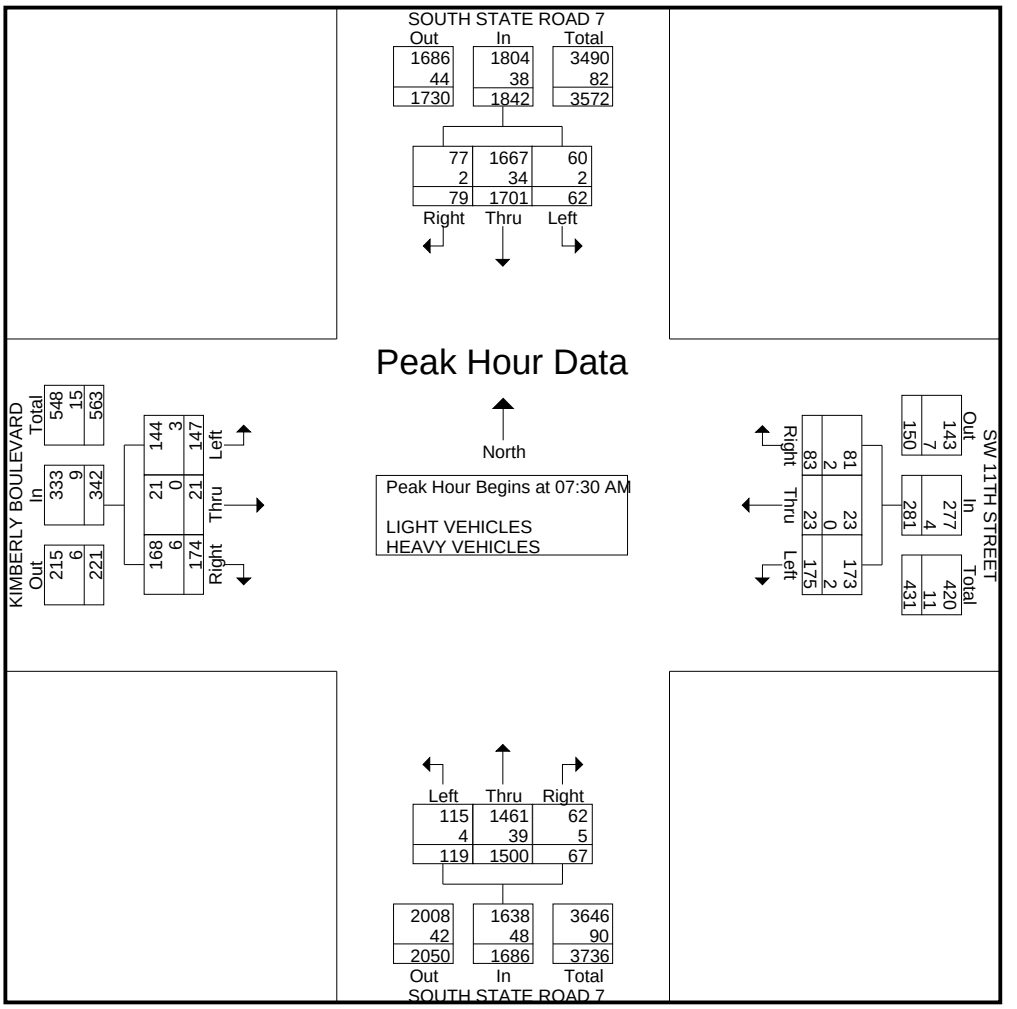
	SOUTH STATE ROAD 7 From North				SW 11TH STREET From East				SOUTH STATE ROAD 7 From South				KIMBERLY BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	5	2	348	21	0	36	3	21	1	18	265	11	1	21	2	38	793
07:15 AM	4	6	319	21	0	56	7	30	1	32	238	15	0	38	3	46	816
07:30 AM	6	9	463	28	0	41	5	29	1	25	335	14	0	42	5	60	1063
07:45 AM	5	7	442	16	0	41	7	15	0	32	403	15	1	22	3	39	1048
Total	20	24	1572	86	0	174	22	95	3	107	1241	55	2	123	13	183	3720
08:00 AM	4	15	372	19	0	56	8	22	0	32	349	19	1	56	11	39	1003
08:15 AM	4	12	424	16	0	37	3	17	2	27	413	19	1	24	2	36	1037
08:30 AM	6	13	390	19	0	45	9	13	0	33	340	14	1	24	4	42	953
08:45 AM	2	8	384	25	0	49	1	16	1	25	366	13	0	29	8	37	964
Total	16	48	1570	79	0	187	21	68	3	117	1468	65	3	133	25	154	3957
04:00 PM	2	13	309	29	0	31	7	10	5	37	383	53	0	44	5	35	963
04:15 PM	4	13	329	34	0	67	10	10	2	49	336	45	1	32	19	38	989
04:30 PM	3	5	338	40	0	36	12	17	3	59	362	38	1	27	15	41	997
04:45 PM	6	12	310	36	0	23	12	15	5	44	350	37	1	22	4	37	914
Total	15	43	1286	139	0	157	41	52	15	189	1431	173	3	125	43	151	3863
05:00 PM	5	18	298	32	0	30	13	14	4	65	397	42	1	38	13	48	1018
05:15 PM	11	9	341	32	0	35	12	16	3	53	420	41	0	33	13	53	1072
05:30 PM	9	7	336	34	0	23	10	11	3	57	497	40	1	31	16	54	1129
05:45 PM	5	12	301	46	0	38	18	11	5	82	426	47	4	31	18	63	1107
Total	30	46	1276	144	0	126	53	52	15	257	1740	170	6	133	60	218	4326
Grand Total	81	161	5704	448	0	644	137	267	36	670	5880	463	14	514	141	706	15866
Apprch %	1.3	2.5	89.2	7	0	61.5	13.1	25.5	0.5	9.5	83.4	6.6	1	37.4	10.3	51.3	
Total %	0.5	1	36	2.8	0	4.1	0.9	1.7	0.2	4.2	37.1	2.9	0.1	3.2	0.9	4.4	
LIGHT VEHICLES	79	150	5594	444	0	637	135	262	35	656	5758	452	13	509	140	684	15548
% LIGHT VEHICLES	97.5	93.2	98.1	99.1	0	98.9	98.5	98.1	97.2	97.9	97.9	97.6	92.9	99	99.3	96.9	98
HEAVY VEHICLES	2	11	110	4	0	7	2	5	1	14	122	11	1	5	1	22	318
% HEAVY VEHICLES	2.5	6.8	1.9	0.9	0	1.1	1.5	1.9	2.8	2.1	2.1	2.4	7.1	1	0.7	3.1	2

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KIMBERLY BOULEVARD & SR 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : kimberly boulevard & sr 7
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	SOUTH STATE ROAD 7 From North					SW 11TH STREET From East					SOUTH STATE ROAD 7 From South					KIMBERLY BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	**6**	9	**463**	**28**	**506**	0	41	5	**29**	75	1	25	335	14	375	0	42	5	**60**	**107**	**1063**
07:45 AM	5	7	442	16	470	0	41	7	15	63	0	**32**	403	15	450	**1**	22	3	39	65	1048
08:00 AM	4	**15**	372	19	410	0	**56**	**8**	22	**86**	0	32	349	**19**	400	1	**56**	**11**	39	107	1003
08:15 AM	4	12	424	16	456	0	37	3	17	57	**2**	27	**413**	19	**461**	1	24	2	36	63	1037
Total Volume	19	43	1701	79	1842	0	175	23	83	281	3	116	1500	67	1686	3	144	21	174	342	4151
% App. Total	1	2.3	92.3	4.3		0	62.3	8.2	29.5		0.2	6.9	89	4		0.9	42.1	6.1	50.9		
PHF	.792	.717	.918	.705	.910	.000	.781	.719	.716	.817	.375	.906	.908	.882	.914	.750	.643	.477	.725	.799	.976
LIGHT VEHICLES			1667										1461								
% LIGHT VEHICLES	100	95.3	98.0	97.5	97.9	0	98.9	100	97.6	98.6	66.7	97.4	97.4	92.5	97.2	66.7	98.6	100	96.6	97.4	97.6
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	4.7	2.0	2.5	2.1	0	1.1	0	2.4	1.4	33.3	2.6	2.6	7.5	2.8	33.3	1.4	0	3.4	2.6	2.4

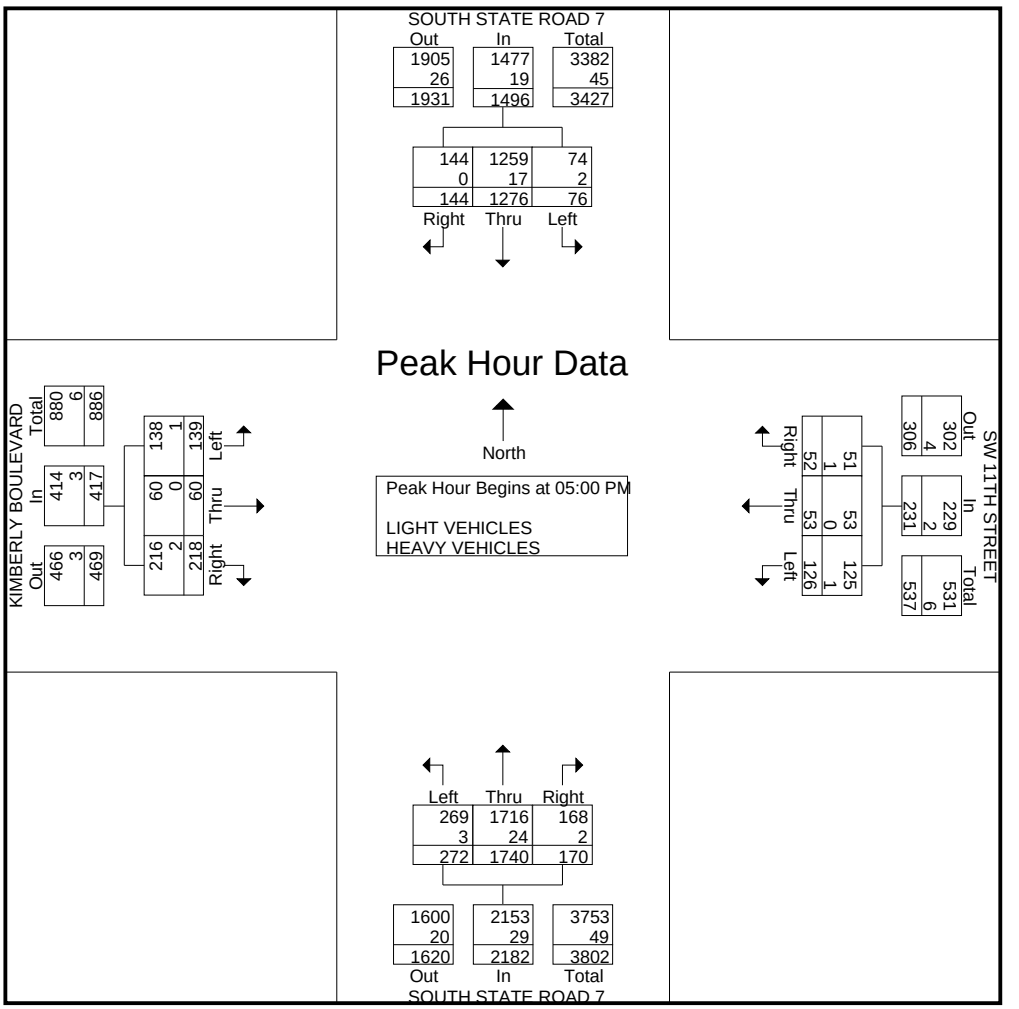


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KIMBERLY BOULEVARD & SR 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : kimberly boulevard & sr 7
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	SOUTH STATE ROAD 7 From North					SW 11TH STREET From East					SOUTH STATE ROAD 7 From South					KIMBERLY BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	5	**18**	298	32	353	0	30	13	14	57	4	65	397	42	508	1	**38**	13	48	100	1018
05:15 PM	**11**	9	**341**	32	**393**	0	35	12	**16**	63	3	53	420	41	517	0	33	13	53	99	1072
05:30 PM	9	7	336	34	386	0	23	10	11	44	3	57	**497**	40	**597**	1	31	16	54	102	**1129**
05:45 PM	5	12	301	**46**	364	0	**38**	**18**	11	**67**	**5**	**82**	426	**47**	560	**4**	31	**18**	**63**	**116**	1107
Total Volume	30	46	1276	144	1496	0	126	53	52	231	15	257	1740	170	2182	6	133	60	218	417	4326
% App. Total	2	3.1	85.3	9.6		0	54.5	22.9	22.5		0.7	11.8	79.7	7.8		1.4	31.9	14.4	52.3		
PHF	.682	.639	.935	.783	.952	.000	.829	.736	.813	.862	.750	.784	.875	.904	.914	.375	.875	.833	.865	.899	.958
LIGHT VEHICLES			1259										1716								
% LIGHT VEHICLES	100	95.7	98.7	100	98.7	0	99.2	100	98.1	99.1	100	98.8	98.6	98.8	98.7	100	99.2	100	99.1	99.3	98.8
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	4.3	1.3	0	1.3	0	0.8	0	1.9	0.9	0	1.2	1.4	1.2	1.3	0	0.8	0	0.9	0.7	1.2



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KIMBERLY BOULEVARD & SR 7
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VIDEO COUNT
SIGNALIZED

File Name : kimberly boulevard & sr 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	SOUTH STATE ROAD 7 From North				SW 11TH STREET From East				SOUTH STATE ROAD 7 From South				KIMBERLY BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
04:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	3
Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	3
Grand Total	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	4
Apprch %	0	0	100	0	0	0	0	0	0	0	100	0	0	0	100	0	
Total %	0	0	25	0	0	0	0	0	0	0	25	0	0	0	50	0	

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KIMBERLY BOULEVARD & SR 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : kimberly boulevard & sr 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	SOUTH STATE ROAD 7 From North				SW 11TH STREET From East				SOUTH STATE ROAD 7 From South				KIMBERLY BOULEVARD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	2	0	0	0	2	0	0	0	0	0	0	0	2	0	2	0	8
07:15 AM	2	0	0	0	1	0	1	0	2	0	0	0	4	0	1	0	11
07:30 AM	13	0	0	0	1	0	0	0	0	0	0	0	5	0	0	0	19
07:45 AM	7	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	10
Total	24	0	0	0	5	0	1	0	3	0	0	0	11	0	4	0	48
08:00 AM	5	0	1	0	5	0	0	0	1	0	0	0	5	0	1	0	18
08:15 AM	4	0	0	0	3	0	1	0	2	0	0	0	1	0	1	0	12
08:30 AM	8	0	0	0	4	0	0	0	2	0	0	0	6	0	4	0	24
08:45 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4
Total	20	0	1	0	12	0	1	0	5	0	0	0	12	0	7	0	58
04:00 PM	1	0	0	0	1	0	0	0	2	0	2	0	5	0	1	0	12
04:15 PM	2	0	0	0	0	0	1	0	4	0	0	0	2	0	0	0	9
04:30 PM	9	0	0	0	2	0	0	0	1	0	0	0	1	0	0	0	13
04:45 PM	2	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	7
Total	14	0	0	0	3	0	1	0	7	0	2	0	12	0	2	0	41
05:00 PM	8	0	0	0	0	0	1	0	3	0	0	0	3	0	0	0	15
05:15 PM	6	0	0	0	1	0	1	0	0	0	0	0	2	0	0	0	10
05:30 PM	4	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	9
05:45 PM	9	0	0	0	3	0	0	0	1	0	1	0	10	0	1	0	25
Total	27	0	0	0	4	0	2	0	4	0	1	0	19	0	2	0	59
Grand Total	85	0	1	0	24	0	5	0	19	0	3	0	54	0	15	0	206
Apprch %	98.8	0	1.2	0	82.8	0	17.2	0	86.4	0	13.6	0	78.3	0	21.7	0	
Total %	41.3	0	0.5	0	11.7	0	2.4	0	9.2	0	1.5	0	26.2	0	7.3	0	

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BOULEVARD OF CHAMPIONS & SR 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : boulevard of champions & sr 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

	SOUTH STATE ROAD 7 From North				CHURCH DRIVEWAY From East				SOUTH STATE ROAD 7 From South				BOULEVARD OF CHAMPIONS From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	1	1	361	29	0	1	0	0	11	35	249	2	1	32	0	59	782
07:15 AM	0	1	401	45	0	4	0	0	5	33	241	2	1	43	0	76	852
07:30 AM	2	2	462	53	0	9	2	0	5	66	354	3	1	30	0	74	1063
07:45 AM	3	1	444	70	0	1	1	0	2	83	374	5	2	47	0	70	1103
Total	6	5	1668	197	0	15	3	0	23	217	1218	12	5	152	0	279	3800
08:00 AM	8	1	421	60	0	1	3	0	10	45	339	5	2	43	0	70	1008
08:15 AM	4	1	456	54	0	1	0	0	4	42	422	0	2	25	0	64	1075
08:30 AM	6	0	426	52	0	2	1	1	4	49	342	1	2	47	1	58	992
08:45 AM	3	1	417	55	0	4	0	0	3	40	392	2	2	40	0	38	997
Total	21	3	1720	221	0	8	4	1	21	176	1495	8	8	155	1	230	4072
04:00 PM	10	0	301	47	0	3	1	0	3	62	370	1	2	61	0	56	917
04:15 PM	15	1	356	38	0	4	0	0	7	38	391	1	4	52	0	54	961
04:30 PM	14	1	379	58	0	0	1	0	10	64	376	1	3	54	1	66	1028
04:45 PM	11	0	298	45	0	2	0	0	2	65	398	0	1	64	2	65	953
Total	50	2	1334	188	0	9	2	0	22	229	1535	3	10	231	3	241	3859
05:00 PM	7	1	345	33	0	1	1	0	7	41	448	2	8	62	0	54	1010
05:15 PM	6	0	344	35	0	1	0	0	6	65	454	1	3	57	0	69	1041
05:30 PM	12	2	396	39	0	3	2	1	2	59	509	4	4	78	0	69	1180
05:45 PM	12	1	317	34	0	3	0	0	3	71	443	3	4	76	0	63	1030
Total	37	4	1402	141	0	8	3	1	18	236	1854	10	19	273	0	255	4261
Grand Total	114	14	6124	747	0	40	12	2	84	858	6102	33	42	811	4	1005	15992
Apprch %	1.6	0.2	87.5	10.7	0	74.1	22.2	3.7	1.2	12.1	86.2	0.5	2.3	43.6	0.2	54	
Total %	0.7	0.1	38.3	4.7	0	0.3	0.1	0	0.5	5.4	38.2	0.2	0.3	5.1	0	6.3	
LIGHT VEHICLES	114	12	6007	725	0	38	12	2	83	837	5977	33	42	787	4	974	15647
% LIGHT VEHICLES	100	85.7	98.1	97.1	0	95	100	100	98.8	97.6	98	100	100	97	100	96.9	97.8
HEAVY VEHICLES	0	2	117	22	0	2	0	0	1	21	125	0	0	24	0	31	345
% HEAVY VEHICLES	0	14.3	1.9	2.9	0	5	0	0	1.2	2.4	2	0	0	3	0	3.1	2.2

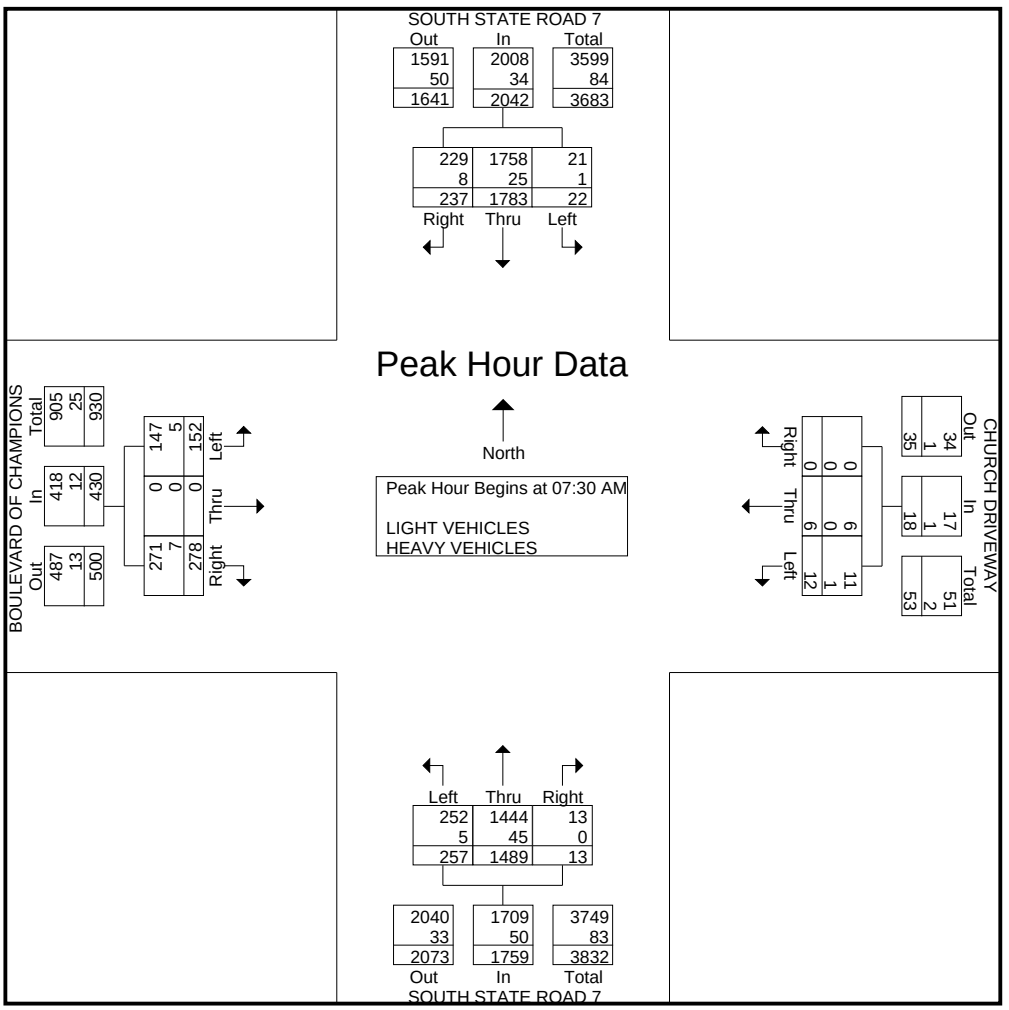
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BOULEVARD OF CHAMPIONS & SR 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : boulevard of champions & sr 7
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	SOUTH STATE ROAD 7 From North					CHURCH DRIVEWAY From East					SOUTH STATE ROAD 7 From South					BOULEVARD OF CHAMPIONS From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	2	**2**	**462**	53	**519**	0	**9**	2	0	**11**	5	66	354	3	428	1	30	0	**74**	105	1063
07:45 AM	3	1	444	**70**	518	0	1	1	0	2	2	**83**	374	**5**	464	**2**	**47**	0	70	**119**	**1103**
08:00 AM	**8**	1	421	60	490	0	1	**3**	0	4	**10**	45	339	5	399	2	43	0	70	115	1008
08:15 AM	4	1	456	54	515	0	1	0	0	1	4	42	**422**	0	**468**	2	25	0	64	91	1075
Total Volume	17	5	1783	237	2042	0	12	6	0	18	21	236	1489	13	1759	7	145	0	278	430	4249
% App. Total	0.8	0.2	87.3	11.6		0	66.7	33.3	0		1.2	13.4	84.7	0.7		1.6	33.7	0	64.7		
PHF	.531	.625	.965	.846	.984	.000	.333	.500	.000	.409	.525	.711	.882	.650	.940	.875	.771	.000	.939	.903	.963
LIGHT VEHICLES			1758										1444								
% LIGHT VEHICLES	100	80.0	98.6	96.6	98.3	0	91.7	100	0	94.4	100	97.9	97.0	100	97.2	100	96.6	0	97.5	97.2	97.7
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	20.0	1.4	3.4	1.7	0	8.3	0	0	5.6	0	2.1	3.0	0	2.8	0	3.4	0	2.5	2.8	2.3

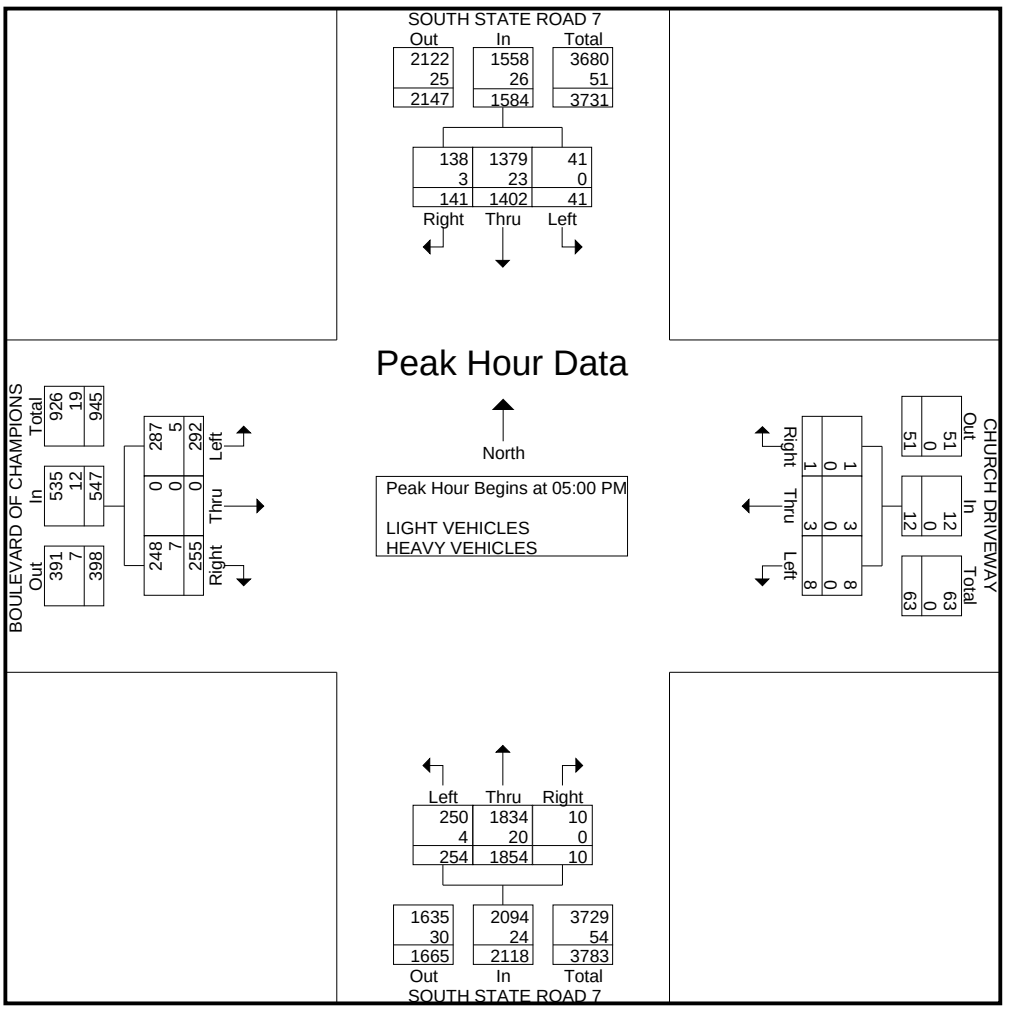


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BOULEVARD OF CHAMPIONS & SR 7
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File Name : boulevard of champions & sr 7
Site Code : 230081
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	SOUTH STATE ROAD 7 From North					CHURCH DRIVEWAY From East					SOUTH STATE ROAD 7 From South					BOULEVARD OF CHAMPIONS From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	7	1	345	33	386	0	1	1	0	2	**7**	41	448	2	498	**8**	62	0	54	124	1010
05:15 PM	6	0	344	35	385	0	1	0	0	1	6	65	454	1	526	3	57	0	**69**	129	1041
05:30 PM	**12**	**2**	**396**	**39**	**449**	0	**3**	**2**	**1**	**6**	2	59	**509**	**4**	**574**	4	**78**	0	69	**151**	**1180**
05:45 PM	12	1	317	34	364	0	3	0	0	3	3	**71**	443	3	520	4	76	0	63	143	1030
Total Volume	37	4	1402	141	1584	0	8	3	1	12	18	236	1854	10	2118	19	273	0	255	547	4261
% App. Total	2.3	0.3	88.5	8.9		0	66.7	25	8.3		0.8	11.1	87.5	0.5		3.5	49.9	0	46.6		
PHF	.771	.500	.885	.904	.882	.000	.667	.375	.250	.500	.643	.831	.911	.625	.922	.594	.875	.000	.924	.906	.903
LIGHT VEHICLES			1379										1834								
% LIGHT VEHICLES	100	100	98.4	97.9	98.4	0	100	100	100	100	100	98.3	98.9	100	98.9	100	98.2	0	97.3	97.8	98.5
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	1.6	2.1	1.6	0	0	0	0	0	0	1.7	1.1	0	1.1	0	1.8	0	2.7	2.2	1.5



Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

BOULEVARD OF CHAMPIONS & SR 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : boulevard of champions & sr 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	SOUTH STATE ROAD 7 From North				CHURCH DRIVEWAY From East				SOUTH STATE ROAD 7 From South				BOULEVARD OF CHAMPIONS From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
04:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	6
Apprch %	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	
Total %	0	0	50	0	0	0	0	0	0	0	50	0	0	0	0	0	

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BOULEVARD OF CHAMPIONS & SR 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : boulevard of champions & sr 7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	SOUTH STATE ROAD 7 From North				CHURCH DRIVEWAY From East				SOUTH STATE ROAD 7 From South				BOULEVARD OF CHAMPIONS From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	4	0	0	0	3	0	0	0	0	0	0	0	5	0	1	0	13
07:15 AM	4	0	0	0	2	0	1	0	0	0	0	0	2	0	2	0	11
07:30 AM	3	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	7
07:45 AM	2	0	0	0	1	0	0	0	0	0	0	0	2	0	2	0	7
Total	13	0	0	0	6	0	1	0	0	0	0	0	12	0	6	0	38
08:00 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:15 AM	3	0	0	0	4	0	0	0	0	0	0	0	4	0	1	0	12
08:30 AM	1	0	0	0	2	0	1	0	0	0	0	0	2	0	2	0	8
08:45 AM	2	0	1	0	2	0	0	0	0	0	0	0	1	0	3	0	9
Total	9	0	1	0	8	0	1	0	0	0	0	0	7	0	6	0	32
04:00 PM	2	0	0	0	1	0	1	0	0	0	0	0	1	0	4	0	9
04:15 PM	0	0	0	0	6	0	0	0	2	0	0	0	4	0	0	0	12
04:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	4	0	1	0	7
04:45 PM	2	0	0	0	2	0	0	0	0	0	0	0	1	0	1	0	6
Total	4	0	0	0	11	0	1	0	2	0	0	0	10	0	6	0	34
05:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	3
05:15 PM	1	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	4
05:30 PM	0	0	0	0	1	0	1	0	0	0	0	0	3	0	2	0	7
05:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	2	0	3	0	6
Total	2	0	0	0	5	0	1	0	0	0	0	0	6	0	6	0	20
Grand Total	28	0	1	0	30	0	4	0	2	0	0	0	35	0	24	0	124
Apprch %	96.6	0	3.4	0	88.2	0	11.8	0	100	0	0	0	59.3	0	40.7	0	
Total %	22.6	0	0.8	0	24.2	0	3.2	0	1.6	0	0	0	28.2	0	19.4	0	

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SW 17TH STREET & SOUTH STATE ROAD 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : sw 17 street & sr7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

	SOUTH STATE ROAD 7 From North				W MCNAB ROAD ON/OFF RAMP From East				SOUTH STATE ROAD 7 From South				SW 17TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	3	87	331	14	0	5	1	37	1	12	224	47	0	12	11	13	798
07:15 AM	2	93	352	14	0	8	2	31	8	5	217	47	0	25	13	16	833
07:30 AM	4	108	357	22	0	23	0	66	2	11	314	34	0	32	11	24	1008
07:45 AM	5	71	350	8	0	60	0	75	5	5	278	40	0	32	10	28	967
Total	14	359	1390	58	0	96	3	209	16	33	1033	168	0	101	45	81	3606
08:00 AM	4	71	490	22	1	48	1	58	3	5	340	48	0	19	7	21	1138
08:15 AM	2	80	434	7	0	46	1	65	2	6	361	57	0	15	2	16	1094
08:30 AM	5	72	361	13	0	77	0	54	1	8	275	48	0	16	3	12	945
08:45 AM	5	67	406	6	1	57	1	56	7	6	366	83	0	18	6	14	1099
Total	16	290	1691	48	2	228	3	233	13	25	1342	236	0	68	18	63	4276
04:00 PM	13	41	288	25	0	9	0	31	2	10	352	23	0	18	2	10	824
04:15 PM	6	38	326	28	0	14	0	35	3	14	366	15	0	15	7	14	881
04:30 PM	13	62	345	32	0	14	0	41	1	11	373	14	0	26	4	12	948
04:45 PM	6	46	318	22	0	8	2	33	1	9	364	19	0	25	3	24	880
Total	38	187	1277	107	0	45	2	140	7	44	1455	71	0	84	16	60	3533
05:00 PM	6	42	328	37	0	13	0	33	3	12	469	15	0	16	4	12	990
05:15 PM	10	65	328	21	0	12	0	37	2	12	422	22	0	15	8	14	968
05:30 PM	16	42	386	31	0	15	0	35	1	22	488	12	0	16	2	10	1076
05:45 PM	9	48	295	21	0	18	0	52	7	19	453	23	1	32	8	12	998
Total	41	197	1337	110	0	58	0	157	13	65	1832	72	1	79	22	48	4032
Grand Total	109	1033	5695	323	2	427	8	739	49	167	5662	547	1	332	101	252	15447
Apprch %	1.5	14.4	79.5	4.5	0.2	36.3	0.7	62.8	0.8	2.6	88.1	8.5	0.1	48.4	14.7	36.7	
Total %	0.7	6.7	36.9	2.1	0	2.8	0.1	4.8	0.3	1.1	36.7	3.5	0	2.1	0.7	1.6	
LIGHT VEHICLES	109	1016	5574	312	2	423	8	723	49	162	5551	536	1	323	99	245	15133
% LIGHT VEHICLES	100	98.4	97.9	96.6	100	99.1	100	97.8	100	97	98	98	100	97.3	98	97.2	98
HEAVY VEHICLES	0	17	121	11	0	4	0	16	0	5	111	11	0	9	2	7	314
% HEAVY VEHICLES	0	1.6	2.1	3.4	0	0.9	0	2.2	0	3	2	2	0	2.7	2	2.8	2

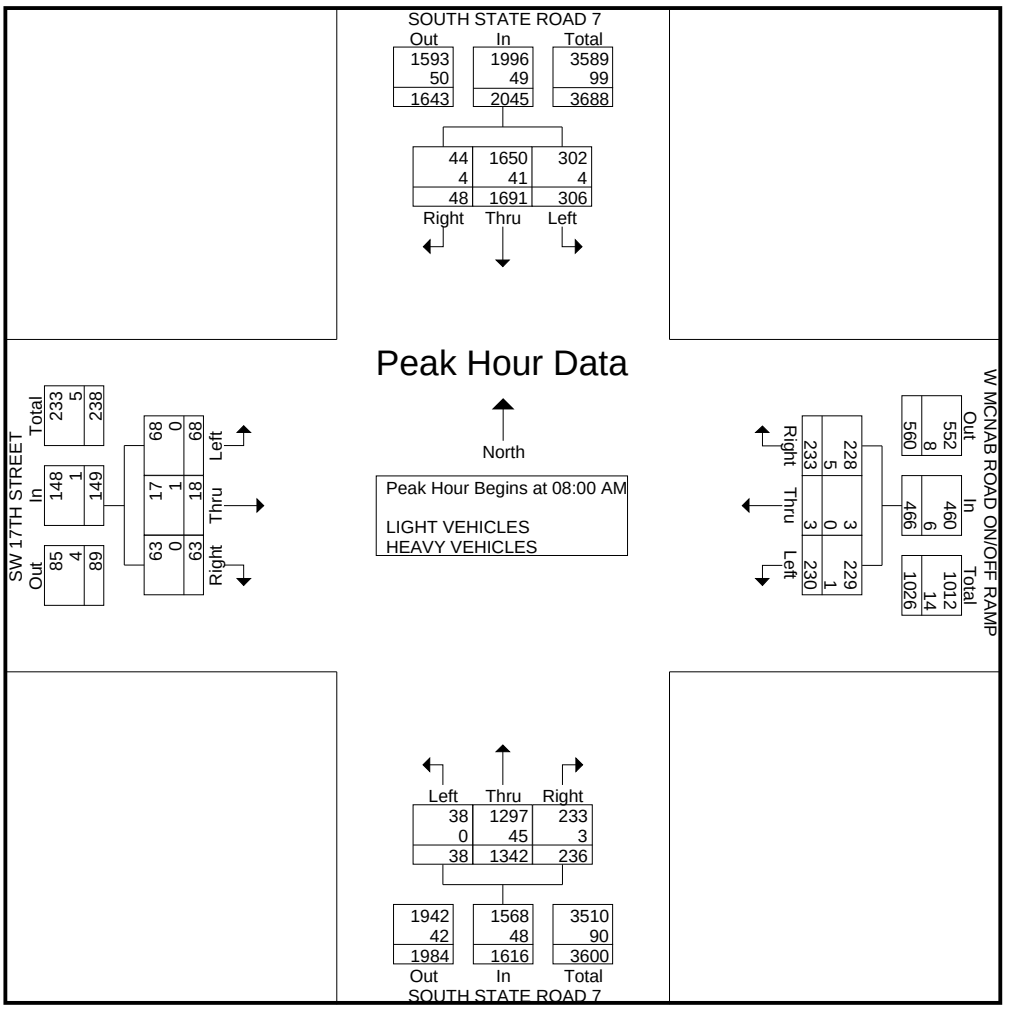
Traffic Survey Specialists, Inc.

85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

SW 17TH STREET & SOUTH STATE ROAD 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : sw 17 street & sr7
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	SOUTH STATE ROAD 7 From North					W MCNAB ROAD ON/OFF RAMP From East					SOUTH STATE ROAD 7 From South					SW 17TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	4	71	**490**	**22**	**587**	**1**	48	**1**	58	108	3	5	340	48	396	0	**19**	**7**	**21**	**47**	**1138**
08:15 AM	2	**80**	434	7	523	0	46	1	**65**	112	2	6	361	57	426	0	15	2	16	33	1094
08:30 AM	**5**	72	361	13	451	0	**77**	0	54	**131**	1	**8**	275	48	332	0	16	3	12	31	945
08:45 AM	5	67	406	6	484	1	57	1	56	115	**7**	6	**366**	**83**	**462**	0	18	6	14	38	1099
Total Volume	16	290	1691	48	2045	2	228	3	233	466	13	25	1342	236	1616	0	68	18	63	149	4276
% App. Total	0.8	14.2	82.7	2.3		0.4	48.9	0.6	50		0.8	1.5	83	14.6		0	45.6	12.1	42.3		
PHF	.800	.906	.863	.545	.871	.500	.740	.750	.896	.889	.464	.781	.917	.711	.874	.000	.895	.643	.750	.793	.939
LIGHT VEHICLES			1650										1297								
% LIGHT VEHICLES	100	98.6	97.6	91.7	97.6	100	99.6	100	97.9	98.7	100	100	96.6	98.7	97.0	0	100	94.4	100	99.3	97.6
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	1.4	2.4	8.3	2.4	0	0.4	0	2.1	1.3	0	0	3.4	1.3	3.0	0	0	5.6	0	0.7	2.4

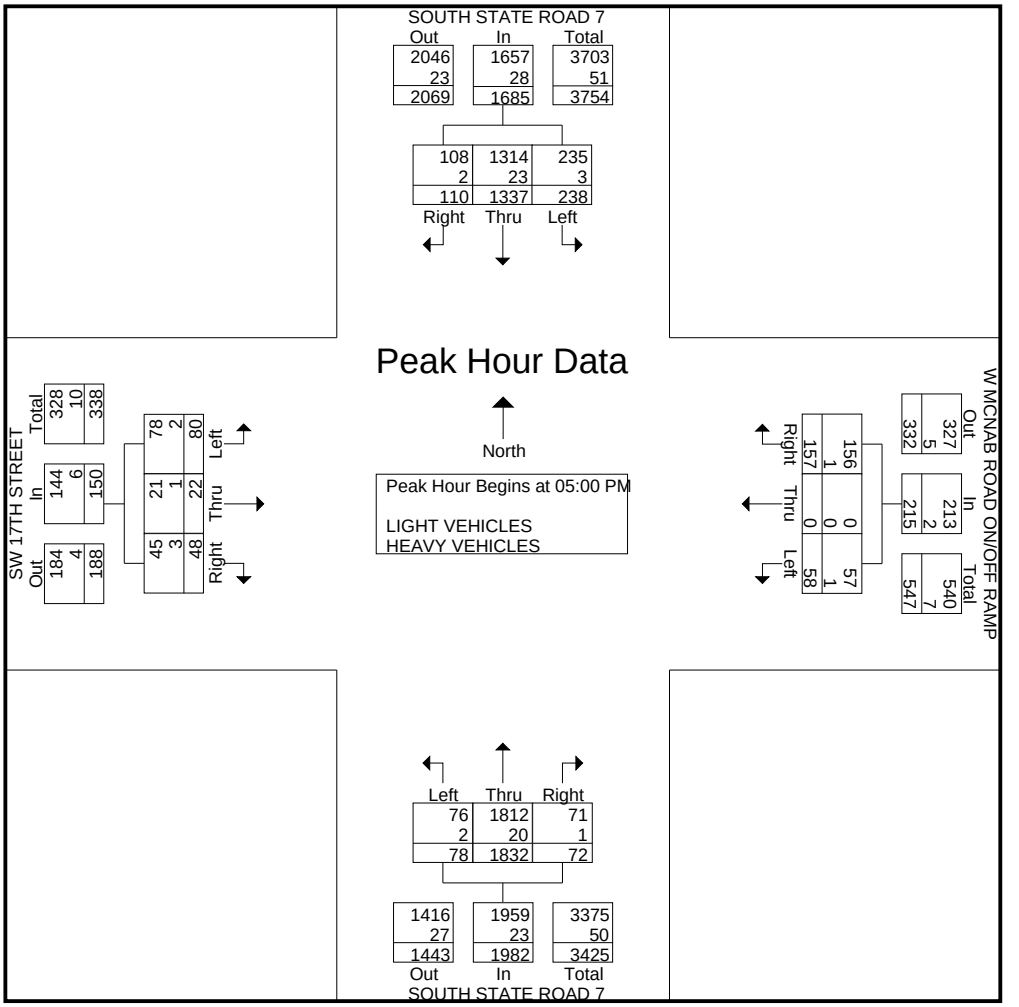


Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

SW 17TH STREET & SOUTH STATE ROAD 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : sw 17 street & sr7
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	SOUTH STATE ROAD 7 From North					W MCNAB ROAD ON/OFF RAMP From East					SOUTH STATE ROAD 7 From South					SW 17TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	6	42	328	**37**	413	0	13	0	33	46	3	12	469	15	499	0	16	4	12	32	990
05:15 PM	10	**65**	328	21	424	0	12	0	37	49	2	12	422	22	458	0	15	**8**	**14**	37	968
05:30 PM	**16**	42	**386**	31	**475**	0	15	0	35	50	1	**22**	**488**	12	**523**	0	16	2	10	28	**1076**
05:45 PM	9	48	295	21	373	0	**18**	0	**52**	**70**	**7**	19	453	**23**	502	**1**	**32**	8	12	**53**	998
Total Volume	41	197	1337	110	1685	0	58	0	157	215	13	65	1832	72	1982	1	79	22	48	150	4032
% App. Total	2.4	11.7	79.3	6.5		0	27	0	73		0.7	3.3	92.4	3.6		0.7	52.7	14.7	32		
PHF	.641	.758	.866	.743	.887	.000	.806	.000	.755	.768	.464	.739	.939	.783	.947	.250	.617	.688	.857	.708	.937
LIGHT VEHICLES			1314										1812								
% LIGHT VEHICLES	100	98.5	98.3	98.2	98.3	0	98.3	0	99.4	99.1	100	96.9	98.9	98.6	98.8	100	97.5	95.5	93.8	96.0	98.5
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	1.5	1.7	1.8	1.7	0	1.7	0	0.6	0.9	0	3.1	1.1	1.4	1.2	0	2.5	4.5	6.3	4.0	1.5



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SW 17TH STREET & SOUTH STATE ROAD 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : sw 17 street & sr7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	SOUTH STATE ROAD 7 From North				W MCNAB ROAD ON/OFF RAMP From East				SOUTH STATE ROAD 7 From South				SW 17TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
08:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
04:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	1	5
Apprch %	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	100	
Total %	0	0	60	0	0	0	0	0	0	0	20	0	0	0	0	20	

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SW 17TH STREET & SOUTH STATE ROAD 7
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : sw 17 street & sr7
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	SOUTH STATE ROAD 7 From North				W MCNAB ROAD ON/OFF RAMP From East				SOUTH STATE ROAD 7 From South				SW 17TH STREET From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	6
07:15 AM	4	0	0	0	1	0	1	0	0	0	0	0	2	0	1	0	9
07:30 AM	3	0	0	0	0	0	1	0	0	0	0	0	2	0	1	0	7
07:45 AM	4	0	1	0	2	0	0	0	0	0	0	0	4	0	1	0	12
Total	12	0	1	0	3	0	2	0	0	0	0	0	11	0	5	0	34
08:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	3
08:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	1	0	2	0	5
08:45 AM	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	4
Total	1	0	1	0	2	0	4	0	0	0	0	0	3	0	3	0	14
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
04:15 PM	3	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	7
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	4
Total	3	0	0	0	1	0	1	0	0	0	0	0	6	0	2	0	13
05:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	4
05:15 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total	0	0	0	0	1	0	3	0	0	0	0	0	3	0	3	0	10
Grand Total	16	0	2	0	7	0	10	0	0	0	0	0	23	0	13	0	71
Apprch %	88.9	0	11.1	0	41.2	0	58.8	0	0	0	0	0	63.9	0	36.1	0	
Total %	22.5	0	2.8	0	9.9	0	14.1	0	0	0	0	0	32.4	0	18.3	0	

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SOUTHGATE BOULEVARD & ROCK ISLAND ROAD
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : southgate & rock island
Site Code : 230081
Start Date : 5/9/2023
Page No : 1

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

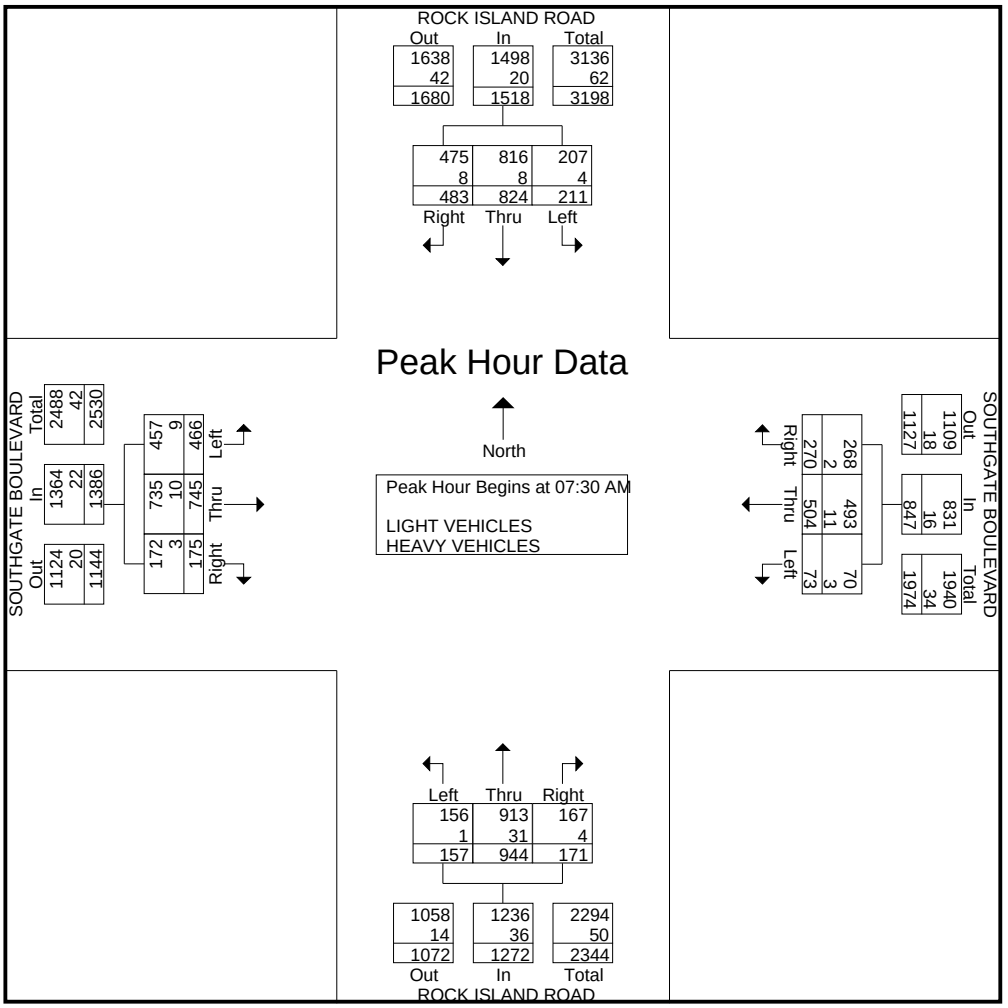
	ROCK ISLAND ROAD From North				SOUTHGATE BOULEVARD From East				ROCK ISLAND ROAD From South				SOUTHGATE BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	39	156	77	0	14	102	66	0	34	186	38	0	120	152	34	1018
07:15 AM	0	49	185	99	0	15	137	92	0	30	217	35	0	104	180	44	1187
07:30 AM	0	63	195	122	0	23	153	90	0	41	195	46	0	132	222	36	1318
07:45 AM	0	59	226	145	0	19	131	60	0	45	267	39	0	119	146	45	1301
Total	0	210	762	443	0	71	523	308	0	150	865	158	0	475	700	159	4824
08:00 AM	0	49	199	96	0	5	93	58	0	43	232	28	0	92	182	56	1133
08:15 AM	0	40	204	120	0	26	127	62	1	27	250	58	0	123	195	38	1271
08:30 AM	0	38	177	107	0	15	119	63	0	38	256	43	0	100	143	35	1134
08:45 AM	0	48	166	117	0	13	101	82	1	26	243	36	0	134	180	40	1187
Total	0	175	746	440	0	59	440	265	2	134	981	165	0	449	700	169	4725
04:00 PM	2	48	189	127	0	13	113	46	2	24	148	35	0	95	111	46	999
04:15 PM	0	49	239	145	0	28	104	39	1	34	209	39	0	110	123	41	1161
04:30 PM	0	41	220	152	0	30	158	43	0	36	207	36	1	89	130	53	1196
04:45 PM	0	36	187	122	0	24	138	56	0	33	197	19	0	108	128	50	1098
Total	2	174	835	546	0	95	513	184	3	127	761	129	1	402	492	190	4454
05:00 PM	0	52	220	157	0	26	103	46	1	40	198	38	2	87	90	45	1105
05:15 PM	1	40	200	157	0	29	165	64	3	43	212	32	1	93	144	53	1237
05:30 PM	0	31	242	158	0	31	147	54	0	41	214	35	0	103	137	60	1253
05:45 PM	1	50	231	129	0	25	134	58	0	47	261	26	3	99	110	35	1209
Total	2	173	893	601	0	111	549	222	4	171	885	131	6	382	481	193	4804
Grand Total	4	732	3236	2030	0	336	2025	979	9	582	3492	583	7	1708	2373	711	18807
Apprch %	0.1	12.2	53.9	33.8	0	10.1	60.6	29.3	0.2	12.5	74.8	12.5	0.1	35.6	49.4	14.8	
Total %	0	3.9	17.2	10.8	0	1.8	10.8	5.2	0	3.1	18.6	3.1	0	9.1	12.6	3.8	
LIGHT VEHICLES	4	722	3199	2004	0	331	1996	968	9	576	3415	571	7	1674	2340	696	18512
% LIGHT VEHICLES	100	98.6	98.9	98.7	0	98.5	98.6	98.9	100	99	97.8	97.9	100	98	98.6	97.9	98.4
HEAVY VEHICLES	0	10	37	26	0	5	29	11	0	6	77	12	0	34	33	15	295
% HEAVY VEHICLES	0	1.4	1.1	1.3	0	1.5	1.4	1.1	0	1	2.2	2.1	0	2	1.4	2.1	1.6

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Phone (561) 272-3255

SOUTHGATE BOULEVARD & ROCK ISLAND ROAD
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : southgate & rock island
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	ROCK ISLAND ROAD From North					SOUTHGATE BOULEVARD From East					ROCK ISLAND ROAD From South					SOUTHGATE BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	**63**	195	122	380	0	23	**153**	**90**	**266**	0	41	195	46	282	0	**132**	**222**	36	**390**	**1318**
07:45 AM	0	59	**226**	**145**	**430**	0	19	131	60	210	0	**45**	**267**	39	**351**	0	119	146	45	310	1301
08:00 AM	0	49	199	96	344	0	5	93	58	156	0	43	232	28	303	0	92	182	**56**	330	1133
08:15 AM	0	40	204	120	364	0	**26**	127	62	215	**1**	27	250	**58**	336	0	123	195	38	356	1271
Total Volume	0	211	824	483	1518	0	73	504	270	847	1	156	944	171	1272	0	466	745	175	1386	5023
% App. Total	0	13.9	54.3	31.8		0	8.6	59.5	31.9		0.1	12.3	74.2	13.4		0	33.6	53.8	12.6		
PHF	.000	.837	.912	.833	.883	.000	.702	.824	.750	.796	.250	.867	.884	.737	.906	.000	.883	.839	.781	.888	.953
LIGHT VEHICLES																					
% LIGHT VEHICLES	0	98.1	99.0	98.3	98.7	0	95.9	97.8	99.3	98.1	100	99.4	96.7	97.7	97.2	0	98.1	98.7	98.3	98.4	98.1
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	1.9	1.0	1.7	1.3	0	4.1	2.2	0.7	1.9	0	0.6	3.3	2.3	2.8	0	1.9	1.3	1.7	1.6	1.9

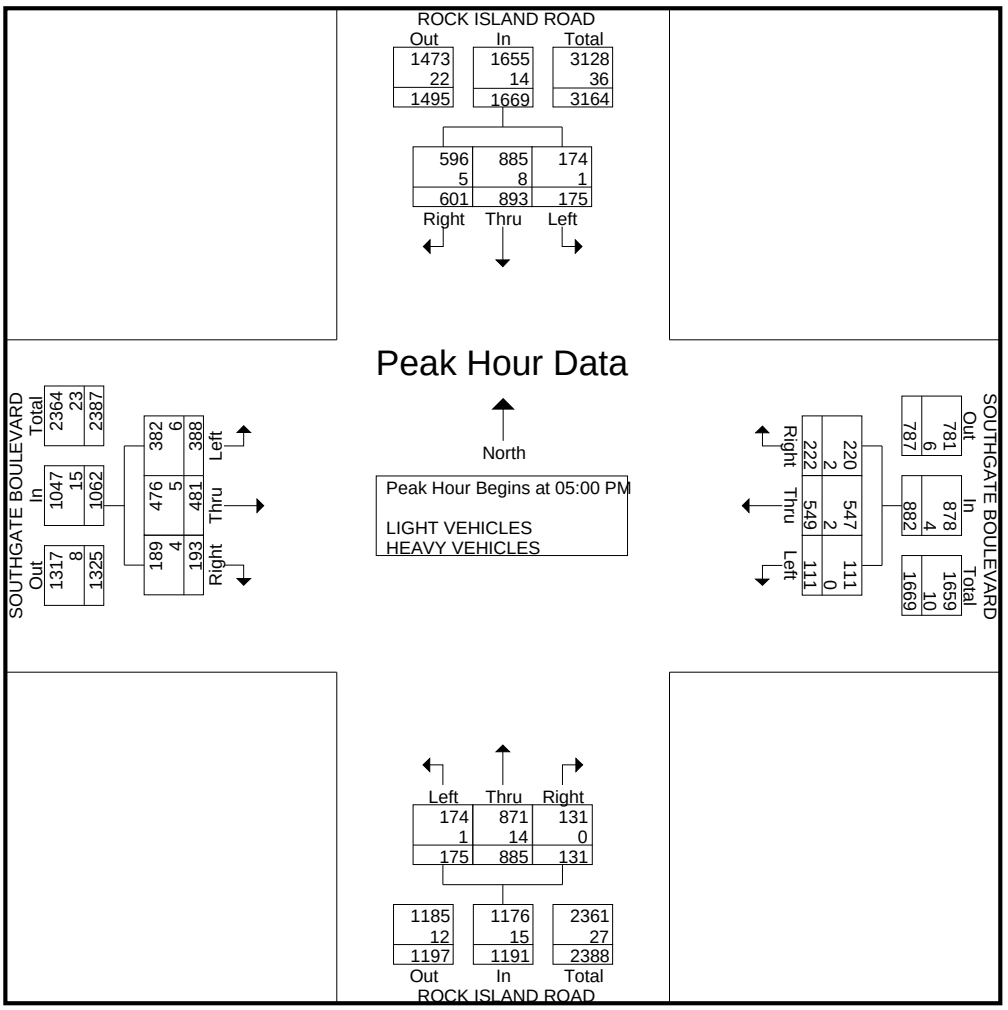


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SOUTHGATE BOULEVARD & ROCK ISLAND ROAD
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : southgate & rock island
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	ROCK ISLAND ROAD From North					SOUTHGATE BOULEVARD From East					ROCK ISLAND ROAD From South					SOUTHGATE BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	**52**	220	157	429	0	26	103	46	175	1	40	198	**38**	277	2	87	90	45	224	1105
05:15 PM	**1**	40	200	157	398	0	29	**165**	**64**	**258**	**3**	43	212	32	290	1	93	**144**	53	291	1237
05:30 PM	0	31	**242**	**158**	**431**	0	**31**	147	54	232	0	41	214	35	290	0	**103**	137	**60**	**300**	**1253**
05:45 PM	1	50	231	129	411	0	25	134	58	217	0	**47**	**261**	26	**334**	**3**	99	110	35	247	1209
Total Volume	2	173	893	601	1669	0	111	549	222	882	4	171	885	131	1191	6	382	481	193	1062	4804
% App. Total	0.1	10.4	53.5	36		0	12.6	62.2	25.2		0.3	14.4	74.3	11		0.6	36	45.3	18.2		
PHF	.500	.832	.923	.951	.968	.000	.895	.832	.867	.855	.333	.910	.848	.862	.891	.500	.927	.835	.804	.885	.958
LIGHT VEHICLES																					
% LIGHT VEHICLES	100	99.4	99.1	99.2	99.2	0	100	99.6	99.1	99.5	100	99.4	98.4	100	98.7	100	98.4	99.0	97.9	98.6	99.0
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0.6	0.9	0.8	0.8	0	0	0.4	0.9	0.5	0	0.6	1.6	0	1.3	0	1.6	1.0	2.1	1.4	1.0



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SOUTHGATE BOULEVARD & ROCK ISLAND ROAD
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : southgate & rock island
Site Code : 230081
Start Date : 5/9/2023
Page No : 1

Groups Printed- BICYCLES ON THE ROAD

	ROCK ISLAND ROAD From North				SOUTHGATE BOULEVARD From East				ROCK ISLAND ROAD From South				SOUTHGATE BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %																	

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SOUTHGATE BOULEVARD & ROCK ISLAND ROAD
MARGATE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : southgate & rock island
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	ROCK ISLAND ROAD From North				SOUTHGATE BOULEVARD From East				ROCK ISLAND ROAD From South				SOUTHGATE BOULEVARD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	1	0	0	0	0	0	0	0	0	0	2	0	1	0	2	0	6
07:15 AM	0	0	0	0	0	0	0	0	2	0	1	0	1	0	2	0	6
07:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	3
07:45 AM	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	4
Total	1	0	0	0	1	0	0	0	3	0	5	0	5	0	4	0	19
08:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	5
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4
08:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3
Total	0	0	0	0	0	0	0	0	1	0	6	0	5	0	3	0	15
04:00 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	4
04:15 PM	4	0	1	0	2	0	1	0	1	0	1	0	2	0	1	0	13
04:30 PM	0	0	2	0	3	0	1	0	0	0	0	0	1	0	1	0	8
04:45 PM	0	0	0	0	0	0	0	0	7	0	1	0	1	0	1	0	10
Total	4	0	3	0	5	0	2	0	10	0	2	0	4	0	5	0	35
05:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	3	0	2	0	2	0	1	0	8
05:30 PM	0	0	1	0	0	0	0	0	2	0	2	0	1	0	1	0	7
05:45 PM	0	0	2	0	0	0	1	0	0	0	1	0	1	0	4	0	9
Total	0	0	3	0	0	0	1	0	6	0	5	0	4	0	6	0	25
Grand Total	5	0	6	0	6	0	3	0	20	0	18	0	18	0	18	0	94
Apprch %	45.5	0	54.5	0	66.7	0	33.3	0	52.6	0	47.4	0	50	0	50	0	
Total %	5.3	0	6.4	0	6.4	0	3.2	0	21.3	0	19.1	0	19.1	0	19.1	0	

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SW 7TH STREET & ROCK ISLAND ROAD
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : SW 7th St & Rock Island
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

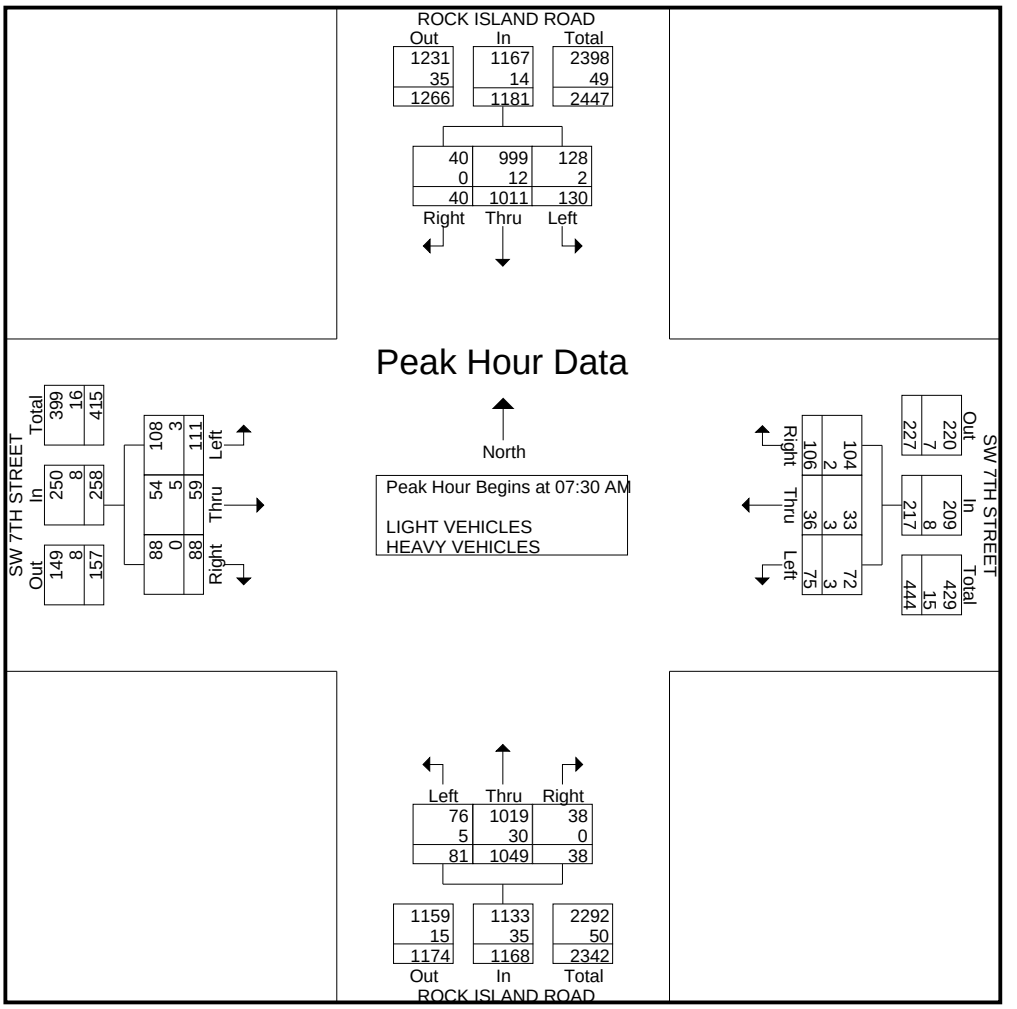
	ROCK ISLAND ROAD From North				SW 7TH STREET From East				ROCK ISLAND ROAD From South				SW 7TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	9	187	17	0	17	9	17	5	15	180	3	0	32	8	21	520
07:15 AM	0	15	188	16	0	24	28	22	17	16	222	10	0	35	20	29	642
07:30 AM	1	32	331	13	0	26	13	32	18	15	238	8	0	36	23	30	816
07:45 AM	2	41	216	6	0	18	11	26	10	11	250	8	0	42	22	31	694
Total	3	97	922	52	0	85	61	97	50	57	890	29	0	145	73	111	2672
08:00 AM	0	30	199	8	0	14	4	21	4	12	248	9	0	22	7	17	595
08:15 AM	2	22	265	13	0	17	8	27	3	8	313	13	0	11	7	10	719
08:30 AM	0	13	202	7	0	18	13	28	0	11	274	8	0	19	5	14	612
08:45 AM	0	18	219	7	0	10	7	36	1	7	289	9	0	17	8	14	642
Total	2	83	885	35	0	59	32	112	8	38	1124	39	0	69	27	55	2568
04:00 PM	0	12	243	12	0	14	10	12	2	28	201	15	0	18	8	18	593
04:15 PM	1	10	259	15	0	11	11	19	2	21	232	25	0	15	8	14	643
04:30 PM	1	10	258	18	0	19	16	23	5	21	270	19	0	9	7	16	692
04:45 PM	0	12	234	22	0	16	12	19	5	30	223	25	0	18	7	22	645
Total	2	44	994	67	0	60	49	73	14	100	926	84	0	60	30	70	2573
05:00 PM	2	8	263	19	0	16	14	15	7	19	265	16	0	9	6	16	675
05:15 PM	1	15	238	17	0	23	13	17	6	28	268	12	0	23	13	27	701
05:30 PM	1	5	301	18	0	19	21	18	5	25	301	26	0	15	11	28	794
05:45 PM	2	11	258	20	0	30	13	24	15	42	253	26	0	21	6	21	742
Total	6	39	1060	74	0	88	61	74	33	114	1087	80	0	68	36	92	2912
Grand Total	13	263	3861	228	0	292	203	356	105	309	4027	232	0	342	166	328	10725
Apprch %	0.3	6	88.5	5.2	0	34.3	23.9	41.8	2.2	6.6	86.2	5	0	40.9	19.9	39.2	
Total %	0.1	2.5	36	2.1	0	2.7	1.9	3.3	1	2.9	37.5	2.2	0	3.2	1.5	3.1	
LIGHT VEHICLES	12	259	3812	223	0	287	196	349	101	300	3941	230	0	336	156	324	10526
% LIGHT VEHICLES	92.3	98.5	98.7	97.8	0	98.3	96.6	98	96.2	97.1	97.9	99.1	0	98.2	94	98.8	98.1
HEAVY VEHICLES	1	4	49	5	0	5	7	7	4	9	86	2	0	6	10	4	199
% HEAVY VEHICLES	7.7	1.5	1.3	2.2	0	1.7	3.4	2	3.8	2.9	2.1	0.9	0	1.8	6	1.2	1.9

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SW 7TH STREET & ROCK ISLAND ROAD
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : SW 7th St & Rock Island
Site Code : 230081
Start Date : 5/9/2023

	ROCK ISLAND ROAD From North					SW 7TH STREET From East					ROCK ISLAND ROAD From South					SW 7TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	1	32	**331**	**13**	**377**	0	**26**	**13**	**32**	**71**	**18**	**15**	238	8	279	0	36	**23**	30	89	**816**
07:45 AM	**2**	**41**	216	6	265	0	18	11	26	55	10	11	250	8	279	0	**42**	22	**31**	**95**	694
08:00 AM	0	30	199	8	237	0	14	4	21	39	4	12	248	9	273	0	22	7	17	46	595
08:15 AM	2	22	265	13	302	0	17	8	27	52	3	8	**313**	**13**	**337**	0	11	7	10	28	719
Total Volume	5	125	1011	40	1181	0	75	36	106	217	35	46	1049	38	1168	0	111	59	88	258	2824
% App. Total	0.4	10.6	85.6	3.4		0	34.6	16.6	48.8		3	3.9	89.8	3.3		0	43	22.9	34.1		
PHF	.625	.762	.764	.769	.783	.000	.721	.692	.828	.764	.486	.767	.838	.731	.866	.000	.661	.641	.710	.679	.865
LIGHT VEHICLES													1019								
% LIGHT VEHICLES	100	98.4	98.8	100	98.8	0	96.0	91.7	98.1	96.3	100	89.1	97.1	100	97.0	0	97.3	91.5	100	96.9	97.7
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	1.6	1.2	0	1.2	0	4.0	8.3	1.9	3.7	0	10.9	2.9	0	3.0	0	2.7	8.5	0	3.1	2.3



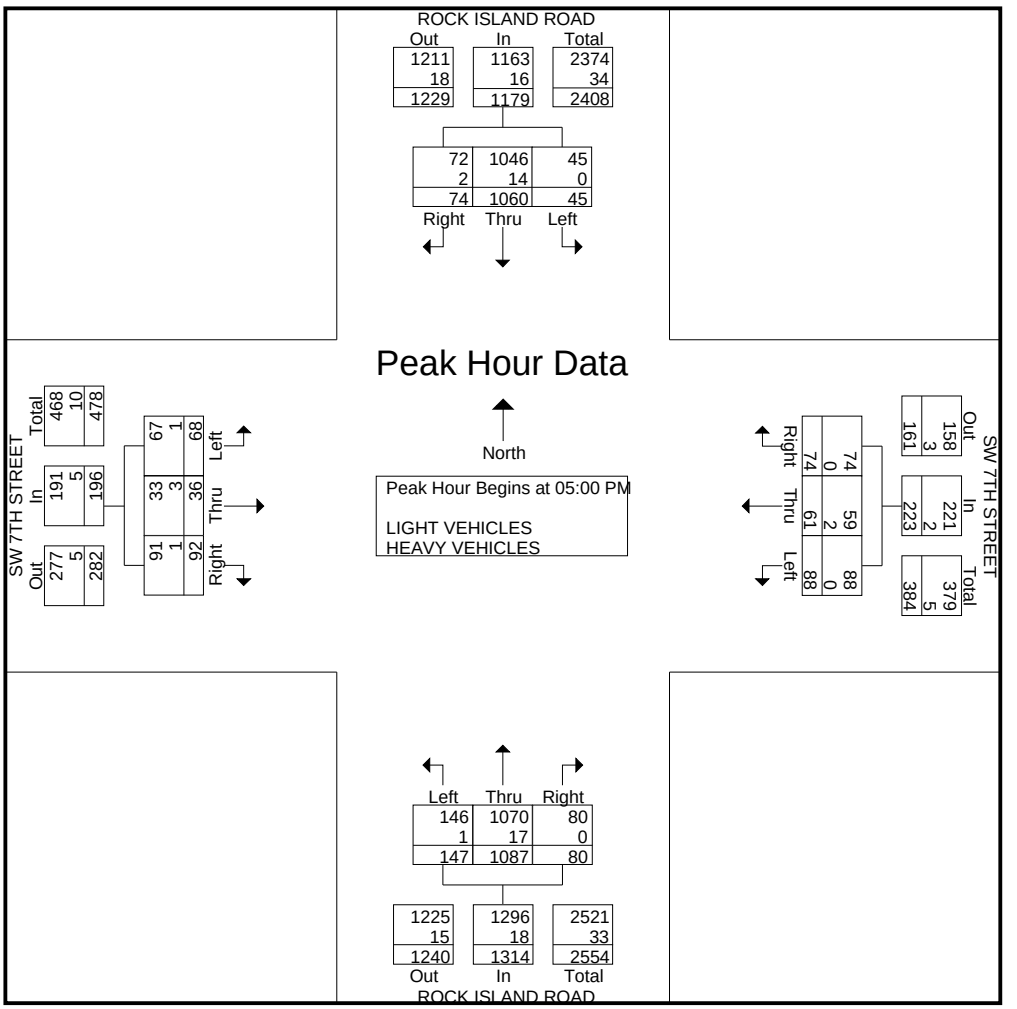
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SW 7TH STREET & ROCK ISLAND ROAD
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : SW 7th St & Rock Island
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	ROCK ISLAND ROAD From North					SW 7TH STREET From East					ROCK ISLAND ROAD From South					SW 7TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	**2**	8	263	19	292	0	16	14	15	45	7	19	265	16	307	0	9	6	16	31	675
05:15 PM	1	**15**	238	17	271	0	23	13	17	53	6	28	268	12	314	0	**23**	**13**	27	**63**	701
05:30 PM	1	5	**301**	18	**325**	0	19	**21**	18	58	5	25	**301**	**26**	**357**	0	15	11	**28**	54	**794**
05:45 PM	2	11	258	**20**	291	0	**30**	13	**24**	**67**	**15**	**42**	253	26	336	0	21	6	21	48	742
Total Volume	6	39	1060	74	1179	0	88	61	74	223	33	114	1087	80	1314	0	68	36	92	196	2912
% App. Total	0.5	3.3	89.9	6.3		0	39.5	27.4	33.2		2.5	8.7	82.7	6.1		0	34.7	18.4	46.9		
PHF	.750	.650	.880	.925	.907	.000	.733	.726	.771	.832	.550	.679	.903	.769	.920	.000	.739	.692	.821	.778	.917
LIGHT VEHICLES			1046										1070								
% LIGHT VEHICLES	100	100	98.7	97.3	98.6	0	100	96.7	100	99.1	97.0	100	98.4	100	98.6	0	98.5	91.7	98.9	97.4	98.6
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	1.3	2.7	1.4	0	0	3.3	0	0.9	3.0	0	1.6	0	1.4	0	1.5	8.3	1.1	2.6	1.4



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SW 7TH STREET & ROCK ISLAND ROAD
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VIDEO COUNT
SIGNALIZED

File Name : SW 7th St & Rock Island
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	ROCK ISLAND ROAD From North				SW 7TH STREET From East				ROCK ISLAND ROAD From South				SW 7TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Apprch %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	

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File Name : SW 7th St & Rock Island
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Groups Printed- PEDESTRIANS & BIKES

	ROCK ISLAND ROAD From North				SW 7TH STREET From East				ROCK ISLAND ROAD From South				SW 7TH STREET From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	1	0	2	0	0	0	0	0	2	0	0	0	0	0	1	0	6
07:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3
07:30 AM	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	3
07:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
Total	4	0	3	0	0	0	0	0	2	0	0	0	1	0	4	0	14
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	5
08:30 AM	1	0	0	0	1	0	0	0	1	0	0	0	1	0	2	0	6
08:45 AM	1	0	0	0	1	0	0	0	1	0	1	0	2	0	0	0	6
Total	2	0	0	0	2	0	0	0	2	0	1	0	8	0	4	0	19
04:00 PM	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
04:45 PM	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	4
Total	3	0	1	0	0	0	1	0	2	0	0	0	6	0	1	0	14
05:00 PM	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2
05:30 PM	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2
05:45 PM	2	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	7
Total	4	0	3	0	0	0	0	0	2	0	0	0	5	0	1	0	15
Grand Total	13	0	7	0	2	0	1	0	8	0	1	0	20	0	10	0	62
Apprch %	65	0	35	0	66.7	0	33.3	0	88.9	0	11.1	0	66.7	0	33.3	0	
Total %	21	0	11.3	0	3.2	0	1.6	0	12.9	0	1.6	0	32.3	0	16.1	0	

Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

KIMBERLY BOULEVARD & ROCK ISLAND ROAD
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : kimberly & rock island
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

	ROCK ISLAND ROAD From North				KIMBERLY BOULEVARD From East				ROCK ISLAND ROAD From South				KIMBERLY BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	2	5	175	18	0	29	9	28	2	12	164	21	0	23	19	13	520
07:15 AM	6	12	198	18	0	36	28	32	1	21	222	22	0	18	26	31	671
07:30 AM	10	16	239	23	0	40	41	25	7	16	251	25	1	21	34	24	773
07:45 AM	6	23	202	26	0	38	34	36	4	16	226	22	0	24	38	32	727
Total	24	56	814	85	0	143	112	121	14	65	863	90	1	86	117	100	2691
08:00 AM	2	24	228	12	0	28	23	20	0	9	241	28	0	24	25	30	694
08:15 AM	0	30	232	19	0	23	10	26	0	10	286	37	1	23	20	13	730
08:30 AM	2	20	200	22	1	44	16	36	0	12	231	18	0	25	24	20	671
08:45 AM	1	24	203	18	0	26	12	28	0	4	260	26	0	18	20	18	658
Total	5	98	863	71	1	121	61	110	0	35	1018	109	1	90	89	81	2753
04:00 PM	3	32	221	29	0	34	33	28	0	12	204	46	0	17	22	11	692
04:15 PM	2	33	218	31	1	34	28	35	1	20	212	53	0	23	24	18	733
04:30 PM	1	21	272	24	0	29	30	42	0	21	254	40	0	17	21	16	788
04:45 PM	1	26	217	37	0	36	32	34	0	17	219	51	0	22	19	15	726
Total	7	112	928	121	1	133	123	139	1	70	889	190	0	79	86	60	2939
05:00 PM	3	21	231	26	0	38	47	49	2	18	239	56	0	22	29	20	801
05:15 PM	2	37	236	35	0	38	33	42	0	16	261	43	0	22	16	19	800
05:30 PM	3	51	255	33	0	40	56	66	0	30	252	74	0	29	21	12	922
05:45 PM	9	24	264	40	0	36	44	44	0	28	237	53	0	30	22	24	855
Total	17	133	986	134	0	152	180	201	2	92	989	226	0	103	88	75	3378
Grand Total	53	399	3591	411	2	549	476	571	17	262	3759	615	2	358	380	316	11761
Apprch %	1.2	9	80.6	9.2	0.1	34.4	29.8	35.7	0.4	5.6	80.8	13.2	0.2	33.9	36	29.9	
Total %	0.5	3.4	30.5	3.5	0	4.7	4	4.9	0.1	2.2	32	5.2	0	3	3.2	2.7	
LIGHT VEHICLES	53	395	3535	404	2	545	467	564	16	256	3671	611	2	351	363	306	11541
% LIGHT VEHICLES	100	99	98.4	98.3	100	99.3	98.1	98.8	94.1	97.7	97.7	99.3	100	98	95.5	96.8	98.1
HEAVY VEHICLES	0	4	56	7	0	4	9	7	1	6	88	4	0	7	17	10	220
% HEAVY VEHICLES	0	1	1.6	1.7	0	0.7	1.9	1.2	5.9	2.3	2.3	0.7	0	2	4.5	3.2	1.9

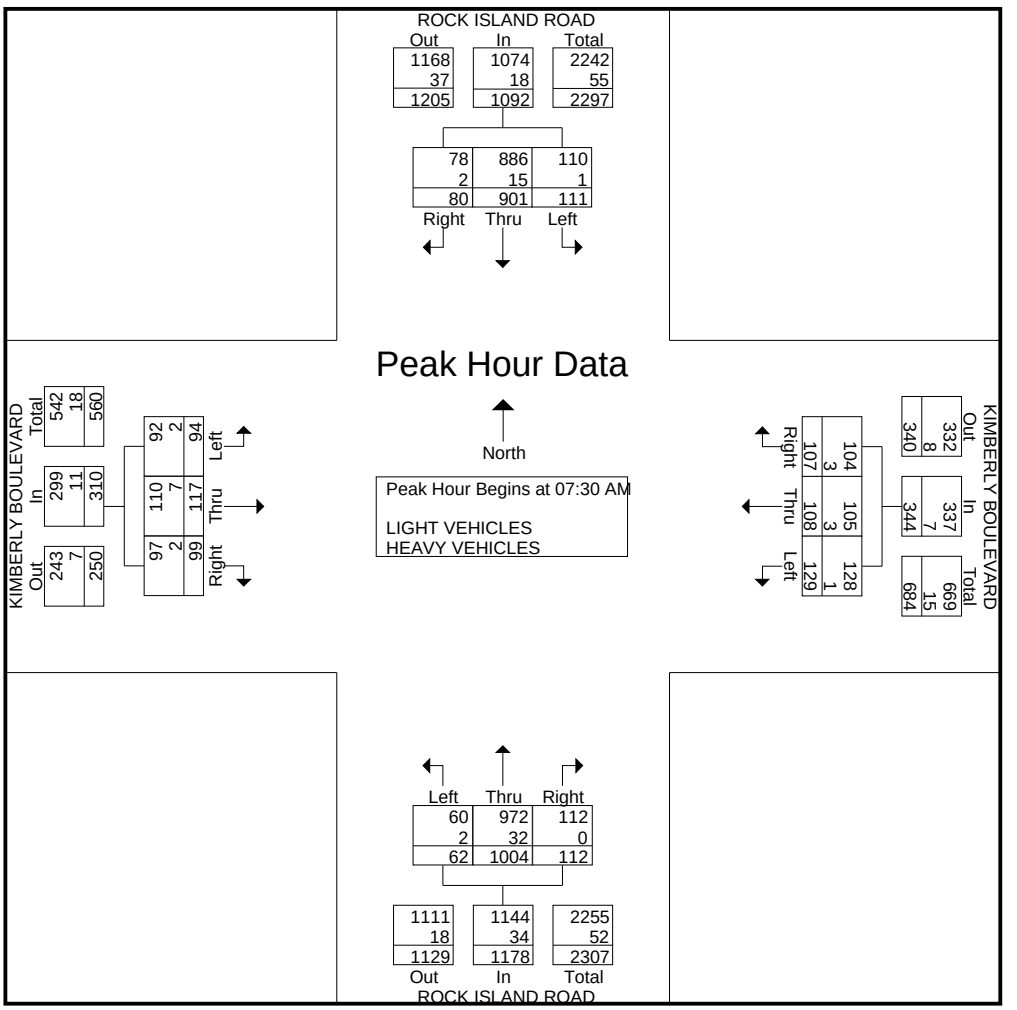
Traffic Survey Specialists, Inc.

