

**ATTACHMENT A**  
Application Package  
Part I

# PLANNING DIVISION



File No. (internal use only): \_\_\_\_\_

2600 Hollywood Boulevard Room 315  
Hollywood, FL 33022

# GENERAL APPLICATION



Tel: (954) 921-3471  
Fax: (954) 921-3347

This application must be completed in full and submitted with all documents to be placed on a Board or Committee's agenda.

The applicant is responsible for obtaining the appropriate checklist for each type of application.

Applicant(s) or their authorized legal agent must be present at all Board or Committee meetings.

At least one set of the submitted plans for each application must be signed and sealed (i.e. Architect or Engineer).

Documents and forms can be accessed on the City's website at

<http://www.hollywoodfl.org/DocumentCenter/Home/View/21>



### APPLICATION TYPE (CHECK ONE):

- Technical Advisory Committee
- City Commission
- Historic Preservation Board
- Planning and Development Board

Date of Application: 2-7-23

Location Address: 6028 Johnson Street, Hollywood FL

Lot(s): 11 Block(s): 2 Subdivision: Pine Ridge Estates

Folio Number(s): 514113040080

Zoning Classification: CS-J Land Use Classification: TOC

Existing Property Use: Trailer park Sq Ft/Number of Units: 40 pads/ 10 RV stalls

Is the request the result of a violation notice? ( ) Yes (x) No If yes, attach a copy of violation.

Has this property been presented to the City before? If yes, check all that apply and provide File Number(s) and Resolution(s): 22-DP-48

- Economic Roundtable
- City Commission
- Technical Advisory Committee
- Planning and Development
- Historic Preservation Board

Explanation of Request: Site Plan review and approval of an eight story, 100 unit, apartment building

Number of units/rooms: 100 Sq Ft: 881sf average

Value of Improvement: \_\_\_\_\_ Estimated Date of Completion: Dec 2024

Will Project be Phased? ( ) Yes (x) No If Phased, Estimated Completion of Each Phase

Name of Current Property Owner: Pinnacle 441 Phase 2, LLC (David O. Deutch, President of Auth. member)

Address of Property Owner: 9400 South Dadeland Boulevard, Suite 100, Miami, FL 33156

Telephone: 305-854-7100 Fax: \_\_\_\_\_ Email Address: \_\_\_\_\_

Name of Consultant/Representative/Tenant (circle one): Keith Poliakoff

Address: 200 S. Andrews Ave., Fort Lauderdale, FL 33301 Telephone: 954-909-0590

Fax: \_\_\_\_\_ Email Address: kpoliakoff@govlawgroup.com

Date of Purchase: 10-07-2022 Is there an option to purchase the Property? Yes ( ) No ( )

If Yes, Attach Copy of the Contract.

List Anyone Else Who Should Receive Notice of the Hearing: Tim Wheat

Pinnacle Communities, LLC Address: 9400 South Dadeland Boulevard, Suite 100  
Miami, FL 33156 Email Address: twheat@pinnaclehousing.com

Joseph B. Kaller - joseph@kallerarchitects.com

PLANNING DIVISION



File No. (internal use only): \_\_\_\_\_

2600 Hollywood Boulevard Room 315  
Hollywood, FL 33022

GENERAL APPLICATION

**CERTIFICATION OF COMPLIANCE WITH APPLICABLE REGULATIONS**

The applicant/owner(s) signature certifies that he/she has been made aware of the criteria, regulations and guidelines applicable to the request. This information can be obtained in Room 315 of City Hall or on our website at [www.hollywoodfl.org](http://www.hollywoodfl.org). The owner(s) further certifies that when required by applicable law, including but not limited to the City's Zoning and Land Development Regulations, they will post the site with a sign provided by the Office of Planning and Development Services. The owner(s) will photograph the sign the day of posting and submit photographs to the Office of Planning and Development Services as required by applicable law. Failure to post the sign will result in violation of State and Municipal Notification Requirements and Laws.

(I)(We) certify that (I) (we) understand and will comply with the provisions and regulations of the City's Zoning and Land Development Regulations, Design Guidelines, Design Guidelines for Historic Properties and City's Comprehensive Plan as they apply to this project. (I)(We) further certify that the above statements and drawings made on any paper or plans submitted herewith are true to the best of (my)(our) knowledge. (I)(We) understand that the application and attachments become part of the official public records of the City and are not returnable.

Signature of Current Owner: *David O. Deutch, President* Date: 1-17-23

PRINT NAME: David O. Deutch, President of Authorized Member, Pinnacle 441 Phase 2, LLC Date: 1-17-23

Signature of Consultant/Representative: *[Signature]* Date: 1-20-23

PRINT NAME: Keith M Poliakoff Date: 1-20-23

Signature of Tenant: \_\_\_\_\_ Date: \_\_\_\_\_

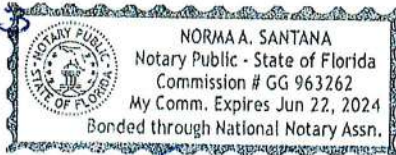
PRINT NAME: \_\_\_\_\_ Date: \_\_\_\_\_

**Current Owner Power of Attorney**

I am the current owner of the described real property and that I am aware of the nature and effect the request for Final Site Plan approval to my property, which is hereby made by me or I am hereby authorizing \_\_\_\_\_ to be my legal representative before the PDB (Board and/or Committee) relative to all matters concerning this application.

Sworn to and subscribed before me this 17th day of January, 2023

*[Signature]*  
Notary Public  
State of Florida



*David O. Deutch, President*  
Signature of Current Owner  
David O. Deutch, President of Authorized Member  
Print Name

My Commission Expires: 6-22-2024 (Check One)  Personally known to me; OR  Produced Identification \_\_\_\_\_



[Department of State](#) / [Division of Corporations](#) / [Search Records](#) / [Search by Entity Name](#) /

## Detail by Entity Name

Florida Limited Liability Company  
PINNACLE 441 PHASE 2, LLC

### Filing Information

<b>Document Number</b>	L15000162528
<b>FEI/EIN Number</b>	87-3564095
<b>Date Filed</b>	09/23/2015
<b>State</b>	FL
<b>Status</b>	ACTIVE
<b>Last Event</b>	LC NAME CHANGE
<b>Event Date Filed</b>	07/29/2021
<b>Event Effective Date</b>	NONE

### Principal Address

9400 S DADELAND BLVD STE 100  
MIAMI, FL 33156

### Mailing Address

9400 S DADELAND BLVD STE 100  
MIAMI, FL 33156

### Registered Agent Name & Address

CORPORATION COMPANY OF MIAMI  
200 S BISCAYNE BLVD.  
STE 4100 (GJC)  
MIAMI, FL 33131

Address Changed: 02/08/2016

### Authorized Person(s) Detail

#### **Name & Address**

Title VP

Deutch, David O.  
9400 S DADELAND BLVD STE 100  
MIAMI, FL 33156

### Annual Reports

<b>Report Year</b>	<b>Filed Date</b>
2020	01/14/2020

2021 03/12/2021  
2022 02/23/2022

**Document Images**

<a href="#">02/23/2022 -- ANNUAL REPORT</a>	View image in PDF format
<a href="#">07/29/2021 -- LC Name Change</a>	View image in PDF format
<a href="#">03/12/2021 -- ANNUAL REPORT</a>	View image in PDF format
<a href="#">01/14/2020 -- ANNUAL REPORT</a>	View image in PDF format
<a href="#">03/25/2019 -- ANNUAL REPORT</a>	View image in PDF format
<a href="#">02/02/2018 -- ANNUAL REPORT</a>	View image in PDF format
<a href="#">02/24/2017 -- ANNUAL REPORT</a>	View image in PDF format
<a href="#">02/08/2016 -- ANNUAL REPORT</a>	View image in PDF format
<a href="#">09/23/2015 -- Florida Limited Liability</a>	View image in PDF format

# PINNACLE 441

## PHASE II

6028 JOHNSON ST  
HOLLYWOOD, FL 33024

### PROJECT INFO:

8 STORY MIXED USE BUILDING WITH 100  
RESIDENTIAL UNITS THAT INCLUDE A  
LIVE/WORK UNIT ON THE FIRST FLOOR.

### LAND DESCRIPTION:

THE WEST 220 FEET OF LOT 11, BLOCK 2, PINE RIDGE  
ESTATES, ACCORDING TO THE PLAT THEREOF AS  
RECORDED IN PLAT BOOK 24, PAGE 10 OF THE PUBLIC  
RECORDS OF BROWARD COUNTY, FLORIDA.

SAID LANDS LYING AND BEING IN THE CITY OF  
HOLLYWOOD, BROWARD COUNTY, FLORIDA, AND CONTAINING  
72,596 SQUARE FEET (1.667 ACRES) MORE OR LESS.



**PINNACLE**  
COMMITTED TO EXCELLENCE

## **VIRTUAL COMMUNITY MEETING INVITATION**

Pinnacle 441 Phase 2, LLC (“Pinnacle”) is cordially inviting you to attend a Virtual Community Meeting to discuss Phase 2 of Pinnacle 441, which is generally located at 6028 Johnson Street, in the City of Hollywood. Pinnacle has filed an application with the City of Hollywood for site plan and design approval and would like to take this opportunity to share this exciting development with the surrounding community. All interested parties are encouraged to participate in the virtual meeting. Pinnacle will be presenting this proposed 100-unit multi-family affordable development and immediately following the presentation will be happy to address any questions or concerns that you may have.

### **VIRTUAL COMMUNITY MEETING DETAILS**

**Meeting Date & Time: Wednesday, January 4, 2023 at 6:00 PM.**

To participate, you must access the link provided below via the Zoom Application. For further assistance, and to ensure that everyone can access the meeting, we kindly request you to RSVP by sending an email with your name and contact information to Keith Poliakoff at [kpoliakoff@govlawgroup.com](mailto:kpoliakoff@govlawgroup.com) by no later than Tuesday, January 3, 2023 at 5:00 PM.

Should you have any specific questions regarding the proposed project that you would like answered during this meeting, please do not hesitate to let us know in advance of the meeting.

### **PARTICIPATION LINK**

**Pinnacle is inviting you to a scheduled Zoom meeting:**

**Topic: Pinnacle 441 Phase 2**

**Time: January 4, 2023 06:00 PM Eastern Time (US and Canada)**

**Join Zoom Meeting**

<https://us02web.zoom.us/j/9175326492>

**Meeting ID: 917 532 6492**

**To Dial In: +1 646 558 8656 US (New York)**



## CERTIFICATION LETTER

City of Hollywood

**Date:** December 20, 2022

**Applicant:** Pinnacle 441 Phase 2 LLC

**Legal Description:** Portion of Tract 11 of Block 2 of Pine Ridge Estates Plat as recorded in Plat Book 24 Page 10 of the Public Records of Broward County, Florida.

**Address or  
General Location:** 6028 Johnson Street

This letter certifies that the attached list of property owners was prepared using the latest tax folio rolls supplied by the Broward County Property Appraisers Office as of December 12, 2022. This list includes all properties within 500 feet from each property line of the subject site in regulations and all Civic Associations and the Planning Department and City Commission in regulations.

This letter also certifies that the attached notification was sent to the persons on the list of property owners. The notice was mailed December 20, 2022.

Finally, this letter certifies that the site was posted with 2 notice signs that meet the City of Hollywood notification regulations. The signs were posted December 19, 2022.

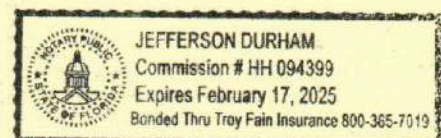
Thank You,

A handwritten signature in blue ink, appearing to read "Christina Mathews", is written over a horizontal line.

Christina Mathews

Sworn and subscribed before me this 19<sup>th</sup> day of  
December, 2022.

\_\_\_\_\_  
Signature of Notary



1025 Yale Drive  
Hollywood, Florida 33021  
954-920-2205

Email: [cutroplanning@yahoo.com](mailto:cutroplanning@yahoo.com)





6028 Johnson St

MARTY KLAR  
BROWARD COUNTY PROPERTY APPRAISER

GARY LEE  
BROWARD COUNTY PROPERTY APPRAISER

250 125 0 250 Feet

FLORIDA TPKE

FLORIDA TPKE

FOLIO_NUMB	NAME	ADDRESS_LI	CITY	STATE	ZIP	ZIP4	LEGAL
514112042790	FLORIDA DEPT OF TRANSPORTATION OFFICE OF RIGHT OF WAY	3400 W COMMERCIAL BLVD	FORT LAUDERDALE	FL	33309	3421	HOLLYWOOD BEACH HEIGHTS SEC AAMENDED PLAT 6-27 BW 25 FT OF THAT PT OF SE1/4 OF SEC 12-51-41 AS DEDICATED PER PLAT
514112042800	PUBLIC LAND % CITY OF HOLLYWOOD DEPT OF COMMUNITY & ECONOMIC DEV	2600 HOLLYWOOD BLVD #206	HOLLYWOOD	FL	33020	4807	HOLLYWOOD BEACH HEIGHTS SEC A6-27 B STREETS & AVENUES DEDICATED PER PLAT
514112051240	FLEURIMA, PATRICK & KAREN H	6104 CALL ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 3 BLK 29
514112051250	VITHOULKAS, DIONYSIA SDIONYSIA VITHOULKAS REV TR	6106 CALL ST	HOLLYWOOD	FL	33024	6012	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 4 BLK 29
514112051251	WARD, ROY TWARD, GURDLYN ETAL	6110 CALL ST	HOLLYWOOD	FL	33024	6012	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 6 W 45 BLK 29
514112051253	POLLARD, IVELYSSE SAVOIE H/EPOLLARD, ALFONSO F	6108 CALL ST	HOLLYWOOD	FL	33024	6012	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 5,6 LESS W 45 BLK 29
514112051260	PEREZ, CARLOS J	6116 CALL ST	HOLLYWOOD	FL	33024	6012	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 7 BLK 29
514112051261	VASQUEZ, BRENDA JO'STEEN, L RAYMOND	2560 NE 203 ST	MIAMI	FL	33180		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 8 BLK 29
514112051270	LASTRAPES, KIM & JOAQUINA	6124 CALL ST	HOLLYWOOD	FL	33024	6012	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 9 BLK 29
514112051360	PERDOMO, JOSE L	6131 GRANT ST	HOLLYWOOD	FL	33024	6021	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 22 BLK 29, TOGETHER WITH THAT PT OF E 15 OF N 61 TERR ABUTTING LOT 22
514112051370	CEVALLOS, WALTER & MARITZA	6127 GRANT ST	HOLLYWOOD	FL	33024	6021	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 23 BLK 29
514112051380	FERMIN, ALAIN OELMIS FERMIN, ANGELA MURILLO	6123 GRANT ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 24 BLK 29
514112051390	NARVAEZ, MARIANO D & LESBIA R	6121 GRANT ST	HOLLYWOOD	FL	33024	6021	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 25 BLK 29
514112051400	HI-LAND PROPERTIES LLC	5644 CORPORATE WAY	WEST PALM BEACH	FL	33407		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 26 BLK 29
514112051410	VASQUEZ, BRENDA O'STEEN, L RAYMOND	2560 NE 203 ST	MIAMI	FL	33180		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 27 BLK 29
514112051412	CLEMONS, MARTHA	6107 GRANT ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 28 BLK 29
514112051420	DURAN, MONICA	6105 GRANT ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 29 & 30 BLK 29
514112051421	HSU, YUAN HUNG & YU, YU LIN	6510 HARDING ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 31 BLK 29
514112051422	MITJANS, MARTHA	6101 GRANT ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 32 BLK 29
514112051430	KINLOCK, DELORIS H/EKINLOCK, PAMELA	1016 N 61 AVE	HOLLYWOOD	FL	33024	6061	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 33,34 BLK 29
514112051560	KGI ENTERPRISE LLC	1900 N UNIVERSITY DR SUITE 206	PEMBROKE PINES	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 11 BLK 30
514112051570	LEVEILLE, LEOPOLD	1021 N 61 AVE	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 12 BLK 30
514112051580	PERMAUL, ANDREW PERMAUL, SEETA	6035 GRANT ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 13 BLK 30
514112051620	1000 N STATE ROAD 7 LLC	1000 N STATE RD 7	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B & RESUB OF SEC C 10-22,23 B10-71 BLOTS 14 THRU 19 INCL BLK 30
514112051740	VASQUEZ, BRENDA O'STEEN, L RAYMOND	2560 NE 203 ST	MIAMI	FL	33180		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 1,2 BLK 37
514112051743	GREEN, MICHAEL A	PO BOX 1421	DANIA BEACH	FL	33004	1421	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 3 BLK 37

514112051750	ELLIS,CLAUDETTE	6120A GRANT ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 4 BLK 37
514112051751	RIVIERE,JEAN E	4108 ADAMS ST	HOLLYWOOD	FL	33021	7331	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 5 BLK 37
514112051760	HYDE/LINNE REAL ESTATE TRHYDE,DONNA JEAN TRSTEE ETAL	112 HONEYCUTT RD	HAZEL GREEN	AL	35750		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 6 BLK 37
514112051770	6130 GRANT LLC	5700 SW 163 AVE	SOUTHWEST RANCHE	FL	33331		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 7 BLK 37,TOGETHER WITH E 15OF THAT PT OF N 61 TERR ABUTTINGLOT 7
514112051780	GREENWICH UNITS LLC	4102 EASY SILVERADO CIR	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 9 BLK 37
514112051790	GOLDBERG,FRED	11700 NW 5 ST	PLANTATION	FL	33325		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 10 BLK 37
514112051820	RAMAWAD,DYLAN AJAY	7547 NW 18 DR	PEMBROKE PINES	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC BLOTS 14,15 & 16 BLK 37
514112051821	CROWN CASTLE SOUTH LLC	4107 WASHINGTON RD PMB #353	MC MURRAY	PA	15317		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOTS 17,18 & 19 BLK 37
514112051860	HARMER,STEVE & JENNILYN	13800 LURAY ROAD	SOUTHWEST RANCHE	FL	33330		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 22,23 BLK 37,TOGETHERWITH E 15 OF THAT PT OFN 61 TERR ABUTTING LOT 22
514112051870	6145 JOHNSON ST CORP	6145 JOHNSON ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 24,25 BLK 37
514112051880	FULL HOUSE RENTALS LLC	4146 NW 6 ST	DEERFIELD BEACH	FL	33442		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 26 LESS S 5,27 W 10 LESS S 5BLK 37
514112051882	KANEU LLC	9880 BLUEFIELD DR	BOYNTON BEACH	FL	33473		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 27 E 15,LESS S 5BLK 37
514112051890	KANEU LLC	9880 BLUEFIELD DR	BOYNTON BEACH	FL	33473		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOTS 28 THRU 34BLK 37
514112051910	SUPERIOR PROPERTY MANAGEMTPROS LLC	401 N 44 AVE	HOLLYWOOD	FL	33021		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOTS 1 & 2 BLK 38
514112051930	SUPERIOR PROPERTY MANAGEMTPROS LLC	401 N 44 AVE	HOLLYWOOD	FL	33021	6648	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 3,4,5 BLK 38
514112051940	6010 GRANT STREET LLC	6013 JOHNSON ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 6 BLK 38
514112051950	6010 GRANT STREET LLC	6013 JOHNSON ST	HOLLYWOOD	FL	33024	6027	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 7 BLK 38
514112051960	GARCIA,DOMINGO &QUIJANO,JOSE	6013 JOHNSON ST	HOLLYWOOD	FL	33024	6027	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 8,9 LESS W 6 BLK 38
514112051970	GARCIA,DOMINGO JR &QUIJANO,JOSE	9701 NW 37 ST	HOLLYWOOD	FL	33024	8009	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BLOT 9 W 6,10 E 25 BLK 38
514112051980	GARCIA,DOMINGO &QUIJANO,JOSE & GARCIA,JESUS	6013 JOHNSON ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B &RESUB OF SEC C 10-22,23 B10-71 BLOT 10 W 25 BLK 38
514112051990	GARCIA,DOMINGO &QUIJANO,JOSE & GARCIA,JESUS	6013 JOHNSON ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B &RESUB OF SEC C 10-22,23 B10-71 BLOT 11 BLK 38
514112052000	ROSADO,JOSECABALLERO,CARMEN RIVERA	6032 GRANT ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B &RESUB OF SEC C 10-22,23 B10-71 BLOT 12,13 BLK 38
514112052010	BRUCE L BARTOS TRBARTOS,BRUCE L TRSTEE	1311 WEST LAKE DR	FORT LAUDERDALE	FL	33316		HOLLYWOOD BEACH HEIGHTS SEC B &RESUB OF SEC C 10-22,23 B10-71 BLOT 14 15 BLK 38
514112052030	BRYVEN LLC	6041 JOHNSON ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B &RESUB OF SEC C 10-22,23 B10-71 BLOTS 16,17,18 & 19 BLK 38
514112052060	KYAW,MAUNG & MOE PHYU	350 NW 118 AVE	PLANTATION	FL	33325		HOLLYWOOD BEACH HEIGHTS SEC B &RESUB OF SEC C 10-22,23 B10-71 BLOT 20,21,22 BLK 38
514112052080	6019 JOHNSON ST LLC	6013 JOHNSON ST	HOLLYWOOD	FL	33024		HOLLYWOOD BEACH HEIGHTS SEC B &RESUB OF SEC C 10-22,23 B10-71 BLOTS 23,24 & 25 BLK 38
514112052100	GARQUI LLC	6013 JOHNSON ST	HOLLYWOOD	FL	33024	6027	HOLLYWOOD BEACH HEIGHTS SEC B &RESUB OF SEC C 10-22,23 B10-71 BLOTS 26,27,28 & 29 &LOTS 30 & 31,BOTH LESS S 5FOR RD BLK 38

514112052140	Y&A INVESTMENT LOTS OF AMERICALLC	5820 FUNSTON ST	HOLLYWOOD	FL	33023		HOLLYWOOD BEACH HEIGHTS SEC B & RESUB OF SEC C 10-22,23 B10-71 BLOTS 32,33,34,35,36 BLK 38 LESSPOR DESC AS: BEG AT NE COR OF LOT 36; S 95.74; SW 55.74; THENCE E 15.41; NELY 39.34; N 109.96 TO POB
514112052141	FLORIDA DEPT OF TRANSPORTATION OFFICE OF RIGHT OF WAY	3400 W COMMERCIAL BLVD	FORT LAUDERDALE	FL	33309	3421	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BPOR LOTS 32,33,34,35,36 BLK 38 DESC AS: BEG AT NE COR OF LOT 36; S 95.74; SW 55.74; THENCE E 15.41; NELY 39.34; N 109.96 TOPOBAKA: PAR 120
514112052160	FLORIDA DEPT OF TRANSPORTATION OFFICE OF RIGHT OF WAY	3400 W COMMERCIAL BLVD	FORT LAUDERDALE	FL	33309	3421	HOLLYWOOD BEACH HEIGHTS SEC B10-22 BE 50 FT OF THAT PT OF SW 1/4 SEC 12-51-41 AS DEDICATED PER PLAT LESS THAT PT DESC IN OR 1449/15
514113022710	FLORIDA DEPT OF TRANSPORTATION OFFICE OF RIGHT OF WAY	3400 W COMMERCIAL BLVD	FORT LAUDERDALE	FL	33309	3421	HOLLYWOOD BEACH GARDENS CORR PLAT 10-14 BW 33 FT OF THAT PT OF NE 1/4 OF SEC 13-51-41 AS DEDICATED PER PLAT
514113040070	GANEVA, DAN	2839 DEWEY ST	HOLLYWOOD	FL	33020		PINE RIDGE ESTATES 24-10 BTRACT 9 E 60 OF N 100 BLK 2
514113040080	PINNACLE 441 PHASE 2 LLC	9400 S DADELAND BLVD STE 100	MIAMI	FL	33156		PINE RIDGE ESTATES 24-10 BTR 11 W 220 BLK 2
514113040220	FLORIDA DEPT OF TRANSPORTATION OFFICE OF RIGHT OF WAY	3400 W COMMERCIAL BLVD	FORT LAUDERDALE	FL	33309	3421	PINE RIDGE ESTATES 24-10 BPOR OF LOT 12 BLK 2 DESC AS: BEGIN NE COR LOT 12, SW 300.02, SE 3.65, NE 255.20, SE 47.83, SE 47.71, SW 7.33, SE 21.75, NE 6.96, SE 11.83, NE 2.57, SE 29.56, NW 142.25 TO POB
514113050010	LOLY'S ENTERPRISE LLC	4613 N UNIVERSITY DR #250	CORAL SPRINGS	FL	33065		GRACEWOOD 24-22 BLOT 1 BLK 1
514113050020	ZELL, D E & PATRICIA WLANTZ, BETTY ANDREWS	141 GREENS RD	HOLLYWOOD	FL	33021	2840	GRACEWOOD 24-22 BLOT 2 BLK 1
514113050030	ZELL, D E & PATRICIA WLANTZ, BETTY ANDREWS	141 GREENS RD	HOLLYWOOD	FL	33021	2840	GRACEWOOD 24-22 BLOT 3 BLK 1
514113050040	ZELL, D E & PATRICIA WLANTZ, BETTY ANDREWS	141 GREENS RD	HOLLYWOOD	FL	33021	2840	GRACEWOOD 24-22 BLOT 4 BLK 1
514113050050	SYCHAR FRENCH SDA CHURCH INC	6019 BUCHANAN ST	HOLLYWOOD	FL	33024		GRACEWOOD 24-22 BLOT 5,6,7 BLK 1
514113050070	ZELL, D E & PATRICIA WLANTZ, BETTY ANDREWS	141 GREENS RD	HOLLYWOOD	FL	33021	2840	GRACEWOOD 24-22 BLOT 8 BLK 1
514113050080	ZELL, D E & PATRICIA WLANTZ, BETTY ANDREWS	141 GREENS RD	HOLLYWOOD	FL	33021	2840	GRACEWOOD 24-22 BLOT 9 BLK 1
514113050090	Y APARTMENTS LLC	507 PALM DR	HALLANDALE BEACH	FL	33009		GRACEWOOD 24-22 BLOT 10,11 BLK 1
514113050100	Y APARTMENTS LLC	507 PALM DR	HALLANDALE BEACH	FL	33009		GRACEWOOD 24-22 BLOT 13 EAST BLK 1
514113050110	BORNMANN, JOHN G	6101 BUCHANAN ST	HOLLYWOOD	FL	33024		GRACEWOOD 24-22 BLOT 13 WEST, 14 & 15 BLK 1
514113050130	BLACK DANCKO LLC	470 ANSIN BLV #470A	HALLANDALE BEACH	FL	33009	3111	GRACEWOOD 24-22 BLOT 16 BLK 1
514113050140	HERNANDEZ, RONALD DE JESUS	6115 BUCHANAN ST	HOLLYWOOD	FL	33024	7927	GRACEWOOD 24-22 BLOT 17 BLK 1
514113050150	RONDON, MIGUEL MMAGUINA ESPINOZA, NANCY O	6117 BUCHANAN ST	HOLLYWOOD	FL	33024		GRACEWOOD 24-22 BLOT 18 BLK 1
514113050160	CR & USA INVESTMENT LLC	1846 MAYO ST	HOLLYWOOD	FL	33020		GRACEWOOD 24-22 BLOT 19,20 E 1/2 BLK 1
514113050170	PRIME, LUC	6131 BUCHANAN ST	HOLLYWOOD	FL	33024	7927	GRACEWOOD 24-22 BLOT 20 LESS E 1/2, 21 BLK 1
514113050180	VAZ FAM TRVAZ, MARK A & PATRICIA TRSTEEES	11330 SW 20 ST	MIRAMAR	FL	33025		GRACEWOOD 24-22 BLOT 22 BLK 1
514113050190	VAZ FAM TRVAZ, MARK A & PATRICIA Y TRSTEEES	11330 SW 20 ST	MIRAMAR	FL	33025		GRACEWOOD 24-22 BLOT 23 BLK 1
514113050220	CROWNED KING 7 LLC	700 N STATE RD 7	HOLLYWOOD	FL	33021	5601	GRACEWOOD 24-22 BLOTS 1,2,3 & 4 BLK 2
514113050240	SHEIR, DANIEL SZNAJDERMAN, CAROLINA YAEL	21130 NE 18 CT	MIAMI	FL	33179	1504	GRACEWOOD 24-22 BLOT 5 BLK 2
514113050250	6020 B LLC	3585 NE 207 ST C9 #1323	AVENTURA	FL	33180		GRACEWOOD 24-22 BLOT 6 BLK 2
514113050260	SHEIR, CAROLINA Y SZNAJDERMAN SHEIR, DANIEL	2445 NE 214 ST	MIAMI	FL	33180	1049	GRACEWOOD 24-22 BLOT 7 BLK 2
514113050270	ROTHKE, GRACE T ETAL	1188 RIVERWIND CIR	VERO BEACH	FL	32967		GRACEWOOD 24-22 BLOT 8 BLK 2
514113050280	ETSUBNEH, JENNIFER	5100 CLEVELAND ST	HOLLYWOOD	FL	33021		GRACEWOOD 24-22 BLOT 9 BLK 2
514113050290	WALTERS, JACQUELINE A	6674 MONTEGO BAY BLVD APT C	BOCA RATON	FL	33433	4028	GRACEWOOD 24-22 BLOT 10 BLK 2
514113050300	KIZIAH, PATRICIA L	3915 BUCHANAN ST	HOLLYWOOD	FL	33021		GRACEWOOD 24-22 BLOT 11 BLK 2
514113050310	GRANT, MARINA	18117 BISCAYNE BLVD #1176	MIAMI	FL	33160		GRACEWOOD 24-22 BLOT 12 BLK 2

514113050320	FKH SFR C1 LP%FIRST KEY HOMES LLC	1850 PARKWAY PL #900	MARIETTA	GA	30067		GRACEWOOD 24-22 BLOT 13 BLK 2
514113050330	INOA,CRUZ	7811 RALEIGH ST	HOLLYWOOD	FL	33024		GRACEWOOD 24-22 BLOT 14 BLK 2
514113050340	INOA,CRUZ	7811 RALEIGH ST	HOLLYWOOD	FL	33024		GRACEWOOD 24-22 BLOT 15 BLK 2
514113050350	KUCINE,SCOTT & MELISSA	2114 SW 60 TER	MIRAMAR	FL	33023		GRACEWOOD 24-22 BLOT 16 BLK 2
514113050351	MENDEZ,JOHNNY	375 N 7 ST	NEWARK	NJ	07107		GRACEWOOD 24-22 BLOT 17 BLK 2
514113050360	MOGE,YVON M & DONNA M	6120 BUCHANAN ST	HOLLYWOOD	FL	33024	7928	GRACEWOOD 24-22 BLOT 18 BLK 2
514113050370	CASTRO,MERLYNGREYES GUZMAN,JAIME	6122 BUCHANAN ST	HOLLYWOOD	FL	33024	7928	GRACEWOOD 24-22 BLOT 19 BLK 2
514113050380	HICKS,CLIFFORD D JR	6124 BUCHANAN ST	HOLLYWOOD	FL	33024	7928	GRACEWOOD 24-22 BLOT 20 BLK 2
514113050390	GUERRERO,PATRICIA L	6128 BUCHANAN ST	HOLLYWOOD	FL	33024		GRACEWOOD 24-22 BLOT 21 BLK 2
514113050400	PADILLA,LUIS E	845 S HIGHLAND DR	HOLLYWOOD	FL	33021		GRACEWOOD 24-22 BLOT 22 BLK 2
514113050410	MONZUR,KHAN	1018 NW 125 AVE	SUNRISE	FL	33323		GRACEWOOD 24-22 BLOT 23 BLK 2
514113050480	ESQUIVEL,NILA	6131 PIERCE ST	HOLLYWOOD	FL	33024	7943	GRACEWOOD 24-22 BLOT 30 BLK 2
514113050490	PHILLIPS,JONATHAN J H/EHAMPTON,JOANN S	6123 PIERCE ST	HOLLYWOOD	FL	33024		GRACEWOOD 24-22 BLOT 31 BLK 2
514113050500	ESPINOSA,IVAN P H/EESPINOSA,ROCIO I	6121 PIERCE ST	HOLLYWOOD	FL	33024		GRACEWOOD 24-22 BLOT 32 BLK 2
514113050510	DEONANAN,DENESH	6551 GRANT ST	HOLLYWOOD	FL	33024		GRACEWOOD 24-22 BLOT 33 BLK 2
514113050520	DENNISDEONANAN,POLLY	302 BUCCANEER ROAD	WILMINGTON	NC	28409		GRACEWOOD 24-22 BLOT 34 BLK 2
514113050530	BERGER,JESSICA	14500 SUNSET LANE	FORT LAUDERDALE	FL	33330	3412	GRACEWOOD 24-22 BLOT 35 BLK 2
514113050540	BAERGA,MARIBEL REV LIV TR	5100 TYLER ST	HOLLYWOOD	FL	33021		GRACEWOOD 24-22 BLOT 36 BLK 2
514113050550	ENGLE,BRETTON CENGLE,MARIA F	4822 HIBBS GROVE TER	COOPER CITY	FL	33330	4458	GRACEWOOD 24-22 BLOT 37,38 BLK 2
514113050560	SHARON MUSCELLA REV TR	49 N SHORE DRIVE	MIAMI BEACH	FL	33141		GRACEWOOD 24-22 BLOT 39,40 BLK 2
514113050570	2917 ROSECRANS LLC	PO BOX 814253	HOLLYWOOD	FL	33081		GRACEWOOD 24-22 BLOT 41 BLK 2
514113050571	LYNMARI LLC	508 LITTLE WEKIVA RD	ALTAMONTE SPG	FL	32714	7404	GRACEWOOD 24-22 BLOT 42 BLK 2
514113050580	URENA,ABRAHAM	6029 PIERCE ST #1-2	HOLLYWOOD	FL	33024		GRACEWOOD 24-22 BLOT 43 BLK 2
514113050590	JOSEPH,ELENA	14500 SUNSET LANE	FORT LAUDERDALE	FL	33330	3412	GRACEWOOD 24-22 BLOT 44 BLK 2
514113050600	BAERGA,MARIBEL REV LIV TR	14500 SUNSET LN	FORT LAUDERDALE	FL	33330	3412	GRACEWOOD 24-22 BLOT 45 BLK 2
514113050610	MARIBEL BAERGA REV LIV TRMANUEL	6235 WINDING LAKE DR	JUPITER	FL	33458		GRACEWOOD 24-22 BLOTS 46 & 47 TOGETHER WITHW 44 FT OF LOTS 49 & 50 BLK 2
514113050620	BAERGA REV LIV TR	6235 WINDING LAKE DR	JUPITER	FL	33458	3991	GRACEWOOD 24-22 BLOT 48 BLK 2
514113050630	614 J & J LLC	6235 WINDING LAKE DR	JUPITER	FL	33458		GRACEWOOD 24-22 BLOT 49 LESS W 44,50 LESS W 44BLK 2
514113050860	FLORIDA DEPT OF TRANSPORTATIONOFFICE OF RIGHT OF WAY	3400 W COMMERCIAL BLVD	FORT LAUDERDALE	FL	33309	3421	GRACEWOOD 24-22 BE 60 FT OF THAT PT OF NW1/4 OFSEC 13 51-41 AS DEDICATED PERPLAT
514113050870	PUBLIC LAND % CITY OF HOLLYWOODOFFICE OF BUSINESS & INTL TRADE	2600 HOLLYWOOD BLVD #212	HOLLYWOOD	FL	33020	4807	GRACEWOOD 24-22 BALL STREETS DEDICATED PER PLAT24-22 B
514113190010	GANEVA,DAN R	2839 DEWEY ST	HOLLYWOOD	FL	33020		NORDINE HEIGHTS 29-43 BLOT 1,2 BLK 1
514113190020	GANEVA,DAN R	2839 DEWEY ST	HOLLYWOOD	FL	33020		NORDINE HEIGHTS 29-43 BLOT 3 BLK 1
514113190030	GANEVA,DAN R	6124 JOHNSON ST	HOLLYWOOD	FL	33024	6030	NORDINE HEIGHTS 29-43 BLOT 4 BLK 1
514113190040	HAROON,FATIMA & SAMI	10212 SW 49 MNR	COOPER CITY	FL	33328	3315	NORDINE HEIGHTS 29-43 BLOT 6 BLK 1
514113190060	JAMM SERVICES LLC	6108 JOHNSON ST	HOLLYWOOD	FL	33024		NORDINE HEIGHTS 29-43 BLOT 7 TO 9 BLK 1
514113190080	ONE WORLD PLUMBING &INSPECTIONS LLC	6821 MCCLELLAN ST	HOLLYWOOD	FL	33024		NORDINE HEIGHTS 29-43 BLOT 10 BLK 1
514113190090	CASANAS,YASMIN MEJIAMEJIA,SERVIO	6105 LINCOLN ST	HOLLYWOOD	FL	33024		NORDINE HEIGHTS 29-43 BLOT 11,12 BLK 1
514113190100	ARZOLA,CARMEN L H/EDIAZ,DIEGO	6109 LINCOLN ST	HOLLYWOOD	FL	33024	7939	NORDINE HEIGHTS 29-43 BLOT 13 BLK 1
514113190110	JOANNE ATHENA MANOL TR	16610 SW 52 PLACE	SOUTHWEST RANCHE	FL	33331		NORDINE HEIGHTS 29-43 BLOT 14 BLK 1
514113190120	BAEZ,CLARA YESENIA H/EDE LA CRUZ,ALBERT JOSE	6115 LINCOLN ST	HOLLYWOOD	FL	33024	7939	NORDINE HEIGHTS 29-43 BLOT 15 BLK 1
514113190130	MISHU,TASNOVA SARKER	13380 SW 29 CT	DAVIE	FL	33330		NORDINE HEIGHTS 29-43 BLOT 16 BLK 1
514113190140	FOXWELL,MARKHOPKINS,JOHANNA	5251 SW 1 ST	PLANTATION	FL	33317		NORDINE HEIGHTS 29-43 BLOT 17 BLK 1
514113190150	KASTEN PROPERTIES LLC	2060 PARK CT	BOCA RATON	FL	33486		NORDINE HEIGHTS 29-43 BLOT 18 BLK 1
514113190160	MENDEZ,CRUZMENDEZ,LUIS	7811 RALEIGH ST	HOLLYWOOD	FL	33024		NORDINE HEIGHTS 29-43 BLOT 19 BLK 1
514113190190	FLORES,MAURICIO & HILDA	6140 LINCOLN ST	HOLLYWOOD	FL	33024		NORDINE HEIGHTS 29-43 BLOT 2 BLK 2
514113190200	MENTOR,KERLINMENTOR,WISLAND	6128 LINCOLN ST	HOLLYWOOD	FL	33024		NORDINE HEIGHTS 29-43 BLOT 3 BLK 2

514113190210	MAPLE HOMES LIMITED INC	61 ANTHONY LN	*VAUGHAN ON	CA	L4K 3	L1	NORDINE HEIGHTS 29-43 BLOT 4 BLK 2
514113190220	RINCON,CRUZ M & DOMINGO	6120 LINCOLN ST	HOLLYWOOD	FL	33024	7940	NORDINE HEIGHTS 29-43 BLOT 5 BLK 2
514113190230	GUERRERO,KATHERINE MARLENE NUNEZDE NUNEZ,CECILIA JOSEFINA G	6116 LINCOLN ST	HOLLYWOOD	FL	33024		NORDINE HEIGHTS 29-43 BLOT 6 BLK 2
514113190240	JIMENEZ,JESUSRIVERA,SARA M	6112 LINCOLN ST	HOLLYWOOD	FL	33024		NORDINE HEIGHTS 29-43 BLOT 7 BLK 2
514113190250	MCCAW,TREVOR H/EMCCAW,ANNETTE	6110 LINCOLN ST	HOLLYWOOD	FL	33024	7940	NORDINE HEIGHTS 29-43 BLOT 8 BLK 2
514113190260	JIM,STEPHEN & CHRISTINE	8931 NW 5 ST	PEMBROKE PINES	FL	33024	6405	NORDINE HEIGHTS 29-43 BLOT 9 BLK 2
514113190270	MOODY,SAPHYIR BREANNA	6104 LINCOLN ST	HOLLYWOOD	FL	33024		NORDINE HEIGHTS 29-43 BLOT 10 BLK 2
514113190280	PUBLIC LAND % CITY OF HOLLYWOODOFFICE OF BUSINESS & INTL TRADE	2600 HOLLYWOOD BLVD #212	HOLLYWOOD	FL	33020	4807	NORDINE HEIGHTS 29-43 BALL STREETS DEDICATED PER PLAT29-43 B
514113400010	PINNACLE 441 LLC	9400 S DADELAND BLVD #100	MIAMI	FL	33156		PINERIDGE ESTATES 24-10 BLOT 12 LESS S 100, AND E 30 OFLOT 11 LESS S 100 BLK 2,LESS PORDESC IN INST#112853176, TOG WITHS 100 OF LOT 12 BLK 2; TOG WITHLOT 11 LESS W 220 AND LESS N 230OF E 30, BLK 2AKA: PARCELS 1,2 & 3PINNACLE 441
	CITY OF HOLLYWOOD DEPT. OF PLANNING & DEVELOPMENT SERVICES PO BOX 229045 HOLLYWOOD FL 33022-9045						
	Josh Levy, Mayor	City of Hollywood 2600 Hollywood Boulevard Hollywood, FL 33020-4807					
	Caryl S. Shuham, Commissioner Distrct 1	City of Hollywood 2600 Hollywood Boulevard Hollywood, FL 33020-4807					
	Linda Hill Anderson, Commissioner District 2	City of Hollywood 2600 Hollywood Boulevard Hollywood, FL 33020-4807					
	Traci L. Callari, Commissioner District 3	City of Hollywood 2600 Hollywood Boulevard Hollywood, FL 33020-4807					
	Adam Gruber, Commissioner District 4	City of Hollywood 2600 Hollywood Boulevard Hollywood, FL 33020-4807					
	Kevin D. Biederman, Commissioner District 5	City of Hollywood 2600 Hollywood Boulevard Hollywood, FL 33020-4807					
	Idelma Quintana, Commissioner District 6	City of Hollywood 2600 Hollywood Boulevard Hollywood, FL 33020-4807					

Association	Name	position	mailing	City	State	Zip
Arapahoe Farms	Miriam Ungar	President	5810 SW 33rd Terrace P.O. Box 223697 Hollywood, Florida	Fort Lauderdale	Florida	33312
Downtown Parkside Royal Poinciana Civic Association	Lynn Smith	President	33022	Hollywood	Florida	33020
Driftwood Civic Association	Glenda Pagan-Cortes	President	2701 N 72nd Ter	Hollywood	FL	33024
Highland Gardens Civic Association	ShirleyStealey	Secretary/Treasurer	2847 Plunkett Street 1301 S. Ocean Dr	Hollywood	FL	33020
Hollywood Beach Civic Association	Frank De Risi	President	Hollywood Fl, 33019	Hollywood	FL	33019
Hollywood Council of Civic Associations	Terry Cantrell	President	745 Harrison Street	Hollywood	FL	33019
Hollywood Gardens West	Idelma Quintana	President	5920 Johnson Street	Hollywood	FL	33021
Hollywood Hills Civic Association	Pamela Burgio	President	PO Box 81-6044	Hollywood	Florida	33081-6044
Hollywood Lakes Civic Association	Terry Cantrell	President	P.O. Box 223922	Hollywood	FL	33019
Hollywood North Beach Association	Jeff Spear	Vice President	Jeff Spear	Hollywood	FL	33019
Lawn Acres Civic Association	Lauren Rothschild	President	404 Lawn Acres Court	Hollywood	FL	33023
Liberia Homeowner Association	Tim Burton	President	2228 Evans Street	Hollywood	FL	33020
North Central Hollywood Civic Association	Patricia Antrican	President	2534 Fillmore Street	Hollywood	FL	33020
Park East Civic Association	Brenda Livingston	Secretary	3157 Johnson Street 2018 FLETCHER STREET	Hollywood	FL	33021
Parkside Civic Association	kenneth r crawford	President	STREET	HOLLYWOOD	FL	33020
The United Neighbors of South Hollywood / South Central	Helen Chervin	President	2470 Adams Street 5300 WASHINGTON ST (CLUB HOUSE OFFICE)	Hollywood,	Florida	33020=5 323
BEVERLY HILLS CONDOMINUMS	TERESA GONZALEZ	PROPERTY MANAGER	8461 Lake Worth Rd. #124	HOLLYWOOD	FL	33021
Virginia Beach Resorts Homeowners Assoc.	Todd Hamilton	Treasurer	#124	Lake Worth	FL	33467
Whitehouse Condominium Association, Inc.	William R. Treece	President	309 Crocus Terrace	Hollywood	FL	33019
Downtown Hollywood Business Association	Mark Rowe	President	1921 Hollywood Blvd.	Hollywood	FL	33021
Greater Hollywood Chamber of Commerce	Catarina Suplicy	Office Manager	330 North Federal Highway	Hollywood	FL	33020
Hollywood Beach Business Association, HBBA	Kathleen DiBona	VP Government Affairs	1501 South Ocean Drive	Hollywood	FL	33019
Hollywood Beach Business Association	Debra Case	Coordinator	1722 Sheridan Street #170	Hollywood	Florida	33020

# NOTICE OF PUBLIC OUTREACH MEETING

Sponsored by: Pinnacle Communities  
Project Name: Pinnacle 441 Phase 2

FOR VIRTUAL MEETING LOGIN INFORMATION:

[kpoliakoff@govlawgroup.com](mailto:kpoliakoff@govlawgroup.com)

Zoom Link: <https://us02web.zoom.us/j/9175326492>

MEETING DATE & TIME: 1/04/2023 @ 6:00 PM

Posted: 12/19/2022 By: Cutro



# NOTICE OF PUBLIC OUTREACH MEETING

Sponsored by: Pinnacle Communities

Project Name: Pinnacle 441 Phase 2

FOR VIRTUAL MEETING LOGIN INFORMATION:

[kpoliakoff@govlawgroup.com](mailto:kpoliakoff@govlawgroup.com)

Zoom Link: <https://us02web.zoom.us/j/9175326492>

MEETING DATE & TIME: 1/04/2023 @ 6:00 PM

Posted: 12/19/2022 By: Cutro

# PINNACLE 441, PHASE 2

## HOLLYWOOD, FLORIDA



Pinnacle 441 is a multi-phase, catalytic mixed-use development being developed by Pinnacle Communities, LLC delivering 213 total units of critically-needed attainable housing on the State Road 7 corridor in Hollywood, Florida. Phase 1, located at the intersection of Johnson Street and US 441/SR 7, is currently under construction and will be complete in late 2023. It will contain 113 residential rental units consisting of 1, 2, & 3 Bedrooms (110 of them affordable at 60% of area-wide median income or less) and 6,780 square feet of commercial development fronting SR7/US441.