85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

KIMBERLY BOULEVARD & ROCK ISLAND ROAD
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : kimberly & rock island
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	ROCK ISLAND ROAD From North					KIMBERLY BOULEVARD From East					ROCK ISLAND ROAD From South					KIMBERLY BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	**10**	16	**239**	23	**288**	0	**40**	**41**	25	106	**7**	**16**	251	25	299	**1**	21	34	24	80	**773**
07:45 AM	6	23	202	**26**	257	0	38	34	**36**	**108**	4	16	226	22	268	0	**24**	**38**	**32**	**94**	727
08:00 AM	2	24	228	12	266	0	28	23	20	71	0	9	241	28	278	0	24	25	30	79	694
08:15 AM	0	**30**	232	19	281	0	23	10	26	59	0	10	**286**	**37**	**333**	1	23	20	13	57	730
Total Volume	18	93	901	80	1092	0	129	108	107	344	11	51	1004	112	1178	2	92	117	99	310	2924
% App. Total	1.6	8.5	82.5	7.3		0	37.5	31.4	31.1		0.9	4.3	85.2	9.5		0.6	29.7	37.7	31.9		
PHF	.450	.775	.942	.769	.948	.000	.806	.659	.743	.796	.393	.797	.878	.757	.884	.500	.958	.770	.773	.824	.946
LIGHT VEHICLES																					
% LIGHT VEHICLES	100	98.9	98.3	97.5	98.4	0	99.2	97.2	97.2	98.0	100	96.1	96.8	100	97.1	100	97.8	94.0	98.0	96.5	97.6
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	1.1	1.7	2.5	1.6	0	0.8	2.8	2.8	2.0	0	3.9	3.2	0	2.9	0	2.2	6.0	2.0	3.5	2.4



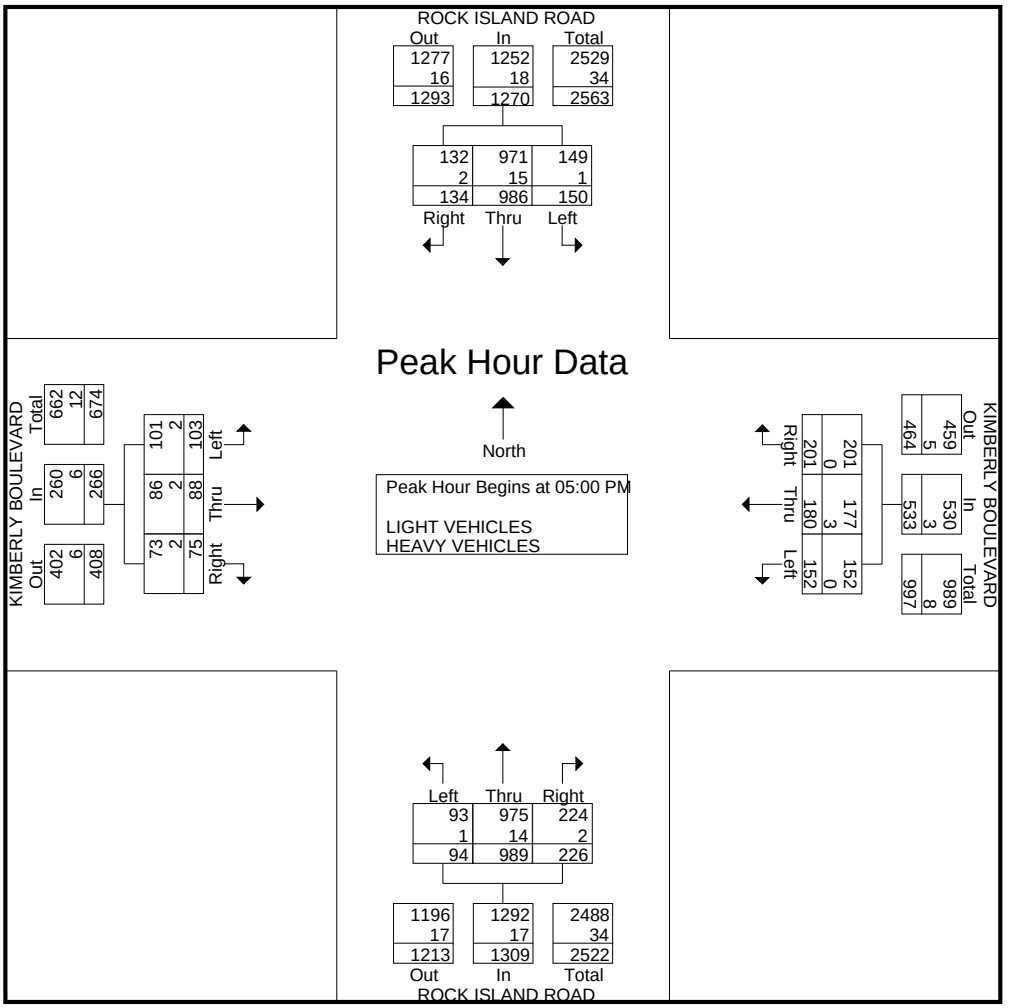
Traffic Survey Specialists, Inc.

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KIMBERLY BOULEVARD & ROCK ISLAND ROAD
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : kimberly & rock island
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	ROCK ISLAND ROAD From North					KIMBERLY BOULEVARD From East					ROCK ISLAND ROAD From South					KIMBERLY BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	3	21	231	26	281	0	38	47	49	134	**2**	18	239	56	315	0	22	**29**	20	71	801
05:15 PM	2	37	236	35	310	0	38	33	42	113	0	16	**261**	43	320	0	22	16	19	57	800
05:30 PM	3	**51**	255	33	**342**	0	**40**	**56**	**66**	**162**	0	**30**	252	**74**	**356**	0	29	21	12	62	**922**
05:45 PM	**9**	24	**264**	**40**	337	0	36	44	44	124	0	28	237	53	318	0	**30**	22	**24**	**76**	855
Total Volume	17	133	986	134	1270	0	152	180	201	533	2	92	989	226	1309	0	103	88	75	266	3378
% App. Total	1.3	10.5	77.6	10.6		0	28.5	33.8	37.7		0.2	7	75.6	17.3		0	38.7	33.1	28.2		
PHF	.472	.652	.934	.838	.928	.000	.950	.804	.761	.823	.250	.767	.947	.764	.919	.000	.858	.759	.781	.875	.916
LIGHT VEHICLES																					
% LIGHT VEHICLES	100	99.2	98.5	98.5	98.6	0	100	98.3	100	99.4	50.0	100	98.6	99.1	98.7	0	98.1	97.7	97.3	97.7	98.7
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0.8	1.5	1.5	1.4	0	0	1.7	0	0.6	50.0	0	1.4	0.9	1.3	0	1.9	2.3	2.7	2.3	1.3



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KIMBERLY BOULEVARD & ROCK ISLAND ROAD
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : kimberly & rock island
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	ROCK ISLAND ROAD From North				KIMBERLY BOULEVARD From East				ROCK ISLAND ROAD From South				KIMBERLY BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
08:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Grand Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	4
Apprch %	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	
Total %	0	0	25	0	0	0	0	0	0	0	0	0	0	0	75	0	

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KIMBERLY BOULEVARD & ROCK ISLAND ROAD
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
SIGNALIZED

File Name : kimberly & rock island
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	ROCK ISLAND ROAD From North				KIMBERLY BOULEVARD From East				ROCK ISLAND ROAD From South				KIMBERLY BOULEVARD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	7	0	1	0	0	0	1	0	3	0	0	0	18	0	1	0	31
07:15 AM	12	0	2	0	0	0	0	0	17	0	3	0	26	0	1	0	61
07:30 AM	39	0	0	0	0	0	0	0	6	0	0	0	58	0	0	0	103
07:45 AM	35	0	0	0	0	0	0	0	7	0	3	0	44	0	1	0	90
Total	93	0	3	0	0	0	1	0	33	0	6	0	146	0	3	0	285
08:00 AM	9	0	0	0	0	0	0	0	2	0	0	0	12	0	2	0	25
08:15 AM	4	0	1	0	0	0	2	0	2	0	0	0	1	0	0	0	10
08:30 AM	6	0	0	0	0	0	0	0	7	0	0	0	8	0	2	0	23
08:45 AM	2	0	0	0	2	0	0	0	4	0	1	0	0	0	0	0	9
Total	21	0	1	0	2	0	2	0	15	0	1	0	21	0	4	0	67
04:00 PM	7	0	1	0	3	0	0	0	11	0	0	0	9	0	0	0	31
04:15 PM	0	0	0	0	0	0	0	0	8	0	0	0	2	0	0	0	10
04:30 PM	7	0	0	0	0	0	0	0	6	0	1	0	0	0	0	0	14
04:45 PM	6	0	0	0	0	0	0	0	2	0	1	0	1	0	0	0	10
Total	20	0	1	0	3	0	0	0	27	0	2	0	12	0	0	0	65
05:00 PM	2	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	7
05:15 PM	5	0	1	0	1	0	0	0	2	0	0	0	1	0	2	0	12
05:30 PM	0	0	0	0	0	0	0	0	2	0	3	0	3	0	0	0	8
05:45 PM	2	0	1	0	0	0	0	0	3	0	1	0	6	0	0	0	13
Total	9	0	3	0	1	0	0	0	11	0	4	0	10	0	2	0	40
Grand Total	143	0	8	0	6	0	3	0	86	0	13	0	189	0	9	0	457
Apprch %	94.7	0	5.3	0	66.7	0	33.3	0	86.9	0	13.1	0	95.5	0	4.5	0	
Total %	31.3	0	1.8	0	1.3	0	0.7	0	18.8	0	2.8	0	41.4	0	2	0	

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SW 7TH STREET & SW 64TH TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : sw 7 street & sw 64 terr
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

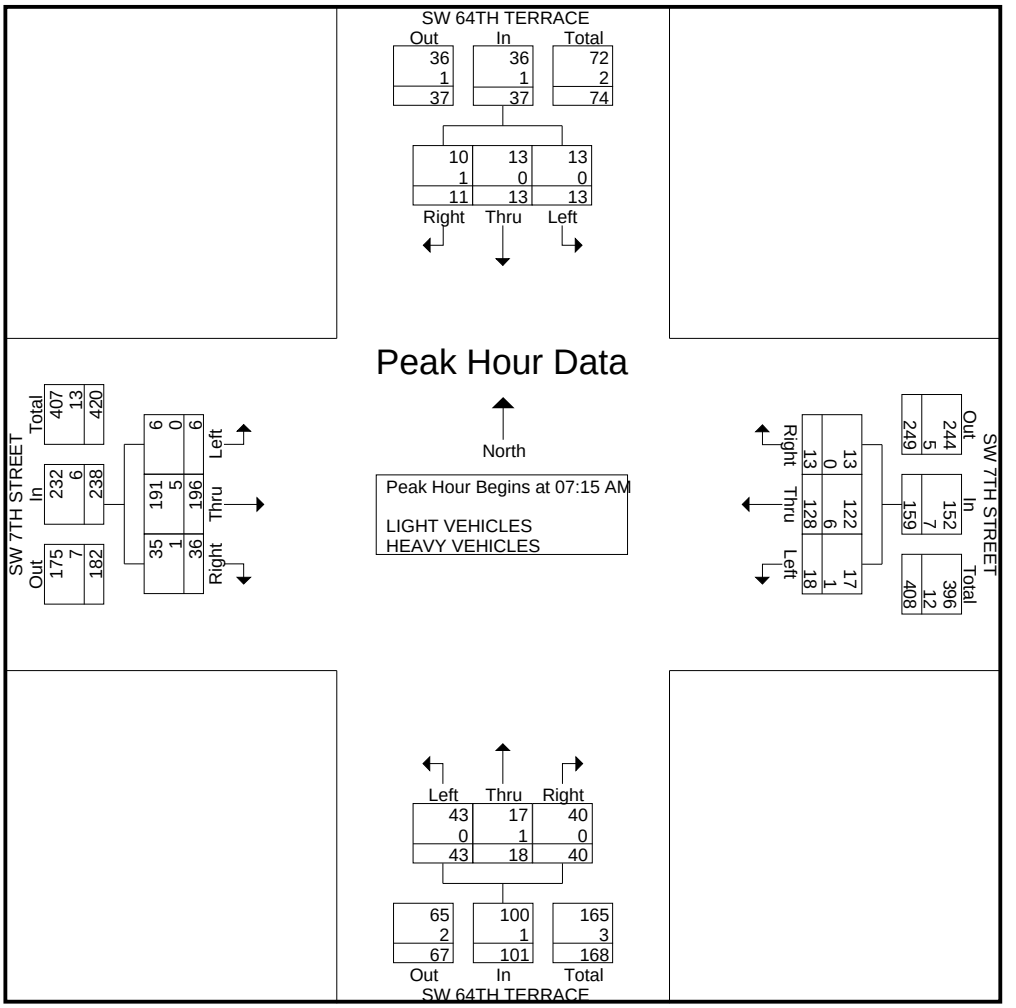
	SW 64TH TERRACE From North				SW 7TH STREET From East				SW 64TH TERRACE From South				SW 7TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	6	2	1	0	6	16	2	0	13	7	10	0	2	27	2	94
07:15 AM	0	1	3	1	0	5	34	4	0	14	5	8	0	0	39	3	117
07:30 AM	0	3	3	3	0	6	32	4	0	17	6	11	0	2	56	14	157
07:45 AM	0	5	2	2	0	4	35	1	0	4	3	11	0	1	56	7	131
Total	0	15	10	7	0	21	117	11	0	48	21	40	0	5	178	26	499
08:00 AM	0	4	5	5	0	3	27	4	0	8	4	10	0	3	45	12	130
08:15 AM	0	6	2	5	0	2	34	3	0	6	3	7	0	2	31	6	107
08:30 AM	0	1	4	3	0	7	49	6	0	4	1	11	0	1	27	5	119
08:45 AM	0	3	4	2	1	2	48	2	0	7	6	15	0	1	37	3	131
Total	0	14	15	15	1	14	158	15	0	25	14	43	0	7	140	26	487
04:00 PM	0	4	4	2	0	13	29	1	0	7	1	5	0	1	20	8	95
04:15 PM	0	2	3	3	0	12	26	1	0	8	6	8	0	5	23	7	104
04:30 PM	0	2	1	0	0	14	49	1	0	8	5	8	0	1	28	3	120
04:45 PM	0	1	5	1	0	8	41	2	0	4	9	5	0	2	32	5	115
Total	0	9	13	6	0	47	145	5	0	27	21	26	0	9	103	23	434
05:00 PM	0	2	3	1	0	10	40	2	0	8	8	12	0	3	22	7	118
05:15 PM	0	2	6	3	0	7	41	3	0	5	4	11	0	3	25	9	119
05:30 PM	0	2	2	3	0	18	53	5	0	9	4	10	0	6	25	5	142
05:45 PM	0	1	3	2	0	14	55	7	0	10	6	15	0	2	34	5	154
Total	0	7	14	9	0	49	189	17	0	32	22	48	0	14	106	26	533
Grand Total	0	45	52	37	1	131	609	48	0	132	78	157	0	35	527	101	1953
Apprch %	0	33.6	38.8	27.6	0.1	16.6	77.2	6.1	0	36	21.3	42.8	0	5.3	79.5	15.2	
Total %	0	2.3	2.7	1.9	0.1	6.7	31.2	2.5	0	6.8	4	8	0	1.8	27	5.2	
LIGHT VEHICLES	0	44	52	35	1	127	595	48	0	130	75	155	0	35	515	100	1912
% LIGHT VEHICLES	0	97.8	100	94.6	100	96.9	97.7	100	0	98.5	96.2	98.7	0	100	97.7	99	97.9
HEAVY VEHICLES	0	1	0	2	0	4	14	0	0	2	3	2	0	0	12	1	41
% HEAVY VEHICLES	0	2.2	0	5.4	0	3.1	2.3	0	0	1.5	3.8	1.3	0	0	2.3	1	2.1

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SW 7TH STREET & SW 64TH TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : sw 7 street & sw 64 terr
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	SW 64TH TERRACE From North					SW 7TH STREET From East					SW 64TH TERRACE From South					SW 7TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	1	3	1	5	0	5	34	**4**	**43**	0	14	5	8	27	0	0	39	3	42	117
07:30 AM	0	3	3	3	9	0	**6**	32	4	42	0	**17**	**6**	**11**	**34**	0	2	**56**	**14**	**72**	**157**
07:45 AM	0	**5**	2	2	9	0	4	**35**	1	40	0	4	3	11	18	0	1	56	7	64	131
08:00 AM	0	4	**5**	**5**	**14**	0	3	27	4	34	0	8	4	10	22	0	**3**	45	12	60	130
Total Volume	0	13	13	11	37	0	18	128	13	159	0	43	18	40	101	0	6	196	36	238	535
% App. Total	0	35.1	35.1	29.7		0	11.3	80.5	8.2		0	42.6	17.8	39.6		0	2.5	82.4	15.1		
PHF	.000	.650	.650	.550	.661	.000	.750	.914	.813	.924	.000	.632	.750	.909	.743	.000	.500	.875	.643	.826	.852
LIGHT VEHICLES																					
% LIGHT VEHICLES	0	100	100	90.9	97.3	0	94.4	95.3	100	95.6	0	100	94.4	100	99.0	0	100	97.4	97.2	97.5	97.2
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	0	9.1	2.7	0	5.6	4.7	0	4.4	0	0	5.6	0	1.0	0	0	2.6	2.8	2.5	2.8



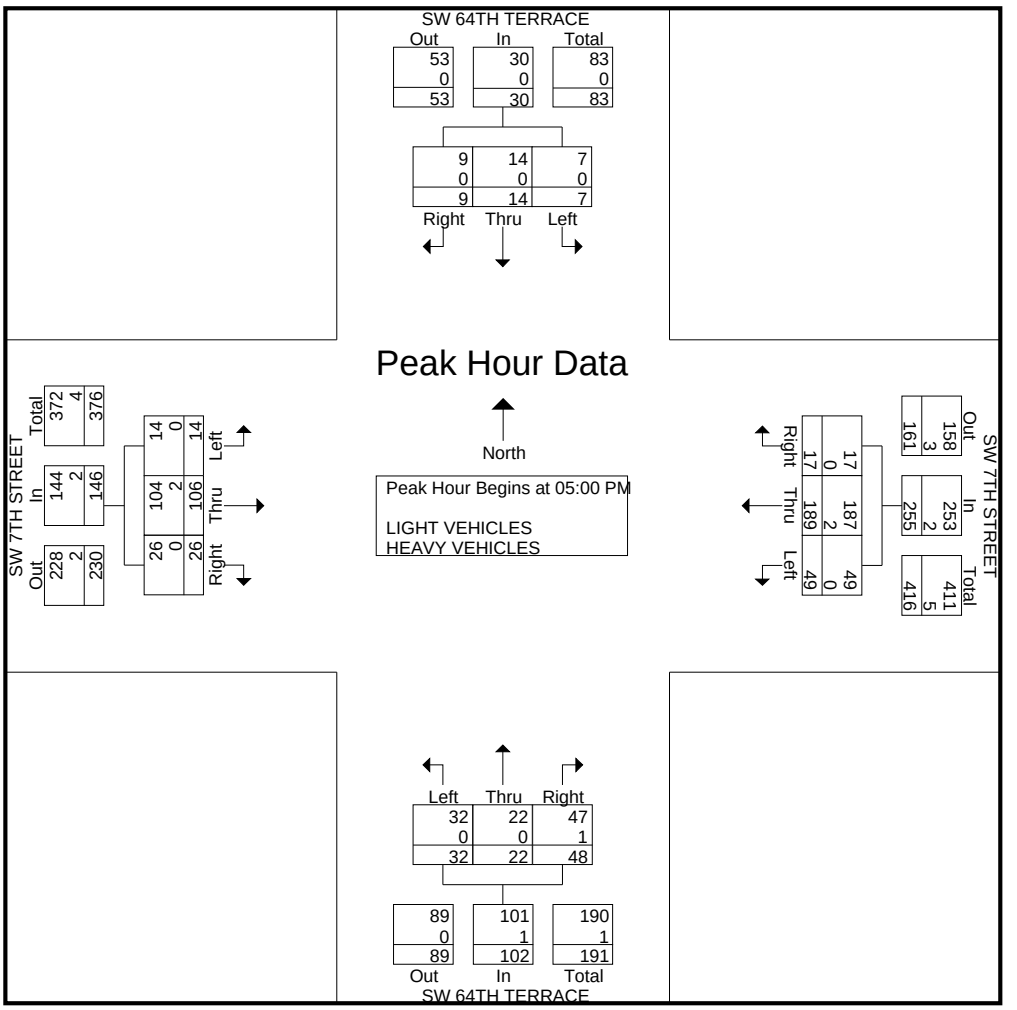
Traffic Survey Specialists, Inc.

85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483
Phone (561) 272-3255

SW 7TH STREET & SW 64TH TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : sw 7 street & sw 64 terr
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	SW 64TH TERRACE From North					SW 7TH STREET From East					SW 64TH TERRACE From South					SW 7TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	**2**	3	1	6	0	10	40	2	52	0	8	**8**	12	28	0	3	22	7	32	118
05:15 PM	0	2	**6**	**3**	**11**	0	7	41	3	51	0	5	4	11	20	0	3	25	**9**	37	119
05:30 PM	0	2	2	3	7	0	**18**	53	5	**76**	0	9	4	10	23	0	**6**	25	5	36	142
05:45 PM	0	1	3	2	6	0	14	**55**	**7**	76	0	**10**	6	**15**	**31**	0	2	**34**	5	**41**	**154**
Total Volume	0	7	14	9	30	0	49	189	17	255	0	32	22	48	102	0	14	106	26	146	533
% App. Total	0	23.3	46.7	30		0	19.2	74.1	6.7		0	31.4	21.6	47.1		0	9.6	72.6	17.8		
PHF	.000	.875	.583	.750	.682	.000	.681	.859	.607	.839	.000	.800	.688	.800	.823	.000	.583	.779	.722	.890	.865
LIGHT VEHICLES																					
% LIGHT VEHICLES	0	100	100	100	100	0	100	98.9	100	99.2	0	100	100	97.9	99.0	0	100	98.1	100	98.6	99.1
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	0	0	0	0	0	1.1	0	0.8	0	0	0	2.1	1.0	0	0	1.9	0	1.4	0.9



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SW 7TH STREET & SW 64TH TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : sw 7 street & sw 64 terr
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	SW 64TH TERRACE From North				SW 7TH STREET From East				SW 64TH TERRACE From South				SW 7TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
08:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2
Apprch %	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	
Total %	0	0	50	0	0	0	0	0	0	0	0	0	0	0	50	0	

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SW 7TH STREET & SW 64TH TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : sw 7 street & sw 64 terr
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	SW 64TH TERRACE From North				SW 7TH STREET From East				SW 64TH TERRACE From South				SW 7TH STREET From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
07:15 AM	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
07:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	3	0	0	0	0	0	0	0	6	0	0	0	1	0	0	0	10
08:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3
08:45 AM	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
Total	3	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	7
04:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	1	0	0	0	0	0	0	0	2	0	0	0	3	0	0	0	6
04:45 PM	3	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	6
Total	4	0	0	0	1	0	0	0	4	0	1	0	3	0	0	0	13
05:00 PM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	1	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	4
05:45 PM	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	5
Total	4	0	3	0	0	0	0	0	6	0	0	0	1	0	0	0	14
Grand Total	14	0	3	0	4	0	0	0	17	0	1	0	5	0	0	0	44
Apprch %	82.4	0	17.6	0	100	0	0	0	94.4	0	5.6	0	100	0	0	0	
Total %	31.8	0	6.8	0	9.1	0	0	0	38.6	0	2.3	0	11.4	0	0	0	

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KIMBERLY BOULEVARD & SW 64TH TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : kimberly & sw 64 terrace
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

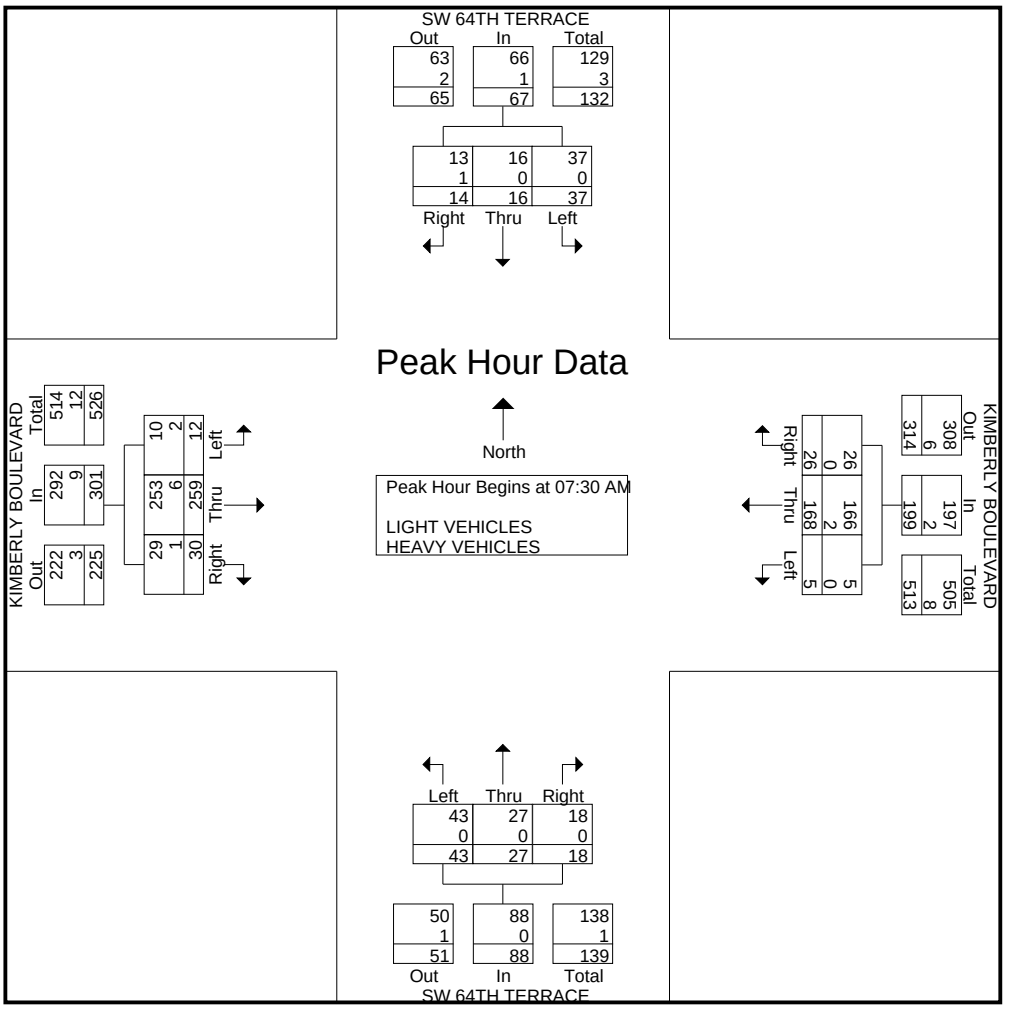
	SW 64TH TERRACE From North				KIMBERLY BOULEVARD From East				SW 64TH TERRACE From South				KIMBERLY BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	6	2	2	0	1	22	2	0	6	9	3	2	0	39	3	97
07:15 AM	0	8	2	6	0	0	48	6	0	14	12	4	2	0	50	6	158
07:30 AM	0	9	5	6	0	0	47	11	0	14	12	6	0	3	77	8	198
07:45 AM	0	6	4	5	0	2	46	5	0	14	2	5	0	3	45	9	146
Total	0	29	13	19	0	3	163	24	0	48	35	18	4	6	211	26	599
08:00 AM	0	12	5	3	0	0	30	5	0	9	11	3	0	2	67	5	152
08:15 AM	0	10	2	0	1	2	45	5	0	6	2	4	1	3	70	8	159
08:30 AM	0	4	2	5	0	3	49	7	0	10	4	4	1	3	48	6	146
08:45 AM	0	9	2	2	0	1	45	2	0	3	9	3	2	4	52	5	139
Total	0	35	11	10	1	6	169	19	0	28	26	14	4	12	237	24	596
04:00 PM	0	6	4	2	1	1	70	6	0	14	19	6	1	5	63	8	206
04:15 PM	1	3	3	2	0	1	57	8	0	22	11	5	0	0	57	22	192
04:30 PM	0	6	9	6	2	2	69	9	0	19	10	6	2	2	57	21	220
04:45 PM	0	5	3	3	1	0	69	7	0	14	10	5	0	5	45	18	185
Total	1	20	19	13	4	4	265	30	0	69	50	22	3	12	222	69	803
05:00 PM	0	5	4	6	0	2	92	8	0	24	17	9	1	0	50	21	239
05:15 PM	0	6	7	6	0	2	58	9	1	34	12	9	1	5	52	12	214
05:30 PM	0	2	7	7	0	4	93	10	0	45	7	5	3	4	90	31	308
05:45 PM	0	7	4	1	0	3	84	10	1	33	21	8	1	3	64	21	261
Total	0	20	22	20	0	11	327	37	2	136	57	31	6	12	256	85	1022
Grand Total	1	104	65	62	5	24	924	110	2	281	168	85	17	42	926	204	3020
Apprch %	0.4	44.8	28	26.7	0.5	2.3	86.9	10.3	0.4	52.4	31.3	15.9	1.4	3.5	77.9	17.2	
Total %	0	3.4	2.2	2.1	0.2	0.8	30.6	3.6	0.1	9.3	5.6	2.8	0.6	1.4	30.7	6.8	
LIGHT VEHICLES	1	104	63	61	5	22	910	110	2	281	164	83	17	36	907	201	2967
% LIGHT VEHICLES	100	100	96.9	98.4	100	91.7	98.5	100	100	100	97.6	97.6	100	85.7	97.9	98.5	98.2
HEAVY VEHICLES	0	0	2	1	0	2	14	0	0	0	4	2	0	6	19	3	53
% HEAVY VEHICLES	0	0	3.1	1.6	0	8.3	1.5	0	0	0	2.4	2.4	0	14.3	2.1	1.5	1.8

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KIMBERLY BOULEVARD & SW 64TH TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : kimberly & sw 64 terrace
Site Code : 230081
Start Date : 5/9/2023

	SW 64TH TERRACE From North					KIMBERLY BOULEVARD From East					SW 64TH TERRACE From South					KIMBERLY BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	9	**5**	**6**	**20**	0	0	**47**	**11**	**58**	0	**14**	**12**	**6**	**32**	0	**3**	**77**	8	**88**	**198**
07:45 AM	0	6	4	5	15	0	**2**	46	5	53	0	14	2	5	21	0	3	45	**9**	57	146
08:00 AM	0	**12**	5	3	20	0	0	30	5	35	0	9	11	3	23	0	2	67	5	74	152
08:15 AM	0	10	2	0	12	**1**	2	45	5	53	0	6	2	4	12	**1**	3	70	8	82	159
Total Volume	0	37	16	14	67	1	4	168	26	199	0	43	27	18	88	1	11	259	30	301	655
% App. Total	0	55.2	23.9	20.9		0.5	2	84.4	13.1		0	48.9	30.7	20.5		0.3	3.7	86	10		
PHF	.000	.771	.800	.583	.838	.250	.500	.894	.591	.858	.000	.768	.563	.750	.688	.250	.917	.841	.833	.855	.827
LIGHT VEHICLES																					
% LIGHT VEHICLES	0	100	100	92.9	98.5	100	100	98.8	100	99.0	0	100	100	100	100	100	81.8	97.7	96.7	97.0	98.2
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	0	7.1	1.5	0	0	1.2	0	1.0	0	0	0	0	0	0	18.2	2.3	3.3	3.0	1.8



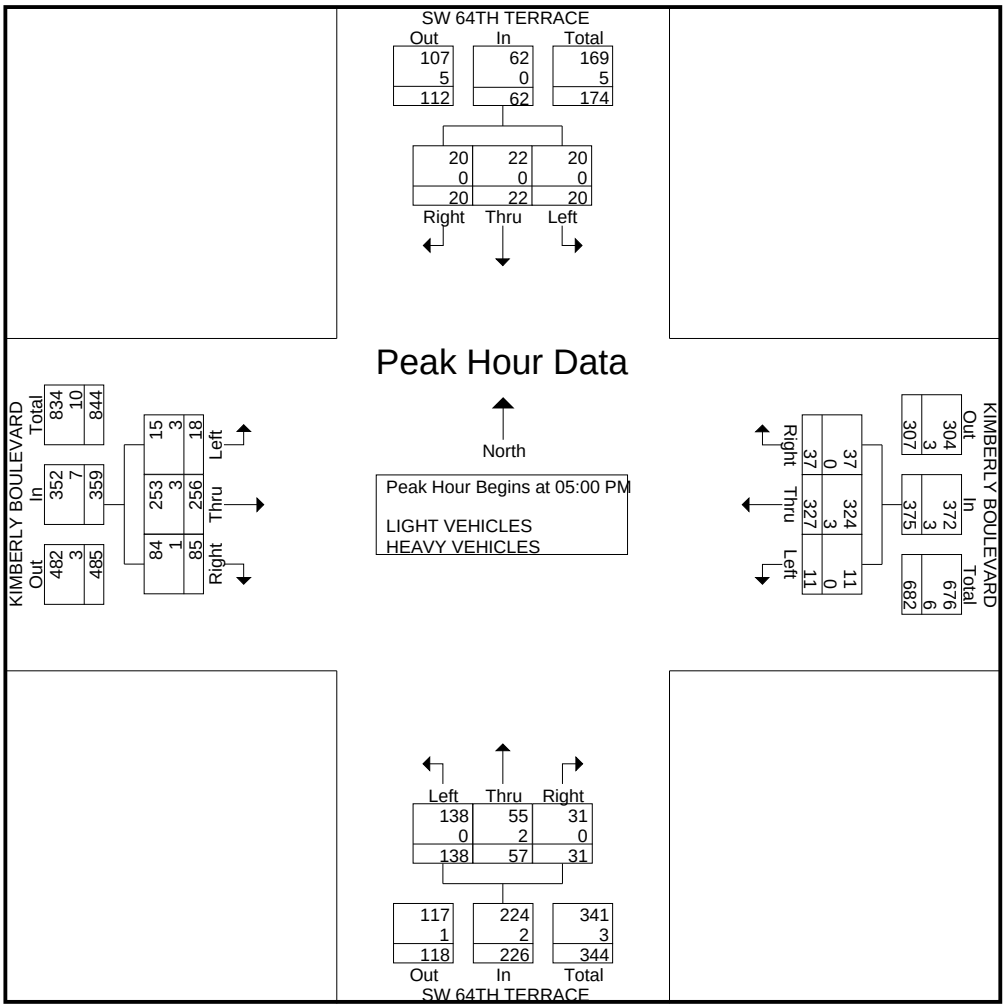
Traffic Survey Specialists, Inc.

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KIMBERLY BOULEVARD & SW 64TH TERRACE
NORTH LAUDERDALE, FLORIDA
VIDEO COUNT
NOT SIGNALIZED

File Name : kimberly & sw 64 terrace
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	SW 64TH TERRACE From North					KIMBERLY BOULEVARD From East					SW 64TH TERRACE From South					KIMBERLY BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	5	4	6	15	0	2	92	8	102	0	24	17	**9**	50	1	0	50	21	72	239
05:15 PM	0	6	**7**	6	**19**	0	2	58	9	69	**1**	34	12	9	56	1	**5**	52	12	70	214
05:30 PM	0	2	7	**7**	16	0	**4**	**93**	**10**	**107**	0	**45**	7	5	57	**3**	4	**90**	**31**	**128**	**308**
05:45 PM	0	**7**	4	1	12	0	3	84	10	97	1	33	**21**	8	**63**	1	3	64	21	89	261
Total Volume	0	20	22	20	62	0	11	327	37	375	2	136	57	31	226	6	12	256	85	359	1022
% App. Total	0	32.3	35.5	32.3		0	2.9	87.2	9.9		0.9	60.2	25.2	13.7		1.7	3.3	71.3	23.7		
PHF	.000	.714	.786	.714	.816	.000	.688	.879	.925	.876	.500	.756	.679	.861	.897	.500	.600	.711	.685	.701	.830
LIGHT VEHICLES																					
% LIGHT VEHICLES	0	100	100	100	100	0	100	99.1	100	99.2	100	100	96.5	100	99.1	100	75.0	98.8	98.8	98.1	98.8
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	0	0	0	0	0	0.9	0	0.8	0	0	3.5	0	0.9	0	25.0	1.2	1.2	1.9	1.2



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VIDEO COUNT
NOT SIGNALIZED

File Name : kimberly & sw 64 terrace
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	SW 64TH TERRACE From North				KIMBERLY BOULEVARD From East				SW 64TH TERRACE From South				KIMBERLY BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
07:30 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Total	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
08:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	2
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
04:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
04:30 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	1	0	0	2	1	0	0	0	0	0	0	0	2	0	6
05:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	3
Grand Total	0	0	2	1	0	3	3	0	0	0	1	0	0	0	4	0	14
Apprch %	0	0	66.7	33.3	0	50	50	0	0	0	100	0	0	0	100	0	
Total %	0	0	14.3	7.1	0	21.4	21.4	0	0	0	7.1	0	0	0	28.6	0	

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File Name : kimberly & sw 64 terrace
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	SW 64TH TERRACE From North				KIMBERLY BOULEVARD From East				SW 64TH TERRACE From South				KIMBERLY BOULEVARD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
07:15 AM	4	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	8
07:30 AM	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	4
07:45 AM	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	11	0	3	0	1	0	0	0	2	0	1	0	1	0	0	0	19
08:00 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:30 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
Total	7	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	10
04:00 PM	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
04:15 PM	6	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	8
04:30 PM	3	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	6
04:45 PM	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	4
Total	13	0	2	0	1	0	0	0	1	0	4	0	0	0	0	0	21
05:00 PM	5	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	9
05:15 PM	3	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	6
05:30 PM	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4
05:45 PM	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	4
Total	11	0	5	0	5	0	0	0	1	0	1	0	0	0	0	0	23
Grand Total	42	0	11	0	7	0	0	0	5	0	7	0	1	0	0	0	73
Apprch %	79.2	0	20.8	0	100	0	0	0	41.7	0	58.3	0	100	0	0	0	
Total %	57.5	0	15.1	0	9.6	0	0	0	6.8	0	9.6	0	1.4	0	0	0	

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SOUTHGATE BOULEVARD & SW 61ST AVENUE
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VIDEO COUNT
NOT SIGNALIZED

File Name : southgate & sw 61 avenue
Site Code : 230081
Start Date : 5/9/2023
Page No : 1

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

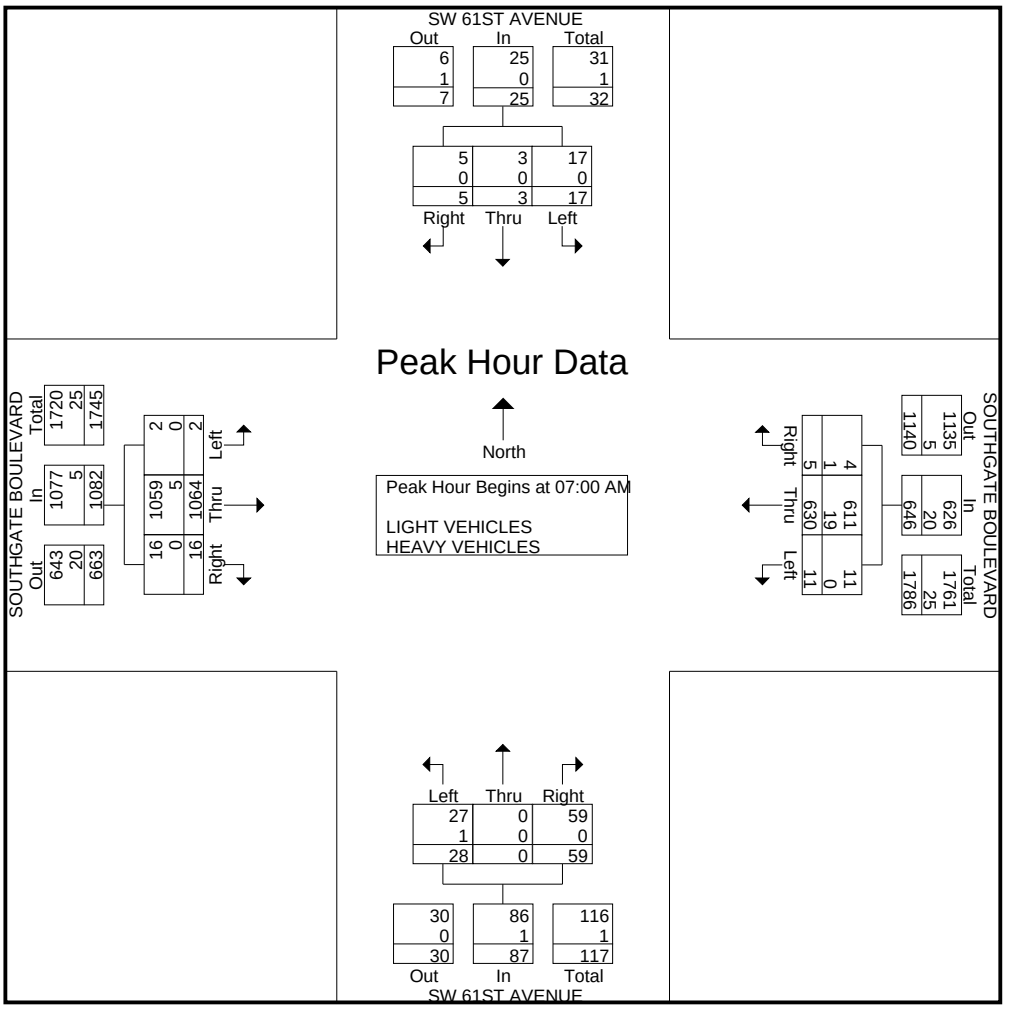
	SW 61ST AVENUE From North				SOUTHGATE BOULEVARD From East				SW 61ST AVENUE From South				SOUTHGATE BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00 AM	0	4	0	1	0	3	132	2	0	7	0	17	0	0	260	1	427
07:15 AM	0	1	1	2	0	3	168	1	0	10	0	8	1	0	245	3	443
07:30 AM	0	6	2	1	0	3	169	0	0	2	0	22	1	0	290	3	499
07:45 AM	0	6	0	1	0	2	161	2	0	9	0	12	0	0	269	9	471
Total	0	17	3	5	0	11	630	5	0	28	0	59	2	0	1064	16	1840
08:00 AM	0	0	0	0	0	2	117	3	0	8	0	16	0	0	216	1	363
08:15 AM	0	3	1	3	0	3	153	2	0	6	0	10	1	0	252	8	442
08:30 AM	0	2	0	1	0	2	158	5	0	3	0	16	1	0	196	4	388
08:45 AM	0	5	0	1	0	2	127	2	0	7	0	10	0	0	251	12	417
Total	0	10	1	5	0	9	555	12	0	24	0	52	2	0	915	25	1610
04:00 PM	0	4	0	0	0	2	181	4	0	4	0	7	2	1	137	1	343
04:15 PM	0	2	0	0	0	12	173	10	0	4	0	4	0	0	184	5	394
04:30 PM	0	4	0	2	0	7	224	7	0	4	1	7	0	1	179	4	440
04:45 PM	0	6	0	0	1	8	177	4	0	7	0	6	1	1	128	7	346
Total	0	16	0	2	1	29	755	25	0	19	1	24	3	3	628	17	1523
05:00 PM	0	3	0	0	0	6	197	8	0	3	3	12	1	1	149	6	389
05:15 PM	0	6	0	0	0	12	223	8	0	7	3	8	2	1	168	4	442
05:30 PM	0	2	0	2	0	2	229	10	0	3	1	5	1	0	169	5	429
05:45 PM	0	0	0	4	0	6	219	11	0	4	0	8	0	2	172	4	430
Total	0	11	0	6	0	26	868	37	0	17	7	33	4	4	658	19	1690
Grand Total	0	54	4	18	1	75	2808	79	0	88	8	168	11	7	3265	77	6663
Apprch %	0	71.1	5.3	23.7	0	2.5	94.8	2.7	0	33.3	3	63.6	0.3	0.2	97.2	2.3	
Total %	0	0.8	0.1	0.3	0	1.1	42.1	1.2	0	1.3	0.1	2.5	0.2	0.1	49	1.2	
LIGHT VEHICLES	0	53	4	16	1	75	2758	77	0	85	8	167	11	7	3218	77	6557
% LIGHT VEHICLES	0	98.1	100	88.9	100	100	98.2	97.5	0	96.6	100	99.4	100	100	98.6	100	98.4
HEAVY VEHICLES	0	1	0	2	0	0	50	2	0	3	0	1	0	0	47	0	106
% HEAVY VEHICLES	0	1.9	0	11.1	0	0	1.8	2.5	0	3.4	0	0.6	0	0	1.4	0	1.6

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File Name : southgate & sw 61 avenue
Site Code : 230081
Start Date : 5/9/2023
Page No : 2

	SW 61ST AVENUE From North					SOUTHGATE BOULEVARD From East					SW 61ST AVENUE From South					SOUTHGATE BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	4	0	1	5	0	**3**	132	**2**	137	0	7	0	17	**24**	0	0	260	1	261	427
07:15 AM	0	1	1	**2**	4	0	3	168	1	**172**	0	**10**	0	8	18	**1**	0	245	3	249	443
07:30 AM	0	**6**	**2**	1	**9**	0	3	**169**	0	172	0	2	0	**22**	24	1	0	**290**	3	**294**	**499**
07:45 AM	0	6	0	1	7	0	2	161	2	165	0	9	0	12	21	0	0	269	**9**	278	471
Total Volume	0	17	3	5	25	0	11	630	5	646	0	28	0	59	87	2	0	1064	16	1082	1840
% App. Total	0	68	12	20		0	1.7	97.5	0.8		0	32.2	0	67.8		0.2	0	98.3	1.5		
PHF	.000	.708	.375	.625	.694	.000	.917	.932	.625	.939	.000	.700	.000	.670	.906	.500	.000	.917	.444	.920	.922
LIGHT VEHICLES																		1059			
% LIGHT VEHICLES	0	100	100	100	100	0	100	97.0	80.0	96.9	0	96.4	0	100	98.9	100	0	99.5	100	99.5	98.6
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	0	0	0	0	0	3.0	20.0	3.1	0	3.6	0	0	1.1	0	0	0.5	0	0.5	1.4

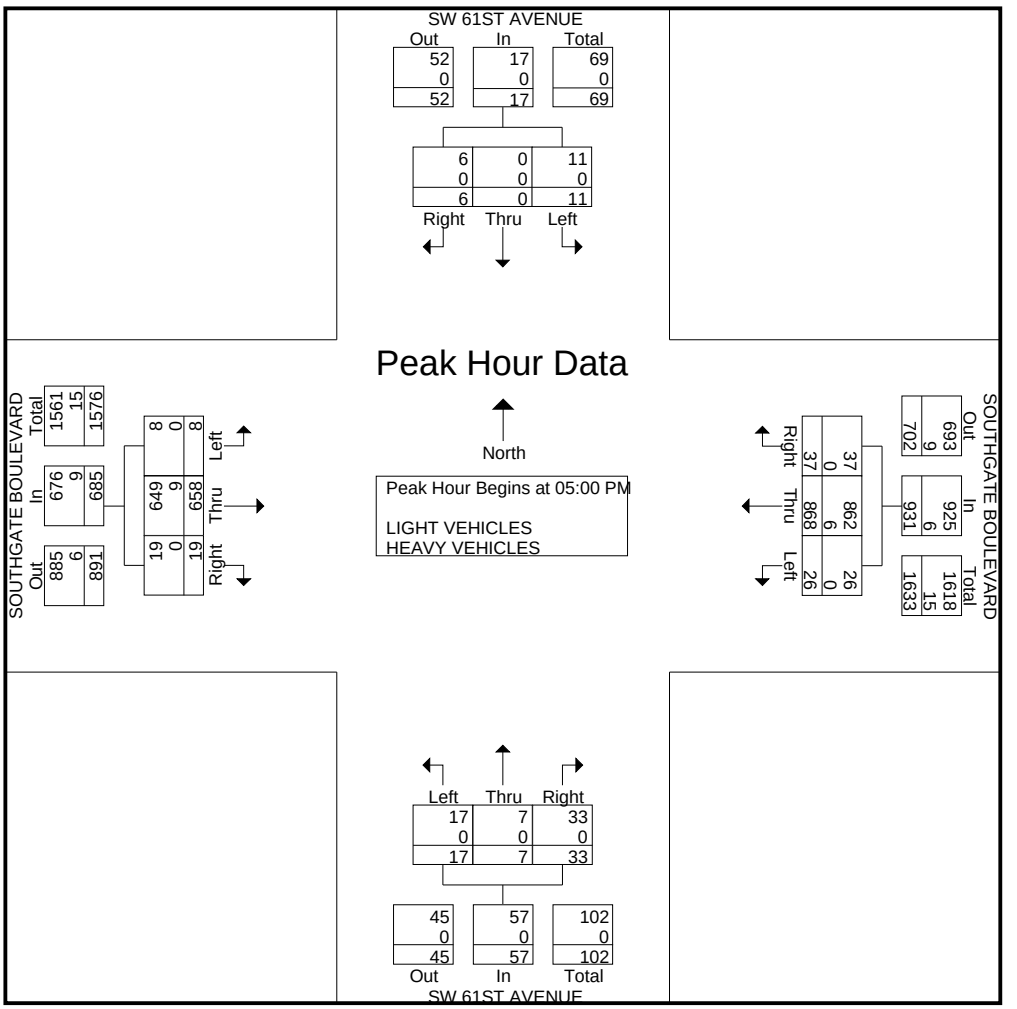


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SOUTHGATE BOULEVARD & SW 61ST AVENUE
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File Name : southgate & sw 61 avenue
Site Code : 230081
Start Date : 5/9/2023
Page No : 3

	SW 61ST AVENUE From North					SOUTHGATE BOULEVARD From East					SW 61ST AVENUE From South					SOUTHGATE BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	3	0	0	3	0	6	197	8	211	0	3	**3**	**12**	**18**	1	1	149	**6**	157	389
05:15 PM	0	**6**	0	0	**6**	0	**12**	223	8	**243**	0	**7**	3	8	18	**2**	1	168	4	175	**442**
05:30 PM	0	2	0	2	4	0	2	**229**	10	241	0	3	1	5	9	1	0	169	5	175	429
05:45 PM	0	0	0	**4**	4	0	6	219	**11**	236	0	4	0	8	12	0	**2**	**172**	4	**178**	430
Total Volume	0	11	0	6	17	0	26	868	37	931	0	17	7	33	57	4	4	658	19	685	1690
% App. Total	0	64.7	0	35.3		0	2.8	93.2	4		0	29.8	12.3	57.9		0.6	0.6	96.1	2.8		
PHF	.000	.458	.000	.375	.708	.000	.542	.948	.841	.958	.000	.607	.583	.688	.792	.500	.500	.956	.792	.962	.956
LIGHT VEHICLES																					
% LIGHT VEHICLES	0	100	0	100	100	0	100	99.3	100	99.4	0	100	100	100	100	100	100	98.6	100	98.7	99.1
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	0	0	0	0	0	0.7	0	0.6	0	0	0	0	0	0	0	1.4	0	1.3	0.9



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VIDEO COUNT
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File Name : southgate & sw 61 avenue
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- BICYCLES ON THE ROAD

	SW 61ST AVENUE From North				SOUTHGATE BOULEVARD From East				SW 61ST AVENUE From South				SOUTHGATE BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	3
04:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	1	0	0	1	1	0	0	0	0	2	0	0	1	0	6
Apprch %	0	0	100	0	0	50	50	0	0	0	0	100	0	0	100	0	
Total %	0	0	16.7	0	0	16.7	16.7	0	0	0	0	33.3	0	0	16.7	0	

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File Name : southgate & sw 61 avenue
Site Code : 230081
Start Date : 5/9/2023

Groups Printed- PEDESTRIANS & BIKES

	SW 61ST AVENUE From North				SOUTHGATE BOULEVARD From East				SW 61ST AVENUE From South				SOUTHGATE BOULEVARD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	3
07:15 AM	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
07:30 AM	1	0	0	0	0	0	1	0	2	0	2	0	0	0	0	0	6
07:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	4	0	0	0	0	0	1	0	5	0	3	0	0	0	0	0	13
08:00 AM	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	3
08:15 AM	1	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	4
08:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Total	1	0	2	0	0	0	0	0	2	0	2	0	2	0	0	0	9
04:00 PM	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	3
04:15 PM	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3
04:30 PM	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	3
04:45 PM	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	6	0	2	0	0	0	1	0	3	0	0	0	0	0	0	0	12
05:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	3	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	5
05:30 PM	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4
05:45 PM	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	6
Total	11	0	1	0	1	0	0	0	2	0	2	0	0	0	0	0	17
Grand Total	22	0	5	0	1	0	2	0	12	0	7	0	2	0	0	0	51
Apprch %	81.5	0	18.5	0	33.3	0	66.7	0	63.2	0	36.8	0	100	0	0	0	
Total %	43.1	0	9.8	0	2	0	3.9	0	23.5	0	13.7	0	3.9	0	0	0	

APPENDIX C

FDOT Peak Season
Conversion Factor Report

2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8630 WEST-W OF US441

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2022 - 01/01/2022	0.99	1.02
2	01/02/2022 - 01/08/2022	1.01	1.04
3	01/09/2022 - 01/15/2022	1.02	1.05
4	01/16/2022 - 01/22/2022	1.01	1.04
5	01/23/2022 - 01/29/2022	1.00	1.03
6	01/30/2022 - 02/05/2022	0.98	1.01
* 7	02/06/2022 - 02/12/2022	0.97	1.00
* 8	02/13/2022 - 02/19/2022	0.96	0.99
* 9	02/20/2022 - 02/26/2022	0.96	0.99
*10	02/27/2022 - 03/05/2022	0.96	0.99
*11	03/06/2022 - 03/12/2022	0.96	0.99
*12	03/13/2022 - 03/19/2022	0.96	0.99
*13	03/20/2022 - 03/26/2022	0.96	0.99
*14	03/27/2022 - 04/02/2022	0.97	1.00
*15	04/03/2022 - 04/09/2022	0.97	1.00
*16	04/10/2022 - 04/16/2022	0.97	1.00
*17	04/17/2022 - 04/23/2022	0.97	1.00
*18	04/24/2022 - 04/30/2022	0.98	1.01
*19	05/01/2022 - 05/07/2022	0.98	1.01
20	05/08/2022 - 05/14/2022	0.99	1.02
21	05/15/2022 - 05/21/2022	1.00	1.03
22	05/22/2022 - 05/28/2022	1.01	1.04
23	05/29/2022 - 06/04/2022	1.02	1.05
24	06/05/2022 - 06/11/2022	1.03	1.06
25	06/12/2022 - 06/18/2022	1.04	1.07
26	06/19/2022 - 06/25/2022	1.04	1.07
27	06/26/2022 - 07/02/2022	1.05	1.08
28	07/03/2022 - 07/09/2022	1.05	1.08
29	07/10/2022 - 07/16/2022	1.06	1.09
30	07/17/2022 - 07/23/2022	1.05	1.08
31	07/24/2022 - 07/30/2022	1.04	1.07
32	07/31/2022 - 08/06/2022	1.03	1.06
33	08/07/2022 - 08/13/2022	1.02	1.05
34	08/14/2022 - 08/20/2022	1.01	1.04
35	08/21/2022 - 08/27/2022	1.02	1.05
36	08/28/2022 - 09/03/2022	1.02	1.05
37	09/04/2022 - 09/10/2022	1.03	1.06
38	09/11/2022 - 09/17/2022	1.03	1.06
39	09/18/2022 - 09/24/2022	1.02	1.05
40	09/25/2022 - 10/01/2022	1.01	1.04
41	10/02/2022 - 10/08/2022	0.99	1.02
42	10/09/2022 - 10/15/2022	0.98	1.01
43	10/16/2022 - 10/22/2022	0.99	1.02
44	10/23/2022 - 10/29/2022	1.00	1.03
45	10/30/2022 - 11/05/2022	1.00	1.03
46	11/06/2022 - 11/12/2022	1.01	1.04
47	11/13/2022 - 11/19/2022	1.02	1.05
48	11/20/2022 - 11/26/2022	1.01	1.04
49	11/27/2022 - 12/03/2022	1.01	1.04
50	12/04/2022 - 12/10/2022	1.00	1.03
51	12/11/2022 - 12/17/2022	0.99	1.02
52	12/18/2022 - 12/24/2022	1.01	1.04
53	12/25/2022 - 12/31/2022	1.02	1.05

* PEAK SEASON

APPENDIX D

ITE *Trip Generation Manual (11th Edition)*

Relevant Excerpts

Land Use: 221
Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments and condominiums located in a building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (mid-rise) (Land Use 226), and mid-rise residential with ground-floor commercial (Land Use 231) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.5 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New York, Ontario (CAN), Oregon, Utah, and Virginia.

Source Numbers

168, 188, 204, 305, 306, 321, 818, 857, 862, 866, 901, 904, 910, 949, 951, 959, 963, 964, 966, 967, 969, 970, 1004, 1014, 1022, 1023, 1025, 1031, 1032, 1035, 1047, 1056, 1057, 1058, 1071, 1076

Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

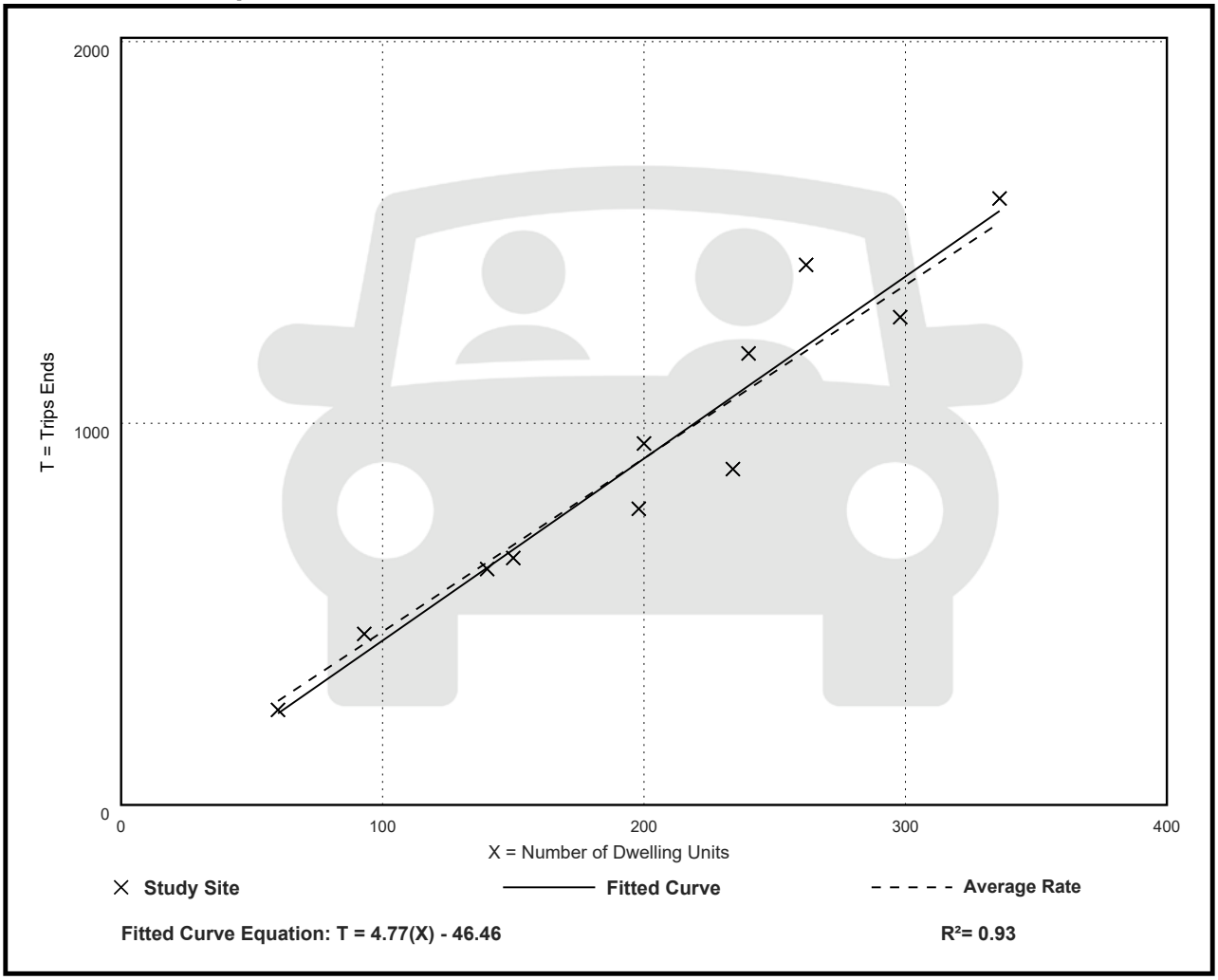
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 11
Avg. Num. of Dwelling Units: 201
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.76 - 5.40	0.51

Data Plot and Equation



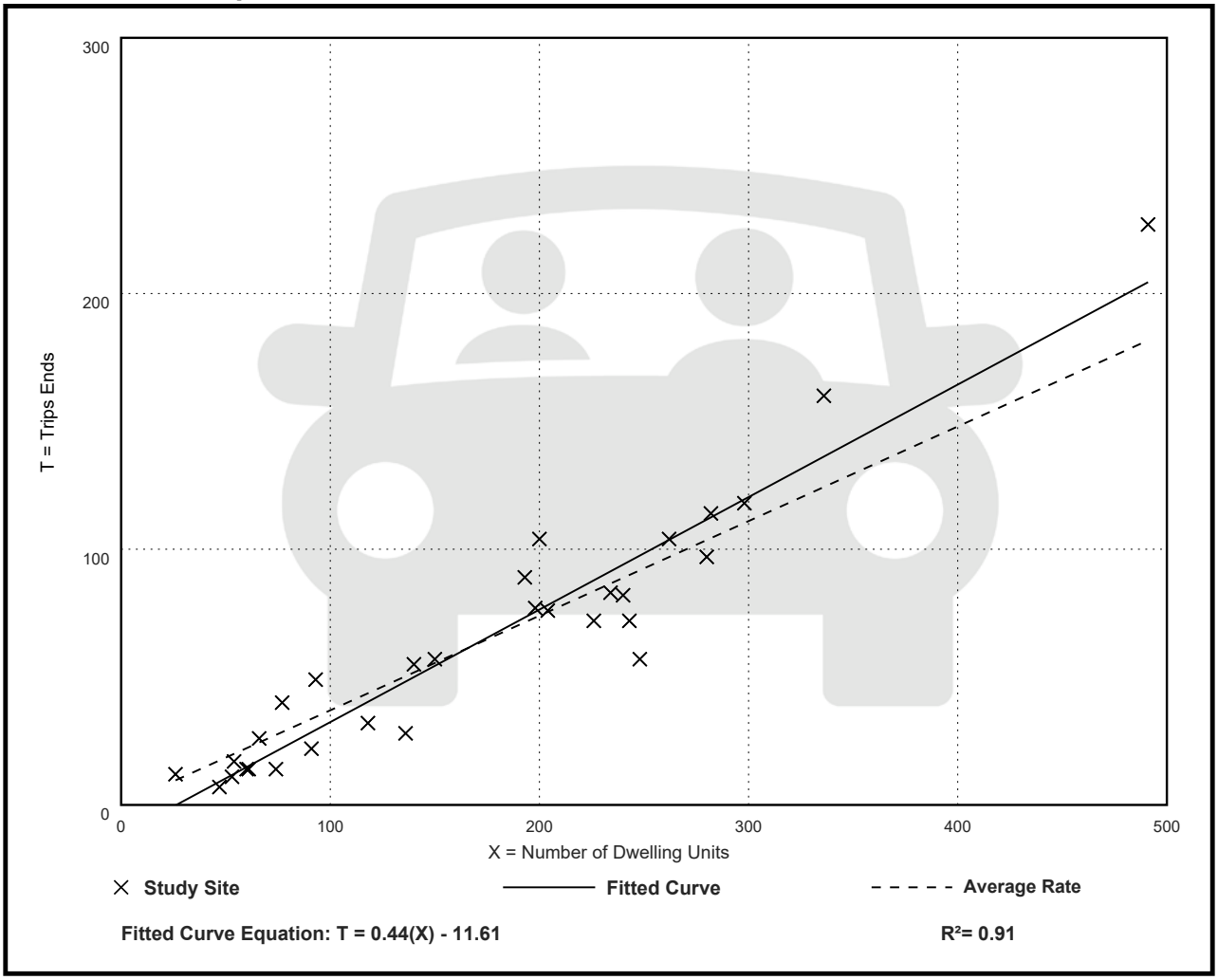
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 30
Avg. Num. of Dwelling Units: 173
Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Fitted Curve Equation: T = 0.44(X) - 11.61

R^2= 0.91

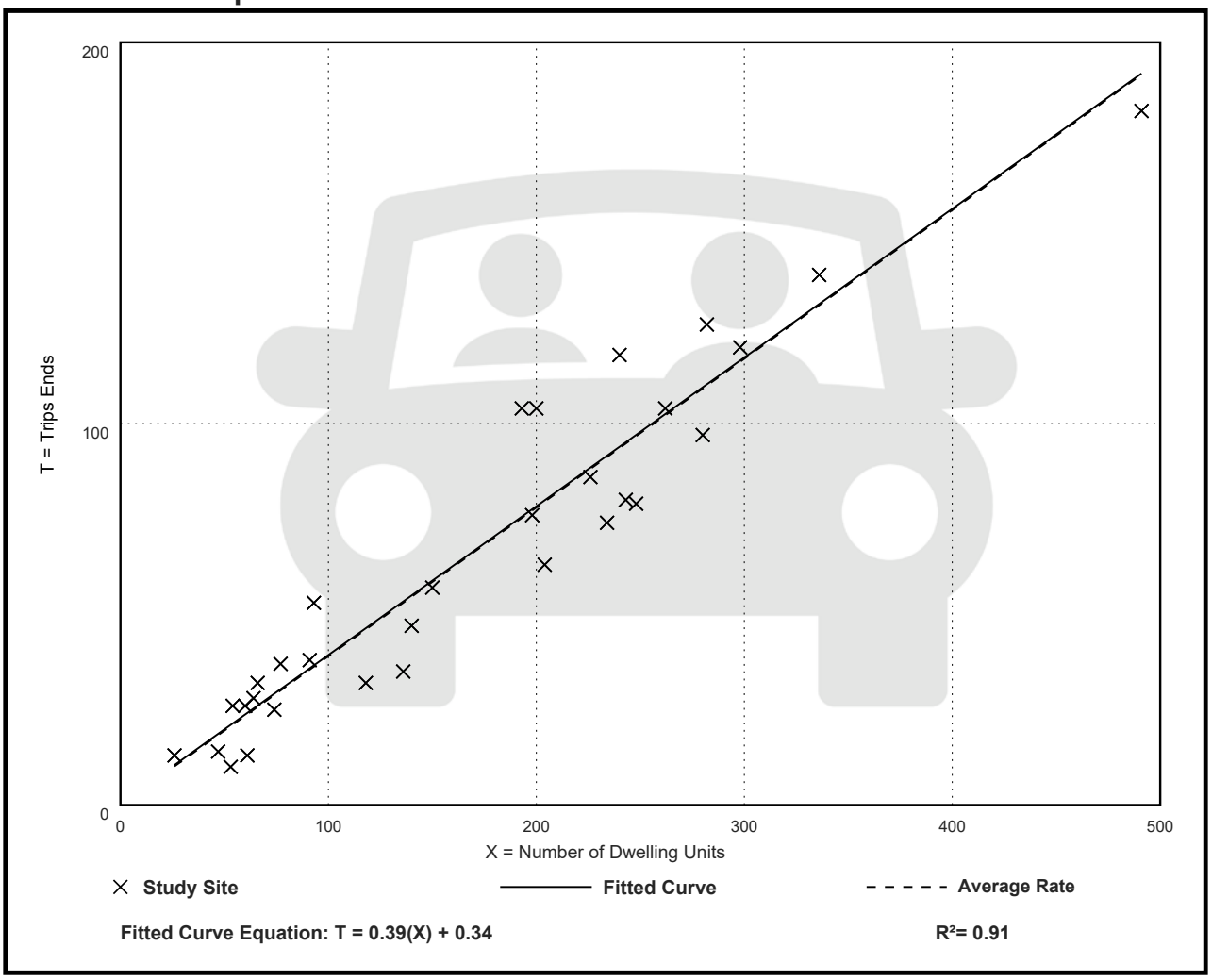
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. Num. of Dwelling Units: 169
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



APPENDIX E

Historic Traffic Counts
And Growth Rate Analysis

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0014 - SR 814/ATLANTIC BLVD - E OF SR 7/US 441

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	52500 C	E 27000	W 25500	9.00	57.00	2.90
2021	46500 C	E 21000	W 25500	9.00	53.80	1.90
2020	53000 F	E 26500	W 26500	9.00	53.90	1.90
2019	56000 C	E 28000	W 28000	9.00	54.60	1.90
2018	53500 C	E 25500	W 28000	9.00	54.50	3.10
2017	53500 C	E 25500	W 28000	9.00	51.90	3.10
2016	50000 C	E 25000	W 25000	9.00	54.10	3.10
2015	47000 C	E 22000	W 25000	9.00	54.00	4.60
2014	51500 C	E 25500	W 26000	9.00	54.20	4.60
2013	51000 C	E 24000	W 27000	9.00	53.60	3.00
2012	43000 C	E 21500	W 21500	9.00	52.20	4.30
2011	45000 C	E 22500	W 22500	9.00	52.50	4.30
2010	49500 C	E 23500	W 26000	8.35	52.69	4.30
2009	47000 C	E 23000	W 24000	8.53	53.89	4.70
2008	49000 C	E 24000	W 25000	8.81	54.16	4.70
2007	52000 C	E 25500	W 26500	8.63	55.75	2.50

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0426 - SR 7 - S OF SOUTHGATE BLVD,CABINET AT AZTEC BLVD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	47000 C	N 23500	S 23500	9.00	57.00	2.90
2021	47500 C	N 24000	S 23500	9.00	53.80	2.90
2020	55000 C	N 28500	S 26500	9.00	53.90	2.90
2019	43500 C	N 21500	S 22000	9.00	54.60	3.50
2018	49000 C	N 24500	S 24500	9.00	54.50	3.50
2017	48000 C	N 25000	S 23000	9.00	51.90	3.50
2016	50000 C	N 24500	S 25500	9.00	54.10	2.90
2015	47500 C	N 22500	S 25000	9.00	54.00	2.90
2014	47500 C	N 22500	S 25000	9.00	54.20	3.10
2013	47500 C	N 22500	S 25000	9.00	53.60	3.10
2012	49500 C	N 24000	S 25500	9.00	52.20	3.40
2011	44500 C	N 22000	S 22500	9.00	52.50	3.30
2010	39500 C	N 19500	S 20000	8.35	52.69	4.00
2009	45500 C	N 22500	S 23000	8.53	53.89	4.10
2008	45000 C	N 23000	S 22000	8.81	54.16	3.80
2007	48000 C	N 24500	S 23500	8.63	55.75	3.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 5238 - CR 814 - ATLANTIC BLVD - W OF SR 7/US 441

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	49500 C	E 25500	W 24000	9.00	53.80	4.50
2021	49000 F	E 25500	W 23500	9.00	54.00	2.90
2020	50000 C	E 26000	W 24000	9.00	55.10	2.90
2019	53500 C	E 26500	W 27000	9.00	56.00	2.90
2018	57500 S	E 29500	W 28000	9.00	56.30	3.20
2017	56500 F	E 29000	W 27500	9.00	57.10	3.20
2016	55000 C	E 28000	W 27000	9.00	56.10	3.20
2015	43500 S	E 20500	W 23000	9.00	56.20	5.70
2014	42500 F	E 20000	W 22500	9.00	56.80	5.70
2013	41500 C	E 19500	W 22000	9.00	56.20	5.70
2012	42500 C	E 21000	W 21500	9.00	57.00	4.10
2011	49000 C	E 23000	W 26000	9.00	59.10	4.10
2010	49000 C	E 25000	W 24000	9.60	57.92	4.10
2009	45000 C	E 22500	W 22500	9.71	58.42	3.50
2008	53500 C	E 26500	W 27000	9.67	56.67	3.50
2007	48500 C	E 24000	W 24500	10.19	60.63	4.40

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 5307 - SR 7 - N OF BAILEY ROAD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	44000 C	N 22000	S 22000	9.00	57.00	3.40
2021	44500 C	N 22000	S 22500	9.00	53.80	2.20
2020	44000 F	N 21500	S 22500	9.00	53.90	2.20
2019	46500 C	N 22500	S 24000	9.00	54.60	2.20
2018	43500 C	N 21500	S 22000	9.00	54.50	1.80
2017	44500 C	N 22000	S 22500	9.00	51.90	1.80
2016	40500 C	N 18000	S 22500	9.00	54.10	1.80
2015	39500 C	N 20000	S 19500	9.00	54.00	3.40
2014	39500 C	N 20500	S 19000	9.00	54.20	3.60
2013	40000 C	N 20500	S 19500	9.00	53.60	3.90
2012	46500 C	N 23500	S 23000	9.00	52.20	3.60
2011	41500 C	N 20500	S 21000	9.00	52.50	3.60
2010	46000 C	N 22500	S 23500	8.35	52.69	3.60
2009	40000 C	N 19500	S 20500	8.53	53.89	4.40
2008	48500 C	N 25500	S 23000	8.81	54.16	4.40
2007	42000 C	N 20500	S 21500	8.63	55.75	2.80

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7491 - SR 7 - S OF ATLANTIC BLVD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	54500 C	N 27000	S 27500	9.00	57.00	3.40
2021	53500 C	N 27500	S 26000	9.00	53.80	3.40
2020	51000 F	N 25000	S 26000	9.00	53.90	2.20
2019	54000 C	N 26500	S 27500	9.00	54.60	2.20
2018	51500 C	N 26500	S 25000	9.00	54.50	2.20
2017	54000 C	N 26500	S 27500	9.00	51.90	3.10
2016	56000 C	N 28000	S 28000	9.00	54.10	3.10
2015	48500 C	N 23500	S 25000	9.00	54.00	3.10
2014	54500 C	N 27500	S 27000	9.00	54.20	2.90
2013	52500 C	N 26000	S 26500	9.00	53.60	3.00
2012	55000 C	N 29000	S 26000	9.00	52.20	3.00
2011	48500 C	N 24500	S 24000	9.00	52.50	5.30
2010	55500 C	N 29500	S 26000	8.35	52.69	5.30
2009	54000 C	N 27500	S 26500	8.53	53.89	5.30
2008	61500 S	N 30500	S 31000	8.81	54.16	3.80
2007	63500 F	N 31500	S 32000	8.63	55.75	3.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7512 - SOUTHGATE BLVD, W OF SR 7

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	13600 S	E 7300	W 6300	9.00	53.80	5.40
2021	13700 F	E 7400	W 6300	9.00	54.00	14.30
2020	13900 C	E 7500	W 6400	9.00	55.10	8.80
2019	21300 T	E 12000	W 9300	9.00	56.00	5.50
2018	21200 S	E 12000	W 9200	9.00	56.30	6.00
2017	21100 F	E 12000	W 9100	9.00	57.10	6.20
2016	20400 C	E 11500	W 8900	9.00	56.10	2.90
2015	20000 V	0	0	9.00	56.20	3.40
2014	19500 R			9.00	56.80	7.40
2013	19000 T	0	0	9.00	56.20	7.60
2012	19000 S	0	0	9.00	57.00	5.90
2011	18900 F	0	0	9.00	59.10	6.30
2010	18500 C	E 9100	W 9400	9.60	57.92	9.30
2009	17800 F	E 9000	W 8800	9.71	58.42	5.30
2008	17600 C	E 8900	W 8700	9.67	56.67	6.50
2007	17800 C	E 9200	W 8600	10.19	60.63	4.80

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7524 - KIMBERLY BLVD, W OF SR 7

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	7700 S	E 4100	W 3600	9.00	53.80	5.40
2021	7700 F	E 4100	W 3600	9.00	54.00	14.30
2020	7800 C	E 4200	W 3600	9.00	55.10	8.80
2019	11000 R	E 6000	W 5000	9.00	56.00	5.50
2018	10900 T	E 5900	W 5000	9.00	56.30	6.00
2017	10700 S	E 5800	W 4900	9.00	57.10	6.20
2016	10400 F	E 5600	W 4800	9.00	56.10	2.90
2015	10200 C	E 5500	W 4700	9.00	56.20	3.40
2014	9900 X			9.00	56.80	7.40
2013	9700 X	0	0	9.00	56.20	7.60
2012	9600 T	0	0	9.00	57.00	5.90
2011	9500 S	0	0	9.00	59.10	6.30
2010	9300 F	E 4700	W 4600	9.60	57.92	9.30
2009	9100 C	E 4600	W 4500	9.71	58.42	5.30
2008	8900 C	E 4600	W 4300	9.67	56.67	6.50
2007	9300 C	E 4700	W 4600	10.19	60.63	4.80

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

REZ SR 7 Multifamily

Margate, FL

Growth Rate Analysis

Site #860014 - SR 814 / Atlantic Boulevard - East of SR 7 / US 441

Year	Volume	Growth Rate
2018	53,500	
2022	52,500	-0.38%

Site #860426 - SR 7 - South of Southgate Boulevard

Year	Volume	Growth Rate
2018	49,000	
2022	47,000	-0.83%

Site #865238 - CR 814 - Atlantic Boulevard - West of SR 7 / US 441

Year	Volume	Growth Rate
2018	57,500	
2022	49,500	-2.95%

Site #865307 - SR 7 - North of Bailey Road

Year	Volume	Growth Rate
2018	43,500	
2022	44,000	0.23%

Site #867491 - SR 7 - South of Atlantic Boulevard

Year	Volume	Growth Rate
2018	51,500	
2022	54,500	1.14%

Site #867512 - Southgate Boulevard - West of SR 7

Year	Volume	Growth Rate
2018	21,200	
2022	13,600	-8.50%

Site #867524 - Kimberly Boulevard - West of SR 7

Year	Volume	Growth Rate
2018	10,900	
2022	7,700	-6.71%

Total - All Count Stations

Year	Volume	Growth Rate
2018	287,100	
2022	268,800	-1.31%

APPENDIX F

Existing Office Buildings at 777 S. State Road 7

Development of Traffic Volumes



MARTY KIAR
BROWARD COUNTY
PROPERTY APPRAISER

Site Address	767 S STATE ROAD 7, MARGATE FL 33068
Property Owner	767 BUILDING LLC
Mailing Address	%777 PROPERTIES INC 541 S STATE ROAD 7 STE 11 MARGATE FL 33068

ID #	4941 01 31 0010
Millage	1212
Use	17-01

Abbr Legal Description	441 SOUTH,LTD II 124-41 B PARCEL A THE N1/2,LESS POR DESC AS:BEG NE COR SAID PAR "A",S 336.52,W 521,N 336.52,E 512.96 TO POB TOG WITH MINI MART DEV CORP SUB 81-49 B PAR B

The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

* 2024 values are considered "working values" and are subject to change.

Property Assessment Values

Year	Land	Building / Improvement	Just / Market Value	Assessed / SOH Value	Tax
2024	$1,787,480	$1,959,020	$3,746,500	$3,746,500	
2023	$1,787,480	$1,987,710	$3,775,190	$3,759,770	$82,909.45
2022	$1,787,480	$1,630,500	$3,417,980	$3,417,980	$74,420.03

2024 Exemptions and Taxable Values by Taxing Authority

	County	School Board	Municipal	Independent
Just Value	$3,746,500	$3,746,500	$3,746,500	$3,746,500
Portability	0	0	0	0
Assessed/SOH	$3,746,500	$3,746,500	$3,746,500	$3,746,500
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wid/Vet/Dis	0	0	0	0
Senior	0	0	0	0
Exempt Type	0	0	0	0
Taxable	$3,746,500	$3,746,500	$3,746,500	$3,746,500

Sales History

Date	Type	Price	Book/Page or CIN
7/16/2004	WD*	$1,950,000	37932 / 22

* Denotes Multi-Parcel Sale (See Deed)

Land Calculations

Price	Factor	Type
$10.00	178,748	SF
Adj. Bldg. S.F. (Card, Sketch)		36637
Eff./Act. Year Built: 1987/1986		

Special Assessments

Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc

Please Note: The City of Margate levies a non-ad valorem fire assessment.
The fire assessment, if any, is not included in the tax amounts shown above.



Site Address	777 S STATE ROAD 7, MARGATE FL 33068-2823	ID #	4941 01 31 0011
Property Owner	777 PROPERTIES INC	Millage	1212
Mailing Address	541 S STATE ROAD 7 #11 MARGATE FL 33068	Use	17-01
Abbr Legal Description	441 SOUTH,LTD II 124-41 B POR OF PAR A N1/2 DESC AS:BEG NE COR SAID PAR A,S 336.52, W 521,N 336.52,E 512.96 TO POB		

The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

* 2024 values are considered "working values" and are subject to change.

Property Assessment Values

Year	Land	Building / Improvement	Just / Market Value	Assessed / SOH Value	Tax
2024	$1,740,000	$2,063,000	$3,803,000	$3,803,000	
2023	$1,740,000	$2,030,890	$3,770,890	$3,755,040	$82,808.13
2022	$1,740,000	$1,673,680	$3,413,680	$3,413,680	$74,326.40

2024 Exemptions and Taxable Values by Taxing Authority

	County	School Board	Municipal	Independent
Just Value	$3,803,000	$3,803,000	$3,803,000	$3,803,000
Portability	0	0	0	0
Assessed/SOH	$3,803,000	$3,803,000	$3,803,000	$3,803,000
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wid/Vet/Dis	0	0	0	0
Senior	0	0	0	0
Exempt Type	0	0	0	0
Taxable	$3,803,000	$3,803,000	$3,803,000	$3,803,000

Sales History

Date	Type	Price	Book/Page or CIN
8/1/1994	WD	$1,950,000	22553 / 810

Land Calculations

Price	Factor	Type
$10.00	174,000	SF
Adj. Bldg. S.F. (Card, Sketch)		36637
Eff./Act. Year Built: 1988/1987		

Special Assessments

Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc

Please Note: The City of Margate levies a non-ad valorem fire assessment.
The fire assessment, if any, is not included in the tax amounts shown above.

Land Use: 710
General Office Building

Description

A general office building is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building houses multiple tenants that can include, as examples, professional services, insurance companies, investment brokers, a banking institution, a restaurant, or other service retailers. A general office building with a gross floor area of 10,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), medical-dental office building (Land Use 720), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.

Additional Data

If two or more general office buildings are in close physical proximity (within a close walk) and function as a unit (perhaps with a shared parking facility and common or complementary tenants), the total gross floor area or employment of the paired office buildings can be used for calculating the site trip generation. If the individual buildings are isolated or not functionally related to one another, trip generation should be calculated for each building separately.

For study sites with reported gross floor area and employees, an average employee density of 3.3 employees per 1,000 square feet GFA (or roughly 300 square feet per employee) has been consistent through the 1980s, 1990s, and 2000s. No sites counted in the 2010s reported both GFA and employees.

The average building occupancy varies considerably within the studies for which occupancy data were provided. The reported occupied gross floor area was 88 percent for general urban/suburban sites and 96 percent for the center city core and dense multi-use urban sites.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The average numbers of person trips per vehicle trip at the eight center city core sites at which both person trip and vehicle trip data were collected are as follows:

- 2.8 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 2.9 during Weekday, AM Peak Hour of Generator
- 2.9 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 3.0 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 18 dense multi-use urban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.5 during Weekday, AM Peak Hour of Generator
- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.5 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 23 general urban/suburban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.3 during Weekday, AM Peak Hour of Generator
- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.4 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Ontario (CAN)Pennsylvania, Texas, Utah, Virginia, and Washington.

Source Numbers

161, 175, 183, 184, 185, 207, 212, 217, 247, 253, 257, 260, 262, 273, 279, 297, 298, 300, 301, 302, 303, 304, 321, 322, 323, 324, 327, 404, 407, 408, 419, 423, 562, 734, 850, 859, 862, 867, 869, 883, 884, 890, 891, 904, 940, 944, 946, 964, 965, 972, 1009, 1030, 1058, 1061

General Office Building
(710)

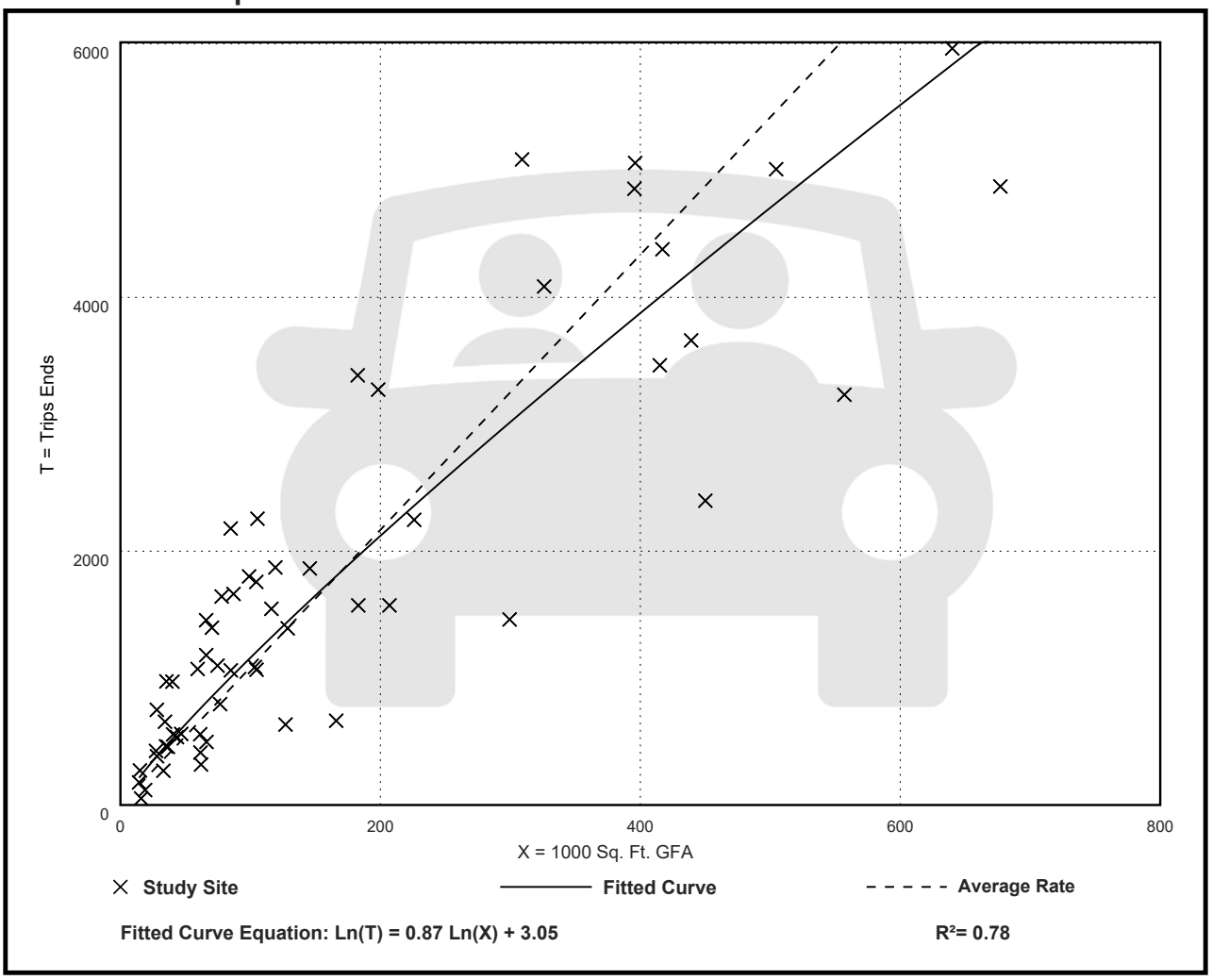
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 59
Avg. 1000 Sq. Ft. GFA: 163
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.84	3.27 - 27.56	4.76

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.87 Ln(X) + 3.05

R^2= 0.78

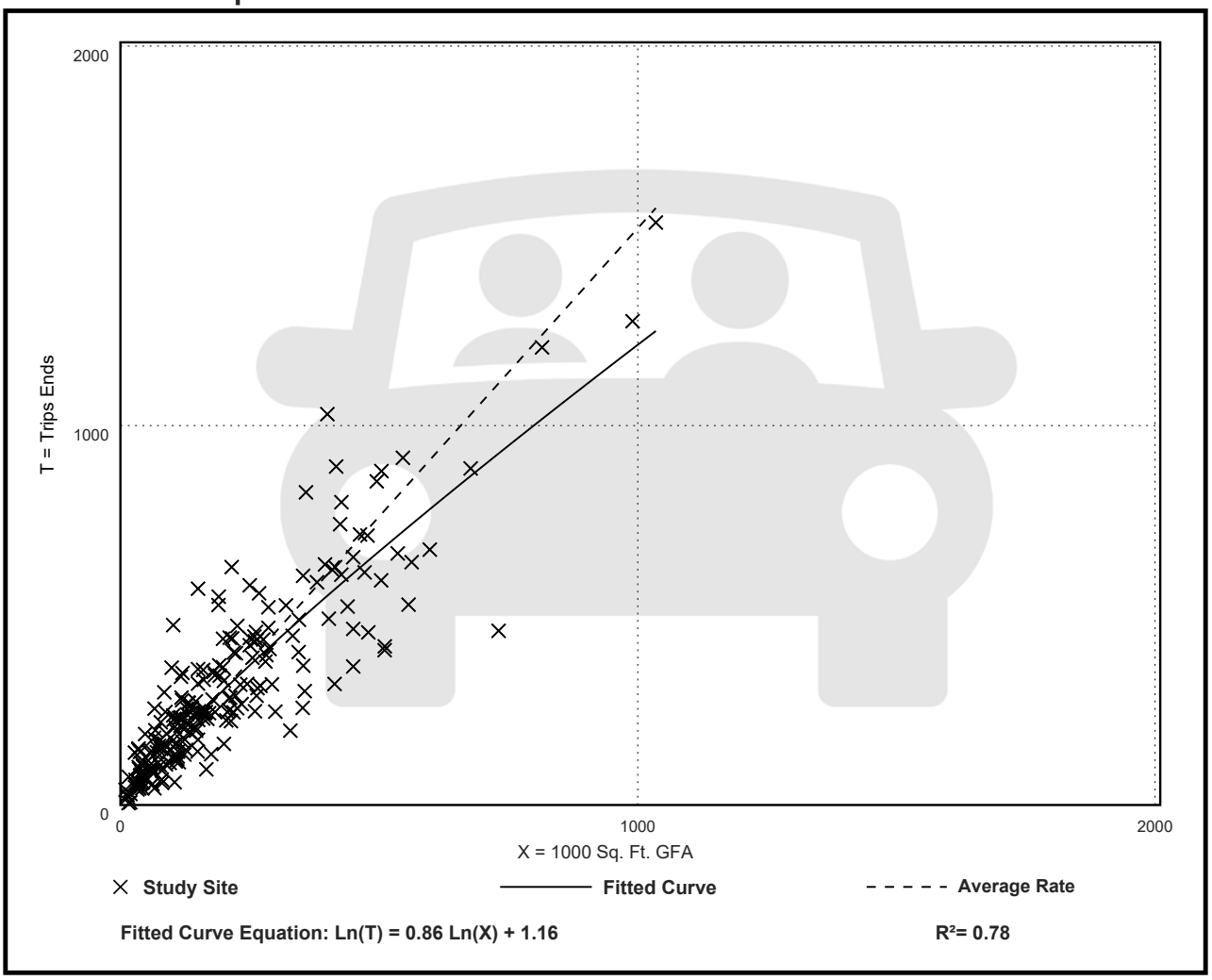
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 221
Avg. 1000 Sq. Ft. GFA: 201
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.86 Ln(X) + 1.16

R^2= 0.78

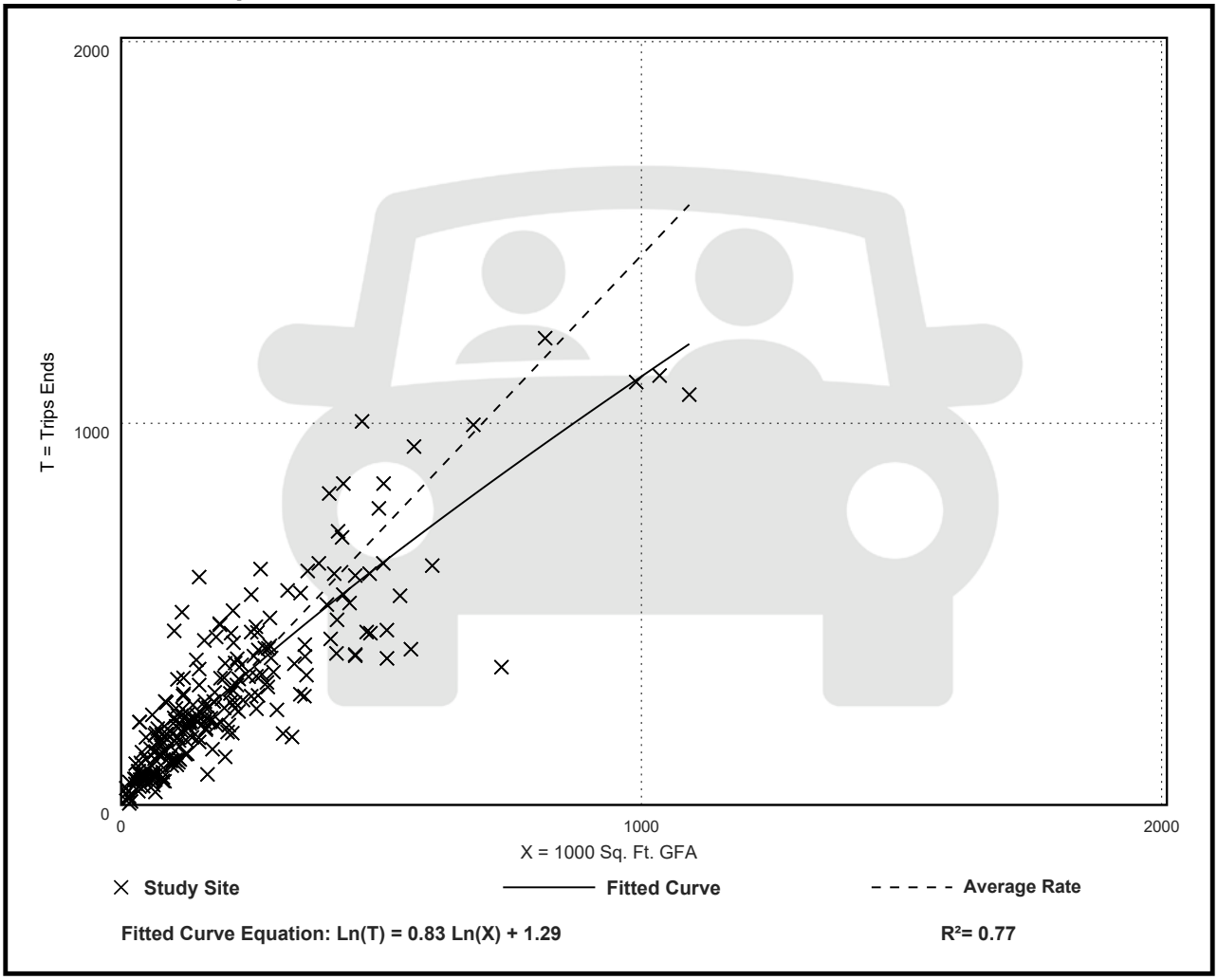
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 232
Avg. 1000 Sq. Ft. GFA: 199
Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.83 Ln(X) + 1.29

R^2= 0.77

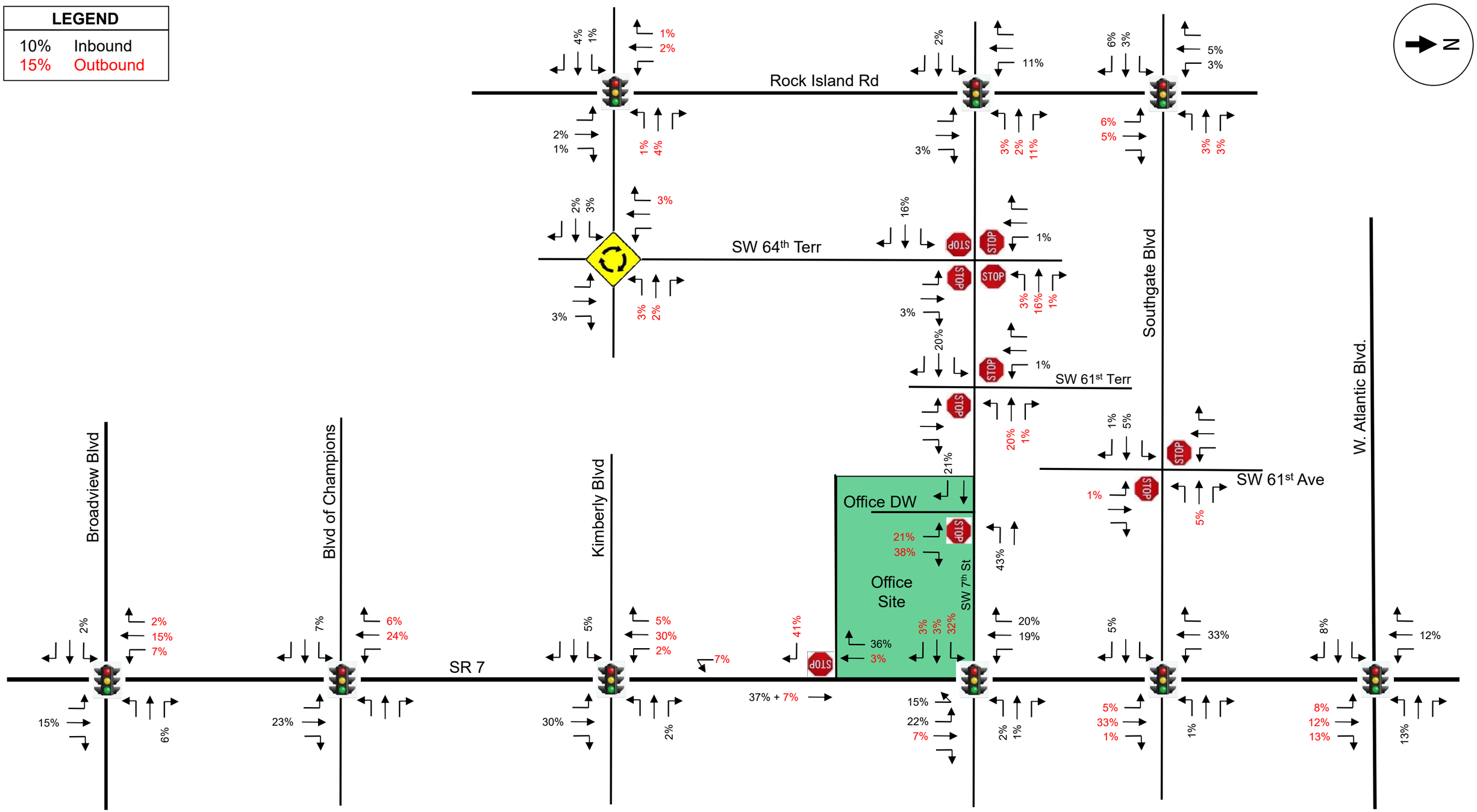
Table 1
Existing Office Building - 777 S. State Road 7
Trip Generation Summary
Margate, Florida

Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Proposed Use								
General Office Building	73,274 SF	885	113	15	128	22	106	128

Compiled by: KBP Consulting, Inc. (December 2023).

Source: Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition), Land Use #710 - General Office Building.

LEGEND	
10%	Inbound
15%	Outbound

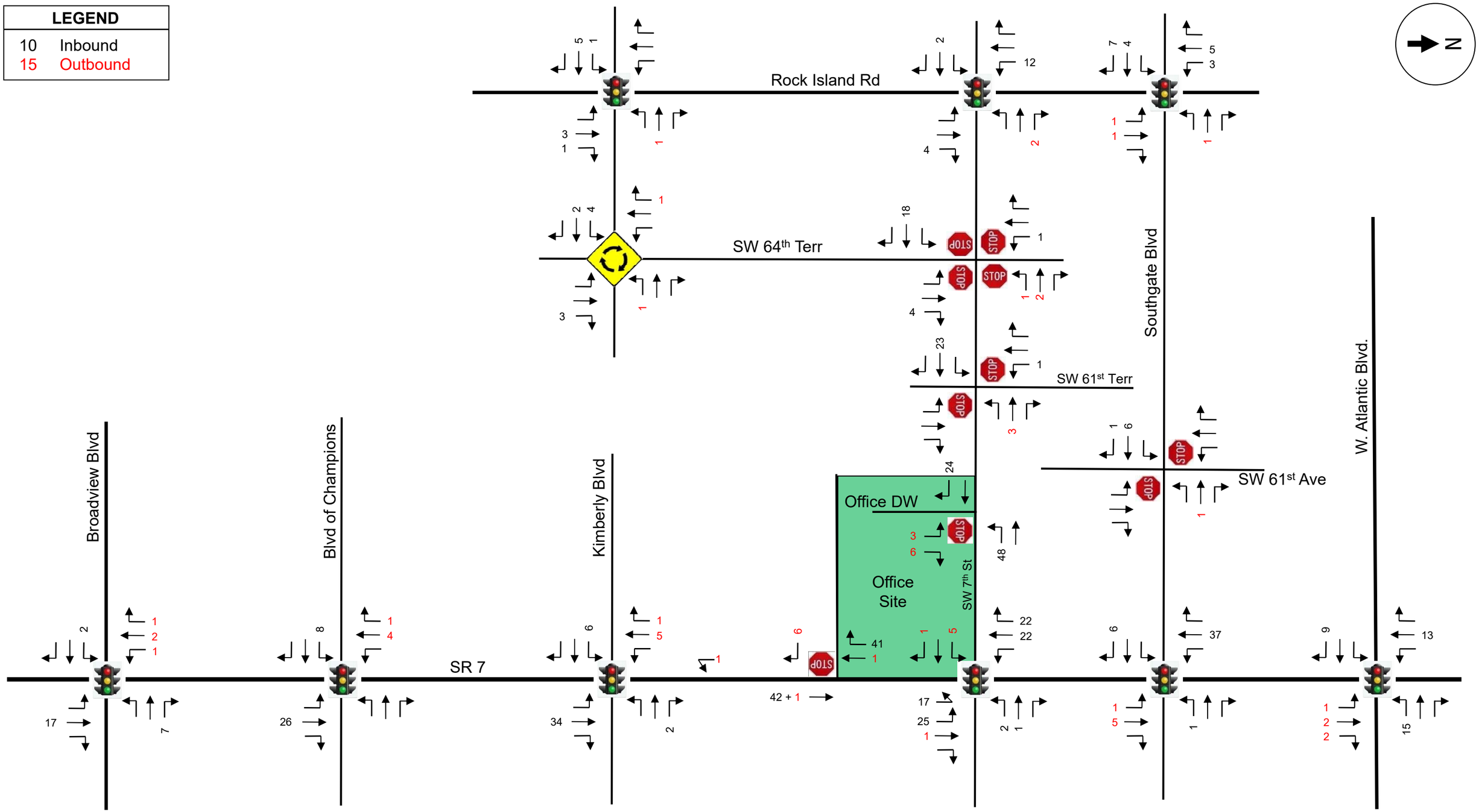


KBP
CONSULTING, INC.

Trip Distribution – Existing Office Development

FIGURE F-1
The Forest Apartments
Margate, Florida

LEGEND	
10	Inbound
15	Outbound

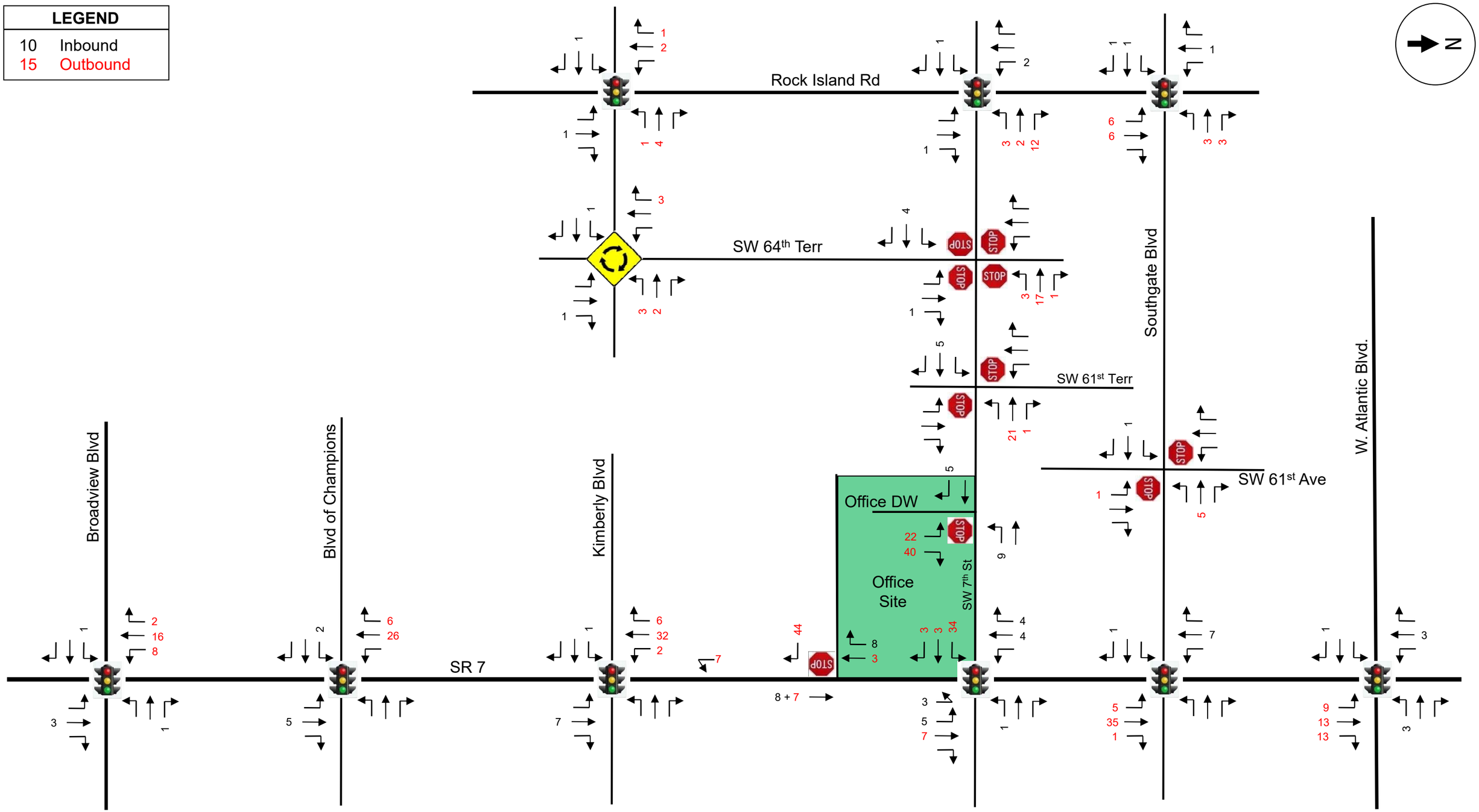


KBP
CONSULTING, INC.

Office Development Traffic Assignment
AM Peak Hour

FIGURE F-2
The Forest Apartments
Margate, Florida

LEGEND	
10	Inbound
15	Outbound



KBP
CONSULTING, INC.

Office Development Traffic Assignment
PM Peak Hour

FIGURE F-3
The Forest Apartments
Margate, Florida

APPENDIX G

Future Traffic Volumes Spreadsheets

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and Broadview Boulevard / SW 17th Street
AM Peak Hour

	SR 7 Northbound			SR 7 Southbound			Broadview Boulevard Eastbound			NW 62nd St Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	38	1,342	236	306	1,691	48	68	18	63	230	3	233
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	39	1,369	241	312	1,725	49	69	18	64	235	3	238
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings		17		1	2	1	2					7
2026 Background Traffic	40	1,427	248	323	1,779	51	73	19	66	242	3	252
The Forest Apartments		5		7	16	2						2
2026 Total Traffic	**40**	**1,432**	**248**	**330**	**1,795**	**53**	**73**	**19**	**66**	**242**	**3**	**254**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and Broadview Boulevard / SW 17th Street
PM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			Broadview Boulevard Eastbound			NW 62nd St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	78	1,832	72	238	1,337	110	80	22	48	58	0	157
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	80	1,869	73	243	1,364	112	82	22	49	59	0	160
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings		3		8	16	2	1					1
2026 Background Traffic	82	1,928	76	258	1,421	118	85	23	50	61	0	166
The Forest Apartments		12		3	8	1	2					5
2026 Total Traffic	**82**	**1,940**	**76**	**261**	**1,429**	**119**	**87**	**23**	**50**	**61**	**0**	**171**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and Boulevard of Champions
AM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			Boulevard of Champions Eastbound			Church DW Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	257	1,489	13	22	1,783	237	152	0	278	12	6	0
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	262	1,519	13	22	1,819	242	155	0	284	12	6	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings		26			4	1	8					
2026 Background Traffic	270	1,591	14	23	1,878	250	168	0	292	13	6	0
The Forest Apartments		7			25	7	2					
2026 Total Traffic	**270**	**1,598**	**14**	**23**	**1,903**	**257**	**170**	**0**	**292**	**13**	**6**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and Boulevard of Champions
PM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			Boulevard of Champions Eastbound			Church DW Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	254	1,854	10	41	1,402	141	292	0	255	8	3	1
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	259	1,891	10	42	1,430	144	298	0	260	8	3	1
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings		5			26	6	2					
2026 Background Traffic	267	1,953	11	43	1,499	154	309	0	268	8	3	1
The Forest Apartments		19			12	3	5					
2026 Total Traffic	**267**	**1,972**	**11**	**43**	**1,511**	**157**	**314**	**0**	**268**	**8**	**3**	**1**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and Kimberly Boulevard
AM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			Kimberly Boulevard Eastbound			SW 11th St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	119	1,500	67	62	1,701	79	147	21	174	175	23	83
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	121	1,530	68	63	1,735	81	150	21	177	179	23	85
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings		34			5	1	6					2
2026 Background Traffic	125	1,610	70	65	1,793	84	160	22	183	184	24	89
The Forest Apartments		9		2	32	5	2					1
2026 Total Traffic	**125**	**1,619**	**70**	**67**	**1,825**	**89**	**162**	**22**	**183**	**184**	**24**	**90**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and Kimberly Boulevard
PM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			Kimberly Boulevard Eastbound			SW 11th St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	272	1,740	170	76	1,276	144	139	60	218	126	53	52
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	277	1,775	173	78	1,302	147	142	61	222	129	54	53
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings		7		2	32	6	1					
2026 Background Traffic	286	1,836	179	82	1,373	157	147	63	229	132	56	55
The Forest Apartments		24		1	15	3	4					2
2026 Total Traffic	**286**	**1,860**	**179**	**83**	**1,388**	**160**	**151**	**63**	**229**	**132**	**56**	**57**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and Project Driveway
AM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			Project Driveway Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	0	1,722	0	0	1,825	2	0	0	2	0	0	0
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	0	1,756	0	0	1,862	2	0	0	2	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings		43			1	41			6			
2026 Background Traffic	0	1,853	0	0	1,919	43	0	0	8	0	0	0
The Forest Apartments		27				20			54			
2026 Total Traffic	**0**	**1,880**	**0**	**0**	**1,919**	**63**	**0**	**0**	**62**	**0**	**0**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and Project Driveway
PM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			Project Driveway Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	0	1,869	0	0	1,495	1	0	0	10	0	0	0
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	0	1,906	0	0	1,525	1	0	0	10	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings		15			3	8			44			
2026 Background Traffic	0	1,979	0	0	1,574	9	0	0	55	0	0	0
The Forest Apartments		37				51			26			
2026 Total Traffic	**0**	**2,016**	**0**	**0**	**1,574**	**60**	**0**	**0**	**81**	**0**	**0**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and SW 7th Street
AM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			SW 7th Street Eastbound			SW 7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	116	1,569	19	16	1,545	56	79	11	222	46	21	10
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	118	1,600	19	16	1,576	57	81	11	226	47	21	10
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings	42	1			22	22	5		1	2	1	
2026 Background Traffic	164	1,650	20	17	1,646	81	88	12	234	50	23	11
The Forest Apartments	12	15			11	1	26	3				
2026 Total Traffic	**176**	**1,665**	**20**	**17**	**1,657**	**82**	**114**	**15**	**234**	**50**	**23**	**11**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and SW 7th Street
PM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			SW 7th Street Eastbound			SW 7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	182	1,639	30	39	1,358	119	66	13	108	27	16	16
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	186	1,672	31	40	1,385	121	67	13	110	28	16	16
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings	8	7			4	4	34	3	3	1		
2026 Background Traffic	199	1,729	32	41	1,431	129	103	17	116	29	17	17
The Forest Apartments	30	7			28	4	13	1		1	1	
2026 Total Traffic	**229**	**1,736**	**32**	**41**	**1,459**	**133**	**116**	**18**	**116**	**30**	**18**	**17**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and Southgate Boulevard
AM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			Southgate Boulevard Eastbound			SW 2nd Court Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	176	1,411	22	58	1,252	375	652	121	291	62	64	140
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	180	1,439	22	59	1,277	383	665	123	297	63	65	143
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings	1	5			37				6	1		
2026 Background Traffic	186	1,488	23	61	1,353	394	685	127	312	66	67	147
The Forest Apartments	5	35	1		10				2			
2026 Total Traffic	**191**	**1,523**	**24**	**61**	**1,363**	**394**	**685**	**127**	**314**	**66**	**67**	**147**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and Southgate Boulevard
PM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			Southgate Boulevard Eastbound			SW 2nd Court Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	375	1,384	41	86	1,422	431	425	51	225	61	55	54
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	383	1,412	42	88	1,450	440	434	52	230	62	56	55
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings	5	35	1		7				1			
2026 Background Traffic	399	1,489	44	90	1,501	453	447	54	237	64	58	57
The Forest Apartments	2	17	1		27				4	1		
2026 Total Traffic	**401**	**1,506**	**45**	**90**	**1,528**	**453**	**447**	**54**	**241**	**65**	**58**	**57**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and Atlantic Boulevard
AM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			Atlantic Boulevard Eastbound			Atlantic Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	78	1,441	588	262	1,270	136	365	1,355	211	330	669	117
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	80	1,470	600	267	1,295	139	372	1,382	215	337	682	119
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings	1	2	2		13				9	15		
2026 Background Traffic	83	1,516	620	275	1,348	143	384	1,424	231	362	703	123
The Forest Apartments	8	13	14		4				2	4		
2026 Total Traffic	**91**	**1,529**	**634**	**275**	**1,352**	**143**	**384**	**1,424**	**233**	**366**	**703**	**123**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

State Road 7 and Atlantic Boulevard
PM Peak Hour

Description	SR 7 Northbound			SR 7 Southbound			Atlantic Boulevard Eastbound			Atlantic Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	215	1,170	448	148	1,174	205	290	865	282	606	1,463	147
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	219	1,193	457	151	1,197	209	296	882	288	618	1,492	150
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings	9	13	13		3				1	3		
2026 Background Traffic	235	1,243	484	156	1,237	215	305	909	297	640	1,537	154
The Forest Apartments	4	6	7		10				7	10		
2026 Total Traffic	**239**	**1,249**	**491**	**156**	**1,247**	**215**	**305**	**909**	**304**	**650**	**1,537**	**154**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Rock Island Road and Southgate Boulevard
AM Peak Hour

Description	Rock Island Road Northbound			Rock Island Road Southbound			Southgate Boulevard Eastbound			Southgate Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	157	944	171	211	824	483	466	745	175	73	504	270
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	160	963	174	215	840	493	475	760	179	74	514	275
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings	1	1		3	5			4	7		1	
2026 Background Traffic	166	993	180	225	871	508	490	787	191	77	531	284
The Forest Apartments	6	6		1	1			1	2		3	3
2026 Total Traffic	**172**	**999**	**180**	**226**	**872**	**508**	**490**	**788**	**193**	**77**	**534**	**287**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Rock Island Road and Southgate Boulevard
PM Peak Hour

Description	Rock Island Road Northbound			Rock Island Road Southbound			Southgate Boulevard Eastbound			Southgate Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	175	885	131	175	893	601	388	481	193	111	549	222
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	179	903	134	179	911	613	396	491	197	113	560	226
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings	6	6			1			1	1		3	3
2026 Background Traffic	190	936	138	184	939	632	408	506	204	117	580	236
The Forest Apartments	3	3		2	4			3	5		1	2
2026 Total Traffic	**193**	**939**	**138**	**186**	**943**	**632**	**408**	**509**	**209**	**117**	**581**	**238**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Rock Island Road and SW 7th Street
AM Peak Hour

Description	Rock Island Road Northbound			Rock Island Road Southbound			SW 7th Street Eastbound			SW 7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	81	1,049	38	130	1,011	40	111	59	88	75	36	106
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	83	1,070	39	133	1,031	41	113	60	90	77	37	108
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings			4	12				2				2
2026 Background Traffic	85	1,102	44	149	1,062	42	117	64	92	79	38	113
The Forest Apartments			1	3				1		3	2	12
2026 Total Traffic	**85**	**1,102**	**45**	**152**	**1,062**	**42**	**117**	**65**	**92**	**82**	**40**	**125**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Rock Island Road and SW 7th Street
PM Peak Hour

Description	Rock Island Road Northbound			Rock Island Road Southbound			SW 7th Street Eastbound			SW 7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	147	1,087	80	45	1,060	74	68	36	92	88	61	74
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	150	1,109	82	46	1,081	75	69	37	94	90	62	75
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings			1	2				1		3	2	12
2026 Background Traffic	154	1,142	85	49	1,114	78	71	39	97	95	66	90
The Forest Apartments			2	9				2		1	1	6
2026 Total Traffic	**154**	**1,142**	**87**	**58**	**1,114**	**78**	**71**	**41**	**97**	**96**	**67**	**96**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Rock Island Road and Kimberly Boulevard
AM Peak Hour

Description	Rock Island Road Northbound			Rock Island Road Southbound			Kimberly Boulevard Eastbound			Kimberly Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	62	1,004	112	111	901	80	94	117	99	129	108	107
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	63	1,024	114	113	919	82	96	119	101	132	110	109
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings		3	1				1	5			1	
2026 Background Traffic	65	1,058	119	117	947	84	100	128	104	136	114	112
The Forest Apartments		1			2	1		1		1	4	
2026 Total Traffic	**65**	**1,059**	**119**	**117**	**949**	**85**	**100**	**129**	**104**	**137**	**118**	**112**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Rock Island Road and Kimberly Boulevard
PM Peak Hour

Description	Rock Island Road Northbound			Rock Island Road Southbound			Kimberly Boulevard Eastbound			Kimberly Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	94	989	226	150	986	134	103	88	75	152	180	201
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	96	1,009	231	153	1,006	137	105	90	77	155	184	205
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings		1			2	1		1		1	4	
2026 Background Traffic	99	1,040	238	158	1,038	142	108	93	79	161	193	211
The Forest Apartments		1	1		1		1	3			2	
2026 Total Traffic	**99**	**1,041**	**239**	**158**	**1,039**	**142**	**109**	**96**	**79**	**161**	**195**	**211**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SW 7th Street and Office Driveway
AM Peak Hour

Description	Office Driveway Northbound			Southbound			SW 7th Street Eastbound			SW 7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	2	0	0	0	0	0	0	315	2	2	163	0
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	2	0	0	0	0	0	0	321	2	2	166	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings	3		6						24	48		
2026 Background Traffic	5	0	6	0	0	0	0	331	26	50	171	0
The Forest Apartments	22		29						7	5		
2026 Total Traffic	**27**	**0**	**35**	**0**	**0**	**0**	**0**	**331**	**33**	**55**	**171**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SW 7th Street and Office Driveway
PM Peak Hour

Description	Office Driveway Northbound			Southbound			SW 7th Street Eastbound			SW 7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	3	0	2	0	0	0	0	171	3	0	294	0
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	3	0	2	0	0	0	0	174	3	0	300	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings	22		40						5	9		
2026 Background Traffic	25	0	42	0	0	0	0	180	8	9	309	0
The Forest Apartments	11		14						17	13		
2026 Total Traffic	**36**	**0**	**56**	**0**	**0**	**0**	**0**	**180**	**25**	**22**	**309**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SW 7th Street and SW 61st Terrace
AM Peak Hour

Description	SW 61st Terrace Northbound			SW 61st Terrace Southbound			SW 7th Street Eastbound			SW 7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	7	4	5	29	2	21	29	278	9	6	145	14
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	7	4	5	30	2	21	30	284	9	6	148	14
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings				1				23			3	
2026 Background Traffic	7	4	5	31	2	22	30	315	9	6	155	15
The Forest Apartments				1				6			21	1
2026 Total Traffic	**7**	**4**	**5**	**32**	**2**	**22**	**30**	**321**	**9**	**6**	**176**	**16**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SW 7th Street and SW 61st Terrace
PM Peak Hour

Description	SW 61st Terrace Northbound			SW 61st Terrace Southbound			SW 7th Street Eastbound			SW 7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	30	3	19	10	4	20	23	140	21	25	246	26
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	31	3	19	10	4	20	23	143	21	26	251	27
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings								5			21	1
2026 Background Traffic	32	3	20	11	4	21	24	152	22	26	280	28
The Forest Apartments				1				16			10	1
2026 Total Traffic	**32**	**3**	**20**	**12**	**4**	**21**	**24**	**168**	**22**	**26**	**290**	**29**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SW 7th Street and SW 64th Terrace
AM Peak Hour

Description	SW 64th Terrace Northbound			SW 64th Terrace Southbound			SW 7th Street Eastbound			SW 7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	43	18	40	13	13	11	6	196	36	18	128	13
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	44	18	41	13	13	11	6	200	37	18	131	13
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings			4	1				18		1	2	
2026 Background Traffic	45	19	46	15	14	12	6	224	38	20	137	14
The Forest Apartments			1					5		3	17	1
2026 Total Traffic	**45**	**19**	**47**	**15**	**14**	**12**	**6**	**229**	**38**	**23**	**154**	**15**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SW 7th Street and SW 64th Terrace
PM Peak Hour

Description	SW 64th Terrace Northbound			SW 64th Terrace Southbound			SW 7th Street Eastbound			SW 7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	32	22	48	7	14	9	14	106	26	49	189	17
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	33	22	49	7	14	9	14	108	27	50	193	17
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings			1					4		3	17	1
2026 Background Traffic	34	23	51	7	15	9	15	115	27	54	216	19
The Forest Apartments			2	1				13		1	8	1
2026 Total Traffic	**34**	**23**	**53**	**8**	**15**	**9**	**15**	**128**	**27**	**55**	**224**	**20**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Kimberly Boulevard and SW 64th Terrace
AM Peak Hour

Description	SW 64th Terrace Northbound			SW 64th Terrace Southbound			Kimberly Boulevard Eastbound			Kimberly Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	43	27	18	37	16	14	12	259	30	5	168	26
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	44	28	18	38	16	14	12	264	31	5	171	27
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings			3			1	4	2		1		
2026 Background Traffic	45	28	22	39	17	16	17	274	32	6	177	27
The Forest Apartments			1			3	1			3	2	
2026 Total Traffic	**45**	**28**	**23**	**39**	**17**	**19**	**18**	**274**	**32**	**9**	**179**	**27**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Kimberly Boulevard and SW 64th Terrace
PM Peak Hour

Description	SW 64th Terrace Northbound			SW 64th Terrace Southbound			Kimberly Boulevard Eastbound			Kimberly Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	138	57	31	20	22	20	18	256	85	11	327	37
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	141	58	32	20	22	20	18	261	87	11	334	38
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings			1			3	1			3	2	
2026 Background Traffic	145	60	34	21	23	24	20	269	89	15	346	39
The Forest Apartments			2			1	2	2		2	1	
2026 Total Traffic	**145**	**60**	**36**	**21**	**23**	**25**	**22**	**271**	**89**	**17**	**347**	**39**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Southgate Boulevard and SW 61st Avenue
AM Peak Hour

Description	SW 61st Avenue Northbound			SW 61st Avenue Southbound			Southgate Boulevard Eastbound			Southgate Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	28	0	59	17	3	5	2	1,064	16	11	630	5
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	29	0	60	17	3	5	2	1,085	16	11	643	5
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings								6	1		1	
2026 Background Traffic	29	0	62	18	3	5	2	1,124	18	12	663	5
The Forest Apartments	1							2	1		5	
2026 Total Traffic	**30**	**0**	**62**	**18**	**3**	**5**	**2**	**1,126**	**19**	**12**	**668**	**5**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Southgate Boulevard and SW 61st Avenue
PM Peak Hour

Description	SW 61st Avenue Northbound			SW 61st Avenue Southbound			Southgate Boulevard Eastbound			Southgate Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (5/9/2023)	17	7	33	11	0	6	8	658	19	26	868	37
Season Adjustment Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
2023 Peak Season Traffic	17	7	34	11	0	6	8	671	19	27	885	38
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development:												
- Existing Office Buildings	1							1			5	
2026 Background Traffic	19	7	35	12	0	6	8	692	20	27	917	39
The Forest Apartments	1							4	1		2	
2026 Total Traffic	**20**	**7**	**35**	**12**	**0**	**6**	**8**	**696**	**21**	**27**	**919**	**39**

APPENDIX H

Signal Timing Data

BROWARD COUNTY TRAFFIC ENGINEERING

ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1022	**Initial Operation Date**	UNKNOWN
Controller Type	2070 LN	**System Number**	1022
Modification Number	20	**Modification Date**	09/25/2020
Drawing/Project No	416877-1-52-01	**FPL Grid Number**	87286282202
Intersection	SR 7 (US 441) and SW 17 STREET		
Municipality	NORTH LAUDERDALE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3,8	4,7	5	6		
Direction	SBL	NB	WB	EB	NBL	SB		
Initial Green(MIN)	5	10	6	6	5	10		
Vehicle Ext.(GAP)	2.0	3.0	2.0	2.0	1.5	3.0		
Maximum Green I	22	50	22	22	15	50		
Maximum Green II								
Yellow Clearance	5.0	5.0	4.0	4.0	5.0	5.0		
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0		
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN		
Detector Delay								
Walk		7	7			7		
Pedestrian Clearance		26	33			26		
Permissive	DUAL				NO			
Flash Operation	RED	YELLOW	RED	RED	RED	YELLOW		

Attachment

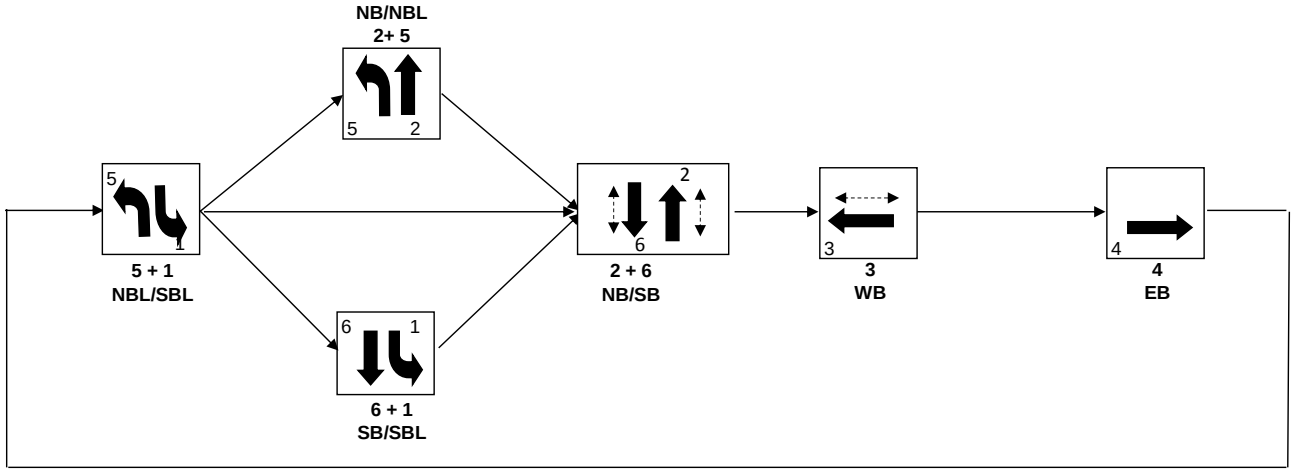
NOTES:

1. MOD. 20 UPDATES WALK ON PHASE 3 PER CURRENT STANDARDS.

Submitted By _____ **Approved By** _____

Sequence of Operation for A-022

SR 7 (US 441) and SW 17 Street (North Lauderdale)



Station : 1022 - SR 7 & SW 17 St (Standard File)

Phase	1 (SL)	2 (NT)	3 (WT)	4 (ET)	5 (NL)	6 (ST)	7	8	9	10	11	12	13	14	15	16
Walk		7	7			7										
Ped Clearance		26	33			26										
Min Green	5	10	6	6	5	10										
Gap Ext	2	3	2	2	1.5	3										
Max1	22	50	22	22	15	50										
Max2																
Yellow Clr	5	5	4	4	5	5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2			1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON										
Auto Flash Entry				ON												
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call	ON				ON											
Min Recall			ON	ON												
Max Recall		ON				ON										
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON	ON	ON					
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash		ON				
Override Higher Preempt		ON				
Flash in Dwell		ON				
Link to Preempt						
Delay						
Min Duration						
Min Green	6		6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8		8	8	8	8
Max Presence	180		180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2		1	3	2	4
Dwell Cyc Veh 2	6		6		5	
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1			2	4	2	2
Exit 2	3		6		6	6
Exit 3						
Exit 4						

Prepared By	Date Implemented
Reviewed By	Traffic Engineer

Broward County Timing Sheet 6/27/2023 10:23:59 AM

Station : 1022 - SR 7 & SW 17 St (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		100	254																							
6		2	2	160	133	2	1	5	17		28	52	45	35	19	61										
9		3	3	160	88	3	1	5	17		17	66	47	30	23	60										
15		4	4	160	114	4	3	5	17		28	56	47	29	28	56										
20		3	3	160	88	3	1	5	17		17	66	47	30	23	60										
Day Plan 2											**Easy**															
		3	3	160	88	3	1	5	17		17	66	47	30	23	60										
1		100	254																							
6	30	3	3	160	88	3	1	5	17		17	66	47	30	23	60										

Day Plan 3												**Easy**																	
		3	3	160	88	3	1	5	17			17	66	47	30	23	60												
1		100	254																										
6	30	3	3	160	88	3	1	5	17			17	66	47	30	23	60												
23		100	254																										

Station : 1022 - SR 7 & SW 17 St (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															

Scheduler

	Month											Day of Weekk							Day of Month										1										2										3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1												1	1	1	1	1			1																															2
5	1												1								1																														2
6					1								1																																1	1	1	1	1	1	2
7							1											1				1																													2
8							1						1	1	1	1	1						1																												2
9							1						1											1																											2
10									1				1							1	1	1	1	1	1	1																									2
11											1						1																																		2
12											1							1																																	2
13												1		1				1																																	2
14												1		1	1	1	1	1																																	2
15												1		1																																					2
16												1		1				1																																	1	2
17																																																			1
18																																																			1
19																																																			1
20																																																			1
21																																																			1
22																																																			1

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BROWARD COUNTY TRAFFIC ENGINEERING

ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1055	**Initial Operation Date**	10/4/74
Controller Type	2070 LN	**System Number**	1055
Modification Number	14	**Modification Date**	03/23/2021
Drawing/Project No	86100-3585	**FPL Grid Number**	87287274505
Intersection	SR 7 (US 441) and SW 7 STREET		
Municipality	MARGATE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2		4	5	6		8
Direction	SBL	NB		EB	NBL	SB		WB
Initial Green(MIN)	5	10		6	5	10		6
Vehicle Ext.(GAP)	1.5	3.0		2.0	1.5	3.0		2.0
Maximum Green I	12	50		20	12	50		20
Maximum Green II								
Yellow Clearance	5.0	5.0		4.0	5.0	5.0		4.0
All Red Clearance	2.0	2.0		2.0	2.0	2.0		2.0
Phase Recall	OFF	MIN		OFF	OFF	MIN		OFF
Detector Delay				30-RT				
Walk		7+A		7+A		7+A		7+A
Pedestrian Clearance		13		33		16		32
Permissive	5-SECT				5-SECT			
Flash Operation		YELLOW		RED		YELLOW		RED

Attachment

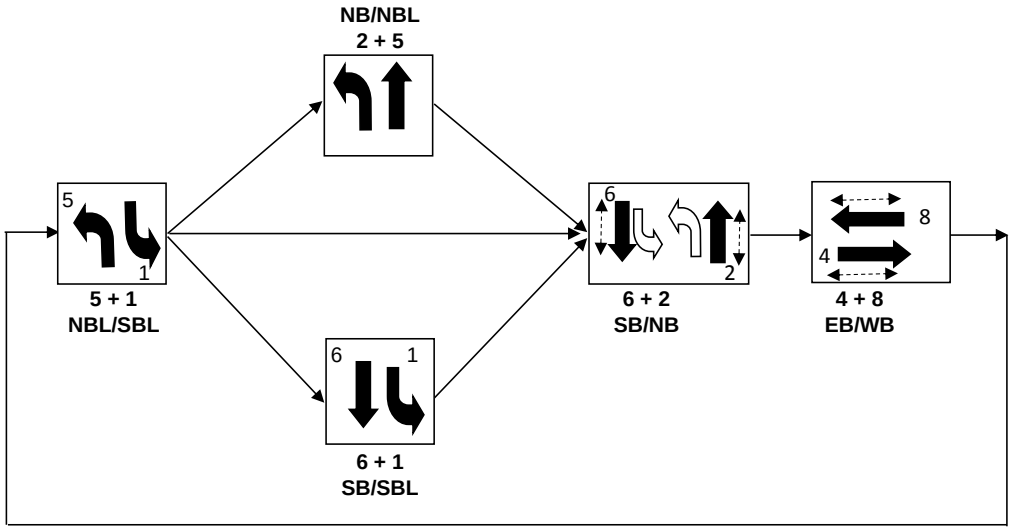
NOTES:

1. DUAL ENTRY EAST/WEST.
2. AUDIBLE PED SIGNALS(BEACONING): EAST/WEST BEEP, NORTH/SOUTH TONE.
3. ANTI-BACKDOWN NORTH/SOUTH: PHASES 2+6 ON---> OMIT PHASES 1+5.
4. MOD. 14 UPDATES PEDESTRIAN CLEARANCES AND EBR DELAY.

Submitted By _____ **Approved By** _____

Sequence of Operation for A-055

SR 7 (US 441) and Forrest Blvd



Station : 1055 - SR 7 & SW 7 St (Standard File)

Phase	1 (SL)	2 (NT)	3	4 (ET)	5 (NL)	6 (ST)	7	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		13		33		16		32								
Min Green	5	10		6	5	10		6								
Gap Ext	1.5	3		2	1.5	3		2								
Max1	12	50		20	12	50		20								
Max2																
Yellow Clr	5	5		4	5	5		4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2		2	2	2		2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON		ON	ON	ON		ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6		6	
Min Walk						
Ped Clear						
Track Green			1		1	
Min Dwell	8	8	8		8	
Max Presence	180	180	180		180	
Track Veh 1			9		9	
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	4	1		2	
Dwell Cyc Veh 2	6	8	6		5	
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	4	1	2		2	
Exit 2	8	5	6		6	
Exit 3						
Exit 4						

Prepared By	Date Implemented
Reviewed By	Traffic Engineer

Broward County Timing Sheet 6/27/2023 10:26:21 AM

Station : 1055 - SR 7 & SW 7 St (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		100	254																							
6		2	2	160	74	2	1	5	17		15	90		55	15	90		55								
9		3	3	160	158	3	1	5	17		22	80		58	22	80		58								
15		4	4	160	76	4	1	5	17		15	94		51	15	94		51								
20		3	3	160	158	3	1	5	17		22	80		58	22	80		58								
Day Plan 2											**Easy**															
		3	3	160	158	3	1	5	17		22	80		58	22	80		58								
1		100	254																							
6	30	3	3	160	158	3	1	5	17		22	80		58	22	80		58								

Day Plan 3												**Easy**																	
		3	3	160	158	3	1	5	17		22	80		58	22	80		58											
1		100	254																										
6	30	3	3	160	158	3	1	5	17		22	80		58	22	80		58											
23		100	254																										

Station : 1055 - SR 7 & SW 7 St (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															

Scheduler

	Month											Day of Weekk							Day of Month										1										2										3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1												1	1	1	1	1		1																																2
5	1												1							1																																2
6					1								1																																1	1	1	1	1	1	2
7							1											1				1																													2
8							1						1	1	1	1	1						1																												2
9							1						1											1																												2
10									1				1							1	1	1	1	1	1	1																										2
11											1						1																																		2
12											1							1																																		2
13												1		1				1																																		2
14												1		1	1	1	1	1																																		2
15												1		1																																						2
16												1		1				1																																		2
17																																																			1
18																																																			1
19																																																			1
20																																																			1
21																																																			1
22																																																			1

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BROWARD COUNTY TRAFFIC ENGINEERING

ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1056	**Initial Operation Date**	03/23/87
Controller Type	2070 LN	**System Number**	1056
Modification Number	17	**Modification Date**	07/08/2014
Drawing/Project No	416878-1-52-01	**FPL Grid Number**	87288274002
Intersection	SR 7 (US 441) and ATLANTIC BOULEVARD (SR 814)		
Municipality	MARGATE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	SBL	NB	WBL	EB	NBL	SB	EBL	WB
Initial Green(MIN)	5	8	4	6	5	8	4	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.5	1.5	3.0	1.5	2.5
Maximum Green I	25	45	20	40	25	45	20	40
Maximum Green II								
Yellow Clearance	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay								
Walk		7+A		7+A		7+A		7+A
Pedestrian Clearance		36		33		36		30
Permissive	NO		DUAL		NO		DUAL	
Flash Operation	RED	RED	RED	RED	RED	RED	RED	RED

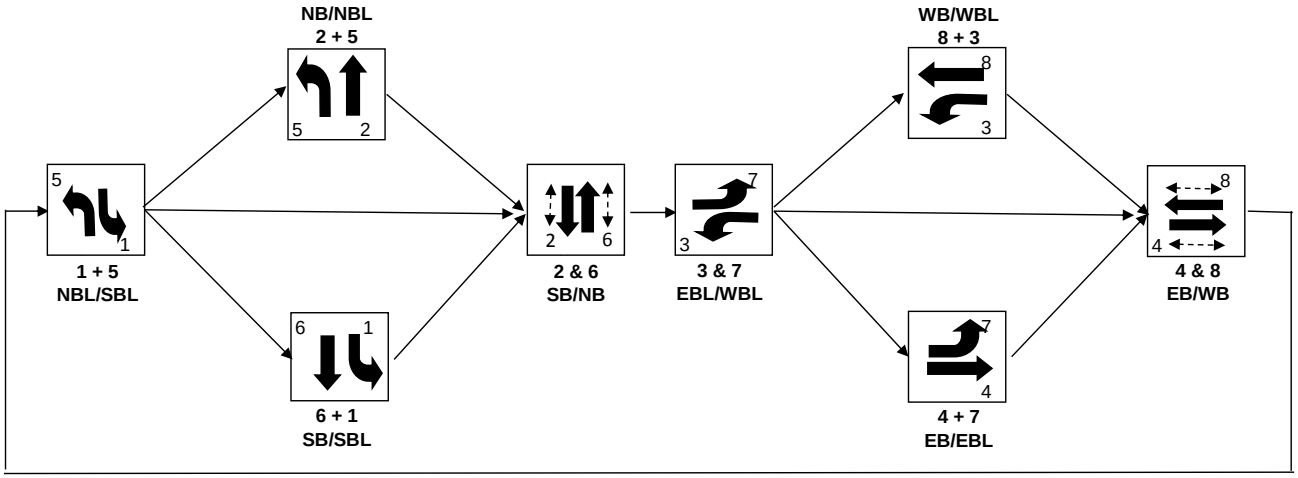
Attachment

NOTES:

1. DUAL ENTRY HARDWIRED EAST/WEST.
2. PHOTO ENFORCEMENT, CITY OF MARGATE.
3. AUDIBLE PEDESTRIAN SIGNALS: E/W BEEP, N/S TONE.
4. MOD. 17 UPDATES YELLOW AND PEDESTRIAN CLEARANCES.

Submitted By _____ **Approved By** _____

Sequence of Operation for (1056) SR 7 (US 441) and Atlantic Blvd (SR 814) Margate



Station : 1056 - SR 7 & Atlantic Blvd (Standard File)

Phase	1 (SL)	2 (NT)	3 (WL)	4 (ET)	5 (NL)	6 (ST)	7 (EL)	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		36		33		36		30								
Min Green	5	8	4	6	5	8	4	6								
Gap Ext	1.5	3	1.5	2.5	1.5	3	1.5	2.5								
Max1	25	45	20	40	25	45	20	40								
Max2																
Yellow Clr	5	5	5	5	5	5	5	5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call	ON								ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall						ON										
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8	8	8	8	8	8
Max Presence	180	180	180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	4	1	3	2	4
Dwell Cyc Veh 2	6	8	6	8	5	7
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	3	1	2	4	2	4
Exit 2	7	5	6	8	6	8
Exit 3						
Exit 4						

Prepared By	Date Implemented
Reviewed By	Traffic Engineer

Broward County Timing Sheet 6/27/2023 10:28:19 AM

Station : 1056 - SR 7 & Atlantic Blvd (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		100	254																							
6		2	2	160	115	2	1	5	17		29	57	21	53	19	67	31	43								
9		3	3	160	59	3	1	5	17		29	54	28	49	29	54	28	49								
15		4	4	160	114	4	1	5	17		24	55	39	42	24	55	22	59								
20		3	3	160	59	3	1	5	17		29	54	28	49	29	54	28	49								
Day Plan 2											**Easy**															
		3	3	160	59	3	1	5	17		29	54	28	49	29	54	28	49								
1		100	254																							
6	30	3	3	160	59	3	1	5	17		29	54	28	49	29	54	28	49								

Day Plan 3												**Easy**																	
		3	3	160	59	3	1	5	17		29	54	28	49	29	54	28	49											
1		100	254																										
6	30	3	3	160	59	3	1	5	17		29	54	28	49	29	54	28	49											
23		100	254																										

Station : 1056 - SR 7 & Atlantic Blvd (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															

Scheduler

	Month											Day of Weekk							Day of Month										1										2										3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1													1	1	1	1	1		1																														2
5	1													1							1																														2
6					1									1																																1	1	1	1	1	1	2
7							1											1				1																													2
8							1							1	1	1	1	1					1																												2
9							1							1										1																											2
10									1					1						1	1	1	1	1	1	1																									2
11											1							1																																	2
12											1							1																																	2
13												1		1				1																																	2
14												1		1	1	1	1	1																																	2
15												1		1																																					2
16												1		1				1																																	2
17																																																		1
18																																																		1
19																																																		1
20																																																		1
21																																																		1
22																																																		1

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BROWARD COUNTY TRAFFIC ENGINEERING

ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1158	**Initial Operation Date**	3/16/73
Controller Type	2070 LN	**System Number**	1158
Modification Number	19	**Modification Date**	04/17/2015
Drawing/Project No	86100-3585	**FPL Grid Number**	87286299105
Intersection	SR 7 (US 441) and KIMBERLY BOULEVARD		
Municipality	NORTH LAUDERDALE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	SBL	NB	WBL	EB	NBL	SB	EBL	WB
Initial Green(MIN)	5	10	5	6	5	10	5	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
Maximum Green I	12	50	12	20	24	50	12	20
Maximum Green II								
Yellow Clearance	5.0	5.0	4.0	4.0	5.0	5.0	4.0	4.0
All Red Clearance	2.0	2.0	2.5	2.0	2.0	2.0	2.0	2.5
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay								
Walk		7		7		7		7
Pedestrian Clearance		26		25		26		27
Permissive	NO		5 SECT		NO		5 SECT	
Flash Operation	RED	YELLOW		RED	RED	YELLOW		RED

Attachment

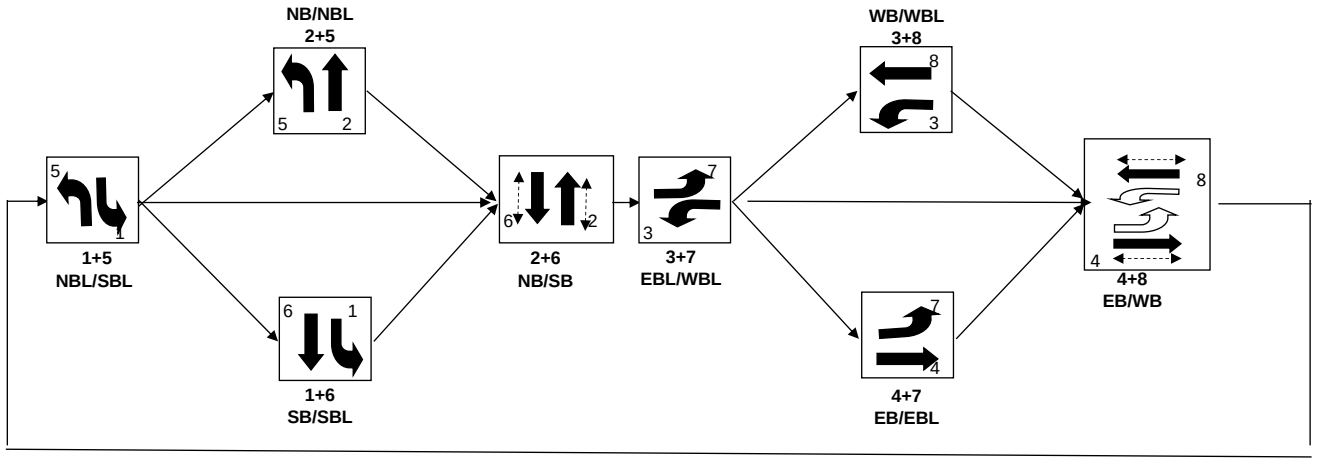
NOTES:

1. DUAL ENTRY HARDWIRED EAST/WEST.
2. MOD. 18 UPDATES WALK TIMES ON PHASES 4 & 8 PER BCTED STANDARDS.

Submitted By _____ **Approved By** _____

Sequence of Operation for A-158

SR 7 (US 441) and Kimberly Boulevard (North Lauderdale)



Station : 1158 - SR 7 & Kimberly Blvd/SW 11 St (Standard File)

Phase	1 (SL)	2 (NT)	3 (WL)	4 (ET)	5 (NL)	6 (ST)	7 (EL)	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		26		25		26		27								
Min Green	5	10	5	6	5	10	5	6								
Gap Ext	2	3	1.5	2	1.5	3	1.5	2								
Max1	12	50	12	20	24	50	12	20								
Max2																
Yellow Clr	5	5	4	4	5	5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2.5	2	2	2	2	2.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt		ON	ON	ON	ON	ON
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	6	6	6	6	6	6
Max Presence	180	180	180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	4	1	3	2	4
Dwell Cyc Veh 2	6	8	6	8	5	7
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	3	1	2	4	6	4
Exit 2	7	5	6	8	2	8
Exit 3						
Exit 4						

Prepared By	Date Implemented
Reviewed By	Traffic Engineer

Broward County Timing Sheet 6/27/2023 10:25:34 AM

Station : 1158 - SR 7 & Kimberly Blvd/SW 11 St (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		100	254																							
6		2	2	160	113	2	1	5	17		20	76	21	43	23	73	21	43								
9		3	3	160	64	3	1	5	17		15	87	15	43	27	75	15	43								
15		4	4	160	142	4	1	5	17		24	77	18	41	34	67	18	41								
20		3	3	160	64	3	1	5	17		15	87	15	43	27	75	15	43								
Day Plan 2											**Easy**															
		3	3	160	64	3	1	5	17		15	87	15	43	27	75	15	43								
1		100	254																							
6	30	3	3	160	64	3	1	5	17		15	87	15	43	27	75	15	43								

Day Plan 3												**Easy**																	
		3	3	160	64	3	1	5	17			15	87	15	43	27	75	15	43										
1		100	254																										
6	30	3	3	160	64	3	1	5	17			15	87	15	43	27	75	15	43										
23		100	254																										

Broward County Timing Sheet 6/27/2023 10:25:34 AM

Station : 1158 - SR 7 & Kimberly Blvd/SW 11 St (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															

Scheduler

	Month											Day of Weekk							Day of Month										1										2										3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1												1	1	1	1	1			1																															2
5	1												1								1																														2
6					1								1																																1	1	1	1	1	1	2
7							1											1				1																													2
8							1						1	1	1	1	1						1																												2
9							1						1											1																											2
10									1				1							1	1	1	1	1	1	1																									2
11											1						1																																		2
12											1							1																																	2
13												1		1				1																																	2
14												1		1	1	1	1	1																																	2
15												1		1																																					2
16												1		1				1																																	1	2
17																																																			1
18																																																			1
19																																																			1
20																																																			1
21																																																			1
22																																																			1

| | | |

BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1160	**Initial Operation Date**	1/22/74
Controller Type	2070 TS 2	**System Number**	1160
Modification Number	18	**Modification Date**	03/23/2021
Drawing/Project No	86100-3585	**FPL Grid Number**	87287258704
Intersection	SR 7 (US 441) and SOUTHGATE BOULEVARD/SW 2 COURT		
Municipality	MARGATE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	SBL	NB	WBL	EB	NBL	SB	EBL	WB
Initial Green(MIN)	5	12	4	6	5	12	5	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
Maximum Green I	12	50	12	25	20	50	12	25
Maximum Green II								
Yellow Clearance	5.0	5.0	4.0	4.0	5.0	5.0	4.0	4.0
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay								
Walk		7		7		7		7
Pedestrian Clearance		23		34		24		30
Permissive	NO		YES		DUAL		DUAL	
Flash Operation	RED	RED	RED	RED	RED	RED	RED	RED

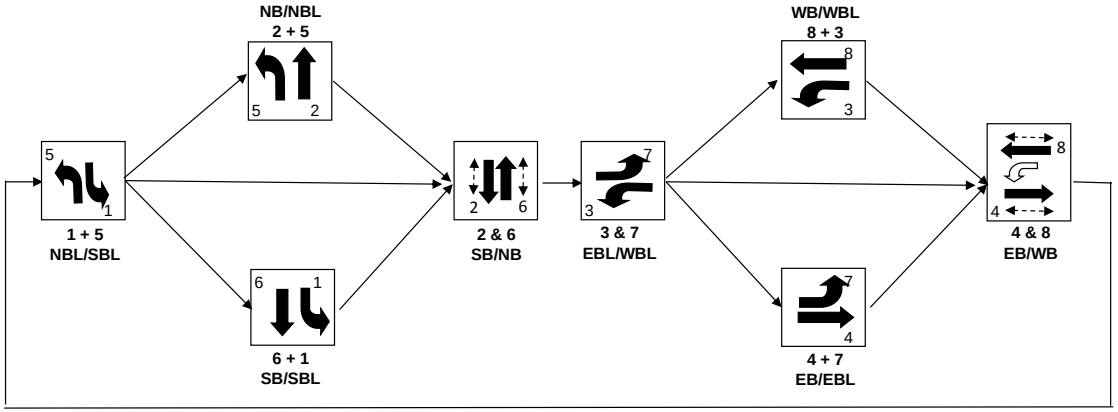
Attachment

NOTES:

1. DUAL ENTRY EAST/WEST.
2. MOD. 18 UPDATES PEDESTRIAN CLEARANCES.

Submitted By _____ **Approved By** _____

Sequence of Operation for (1160) SR 7 (US 441) and Southgate Blvd/SW 2 Court Tamarac



Station : 1160 - SR 7 & Southgate Blvd (Standard File)

Phase	1 (SL)	2 (NT)	3 (WL)	4 (ET)	5 (NL)	6 (ST)	7 (EL)	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		23		34		24		30								
Min Green	5	12	4	6	5	12	5	6								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	12	50	12	25	20	50	12	25								
Max2																
Yellow Clr	5	5	4	4	5	5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call	ON		ON		ON		ON		ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8	8	8	8	8	8
Max Presence	180	180	180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	4	1	3	2	4
Dwell Cyc Veh 2	6	8	6	8	5	7
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	3	1	2	4	2	4
Exit 2	7	5	6	8	6	8
Exit 3						
Exit 4						

Prepared By	Date Implemented
Reviewed By	Traffic Engineer

Broward County Timing Sheet 6/27/2023 10:27:30 AM

Station : 1160 - SR 7 & Southgate Blvd (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		100	254																							
6		2	2	160	24	2	1	5	17		25	60	40	35	25	60	40	35								
9		3	3	160	139	3	1	5	17		25	70	40	25	25	70	40	25								
15		4	4	160	49	4	1	5	17		25	70	40	25	25	70	40	25								
20		3	3	160	139	3	1	5	17		25	70	40	25	25	70	40	25								
Day Plan 2											**Easy**															
		3	3	160	139	3	1	5	17		25	70	40	25	25	70	40	25								
1		100	254																							
6	30	3	3	160	139	3	1	5	17		25	70	40	25	25	70	40	25								

Day Plan 3											Easy																
		3	3	160	139	3	1	5	17		25	70	40	25	25	70	40	25									
1		100	254																								
6	30	3	3	160	139	3	1	5	17		25	70	40	25	25	70	40	25									
23		100	254																								

Station : 1160 - SR 7 & Southgate Blvd (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															

Scheduler

	Month											Day of Weekk							Day of Month										1										2										3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1												1	1	1	1	1		1																																2
5	1												1							1																																2
6					1								1																																1	1	1	1	1	1	1	2
7							1											1				1																														2
8							1						1	1	1	1	1						1																													2
9							1						1											1																												2
10									1				1							1	1	1	1	1	1	1																										2
11											1						1																																			2
12											1							1																																		2
13												1		1				1																																		2
14												1		1	1	1	1	1																																		2
15												1		1																																						2
16												1		1				1																																		1	2
17																																																				1
18																																																				1
19																																																				1
20																																																				1
21																																																				1
22																																																				1

| | | |

BROWARD COUNTY TRAFFIC ENGINEERING

ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1186	**Initial Operation Date**	UNKNOWN
Controller Type	2070	**System Number**	1186
Modification Number	17	**Modification Date**	09/15/2020
Drawing/Project No	416877-1-52-01	**FPL Grid Number**	87286294707
Intersection	SR 7 (US 441) and BOULEVARD OF CHAMPIONS		
Municipality	NORTH LAUDERDALE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3,8	4,7	5	6		
Direction	SBL	NB	WB	EB	NBL	SB		
Initial Green(MIN)	5	10	6	6	5	10		
Vehicle Ext.(GAP)	1.5	3.0	2.2	2.2	1.5	3.0		
Maximum Green I	20	50	20	25	20	50		
Maximum Green II								
Yellow Clearance	5.0	5.0	4.0	4.0	5.0	5.0		
All Red Clearance	2.0	2.0	2.5	2.0	2.0	2.0		
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN		
Detector Delay								
Walk		7-A	7-A			7-A		
Pedestrian Clearance		29	34			29		
Permissive	NO				DUAL			
Flash Operation	RED	YELLOW	RED	RED	RED	YELLOW		

Attachment

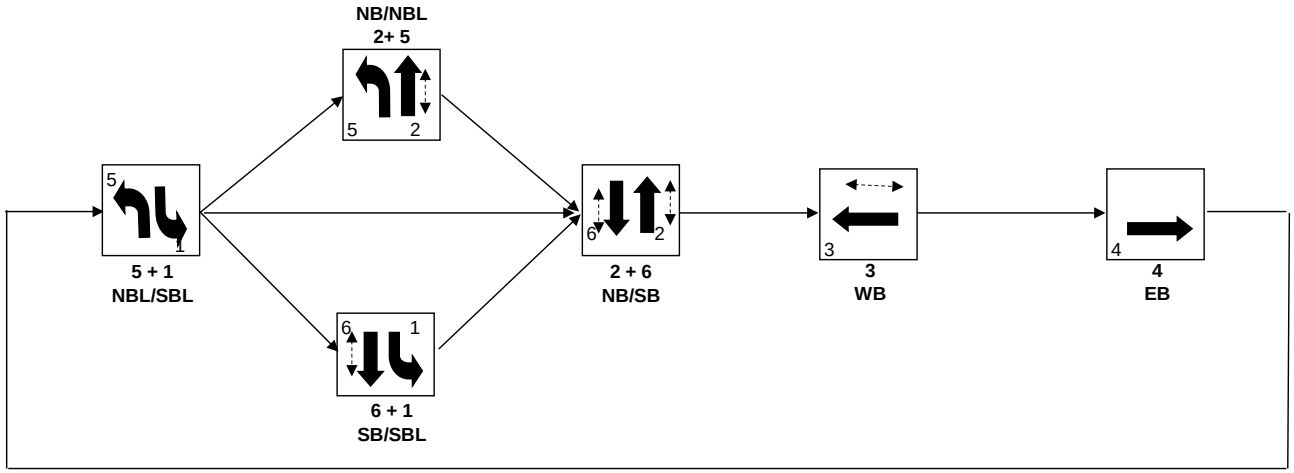
NOTES:

1. >EBR IS OVERLAPPPED WITH SBL AND NBL.
2. AUDIBLE PEDESTRIAN SIGNAL: WB BEEP, N/S TONE.
3. MOD. 17 UPDATES WALK VALUE ON PHASE 3 PER CURRENT STANDARDS.