Pinnacle 441 Phase 2 will be located at 6028 Johnson Street, west of Phase 1, and will contain another 100 units of affordable rental units (1, 2 and 3 bedrooms, also affordable at 60% AMI or less) with one unit also serving as a ground-floor live/work space with commercial frontage on Johnson Street. The development replaces a mobile home park in considerable disrepair which has been a focal point of illegal activity in the community. The park closes at the end of February 2023

and the closure is being conducted consistent with Florida Statutes, Chapter 723.

Pinnacle 441, Phase 2 will rise eight stories in height on 1.65 acres of land, and contain surface parking, state of the art improvements and shared amenities between both phases. These integrated developments will feature improvements encouraged by the City of Hollywood, such as a large public plaza at the intersection of SR 7 and Johnson Street, bike racks, and enhanced bus shelters offering connections to multiple routes, including BCT's express "441 Breeze." These improvements, access to services and employment in the immediate area, and the mixed-use nature of the development will ensure Pinnacle 441 thrives as an ideal destination to live, work and play. Construction of Phase 2 will commence in late summer 2023 and is expected to take 18 months to complete.

Established in 1997, Pinnacle develops, builds, leases and owns affordably-priced, luxury-style apartment homes, with a development portfolio approaching 10,000 units and over \$1.5 billion in combined investment. Pinnacle has experience in all facets of housing development, including affordable, mixed-income, senior, family and special needs housing.

Pinnacle maintains a enduring relationship with the City of Hollywood. Upon completion, Pinnacle will have developed four multi-family projects located within the City of Hollywood: Crystal Lakes, Parc Station, Pinnacle at Peacefield and Pinnacle 441.

*Pinnacle 441 Phase 1 Under Construction*



*Pinnacle 441 Phase 2 Site (Trailer Park)*





# Pinnacle 441

Hollywood, Florida

prepared for:

**Pinnacle Communities, LLC**

Traffic Study

January 22, 2023

Mr. Timothy P. Wheat  
Pinnacle Communities, LLC  
9400 S. Dadeland Boulevard, #100  
Miami, Florida 33156

**Re: Pinnacle 441 Project (Phases 1 & 2) – Traffic Memorandum**

Dear Tim:

Per your request, Traf Tech Engineering, Inc is pleased to provide you with the results of the traffic evaluation associated with the Pinnacle 441 mixed-use project (Phases 1 and 2) planned to be located south of Johnson Street between N 61<sup>st</sup> Avenue and SR 7/US 441 in the City of Hollywood, Broward County, Florida. Figure 1 shows the location of the project site and the surrounding street system.

**Project Description and Access**

The project will consist of the following land uses and intensities:

- Multifamily Mid-Rise: 213 units
- Retail < 40k: 6,760 sf
- Small Office: 1,501 sf

Access to the site is provided via access locations on Johnson Road, SR 7/US 441, and N 61<sup>st</sup> Avenue.

A copy of the site plan is contained in Attachment A. For purposes of this traffic evaluation, the project is anticipated to be built and occupied in the year 2026. The following tasks were undertaken as part of this evaluation:

- o Documented the existing lane geometry of the study area. Three intersections and the project driveways were evaluated. These intersections include:

- Johnson Street and N 62<sup>nd</sup> Avenue (signalized)
- Johnson Street and N 61<sup>st</sup> Avenue (stop controlled)
- Johnson Street and SR 7/US 441 (signalized)

Figures 2a and 2b depict the existing and future lane geometry of the above intersections and future project driveways.

- Collected intersection turning movement counts during the critical peak periods (7:00 AM to 9:00 AM) and (4:00 PM to 6:00 PM) at the following locations:
  - Johnson Street and N 62<sup>nd</sup> Avenue
  - Johnson Street and N 61<sup>st</sup> Avenue
  - Johnson Street and SR 7/US 441

The above traffic counts were recorded on Wednesday, March 10, 2021, and January 11, 2023. The traffic counts were adjusted by utilizing peak season factors of 1.00 and 1.04. Figure 3 shows the results of the AM and PM peak hour traffic counts. These traffic counts are included in Attachment B.

- Obtained the signal timing plans from Broward County for the signalized intersection. Attachment B contains the signal timing plans for the signalized intersection located within the study area.

## **Trip Generation**

A trip generation analysis was performed for the site using the trip generation equations published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (11<sup>th</sup> Edition)*. The trip generation analyses were undertaken for daily, AM peak hour, and PM peak hour conditions. The results of the trip generation analyses are documented in Table 1. As shown in the table, the Pinnacle 441 mixed-use development is projected to generate approximately 1,461 daily trips, approximately 89 AM peak hour trips (28 inbound and 61 outbound) and approximately 131 trips during the typical afternoon peak hour (75 inbound and 56 outbound).

The City's transportation consultant requested the ITE documentation from the *Trip Generation Manual (11<sup>th</sup> Edition)* which is found in Attachment F.

- Johnson Street and N 62<sup>nd</sup> Avenue (signalized)
- Johnson Street and N 61<sup>st</sup> Avenue (stop controlled)
- Johnson Street and SR 7/US 441 (signalized)

Figures 2a and 2b depict the existing and future lane geometry of the above intersections and future project driveways.

- Collected intersection turning movement counts during the critical peak periods (7:00 AM to 9:00 AM) and (4:00 PM to 6:00 PM) at the following locations:
  - Johnson Street and N 62<sup>nd</sup> Avenue
  - Johnson Street and N 61<sup>st</sup> Avenue
  - Johnson Street and SR 7/US 441

The above traffic counts were recorded on Wednesday, March 10, 2021, and January 11, 2023. The traffic counts were adjusted by utilizing peak season factors of 1.00 and 1.04. Figure 3 shows the results of the AM and PM peak hour traffic counts. These traffic counts are included in Attachment B.

- Obtained the signal timing plans from Broward County for the signalized intersection. Attachment B contains the signal timing plans for the signalized intersection located within the study area.

## **Trip Generation**

A trip generation analysis was performed for the site using the trip generation equations published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (11<sup>th</sup> Edition)*. The trip generation analyses were undertaken for daily, AM peak hour, and PM peak hour conditions. The results of the trip generation analyses are documented in Table 1. As shown in the table, the Pinnacle 441 mixed-use development is projected to generate approximately 1,461 daily trips, approximately 89 AM peak hour trips (28 inbound and 61 outbound) and approximately 131 trips during the typical afternoon peak hour (75 inbound and 56 outbound).

## **Trip Distribution**

The trip distribution for this project was based upon knowledge of the study area, examination of the surrounding roadway network characteristics, review of current traffic volumes, and existing land use patterns. The general trip distribution for the project is summarized below:

- 35% to and from the north via State Road 7
- 35% to and from the south via State Road 7
- 15% to and from the east via Johnson Street
- 15% to and from the west via Johnson Street

Figure 4 documents the project traffic assignment based on the above traffic percentages.

Figures 5 and 6 present the future traffic volumes for the study area. Figure 5 includes background traffic only (without the proposed project) and Figure 6 includes the additional traffic anticipated to be generated by the proposed development. The background traffic includes peak season adjustment factor, traffic growth based on historical traffic data within the study area (refer to Attachment C). The future traffic projections for the study intersections are presented in tabular format in Attachment D.

## **Volume Balancing**

In reviewing the adjusted (converted to peak season for year 2023 conditions) traffic counts along Johnson Street, it was noted that a significant drop in vehicular traffic occurred on the section between N 61<sup>st</sup> Avenue and SR 7. The eastbound and westbound traffic is higher at N 61<sup>st</sup> Avenue than at SR 7. For this reason, and to determine the eastbound queues at the Johnson Street/SR 7 intersection with a conservative approach, the eastbound traffic approaching SR 7 and westbound traffic departing from SR 7 were increased to match the higher volumes at the N 61<sup>st</sup> Avenue intersection. The increase in traffic was proportionately distributed to the three eastbound movements (left, through rights) and the three movements heading westbound on Johnson Street (northbound lefts, westbound throughs, and southbound right-turns at the Johnson Street/SR 7 intersection). These adjustments are reflected in future traffic projections found in Attachment D for the intersection of Johnson Street and SR 7.



## Capacity/Level of Service Analyses

In order to determine the impacts created to the impacted intersections, capacity/level of service analyses were undertaken using the SYNCHRO software. The results of the capacity/level of service analyses are presented in Tables 2 and 3. The following conclusions are reached:

- o All study intersections are projected to operate at an acceptable level of service with and without the project.
- o The project driveways are projected to operate at acceptable levels of services.
- o The eastbound queue at the Johnson Street/SR 7 intersection is projected to extend back approximately 310 feet. Based on the site plan, the distance between the eastbound stop bar at SR 7 and the east edge of the Johnson Street driveway is approximately 340 feet. Hence, eastbound queues are not projected to affect the Johnsons Street driveway operation.

The SYNCHRO outputs are contained in Attachment E.

In summary and as presented in Tables 2 and 3, in the year 2026 with the proposed project in place, all study intersections and project driveways are expected to operate at acceptable level of service during both AM and PM Peak hours.

Please give me a call if you have any questions.

Sincerely,

**TRAF TECH ENGINEERING, INC.**

Joaquin E. Vargas, P.E.  
Senior Transportation Engineer

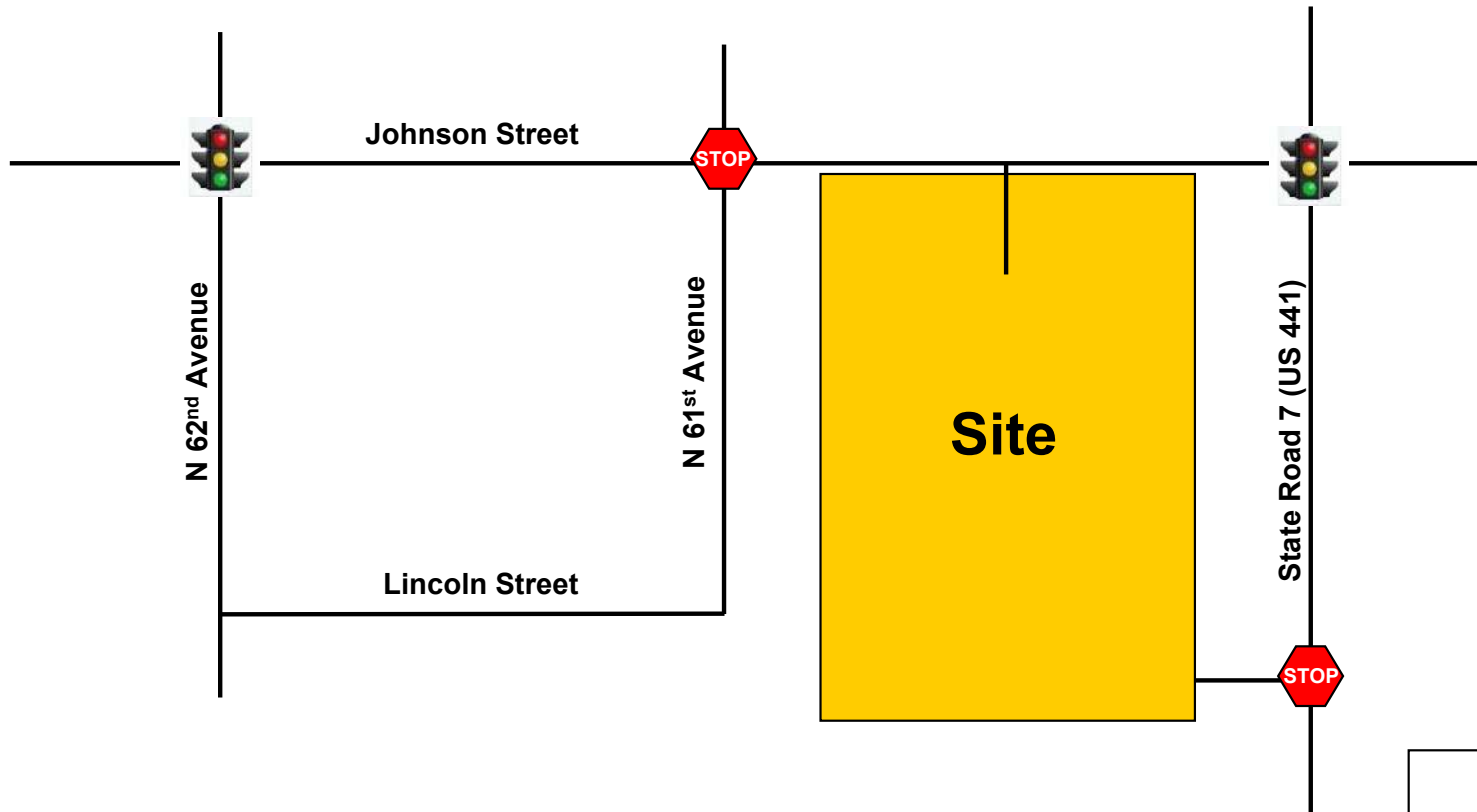
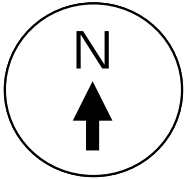
**TABLE 1**  
**Trip Generation**  
**Pinnacle 441 Phases 1 and 2**


Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound
<b>Phase 1</b>								
Multifamily M Rise (LUC 221)	113	493	38	9	29	44	27	17
Retail <40k (LUC822)	6,760	515	16	10	6	45	23	22
Small Office (LUC712)	1,501	22	3	2	1	3	1	2
<b>Total Phase 1</b>		<b>1,030</b>	<b>57</b>	<b>21</b>	<b>36</b>	<b>92</b>	<b>51</b>	<b>41</b>
<b>Phase 2</b>								
Multifamily M Rise (LUC 221)	100	431	32	7	25	39	24	15
<b>Total Phase 2</b>		<b>431</b>	<b>32</b>	<b>7</b>	<b>25</b>	<b>39</b>	<b>24</b>	<b>15</b>
<b>Gross Trips</b>		<b>1,461</b>	<b>89</b>	<b>28</b>	<b>61</b>	<b>131</b>	<b>75</b>	<b>56</b>

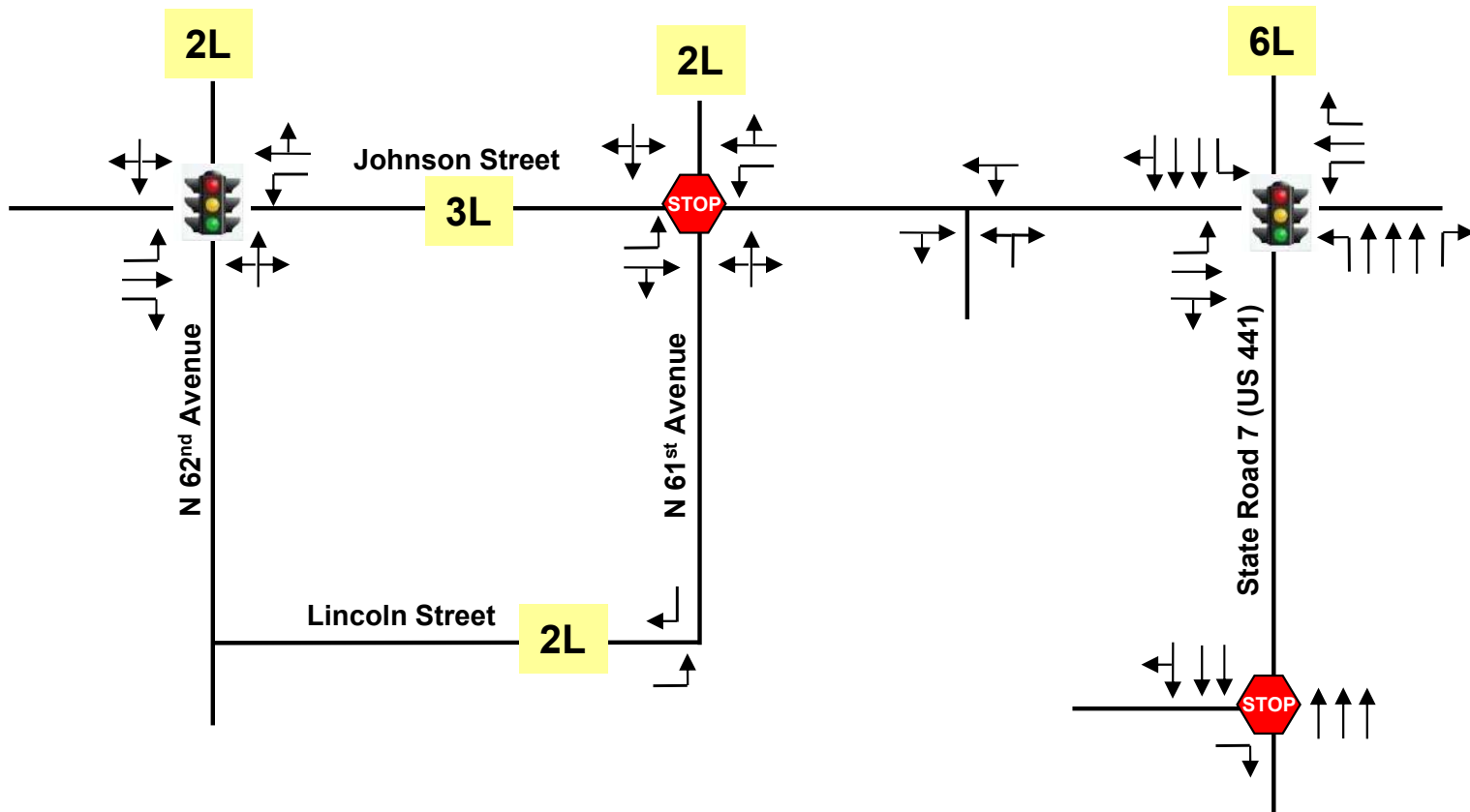
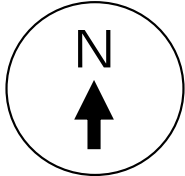
Source: ITE Trip Generation Manual (11th Edition)



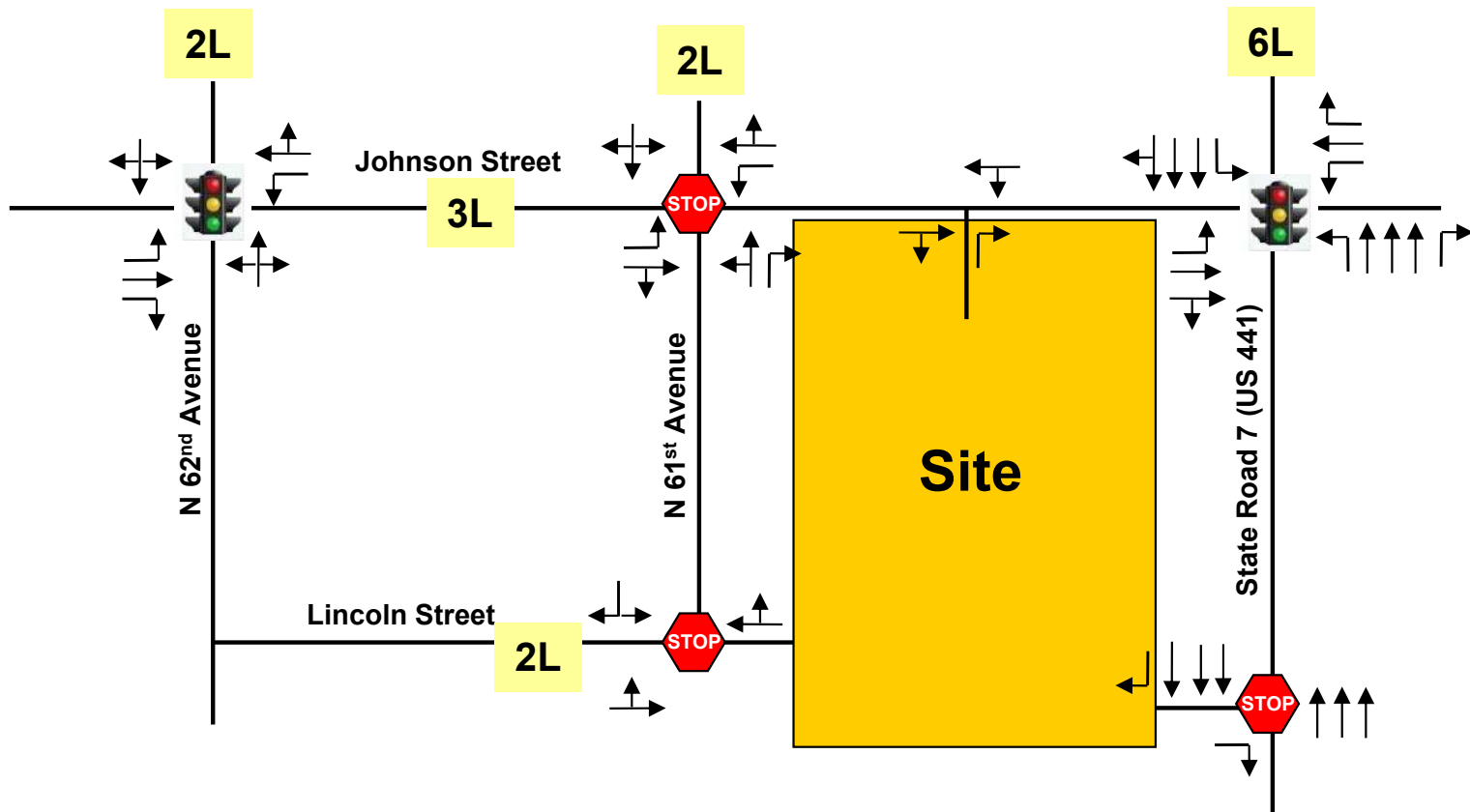
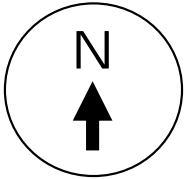




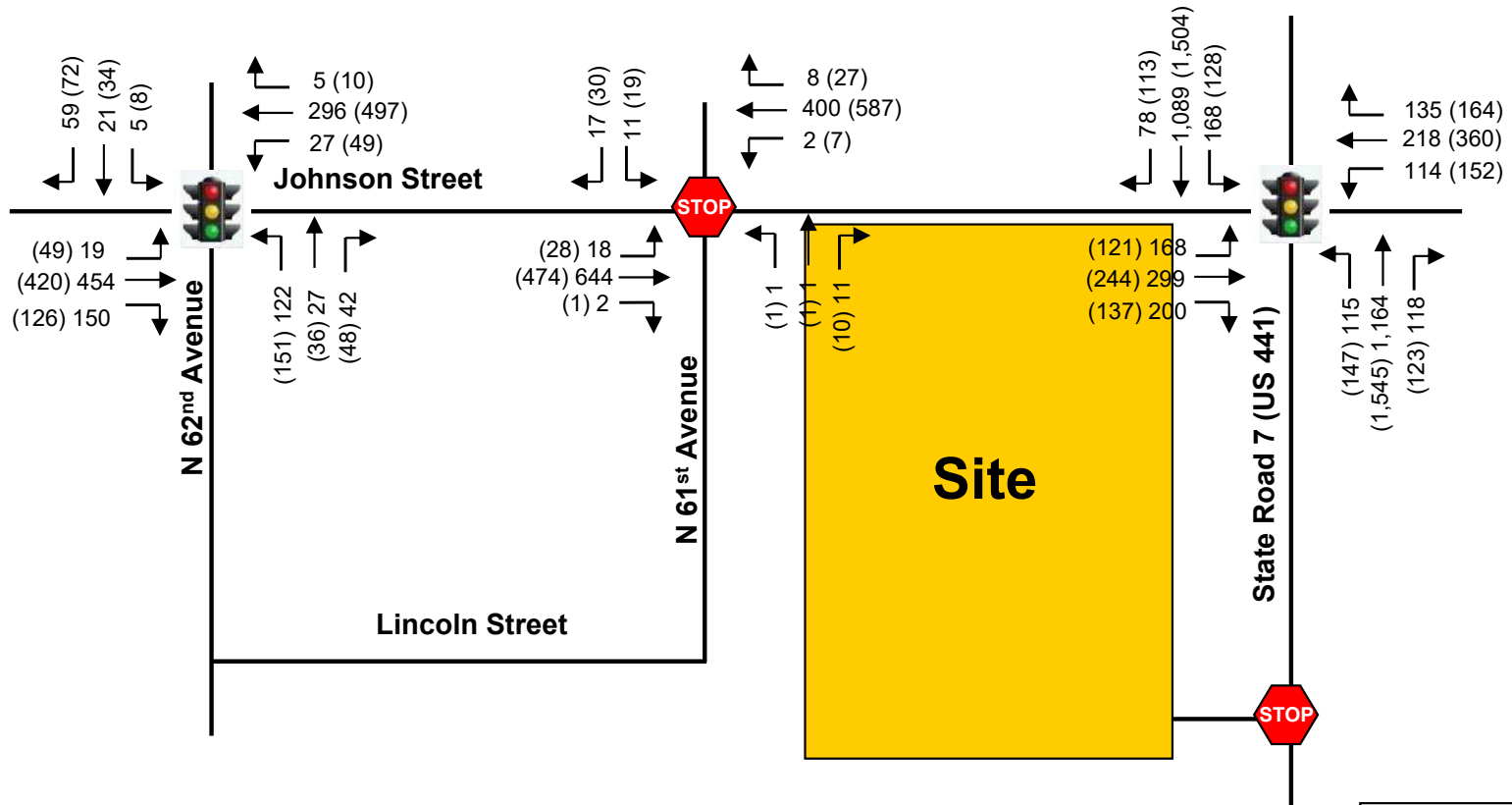
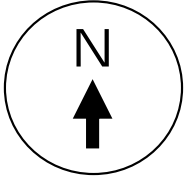
LEGEND	
	Subject Site



LEGEND	
	Left-Turn Lane
	Through Lane
	Right-Turn Lane

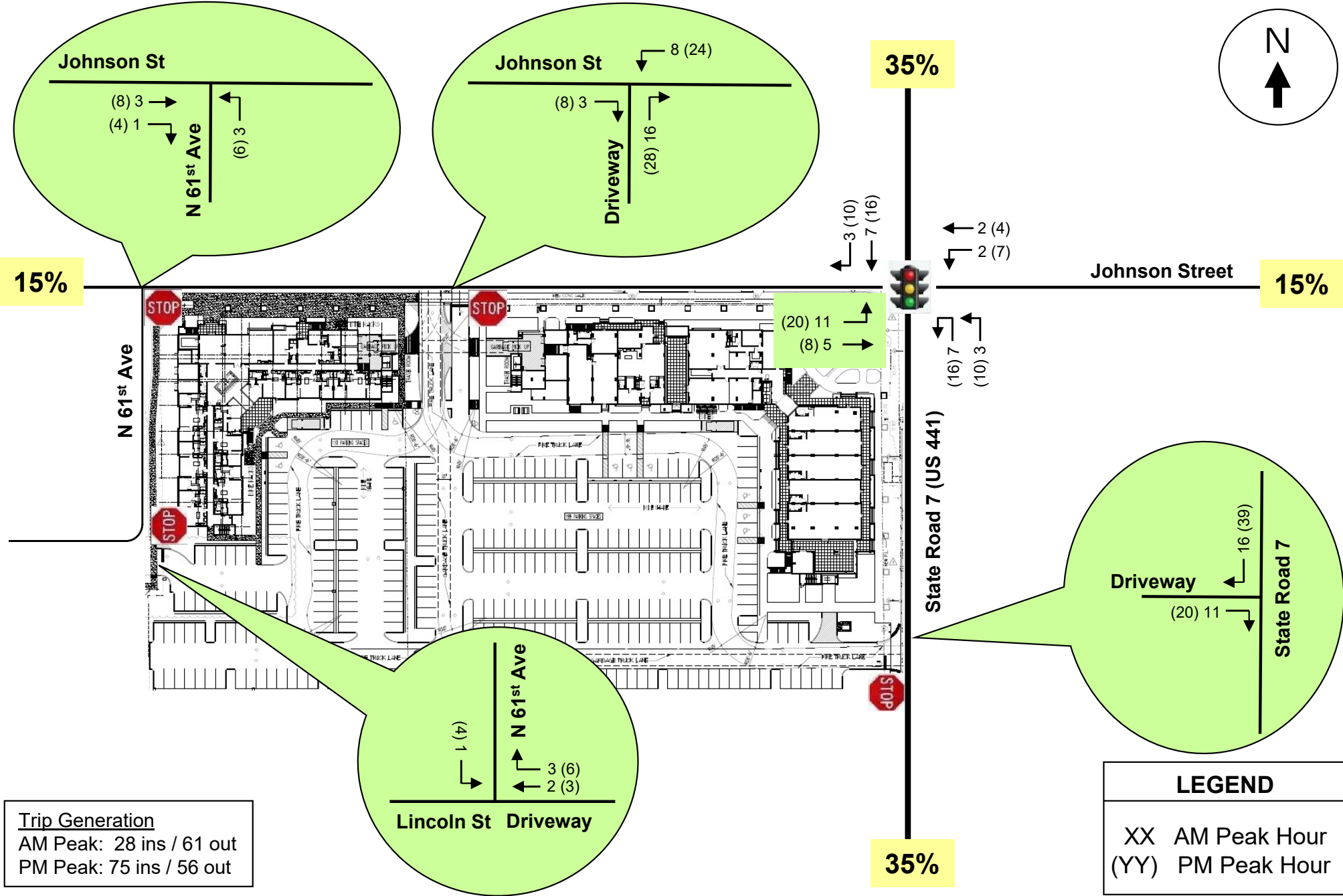


LEGEND	
	Left-Turn Lane
	Through Lane
	Right-Turn Lane



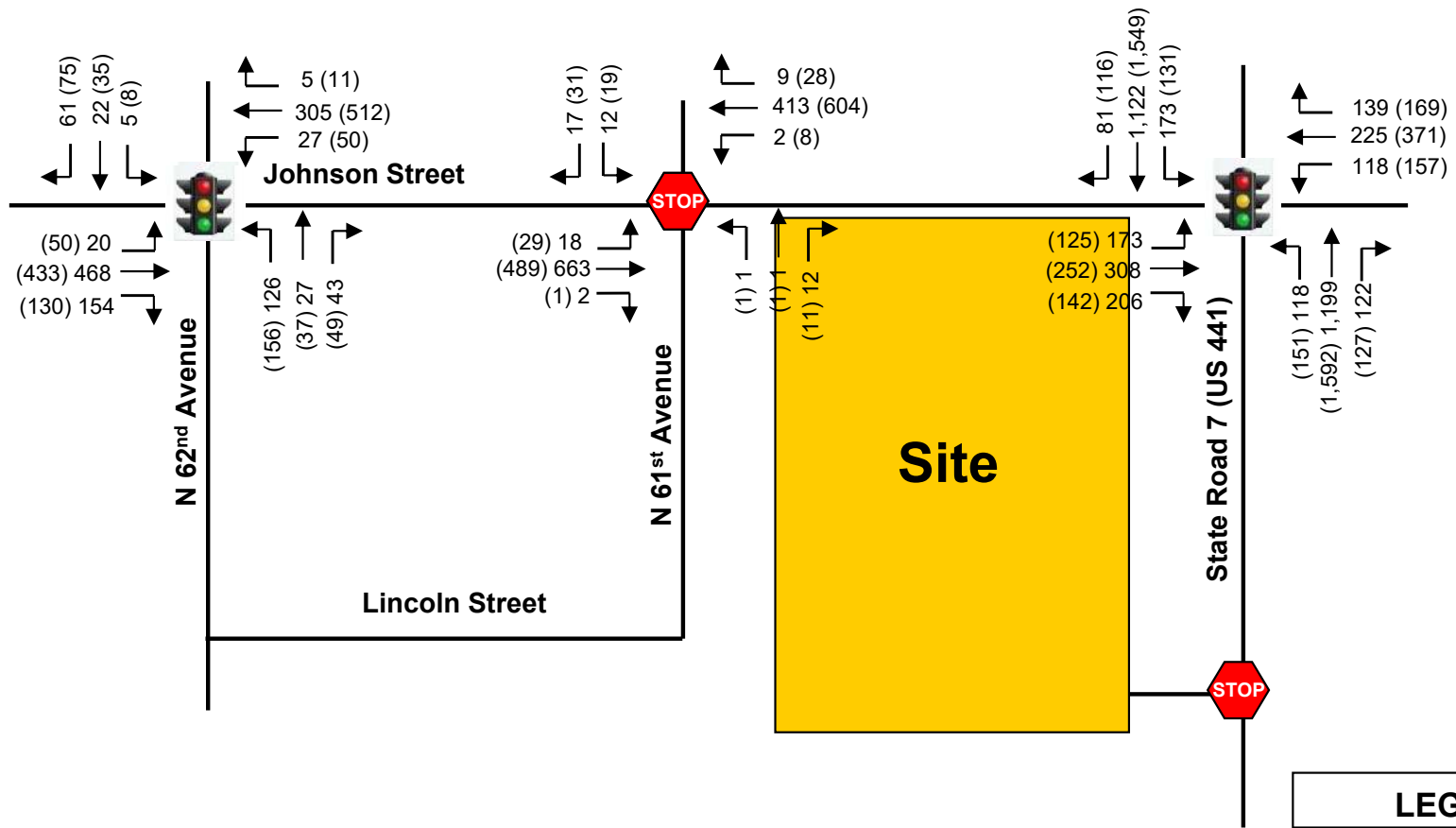
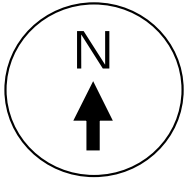
LEGEND	
XX	AM Peak Hour
(YY)	PM Peak Hour

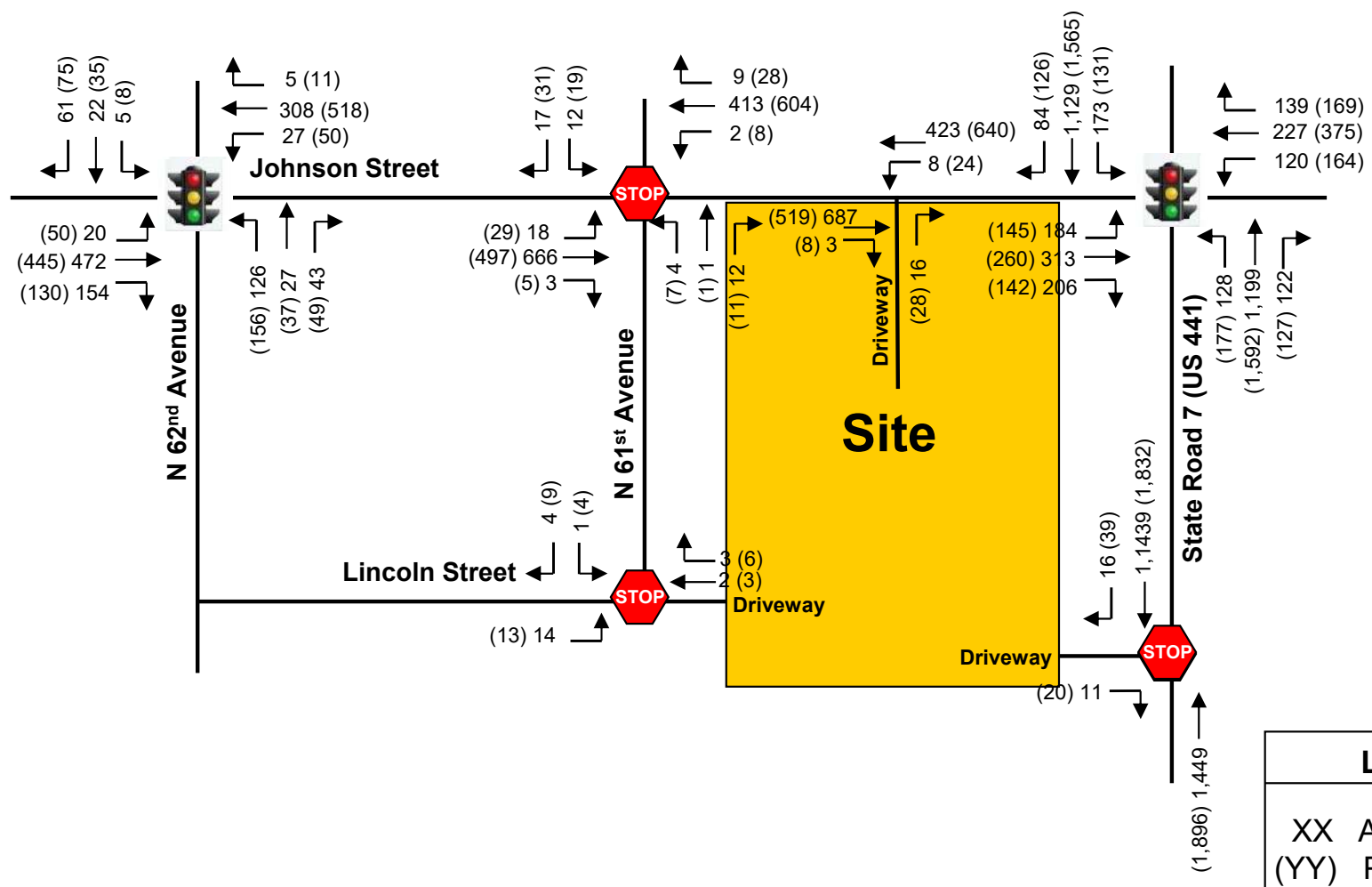
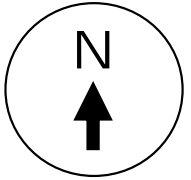




**Site Location Map and Project Traffic**

**FIGURE 4**  
Pinnacle 441  
Hollywood, Florida





LEGEND	
XX	AM Peak Hour
YY	PM Peak Hour



**TOTAL TRAFFIC VOLUMES**  
(Year 2026 Peak Season)

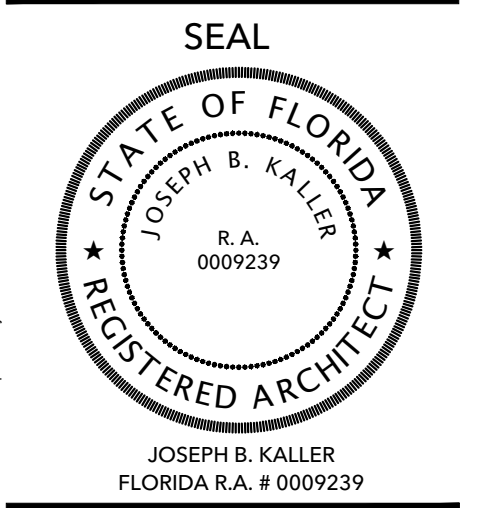
**FIGURE 6**  
Pinnacle 441  
Hollywood, Florida

# **Attachement A**

**Site Plan  
441 Pinnacle**



**Kaller Architecture**  
 AA# 26001212  
 2417 Hollywood Blvd.  
 Hollywood Florida 33020  
 954.920.5746  
 joseph@kallerarchitects.com  
 www.kallerarchitects.com



**PINNACLE 441**  
 PHASE II  
 6028 JOHNSON ST  
 HOLLYWOOD FLORIDA 33024

PROJECT TITLE

SHEET TITLE  
**OVERALL SITE PLAN**

REVISIONS  
 No. DATE DESCRIPTION

1	9-6-22	PRELIM. TAC
2	11-21-22	FINAL TAC
3	12-27-22	ENGINEERING

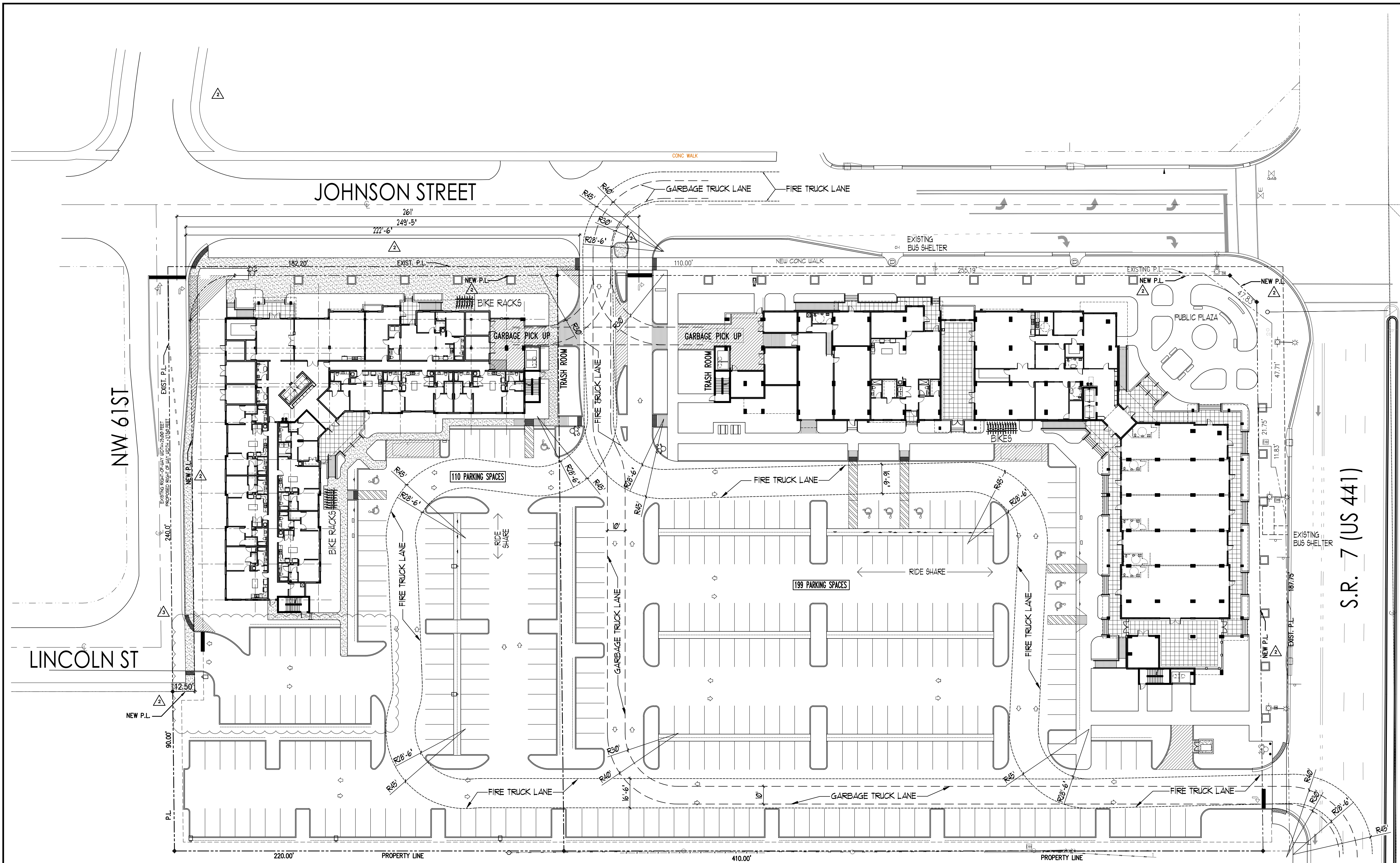
This drawing, as an instrument of service, is and shall remain the property of the Architect and shall not be reproduced, published or used in any way without the permission of the Architect.

PROJECT No.: 21184  
 DATE: 7-6-22  
 DRAWN BY: TMS  
 CHECKED BY: JBK

SHEET

**SP-1**

SHEET 2 OF 6



NOTE: SEE SHEET SP-1.2 FOR PHASE II SITE PLAN

**1 OVERALL SITE PLAN**  
 PHASE 1 AND 2



KALLER ARCHITECTURE, ALL RIGHTS RESERVED © 2018

# **Attachement B**

## **Traffic Counts and Signal Timing**

# Traf Tech Engineering Inc.

File Name : 1-Johnson & N 62nd Ave  
 Site Code : 00000000  
 Start Date : 3/10/2021  
 Page No : 1

## Groups Printed- Peds & Bikes

Start Time	N 62nd Ave From North				Johnson Street From East				N 62nd Ave From South				Johnson Street From West				Int. Total
	Bikes			Peds	Bikes			Peds	Bikes			Peds	Bikes			Peds	
07:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
07:15	2	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	5
07:30	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2
07:45	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	4
Total	3	0	0	2	0	0	0	2	1	0	0	2	1	0	0	2	13
08:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
08:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
08:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2
08:45	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	3
Total	0	0	0	2	0	0	0	0	3	0	0	2	0	0	0	2	9
*** BREAK ***																	
16:00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
16:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
*** BREAK ***																	
Total	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5
17:00	2	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	8
*** BREAK ***																	
17:45	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	3
Total	3	0	0	3	0	0	0	1	1	0	0	3	0	0	0	0	11
Grand Total	6	0	0	7	0	0	0	3	5	0	0	12	1	0	0	4	38
Apprch %	46.2	0	0	53.8	0	0	0	100	29.4	0	0	70.6	20	0	0	80	
Total %	15.8	0	0	18.4	0	0	0	7.9	13.2	0	0	31.6	2.6	0	0	10.5	

# Traf Tech Engineering Inc.

File Name : 1-Johnson & N 62nd Ave  
 Site Code : 00000000  
 Start Date : 3/10/2021  
 Page No : 1

## Groups Printed- Autos - Heavy Vehicles

Start Time	N 62nd Ave From North					Johnson Street From East					N 62nd Ave From South					Johnson Street From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
07:00	8	3	4	0	15	1	32	3	0	36	9	3	26	0	38	30	76	9	0	115	204
07:15	10	4	5	0	19	1	59	4	0	64	14	3	27	0	44	27	75	3	0	105	232
07:30	17	4	1	0	22	1	65	9	0	75	5	5	33	0	43	32	121	4	0	157	297
07:45	19	2	0	0	21	1	79	5	0	85	18	7	34	0	59	43	118	10	0	171	336
Total	54	13	10	0	77	4	235	21	0	260	46	18	120	0	184	132	390	26	0	548	1069
08:00	11	8	3	0	22	1	83	6	0	90	8	8	27	0	43	43	124	3	0	170	325
08:15	11	7	1	0	19	2	63	6	0	71	10	6	26	0	42	29	82	2	0	113	245
08:30	8	3	2	0	13	2	44	1	0	47	12	3	14	0	29	25	127	6	0	158	247
08:45	8	3	2	0	13	1	59	9	0	69	8	6	29	0	43	29	111	7	0	147	272
Total	38	21	8	0	67	6	249	22	0	277	38	23	96	0	157	126	444	18	0	588	1089
*** BREAK ***																					
16:00	13	2	2	0	17	3	114	6	0	123	13	1	32	0	46	41	108	9	0	158	344
16:15	12	5	3	0	20	4	105	7	0	116	8	5	31	0	44	46	91	16	0	153	333
16:30	11	4	3	0	18	0	110	8	0	118	10	5	30	0	45	33	93	6	0	132	313
16:45	17	6	2	0	25	1	107	12	0	120	6	5	39	0	50	38	110	12	0	160	355
Total	53	17	10	0	80	8	436	33	0	477	37	16	132	0	185	158	402	43	0	603	1345
17:00	19	8	0	0	27	2	137	11	0	150	12	11	43	0	66	19	113	12	0	144	387
17:15	19	12	3	0	34	3	126	9	0	138	14	9	34	0	57	33	90	10	0	133	362
17:30	16	7	3	0	26	4	117	16	0	137	15	10	32	0	57	34	99	14	0	147	367
17:45	13	7	1	0	21	1	115	11	0	127	7	7	32	0	46	44	97	12	0	153	347
Total	67	34	7	0	108	10	495	47	0	552	48	37	141	0	226	130	399	48	0	577	1463
Grand Total	212	85	35	0	332	28	1415	123	0	1566	169	94	489	0	752	546	1635	135	0	2316	4966
Apprch %	63.9	25.6	10.5	0		1.8	90.4	7.9	0		22.5	12.5	65	0		23.6	70.6	5.8	0		
Total %	4.3	1.7	0.7	0	6.7	0.6	28.5	2.5	0	31.5	3.4	1.9	9.8	0	15.1	11	32.9	2.7	0	46.6	
Autos	211	84	34	0	329	27	1373									1594					
% Autos	99.5	98.8	97.1	0	99.1	96.4	97	95.1	0	96.9	95.3	98.9	98.2	0	97.6	98.5	97.5	98.5	0	97.8	97.6
Heavy Vehicles																					
% Heavy Vehicles	0.5	1.2	2.9	0	0.9	3.6	3	4.9	0	3.1	4.7	1.1	1.8	0	2.4	1.5	2.5	1.5	0	2.2	2.4



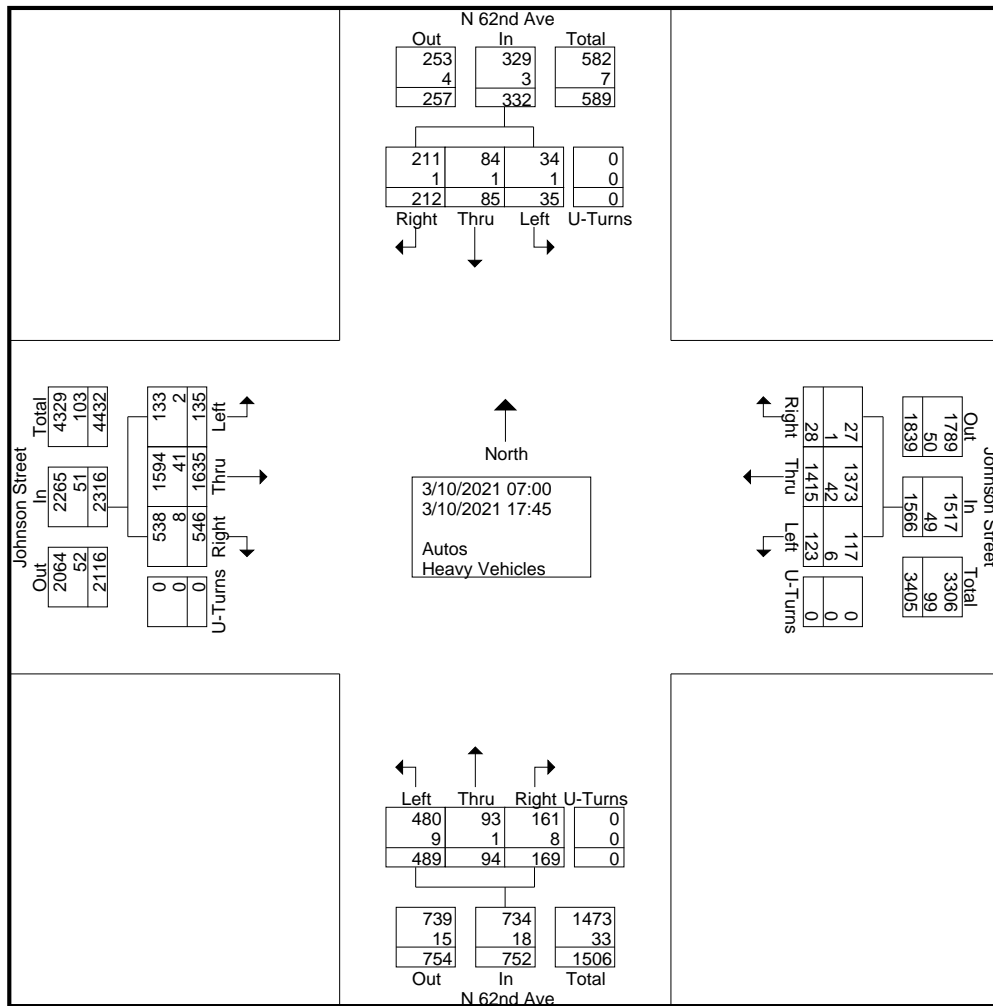
# Traf Tech Engineering Inc.

File Name : 1-Johnson & N 62nd Ave

Site Code : 00000000

Start Date : 3/10/2021

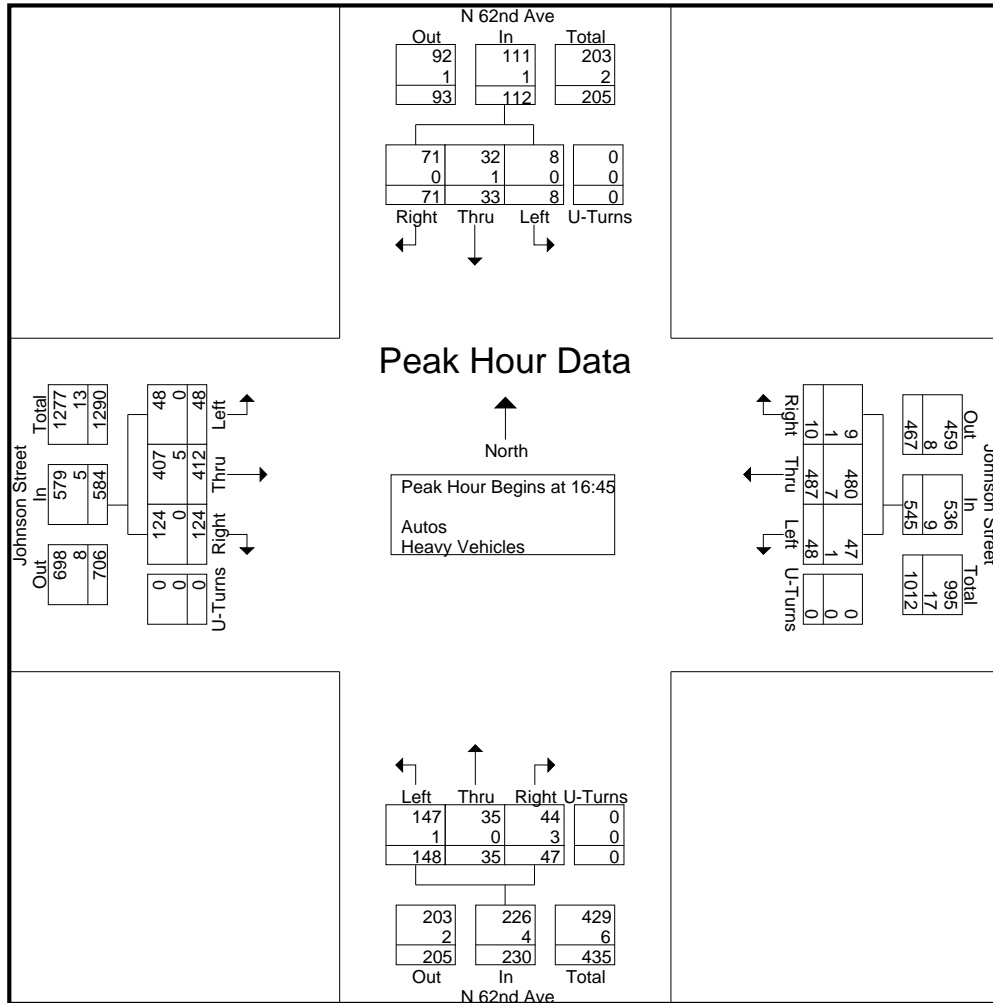
Page No : 2



# Traf Tech Engineering Inc.

File Name : 1-Johnson & N 62nd Ave  
 Site Code : 00000000  
 Start Date : 3/10/2021  
 Page No : 3

Start Time	N 62nd Ave From North					Johnson Street From East					N 62nd Ave From South					Johnson Street From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	17	6	2	0	25	1	107	12	0	120	6	5	39	0	50	38	110	12	0	160	355
17:00	19	8	0	0	27	2	137	11	0	150	12	11	43	0	66	19	113	12	0	144	387
17:15	19	12	3	0	34	3	126	9	0	138	14	9	34	0	57	33	90	10	0	133	362
17:30	16	7	3	0	26	4	117	16	0	137	15	10	32	0	57	34	99	14	0	147	367
Total Volume	71	33	8	0	112	10	487	48	0	545	47	35	148	0	230	124	412	48	0	584	1471
% App. Total	63.4	29.5	7.1	0		1.8	89.4	8.8	0		20.4	15.2	64.3	0		21.2	70.5	8.2	0		
PHF	.934	.688	.667	.000	.824	.625	.889	.750	.000	.908	.783	.795	.860	.000	.871	.816	.912	.857	.000	.913	.950
Autos	71	32	8	0	111	9	480	47	0	536	44	35	147	0	226	124	407	48	0	579	1452
% Autos	100	97.0	100	0	99.1	90.0	98.6	97.9	0	98.3	93.6	100	99.3	0	98.3	100	98.8	100	0	99.1	98.7
Heavy Vehicles																					
% Heavy Vehicles	0	3.0	0	0	0.9	10.0	1.4	2.1	0	1.7	6.4	0	0.7	0	1.7	0	1.2	0	0	0.9	1.3



# Traf Tech Engineering Inc.

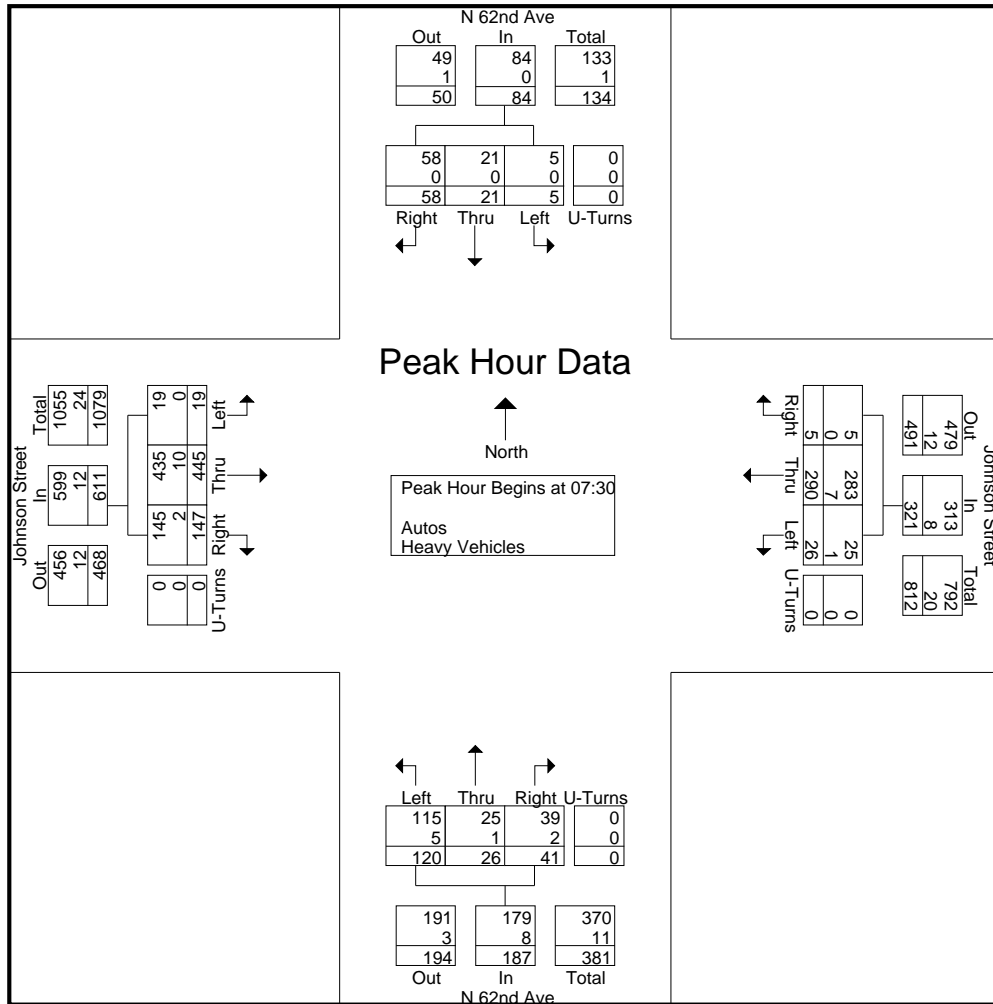
File Name : 1-Johnson & N 62nd Ave  
 Site Code : 00000000  
 Start Date : 3/10/2021  
 Page No : 4

Start Time	N 62nd Ave From North					Johnson Street From East					N 62nd Ave From South					Johnson Street From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30

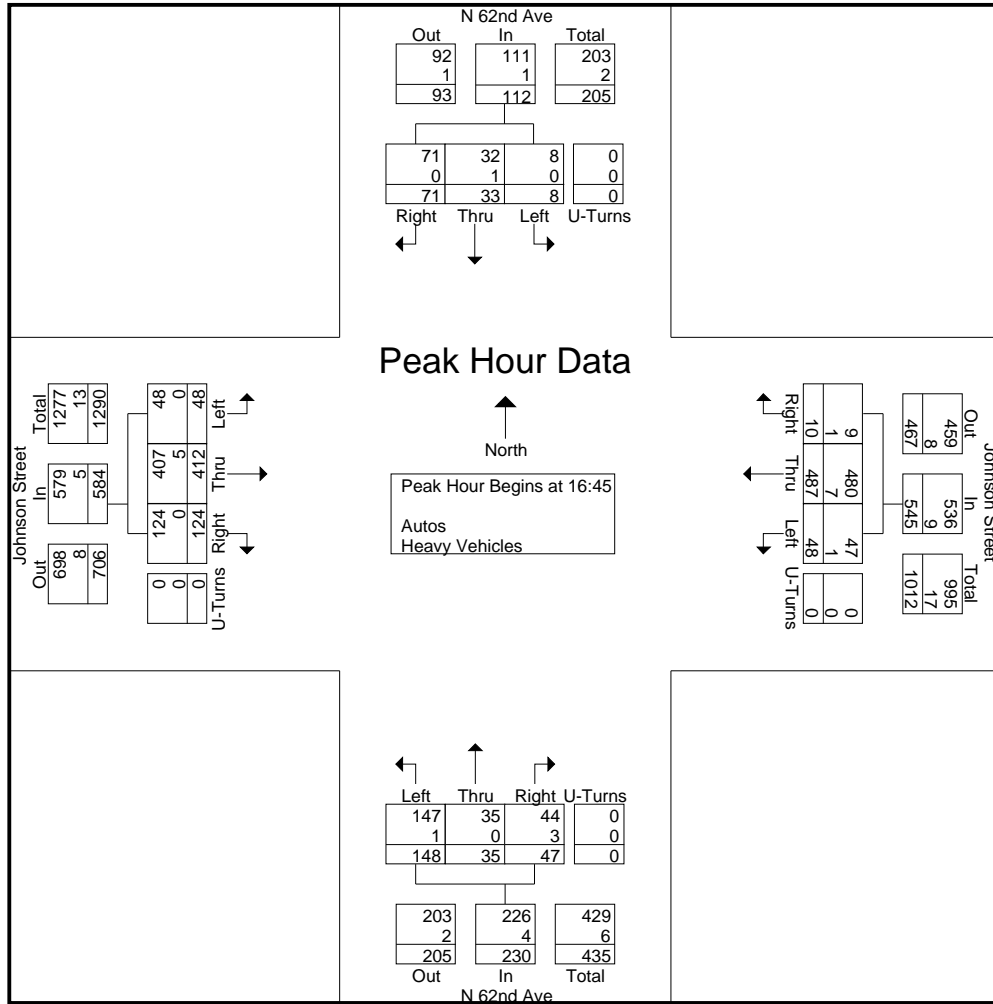
07:30	17	4	1	0	22	1	65	9	0	75	5	5	33	0	43	32	121	4	0	157	297
07:45	19	2	0	0	21	1	79	5	0	85	18	7	34	0	59	43	118	10	0	171	336
08:00	11	8	3	0	22	1	83	6	0	90	8	8	27	0	43	43	124	3	0	170	325
08:15	11	7	1	0	19	2	63	6	0	71	10	6	26	0	42	29	82	2	0	113	245
Total Volume	58	21	5	0	84	5	290	26	0	321	41	26	120	0	187	147	445	19	0	611	1203
% App. Total	69	25	6	0		1.6	90.3	8.1	0		21.9	13.9	64.2	0		24.1	72.8	3.1	0		
PHF	.763	.656	.417	.000	.955	.625	.873	.722	.000	.892	.569	.813	.882	.000	.792	.855	.897	.475	.000	.893	.895
Autos	58	21	5	0	84	5	283	25	0	313	39	25	115	0	179	145	435	19	0	599	1175
% Autos	100	100	100	0	100	100	97.6	96.2	0	97.5	95.1	96.2	95.8	0	95.7	98.6	97.8	100	0	98.0	97.7
Heavy Vehicles	0	0	0	0	0	0	2.4	3.8	0	2.5	4.9	3.8	4.2	0	4.3	1.4	2.2	0	0	2.0	2.3
% Heavy Vehicles	0	0	0	0	0	0	2.4	3.8	0	2.5	4.9	3.8	4.2	0	4.3	1.4	2.2	0	0	2.0	2.3



# Traf Tech Engineering Inc.

File Name : 1-Johnson & N 62nd Ave  
 Site Code : 00000000  
 Start Date : 3/10/2021  
 Page No : 5

Start Time	N 62nd Ave From North					Johnson Street From East					N 62nd Ave From South					Johnson Street From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	17	6	2	0	25	1	107	12	0	120	6	5	39	0	50	38	110	12	0	160	355
17:00	19	8	0	0	27	2	137	11	0	150	12	11	43	0	66	19	113	12	0	144	387
17:15	19	12	3	0	34	3	126	9	0	138	14	9	34	0	57	33	90	10	0	133	362
17:30	16	7	3	0	26	4	117	16	0	137	15	10	32	0	57	34	99	14	0	147	367
Total Volume	71	33	8	0	112	10	487	48	0	545	47	35	148	0	230	124	412	48	0	584	1471
% App. Total	63.4	29.5	7.1	0		1.8	89.4	8.8	0		20.4	15.2	64.3	0		21.2	70.5	8.2	0		
PHF	.934	.688	.667	.000	.824	.625	.889	.750	.000	.908	.783	.795	.860	.000	.871	.816	.912	.857	.000	.913	.950
Autos	71	32	8	0	111	9	480	47	0	536	44	35	147	0	226	124	407	48	0	579	1452
% Autos	100	97.0	100	0	99.1	90.0	98.6	97.9	0	98.3	93.6	100	99.3	0	98.3	100	98.8	100	0	99.1	98.7
Heavy Vehicles																					
% Heavy Vehicles	0	3.0	0	0	0.9	10.0	1.4	2.1	0	1.7	6.4	0	0.7	0	1.7	0	1.2	0	0	0.9	1.3



# Traf Tech Engineering Inc.

File Name : 2-Johnson St & SR-7  
 Site Code : 00000000  
 Start Date : 3/10/2021  
 Page No : 1

## Groups Printed- Peds & Bikes

Start Time	SR-7 From North				Johnson Street From East				SR-7 From South				Johnson Street From West				Int. Total
	Bikes			Peds	Bikes			Peds	Bikes			Peds	Bikes			Peds	
07:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
*** BREAK ***																	
07:45	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	4
Total	1	0	0	0	0	0	0	2	1	0	0	2	0	0	0	0	6
08:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	3
08:15	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
08:30	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	4
08:45	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	3
Total	0	0	0	1	0	0	0	2	3	0	0	4	0	0	0	1	11
*** BREAK ***																	
16:00	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2
16:15	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	4
*** BREAK ***																	
16:45	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2
Total	1	0	0	2	0	0	0	3	0	0	0	1	0	0	0	1	8
17:00	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3
*** BREAK ***																	
17:30	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	3
17:45	1	0	0	1	0	0	0	0	0	0	0	1	1	0	0	3	7
Total	2	0	0	2	0	0	0	0	0	0	0	2	3	0	0	4	13
Grand Total	4	0	0	5	0	0	0	7	4	0	0	9	3	0	0	6	38
Apprch %	44.4	0	0	55.6	0	0	0	100	30.8	0	0	69.2	33.3	0	0	66.7	
Total %	10.5	0	0	13.2	0	0	0	18.4	10.5	0	0	23.7	7.9	0	0	15.8	

# Traf Tech Engineering Inc.

File Name : 2-Johnson St & SR-7  
 Site Code : 00000000  
 Start Date : 3/10/2021  
 Page No : 1

## Groups Printed- Autos - Heavy Vehicles

Start Time	SR-7 From North					Johnson Street From East					SR-7 From South					Johnson Street From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
07:00	12	226	24	0	262	23	18	23	0	64	15	240	6	0	261	36	34	26	0	96	683
07:15	7	179	31	0	217	34	37	35	0	106	15	243	22	0	280	27	42	23	0	92	695
07:30	14	274	53	0	341	23	38	29	0	90	24	283	15	0	322	30	45	30	0	105	858
07:45	14	250	50	1	315	43	49	26	0	118	31	320	23	0	374	43	62	35	0	140	947
Total	47	929	158	1	1135	123	142	113	0	378	85	1086	66	0	1237	136	183	114	0	433	3183
08:00	15	264	29	0	308	38	53	33	0	124	31	236	20	2	289	33	70	33	0	136	857
08:15	15	280	30	2	327	28	23	24	0	75	30	302	25	1	358	32	30	18	0	80	840
08:30	9	256	22	3	290	25	34	32	0	91	17	273	20	4	314	40	68	41	0	149	844
08:45	11	305	24	2	342	21	26	29	0	76	22	271	17	2	312	36	49	25	0	110	840
Total	50	1105	105	7	1267	112	136	118	0	366	100	1082	82	9	1273	141	217	117	0	475	3381
*** BREAK ***																					
16:00	26	361	24	3	414	30	64	30	0	124	21	357	37	0	415	32	55	24	0	111	1064
16:15	22	361	17	1	401	50	69	30	0	149	26	335	24	9	394	51	49	17	0	117	1061
16:30	26	326	18	3	373	31	72	36	0	139	40	338	31	3	412	26	60	35	0	121	1045
16:45	20	374	25	0	419	42	66	33	0	141	31	387	27	2	447	32	52	28	0	112	1119
Total	94	1422	84	7	1607	153	271	129	0	553	118	1417	119	14	1668	141	216	104	0	461	4289
17:00	25	372	23	3	423	40	80	40	0	160	32	373	27	3	435	32	59	23	0	114	1132
17:15	24	348	27	0	399	43	102	40	0	185	26	371	30	3	430	35	57	23	0	115	1129
17:30	29	380	38	9	456	36	64	36	0	136	32	384	34	1	451	24	51	35	0	110	1153
17:45	22	331	29	6	388	37	74	39	0	150	15	362	32	2	411	38	52	21	0	111	1060
Total	100	1431	117	18	1666	156	320	155	0	631	105	1490	123	9	1727	129	219	102	0	450	4474
Grand Total	291	4887	464	33	5675	544	869	515	0	1928	408	5075	390	32	5905	547	835	437	0	1819	15327
Apprch %	5.1	86.1	8.2	0.6		28.2	45.1	26.7	0		6.9	85.9	6.6	0.5		30.1	45.9	24	0		
Total %	1.9	31.9	3	0.2	37	3.5	5.7	3.4	0	12.6	2.7	33.1	2.5	0.2	38.5	3.6	5.4	2.9	0	11.9	
Autos	284	4751										4928									14906
% Autos	97.6	97.2	98.1	100	97.3	98.3	97	97.3	0	97.5	97.8	97.1	96.4	100	97.1	96.7	97.1	98.2	0	97.3	97.3
Heavy Vehicles																					
% Heavy Vehicles	2.4	2.8	1.9	0	2.7	1.7	3	2.7	0	2.5	2.2	2.9	3.6	0	2.9	3.3	2.9	1.8	0	2.7	2.7

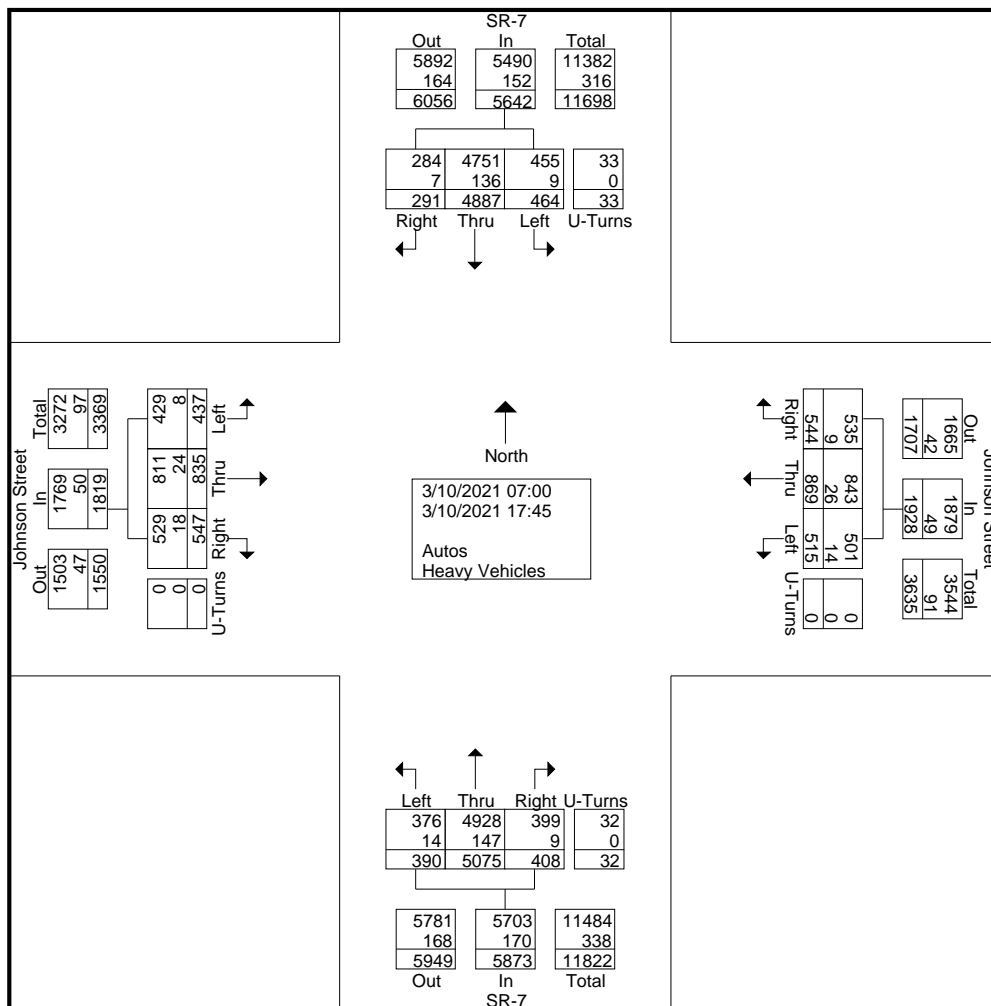
# Traf Tech Engineering Inc.