Submitted By _____ **Approved By** _____

Sequence of Operation for 1186

SR 7 (US 441) and Boulevard of Champions (North Lauderdale)



NOTE: EBR IS OVERLAPPED WITH EB AND NBL.

Station : 1186 - SR 7 & Blvd of Champions (Standard File)

Phase	1 (SL)	2 (NT)	3 (WT)	4 (ET)	5 (NL)	6 (ST)	7	8	9	10	11	12	13	14	15	16
Walk		7	7			7										
Ped Clearance		29	34			29										
Min Green	5	10	6	6	5	10										
Gap Ext	1.5	3	2.2	2.2	1.5	3										
Max1	20	50	20	25	20	50										
Max2																
Yellow Clr	5	5	4	4	5	5		4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2.5	2	2	2			1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON										
Auto Flash Entry				ON												
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON	ON	ON	ON	ON
Override Higher Preempt	ON	ON	ON	ON	ON	ON
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6		6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8		8	8	8	8
Max Presence	180		180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2		1	3	2	4
Dwell Cyc Veh 2	6		6		5	
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	3		2	4	2	1
Exit 2			6		6	5
Exit 3						
Exit 4						

Prepared By	Date Implemented
Reviewed By	Traffic Engineer

Broward County Timing Sheet 6/27/2023 10:24:47 AM

Station : 1186 - SR 7 & Blvd of Champions (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		100	254																							
6		2	2	160	121	2	1	5	17		16	75	50	19	16	75										
9		3	3	160	96	3	1	5	17		17	74	50	19	17	74										
15		4	4	160	153	4	2	5	17		15	76	50	19	25	66										
20		3	3	160	96	3	1	5	17		17	74	50	19	17	74										
Day Plan 2											**Easy**															
		3	3	160	96	3	1	5	17		17	74	50	19	17	74										
1		100	254																							
6	30	3	3	160	96	3	1	5	17		17	74	50	19	17	74										

Day Plan 3												**Easy**																	
		3	3	160	96	3	1	5	17		17	74	50	19	17	74													
1		100	254																										
6	30	3	3	160	96	3	1	5	17		17	74	50	19	17	74													
23		100	254																										

Station : 1186 - SR 7 & Blvd of Champions (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															

Scheduler

	Month											Day of Weekk							Day of Month										1										2										3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1												1	1	1	1	1		1																																2
5	1												1							1																																2
6					1								1																																1	1	1	1	1	1	1	2
7							1											1				1																														2
8							1						1	1	1	1	1						1																													2
9							1						1											1																												2
10									1				1							1	1	1	1	1	1	1																										2
11											1						1																																			2
12											1							1																																		2
13												1		1				1																																			2
14												1		1	1	1	1	1																																			2
15												1		1																																						2
16												1		1				1																																			2
17																																																				1
18																																																				1
19																																																				1
20																																																				1
21																																																				1
22																																																				1

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BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1204	**Initial Operation Date**	12/11/78
Controller Type	2070 LX TS2 (BIU)	**System Number**	1204
Modification Number	14	**Modification Date**	02/11/2019
Drawing/Project No	DES. GRP. 4	**FPL Grid Number**	87187228602
Intersection	ROCK ISLAND ROAD and SOUTHGATE BOULEVARD		
Municipality	NORTH LAUDERDALE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	SBL	NB	WBL	EB	NBL	SB	EBL	WB
Initial Green(MIN)	4	12	5	6	4	12	5	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
Maximum Green I	15	45	20	30	15	45	20	30
Maximum Green II								
Yellow Clearance	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay								
Walk		7		7		7		7
Pedestrian Clearance		31		23		31		34
Permissive	YES		NO		YES		DUAL	
Flash Operation		YELLOW	RED	RED		YELLOW	RED	RED

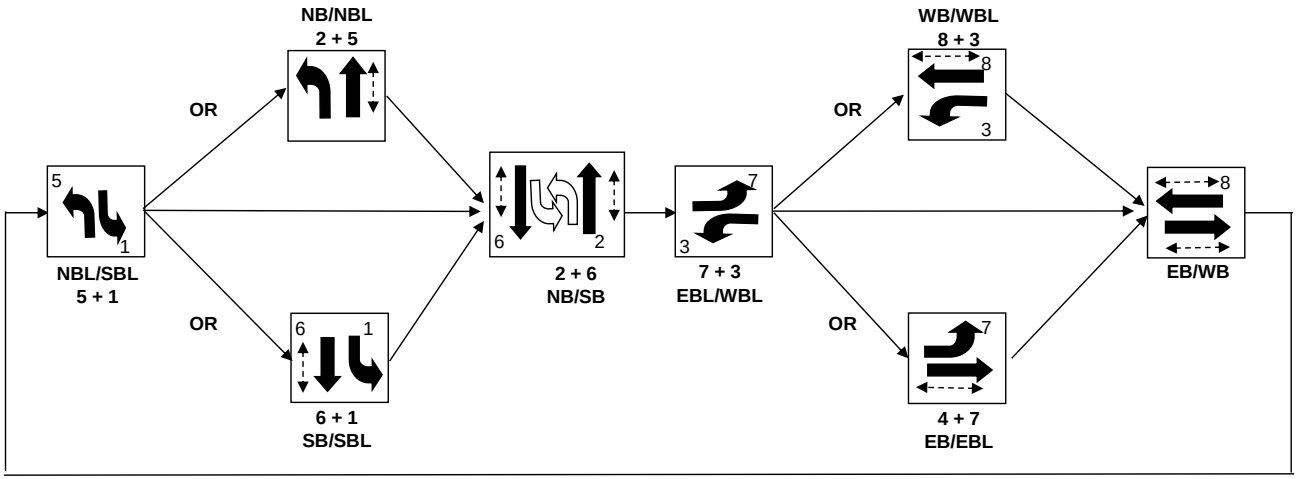
Attachment

NOTES:

1. ANTI-BACKDOWN NORTH/SOUTH: PHASES 2+6 ON--->OMIT PHASES 1+5.
2. DUAL ENTRY HARDWIRED EAST/WEST.
3. MOD. 14 UPDATES PHASE 2 & 8 PEDESTRIAN CLEARANCES.

Submitted By _____ **Approved By** _____

Sequence of Operation for (1204) Rock Island Road and Southgate Boulevard North Lauderdale



Station : 1204 - Rock Island Rd & Southgate Blvd (Standard File)

Phase	1 (SL)	2 (NT)	3 (WL)	4 (ET)	5 (NL)	6 (ST)	7 (EL)	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		31		23		31		34								
Min Green	4	12	5	6	4	12	5	6								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	15	45	20	30	15	45	20	30								
Max2																
Yellow Clr	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call			ON						ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green			1		1	
Min Dwell	8	8	8	8	8	8
Max Presence	180	180	180	180	180	180
Track Veh 1			9		9	
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	4	1	3	2	4
Dwell Cyc Veh 2	6	8	6	8	5	7
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	3	1	2	4	2	4
Exit 2	7	5	6	8	6	8
Exit 3						
Exit 4						

Prepared By	Date Implemented
Reviewed By	Traffic Engineer

Broward County Timing Sheet 6/27/2023 10:29:06 AM

Station : 1204 - Rock Island Rd & Southgate Blvd (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		100	254																							
6		2	2	160	60	2	1	2	50		19	66	26	49	19	66	26	49								
9		3	3	160	69	3	1	2	50		17	70	24	49	17	70	24	49								
15		4	4	160	80	4	1	2	50		20	65	21	54	20	65	26	49								
20		3	3	160	69	3	1	2	50		17	70	24	49	17	70	24	49								
23		100	254																							
Day Plan 2											**Easy**															
		100	254																							
7		3	3	160	69	3	1	2	50		17	70	24	49	17	70	24	49								
23		100	254																							

Day Plan 3											Easy																
		100	254																								
7		3	3	160	69	3	1	2	50		17	70	24	49	17	70	24	49									
23		100	254																								

Station : 1204 - Rock Island Rd & Southgate Blvd (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															

Scheduler

	Month											Day of Weekk							Day of Month										1										2										3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1												1	1	1	1	1		1																																2
5	1												1							1																																2
6					1								1																																1	1	1	1	1	1	1	2
7							1										1					1																													1
8							1						1	1	1	1	1						1																												1
9							1						1											1																												2
10									1				1							1	1	1	1	1	1	1	1																									2
11											1						1																													1	1	1	1	1	1	1	2
12											1							1																														1	1	1	1	1	1	2
13												1						1																															1					2
14												1		1	1	1	1	1																																1				2
15												1		1																																					1			2
16												1		1																																							1	2
17																																																					1
18																																																					1
19																																																					1
20																																																					1
21																																																					1
22																																																					1

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BROWARD COUNTY TRAFFIC ENGINEERING

ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1229	**Initial Operation Date**	4/20/81
Controller Type	2070 LN	**System Number**	
Modification Number	8	**Modification Date**	04/09/2019
Drawing/Project No	GRP 4	**FPL Grid Number**	87187241803
Intersection	ROCK ISLAND ROAD and KIMBERLY BOULEVARD		
Municipality	NORTH LAUDERDALE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	SBL	NB	WBL	EB	NBL	SB	EBL	WB
Initial Green(MIN)	5	10	5	6	5	10	5	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
Maximum Green I	12	50	12	30	12	50	12	30
Maximum Green II								
Yellow Clearance	4.5	4.5	4.0	4.0	4.5	4.5	4.0	4.0
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay								
Walk		7		7		7		7
Pedestrian Clearance		21		29		21		29
Permissive	5 SECT		5 SECT		5 SECT		5 SECT	
Flash Operation		YELLOW		RED		YELLOW		RED

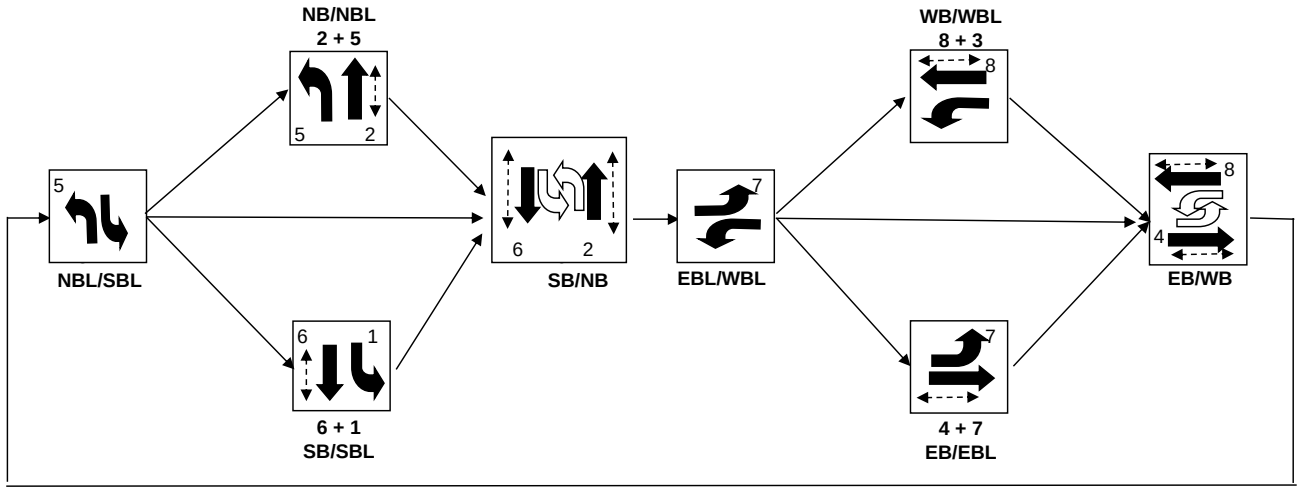
Attachment

NOTES:

1. DUAL ENTRY HARDWIRED EAST/WEST.
2. ANTI-BACKDOWN NORTH/SOUTH: PHASES 2+6 ON--->OMIT PHASES 1+5.
3. MOD. 8 UPDATES NS/NSL YELLOW CLEARANCE VALUES.

Submitted By _____ **Approved By** _____

Sequence of Operation for (1229) Rock Island & Kimberly Blvd
North Lauderdale



Station : 1229 - Rock Island Rd & Kimberly Blvd (Standard File)

Phase	1 (SL)	2 (NT)	3 (WL)	4 (ET)	5 (NL)	6 (ST)	7 (EL)	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		21		29		21		29								
Min Green	5	10	5	6	5	10	5	6								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	12	50	12	30	12	50	12	30								
Max2																
Yellow Clr	4.5	4.5	4	4	4.5	4.5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable				ON				ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8	8	8	8	8	8
Max Presence	180	180	180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	4	1	3	2	4
Dwell Cyc Veh 2	6	6	6	8	5	7
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	3	1	2	4	2	4
Exit 2	7	5	6	8	6	8
Exit 3						
Exit 4						

Prepared By	Date Implemented
Reviewed By	Traffic Engineer

Broward County Timing Sheet 6/27/2023 10:30:55 AM

Station : 1229 - Rock Island Rd & Kimberly Blvd (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		100	254																							
6		2	2	160	123	2	1	10	50		21	73	20	46	21	73	20	46								
9		3	3	160	150	3	1	10	50		16	82	16	46	16	82	16	46								
15		4	4	160	63	4	1	10	50		24	70	20	46	16	78	20	46								
20		3	3	160	150	3	1	10	50		16	82	16	46	16	82	16	46								
23		100	254																							
Day Plan 2											**Easy**															
		100	254																							
7		3	3	160	150	3	1	10	50		16	82	16	46	16	82	16	46								
23		100	254																							

Day Plan 3												**Easy**																	
		100	254																										
7		3	3	160	150	3	1	10	50			16	82	16	46	16	82	16	46										
23		100	254																										

Station : 1229 - Rock Island Rd & Kimberly Blvd (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															

Scheduler

	Month											Day of Weekk							Day of Month										1									2									3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1												1	1	1	1	1		1																																2
5	1												1							1																																2
6					1								1																																1	1	1	1	1	1	1	2
7							1											1					1																													1
8							1						1	1	1	1	1					1																														1
9							1						1											1																												2
10									1				1							1	1	1	1	1	1	1	1																										2
11											1						1																													1	1	1	1	1	1	1	2
12											1							1																													1	1	1	1	1	1	1	2
13												1						1																														1						2
14												1		1	1	1	1	1																														1						2
15												1		1																																			1					2
16												1		1																																							1	2
17																																																						1
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BROWARD COUNTY TRAFFIC ENGINEERING

ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1243	**Initial Operation Date**	12/31/03
Controller Type	2070 LN	**System Number**	
Modification Number	5	**Modification Date**	02/15/2018
Drawing/Project No	BOND 5024	**FPL Grid Number**	87187234505
Intersection	ROCK ISLAND ROAD and FOREST BOULEVARD		
Municipality	NORTH LAUDERDALE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	SBL	NB	WBL	EB	NBL	SB	EBL	WB
Initial Green(MIN)	4	12	4	6	4	12	4	6
Vehicle Ext.(GAP)	1.5	2.5	1.5	2.0	1.5	2.5	1.5	2.0
Maximum Green I	12	50	12	20	12	50	12	20
Maximum Green II								
Yellow Clearance	4.5	4.5	4.0	4.0	4.5	4.5	4.0	4.0
All Red Clearance	2.0	2.0	3.0	3.0	2.0	2.0	3.0	3.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay								
Walk		7		7		7		7
Pedestrian Clearance		14		21		14		21
Permissive	5-SECT		5-SECT		5-SECT		5-SECT	
Flash Operation		YELLOW		RED		YELLOW		RED

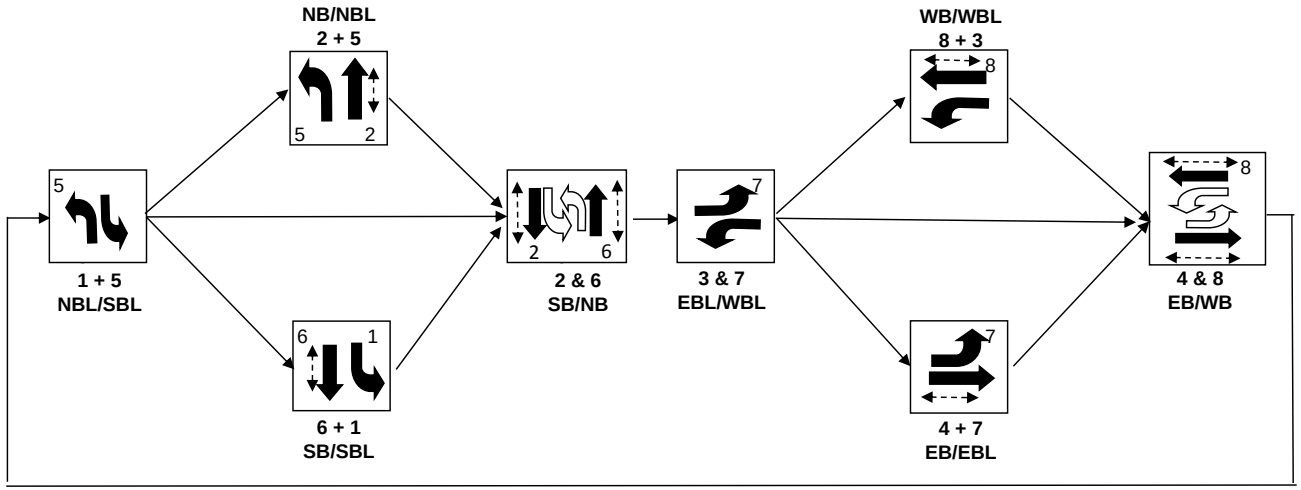
Attachment

NOTES:

1. ANTI-BACKDOWN NORTH/SOUTH: PHASES 2+6 ON--->OMIT PHASES 1+5.
2. DUAL ENTRY HARDWIRED EAST/WEST.
3. FLASH OPERATION: 0000-0600, 7 DAYS.
4. DETECTOR SWITCH PROGRAMMED (DETECTOR 3 CALL PHASE 3, SWITCH PHASE 8; DETECTOR 7 CALL PHASE 7 SWITCH PHASE 4)
5. MOD. 5 UPDATE YELLOW AND ALL RED CLEARANCE.

Submitted By _____ **Approved By** _____

Sequence of Operation for (1243) ROCK ISLAND ROAD AND FOREST BOULEVARD



Denotes permissive left turn

Denotes pedestrian clearance.

Station : 1243 - Rock Island Rd & Forest Blvd (Standard File)

Phase	1 (SL)	2 (NT)	3 (WL)	4 (ET)	5 (NL)	6 (ST)	7 (EL)	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		14		21		14		21								
Min Green	4	12	4	6	4	12	4	6								
Gap Ext	1.5	2.5	1.5	2	1.5	2.5	1.5	2								
Max1	12	50	12	20	12	50	12	20								
Max2																
Yellow Clr	4.5	4.5	4	4	4.5	4.5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	3	3	2	2	3	3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable		ON		ON		ON		ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green			1		1	
Min Dwell	8	8	8	8	8	8
Max Presence	180	180	180	180	180	180
Track Veh 1			9			
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	4	6	8	2	7
Dwell Cyc Veh 2	6	8	1	3	5	4
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	3	1	2	4	2	4
Exit 2	7	5	6	8	6	8
Exit 3						
Exit 4						

Prepared By	Date Implemented
Reviewed By	Traffic Engineer

Broward County Timing Sheet 6/27/2023 10:29:58 AM

Station : 1243 - Rock Island Rd & Forest Blvd (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		25	255																							
6		2	2	160	131	2	1	10	50		16	88	20	36	16	88	20	36								
9		3	3	160	159	3	1	10	50		15	95	15	35	15	95	15	35								
15		4	4	160	93	4	1	10	50		21	83	20	36	21	83	20	36								
20		3	3	160	159	3	1	10	50		15	95	15	35	15	95	15	35								
23		100	254																							
Day Plan 2											**Easy**															
		25	255																							
6		100	254																							
7		3	3	160	159	3	1	10	50		15	95	15	35	15	95	15	35								
23		100	254																							

Day Plan 3												**Easy**																	
		25	255																										
6		100	254																										
7		3	3	160	159	3	1	10	50			15	95	15	35	15	95	15	35										
23		100	254																										

Broward County Timing Sheet 6/27/2023 10:29:58 AM

Station : 1243 - Rock Island Rd & Forest Blvd (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															

Scheduler

	Month											Day of Weekk							Day of Month										1									2									3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1												1	1	1	1	1		1																																2
5	1												1							1																																2
6					1								1																																1	1	1	1	1	1	1	2
7							1											1				1																														1
8							1						1	1	1	1	1						1																													1
9							1						1											1																												2
10								1					1							1	1	1	1	1	1	1																										2
11										1							1																											1	1	1	1	1	1	1	2
12										1								1																											1	1	1	1	1	1	1	2
13											1							1																												1						2
14											1		1	1	1	1	1																													1					2
15											1		1																																		1				2
16											1		1																																						1	2
17																																																			1
18																																																			1
19																																																			1
20																																																			1
21																																																			1
22																																																			1

| | | |

APPENDIX I

SYNCHRO Output

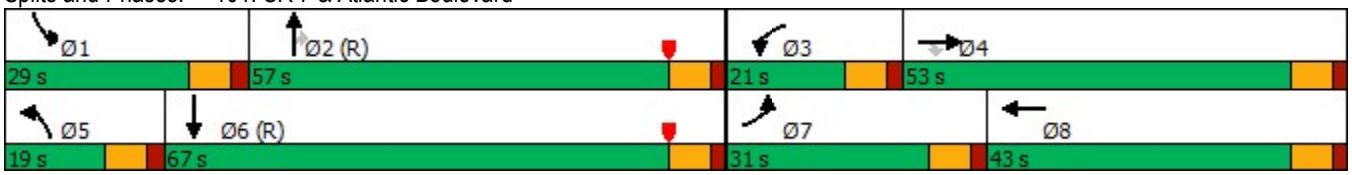
Existing (2023) SYNCHRO Output

Timings
101: SR 7 & Atlantic Boulevard

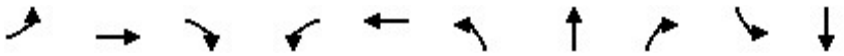
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	372	1382	215	337	682	80	1470	600	267	1295
Future Volume (vph)	372	1382	215	337	682	80	1470	600	267	1295
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	11.0	47.0	47.0	11.0	43.0	12.0	50.0	50.0	12.0	50.0
Total Split (s)	31.0	53.0	53.0	21.0	43.0	19.0	57.0	57.0	29.0	67.0
Total Split (%)	19.4%	33.1%	33.1%	13.1%	26.9%	11.9%	35.6%	35.6%	18.1%	41.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	20.9	46.0	46.0	14.0	39.1	10.2	50.0	50.0	22.0	61.8
Actuated g/C Ratio	0.13	0.29	0.29	0.09	0.24	0.06	0.31	0.31	0.14	0.39
v/c Ratio	0.85	0.97	0.39	1.15	0.67	0.73	0.94	0.95	1.12	0.76
Control Delay	85.4	72.4	13.2	159.2	56.8	99.4	48.8	39.5	153.4	45.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.4	72.4	13.2	159.2	56.8	99.4	48.8	39.5	153.4	45.5
LOS	F	E	B	F	E	F	D	D	F	D
Approach Delay		68.4			87.1		48.1			62.4
Approach LOS		E			F		D			E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 115 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 63.7	Intersection LOS: E
Intersection Capacity Utilization 113.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 101: SR 7 & Atlantic Boulevard



Queues
101: SR 7 & Atlantic Boulevard



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	380	1410	219	344	817	82	1500	612	272	1463
v/c Ratio	0.85	0.97	0.39	1.15	0.67	0.73	0.94	0.95	1.12	0.76
Control Delay	85.4	72.4	13.2	159.2	56.8	99.4	48.8	39.5	153.4	45.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.4	72.4	13.2	159.2	56.8	99.4	48.8	39.5	153.4	45.5
Queue Length 50th (ft)	202	535	36	~216	279	82	519	358	~326	487
Queue Length 95th (ft)	259	#636	112	#323	338	m107	m#649	m#635	#519	550
Internal Link Dist (ft)		2560			1156		2623			1036
Turn Bay Length (ft)	280		330	525		400		270	395	
Base Capacity (vph)	514	1461	562	300	1224	132	1589	647	243	1937
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.97	0.39	1.15	0.67	0.62	0.94	0.95	1.12	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

HCM 6th Signalized Intersection Summary
101: SR 7 & Atlantic Boulevard

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	372	1382	215	337	682	119	80	1470	600	267	1295	139
Future Volume (veh/h)	372	1382	215	337	682	119	80	1470	600	267	1295	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	380	1410	219	344	696	121	82	1500	612	272	1321	142
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	423	1465	446	302	1098	188	101	1599	484	245	1840	198
Arrive On Green	0.12	0.29	0.29	0.09	0.25	0.25	0.08	0.42	0.42	0.18	0.52	0.52
Sat Flow, veh/h	3456	5106	1555	3456	4360	748	1781	5106	1546	1781	4669	502
Grp Volume(v), veh/h	380	1410	219	344	541	276	82	1500	612	272	963	500
Grp Sat Flow(s),veh/h/ln	1728	1702	1555	1728	1702	1704	1781	1702	1546	1781	1702	1767
Q Serve(g_s), s	17.3	43.5	18.7	14.0	22.6	23.1	7.3	45.0	50.1	22.0	34.5	34.5
Cycle Q Clear(g_c), s	17.3	43.5	18.7	14.0	22.6	23.1	7.3	45.0	50.1	22.0	34.5	34.5
Prop In Lane	1.00		1.00	1.00		0.44	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	423	1465	446	302	858	429	101	1599	484	245	1342	696
V/C Ratio(X)	0.90	0.96	0.49	1.14	0.63	0.64	0.82	0.94	1.26	1.11	0.72	0.72
Avail Cap(c_a), veh/h	518	1468	447	302	858	429	134	1599	484	245	1342	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.52	0.52	0.52	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.2	56.2	47.3	73.0	53.2	53.4	73.2	45.2	46.7	65.4	31.3	31.3
Incr Delay (d2), s/veh	14.4	15.4	0.6	94.3	1.4	3.0	10.6	7.1	127.8	90.4	3.3	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	20.8	7.4	10.2	9.9	10.3	3.6	19.2	35.5	15.9	14.0	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.6	71.6	48.0	167.3	54.6	56.4	83.8	52.3	174.5	155.7	34.6	37.5
LnGrp LOS	F	E	D	F	D	E	F	D	F	F	C	D
Approach Vol, veh/h		2009			1161			2194			1735	
Approach Delay, s/veh		71.3			88.4			87.6			54.4	
Approach LOS		E			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	57.1	21.0	52.9	16.0	70.1	26.6	47.3
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	22.0	50.0	14.0	46.0	12.0	60.0	24.0	36.0
Max Q Clear Time (g_c+I1), s	24.0	52.1	16.0	45.5	9.3	36.5	19.3	25.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	11.5	0.3	3.5

Intersection Summary	
HCM 6th Ctrl Delay	75.0
HCM 6th LOS	E

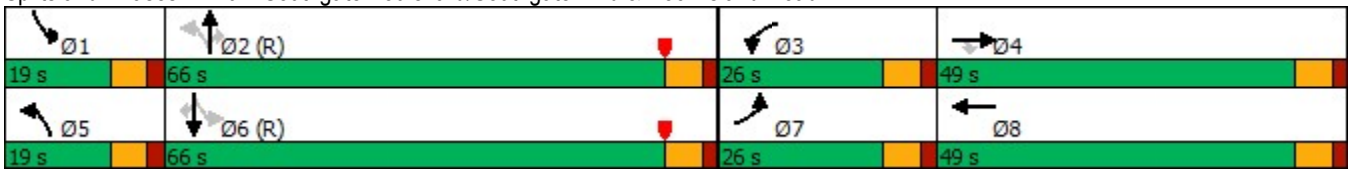
Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	475	760	179	74	514	160	963	174	215	840	493
Future Volume (vph)	475	760	179	74	514	160	963	174	215	840	493
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4			2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	4.0	12.0	12.0	4.0	12.0	12.0
Minimum Split (s)	11.5	36.5	36.5	11.5	47.5	10.5	44.5	44.5	10.5	44.5	44.5
Total Split (s)	26.0	49.0	49.0	26.0	49.0	19.0	66.0	66.0	19.0	66.0	66.0
Total Split (%)	16.3%	30.6%	30.6%	16.3%	30.6%	11.9%	41.3%	41.3%	11.9%	41.3%	41.3%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	19.5	49.0	49.0	11.0	40.5	70.7	59.5	59.5	76.3	62.9	62.9
Actuated g/C Ratio	0.12	0.31	0.31	0.07	0.25	0.44	0.37	0.37	0.48	0.39	0.39
v/c Ratio	1.20	0.74	0.34	0.64	0.93	0.66	0.77	0.28	0.96	0.64	0.63
Control Delay	166.4	54.8	19.1	96.1	49.5	47.6	68.1	28.5	81.7	42.6	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	166.4	54.8	19.1	96.1	49.5	47.6	68.1	28.5	81.7	42.6	16.7
LOS	F	D	B	F	D	D	E	C	F	D	B
Approach Delay		87.8			53.5		60.3			39.7	
Approach LOS		F			D		E			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 60 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 60.5	Intersection LOS: E
Intersection Capacity Utilization 101.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Queues
102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	500	800	188	78	830	168	1014	183	226	884	519
v/c Ratio	1.20	0.74	0.34	0.64	0.93	0.66	0.77	0.28	0.96	0.64	0.63
Control Delay	166.4	54.8	19.1	96.1	49.5	47.6	68.1	28.5	81.7	42.6	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	166.4	54.8	19.1	96.1	49.5	47.6	68.1	28.5	81.7	42.6	16.7
Queue Length 50th (ft)	~324	388	57	76	377	144	588	84	~180	406	151
Queue Length 95th (ft)	#444	489	134	m101	m#470	213	657	169	#362	484	288
Internal Link Dist (ft)		387			3410		1324			1269	
Turn Bay Length (ft)	315		140	315		350			180		190
Base Capacity (vph)	418	1083	552	215	935	270	1316	665	236	1390	819
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.74	0.34	0.36	0.89	0.62	0.77	0.28	0.96	0.64	0.63

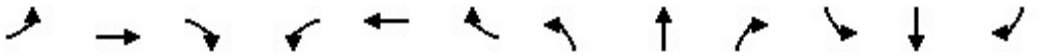
Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

HCM 6th Signalized Intersection Summary
102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	475	760	179	74	514	275	160	963	174	215	840	493
Future Volume (veh/h)	475	760	179	74	514	275	160	963	174	215	840	493
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	500	800	188	78	541	289	168	1014	0	226	884	519
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	421	1152	505	97	574	306	251	1354		270	1382	613
Arrive On Green	0.12	0.32	0.32	0.05	0.26	0.26	0.09	0.51	0.00	0.10	0.52	0.52
Sat Flow, veh/h	3456	3554	1557	1781	2237	1192	1781	3554	1585	1781	3554	1578
Grp Volume(v), veh/h	500	800	188	78	430	400	168	1014	0	226	884	519
Grp Sat Flow(s),veh/h/ln	1728	1777	1557	1781	1777	1652	1781	1777	1585	1781	1777	1578
Q Serve(g_s), s	19.5	31.4	14.9	6.9	37.9	38.1	9.2	36.3	0.0	12.5	28.7	45.2
Cycle Q Clear(g_c), s	19.5	31.4	14.9	6.9	37.9	38.1	9.2	36.3	0.0	12.5	28.7	45.2
Prop In Lane	1.00		1.00	1.00		0.72	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1152	505	97	456	424	251	1354		270	1382	613
V/C Ratio(X)	1.19	0.69	0.37	0.81	0.94	0.94	0.67	0.75		0.84	0.64	0.85
Avail Cap(c_a), veh/h	421	1152	505	217	472	439	265	1354		270	1382	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.75	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	47.2	41.6	74.8	58.3	58.4	30.0	33.4	0.0	33.6	30.5	34.5
Incr Delay (d2), s/veh	105.8	1.5	0.2	5.8	26.6	28.4	3.5	2.9	0.0	19.1	2.3	13.5
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	14.9	14.3	5.8	3.4	20.5	19.3	4.1	15.3	0.0	6.7	12.1	18.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	176.1	48.7	41.7	80.7	84.9	86.8	33.5	36.3	0.0	52.7	32.8	48.0
LnGrp LOS	F	D	D	F	F	F	C	D		D	C	D
Approach Vol, veh/h		1488			908			1182			1629	
Approach Delay, s/veh		90.6			85.4			35.9			40.4	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	67.5	15.2	58.4	17.7	68.7	26.0	47.5
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	12.5	59.5	19.5	42.5	12.5	59.5	19.5	42.5
Max Q Clear Time (g_c+I1), s	14.5	38.3	8.9	33.4	11.2	47.2	21.5	40.1
Green Ext Time (p_c), s	0.0	7.6	0.0	3.0	0.0	6.5	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	61.6
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

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	2	1085	16	11	643	5	29	0	60	17	3	5
Future Vol, veh/h	2	1085	16	11	643	5	29	0	60	17	3	5
Conflicting Peds, #/hr	4	0	5	5	0	4	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	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1179	17	12	699	5	32	0	65	18	3	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	708	0	0	1201	0	0	1572	1929	603	1324	1935	356
Stage 1	-	-	-	-	-	-	1197	1197	-	730	730	-
Stage 2	-	-	-	-	-	-	375	732	-	594	1205	-
Critical Hdwy	4.14	-	-	4.14	-	-	5	5	4.5	5	5	4.5
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	5	5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5	5	-	5	5	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3	3	3	3	3	3
Pot Cap-1 Maneuver	887	-	-	577	-	-	243	166	718	315	164	889
Stage 1	-	-	-	-	-	-	360	360	-	581	581	-
Stage 2	-	-	-	-	-	-	830	580	-	667	357	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	884	-	-	574	-	-	230	159	715	277	157	886
Mov Cap-2 Maneuver	-	-	-	-	-	-	230	159	-	277	157	-
Stage 1	-	-	-	-	-	-	357	357	-	578	559	-
Stage 2	-	-	-	-	-	-	792	558	-	605	355	-

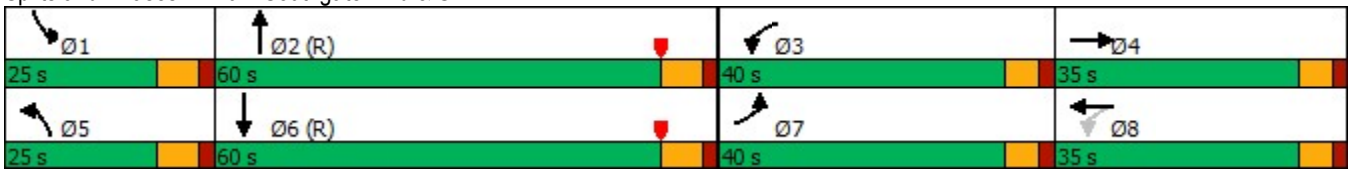
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	16	18.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	424	884	-	-	574	-	-	290
HCM Lane V/C Ratio	0.228	0.002	-	-	0.021	-	-	0.094
HCM Control Delay (s)	16	9.1	-	-	11.4	0.2	-	18.7
HCM Lane LOS	C	A	-	-	B	A	-	C
HCM 95th %tile Q(veh)	0.9	0	-	-	0.1	-	-	0.3

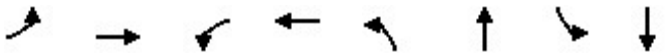
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	665	123	63	65	180	1439	59	1277
Future Volume (vph)	665	123	63	65	180	1439	59	1277
Turn Type	Prot	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases			8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	6.0	4.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	11.0	35.0	10.0	35.0	12.0	37.0	12.0	38.0
Total Split (s)	40.0	35.0	40.0	35.0	25.0	60.0	25.0	60.0
Total Split (%)	25.0%	21.9%	25.0%	21.9%	15.6%	37.5%	15.6%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	33.2	56.0	35.5	28.1	12.5	65.8	9.3	60.2
Actuated g/C Ratio	0.21	0.35	0.22	0.18	0.08	0.41	0.06	0.38
v/c Ratio	0.95	0.70	0.26	0.62	0.69	0.71	0.58	0.90
Control Delay	82.5	26.3	34.2	52.4	87.4	38.5	122.3	39.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.5	26.3	34.2	52.4	87.4	38.5	122.3	39.6
LOS	F	C	C	D	F	D	F	D
Approach Delay		60.8		48.2		43.8		42.4
Approach LOS		E		D		D		D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 24 (15%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 47.5	Intersection LOS: D
Intersection Capacity Utilization 93.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 104: Southgate Blvd & SR 7



Queues
104: Southgate Blvd & SR 7



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	679	429	64	212	184	1490	60	1694
v/c Ratio	0.95	0.70	0.26	0.62	0.69	0.71	0.58	0.90
Control Delay	82.5	26.3	34.2	52.4	87.4	38.5	122.3	39.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.5	26.3	34.2	52.4	87.4	38.5	122.3	39.6
Queue Length 50th (ft)	252	224	41	152	103	325	66	634
Queue Length 95th (ft)	m#448	m309	71	242	146	416	m83	m#712
Internal Link Dist (ft)		1738		1039		1330		2623
Turn Bay Length (ft)	125		205		235		215	
Base Capacity (vph)	729	616	543	357	386	2086	199	1872
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.70	0.12	0.59	0.48	0.71	0.30	0.90

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
104: Southgate Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	665	123	297	63	65	143	180	1439	22	59	1277	383
Future Volume (veh/h)	665	123	297	63	65	143	180	1439	22	59	1277	383
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	0.99		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	679	126	303	64	66	146	184	1468	22	60	1303	391
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	717	156	375	197	79	176	227	2239	34	76	1594	477
Arrive On Green	0.21	0.32	0.32	0.04	0.16	0.16	0.09	0.57	0.57	0.06	0.54	0.54
Sat Flow, veh/h	3456	484	1164	1781	511	1130	3456	5182	78	1781	3896	1166
Grp Volume(v), veh/h	679	0	429	64	0	212	184	964	526	60	1138	556
Grp Sat Flow(s),veh/h/ln	1728	0	1648	1781	0	1641	1728	1702	1856	1781	1702	1657
Q Serve(g_s), s	31.0	0.0	38.1	4.8	0.0	20.1	8.4	30.9	30.9	5.3	43.9	44.2
Cycle Q Clear(g_c), s	31.0	0.0	38.1	4.8	0.0	20.1	8.4	30.9	30.9	5.3	43.9	44.2
Prop In Lane	1.00		0.71	1.00		0.69	1.00		0.04	1.00		0.70
Lane Grp Cap(c), veh/h	717	0	532	197	0	255	227	1471	802	76	1393	678
V/C Ratio(X)	0.95	0.00	0.81	0.33	0.00	0.83	0.81	0.66	0.66	0.79	0.82	0.82
Avail Cap(c_a), veh/h	734	0	532	504	0	297	389	1471	802	200	1393	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90	0.53	0.53	0.53
Uniform Delay (d), s/veh	62.6	0.0	49.6	54.1	0.0	65.5	72.0	25.9	25.9	74.7	31.6	31.6
Incr Delay (d2), s/veh	20.8	0.0	8.3	0.4	0.0	13.9	2.4	2.1	3.8	3.6	3.0	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	15.7	0.0	17.0	2.2	0.0	9.4	3.7	12.1	13.5	2.5	17.4	17.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.3	0.0	58.0	54.5	0.0	79.4	74.4	28.0	29.7	78.3	34.5	37.6
LnGrp LOS	F	A	E	D	A	E	E	C	C	E	C	D
Approach Vol, veh/h		1108			276			1674			1754	
Approach Delay, s/veh		73.5			73.6			33.6			37.0	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	76.1	12.4	57.6	17.5	72.5	39.2	30.9
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	18.0	53.0	34.0	29.0	18.0	53.0	34.0	29.0
Max Q Clear Time (g_c+I1), s	7.3	32.9	6.8	40.1	10.4	46.2	33.0	22.1
Green Ext Time (p_c), s	0.0	10.6	0.0	0.0	0.1	5.3	0.2	0.5

Intersection Summary	
HCM 6th Ctrl Delay	46.3
HCM 6th LOS	D

Notes

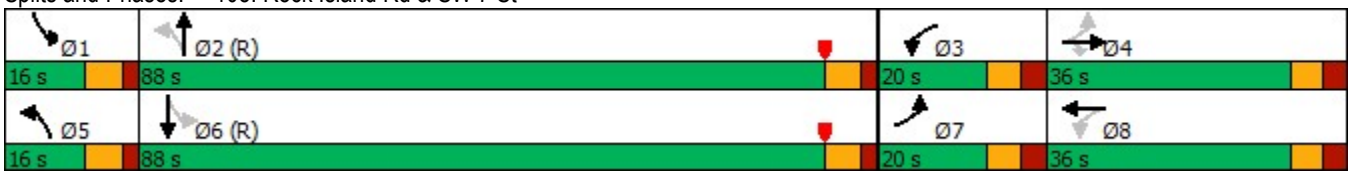
User approved pedestrian interval to be less than phase max green.

Timings
105: Rock Island Rd & SW 7 St

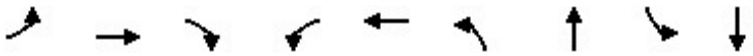
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	113	60	90	77	37	83	1070	133	1031
Future Volume (vph)	113	60	90	77	37	83	1070	133	1031
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases	4		4	8		2		6	
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	11.0	35.0	35.0	11.0	35.0	10.5	27.5	10.5	27.5
Total Split (s)	20.0	36.0	36.0	20.0	36.0	16.0	88.0	16.0	88.0
Total Split (%)	12.5%	22.5%	22.5%	12.5%	22.5%	10.0%	55.0%	10.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	27.3	15.3	15.3	24.0	13.6	104.1	97.2	110.6	100.5
Actuated g/C Ratio	0.17	0.10	0.10	0.15	0.08	0.65	0.61	0.69	0.63
v/c Ratio	0.73	0.40	0.41	0.40	0.79	0.37	0.60	0.56	0.56
Control Delay	76.9	73.1	12.7	56.8	61.6	12.6	22.4	23.4	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.9	73.1	12.7	56.8	61.6	12.6	22.4	23.4	10.2
LOS	E	E	B	E	E	B	C	C	B
Approach Delay		54.0			59.9		21.7		11.7
Approach LOS		D			E		C		B

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 131 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 76.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 105: Rock Island Rd & SW 7 St



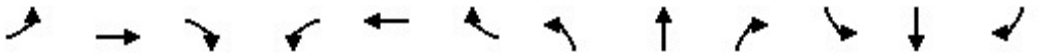
Queues
105: Rock Island Rd & SW 7 St



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	131	70	105	90	169	97	1289	155	1247
v/c Ratio	0.73	0.40	0.41	0.40	0.79	0.37	0.60	0.56	0.56
Control Delay	76.9	73.1	12.7	56.8	61.6	12.6	22.4	23.4	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.9	73.1	12.7	56.8	61.6	12.6	22.4	23.4	10.2
Queue Length 50th (ft)	118	70	0	79	92	29	420	36	79
Queue Length 95th (ft)	165	114	41	120	158	56	565	57	606
Internal Link Dist (ft)		723			1226		764		1324
Turn Bay Length (ft)	215		215	125		195		205	
Base Capacity (vph)	190	337	381	256	362	295	2141	287	2209
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.21	0.28	0.35	0.47	0.33	0.60	0.54	0.56

Intersection Summary

HCM 6th Signalized Intersection Summary
105: Rock Island Rd & SW 7 St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	60	90	77	37	108	83	1070	39	133	1031	41
Future Volume (veh/h)	113	60	90	77	37	108	83	1070	39	133	1031	41
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		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	70	105	90	43	126	97	1244	45	155	1199	48
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	267	225	276	51	148	315	2046	74	317	2083	83
Arrive On Green	0.08	0.14	0.14	0.06	0.12	0.12	0.05	0.78	0.78	0.06	0.80	0.80
Sat Flow, veh/h	1781	1870	1578	1781	413	1212	1781	3497	126	1781	3479	139
Grp Volume(v), veh/h	131	70	105	90	0	169	97	632	657	155	612	635
Grp Sat Flow(s),veh/h/ln	1781	1870	1578	1781	0	1625	1781	1777	1847	1781	1777	1842
Q Serve(g_s), s	10.2	5.3	9.8	7.0	0.0	16.3	3.5	23.9	24.0	5.7	20.7	20.7
Cycle Q Clear(g_c), s	10.2	5.3	9.8	7.0	0.0	16.3	3.5	23.9	24.0	5.7	20.7	20.7
Prop In Lane	1.00		1.00	1.00		0.75	1.00		0.07	1.00		0.08
Lane Grp Cap(c), veh/h	205	267	225	276	0	199	315	1039	1080	317	1064	1103
V/C Ratio(X)	0.64	0.26	0.47	0.33	0.00	0.85	0.31	0.61	0.61	0.49	0.58	0.58
Avail Cap(c_a), veh/h	214	339	286	322	0	295	360	1039	1080	337	1064	1103
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	56.4	61.1	63.0	57.0	0.0	68.8	13.5	10.0	10.0	14.4	8.6	8.6
Incr Delay (d2), s/veh	4.3	0.2	0.6	0.3	0.0	9.8	0.2	2.6	2.6	0.3	1.8	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	4.9	2.6	4.0	3.2	0.0	7.4	1.4	8.0	8.3	2.3	6.4	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	61.3	63.5	57.3	0.0	78.6	13.7	12.7	12.6	14.7	10.4	10.4
LnGrp LOS	E	E	E	E	A	E	B	B	B	B	B	B
Approach Vol, veh/h		306			259			1386			1402	
Approach Delay, s/veh		61.8			71.2			12.7			10.9	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	100.1	15.9	29.8	12.0	102.3	19.2	26.5
Change Period (Y+Rc), s	6.5	6.5	7.0	7.0	6.5	6.5	7.0	7.0
Max Green Setting (Gmax), s	9.5	81.5	13.0	29.0	9.5	81.5	13.0	29.0
Max Q Clear Time (g_c+I1), s	7.7	26.0	9.0	11.8	5.5	22.7	12.2	18.3
Green Ext Time (p_c), s	0.0	9.7	0.0	0.3	0.0	9.2	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	200	37	18	131	13	44	18	41	13	13	11
Future Vol, veh/h	6	200	37	18	131	13	44	18	41	13	13	11
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	235	44	21	154	15	52	21	48	15	15	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10	9.2	8.9	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	43%	2%	11%	35%
Vol Thru, %	17%	82%	81%	35%
Vol Right, %	40%	15%	8%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	243	162	37
LT Vol	44	6	18	13
Through Vol	18	200	131	13
RT Vol	41	37	13	11
Lane Flow Rate	121	286	191	44
Geometry Grp	1	1	1	1
Degree of Util (X)	0.165	0.356	0.245	0.061
Departure Headway (Hd)	4.916	4.477	4.637	5.076
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	726	800	772	701
Service Time	2.969	2.514	2.679	3.137
HCM Lane V/C Ratio	0.167	0.357	0.247	0.063
HCM Control Delay	8.9	10	9.2	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	1.6	1	0.2

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	30	284	9	6	148	14	7	4	5	30	2	21
Future Vol, veh/h	30	284	9	6	148	14	7	4	5	30	2	21
Conflicting Peds, #/hr	1	0	6	6	0	1	2	0	0	0	0	2
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	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	293	9	6	153	14	7	4	5	31	2	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	168	0	0	308	0	0	552	546	304	537	543	163
Stage 1	-	-	-	-	-	-	366	366	-	173	173	-
Stage 2	-	-	-	-	-	-	186	180	-	364	370	-
Critical Hdwy	4.12	-	-	4.12	-	-	5	5	4.5	5	5	4.5
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	5	5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5	5	-	5	5	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3	3	3	3	3	3
Pot Cap-1 Maneuver	1410	-	-	1253	-	-	695	700	929	706	702	1047
Stage 1	-	-	-	-	-	-	837	837	-	1013	1013	-
Stage 2	-	-	-	-	-	-	1000	1006	-	839	834	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1409	-	-	1246	-	-	658	673	924	682	675	1044
Mov Cap-2 Maneuver	-	-	-	-	-	-	658	673	-	682	675	-
Stage 1	-	-	-	-	-	-	810	810	-	986	1007	-
Stage 2	-	-	-	-	-	-	971	1000	-	808	807	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.3	10.1	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	728	1409	-	-	1246	-	-	790
HCM Lane V/C Ratio	0.023	0.022	-	-	0.005	-	-	0.069
HCM Control Delay (s)	10.1	7.6	0	-	7.9	0	-	9.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	321	2	2	166	2	0
Future Vol, veh/h	321	2	2	166	2	0
Conflicting Peds, #/hr	0	9	9	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	357	2	2	171	2	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	368	0	542	368
Stage 1	-	-	-	-	367	-
Stage 2	-	-	-	-	175	-
Critical Hdwy	-	-	4.12	-	5	4.5
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	-	-	2.218	-	3	3
Pot Cap-1 Maneuver	-	-	1191	-	703	880
Stage 1	-	-	-	-	837	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1181	-	695	872
Mov Cap-2 Maneuver	-	-	-	-	695	-
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	1009	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.2
HCM LOS			B

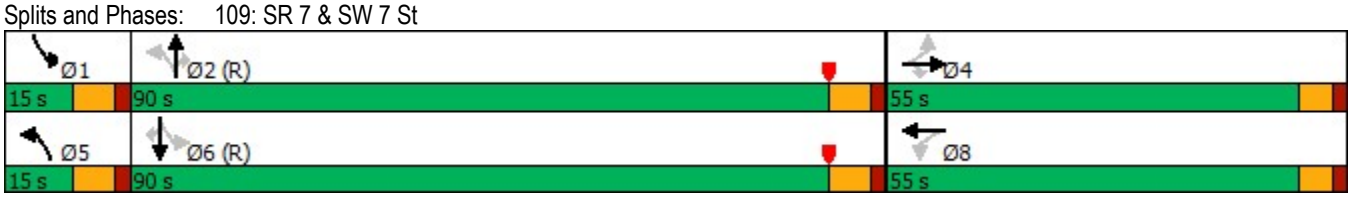
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	695	-	-	-	1181	-
HCM Lane V/C Ratio	0.003	-	-	-	0.002	-
HCM Control Delay (s)	10.2	0	-	-	8.1	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0	-

Timings
109: SR 7 & SW 7 St

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	81	11	226	47	21	118	1600	19	16	1576	57
Future Volume (vph)	81	11	226	47	21	118	1600	19	16	1576	57
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.0	26.0	26.0	45.0	45.0	12.0	27.0	27.0	12.0	27.0	27.0
Total Split (s)	55.0	55.0	55.0	55.0	55.0	15.0	90.0	90.0	15.0	90.0	90.0
Total Split (%)	34.4%	34.4%	34.4%	34.4%	34.4%	9.4%	56.3%	56.3%	9.4%	56.3%	56.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		19.1	19.1		19.1	126.0	120.7	120.7	118.4	113.4	113.4
Actuated g/C Ratio		0.12	0.12		0.12	0.79	0.75	0.75	0.74	0.71	0.71
v/c Ratio		0.64	0.85		0.54	0.52	0.44	0.02	0.08	0.46	0.06
Control Delay		84.0	62.9		73.2	12.3	9.0	0.1	3.1	5.6	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		84.0	62.9		73.2	12.3	9.0	0.1	3.1	5.6	0.1
LOS		F	E		E	B	A	A	A	A	A
Approach Delay		69.0			73.2		9.1			5.4	
Approach LOS		E			E		A			A	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 74 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 71.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 109: SR 7 & SW 7 St



Queues
109: SR 7 & SW 7 St

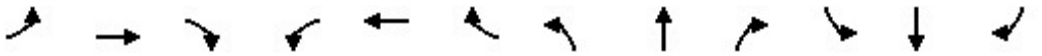


Lane Group	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	97	238	82	124	1684	20	17	1659	60
v/c Ratio	0.64	0.85	0.54	0.52	0.44	0.02	0.08	0.46	0.06
Control Delay	84.0	62.9	73.2	12.3	9.0	0.1	3.1	5.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.0	62.9	73.2	12.3	9.0	0.1	3.1	5.6	0.1
Queue Length 50th (ft)	98	140	77	24	243	0	2	124	0
Queue Length 95th (ft)	155	229	129	54	345	0	m3	145	m0
Internal Link Dist (ft)	972		833		582			1330	
Turn Bay Length (ft)		100		330		105	275		95
Base Capacity (vph)	391	552	382	249	3835	1176	247	3602	1053
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.43	0.21	0.50	0.44	0.02	0.07	0.46	0.06

Intersection Summary

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

HCM 6th Signalized Intersection Summary
109: SR 7 & SW 7 St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	11	226	47	21	10	118	1600	19	16	1576	57
Future Volume (veh/h)	81	11	226	47	21	10	118	1600	19	16	1576	57
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	1.00		0.97	1.00		0.97	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	12	238	49	22	11	124	1684	20	17	1659	60
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	222	29	261	109	46	18	281	3532	1062	260	3440	1056
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.05	0.92	0.92	0.02	0.90	0.90
Sat Flow, veh/h	1076	172	1565	437	276	111	1781	5106	1536	1781	5106	1567
Grp Volume(v), veh/h	97	0	238	82	0	0	124	1684	20	17	1659	60
Grp Sat Flow(s),veh/h/ln	1247	0	1565	824	0	0	1781	1702	1536	1781	1702	1567
Q Serve(g_s), s	0.0	0.0	23.9	7.7	0.0	0.0	3.5	7.5	0.2	0.5	9.5	0.7
Cycle Q Clear(g_c), s	11.8	0.0	23.9	19.5	0.0	0.0	3.5	7.5	0.2	0.5	9.5	0.7
Prop In Lane	0.88		1.00	0.60		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	250	0	261	173	0	0	281	3532	1062	260	3440	1056
V/C Ratio(X)	0.39	0.00	0.91	0.47	0.00	0.00	0.44	0.48	0.02	0.07	0.48	0.06
Avail Cap(c_a), veh/h	447	0	479	356	0	0	308	3532	1062	319	3440	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.35	0.35	0.35
Uniform Delay (d), s/veh	60.4	0.0	65.5	66.5	0.0	0.0	7.7	2.3	2.0	7.8	3.2	2.7
Incr Delay (d2), s/veh	0.4	0.0	5.1	0.7	0.0	0.0	0.4	0.5	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	10.0	3.3	0.0	0.0	1.4	1.9	0.1	0.2	2.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	0.0	70.6	67.3	0.0	0.0	8.1	2.7	2.0	7.8	3.4	2.8
LnGrp LOS	E	A	E	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		335			82			1828			1736	
Approach Delay, s/veh		67.8			67.3			3.1			3.4	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	117.7		32.7	12.5	114.8		32.7				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	8.0	83.0		49.0	8.0	83.0		49.0				
Max Q Clear Time (g_c+I1), s	2.5	9.5		25.9	5.5	11.5		21.5				
Green Ext Time (p_c), s	0.0	22.9		0.8	0.0	22.5		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			A									

Timings
110: Kimberly Blvd & Rock Island Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	96	119	101	132	110	63	1024	114	113	919	82
Future Volume (vph)	96	119	101	132	110	63	1024	114	113	919	82
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.5	42.0	42.0	11.5	47.5	11.5	44.5	44.5	16.5	44.6	44.6
Total Split (s)	20.0	46.0	46.0	20.0	46.0	21.0	73.0	73.0	21.0	73.0	73.0
Total Split (%)	12.5%	28.8%	28.8%	12.5%	28.8%	13.1%	45.6%	45.6%	13.1%	45.6%	45.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	26.3	15.2	15.2	29.7	16.9	105.0	99.0	99.0	108.9	101.0	101.0
Actuated g/C Ratio	0.16	0.10	0.10	0.19	0.11	0.66	0.62	0.62	0.68	0.63	0.63
v/c Ratio	0.50	0.71	0.44	0.63	0.54	0.19	0.49	0.12	0.37	0.43	0.10
Control Delay	59.8	90.8	15.5	65.8	37.9	9.5	18.7	3.8	11.3	16.5	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	90.8	15.5	65.8	37.9	9.5	18.7	3.8	11.3	16.5	1.6
LOS	E	F	B	E	D	A	B	A	B	B	A
Approach Delay		57.3			48.4		16.8			14.9	
Approach LOS		E			D		B			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 123 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization 89.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 110: Kimberly Blvd & Rock Island Road



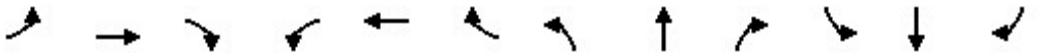
Queues
110: Kimberly Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	101	125	106	139	231	66	1078	120	119	967	86
v/c Ratio	0.50	0.71	0.44	0.63	0.54	0.19	0.49	0.12	0.37	0.43	0.10
Control Delay	59.8	90.8	15.5	65.8	37.9	9.5	18.7	3.8	11.3	16.5	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	90.8	15.5	65.8	37.9	9.5	18.7	3.8	11.3	16.5	1.6
Queue Length 50th (ft)	88	129	0	125	60	20	315	6	37	262	0
Queue Length 95th (ft)	139	196	56	185	105	41	441	38	68	355	16
Internal Link Dist (ft)		387			3410		622			1269	
Turn Bay Length (ft)	250		250	200		280		150	240		160
Base Capacity (vph)	236	465	463	234	853	447	2190	998	394	2233	832
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.27	0.23	0.59	0.27	0.15	0.49	0.12	0.30	0.43	0.10

Intersection Summary

HCM 6th Signalized Intersection Summary
110: Kimberly Blvd & Rock Island Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	119	101	132	110	109	63	1024	114	113	919	82
Future Volume (veh/h)	96	119	101	132	110	109	63	1024	114	113	919	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.92		0.87	0.93		0.88	1.00		0.87	1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	101	125	106	139	116	115	66	1078	120	119	967	86
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	325	416	307	351	425	333	305	1792	693	282	1847	759
Arrive On Green	0.06	0.22	0.22	0.07	0.24	0.24	0.04	0.67	0.67	0.06	0.69	0.69
Sat Flow, veh/h	1781	1870	1380	1781	1777	1395	1781	3554	1374	1781	3554	1461
Grp Volume(v), veh/h	101	125	106	139	116	115	66	1078	120	119	967	86
Grp Sat Flow(s),veh/h/ln	1781	1870	1380	1781	1777	1395	1781	1777	1374	1781	1777	1461
Q Serve(g_s), s	6.9	8.9	10.4	9.6	8.5	10.9	2.9	26.8	5.2	5.2	21.1	3.2
Cycle Q Clear(g_c), s	6.9	8.9	10.4	9.6	8.5	10.9	2.9	26.8	5.2	5.2	21.1	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	325	416	307	351	425	333	305	1792	693	282	1847	759
V/C Ratio(X)	0.31	0.30	0.35	0.40	0.27	0.34	0.22	0.60	0.17	0.42	0.52	0.11
Avail Cap(c_a), veh/h	382	468	345	378	444	349	413	1792	693	364	1847	759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	51.9	52.4	43.5	49.6	50.5	19.1	17.5	13.9	20.1	15.1	12.4
Incr Delay (d2), s/veh	0.2	0.1	0.2	0.3	0.1	0.2	0.1	1.5	0.5	0.4	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	4.3	3.7	4.3	3.9	3.9	1.2	10.1	1.7	2.2	7.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.7	52.0	52.7	43.7	49.7	50.7	19.2	19.0	14.5	20.5	16.2	12.7
LnGrp LOS	D	D	D	D	D	D	B	B	B	C	B	B
Approach Vol, veh/h		332			370			1264			1172	
Approach Delay, s/veh		50.0			47.8			18.6			16.4	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	87.2	17.6	41.6	11.2	89.7	14.9	44.2
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	14.5	66.5	14.0	40.0	14.5	66.5	14.0	40.0
Max Q Clear Time (g_c+I1), s	7.2	28.8	11.6	12.4	4.9	23.1	8.9	12.9
Green Ext Time (p_c), s	0.0	10.8	0.0	0.7	0.0	9.3	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	24.5
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	5.1
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	369	245	109	82
Demand Flow Rate, veh/h	376	250	111	83
Vehicles Circulating, veh/h	72	103	385	270
Vehicles Exiting, veh/h	281	393	63	83
Ped Vol Crossing Leg, #/h	0	0	1	7
Ped Cap Adj	1.000	1.000	1.000	0.999
Approach Delay, s/veh	5.5	4.7	5.0	4.2
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	376	250	111	83
Cap Entry Lane, veh/h	1282	1242	932	1048
Entry HV Adj Factor	0.980	0.980	0.985	0.983
Flow Entry, veh/h	369	245	109	82
Cap Entry, veh/h	1257	1217	917	1029
V/C Ratio	0.293	0.201	0.119	0.079
Control Delay, s/veh	5.5	4.7	5.0	4.2
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	0

Timings
112: Kimberly Blvd & SR 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	150	21	177	179	23	85	121	1530	63	1735	81
Future Volume (vph)	150	21	177	179	23	85	121	1530	63	1735	81
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	38.0	38.0	11.0	40.0	40.0	12.0	40.0	12.0	40.0	40.0
Total Split (s)	21.0	43.0	43.0	21.0	43.0	43.0	23.0	76.0	20.0	73.0	73.0
Total Split (%)	13.1%	26.9%	26.9%	13.1%	26.9%	26.9%	14.4%	47.5%	12.5%	45.6%	45.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max	C-Max
Act Effct Green (s)	22.0	8.2	8.2	23.3	8.8	8.8	15.2	104.1	9.7	96.2	96.2
Actuated g/C Ratio	0.14	0.05	0.05	0.15	0.06	0.06	0.10	0.65	0.06	0.60	0.60
v/c Ratio	0.70	0.22	0.72	0.80	0.23	0.45	0.73	0.50	0.60	0.58	0.09
Control Delay	75.8	76.8	25.7	85.3	76.5	11.9	90.0	23.6	94.8	21.5	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.8	76.8	25.7	85.3	76.5	11.9	90.0	23.6	94.8	21.5	1.5
LOS	E	E	C	F	E	B	F	C	F	C	A
Approach Delay		50.3			62.8			28.3		23.1	
Approach LOS		D			E			C		C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 113 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 30.1	Intersection LOS: C
Intersection Capacity Utilization 80.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 112: Kimberly Blvd & SR 7



Queues
112: Kimberly Blvd & SR 7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	153	21	181	183	23	87	123	1630	64	1770	83
v/c Ratio	0.70	0.22	0.72	0.80	0.23	0.45	0.73	0.50	0.60	0.58	0.09
Control Delay	75.8	76.8	25.7	85.3	76.5	11.9	90.0	23.6	94.8	21.5	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.8	76.8	25.7	85.3	76.5	11.9	90.0	23.6	94.8	21.5	1.5
Queue Length 50th (ft)	147	22	0	180	24	0	137	316	67	391	0
Queue Length 95th (ft)	213	51	80	252	54	28	209	447	117	534	15
Internal Link Dist (ft)		1738			1039			1330		793	
Turn Bay Length (ft)	175			110		110	325		330		235
Base Capacity (vph)	233	430	498	235	430	435	192	3285	145	3056	948
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.05	0.36	0.78	0.05	0.20	0.64	0.50	0.44	0.58	0.09

Intersection Summary

HCM 6th Signalized Intersection Summary
112: Kimberly Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	21	177	179	23	85	121	1530	68	63	1735	81
Future Volume (veh/h)	150	21	177	179	23	85	121	1530	68	63	1735	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.95	0.96		0.94	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	153	21	181	183	23	87	123	1561	69	64	1770	83
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	413	337	272	407	359	287	143	2594	115	81	2468	740
Arrive On Green	0.08	0.18	0.18	0.09	0.19	0.19	0.11	0.69	0.69	0.06	0.64	0.64
Sat Flow, veh/h	1781	1870	1509	1781	1870	1494	1781	5005	221	1781	5106	1532
Grp Volume(v), veh/h	153	21	181	183	23	87	123	1062	568	64	1770	83
Grp Sat Flow(s),veh/h/ln	1781	1870	1509	1781	1870	1494	1781	1702	1822	1781	1702	1532
Q Serve(g_s), s	11.1	1.5	17.9	13.3	1.6	8.0	10.9	26.5	26.5	5.7	36.8	3.3
Cycle Q Clear(g_c), s	11.1	1.5	17.9	13.3	1.6	8.0	10.9	26.5	26.5	5.7	36.8	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	413	337	272	407	359	287	143	1764	944	81	2468	740
V/C Ratio(X)	0.37	0.06	0.67	0.45	0.06	0.30	0.86	0.60	0.60	0.79	0.72	0.11
Avail Cap(c_a), veh/h	434	433	349	407	433	345	178	1764	944	145	2468	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	54.4	61.1	47.0	52.9	55.4	70.6	16.1	16.1	74.4	21.3	15.4
Incr Delay (d2), s/veh	0.2	0.0	1.5	0.3	0.0	0.2	22.0	1.4	2.5	6.4	1.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.7	7.0	6.0	0.8	3.1	5.7	9.4	10.3	2.7	13.6	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.9	54.4	62.6	47.3	52.9	55.7	92.6	17.5	18.6	80.9	23.2	15.7
LnGrp LOS	D	D	E	D	D	E	F	B	B	F	C	B
Approach Vol, veh/h		355			293			1753			1917	
Approach Delay, s/veh		55.8			50.2			23.1			24.8	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	89.9	21.0	34.8	19.8	84.3	19.1	36.7
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	69.0	15.0	37.0	16.0	66.0	15.0	37.0
Max Q Clear Time (g_c+I1), s	7.7	28.5	15.3	19.9	12.9	38.8	13.1	10.0
Green Ext Time (p_c), s	0.0	16.9	0.0	0.4	0.0	16.6	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Timings
113: SR 7 & Blvd of Champions

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	155	0	284	12	6	262	1519	13	22	1819	242
Future Volume (vph)	155	0	284	12	6	262	1519	13	22	1819	242
Turn Type	Split	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			3	5	2		1	6	
Permitted Phases			4	3				2			6
Detector Phase	4	4	4	3	3	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	47.5	47.5	12.0	43.0	43.0	12.0	43.0	43.0
Total Split (s)	19.0	19.0	19.0	50.0	50.0	16.0	75.0	75.0	16.0	75.0	75.0
Total Split (%)	11.9%	11.9%	11.9%	31.3%	31.3%	10.0%	46.9%	46.9%	10.0%	46.9%	46.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	12.2	12.2	12.2		9.4	23.5	115.4	115.4	6.3	93.4	93.4
Actuated g/C Ratio	0.08	0.08	0.08		0.06	0.15	0.72	0.72	0.04	0.58	0.58
v/c Ratio	0.61	0.28	0.28		0.36	0.54	0.43	0.01	0.33	0.64	0.25
Control Delay	81.4	1.3	1.3		88.9	70.0	9.4	0.0	85.6	13.4	0.6
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.4	1.3	1.3		88.9	70.0	9.4	0.0	85.6	13.4	0.6
LOS	F	A	A		F	E	A	A	F	B	A
Approach Delay		29.5			88.9		18.2			12.6	
Approach LOS		C			F		B			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 121 (76%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 77.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 113: SR 7 & Blvd of Champions

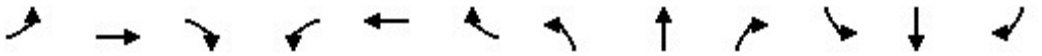




Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	161	148	148	19	273	1582	14	23	1895	252
v/c Ratio	0.61	0.28	0.28	0.36	0.54	0.43	0.01	0.33	0.64	0.25
Control Delay	81.4	1.3	1.3	88.9	70.0	9.4	0.0	85.6	13.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.4	1.3	1.3	88.9	70.0	9.4	0.0	85.6	13.4	0.6
Queue Length 50th (ft)	85	0	0	20	154	160	0	24	197	0
Queue Length 95th (ft)	123	0	0	49	205	258	m0	m43	224	m6
Internal Link Dist (ft)		446		833		1028			1330	
Turn Bay Length (ft)	170		300		300		160	160		425
Base Capacity (vph)	295	543	543	247	504	3666	1137	99	2968	1005
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.27	0.27	0.08	0.54	0.43	0.01	0.23	0.64	0.25

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	0	284	12	6	0	262	1519	13	22	1819	242
Future Volume (vph)	155	0	284	12	6	0	262	1519	13	22	1819	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.5		7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95		1.00		0.97	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	0.85		1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.97		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1504	1504		1801		3433	5085	1534	1770	5085	1543
Flt Permitted	0.95	1.00	1.00		0.49		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1504	1504		909		3433	5085	1534	1770	5085	1543
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	161	0	296	12	6	0	273	1582	14	23	1895	252
RTOR Reduction (vph)	0	137	137	0	0	0	0	0	4	0	0	109
Lane Group Flow (vph)	161	11	11	0	19	0	273	1582	10	23	1895	143
Confl. Peds. (#/hr)	11					11	9		5	5		9
Confl. Bikes (#/hr)												4
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			3		5	2		1	6	
Permitted Phases			4	3					2			6
Actuated Green, G (s)	12.2	12.2	12.2		6.9		23.5	110.1	110.1	4.3	90.9	90.9
Effective Green, g (s)	12.2	12.2	12.2		6.9		23.5	110.1	110.1	4.3	90.9	90.9
Actuated g/C Ratio	0.08	0.08	0.08		0.04		0.15	0.69	0.69	0.03	0.57	0.57
Clearance Time (s)	6.0	6.0	6.0		6.5		7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	2.2	2.2	2.2		2.2		1.5	3.0	3.0	1.5	3.0	3.0
Lane Grp Cap (vph)	261	114	114		39		504	3499	1055	47	2888	876
v/s Ratio Prot	c0.05	0.01					c0.08	0.31		0.01	c0.37	
v/s Ratio Perm			0.01		c0.02				0.01			0.09
v/c Ratio	0.62	0.10	0.10		0.49		0.54	0.45	0.01	0.49	0.66	0.16
Uniform Delay, d1	71.6	68.8	68.8		74.8		63.3	11.3	7.8	76.8	23.8	16.4
Progression Factor	1.00	1.00	1.00		1.00		1.03	0.77	1.00	1.01	0.53	0.07
Incremental Delay, d2	3.3	0.2	0.2		4.8		0.6	0.4	0.0	2.4	1.0	0.3
Delay (s)	74.9	69.0	69.0		79.6		65.6	9.1	7.8	80.3	13.6	1.5
Level of Service	E	E	E		E		E	A	A	F	B	A
Approach Delay (s)		71.1			79.6			17.4			12.9	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.5
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

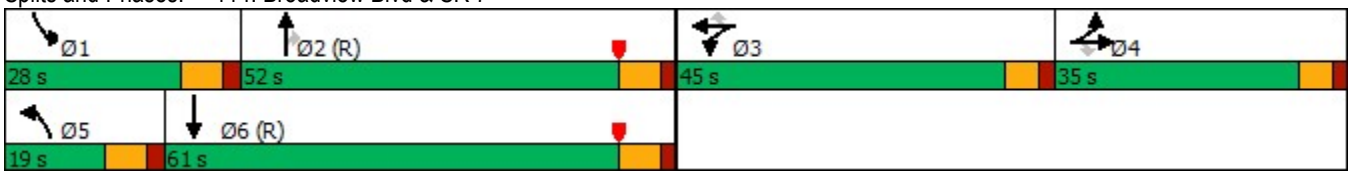
HCM 6th Edition methodology expects strict NEMA phasing.

Timings
114: Broadview Blvd & SR 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	69	18	64	235	3	238	39	1369	241	312	1725
Future Volume (vph)	69	18	64	235	3	238	39	1369	241	312	1725
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	2		1	6
Permitted Phases			4			3			2		
Detector Phase	4	4	4	3	3	3	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.0	45.0	45.0	45.0	12.0	40.0	40.0	12.0	40.0
Total Split (s)	35.0	35.0	35.0	45.0	45.0	45.0	19.0	52.0	52.0	28.0	61.0
Total Split (%)	21.9%	21.9%	21.9%	28.1%	28.1%	28.1%	11.9%	32.5%	32.5%	17.5%	38.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	7.9	7.9	7.9	16.9	16.9	16.9	7.8	89.5	89.5	19.7	103.8
Actuated g/C Ratio	0.05	0.05	0.05	0.11	0.11	0.11	0.05	0.56	0.56	0.12	0.65
v/c Ratio	0.43	0.21	0.29	0.72	0.71	0.65	0.48	0.51	0.27	0.78	0.57
Control Delay	81.3	77.5	3.1	90.2	89.6	14.9	91.3	23.9	8.9	101.2	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.3	77.5	3.1	90.2	89.6	14.9	91.3	23.9	8.9	101.2	6.2
LOS	F	E	A	F	F	B	F	C	A	F	A
Approach Delay		47.6			52.4			23.3			20.4
Approach LOS		D			D			C			C

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 133 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 25.9	Intersection LOS: C
Intersection Capacity Utilization 69.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 114: Broadview Blvd & SR 7



Queues
114: Broadview Blvd & SR 7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	73	19	68	127	126	253	41	1456	256	332	1887
v/c Ratio	0.43	0.21	0.29	0.72	0.71	0.65	0.48	0.51	0.27	0.78	0.57
Control Delay	81.3	77.5	3.1	90.2	89.6	14.9	91.3	23.9	8.9	101.2	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.3	77.5	3.1	90.2	89.6	14.9	91.3	23.9	8.9	101.2	6.2
Queue Length 50th (ft)	39	20	0	137	136	0	43	332	47	188	90
Queue Length 95th (ft)	67	49	0	208	207	86	85	460	123	241	124
Internal Link Dist (ft)		559			661			481			1028
Turn Bay Length (ft)	160		260	270		260	270		150	290	
Base Capacity (vph)	622	337	421	409	410	572	132	2843	940	470	3284
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.06	0.16	0.31	0.31	0.44	0.31	0.51	0.27	0.71	0.57

Intersection Summary

HCM Signalized Intersection Capacity Analysis
114: Broadview Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	18	64	235	3	238	39	1369	241	312	1725	49
Future Volume (vph)	69	18	64	235	3	238	39	1369	241	312	1725	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1863	1583	1681	1687	1562	1770	5085	1560	3433	5060	
Flt Permitted	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	1863	1583	1681	1687	1562	1770	5085	1560	3433	5060	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	73	19	68	250	3	253	41	1456	256	332	1835	52
RTOR Reduction (vph)	0	0	65	0	0	226	0	0	69	0	1	0
Lane Group Flow (vph)	73	19	3	127	126	27	41	1456	187	332	1886	0
Confl. Peds. (#/hr)	1					1	3		1	1		3
Confl. Bikes (#/hr)									3			3
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3			2			
Actuated Green, G (s)	7.9	7.9	7.9	16.9	16.9	16.9	6.8	89.5	89.5	19.7	102.4	
Effective Green, g (s)	7.9	7.9	7.9	16.9	16.9	16.9	6.8	89.5	89.5	19.7	102.4	
Actuated g/C Ratio	0.05	0.05	0.05	0.11	0.11	0.11	0.04	0.56	0.56	0.12	0.64	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	169	91	78	177	178	164	75	2844	872	422	3238	
v/s Ratio Prot	c0.02	0.01		c0.08	0.07		0.02	0.29		c0.10	c0.37	
v/s Ratio Perm			0.00			0.02			0.12			
v/c Ratio	0.43	0.21	0.04	0.72	0.71	0.16	0.55	0.51	0.21	0.79	0.58	
Uniform Delay, d1	73.9	73.0	72.4	69.2	69.2	65.1	75.1	21.8	17.6	68.1	16.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	0.32	
Incremental Delay, d2	0.6	0.4	0.1	10.9	10.0	0.2	4.3	0.7	0.6	7.2	0.6	
Delay (s)	74.5	73.5	72.5	80.2	79.2	65.3	79.4	22.4	18.2	97.6	5.9	
Level of Service	E	E	E	F	E	E	E	C	B	F	A	
Approach Delay (s)		73.5			72.5			23.1			19.6	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	0	1756	1862	2
Future Vol, veh/h	0	2	0	1756	1862	2
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	0	1810	1920	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	961	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	4.5	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3	-	-	-	-
Pot Cap-1 Maneuver	0	525	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	525	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

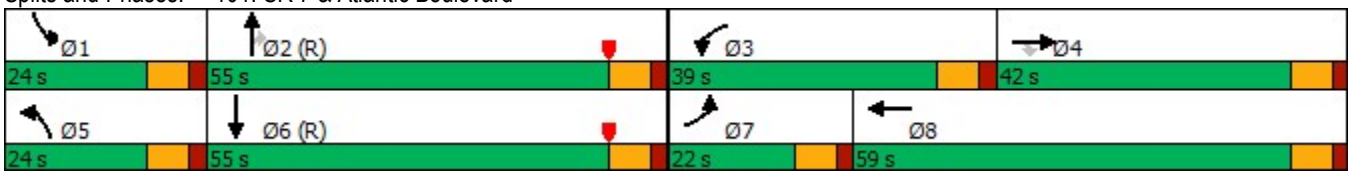
Approach	EB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	525	-	-
HCM Lane V/C Ratio	-	0.004	-	-
HCM Control Delay (s)	-	11.9	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	296	882	288	618	1492	219	1193	457	151	1197
Future Volume (vph)	296	882	288	618	1492	219	1193	457	151	1197
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	11.0	42.0	42.0	11.0	59.0	12.0	50.0	50.0	12.0	50.0
Total Split (s)	22.0	42.0	42.0	39.0	59.0	24.0	55.0	55.0	24.0	55.0
Total Split (%)	13.8%	26.3%	26.3%	24.4%	36.9%	15.0%	34.4%	34.4%	15.0%	34.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	15.0	35.9	35.9	31.1	52.0	17.0	49.1	49.1	15.9	48.0
Actuated g/C Ratio	0.09	0.22	0.22	0.19	0.32	0.11	0.31	0.31	0.10	0.30
v/c Ratio	0.94	0.79	0.58	0.95	1.03	1.19	0.78	0.63	0.88	0.96
Control Delay	108.0	64.6	20.8	86.9	81.3	176.4	51.3	15.6	112.3	68.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.0	64.6	20.8	86.9	81.3	176.4	51.3	15.6	112.3	68.6
LOS	F	E	C	F	F	F	D	B	F	E
Approach Delay		64.7			82.8		57.2			72.8
Approach LOS		E			F		E			E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 114 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay: 70.3	Intersection LOS: E
Intersection Capacity Utilization 112.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 101: SR 7 & Atlantic Boulevard



Queues
101: SR 7 & Atlantic Boulevard

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	302	900	294	631	1675	223	1217	466	154	1434
v/c Ratio	0.94	0.79	0.58	0.95	1.03	1.19	0.78	0.63	0.88	0.96
Control Delay	108.0	64.6	20.8	86.9	81.3	176.4	51.3	15.6	112.3	68.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.0	64.6	20.8	86.9	81.3	176.4	51.3	15.6	112.3	68.6
Queue Length 50th (ft)	164	330	73	337	~679	~275	463	131	161	535
Queue Length 95th (ft)	#260	386	179	#447	#776	#452	520	367	#286	#633
Internal Link Dist (ft)		2560			1156		2623			1036
Turn Bay Length (ft)	280		330	525		400		270	395	
Base Capacity (vph)	321	1140	507	686	1631	188	1561	735	188	1501
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.79	0.58	0.92	1.03	1.19	0.78	0.63	0.82	0.96

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

HCM 6th Signalized Intersection Summary
101: SR 7 & Atlantic Boulevard

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	882	288	618	1492	150	219	1193	457	151	1197	209
Future Volume (veh/h)	296	882	288	618	1492	150	219	1193	457	151	1197	209
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	302	900	294	631	1522	153	223	1217	466	154	1221	213
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	324	1149	343	669	1527	153	189	1576	469	174	1303	227
Arrive On Green	0.09	0.23	0.23	0.19	0.32	0.32	0.14	0.41	0.41	0.13	0.40	0.40
Sat Flow, veh/h	3456	5106	1524	3456	4699	472	1781	5106	1520	1781	4343	758
Grp Volume(v), veh/h	302	900	294	631	1102	573	223	1217	466	154	957	477
Grp Sat Flow(s),veh/h/ln	1728	1702	1524	1728	1702	1767	1781	1702	1520	1781	1702	1697
Q Serve(g_s), s	13.9	26.5	29.6	28.8	51.7	51.8	17.0	32.9	48.8	13.6	43.2	43.2
Cycle Q Clear(g_c), s	13.9	26.5	29.6	28.8	51.7	51.8	17.0	32.9	48.8	13.6	43.2	43.2
Prop In Lane	1.00		1.00	1.00		0.27	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	324	1149	343	669	1106	574	189	1576	469	174	1021	509
V/C Ratio(X)	0.93	0.78	0.86	0.94	1.00	1.00	1.18	0.77	0.99	0.89	0.94	0.94
Avail Cap(c_a), veh/h	324	1149	343	691	1106	574	189	1576	469	189	1021	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.0	58.3	59.5	63.6	53.9	53.9	68.7	42.3	47.0	68.8	46.6	46.6
Incr Delay (d2), s/veh	32.4	3.5	18.6	20.6	26.1	36.9	112.8	2.7	33.8	32.5	16.6	27.0
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	7.6	11.9	13.3	14.6	26.1	28.9	13.5	13.7	22.0	7.6	19.8	21.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.4	61.8	78.1	84.3	80.0	90.8	181.5	45.0	80.8	101.2	63.2	73.6
LnGrp LOS	F	E	E	F	F	F	F	D	F	F	E	E
Approach Vol, veh/h		1496			2306			1906			1588	
Approach Delay, s/veh		73.6			83.9			69.7			70.0	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.6	56.4	38.0	43.0	24.0	55.0	22.0	59.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	17.0	48.0	32.0	35.0	17.0	48.0	15.0	52.0
Max Q Clear Time (g_c+I1), s	15.6	50.8	30.8	31.6	19.0	45.2	15.9	53.8
Green Ext Time (p_c), s	0.0	0.0	0.2	1.9	0.0	2.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	75.1
HCM 6th LOS	E

Notes

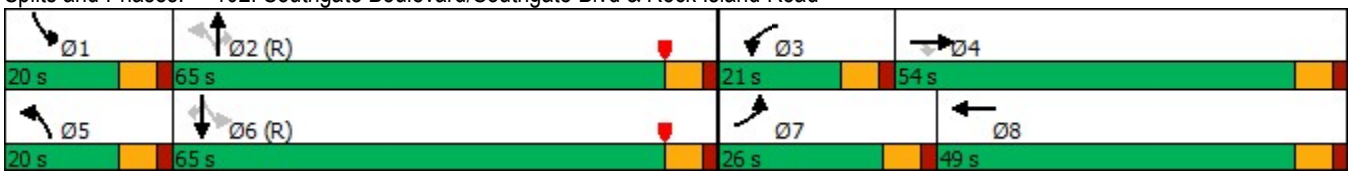
User approved pedestrian interval to be less than phase max green.