File Name : 2-Johnson St & SR-7

Site Code : 00000000

Start Date : 3/10/2021

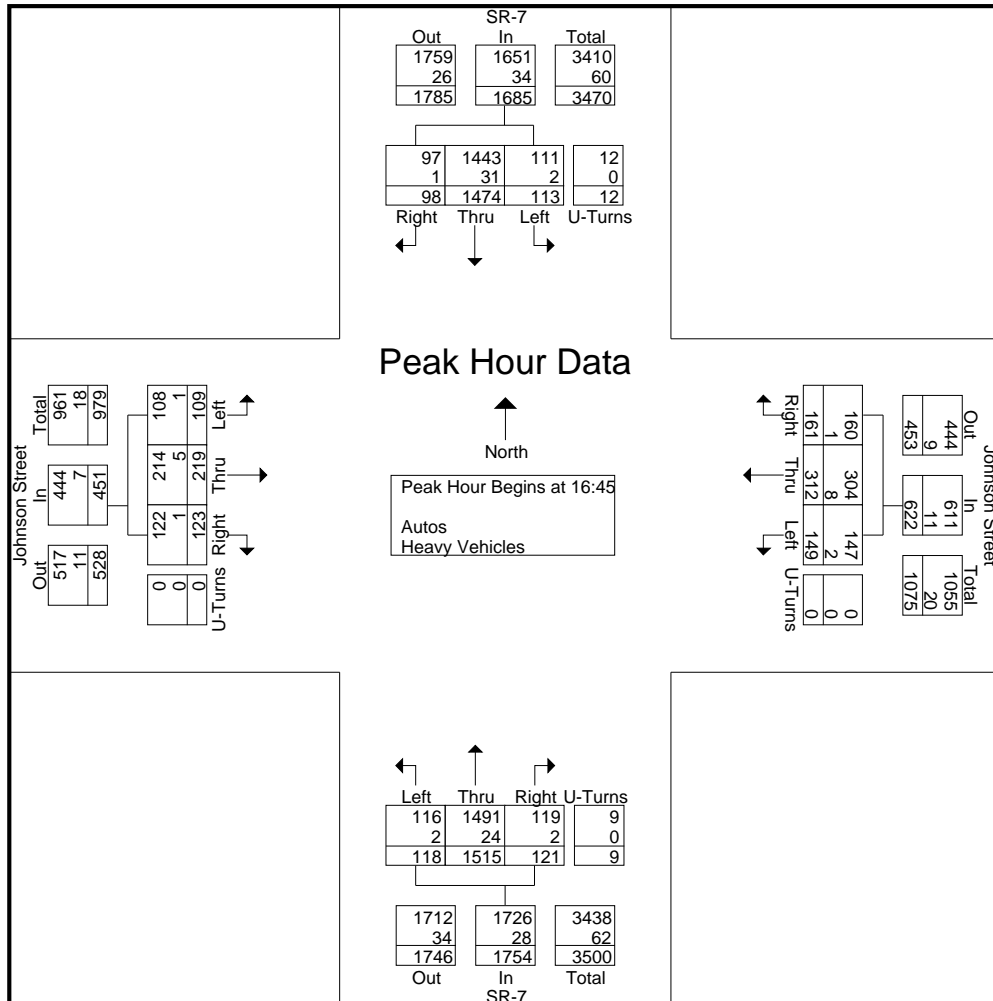
Page No : 2



# Traf Tech Engineering Inc.

File Name : 2-Johnson St & SR-7  
 Site Code : 00000000  
 Start Date : 3/10/2021  
 Page No : 3

Start Time	SR-7 From North					Johnson Street From East					SR-7 From South					Johnson Street From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	20	374	25	0	419	42	66	33	0	141	31	387	27	2	447	32	52	28	0	112	1119
17:00	25	372	23	3	423	40	80	40	0	160	32	373	27	3	435	32	59	23	0	114	1132
17:15	24	348	27	0	399	43	102	40	0	185	26	371	30	3	430	35	57	23	0	115	1129
17:30	29	380	38	9	456	36	64	36	0	136	32	384	34	1	451	24	51	35	0	110	1153
Total Volume	98	1474	113	12	1697	161	312	149	0	622	121	1515	118	9	1763	123	219	109	0	451	4533
% App. Total	5.8	86.9	6.7	0.7		25.9	50.2	24	0		6.9	85.9	6.7	0.5		27.3	48.6	24.2	0		
PHF	.845	.970	.743	.333	.930	.936	.765	.931	.000	.841	.945	.979	.868	.750	.977	.879	.928	.779	.000	.980	.983
Autos	97	1443									1491										
% Autos	99.0	97.9	98.2	100	98.0	99.4	97.4	98.7	0	98.2	98.3	98.4	98.3	100	98.4	99.2	97.7	99.1	0	98.4	98.2
Heavy Vehicles																					
% Heavy Vehicles	1.0	2.1	1.8	0	2.0	0.6	2.6	1.3	0	1.8	1.7	1.6	1.7	0	1.6	0.8	2.3	0.9	0	1.6	1.8

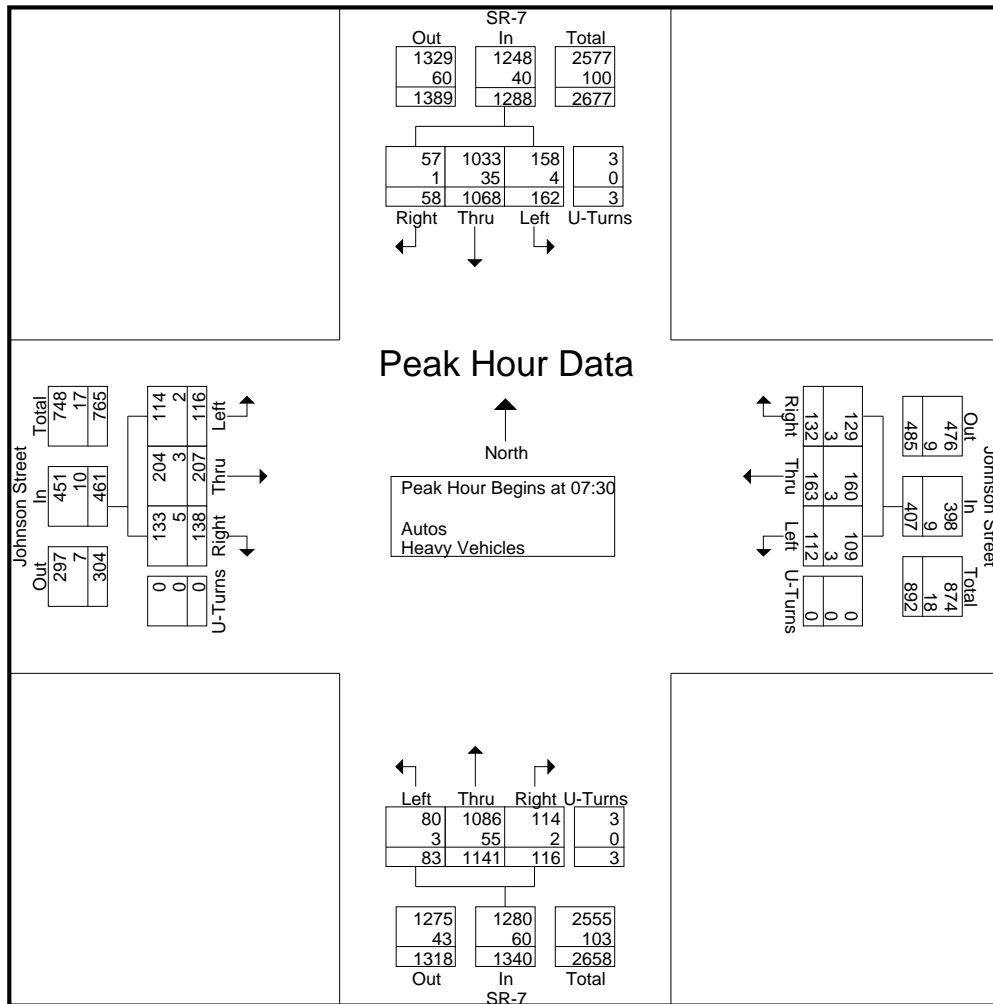




# Traf Tech Engineering Inc.

File Name : 2-Johnson St & SR-7  
 Site Code : 00000000  
 Start Date : 3/10/2021  
 Page No : 4

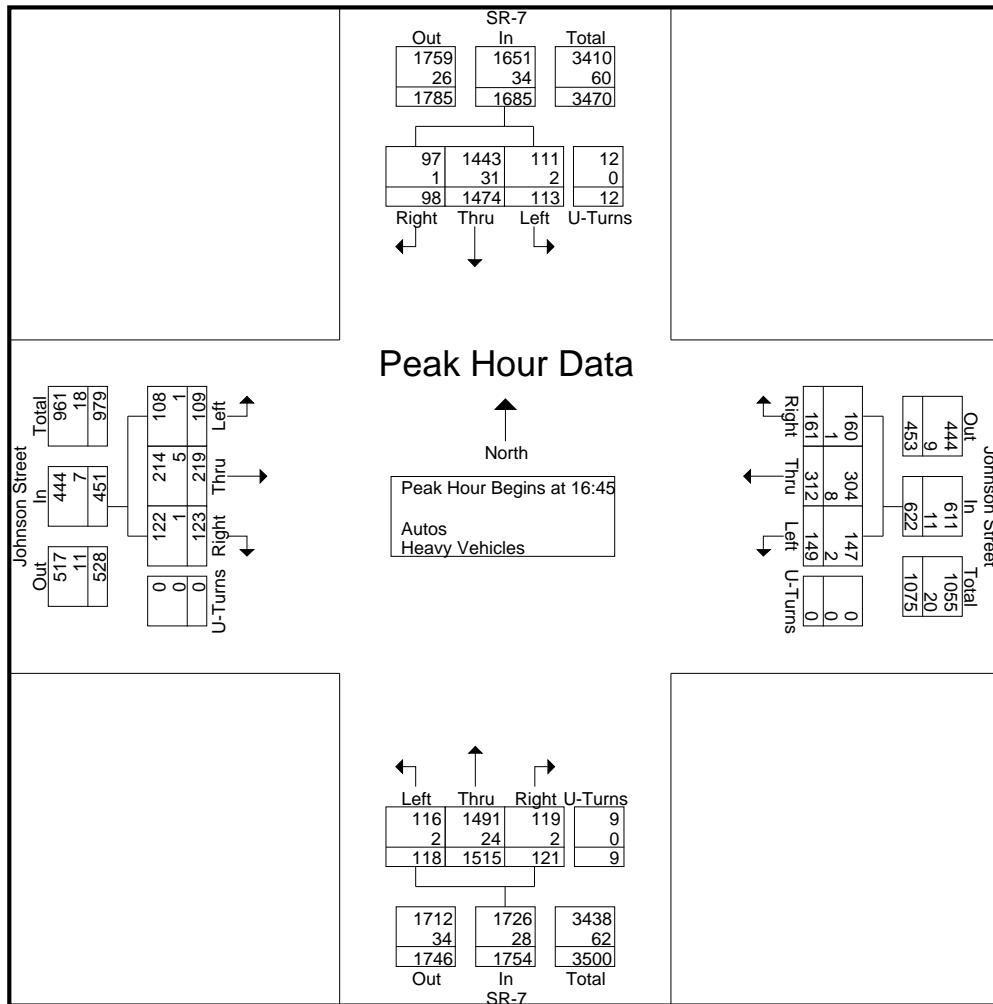
Start Time	SR-7 From North					Johnson Street From East					SR-7 From South					Johnson Street From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	14	274	53	0	341	23	38	29	0	90	24	283	15	0	322	30	45	30	0	105	858
07:45	14	250	50	1	315	43	49	26	0	118	31	320	23	0	374	43	62	35	0	140	947
08:00	15	264	29	0	308	38	53	33	0	124	31	236	20	2	289	33	70	33	0	136	857
08:15	15	280	30	2	327	28	23	24	0	75	30	302	25	1	358	32	30	18	0	80	840
Total Volume	58	1068	162	3	1291	132	163	112	0	407	116	1141	83	3	1343	138	207	116	0	461	3502
% App. Total	4.5	82.7	12.5	0.2		32.4	40	27.5	0		8.6	85	6.2	0.2		29.9	44.9	25.2	0		
PHF	.967	.954	.764	.375	.946	.767	.769	.848	.000	.821	.935	.891	.830	.375	.898	.802	.739	.829	.000	.823	.924
Autos	57	1033									1086										
% Autos	98.3	96.7	97.5	100	96.9	97.7	98.2	97.3	0	97.8	98.3	95.2	96.4	100	95.5	96.4	98.6	98.3	0	97.8	96.6
Heavy Vehicles																					
% Heavy Vehicles	1.7	3.3	2.5	0	3.1	2.3	1.8	2.7	0	2.2	1.7	4.8	3.6	0	4.5	3.6	1.4	1.7	0	2.2	3.4



# Traf Tech Engineering Inc.

File Name : 2-Johnson St & SR-7  
 Site Code : 00000000  
 Start Date : 3/10/2021  
 Page No : 5

Start Time	SR-7 From North					Johnson Street From East					SR-7 From South					Johnson Street From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	20	374	25	0	419	42	66	33	0	141	31	387	27	2	447	32	52	28	0	112	1119
17:00	25	372	23	3	423	40	80	40	0	160	32	373	27	3	435	32	59	23	0	114	1132
17:15	24	348	27	0	399	43	102	40	0	185	26	371	30	3	430	35	57	23	0	115	1129
17:30	29	380	38	9	456	36	64	36	0	136	32	384	34	1	451	24	51	35	0	110	1153
Total Volume	98	1474	113	12	1697	161	312	149	0	622	121	1515	118	9	1763	123	219	109	0	451	4533
% App. Total	5.8	86.9	6.7	0.7		25.9	50.2	24	0		6.9	85.9	6.7	0.5		27.3	48.6	24.2	0		
PHF	.845	.970	.743	.333	.930	.936	.765	.931	.000	.841	.945	.979	.868	.750	.977	.879	.928	.779	.000	.980	.983
Autos	97	1443									1491										
% Autos	99.0	97.9	98.2	100	98.0	99.4	97.4	98.7	0	98.2	98.3	98.4	98.3	100	98.4	99.2	97.7	99.1	0	98.4	98.2
Heavy Vehicles																					
% Heavy Vehicles	1.0	2.1	1.8	0	2.0	0.6	2.6	1.3	0	1.8	1.7	1.6	1.7	0	1.6	0.8	2.3	0.9	0	1.6	1.8



# Traf Tech Engineering Inc.

File Name : N 61st Ave & Johnson St

Site Code : 00000000

Start Date : 1/11/2023

Page No : 1

## Groups Printed- Peds & Bikes

Start Time	N 61 Ave From North				Johnson St From East				N 61 Ave From South				Johnson St From West				Int. Total
	Bikes			Peds	Bikes			Peds	Bikes			Peds	Bikes			Peds	
07:00	2	0	0	4	0	0	0	0	1	0	0	2	0	0	0	0	9
07:15	1	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	4
*** BREAK ***																	
07:45	1	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	5
Total	4	0	0	7	0	0	0	0	4	0	0	3	0	0	0	0	18
08:00	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	4
08:15	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3
08:30	0	0	0	3	0	0	0	1	3	0	0	1	0	0	0	1	9
08:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	0	0	5	0	0	0	2	6	0	0	2	0	0	0	2	17
*** BREAK ***																	
16:00	1	0	0	0	0	0	0	0	4	0	0	6	0	0	0	0	11
16:15	2	0	0	1	1	0	0	0	1	0	0	3	1	0	0	2	11
16:30	1	0	0	1	0	0	0	0	3	0	0	2	0	0	0	1	8
16:45	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	5
Total	4	0	0	2	1	0	0	0	8	0	0	15	1	0	0	4	35
17:00	2	0	0	0	1	0	0	1	2	0	0	1	0	0	0	1	8
17:15	1	0	0	0	0	0	0	0	1	0	0	3	1	0	0	1	7
17:30	3	0	0	4	0	0	0	1	0	0	0	4	0	0	0	0	12
17:45	2	0	0	3	0	0	0	1	9	0	0	4	2	0	0	1	22
Total	8	0	0	7	1	0	0	3	12	0	0	12	3	0	0	3	49
Grand Total	16	0	0	21	2	0	0	5	30	0	0	32	4	0	0	9	119
Apprch %	43.2	0	0	56.8	28.6	0	0	71.4	48.4	0	0	51.6	30.8	0	0	69.2	
Total %	13.4	0	0	17.6	1.7	0	0	4.2	25.2	0	0	26.9	3.4	0	0	7.6	

# Traf Tech Engineering Inc.

File Name : N 61st Ave & Johnson St  
 Site Code : 00000000  
 Start Date : 1/11/2023  
 Page No : 1

## Groups Printed- Autos - Heavy Vehicles

Start Time	N 61 Ave From North					Johnson St From East					N 61 Ave From South					Johnson St From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
07:00	1	0	1	0	2	2	43	1	0	46	3	0	1	0	4	0	130	2	0	132	184
07:15	4	0	1	0	5	2	68	2	1	73	1	1	1	0	3	0	139	3	0	142	223
07:30	7	0	5	0	12	3	113	0	0	116	5	0	0	0	5	0	150	6	0	156	289
07:45	2	0	2	0	4	1	100	0	0	101	3	0	1	0	4	2	173	2	0	177	286
Total	14	0	9	0	23	8	324	3	1	336	12	1	3	0	16	2	592	13	0	607	982
08:00	4	0	2	0	6	2	101	2	0	105	2	0	0	0	2	0	154	6	0	160	273
08:15	3	0	2	0	5	2	71	0	0	73	1	1	0	0	2	0	142	3	0	145	225
08:30	3	0	2	0	5	6	60	0	0	66	3	0	1	0	4	2	102	2	0	106	181
08:45	3	0	0	0	3	1	79	2	0	82	2	0	0	0	2	1	120	4	0	125	212
Total	13	0	6	0	19	11	311	4	0	326	8	1	1	0	10	3	518	15	0	536	891
*** BREAK ***																					
16:00	5	0	3	0	8	8	109	2	0	119	2	0	0	0	2	0	133	5	0	138	267
16:15	2	0	3	0	5	4	120	3	0	127	0	1	0	0	1	1	131	6	0	138	271
16:30	4	1	6	0	11	4	146	3	0	153	7	0	3	0	10	0	118	7	0	125	299
16:45	9	0	2	0	11	8	126	1	0	135	1	0	0	0	1	0	120	5	0	125	272
Total	20	1	14	0	35	24	501	9	0	534	10	1	3	0	14	1	502	23	0	526	1109
17:00	9	0	9	0	18	5	137	2	0	144	4	0	0	0	4	0	105	5	1	111	277
17:15	3	0	3	0	6	6	151	3	0	160	2	0	1	0	3	0	110	4	0	114	283
17:30	8	0	4	0	12	7	150	1	0	158	3	1	0	0	4	1	121	12	0	134	308
17:45	12	0	1	0	13	3	135	3	0	141	3	1	0	0	4	1	102	3	0	106	264
Total	32	0	17	0	49	21	573	9	0	603	12	2	1	0	15	2	438	24	1	465	1132
Grand Total	79	1	46	0	126	64	1709	25	1	1799	42	5	8	0	55	8	2050	75	1	2134	4114
Apprch %	62.7	0.8	36.5	0		3.6	95	1.4	0.1		76.4	9.1	14.5	0		0.4	96.1	3.5	0		
Total %	1.9	0	1.1	0	3.1	1.6	41.5	0.6	0	43.7	1	0.1	0.2	0	1.3	0.2	49.8	1.8	0	51.9	
Autos	76	1	45	0	122	62	1663									2013					
% Autos	96.2	100	97.8	0	96.8	96.9	97.3	100	100	97.3	95.2	100	100	0	96.4	50	98.2	97.3	100	98	97.6
Heavy Vehicles																					
% Heavy Vehicles	3.8	0	2.2	0	3.2	3.1	2.7	0	0	2.7	4.8	0	0	0	3.6	50	1.8	2.7	0	2	2.4

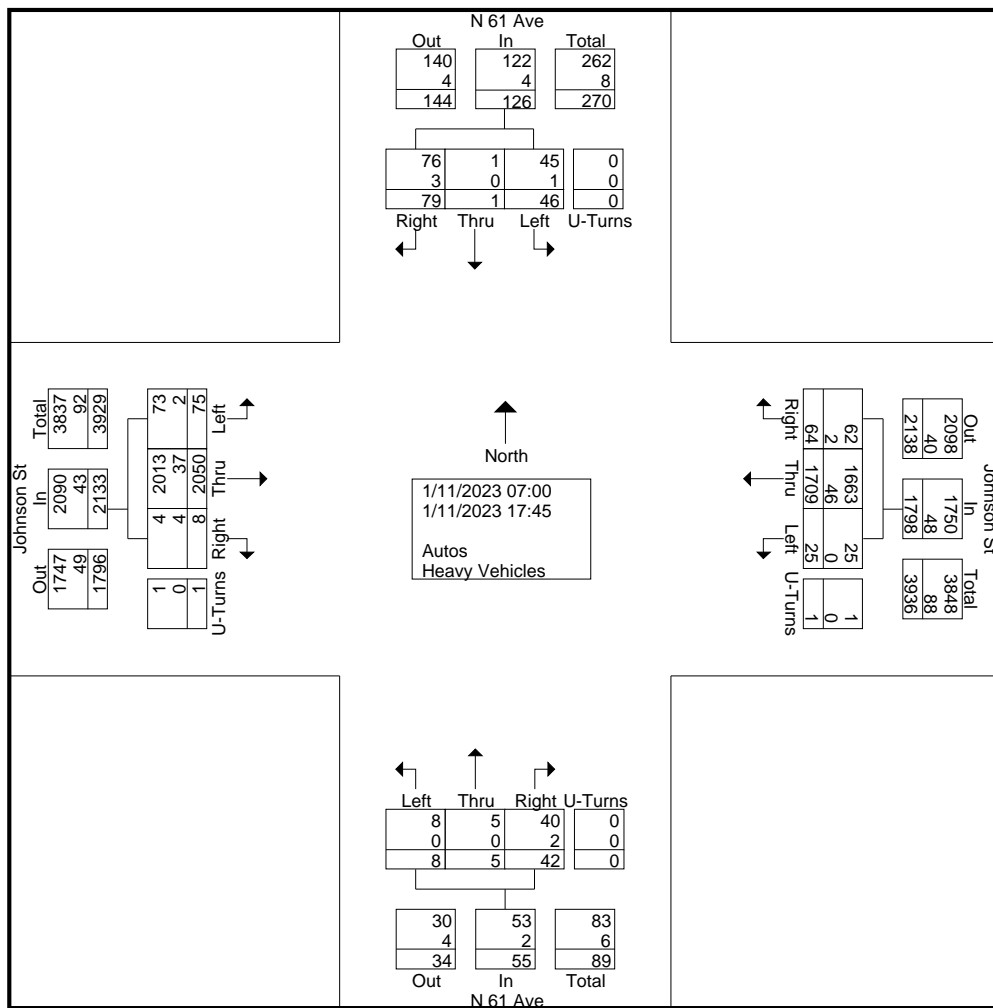
# Traf Tech Engineering Inc.

File Name : N 61st Ave & Johnson St

Site Code : 00000000

Start Date : 1/11/2023

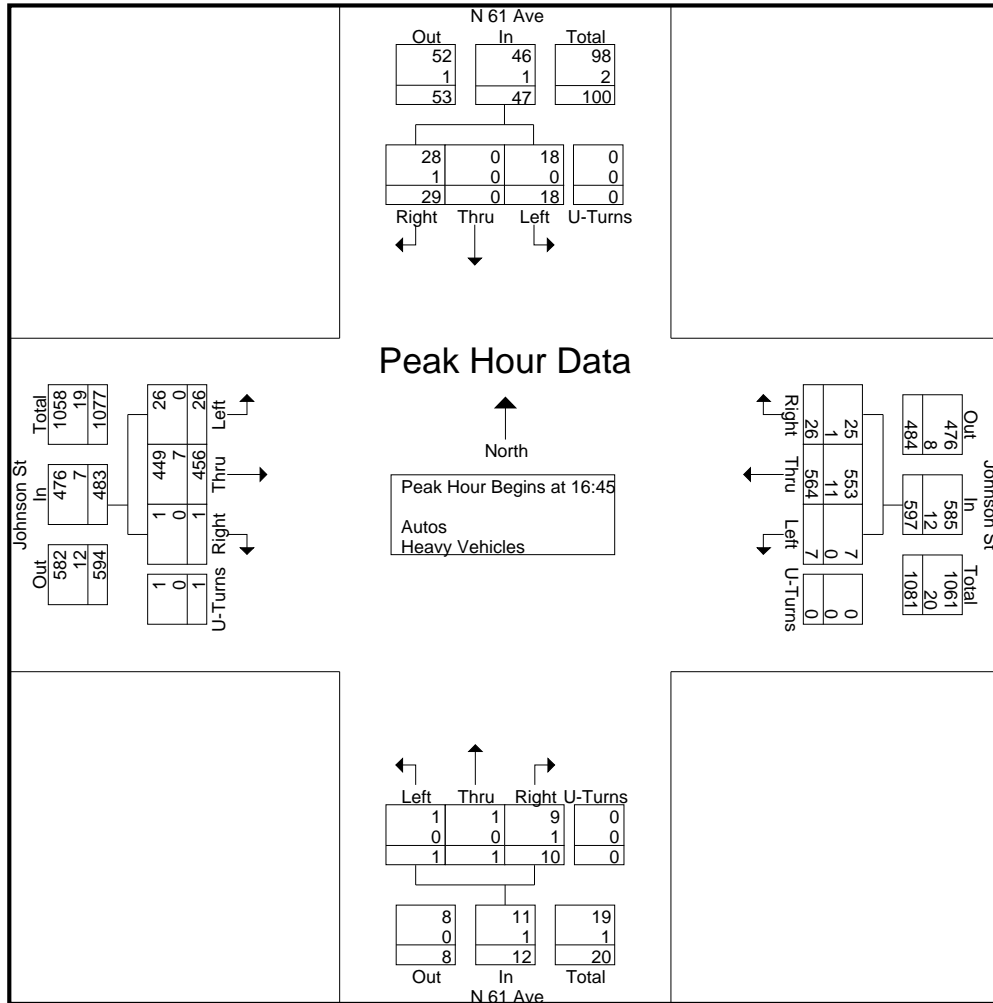
Page No : 2



# Traf Tech Engineering Inc.

File Name : N 61st Ave & Johnson St  
 Site Code : 00000000  
 Start Date : 1/11/2023  
 Page No : 3

Start Time	N 61 Ave From North					Johnson St From East					N 61 Ave From South					Johnson St From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	9	0	2	0	11	8	126	1	0	135	1	0	0	0	1	0	120	5	0	125	272
17:00	9	0	9	0	18	5	137	2	0	144	4	0	0	0	4	0	105	5	1	111	277
17:15	3	0	3	0	6	6	151	3	0	160	2	0	1	0	3	0	110	4	0	114	283
17:30	8	0	4	0	12	7	150	1	0	158	3	1	0	0	4	1	121	12	0	134	308
Total Volume	29	0	18	0	47	26	564	7	0	597	10	1	1	0	12	1	456	26	1	484	1140
% App. Total	61.7	0	38.3	0		4.4	94.5	1.2	0		83.3	8.3	8.3	0		0.2	94.2	5.4	0.2		
PHF	.806	.000	.500	.000	.653	.813	.934	.583	.000	.933	.625	.250	.250	.000	.750	.250	.942	.542	.250	.903	.925
Autos	28	0	18	0	46	25	553	7	0	585	9	1	1	0	11	1	449	26	1	477	1119
% Autos	96.6	0	100	0	97.9	96.2	98.0	100	0	98.0	90.0	100	100	0	91.7	100	98.5	100	100	98.6	98.2
Heavy Vehicles																					
% Heavy Vehicles	3.4	0	0	0	2.1	3.8	2.0	0	0	2.0	10.0	0	0	0	8.3	0	1.5	0	0	1.4	1.8



# Traf Tech Engineering Inc.

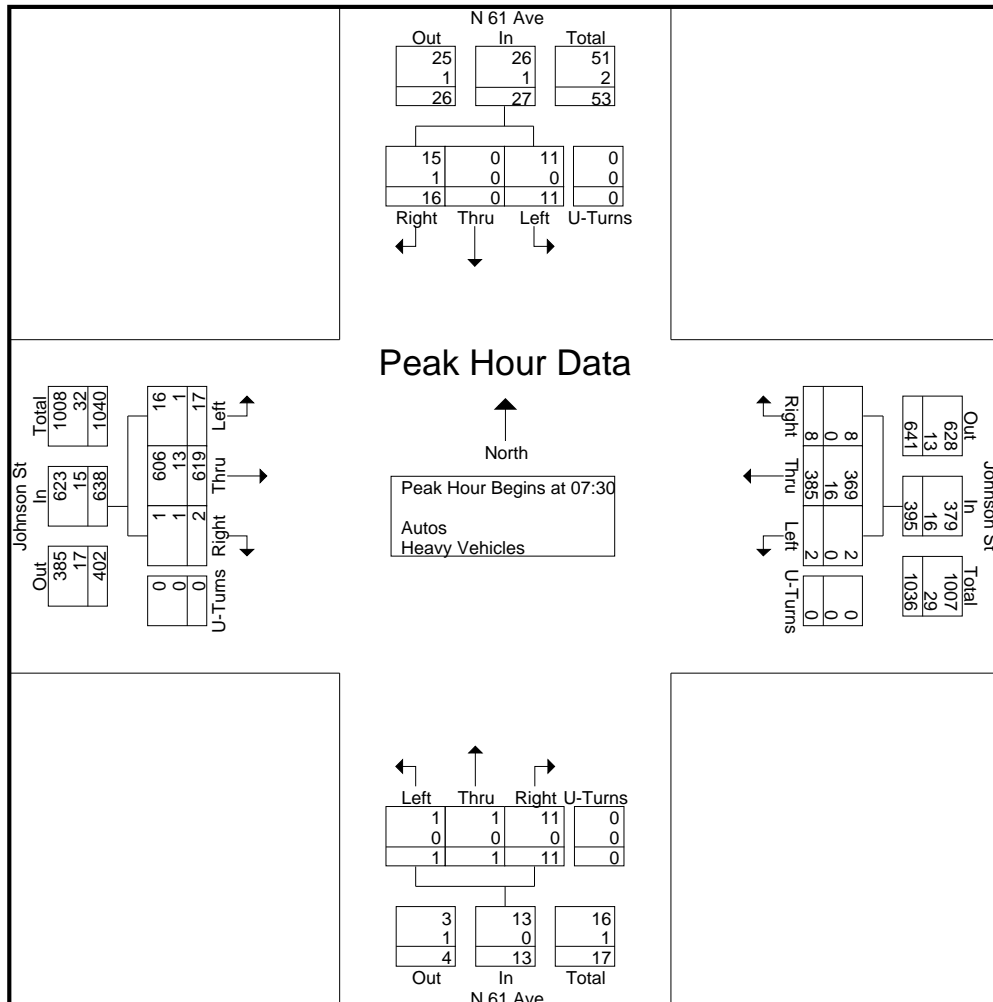
File Name : N 61st Ave & Johnson St  
 Site Code : 00000000  
 Start Date : 1/11/2023  
 Page No : 4

Start Time	N 61 Ave From North					Johnson St From East					N 61 Ave From South					Johnson St From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30

07:30	7	0	5	0	12	3	113	0	0	116	5	0	0	0	5	0	150	6	0	156	289
07:45	2	0	2	0	4	1	100	0	0	101	3	0	1	0	4	2	173	2	0	177	286
08:00	4	0	2	0	6	2	101	2	0	105	2	0	0	0	2	0	154	6	0	160	273
08:15	3	0	2	0	5	2	71	0	0	73	1	1	0	0	2	0	142	3	0	145	225
Total Volume	16	0	11	0	27	8	385	2	0	395	11	1	1	0	13	2	619	17	0	638	1073
% App. Total	59.3	0	40.7	0		2	97.5	0.5	0		84.6	7.7	7.7	0		0.3	97	2.7	0		
PHF	.571	.000	.550	.000	.563	.667	.852	.250	.000	.851	.550	.250	.250	.000	.650	.250	.895	.708	.000	.901	.928
Autos	15	0	11	0	26	8	369	2	0	379	11	1	1	0	13	1	606	16	0	623	1041
% Autos	93.8	0	100	0	96.3	100	95.8	100	0	95.9	100	100	100	0	100	50.0	97.9	94.1	0	97.6	97.0
Heavy Vehicles																					
% Heavy Vehicles	6.3	0	0	0	3.7	0	4.2	0	0	4.1	0	0	0	0	0	50.0	2.1	5.9	0	2.4	3.0



# Traf Tech Engineering Inc.

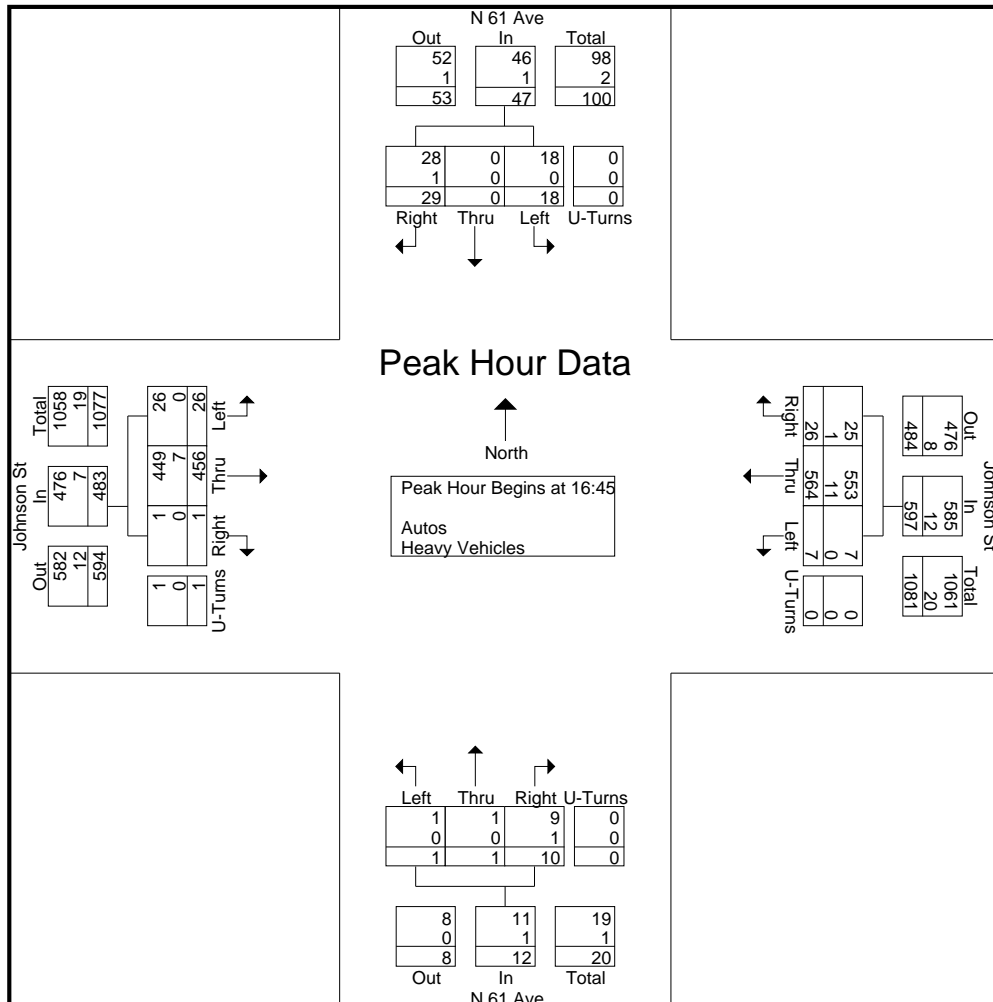
File Name : N 61st Ave & Johnson St  
 Site Code : 00000000  
 Start Date : 1/11/2023  
 Page No : 5

Start Time	N 61 Ave From North					Johnson St From East					N 61 Ave From South					Johnson St From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

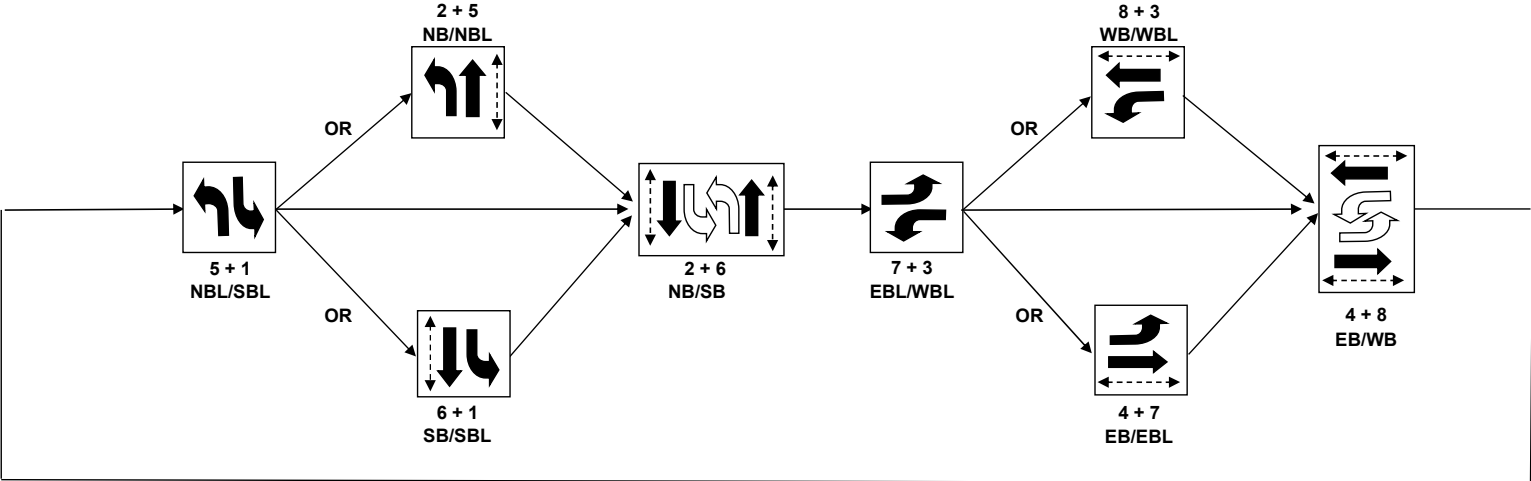
Peak Hour for Entire Intersection Begins at 16:45



16:45	9	0	2	0	11	8	126	1	0	135	1	0	0	0	1	0	120	5	0	125	272
17:00	9	0	9	0	18	5	137	2	0	144	4	0	0	0	4	0	105	5	1	111	277
17:15	3	0	3	0	6	6	151	3	0	160	2	0	1	0	3	0	110	4	0	114	283
17:30	8	0	4	0	12	7	150	1	0	158	3	1	0	0	4	1	121	12	0	134	308
Total Volume	29	0	18	0	47	26	564	7	0	597	10	1	1	0	12	1	456	26	1	484	1140
% App. Total	61.7	0	38.3	0		4.4	94.5	1.2	0		83.3	8.3	8.3	0		0.2	94.2	5.4	0.2		
PHF	.806	.000	.500	.000	.653	.813	.934	.583	.000	.933	.625	.250	.250	.000	.750	.250	.942	.542	.250	.903	.925
Autos	28	0	18	0	46	25	553	7	0	585	9	1	1	0	11	1	449	26	1	477	1119
% Autos	96.6	0	100	0	97.9	96.2	98.0	100	0	98.0	90.0	100	100	0	91.7	100	98.5	100	100	98.6	98.2
Heavy Vehicles																					
% Heavy Vehicles	3.4	0	0	0	2.1	3.8	2.0	0	0	2.0	10.0	0	0	0	8.3	0	1.5	0	0	1.4	1.8





**SEQUENCE of OPERATION for SR 7 (US 441) and Johnson Street (3155)  
HOLLYWOOD**



 INDICATES PERMISSIVE TURN  
 Indicates Pedestrian Signal

Station : 3155 - SR 7 & Johnson 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		18		39		18		33								
Min Green	4	12	4	6	4	12	4	6								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	12	50	30	40	12	50	12	40								
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	4	4	2	2	4	4	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																
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			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				









**BROWARD COUNTY TRAFFIC ENGINEERING**  
**ACTUATED TRAFFIC SIGNAL TIMING SHEET**

<b>Intersection Number</b>	3155	<b>Initial Operation Date</b>	9/28/55
<b>Controller Type</b>	2070 TS2 (BIU)	<b>System Number</b>	3155
<b>Modification Number</b>	16	<b>Modification Date</b>	07/27/2020
<b>Drawing/Project No</b>	227775-1-52-01	<b>FPL Grid Number</b>	87272025008
<b>Intersection</b>	SR 7 (US 441) and JOHNSON STREET		
<b>Municipality</b>	HOLLYWOOD		

<b>Controller Phase</b>	1	2	3	4	5	6	7	8
<b>Face Number</b>	1	2	3	4	5	6	7	8
<b>Direction</b>	SBL	NB	WBL	EB	NBL	SB	EBL	WB
<b>Initial Green(MIN)</b>	4	12	4	6	4	12	4	6
<b>Vehicle Ext.(GAP)</b>	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
<b>Maximum Green I</b>	12	50	12	30	12	50	12	30
<b>Maximum Green II</b>								
<b>Yellow Clearance</b>	4.5	4.5	4.0	4.0	4.5	4.5	4.0	4.0
<b>All Red Clearance</b>	2.0	2.0	4.0	4.0	2.0	2.0	4.0	4.0
<b>Phase Recall</b>	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
<b>Detector Delay</b>								
<b>Walk</b>		7		7		7		7
<b>Pedestrian Clearance</b>		18		39		18		33
<b>Permissive</b>	YES		YES		YES		YES	
<b>Flash Operation</b>		YELLOW		RED		YELLOW		RED

**Attachment**

**NOTES:**

1. ANTI-BACKDOWN NORTH/SOUTH: PHASES 2+6 ON ---> OMIT PHASES 1+5.
2. DUAL ENTRY EAST/WEST.
3. PHOTO ENFORCEMENT, CITY OF HOLLYWOOD.
4. MOD. 16 REFLECTS TIMING UPDATE PER INTERSECTION REBUILD UNDER FDOT PROJECT.

**Submitted By** \_\_\_\_\_

**Approved By** \_\_\_\_\_

Station : 3156 - Johnson St & N 62 Ave ( Standard File )

Phase	1	2 (WT)	3 (ST)	4 (NT)	5	6 (ET)	7	8	9	10	11	12	13	14	15	16
Walk		7	7	7		7										
Ped Clearance		14	17	14		14										
Min Green		12	6	6		12										
Gap Ext		3	2	2		3										
Max1		50	20	20		50										
Max2																
Yellow Clr	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr		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										
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																
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	ON	ON	ON	ON	ON	ON
Link to Preempt						
Delay						
Min Duration						
Min Green						
Min Walk						
Ped Clear						
Track Green						
Min Dwell						
Max Presence						
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1						
Dwell Cyc Veh 2						
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				

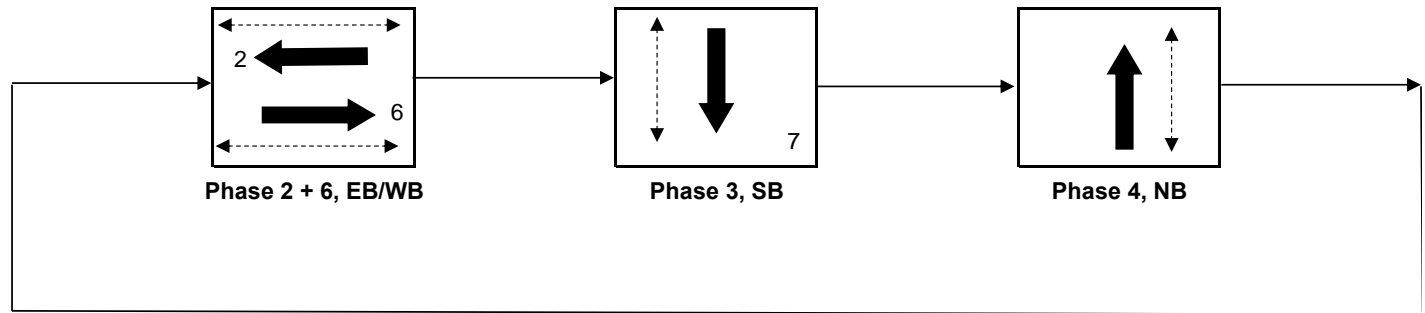








Sequence of Operation For (3156) Johnson Street and N. 62 Avenue  
**Hollywood**



←-----→ Denotes Pedestrian Signal



**BROWARD COUNTY TRAFFIC ENGINEERING**  
**ACTUATED TRAFFIC SIGNAL TIMING SHEET**

<b>Intersection Number</b>	3156	<b>Initial Operation Date</b>	7/76
<b>Controller Type</b>	2070 LN	<b>System Number</b>	3156
<b>Modification Number</b>	10	<b>Modification Date</b>	05/13/2020
<b>Drawing/Project No</b>	DES. GRP. 4	<b>FPL Grid Number</b>	87172754702
<b>Intersection</b>	JOHNSON STREET and N. 62 AVE		
<b>Municipality</b>	HOLLYWOOD		

<b>Controller Phase</b>	1	2	3	4	5	6	7	8
<b>Face Number</b>		2	3	4		6		
<b>Direction</b>		WB	SB	NB		EB		
<b>Initial Green(MIN)</b>		12	6	6		12		
<b>Vehicle Ext.(GAP)</b>		3.0	2.0	2.0		3.0		
<b>Maximum Green I</b>		50	20	20		50		
<b>Maximum Green II</b>								
<b>Yellow Clearance</b>		4.0	4.0	4.0		4.0		
<b>All Red Clearance</b>		2.0	2.0	2.0		2.0		
<b>Phase Recall</b>		MIN	OFF	OFF		MIN		
<b>Detector Delay</b>								
<b>Walk</b>		7	7	7		7		
<b>Pedestrian Clearance</b>		14	17	14		14		
<b>Permissive</b>								
<b>Flash Operation</b>		YELLOW	RED	RED		YELLOW		

**Attachment**

**NOTES:**

1. MOD. 10 UPDATES ALL RED CLEARANCE.

**Submitted By** \_\_\_\_\_

**Approved By** \_\_\_\_\_

# **Attachement C**

**PSCF, Historical Data, and Growth  
Rate**

2019 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL  
 CATEGORY: 8630 WEST-W OF US441

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2019 - 01/05/2019	1.01	1.04
2	01/06/2019 - 01/12/2019	1.01	1.04
3	01/13/2019 - 01/19/2019	1.02	1.05
4	01/20/2019 - 01/26/2019	1.00	1.03
5	01/27/2019 - 02/02/2019	0.99	1.02
* 6	02/03/2019 - 02/09/2019	0.98	1.01
* 7	02/10/2019 - 02/16/2019	0.97	1.00
* 8	02/17/2019 - 02/23/2019	0.97	1.00
* 9	02/24/2019 - 03/02/2019	0.97	1.00
*10	03/03/2019 - 03/09/2019	0.97	1.00
*11	03/10/2019 - 03/16/2019	0.97	1.00
*12	03/17/2019 - 03/23/2019	0.97	1.00
*13	03/24/2019 - 03/30/2019	0.97	1.00
*14	03/31/2019 - 04/06/2019	0.97	1.00
*15	04/07/2019 - 04/13/2019	0.97	1.00
*16	04/14/2019 - 04/20/2019	0.97	1.00
*17	04/21/2019 - 04/27/2019	0.97	1.00
*18	04/28/2019 - 05/04/2019	0.98	1.01
19	05/05/2019 - 05/11/2019	0.99	1.02
20	05/12/2019 - 05/18/2019	1.00	1.03
21	05/19/2019 - 05/25/2019	1.01	1.04
22	05/26/2019 - 06/01/2019	1.02	1.05
23	06/02/2019 - 06/08/2019	1.02	1.05
24	06/09/2019 - 06/15/2019	1.03	1.06
25	06/16/2019 - 06/22/2019	1.04	1.07
26	06/23/2019 - 06/29/2019	1.04	1.07
27	06/30/2019 - 07/06/2019	1.05	1.08
28	07/07/2019 - 07/13/2019	1.05	1.08
29	07/14/2019 - 07/20/2019	1.06	1.09
30	07/21/2019 - 07/27/2019	1.05	1.08
31	07/28/2019 - 08/03/2019	1.04	1.07
32	08/04/2019 - 08/10/2019	1.02	1.05
33	08/11/2019 - 08/17/2019	1.01	1.04
34	08/18/2019 - 08/24/2019	1.01	1.04
35	08/25/2019 - 08/31/2019	1.02	1.05
36	09/01/2019 - 09/07/2019	1.02	1.05
37	09/08/2019 - 09/14/2019	1.03	1.06
38	09/15/2019 - 09/21/2019	1.03	1.06
39	09/22/2019 - 09/28/2019	1.02	1.05
40	09/29/2019 - 10/05/2019	1.01	1.04
41	10/06/2019 - 10/12/2019	1.00	1.03
42	10/13/2019 - 10/19/2019	0.98	1.01
43	10/20/2019 - 10/26/2019	0.99	1.02
44	10/27/2019 - 11/02/2019	0.99	1.02
45	11/03/2019 - 11/09/2019	0.99	1.02
46	11/10/2019 - 11/16/2019	0.99	1.02
47	11/17/2019 - 11/23/2019	1.00	1.03
48	11/24/2019 - 11/30/2019	1.00	1.03
49	12/01/2019 - 12/07/2019	1.00	1.03
50	12/08/2019 - 12/14/2019	1.00	1.03
51	12/15/2019 - 12/21/2019	1.01	1.04
52	12/22/2019 - 12/28/2019	1.01	1.04
53	12/29/2019 - 12/31/2019	1.02	1.05

\* PEAK SEASON

FLORIDA DEPARTMENT OF TRANSPORTATION  
TRANSPORTATION STATISTICS OFFICE  
2021 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 8010 - JOHNSON STREET, E OF SR 7

YEAR	AADT		DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2021	10800	F	E	5200	W	5600	9.00	53.80	14.30
2020	10800	C	E	5200	W	5600	9.00	53.90	8.80
2019	13100	R	E	7700	W	5400	9.00	54.60	5.50
2018	13100	T	E	7700	W	5400	9.00	54.50	6.00
2017	13100	S	E	7700	W	5400	9.00	51.90	6.20
2016	13100	F	E	7700	W	5400	9.00	54.10	2.90
2015	12900	C	E	7600	W	5300	9.00	54.00	3.40
2014	18500	X					9.00	54.20	7.40
2013	18500	X		0		0	9.00	53.60	7.60
2012	18500	T		0		0	9.00	52.20	5.90
2011	18500	S		0		0	9.00	52.50	6.30
2010	18500	F		0		0	8.35	52.69	9.30
2009	18500	C	E	0	W	0	8.53	53.89	5.30
2008	14000	C	E	0	W	0	8.81	54.16	6.50
2007	17500	C	E	0	W	0	8.63	55.75	4.80
2006	15500	C	E	0	W	0	8.40	55.34	2.90

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  
 2021 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 8011 - JOHNSON STREET, W OF FLORIDA'S TURNPIKE

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR	
2021	13500	F	E	7200	W	6300	9.00	54.00	14.30
2020	13700	C	E	7300	W	6400	9.00	55.10	8.80
2019	20100	T	E	11000	W	9100	9.00	56.00	5.50
2018	20000	S	E	11000	W	9000	9.00	56.30	6.00
2017	19900	F	E	11000	W	8900	9.00	57.10	6.20
2016	19200	C	E	10500	W	8700	9.00	56.10	2.90
2015	14000	V		0		0	9.00	56.20	3.40
2014	13500	R					9.00	56.80	7.40
2013	13000	T		0		0	9.00	56.20	7.60
2012	13000	S		0		0	9.00	57.00	5.90
2011	13000	F		0		0	9.00	59.10	6.30
2010	12500	C	E	0	W	0	9.60	57.92	9.30
2009	17000	F		0		0	9.71	58.42	5.30
2008	17000	C	E	0	W	0	9.67	56.67	6.50
2007	17500	C	E	0	W	0	10.19	60.63	4.80
2006	14500	C	E	0	W	0	9.61	59.08	2.90

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

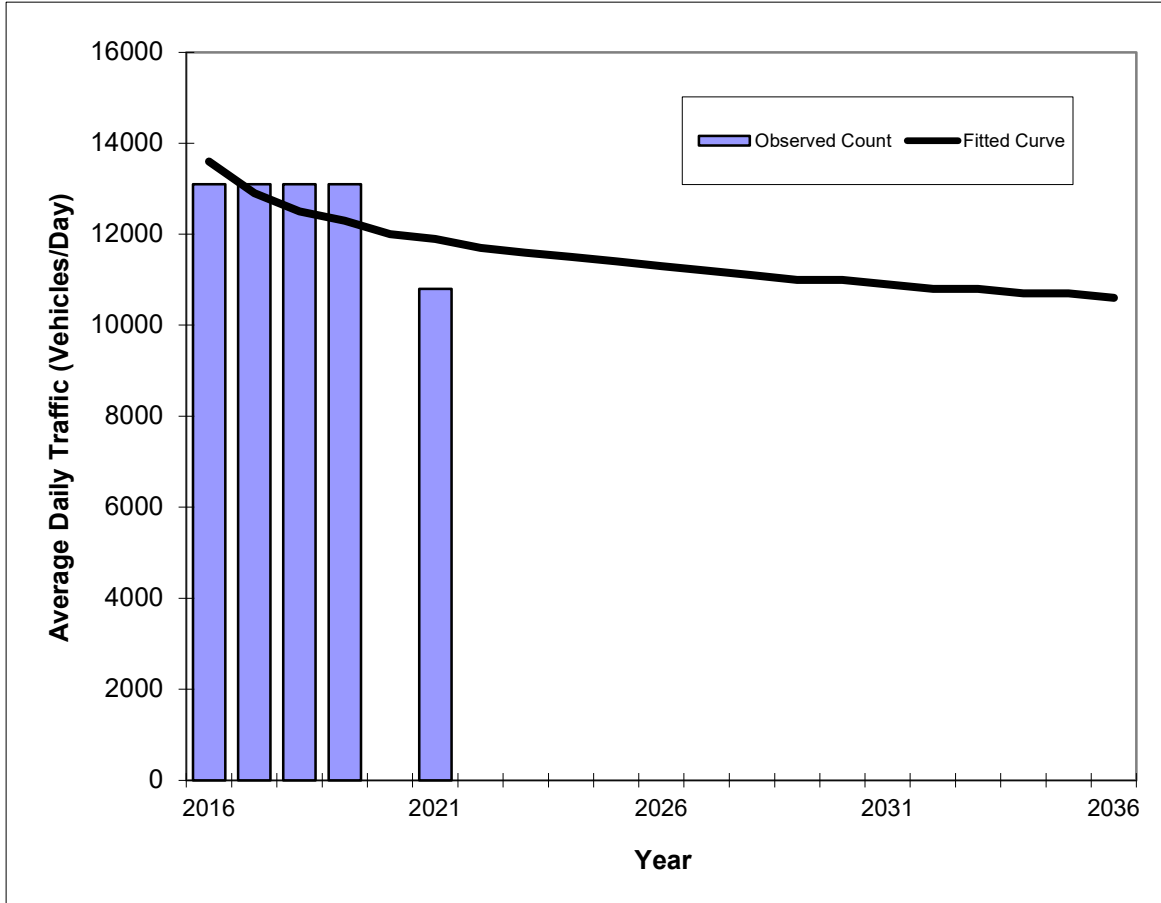
\*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES



## Traffic Trends - V03.a JOHNSON STREET -- E OF SR 7

FIN#	0
Location	1

County:	BROWARD
Station #:	8010
Highway:	JOHNSON STREET



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2016	13100	13600
2017	13100	12900
2018	13100	12500
2019	13100	12300
2020	na	na
2021	10800	11900
<b>2022 Opening Year Trend</b>		
2022	N/A	11700
<b>2024 Mid-Year Trend</b>		
2024	N/A	11500
<b>2026 Design Year Trend</b>		
2026	N/A	11300
<b>TRANPLAN Forecasts/Trends</b>		

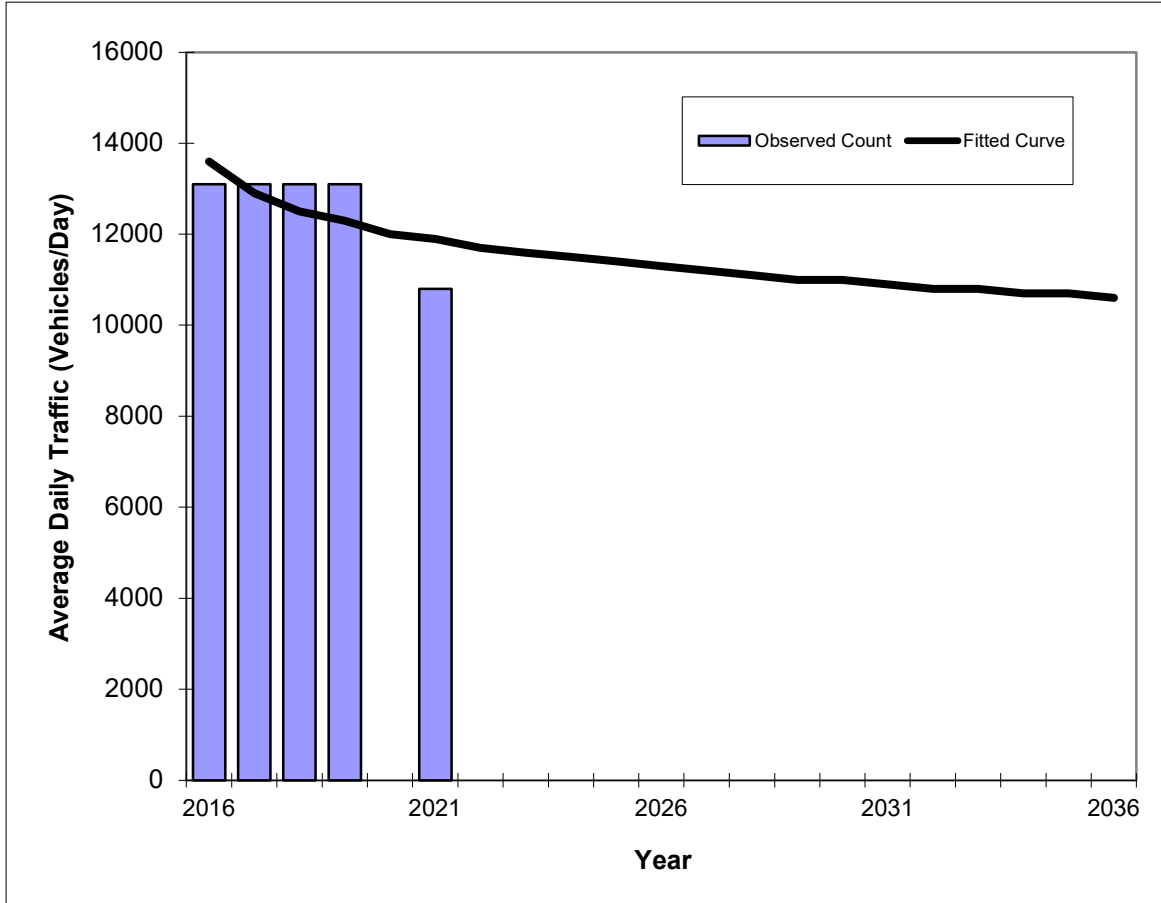
Trend R-squared:	42.32%
Compounded Annual Historic Growth Rate:	-2.64%
Compounded Growth Rate (2021 to Design Year):	-1.03%
Printed:	15-Jan-23
<b>Decaying Exponential Growth Option</b>	

\*Axle-Adjusted

## Traffic Trends - V03.a JOHNSON STREET -- E OF SR 7

FIN#	0
Location	1

County:	BROWARD
Station #:	8010
Highway:	JOHNSON STREET



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2016	13100	13600
2017	13100	12900
2018	13100	12500
2019	13100	12300
2020	na	na
2021	10800	11900
<b>2022 Opening Year Trend</b>		
2022	N/A	11700
<b>2024 Mid-Year Trend</b>		
2024	N/A	11500
<b>2026 Design Year Trend</b>		
2026	N/A	11300
<b>TRANPLAN Forecasts/Trends</b>		

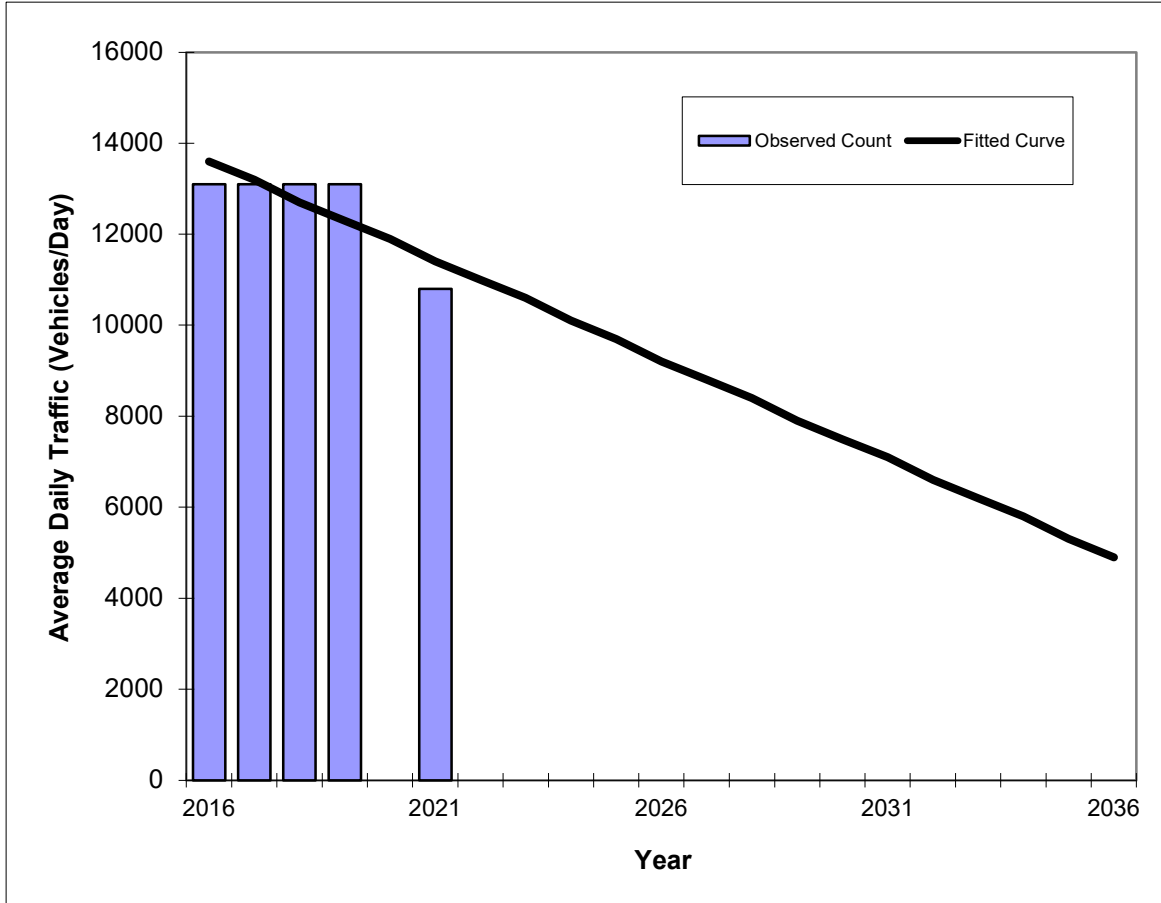
Trend R-squared:	66.22%
Compounded Annual Historic Growth Rate:	-2.64%
Compounded Growth Rate (2021 to Design Year):	-1.03%
Printed:	15-Jan-23
<b>Exponential Growth Option</b>	

\*Axle-Adjusted

## Traffic Trends - V03.a JOHNSON STREET -- E OF SR 7

FIN#	0
Location	1

County:	BROWARD
Station #:	8010
Highway:	JOHNSON STREET



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2016	13100	13600
2017	13100	13200
2018	13100	12700
2019	13100	12300
2020	na	na
2021	10800	11400
<b>2022 Opening Year Trend</b>		
2022	N/A	11000
<b>2024 Mid-Year Trend</b>		
2024	N/A	10100
<b>2026 Design Year Trend</b>		
2026	N/A	9200
<b>TRANPLAN Forecasts/Trends</b>		

** Annual Trend Increase:	-435
Trend R-squared:	66.22%
Trend Annual Historic Growth Rate:	-3.24%
Trend Growth Rate (2021 to Design Year):	-3.86%
Printed:	15-Jan-23
<b>Straight Line Growth Option</b>	

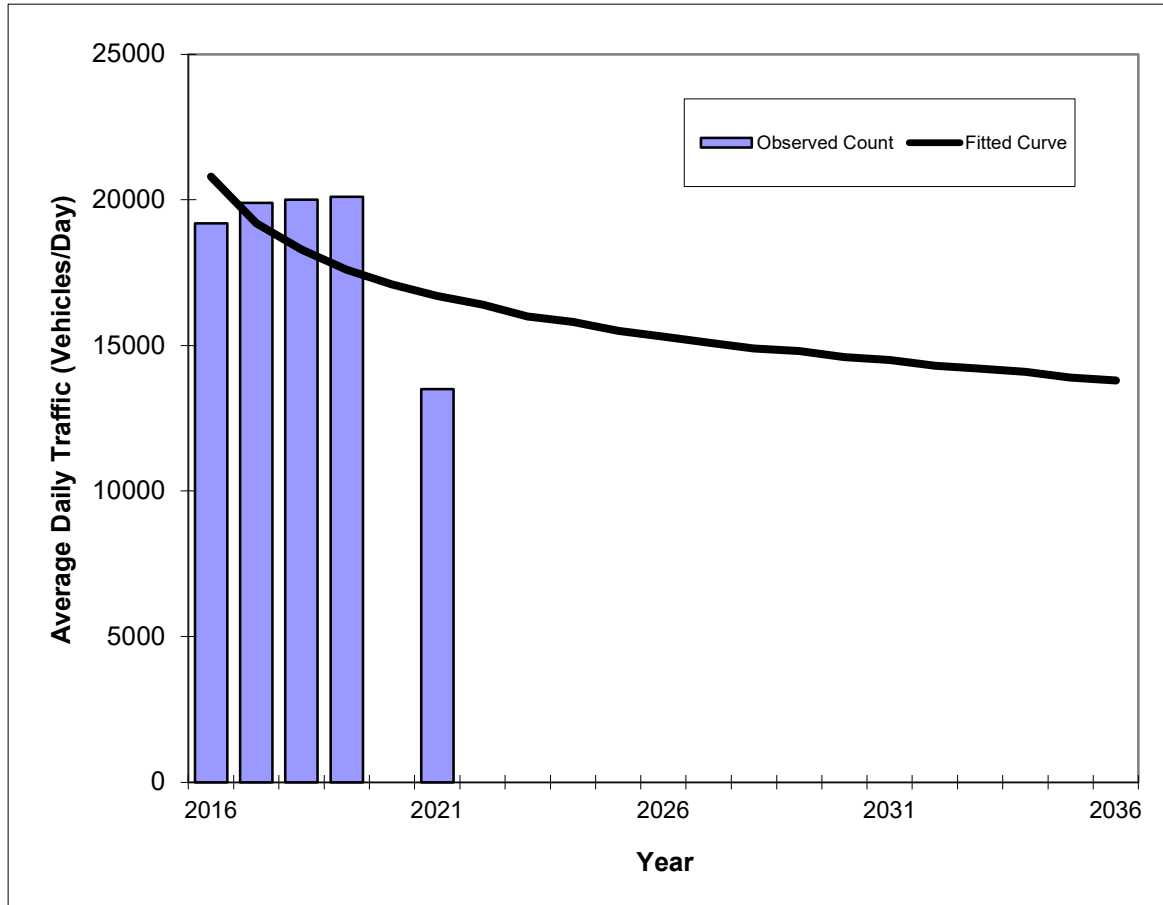
\*Axle-Adjusted

## Traffic Trends - V03.a

### JOHNSON STREET -- W OF FLORIDA'S TURNPIKE

FIN#	0
Location	2

County:	BROWARD
Station #:	8011
Highway:	JOHNSON STREET



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2016	19200	20800
2017	19900	19200
2018	20000	18300
2019	20100	17600
2020	na	na
2021	13500	16700
<b>2022 Opening Year Trend</b>		
2022	N/A	16400
<b>2024 Mid-Year Trend</b>		
2024	N/A	15800
<b>2026 Design Year Trend</b>		
2026	N/A	15300
<b>TRANPLAN Forecasts/Trends</b>		

Trend R-squared:	30.80%
Compounded Annual Historic Growth Rate:	-4.30%
Compounded Growth Rate (2021 to Design Year):	-1.74%
Printed:	15-Jan-23
<b>Decaying Exponential Growth Option</b>	

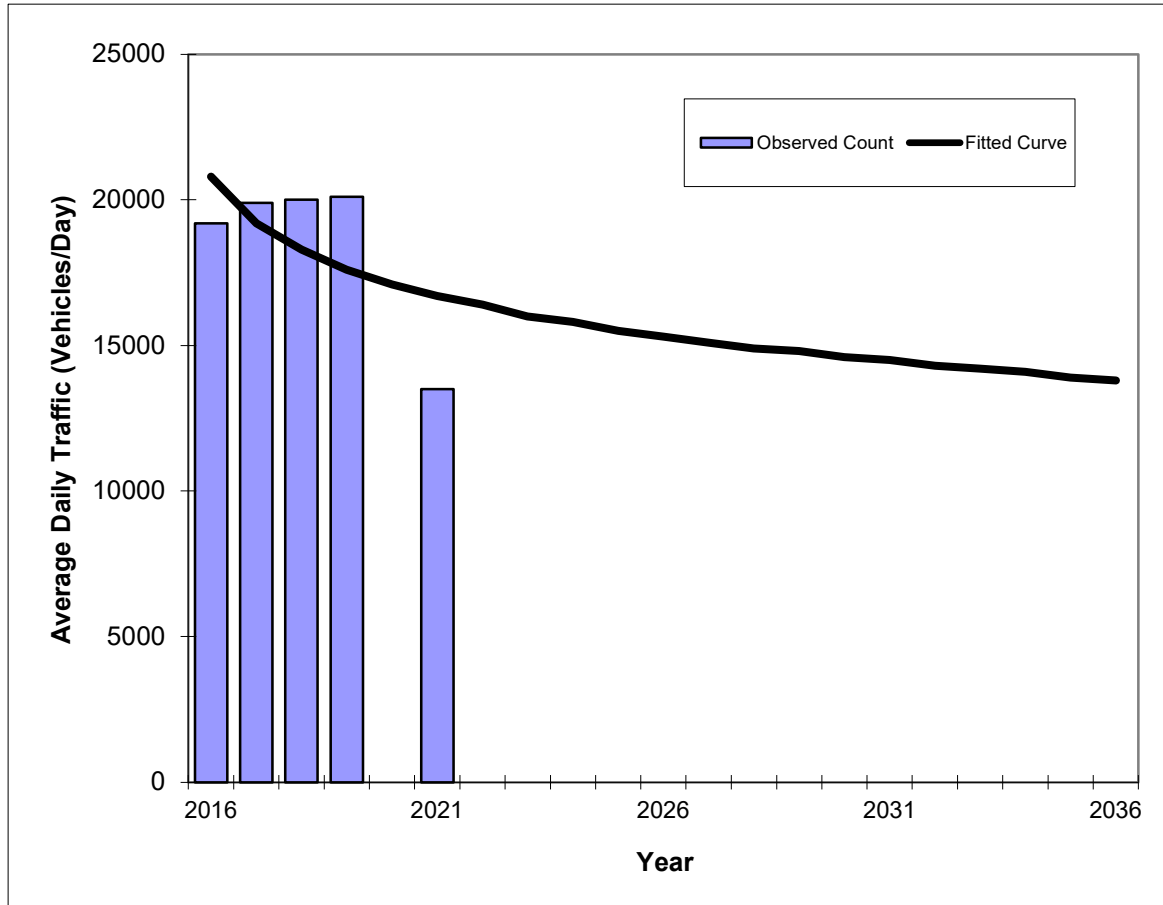
\*Axle-Adjusted

## Traffic Trends - V03.a

### JOHNSON STREET -- W OF FLORIDA'S TURNPIKE

FIN#	0
Location	2

County:	BROWARD
Station #:	8011
Highway:	JOHNSON STREET



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2016	19200	20800
2017	19900	19200
2018	20000	18300
2019	20100	17600
2020	na	na
2021	13500	16700
<b>2022 Opening Year Trend</b>		
2022	N/A	16400
<b>2024 Mid-Year Trend</b>		
2024	N/A	15800
<b>2026 Design Year Trend</b>		
2026	N/A	15300
<b>TRANPLAN Forecasts/Trends</b>		

Trend R-squared:	57.08%
Compounded Annual Historic Growth Rate:	-4.30%
Compounded Growth Rate (2021 to Design Year):	-1.74%
Printed:	15-Jan-23
<b>Exponential Growth Option</b>	

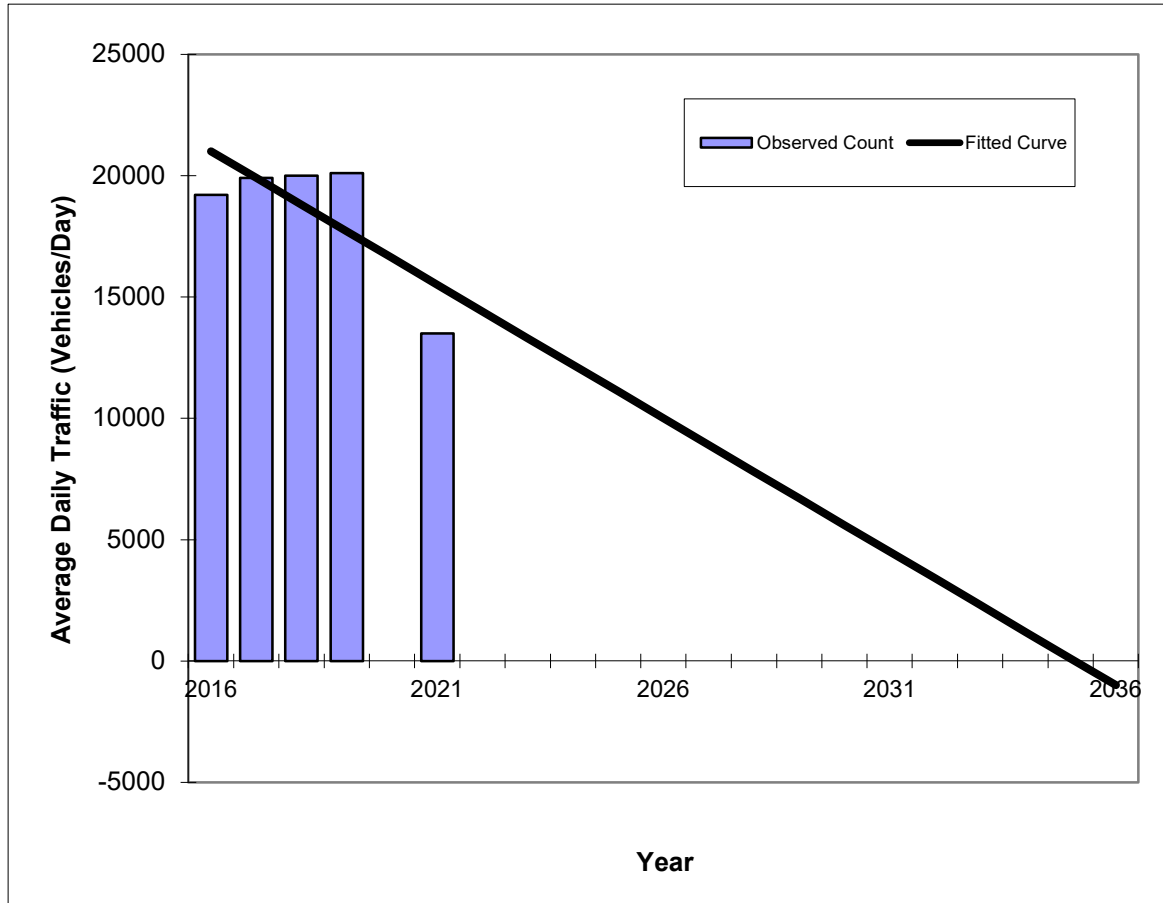
\*Axle-Adjusted

## Traffic Trends - V03.a

### JOHNSON STREET -- W OF FLORIDA'S TURNPIKE

FIN#	0
Location	2

County:	BROWARD
Station #:	8011
Highway:	JOHNSON STREET



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2016	19200	21000
2017	19900	19900
2018	20000	18800
2019	20100	17700
2020	na	na
2021	13500	15500
<b>2022 Opening Year Trend</b>		
2022	N/A	14400
<b>2024 Mid-Year Trend</b>		
2024	N/A	12200
<b>2026 Design Year Trend</b>		
2026	N/A	10000
<b>TRANPLAN Forecasts/Trends</b>		

** Annual Trend Increase:	-1,097
Trend R-squared:	55.25%
Trend Annual Historic Growth Rate:	-5.24%
Trend Growth Rate (2021 to Design Year):	-7.10%
Printed:	15-Jan-23

**Straight Line Growth Option**

\*Axle-Adjusted

### Growth Rate Trend Analysis Calculations

Description	8010			8011		
Option	Linear	Exponential	Decaying Exponential	Linear	Exponential	Decaying Exponential
Trend Growth Rate 5 years	-3.24	-2.64	-3.24	-5.24	-4.30	-4.30
Adjusted Growth Rate 5-years (2)	0.50	0.50	0.50	0.50	0.50	0.50
Trend R-squared 5 years	66.22	66.22	66.22	55.25	57.08	30.80
Growth Rate with highest R-squared (5-year)	<b>0.50</b>			<b>0.50</b>		
Average Growth Rate (5-year)	0.50					
<b>Growth Rate Used</b>	<b>1.00</b>					

Notes:

1: Refer to Trend Analysis Chart

2: If the resulting growth rate is negative, a 0.5 growth rate was used

#### What Is R-squared?

R-squared is a statistical measure of how close the data are to the fitted regression line. It is also known as the coefficient of determination, or the coefficient of multiple determination for multiple regression.

The definition of R-squared is fairly straight-forward; it is the percentage of the response variable variation that is explained by a linear model. Or:

$R\text{-squared} = \text{Explained variation} / \text{Total variation}$

R-squared is always between 0 and 100%:

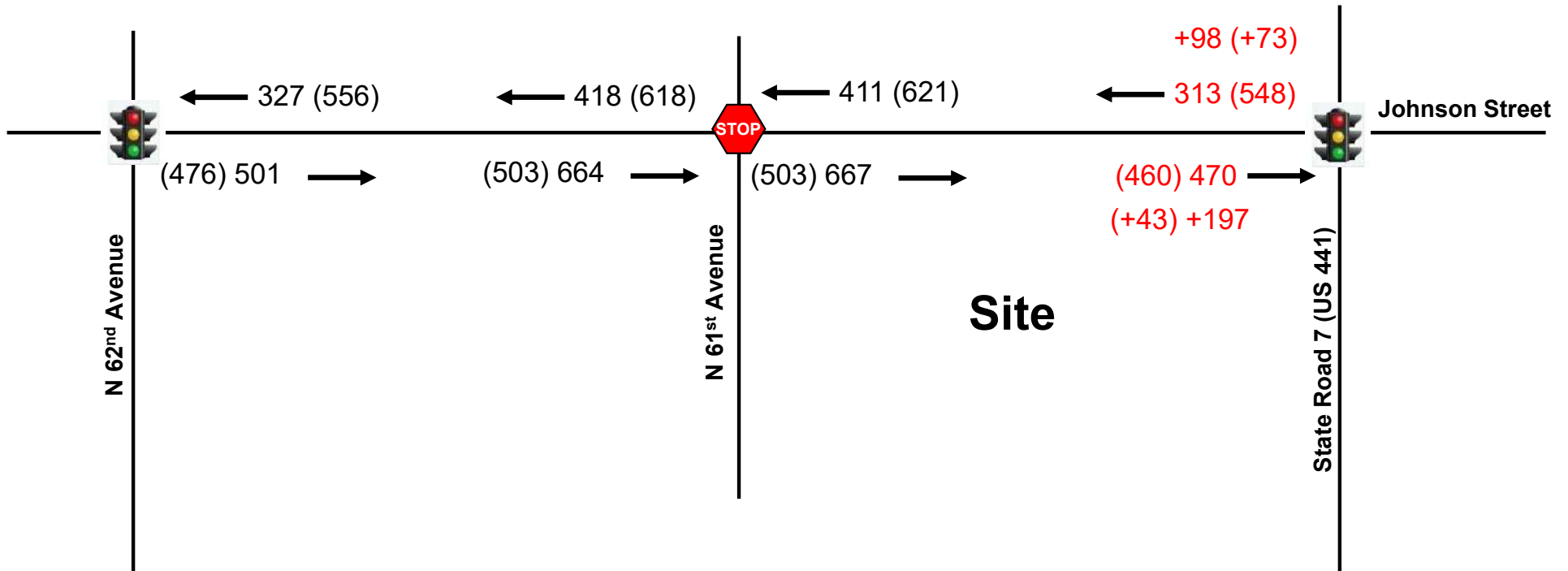
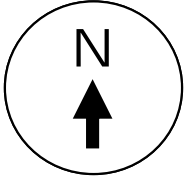
0% indicates that the model explains none of the variability of the response data around its mean.

100% indicates that the model explains all the variability of the response data around its mean.

In general, the higher the R-squared, the better the model fits your data. However, there are important conditions for this guideline that I'll talk about both in this post and my next post.

**Attachement D**  
**Future Turning Movement Volumes**





Site

Numbers in red were increased to match volumes on east leg of Johnson Street/N 61<sup>st</sup> Avenue. This adjustment is reflected in the volume development tables for Johnson Street/SR 441 in this appendix...

LEGEND	
XX	AM Peak Hour
(YY)	PM Peak Hour

**FUTURE TURNING MOVEMENT VOLUME ANALYSIS**

**Johnson Street and N 62nd Avenue  
AM Peak Hour**

<b>Description</b>	<b>N 62nd Avenue Northbound</b>			<b>N 62nd Avenue Southbound</b>			<b>Johnson Street Eastbound</b>			<b>Johnson Street Westbound</b>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/10/2021)	120	26	41	5	21	58	19	445	147	26	290	5
Season Adjustment Factor*	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2023 Peak Season Traffic	122	27	42	5	21	59	19	454	150	27	296	5
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2026 Background Traffic	126	27	43	5	22	61	20	468	154	27	305	5
<b>Pinnacle 441</b>							4			3		
<b>2026 Total Traffic</b>	<b>126</b>	<b>27</b>	<b>43</b>	<b>5</b>	<b>22</b>	<b>61</b>	<b>20</b>	<b>472</b>	<b>154</b>	<b>27</b>	<b>308</b>	<b>5</b>

**FUTURE TURNING MOVEMENT VOLUME ANALYSIS**

**Johnson Street and N 62nd Avenue  
PM Peak Hour**

<b>Description</b>	<b>N 62nd Avenue Northbound</b>			<b>N 62nd Avenue Southbound</b>			<b>Johnson Street Eastbound</b>			<b>Johnson Street Westbound</b>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/10/2021)	148	35	47	8	33	71	48	412	124	48	487	10
Season Adjustment Factor*	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2023 Peak Season Traffic	151	36	48	8	34	72	49	420	126	49	497	10
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2026 Background Traffic	156	37	49	8	35	75	50	433	130	50	512	11
<b>Pinnacle 441</b>							12			6		
<b>2026 Total Traffic</b>	<b>156</b>	<b>37</b>	<b>49</b>	<b>8</b>	<b>35</b>	<b>75</b>	<b>50</b>	<b>445</b>	<b>130</b>	<b>50</b>	<b>518</b>	<b>11</b>

**FUTURE TURNING MOVEMENT VOLUME ANALYSIS**

**Johnson Street and N 61st Avenue  
AM Peak Hour**

<b>Description</b>	<b>N 61st Avenue Northbound</b>			<b>N 61st Avenue Southbound</b>			<b>Johnson Street Eastbound</b>			<b>Johnson Street Westbound</b>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (1/11/2023)	1	1	11	11		16	17	619	2	2	385	8
Season Adjustment Factor*	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2023 Peak Season Traffic	1	1	11	11	0	17	18	644	2	2	400	8
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2026 Background Traffic	1	1	12	12	0	17	18	663	2	2	413	9
<b>Pinnacle 441</b>	3							3	1			
<b>2026 Total Traffic</b>	<b>4</b>	<b>1</b>	<b>12</b>	<b>12</b>	<b>0</b>	<b>17</b>	<b>18</b>	<b>666</b>	<b>3</b>	<b>2</b>	<b>413</b>	<b>9</b>

**FUTURE TURNING MOVEMENT VOLUME ANALYSIS**

**Johnson Street and N 61st Avenue  
PM Peak Hour**

Description	N 61st Avenue Northbound			N 61st Avenue Southbound			Johnson Street Eastbound			Johnson Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (1/11/2023)	1	1	10	18		29	27	456	1	7	564	26
Season Adjustment Factor*	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2023 Peak Season Traffic	1	1	10	19	0	30	28	474	1	7	587	27
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2026 Background Traffic	1	1	11	19	0	31	29	489	1	8	604	28
Pinnacle 441	6						8	4				
<b>2026 Total Traffic</b>	<b>7</b>	<b>1</b>	<b>11</b>	<b>19</b>	<b>0</b>	<b>31</b>	<b>29</b>	<b>497</b>	<b>5</b>	<b>8</b>	<b>604</b>	<b>28</b>

**FUTURE TURNING MOVEMENT VOLUME ANALYSIS**

**Johnson Street and State Road 7 (US 441)  
AM Peak Hour**

<b>Description</b>	<b>State Road 7 (US 441) Northbound</b>			<b>State Road 7 (US 441) Southbound</b>			<b>Johnson Street Eastbound</b>			<b>Johnson Street Westbound</b>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/10/2021)	86	1,141	116	165	1,068	58	116	207	138	112	163	132
Season Adjustment Factor*	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2023 Peak Season Traffic	88	1164	118	168	1089	59	118	211	141	114	166	135
Balancing (+197 EB / +98 WB)	27					19	50	88	59		52	
2023 Peak Season Adjusted	115	1164	118	168	1089	78	168	299	200	114	218	135
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2026 Background Traffic	118	1,199	122	173	1,122	81	173	308	206	118	225	139
<b>Pinnacle 441</b>	10				7	3	11	5		2	2	
<b>2026 Total Traffic</b>	<b>128</b>	<b>1,199</b>	<b>122</b>	<b>173</b>	<b>1,129</b>	<b>84</b>	<b>184</b>	<b>313</b>	<b>206</b>	<b>120</b>	<b>227</b>	<b>139</b>

**FUTURE TURNING MOVEMENT VOLUME ANALYSIS**

**Johnson Street and State Road 7 (US 441)  
PM Peak Hour**

<b>Description</b>	<b>State Road 7 (US 441) Northbound</b>			<b>State Road 7 (US 441) Southbound</b>			<b>Johnson Street Eastbound</b>			<b>Johnson Street Westbound</b>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/10/2021)	127	1,515	121	125	1,474	98	109	219	123	149	312	161
Season Adjustment Factor*	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2023 Peak Season Traffic	130	1545	123	128	1504	100	111	223	125	152	318	164
Balancing (+43 EB / +73 WB)	17					13	10	21	12		42	
2023 Peak Season Adjusted	147	1545	123	128	1504	113	121	244	137	152	360	164
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2026 Background Traffic	151	1,592	127	131	1,549	116	125	252	142	157	371	169
<b>Pinnacle 441</b>	26				16	10	20	8		7	4	
<b>2026 Total Traffic</b>	<b>177</b>	<b>1,592</b>	<b>127</b>	<b>131</b>	<b>1,565</b>	<b>126</b>	<b>145</b>	<b>260</b>	<b>142</b>	<b>164</b>	<b>375</b>	<b>169</b>

**FUTURE TURNING MOVEMENT VOLUME ANALYSIS**

**Johnson Street and Project Driveway  
AM Peak Hour**

Description	Project Driveway Northbound			Southbound			Johnson Street Eastbound			Johnson Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (1/11/2023)							641			395		
Season Adjustment Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2023 Peak Season Traffic	0	0	0	0	0	0	0	667	0	0	411	0
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2026 Background Traffic	0	0	0	0	0	0	0	687	0	0	423	0
<b>Pinnacle 441</b>			16						3	8		
<b>2026 Total Traffic</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>687</b>	<b>3</b>	<b>8</b>	<b>423</b>	<b>0</b>



**FUTURE TURNING MOVEMENT VOLUME ANALYSIS**

**Johnson Street and Project Driveway  
PM Peak Hour**

Description	Project Driveway Northbound			Southbound			Johnson Street Eastbound			Johnson Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (1/11/2023)							484			597		
Season Adjustment Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2023 Peak Season Traffic	0	0	0	0	0	0	0	503	0	0	621	0
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2026 Background Traffic	0	0	0	0	0	0	0	519	0	0	640	0
<b>Pinnacle 441</b>			28						8	24		
<b>2026 Total Traffic</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>519</b>	<b>8</b>	<b>24</b>	<b>640</b>	<b>0</b>

**Attachement E**  
**SYNCHRO Analyses**

# Timings

## 101: NW 62 Ave & Johnson St/Johnson Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗		↕		↕
Traffic Volume (vph)	19	454	150	27	296	122	27	5	21
Future Volume (vph)	19	454	150	27	296	122	27	5	21
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2			6		4		3
Permitted Phases	2		2	6		4		3	
Detector Phase	2	2	2	6	6	4	4	3	3
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	6.0	6.0	6.0	6.0
Minimum Split (s)	27.0	27.0	27.0	30.0	30.0	20.0	20.0	20.0	20.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	20.0	20.0	20.0	20.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	55.6%	22.2%	22.2%	22.2%	22.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0		6.0
Lead/Lag						Lag	Lag	Lead	Lead
Lead-Lag Optimize?									
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	48.5	48.5	48.5	48.5	48.5		18.6		7.3
Actuated g/C Ratio	0.54	0.54	0.54	0.54	0.54		0.21		0.08
v/c Ratio	0.04	0.50	0.19	0.08	0.34		0.74		0.50
Control Delay	12.3	16.8	3.7	13.0	14.2		48.3		25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	12.3	16.8	3.7	13.0	14.2		48.3		25.0
LOS	B	B	A	B	B		D		C
Approach Delay		13.5			14.1		48.3		25.0
Approach LOS		B			B		D		C

### Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 19.9

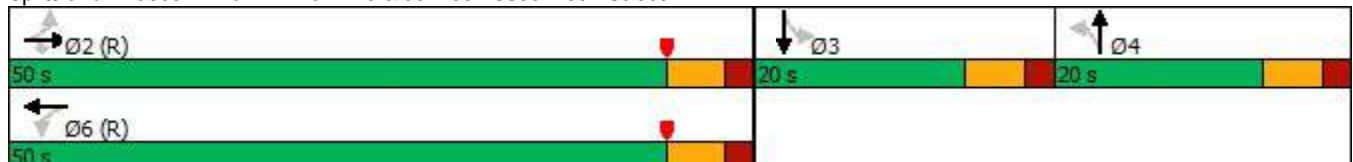
Intersection LOS: B

Intersection Capacity Utilization 51.3%

ICU Level of Service A

Analysis Period (min) 15

### Splits and Phases: 101: NW 62 Ave & Johnson St/Johnson Street



## Queues

### 101: NW 62 Ave & Johnson St/Johnson Street























Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	21	504	167	30	335	213	95
v/c Ratio	0.04	0.50	0.19	0.08	0.34	0.74	0.50
Control Delay	12.3	16.8	3.7	13.0	14.2	48.3	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	16.8	3.7	13.0	14.2	48.3	25.0
Queue Length 50th (ft)	6	187	6	9	110	104	16
Queue Length 95th (ft)	18	287	38	25	176	#226	60
Internal Link Dist (ft)		507			550	421	357
Turn Bay Length (ft)	180		115	125			
Base Capacity (vph)	515	1003	896	371	1000	289	305
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.50	0.19	0.08	0.34	0.74	0.31

#### Intersection Summary

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

# HCM Signalized Intersection Capacity Analysis

## 101: NW 62 Ave & Johnson St/Johnson Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	454	150	27	296	5	122	27	42	5	21	59
Future Volume (vph)	19	454	150	27	296	5	122	27	42	5	21	59
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			6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00			1.00			0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00			0.97			0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			1.00	
Satd. Flow (prot)	1767	1863	1541	1765	1857			1746			1647	
Flt Permitted	0.51	1.00	1.00	0.37	1.00			0.75			0.97	
Satd. Flow (perm)	957	1863	1541	690	1857			1351			1602	
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)	21	504	167	30	329	6	136	30	47	6	23	66
RTOR Reduction (vph)	0	0	69	0	0	0	0	10	0	0	62	0
Lane Group Flow (vph)	21	504	98	30	335	0	0	203	0	0	33	0
Confl. Peds. (#/hr)	1		3	3		1	3					3
Confl. Bikes (#/hr)			1			1						1
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			3	
Permitted Phases	2		2	6			4			3		
Actuated Green, G (s)	47.3	47.3	47.3	47.3	47.3			18.6			6.1	
Effective Green, g (s)	47.3	47.3	47.3	47.3	47.3			18.6			6.1	
Actuated g/C Ratio	0.53	0.53	0.53	0.53	0.53			0.21			0.07	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			2.0			2.0	
Lane Grp Cap (vph)	502	979	809	362	975			279			108	
v/s Ratio Prot		c0.27			0.18							
v/s Ratio Perm	0.02		0.06	0.04				c0.15			c0.02	
v/c Ratio	0.04	0.51	0.12	0.08	0.34			0.73			0.31	
Uniform Delay, d1	10.4	13.9	10.8	10.6	12.4			33.3			39.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.2	1.9	0.3	0.4	1.0			7.7			0.6	
Delay (s)	10.5	15.8	11.1	11.0	13.3			41.1			40.5	
Level of Service	B	B	B	B	B			D			D	
Approach Delay (s)		14.5			13.1			41.1			40.5	
Approach LOS		B			B			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			20.1					HCM 2000 Level of Service			C	
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			90.0					Sum of lost time (s)		18.0		
Intersection Capacity Utilization			51.3%					ICU Level of Service		A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary  
101: NW 62 Ave & Johnson St/Johnson Street

---

HCM 6th Edition methodology expects strict NEMA phasing.