Timings
102: Southgate Boulevard/Southgate Blvd & Rock Island Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	396	491	197	113	560	179	903	134	179	911	613
Future Volume (vph)	396	491	197	113	560	179	903	134	179	911	613
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4			2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	4.0	12.0	12.0	4.0	12.0	12.0
Minimum Split (s)	11.5	36.5	36.5	11.5	47.5	10.5	44.5	44.5	10.5	44.5	44.5
Total Split (s)	26.0	54.0	54.0	21.0	49.0	20.0	65.0	65.0	20.0	65.0	65.0
Total Split (%)	16.3%	33.8%	33.8%	13.1%	30.6%	12.5%	40.6%	40.6%	12.5%	40.6%	40.6%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	19.5	46.9	46.9	13.1	40.5	74.0	61.6	61.6	74.0	61.6	61.6
Actuated g/C Ratio	0.12	0.29	0.29	0.08	0.25	0.46	0.38	0.38	0.46	0.38	0.38
v/c Ratio	0.99	0.49	0.36	0.82	0.93	0.77	0.69	0.21	0.76	0.70	0.82
Control Delay	109.9	48.5	12.7	94.8	57.2	57.1	33.0	5.0	43.7	45.3	33.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.9	48.5	12.7	94.8	57.2	57.1	33.0	5.0	43.7	45.3	33.4
LOS	F	D	B	F	E	E	C	A	D	D	C
Approach Delay		64.5			61.9		33.5			40.8	
Approach LOS		E			E		C			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 80 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 48.1	Intersection LOS: D
Intersection Capacity Utilization 97.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Queues
102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	413	511	205	118	818	186	941	140	186	949	639
v/c Ratio	0.99	0.49	0.36	0.82	0.93	0.77	0.69	0.21	0.76	0.70	0.82
Control Delay	109.9	48.5	12.7	94.8	57.2	57.1	33.0	5.0	43.7	45.3	33.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.9	48.5	12.7	94.8	57.2	57.1	33.0	5.0	43.7	45.3	33.4
Queue Length 50th (ft)	226	232	34	129	418	97	389	4	109	452	366
Queue Length 95th (ft)	#341	291	104	m142	m478	#219	278	35	#181	535	564
Internal Link Dist (ft)		387			3410		1324			1269	
Turn Bay Length (ft)	315		140	315		350			180		190
Base Capacity (vph)	418	1050	571	160	923	254	1363	670	258	1362	779
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.49	0.36	0.74	0.89	0.73	0.69	0.21	0.72	0.70	0.82

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
102: Southgate Boulevard/Southgate Blvd & Rock Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	396	491	197	113	560	226	179	903	134	179	911	613
Future Volume (veh/h)	396	491	197	113	560	226	179	903	134	179	911	613
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	412	511	205	118	583	235	186	941	0	186	949	639
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	1059	462	138	623	251	240	1371		292	1371	600
Arrive On Green	0.12	0.30	0.30	0.08	0.25	0.25	0.10	0.51	0.00	0.10	0.51	0.51
Sat Flow, veh/h	3456	3554	1551	1781	2456	988	1781	3554	1585	1781	3554	1556
Grp Volume(v), veh/h	412	511	205	118	421	397	186	941	0	186	949	639
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	1781	1777	1667	1781	1777	1585	1781	1777	1556
Q Serve(g_s), s	19.0	18.9	17.1	10.5	37.1	37.3	10.2	31.9	0.0	10.2	32.3	61.7
Cycle Q Clear(g_c), s	19.0	18.9	17.1	10.5	37.1	37.3	10.2	31.9	0.0	10.2	32.3	61.7
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1059	462	138	451	423	240	1371		292	1371	600
V/C Ratio(X)	0.98	0.48	0.44	0.85	0.93	0.94	0.78	0.69		0.64	0.69	1.07
Avail Cap(c_a), veh/h	421	1059	462	161	472	443	254	1371		306	1371	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.81	0.81	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.0	46.0	45.4	72.9	58.4	58.4	32.1	31.7	0.0	29.6	31.8	39.0
Incr Delay (d2), s/veh	37.9	0.1	0.2	27.1	24.8	26.5	9.7	2.3	0.0	3.0	2.9	55.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	8.5	6.7	5.9	19.8	18.9	4.9	13.4	0.0	4.5	13.6	31.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.9	46.2	45.7	100.0	83.2	84.9	41.8	34.0	0.0	32.6	34.7	94.2
LnGrp LOS	F	D	D	F	F	F	D	C		C	C	F
Approach Vol, veh/h		1128			936			1127			1774	
Approach Delay, s/veh		68.6			86.1			35.3			55.9	
Approach LOS		E			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.7	68.2	18.9	54.2	18.7	68.2	26.0	47.1
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	13.5	58.5	14.5	47.5	13.5	58.5	19.5	42.5
Max Q Clear Time (g_c+I1), s	12.2	33.9	12.5	20.9	12.2	63.7	21.0	39.3
Green Ext Time (p_c), s	0.0	7.4	0.0	2.7	0.0	0.0	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	59.8
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

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	671	19	27	885	38	17	7	34	11	0	6
Future Vol, veh/h	8	671	19	27	885	38	17	7	34	11	0	6
Conflicting Peds, #/hr	11	0	2	2	0	11	0	0	1	1	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	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	699	20	28	922	40	18	7	35	11	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	973	0	0	721	0	0	1244	1756	363	1379	1746	492
Stage 1	-	-	-	-	-	-	727	727	-	1009	1009	-
Stage 2	-	-	-	-	-	-	517	1029	-	370	737	-
Critical Hdwy	4.14	-	-	4.14	-	-	5	5	4.5	5	5	4.5
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	5	5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5	5	-	5	5	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3	3	3	3	3	3
Pot Cap-1 Maneuver	704	-	-	877	-	-	342	199	883	297	202	791
Stage 1	-	-	-	-	-	-	583	583	-	437	437	-
Stage 2	-	-	-	-	-	-	720	428	-	834	577	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	697	-	-	875	-	-	318	181	880	257	184	783
Mov Cap-2 Maneuver	-	-	-	-	-	-	318	181	-	257	184	-
Stage 1	-	-	-	-	-	-	575	575	-	427	403	-
Stage 2	-	-	-	-	-	-	665	395	-	780	569	-

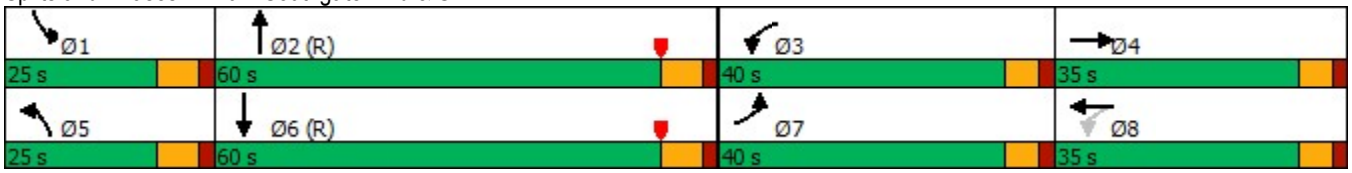
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	14.4	16.3
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	444	697	-	-	875	-	-	337
HCM Lane V/C Ratio	0.136	0.012	-	-	0.032	-	-	0.053
HCM Control Delay (s)	14.4	10.2	-	-	9.3	0.3	-	16.3
HCM Lane LOS	B	B	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.2

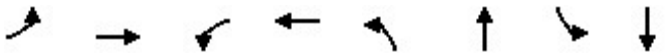
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	434	52	62	56	383	1412	88	1450
Future Volume (vph)	434	52	62	56	383	1412	88	1450
Turn Type	Prot	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases			8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	6.0	4.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	11.0	35.0	10.0	35.0	12.0	37.0	12.0	38.0
Total Split (s)	40.0	35.0	40.0	35.0	25.0	60.0	25.0	60.0
Total Split (%)	25.0%	21.9%	25.0%	21.9%	15.6%	37.5%	15.6%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	25.0	29.5	21.2	12.8	25.8	83.9	12.2	70.4
Actuated g/C Ratio	0.16	0.18	0.13	0.08	0.16	0.52	0.08	0.44
v/c Ratio	0.84	0.74	0.41	0.72	0.72	0.57	0.68	0.91
Control Delay	71.9	27.4	50.6	77.9	85.1	23.1	108.2	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.9	27.4	50.6	77.9	85.1	23.1	108.2	21.8
LOS	E	C	D	E	F	C	F	C
Approach Delay		54.3		68.0		36.0		25.7
Approach LOS		D		E		D		C

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 49 (31%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 35.7	Intersection LOS: D
Intersection Capacity Utilization 101.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 104: Southgate Blvd & SR 7



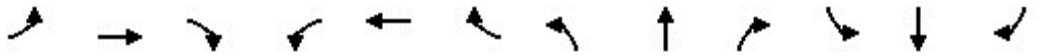
Queues
104: Southgate Blvd & SR 7



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	452	294	65	115	399	1515	92	1968
v/c Ratio	0.84	0.74	0.41	0.72	0.72	0.57	0.68	0.91
Control Delay	71.9	27.4	50.6	77.9	85.1	23.1	108.2	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.9	27.4	50.6	77.9	85.1	23.1	108.2	21.8
Queue Length 50th (ft)	171	50	52	91	221	249	102	559
Queue Length 95th (ft)	195	284	84	158	286	432	m105	m#928
Internal Link Dist (ft)		1738		1039		1330		2623
Turn Bay Length (ft)	125		205		235		215	
Base Capacity (vph)	729	417	427	329	552	2655	199	2171
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.71	0.15	0.35	0.72	0.57	0.46	0.91

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
104: Southgate Blvd & SR 7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	434	52	230	62	56	55	383	1412	42	88	1450	440
Future Volume (veh/h)	434	52	230	62	56	55	383	1412	42	88	1450	440
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.98		0.96	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	452	54	240	65	58	57	399	1471	44	92	1510	458
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	499	70	310	190	116	114	389	2509	75	111	1717	514
Arrive On Green	0.14	0.24	0.24	0.04	0.14	0.14	0.15	0.66	0.66	0.08	0.59	0.59
Sat Flow, veh/h	3456	290	1290	1781	846	832	3456	5088	152	1781	3875	1159
Grp Volume(v), veh/h	452	0	294	65	0	115	399	984	531	92	1324	644
Grp Sat Flow(s),veh/h/ln	1728	0	1580	1781	0	1678	1728	1702	1836	1781	1702	1631
Q Serve(g_s), s	20.6	0.0	27.8	5.0	0.0	10.2	18.0	25.9	25.9	8.1	52.9	54.7
Cycle Q Clear(g_c), s	20.6	0.0	27.8	5.0	0.0	10.2	18.0	25.9	25.9	8.1	52.9	54.7
Prop In Lane	1.00		0.82	1.00		0.50	1.00		0.08	1.00		0.71
Lane Grp Cap(c), veh/h	499	0	380	190	0	231	389	1678	905	111	1508	722
V/C Ratio(X)	0.91	0.00	0.77	0.34	0.00	0.50	1.03	0.59	0.59	0.83	0.88	0.89
Avail Cap(c_a), veh/h	734	0	380	495	0	304	389	1678	905	200	1508	722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90	0.30	0.30	0.30
Uniform Delay (d), s/veh	67.4	0.0	56.7	56.4	0.0	63.9	68.0	18.4	18.4	72.5	29.2	29.5
Incr Delay (d2), s/veh	8.5	0.0	8.7	0.4	0.0	0.6	50.2	1.4	2.5	1.8	2.5	5.5
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	9.7	0.0	12.1	2.3	0.0	4.4	10.5	9.5	10.5	3.7	20.3	20.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.9	0.0	65.4	56.8	0.0	64.5	118.2	19.8	20.9	74.3	31.6	35.1
LnGrp LOS	E	A	E	E	A	E	F	B	C	E	C	D
Approach Vol, veh/h		746			180			1914			2060	
Approach Delay, s/veh		71.7			61.7			40.6			34.6	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	85.9	12.6	44.5	25.0	77.9	29.1	28.0
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	18.0	53.0	34.0	29.0	18.0	53.0	34.0	29.0
Max Q Clear Time (g_c+I1), s	10.1	27.9	7.0	29.8	20.0	56.7	22.6	12.2
Green Ext Time (p_c), s	0.0	12.3	0.0	0.0	0.0	0.0	0.5	0.3

Intersection Summary	
HCM 6th Ctrl Delay	43.6
HCM 6th LOS	D

Notes

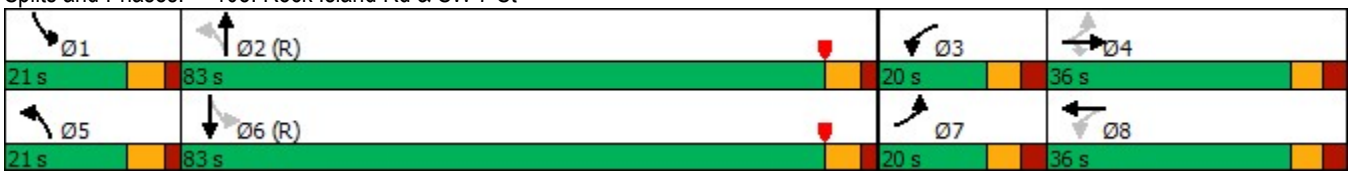
User approved pedestrian interval to be less than phase max green.

Timings
105: Rock Island Rd & SW 7 St

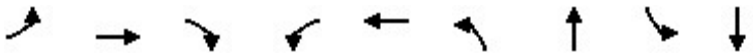
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	69	37	94	90	62	150	1109	46	1081
Future Volume (vph)	69	37	94	90	62	150	1109	46	1081
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases	4		4	8		2		6	
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	11.0	35.0	35.0	11.0	35.0	10.5	27.5	10.5	27.5
Total Split (s)	20.0	36.0	36.0	20.0	36.0	21.0	83.0	21.0	83.0
Total Split (%)	12.5%	22.5%	22.5%	12.5%	22.5%	13.1%	51.9%	13.1%	51.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	24.0	14.3	14.3	26.4	15.5	112.6	104.5	103.6	98.1
Actuated g/C Ratio	0.15	0.09	0.09	0.16	0.10	0.70	0.65	0.65	0.61
v/c Ratio	0.42	0.24	0.42	0.41	0.77	0.58	0.56	0.20	0.59
Control Delay	58.2	68.7	12.2	57.2	78.2	16.6	18.2	10.0	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.2	68.7	12.2	57.2	78.2	16.6	18.2	10.0	15.7
LOS	E	E	B	E	E	B	B	A	B
Approach Delay		38.5			69.9		18.0		15.5
Approach LOS		D			E		B		B

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 93 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 76.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 105: Rock Island Rd & SW 7 St



Queues
105: Rock Island Rd & SW 7 St

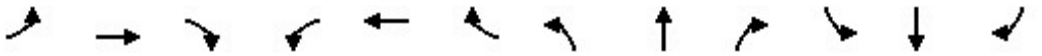


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	75	40	102	98	149	163	1294	50	1257
v/c Ratio	0.42	0.24	0.42	0.41	0.77	0.58	0.56	0.20	0.59
Control Delay	58.2	68.7	12.2	57.2	78.2	16.6	18.2	10.0	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.2	68.7	12.2	57.2	78.2	16.6	18.2	10.0	15.7
Queue Length 50th (ft)	66	40	0	88	120	50	385	12	198
Queue Length 95th (ft)	108	76	44	134	194	95	552	m27	317
Internal Link Dist (ft)		723			1226		764		1324
Turn Bay Length (ft)	215		215	125		195		205	
Base Capacity (vph)	216	337	377	264	333	334	2291	346	2145
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.12	0.27	0.37	0.45	0.49	0.56	0.14	0.59

Intersection Summary

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

HCM 6th Signalized Intersection Summary
105: Rock Island Rd & SW 7 St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	37	94	90	62	75	150	1109	82	46	1081	75
Future Volume (veh/h)	69	37	94	90	62	75	150	1109	82	46	1081	75
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		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	40	102	98	67	82	163	1205	89	50	1175	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	190	159	254	86	105	353	2170	160	319	2093	146
Arrive On Green	0.05	0.10	0.10	0.06	0.11	0.11	0.06	0.86	0.86	0.03	0.83	0.83
Sat Flow, veh/h	1781	1870	1566	1781	752	921	1781	3354	247	1781	3364	234
Grp Volume(v), veh/h	75	40	102	98	0	149	163	638	656	50	620	637
Grp Sat Flow(s),veh/h/ln	1781	1870	1566	1781	0	1673	1781	1777	1825	1781	1777	1821
Q Serve(g_s), s	6.0	3.1	10.0	7.8	0.0	13.9	5.4	15.3	15.4	1.6	18.0	18.0
Cycle Q Clear(g_c), s	6.0	3.1	10.0	7.8	0.0	13.9	5.4	15.3	15.4	1.6	18.0	18.0
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.14	1.00		0.13
Lane Grp Cap(c), veh/h	164	190	159	254	0	191	353	1149	1180	319	1106	1133
V/C Ratio(X)	0.46	0.21	0.64	0.39	0.00	0.78	0.46	0.55	0.56	0.16	0.56	0.56
Avail Cap(c_a), veh/h	223	339	284	291	0	303	431	1149	1180	441	1106	1133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.71	0.71	0.71
Uniform Delay (d), s/veh	60.9	66.0	69.1	59.5	0.0	69.0	11.1	5.0	5.0	10.8	6.8	6.8
Incr Delay (d2), s/veh	0.7	0.2	1.6	0.4	0.0	2.6	0.3	1.9	1.9	0.1	1.5	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	2.8	1.5	4.1	3.6	0.0	6.1	2.1	4.4	4.5	0.7	5.1	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.6	66.2	70.7	59.8	0.0	71.6	11.4	6.9	6.9	10.8	8.2	8.2
LnGrp LOS	E	E	E	E	A	E	B	A	A	B	A	A
Approach Vol, veh/h		217			247			1457			1307	
Approach Delay, s/veh		66.7			66.9			7.4			8.3	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	110.0	16.7	23.2	14.0	106.1	14.7	25.2
Change Period (Y+Rc), s	6.5	6.5	7.0	7.0	6.5	6.5	7.0	7.0
Max Green Setting (Gmax), s	14.5	76.5	13.0	29.0	14.5	76.5	13.0	29.0
Max Q Clear Time (g_c+I1), s	3.6	17.4	9.8	12.0	7.4	20.0	8.0	15.9
Green Ext Time (p_c), s	0.0	9.9	0.0	0.2	0.1	9.4	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	108	27	50	193	17	33	22	49	7	14	9
Future Vol, veh/h	14	108	27	50	193	17	33	22	49	7	14	9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	126	31	58	224	20	38	26	57	8	16	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	10.3	8.8	8.4
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	9%	19%	23%
Vol Thru, %	21%	72%	74%	47%
Vol Right, %	47%	18%	7%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	104	149	260	30
LT Vol	33	14	50	7
Through Vol	22	108	193	14
RT Vol	49	27	17	9
Lane Flow Rate	121	173	302	35
Geometry Grp	1	1	1	1
Degree of Util (X)	0.162	0.22	0.379	0.049
Departure Headway (Hd)	4.837	4.566	4.512	5.047
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	739	785	795	706
Service Time	2.887	2.605	2.547	3.106
HCM Lane V/C Ratio	0.164	0.22	0.38	0.05
HCM Control Delay	8.8	8.9	10.3	8.4
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.6	0.8	1.8	0.2

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	143	21	26	251	27	31	3	19	10	4	20
Future Vol, veh/h	23	143	21	26	251	27	31	3	19	10	4	20
Conflicting Peds, #/hr	0	0	7	7	0	0	2	0	4	4	0	2
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	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	161	24	29	282	30	35	3	21	11	4	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	312	0	0	192	0	0	602	602	184	596	599	299
Stage 1	-	-	-	-	-	-	232	232	-	355	355	-
Stage 2	-	-	-	-	-	-	370	370	-	241	244	-
Critical Hdwy	4.12	-	-	4.12	-	-	5	5	4.5	5	5	4.5
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	5	5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5	5	-	5	5	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3	3	3	3	3	3
Pot Cap-1 Maneuver	1248	-	-	1381	-	-	661	661	1028	665	663	933
Stage 1	-	-	-	-	-	-	956	956	-	847	847	-
Stage 2	-	-	-	-	-	-	834	834	-	948	945	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1248	-	-	1372	-	-	613	625	1017	622	627	931
Mov Cap-2 Maneuver	-	-	-	-	-	-	613	625	-	622	627	-
Stage 1	-	-	-	-	-	-	927	927	-	828	825	-
Stage 2	-	-	-	-	-	-	787	812	-	900	917	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.7	10.5	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	716	1248	-	-	1372	-	-	774
HCM Lane V/C Ratio	0.083	0.021	-	-	0.021	-	-	0.049
HCM Control Delay (s)	10.5	7.9	0	-	7.7	0	-	9.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	174	3	0	300	3	2
Future Vol, veh/h	174	3	0	300	3	2
Conflicting Peds, #/hr	0	0	0	0	4	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	196	3	0	337	3	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	199	0	539	198
Stage 1	-	-	-	-	198	-
Stage 2	-	-	-	-	341	-
Critical Hdwy	-	-	4.12	-	5	4.5
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	-	-	2.218	-	3	3
Pot Cap-1 Maneuver	-	-	1373	-	705	1016
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	859	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1373	-	702	1016
Mov Cap-2 Maneuver	-	-	-	-	702	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	856	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

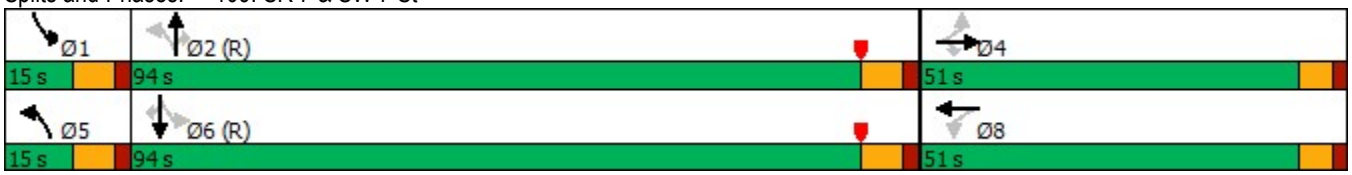
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	702	1016	-	-	1373	-
HCM Lane V/C Ratio	0.005	0.002	-	-	-	-
HCM Control Delay (s)	10.2	8.6	-	-	0	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-

Timings
109: SR 7 & SW 7 St

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	67	13	110	28	16	186	1672	31	40	1385	121
Future Volume (vph)	67	13	110	28	16	186	1672	31	40	1385	121
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.0	26.0	26.0	45.0	45.0	12.0	27.0	27.0	12.0	27.0	27.0
Total Split (s)	51.0	51.0	51.0	51.0	51.0	15.0	94.0	94.0	15.0	94.0	94.0
Total Split (%)	31.9%	31.9%	31.9%	31.9%	31.9%	9.4%	58.8%	58.8%	9.4%	58.8%	58.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		14.0	14.0		14.0	131.1	123.3	123.3	121.9	116.8	116.8
Actuated g/C Ratio		0.09	0.09		0.09	0.82	0.77	0.77	0.76	0.73	0.73
v/c Ratio		0.69	0.47		0.48	0.59	0.44	0.03	0.19	0.38	0.11
Control Delay		98.5	16.9		67.5	10.8	7.5	0.0	3.6	4.9	1.6
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		98.5	16.9		67.5	10.8	7.5	0.0	3.6	4.9	1.6
LOS		F	B		E	B	A	A	A	A	A
Approach Delay		51.1			67.5		7.7			4.6	
Approach LOS		D			E		A			A	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 76 (48%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 9.6	Intersection LOS: A
Intersection Capacity Utilization 64.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 109: SR 7 & SW 7 St



Queues
109: SR 7 & SW 7 St

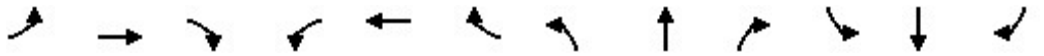


Lane Group	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	81	112	61	190	1706	32	41	1413	123
v/c Ratio	0.69	0.47	0.48	0.59	0.44	0.03	0.19	0.38	0.11
Control Delay	98.5	16.9	67.5	10.8	7.5	0.0	3.6	4.9	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.5	16.9	67.5	10.8	7.5	0.0	3.6	4.9	1.6
Queue Length 50th (ft)	84	0	50	31	215	0	4	99	2
Queue Length 95th (ft)	140	62	99	61	290	0	m6	134	m5
Internal Link Dist (ft)	972		833		582			1330	
Turn Bay Length (ft)		100		330		105	275		95
Base Capacity (vph)	377	517	388	323	3917	1205	252	3711	1128
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.22	0.16	0.59	0.44	0.03	0.16	0.38	0.11

Intersection Summary

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

HCM 6th Signalized Intersection Summary
109: SR 7 & SW 7 St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	13	110	28	16	16	186	1672	31	40	1385	121
Future Volume (veh/h)	67	13	110	28	16	16	186	1672	31	40	1385	121
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		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	13	112	29	16	16	190	1706	32	41	1413	123
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	159	27	200	71	39	27	351	3687	1117	286	3598	1113
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.06	0.96	0.96	0.03	0.94	0.94
Sat Flow, veh/h	931	213	1574	298	307	215	1781	5106	1547	1781	5106	1579
Grp Volume(v), veh/h	81	0	112	61	0	0	190	1706	32	41	1413	123
Grp Sat Flow(s),veh/h/ln	1145	0	1574	819	0	0	1781	1702	1547	1781	1702	1579
Q Serve(g_s), s	0.0	0.0	10.7	3.8	0.0	0.0	4.9	3.8	0.1	1.0	4.4	0.9
Cycle Q Clear(g_c), s	11.6	0.0	10.7	15.4	0.0	0.0	4.9	3.8	0.1	1.0	4.4	0.9
Prop In Lane	0.84		1.00	0.48		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	0	200	137	0	0	351	3687	1117	286	3598	1113
V/C Ratio(X)	0.43	0.00	0.56	0.45	0.00	0.00	0.54	0.46	0.03	0.14	0.39	0.11
Avail Cap(c_a), veh/h	408	0	443	362	0	0	363	3687	1117	328	3598	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.33	0.33	0.33
Uniform Delay (d), s/veh	65.9	0.0	65.7	68.4	0.0	0.0	5.7	1.0	0.9	5.9	1.6	1.5
Incr Delay (d2), s/veh	0.6	0.0	0.9	0.8	0.0	0.0	0.7	0.4	0.0	0.0	0.1	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	3.2	0.0	4.4	2.5	0.0	0.0	1.8	1.0	0.1	0.4	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	0.0	66.6	69.2	0.0	0.0	6.5	1.4	0.9	5.9	1.7	1.6
LnGrp LOS	E	A	E	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		193			61			1928			1577	
Approach Delay, s/veh		66.6			69.2			1.9			1.8	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	122.5		26.3	14.0	119.8		26.3				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	8.0	87.0		45.0	8.0	87.0		45.0				
Max Q Clear Time (g_c+I1), s	3.0	5.8		13.6	6.9	6.4		17.4				
Green Ext Time (p_c), s	0.0	24.0		0.5	0.0	17.5		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			6.3									
HCM 6th LOS			A									

Timings
110: Kimberly Blvd & Rock Island Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	105	90	77	155	184	96	1009	231	153	1006	137
Future Volume (vph)	105	90	77	155	184	96	1009	231	153	1006	137
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.5	42.0	42.0	11.5	47.5	11.5	44.5	44.5	16.5	44.6	44.6
Total Split (s)	20.0	46.0	46.0	20.0	46.0	16.0	70.0	70.0	24.0	78.0	78.0
Total Split (%)	12.5%	28.8%	28.8%	12.5%	28.8%	10.0%	43.8%	43.8%	15.0%	48.8%	48.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	28.1	16.3	16.3	31.3	17.9	100.3	93.1	93.1	109.7	98.1	98.1
Actuated g/C Ratio	0.18	0.10	0.10	0.20	0.11	0.63	0.58	0.58	0.69	0.61	0.61
v/c Ratio	0.65	0.52	0.29	0.65	0.83	0.34	0.53	0.26	0.49	0.50	0.15
Control Delay	67.0	76.3	2.4	64.6	56.1	12.6	23.3	8.5	14.1	19.5	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.0	76.3	2.4	64.6	56.1	12.6	23.3	8.5	14.1	19.5	5.6
LOS	E	E	A	E	E	B	C	A	B	B	A
Approach Delay		51.8			58.5		20.0			17.4	
Approach LOS		D			E		B			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 63 (39%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 27.6	Intersection LOS: C
Intersection Capacity Utilization 79.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 110: Kimberly Blvd & Rock Island Road



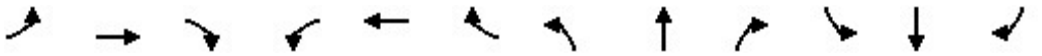
Queues
110: Kimberly Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	114	98	84	168	423	104	1097	251	166	1093	149
v/c Ratio	0.65	0.52	0.29	0.65	0.83	0.34	0.53	0.26	0.49	0.50	0.15
Control Delay	67.0	76.3	2.4	64.6	56.1	12.6	23.3	8.5	14.1	19.5	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.0	76.3	2.4	64.6	56.1	12.6	23.3	8.5	14.1	19.5	5.6
Queue Length 50th (ft)	99	99	0	151	142	33	357	46	55	326	17
Queue Length 95th (ft)	150	155	0	213	197	65	520	120	98	455	58
Internal Link Dist (ft)		387			3410		622			1269	
Turn Bay Length (ft)	250		250	200		280		150	240		160
Base Capacity (vph)	201	465	498	266	928	334	2059	962	393	2169	982
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.21	0.17	0.63	0.46	0.31	0.53	0.26	0.42	0.50	0.15

Intersection Summary

HCM 6th Signalized Intersection Summary
110: Kimberly Blvd & Rock Island Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	90	77	155	184	205	96	1009	231	153	1006	137
Future Volume (veh/h)	105	90	77	155	184	205	96	1009	231	153	1006	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	98	84	168	200	223	104	1097	251	166	1093	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	306	250	340	331	285	301	1909	843	301	1968	862
Arrive On Green	0.06	0.16	0.16	0.09	0.19	0.19	0.05	0.71	0.71	0.07	0.74	0.74
Sat Flow, veh/h	1781	1870	1526	1781	1777	1533	1781	3554	1570	1781	3554	1556
Grp Volume(v), veh/h	114	98	84	168	200	223	104	1097	251	166	1093	149
Grp Sat Flow(s),veh/h/ln	1781	1870	1526	1781	1777	1533	1781	1777	1570	1781	1777	1556
Q Serve(g_s), s	8.4	7.4	7.8	12.5	16.5	22.2	4.2	23.9	9.3	6.8	21.9	4.6
Cycle Q Clear(g_c), s	8.4	7.4	7.8	12.5	16.5	22.2	4.2	23.9	9.3	6.8	21.9	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	306	250	340	331	285	301	1909	843	301	1968	862
V/C Ratio(X)	0.55	0.32	0.34	0.49	0.60	0.78	0.35	0.57	0.30	0.55	0.56	0.17
Avail Cap(c_a), veh/h	246	468	382	340	444	383	337	1909	843	397	1968	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	59.1	59.2	49.7	59.7	62.0	16.6	14.0	11.9	17.3	12.3	10.0
Incr Delay (d2), s/veh	0.9	0.2	0.3	0.4	0.7	5.0	0.3	1.3	0.9	0.6	1.1	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	3.9	3.6	3.1	5.7	7.6	9.1	1.8	8.6	3.3	2.8	7.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.9	59.3	59.5	50.1	60.4	67.0	16.8	15.3	12.8	17.9	13.4	10.4
LnGrp LOS	D	E	E	D	E	E	B	B	B	B	B	B
Approach Vol, veh/h		296			591			1452			1408	
Approach Delay, s/veh		56.9			60.0			14.9			13.6	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	92.4	20.0	32.2	12.7	95.1	16.4	35.8
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	17.5	63.5	14.0	40.0	9.5	71.5	14.0	40.0
Max Q Clear Time (g_c+I1), s	8.8	25.9	14.5	9.8	6.2	23.9	10.4	24.2
Green Ext Time (p_c), s	0.1	11.7	0.0	0.5	0.0	11.5	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	24.9
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	441	461	279	75
Demand Flow Rate, veh/h	449	470	284	76
Vehicles Circulating, veh/h	65	266	366	596
Vehicles Exiting, veh/h	607	384	148	140
Ped Vol Crossing Leg, #/h	0	5	1	11
Ped Cap Adj	1.000	0.999	1.000	0.998
Approach Delay, s/veh	6.1	8.5	7.0	5.9
Approach LOS	A	A	A	A

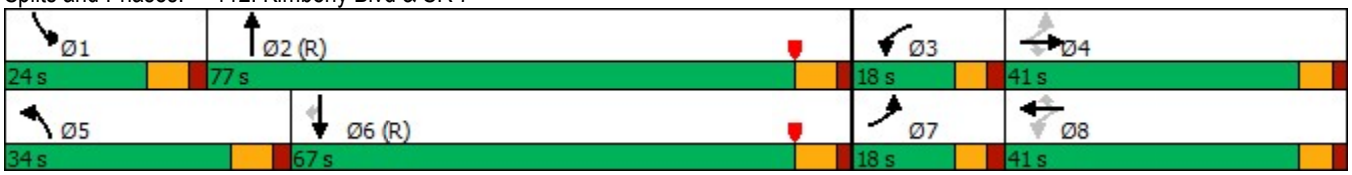
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	449	470	284	76
Cap Entry Lane, veh/h	1291	1052	950	751
Entry HV Adj Factor	0.982	0.981	0.981	0.993
Flow Entry, veh/h	441	461	279	75
Cap Entry, veh/h	1268	1031	932	745
V/C Ratio	0.348	0.447	0.299	0.101
Control Delay, s/veh	6.1	8.5	7.0	5.9
LOS	A	A	A	A
95th %tile Queue, veh	2	2	1	0

Timings
112: Kimberly Blvd & SR 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	142	61	222	129	54	53	277	1775	78	1302	147
Future Volume (vph)	142	61	222	129	54	53	277	1775	78	1302	147
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	38.0	38.0	11.0	40.0	40.0	12.0	40.0	12.0	40.0	40.0
Total Split (s)	18.0	41.0	41.0	18.0	41.0	41.0	34.0	77.0	24.0	67.0	67.0
Total Split (%)	11.3%	25.6%	25.6%	11.3%	25.6%	25.6%	21.3%	48.1%	15.0%	41.9%	41.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max	C-Max
Act Effct Green (s)	22.0	10.4	10.4	21.7	10.3	10.3	33.0	100.9	11.2	79.2	79.2
Actuated g/C Ratio	0.14	0.06	0.06	0.14	0.06	0.06	0.21	0.63	0.07	0.50	0.50
v/c Ratio	0.70	0.53	0.73	0.64	0.47	0.22	0.79	0.64	0.66	0.54	0.19
Control Delay	78.0	87.1	21.7	73.0	83.9	2.0	78.1	15.9	95.8	29.9	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.0	87.1	21.7	73.0	83.9	2.0	78.1	15.9	95.8	29.9	3.9
LOS	E	F	C	E	F	A	E	B	F	C	A
Approach Delay		50.0			59.5			23.7		30.7	
Approach LOS		D			E			C		C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 142 (89%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 30.6	Intersection LOS: C
Intersection Capacity Utilization 81.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 112: Kimberly Blvd & SR 7



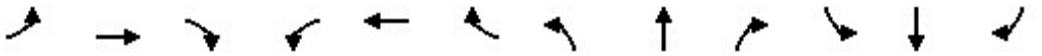
Queues
112: Kimberly Blvd & SR 7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	148	64	231	134	56	55	289	2029	81	1356	153
v/c Ratio	0.70	0.53	0.73	0.64	0.47	0.22	0.79	0.64	0.66	0.54	0.19
Control Delay	78.0	87.1	21.7	73.0	83.9	2.0	78.1	15.9	95.8	29.9	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.0	87.1	21.7	73.0	83.9	2.0	78.1	15.9	95.8	29.9	3.9
Queue Length 50th (ft)	142	66	0	127	58	0	305	242	84	354	0
Queue Length 95th (ft)	209	116	89	191	105	0	387	337	141	454	42
Internal Link Dist (ft)		1738			1039			1330		793	
Turn Bay Length (ft)	175			110		110	325		330		235
Base Capacity (vph)	215	407	520	217	407	457	365	3162	188	2516	810
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.16	0.44	0.62	0.14	0.12	0.79	0.64	0.43	0.54	0.19

Intersection Summary

HCM 6th Signalized Intersection Summary
112: Kimberly Blvd & SR 7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	61	222	129	54	53	277	1775	173	78	1302	147
Future Volume (veh/h)	142	61	222	129	54	53	277	1775	173	78	1302	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.94	0.97		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	64	231	134	56	55	289	1849	180	81	1356	153
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	379	354	283	344	349	283	301	2450	237	100	2078	616
Arrive On Green	0.08	0.19	0.19	0.07	0.19	0.19	0.22	0.69	0.69	0.07	0.54	0.54
Sat Flow, veh/h	1781	1870	1498	1781	1870	1516	1781	4714	456	1781	5106	1514
Grp Volume(v), veh/h	148	64	231	134	56	55	289	1332	697	81	1356	153
Grp Sat Flow(s),veh/h/ln	1781	1870	1498	1781	1870	1516	1781	1702	1766	1781	1702	1514
Q Serve(g_s), s	10.7	4.6	23.7	9.6	4.0	4.9	25.7	40.3	41.0	7.2	30.1	8.6
Cycle Q Clear(g_c), s	10.7	4.6	23.7	9.6	4.0	4.9	25.7	40.3	41.0	7.2	30.1	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	379	354	283	344	349	283	301	1769	918	100	2078	616
V/C Ratio(X)	0.39	0.18	0.82	0.39	0.16	0.19	0.96	0.75	0.76	0.81	0.65	0.25
Avail Cap(c_a), veh/h	379	409	328	348	409	332	301	1769	918	189	2078	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	54.5	62.2	47.5	54.5	54.9	61.5	18.1	18.2	73.2	28.7	23.7
Incr Delay (d2), s/veh	0.2	0.1	11.3	0.3	0.1	0.1	33.8	2.2	4.3	5.9	1.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	2.2	9.9	4.4	1.9	1.9	14.1	14.3	15.6	3.4	11.9	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	54.5	73.5	47.8	54.6	55.0	95.4	20.3	22.5	79.1	30.3	24.7
LnGrp LOS	D	D	E	D	D	E	F	C	C	E	C	C
Approach Vol, veh/h		443			245			2318			1590	
Approach Delay, s/veh		62.2			51.0			30.3			32.2	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	90.2	17.6	36.3	34.0	72.1	18.0	35.9
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	17.0	70.0	12.0	35.0	27.0	60.0	12.0	35.0
Max Q Clear Time (g_c+I1), s	9.2	43.0	11.6	25.7	27.7	32.1	12.7	6.9
Green Ext Time (p_c), s	0.0	18.2	0.0	0.5	0.0	12.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D

Timings
113: SR 7 & Blvd of Champions

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	298	0	260	8	3	259	1891	10	42	1430	144
Future Volume (vph)	298	0	260	8	3	259	1891	10	42	1430	144
Turn Type	Split	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			3	5	2		1	6	
Permitted Phases			4	3				2			6
Detector Phase	4	4	4	3	3	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	47.5	47.5	12.0	43.0	43.0	12.0	43.0	43.0
Total Split (s)	19.0	19.0	19.0	50.0	50.0	25.0	76.0	76.0	15.0	66.0	66.0
Total Split (%)	11.9%	11.9%	11.9%	31.3%	31.3%	15.6%	47.5%	47.5%	9.4%	41.3%	41.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	26.1	26.1	26.1		7.7	17.3	101.5	101.5	8.3	90.1	90.1
Actuated g/C Ratio	0.16	0.16	0.16		0.05	0.11	0.63	0.63	0.05	0.56	0.56
v/c Ratio	0.59	0.22	0.21		0.17	0.78	0.65	0.01	0.52	0.55	0.17
Control Delay	67.2	0.7	0.7		72.9	93.1	15.5	0.0	89.9	13.9	0.7
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	0.7	0.7		72.9	93.1	15.5	0.0	89.9	13.9	0.7
LOS	E	A	A		E	F	B	A	F	B	A
Approach Delay		36.2			72.9		24.7			14.7	
Approach LOS		D			E		C			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 153 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 22.6	Intersection LOS: C
Intersection Capacity Utilization 69.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 113: SR 7 & Blvd of Champions



Queues
113: SR 7 & Blvd of Champions



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	331	145	144	13	288	2101	11	47	1589	160
v/c Ratio	0.59	0.22	0.21	0.17	0.78	0.65	0.01	0.52	0.55	0.17
Control Delay	67.2	0.7	0.7	72.9	93.1	15.5	0.0	89.9	13.9	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	0.7	0.7	72.9	93.1	15.5	0.0	89.9	13.9	0.7
Queue Length 50th (ft)	169	0	0	12	140	554	0	0	159	1
Queue Length 95th (ft)	222	0	0	37	180	799	m0	m97	202	5
Internal Link Dist (ft)		446		833		1028			1330	
Turn Bay Length (ft)	170		300		300		160	160		425
Base Capacity (vph)	559	670	670	435	408	3226	1013	101	2864	940
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.22	0.21	0.03	0.71	0.65	0.01	0.47	0.55	0.17

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	298	0	260	8	3	1	259	1891	10	42	1430	144
Future Volume (vph)	298	0	260	8	3	1	259	1891	10	42	1430	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.5		7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95		1.00		0.97	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	0.85		0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.97		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1504	1504		1780		3433	5085	1533	1770	5085	1548
Flt Permitted	0.95	1.00	1.00		0.87		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1504	1504		1598		3433	5085	1533	1770	5085	1548
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	331	0	289	9	3	1	288	2101	11	47	1589	160
RTOR Reduction (vph)	0	121	121	0	1	0	0	0	4	0	0	74
Lane Group Flow (vph)	331	24	23	0	12	0	288	2101	7	47	1589	86
Confl. Peds. (#/hr)	2					2	6		5	5		6
Confl. Bikes (#/hr)									1			6
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			3		5	2		1	6	
Permitted Phases			4	3					2			6
Actuated Green, G (s)	26.1	26.1	26.1		3.9		17.3	96.2	96.2	7.3	86.2	86.2
Effective Green, g (s)	26.1	26.1	26.1		3.9		17.3	96.2	96.2	7.3	86.2	86.2
Actuated g/C Ratio	0.16	0.16	0.16		0.02		0.11	0.60	0.60	0.05	0.54	0.54
Clearance Time (s)	6.0	6.0	6.0		6.5		7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	2.2	2.2	2.2		2.2		1.5	3.0	3.0	1.5	3.0	3.0
Lane Grp Cap (vph)	560	245	245		38		371	3057	921	80	2739	833
v/s Ratio Prot	c0.10	0.02					c0.08	c0.41		0.03	0.31	
v/s Ratio Perm			0.02		c0.01				0.00			0.06
v/c Ratio	0.59	0.10	0.10		0.32		0.78	0.69	0.01	0.59	0.58	0.10
Uniform Delay, d1	62.0	56.9	56.9		76.7		69.5	21.7	12.8	74.9	24.8	18.0
Progression Factor	1.00	1.00	1.00		1.00		1.16	0.72	1.00	1.00	0.56	0.10
Incremental Delay, d2	1.2	0.1	0.1		2.4		7.7	1.1	0.0	6.1	0.8	0.2
Delay (s)	63.2	57.0	57.0		79.2		88.4	16.6	12.8	80.8	14.6	2.0
Level of Service	E	E	E		E		F	B	B	F	B	A
Approach Delay (s)		60.3			79.2			25.2			15.2	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.5
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Timings
114: Broadview Blvd & SR 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	82	22	49	59	0	160	80	1869	73	243	1364
Future Volume (vph)	82	22	49	59	0	160	80	1869	73	243	1364
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	2		1	6
Permitted Phases			4			3			2		
Detector Phase	4	4	4	3	3	3	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.0	47.0	47.0	47.0	12.0	40.0	40.0	12.0	40.0
Total Split (s)	29.0	29.0	29.0	47.0	47.0	47.0	28.0	56.0	56.0	28.0	56.0
Total Split (%)	18.1%	18.1%	18.1%	29.4%	29.4%	29.4%	17.5%	35.0%	35.0%	17.5%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	8.5	8.5	8.5	8.4	8.4	8.4	11.6	100.7	100.7	16.4	105.5
Actuated g/C Ratio	0.05	0.05	0.05	0.05	0.05	0.05	0.07	0.63	0.63	0.10	0.66
v/c Ratio	0.48	0.23	0.27	0.36	0.37	0.70	0.66	0.62	0.08	0.74	0.47
Control Delay	82.0	77.4	3.4	83.1	83.7	24.8	95.5	20.1	1.1	52.8	30.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.0	77.4	3.4	83.1	83.7	24.8	95.5	20.1	1.1	52.8	30.8
LOS	F	E	A	F	F	C	F	C	A	D	C
Approach Delay		56.1			40.6			22.4			33.9
Approach LOS		E			D			C			C

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 114 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 29.4	Intersection LOS: C
Intersection Capacity Utilization 68.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 114: Broadview Blvd & SR 7



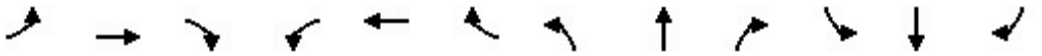
Queues
114: Broadview Blvd & SR 7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	87	23	52	31	32	170	85	1988	78	259	1570
v/c Ratio	0.48	0.23	0.27	0.36	0.37	0.70	0.66	0.62	0.08	0.74	0.47
Control Delay	82.0	77.4	3.4	83.1	83.7	24.8	95.5	20.1	1.1	52.8	30.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.0	77.4	3.4	83.1	83.7	24.8	95.5	20.1	1.1	52.8	30.8
Queue Length 50th (ft)	46	24	0	33	34	0	88	435	0	138	441
Queue Length 95th (ft)	76	55	0	71	72	78	146	596	11	173	548
Internal Link Dist (ft)		559			661			481			1028
Turn Bay Length (ft)	160		260	270		260	270		150	290	
Base Capacity (vph)	493	267	326	430	430	532	232	3201	1021	450	3312
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.09	0.16	0.07	0.07	0.32	0.37	0.62	0.08	0.58	0.47

Intersection Summary

HCM Signalized Intersection Capacity Analysis
114: Broadview Blvd & SR 7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	22	49	59	0	160	80	1869	73	243	1364	112
Future Volume (vph)	82	22	49	59	0	160	80	1869	73	243	1364	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1863	1583	1681	1681	1583	1770	5085	1560	3433	5017	
Flt Permitted	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	1863	1583	1681	1681	1583	1770	5085	1560	3433	5017	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	87	23	52	63	0	170	85	1988	78	259	1451	119
RTOR Reduction (vph)	0	0	49	0	0	161	0	0	29	0	3	0
Lane Group Flow (vph)	87	23	3	31	32	9	85	1988	49	259	1567	0
Confl. Peds. (#/hr)							3		1	1		3
Confl. Bikes (#/hr)									3			3
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3			2			
Actuated Green, G (s)	8.5	8.5	8.5	8.4	8.4	8.4	11.6	100.7	100.7	16.4	105.5	
Effective Green, g (s)	8.5	8.5	8.5	8.4	8.4	8.4	11.6	100.7	100.7	16.4	105.5	
Actuated g/C Ratio	0.05	0.05	0.05	0.05	0.05	0.05	0.07	0.63	0.63	0.10	0.66	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	182	98	84	88	88	83	128	3200	981	351	3308	
v/s Ratio Prot	c0.03	0.01		0.02	c0.02		0.05	c0.39		c0.08	c0.31	
v/s Ratio Perm			0.00			0.01			0.03			
v/c Ratio	0.48	0.23	0.03	0.35	0.36	0.11	0.66	0.62	0.05	0.74	0.47	
Uniform Delay, d1	73.6	72.6	71.9	73.2	73.2	72.2	72.3	18.0	11.3	69.7	13.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.60	2.11	
Incremental Delay, d2	0.7	0.5	0.1	0.9	0.9	0.2	9.6	0.9	0.1	6.0	0.4	
Delay (s)	74.3	73.1	71.9	74.1	74.2	72.4	81.9	19.0	11.4	47.6	29.0	
Level of Service	E	E	E	E	E	E	F	B	B	D	C	
Approach Delay (s)		73.4			72.9			21.2			31.6	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	0	1906	1525	1
Future Vol, veh/h	0	10	0	1906	1525	1
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	-	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	0	1925	1540	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	770	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	4.5	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3	-	-	-	-
Pot Cap-1 Maneuver	0	621	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	621	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	621	-	-
HCM Lane V/C Ratio	-	0.016	-	-
HCM Control Delay (s)	-	10.9	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

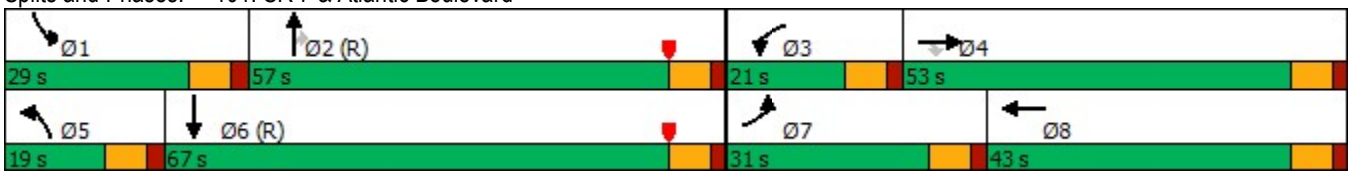
Future (2026) Background SYNCHRO Output

Timings
101: SR 7 & Atlantic Boulevard

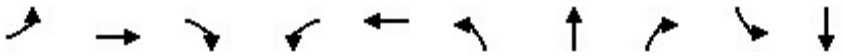
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	384	1424	231	362	703	83	1516	620	275	1348
Future Volume (vph)	384	1424	231	362	703	83	1516	620	275	1348
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	11.0	47.0	47.0	11.0	43.0	12.0	50.0	50.0	12.0	50.0
Total Split (s)	31.0	53.0	53.0	21.0	43.0	19.0	57.0	57.0	29.0	67.0
Total Split (%)	19.4%	33.1%	33.1%	13.1%	26.9%	11.9%	35.6%	35.6%	18.1%	41.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	21.3	46.0	46.0	14.0	38.7	10.5	50.0	50.0	22.0	61.5
Actuated g/C Ratio	0.13	0.29	0.29	0.09	0.24	0.07	0.31	0.31	0.14	0.38
v/c Ratio	0.86	0.99	0.42	1.23	0.69	0.74	0.97	0.98	1.16	0.79
Control Delay	86.3	78.5	15.6	186.2	57.9	100.6	51.9	44.5	164.4	46.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.3	78.5	15.6	186.2	57.9	100.6	51.9	44.5	164.4	46.9
LOS	F	E	B	F	E	F	D	D	F	D
Approach Delay		72.8			96.9		51.6			65.3
Approach LOS		E			F		D			E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 115 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 68.4	Intersection LOS: E
Intersection Capacity Utilization 114.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 101: SR 7 & Atlantic Boulevard



Queues
101: SR 7 & Atlantic Boulevard



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	392	1453	236	369	843	85	1547	633	281	1522
v/c Ratio	0.86	0.99	0.42	1.23	0.69	0.74	0.97	0.98	1.16	0.79
Control Delay	86.3	78.5	15.6	186.2	57.9	100.6	51.9	44.5	164.4	46.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.3	78.5	15.6	186.2	57.9	100.6	51.9	44.5	164.4	46.9
Queue Length 50th (ft)	208	558	51	~244	292	81	554	401	~345	517
Queue Length 95th (ft)	266	#669	132	#354	350	m106	m#676	m#669	#540	579
Internal Link Dist (ft)		2560			1156		2623			1036
Turn Bay Length (ft)	280		330	525		400		270	395	
Base Capacity (vph)	514	1461	562	300	1213	132	1589	647	243	1932
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.99	0.42	1.23	0.69	0.64	0.97	0.98	1.16	0.79

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

HCM 6th Signalized Intersection Summary
101: SR 7 & Atlantic Boulevard

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	384	1424	231	362	703	123	83	1516	620	275	1348	143
Future Volume (veh/h)	384	1424	231	362	703	123	83	1516	620	275	1348	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	392	1453	236	369	717	126	85	1547	633	281	1376	146
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	435	1468	447	302	1084	188	104	1596	483	245	1832	194
Arrive On Green	0.13	0.29	0.29	0.09	0.25	0.25	0.08	0.42	0.42	0.18	0.52	0.52
Sat Flow, veh/h	3456	5106	1555	3456	4351	755	1781	5106	1546	1781	4676	496
Grp Volume(v), veh/h	392	1453	236	369	559	284	85	1547	633	281	1002	520
Grp Sat Flow(s),veh/h/ln	1728	1702	1555	1728	1702	1702	1781	1702	1546	1781	1702	1768
Q Serve(g_s), s	17.9	45.3	20.4	14.0	23.6	24.1	7.5	47.4	50.0	22.0	37.1	37.1
Cycle Q Clear(g_c), s	17.9	45.3	20.4	14.0	23.6	24.1	7.5	47.4	50.0	22.0	37.1	37.1
Prop In Lane	1.00		1.00	1.00		0.44	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	435	1468	447	302	848	424	104	1596	483	245	1334	693
V/C Ratio(X)	0.90	0.99	0.53	1.22	0.66	0.67	0.82	0.97	1.31	1.15	0.75	0.75
Avail Cap(c_a), veh/h	518	1468	447	302	848	424	134	1596	483	245	1334	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.46	0.46	0.46	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.9	56.8	47.9	73.0	54.0	54.1	73.0	46.0	46.8	65.4	32.2	32.2
Incr Delay (d2), s/veh	15.4	21.0	0.9	125.3	1.7	3.7	10.6	9.7	146.7	103.1	3.9	7.4
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	8.9	22.3	8.1	11.5	10.4	10.8	3.7	20.5	38.0	16.7	15.1	16.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.4	77.7	48.8	198.3	55.7	57.9	83.6	55.7	193.4	168.5	36.1	39.5
LnGrp LOS	F	E	D	F	E	E	F	E	F	F	D	D
Approach Vol, veh/h		2081			1212			2265			1803	
Approach Delay, s/veh		75.7			99.6			95.2			57.7	
Approach LOS		E			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	57.0	21.0	53.0	16.3	69.7	27.1	46.9
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	22.0	50.0	14.0	46.0	12.0	60.0	24.0	36.0
Max Q Clear Time (g_c+I1), s	24.0	52.0	16.0	47.3	9.5	39.1	19.9	26.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	11.3	0.2	3.4

Intersection Summary	
HCM 6th Ctrl Delay	81.2
HCM 6th LOS	F

Notes

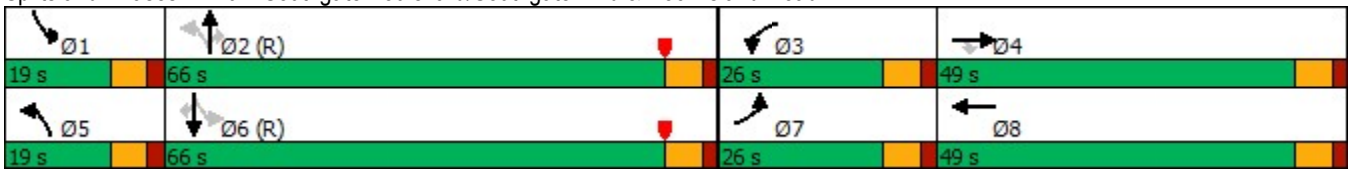
User approved pedestrian interval to be less than phase max green.

Timings
102: Southgate Boulevard/Southgate Blvd & Rock Island Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	490	787	191	77	531	166	993	180	225	871	508
Future Volume (vph)	490	787	191	77	531	166	993	180	225	871	508
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4			2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	4.0	12.0	12.0	4.0	12.0	12.0
Minimum Split (s)	11.5	36.5	36.5	11.5	47.5	10.5	44.5	44.5	10.5	44.5	44.5
Total Split (s)	26.0	49.0	49.0	26.0	49.0	19.0	66.0	66.0	19.0	66.0	66.0
Total Split (%)	16.3%	30.6%	30.6%	16.3%	30.6%	11.9%	41.3%	41.3%	11.9%	41.3%	41.3%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	19.5	49.5	49.5	11.2	41.2	70.9	59.5	59.5	75.0	61.8	61.8
Actuated g/C Ratio	0.12	0.31	0.31	0.07	0.26	0.44	0.37	0.37	0.47	0.39	0.39
v/c Ratio	1.23	0.76	0.36	0.65	0.94	0.72	0.79	0.28	1.08	0.67	0.66
Control Delay	179.8	55.4	20.8	94.4	52.8	50.3	67.7	28.4	117.1	44.1	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	179.8	55.4	20.8	94.4	52.8	50.3	67.7	28.4	117.1	44.1	18.4
LOS	F	E	C	F	D	D	E	C	F	D	B
Approach Delay		92.4			56.4		60.3			46.2	
Approach LOS		F			E		E			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 60 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 64.3	Intersection LOS: E
Intersection Capacity Utilization 103.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Queues
102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	516	828	201	81	858	175	1045	189	237	917	535
v/c Ratio	1.23	0.76	0.36	0.65	0.94	0.72	0.79	0.28	1.08	0.67	0.66
Control Delay	179.8	55.4	20.8	94.4	52.8	50.3	67.7	28.4	117.1	44.1	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	179.8	55.4	20.8	94.4	52.8	50.3	67.7	28.4	117.1	44.1	18.4
Queue Length 50th (ft)	~342	407	68	70	404	150	608	94	~219	427	173
Queue Length 95th (ft)	#463	512	149	m102	m466	m221	677	m177	#403	507	315
Internal Link Dist (ft)		387			3410		1324			1269	
Turn Bay Length (ft)	315		140	315		350			180		190
Base Capacity (vph)	418	1095	556	215	935	255	1316	665	220	1368	809
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.76	0.36	0.38	0.92	0.69	0.79	0.28	1.08	0.67	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

HCM 6th Signalized Intersection Summary
102: Southgate Boulevard/Southgate Blvd & Rock Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	490	787	191	77	531	284	166	993	180	225	871	508
Future Volume (veh/h)	490	787	191	77	531	284	166	993	180	225	871	508
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	516	828	201	81	559	299	175	1045	0	237	917	535
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	421	1165	510	100	586	313	244	1334		256	1352	600
Arrive On Green	0.12	0.33	0.33	0.06	0.26	0.26	0.10	0.50	0.00	0.10	0.51	0.51
Sat Flow, veh/h	3456	3554	1557	1781	2235	1194	1781	3554	1585	1781	3554	1578
Grp Volume(v), veh/h	516	828	201	81	444	414	175	1045	0	237	917	535
Grp Sat Flow(s),veh/h/ln	1728	1777	1557	1781	1777	1652	1781	1777	1585	1781	1777	1578
Q Serve(g_s), s	19.5	32.7	15.9	7.2	39.4	39.4	9.7	38.7	0.0	12.5	31.1	48.8
Cycle Q Clear(g_c), s	19.5	32.7	15.9	7.2	39.4	39.4	9.7	38.7	0.0	12.5	31.1	48.8
Prop In Lane	1.00		1.00	1.00		0.72	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1165	510	100	466	433	244	1334		256	1352	600
V/C Ratio(X)	1.23	0.71	0.39	0.81	0.95	0.96	0.72	0.78		0.92	0.68	0.89
Avail Cap(c_a), veh/h	421	1165	510	217	472	439	252	1334		256	1352	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.71	0.71	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	47.1	41.5	74.7	58.1	58.1	31.5	34.7	0.0	37.4	32.2	36.6
Incr Delay (d2), s/veh	120.8	1.8	0.2	5.8	29.5	31.3	5.6	3.3	0.0	36.0	2.8	18.0
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	15.7	14.9	6.3	3.5	21.5	20.3	4.4	16.4	0.0	8.2	13.2	20.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	191.1	48.9	41.7	80.4	87.6	89.4	37.1	38.0	0.0	73.4	34.9	54.6
LnGrp LOS	F	D	D	F	F	F	D	D		E	C	D
Approach Vol, veh/h		1545			939			1220			1689	
Approach Delay, s/veh		95.4			87.8			37.9			46.5	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	66.6	15.5	58.9	18.2	67.4	26.0	48.4
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	12.5	59.5	19.5	42.5	12.5	59.5	19.5	42.5
Max Q Clear Time (g_c+I1), s	14.5	40.7	9.2	34.7	11.7	50.8	21.5	41.4
Green Ext Time (p_c), s	0.0	7.5	0.0	2.8	0.0	5.3	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	65.8
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

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	2	1124	18	12	663	5	29	0	62	18	3	5
Future Vol, veh/h	2	1124	18	12	663	5	29	0	62	18	3	5
Conflicting Peds, #/hr	4	0	5	5	0	4	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	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1222	20	13	721	5	32	0	67	20	3	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	730	0	0	1247	0	0	1629	1997	626	1369	2005	367
Stage 1	-	-	-	-	-	-	1241	1241	-	754	754	-
Stage 2	-	-	-	-	-	-	388	756	-	615	1251	-
Critical Hdwy	4.14	-	-	4.14	-	-	5	5	4.5	5	5	4.5
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	5	5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5	5	-	5	5	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3	3	3	3	3	3
Pot Cap-1 Maneuver	870	-	-	554	-	-	228	154	704	301	152	880
Stage 1	-	-	-	-	-	-	344	344	-	567	567	-
Stage 2	-	-	-	-	-	-	819	566	-	653	340	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	867	-	-	551	-	-	215	146	701	262	144	877
Mov Cap-2 Maneuver	-	-	-	-	-	-	215	146	-	262	144	-
Stage 1	-	-	-	-	-	-	342	342	-	564	542	-
Stage 2	-	-	-	-	-	-	777	541	-	589	338	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	16.7	19.7
HCM LOS			C	C

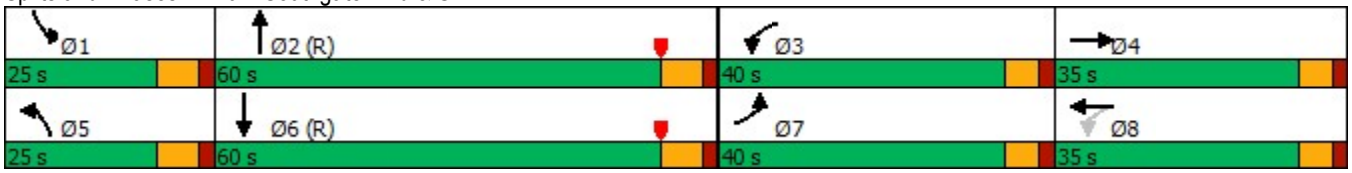
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	407	867	-	-	551	-	-	273
HCM Lane V/C Ratio	0.243	0.003	-	-	0.024	-	-	0.104
HCM Control Delay (s)	16.7	9.2	-	-	11.7	0.2	-	19.7
HCM Lane LOS	C	A	-	-	B	A	-	C
HCM 95th %tile Q(veh)	0.9	0	-	-	0.1	-	-	0.3

Timings
104: Southgate Blvd & SR 7

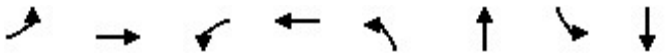
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	685	127	66	67	186	1488	61	1353
Future Volume (vph)	685	127	66	67	186	1488	61	1353
Turn Type	Prot	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases			8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	6.0	4.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	11.0	35.0	10.0	35.0	12.0	37.0	12.0	38.0
Total Split (s)	40.0	35.0	40.0	35.0	25.0	60.0	25.0	60.0
Total Split (%)	25.0%	21.9%	25.0%	21.9%	15.6%	37.5%	15.6%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	33.6	55.3	36.8	29.3	12.7	64.1	9.5	58.4
Actuated g/C Ratio	0.21	0.35	0.23	0.18	0.08	0.40	0.06	0.36
v/c Ratio	0.97	0.73	0.28	0.62	0.70	0.76	0.59	0.98
Control Delay	85.7	28.8	33.6	51.6	87.7	41.0	121.9	49.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.7	28.8	33.6	51.6	87.7	41.0	121.9	49.5
LOS	F	C	C	D	F	D	F	D
Approach Delay		63.5		47.4		46.2		52.0
Approach LOS		E		D		D		D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 24 (15%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 52.3	Intersection LOS: D
Intersection Capacity Utilization 96.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 104: Southgate Blvd & SR 7



Queues
104: Southgate Blvd & SR 7

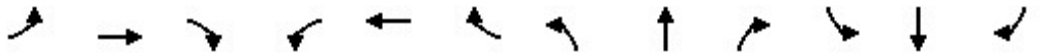


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	699	448	67	218	190	1541	62	1783
v/c Ratio	0.97	0.73	0.28	0.62	0.70	0.76	0.59	0.98
Control Delay	85.7	28.8	33.6	51.6	87.7	41.0	121.9	49.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.7	28.8	33.6	51.6	87.7	41.0	121.9	49.5
Queue Length 50th (ft)	279	257	41	154	106	338	68	704
Queue Length 95th (ft)	m#458	m316	75	250	151	450	m81	m#768
Internal Link Dist (ft)		1738		1039		1330		2623
Turn Bay Length (ft)	125		205		235		215	
Base Capacity (vph)	729	610	530	353	386	2031	199	1817
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.73	0.13	0.62	0.49	0.76	0.31	0.98

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
104: Southgate Blvd & SR 7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	685	127	312	66	67	147	186	1488	23	61	1353	394
Future Volume (veh/h)	685	127	312	66	67	147	186	1488	23	61	1353	394
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	0.99		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	699	130	318	67	68	150	190	1518	23	62	1381	402
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	734	157	384	192	81	178	233	2194	33	78	1572	455
Arrive On Green	0.21	0.33	0.33	0.04	0.16	0.16	0.09	0.56	0.56	0.06	0.53	0.53
Sat Flow, veh/h	3456	478	1169	1781	512	1129	3456	5181	79	1781	3928	1138
Grp Volume(v), veh/h	699	0	448	67	0	218	190	997	544	62	1196	587
Grp Sat Flow(s),veh/h/ln	1728	0	1647	1781	0	1641	1728	1702	1856	1781	1702	1662
Q Serve(g_s), s	32.0	0.0	40.2	5.0	0.0	20.6	8.6	33.5	33.5	5.5	49.4	49.9
Cycle Q Clear(g_c), s	32.0	0.0	40.2	5.0	0.0	20.6	8.6	33.5	33.5	5.5	49.4	49.9
Prop In Lane	1.00		0.71	1.00		0.69	1.00		0.04	1.00		0.68
Lane Grp Cap(c), veh/h	734	0	541	192	0	259	233	1441	786	78	1362	665
V/C Ratio(X)	0.95	0.00	0.83	0.35	0.00	0.84	0.82	0.69	0.69	0.79	0.88	0.88
Avail Cap(c_a), veh/h	734	0	541	496	0	297	389	1441	786	200	1362	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.89	0.89	0.89	0.46	0.46	0.46
Uniform Delay (d), s/veh	62.2	0.0	49.6	53.8	0.0	65.4	71.9	27.5	27.5	74.6	34.0	34.1
Incr Delay (d2), s/veh	22.1	0.0	9.8	0.4	0.0	15.5	2.4	2.5	4.4	3.1	4.1	8.1
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	16.3	0.0	18.1	2.3	0.0	9.8	3.9	13.2	14.8	2.6	19.8	20.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.3	0.0	59.4	54.2	0.0	80.9	74.2	29.9	31.9	77.7	38.1	42.2
LnGrp LOS	F	A	E	D	A	F	E	C	C	E	D	D
Approach Vol, veh/h		1147			285			1731			1845	
Approach Delay, s/veh		74.6			74.6			35.4			40.7	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	74.8	12.7	58.5	17.8	71.0	40.0	31.2
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	18.0	53.0	34.0	29.0	18.0	53.0	34.0	29.0
Max Q Clear Time (g_c+I1), s	7.5	35.5	7.0	42.2	10.6	51.9	34.0	22.6
Green Ext Time (p_c), s	0.0	10.1	0.0	0.0	0.1	1.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	48.6
HCM 6th LOS	D

Notes

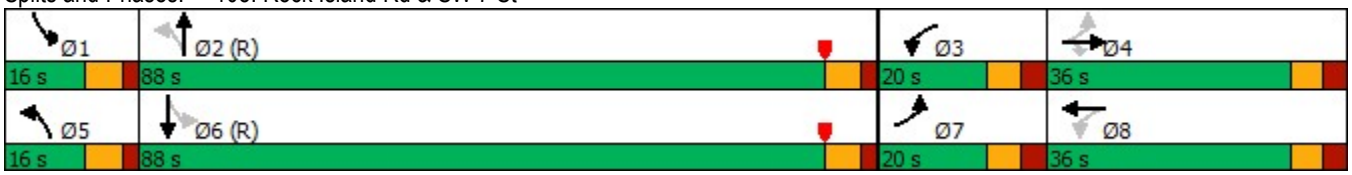
User approved pedestrian interval to be less than phase max green.

Timings
105: Rock Island Rd & SW 7 St

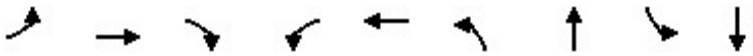
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	117	64	92	79	38	85	1102	149	1062
Future Volume (vph)	117	64	92	79	38	85	1102	149	1062
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases	4		4	8		2		6	
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	11.0	35.0	35.0	11.0	35.0	10.5	27.5	10.5	27.5
Total Split (s)	20.0	36.0	36.0	20.0	36.0	16.0	88.0	16.0	88.0
Total Split (%)	12.5%	22.5%	22.5%	12.5%	22.5%	10.0%	55.0%	10.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	27.9	15.7	15.7	24.5	14.0	101.1	94.1	112.2	99.8
Actuated g/C Ratio	0.17	0.10	0.10	0.15	0.09	0.63	0.59	0.70	0.62
v/c Ratio	0.75	0.40	0.41	0.40	0.80	0.39	0.64	0.62	0.59
Control Delay	78.6	72.9	13.0	56.4	63.0	13.8	25.2	35.0	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.6	72.9	13.0	56.4	63.0	13.8	25.2	35.0	10.6
LOS	E	E	B	E	E	B	C	D	B
Approach Delay		55.1			60.7		24.4		13.5
Approach LOS		E			E		C		B

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 131 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 79.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 105: Rock Island Rd & SW 7 St



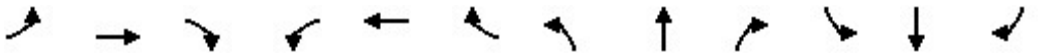
Queues
105: Rock Island Rd & SW 7 St



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	136	74	107	92	175	99	1332	173	1284
v/c Ratio	0.75	0.40	0.41	0.40	0.80	0.39	0.64	0.62	0.59
Control Delay	78.6	72.9	13.0	56.4	63.0	13.8	25.2	35.0	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.6	72.9	13.0	56.4	63.0	13.8	25.2	35.0	10.6
Queue Length 50th (ft)	123	74	0	81	98	30	478	56	82
Queue Length 95th (ft)	170	118	43	122	164	57	607	85	642
Internal Link Dist (ft)		723			1226		764		1324
Turn Bay Length (ft)	215		215	125		195		205	
Base Capacity (vph)	190	337	381	259	363	281	2071	283	2194
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.22	0.28	0.36	0.48	0.35	0.64	0.61	0.59

Intersection Summary

HCM 6th Signalized Intersection Summary
105: Rock Island Rd & SW 7 St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	64	92	79	38	113	85	1102	44	149	1062	42
Future Volume (veh/h)	117	64	92	79	38	113	85	1102	44	149	1062	42
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		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	74	107	92	44	131	99	1281	51	173	1235	49
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	276	233	280	51	153	301	2000	80	306	2061	82
Arrive On Green	0.08	0.15	0.15	0.06	0.13	0.13	0.05	0.76	0.76	0.07	0.79	0.79
Sat Flow, veh/h	1781	1870	1579	1781	408	1216	1781	3483	139	1781	3481	138
Grp Volume(v), veh/h	136	74	107	92	0	175	99	653	679	173	630	654
Grp Sat Flow(s),veh/h/ln	1781	1870	1579	1781	0	1625	1781	1777	1845	1781	1777	1842
Q Serve(g_s), s	10.5	5.6	9.9	7.1	0.0	16.9	3.7	27.2	27.3	6.5	22.8	22.9
Cycle Q Clear(g_c), s	10.5	5.6	9.9	7.1	0.0	16.9	3.7	27.2	27.3	6.5	22.8	22.9
Prop In Lane	1.00		1.00	1.00		0.75	1.00		0.08	1.00		0.07
Lane Grp Cap(c), veh/h	208	276	233	280	0	204	301	1020	1059	306	1052	1091
V/C Ratio(X)	0.65	0.27	0.46	0.33	0.00	0.86	0.33	0.64	0.64	0.57	0.60	0.60
Avail Cap(c_a), veh/h	214	339	286	324	0	294	344	1020	1059	317	1052	1091
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.75	0.75	0.75
Uniform Delay (d), s/veh	55.9	60.5	62.4	56.5	0.0	68.6	14.4	11.3	11.3	16.0	9.4	9.4
Incr Delay (d2), s/veh	5.2	0.2	0.5	0.3	0.0	11.5	0.2	3.1	3.0	0.9	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	5.1	2.7	4.0	3.3	0.0	7.7	1.5	9.4	9.7	2.6	7.2	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	60.7	62.9	56.7	0.0	80.0	14.6	14.3	14.3	16.9	11.2	11.2
LnGrp LOS	E	E	E	E	A	F	B	B	B	B	B	B
Approach Vol, veh/h		317			267			1431			1457	
Approach Delay, s/veh		61.6			72.0			14.3			11.9	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	98.4	16.0	30.6	12.2	101.2	19.5	27.1
Change Period (Y+Rc), s	6.5	6.5	7.0	7.0	6.5	6.5	7.0	7.0
Max Green Setting (Gmax), s	9.5	81.5	13.0	29.0	9.5	81.5	13.0	29.0
Max Q Clear Time (g_c+I1), s	8.5	29.3	9.1	11.9	5.7	24.9	12.5	18.9
Green Ext Time (p_c), s	0.0	10.3	0.0	0.4	0.0	9.7	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	224	38	20	137	14	45	19	46	15	14	12
Future Vol, veh/h	6	224	38	20	137	14	45	19	46	15	14	12
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	264	45	24	161	16	53	22	54	18	16	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.6	9.5	9.2	8.7
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	2%	12%	37%
Vol Thru, %	17%	84%	80%	34%
Vol Right, %	42%	14%	8%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	268	171	41
LT Vol	45	6	20	15
Through Vol	19	224	137	14
RT Vol	46	38	14	12
Lane Flow Rate	129	315	201	48
Geometry Grp	1	1	1	1
Degree of Util (X)	0.18	0.397	0.264	0.07
Departure Headway (Hd)	5.009	4.538	4.716	5.199
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	712	788	758	683
Service Time	3.072	2.586	2.768	3.274
HCM Lane V/C Ratio	0.181	0.4	0.265	0.07
HCM Control Delay	9.2	10.6	9.5	8.7
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.7	1.9	1.1	0.2

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	315	9	6	155	15	7	4	5	31	2	22
Future Vol, veh/h	30	315	9	6	155	15	7	4	5	31	2	22
Conflicting Peds, #/hr	1	0	6	6	0	1	2	0	0	0	0	2
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	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	325	9	6	160	15	7	4	5	32	2	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	176	0	0	340	0	0	592	586	336	577	583	171
Stage 1	-	-	-	-	-	-	398	398	-	181	181	-
Stage 2	-	-	-	-	-	-	194	188	-	396	402	-
Critical Hdwy	4.12	-	-	4.12	-	-	5	5	4.5	5	5	4.5
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	5	5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5	5	-	5	5	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3	3	3	3	3	3
Pot Cap-1 Maneuver	1400	-	-	1219	-	-	668	672	904	678	674	1040
Stage 1	-	-	-	-	-	-	811	811	-	1005	1005	-
Stage 2	-	-	-	-	-	-	993	999	-	813	808	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1399	-	-	1212	-	-	631	646	899	654	648	1037
Mov Cap-2 Maneuver	-	-	-	-	-	-	631	646	-	654	648	-
Stage 1	-	-	-	-	-	-	784	784	-	977	999	-
Stage 2	-	-	-	-	-	-	963	993	-	782	781	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.3	10.3	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	700	1399	-	-	1212	-	-	767
HCM Lane V/C Ratio	0.024	0.022	-	-	0.005	-	-	0.074
HCM Control Delay (s)	10.3	7.6	0	-	8	0	-	10.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	331	26	50	171	5	6
Future Vol, veh/h	331	26	50	171	5	6
Conflicting Peds, #/hr	0	9	9	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	368	27	52	176	5	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	404	0	671	392
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	280	-
Critical Hdwy	-	-	4.12	-	5	4.5
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	-	-	2.218	-	3	3
Pot Cap-1 Maneuver	-	-	1155	-	617	862
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	912	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1145	-	581	854
Mov Cap-2 Maneuver	-	-	-	-	581	-
Stage 1	-	-	-	-	810	-
Stage 2	-	-	-	-	866	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	10.2
HCM LOS			B

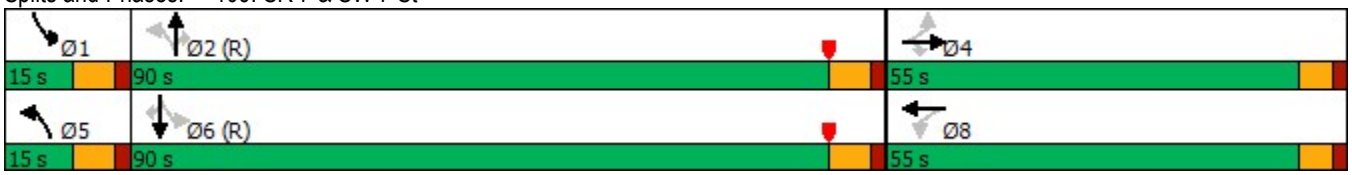
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	581	854	-	-	1145	-
HCM Lane V/C Ratio	0.009	0.007	-	-	0.045	-
HCM Control Delay (s)	11.3	9.2	-	-	8.3	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-

Timings
109: SR 7 & SW 7 St

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	88	12	234	50	23	164	1650	20	17	1646	81
Future Volume (vph)	88	12	234	50	23	164	1650	20	17	1646	81
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.0	26.0	26.0	45.0	45.0	12.0	27.0	27.0	12.0	27.0	27.0
Total Split (s)	55.0	55.0	55.0	55.0	55.0	15.0	90.0	90.0	15.0	90.0	90.0
Total Split (%)	34.4%	34.4%	34.4%	34.4%	34.4%	9.4%	56.3%	56.3%	9.4%	56.3%	56.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.2	20.2		20.2	126.8	119.6	119.6	109.1	104.1	104.1
Actuated g/C Ratio		0.13	0.13		0.13	0.79	0.75	0.75	0.68	0.65	0.65
v/c Ratio		0.67	0.85		0.58	0.59	0.46	0.02	0.09	0.52	0.09
Control Delay		85.2	64.1		75.0	21.9	9.6	0.1	3.4	7.3	0.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		85.2	64.1		75.0	21.9	9.6	0.1	3.4	7.3	0.5
LOS		F	E		E	C	A	A	A	A	A
Approach Delay		70.4			75.0		10.6			7.0	
Approach LOS		E			E		B			A	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 74 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 73.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 109: SR 7 & SW 7 St



Queues
109: SR 7 & SW 7 St

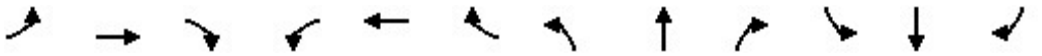


Lane Group	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	106	246	89	173	1737	21	18	1733	85
v/c Ratio	0.67	0.85	0.58	0.59	0.46	0.02	0.09	0.52	0.09
Control Delay	85.2	64.1	75.0	21.9	9.6	0.1	3.4	7.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.2	64.1	75.0	21.9	9.6	0.1	3.4	7.3	0.5
Queue Length 50th (ft)	108	151	84	38	262	0	2	135	1
Queue Length 95th (ft)	165	240	138	136	371	0	m3	m148	m0
Internal Link Dist (ft)	972		833		582			1330	
Turn Bay Length (ft)		100		330		105	275		95
Base Capacity (vph)	386	550	368	292	3801	1167	234	3308	973
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.45	0.24	0.59	0.46	0.02	0.08	0.52	0.09

Intersection Summary

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

HCM 6th Signalized Intersection Summary
109: SR 7 & SW 7 St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	12	234	50	23	11	164	1650	20	17	1646	81
Future Volume (veh/h)	88	12	234	50	23	11	164	1650	20	17	1646	81
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	1.00		0.97	1.00		0.97	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	93	13	246	53	24	12	173	1737	21	18	1733	85
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	228	29	274	109	46	19	274	3487	1049	246	3343	1026
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.06	0.91	0.91	0.02	0.87	0.87
Sat Flow, veh/h	1064	167	1566	418	265	106	1781	5106	1535	1781	5106	1567
Grp Volume(v), veh/h	106	0	246	89	0	0	173	1737	21	18	1733	85
Grp Sat Flow(s),veh/h/ln	1232	0	1566	789	0	0	1781	1702	1535	1781	1702	1567
Q Serve(g_s), s	0.0	0.0	24.6	8.6	0.0	0.0	5.3	9.1	0.2	0.5	12.8	1.2
Cycle Q Clear(g_c), s	13.0	0.0	24.6	21.5	0.0	0.0	5.3	9.1	0.2	0.5	12.8	1.2
Prop In Lane	0.88		1.00	0.60		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	0	274	174	0	0	274	3487	1049	246	3343	1026
V/C Ratio(X)	0.41	0.00	0.90	0.51	0.00	0.00	0.63	0.50	0.02	0.07	0.52	0.08
Avail Cap(c_a), veh/h	443	0	480	346	0	0	282	3487	1049	305	3343	1026
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.19	0.19	0.19
Uniform Delay (d), s/veh	59.7	0.0	64.6	66.7	0.0	0.0	9.4	2.7	2.3	8.7	4.4	3.7
Incr Delay (d2), s/veh	0.4	0.0	5.4	0.9	0.0	0.0	3.2	0.5	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	10.3	3.6	0.0	0.0	2.2	2.2	0.1	0.2	3.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	0.0	70.0	67.6	0.0	0.0	12.6	3.3	2.4	8.7	4.5	3.7
LnGrp LOS	E	A	E	E	A	A	B	A	A	A	A	A
Approach Vol, veh/h		352			89			1931			1836	
Approach Delay, s/veh		67.0			67.6			4.1			4.5	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	116.3		34.0	14.3	111.7		34.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	8.0	83.0		49.0	8.0	83.0		49.0				
Max Q Clear Time (g_c+I1), s	2.5	11.1		26.6	7.3	14.8		23.5				
Green Ext Time (p_c), s	0.0	24.2		0.8	0.0	24.4		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			10.9									
HCM 6th LOS			B									

Timings
110: Kimberly Blvd & Rock Island Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	100	128	104	136	114	65	1058	119	117	947	84
Future Volume (vph)	100	128	104	136	114	65	1058	119	117	947	84
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.5	42.0	42.0	11.5	47.5	11.5	44.5	44.5	16.5	44.6	44.6
Total Split (s)	20.0	46.0	46.0	20.0	46.0	21.0	73.0	73.0	21.0	73.0	73.0
Total Split (%)	12.5%	28.8%	28.8%	12.5%	28.8%	13.1%	45.6%	45.6%	13.1%	45.6%	45.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	27.4	16.1	16.1	30.5	17.6	103.6	97.5	97.5	108.5	99.9	99.9
Actuated g/C Ratio	0.17	0.10	0.10	0.19	0.11	0.65	0.61	0.61	0.68	0.62	0.62
v/c Ratio	0.50	0.72	0.43	0.64	0.54	0.20	0.52	0.13	0.39	0.45	0.11
Control Delay	59.1	90.5	15.6	66.0	37.5	10.1	20.1	4.3	12.2	17.4	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.1	90.5	15.6	66.0	37.5	10.1	20.1	4.3	12.2	17.4	1.8
LOS	E	F	B	E	D	B	C	A	B	B	A
Approach Delay		57.7			48.2		18.1			15.7	
Approach LOS		E			D		B			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 123 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 91.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 110: Kimberly Blvd & Rock Island Road



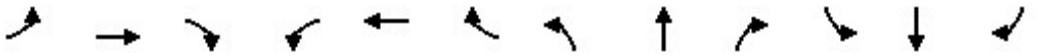
Queues
110: Kimberly Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	105	135	109	143	238	68	1114	125	123	997	88
v/c Ratio	0.50	0.72	0.43	0.64	0.54	0.20	0.52	0.13	0.39	0.45	0.11
Control Delay	59.1	90.5	15.6	66.0	37.5	10.1	20.1	4.3	12.2	17.4	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.1	90.5	15.6	66.0	37.5	10.1	20.1	4.3	12.2	17.4	1.8
Queue Length 50th (ft)	91	139	0	127	62	21	337	8	39	279	0
Queue Length 95th (ft)	143	209	59	187	106	43	477	43	72	377	18
Internal Link Dist (ft)		387			3410		622			1269	
Turn Bay Length (ft)	250		250	200		280		150	240		160
Base Capacity (vph)	239	465	463	233	856	431	2156	985	376	2209	824
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.29	0.24	0.61	0.28	0.16	0.52	0.13	0.33	0.45	0.11

Intersection Summary

HCM 6th Signalized Intersection Summary
110: Kimberly Blvd & Rock Island Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	128	104	136	114	112	65	1058	119	117	947	84
Future Volume (veh/h)	100	128	104	136	114	112	65	1058	119	117	947	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.93		0.87	0.93		0.88	1.00		0.87	1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	135	109	143	120	118	68	1114	125	123	997	88
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	325	416	307	347	425	333	294	1781	688	272	1840	756
Arrive On Green	0.06	0.22	0.22	0.07	0.24	0.24	0.04	0.67	0.67	0.06	0.69	0.69
Sat Flow, veh/h	1781	1870	1380	1781	1777	1395	1781	3554	1373	1781	3554	1461
Grp Volume(v), veh/h	105	135	109	143	120	118	68	1114	125	123	997	88
Grp Sat Flow(s),veh/h/ln	1781	1870	1380	1781	1777	1395	1781	1777	1373	1781	1777	1461
Q Serve(g_s), s	7.2	9.7	10.7	9.8	8.8	11.3	3.0	28.7	5.5	5.4	22.3	3.3
Cycle Q Clear(g_c), s	7.2	9.7	10.7	9.8	8.8	11.3	3.0	28.7	5.5	5.4	22.3	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	325	416	307	347	425	333	294	1781	688	272	1840	756
V/C Ratio(X)	0.32	0.32	0.36	0.41	0.28	0.35	0.23	0.63	0.18	0.45	0.54	0.12
Avail Cap(c_a), veh/h	379	468	345	371	444	349	402	1781	688	351	1840	756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	52.2	52.5	43.4	49.7	50.6	19.5	18.1	14.2	20.8	15.5	12.5
Incr Delay (d2), s/veh	0.2	0.2	0.3	0.3	0.1	0.2	0.1	1.7	0.6	0.4	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	4.6	3.8	4.4	4.0	4.0	1.3	10.9	1.8	2.3	8.2	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	52.3	52.8	43.7	49.8	50.9	19.6	19.8	14.8	21.2	16.6	12.8
LnGrp LOS	D	D	D	D	D	D	B	B	B	C	B	B
Approach Vol, veh/h		349			381			1307			1208	
Approach Delay, s/veh		50.1			47.8			19.3			16.8	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	86.7	17.8	41.6	11.3	89.3	15.2	44.2
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	14.5	66.5	14.0	40.0	14.5	66.5	14.0	40.0
Max Q Clear Time (g_c+I1), s	7.4	30.7	11.8	12.7	5.0	24.3	9.2	13.3
Green Ext Time (p_c), s	0.1	11.1	0.0	0.7	0.0	9.6	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	5.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	389	253	115	86
Demand Flow Rate, veh/h	397	258	118	87
Vehicles Circulating, veh/h	75	110	405	279
Vehicles Exiting, veh/h	291	413	67	89
Ped Vol Crossing Leg, #/h	0	0	1	7
Ped Cap Adj	1.000	1.000	1.000	0.999
Approach Delay, s/veh	5.7	4.8	5.3	4.3
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	397	258	118	87
Cap Entry Lane, veh/h	1278	1233	913	1038
Entry HV Adj Factor	0.981	0.980	0.977	0.984
Flow Entry, veh/h	389	253	115	86
Cap Entry, veh/h	1254	1208	892	1021
V/C Ratio	0.311	0.209	0.129	0.084
Control Delay, s/veh	5.7	4.8	5.3	4.3
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	0

Timings
112: Kimberly Blvd & SR 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	160	22	183	184	24	89	125	1610	65	1793	84
Future Volume (vph)	160	22	183	184	24	89	125	1610	65	1793	84
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	38.0	38.0	11.0	40.0	40.0	12.0	40.0	12.0	40.0	40.0
Total Split (s)	21.0	43.0	43.0	21.0	43.0	43.0	23.0	76.0	20.0	73.0	73.0
Total Split (%)	13.1%	26.9%	26.9%	13.1%	26.9%	26.9%	14.4%	47.5%	12.5%	45.6%	45.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max	C-Max
Act Effct Green (s)	22.3	8.2	8.2	23.2	8.6	8.6	15.8	101.4	9.9	95.5	95.5
Actuated g/C Ratio	0.14	0.05	0.05	0.14	0.05	0.05	0.10	0.63	0.06	0.60	0.60
v/c Ratio	0.73	0.23	0.73	0.81	0.24	0.48	0.74	0.54	0.61	0.60	0.09
Control Delay	78.6	77.1	25.6	87.2	77.1	13.3	89.0	25.0	95.0	22.4	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.6	77.1	25.6	87.2	77.1	13.3	89.0	25.0	95.0	22.4	1.6
LOS	E	E	C	F	E	B	F	C	F	C	A
Approach Delay		51.8			64.2			29.4		23.9	
Approach LOS		D			E			C		C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 113 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 31.2	Intersection LOS: C
Intersection Capacity Utilization 82.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 112: Kimberly Blvd & SR 7



Queues
112: Kimberly Blvd & SR 7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	163	22	187	188	24	91	128	1714	66	1830	86
v/c Ratio	0.73	0.23	0.73	0.81	0.24	0.48	0.74	0.54	0.61	0.60	0.09
Control Delay	78.6	77.1	25.6	87.2	77.1	13.3	89.0	25.0	95.0	22.4	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.6	77.1	25.6	87.2	77.1	13.3	89.0	25.0	95.0	22.4	1.6
Queue Length 50th (ft)	158	23	0	185	25	0	143	353	69	417	0
Queue Length 95th (ft)	226	53	82	259	56	33	214	440	121	567	17
Internal Link Dist (ft)		1738			1039			1330		793	
Turn Bay Length (ft)	175			110		110	325		330		235
Base Capacity (vph)	233	430	503	236	430	435	194	3199	146	3035	942
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.05	0.37	0.80	0.06	0.21	0.66	0.54	0.45	0.60	0.09

Intersection Summary

HCM 6th Signalized Intersection Summary
112: Kimberly Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	22	183	184	24	89	125	1610	70	65	1793	84
Future Volume (veh/h)	160	22	183	184	24	89	125	1610	70	65	1793	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.95	0.97		0.94	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	163	22	187	188	24	91	128	1643	71	66	1830	86
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	417	339	274	406	353	282	148	2585	112	83	2448	734
Arrive On Green	0.09	0.18	0.18	0.09	0.19	0.19	0.11	0.69	0.69	0.06	0.64	0.64
Sat Flow, veh/h	1781	1870	1509	1781	1870	1493	1781	5011	216	1781	5106	1532
Grp Volume(v), veh/h	163	22	187	188	24	91	128	1116	598	66	1830	86
Grp Sat Flow(s),veh/h/ln	1781	1870	1509	1781	1870	1493	1781	1702	1823	1781	1702	1532
Q Serve(g_s), s	11.8	1.6	18.5	13.7	1.7	8.4	11.3	29.2	29.2	5.8	39.7	3.5
Cycle Q Clear(g_c), s	11.8	1.6	18.5	13.7	1.7	8.4	11.3	29.2	29.2	5.8	39.7	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	417	339	274	406	353	282	148	1756	941	83	2448	734
V/C Ratio(X)	0.39	0.06	0.68	0.46	0.07	0.32	0.87	0.64	0.64	0.80	0.75	0.12
Avail Cap(c_a), veh/h	430	433	349	406	433	345	178	1756	941	145	2448	734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	54.3	61.2	47.0	53.3	56.1	70.3	16.7	16.7	74.3	22.3	15.7
Incr Delay (d2), s/veh	0.2	0.0	2.0	0.3	0.0	0.2	23.8	1.6	2.9	6.3	2.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.7	7.3	6.2	0.8	3.2	6.0	10.4	11.5	2.8	14.8	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	54.3	63.2	47.3	53.4	56.3	94.1	18.3	19.6	80.6	24.4	16.1
LnGrp LOS	D	D	E	D	D	E	F	B	B	F	C	B
Approach Vol, veh/h		372			303			1842			1982	
Approach Delay, s/veh		55.8			50.5			24.0			25.9	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	89.5	21.0	35.0	20.3	83.7	19.8	36.2
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	69.0	15.0	37.0	16.0	66.0	15.0	37.0
Max Q Clear Time (g_c+I1), s	7.8	31.2	15.7	20.5	13.3	41.7	13.8	10.4
Green Ext Time (p_c), s	0.0	17.7	0.0	0.4	0.0	16.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C

Timings
113: SR 7 & Blvd of Champions

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	168	0	292	13	6	270	1591	14	23	1878	250
Future Volume (vph)	168	0	292	13	6	270	1591	14	23	1878	250
Turn Type	Split	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			3	5	2		1	6	
Permitted Phases			4	3				2			6
Detector Phase	4	4	4	3	3	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	47.5	47.5	12.0	43.0	43.0	12.0	43.0	43.0
Total Split (s)	19.0	19.0	19.0	50.0	50.0	16.0	75.0	75.0	16.0	75.0	75.0
Total Split (%)	11.9%	11.9%	11.9%	31.3%	31.3%	10.0%	46.9%	46.9%	10.0%	46.9%	46.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.1	13.1	13.1		9.8	24.4	114.2	114.2	6.4	91.4	91.4
Actuated g/C Ratio	0.08	0.08	0.08		0.06	0.15	0.71	0.71	0.04	0.57	0.57
v/c Ratio	0.62	0.28	0.28		0.38	0.54	0.46	0.01	0.34	0.67	0.26
Control Delay	80.7	1.3	1.3		90.1	69.8	10.7	0.0	86.3	14.0	0.7
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.7	1.3	1.3		90.1	69.8	10.7	0.0	86.3	14.0	0.7
LOS	F	A	A		F	E	B	A	F	B	A
Approach Delay		30.3			90.1		19.1			13.3	
Approach LOS		C			F		B			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 121 (76%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 17.8	Intersection LOS: B
Intersection Capacity Utilization 78.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 113: SR 7 & Blvd of Champions



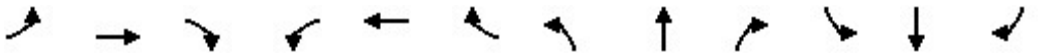
Queues
113: SR 7 & Blvd of Champions



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	175	152	152	20	281	1657	15	24	1956	260
v/c Ratio	0.62	0.28	0.28	0.38	0.54	0.46	0.01	0.34	0.67	0.26
Control Delay	80.7	1.3	1.3	90.1	69.8	10.7	0.0	86.3	14.0	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.7	1.3	1.3	90.1	69.8	10.7	0.0	86.3	14.0	0.7
Queue Length 50th (ft)	93	0	0	21	158	169	0	25	204	0
Queue Length 95th (ft)	131	0	0	51	210	304	m0	m44	231	m7
Internal Link Dist (ft)		446		833		1028			1330	
Turn Bay Length (ft)	170		300		300		160	160		425
Base Capacity (vph)	306	544	544	238	523	3629	1126	99	2905	990
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.28	0.28	0.08	0.54	0.46	0.01	0.24	0.67	0.26

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	168	0	292	13	6	0	270	1591	14	23	1878	250
Future Volume (vph)	168	0	292	13	6	0	270	1591	14	23	1878	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.5		7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95		1.00		0.97	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	0.85		1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.97		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1504	1504		1800		3433	5085	1534	1770	5085	1543
Flt Permitted	0.95	1.00	1.00		0.47		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1504	1504		880		3433	5085	1534	1770	5085	1543
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	175	0	304	14	6	0	281	1657	15	24	1956	260
RTOR Reduction (vph)	0	140	140	0	0	0	0	0	5	0	0	114
Lane Group Flow (vph)	175	12	12	0	20	0	281	1657	10	24	1956	146
Confl. Peds. (#/hr)	11					11	9		5	5		9
Confl. Bikes (#/hr)												4
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			3		5	2		1	6	
Permitted Phases			4	3					2			6
Actuated Green, G (s)	13.1	13.1	13.1		7.2		24.4	108.8	108.8	4.4	88.8	88.8
Effective Green, g (s)	13.1	13.1	13.1		7.2		24.4	108.8	108.8	4.4	88.8	88.8
Actuated g/C Ratio	0.08	0.08	0.08		0.05		0.15	0.68	0.68	0.03	0.55	0.55
Clearance Time (s)	6.0	6.0	6.0		6.5		7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	2.2	2.2	2.2		2.2		1.5	3.0	3.0	1.5	3.0	3.0
Lane Grp Cap (vph)	281	123	123		39		523	3457	1043	48	2822	856
v/s Ratio Prot	c0.05	0.01					c0.08	c0.33		0.01	c0.38	
v/s Ratio Perm			0.01		c0.02				0.01			0.09
v/c Ratio	0.62	0.10	0.10		0.51		0.54	0.48	0.01	0.50	0.69	0.17
Uniform Delay, d1	71.1	68.0	68.0		74.7		62.6	12.2	8.2	76.7	25.7	17.5
Progression Factor	1.00	1.00	1.00		1.00		1.04	0.82	1.00	1.02	0.51	0.07
Incremental Delay, d2	3.3	0.2	0.2		6.1		0.5	0.4	0.0	2.4	1.2	0.4
Delay (s)	74.4	68.2	68.2		80.8		65.3	10.4	8.3	80.8	14.4	1.6
Level of Service	E	E	E		F		E	B	A	F	B	A
Approach Delay (s)		70.4			80.8			18.3			13.6	
Approach LOS		E			F			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.5
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

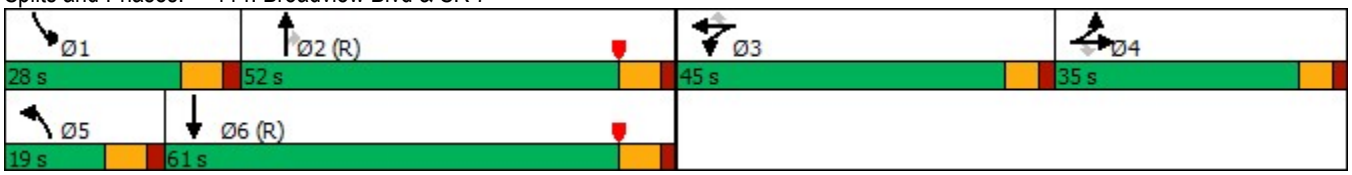
HCM 6th Edition methodology expects strict NEMA phasing.

Timings
114: Broadview Blvd & SR 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	73	19	66	242	3	252	40	1427	248	323	1779
Future Volume (vph)	73	19	66	242	3	252	40	1427	248	323	1779
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	2		1	6
Permitted Phases			4			3			2		
Detector Phase	4	4	4	3	3	3	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.0	45.0	45.0	45.0	12.0	40.0	40.0	12.0	40.0
Total Split (s)	35.0	35.0	35.0	45.0	45.0	45.0	19.0	52.0	52.0	28.0	61.0
Total Split (%)	21.9%	21.9%	21.9%	28.1%	28.1%	28.1%	11.9%	32.5%	32.5%	17.5%	38.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	8.2	8.2	8.2	17.3	17.3	17.3	8.0	88.2	88.2	20.4	103.0
Actuated g/C Ratio	0.05	0.05	0.05	0.11	0.11	0.11	0.05	0.55	0.55	0.13	0.64
v/c Ratio	0.45	0.21	0.30	0.72	0.71	0.66	0.49	0.54	0.28	0.79	0.60
Control Delay	81.4	77.2	3.2	90.2	88.9	14.6	91.8	25.3	9.6	100.4	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.4	77.2	3.2	90.2	88.9	14.6	91.8	25.3	9.6	100.4	6.8
LOS	F	E	A	F	F	B	F	C	A	F	A
Approach Delay		48.3			51.5			24.6			20.9
Approach LOS		D			D			C			C

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 133 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 26.6	Intersection LOS: C
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 114: Broadview Blvd & SR 7



Queues
114: Broadview Blvd & SR 7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	78	20	70	131	129	268	43	1518	264	344	1947
v/c Ratio	0.45	0.21	0.30	0.72	0.71	0.66	0.49	0.54	0.28	0.79	0.60
Control Delay	81.4	77.2	3.2	90.2	88.9	14.6	91.8	25.3	9.6	100.4	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.4	77.2	3.2	90.2	88.9	14.6	91.8	25.3	9.6	100.4	6.8
Queue Length 50th (ft)	41	20	0	142	140	0	45	360	52	195	94
Queue Length 95th (ft)	70	51	0	212	209	88	88	495	132	249	150
Internal Link Dist (ft)		559			661			481			1028
Turn Bay Length (ft)	160		260	270		260	270		150	290	
Base Capacity (vph)	622	337	421	409	410	583	132	2803	929	475	3259
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.06	0.17	0.32	0.31	0.46	0.33	0.54	0.28	0.72	0.60

Intersection Summary

HCM Signalized Intersection Capacity Analysis
114: Broadview Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	19	66	242	3	252	40	1427	248	323	1779	51
Future Volume (vph)	73	19	66	242	3	252	40	1427	248	323	1779	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1863	1583	1681	1687	1562	1770	5085	1560	3433	5060	
Flt Permitted	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	1863	1583	1681	1687	1562	1770	5085	1560	3433	5060	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	78	20	70	257	3	268	43	1518	264	344	1893	54
RTOR Reduction (vph)	0	0	66	0	0	239	0	0	71	0	1	0
Lane Group Flow (vph)	78	20	4	131	129	29	43	1518	193	344	1946	0
Confl. Peds. (#/hr)	1					1	3		1	1		3
Confl. Bikes (#/hr)									3			3
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3			2			
Actuated Green, G (s)	8.2	8.2	8.2	17.3	17.3	17.3	7.0	88.1	88.1	20.4	101.5	
Effective Green, g (s)	8.2	8.2	8.2	17.3	17.3	17.3	7.0	88.1	88.1	20.4	101.5	
Actuated g/C Ratio	0.05	0.05	0.05	0.11	0.11	0.11	0.04	0.55	0.55	0.13	0.63	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	175	95	81	181	182	168	77	2799	858	437	3209	
v/s Ratio Prot	c0.02	0.01		c0.08	0.08		0.02	0.30		c0.10	c0.38	
v/s Ratio Perm			0.00			0.02			0.12			
v/c Ratio	0.45	0.21	0.04	0.72	0.71	0.17	0.56	0.54	0.23	0.79	0.61	
Uniform Delay, d1	73.7	72.8	72.2	69.0	68.9	64.8	75.0	23.0	18.4	67.7	17.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	0.33	
Incremental Delay, d2	0.7	0.4	0.1	11.5	9.9	0.2	4.9	0.8	0.6	6.8	0.7	
Delay (s)	74.4	73.2	72.3	80.5	78.8	65.0	79.9	23.8	19.1	96.7	6.5	
Level of Service	E	E	E	F	E	E	E	C	B	F	A	
Approach Delay (s)		73.3			72.2			24.4			20.0	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	8	0	1853	1919	43
Future Vol, veh/h	0	8	0	1853	1919	43
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	0	1910	1978	44

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	990	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	4.5	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3	-	-	-	-
Pot Cap-1 Maneuver	0	511	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	511	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

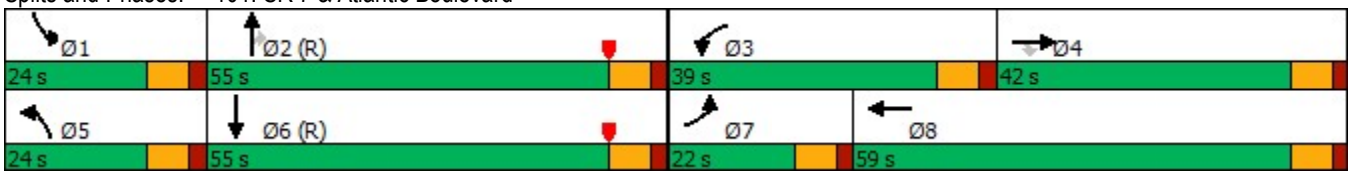
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	511	-	-
HCM Lane V/C Ratio	-	0.016	-	-
HCM Control Delay (s)	-	12.2	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

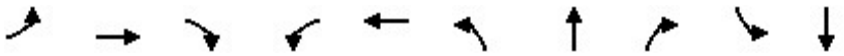
Timings
101: SR 7 & Atlantic Boulevard

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	305	909	297	640	1537	235	1243	484	156	1237
Future Volume (vph)	305	909	297	640	1537	235	1243	484	156	1237
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	11.0	42.0	42.0	11.0	59.0	12.0	50.0	50.0	12.0	50.0
Total Split (s)	22.0	42.0	42.0	39.0	59.0	24.0	55.0	55.0	24.0	55.0
Total Split (%)	13.8%	26.3%	26.3%	24.4%	36.9%	15.0%	34.4%	34.4%	15.0%	34.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	15.0	35.4	35.4	31.6	52.0	17.0	48.9	48.9	16.1	48.0
Actuated g/C Ratio	0.09	0.22	0.22	0.20	0.32	0.11	0.31	0.31	0.10	0.30
v/c Ratio	0.97	0.82	0.60	0.96	1.06	1.28	0.82	0.67	0.89	0.99
Control Delay	113.7	66.6	22.5	90.0	90.0	208.3	51.0	16.2	113.9	74.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.7	66.6	22.5	90.0	90.0	208.3	51.0	16.2	113.9	74.5
LOS	F	E	C	F	F	F	D	B	F	E
Approach Delay		67.4			90.0		61.3			78.4
Approach LOS		E			F		E			E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 114 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 75.3	Intersection LOS: E
Intersection Capacity Utilization 114.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 101: SR 7 & Atlantic Boulevard





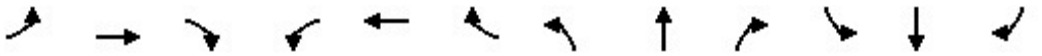
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	311	928	303	653	1725	240	1268	494	159	1481
v/c Ratio	0.97	0.82	0.60	0.96	1.06	1.28	0.82	0.67	0.89	0.99
Control Delay	113.7	66.6	22.5	90.0	90.0	208.3	51.0	16.2	113.9	74.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.7	66.6	22.5	90.0	90.0	208.3	51.0	16.2	113.9	74.5
Queue Length 50th (ft)	170	343	84	352	~719	~312	486	125	166	560
Queue Length 95th (ft)	#271	400	193	#473	#815	#494	546	387	#297	#671
Internal Link Dist (ft)		2560			1156		2623			1036
Turn Bay Length (ft)	280		330	525		400		270	395	
Base Capacity (vph)	321	1126	503	686	1631	188	1552	732	188	1501
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.82	0.60	0.95	1.06	1.28	0.82	0.67	0.85	0.99

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

HCM 6th Signalized Intersection Summary
101: SR 7 & Atlantic Boulevard



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	305	909	297	640	1537	154	235	1243	484	156	1237	215
Future Volume (veh/h)	305	909	297	640	1537	154	235	1243	484	156	1237	215
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	311	928	303	653	1568	157	240	1268	494	159	1262	219
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	324	1121	334	688	1528	153	189	1562	465	179	1304	226
Arrive On Green	0.09	0.22	0.22	0.20	0.32	0.32	0.14	0.41	0.41	0.13	0.40	0.40
Sat Flow, veh/h	3456	5106	1523	3456	4701	470	1781	5106	1520	1781	4347	754
Grp Volume(v), veh/h	311	928	303	653	1135	590	240	1268	494	159	988	493
Grp Sat Flow(s),veh/h/ln	1728	1702	1523	1728	1702	1767	1781	1702	1520	1781	1702	1697
Q Serve(g_s), s	14.3	27.7	31.0	29.9	52.0	52.0	17.0	35.2	49.0	14.0	45.5	45.5
Cycle Q Clear(g_c), s	14.3	27.7	31.0	29.9	52.0	52.0	17.0	35.2	49.0	14.0	45.5	45.5
Prop In Lane	1.00		1.00	1.00		0.27	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	324	1121	334	688	1106	574	189	1562	465	179	1021	509
V/C Ratio(X)	0.96	0.83	0.91	0.95	1.03	1.03	1.27	0.81	1.06	0.89	0.97	0.97
Avail Cap(c_a), veh/h	324	1121	334	691	1106	574	189	1562	465	189	1021	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.2	59.6	60.8	63.3	54.0	54.0	68.7	43.4	47.4	68.5	47.3	47.3
Incr Delay (d2), s/veh	39.0	5.2	26.9	22.1	33.8	44.8	146.6	3.3	52.6	34.1	21.4	32.6
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	8.1	12.6	14.5	15.3	27.4	30.2	15.3	14.7	24.5	7.9	21.4	23.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.2	64.7	87.7	85.4	87.8	98.8	215.3	46.7	100.1	102.6	68.7	80.0
LnGrp LOS	F	E	F	F	F	F	F	D	F	F	E	E
Approach Vol, veh/h		1542			2378			2002			1640	
Approach Delay, s/veh		78.6			89.9			80.1			75.4	
Approach LOS		E			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	56.0	38.9	42.1	24.0	55.0	22.0	59.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	17.0	48.0	32.0	35.0	17.0	48.0	15.0	52.0
Max Q Clear Time (g_c+I1), s	16.0	51.0	31.9	33.0	19.0	47.5	16.3	54.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.2	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	81.8
HCM 6th LOS	F

Notes

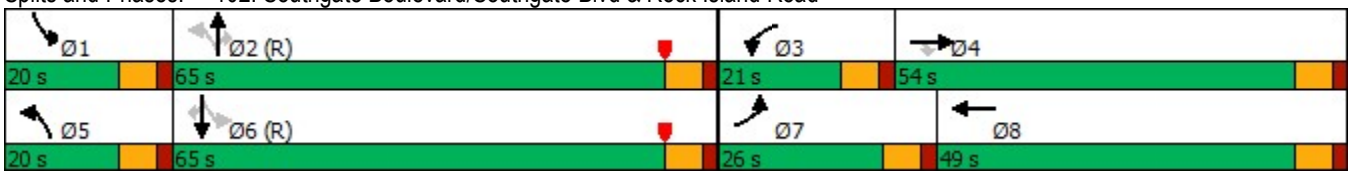
User approved pedestrian interval to be less than phase max green.

Timings
102: Southgate Boulevard/Southgate Blvd & Rock Island Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	408	506	204	117	580	190	936	138	184	939	632
Future Volume (vph)	408	506	204	117	580	190	936	138	184	939	632
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4			2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	4.0	12.0	12.0	4.0	12.0	12.0
Minimum Split (s)	11.5	36.5	36.5	11.5	47.5	10.5	44.5	44.5	10.5	44.5	44.5
Total Split (s)	26.0	54.0	54.0	21.0	49.0	20.0	65.0	65.0	20.0	65.0	65.0
Total Split (%)	16.3%	33.8%	33.8%	13.1%	30.6%	12.5%	40.6%	40.6%	12.5%	40.6%	40.6%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	19.5	47.7	47.7	13.2	41.4	73.4	60.4	60.4	72.8	60.1	60.1
Actuated g/C Ratio	0.12	0.30	0.30	0.08	0.26	0.46	0.38	0.38	0.46	0.38	0.38
v/c Ratio	1.02	0.50	0.37	0.84	0.95	0.84	0.73	0.22	0.82	0.74	0.87
Control Delay	115.9	48.3	13.6	97.2	58.0	71.4	35.4	6.5	52.9	47.5	38.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.9	48.3	13.6	97.2	58.0	71.4	35.4	6.5	52.9	47.5	38.9
LOS	F	D	B	F	E	E	D	A	D	D	D
Approach Delay		66.6			62.9		37.7			45.0	
Approach LOS		E			E		D			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 80 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 51.2	Intersection LOS: D
Intersection Capacity Utilization 99.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Queues
102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	425	527	213	122	850	198	975	144	192	978	658
v/c Ratio	1.02	0.50	0.37	0.84	0.95	0.84	0.73	0.22	0.82	0.74	0.87
Control Delay	115.9	48.3	13.6	97.2	58.0	71.4	35.4	6.5	52.9	47.5	38.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.9	48.3	13.6	97.2	58.0	71.4	35.4	6.5	52.9	47.5	38.9
Queue Length 50th (ft)	~241	241	39	135	432	127	371	4	113	471	409
Queue Length 95th (ft)	#355	301	112	m146	m#483	#254	334	47	#225	556	#663
Internal Link Dist (ft)		387			3410		1324			1269	
Turn Bay Length (ft)	315		140	315		350			180		190
Base Capacity (vph)	418	1054	574	160	923	240	1335	659	242	1329	760
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.50	0.37	0.76	0.92	0.82	0.73	0.22	0.79	0.74	0.87

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

HCM 6th Signalized Intersection Summary
102: Southgate Boulevard/Southgate Blvd & Rock Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	408	506	204	117	580	236	190	936	138	184	939	632
Future Volume (veh/h)	408	506	204	117	580	236	190	936	138	184	939	632
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	425	527	212	122	604	246	198	975	0	192	978	658
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	1073	468	142	636	259	238	1338		279	1330	582
Arrive On Green	0.12	0.30	0.30	0.08	0.26	0.26	0.11	0.50	0.00	0.11	0.50	0.50
Sat Flow, veh/h	3456	3554	1551	1781	2447	995	1781	3554	1585	1781	3554	1555
Grp Volume(v), veh/h	425	527	212	122	438	412	198	975	0	192	978	658
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	1781	1777	1666	1781	1777	1585	1781	1777	1555
Q Serve(g_s), s	19.5	19.4	17.7	10.8	38.8	38.9	11.0	34.5	0.0	10.7	34.9	59.9
Cycle Q Clear(g_c), s	19.5	19.4	17.7	10.8	38.8	38.9	11.0	34.5	0.0	10.7	34.9	59.9
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1073	468	142	462	433	238	1338		279	1330	582
V/C Ratio(X)	1.01	0.49	0.45	0.86	0.95	0.95	0.83	0.73		0.69	0.74	1.13
Avail Cap(c_a), veh/h	421	1073	468	161	472	442	243	1338		288	1330	582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	45.8	45.2	72.7	58.2	58.2	33.8	33.5	0.0	31.3	33.9	40.2
Incr Delay (d2), s/veh	46.2	0.1	0.3	28.9	28.3	29.9	15.8	2.8	0.0	5.3	3.6	78.6
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	11.4	8.7	6.9	6.1	21.1	20.0	5.6	14.6	0.0	4.9	14.9	34.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.4	45.9	45.4	101.6	86.5	88.1	49.6	36.3	0.0	36.6	37.5	118.8
LnGrp LOS	F	D	D	F	F	F	D	D		D	D	F
Approach Vol, veh/h		1164			972			1173			1828	
Approach Delay, s/veh		71.6			89.1			38.5			66.7	
Approach LOS		E			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	66.7	19.3	54.8	19.5	66.4	26.0	48.1
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	13.5	58.5	14.5	47.5	13.5	58.5	19.5	42.5
Max Q Clear Time (g_c+I1), s	12.7	36.5	12.8	21.4	13.0	61.9	21.5	40.9
Green Ext Time (p_c), s	0.0	7.4	0.0	2.8	0.0	0.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	65.6
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

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	692	20	27	917	39	19	7	35	12	0	6
Future Vol, veh/h	8	692	20	27	917	39	19	7	35	12	0	6
Conflicting Peds, #/hr	11	0	2	2	0	11	0	0	1	1	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	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	721	21	28	955	41	20	7	36	13	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1007	0	0	744	0	0	1284	1813	374	1424	1803	509
Stage 1	-	-	-	-	-	-	750	750	-	1043	1043	-
Stage 2	-	-	-	-	-	-	534	1063	-	381	760	-
Critical Hdwy	4.14	-	-	4.14	-	-	5	5	4.5	5	5	4.5
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	5	5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5	5	-	5	5	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3	3	3	3	3	3
Pot Cap-1 Maneuver	684	-	-	859	-	-	328	188	875	284	190	779
Stage 1	-	-	-	-	-	-	569	569	-	422	422	-
Stage 2	-	-	-	-	-	-	708	413	-	825	564	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	677	-	-	857	-	-	304	170	873	243	172	771
Mov Cap-2 Maneuver	-	-	-	-	-	-	304	170	-	243	172	-
Stage 1	-	-	-	-	-	-	561	561	-	413	387	-
Stage 2	-	-	-	-	-	-	650	379	-	770	556	-

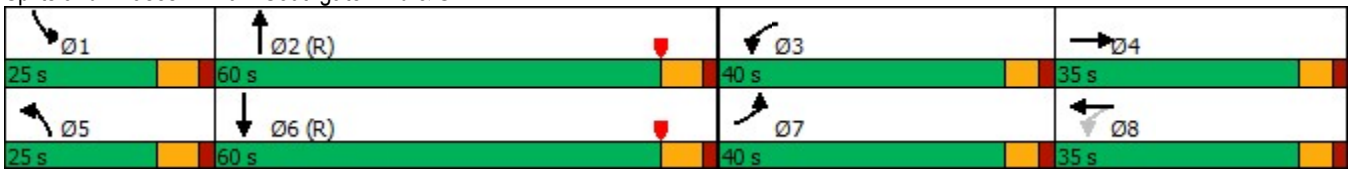
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	15	17.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	424	677	-	-	857	-	-	315
HCM Lane V/C Ratio	0.15	0.012	-	-	0.033	-	-	0.06
HCM Control Delay (s)	15	10.4	-	-	9.3	0.3	-	17.2
HCM Lane LOS	C	B	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.2

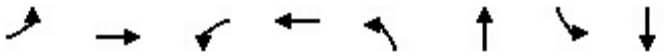
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	447	54	64	58	399	1489	90	1501
Future Volume (vph)	447	54	64	58	399	1489	90	1501
Turn Type	Prot	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases			8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	6.0	4.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	11.0	35.0	10.0	35.0	12.0	37.0	12.0	38.0
Total Split (s)	40.0	35.0	40.0	35.0	25.0	60.0	25.0	60.0
Total Split (%)	25.0%	21.9%	25.0%	21.9%	15.6%	37.5%	15.6%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	25.7	30.4	21.7	13.2	27.5	82.8	12.4	67.6
Actuated g/C Ratio	0.16	0.19	0.14	0.08	0.17	0.52	0.08	0.42
v/c Ratio	0.85	0.75	0.42	0.73	0.71	0.61	0.69	0.98
Control Delay	71.1	28.4	50.2	78.5	81.7	23.4	107.1	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.1	28.4	50.2	78.5	81.7	23.4	107.1	29.1
LOS	E	C	D	E	F	C	F	C
Approach Delay		54.3		68.3		35.4		32.5
Approach LOS		D		E		D		C

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 49 (31%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 38.2	Intersection LOS: D
Intersection Capacity Utilization 103.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 104: Southgate Blvd & SR 7



Queues
104: Southgate Blvd & SR 7



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	466	303	67	119	416	1597	94	2036
v/c Ratio	0.85	0.75	0.42	0.73	0.71	0.61	0.69	0.98
Control Delay	71.1	28.4	50.2	78.5	81.7	23.4	107.1	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.1	28.4	50.2	78.5	81.7	23.4	107.1	29.1
Queue Length 50th (ft)	174	55	53	96	228	270	104	589
Queue Length 95th (ft)	200	m300	85	163	294	297	m102	m#975
Internal Link Dist (ft)		1738		1039		1330		2623
Turn Bay Length (ft)	125		205		235		215	
Base Capacity (vph)	729	422	429	329	590	2618	199	2087
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.72	0.16	0.36	0.71	0.61	0.47	0.98

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
104: Southgate Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	447	54	237	64	58	57	399	1489	44	90	1501	453
Future Volume (veh/h)	447	54	237	64	58	57	399	1489	44	90	1501	453
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.98		0.96	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	466	56	247	67	60	59	416	1551	46	94	1564	472
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	513	71	315	190	117	115	389	2478	73	113	1701	504
Arrive On Green	0.15	0.24	0.24	0.04	0.14	0.14	0.15	0.65	0.65	0.08	0.58	0.58
Sat Flow, veh/h	3456	292	1289	1781	846	832	3456	5090	151	1781	3884	1152
Grp Volume(v), veh/h	466	0	303	67	0	119	416	1037	560	94	1367	669
Grp Sat Flow(s),veh/h/ln	1728	0	1581	1781	0	1678	1728	1702	1837	1781	1702	1632
Q Serve(g_s), s	21.2	0.0	28.7	5.1	0.0	10.5	18.0	28.9	28.9	8.3	57.6	60.2
Cycle Q Clear(g_c), s	21.2	0.0	28.7	5.1	0.0	10.5	18.0	28.9	28.9	8.3	57.6	60.2
Prop In Lane	1.00		0.82	1.00		0.50	1.00		0.08	1.00		0.71
Lane Grp Cap(c), veh/h	513	0	387	190	0	233	389	1657	894	113	1491	715
V/C Ratio(X)	0.91	0.00	0.78	0.35	0.00	0.51	1.07	0.63	0.63	0.83	0.92	0.94
Avail Cap(c_a), veh/h	734	0	387	492	0	304	389	1657	894	200	1491	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.88	0.88	0.88	0.24	0.24	0.24
Uniform Delay (d), s/veh	67.1	0.0	56.5	56.2	0.0	63.9	68.0	19.6	19.6	72.4	30.8	31.3
Incr Delay (d2), s/veh	9.3	0.0	9.3	0.4	0.0	0.6	62.8	1.6	2.9	1.4	3.0	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	0.0	12.5	2.4	0.0	4.6	11.1	10.7	11.9	3.8	22.2	23.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.4	0.0	65.8	56.6	0.0	64.5	130.8	21.2	22.5	73.8	33.8	38.4
LnGrp LOS	E	A	E	E	A	E	F	C	C	E	C	D
Approach Vol, veh/h		769			186			2013			2130	
Approach Delay, s/veh		72.2			61.7			44.2			37.0	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	84.9	12.8	45.1	25.0	77.1	29.7	28.2
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	18.0	53.0	34.0	29.0	18.0	53.0	34.0	29.0
Max Q Clear Time (g_c+I1), s	10.3	30.9	7.1	30.7	20.0	62.2	23.2	12.5
Green Ext Time (p_c), s	0.0	12.2	0.0	0.0	0.0	0.0	0.5	0.3

Intersection Summary	
HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D

Notes

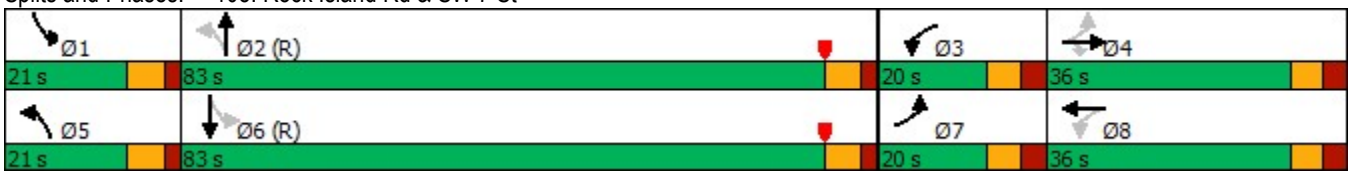
User approved pedestrian interval to be less than phase max green.

Timings
105: Rock Island Rd & SW 7 St

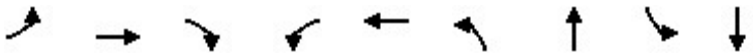
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	71	39	97	95	66	154	1142	49	1114
Future Volume (vph)	71	39	97	95	66	154	1142	49	1114
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases	4		4	8		2		6	
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	11.0	35.0	35.0	11.0	35.0	10.5	27.5	10.5	27.5
Total Split (s)	20.0	36.0	36.0	20.0	36.0	21.0	83.0	21.0	83.0
Total Split (%)	12.5%	22.5%	22.5%	12.5%	22.5%	13.1%	51.9%	13.1%	51.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	25.9	16.1	16.1	28.3	17.3	111.2	102.5	100.7	95.2
Actuated g/C Ratio	0.16	0.10	0.10	0.18	0.11	0.70	0.64	0.63	0.60
v/c Ratio	0.43	0.22	0.40	0.40	0.79	0.61	0.59	0.23	0.62
Control Delay	57.1	66.4	12.1	55.3	78.8	19.1	19.9	11.4	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	66.4	12.1	55.3	78.8	19.1	19.9	11.4	17.8
LOS	E	E	B	E	E	B	B	B	B
Approach Delay		37.7			69.9		19.8		17.6
Approach LOS		D			E		B		B

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 93 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization 79.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 105: Rock Island Rd & SW 7 St



Queues
105: Rock Island Rd & SW 7 St

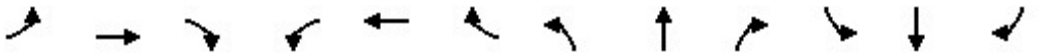


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	77	42	105	103	170	167	1333	53	1296
v/c Ratio	0.43	0.22	0.40	0.40	0.79	0.61	0.59	0.23	0.62
Control Delay	57.1	66.4	12.1	55.3	78.8	19.1	19.9	11.4	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	66.4	12.1	55.3	78.8	19.1	19.9	11.4	17.8
Queue Length 50th (ft)	67	41	0	91	139	54	420	12	216
Queue Length 95th (ft)	107	79	47	137	217	102	600	m30	345
Internal Link Dist (ft)		723			1226		764		1324
Turn Bay Length (ft)	215		215	125		195		205	
Base Capacity (vph)	214	337	377	280	334	316	2247	326	2081
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.12	0.28	0.37	0.51	0.53	0.59	0.16	0.62

Intersection Summary

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

HCM 6th Signalized Intersection Summary
105: Rock Island Rd & SW 7 St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	39	97	95	66	90	154	1142	85	49	1114	78
Future Volume (veh/h)	71	39	97	95	66	90	154	1142	85	49	1114	78
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		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	42	105	103	72	98	167	1241	92	53	1211	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	208	174	268	88	120	335	2129	158	299	2046	143
Arrive On Green	0.05	0.11	0.11	0.06	0.12	0.12	0.07	0.84	0.84	0.03	0.81	0.81
Sat Flow, veh/h	1781	1870	1568	1781	706	961	1781	3353	248	1781	3362	236
Grp Volume(v), veh/h	77	42	105	103	0	170	167	657	676	53	639	657
Grp Sat Flow(s),veh/h/ln	1781	1870	1568	1781	0	1666	1781	1777	1825	1781	1777	1821
Q Serve(g_s), s	6.1	3.3	10.2	8.1	0.0	15.9	5.8	18.1	18.2	1.8	21.0	21.1
Cycle Q Clear(g_c), s	6.1	3.3	10.2	8.1	0.0	15.9	5.8	18.1	18.2	1.8	21.0	21.1
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.14	1.00		0.13
Lane Grp Cap(c), veh/h	163	208	174	268	0	208	335	1128	1159	299	1081	1108
V/C Ratio(X)	0.47	0.20	0.60	0.38	0.00	0.82	0.50	0.58	0.58	0.18	0.59	0.59
Avail Cap(c_a), veh/h	220	339	284	301	0	302	409	1128	1159	420	1081	1108
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	59.6	64.7	67.8	58.0	0.0	68.2	12.4	5.9	6.0	11.8	8.0	8.0
Incr Delay (d2), s/veh	0.8	0.2	1.3	0.3	0.0	7.0	0.4	2.2	2.2	0.1	1.6	1.6
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	2.8	1.6	4.2	3.7	0.0	7.2	2.3	5.1	5.3	0.7	6.2	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.4	64.9	69.0	58.4	0.0	75.3	12.9	8.1	8.1	11.9	9.6	9.6
LnGrp LOS	E	E	E	E	A	E	B	A	A	B	A	A
Approach Vol, veh/h		224			273			1500			1349	
Approach Delay, s/veh		65.3			68.9			8.7			9.7	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	108.1	17.0	24.8	14.3	103.9	14.8	27.0
Change Period (Y+Rc), s	6.5	6.5	7.0	7.0	6.5	6.5	7.0	7.0
Max Green Setting (Gmax), s	14.5	76.5	13.0	29.0	14.5	76.5	13.0	29.0
Max Q Clear Time (g_c+I1), s	3.8	20.2	10.1	12.2	7.8	23.1	8.1	17.9
Green Ext Time (p_c), s	0.0	10.4	0.0	0.3	0.1	9.9	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	115	27	54	216	19	34	23	51	7	15	9
Future Vol, veh/h	15	115	27	54	216	19	34	23	51	7	15	9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	134	31	63	251	22	40	27	59	8	17	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	10.9	9	8.5
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	10%	19%	23%
Vol Thru, %	21%	73%	75%	48%
Vol Right, %	47%	17%	7%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	108	157	289	31
LT Vol	34	15	54	7
Through Vol	23	115	216	15
RT Vol	51	27	19	9
Lane Flow Rate	126	183	336	36
Geometry Grp	1	1	1	1
Degree of Util (X)	0.172	0.235	0.424	0.052
Departure Headway (Hd)	4.941	4.633	4.544	5.168
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	722	772	790	688
Service Time	2.997	2.68	2.586	3.236
HCM Lane V/C Ratio	0.175	0.237	0.425	0.052
HCM Control Delay	9	9.1	10.9	8.5
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.6	0.9	2.1	0.2

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	152	22	26	280	28	32	3	20	11	4	21
Future Vol, veh/h	24	152	22	26	280	28	32	3	20	11	4	21
Conflicting Peds, #/hr	0	0	7	7	0	0	2	0	4	4	0	2
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	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	171	25	29	315	31	36	3	22	12	4	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	346	0	0	203	0	0	650	649	195	643	646	333
Stage 1	-	-	-	-	-	-	245	245	-	389	389	-
Stage 2	-	-	-	-	-	-	405	404	-	254	257	-
Critical Hdwy	4.12	-	-	4.12	-	-	5	5	4.5	5	5	4.5
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	5	5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5	5	-	5	5	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3	3	3	3	3	3
Pot Cap-1 Maneuver	1213	-	-	1369	-	-	630	631	1019	635	633	906
Stage 1	-	-	-	-	-	-	944	944	-	819	819	-
Stage 2	-	-	-	-	-	-	806	806	-	936	933	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1213	-	-	1360	-	-	581	594	1008	592	596	904
Mov Cap-2 Maneuver	-	-	-	-	-	-	581	594	-	592	596	-
Stage 1	-	-	-	-	-	-	914	914	-	799	797	-
Stage 2	-	-	-	-	-	-	758	784	-	886	903	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.6	10.7	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	688	1213	-	-	1360	-	-	742
HCM Lane V/C Ratio	0.09	0.022	-	-	0.021	-	-	0.055
HCM Control Delay (s)	10.7	8	0	-	7.7	0	-	10.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	180	8	9	309	25	42
Future Vol, veh/h	180	8	9	309	25	42
Conflicting Peds, #/hr	0	0	0	0	4	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	202	9	10	347	28	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	211	0	578	207
Stage 1	-	-	-	-	207	-
Stage 2	-	-	-	-	371	-
Critical Hdwy	-	-	4.12	-	5	4.5
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	-	-	2.218	-	3	3
Pot Cap-1 Maneuver	-	-	1360	-	678	1009
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	833	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1360	-	669	1009
Mov Cap-2 Maneuver	-	-	-	-	669	-
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	822	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.4
HCM LOS			A

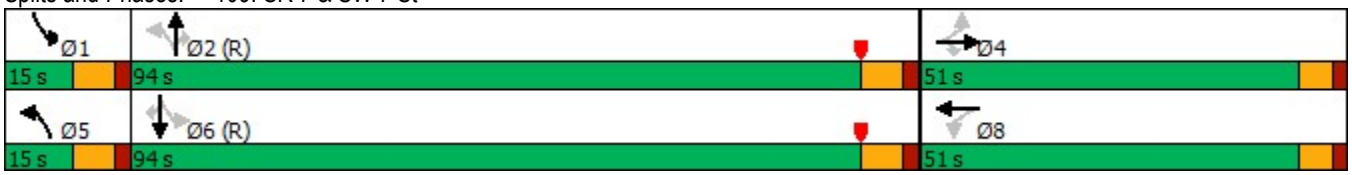
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	669	1009	-	-	1360	-
HCM Lane V/C Ratio	0.042	0.047	-	-	0.007	-
HCM Control Delay (s)	10.6	8.7	-	-	7.7	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-

Timings
109: SR 7 & SW 7 St

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	103	17	116	29	17	199	1729	32	41	1431	129
Future Volume (vph)	103	17	116	29	17	199	1729	32	41	1431	129
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.0	26.0	26.0	45.0	45.0	12.0	27.0	27.0	12.0	27.0	27.0
Total Split (s)	51.0	51.0	51.0	51.0	51.0	15.0	94.0	94.0	15.0	94.0	94.0
Total Split (%)	31.9%	31.9%	31.9%	31.9%	31.9%	9.4%	58.8%	58.8%	9.4%	58.8%	58.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		19.0	19.0		19.0	127.8	118.2	118.2	113.9	108.7	108.7
Actuated g/C Ratio		0.12	0.12		0.12	0.80	0.74	0.74	0.71	0.68	0.68
v/c Ratio		0.78	0.41		0.43	0.63	0.47	0.03	0.21	0.42	0.13
Control Delay		98.1	13.5		61.3	15.7	9.8	0.0	4.5	6.6	2.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		98.1	13.5		61.3	15.7	9.8	0.0	4.5	6.6	2.2
LOS		F	B		E	B	A	A	A	A	A
Approach Delay		56.5			61.3		10.3			6.2	
Approach LOS		E			E		B			A	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 76 (48%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 67.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 109: SR 7 & SW 7 St



Queues
109: SR 7 & SW 7 St

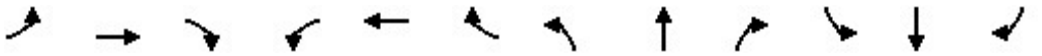


Lane Group	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	122	118	64	203	1764	33	42	1460	132
v/c Ratio	0.78	0.41	0.43	0.63	0.47	0.03	0.21	0.42	0.13
Control Delay	98.1	13.5	61.3	15.7	9.8	0.0	4.5	6.6	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.1	13.5	61.3	15.7	9.8	0.0	4.5	6.6	2.2
Queue Length 50th (ft)	126	0	52	41	261	0	4	106	3
Queue Length 95th (ft)	192	60	99	104	357	1	m7	m141	m7
Internal Link Dist (ft)	972		833		582			1330	
Turn Bay Length (ft)		100		330		105	275		95
Base Capacity (vph)	373	521	336	320	3757	1158	230	3455	1055
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.23	0.19	0.63	0.47	0.03	0.18	0.42	0.13

Intersection Summary

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

HCM 6th Signalized Intersection Summary
109: SR 7 & SW 7 St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	17	116	29	17	17	199	1729	32	41	1431	129
Future Volume (veh/h)	103	17	116	29	17	17	199	1729	32	41	1431	129
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		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	17	118	30	17	17	203	1764	33	42	1460	132
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	192	24	269	67	38	26	324	3461	1049	253	3341	1033
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.07	0.90	0.90	0.04	0.87	0.87
Sat Flow, veh/h	882	143	1577	199	221	152	1781	5106	1547	1781	5106	1579
Grp Volume(v), veh/h	122	0	118	64	0	0	203	1764	33	42	1460	132
Grp Sat Flow(s),veh/h/ln	1025	0	1577	572	0	0	1781	1702	1547	1781	1702	1579
Q Serve(g_s), s	0.0	0.0	10.7	4.1	0.0	0.0	6.2	10.1	0.3	1.2	9.6	2.0
Cycle Q Clear(g_c), s	19.3	0.0	10.7	23.4	0.0	0.0	6.2	10.1	0.3	1.2	9.6	2.0
Prop In Lane	0.86		1.00	0.47		0.27	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	0	269	131	0	0	324	3461	1049	253	3341	1033
V/C Ratio(X)	0.56	0.00	0.44	0.49	0.00	0.00	0.63	0.51	0.03	0.17	0.44	0.13
Avail Cap(c_a), veh/h	374	0	443	292	0	0	324	3461	1049	295	3341	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.19	0.19	0.19
Uniform Delay (d), s/veh	63.0	0.0	59.5	66.2	0.0	0.0	8.5	3.0	2.6	8.4	4.2	3.7
Incr Delay (d2), s/veh	0.9	0.0	0.4	1.1	0.0	0.0	2.8	0.5	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	4.4	2.6	0.0	0.0	2.6	2.5	0.1	0.5	2.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.9	0.0	59.9	67.3	0.0	0.0	11.4	3.6	2.6	8.4	4.3	3.8
LnGrp LOS	E	A	E	E	A	A	B	A	A	A	A	A
Approach Vol, veh/h		240			64			2000			1634	
Approach Delay, s/veh		61.9			67.3			4.3			4.4	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	115.5		33.3	15.0	111.7		33.3				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	8.0	87.0		45.0	8.0	87.0		45.0				
Max Q Clear Time (g_c+I1), s	3.2	12.1		21.3	8.2	11.6		25.4				
Green Ext Time (p_c), s	0.0	25.3		0.6	0.0	18.6		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Timings
110: Kimberly Blvd & Rock Island Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	108	93	79	161	193	99	1040	238	158	1038	142
Future Volume (vph)	108	93	79	161	193	99	1040	238	158	1038	142
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.5	42.0	42.0	11.5	47.5	11.5	44.5	44.5	16.5	44.6	44.6
Total Split (s)	20.0	46.0	46.0	20.0	46.0	16.0	70.0	70.0	24.0	78.0	78.0
Total Split (%)	12.5%	28.8%	28.8%	12.5%	28.8%	10.0%	43.8%	43.8%	15.0%	48.8%	48.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	29.2	17.3	17.3	32.4	18.9	98.2	90.8	90.8	109.1	96.8	96.8
Actuated g/C Ratio	0.18	0.11	0.11	0.20	0.12	0.61	0.57	0.57	0.68	0.60	0.60
v/c Ratio	0.66	0.50	0.28	0.66	0.84	0.37	0.56	0.27	0.52	0.53	0.16
Control Delay	66.9	74.3	2.4	64.2	57.2	13.8	25.3	9.5	15.2	20.7	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.9	74.3	2.4	64.2	57.2	13.8	25.3	9.5	15.2	20.7	6.1
LOS	E	E	A	E	E	B	C	A	B	C	A
Approach Delay		51.1			59.2		21.7			18.5	
Approach LOS		D			E		C			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 63 (39%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 28.8	Intersection LOS: C
Intersection Capacity Utilization 81.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 110: Kimberly Blvd & Rock Island Road



Queues
110: Kimberly Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	117	101	86	175	439	108	1130	259	172	1128	154
v/c Ratio	0.66	0.50	0.28	0.66	0.84	0.37	0.56	0.27	0.52	0.53	0.16
Control Delay	66.9	74.3	2.4	64.2	57.2	13.8	25.3	9.5	15.2	20.7	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.9	74.3	2.4	64.2	57.2	13.8	25.3	9.5	15.2	20.7	6.1
Queue Length 50th (ft)	101	101	0	157	153	35	389	52	59	351	20
Queue Length 95th (ft)	152	157	0	219	208	68	560	131	104	486	62
Internal Link Dist (ft)		387			3410		622			1269	
Turn Bay Length (ft)	250		250	200		280		150	240		160
Base Capacity (vph)	201	465	498	272	927	318	2009	943	377	2140	971
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.22	0.17	0.64	0.47	0.34	0.56	0.27	0.46	0.53	0.16

Intersection Summary

HCM 6th Signalized Intersection Summary
110: Kimberly Blvd & Rock Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	93	79	161	193	211	99	1040	238	158	1038	142
Future Volume (veh/h)	108	93	79	161	193	211	99	1040	238	158	1038	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	117	101	86	175	210	229	108	1130	259	172	1128	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	313	256	342	335	289	289	1888	834	292	1950	854
Arrive On Green	0.07	0.17	0.17	0.09	0.19	0.19	0.05	0.71	0.71	0.08	0.73	0.73
Sat Flow, veh/h	1781	1870	1527	1781	1777	1533	1781	3554	1570	1781	3554	1556
Grp Volume(v), veh/h	117	101	86	175	210	229	108	1130	259	172	1128	154
Grp Sat Flow(s),veh/h/ln	1781	1870	1527	1781	1777	1533	1781	1777	1570	1781	1777	1556
Q Serve(g_s), s	8.6	7.6	7.9	13.0	17.4	22.8	4.5	25.9	9.9	7.1	23.7	4.9
Cycle Q Clear(g_c), s	8.6	7.6	7.9	13.0	17.4	22.8	4.5	25.9	9.9	7.1	23.7	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	313	256	342	335	289	289	1888	834	292	1950	854
V/C Ratio(X)	0.57	0.32	0.34	0.51	0.63	0.79	0.37	0.60	0.31	0.59	0.58	0.18
Avail Cap(c_a), veh/h	244	468	382	342	444	383	323	1888	834	384	1950	854
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	58.6	58.8	49.5	59.7	61.9	17.2	14.8	12.5	18.3	13.0	10.4
Incr Delay (d2), s/veh	0.9	0.2	0.3	0.6	0.7	5.8	0.3	1.4	1.0	0.7	1.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	3.7	3.1	5.9	8.0	9.4	1.8	9.4	3.5	2.9	8.3	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	58.9	59.1	50.0	60.4	67.7	17.5	16.2	13.4	19.0	14.2	10.9
LnGrp LOS	D	E	E	D	E	E	B	B	B	B	B	B
Approach Vol, veh/h		304			614			1497			1454	
Approach Delay, s/veh		56.5			60.2			15.8			14.4	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	91.5	20.0	32.8	12.9	94.3	16.6	36.2
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	17.5	63.5	14.0	40.0	9.5	71.5	14.0	40.0
Max Q Clear Time (g_c+I1), s	9.1	27.9	15.0	9.9	6.5	25.7	10.6	24.8
Green Ext Time (p_c), s	0.1	12.0	0.0	0.5	0.0	12.0	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	455	482	288	82
Demand Flow Rate, veh/h	463	491	293	85
Vehicles Circulating, veh/h	72	275	379	621
Vehicles Exiting, veh/h	633	397	156	145
Ped Vol Crossing Leg, #/h	0	5	1	11
Ped Cap Adj	1.000	0.999	1.000	0.998
Approach Delay, s/veh	6.3	9.0	7.2	6.3
Approach LOS	A	A	A	A

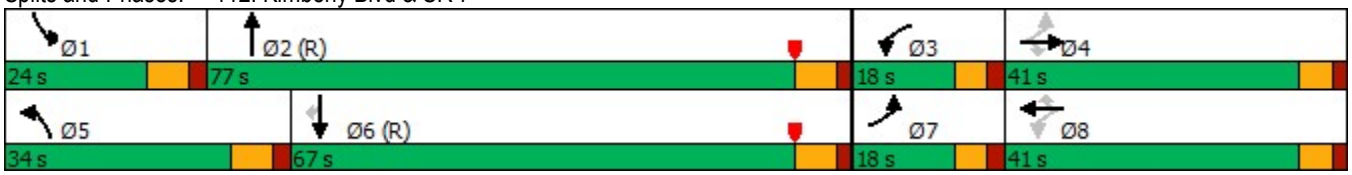
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	463	491	293	85
Cap Entry Lane, veh/h	1282	1042	937	732
Entry HV Adj Factor	0.982	0.981	0.981	0.970
Flow Entry, veh/h	455	482	288	82
Cap Entry, veh/h	1259	1022	920	709
V/C Ratio	0.361	0.471	0.313	0.116
Control Delay, s/veh	6.3	9.0	7.2	6.3
LOS	A	A	A	A
95th %tile Queue, veh	2	3	1	0

Timings
112: Kimberly Blvd & SR 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	147	63	229	132	56	55	286	1836	82	1373	157
Future Volume (vph)	147	63	229	132	56	55	286	1836	82	1373	157
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	38.0	38.0	11.0	40.0	40.0	12.0	40.0	12.0	40.0	40.0
Total Split (s)	18.0	41.0	41.0	18.0	41.0	41.0	34.0	77.0	24.0	67.0	67.0
Total Split (%)	11.3%	25.6%	25.6%	11.3%	25.6%	25.6%	21.3%	48.1%	15.0%	41.9%	41.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max	C-Max
Act Effct Green (s)	22.3	10.6	10.6	21.9	10.4	10.4	34.8	100.3	11.6	77.1	77.1
Actuated g/C Ratio	0.14	0.07	0.07	0.14	0.06	0.06	0.22	0.63	0.07	0.48	0.48
v/c Ratio	0.72	0.54	0.74	0.65	0.48	0.23	0.78	0.67	0.66	0.58	0.21
Control Delay	79.1	87.1	21.5	73.5	84.1	2.1	74.8	17.1	95.6	32.0	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.1	87.1	21.5	73.5	84.1	2.1	74.8	17.1	95.6	32.0	4.9
LOS	E	F	C	E	F	A	E	B	F	C	A
Approach Delay		50.2			59.8			24.3		32.6	
Approach LOS		D			E			C		C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 142 (89%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 31.6	Intersection LOS: C
Intersection Capacity Utilization 83.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 112: Kimberly Blvd & SR 7



Queues
112: Kimberly Blvd & SR 7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	153	66	239	138	58	57	298	2099	85	1430	164
v/c Ratio	0.72	0.54	0.74	0.65	0.48	0.23	0.78	0.67	0.66	0.58	0.21
Control Delay	79.1	87.1	21.5	73.5	84.1	2.1	74.8	17.1	95.6	32.0	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.1	87.1	21.5	73.5	84.1	2.1	74.8	17.1	95.6	32.0	4.9
Queue Length 50th (ft)	147	68	0	131	60	0	317	252	88	389	4
Queue Length 95th (ft)	215	119	90	195	107	0	399	368	146	494	52
Internal Link Dist (ft)		1738			1039			1330		793	
Turn Bay Length (ft)	175			110		110	325		330		235
Base Capacity (vph)	216	407	526	219	407	457	384	3142	188	2450	793
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.16	0.45	0.63	0.14	0.12	0.78	0.67	0.45	0.58	0.21

Intersection Summary

HCM 6th Signalized Intersection Summary
112: Kimberly Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	63	229	132	56	55	286	1836	179	82	1373	157
Future Volume (veh/h)	147	63	229	132	56	55	286	1836	179	82	1373	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.95	0.97		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	153	66	239	138	58	57	298	1912	186	85	1430	164
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	381	357	286	346	355	288	301	2424	234	104	2061	611
Arrive On Green	0.08	0.19	0.19	0.07	0.19	0.19	0.22	0.68	0.68	0.08	0.54	0.54
Sat Flow, veh/h	1781	1870	1498	1781	1870	1517	1781	4715	455	1781	5106	1514
Grp Volume(v), veh/h	153	66	239	138	58	57	298	1376	722	85	1430	164
Grp Sat Flow(s),veh/h/ln	1781	1870	1498	1781	1870	1517	1781	1702	1766	1781	1702	1514
Q Serve(g_s), s	11.0	4.7	24.6	9.9	4.1	5.1	26.7	44.2	45.3	7.5	33.1	9.4
Cycle Q Clear(g_c), s	11.0	4.7	24.6	9.9	4.1	5.1	26.7	44.2	45.3	7.5	33.1	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	381	357	286	346	355	288	301	1750	908	104	2061	611
V/C Ratio(X)	0.40	0.18	0.84	0.40	0.16	0.20	0.99	0.79	0.79	0.82	0.69	0.27
Avail Cap(c_a), veh/h	381	409	328	347	409	332	301	1750	908	189	2061	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	54.3	62.3	47.0	54.2	54.5	61.9	19.3	19.4	73.0	29.7	24.3
Incr Delay (d2), s/veh	0.3	0.1	13.6	0.3	0.1	0.1	40.7	2.5	5.0	5.8	1.9	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	5.0	2.3	10.5	4.5	2.0	2.0	15.1	15.8	17.4	3.6	13.1	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	54.4	75.9	47.3	54.2	54.7	102.6	21.8	24.5	78.8	31.7	25.3
LnGrp LOS	D	D	E	D	D	D	F	C	C	E	C	C
Approach Vol, veh/h		458			253			2396			1679	
Approach Delay, s/veh		63.3			50.6			32.7			33.5	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	89.3	17.9	36.5	34.0	71.6	18.0	36.4
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	17.0	70.0	12.0	35.0	27.0	60.0	12.0	35.0
Max Q Clear Time (g_c+I1), s	9.5	47.3	11.9	26.6	28.7	35.1	13.0	7.1
Green Ext Time (p_c), s	0.0	16.6	0.0	0.5	0.0	12.8	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	36.8
HCM 6th LOS	D

Timings
113: SR 7 & Blvd of Champions

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	309	0	268	8	3	267	1953	11	43	1499	154
Future Volume (vph)	309	0	268	8	3	267	1953	11	43	1499	154
Turn Type	Split	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			3	5	2		1	6	
Permitted Phases			4	3				2			6
Detector Phase	4	4	4	3	3	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	47.5	47.5	12.0	43.0	43.0	12.0	43.0	43.0
Total Split (s)	19.0	19.0	19.0	50.0	50.0	25.0	76.0	76.0	15.0	66.0	66.0
Total Split (%)	11.9%	11.9%	11.9%	31.3%	31.3%	15.6%	47.5%	47.5%	9.4%	41.3%	41.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	27.4	27.4	27.4		7.7	17.8	100.1	100.1	8.4	88.3	88.3
Actuated g/C Ratio	0.17	0.17	0.17		0.05	0.11	0.63	0.63	0.05	0.55	0.55
v/c Ratio	0.58	0.22	0.22		0.17	0.78	0.68	0.01	0.52	0.59	0.18
Control Delay	66.1	0.7	0.7		72.9	92.3	16.4	0.0	89.3	14.5	0.6
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.1	0.7	0.7		72.9	92.3	16.4	0.0	89.3	14.5	0.6
LOS	E	A	A		E	F	B	A	F	B	A
Approach Delay		35.7			72.9		25.4			15.1	
Approach LOS		D			E		C			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 153 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 23.0	Intersection LOS: C
Intersection Capacity Utilization 70.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 113: SR 7 & Blvd of Champions



Queues
113: SR 7 & Blvd of Champions



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	343	149	149	13	297	2170	12	48	1666	171
v/c Ratio	0.58	0.22	0.22	0.17	0.78	0.68	0.01	0.52	0.59	0.18
Control Delay	66.1	0.7	0.7	72.9	92.3	16.4	0.0	89.3	14.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.1	0.7	0.7	72.9	92.3	16.4	0.0	89.3	14.5	0.6
Queue Length 50th (ft)	175	0	0	12	143	595	0	52	167	1
Queue Length 95th (ft)	228	0	0	37	187	848	m0	m92	210	5
Internal Link Dist (ft)		446		833		1028			1330	
Turn Bay Length (ft)	170		300		300		160	160		425
Base Capacity (vph)	587	678	678	435	412	3182	1001	101	2807	930
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.22	0.22	0.03	0.72	0.68	0.01	0.48	0.59	0.18

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	309	0	268	8	3	1	267	1953	11	43	1499	154
Future Volume (vph)	309	0	268	8	3	1	267	1953	11	43	1499	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.5		7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95		1.00		0.97	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	0.85		0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.97		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1504	1504		1780		3433	5085	1533	1770	5085	1548
Flt Permitted	0.95	1.00	1.00		0.87		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1504	1504		1598		3433	5085	1533	1770	5085	1548
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	343	0	298	9	3	1	297	2170	12	48	1666	171
RTOR Reduction (vph)	0	123	123	0	1	0	0	0	5	0	0	81
Lane Group Flow (vph)	343	26	26	0	12	0	297	2170	7	48	1666	90
Confl. Peds. (#/hr)	2					2	6		5	5		6
Confl. Bikes (#/hr)									1			6
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			3		5	2		1	6	
Permitted Phases			4	3					2			6
Actuated Green, G (s)	27.4	27.4	27.4		3.9		17.8	94.8	94.8	7.4	84.4	84.4
Effective Green, g (s)	27.4	27.4	27.4		3.9		17.8	94.8	94.8	7.4	84.4	84.4
Actuated g/C Ratio	0.17	0.17	0.17		0.02		0.11	0.59	0.59	0.05	0.53	0.53
Clearance Time (s)	6.0	6.0	6.0		6.5		7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	2.2	2.2	2.2		2.2		1.5	3.0	3.0	1.5	3.0	3.0
Lane Grp Cap (vph)	587	257	257		38		381	3012	908	81	2682	816
v/s Ratio Prot	c0.10	0.02					c0.09	c0.43		0.03	0.33	
v/s Ratio Perm			0.02		c0.01				0.00			0.06
v/c Ratio	0.58	0.10	0.10		0.32		0.78	0.72	0.01	0.59	0.62	0.11
Uniform Delay, d1	61.1	55.9	55.9		76.7		69.2	23.2	13.3	74.8	26.6	19.0
Progression Factor	1.00	1.00	1.00		1.00		1.16	0.71	1.00	0.99	0.54	0.09
Incremental Delay, d2	1.1	0.1	0.1		2.4		7.5	1.3	0.0	6.4	0.9	0.2
Delay (s)	62.1	56.0	56.0		79.2		88.0	17.8	13.4	80.7	15.2	1.9
Level of Service	E	E	E		E		F	B	B	F	B	A
Approach Delay (s)		59.3			79.2			26.2			15.7	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.5
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Timings
114: Broadview Blvd & SR 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	85	23	50	61	0	166	82	1928	76	258	1421
Future Volume (vph)	85	23	50	61	0	166	82	1928	76	258	1421
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	2		1	6
Permitted Phases			4			3			2		
Detector Phase	4	4	4	3	3	3	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.0	47.0	47.0	47.0	12.0	40.0	40.0	12.0	40.0
Total Split (s)	29.0	29.0	29.0	47.0	47.0	47.0	28.0	56.0	56.0	28.0	56.0
Total Split (%)	18.1%	18.1%	18.1%	29.4%	29.4%	29.4%	17.5%	35.0%	35.0%	17.5%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	8.6	8.6	8.6	8.5	8.5	8.5	11.8	99.8	99.8	17.1	105.1
Actuated g/C Ratio	0.05	0.05	0.05	0.05	0.05	0.05	0.07	0.62	0.62	0.11	0.66
v/c Ratio	0.49	0.24	0.27	0.36	0.37	0.71	0.67	0.65	0.08	0.75	0.50
Control Delay	82.1	77.4	3.4	83.1	83.7	24.6	95.8	21.2	1.3	51.0	32.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.1	77.4	3.4	83.1	83.7	24.6	95.8	21.2	1.3	51.0	32.1
LOS	F	E	A	F	F	C	F	C	A	D	C
Approach Delay		56.4			40.4			23.4			34.8
Approach LOS		E			D			C			C