HCM 6th TWSC  
102: N 61 Avenue & Johnson Street

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	644	2	2	400	8	1	1	11	11	0	17
Future Vol, veh/h	18	644	2	2	400	8	1	1	11	11	0	17
Conflicting Peds, #/hr	3	0	0	0	0	3	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	692	2	2	430	9	1	1	12	12	0	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	442	0	0	694	0	0	1180	1177	694	1181	1174	439
Stage 1	-	-	-	-	-	-	731	731	-	442	442	-
Stage 2	-	-	-	-	-	-	449	446	-	739	732	-
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	1118	-	-	901	-	-	366	367	664	366	368	828
Stage 1	-	-	-	-	-	-	581	581	-	776	776	-
Stage 2	-	-	-	-	-	-	771	773	-	576	580	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1115	-	-	901	-	-	352	359	663	352	360	825
Mov Cap-2 Maneuver	-	-	-	-	-	-	352	359	-	352	360	-
Stage 1	-	-	-	-	-	-	571	571	-	760	772	-
Stage 2	-	-	-	-	-	-	752	769	-	555	570	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			11.3			12.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	585	1115	-	-	901	-	-	540
HCM Lane V/C Ratio	0.024	0.017	-	-	0.002	-	-	0.056
HCM Control Delay (s)	11.3	8.3	-	-	9	-	-	12.1
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2

# Timings

## 103: SR 7 & Johnson Street

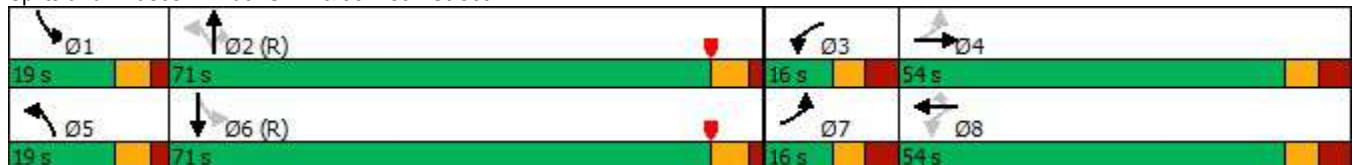
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	168	299	114	218	135	115	1164	118	168	1089
Future Volume (vph)	168	299	114	218	135	115	1164	118	168	1089
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	4.0	6.0	6.0	4.0	12.0	12.0	4.0	12.0
Minimum Split (s)	12.0	54.0	12.0	48.0	48.0	10.5	31.5	31.5	10.5	31.5
Total Split (s)	16.0	54.0	16.0	54.0	54.0	19.0	71.0	71.0	19.0	71.0
Total Split (%)	10.0%	33.8%	10.0%	33.8%	33.8%	11.9%	44.4%	44.4%	11.9%	44.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	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)	8.0	8.0	8.0	8.0	8.0	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	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)	35.0	27.0	35.0	27.0	27.0	91.4	82.8	82.8	100.4	87.4
Actuated g/C Ratio	0.22	0.17	0.22	0.17	0.17	0.57	0.52	0.52	0.63	0.55
v/c Ratio	0.95	0.85	0.89	0.75	0.40	0.48	0.48	0.15	0.62	0.46
Control Delay	104.8	64.5	98.3	78.1	16.1	19.3	26.8	3.8	21.8	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	104.8	64.5	98.3	78.1	16.1	19.3	26.8	3.8	21.8	23.5
LOS	F	E	F	E	B	B	C	A	C	C
Approach Delay		74.7		65.1			24.3			23.2
Approach LOS		E		E			C			C

### Intersection Summary

Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 130 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.95  
 Intersection Signal Delay: 37.5  
 Intersection Capacity Utilization 80.1%  
 Analysis Period (min) 15

Intersection LOS: D  
 ICU Level of Service D

### Splits and Phases: 103: SR 7 & Johnson Street





# Queues

## 103: SR 7 & Johnson Street


























Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	183	542	124	237	147	125	1265	128	183	1269
v/c Ratio	0.95	0.85	0.89	0.75	0.40	0.48	0.48	0.15	0.62	0.46
Control Delay	104.8	64.5	98.3	78.1	16.1	19.3	26.8	3.8	21.8	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	104.8	64.5	98.3	78.1	16.1	19.3	26.8	3.8	21.8	23.5
Queue Length 50th (ft)	158	242	103	240	22	48	302	0	73	283
Queue Length 95th (ft)	#263	296	#170	322	86	88	412	37	125	377
Internal Link Dist (ft)		280		2492			608			502
Turn Bay Length (ft)	220		115		100	530		140	340	
Base Capacity (vph)	193	1021	140	535	542	303	2632	870	312	2751
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	0.95	0.53	0.89	0.44	0.27	0.41	0.48	0.15	0.59	0.46

### Intersection Summary

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

# HCM 6th Signalized Intersection Summary

## 103: SR 7 & Johnson Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	299	200	114	218	135	115	1164	118	168	1089	78
Future Volume (veh/h)	168	299	200	114	218	135	115	1164	118	168	1089	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	183	325	217	124	237	147	125	1265	128	183	1184	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	217	408	266	172	373	314	289	2590	803	289	2543	182
Arrive On Green	0.05	0.20	0.20	0.05	0.20	0.20	0.05	0.51	0.51	0.06	0.52	0.52
Sat Flow, veh/h	1781	2045	1332	1781	1870	1576	1781	5106	1583	1781	4862	349
Grp Volume(v), veh/h	183	281	261	124	237	147	125	1265	128	183	829	440
Grp Sat Flow(s),veh/h/ln	1781	1777	1600	1781	1870	1576	1781	1702	1583	1781	1702	1807
Q Serve(g_s), s	8.0	24.1	24.9	8.0	18.6	13.2	5.4	26.0	6.9	7.9	24.6	24.6
Cycle Q Clear(g_c), s	8.0	24.1	24.9	8.0	18.6	13.2	5.4	26.0	6.9	7.9	24.6	24.6
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	217	354	319	172	373	314	289	2590	803	289	1780	945
V/C Ratio(X)	0.84	0.79	0.82	0.72	0.64	0.47	0.43	0.49	0.16	0.63	0.47	0.47
Avail Cap(c_a), veh/h	217	511	460	172	538	453	345	2590	803	318	1780	945
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	60.9	61.3	53.2	58.7	56.5	19.3	25.8	21.1	20.5	24.1	24.1
Incr Delay (d2), s/veh	23.7	3.3	4.8	12.2	0.7	0.4	0.4	0.7	0.4	2.3	0.9	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	5.1	11.2	10.6	1.7	8.9	5.3	2.3	10.8	2.7	3.5	10.3	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.2	64.2	66.1	65.3	59.4	57.0	19.7	26.5	21.6	22.8	24.9	25.7
LnGrp LOS	F	E	E	E	E	E	B	C	C	C	C	C
Approach Vol, veh/h		725			508			1518			1452	
Approach Delay, s/veh		69.7			60.1			25.5			24.9	
Approach LOS		E			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.4	87.7	16.0	39.9	13.9	90.2	16.0	39.9				
Change Period (Y+Rc), s	6.5	6.5	8.0	8.0	6.5	6.5	8.0	8.0				
Max Green Setting (Gmax), s	12.5	64.5	8.0	46.0	12.5	64.5	8.0	46.0				
Max Q Clear Time (g_c+I1), s	9.9	28.0	10.0	26.9	7.4	26.6	10.0	20.6				
Green Ext Time (p_c), s	0.0	12.7	0.0	2.2	0.0	11.4	0.0	1.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				37.1								
HCM 6th LOS				D								

# Timings

## 101: NW 62 Ave & Johnson St/Johnson Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	20	468	154	27	305	126	27	5	22
Future Volume (vph)	20	468	154	27	305	126	27	5	22
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2			6		4		3
Permitted Phases	2		2	6		4		3	
Detector Phase	2	2	2	6	6	4	4	3	3
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	6.0	6.0	6.0	6.0
Minimum Split (s)	27.0	27.0	27.0	30.0	30.0	20.0	20.0	20.0	20.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	20.0	20.0	20.0	20.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	55.6%	22.2%	22.2%	22.2%	22.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0		6.0
Lead/Lag						Lag	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	47.7	47.7	47.7	47.7	47.7		19.4		7.4
Actuated g/C Ratio	0.53	0.53	0.53	0.53	0.53		0.22		0.08
v/c Ratio	0.04	0.53	0.19	0.09	0.35		0.73		0.51
Control Delay	12.4	17.5	3.9	13.2	14.7		47.2		25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	12.4	17.5	3.9	13.2	14.7		47.2		25.0
LOS	B	B	A	B	B		D		C
Approach Delay		14.1			14.6		47.2		25.0
Approach LOS		B			B		D		C

### Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 20.1

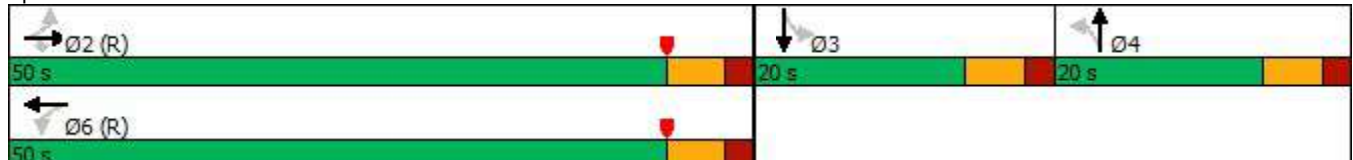
Intersection LOS: C

Intersection Capacity Utilization 52.3%

ICU Level of Service A

Analysis Period (min) 15

### Splits and Phases: 101: NW 62 Ave & Johnson St/Johnson Street



## Queues

### 101: NW 62 Ave & Johnson St/Johnson Street























Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	22	520	171	30	345	218	98
v/c Ratio	0.04	0.53	0.19	0.09	0.35	0.73	0.51
Control Delay	12.4	17.5	3.9	13.2	14.7	47.2	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	17.5	3.9	13.2	14.7	47.2	25.0
Queue Length 50th (ft)	6	200	8	9	117	105	17
Queue Length 95th (ft)	19	299	40	25	181	#235	62
Internal Link Dist (ft)		507			550	421	357
Turn Bay Length (ft)	180		115	125			
Base Capacity (vph)	494	986	883	346	982	299	307
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.53	0.19	0.09	0.35	0.73	0.32

#### Intersection Summary

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

# HCM Signalized Intersection Capacity Analysis

## 101: NW 62 Ave & Johnson St/Johnson Street

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	20	468	154	27	305	5	126	27	43	5	22	61	
Future Volume (vph)	20	468	154	27	305	5	126	27	43	5	22	61	
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			6.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00		
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00			1.00			0.98		
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00		
Frt	1.00	1.00	0.85	1.00	1.00			0.97			0.91		
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			1.00		
Satd. Flow (prot)	1768	1863	1541	1766	1857			1746			1647		
Flt Permitted	0.50	1.00	1.00	0.35	1.00			0.75			0.97		
Satd. Flow (perm)	934	1863	1541	655	1857			1346			1604		
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)	22	520	171	30	339	6	140	30	48	6	24	68	
RTOR Reduction (vph)	0	0	70	0	0	0	0	10	0	0	63	0	
Lane Group Flow (vph)	22	520	101	30	345	0	0	208	0	0	35	0	
Confl. Peds. (#/hr)	1		3	3		1	3					3	
Confl. Bikes (#/hr)			1			1						1	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			6			4			3		
Permitted Phases	2		2	6			4			3			
Actuated Green, G (s)	46.4	46.4	46.4	46.4	46.4			19.4			6.2		
Effective Green, g (s)	46.4	46.4	46.4	46.4	46.4			19.4			6.2		
Actuated g/C Ratio	0.52	0.52	0.52	0.52	0.52			0.22			0.07		
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.0			6.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			2.0			2.0		
Lane Grp Cap (vph)	481	960	794	337	957			290			110		
v/s Ratio Prot		c0.28			0.19								
v/s Ratio Perm	0.02		0.07	0.05				c0.15			c0.02		
v/c Ratio	0.05	0.54	0.13	0.09	0.36			0.72			0.32		
Uniform Delay, d1	10.8	14.7	11.3	11.1	13.0			32.7			39.9		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00		
Incremental Delay, d2	0.2	2.2	0.3	0.5	1.1			6.9			0.6		
Delay (s)	11.0	16.8	11.6	11.6	14.0			39.6			40.5		
Level of Service	B	B	B	B	B			D			D		
Approach Delay (s)		15.4			13.8			39.6			40.5		
Approach LOS		B			B			D			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			20.5	HCM 2000 Level of Service						C			
HCM 2000 Volume to Capacity ratio			0.57										
Actuated Cycle Length (s)			90.0	Sum of lost time (s)						18.0			
Intersection Capacity Utilization			52.3%	ICU Level of Service						A			
Analysis Period (min)			15										
c Critical Lane Group													

HCM 6th Signalized Intersection Summary  
101: NW 62 Ave & Johnson St/Johnson Street

---

HCM 6th Edition methodology expects strict NEMA phasing.

HCM 6th TWSC  
 102: N 61 Avenue & Johnson Street

**Intersection**

Int Delay, s/veh 0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	663	2	2	413	9	1	1	12	12	0	17
Future Vol, veh/h	18	663	2	2	413	9	1	1	12	12	0	17
Conflicting Peds, #/hr	3	0	0	0	0	3	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	713	2	2	444	10	1	1	13	13	0	18

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	457	0	0	715
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1104	-	-	885
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1101	-	-	885
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	11.4	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	577	1101	-	-	885	-	-	515
HCM Lane V/C Ratio	0.026	0.018	-	-	0.002	-	-	0.061
HCM Control Delay (s)	11.4	8.3	-	-	9.1	-	-	12.4
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2

# Timings

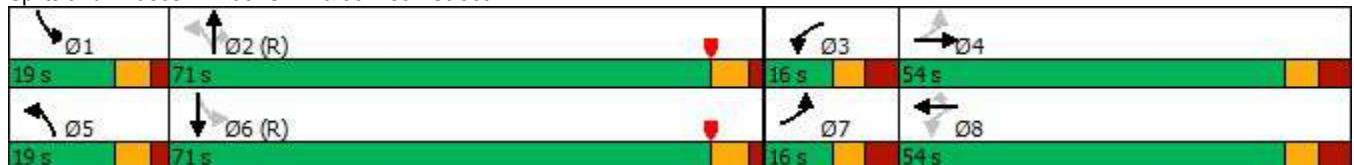
## 103: SR 7 & Johnson Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	173	308	118	225	139	118	1199	122	173	1122
Future Volume (vph)	173	308	118	225	139	118	1199	122	173	1122
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	4.0	6.0	6.0	4.0	12.0	12.0	4.0	12.0
Minimum Split (s)	12.0	54.0	12.0	48.0	48.0	10.5	31.5	31.5	10.5	31.5
Total Split (s)	16.0	54.0	16.0	54.0	54.0	19.0	71.0	71.0	19.0	71.0
Total Split (%)	10.0%	33.8%	10.0%	33.8%	33.8%	11.9%	44.4%	44.4%	11.9%	44.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	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)	8.0	8.0	8.0	8.0	8.0	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	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)	35.9	27.9	35.9	27.9	27.9	91.5	80.6	80.6	98.7	84.2
Actuated g/C Ratio	0.22	0.17	0.22	0.17	0.17	0.57	0.50	0.50	0.62	0.53
v/c Ratio	0.96	0.85	0.91	0.76	0.40	0.48	0.51	0.16	0.64	0.49
Control Delay	108.8	64.5	104.4	77.2	16.5	19.3	28.7	4.4	24.5	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.8	64.5	104.4	77.2	16.5	19.3	28.7	4.4	24.5	26.2
LOS	F	E	F	E	B	B	C	A	C	C
Approach Delay		75.6		66.3			25.9			25.9
Approach LOS		E		E			C			C

### Intersection Summary

Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 130 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 39.4	Intersection LOS: D
Intersection Capacity Utilization 81.6%	ICU Level of Service D
Analysis Period (min) 15	

### Splits and Phases: 103: SR 7 & Johnson Street





# Queues

## 103: SR 7 & Johnson Street


























Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	188	559	128	245	151	128	1303	133	188	1308
v/c Ratio	0.96	0.85	0.91	0.76	0.40	0.48	0.51	0.16	0.64	0.49
Control Delay	108.8	64.5	104.4	77.2	16.5	19.3	28.7	4.4	24.5	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.8	64.5	104.4	77.2	16.5	19.3	28.7	4.4	24.5	26.2
Queue Length 50th (ft)	161	252	106	248	25	50	326	0	76	308
Queue Length 95th (ft)	#274	305	#179	330	89	91	438	43	142	423
Internal Link Dist (ft)		280		2492			608			502
Turn Bay Length (ft)	220		115		100	530		140	340	
Base Capacity (vph)	195	1021	140	535	542	297	2562	851	307	2650
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	0.96	0.55	0.91	0.46	0.28	0.43	0.51	0.16	0.61	0.49

### Intersection Summary

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

# HCM 6th Signalized Intersection Summary

## 103: SR 7 & Johnson Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	308	206	118	225	139	118	1199	122	173	1122	81
Future Volume (veh/h)	173	308	206	118	225	139	118	1199	122	173	1122	81
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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	188	335	224	128	245	151	128	1303	133	188	1220	88
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	217	416	272	171	381	321	279	2558	793	282	2515	181
Arrive On Green	0.05	0.20	0.20	0.05	0.20	0.20	0.05	0.50	0.50	0.06	0.52	0.52
Sat Flow, veh/h	1781	2042	1334	1781	1870	1576	1781	5106	1583	1781	4860	350
Grp Volume(v), veh/h	188	290	269	128	245	151	128	1303	133	188	854	454
Grp Sat Flow(s),veh/h/ln	1781	1777	1600	1781	1870	1576	1781	1702	1583	1781	1702	1806
Q Serve(g_s), s	8.0	24.9	25.7	8.0	19.2	13.5	5.6	27.4	7.3	8.2	25.9	25.9
Cycle Q Clear(g_c), s	8.0	24.9	25.7	8.0	19.2	13.5	5.6	27.4	7.3	8.2	25.9	25.9
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	217	362	326	171	381	321	279	2558	793	282	1762	935
V/C Ratio(X)	0.87	0.80	0.82	0.75	0.64	0.47	0.46	0.51	0.17	0.67	0.49	0.49
Avail Cap(c_a), veh/h	217	511	460	171	538	453	334	2558	793	307	1762	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	60.6	61.0	53.5	58.4	56.1	20.0	26.7	21.7	21.6	24.9	24.9
Incr Delay (d2), s/veh	28.1	4.0	5.7	15.1	0.7	0.4	0.4	0.7	0.5	3.6	1.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	11.7	11.0	2.0	9.2	5.5	2.4	11.4	2.9	3.7	10.8	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.8	64.6	66.6	68.6	59.1	56.5	20.4	27.5	22.2	25.2	25.8	26.7
LnGrp LOS	F	E	E	E	E	E	C	C	C	C	C	C
Approach Vol, veh/h		747			524			1564			1496	
Approach Delay, s/veh		71.2			60.7			26.5			26.0	
Approach LOS		E			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.7	86.7	16.0	40.6	14.1	89.3	16.0	40.6				
Change Period (Y+Rc), s	6.5	6.5	8.0	8.0	6.5	6.5	8.0	8.0				
Max Green Setting (Gmax), s	12.5	64.5	8.0	46.0	12.5	64.5	8.0	46.0				
Max Q Clear Time (g_c+I1), s	10.2	29.4	10.0	27.7	7.6	27.9	10.0	21.2				
Green Ext Time (p_c), s	0.0	13.1	0.0	2.2	0.0	11.8	0.0	1.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				38.2								
HCM 6th LOS				D								

# Timings

## 101: NW 62 Ave & Johnson St/Johnson Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	20	472	154	27	308	126	27	5	22
Future Volume (vph)	20	472	154	27	308	126	27	5	22
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2			6		4		3
Permitted Phases	2		2	6		4		3	
Detector Phase	2	2	2	6	6	4	4	3	3
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	6.0	6.0	6.0	6.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	20.0	20.0	20.0	20.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	20.0	20.0	20.0	20.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	55.6%	22.2%	22.2%	22.2%	22.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0		6.0
Lead/Lag						Lag	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	47.7	47.7	47.7	47.7	47.7		19.4		7.4
Actuated g/C Ratio	0.53	0.53	0.53	0.53	0.53		0.22		0.08
v/c Ratio	0.04	0.53	0.19	0.09	0.35		0.73		0.51
Control Delay	12.4	17.6	3.9	13.3	14.7		47.2		25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	12.4	17.6	3.9	13.3	14.7		47.2		25.0
LOS	B	B	A	B	B		D		C
Approach Delay		14.2			14.6		47.2		25.0
Approach LOS		B			B		D		C

### Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 20.2

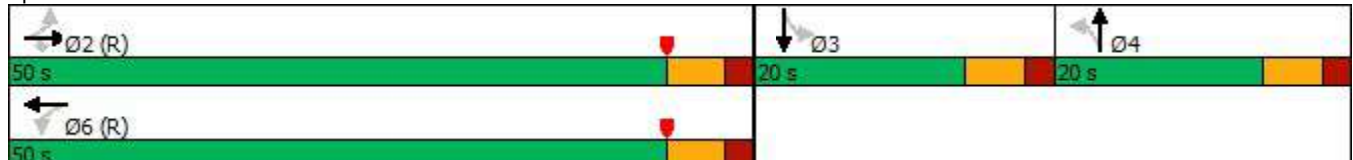
Intersection LOS: C

Intersection Capacity Utilization 52.5%

ICU Level of Service A

Analysis Period (min) 15

### Splits and Phases: 101: NW 62 Ave & Johnson St/Johnson Street



## Queues

### 101: NW 62 Ave & Johnson St/Johnson Street























Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	22	524	171	30	348	218	98
v/c Ratio	0.04	0.53	0.19	0.09	0.35	0.73	0.51
Control Delay	12.4	17.6	3.9	13.3	14.7	47.2	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	17.6	3.9	13.3	14.7	47.2	25.0
Queue Length 50th (ft)	6	202	8	9	118	105	17
Queue Length 95th (ft)	19	302	41	25	184	#235	62
Internal Link Dist (ft)		507			550	421	357
Turn Bay Length (ft)	180		115	125			
Base Capacity (vph)	491	986	882	343	982	299	307
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.53	0.19	0.09	0.35	0.73	0.32

#### Intersection Summary

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

# HCM Signalized Intersection Capacity Analysis

## 101: NW 62 Ave & Johnson St/Johnson Street

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	20	472	154	27	308	5	126	27	43	5	22	61	
Future Volume (vph)	20	472	154	27	308	5	126	27	43	5	22	61	
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			6.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00		
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00			1.00			0.98		
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00		
Frt	1.00	1.00	0.85	1.00	1.00			0.97			0.91		
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			1.00		
Satd. Flow (prot)	1768	1863	1541	1766	1857			1746			1647		
Flt Permitted	0.50	1.00	1.00	0.35	1.00			0.75			0.97		
Satd. Flow (perm)	929	1863	1541	649	1857			1346			1604		
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)	22	524	171	30	342	6	140	30	48	6	24	68	
RTOR Reduction (vph)	0	0	69	0	0	0	0	10	0	0	63	0	
Lane Group Flow (vph)	22	524	102	30	348	0	0	208	0	0	35	0	
Confl. Peds. (#/hr)	1		3	3		1	3					3	
Confl. Bikes (#/hr)			1			1						1	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			6			4			3		
Permitted Phases	2		2	6			4			3			
Actuated Green, G (s)	46.4	46.4	46.4	46.4	46.4			19.4			6.2		
Effective Green, g (s)	46.4	46.4	46.4	46.4	46.4			19.4			6.2		
Actuated g/C Ratio	0.52	0.52	0.52	0.52	0.52			0.22			0.07		
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.0			6.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			2.0			2.0		
Lane Grp Cap (vph)	478	960	794	334	957			290			110		
v/s Ratio Prot		c0.28			0.19								
v/s Ratio Perm	0.02		0.07	0.05				c0.15			c0.02		
v/c Ratio	0.05	0.55	0.13	0.09	0.36			0.72			0.32		
Uniform Delay, d1	10.8	14.7	11.3	11.1	13.0			32.7			39.9		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00		
Incremental Delay, d2	0.2	2.2	0.3	0.5	1.1			6.9			0.6		
Delay (s)	11.0	16.9	11.6	11.6	14.1			39.6			40.5		
Level of Service	B	B	B	B	B			D			D		
Approach Delay (s)		15.5			13.9			39.6			40.5		
Approach LOS		B			B			D			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			20.5									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.57										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	18.0
Intersection Capacity Utilization			52.5%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

HCM 6th Signalized Intersection Summary  
101: NW 62 Ave & Johnson St/Johnson Street

---

HCM 6th Edition methodology expects strict NEMA phasing.

HCM 6th TWSC  
102: N 61 Avenue & Johnson Street

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	666	3	2	413	9	4	1	12	12	0	17
Future Vol, veh/h	18	666	3	2	413	9	4	1	12	12	0	17
Conflicting Peds, #/hr	3	0	0	0	0	3	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	716	3	2	444	10	4	1	13	13	0	18

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	457	0	0	719	0	0	1219	1217	719	1220	1213	453
Stage 1	-	-	-	-	-	-	756	756	-	456	456	-
Stage 2	-	-	-	-	-	-	463	461	-	764	757	-
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	1104	-	-	882	-	-	352	352	649	351	354	818
Stage 1	-	-	-	-	-	-	566	566	-	766	766	-
Stage 2	-	-	-	-	-	-	760	762	-	561	565	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1101	-	-	882	-	-	339	344	648	337	346	815
Mov Cap-2 Maneuver	-	-	-	-	-	-	339	344	-	337	346	-
Stage 1	-	-	-	-	-	-	556	556	-	751	762	-
Stage 2	-	-	-	-	-	-	741	758	-	539	555	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	12.2	12.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	340	648	1101	-	-	882	-	-	514
HCM Lane V/C Ratio	0.016	0.02	0.018	-	-	0.002	-	-	0.061
HCM Control Delay (s)	15.8	10.7	8.3	-	-	9.1	-	-	12.5
HCM Lane LOS	C	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	0.1	-	-	0	-	-	0.2

# Timings

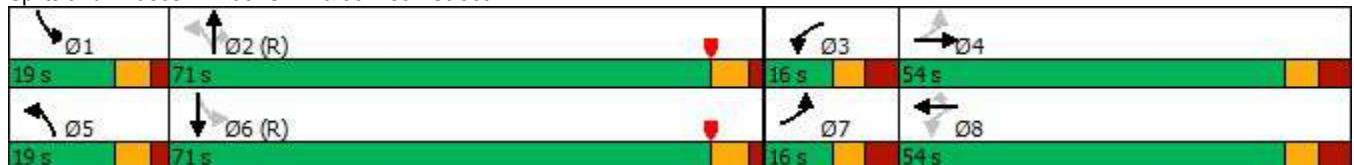
## 103: SR 7 & Johnson Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	184	313	120	227	139	128	1199	122	173	1129
Future Volume (vph)	184	313	120	227	139	128	1199	122	173	1129
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	4.0	6.0	6.0	4.0	12.0	12.0	4.0	12.0
Minimum Split (s)	12.0	54.0	12.0	48.0	48.0	10.5	31.5	31.5	10.5	31.5
Total Split (s)	16.0	54.0	16.0	54.0	54.0	19.0	71.0	71.0	19.0	71.0
Total Split (%)	10.0%	33.8%	10.0%	33.8%	33.8%	11.9%	44.4%	44.4%	11.9%	44.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	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)	8.0	8.0	8.0	8.0	8.0	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	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)	36.3	28.3	36.3	28.3	28.3	92.3	80.2	80.2	97.2	82.7
Actuated g/C Ratio	0.23	0.18	0.23	0.18	0.18	0.58	0.50	0.50	0.61	0.52
v/c Ratio	1.02	0.85	0.92	0.75	0.40	0.51	0.51	0.16	0.64	0.51
Control Delay	121.1	64.9	105.7	76.4	16.4	20.1	29.0	4.4	25.1	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	121.1	64.9	105.7	76.4	16.4	20.1	29.0	4.4	25.1	27.3
LOS	F	E	F	E	B	C	C	A	C	C
Approach Delay		79.6		66.4			26.1			27.0
Approach LOS		E		E			C			C

### Intersection Summary

Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 130 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.02  
 Intersection Signal Delay: 40.6  
 Intersection Capacity Utilization 81.9%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service D

### Splits and Phases: 103: SR 7 & Johnson Street





# Queues

## 103: SR 7 & Johnson Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	200	564	130	247	151	139	1303	133	188	1318
v/c Ratio	1.02	0.85	0.92	0.75	0.40	0.51	0.51	0.16	0.64	0.51
Control Delay	121.1	64.9	105.7	76.4	16.4	20.1	29.0	4.4	25.1	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	121.1	64.9	105.7	76.4	16.4	20.1	29.0	4.4	25.1	27.3
Queue Length 50th (ft)	~177	256	107	249	25	55	328	0	77	319
Queue Length 95th (ft)	#301	310	#184	333	88	99	440	43	144	435
Internal Link Dist (ft)		280		2492			608			502
Turn Bay Length (ft)	220		115		100	530		140	340	
Base Capacity (vph)	196	1019	141	535	542	295	2549	847	305	2602
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	1.02	0.55	0.92	0.46	0.28	0.47	0.51	0.16	0.62	0.51

### 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

## 103: SR 7 & Johnson Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	313	206	120	227	139	128	1199	122	173	1129	84
Future Volume (veh/h)	184	313	206	120	227	139	128	1199	122	173	1129	84
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		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	200	340	224	130	247	151	139	1303	133	188	1227	91
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	217	421	271	170	383	323	280	2551	791	281	2488	185
Arrive On Green	0.05	0.20	0.20	0.05	0.20	0.20	0.05	0.50	0.50	0.06	0.51	0.51
Sat Flow, veh/h	1781	2055	1324	1781	1870	1576	1781	5106	1583	1781	4849	360
Grp Volume(v), veh/h	200	293	271	130	247	151	139	1303	133	188	861	457
Grp Sat Flow(s),veh/h/ln	1781	1777	1602	1781	1870	1576	1781	1702	1583	1781	1702	1805
Q Serve(g_s), s	8.0	25.1	25.9	8.0	19.4	13.5	6.1	27.4	7.3	8.2	26.4	26.4
Cycle Q Clear(g_c), s	8.0	25.1	25.9	8.0	19.4	13.5	6.1	27.4	7.3	8.2	26.4	26.4
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	217	364	328	170	383	323	280	2551	791	281	1747	926
V/C Ratio(X)	0.92	0.80	0.83	0.76	0.64	0.47	0.50	0.51	0.17	0.67	0.49	0.49
Avail Cap(c_a), veh/h	217	511	461	170	538	453	329	2551	791	306	1747	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.9	60.6	60.9	53.8	58.3	55.9	20.3	26.9	21.9	21.8	25.4	25.4
Incr Delay (d2), s/veh	39.9	4.2	5.9	16.6	0.7	0.4	0.5	0.7	0.5	3.6	1.0	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	6.8	11.8	11.1	2.2	9.3	5.5	2.6	11.5	2.9	3.7	11.0	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.7	64.8	66.7	70.4	59.0	56.3	20.8	27.6	22.3	25.4	26.4	27.3
LnGrp LOS	F	E	E	E	E	E	C	C	C	C	C	C
Approach Vol, veh/h		764			528			1575			1506	
Approach Delay, s/veh		74.9			61.0			26.6			26.5	
Approach LOS		E			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.8	86.4	16.0	40.8	14.6	88.6	16.0	40.8				
Change Period (Y+Rc), s	6.5	6.5	8.0	8.0	6.5	6.5	8.0	8.0				
Max Green Setting (Gmax), s	12.5	64.5	8.0	46.0	12.5	64.5	8.0	46.0				
Max Q Clear Time (g_c+I1), s	10.2	29.4	10.0	27.9	8.1	28.4	10.0	21.4				
Green Ext Time (p_c), s	0.0	13.1	0.0	2.2	0.0	11.9	0.0	1.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				39.2								
HCM 6th LOS				D								

HCM 6th TWSC  
201: Driveway & Johnson Street

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	687	3	8	423	0	16
Future Vol, veh/h	687	3	8	423	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	747	3	9	460	0	17

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	750	0	- 749
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	- 4.5
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	- 3
Pot Cap-1 Maneuver	-	-	859	-	0 633
Stage 1	-	-	-	-	0 -
Stage 2	-	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	859	-	- 633
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	633	-	-	859	-
HCM Lane V/C Ratio	0.027	-	-	0.01	-
HCM Control Delay (s)	10.8	-	-	9.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

# HCM Unsignalized Intersection Capacity Analysis

## 202: Lincoln Street/Driveway & N 61 Avenue



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↘	
Traffic Volume (veh/h)	14	0	2	3	1	4
Future Volume (Veh/h)	14	0	2	3	1	4
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	0	2	3	1	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type						
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	8	4	6	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	8	4	6	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	99	100	100	100	100	
cM capacity (veh/h)	1006	891	889	1085	1623	
<b>Direction, Lane #</b>						
	EB 1	WB 1	SB 1			
Volume Total	15	5	5			
Volume Left	15	0	1			
Volume Right	0	3	4			
cSH	1006	997	1623			
Volume to Capacity	0.01	0.01	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	8.6	8.6	1.4			
Lane LOS	A	A	A			
Approach Delay (s)	8.6	8.6	1.4			
Approach LOS	A	A				
<b>Intersection Summary</b>						
Average Delay			7.2			
Intersection Capacity Utilization			17.4%		ICU Level of Service	A
Analysis Period (min)			15			

HCM 6th TWSC  
203: Driveway & SR 7

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑↑	↑↑↑	↗
Traffic Vol, veh/h	0	11	0	1449	1439	16
Future Vol, veh/h	0	11	0	1449	1439	16
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	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	0	1575	1564	17

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	782	-	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-
Pot Cap-1 Maneuver	0	289	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	289	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	289	-	-
HCM Lane V/C Ratio	-	0.041	-	-
HCM Control Delay (s)	-	18	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

# Timings

## 101: NW 62 Ave & Johnson St/Johnson Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗		↕		↕
Traffic Volume (vph)	49	420	126	49	497	151	36	8	34
Future Volume (vph)	49	420	126	49	497	151	36	8	34
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		6			2		4		3
Permitted Phases	6		6	2		4		3	
Detector Phase	6	6	6	2	2	4	4	3	3
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	6.0	6.0	6.0	6.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	30.0	30.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	20.0	20.0	20.0	20.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	55.6%	22.2%	22.2%	22.2%	22.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0		6.0
Lead/Lag						Lag	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	44.0	44.0	44.0	44.0	44.0		20.0		8.0
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.49		0.22		0.09
v/c Ratio	0.18	0.49	0.16	0.14	0.59		0.81		0.56
Control Delay	14.9	17.7	3.0	14.0	19.8		55.3		27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	14.9	17.7	3.0	14.0	19.8		55.3		27.1
LOS	B	B	A	B	B		E		C
Approach Delay		14.3			19.2		55.3		27.1
Approach LOS		B			B		E		C

### Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 23.5

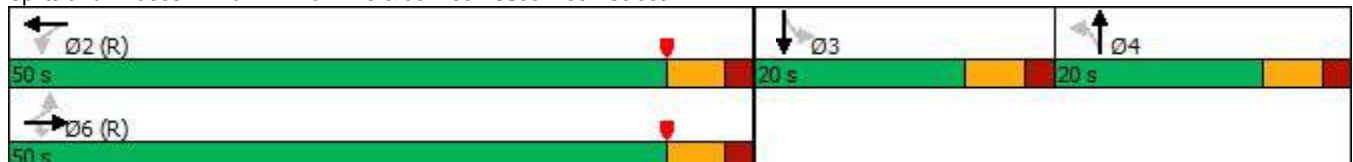
Intersection LOS: C

Intersection Capacity Utilization 70.6%

ICU Level of Service C

Analysis Period (min) 15

### Splits and Phases: 101: NW 62 Ave & Johnson St/Johnson Street



## Queues

### 101: NW 62 Ave & Johnson St/Johnson Street























Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	52	442	133	52	534	248	120
v/c Ratio	0.18	0.49	0.16	0.14	0.59	0.81	0.56
Control Delay	14.9	17.7	3.0	14.0	19.8	55.3	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	17.7	3.0	14.0	19.8	55.3	27.1
Queue Length 50th (ft)	16	161	0	16	208	126	24
Queue Length 95th (ft)	39	243	28	37	309	#293	74
Internal Link Dist (ft)		507			550	421	357
Turn Bay Length (ft)	180		115	125			
Base Capacity (vph)	294	910	821	366	908	305	316
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.49	0.16	0.14	0.59	0.81	0.38

#### Intersection Summary

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

# HCM Signalized Intersection Capacity Analysis

## 101: NW 62 Ave & Johnson St/Johnson Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	420	126	49	497	10	151	36	48	8	34	72
Future Volume (vph)	49	420	126	49	497	10	151	36	48	8	34	72
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			6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00			1.00			0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00			0.97			0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			1.00	
Satd. Flow (prot)	1766	1863	1542	1765	1856			1755			1672	
Flt Permitted	0.32	1.00	1.00	0.40	1.00			0.73			0.97	
Satd. Flow (perm)	601	1863	1542	749	1856			1331			1620	
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)	52	442	133	52	523	11	159	38	51	8	36	76
RTOR Reduction (vph)	0	0	67	0	1	0	0	9	0	0	69	0
Lane Group Flow (vph)	52	442	66	52	533	0	0	239	0	0	51	0
Confl. Peds. (#/hr)	3		3	3		3						
Confl. Bikes (#/hr)						2						1
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			3	
Permitted Phases	6		6	2			4			3		
Actuated Green, G (s)	44.0	44.0	44.0	44.0	44.0			20.0			8.0	
Effective Green, g (s)	44.0	44.0	44.0	44.0	44.0			20.0			8.0	
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.49			0.22			0.09	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			2.0			2.0	
Lane Grp Cap (vph)	293	910	753	366	907			295			144	
v/s Ratio Prot		0.24			c0.29							
v/s Ratio Perm	0.09		0.04	0.07				c0.18			c0.03	
v/c Ratio	0.18	0.49	0.09	0.14	0.59			0.81			0.35	
Uniform Delay, d1	12.9	15.4	12.3	12.6	16.5			33.2			38.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.3	1.9	0.2	0.8	2.8			14.2			0.5	
Delay (s)	14.2	17.3	12.5	13.4	19.3			47.4			39.1	
Level of Service	B	B	B	B	B			D			D	
Approach Delay (s)		16.0			18.8			47.4			39.1	
Approach LOS		B			B			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			23.7	HCM 2000 Level of Service				C				
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				18.0				
Intersection Capacity Utilization			70.6%	ICU Level of Service				C				
Analysis Period (min)			15									
c Critical Lane Group												



HCM 6th Signalized Intersection Summary  
101: NW 62 Ave & Johnson St/Johnson Street

---

HCM 6th Edition methodology expects strict NEMA phasing.

HCM 6th TWSC  
 102: N 61 Avenue & Johnson Street

**Intersection**

Int Delay, s/veh 0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	474	1	7	587	27	1	1	10	19	0	30
Future Vol, veh/h	28	474	1	7	587	27	1	1	10	19	0	30
Conflicting Peds, #/hr	3	0	4	4	0	3	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	510	1	8	631	29	1	1	11	20	0	32

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	663	0	0	515
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	926	-	-	1051
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	923	-	-	1047
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	10.9	13.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	623	923	-	-	1047	-	-	481
HCM Lane V/C Ratio	0.021	0.033	-	-	0.007	-	-	0.11
HCM Control Delay (s)	10.9	9	-	-	8.5	-	-	13.4
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

# Timings

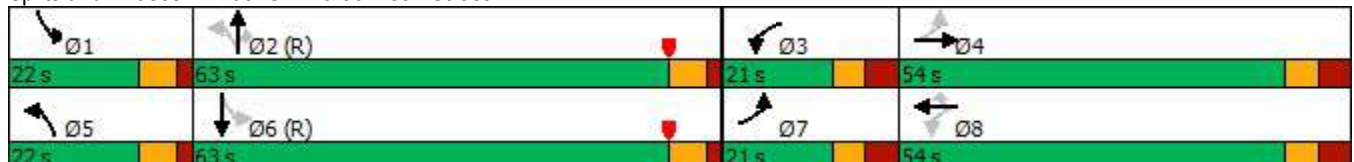
## 103: SR 7 & Johnson Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	121	244	152	360	164	147	1545	123	128	1504
Future Volume (vph)	121	244	152	360	164	147	1545	123	128	1504
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	4.0	6.0	6.0	4.0	12.0	12.0	4.0	12.0
Minimum Split (s)	12.0	54.0	12.0	48.0	48.0	10.5	31.5	31.5	10.5	31.5
Total Split (s)	21.0	54.0	21.0	54.0	54.0	22.0	63.0	63.0	22.0	63.0
Total Split (%)	13.1%	33.8%	13.1%	33.8%	33.8%	13.8%	39.4%	39.4%	13.8%	39.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	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)	8.0	8.0	8.0	8.0	8.0	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	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)	47.2	35.6	48.5	36.3	36.3	83.6	71.9	71.9	82.6	71.4
Actuated g/C Ratio	0.30	0.22	0.30	0.23	0.23	0.52	0.45	0.45	0.52	0.45
v/c Ratio	0.59	0.49	0.51	0.87	0.37	0.82	0.69	0.16	0.70	0.73
Control Delay	46.9	45.4	42.0	79.8	16.5	68.0	39.1	4.8	47.5	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.9	45.4	42.0	79.8	16.5	68.0	39.1	4.8	47.5	40.5
LOS	D	D	D	E	B	E	D	A	D	D
Approach Delay		45.8		56.0			39.1			41.1
Approach LOS		D		E			D			D

### Intersection Summary

Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 137 (86%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 42.9	Intersection LOS: D
Intersection Capacity Utilization 90.5%	ICU Level of Service E
Analysis Period (min) 15	

### Splits and Phases: 103: SR 7 & Johnson Street



Queues

103: SR 7 & Johnson Street


























Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	123	389	155	367	167	150	1577	126	131	1650
v/c Ratio	0.59	0.49	0.51	0.87	0.37	0.82	0.69	0.16	0.70	0.73
Control Delay	46.9	45.4	42.0	79.8	16.5	68.0	39.1	4.8	47.5	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.9	45.4	42.0	79.8	16.5	68.0	39.1	4.8	47.5	40.5
Queue Length 50th (ft)	89	154	114	374	37	98	486	0	65	524
Queue Length 95th (ft)	128	193	157	464	99	#201	632	42	151	674
Internal Link Dist (ft)		280		2492			608			502
Turn Bay Length (ft)	220		115		100	530		140	340	
Base Capacity (vph)	223	1006	311	535	535	224	2285	784	234	2247
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	0.39	0.50	0.69	0.31	0.67	0.69	0.16	0.56	0.73

Intersection Summary

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

# HCM 6th Signalized Intersection Summary

## 103: SR 7 & Johnson Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	244	137	152	360	164	147	1545	123	128	1504	113
Future Volume (veh/h)	121	244	137	152	360	164	147	1545	123	128	1504	113
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		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	123	249	140	155	367	167	150	1577	126	131	1535	115
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	185	449	244	286	405	338	216	2480	770	208	2323	174
Arrive On Green	0.07	0.20	0.20	0.08	0.22	0.22	0.06	0.49	0.49	0.05	0.48	0.48
Sat Flow, veh/h	1781	2220	1206	1781	1870	1560	1781	5106	1584	1781	4837	362
Grp Volume(v), veh/h	123	198	191	155	367	167	150	1577	126	131	1080	570
Grp Sat Flow(s),veh/h/ln	1781	1777	1649	1781	1870	1560	1781	1702	1584	1781	1702	1795
Q Serve(g_s), s	8.7	16.0	16.8	10.9	30.6	15.0	6.8	36.8	7.1	6.0	38.6	38.7
Cycle Q Clear(g_c), s	8.7	16.0	16.8	10.9	30.6	15.0	6.8	36.8	7.1	6.0	38.6	38.7
Prop In Lane	1.00		0.73	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	185	359	333	286	405	338	216	2480	770	208	1635	862
V/C Ratio(X)	0.66	0.55	0.57	0.54	0.91	0.49	0.69	0.64	0.16	0.63	0.66	0.66
Avail Cap(c_a), veh/h	212	511	474	286	538	449	290	2480	770	291	1635	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	57.3	57.6	46.1	61.1	55.0	28.1	30.6	23.0	26.4	31.7	31.7
Incr Delay (d2), s/veh	4.3	0.5	0.6	1.2	13.6	0.4	2.1	1.3	0.5	1.2	2.1	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	7.3	7.1	5.0	16.1	6.0	3.0	15.5	2.8	2.6	16.5	17.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	57.8	58.2	47.2	74.7	55.4	30.2	31.9	23.4	27.6	33.8	35.6
LnGrp LOS	D	E	E	D	E	E	C	C	C	C	C	D
Approach Vol, veh/h		512			689			1853			1781	
Approach Delay, s/veh		56.8			63.9			31.2			33.9	
Approach LOS		E			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.5	84.2	20.9	40.4	15.4	83.3	18.7	42.6				
Change Period (Y+Rc), s	6.5	6.5	8.0	8.0	6.5	6.5	8.0	8.0				
Max Green Setting (Gmax), s	15.5	56.5	13.0	46.0	15.5	56.5	13.0	46.0				
Max Q Clear Time (g_c+I1), s	8.0	38.8	12.9	18.8	8.8	40.7	10.7	32.6				
Green Ext Time (p_c), s	0.1	11.3	0.0	1.6	0.1	10.2	0.0	1.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				39.5								
HCM 6th LOS				D								

# Timings

## 101: NW 62 Ave & Johnson St/Johnson Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	50	433	130	50	512	156	37	8	35
Future Volume (vph)	50	433	130	50	512	156	37	8	35
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		6			2		4		3
Permitted Phases	6		6	2		4		3	
Detector Phase	6	6	6	2	2	4	4	3	3
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	6.0	6.0	6.0	6.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	20.0	20.0	20.0	20.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	20.0	20.0	20.0	20.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	55.6%	22.2%	22.2%	22.2%	22.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0		6.0
Lead/Lag						Lag	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	44.0	44.0	44.0	44.0	44.0		20.0		8.0
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.49		0.22		0.09
v/c Ratio	0.19	0.50	0.17	0.15	0.61		0.84		0.57
Control Delay	15.2	18.0	3.1	14.1	20.2		59.1		27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	15.2	18.0	3.1	14.1	20.2		59.1		27.1
LOS	B	B	A	B	C		E		C
Approach Delay		14.6			19.7		59.1		27.1
Approach LOS		B			B		E		C

### Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 24.4

Intersection LOS: C

Intersection Capacity Utilization 71.8%

ICU Level of Service C

Analysis Period (min) 15

### Splits and Phases: 101: NW 62 Ave & Johnson St/Johnson Street



## Queues

### 101: NW 62 Ave & Johnson St/Johnson Street






















Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	53	456	137	53	551	255	124
v/c Ratio	0.19	0.50	0.17	0.15	0.61	0.84	0.57
Control Delay	15.2	18.0	3.1	14.1	20.2	59.1	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.2	18.0	3.1	14.1	20.2	59.1	27.1
Queue Length 50th (ft)	16	168	1	16	217	131	25
Queue Length 95th (ft)	40	252	30	38	323	#305	75
Internal Link Dist (ft)		507			550	421	357
Turn Bay Length (ft)	180		115	125			
Base Capacity (vph)	280	910	821	354	908	302	319
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.50	0.17	0.15	0.61	0.84	0.39

#### Intersection Summary

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

# HCM Signalized Intersection Capacity Analysis

## 101: NW 62 Ave & Johnson St/Johnson Street

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (vph)	50	433	130	50	512	11	156	37	49	8	35	75		
Future Volume (vph)	50	433	130	50	512	11	156	37	49	8	35	75		
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			6.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00			
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00			1.00			0.98			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00			
Frt	1.00	1.00	0.85	1.00	1.00			0.97			0.91			
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			1.00			
Satd. Flow (prot)	1766	1863	1542	1765	1856			1755			1671			
Flt Permitted	0.31	1.00	1.00	0.39	1.00			0.73			0.97			
Satd. Flow (perm)	575	1863	1542	726	1856			1326			1621			
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)	53	456	137	53	539	12	164	39	52	8	37	79		
RTOR Reduction (vph)	0	0	67	0	1	0	0	9	0	0	72	0		
Lane Group Flow (vph)	53	456	70	53	550	0	0	246	0	0	52	0		
Confl. Peds. (#/hr)	3		3	3		3								
Confl. Bikes (#/hr)						2						1		
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA			
Protected Phases		6			2			4			3			
Permitted Phases	6		6	2			4			3				
Actuated Green, G (s)	44.0	44.0	44.0	44.0	44.0			20.0			8.0			
Effective Green, g (s)	44.0	44.0	44.0	44.0	44.0			20.0			8.0			
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.49			0.22			0.09			
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.0			6.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			2.0			2.0			
Lane Grp Cap (vph)	281	910	753	354	907			294			144			
v/s Ratio Prot		0.24			c0.30									
v/s Ratio Perm	0.09		0.05	0.07				c0.19			c0.03			
v/c Ratio	0.19	0.50	0.09	0.15	0.61			0.84			0.36			
Uniform Delay, d1	12.9	15.6	12.3	12.7	16.7			33.4			38.6			
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00			
Incremental Delay, d2	1.5	2.0	0.2	0.9	3.0			17.5			0.6			
Delay (s)	14.4	17.5	12.6	13.6	19.7			50.9			39.2			
Level of Service	B	B	B	B	B			D			D			
Approach Delay (s)		16.2			19.2			50.9			39.2			
Approach LOS		B			B			D			D			
<b>Intersection Summary</b>														
HCM 2000 Control Delay			24.5									HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio			0.64											
Actuated Cycle Length (s)			90.0								18.0			
Intersection Capacity Utilization			71.8%										ICU Level of Service	C
Analysis Period (min)			15											

c Critical Lane Group



HCM 6th Signalized Intersection Summary  
101: NW 62 Ave & Johnson St/Johnson Street

---

HCM 6th Edition methodology expects strict NEMA phasing.

HCM 6th TWSC  
102: N 61 Avenue & Johnson Street

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	489	1	8	604	28	1	1	11	19	0	31
Future Vol, veh/h	29	489	1	8	604	28	1	1	11	19	0	31
Conflicting Peds, #/hr	3	0	4	4	0	3	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	526	1	9	649	30	1	1	12	20	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	682	0	0	531	0	0	1293	1293	532	1281	1278	668
Stage 1	-	-	-	-	-	-	593	593	-	685	685	-
Stage 2	-	-	-	-	-	-	700	700	-	596	593	-
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	911	-	-	1036	-	-	325	325	764	330	331	679
Stage 1	-	-	-	-	-	-	667	667	-	608	608	-
Stage 2	-	-	-	-	-	-	599	599	-	665	667	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	908	-	-	1032	-	-	297	309	760	312	315	676
Mov Cap-2 Maneuver	-	-	-	-	-	-	297	309	-	312	315	-
Stage 1	-	-	-	-	-	-	642	642	-	586	601	-
Stage 2	-	-	-	-	-	-	564	592	-	631	642	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.1			11			13.7		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	617	908	-	-	1032	-	-	468
HCM Lane V/C Ratio	0.023	0.034	-	-	0.008	-	-	0.115
HCM Control Delay (s)	11	9.1	-	-	8.5	-	-	13.7
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

# Timings

## 103: SR 7 & Johnson Street

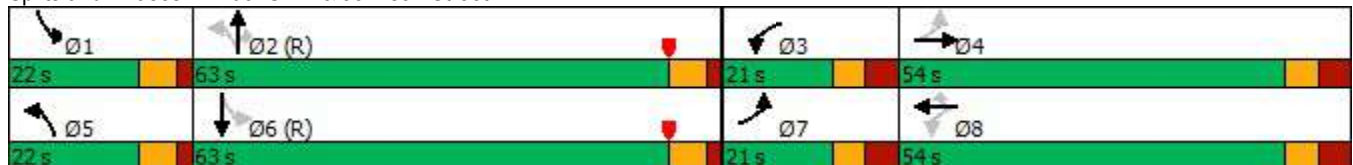
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	125	252	157	371	169	151	1592	127	131	1549
Future Volume (vph)	125	252	157	371	169	151	1592	127	131	1549
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	4.0	6.0	6.0	4.0	12.0	12.0	4.0	12.0
Minimum Split (s)	12.0	54.0	12.0	48.0	48.0	10.5	31.5	31.5	10.5	31.5
Total Split (s)	21.0	54.0	21.0	54.0	54.0	22.0	63.0	63.0	22.0	63.0
Total Split (%)	13.1%	33.8%	13.1%	33.8%	33.8%	13.8%	39.4%	39.4%	13.8%	39.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	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)	8.0	8.0	8.0	8.0	8.0	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	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)	48.2	36.4	49.4	37.1	37.1	83.0	70.8	70.8	81.5	70.1
Actuated g/C Ratio	0.30	0.23	0.31	0.23	0.23	0.52	0.44	0.44	0.51	0.44
v/c Ratio	0.62	0.50	0.53	0.88	0.38	0.86	0.72	0.17	0.74	0.77
Control Delay	48.0	45.4	42.0	80.3	17.2	77.8	40.6	5.2	56.5	42.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.0	45.4	42.0	80.3	17.2	77.8	40.6	5.2	56.5	42.5
LOS	D	D	D	F	B	E	D	A	E	D
Approach Delay		46.0		56.4			41.2			43.5
Approach LOS		D		E			D			D

### Intersection Summary

Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 137 (86%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 44.7  
 Intersection Capacity Utilization 92.4%  
 Analysis Period (min) 15

Intersection LOS: D  
 ICU Level of Service F

### Splits and Phases: 103: SR 7 & Johnson Street



# Queues

## 103: SR 7 & Johnson Street


























Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	128	402	160	379	172	154	1624	130	134	1699
v/c Ratio	0.62	0.50	0.53	0.88	0.38	0.86	0.72	0.17	0.74	0.77
Control Delay	48.0	45.4	42.0	80.3	17.2	77.8	40.6	5.2	56.5	42.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.0	45.4	42.0	80.3	17.2	77.8	40.6	5.2	56.5	42.5
Queue Length 50th (ft)	92	160	117	386	41	111	515	0	79	558
Queue Length 95th (ft)	132	200	162	482	104	#224	658	45	164	#735
Internal Link Dist (ft)		280		2492			608			502
Turn Bay Length (ft)	220		115		100	530		140	340	
Base Capacity (vph)	220	1006	311	535	535	218	2250	775	225	2205
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	0.40	0.51	0.71	0.32	0.71	0.72	0.17	0.60	0.77

### Intersection Summary

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

# HCM 6th Signalized Intersection Summary

## 103: SR 7 & Johnson Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	252	142	157	371	169	151	1592	127	131	1549	116
Future Volume (veh/h)	125	252	142	157	371	169	151	1592	127	131	1549	116
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		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	128	257	145	160	379	172	154	1624	130	134	1581	118
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	188	464	253	289	416	347	209	2433	755	201	2277	170
Arrive On Green	0.07	0.21	0.21	0.08	0.22	0.22	0.06	0.48	0.48	0.05	0.47	0.47
Sat Flow, veh/h	1781	2216	1209	1781	1870	1560	1781	5106	1584	1781	4839	361
Grp Volume(v), veh/h	128	204	198	160	379	172	154	1624	130	134	1112	587
Grp Sat Flow(s),veh/h/ln	1781	1777	1649	1781	1870	1560	1781	1702	1584	1781	1702	1796
Q Serve(g_s), s	8.9	16.4	17.2	11.2	31.6	15.4	7.1	39.1	7.5	6.2	41.1	41.1
Cycle Q Clear(g_c), s	8.9	16.4	17.2	11.2	31.6	15.4	7.1	39.1	7.5	6.2	41.1	41.1
Prop In Lane	1.00		0.73	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	188	372	345	289	416	347	209	2433	755	201	1602	845
V/C Ratio(X)	0.68	0.55	0.57	0.55	0.91	0.50	0.74	0.67	0.17	0.67	0.69	0.69
Avail Cap(c_a), veh/h	211	511	474	289	538	449	279	2433	755	281	1602	845
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	56.5	56.8	45.3	60.7	54.4	30.4	32.1	23.9	28.6	33.3	33.3
Incr Delay (d2), s/veh	5.5	0.5	0.6	1.4	14.9	0.4	4.1	1.5	0.5	1.4	2.5	4.7
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	4.3	7.5	7.3	5.1	16.8	6.2	3.3	16.5	3.0	2.7	17.6	19.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	57.0	57.4	46.7	75.6	54.8	34.5	33.6	24.4	30.1	35.8	38.0
LnGrp LOS	D	E	E	D	E	D	C	C	C	C	D	D
Approach Vol, veh/h		530			711			1908			1833	
Approach Delay, s/veh		56.3			64.0			33.0			36.1	
Approach LOS		E			E			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.8	82.8	21.0	41.5	15.7	81.8	18.9	43.6				
Change Period (Y+Rc), s	6.5	6.5	8.0	8.0	6.5	6.5	8.0	8.0				
Max Green Setting (Gmax), s	15.5	56.5	13.0	46.0	15.5	56.5	13.0	46.0				
Max Q Clear Time (g_c+I1), s	8.2	41.1	13.2	19.2	9.1	43.1	10.9	33.6				
Green Ext Time (p_c), s	0.1	10.5	0.0	1.6	0.1	9.2	0.0	1.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			41.1									
HCM 6th LOS			D									

# Timings

## 101: NW 62 Ave & Johnson St/Johnson Street



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗		↕		↕
Traffic Volume (vph)	50	445	130	50	518	156	37	8	35
Future Volume (vph)	50	445	130	50	518	156	37	8	35
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		6			2		4		3
Permitted Phases	6		6	2		4		3	
Detector Phase	6	6	6	2	2	4	4	3	3
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	6.0	6.0	6.0	6.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	20.0	20.0	20.0	20.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	20.0	20.0	20.0	20.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	55.6%	22.2%	22.2%	22.2%	22.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0		6.0
Lead/Lag						Lag	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	44.0	44.0	44.0	44.0	44.0		20.0		8.0
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.49		0.22		0.09
v/c Ratio	0.19	0.51	0.17	0.15	0.61		0.84		0.57
Control Delay	15.3	18.2	3.4	14.3	20.4		59.1		27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	15.3	18.2	3.4	14.3	20.4		59.1		27.1
LOS	B	B	A	B	C		E		C
Approach Delay		14.9			19.8		59.1		27.1
Approach LOS		B			B		E		C

### Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 24.5

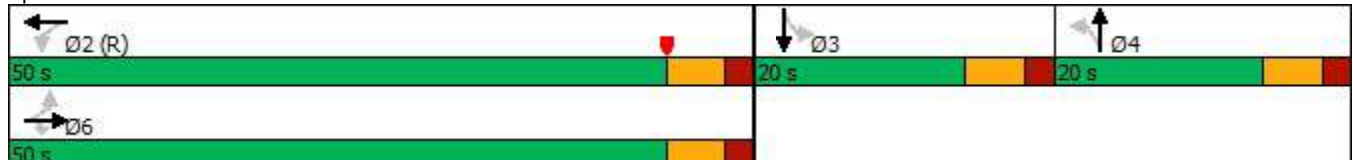
Intersection LOS: C

Intersection Capacity Utilization 71.8%

ICU Level of Service C

Analysis Period (min) 15

### Splits and Phases: 101: NW 62 Ave & Johnson St/Johnson Street



## Queues

### 101: NW 62 Ave & Johnson St/Johnson Street























Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	53	468	137	53	557	255	124
v/c Ratio	0.19	0.51	0.17	0.15	0.61	0.84	0.57
Control Delay	15.3	18.2	3.4	14.3	20.4	59.1	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	18.2	3.4	14.3	20.4	59.1	27.1
Queue Length 50th (ft)	16	174	3	16	220	131	25
Queue Length 95th (ft)	41	261	31	39	328	#305	75
Internal Link Dist (ft)		507			550	421	357
Turn Bay Length (ft)	180		115	125			
Base Capacity (vph)	276	910	819	345	908	302	319
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.51	0.17	0.15	0.61	0.84	0.39

#### Intersection Summary

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

# HCM Signalized Intersection Capacity Analysis

## 101: NW 62 Ave & Johnson St/Johnson Street

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	50	445	130	50	518	11	156	37	49	8	35	75	
Future Volume (vph)	50	445	130	50	518	11	156	37	49	8	35	75	
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			6.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00		
Frbp, ped/bikes	1.00	1.00	0.97	1.00	1.00			1.00			0.98		
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00		
Frt	1.00	1.00	0.85	1.00	1.00			0.97			0.91		
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			1.00		
Satd. Flow (prot)	1766	1863	1542	1765	1856			1755			1671		
Flt Permitted	0.30	1.00	1.00	0.38	1.00			0.73			0.97		
Satd. Flow (perm)	566	1863	1542	707	1856			1326			1621		
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)	53	468	137	53	545	12	164	39	52	8	37	79	
RTOR Reduction (vph)	0	0	65	0	1	0	0	9	0	0	72	0	
Lane Group Flow (vph)	53	468	72	53	556	0	0	246	0	0	52	0	
Confl. Peds. (#/hr)	3		3	3		3							
Confl. Bikes (#/hr)						2						1	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		6			2			4			3		
Permitted Phases	6		6	2			4			3			
Actuated Green, G (s)	44.0	44.0	44.0	44.0	44.0			20.0			8.0		
Effective Green, g (s)	44.0	44.0	44.0	44.0	44.0			20.0			8.0		
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.49			0.22			0.09		
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0			6.0			6.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			2.0			2.0		
Lane Grp Cap (vph)	276	910	753	345	907			294			144		
v/s Ratio Prot		0.25			c0.30								
v/s Ratio Perm	0.09		0.05	0.08				c0.19			c0.03		
v/c Ratio	0.19	0.51	0.10	0.15	0.61			0.84			0.36		
Uniform Delay, d1	13.0	15.7	12.3	12.7	16.8			33.4			38.6		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00		
Incremental Delay, d2	1.5	2.1	0.3	0.9	3.1			17.5			0.6		
Delay (s)	14.5	17.8	12.6	13.7	19.9			50.9			39.2		
Level of Service	B	B	B	B	B			D			D		
Approach Delay (s)		16.4			19.3			50.9			39.2		
Approach LOS		B			B			D			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			24.6	HCM 2000 Level of Service				C					
HCM 2000 Volume to Capacity ratio			0.65										
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				18.0					
Intersection Capacity Utilization			71.8%	ICU Level of Service				C					
Analysis Period (min)			15										
c Critical Lane Group													



HCM 6th Signalized Intersection Summary  
101: NW 62 Ave & Johnson St/Johnson Street

---

HCM 6th Edition methodology expects strict NEMA phasing.

HCM 6th TWSC  
102: N 61 Avenue & Johnson Street

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	29	497	5	8	604	28	7	1	11	19	0	31
Future Vol, veh/h	29	497	5	8	604	28	7	1	11	19	0	31
Conflicting Peds, #/hr	3	0	4	4	0	3	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	534	5	9	649	30	8	1	12	20	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	682	0	0	543	0	0	1303	1303	542	1291	1290	668
Stage 1	-	-	-	-	-	-	603	603	-	685	685	-
Stage 2	-	-	-	-	-	-	700	700	-	606	605	-
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	911	-	-	1026	-	-	322	322	757	326	326	679
Stage 1	-	-	-	-	-	-	661	661	-	608	608	-
Stage 2	-	-	-	-	-	-	599	599	-	659	659	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	908	-	-	1022	-	-	295	306	753	308	310	676
Mov Cap-2 Maneuver	-	-	-	-	-	-	295	306	-	308	310	-
Stage 1	-	-	-	-	-	-	636	636	-	586	601	-
Stage 2	-	-	-	-	-	-	564	592	-	625	634	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.1			13.1			13.8		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	296	753	908	-	-	1022	-	-	465
HCM Lane V/C Ratio	0.029	0.016	0.034	-	-	0.008	-	-	0.116
HCM Control Delay (s)	17.5	9.9	9.1	-	-	8.6	-	-	13.8
HCM Lane LOS	C	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	0.1	-	-	0	-	-	0.4

# Timings

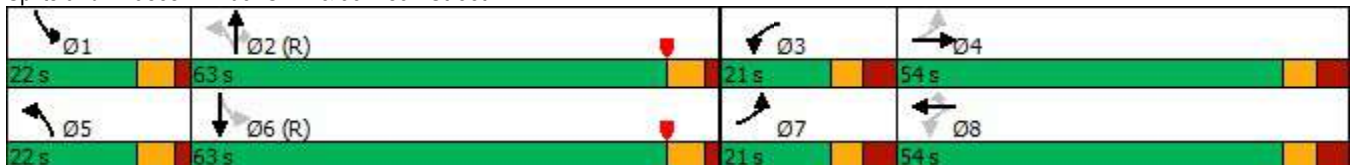
## 103: SR 7 & Johnson Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	145	260	164	375	169	177	1592	127	131	1565
Future Volume (vph)	145	260	164	375	169	177	1592	127	131	1565
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	6.0	4.0	6.0	6.0	4.0	12.0	12.0	4.0	12.0
Minimum Split (s)	12.0	54.0	12.0	48.0	48.0	10.5	31.5	31.5	10.5	31.5
Total Split (s)	21.0	54.0	21.0	54.0	54.0	22.0	63.0	63.0	22.0	63.0
Total Split (%)	13.1%	33.8%	13.1%	33.8%	33.8%	13.8%	39.4%	39.4%	13.8%	39.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	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)	8.0	8.0	8.0	8.0	8.0	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag	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)	49.3	37.1	49.8	37.3	37.3	84.5	70.0	70.0	78.4	67.0
Actuated g/C Ratio	0.31	0.23	0.31	0.23	0.23	0.53	0.44	0.44	0.49	0.42
v/c Ratio	0.70	0.50	0.55	0.88	0.38	0.88	0.73	0.17	0.75	0.82
Control Delay	53.0	45.8	42.4	80.5	17.1	79.3	41.3	5.2	58.3	46.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	45.8	42.4	80.5	17.1	79.3	41.3	5.2	58.3	46.1
LOS	D	D	D	F	B	E	D	A	E	D
Approach Delay		47.7		56.6			42.4			47.0
Approach LOS		D		E			D			D

### Intersection Summary

Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 137 (86%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 46.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 95.7%  
 ICU Level of Service F  
 Analysis Period (min) 15

### Splits and Phases: 103: SR 7 & Johnson Street



# Queues

## 103: SR 7 & Johnson Street


























Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	148	410	167	383	172	181	1624	130	134	1726
v/c Ratio	0.70	0.50	0.55	0.88	0.38	0.88	0.73	0.17	0.75	0.82
Control Delay	53.0	45.8	42.4	80.5	17.1	79.3	41.3	5.2	58.3	46.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	45.8	42.4	80.5	17.1	79.3	41.3	5.2	58.3	46.1
Queue Length 50th (ft)	107	166	122	390	41	137	517	0	82	597
Queue Length 95th (ft)	151	206	169	488	104	#290	658	45	163	#757
Internal Link Dist (ft)		280		2492			608			502
Turn Bay Length (ft)	220		115		100	530		140	340	
Base Capacity (vph)	219	1004	312	535	535	227	2226	767	224	2107
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	0.68	0.41	0.54	0.72	0.32	0.80	0.73	0.17	0.60	0.82

### Intersection Summary

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

# HCM 6th Signalized Intersection Summary

## 103: SR 7 & Johnson Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	260	142	164	375	169	177	1592	127	131	1565	126
Future Volume (veh/h)	145	260	142	164	375	169	177	1592	127	131	1565	126
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		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	148	265	145	167	383	172	181	1624	130	134	1597	129
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	202	491	261	298	419	350	215	2375	737	199	2167	175
Arrive On Green	0.08	0.22	0.22	0.08	0.22	0.22	0.07	0.47	0.47	0.05	0.45	0.45
Sat Flow, veh/h	1781	2241	1188	1781	1870	1560	1781	5106	1584	1781	4806	388
Grp Volume(v), veh/h	148	208	202	167	383	172	181	1624	130	134	1131	595
Grp Sat Flow(s),veh/h/ln	1781	1777	1653	1781	1870	1560	1781	1702	1584	1781	1702	1790
Q Serve(g_s), s	10.2	16.6	17.4	11.6	32.0	15.4	8.7	39.9	7.7	6.5	43.7	43.8
Cycle Q Clear(g_c), s	10.2	16.6	17.4	11.6	32.0	15.4	8.7	39.9	7.7	6.5	43.7	43.8
Prop In Lane	1.00		0.72	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	202	390	362	298	419	350	215	2375	737	199	1535	807
V/C Ratio(X)	0.73	0.53	0.56	0.56	0.91	0.49	0.84	0.68	0.18	0.67	0.74	0.74
Avail Cap(c_a), veh/h	211	511	475	298	538	449	267	2375	737	277	1535	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	55.2	55.5	44.3	60.5	54.1	33.0	33.6	24.9	29.9	36.1	36.1
Incr Delay (d2), s/veh	10.3	0.4	0.5	1.5	15.3	0.4	15.0	1.6	0.5	1.5	3.2	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	5.2	7.6	7.4	5.3	17.0	6.1	4.6	16.9	3.1	2.9	18.9	20.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	55.7	56.0	45.8	75.8	54.5	48.0	35.2	25.5	31.4	39.3	42.1
LnGrp LOS	E	E	E	D	E	D	D	D	C	C	D	D
Approach Vol, veh/h		558			722			1935			1860	
Approach Delay, s/veh		56.2			63.8			35.7			39.6	
Approach LOS		E			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	80.9	21.0	43.1	17.3	78.6	20.2	43.9				
Change Period (Y+Rc), s	6.5	6.5	8.0	8.0	6.5	6.5	8.0	8.0				
Max Green Setting (Gmax), s	15.5	56.5	13.0	46.0	15.5	56.5	13.0	46.0				
Max Q Clear Time (g_c+I1), s	8.5	41.9	13.6	19.4	10.7	45.8	12.2	34.0				
Green Ext Time (p_c), s	0.1	10.0	0.0	1.7	0.1	7.8	0.0	1.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			43.4									
HCM 6th LOS			D									

HCM 6th TWSC  
 201: Driveway & Johnson Street

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	519	8	24	640	0	28
Future Vol, veh/h	519	8	24	640	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	564	9	26	696	0	30

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	573	0	569
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	4.5
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	3
Pot Cap-1 Maneuver	-	-	1000	-	740
Stage 1	-	-	-	-	0
Stage 2	-	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1000	-	740
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	740	-	-	1000	-
HCM Lane V/C Ratio	0.041	-	-	0.026	-
HCM Control Delay (s)	10.1	-	-	8.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

# HCM Unsignalized Intersection Capacity Analysis

## 202: Lincoln Street/Driveway & N 61 Avenue



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	0	3	6	4	9
Future Volume (Veh/h)	13	0	3	6	4	9
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	0	3	7	4	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type						
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	22	13	18	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	22	13	18	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	99	100	100	99	100	
cM capacity (veh/h)	980	879	874	1085	1623	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	14	10	14			
Volume Left	14	0	4			
Volume Right	0	7	10			
cSH	980	1012	1623			
Volume to Capacity	0.01	0.01	0.00			
Queue Length 95th (ft)	1	1	0			
Control Delay (s)	8.7	8.6	2.1			
Lane LOS	A	A	A			
Approach Delay (s)	8.7	8.6	2.1			
Approach LOS	A	A				
Intersection Summary						
Average Delay			6.2			
Intersection Capacity Utilization			17.4%		ICU Level of Service	A
Analysis Period (min)			15			

HCM 6th TWSC  
203: Driveway & SR 7

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑↑	↑↑↑	↗
Traffic Vol, veh/h	0	20	0	1896	1832	39
Future Vol, veh/h	0	20	0	1896	1832	39
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	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	0	2061	1991	42

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	996	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.14	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.92	-
Pot Cap-1 Maneuver	0	209	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			
Mov Cap-1 Maneuver	-	209	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	- 209	-	-
HCM Lane V/C Ratio	- 0.104	-	-
HCM Control Delay (s)	- 24.2	-	-
HCM Lane LOS	- C	-	-
HCM 95th %tile Q(veh)	- 0.3	-	-



**Attachment F**  
**ITE Trip Generation Formula**

# 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

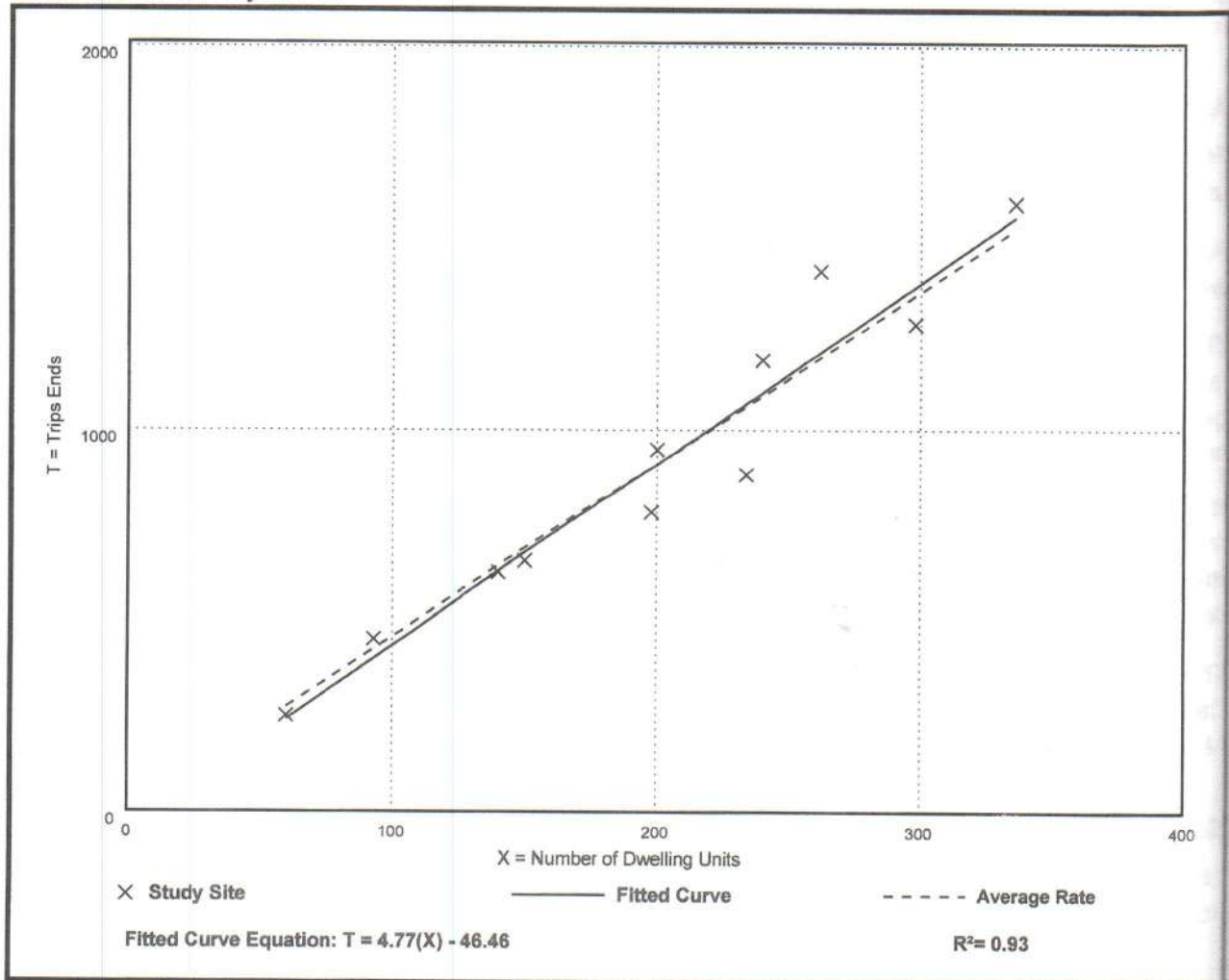
Avg. Num. of Dwelling Units: 201

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

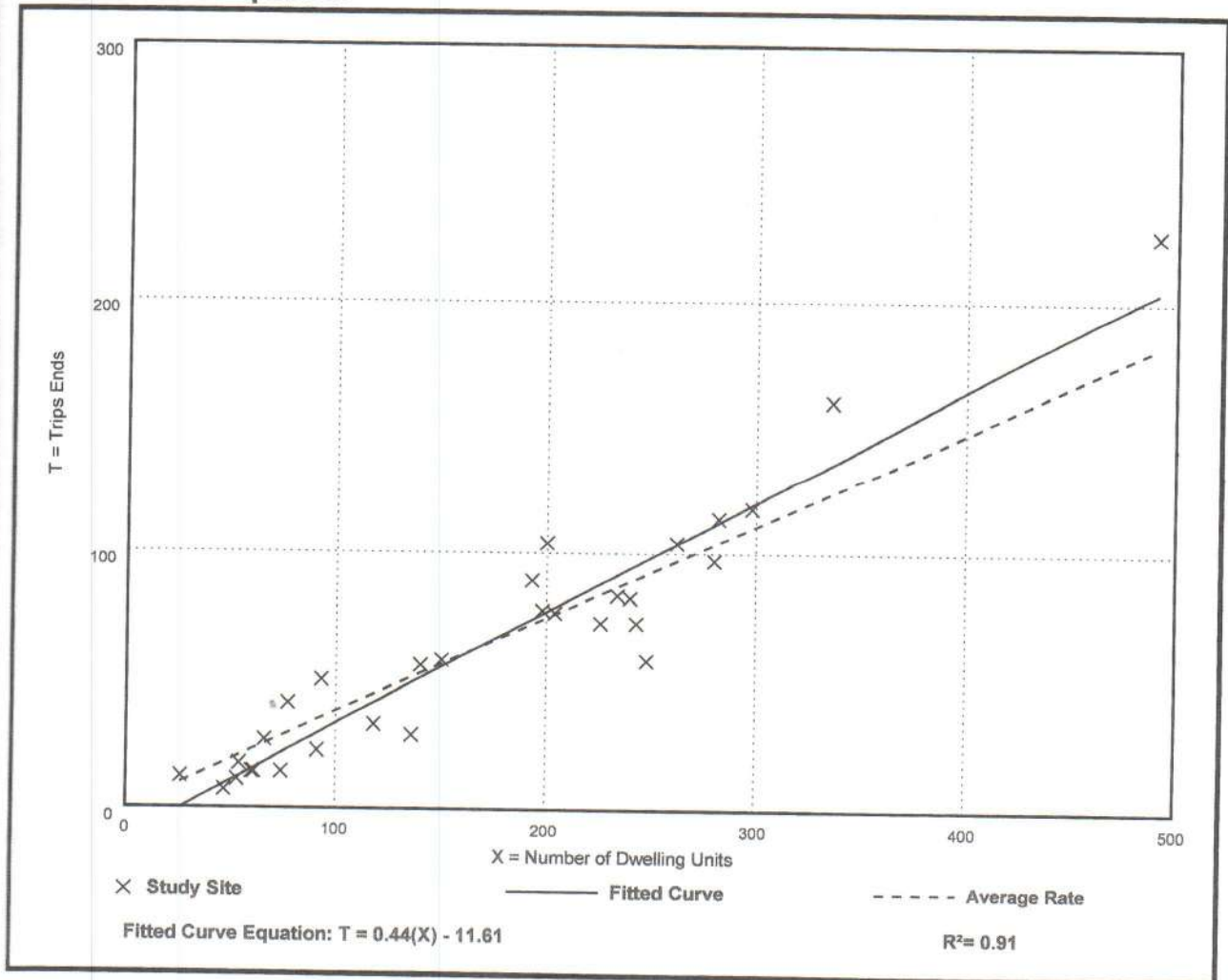
Avg. Num. of Dwelling Units: 173

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



# 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

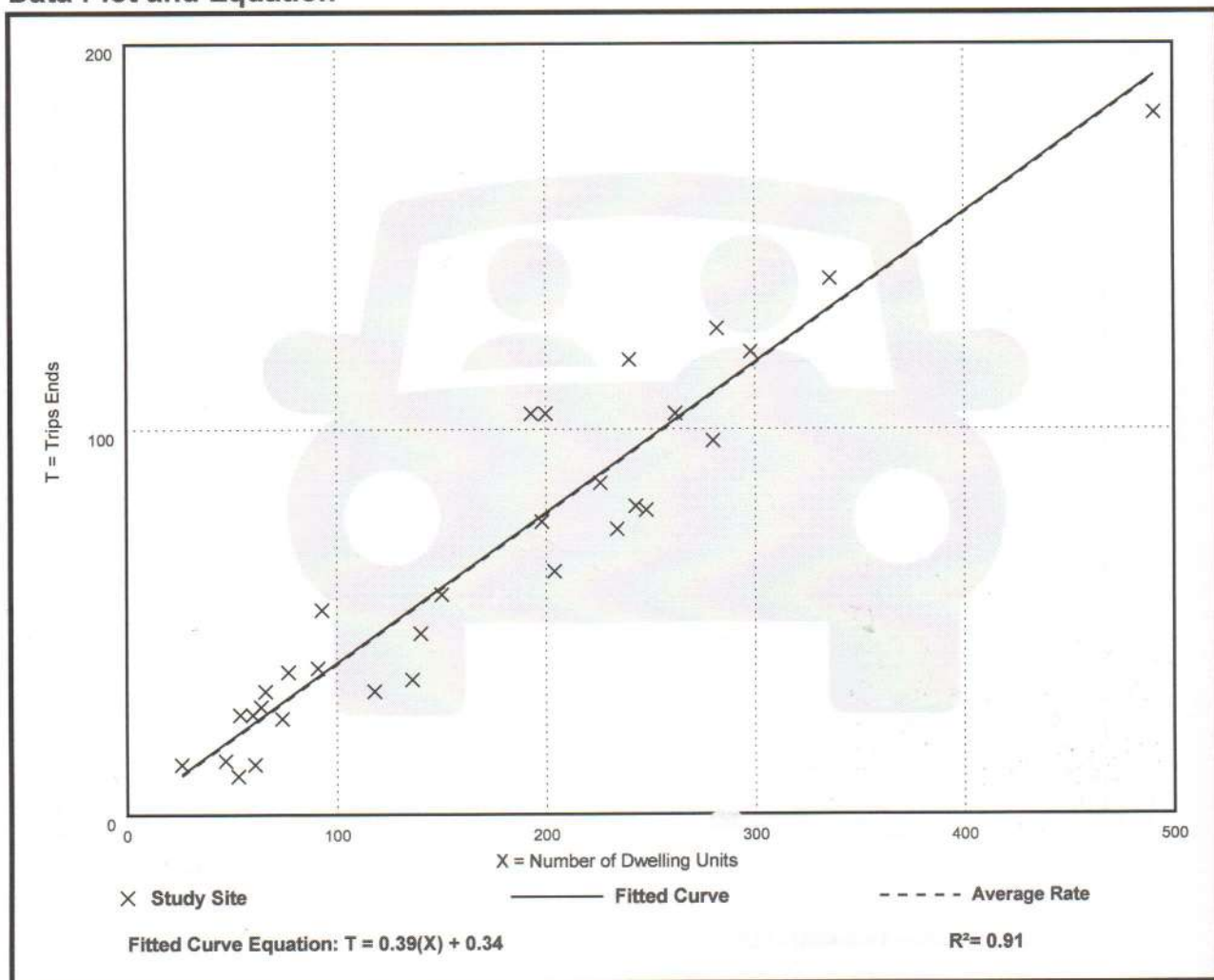
Avg. Num. of Dwelling Units: 169

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



# Land Use: 712

## Small Office Building

---

### Description

A small office building is the same as a general office building (Land Use 710) but with less than or equal to 10,000 square feet of gross floor area. The building typically houses a single tenant. It is a location where affairs of a business, commercial or industrial organization, or professional person or firm are conducted. General office building (Land Use 710) is a related use.