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 114 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 30.3	Intersection LOS: C
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 114: Broadview Blvd & SR 7



Queues
114: Broadview Blvd & SR 7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	90	24	53	32	33	177	87	2051	81	274	1638
v/c Ratio	0.49	0.24	0.27	0.36	0.37	0.71	0.67	0.65	0.08	0.75	0.50
Control Delay	82.1	77.4	3.4	83.1	83.7	24.6	95.8	21.2	1.3	51.0	32.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.1	77.4	3.4	83.1	83.7	24.6	95.8	21.2	1.3	51.0	32.1
Queue Length 50th (ft)	47	25	0	34	35	0	90	466	0	146	462
Queue Length 95th (ft)	78	57	0	72	74	79	149	639	13	175	589
Internal Link Dist (ft)		559			661			481			1028
Turn Bay Length (ft)	160		260	270		260	270		150	290	
Base Capacity (vph)	493	267	326	430	430	537	232	3172	1013	453	3296
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.09	0.16	0.07	0.08	0.33	0.38	0.65	0.08	0.60	0.50

Intersection Summary

HCM Signalized Intersection Capacity Analysis
114: Broadview Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	23	50	61	0	166	82	1928	76	258	1421	118
Future Volume (vph)	85	23	50	61	0	166	82	1928	76	258	1421	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1863	1583	1681	1681	1583	1770	5085	1560	3433	5015	
Flt Permitted	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	1863	1583	1681	1681	1583	1770	5085	1560	3433	5015	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	90	24	53	65	0	177	87	2051	81	274	1512	126
RTOR Reduction (vph)	0	0	50	0	0	168	0	0	30	0	3	0
Lane Group Flow (vph)	90	24	3	32	33	9	87	2051	51	274	1635	0
Confl. Peds. (#/hr)							3		1	1		3
Confl. Bikes (#/hr)									3			3
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3			2			
Actuated Green, G (s)	8.6	8.6	8.6	8.5	8.5	8.5	11.8	99.8	99.8	17.1	105.1	
Effective Green, g (s)	8.6	8.6	8.6	8.5	8.5	8.5	11.8	99.8	99.8	17.1	105.1	
Actuated g/C Ratio	0.05	0.05	0.05	0.05	0.05	0.05	0.07	0.62	0.62	0.11	0.66	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	184	100	85	89	89	84	130	3171	973	366	3294	
v/s Ratio Prot	c0.03	0.01		0.02	c0.02		0.05	c0.40		c0.08	c0.33	
v/s Ratio Perm			0.00			0.01			0.03			
v/c Ratio	0.49	0.24	0.03	0.36	0.37	0.11	0.67	0.65	0.05	0.75	0.50	
Uniform Delay, d1	73.6	72.6	71.8	73.1	73.2	72.2	72.2	19.0	11.7	69.4	14.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.57	2.12	
Incremental Delay, d2	0.7	0.5	0.1	0.9	1.0	0.2	9.7	1.0	0.1	6.2	0.5	
Delay (s)	74.3	73.0	71.8	74.0	74.1	72.4	81.9	20.0	11.8	46.0	30.1	
Level of Service	E	E	E	E	E	E	F	C	B	D	C	
Approach Delay (s)		73.3			72.8			22.1			32.4	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	55	0	1979	1574	9
Future Vol, veh/h	0	55	0	1979	1574	9
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	-	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	56	0	1999	1590	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	795	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	4.5	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3	-	-	-	-
Pot Cap-1 Maneuver	0	608	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	608	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	608	-	-
HCM Lane V/C Ratio	-	0.091	-	-
HCM Control Delay (s)	-	11.5	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

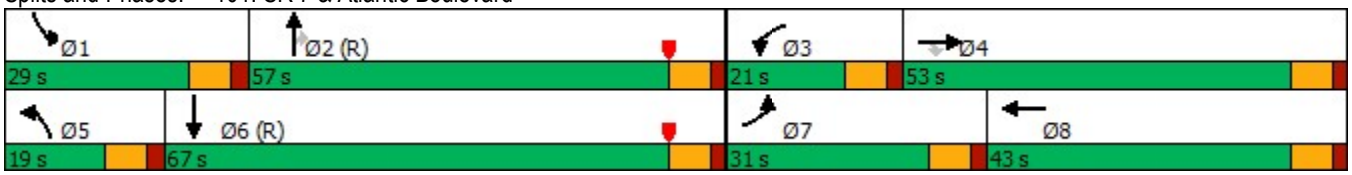
Future (2026) Total SYNCHRO Output

Timings
101: SR 7 & Atlantic Boulevard

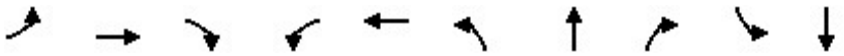
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	384	1424	233	366	703	91	1529	634	275	1352
Future Volume (vph)	384	1424	233	366	703	91	1529	634	275	1352
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	11.0	47.0	47.0	11.0	43.0	12.0	50.0	50.0	12.0	50.0
Total Split (s)	31.0	53.0	53.0	21.0	43.0	19.0	57.0	57.0	29.0	67.0
Total Split (%)	19.4%	33.1%	33.1%	13.1%	26.9%	11.9%	35.6%	35.6%	18.1%	41.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	21.3	46.0	46.0	14.0	38.7	10.8	50.0	50.0	22.0	61.2
Actuated g/C Ratio	0.13	0.29	0.29	0.09	0.24	0.07	0.31	0.31	0.14	0.38
v/c Ratio	0.86	0.99	0.42	1.24	0.69	0.78	0.98	1.00	1.16	0.79
Control Delay	86.3	78.5	15.9	190.7	57.9	103.4	52.9	49.6	164.4	47.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.3	78.5	15.9	190.7	57.9	103.4	52.9	49.6	164.4	47.4
LOS	F	E	B	F	E	F	D	D	F	D
Approach Delay		72.8			98.6		54.0			65.6
Approach LOS		E			F		D			E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 115 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay: 69.4	Intersection LOS: E
Intersection Capacity Utilization 115.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 101: SR 7 & Atlantic Boulevard



Queues
101: SR 7 & Atlantic Boulevard



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	392	1453	238	373	843	93	1560	647	281	1526
v/c Ratio	0.86	0.99	0.42	1.24	0.69	0.78	0.98	1.00	1.16	0.79
Control Delay	86.3	78.5	15.9	190.7	57.9	103.4	52.9	49.6	164.4	47.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.3	78.5	15.9	190.7	57.9	103.4	52.9	49.6	164.4	47.4
Queue Length 50th (ft)	208	558	53	~248	292	89	563	421	~345	520
Queue Length 95th (ft)	266	#669	134	#359	350	m114	m#687	m#705	#540	583
Internal Link Dist (ft)		2560			1156		2623			1036
Turn Bay Length (ft)	280		330	525		400		270	395	
Base Capacity (vph)	514	1461	562	300	1213	132	1589	647	243	1922
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.99	0.42	1.24	0.69	0.70	0.98	1.00	1.16	0.79

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

HCM 6th Signalized Intersection Summary
101: SR 7 & Atlantic Boulevard

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	384	1424	233	366	703	123	91	1529	634	275	1352	143
Future Volume (veh/h)	384	1424	233	366	703	123	91	1529	634	275	1352	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	392	1453	238	373	717	126	93	1560	647	281	1380	146
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	435	1468	447	302	1084	188	112	1596	483	245	1810	192
Arrive On Green	0.13	0.29	0.29	0.09	0.25	0.25	0.08	0.42	0.42	0.18	0.51	0.51
Sat Flow, veh/h	3456	5106	1555	3456	4351	755	1781	5106	1546	1781	4677	495
Grp Volume(v), veh/h	392	1453	238	373	559	284	93	1560	647	281	1004	522
Grp Sat Flow(s),veh/h/ln	1728	1702	1555	1728	1702	1702	1781	1702	1546	1781	1702	1768
Q Serve(g_s), s	17.9	45.3	20.6	14.0	23.6	24.1	8.2	48.1	50.0	22.0	37.7	37.7
Cycle Q Clear(g_c), s	17.9	45.3	20.6	14.0	23.6	24.1	8.2	48.1	50.0	22.0	37.7	37.7
Prop In Lane	1.00		1.00	1.00		0.44	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	435	1468	447	302	848	424	112	1596	483	245	1318	684
V/C Ratio(X)	0.90	0.99	0.53	1.23	0.66	0.67	0.83	0.98	1.34	1.15	0.76	0.76
Avail Cap(c_a), veh/h	518	1468	447	302	848	424	134	1596	483	245	1318	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.44	0.44	0.44	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.9	56.8	48.0	73.0	54.0	54.1	72.5	46.2	46.8	65.4	32.9	32.9
Incr Delay (d2), s/veh	15.4	21.0	1.0	130.4	1.7	3.7	13.0	10.6	159.0	103.1	4.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	22.3	8.2	11.7	10.4	10.8	4.1	20.9	39.6	16.7	15.4	16.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.4	77.7	48.9	203.4	55.7	57.9	85.4	56.8	205.8	168.5	37.2	40.8
LnGrp LOS	F	E	D	F	E	E	F	E	F	F	D	D
Approach Vol, veh/h		2083			1216			2300			1807	
Approach Delay, s/veh		75.7			101.5			99.9			58.6	
Approach LOS		E			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	57.0	21.0	53.0	17.1	68.9	27.1	46.9
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	22.0	50.0	14.0	46.0	12.0	60.0	24.0	36.0
Max Q Clear Time (g_c+I1), s	24.0	52.0	16.0	47.3	10.2	39.7	19.9	26.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	11.1	0.2	3.4

Intersection Summary	
HCM 6th Ctrl Delay	83.3
HCM 6th LOS	F

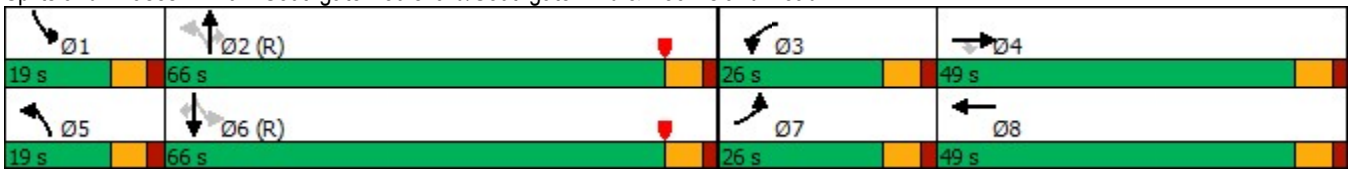
Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	490	788	193	77	534	172	999	180	226	872	508
Future Volume (vph)	490	788	193	77	534	172	999	180	226	872	508
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4			2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	4.0	12.0	12.0	4.0	12.0	12.0
Minimum Split (s)	11.5	36.5	36.5	11.5	47.5	10.5	44.5	44.5	10.5	44.5	44.5
Total Split (s)	26.0	49.0	49.0	26.0	49.0	19.0	66.0	66.0	19.0	66.0	66.0
Total Split (%)	16.3%	30.6%	30.6%	16.3%	30.6%	11.9%	41.3%	41.3%	11.9%	41.3%	41.3%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	19.5	49.7	49.7	11.2	41.5	71.1	59.5	59.5	74.5	61.4	61.4
Actuated g/C Ratio	0.12	0.31	0.31	0.07	0.26	0.44	0.37	0.37	0.47	0.38	0.38
v/c Ratio	1.23	0.75	0.36	0.65	0.95	0.74	0.80	0.28	1.10	0.68	0.66
Control Delay	179.8	55.2	21.0	93.9	52.9	51.3	67.0	28.1	124.7	44.5	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	179.8	55.2	21.0	93.9	52.9	51.3	67.0	28.1	124.7	44.5	18.6
LOS	F	E	C	F	D	D	E	C	F	D	B
Approach Delay		92.2			56.4		59.8			47.6	
Approach LOS		F			E		E			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 60 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 64.5	Intersection LOS: E
Intersection Capacity Utilization 103.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Queues
102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	516	829	203	81	864	181	1052	189	238	918	535
v/c Ratio	1.23	0.75	0.36	0.65	0.95	0.74	0.80	0.28	1.10	0.68	0.66
Control Delay	179.8	55.2	21.0	93.9	52.9	51.3	67.0	28.1	124.7	44.5	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	179.8	55.2	21.0	93.9	52.9	51.3	67.0	28.1	124.7	44.5	18.6
Queue Length 50th (ft)	~342	408	70	70	411	154	610	95	~222	427	173
Queue Length 95th (ft)	#463	512	152	m100	m#472	m#231	675	m175	#407	507	315
Internal Link Dist (ft)		387			3410		1324			1269	
Turn Bay Length (ft)	315		140	315		350			180		190
Base Capacity (vph)	418	1100	559	215	935	253	1316	665	217	1358	806
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.75	0.36	0.38	0.92	0.72	0.80	0.28	1.10	0.68	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

HCM 6th Signalized Intersection Summary
102: Southgate Boulevard/Southgate Blvd & Rock Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	490	788	193	77	534	287	172	999	180	226	872	508
Future Volume (veh/h)	490	788	193	77	534	287	172	999	180	226	872	508
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	516	829	203	81	562	302	181	1052	0	238	918	535
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	421	1169	512	100	587	315	246	1330		253	1340	595
Arrive On Green	0.12	0.33	0.33	0.06	0.26	0.26	0.10	0.50	0.00	0.10	0.50	0.50
Sat Flow, veh/h	3456	3554	1557	1781	2231	1197	1781	3554	1585	1781	3554	1577
Grp Volume(v), veh/h	516	829	203	81	447	417	181	1052	0	238	918	535
Grp Sat Flow(s),veh/h/ln	1728	1777	1557	1781	1777	1652	1781	1777	1585	1781	1777	1577
Q Serve(g_s), s	19.5	32.7	16.1	7.2	39.7	39.8	10.1	39.2	0.0	12.5	31.4	49.3
Cycle Q Clear(g_c), s	19.5	32.7	16.1	7.2	39.7	39.8	10.1	39.2	0.0	12.5	31.4	49.3
Prop In Lane	1.00		1.00	1.00		0.73	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1169	512	100	468	435	246	1330		253	1340	595
V/C Ratio(X)	1.23	0.71	0.40	0.81	0.96	0.96	0.74	0.79		0.94	0.69	0.90
Avail Cap(c_a), veh/h	421	1169	512	217	472	439	250	1330		253	1340	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.70	0.70	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	47.0	41.4	74.7	58.1	58.1	31.9	35.0	0.0	37.9	32.7	37.1
Incr Delay (d2), s/veh	120.8	1.7	0.2	5.8	30.2	32.0	6.7	3.5	0.0	39.7	2.9	19.1
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	15.7	14.8	6.3	3.5	21.8	20.5	4.7	16.7	0.0	8.5	13.3	21.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	191.1	48.7	41.6	80.4	88.3	90.0	38.6	38.4	0.0	77.6	35.5	56.2
LnGrp LOS	F	D	D	F	F	F	D	D		E	D	E
Approach Vol, veh/h		1548			945			1233			1691	
Approach Delay, s/veh		95.2			88.4			38.5			48.0	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	66.4	15.5	59.1	18.6	66.8	26.0	48.6
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	12.5	59.5	19.5	42.5	12.5	59.5	19.5	42.5
Max Q Clear Time (g_c+I1), s	14.5	41.2	9.2	34.7	12.1	51.3	21.5	41.8
Green Ext Time (p_c), s	0.0	7.4	0.0	2.9	0.0	5.1	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	66.4
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

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	2	1126	19	12	668	5	30	0	62	18	3	5
Future Vol, veh/h	2	1126	19	12	668	5	30	0	62	18	3	5
Conflicting Peds, #/hr	4	0	5	5	0	4	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	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1224	21	13	726	5	33	0	67	20	3	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	735	0	0	1250	0	0	1635	2005	628	1375	2013	370
Stage 1	-	-	-	-	-	-	1244	1244	-	759	759	-
Stage 2	-	-	-	-	-	-	391	761	-	616	1254	-
Critical Hdwy	4.14	-	-	4.14	-	-	5	5	4.5	5	5	4.5
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	5	5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5	5	-	5	5	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3	3	3	3	3	3
Pot Cap-1 Maneuver	866	-	-	553	-	-	227	152	703	299	151	878
Stage 1	-	-	-	-	-	-	342	342	-	564	564	-
Stage 2	-	-	-	-	-	-	817	563	-	652	339	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	863	-	-	550	-	-	214	144	700	260	143	875
Mov Cap-2 Maneuver	-	-	-	-	-	-	214	144	-	260	143	-
Stage 1	-	-	-	-	-	-	340	340	-	561	539	-
Stage 2	-	-	-	-	-	-	775	538	-	588	337	-

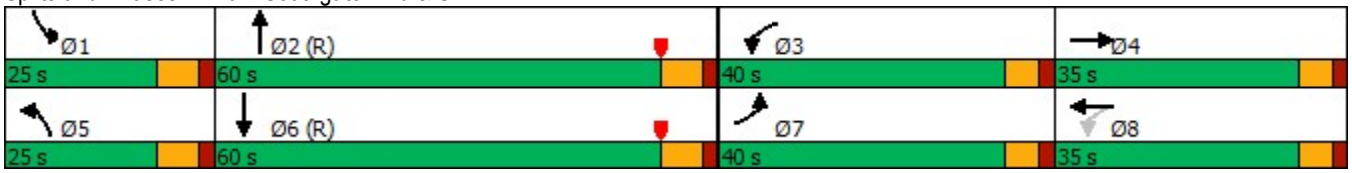
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	16.9	19.8
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	402	863	-	-	550	-	-	271
HCM Lane V/C Ratio	0.249	0.003	-	-	0.024	-	-	0.104
HCM Control Delay (s)	16.9	9.2	-	-	11.7	0.2	-	19.8
HCM Lane LOS	C	A	-	-	B	A	-	C
HCM 95th %tile Q(veh)	1	0	-	-	0.1	-	-	0.3

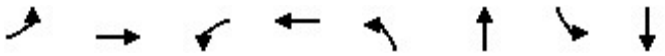
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	685	127	66	67	191	1523	61	1363
Future Volume (vph)	685	127	66	67	191	1523	61	1363
Turn Type	Prot	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases			8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	6.0	4.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	11.0	35.0	10.0	35.0	12.0	37.0	12.0	38.0
Total Split (s)	40.0	35.0	40.0	35.0	25.0	60.0	25.0	60.0
Total Split (%)	25.0%	21.9%	25.0%	21.9%	15.6%	37.5%	15.6%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	33.6	55.4	36.9	29.3	13.0	64.0	9.5	58.1
Actuated g/C Ratio	0.21	0.35	0.23	0.18	0.08	0.40	0.06	0.36
v/c Ratio	0.97	0.74	0.28	0.62	0.70	0.78	0.59	0.99
Control Delay	85.7	29.0	33.6	51.5	88.2	41.6	121.3	51.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.7	29.0	33.6	51.5	88.2	41.6	121.3	51.7
LOS	F	C	C	D	F	D	F	D
Approach Delay		63.5		47.3		46.7		54.0
Approach LOS		E		D		D		D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 24 (15%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 53.2	Intersection LOS: D
Intersection Capacity Utilization 96.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 104: Southgate Blvd & SR 7



Queues
104: Southgate Blvd & SR 7



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	699	450	67	218	195	1578	62	1793
v/c Ratio	0.97	0.74	0.28	0.62	0.70	0.78	0.59	0.99
Control Delay	85.7	29.0	33.6	51.5	88.2	41.6	121.3	51.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.7	29.0	33.6	51.5	88.2	41.6	121.3	51.7
Queue Length 50th (ft)	280	257	41	154	108	350	68	709
Queue Length 95th (ft)	m#455	m312	75	250	153	465	m81	m#777
Internal Link Dist (ft)		1738		1039		1330		2623
Turn Bay Length (ft)	125		205		235		215	
Base Capacity (vph)	729	610	530	353	386	2029	199	1808
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.74	0.13	0.62	0.51	0.78	0.31	0.99

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
104: Southgate Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	685	127	314	66	67	147	191	1523	24	61	1363	394
Future Volume (veh/h)	685	127	314	66	67	147	191	1523	24	61	1363	394
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	0.99		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	699	130	320	67	68	150	195	1554	24	62	1391	402
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	734	156	384	190	81	178	238	2193	34	78	1569	451
Arrive On Green	0.21	0.33	0.33	0.04	0.16	0.16	0.09	0.56	0.56	0.06	0.53	0.53
Sat Flow, veh/h	3456	476	1171	1781	512	1129	3456	5180	80	1781	3936	1132
Grp Volume(v), veh/h	699	0	450	67	0	218	195	1021	557	62	1202	591
Grp Sat Flow(s),veh/h/ln	1728	0	1647	1781	0	1641	1728	1702	1856	1781	1702	1664
Q Serve(g_s), s	32.0	0.0	40.4	5.0	0.0	20.6	8.9	34.9	34.9	5.5	50.0	50.6
Cycle Q Clear(g_c), s	32.0	0.0	40.4	5.0	0.0	20.6	8.9	34.9	34.9	5.5	50.0	50.6
Prop In Lane	1.00		0.71	1.00		0.69	1.00		0.04	1.00		0.68
Lane Grp Cap(c), veh/h	734	0	540	190	0	259	238	1441	786	78	1357	663
V/C Ratio(X)	0.95	0.00	0.83	0.35	0.00	0.84	0.82	0.71	0.71	0.79	0.89	0.89
Avail Cap(c_a), veh/h	734	0	540	494	0	297	389	1441	786	200	1357	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.88	0.88	0.88	0.45	0.45	0.45
Uniform Delay (d), s/veh	62.2	0.0	49.7	53.8	0.0	65.4	71.7	27.8	27.8	74.6	34.3	34.5
Incr Delay (d2), s/veh	22.1	0.0	10.1	0.4	0.0	15.5	2.5	2.6	4.7	3.0	4.3	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.3	0.0	18.2	2.3	0.0	9.8	4.0	13.8	15.5	2.6	20.1	20.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.3	0.0	59.8	54.3	0.0	80.9	74.2	30.4	32.5	77.6	38.6	43.0
LnGrp LOS	F	A	E	D	A	F	E	C	C	E	D	D
Approach Vol, veh/h		1149			285			1773			1855	
Approach Delay, s/veh		74.7			74.7			35.9			41.3	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	74.8	12.7	58.5	18.0	70.8	40.0	31.2
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	18.0	53.0	34.0	29.0	18.0	53.0	34.0	29.0
Max Q Clear Time (g_c+I1), s	7.5	36.9	7.0	42.4	10.9	52.6	34.0	22.6
Green Ext Time (p_c), s	0.0	9.8	0.0	0.0	0.1	0.4	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	48.9
HCM 6th LOS	D

Notes

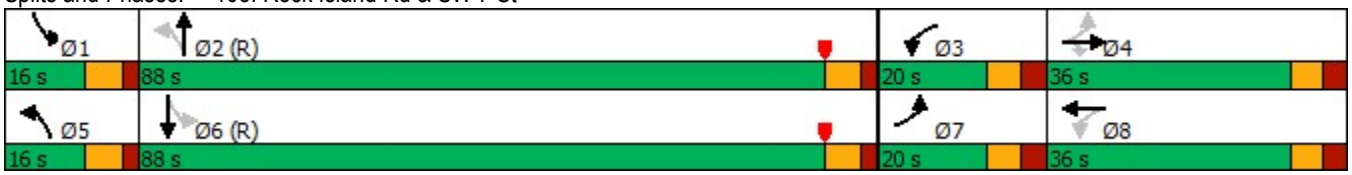
User approved pedestrian interval to be less than phase max green.

Timings
105: Rock Island Rd & SW 7 St

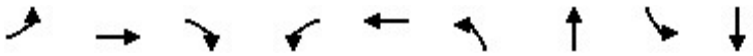
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	117	65	92	82	40	85	1102	152	1062
Future Volume (vph)	117	65	92	82	40	85	1102	152	1062
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases	4		4	8		2		6	
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	11.0	35.0	35.0	11.0	35.0	10.5	27.5	10.5	27.5
Total Split (s)	20.0	36.0	36.0	20.0	36.0	16.0	88.0	16.0	88.0
Total Split (%)	12.5%	22.5%	22.5%	12.5%	22.5%	10.0%	55.0%	10.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	29.2	17.0	17.0	26.1	15.5	99.5	92.4	110.8	98.3
Actuated g/C Ratio	0.18	0.11	0.11	0.16	0.10	0.62	0.58	0.69	0.61
v/c Ratio	0.75	0.38	0.39	0.39	0.82	0.40	0.66	0.65	0.59
Control Delay	77.2	70.7	12.3	54.8	64.7	14.5	26.4	39.1	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.2	70.7	12.3	54.8	64.7	14.5	26.4	39.1	11.7
LOS	E	E	B	D	E	B	C	D	B
Approach Delay		53.9			61.4		25.6		15.1
Approach LOS		D			E		C		B

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 131 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 26.7	Intersection LOS: C
Intersection Capacity Utilization 80.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 105: Rock Island Rd & SW 7 St



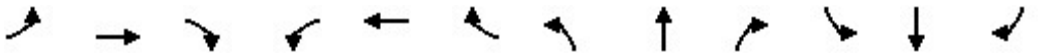
Queues
105: Rock Island Rd & SW 7 St



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	136	76	107	95	192	99	1333	177	1284
v/c Ratio	0.75	0.38	0.39	0.39	0.82	0.40	0.66	0.65	0.59
Control Delay	77.2	70.7	12.3	54.8	64.7	14.5	26.4	39.1	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.2	70.7	12.3	54.8	64.7	14.5	26.4	39.1	11.7
Queue Length 50th (ft)	121	75	0	83	113	31	496	58	529
Queue Length 95th (ft)	167	120	43	122	181	60	607	99	655
Internal Link Dist (ft)		723			1226		764		1324
Turn Bay Length (ft)	215		215	125		195		205	
Base Capacity (vph)	190	337	381	271	365	275	2033	276	2161
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.23	0.28	0.35	0.53	0.36	0.66	0.64	0.59

Intersection Summary

HCM 6th Signalized Intersection Summary
105: Rock Island Rd & SW 7 St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	65	92	82	40	125	85	1102	45	152	1062	42
Future Volume (veh/h)	117	65	92	82	40	125	85	1102	45	152	1062	42
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		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	76	107	95	47	145	99	1281	52	177	1235	49
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	291	245	290	54	166	295	1960	79	301	2028	80
Arrive On Green	0.08	0.16	0.16	0.06	0.14	0.14	0.05	0.75	0.75	0.07	0.78	0.78
Sat Flow, veh/h	1781	1870	1579	1781	397	1226	1781	3480	141	1781	3481	138
Grp Volume(v), veh/h	136	76	107	95	0	192	99	653	680	177	630	654
Grp Sat Flow(s),veh/h/ln	1781	1870	1579	1781	0	1623	1781	1777	1844	1781	1777	1842
Q Serve(g_s), s	10.4	5.7	9.8	7.3	0.0	18.6	3.8	28.9	29.0	6.9	24.2	24.2
Cycle Q Clear(g_c), s	10.4	5.7	9.8	7.3	0.0	18.6	3.8	28.9	29.0	6.9	24.2	24.2
Prop In Lane	1.00		1.00	1.00		0.76	1.00		0.08	1.00		0.07
Lane Grp Cap(c), veh/h	206	291	245	290	0	219	295	1001	1039	301	1035	1073
V/C Ratio(X)	0.66	0.26	0.44	0.33	0.00	0.88	0.34	0.65	0.65	0.59	0.61	0.61
Avail Cap(c_a), veh/h	212	339	286	333	0	294	336	1001	1039	308	1035	1073
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.75	0.75	0.75
Uniform Delay (d), s/veh	54.9	59.5	61.2	55.1	0.0	67.9	15.2	12.4	12.4	17.2	10.2	10.2
Incr Delay (d2), s/veh	5.6	0.2	0.5	0.2	0.0	16.1	0.2	3.3	3.2	1.4	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	5.0	2.8	4.0	3.3	0.0	8.7	1.6	10.3	10.7	2.8	7.9	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	59.7	61.7	55.4	0.0	84.0	15.5	15.7	15.6	18.6	12.2	12.2
LnGrp LOS	E	E	E	E	A	F	B	B	B	B	B	B
Approach Vol, veh/h		319			287			1432			1461	
Approach Delay, s/veh		60.7			74.5			15.6			13.0	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	96.6	16.2	31.9	12.3	99.7	19.4	28.6
Change Period (Y+Rc), s	6.5	6.5	7.0	7.0	6.5	6.5	7.0	7.0
Max Green Setting (Gmax), s	9.5	81.5	13.0	29.0	9.5	81.5	13.0	29.0
Max Q Clear Time (g_c+I1), s	8.9	31.0	9.3	11.8	5.8	26.2	12.4	20.6
Green Ext Time (p_c), s	0.0	10.3	0.0	0.4	0.0	9.7	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	23.5
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	229	38	23	154	15	45	19	47	15	14	12
Future Vol, veh/h	6	229	38	23	154	15	45	19	47	15	14	12
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	269	45	27	181	18	53	22	55	18	16	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.8	9.8	9.3	8.8
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	2%	12%	37%
Vol Thru, %	17%	84%	80%	34%
Vol Right, %	42%	14%	8%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	111	273	192	41
LT Vol	45	6	23	15
Through Vol	19	229	154	14
RT Vol	47	38	15	12
Lane Flow Rate	131	321	226	48
Geometry Grp	1	1	1	1
Degree of Util (X)	0.184	0.408	0.297	0.071
Departure Headway (Hd)	5.075	4.575	4.733	5.277
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	701	784	754	672
Service Time	3.147	2.629	2.792	3.36
HCM Lane V/C Ratio	0.187	0.409	0.3	0.071
HCM Control Delay	9.3	10.8	9.8	8.8
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.7	2	1.2	0.2

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	321	9	6	176	16	7	4	5	32	2	22
Future Vol, veh/h	30	321	9	6	176	16	7	4	5	32	2	22
Conflicting Peds, #/hr	1	0	6	6	0	1	2	0	0	0	0	2
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	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	331	9	6	181	16	7	4	5	33	2	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	346	0	0	620	614	342	604	610	192
Stage 1	-	-	-	-	-	-	404	404	-	202	202	-
Stage 2	-	-	-	-	-	-	216	210	-	402	408	-
Critical Hdwy	4.12	-	-	4.12	-	-	5	5	4.5	5	5	4.5
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	5	5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5	5	-	5	5	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3	3	3	3	3	3
Pot Cap-1 Maneuver	1375	-	-	1213	-	-	649	653	899	660	656	1021
Stage 1	-	-	-	-	-	-	806	806	-	985	985	-
Stage 2	-	-	-	-	-	-	971	977	-	808	803	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1374	-	-	1206	-	-	612	626	894	636	629	1018
Mov Cap-2 Maneuver	-	-	-	-	-	-	612	626	-	636	629	-
Stage 1	-	-	-	-	-	-	779	779	-	956	978	-
Stage 2	-	-	-	-	-	-	940	970	-	777	776	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.2	10.4	10.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	683	1374	-	-	1206	-	-	746
HCM Lane V/C Ratio	0.024	0.023	-	-	0.005	-	-	0.077
HCM Control Delay (s)	10.4	7.7	0	-	8	0	-	10.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	331	33	55	171	27	35
Future Vol, veh/h	331	33	55	171	27	35
Conflicting Peds, #/hr	0	9	9	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	368	34	57	176	28	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	411	0	684	395
Stage 1	-	-	-	-	394	-
Stage 2	-	-	-	-	290	-
Critical Hdwy	-	-	4.12	-	5	4.5
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	-	-	2.218	-	3	3
Pot Cap-1 Maneuver	-	-	1148	-	609	860
Stage 1	-	-	-	-	814	-
Stage 2	-	-	-	-	903	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1138	-	570	852
Mov Cap-2 Maneuver	-	-	-	-	570	-
Stage 1	-	-	-	-	807	-
Stage 2	-	-	-	-	852	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	10.4
HCM LOS			B

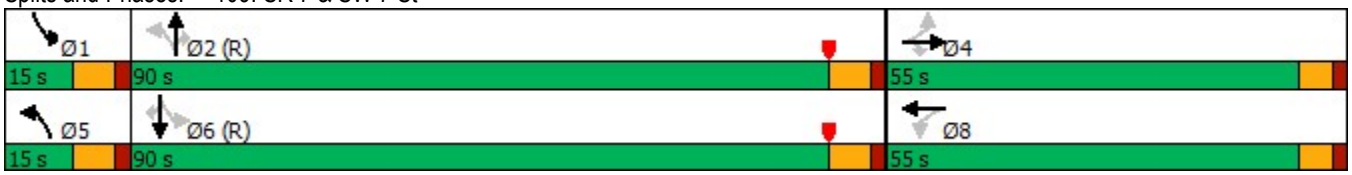
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	570	852	-	-	1138	-
HCM Lane V/C Ratio	0.049	0.042	-	-	0.05	-
HCM Control Delay (s)	11.6	9.4	-	-	8.3	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0.2	-

Timings
109: SR 7 & SW 7 St

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	114	15	234	50	23	176	1665	20	17	1657	82
Future Volume (vph)	114	15	234	50	23	176	1665	20	17	1657	82
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.0	26.0	26.0	45.0	45.0	12.0	27.0	27.0	12.0	27.0	27.0
Total Split (s)	55.0	55.0	55.0	55.0	55.0	15.0	90.0	90.0	15.0	90.0	90.0
Total Split (%)	34.4%	34.4%	34.4%	34.4%	34.4%	9.4%	56.3%	56.3%	9.4%	56.3%	56.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		21.6	21.6		21.6	125.4	118.1	118.1	104.0	99.0	99.0
Actuated g/C Ratio		0.14	0.14		0.14	0.78	0.74	0.74	0.65	0.62	0.62
v/c Ratio		0.80	0.82		0.63	0.58	0.47	0.02	0.09	0.55	0.09
Control Delay		97.2	58.4		79.6	25.8	10.1	0.1	3.6	8.3	0.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		97.2	58.4		79.6	25.8	10.1	0.1	3.6	8.3	0.5
LOS		F	E		E	C	B	A	A	A	A
Approach Delay		72.2			79.6		11.5			7.9	
Approach LOS		E			E		B			A	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 74 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 74.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 109: SR 7 & SW 7 St



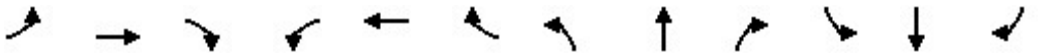


Lane Group	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	136	246	89	185	1753	21	18	1744	86
v/c Ratio	0.80	0.82	0.63	0.58	0.47	0.02	0.09	0.55	0.09
Control Delay	97.2	58.4	79.6	25.8	10.1	0.1	3.6	8.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.2	58.4	79.6	25.8	10.1	0.1	3.6	8.3	0.5
Queue Length 50th (ft)	140	149	84	64	276	0	2	138	1
Queue Length 95th (ft)	208	240	142	162	375	0	m3	m148	m0
Internal Link Dist (ft)	972		833		582			1330	
Turn Bay Length (ft)		100		330		105	275		95
Base Capacity (vph)	386	550	314	318	3754	1153	228	3146	928
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.45	0.28	0.58	0.47	0.02	0.08	0.55	0.09

Intersection Summary

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

HCM 6th Signalized Intersection Summary
109: SR 7 & SW 7 St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	15	234	50	23	11	176	1665	20	17	1657	82
Future Volume (veh/h)	114	15	234	50	23	11	176	1665	20	17	1657	82
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	1.00		0.98	1.00		0.97	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	16	246	53	24	12	185	1753	21	18	1744	86
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	249	27	304	104	44	17	269	3391	1019	234	3223	989
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.07	0.88	0.88	0.02	0.84	0.84
Sat Flow, veh/h	1064	142	1568	350	227	90	1781	5106	1535	1781	5106	1566
Grp Volume(v), veh/h	136	0	246	89	0	0	185	1753	21	18	1744	86
Grp Sat Flow(s),veh/h/ln	1206	0	1568	667	0	0	1781	1702	1535	1781	1702	1566
Q Serve(g_s), s	0.0	0.0	24.0	8.6	0.0	0.0	6.0	11.8	0.3	0.6	16.1	1.5
Cycle Q Clear(g_c), s	17.1	0.0	24.0	25.7	0.0	0.0	6.0	11.8	0.3	0.6	16.1	1.5
Prop In Lane	0.88		1.00	0.60		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	276	0	304	165	0	0	269	3391	1019	234	3223	989
V/C Ratio(X)	0.49	0.00	0.81	0.54	0.00	0.00	0.69	0.52	0.02	0.08	0.54	0.09
Avail Cap(c_a), veh/h	435	0	480	312	0	0	269	3391	1019	292	3223	989
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.17	0.17	0.17
Uniform Delay (d), s/veh	58.9	0.0	61.7	67.0	0.0	0.0	11.7	3.8	3.2	10.1	6.0	4.9
Incr Delay (d2), s/veh	0.5	0.0	2.5	1.0	0.0	0.0	6.0	0.6	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	9.8	3.6	0.0	0.0	2.7	3.0	0.1	0.2	4.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.4	0.0	64.2	68.0	0.0	0.0	17.7	4.4	3.2	10.1	6.1	4.9
LnGrp LOS	E	A	E	E	A	A	B	A	A	B	A	A
Approach Vol, veh/h		382			89			1959			1848	
Approach Delay, s/veh		62.5			68.0			5.6			6.1	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	113.3		37.0	15.0	108.0		37.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	8.0	83.0		49.0	8.0	83.0		49.0				
Max Q Clear Time (g_c+I1), s	2.6	13.8		26.0	8.0	18.1		27.7				
Green Ext Time (p_c), s	0.0	24.4		0.9	0.0	24.4		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		12.2	
HCM 6th LOS		B	

Timings
110: Kimberly Blvd & Rock Island Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	100	129	104	137	118	65	1059	119	117	949	85
Future Volume (vph)	100	129	104	137	118	65	1059	119	117	949	85
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.5	42.0	42.0	11.5	47.5	11.5	44.5	44.5	16.5	44.6	44.6
Total Split (s)	20.0	46.0	46.0	20.0	46.0	21.0	73.0	73.0	21.0	73.0	73.0
Total Split (%)	12.5%	28.8%	28.8%	12.5%	28.8%	13.1%	45.6%	45.6%	13.1%	45.6%	45.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	27.5	16.1	16.1	30.7	17.7	103.5	97.4	97.4	108.4	99.8	99.8
Actuated g/C Ratio	0.17	0.10	0.10	0.19	0.11	0.65	0.61	0.61	0.68	0.62	0.62
v/c Ratio	0.50	0.73	0.43	0.65	0.54	0.20	0.52	0.13	0.39	0.45	0.11
Control Delay	59.2	90.7	15.6	66.3	38.1	10.1	20.2	4.3	12.2	17.4	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	90.7	15.6	66.3	38.1	10.1	20.2	4.3	12.2	17.4	1.8
LOS	E	F	B	E	D	B	C	A	B	B	A
Approach Delay		57.9			48.6		18.1			15.7	
Approach LOS		E			D		B			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 123 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 25.1	Intersection LOS: C
Intersection Capacity Utilization 91.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 110: Kimberly Blvd & Rock Island Road



Queues
110: Kimberly Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	105	136	109	144	242	68	1115	125	123	999	89
v/c Ratio	0.50	0.73	0.43	0.65	0.54	0.20	0.52	0.13	0.39	0.45	0.11
Control Delay	59.2	90.7	15.6	66.3	38.1	10.1	20.2	4.3	12.2	17.4	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	90.7	15.6	66.3	38.1	10.1	20.2	4.3	12.2	17.4	1.8
Queue Length 50th (ft)	91	141	0	128	64	21	337	8	39	280	0
Queue Length 95th (ft)	143	210	59	189	109	43	478	43	72	378	19
Internal Link Dist (ft)		387			3410		622			1269	
Turn Bay Length (ft)	250		250	200		280		150	240		160
Base Capacity (vph)	237	465	463	233	858	429	2153	984	374	2207	824
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.29	0.24	0.62	0.28	0.16	0.52	0.13	0.33	0.45	0.11

Intersection Summary

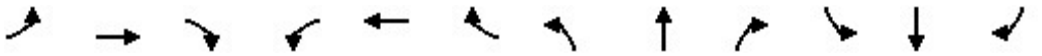
HCM Signalized Intersection Capacity Analysis
110: Kimberly Blvd & Rock Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	129	104	137	118	112	65	1059	119	117	949	85
Future Volume (vph)	100	129	104	137	118	112	65	1059	119	117	949	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	0.94		1.00	1.00	0.98	1.00	1.00	0.79
Flpb, ped/bikes	0.96	1.00	1.00	0.99	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1706	1863	1519	1759	3077		1757	3539	1550	1770	3539	1257
Flt Permitted	0.48	1.00	1.00	0.39	1.00		0.24	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	863	1863	1519	725	3077		445	3539	1550	351	3539	1257
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	136	109	144	124	118	68	1115	125	123	999	89
RTOR Reduction (vph)	0	0	98	0	105	0	0	0	41	0	0	33
Lane Group Flow (vph)	105	136	11	144	137	0	68	1115	84	123	999	56
Confl. Peds. (#/hr)	87		17	17		87	115					115
Confl. Bikes (#/hr)			3			1			2			3
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	27.4	16.1	16.1	30.6	17.7		103.5	97.4	97.4	108.5	99.9	99.9
Effective Green, g (s)	27.4	16.1	16.1	30.6	17.7		103.5	97.4	97.4	108.5	99.9	99.9
Actuated g/C Ratio	0.17	0.10	0.10	0.19	0.11		0.65	0.61	0.61	0.68	0.62	0.62
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		1.5	3.0	3.0	1.5	3.0	3.0
Lane Grp Cap (vph)	207	187	152	222	340		337	2154	943	314	2209	784
v/s Ratio Prot	0.04	c0.07		c0.05	0.04		0.01	c0.32		c0.02	0.28	
v/s Ratio Perm	0.05		0.01	0.07			0.12		0.05	0.24		0.04
v/c Ratio	0.51	0.73	0.07	0.65	0.40		0.20	0.52	0.09	0.39	0.45	0.07
Uniform Delay, d1	58.6	69.8	65.2	57.2	66.2		11.3	17.9	12.9	11.8	15.7	11.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	11.3	0.1	4.8	0.3		0.1	0.9	0.2	0.3	0.7	0.2
Delay (s)	59.3	81.1	65.3	62.0	66.5		11.4	18.8	13.1	12.1	16.4	12.0
Level of Service	E	F	E	E	E		B	B	B	B	B	B
Approach Delay (s)		69.6			64.8			17.8			15.6	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
110: Kimberly Blvd & Rock Island Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	129	104	137	118	112	65	1059	119	117	949	85
Future Volume (veh/h)	100	129	104	137	118	112	65	1059	119	117	949	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.93		0.87	0.93		0.88	1.00		0.87	1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	136	109	144	124	118	68	1115	125	123	999	89
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	325	416	307	347	425	334	293	1779	687	272	1838	756
Arrive On Green	0.06	0.22	0.22	0.07	0.24	0.24	0.04	0.67	0.67	0.06	0.69	0.69
Sat Flow, veh/h	1781	1870	1380	1781	1777	1395	1781	3554	1373	1781	3554	1461
Grp Volume(v), veh/h	105	136	109	144	124	118	68	1115	125	123	999	89
Grp Sat Flow(s),veh/h/ln	1781	1870	1380	1781	1777	1395	1781	1777	1373	1781	1777	1461
Q Serve(g_s), s	7.2	9.8	10.7	9.9	9.1	11.2	3.0	28.8	5.5	5.4	22.4	3.3
Cycle Q Clear(g_c), s	7.2	9.8	10.7	9.9	9.1	11.2	3.0	28.8	5.5	5.4	22.4	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	325	416	307	347	425	334	293	1779	687	272	1838	756
V/C Ratio(X)	0.32	0.33	0.36	0.41	0.29	0.35	0.23	0.63	0.18	0.45	0.54	0.12
Avail Cap(c_a), veh/h	379	468	345	371	444	349	401	1779	687	350	1838	756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	52.2	52.5	43.4	49.8	50.6	19.5	18.2	14.3	20.8	15.5	12.6
Incr Delay (d2), s/veh	0.2	0.2	0.3	0.3	0.1	0.2	0.1	1.7	0.6	0.4	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	4.7	3.8	4.5	4.1	4.0	1.3	11.0	1.8	2.3	8.3	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	52.4	52.8	43.7	49.9	50.8	19.7	19.8	14.9	21.3	16.7	12.9
LnGrp LOS	D	D	D	D	D	D	B	B	B	C	B	B
Approach Vol, veh/h		350			386			1308			1211	
Approach Delay, s/veh		50.2			47.9			19.4			16.9	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	86.6	17.9	41.6	11.3	89.3	15.2	44.3
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	14.5	66.5	14.0	40.0	14.5	66.5	14.0	40.0
Max Q Clear Time (g_c+I1), s	7.4	30.8	11.9	12.7	5.0	24.4	9.2	13.2
Green Ext Time (p_c), s	0.1	11.1	0.0	0.7	0.0	9.7	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	5.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	391	260	116	90
Demand Flow Rate, veh/h	399	265	119	91
Vehicles Circulating, veh/h	79	112	407	286
Vehicles Exiting, veh/h	298	414	71	91
Ped Vol Crossing Leg, #/h	0	0	1	7
Ped Cap Adj	1.000	1.000	1.000	0.999
Approach Delay, s/veh	5.8	4.9	5.3	4.3
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	399	265	119	91
Cap Entry Lane, veh/h	1273	1231	911	1031
Entry HV Adj Factor	0.981	0.980	0.977	0.985
Flow Entry, veh/h	391	260	116	90
Cap Entry, veh/h	1249	1206	890	1014
V/C Ratio	0.313	0.215	0.131	0.088
Control Delay, s/veh	5.8	4.9	5.3	4.3
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	0

Timings
112: Kimberly Blvd & SR 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	162	22	183	184	24	90	125	1619	67	1825	89
Future Volume (vph)	162	22	183	184	24	90	125	1619	67	1825	89
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	38.0	38.0	11.0	40.0	40.0	12.0	40.0	12.0	40.0	40.0
Total Split (s)	21.0	43.0	43.0	21.0	43.0	43.0	23.0	76.0	20.0	73.0	73.0
Total Split (%)	13.1%	26.9%	26.9%	13.1%	26.9%	26.9%	14.4%	47.5%	12.5%	45.6%	45.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max	C-Max
Act Effct Green (s)	22.3	8.2	8.2	23.1	8.6	8.6	15.8	101.2	10.0	95.5	95.5
Actuated g/C Ratio	0.14	0.05	0.05	0.14	0.05	0.05	0.10	0.63	0.06	0.60	0.60
v/c Ratio	0.74	0.23	0.73	0.82	0.24	0.48	0.74	0.54	0.62	0.61	0.10
Control Delay	79.2	77.1	25.6	87.5	77.2	13.7	89.0	25.2	95.4	22.6	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.2	77.1	25.6	87.5	77.2	13.7	89.0	25.2	95.4	22.6	2.1
LOS	E	E	C	F	E	B	F	C	F	C	A
Approach Delay		52.2			64.3			29.7		24.1	
Approach LOS		D			E			C		C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 113 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 31.4	Intersection LOS: C
Intersection Capacity Utilization 82.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 112: Kimberly Blvd & SR 7



Queues
112: Kimberly Blvd & SR 7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	165	22	187	188	24	92	128	1723	68	1862	91
v/c Ratio	0.74	0.23	0.73	0.82	0.24	0.48	0.74	0.54	0.62	0.61	0.10
Control Delay	79.2	77.1	25.6	87.5	77.2	13.7	89.0	25.2	95.4	22.6	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.2	77.1	25.6	87.5	77.2	13.7	89.0	25.2	95.4	22.6	2.1
Queue Length 50th (ft)	160	23	0	185	25	0	143	360	71	429	0
Queue Length 95th (ft)	228	53	82	259	56	34	215	438	124	582	20
Internal Link Dist (ft)		1738			1039			1330		793	
Turn Bay Length (ft)	175			110		110	325		330		235
Base Capacity (vph)	233	430	503	236	430	435	194	3194	146	3035	942
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.05	0.37	0.80	0.06	0.21	0.66	0.54	0.47	0.61	0.10

Intersection Summary

HCM Signalized Intersection Capacity Analysis
112: Kimberly Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	22	183	184	24	90	125	1619	70	67	1825	89
Future Volume (vph)	162	22	183	184	24	90	125	1619	70	67	1825	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.94	1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	1863	1555	1763	1863	1495	1770	5045		1770	5085	1507
Flt Permitted	0.74	1.00	1.00	0.71	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1342	1863	1555	1314	1863	1495	1770	5045		1770	5085	1507
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	165	22	187	188	24	92	128	1652	71	68	1862	91
RTOR Reduction (vph)	0	0	177	0	0	87	0	2	0	0	0	37
Lane Group Flow (vph)	165	22	10	188	24	5	128	1721	0	68	1862	54
Confl. Peds. (#/hr)	29		4	4		29	11		10	10		11
Confl. Bikes (#/hr)						1			1			3
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	22.3	8.2	8.2	23.1	8.6	8.6	15.8	101.3		10.0	95.5	95.5
Effective Green, g (s)	22.3	8.2	8.2	23.1	8.6	8.6	15.8	101.3		10.0	95.5	95.5
Actuated g/C Ratio	0.14	0.05	0.05	0.14	0.05	0.05	0.10	0.63		0.06	0.60	0.60
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	1.5	3.0		1.5	3.0	3.0
Lane Grp Cap (vph)	220	95	79	230	100	80	174	3194		110	3035	899
v/s Ratio Prot	0.07	0.01		c0.07	0.01		c0.07	c0.34		0.04	c0.37	
v/s Ratio Perm	0.04		0.01	c0.04		0.00						0.04
v/c Ratio	0.75	0.23	0.12	0.82	0.24	0.06	0.74	0.54		0.62	0.61	0.06
Uniform Delay, d1	65.5	72.9	72.5	65.6	72.6	71.9	70.1	16.3		73.1	20.5	13.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.43		1.00	1.00	1.00
Incremental Delay, d2	12.0	0.5	0.3	18.8	0.5	0.1	11.8	0.6		7.1	0.9	0.1
Delay (s)	77.5	73.3	72.7	84.4	73.0	72.0	79.6	24.0		80.2	21.4	13.6
Level of Service	E	E	E	F	E	E	E	C		F	C	B
Approach Delay (s)		74.9			79.7			27.9			23.1	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
112: Kimberly Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	22	183	184	24	90	125	1619	70	67	1825	89
Future Volume (veh/h)	162	22	183	184	24	90	125	1619	70	67	1825	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.95	0.97		0.94	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	165	22	187	188	24	92	128	1652	71	68	1862	91
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	418	339	274	406	351	280	148	2579	111	85	2448	734
Arrive On Green	0.09	0.18	0.18	0.09	0.19	0.19	0.11	0.68	0.68	0.06	0.64	0.64
Sat Flow, veh/h	1781	1870	1509	1781	1870	1492	1781	5012	215	1781	5106	1532
Grp Volume(v), veh/h	165	22	187	188	24	92	128	1122	601	68	1862	91
Grp Sat Flow(s),veh/h/ln	1781	1870	1509	1781	1870	1492	1781	1702	1823	1781	1702	1532
Q Serve(g_s), s	11.9	1.6	18.5	13.7	1.7	8.5	11.3	29.6	29.7	6.0	41.1	3.7
Cycle Q Clear(g_c), s	11.9	1.6	18.5	13.7	1.7	8.5	11.3	29.6	29.7	6.0	41.1	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	418	339	274	406	351	280	148	1752	938	85	2448	734
V/C Ratio(X)	0.40	0.06	0.68	0.46	0.07	0.33	0.87	0.64	0.64	0.80	0.76	0.12
Avail Cap(c_a), veh/h	429	433	349	406	433	345	178	1752	938	145	2448	734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	54.3	61.2	47.0	53.4	56.2	70.3	16.9	16.9	74.2	22.5	15.8
Incr Delay (d2), s/veh	0.2	0.0	2.0	0.3	0.0	0.3	23.8	1.6	3.0	6.3	2.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.7	7.3	6.2	0.8	3.3	6.0	10.6	11.7	2.9	15.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	54.3	63.2	47.3	53.5	56.5	94.1	18.5	19.9	80.4	24.8	16.1
LnGrp LOS	D	D	E	D	D	E	F	B	B	F	C	B
Approach Vol, veh/h		374			304			1851			2021	
Approach Delay, s/veh		55.7			50.6			24.2			26.3	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	89.3	21.0	35.0	20.3	83.7	20.0	36.1
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	69.0	15.0	37.0	16.0	66.0	15.0	37.0
Max Q Clear Time (g_c+I1), s	8.0	31.7	15.7	20.5	13.3	43.1	13.9	10.5
Green Ext Time (p_c), s	0.0	17.7	0.0	0.4	0.0	15.6	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	29.5
HCM 6th LOS	C

Timings
113: SR 7 & Blvd of Champions

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	170	0	292	13	6	270	1598	14	23	1903	257
Future Volume (vph)	170	0	292	13	6	270	1598	14	23	1903	257
Turn Type	Split	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			3	5	2		1	6	
Permitted Phases			4	3				2			6
Detector Phase	4	4	4	3	3	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	47.5	47.5	12.0	43.0	43.0	12.0	43.0	43.0
Total Split (s)	19.0	19.0	19.0	50.0	50.0	16.0	75.0	75.0	16.0	75.0	75.0
Total Split (%)	11.9%	11.9%	11.9%	31.3%	31.3%	10.0%	46.9%	46.9%	10.0%	46.9%	46.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.2	13.2	13.2		9.8	24.4	114.1	114.1	6.4	91.3	91.3
Actuated g/C Ratio	0.08	0.08	0.08		0.06	0.15	0.71	0.71	0.04	0.57	0.57
v/c Ratio	0.63	0.28	0.28		0.38	0.54	0.46	0.01	0.34	0.68	0.27
Control Delay	80.7	1.3	1.3		90.1	69.6	10.8	0.0	85.5	14.1	0.7
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.7	1.3	1.3		90.1	69.6	10.8	0.0	85.5	14.1	0.7
LOS	F	A	A		F	E	B	A	F	B	A
Approach Delay		30.5			90.1		19.2			13.3	
Approach LOS		C			F		B			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 121 (76%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 17.8	Intersection LOS: B
Intersection Capacity Utilization 79.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 113: SR 7 & Blvd of Champions



Queues
113: SR 7 & Blvd of Champions



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	177	152	152	20	281	1665	15	24	1982	268
v/c Ratio	0.63	0.28	0.28	0.38	0.54	0.46	0.01	0.34	0.68	0.27
Control Delay	80.7	1.3	1.3	90.1	69.6	10.8	0.0	85.5	14.1	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.7	1.3	1.3	90.1	69.6	10.8	0.0	85.5	14.1	0.7
Queue Length 50th (ft)	94	0	0	21	158	170	0	25	205	0
Queue Length 95th (ft)	133	0	0	51	210	310	m0	m42	233	m7
Internal Link Dist (ft)		446		833		1028			1330	
Turn Bay Length (ft)	170		300		300		160	160		425
Base Capacity (vph)	307	545	545	238	523	3626	1126	99	2902	991
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.28	0.28	0.08	0.54	0.46	0.01	0.24	0.68	0.27

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
113: SR 7 & Blvd of Champions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	0	292	13	6	0	270	1598	14	23	1903	257
Future Volume (vph)	170	0	292	13	6	0	270	1598	14	23	1903	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.5		7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95		1.00		0.97	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	0.85		1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.97		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1504	1504		1800		3433	5085	1534	1770	5085	1543
Flt Permitted	0.95	1.00	1.00		0.47		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1504	1504		880		3433	5085	1534	1770	5085	1543
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	177	0	304	14	6	0	281	1665	15	24	1982	268
RTOR Reduction (vph)	0	139	139	0	0	0	0	0	5	0	0	116
Lane Group Flow (vph)	177	13	13	0	20	0	281	1665	10	24	1982	152
Confl. Peds. (#/hr)	11					11	9		5	5		9
Confl. Bikes (#/hr)												4
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			3		5	2		1	6	
Permitted Phases			4	3					2			6
Actuated Green, G (s)	13.2	13.2	13.2		7.2		24.4	108.7	108.7	4.4	88.7	88.7
Effective Green, g (s)	13.2	13.2	13.2		7.2		24.4	108.7	108.7	4.4	88.7	88.7
Actuated g/C Ratio	0.08	0.08	0.08		0.05		0.15	0.68	0.68	0.03	0.55	0.55
Clearance Time (s)	6.0	6.0	6.0		6.5		7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	2.2	2.2	2.2		2.2		1.5	3.0	3.0	1.5	3.0	3.0
Lane Grp Cap (vph)	283	124	124		39		523	3454	1042	48	2818	855
v/s Ratio Prot	c0.05	0.01					c0.08	c0.33		0.01	c0.39	
v/s Ratio Perm			0.01		c0.02				0.01			0.10
v/c Ratio	0.63	0.10	0.10		0.51		0.54	0.48	0.01	0.50	0.70	0.18
Uniform Delay, d1	71.0	67.9	67.9		74.7		62.6	12.2	8.3	76.7	26.0	17.6
Progression Factor	1.00	1.00	1.00		1.00		1.03	0.83	1.00	1.01	0.51	0.07
Incremental Delay, d2	3.3	0.2	0.2		6.1		0.5	0.4	0.0	2.4	1.2	0.4
Delay (s)	74.3	68.1	68.1		80.8		65.2	10.5	8.3	80.1	14.4	1.6
Level of Service	E	E	E		F		E	B	A	F	B	A
Approach Delay (s)		70.4			80.8			18.3			13.6	
Approach LOS		E			F			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.5
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

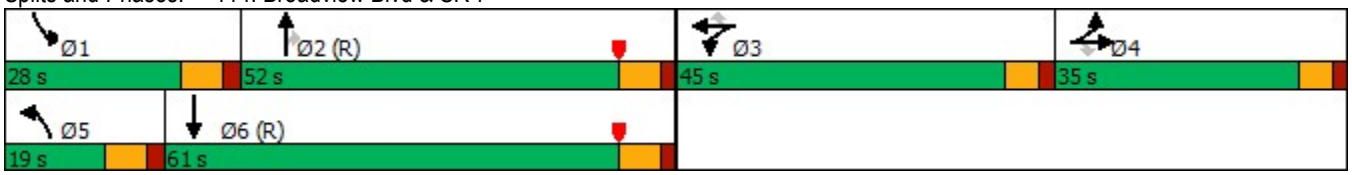
HCM 6th Edition methodology expects strict NEMA phasing.

Timings
114: Broadview Blvd & SR 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	73	19	66	242	3	254	40	1432	248	330	1795
Future Volume (vph)	73	19	66	242	3	254	40	1432	248	330	1795
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	2		1	6
Permitted Phases			4			3			2		
Detector Phase	4	4	4	3	3	3	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.0	45.0	45.0	45.0	12.0	40.0	40.0	12.0	40.0
Total Split (s)	35.0	35.0	35.0	45.0	45.0	45.0	19.0	52.0	52.0	28.0	61.0
Total Split (%)	21.9%	21.9%	21.9%	28.1%	28.1%	28.1%	11.9%	32.5%	32.5%	17.5%	38.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	8.2	8.2	8.2	17.3	17.3	17.3	8.0	87.9	87.9	20.7	103.0
Actuated g/C Ratio	0.05	0.05	0.05	0.11	0.11	0.11	0.05	0.55	0.55	0.13	0.64
v/c Ratio	0.45	0.21	0.30	0.72	0.71	0.66	0.49	0.55	0.29	0.79	0.60
Control Delay	81.4	77.2	3.2	90.2	88.9	14.6	91.8	25.6	9.7	100.1	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.4	77.2	3.2	90.2	88.9	14.6	91.8	25.6	9.7	100.1	7.0
LOS	F	E	A	F	F	B	F	C	A	F	A
Approach Delay		48.3			51.4			24.8			21.1
Approach LOS		D			D			C			C

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 133 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 70.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 114: Broadview Blvd & SR 7



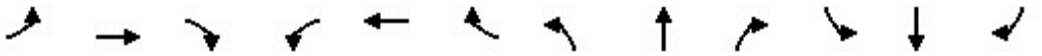
Queues
114: Broadview Blvd & SR 7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	78	20	70	131	129	270	43	1523	264	351	1966
v/c Ratio	0.45	0.21	0.30	0.72	0.71	0.66	0.49	0.55	0.29	0.79	0.60
Control Delay	81.4	77.2	3.2	90.2	88.9	14.6	91.8	25.6	9.7	100.1	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.4	77.2	3.2	90.2	88.9	14.6	91.8	25.6	9.7	100.1	7.0
Queue Length 50th (ft)	41	20	0	142	140	0	45	363	52	199	94
Queue Length 95th (ft)	70	51	0	212	209	88	88	500	133	252	158
Internal Link Dist (ft)		559			661			481			1028
Turn Bay Length (ft)	160		260	270		260	270		150	290	
Base Capacity (vph)	622	337	421	409	410	584	132	2792	926	478	3259
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.06	0.17	0.32	0.31	0.46	0.33	0.55	0.29	0.73	0.60

Intersection Summary

HCM Signalized Intersection Capacity Analysis
114: Broadview Blvd & SR 7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	19	66	242	3	254	40	1432	248	330	1795	53
Future Volume (vph)	73	19	66	242	3	254	40	1432	248	330	1795	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1863	1583	1681	1687	1562	1770	5085	1560	3433	5059	
Flt Permitted	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	1863	1583	1681	1687	1562	1770	5085	1560	3433	5059	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	78	20	70	257	3	270	43	1523	264	351	1910	56
RTOR Reduction (vph)	0	0	66	0	0	241	0	0	71	0	1	0
Lane Group Flow (vph)	78	20	4	131	129	29	43	1523	193	351	1965	0
Confl. Peds. (#/hr)	1					1	3		1	1		3
Confl. Bikes (#/hr)									3			3
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3			2			
Actuated Green, G (s)	8.2	8.2	8.2	17.3	17.3	17.3	7.0	87.8	87.8	20.7	101.5	
Effective Green, g (s)	8.2	8.2	8.2	17.3	17.3	17.3	7.0	87.8	87.8	20.7	101.5	
Actuated g/C Ratio	0.05	0.05	0.05	0.11	0.11	0.11	0.04	0.55	0.55	0.13	0.63	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	175	95	81	181	182	168	77	2790	856	444	3209	
v/s Ratio Prot	c0.02	0.01		c0.08	0.08		0.02	0.30		c0.10	c0.39	
v/s Ratio Perm			0.00			0.02			0.12			
v/c Ratio	0.45	0.21	0.04	0.72	0.71	0.17	0.56	0.55	0.23	0.79	0.61	
Uniform Delay, d1	73.7	72.8	72.2	69.0	68.9	64.9	75.0	23.3	18.6	67.5	17.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	0.34	
Incremental Delay, d2	0.7	0.4	0.1	11.5	9.9	0.2	4.9	0.8	0.6	6.9	0.7	
Delay (s)	74.4	73.2	72.3	80.5	78.8	65.0	79.9	24.0	19.2	96.9	6.6	
Level of Service	E	E	E	F	E	E	E	C	B	F	A	
Approach Delay (s)		73.3			72.2			24.6			20.3	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	62	0	1880	1919	63
Future Vol, veh/h	0	62	0	1880	1919	63
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	64	0	1938	1978	65

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	990	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	4.5	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3	-	-	-	-
Pot Cap-1 Maneuver	0	511	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	511	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

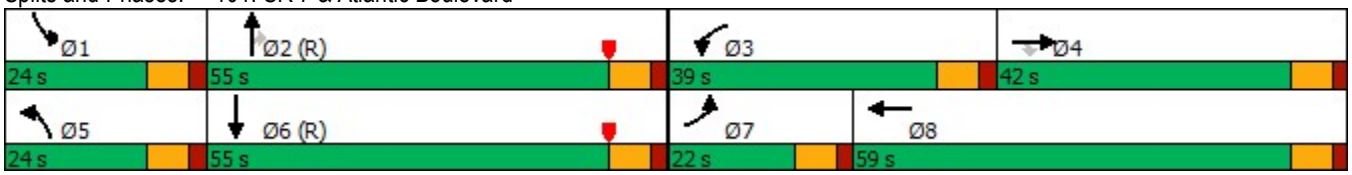
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	511	-	-
HCM Lane V/C Ratio	-	0.125	-	-
HCM Control Delay (s)	-	13.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-

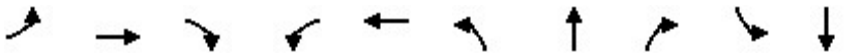
Timings
101: SR 7 & Atlantic Boulevard

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	305	909	304	650	1537	239	1249	491	156	1247
Future Volume (vph)	305	909	304	650	1537	239	1249	491	156	1247
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	11.0	42.0	42.0	11.0	59.0	12.0	50.0	50.0	12.0	50.0
Total Split (s)	22.0	42.0	42.0	39.0	59.0	24.0	55.0	55.0	24.0	55.0
Total Split (%)	13.8%	26.3%	26.3%	24.4%	36.9%	15.0%	34.4%	34.4%	15.0%	34.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	15.0	35.2	35.2	31.8	52.0	17.0	48.9	48.9	16.1	48.0
Actuated g/C Ratio	0.09	0.22	0.22	0.20	0.32	0.11	0.31	0.31	0.10	0.30
v/c Ratio	0.97	0.83	0.62	0.97	1.06	1.30	0.82	0.68	0.89	0.99
Control Delay	113.7	67.0	23.6	91.4	90.0	216.5	50.6	16.3	113.9	76.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.7	67.0	23.6	91.4	90.0	216.5	50.6	16.3	113.9	76.1
LOS	F	E	C	F	F	F	D	B	F	E
Approach Delay		67.7			90.4		62.1			79.7
Approach LOS		E			F		E			E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 114 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay: 75.9	Intersection LOS: E
Intersection Capacity Utilization 115.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 101: SR 7 & Atlantic Boulevard





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	311	928	310	663	1725	244	1274	501	159	1491
v/c Ratio	0.97	0.83	0.62	0.97	1.06	1.30	0.82	0.68	0.89	0.99
Control Delay	113.7	67.0	23.6	91.4	90.0	216.5	50.6	16.3	113.9	76.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.7	67.0	23.6	91.4	90.0	216.5	50.6	16.3	113.9	76.1
Queue Length 50th (ft)	170	343	92	358	~719	~321	489	119	166	566
Queue Length 95th (ft)	#271	400	202	#485	#815	#503	549	400	#297	#679
Internal Link Dist (ft)		2560			1156		2623			1036
Turn Bay Length (ft)	280		330	525		400		270	395	
Base Capacity (vph)	321	1119	501	686	1631	188	1552	732	188	1501
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.83	0.62	0.97	1.06	1.30	0.82	0.68	0.85	0.99

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

HCM 6th Signalized Intersection Summary
101: SR 7 & Atlantic Boulevard

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	305	909	304	650	1537	154	239	1249	491	156	1247	215
Future Volume (veh/h)	305	909	304	650	1537	154	239	1249	491	156	1247	215
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	311	928	310	663	1568	157	244	1274	501	159	1272	219
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	324	1117	333	691	1528	153	189	1562	465	179	1306	225
Arrive On Green	0.09	0.22	0.22	0.20	0.32	0.32	0.14	0.41	0.41	0.13	0.40	0.40
Sat Flow, veh/h	3456	5106	1522	3456	4701	470	1781	5106	1520	1781	4353	749
Grp Volume(v), veh/h	311	928	310	663	1135	590	244	1274	501	159	995	496
Grp Sat Flow(s),veh/h/ln	1728	1702	1522	1728	1702	1767	1781	1702	1520	1781	1702	1698
Q Serve(g_s), s	14.3	27.8	32.0	30.4	52.0	52.0	17.0	35.4	49.0	14.0	46.0	46.0
Cycle Q Clear(g_c), s	14.3	27.8	32.0	30.4	52.0	52.0	17.0	35.4	49.0	14.0	46.0	46.0
Prop In Lane	1.00		1.00	1.00		0.27	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	324	1117	333	691	1106	574	189	1562	465	179	1021	510
V/C Ratio(X)	0.96	0.83	0.93	0.96	1.03	1.03	1.29	0.82	1.08	0.89	0.97	0.97
Avail Cap(c_a), veh/h	324	1117	333	691	1106	574	189	1562	465	189	1021	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.2	59.7	61.3	63.4	54.0	54.0	68.7	43.4	47.4	68.5	47.5	47.5
Incr Delay (d2), s/veh	39.0	5.3	31.8	24.4	33.8	44.8	154.7	3.4	57.4	34.1	22.6	33.9
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	8.1	12.6	15.3	15.7	27.4	30.2	15.7	14.8	25.1	7.9	21.8	23.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.2	65.0	93.1	87.7	87.8	98.8	223.4	46.8	104.8	102.6	70.0	81.4
LnGrp LOS	F	E	F	F	F	F	F	D	F	F	E	F
Approach Vol, veh/h		1549			2388			2019			1650	
Approach Delay, s/veh		79.9			90.5			82.5			76.6	
Approach LOS		E			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	56.0	39.0	42.0	24.0	55.0	22.0	59.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	17.0	48.0	32.0	35.0	17.0	48.0	15.0	52.0
Max Q Clear Time (g_c+I1), s	16.0	51.0	32.4	34.0	19.0	48.0	16.3	54.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	83.2
HCM 6th LOS	F

Notes

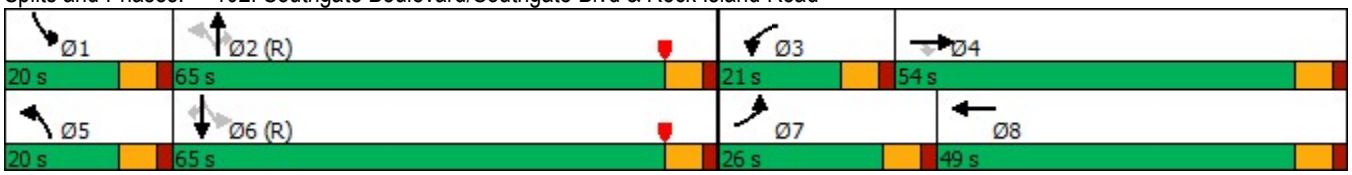
User approved pedestrian interval to be less than phase max green.

Timings
102: Southgate Boulevard/Southgate Blvd & Rock Island Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	408	509	209	117	581	193	939	138	186	943	632
Future Volume (vph)	408	509	209	117	581	193	939	138	186	943	632
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4			2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	4.0	12.0	12.0	4.0	12.0	12.0
Minimum Split (s)	11.5	36.5	36.5	11.5	47.5	10.5	44.5	44.5	10.5	44.5	44.5
Total Split (s)	26.0	54.0	54.0	21.0	49.0	20.0	65.0	65.0	20.0	65.0	65.0
Total Split (%)	16.3%	33.8%	33.8%	13.1%	30.6%	12.5%	40.6%	40.6%	12.5%	40.6%	40.6%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	19.5	47.8	47.8	13.2	41.5	73.3	60.2	60.2	72.8	59.9	59.9
Actuated g/C Ratio	0.12	0.30	0.30	0.08	0.26	0.46	0.38	0.38	0.46	0.37	0.37
v/c Ratio	1.02	0.50	0.38	0.84	0.95	0.86	0.74	0.22	0.84	0.74	0.87
Control Delay	115.9	48.3	13.7	96.9	58.0	74.9	35.9	6.9	55.5	47.8	39.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.9	48.3	13.7	96.9	58.0	74.9	35.9	6.9	55.5	47.8	39.2
LOS	F	D	B	F	E	E	D	A	E	D	D
Approach Delay		66.4			62.9		38.7			45.5	
Approach LOS		E			E		D			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 80 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 51.6	Intersection LOS: D
Intersection Capacity Utilization 99.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Queues
102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	425	530	218	122	853	201	978	144	194	982	658
v/c Ratio	1.02	0.50	0.38	0.84	0.95	0.86	0.74	0.22	0.84	0.74	0.87
Control Delay	115.9	48.3	13.7	96.9	58.0	74.9	35.9	6.9	55.5	47.8	39.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.9	48.3	13.7	96.9	58.0	74.9	35.9	6.9	55.5	47.8	39.2
Queue Length 50th (ft)	~241	242	41	135	434	134	354	4	114	474	411
Queue Length 95th (ft)	#355	303	116	m146	m#480	#264	341	52	#237	560	#664
Internal Link Dist (ft)		387			3410		1324			1269	
Turn Bay Length (ft)	315		140	315		350			180		190
Base Capacity (vph)	418	1056	576	160	922	238	1330	657	239	1324	758
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.50	0.38	0.76	0.93	0.84	0.74	0.22	0.81	0.74	0.87

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

HCM 6th Signalized Intersection Summary
102: Southgate Boulevard/Southgate Blvd & Rock Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	408	509	209	117	581	238	193	939	138	186	943	632
Future Volume (veh/h)	408	509	209	117	581	238	193	939	138	186	943	632
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	425	530	218	122	605	248	201	978	0	194	982	658
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	1075	469	142	636	260	239	1332		278	1323	579
Arrive On Green	0.12	0.30	0.30	0.08	0.26	0.26	0.11	0.50	0.00	0.11	0.50	0.50
Sat Flow, veh/h	3456	3554	1551	1781	2442	1000	1781	3554	1585	1781	3554	1555
Grp Volume(v), veh/h	425	530	218	122	440	413	201	978	0	194	982	658
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	1781	1777	1665	1781	1777	1585	1781	1777	1555
Q Serve(g_s), s	19.5	19.6	18.3	10.8	38.9	39.0	11.2	34.8	0.0	10.8	35.3	59.6
Cycle Q Clear(g_c), s	19.5	19.6	18.3	10.8	38.9	39.0	11.2	34.8	0.0	10.8	35.3	59.6
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1075	469	142	463	434	239	1332		278	1323	579
V/C Ratio(X)	1.01	0.49	0.46	0.86	0.95	0.95	0.84	0.73		0.70	0.74	1.14
Avail Cap(c_a), veh/h	421	1075	469	161	472	442	242	1332		286	1323	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	45.7	45.3	72.7	58.2	58.2	34.0	33.8	0.0	31.5	34.2	40.4
Incr Delay (d2), s/veh	46.2	0.1	0.3	28.9	28.7	30.2	17.4	2.8	0.0	5.8	3.8	80.8
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	11.4	8.8	7.2	6.1	21.2	20.1	5.8	14.8	0.0	5.0	15.1	34.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.4	45.9	45.6	101.6	86.8	88.4	51.3	36.6	0.0	37.3	38.0	121.2
LnGrp LOS	F	D	D	F	F	F	D	D		D	D	F
Approach Vol, veh/h		1173			975			1179			1834	
Approach Delay, s/veh		71.4			89.3			39.2			67.8	
Approach LOS		E			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	66.5	19.3	54.9	19.7	66.1	26.0	48.2
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	13.5	58.5	14.5	47.5	13.5	58.5	19.5	42.5
Max Q Clear Time (g_c+I1), s	12.8	36.8	12.8	21.6	13.2	61.6	21.5	41.0
Green Ext Time (p_c), s	0.0	7.4	0.0	2.9	0.0	0.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	66.1
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

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	696	21	27	919	39	20	7	35	12	0	6
Future Vol, veh/h	8	696	21	27	919	39	20	7	35	12	0	6
Conflicting Peds, #/hr	11	0	2	2	0	11	0	0	1	1	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	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	725	22	28	957	41	21	7	36	13	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1009	0	0	749	0	0	1289	1819	377	1428	1810	510
Stage 1	-	-	-	-	-	-	754	754	-	1045	1045	-
Stage 2	-	-	-	-	-	-	535	1065	-	383	765	-
Critical Hdwy	4.14	-	-	4.14	-	-	5	5	4.5	5	5	4.5
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	5	5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5	5	-	5	5	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3	3	3	3	3	3
Pot Cap-1 Maneuver	683	-	-	856	-	-	327	186	873	282	188	779
Stage 1	-	-	-	-	-	-	567	567	-	421	421	-
Stage 2	-	-	-	-	-	-	707	412	-	823	561	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	676	-	-	854	-	-	303	168	871	242	170	771
Mov Cap-2 Maneuver	-	-	-	-	-	-	303	168	-	242	170	-
Stage 1	-	-	-	-	-	-	559	559	-	412	386	-
Stage 2	-	-	-	-	-	-	649	378	-	768	553	-

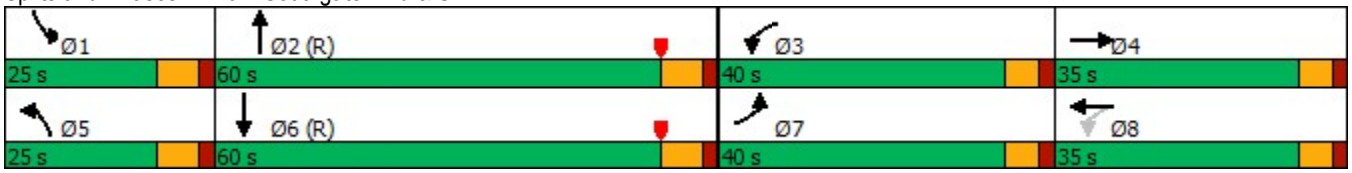
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	15.2	17.2
HCM LOS			C	C

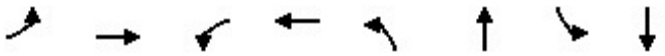
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	419	676	-	-	854	-	-	314
HCM Lane V/C Ratio	0.154	0.012	-	-	0.033	-	-	0.06
HCM Control Delay (s)	15.2	10.4	-	-	9.4	0.3	-	17.2
HCM Lane LOS	C	B	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.2

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	447	54	65	58	401	1506	90	1528
Future Volume (vph)	447	54	65	58	401	1506	90	1528
Turn Type	Prot	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases			8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	6.0	4.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	11.0	35.0	10.0	35.0	12.0	37.0	12.0	38.0
Total Split (s)	40.0	35.0	40.0	35.0	25.0	60.0	25.0	60.0
Total Split (%)	25.0%	21.9%	25.0%	21.9%	15.6%	37.5%	15.6%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	25.7	30.3	21.7	13.2	27.8	82.8	12.4	67.4
Actuated g/C Ratio	0.16	0.19	0.14	0.08	0.17	0.52	0.08	0.42
v/c Ratio	0.85	0.76	0.43	0.73	0.70	0.62	0.69	0.99
Control Delay	71.4	28.8	50.7	78.5	80.3	23.2	106.4	32.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.4	28.8	50.7	78.5	80.3	23.2	106.4	32.2
LOS	E	C	D	E	F	C	F	C
Approach Delay		54.5		68.4		34.9		35.4
Approach LOS		D		E		C		D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 49 (31%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 39.3	Intersection LOS: D
Intersection Capacity Utilization 104.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 104: Southgate Blvd & SR 7



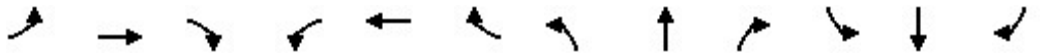


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	466	307	68	119	418	1616	94	2064
v/c Ratio	0.85	0.76	0.43	0.73	0.70	0.62	0.69	0.99
Control Delay	71.4	28.8	50.7	78.5	80.3	23.2	106.4	32.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.4	28.8	50.7	78.5	80.3	23.2	106.4	32.2
Queue Length 50th (ft)	175	56	54	96	227	276	104	622
Queue Length 95th (ft)	200	m302	86	163	294	302	m102	m#985
Internal Link Dist (ft)		1738		1039		1330		2623
Turn Bay Length (ft)	125		205		235		215	
Base Capacity (vph)	729	422	427	329	596	2618	199	2082
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.73	0.16	0.36	0.70	0.62	0.47	0.99

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
104: Southgate Blvd & SR 7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	447	54	241	65	58	57	401	1506	45	90	1528	453
Future Volume (veh/h)	447	54	241	65	58	57	401	1506	45	90	1528	453
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.98		0.96	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	466	56	251	68	60	59	418	1569	47	94	1592	472
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	513	70	315	187	117	115	389	2477	74	113	1710	497
Arrive On Green	0.15	0.24	0.24	0.04	0.14	0.14	0.15	0.65	0.65	0.08	0.58	0.58
Sat Flow, veh/h	3456	288	1292	1781	846	832	3456	5088	152	1781	3904	1136
Grp Volume(v), veh/h	466	0	307	68	0	119	418	1050	566	94	1384	680
Grp Sat Flow(s),veh/h/ln	1728	0	1580	1781	0	1678	1728	1702	1836	1781	1702	1635
Q Serve(g_s), s	21.2	0.0	29.2	5.2	0.0	10.5	18.0	29.5	29.5	8.3	59.2	62.1
Cycle Q Clear(g_c), s	21.2	0.0	29.2	5.2	0.0	10.5	18.0	29.5	29.5	8.3	59.2	62.1
Prop In Lane	1.00		0.82	1.00		0.50	1.00		0.08	1.00		0.69
Lane Grp Cap(c), veh/h	513	0	385	187	0	233	389	1657	894	113	1491	716
V/C Ratio(X)	0.91	0.00	0.80	0.36	0.00	0.51	1.08	0.63	0.63	0.83	0.93	0.95
Avail Cap(c_a), veh/h	734	0	385	488	0	304	389	1657	894	200	1491	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.87	0.87	0.87	0.23	0.23	0.23
Uniform Delay (d), s/veh	67.1	0.0	56.8	56.2	0.0	63.9	68.0	19.7	19.7	72.4	31.1	31.7
Incr Delay (d2), s/veh	9.3	0.0	10.3	0.4	0.0	0.6	64.2	1.6	3.0	1.4	3.3	8.0
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	10.1	0.0	12.8	2.4	0.0	4.6	11.2	10.9	12.1	3.8	22.9	24.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.4	0.0	67.0	56.6	0.0	64.5	132.2	21.3	22.7	73.8	34.4	39.7
LnGrp LOS	E	A	E	E	A	E	F	C	C	E	C	D
Approach Vol, veh/h		773			187			2034			2158	
Approach Delay, s/veh		72.7			61.7			44.5			37.8	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	84.9	12.9	45.0	25.0	77.1	29.7	28.2
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	18.0	53.0	34.0	29.0	18.0	53.0	34.0	29.0
Max Q Clear Time (g_c+I1), s	10.3	31.5	7.2	31.2	20.0	64.1	23.2	12.5
Green Ext Time (p_c), s	0.0	12.2	0.0	0.0	0.0	0.0	0.5	0.3

Intersection Summary	
HCM 6th Ctrl Delay	46.5
HCM 6th LOS	D

Notes

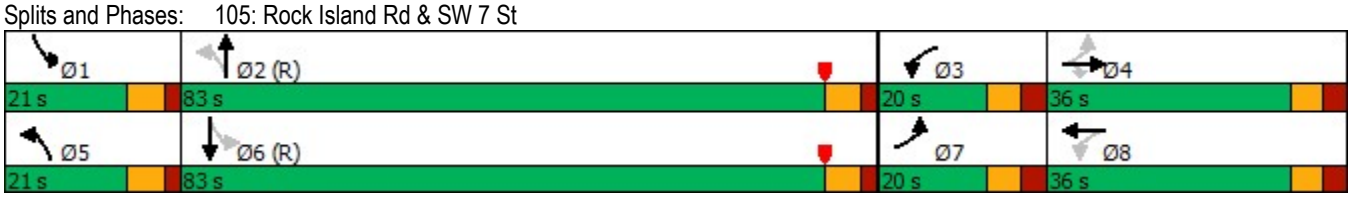
User approved pedestrian interval to be less than phase max green.

Timings
105: Rock Island Rd & SW 7 St

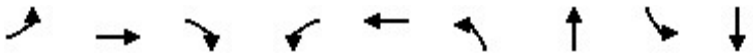
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	71	41	97	96	67	154	1142	58	1114
Future Volume (vph)	71	41	97	96	67	154	1142	58	1114
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases	4		4	8		2		6	
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	11.0	35.0	35.0	11.0	35.0	10.5	27.5	10.5	27.5
Total Split (s)	20.0	36.0	36.0	20.0	36.0	21.0	83.0	21.0	83.0
Total Split (%)	12.5%	22.5%	22.5%	12.5%	22.5%	13.1%	51.9%	13.1%	51.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	26.4	16.6	16.6	28.9	17.9	110.5	101.6	100.5	94.6
Actuated g/C Ratio	0.16	0.10	0.10	0.18	0.11	0.69	0.64	0.63	0.59
v/c Ratio	0.43	0.23	0.40	0.40	0.80	0.62	0.60	0.28	0.63
Control Delay	56.6	66.0	11.8	54.7	78.1	19.7	20.6	12.0	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	66.0	11.8	54.7	78.1	19.7	20.6	12.0	18.0
LOS	E	E	B	D	E	B	C	B	B
Approach Delay		37.8			69.4		20.5		17.7
Approach LOS		D			E		C		B

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 93 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 24.6	Intersection LOS: C
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 105: Rock Island Rd & SW 7 St



Queues
105: Rock Island Rd & SW 7 St

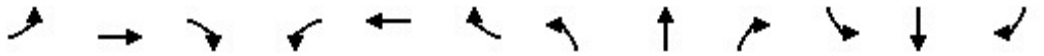


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	77	45	105	104	177	167	1336	63	1296
v/c Ratio	0.43	0.23	0.40	0.40	0.80	0.62	0.60	0.28	0.63
Control Delay	56.6	66.0	11.8	54.7	78.1	19.7	20.6	12.0	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	66.0	11.8	54.7	78.1	19.7	20.6	12.0	18.0
Queue Length 50th (ft)	67	44	0	91	144	54	428	15	215
Queue Length 95th (ft)	106	81	47	138	223	103	615	m35	348
Internal Link Dist (ft)		723			1226		764		1324
Turn Bay Length (ft)	215		215	125		195		205	
Base Capacity (vph)	214	337	377	283	335	313	2225	322	2067
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.13	0.28	0.37	0.53	0.53	0.60	0.20	0.63

Intersection Summary

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

HCM 6th Signalized Intersection Summary
105: Rock Island Rd & SW 7 St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	41	97	96	67	96	154	1142	87	58	1114	78
Future Volume (veh/h)	71	41	97	96	67	96	154	1142	87	58	1114	78
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	0.99		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	45	105	104	73	104	167	1241	95	63	1211	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	214	179	271	88	125	332	2105	161	298	2033	142
Arrive On Green	0.05	0.11	0.11	0.06	0.13	0.13	0.07	0.84	0.84	0.03	0.80	0.80
Sat Flow, veh/h	1781	1870	1568	1781	686	977	1781	3344	256	1781	3362	236
Grp Volume(v), veh/h	77	45	105	104	0	177	167	658	678	63	639	657
Grp Sat Flow(s),veh/h/ln	1781	1870	1568	1781	0	1663	1781	1777	1823	1781	1777	1821
Q Serve(g_s), s	6.1	3.5	10.2	8.2	0.0	16.6	5.8	19.0	19.2	2.2	21.6	21.7
Cycle Q Clear(g_c), s	6.1	3.5	10.2	8.2	0.0	16.6	5.8	19.0	19.2	2.2	21.6	21.7
Prop In Lane	1.00		1.00	1.00		0.59	1.00		0.14	1.00		0.13
Lane Grp Cap(c), veh/h	161	214	179	271	0	214	332	1118	1147	298	1074	1101
V/C Ratio(X)	0.48	0.21	0.59	0.38	0.00	0.83	0.50	0.59	0.59	0.21	0.59	0.60
Avail Cap(c_a), veh/h	219	339	284	303	0	301	406	1118	1147	415	1074	1101
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.66	0.66	0.66
Uniform Delay (d), s/veh	59.3	64.3	67.3	57.6	0.0	68.0	12.8	6.4	6.4	12.1	8.3	8.3
Incr Delay (d2), s/veh	0.8	0.2	1.1	0.3	0.0	8.8	0.4	2.3	2.2	0.1	1.6	1.6
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	2.8	1.7	4.2	3.7	0.0	7.6	2.3	5.4	5.6	0.9	6.4	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	64.5	68.4	57.9	0.0	76.8	13.2	8.7	8.6	12.2	9.9	9.9
LnGrp LOS	E	E	E	E	A	E	B	A	A	B	A	A
Approach Vol, veh/h		227			281			1503			1359	
Approach Delay, s/veh		64.8			69.8			9.2			10.0	
Approach LOS		E			E			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	107.2	17.1	25.3	14.4	103.2	14.8	27.5
Change Period (Y+Rc), s	6.5	6.5	7.0	7.0	6.5	6.5	7.0	7.0
Max Green Setting (Gmax), s	14.5	76.5	13.0	29.0	14.5	76.5	13.0	29.0
Max Q Clear Time (g_c+I1), s	4.2	21.2	10.2	12.2	7.8	23.7	8.1	18.6
Green Ext Time (p_c), s	0.0	10.4	0.0	0.3	0.1	9.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	128	27	55	224	20	34	23	53	8	15	9
Future Vol, veh/h	15	128	27	55	224	20	34	23	53	8	15	9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	149	31	64	260	23	40	27	62	9	17	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	11.2	9.2	8.6
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	9%	18%	25%
Vol Thru, %	21%	75%	75%	47%
Vol Right, %	48%	16%	7%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	170	299	32
LT Vol	34	15	55	8
Through Vol	23	128	224	15
RT Vol	53	27	20	9
Lane Flow Rate	128	198	348	37
Geometry Grp	1	1	1	1
Degree of Util (X)	0.178	0.256	0.442	0.054
Departure Headway (Hd)	5	4.667	4.574	5.25
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	714	765	786	676
Service Time	3.062	2.721	2.62	3.326
HCM Lane V/C Ratio	0.179	0.259	0.443	0.055
HCM Control Delay	9.2	9.3	11.2	8.6
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.6	1	2.3	0.2

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	24	168	22	26	290	29	32	3	20	12	4	21
Future Vol, veh/h	24	168	22	26	290	29	32	3	20	12	4	21
Conflicting Peds, #/hr	0	0	7	7	0	0	2	0	4	4	0	2
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	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	189	25	29	326	33	36	3	22	13	4	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	359	0	0	221	0	0	680	680	213	673	676	345
Stage 1	-	-	-	-	-	-	263	263	-	401	401	-
Stage 2	-	-	-	-	-	-	417	417	-	272	275	-
Critical Hdwy	4.12	-	-	4.12	-	-	5	5	4.5	5	5	4.5
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	5	5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5	5	-	5	5	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3	3	3	3	3	3
Pot Cap-1 Maneuver	1200	-	-	1348	-	-	611	611	1004	616	614	897
Stage 1	-	-	-	-	-	-	927	927	-	809	809	-
Stage 2	-	-	-	-	-	-	796	796	-	919	916	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1200	-	-	1339	-	-	563	575	994	573	578	895
Mov Cap-2 Maneuver	-	-	-	-	-	-	563	575	-	573	578	-
Stage 1	-	-	-	-	-	-	897	896	-	788	787	-
Stage 2	-	-	-	-	-	-	748	775	-	868	886	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.6	10.9	10.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	669	1200	-	-	1339	-	-	721
HCM Lane V/C Ratio	0.092	0.022	-	-	0.022	-	-	0.058
HCM Control Delay (s)	10.9	8.1	0	-	7.7	0	-	10.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	180	25	22	309	36	56
Future Vol, veh/h	180	25	22	309	36	56
Conflicting Peds, #/hr	0	0	0	0	4	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	202	28	25	347	40	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	230	0	617	216
Stage 1	-	-	-	-	216	-
Stage 2	-	-	-	-	401	-
Critical Hdwy	-	-	4.12	-	5	4.5
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	-	-	2.218	-	3	3
Pot Cap-1 Maneuver	-	-	1338	-	651	1001
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	809	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1338	-	633	1001
Mov Cap-2 Maneuver	-	-	-	-	633	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	787	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	9.7
HCM LOS			A

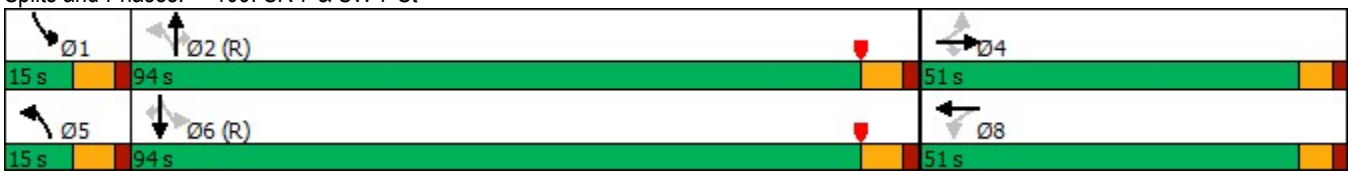
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	633	1001	-	-	1338	-
HCM Lane V/C Ratio	0.064	0.063	-	-	0.018	-
HCM Control Delay (s)	11.1	8.8	-	-	7.7	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0.1	-

Timings
109: SR 7 & SW 7 St

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	116	18	116	30	18	229	1736	32	41	1459	133
Future Volume (vph)	116	18	116	30	18	229	1736	32	41	1459	133
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.0	26.0	26.0	45.0	45.0	12.0	27.0	27.0	12.0	27.0	27.0
Total Split (s)	51.0	51.0	51.0	51.0	51.0	15.0	94.0	94.0	15.0	94.0	94.0
Total Split (%)	31.9%	31.9%	31.9%	31.9%	31.9%	9.4%	58.8%	58.8%	9.4%	58.8%	58.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.8	20.8		20.8	126.2	116.4	116.4	104.8	99.5	99.5
Actuated g/C Ratio		0.13	0.13		0.13	0.79	0.73	0.73	0.66	0.62	0.62
v/c Ratio		0.80	0.39		0.42	0.63	0.48	0.03	0.22	0.47	0.14
Control Delay		97.1	13.3		59.2	20.3	10.7	0.1	5.0	8.2	2.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		97.1	13.3		59.2	20.3	10.7	0.1	5.0	8.2	2.5
LOS		F	B		E	C	B	A	A	A	A
Approach Delay		58.2			59.2		11.6			7.7	
Approach LOS		E			E		B			A	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 76 (48%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 13.7	Intersection LOS: B
Intersection Capacity Utilization 70.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 109: SR 7 & SW 7 St



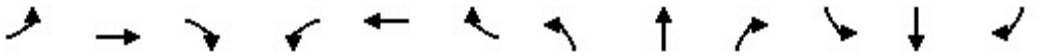


Lane Group	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	136	118	66	234	1771	33	42	1489	136
v/c Ratio	0.80	0.39	0.42	0.63	0.48	0.03	0.22	0.47	0.14
Control Delay	97.1	13.3	59.2	20.3	10.7	0.1	5.0	8.2	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.1	13.3	59.2	20.3	10.7	0.1	5.0	8.2	2.5
Queue Length 50th (ft)	140	2	54	55	275	0	4	111	3
Queue Length 95th (ft)	209	61	101	169	378	1	m7	m143	m7
Internal Link Dist (ft)	972		833		582			1330	
Turn Bay Length (ft)		100		330		105	275		95
Base Capacity (vph)	370	520	330	371	3698	1141	225	3163	972
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.23	0.20	0.63	0.48	0.03	0.19	0.47	0.14

Intersection Summary

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

HCM 6th Signalized Intersection Summary
109: SR 7 & SW 7 St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	18	116	30	18	17	229	1736	32	41	1459	133
Future Volume (veh/h)	116	18	116	30	18	17	229	1736	32	41	1459	133
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		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	18	118	31	18	17	234	1771	33	42	1489	136
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	204	25	292	67	38	25	311	3388	1026	245	3268	1010
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.07	0.88	0.88	0.04	0.85	0.85
Sat Flow, veh/h	874	133	1577	182	206	135	1781	5106	1547	1781	5106	1579
Grp Volume(v), veh/h	136	0	118	66	0	0	234	1771	33	42	1489	136
Grp Sat Flow(s),veh/h/ln	1007	0	1577	523	0	0	1781	1702	1547	1781	1702	1579
Q Serve(g_s), s	0.0	0.0	10.5	4.3	0.0	0.0	7.8	12.1	0.4	1.3	11.3	2.3
Cycle Q Clear(g_c), s	21.7	0.0	10.5	26.1	0.0	0.0	7.8	12.1	0.4	1.3	11.3	2.3
Prop In Lane	0.87		1.00	0.47		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	228	0	292	130	0	0	311	3388	1026	245	3268	1010
V/C Ratio(X)	0.60	0.00	0.40	0.51	0.00	0.00	0.75	0.52	0.03	0.17	0.46	0.13
Avail Cap(c_a), veh/h	365	0	444	270	0	0	311	3388	1026	287	3268	1010
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.15	0.15	0.15
Uniform Delay (d), s/veh	62.0	0.0	57.4	65.7	0.0	0.0	10.3	3.9	3.2	9.3	5.1	4.5
Incr Delay (d2), s/veh	0.9	0.0	0.3	1.1	0.0	0.0	9.0	0.6	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	4.3	2.7	0.0	0.0	3.6	3.0	0.2	0.5	3.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.9	0.0	57.8	66.9	0.0	0.0	19.2	4.5	3.2	9.3	5.2	4.5
LnGrp LOS	E	A	E	E	A	A	B	A	A	A	A	A
Approach Vol, veh/h		254			66			2038			1667	
Approach Delay, s/veh		60.5			66.9			6.1			5.2	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	113.2		35.6	15.0	109.4		35.6				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	8.0	87.0		45.0	8.0	87.0		45.0				
Max Q Clear Time (g_c+I1), s	3.3	14.1		23.7	9.8	13.3		28.1				
Green Ext Time (p_c), s	0.0	25.3		0.7	0.0	19.2		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		10.2	
HCM 6th LOS		B	

Timings
110: Kimberly Blvd & Rock Island Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	109	96	79	161	195	99	1041	239	158	1039	142
Future Volume (vph)	109	96	79	161	195	99	1041	239	158	1039	142
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.5	42.0	42.0	11.5	47.5	11.5	44.5	44.5	16.5	44.6	44.6
Total Split (s)	20.0	46.0	46.0	20.0	46.0	16.0	70.0	70.0	24.0	78.0	78.0
Total Split (%)	12.5%	28.8%	28.8%	12.5%	28.8%	10.0%	43.8%	43.8%	15.0%	48.8%	48.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	29.4	17.4	17.4	32.5	19.0	98.1	90.7	90.7	109.0	96.6	96.6
Actuated g/C Ratio	0.18	0.11	0.11	0.20	0.12	0.61	0.57	0.57	0.68	0.60	0.60
v/c Ratio	0.66	0.51	0.28	0.66	0.84	0.37	0.56	0.28	0.52	0.53	0.16
Control Delay	67.1	74.7	2.3	64.2	57.2	13.8	25.4	9.6	15.4	20.8	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.1	74.7	2.3	64.2	57.2	13.8	25.4	9.6	15.4	20.8	6.1
LOS	E	E	A	E	E	B	C	A	B	C	A
Approach Delay		51.6			59.2		21.8			18.6	
Approach LOS		D			E		C			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 63 (39%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 28.9	Intersection LOS: C
Intersection Capacity Utilization 81.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 110: Kimberly Blvd & Rock Island Road



Queues
110: Kimberly Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	118	104	86	175	441	108	1132	260	172	1129	154
v/c Ratio	0.66	0.51	0.28	0.66	0.84	0.37	0.56	0.28	0.52	0.53	0.16
Control Delay	67.1	74.7	2.3	64.2	57.2	13.8	25.4	9.6	15.4	20.8	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.1	74.7	2.3	64.2	57.2	13.8	25.4	9.6	15.4	20.8	6.1
Queue Length 50th (ft)	102	104	0	157	154	36	392	53	59	352	20
Queue Length 95th (ft)	153	162	0	219	211	68	563	132	104	488	62
Internal Link Dist (ft)		387			3410		622			1269	
Turn Bay Length (ft)	250		250	200		280		150	240		160
Base Capacity (vph)	200	465	498	271	927	318	2006	941	376	2137	969
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.22	0.17	0.65	0.48	0.34	0.56	0.28	0.46	0.53	0.16

Intersection Summary

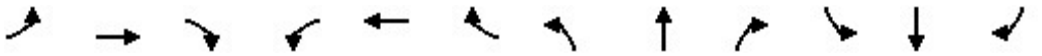
HCM Signalized Intersection Capacity Analysis
110: Kimberly Blvd & Rock Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	96	79	161	195	211	99	1041	239	158	1039	142
Future Volume (vph)	109	96	79	161	195	211	99	1041	239	158	1039	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.98		1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1768	1863	1529	1759	3214		1769	3539	1547	1770	3539	1537
Flt Permitted	0.23	1.00	1.00	0.54	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	425	1863	1529	992	3214		372	3539	1547	305	3539	1537
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	118	104	86	175	212	229	108	1132	260	172	1129	154
RTOR Reduction (vph)	0	0	77	0	145	0	0	0	65	0	0	42
Lane Group Flow (vph)	118	104	9	175	296	0	108	1132	195	172	1129	112
Confl. Peds. (#/hr)	9		11	11		9	10		1	1		10
Confl. Bikes (#/hr)			4			3						2
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	29.5	17.5	17.5	32.5	19.0		98.1	90.7	90.7	109.9	96.6	96.6
Effective Green, g (s)	29.5	17.5	17.5	32.5	19.0		98.1	90.7	90.7	109.9	96.6	96.6
Actuated g/C Ratio	0.18	0.11	0.11	0.20	0.12		0.61	0.57	0.57	0.69	0.60	0.60
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		1.5	3.0	3.0	1.5	3.0	3.0
Lane Grp Cap (vph)	179	203	167	266	381		292	2006	876	331	2136	927
v/s Ratio Prot	0.05	0.06		c0.06	c0.09		0.02	c0.32		c0.04	c0.32	
v/s Ratio Perm	0.07		0.01	0.08			0.21		0.13	0.31		0.07
v/c Ratio	0.66	0.51	0.06	0.66	0.78		0.37	0.56	0.22	0.52	0.53	0.12
Uniform Delay, d1	57.6	67.2	63.9	56.6	68.5		14.2	22.1	17.2	14.3	18.4	13.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.5	0.9	0.1	4.4	8.8		0.3	1.2	0.6	0.6	0.9	0.3
Delay (s)	64.2	68.1	63.9	61.1	77.3		14.5	23.2	17.8	14.9	19.4	13.8
Level of Service	E	E	E	E	E		B	C	B	B	B	B
Approach Delay (s)		65.4			72.7			21.6			18.3	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
110: Kimberly Blvd & Rock Island Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	96	79	161	195	211	99	1041	239	158	1039	142
Future Volume (veh/h)	109	96	79	161	195	211	99	1041	239	158	1039	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	104	86	175	212	229	108	1132	260	172	1129	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	314	256	341	335	289	289	1886	833	291	1948	853
Arrive On Green	0.07	0.17	0.17	0.09	0.19	0.19	0.05	0.71	0.71	0.08	0.73	0.73
Sat Flow, veh/h	1781	1870	1527	1781	1777	1533	1781	3554	1570	1781	3554	1556
Grp Volume(v), veh/h	118	104	86	175	212	229	108	1132	260	172	1129	154
Grp Sat Flow(s),veh/h/ln	1781	1870	1527	1781	1777	1533	1781	1777	1570	1781	1777	1556
Q Serve(g_s), s	8.7	7.8	7.9	13.0	17.6	22.8	4.5	26.0	10.0	7.1	23.8	4.9
Cycle Q Clear(g_c), s	8.7	7.8	7.9	13.0	17.6	22.8	4.5	26.0	10.0	7.1	23.8	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	314	256	341	335	289	289	1886	833	291	1948	853
V/C Ratio(X)	0.57	0.33	0.34	0.51	0.63	0.79	0.37	0.60	0.31	0.59	0.58	0.18
Avail Cap(c_a), veh/h	244	468	382	341	444	383	323	1886	833	383	1948	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	58.7	58.7	49.4	59.8	61.9	17.3	14.9	12.5	18.4	13.0	10.5
Incr Delay (d2), s/veh	0.9	0.2	0.3	0.6	0.7	5.8	0.3	1.4	1.0	0.7	1.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	3.8	3.1	5.9	8.1	9.4	1.8	9.4	3.5	2.9	8.3	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	58.9	59.0	50.0	60.5	67.7	17.6	16.3	13.5	19.1	14.3	10.9
LnGrp LOS	D	E	E	D	E	E	B	B	B	B	B	B
Approach Vol, veh/h		308			616			1500			1455	
Approach Delay, s/veh		56.5			60.2			15.9			14.5	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	91.4	20.0	32.8	12.9	94.2	16.7	36.2
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	17.5	63.5	14.0	40.0	9.5	71.5	14.0	40.0
Max Q Clear Time (g_c+I1), s	9.1	28.0	15.0	9.9	6.5	25.8	10.7	24.8
Green Ext Time (p_c), s	0.1	12.0	0.0	0.5	0.0	12.0	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	461	485	290	83
Demand Flow Rate, veh/h	471	494	295	86
Vehicles Circulating, veh/h	74	279	387	624
Vehicles Exiting, veh/h	635	403	158	149
Ped Vol Crossing Leg, #/h	0	5	1	11
Ped Cap Adj	1.000	0.999	1.000	0.998
Approach Delay, s/veh	6.4	9.1	7.4	6.4
Approach LOS	A	A	A	A

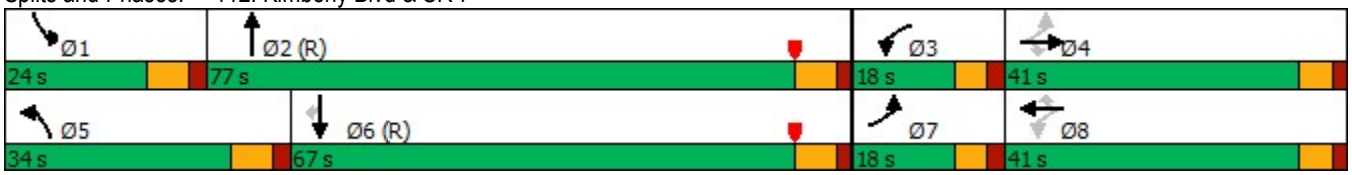
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	471	494	295	86
Cap Entry Lane, veh/h	1280	1038	930	730
Entry HV Adj Factor	0.980	0.981	0.982	0.970
Flow Entry, veh/h	461	485	290	83
Cap Entry, veh/h	1254	1018	913	707
V/C Ratio	0.368	0.476	0.317	0.118
Control Delay, s/veh	6.4	9.1	7.4	6.4
LOS	A	A	A	A
95th %tile Queue, veh	2	3	1	0

Timings
112: Kimberly Blvd & SR 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	151	63	229	132	56	57	286	1860	83	1388	160
Future Volume (vph)	151	63	229	132	56	57	286	1860	83	1388	160
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.0	38.0	38.0	11.0	40.0	40.0	12.0	40.0	12.0	40.0	40.0
Total Split (s)	18.0	41.0	41.0	18.0	41.0	41.0	34.0	77.0	24.0	67.0	67.0
Total Split (%)	11.3%	25.6%	25.6%	11.3%	25.6%	25.6%	21.3%	48.1%	15.0%	41.9%	41.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max	C-Max
Act Effct Green (s)	22.4	10.7	10.7	21.9	10.4	10.4	34.8	100.2	11.7	77.0	77.0
Actuated g/C Ratio	0.14	0.07	0.07	0.14	0.06	0.06	0.22	0.63	0.07	0.48	0.48
v/c Ratio	0.73	0.53	0.73	0.65	0.48	0.24	0.78	0.68	0.67	0.59	0.21
Control Delay	80.4	86.9	21.4	73.5	84.1	2.2	74.2	17.6	95.8	32.2	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.4	86.9	21.4	73.5	84.1	2.2	74.2	17.6	95.8	32.2	5.1
LOS	F	F	C	E	F	A	E	B	F	C	A
Approach Delay		50.8			59.4			24.6		32.8	
Approach LOS		D			E			C		C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 142 (89%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 31.8	Intersection LOS: C
Intersection Capacity Utilization 83.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 112: Kimberly Blvd & SR 7



Queues
112: Kimberly Blvd & SR 7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	157	66	239	138	58	59	298	2124	86	1446	167
v/c Ratio	0.73	0.53	0.73	0.65	0.48	0.24	0.78	0.68	0.67	0.59	0.21
Control Delay	80.4	86.9	21.4	73.5	84.1	2.2	74.2	17.6	95.8	32.2	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.4	86.9	21.4	73.5	84.1	2.2	74.2	17.6	95.8	32.2	5.1
Queue Length 50th (ft)	151	68	0	131	60	0	316	255	89	395	5
Queue Length 95th (ft)	221	119	90	195	107	0	399	378	147	501	54
Internal Link Dist (ft)		1738			1039			1330		793	
Turn Bay Length (ft)	175			110		110	325		330		235
Base Capacity (vph)	217	407	526	219	407	457	384	3138	188	2448	792
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.16	0.45	0.63	0.14	0.13	0.78	0.68	0.46	0.59	0.21

Intersection Summary

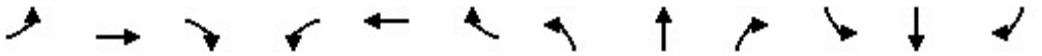
HCM Signalized Intersection Capacity Analysis
112: Kimberly Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	63	229	132	56	57	286	1860	179	83	1388	160
Future Volume (vph)	151	63	229	132	56	57	286	1860	179	83	1388	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.95	1.00	1.00		1.00	1.00	0.93
Flpb, ped/bikes	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1727	1863	1550	1763	1863	1505	1770	5005		1770	5085	1478
Flt Permitted	0.71	1.00	1.00	0.71	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1283	1863	1550	1325	1863	1505	1770	5005		1770	5085	1478
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	157	66	239	138	58	59	298	1938	186	86	1446	167
RTOR Reduction (vph)	0	0	223	0	0	55	0	5	0	0	0	81
Lane Group Flow (vph)	157	66	16	138	58	4	298	2119	0	86	1446	86
Confl. Peds. (#/hr)	27		4	4		27	19		4	4		19
Confl. Bikes (#/hr)			1						2			2
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)	22.4	10.7	10.7	22.0	10.5	10.5	34.8	100.1		11.7	77.0	77.0
Effective Green, g (s)	22.4	10.7	10.7	22.0	10.5	10.5	34.8	100.1		11.7	77.0	77.0
Actuated g/C Ratio	0.14	0.07	0.07	0.14	0.07	0.07	0.22	0.63		0.07	0.48	0.48
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	1.5	3.0		1.5	3.0	3.0
Lane Grp Cap (vph)	212	124	103	213	122	98	384	3131		129	2447	711
v/s Ratio Prot	c0.05	0.04		0.05	0.03		c0.17	c0.42		0.05	0.28	
v/s Ratio Perm	c0.05		0.01	0.04		0.00						0.06
v/c Ratio	0.74	0.53	0.16	0.65	0.48	0.04	0.78	0.68		0.67	0.59	0.12
Uniform Delay, d1	65.2	72.2	70.4	64.6	72.1	70.0	58.9	19.4		72.2	30.1	22.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.08	0.82		1.00	1.00	1.00
Incremental Delay, d2	11.5	2.2	0.3	5.0	1.1	0.1	6.4	0.9		9.6	1.1	0.3
Delay (s)	76.6	74.4	70.6	69.6	73.2	70.1	70.0	16.8		81.9	31.1	23.2
Level of Service	E	E	E	E	E	E	E	B		F	C	C
Approach Delay (s)		73.2			70.5			23.4			32.9	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
112: Kimberly Blvd & SR 7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	63	229	132	56	57	286	1860	179	83	1388	160
Future Volume (veh/h)	151	63	229	132	56	57	286	1860	179	83	1388	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.95	0.97		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	157	66	239	138	58	59	298	1938	186	86	1446	167
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	381	357	286	346	355	288	301	2425	231	105	2061	611
Arrive On Green	0.08	0.19	0.19	0.07	0.19	0.19	0.22	0.68	0.68	0.08	0.54	0.54
Sat Flow, veh/h	1781	1870	1498	1781	1870	1517	1781	4722	449	1781	5106	1514
Grp Volume(v), veh/h	157	66	239	138	58	59	298	1393	731	86	1446	167
Grp Sat Flow(s),veh/h/ln	1781	1870	1498	1781	1870	1517	1781	1702	1768	1781	1702	1514
Q Serve(g_s), s	11.4	4.7	24.6	9.9	4.1	5.2	26.7	45.5	46.7	7.6	33.7	9.6
Cycle Q Clear(g_c), s	11.4	4.7	24.6	9.9	4.1	5.2	26.7	45.5	46.7	7.6	33.7	9.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	381	357	286	346	355	288	301	1748	908	105	2061	611
V/C Ratio(X)	0.41	0.18	0.84	0.40	0.16	0.20	0.99	0.80	0.81	0.82	0.70	0.27
Avail Cap(c_a), veh/h	381	409	328	347	409	332	301	1748	908	189	2061	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	54.3	62.3	47.0	54.2	54.6	61.9	19.5	19.7	72.9	29.9	24.3
Incr Delay (d2), s/veh	0.3	0.1	13.6	0.3	0.1	0.1	40.4	2.7	5.3	5.8	2.0	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	5.1	2.3	10.5	4.5	2.0	2.0	15.1	16.3	18.0	3.6	13.3	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.7	54.4	75.9	47.3	54.2	54.7	102.3	22.2	25.0	78.7	31.9	25.4
LnGrp LOS	D	D	E	D	D	D	F	C	C	E	C	C
Approach Vol, veh/h		462			255			2422			1699	
Approach Delay, s/veh		63.2			50.6			32.9			33.6	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	89.2	17.9	36.5	34.0	71.6	18.0	36.4
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	17.0	70.0	12.0	35.0	27.0	60.0	12.0	35.0
Max Q Clear Time (g_c+I1), s	9.6	48.7	11.9	26.6	28.7	35.7	13.4	7.2
Green Ext Time (p_c), s	0.0	16.0	0.0	0.5	0.0	12.8	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	37.0
HCM 6th LOS	D

Timings
113: SR 7 & Blvd of Champions

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	314	0	268	8	3	267	1972	11	43	1511	157
Future Volume (vph)	314	0	268	8	3	267	1972	11	43	1511	157
Turn Type	Split	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			3	5	2		1	6	
Permitted Phases			4	3				2			6
Detector Phase	4	4	4	3	3	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	47.5	47.5	12.0	43.0	43.0	12.0	43.0	43.0
Total Split (s)	19.0	19.0	19.0	50.0	50.0	25.0	76.0	76.0	15.0	66.0	66.0
Total Split (%)	11.9%	11.9%	11.9%	31.3%	31.3%	15.6%	47.5%	47.5%	9.4%	41.3%	41.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	28.2	28.2	28.2		7.7	17.8	99.3	99.3	8.4	87.5	87.5
Actuated g/C Ratio	0.18	0.18	0.18		0.05	0.11	0.62	0.62	0.05	0.55	0.55
v/c Ratio	0.58	0.22	0.22		0.17	0.78	0.69	0.01	0.52	0.60	0.19
Control Delay	65.3	0.7	0.7		72.9	92.0	17.1	0.0	89.2	14.7	0.6
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.3	0.7	0.7		72.9	92.0	17.1	0.0	89.2	14.7	0.6
LOS	E	A	A		E	F	B	A	F	B	A
Approach Delay		35.5			72.9		25.9			15.3	
Approach LOS		D			E		C			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 153 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 23.3	Intersection LOS: C
Intersection Capacity Utilization 71.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 113: SR 7 & Blvd of Champions



Queues
113: SR 7 & Blvd of Champions

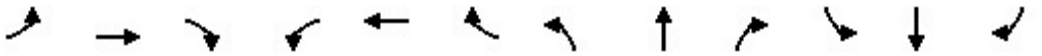


Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	349	149	149	13	297	2191	12	48	1679	174
v/c Ratio	0.58	0.22	0.22	0.17	0.78	0.69	0.01	0.52	0.60	0.19
Control Delay	65.3	0.7	0.7	72.9	92.0	17.1	0.0	89.2	14.7	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.3	0.7	0.7	72.9	92.0	17.1	0.0	89.2	14.7	0.6
Queue Length 50th (ft)	177	0	0	12	144	610	0	52	168	1
Queue Length 95th (ft)	232	0	0	37	186	864	m0	m92	211	5
Internal Link Dist (ft)		446		833		1028			1330	
Turn Bay Length (ft)	170		300		300		160	160		425
Base Capacity (vph)	604	683	683	435	412	3157	994	101	2781	924
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.22	0.22	0.03	0.72	0.69	0.01	0.48	0.60	0.19

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
113: SR 7 & Blvd of Champions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	314	0	268	8	3	1	267	1972	11	43	1511	157
Future Volume (vph)	314	0	268	8	3	1	267	1972	11	43	1511	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.5		7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95		1.00		0.97	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	0.85		0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.97		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1504	1504		1780		3433	5085	1533	1770	5085	1548
Flt Permitted	0.95	1.00	1.00		0.87		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1504	1504		1598		3433	5085	1533	1770	5085	1548
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	349	0	298	9	3	1	297	2191	12	48	1679	174
RTOR Reduction (vph)	0	123	123	0	1	0	0	0	5	0	0	83
Lane Group Flow (vph)	349	26	26	0	12	0	297	2191	7	48	1679	91
Confl. Peds. (#/hr)	2					2	6		5	5		6
Confl. Bikes (#/hr)									1			6
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4			3		5	2		1	6	
Permitted Phases			4	3					2			6
Actuated Green, G (s)	28.2	28.2	28.2		3.9		17.8	94.0	94.0	7.4	83.6	83.6
Effective Green, g (s)	28.2	28.2	28.2		3.9		17.8	94.0	94.0	7.4	83.6	83.6
Actuated g/C Ratio	0.18	0.18	0.18		0.02		0.11	0.59	0.59	0.05	0.52	0.52
Clearance Time (s)	6.0	6.0	6.0		6.5		7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	2.2	2.2	2.2		2.2		1.5	3.0	3.0	1.5	3.0	3.0
Lane Grp Cap (vph)	605	265	265		38		381	2987	900	81	2656	808
v/s Ratio Prot	c0.10	0.02					c0.09	c0.43		0.03	0.33	
v/s Ratio Perm			0.02		c0.01				0.00			0.06
v/c Ratio	0.58	0.10	0.10		0.32		0.78	0.73	0.01	0.59	0.63	0.11
Uniform Delay, d1	60.4	55.3	55.3		76.7		69.2	23.9	13.7	74.8	27.2	19.4
Progression Factor	1.00	1.00	1.00		1.00		1.16	0.72	1.00	0.99	0.53	0.08
Incremental Delay, d2	0.9	0.1	0.1		2.4		7.5	1.4	0.0	6.4	1.0	0.2
Delay (s)	61.4	55.3	55.3		79.2		87.7	18.5	13.7	80.6	15.5	1.8
Level of Service	E	E	E		E		F	B	B	F	B	A
Approach Delay (s)		58.6			79.2			26.7			15.9	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.5
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

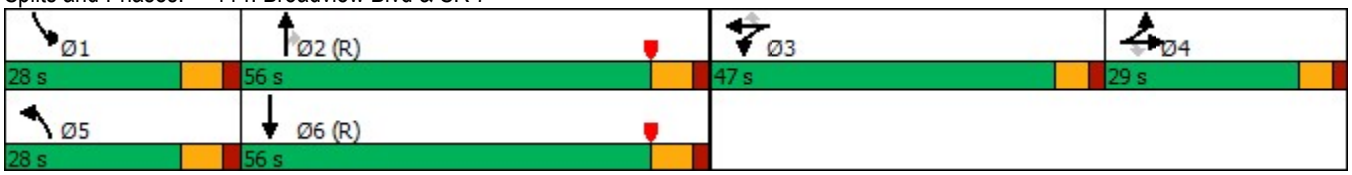
HCM 6th Edition methodology expects strict NEMA phasing.

Timings
114: Broadview Blvd & SR 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	87	23	50	61	0	171	82	1940	76	261	1429
Future Volume (vph)	87	23	50	61	0	171	82	1940	76	261	1429
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		3	3		5	2		1	6
Permitted Phases			4			3			2		
Detector Phase	4	4	4	3	3	3	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.0	47.0	47.0	47.0	12.0	40.0	40.0	12.0	40.0
Total Split (s)	29.0	29.0	29.0	47.0	47.0	47.0	28.0	56.0	56.0	28.0	56.0
Total Split (%)	18.1%	18.1%	18.1%	29.4%	29.4%	29.4%	17.5%	35.0%	35.0%	17.5%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	8.7	8.7	8.7	8.5	8.5	8.5	11.8	99.5	99.5	17.3	105.0
Actuated g/C Ratio	0.05	0.05	0.05	0.05	0.05	0.05	0.07	0.62	0.62	0.11	0.66
v/c Ratio	0.50	0.24	0.27	0.36	0.37	0.71	0.67	0.65	0.08	0.75	0.50
Control Delay	82.2	77.1	3.4	83.0	83.6	24.6	95.8	21.6	1.3	50.6	32.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.2	77.1	3.4	83.0	83.6	24.6	95.8	21.6	1.3	50.6	32.8
LOS	F	E	A	F	F	C	F	C	A	D	C
Approach Delay		56.9			40.1			23.8			35.4
Approach LOS		E			D			C			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 114 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 30.7	Intersection LOS: C
Intersection Capacity Utilization 70.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 114: Broadview Blvd & SR 7



Queues
114: Broadview Blvd & SR 7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	93	24	53	32	33	182	87	2064	81	278	1647
v/c Ratio	0.50	0.24	0.27	0.36	0.37	0.71	0.67	0.65	0.08	0.75	0.50
Control Delay	82.2	77.1	3.4	83.0	83.6	24.6	95.8	21.6	1.3	50.6	32.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.2	77.1	3.4	83.0	83.6	24.6	95.8	21.6	1.3	50.6	32.8
Queue Length 50th (ft)	49	25	0	34	35	0	90	474	0	148	466
Queue Length 95th (ft)	80	57	0	72	74	79	149	650	13	178	596
Internal Link Dist (ft)		559			661			481			1028
Turn Bay Length (ft)	160		260	270		260	270		150	290	
Base Capacity (vph)	493	267	326	430	430	541	232	3162	1010	454	3292
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.09	0.16	0.07	0.08	0.34	0.38	0.65	0.08	0.61	0.50

Intersection Summary

HCM Signalized Intersection Capacity Analysis
114: Broadview Blvd & SR 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	23	50	61	0	171	82	1940	76	261	1429	119
Future Volume (vph)	87	23	50	61	0	171	82	1940	76	261	1429	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1863	1583	1681	1681	1583	1770	5085	1560	3433	5015	
Flt Permitted	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	1863	1583	1681	1681	1583	1770	5085	1560	3433	5015	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	93	24	53	65	0	182	87	2064	81	278	1520	127
RTOR Reduction (vph)	0	0	50	0	0	172	0	0	31	0	3	0
Lane Group Flow (vph)	93	24	3	32	33	10	87	2064	50	278	1644	0
Confl. Peds. (#/hr)							3		1	1		3
Confl. Bikes (#/hr)									3			3
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3			2			
Actuated Green, G (s)	8.7	8.7	8.7	8.5	8.5	8.5	11.8	99.5	99.5	17.3	105.0	
Effective Green, g (s)	8.7	8.7	8.7	8.5	8.5	8.5	11.8	99.5	99.5	17.3	105.0	
Actuated g/C Ratio	0.05	0.05	0.05	0.05	0.05	0.05	0.07	0.62	0.62	0.11	0.66	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)	186	101	86	89	89	84	130	3162	970	371	3291	
v/s Ratio Prot	c0.03	0.01		0.02	c0.02		0.05	c0.41		c0.08	c0.33	
v/s Ratio Perm			0.00			0.01			0.03			
v/c Ratio	0.50	0.24	0.03	0.36	0.37	0.12	0.67	0.65	0.05	0.75	0.50	
Uniform Delay, d1	73.5	72.5	71.7	73.1	73.2	72.2	72.2	19.3	11.8	69.2	14.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.57	2.15	
Incremental Delay, d2	0.8	0.4	0.1	0.9	1.0	0.2	9.7	1.1	0.1	6.1	0.5	
Delay (s)	74.3	72.9	71.7	74.0	74.1	72.4	81.9	20.3	11.9	45.5	30.7	
Level of Service	E	E	E	E	E	E	F	C	B	D	C	
Approach Delay (s)		73.3			72.8			22.4			32.8	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Edition methodology expects strict NEMA phasing.

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	81	0	2016	1574	60
Future Vol, veh/h	0	81	0	2016	1574	60
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	-	-	-	240
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	82	0	2036	1590	61

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	795	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	4.5	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3	-	-	-	-
Pot Cap-1 Maneuver	0	608	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	608	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	608	-	-
HCM Lane V/C Ratio	-	0.135	-	-
HCM Control Delay (s)	-	11.8	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

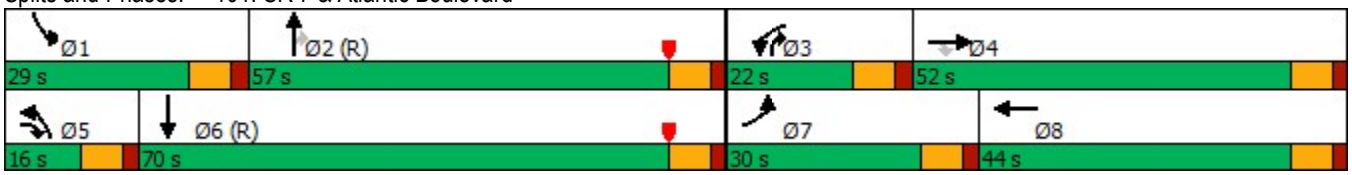
Future (2026) Total SYNCHRO Output – *Optimized*

Timings
101: SR 7 & Atlantic Boulevard

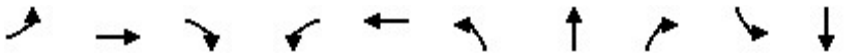
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	384	1424	233	366	703	91	1529	634	275	1352
Future Volume (vph)	384	1424	233	366	703	91	1529	634	275	1352
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	5	2	3	1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	5.0	4.0	6.0	5.0	8.0	4.0	5.0	8.0
Minimum Split (s)	11.0	47.0	12.0	11.0	43.0	12.0	50.0	11.0	12.0	50.0
Total Split (s)	30.0	52.0	16.0	22.0	44.0	16.0	57.0	22.0	29.0	70.0
Total Split (%)	18.8%	32.5%	10.0%	13.8%	27.5%	10.0%	35.6%	13.8%	18.1%	43.8%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max
Act Effct Green (s)	21.0	45.0	54.0	15.0	39.0	9.0	50.0	65.0	22.0	63.0
Actuated g/C Ratio	0.13	0.28	0.34	0.09	0.24	0.06	0.31	0.41	0.14	0.39
v/c Ratio	0.87	1.02	0.40	1.16	0.69	0.94	0.98	0.89	1.16	0.77
Control Delay	87.8	83.9	18.6	162.0	57.4	132.5	52.9	32.6	164.4	45.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.8	83.9	18.6	162.0	57.4	132.5	52.9	32.6	164.4	45.1
LOS	F	F	B	F	E	F	D	C	F	D
Approach Delay		77.1			89.5		50.4			63.7
Approach LOS		E			F		D			E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 115 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 67.6	Intersection LOS: E
Intersection Capacity Utilization 115.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 101: SR 7 & Atlantic Boulevard



Queues
101: SR 7 & Atlantic Boulevard



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	392	1453	238	373	843	93	1560	647	281	1526
v/c Ratio	0.87	1.02	0.40	1.16	0.69	0.94	0.98	0.89	1.16	0.77
Control Delay	87.8	83.9	18.6	162.0	57.4	132.5	52.9	32.6	164.4	45.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.8	83.9	18.6	162.0	57.4	132.5	52.9	32.6	164.4	45.1
Queue Length 50th (ft)	208	~585	81	~237	293	94	564	435	~345	503
Queue Length 95th (ft)	268	#682	155	#347	347	m#136	m#687	m#724	#540	564
Internal Link Dist (ft)		2560			1156		2623			1036
Turn Bay Length (ft)	280		330	525		400		270	395	
Base Capacity (vph)	493	1430	601	321	1222	99	1589	731	243	1978
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	1.02	0.40	1.16	0.69	0.94	0.98	0.89	1.16	0.77

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

HCM 6th Signalized Intersection Summary
101: SR 7 & Atlantic Boulevard

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	384	1424	233	366	703	123	91	1529	634	275	1352	143
Future Volume (veh/h)	384	1424	233	366	703	123	91	1529	634	275	1352	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	392	1453	238	373	717	126	93	1560	647	281	1380	146
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	434	1436	526	324	1085	188	100	1596	632	245	1842	195
Arrive On Green	0.13	0.28	0.28	0.09	0.25	0.25	0.07	0.42	0.42	0.18	0.52	0.52
Sat Flow, veh/h	3456	5106	1555	3456	4351	755	1781	5106	1546	1781	4677	495
Grp Volume(v), veh/h	392	1453	238	373	559	284	93	1560	647	281	1004	522
Grp Sat Flow(s),veh/h/ln	1728	1702	1555	1728	1702	1702	1781	1702	1546	1781	1702	1768
Q Serve(g_s), s	17.9	45.0	19.2	15.0	23.6	24.1	8.3	48.1	50.0	22.0	37.0	37.0
Cycle Q Clear(g_c), s	17.9	45.0	19.2	15.0	23.6	24.1	8.3	48.1	50.0	22.0	37.0	37.0
Prop In Lane	1.00		1.00	1.00		0.44	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	434	1436	526	324	849	424	100	1596	632	245	1340	696
V/C Ratio(X)	0.90	1.01	0.45	1.15	0.66	0.67	0.93	0.98	1.02	1.15	0.75	0.75
Avail Cap(c_a), veh/h	497	1436	526	324	849	424	100	1596	632	245	1340	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.44	0.44	0.44	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.0	57.5	41.5	72.5	53.9	54.1	73.7	46.2	41.6	65.4	31.9	31.9
Incr Delay (d2), s/veh	17.0	26.7	0.5	97.6	1.7	3.7	39.7	10.6	30.2	103.1	3.9	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	22.9	7.5	11.1	10.4	10.8	4.9	20.9	30.9	16.7	15.0	16.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.0	84.2	41.9	170.1	55.7	57.8	113.4	56.8	71.8	168.5	35.8	39.2
LnGrp LOS	F	F	D	F	E	E	F	E	F	F	D	D
Approach Vol, veh/h		2083			1216			2300			1807	
Approach Delay, s/veh		79.7			91.3			63.3			57.4	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	57.0	22.0	52.0	16.0	70.0	27.1	46.9
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	22.0	50.0	15.0	45.0	9.0	63.0	23.0	37.0
Max Q Clear Time (g_c+I1), s	24.0	52.0	17.0	47.0	10.3	39.0	19.9	26.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	12.2	0.2	3.6

Intersection Summary	
HCM 6th Ctrl Delay	71.1
HCM 6th LOS	E

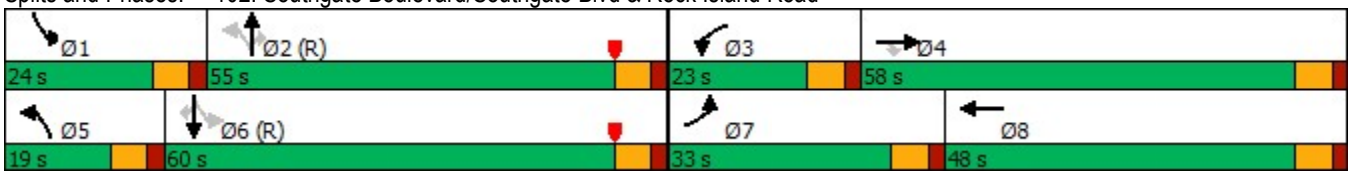
Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	490	788	193	77	534	172	999	180	226	872	508
Future Volume (vph)	490	788	193	77	534	172	999	180	226	872	508
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4			2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	4.0	12.0	12.0	4.0	12.0	12.0
Minimum Split (s)	11.5	36.5	36.5	11.5	47.5	10.5	44.5	44.5	10.5	44.5	44.5
Total Split (s)	33.0	58.0	58.0	23.0	48.0	19.0	55.0	55.0	24.0	60.0	60.0
Total Split (%)	20.6%	36.3%	36.3%	14.4%	30.0%	11.9%	34.4%	34.4%	15.0%	37.5%	37.5%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	25.8	55.4	55.4	11.2	40.8	61.4	49.4	49.4	72.7	55.4	55.4
Actuated g/C Ratio	0.16	0.35	0.35	0.07	0.26	0.38	0.31	0.31	0.45	0.35	0.35
v/c Ratio	0.93	0.68	0.33	0.66	0.96	0.83	0.96	0.32	0.97	0.75	0.72
Control Delay	90.7	48.3	18.6	94.0	54.3	66.1	88.2	29.2	95.8	51.3	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.7	48.3	18.6	94.0	54.3	66.1	88.2	29.2	95.8	51.3	23.6
LOS	F	D	B	F	D	E	F	C	F	D	C
Approach Delay		58.5			57.7		77.6			48.8	
Approach LOS		E			E		E			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 60 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 60.3	Intersection LOS: E
Intersection Capacity Utilization 103.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Queues
102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	516	829	203	81	864	181	1052	189	238	918	535
v/c Ratio	0.93	0.68	0.33	0.66	0.96	0.83	0.96	0.32	0.97	0.75	0.72
Control Delay	90.7	48.3	18.6	94.0	54.3	66.1	88.2	29.2	95.8	51.3	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.7	48.3	18.6	94.0	54.3	66.1	88.2	29.2	95.8	51.3	23.6
Queue Length 50th (ft)	277	384	65	70	418	161	614	78	203	455	206
Queue Length 95th (ft)	#379	484	143	m100	m#515	m#279	#747	m162	#392	540	361
Internal Link Dist (ft)		387			3410		1324			1269	
Turn Bay Length (ft)	315		140	315		350			180		190
Base Capacity (vph)	568	1224	610	182	914	222	1091	590	245	1224	747
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.68	0.33	0.45	0.95	0.82	0.96	0.32	0.97	0.75	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
102: Southgate Boulevard/Southgate Blvd & Rock Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	490	788	193	77	534	287	172	999	180	226	872	508
Future Volume (veh/h)	490	788	193	77	534	287	172	999	180	226	872	508
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	516	829	203	81	562	302	181	1052	0	238	918	535
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	555	1293	567	100	579	311	229	1095		251	1206	535
Arrive On Green	0.16	0.36	0.36	0.06	0.26	0.26	0.10	0.41	0.00	0.15	0.45	0.45
Sat Flow, veh/h	3456	3554	1558	1781	2231	1197	1781	3554	1585	1781	3554	1577
Grp Volume(v), veh/h	516	829	203	81	447	417	181	1052	0	238	918	535
Grp Sat Flow(s),veh/h/ln	1728	1777	1558	1781	1777	1652	1781	1777	1585	1781	1777	1577
Q Serve(g_s), s	23.6	31.0	15.3	7.2	39.9	40.0	11.2	46.1	0.0	16.1	34.5	54.3
Cycle Q Clear(g_c), s	23.6	31.0	15.3	7.2	39.9	40.0	11.2	46.1	0.0	16.1	34.5	54.3
Prop In Lane	1.00		1.00	1.00		0.73	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	555	1293	567	100	461	428	229	1095		251	1206	535
V/C Ratio(X)	0.93	0.64	0.36	0.81	0.97	0.97	0.79	0.96		0.95	0.76	1.00
Avail Cap(c_a), veh/h	572	1293	567	184	461	428	229	1095		251	1206	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.70	0.70	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	42.2	37.2	74.7	58.7	58.7	37.5	46.3	0.0	44.1	38.5	43.9
Incr Delay (d2), s/veh	21.2	0.8	0.1	5.8	34.2	36.0	11.2	15.1	0.0	42.6	4.6	38.8
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	12.1	13.9	5.9	3.5	22.3	21.0	5.5	21.7	0.0	12.3	15.1	25.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.4	43.1	37.4	80.5	92.8	94.7	48.8	61.4	0.0	86.7	43.0	82.7
LnGrp LOS	F	D	D	F	F	F	D	E		F	D	F
Approach Vol, veh/h		1548			945			1233			1691	
Approach Delay, s/veh		57.1			92.6			59.5			61.7	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	55.8	15.5	64.7	19.0	60.8	32.2	48.0
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	17.5	48.5	16.5	51.5	12.5	53.5	26.5	41.5
Max Q Clear Time (g_c+I1), s	18.1	48.1	9.2	33.0	13.2	56.3	25.6	42.0
Green Ext Time (p_c), s	0.0	0.3	0.0	4.3	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	65.3
HCM 6th LOS	E

Notes

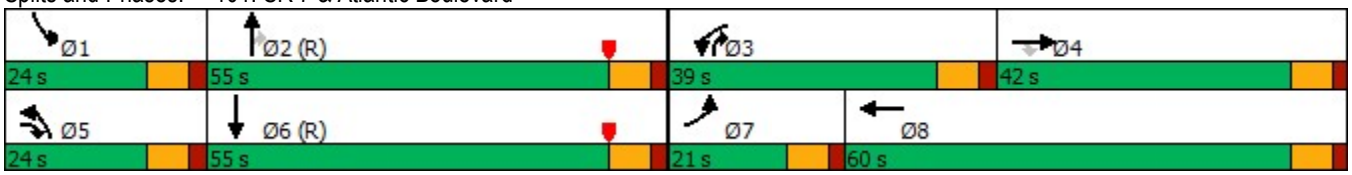
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Timings
101: SR 7 & Atlantic Boulevard

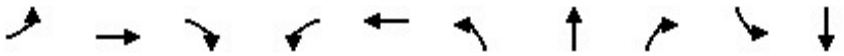
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	305	909	304	650	1537	239	1249	491	156	1247
Future Volume (vph)	305	909	304	650	1537	239	1249	491	156	1247
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	5	2	3	1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	5.0	4.0	6.0	5.0	8.0	4.0	5.0	8.0
Minimum Split (s)	11.0	42.0	12.0	11.0	59.0	12.0	50.0	11.0	12.0	50.0
Total Split (s)	21.0	42.0	24.0	39.0	60.0	24.0	55.0	39.0	24.0	55.0
Total Split (%)	13.1%	26.3%	15.0%	24.4%	37.5%	15.0%	34.4%	24.4%	15.0%	34.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max
Act Effct Green (s)	14.0	35.2	52.2	31.8	53.0	17.0	48.9	80.6	16.1	48.0
Actuated g/C Ratio	0.09	0.22	0.33	0.20	0.33	0.11	0.31	0.50	0.10	0.30
v/c Ratio	1.04	0.83	0.53	0.97	1.04	1.30	0.82	0.61	0.89	0.99
Control Delay	130.3	67.0	26.2	91.4	83.6	216.5	50.6	19.2	113.9	76.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	130.3	67.0	26.2	91.4	83.6	216.5	50.6	19.2	113.9	76.1
LOS	F	E	C	F	F	F	D	B	F	E
Approach Delay		71.5			85.7		62.8			79.7
Approach LOS		E			F		E			E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 114 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay: 75.5	Intersection LOS: E
Intersection Capacity Utilization 115.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 101: SR 7 & Atlantic Boulevard



Queues
101: SR 7 & Atlantic Boulevard



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	311	928	310	663	1725	244	1274	501	159	1491
v/c Ratio	1.04	0.83	0.53	0.97	1.04	1.30	0.82	0.61	0.89	0.99
Control Delay	130.3	67.0	26.2	91.4	83.6	216.5	50.6	19.2	113.9	76.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	130.3	67.0	26.2	91.4	83.6	216.5	50.6	19.2	113.9	76.1
Queue Length 50th (ft)	~179	343	147	358	~707	~321	489	224	166	566
Queue Length 95th (ft)	#283	400	240	#485	#802	#503	549	474	#297	#679
Internal Link Dist (ft)		2560			1156		2623			1036
Turn Bay Length (ft)	280		330	525		400		270	395	
Base Capacity (vph)	300	1119	588	686	1662	188	1552	817	188	1501
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.83	0.53	0.97	1.04	1.30	0.82	0.61	0.85	0.99

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

HCM 6th Signalized Intersection Summary
101: SR 7 & Atlantic Boulevard

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	305	909	304	650	1537	154	239	1249	491	156	1247	215
Future Volume (veh/h)	305	909	304	650	1537	154	239	1249	491	156	1247	215
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	311	928	310	663	1568	157	244	1274	501	159	1272	219
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	302	1117	501	691	1557	156	189	1562	782	179	1306	225
Arrive On Green	0.09	0.22	0.22	0.20	0.33	0.33	0.14	0.41	0.41	0.13	0.40	0.40
Sat Flow, veh/h	3456	5106	1522	3456	4701	470	1781	5106	1520	1781	4353	749
Grp Volume(v), veh/h	311	928	310	663	1135	590	244	1274	501	159	995	496
Grp Sat Flow(s),veh/h/ln	1728	1702	1522	1728	1702	1767	1781	1702	1520	1781	1702	1698
Q Serve(g_s), s	14.0	27.8	27.6	30.4	53.0	53.0	17.0	35.4	39.6	14.0	46.0	46.0
Cycle Q Clear(g_c), s	14.0	27.8	27.6	30.4	53.0	53.0	17.0	35.4	39.6	14.0	46.0	46.0
Prop In Lane	1.00		1.00	1.00		0.27	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	302	1117	501	691	1128	585	189	1562	782	179	1021	510
V/C Ratio(X)	1.03	0.83	0.62	0.96	1.01	1.01	1.29	0.82	0.64	0.89	0.97	0.97
Avail Cap(c_a), veh/h	302	1117	501	691	1128	585	189	1562	782	189	1021	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.0	59.7	45.8	63.4	53.5	53.5	68.7	43.4	25.1	68.5	47.5	47.5
Incr Delay (d2), s/veh	59.3	5.3	2.1	24.4	28.4	39.2	154.7	3.4	2.8	34.1	22.6	33.9
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	8.7	12.6	10.8	15.7	27.1	29.9	15.7	14.8	13.9	7.9	21.8	23.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	132.3	65.0	47.8	87.7	81.9	92.7	223.4	46.8	27.8	102.6	70.0	81.4
LnGrp LOS	F	E	D	F	F	F	F	D	C	F	E	F
Approach Vol, veh/h		1549			2388			2019			1650	
Approach Delay, s/veh		75.1			86.2			63.4			76.6	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	56.0	39.0	42.0	24.0	55.0	21.0	60.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	17.0	48.0	32.0	35.0	17.0	48.0	14.0	53.0
Max Q Clear Time (g_c+I1), s	16.0	41.6	32.4	29.8	19.0	48.0	16.0	55.0
Green Ext Time (p_c), s	0.0	4.8	0.0	2.9	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	75.8
HCM 6th LOS	E

Notes

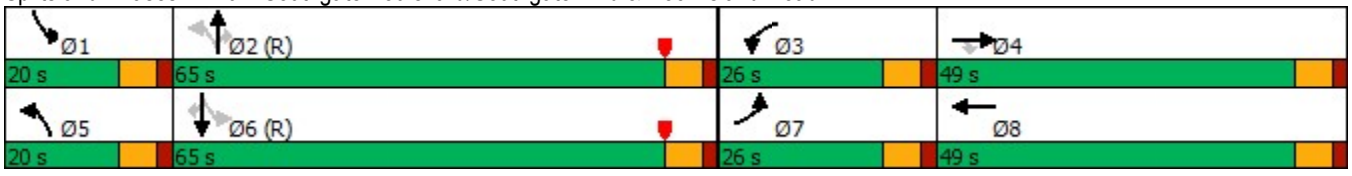
User approved pedestrian interval to be less than phase max green.

Timings
102: Southgate Boulevard/Southgate Blvd & Rock Island Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	408	509	209	117	581	193	939	138	186	943	632
Future Volume (vph)	408	509	209	117	581	193	939	138	186	943	632
Turn Type	Prot	NA	Perm	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4			2		2	6		6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	4.0	12.0	12.0	4.0	12.0	12.0
Minimum Split (s)	11.5	36.5	36.5	11.5	47.5	10.5	44.5	44.5	10.5	44.5	44.5
Total Split (s)	26.0	49.0	49.0	26.0	49.0	20.0	65.0	65.0	20.0	65.0	65.0
Total Split (%)	16.3%	30.6%	30.6%	16.3%	30.6%	12.5%	40.6%	40.6%	12.5%	40.6%	40.6%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	19.5	46.4	46.4	14.6	41.5	73.3	60.2	60.2	72.8	59.9	59.9
Actuated g/C Ratio	0.12	0.29	0.29	0.09	0.26	0.46	0.38	0.38	0.46	0.37	0.37
v/c Ratio	1.02	0.52	0.39	0.76	0.95	0.86	0.74	0.22	0.84	0.74	0.83
Control Delay	115.9	50.1	15.8	84.4	57.9	74.8	35.9	6.9	55.5	47.8	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.9	50.1	15.8	84.4	57.9	74.8	35.9	6.9	55.5	47.8	32.0
LOS	F	D	B	F	E	E	D	A	E	D	C
Approach Delay		67.5			61.2		38.7			43.0	
Approach LOS		E			E		D			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 80 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 50.7	Intersection LOS: D
Intersection Capacity Utilization 99.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Queues
102: Southgate Boulevard/Southgate Blvd & Rock Island Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	425	530	218	122	853	201	978	144	194	982	658
v/c Ratio	1.02	0.52	0.39	0.76	0.95	0.86	0.74	0.22	0.84	0.74	0.83
Control Delay	115.9	50.1	15.8	84.4	57.9	74.8	35.9	6.9	55.5	47.8	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.9	50.1	15.8	84.4	57.9	74.8	35.9	6.9	55.5	47.8	32.0
Queue Length 50th (ft)	~241	243	46	135	435	134	354	4	114	474	345
Queue Length 95th (ft)	#355	317	129	m132	m#480	#264	341	52	#237	560	547
Internal Link Dist (ft)		387			3410		1324			1269	
Turn Bay Length (ft)	315		140	315		350			180		190
Base Capacity (vph)	418	1025	559	215	922	238	1330	657	239	1324	791
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.52	0.39	0.57	0.93	0.84	0.74	0.22	0.81	0.74	0.83

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

HCM 6th Signalized Intersection Summary
102: Southgate Boulevard/Southgate Blvd & Rock Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	408	509	209	117	581	238	193	939	138	186	943	632
Future Volume (veh/h)	408	509	209	117	581	238	193	939	138	186	943	632
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	425	530	218	122	605	248	201	978	0	194	982	658
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	1074	469	143	636	260	239	1332		278	1323	579
Arrive On Green	0.12	0.30	0.30	0.08	0.26	0.26	0.11	0.50	0.00	0.11	0.50	0.50
Sat Flow, veh/h	3456	3554	1551	1781	2442	1000	1781	3554	1585	1781	3554	1555
Grp Volume(v), veh/h	425	530	218	122	440	413	201	978	0	194	982	658
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	1781	1777	1665	1781	1777	1585	1781	1777	1555
Q Serve(g_s), s	19.5	19.6	18.3	10.8	38.9	39.0	11.2	34.8	0.0	10.8	35.3	59.6
Cycle Q Clear(g_c), s	19.5	19.6	18.3	10.8	38.9	39.0	11.2	34.8	0.0	10.8	35.3	59.6
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1074	469	143	463	434	239	1332		278	1323	579
V/C Ratio(X)	1.01	0.49	0.46	0.86	0.95	0.95	0.84	0.73		0.70	0.74	1.14
Avail Cap(c_a), veh/h	421	1074	469	217	472	442	242	1332		286	1323	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	45.8	45.3	72.7	58.2	58.2	34.0	33.8	0.0	31.5	34.2	40.4
Incr Delay (d2), s/veh	46.2	0.1	0.3	12.2	28.7	30.2	17.4	2.8	0.0	5.8	3.8	80.8
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	11.4	8.8	7.2	5.5	21.2	20.1	5.8	14.8	0.0	5.0	15.1	34.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.4	45.9	45.6	84.9	86.8	88.4	51.3	36.6	0.0	37.3	38.0	121.2
LnGrp LOS	F	D	D	F	F	F	D	D		D	D	F
Approach Vol, veh/h		1173			975			1179			1834	
Approach Delay, s/veh		71.4			87.2			39.2			67.8	
Approach LOS		E			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	66.5	19.3	54.9	19.7	66.1	26.0	48.2
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	13.5	58.5	19.5	42.5	13.5	58.5	19.5	42.5
Max Q Clear Time (g_c+I1), s	12.8	36.8	12.8	21.6	13.2	61.6	21.5	41.0
Green Ext Time (p_c), s	0.0	7.4	0.0	2.8	0.0	0.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	65.7
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX J

Road Safety Audit Report
SR-7 / US 441 from Kimberly Boulevard to NW 31st Street (Coral Way Boulevard)

Relevant Excerpts

ROAD SAFETY AUDIT REPORT

SR-7/US-441 from Kimberly Boulevard/SW 11th Street to NW 31st Street (Coral Way Boulevard)

Broward County, Florida

Section Number:	**86 100 000**
Project Mile Post:	**16.700 to 19.462**
	19.658 to 20.540
Safety Review FM No.	**429650-4-32-01**
Contract No.	**C-AO89**
Task Work Order.	**#4**

Prepared for:
Florida Department of Transportation, District 4

Prepared by:
Benesch

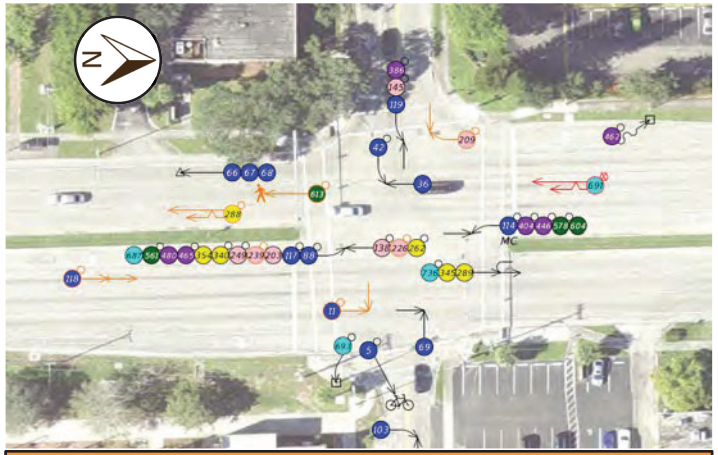


February 2024

FDOT

Road Safety Audit Findings Details – Spot Observations

ID	Location Description:	Spot Observation Overview:	Recommendations:
S05	SR-7/US-441 at SW 7th St	N-S left-turn crashes	Evaluate feasibility of provide protected-only left-turn phase



Excerpt from collision diagram showing left-turn crashes at this location.



Approaching traffic during permissive left-turn movement, looking south.

Data / Field Observations:

Crash data showed a total of 22 left-turn/u-turn crashes at this location involving SB and NB left-turning vehicles. Crash data showed periods of 12 months with 6 crashes (Nov 2018 – Oct 2019; Jul 2019 – Jun 2020, Oct 2019 – Sept 2020).

Existing left-turn phases are protected-permissive for N-S traffic.

Left-turn traffic at this location crosses three lanes of opposing traffic.

Recommendation Details:

Considering the number of crashes and location conditions, evaluate feasibility of providing a protected-only left-turn phase for NB and SB left-turn movements. Conduct study to evaluate operational impact of the protected-only phase.

Structural analysis must be conducted for converting from 5-section to 3- or 4-section signal heads due to additional 3-section heads that would need to be provided for the adjacent through lane.
Preliminary review showed a B/C close to 1.0; therefore, it is not recommended to have this improvement as a stand-alone project, but to be considered with future project of a greater scope.

Short-term: Study
Long-term: Implementation, if warranted per engineering study

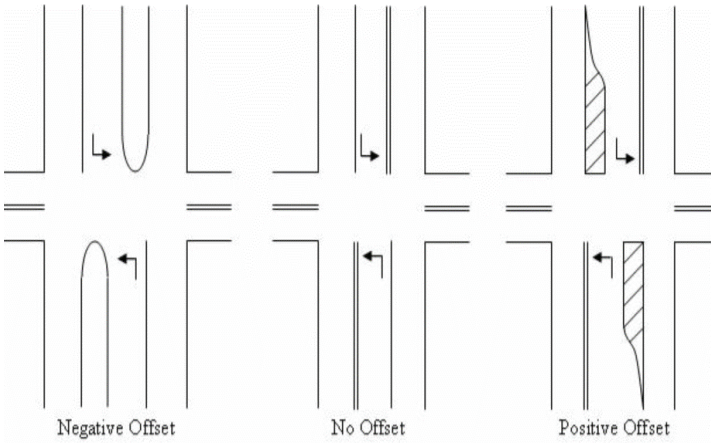
Responsible Agency:	Improvement Type:
FDOT	Signal Timing, Study
Time Frame:	**EEE:**
Short-Term	Engineering
Level of Effort (Low, Medium, High)	**Comment:**
Low	-

Road Safety Audit Findings Details – Spot Observations

ID	Location Description:	Spot Observation Overview:	Recommendations:
S06	SR-7/US-441 at SW 7th St	N-S left-turn crashes	Evaluate feasibility of increasing offset for N-S left-turn lanes



Existing offset of the left-turn lanes. Looking south.



Left-turn lanes offset schematics from FHWA.

Data / Field Observations:

Crash data showed a total of 22 left-turn/u-turn crashes at this location involving SB and NB left-turning vehicles. Crash data showed periods of 12 months with 6 crashes (Nov 2018 – Oct 2019; Jul 2019 – Jun 2020, Oct 2019 – Sept 2020).

Existing left-turn phases are protected-permissive for N-S traffic.

Left-turn traffic at this location crosses three lanes of opposing traffic.

Sight distance from the left-turn lanes is significantly reduced when opposing left-turn traffic is in queue.
Existing adjacent to left-turn lanes are approximately 9ft.

Recommendation Details:

Review feasibility of reducing the median adjacent to N-S left-turn lanes to provide greater offset and enhance sight distance for turning vehicles during permissive phase.

In addition to provide greater offset, the addition of backplates and Yellow Retroreflective Borders (proposed in C03) would also enhance signal visibility and improve compliance for left-turn and through traffic.

Short-term: Feasibility study
Mid/long-term: Construction

Responsible Agency:	Improvement Type:
FDOT	Study, Construction
Time Frame:	**EEE:**
Short-Term	Engineering
Level of Effort (Low, Medium, High)	**Comment:**
Low	-

Road Safety Audit Findings Details – Spot Observations

ID	Location Description:	Spot Observation Overview:	Recommendations:
S07	SR-7/US-441 at SW 7th St	Left-turning vehicles conflicting with pedestrians	Evaluate feasibility of provide protected-permissive left-turn phase E-W



Pedestrian waiting to cross south leg of the intersection.



Existing lane configuration for EB and WB approaches.

Data / Field Observations:

During field review there were EB-WB left-turning vehicles conflicting with crossing pedestrians during walk phase (concurrent with left-turn permissive phase), and instances where vehicles did not yield to the pedestrian.
Existing permissive-only left-turn phase for EB-WB approaches.

High pedestrian/bicycle activity at this location.

Recommendation Details:

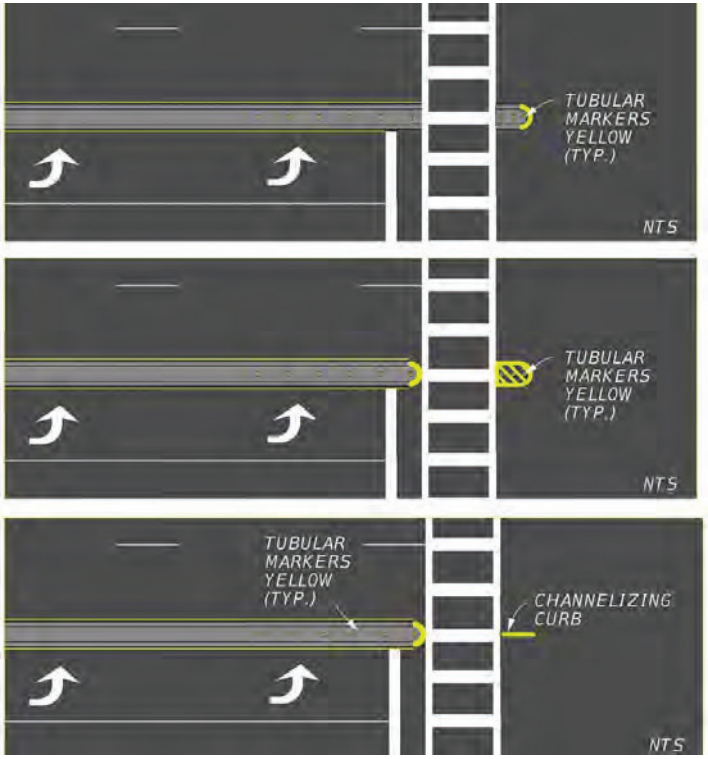
Review feasibility of providing a protected phase for the E-W left-turning traffic to clear the queue before giving pedestrians the ROW. The side streets lane configurations would need to be modified to provide dedicated left-turn lanes to accommodate protected phasing. The eastbound approach could be converted to EBL/EBTR and the westbound approach could remain and be phased permissive or a left-turn lane added to provide for the protected phase.

Short-term: Feasibility study
Mid/long-term: Construction

Responsible Agency:	Improvement Type:
FDOT	Study, Signal Timing, Pedestrian
Time Frame:	**EEE:**
Short-Term	Engineering
Level of Effort (Low, Medium, High)	**Comment:**
Low	-

Road Safety Audit Findings Details – Spot Observations

ID	Location Description:	Spot Observation Overview:	Recommendations:
S08	SR-7/US-441 at SW 7th St	Left-turning vehicles conflicting with pedestrians	Evaluate feasibility of provide Hardened Centerlines



Examples of Hardened Centerline treatments from FDM 210.

Data / Field Observations:

During field review there were EB-WB left-turning vehicles conflicting with crossing pedestrians during walk phase (concurrent with left-turn permissive phase), and instances where vehicles did not yield to the pedestrian.
Existing permissive-only left-turn phase for EB-WB approaches.

High pedestrian/bicycle activity at this location.

Recommendation Details:

Review feasibility of providing Hardened Centerlines on N-S legs median nose which help reduce turning speeds and increase visibility of pedestrian in the crosswalk. During evaluation consideration should be given to the feasibility of installing intersection refuge islands on the median nose with pedestrian push button. The pedestrian push buttons are considered to be optional for this installation. The benefits would include that the pedestrian phase could operate as two-stage, if desired. Additionally, if pedestrians were stranded on the refuge island, they would be able to use the button to call the next pedestrian phase.

Follow guidance from FDM Sections 210.3.2.3 and 210.3.3.

This treatment is also included as a corridorwide (signalized intersections) in C05.
Short-term: Feasibility study
Mid/long-term: Construction

Responsible Agency:	Improvement Type:
FDOT	Study, Construction
Time Frame:	**EEE:**
Short-Term	Engineering
Level of Effort (Low, Medium, High)	**Comment:**
Low	Not based on crash history