### Additional Data

Attorney office, mortgage company, financial advisor, insurance agency, home health care provider, and real estate company are examples of tenants included in the small office building database. The diversity of employer types results in a wide range in employee density in the database. Densities range from a high of 1,300 to a low of 240 square feet per employee with an overall average of nearly 600 square feet per employee (a value much larger than the average observed in a general office building study sites).

In addition to the significant difference in employee density, small office buildings tend to be dominated by a single tenant (or very few) that are more service-oriented than a typical general office building. The result is more frequent and regular visitors and higher trip generation rates.

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 sites were surveyed in the 1980s and the 2010s in Alberta (CAN), California, Texas, and Wisconsin.

### Source Numbers

418, 890, 891, 959, 976

# Small Office Building (712)

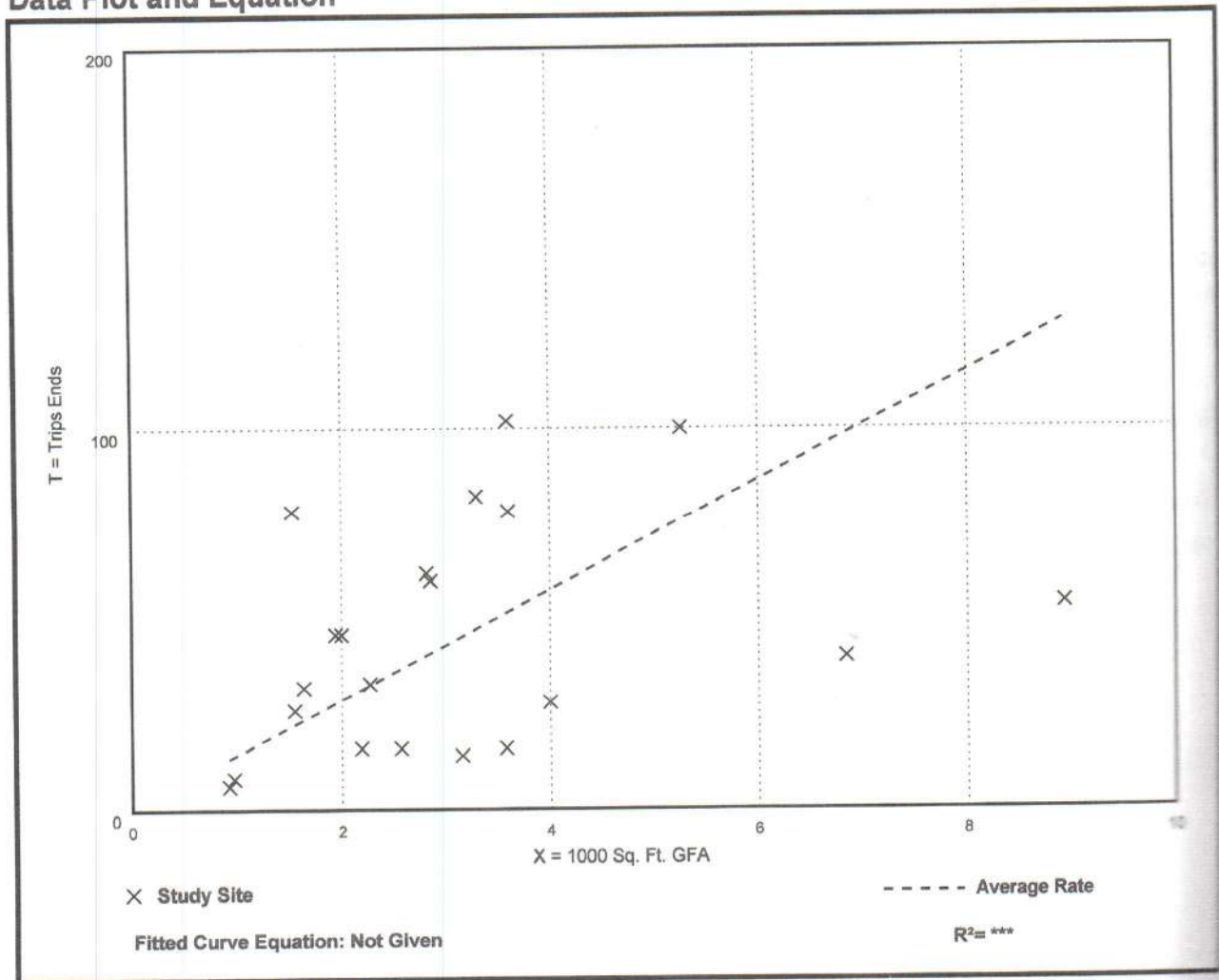
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 21  
Avg. 1000 Sq. Ft. GFA: 3  
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
14.39	4.44 - 50.91	10.16

## Data Plot and Equation



# Small Office Building (712)

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: 21

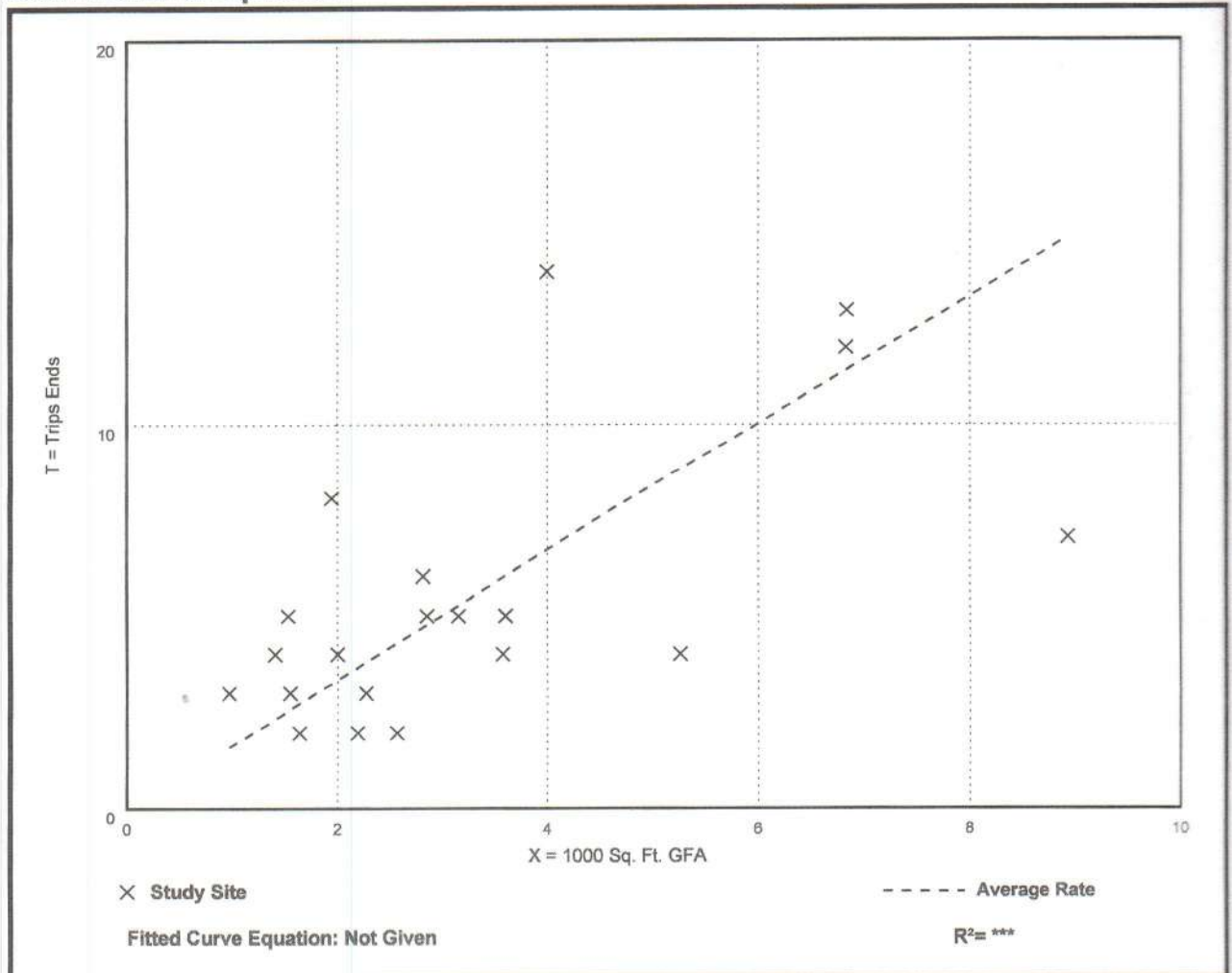
Avg. 1000 Sq. Ft. GFA: 3

Directional Distribution: 82% entering, 18% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.67	0.76 - 4.12	0.88

## Data Plot and Equation





# Small Office Building (712)

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: 21

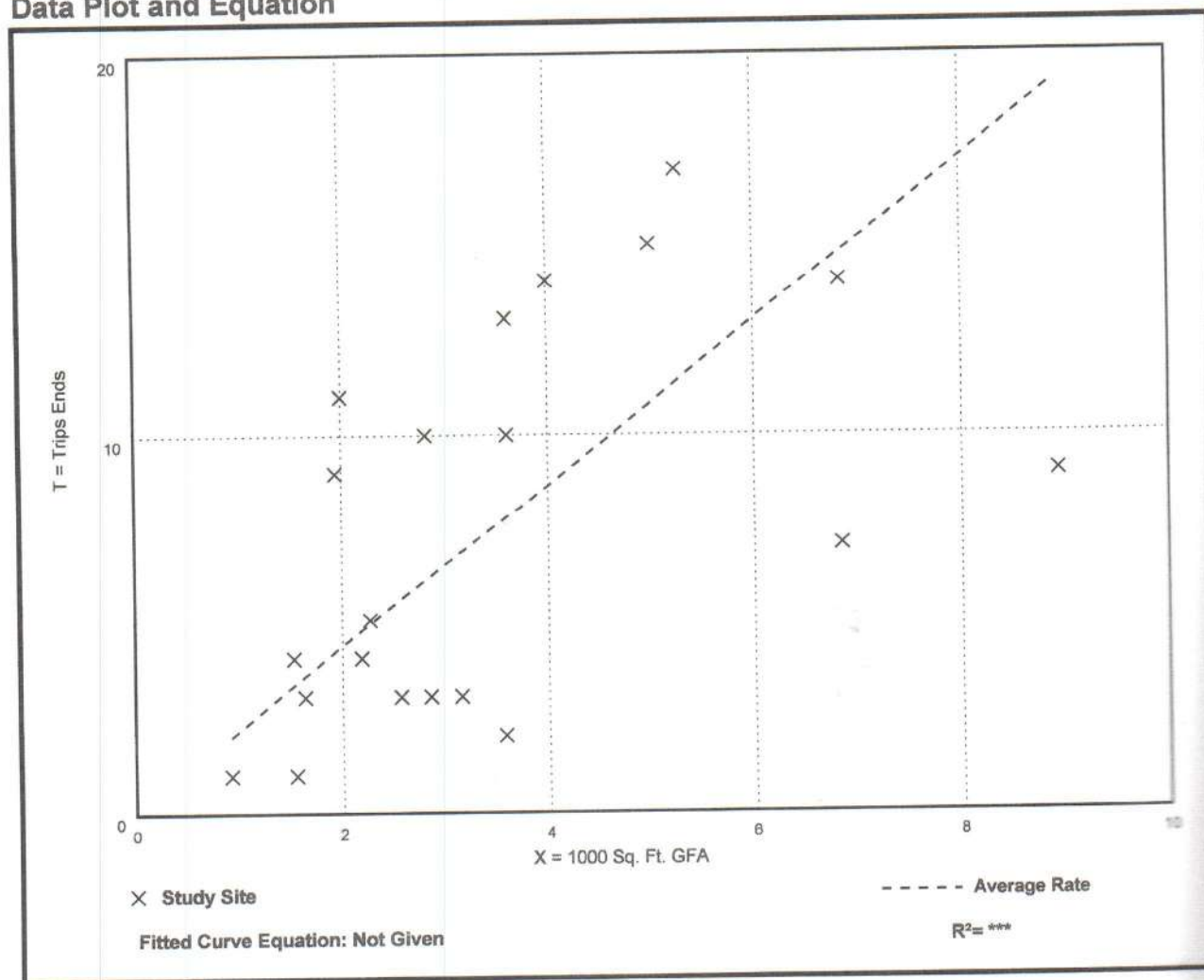
Avg. 1000 Sq. Ft. GFA: 3

Directional Distribution: 34% entering, 66% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.16	0.56 - 5.50	1.26

## Data Plot and Equation



## Land Use: 822 Strip Retail Plaza (<40k)

---

### **Description**

A strip retail plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has less than 40,000 square feet of gross leasable area (GLA). Because a strip retail plaza is open-air, the GLA is the same as the gross floor area of the building.

The 40,000 square feet GFA threshold between strip retail plaza and shopping plaza (Land Use 821) was selected based on an examination of the overall shopping center/plaza database. No shopping plaza with a supermarket as its anchor is smaller than 40,000 square feet GLA.

Shopping center (>150k) (Land use 820), shopping plaza (40-150k) (Land Use 821), and factory outlet center (Land Use 823) are related uses.

### **Additional Data**

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 sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Delaware, Florida, New Jersey, Ontario (CAN), South Dakota, Vermont, Washington, and Wisconsin.

### **Source Numbers**

304, 358, 423, 428, 437, 507, 715, 728, 936, 960, 961, 974, 1009

# Strip Retail Plaza (<40k) (822)

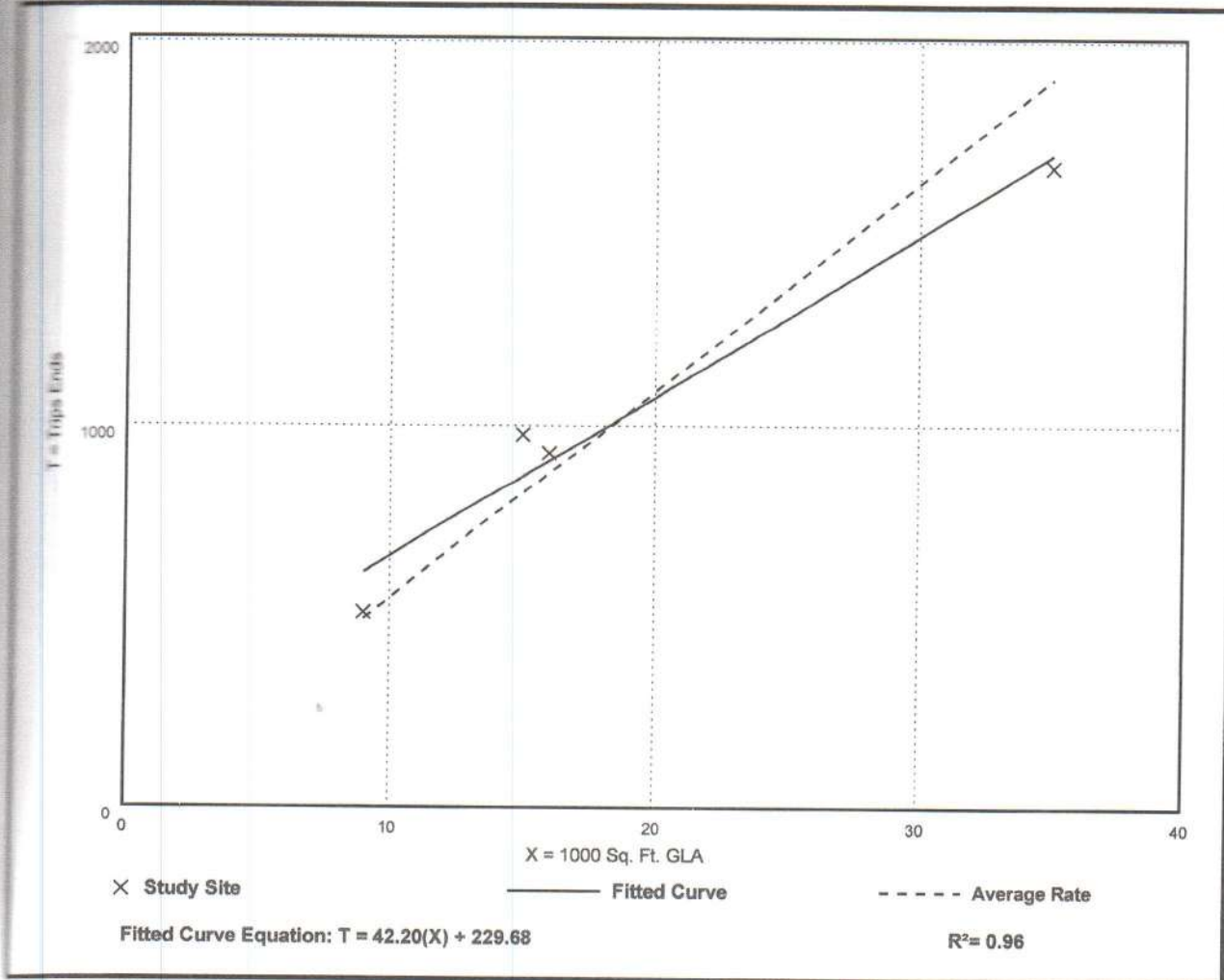
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 4  
Avg. 1000 Sq. Ft. GLA: 19  
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
54.45	47.86 - 65.07	7.81

## Data Plot and Equation



# Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

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: 5

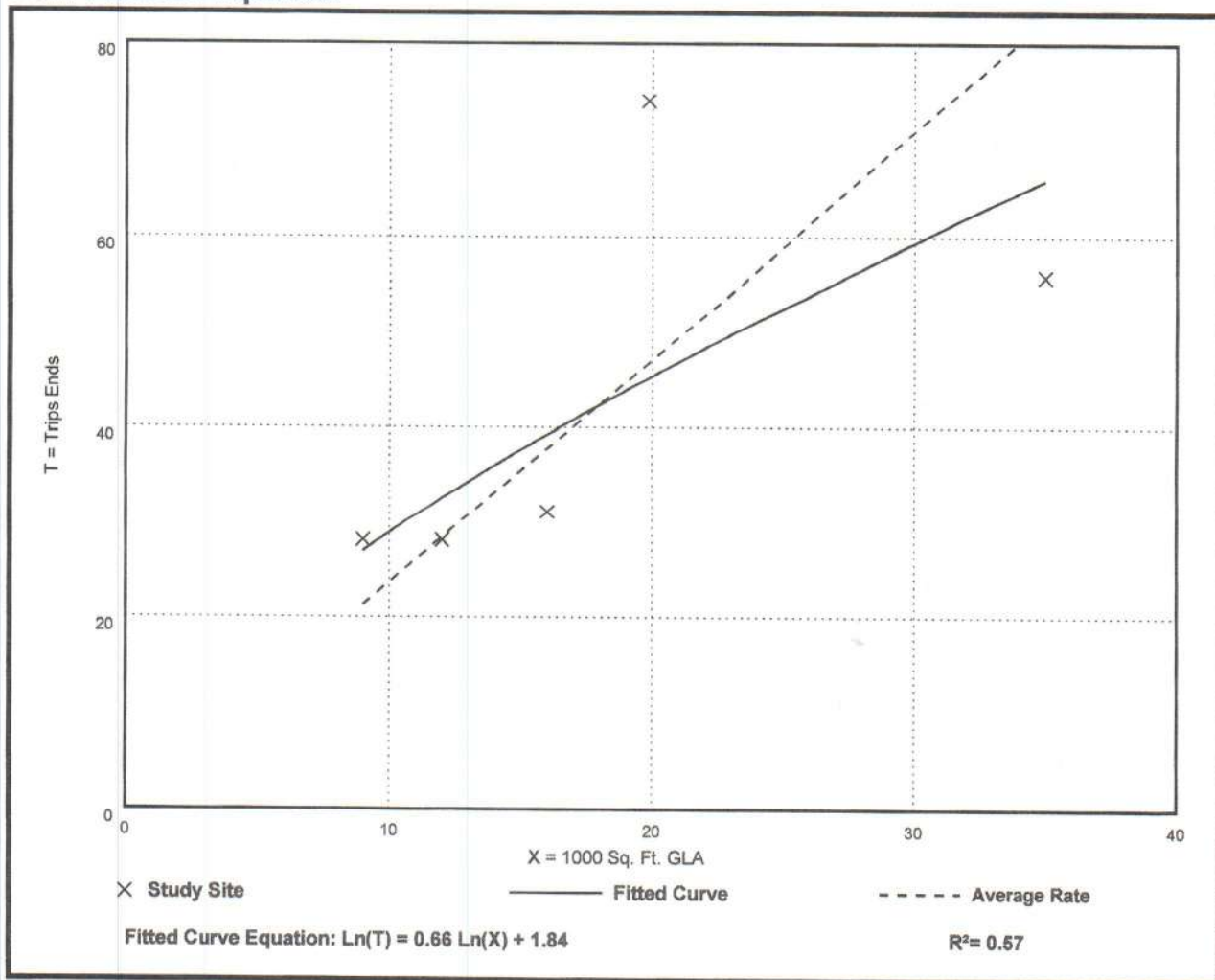
Avg. 1000 Sq. Ft. GLA: 18

Directional Distribution: 60% entering, 40% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

## Data Plot and Equation



# Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

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: 25

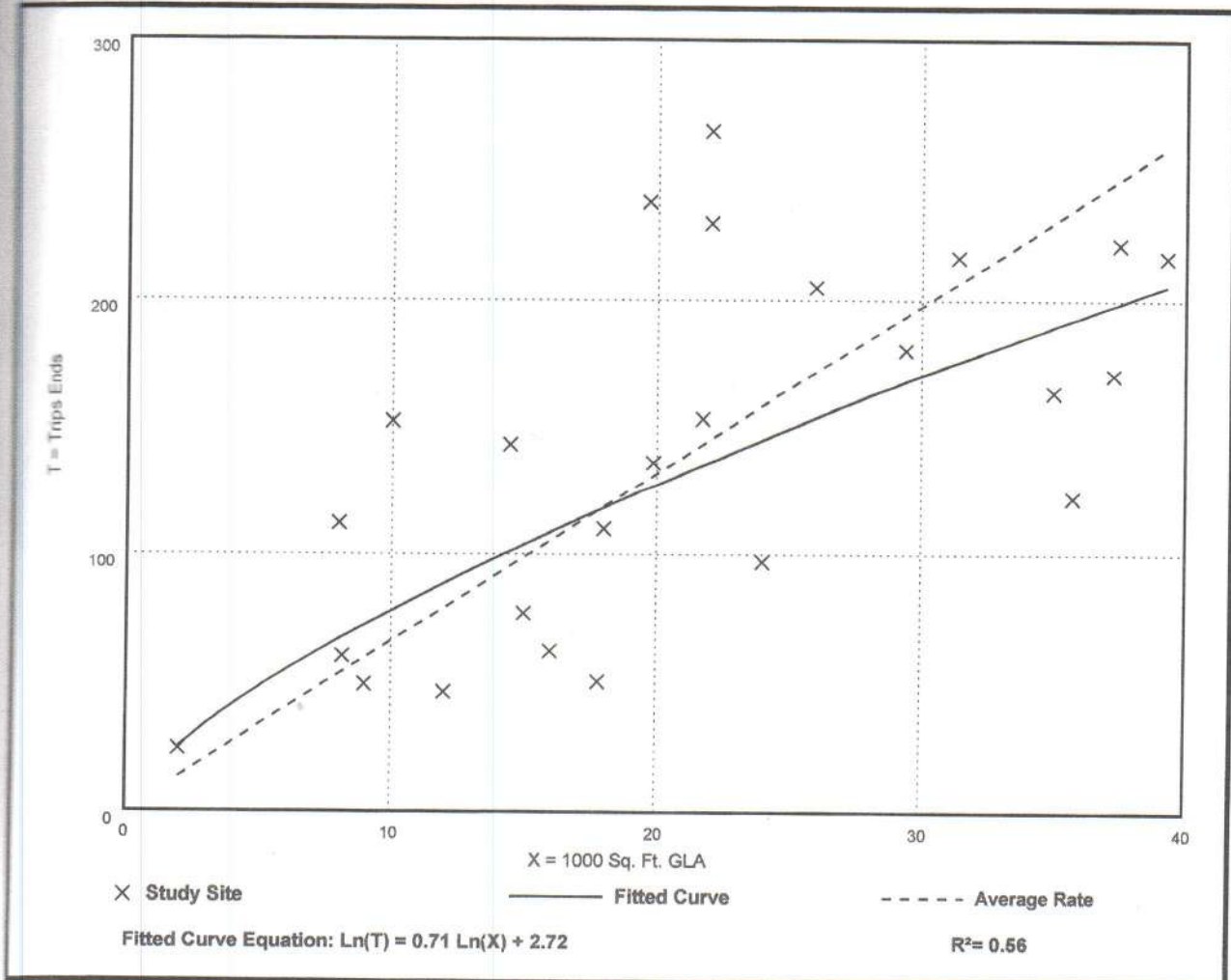
Avg. 1000 Sq. Ft. GLA: 21

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GLA

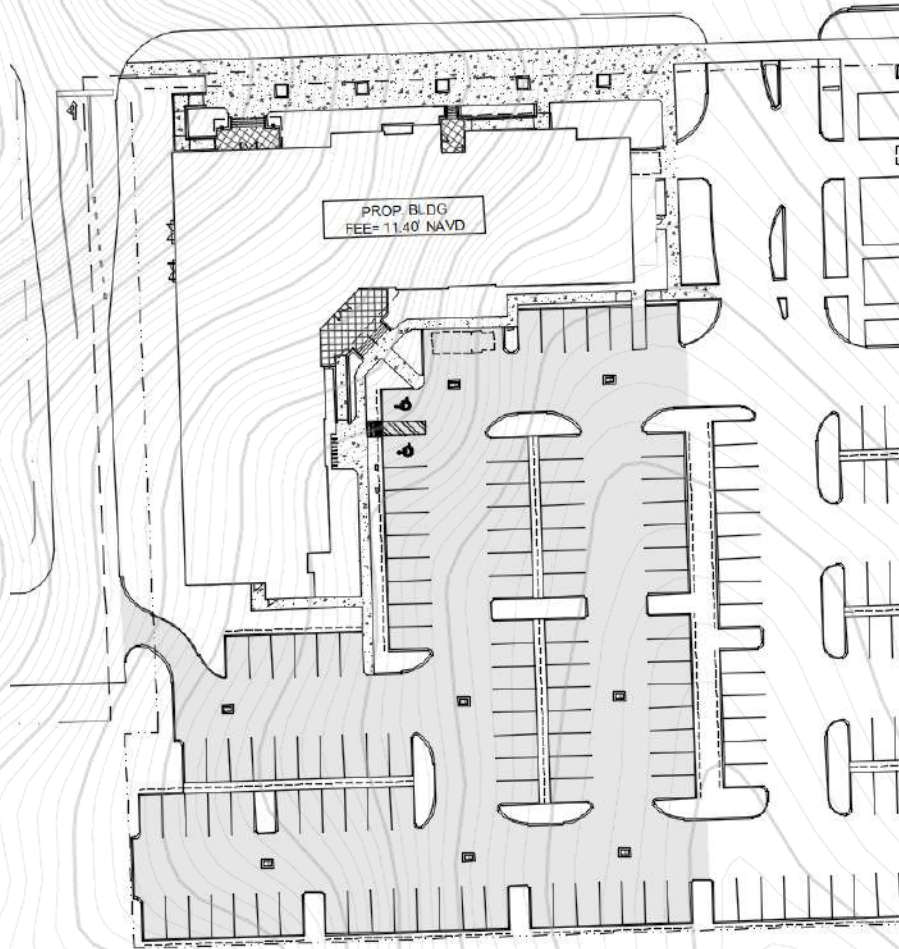
Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

## Data Plot and Equation



# FIRE FLOW TEST CALCULATIONS

PROJECT NO. 11074.03  
DATE: NOVEMBER 2022  
REVISED DATE: DECEMBER 2022



## PINNACLE 441 PHASE II

Hollywood, FL 33025



Thomas F. Donahue, P.E.  
Florida Reg No. 60529  
(For the Firm)

Florida Engineering Business License: CA7928  
Florida Surveyor and Mapper Business License: LB6860  
Florida Landscape Architecture Business License: LC26000457  
301 E. Atlantic Boulevard, Pompano Beach, FL 33060  
954-788-3400

[www.KEITHteam.com](http://www.KEITHteam.com)

Pompano Beach (HQ) • Fort Lauderdale • Miami • West Palm Beach • Orlando • Tallahassee

December 9<sup>th</sup>, 2022

## Fire Flow Test Calculations

**Project:** 11074.03 Pinnacle Phase II

**Location:** City of Hollywood

NFPA 1, 18.4.5.3 FLORIDA FIRE PREVENTION CODE (2021 Edition)

Occupancy Classification   X   Residential    Commercial (Mixed use facility)

Construction Type (NFPA 220): **II (222) (Fire Resistive, Non-combustible), automatic sprinkler system.**

### Project Site

Fire Flow Area: **107,161 S.F** (Three largest successive floors – **NFPA 1:18.4.4.2**)

The fire flow in GPM from NFPA 1 Table 18.4.5.2.1 is **3,500 GPM** for **3** hours flow duration.

**Fire Flow Reductions (NFPA 1:18.4.5.3.3):** Required fire flow shall be reduced by 75% when the building is protected throughout by an approved automatic sprinkler system, which utilizes quick response sprinklers throughout. The resulting fire flow shall not be less than 600 GPM (2270L/min).

Required fire flow minus 75% Reduction = **875 GPM** > 600 GPM. Therefore, the minimum fire flow shall not be greater than 600 GPM.

**Available flow at F-2 Hydrant (FH000787) at residual pressure of 20 P.S.I = 4,258 GPM**

Project: Pinnacle 441 Phase II

Date:

Project Number: 11074.03

11/4/2022  
Rev: 12/9/2022

Computed by: CL

Page:

Checked by: MC

1

### COMPUTING WORKSHEET

#### Summary of required Fire Flow

##### 1. Site Data

Structure	Area (SF)	Fire Area (SF) (Max. with 1 hr fire wall separation)
Phase I Building	157,586	59628
Phase II Building	123,593	47533

Note:

Type of Construction - Type I-B

##### 2. Determine Required Fire Flow per Florida Fire Prevention Code (NFPA 1 as amended) (Unsprinkled Building)

Required Fire Flow (RFF) = 3,500 gpm @ 20 PSI per NFPA 1 Ch 18 table 18.4.5.1.2

Duration = 3 Hours

##### 3. Determine Required Fire Flow per Florida Fire Prevention Code (NFPA 1 as amended) (For NFPA compliant Automatic Sprinkled Building)

Sprinkled Bldg Required Fire Flow reduce RFF by 75% = 875 gpm @ 20 PSI

Minimum Required Flow for Sprinkled Bldg = 1000 gpm @ 20 PSI USE 1000 gpm

Minimum Required Flow for Quick Response Heads = 600 gpm @ 20 PSI USE 875 gpm

Total Required Fire Flow for Protection Type 875 gpm

##### 4. Determine Available Flow from Flow Test

Total Flow at 20 psi using test data Residual Pressure

FH #1 4,258 gpm

Total Available Flow @ Test Static (55 psi) 4,258 gpm Exceeds Required Fire Flow (RFF)

Available flow exceeds Required Fire Flow unsprinkled building

Available Hydrant Flow EXCEEDS Required Fire Flow



## Fire Hydrant Field Flow Test Results - Available Fire Flow Calculations

Project Name: Pinnacle 441 Phase II  
 Project No.: 11074.03  
 Calculated By: CL                      Checked By: MC  
 Date: 12/9/2022

**Fire Hydrant No.                      1 Determine Flow at 20 psi from Test Data**

Hydrant Location: SR7  
 Fire Hydrant No.: FH000787

Flowing Hydrant @ Test Static Condition - Point 1                      Test Static Condition

Q1 = 1160 gpm  
 H1 = 55 psi = 127 ft of head

Flowing Hydrant @ Calc'd Residual Condition - Point 2                      Calc'd Fire Flow Condition

H2= 20 psi = 46 ft of head  
 Q2 = Qr =  $Q_f \times (H_r/H_f)^{0.54} =$  4258 gpm  
 Qf = Q test residual = 1130 gpm  
 Hr = H1 - H2 = 35 psi  
 Hf = H1 - H3 = 3 psi

Flowing Hydrant @ Test Residual Condition - Point 3                      Test Residual Condition

Q3 = 1130 gpm  
 H3 = 52 psi = 120 ft of head

System Curve Data Point Summary

	Q (gpm)	HEAD (psi)	ft of head
Test Static Condition	1130	55	127
Test Residual Condition	1130	52	120
Calc'd Fire Flow Condition	4258	20	46

0

# EXHIBITS

## Hydrant Flow Test Procedure

### Procedure For One & Two Flow Hydrant Test:

- Establish hydrants closest to location and associated water main(s).
- Static/Residual hydrant (**P**) should be located close to location (preferably off same main as to provide future water source).
- Flow hydrant(s) (**F**) should be located off same main up and down stream from mid-point test (static/residual) hydrant.
- Note static system pressure off **P** hydrant before opening any other (note any unusual or remarkable anomalies such as high demand sources, construction, etc.)
- Flow **F1** hydrant and record GPM and residual off **P** hydrant.
- Flow **F2** hydrant and record GPM and residual off **P** hydrant.
- Flow **F1 & F2** simultaneously and record GPM separately from **F1** and **F2** and record **P** hydrant residual.

#### Legend:

**F1 & F2** Designation shall represent first and second flowed hydrants respectively  
**P** Designation shall represent test hydrant for static and residual distribution system pressures.

### Keith

<b>Date:</b> 4/28/22	<b>Time:</b> 8:26am	<b>Static Pressure -</b>	<b>55psi</b>
Residual/Static Hydrant	Address/Location	Residual Pressures	
<b>P - Hydrant</b> FH004293	820 N State Rd 7	F-1 Only	F-2 Only
		52psi	52psi
		F-1& F-2	
Flow Hydrants	Address/Location	Flow Rate	
<b>F-1 Hydrant</b> (Individual) FH004294	900 N State Rd 7	GPM	
		<b>1160</b>	
<b>F-2 Hydrant</b> (Individual) FH000787	614 N State Rd 7	GPM	
		<b>1130</b>	
<b>F-1 Hydrant</b> (Both Flowing)		GPM	
		<b>1160</b>	
<b>F-2 Hydrant</b> (Both Flowing)		GPM	
		<b>1130</b>	



BUILDING SUMMARY

Table with columns: ALLOWED, PROVIDED, BUILDING HEIGHT, BUILDING AREA, UNITS, MINIMUM UNIT SIZE.

Table with columns: MINIMUM PER UNIT, MINIMUM CUMULATIVE AVG., PROVIDED, MINIMUM UNIT SIZE.

Table with columns: ALLOWED, PROVIDED, MAX. LENGTH OF TOWER, MIN. FL. TO FL. HEIGHT, MIN. ACTIVE LINER DEPTH, MIN. ACTIVE LINER WIDTH.

Main table with columns: SPACE, AREA (AC, NON AC), GROSS AREA (AC, NON AC, BALCONY/TERRACE).

Main table with columns: LOCATION, UNIT #, UNIT TYPE, AREA (AC, TERRACE/BALCONY), NET AREA (AC, BALCONY).

ALL SIGNAGE TO COMPLY WITH THE REQUIREMENTS OF THE CITY OF HOLLYWOOD ZONING AND LAND DEVELOPMENT CODE BASED ON THE C-JS-SR7 ZONING DISTRICT.

NOTE: BUILDING TO BE FULLY SPRINKLED WITH A SUPERVISED FIRE SPRINKLER SYSTEM.

NOTE: ALL MACHINE ROOMS, ELECTRICAL, MECHANICAL AND OTHER EQUIPMENT WILL BE ABOVE THE REQUIRED FEMA BASE FLOOD +11.0' N.A.V.D.

FEMA NOTE: THE NATIONAL FLOOD INSURANCE PROGRAM IS IN THE PROCESS OF ISSUING NEW FLOOD MAPS. AT TIME OF BUILDING PERMIT THE FEMA BASE FLOOD ELEVATION SHOULD BE CHECKED TO ENSURE IT IS STILL COMPLIANT.

SITE LIGHTING NOTE: SITE LIGHTING LEVELS SHALL NOT EXCEED 0.5 FC AT THE PROPERTY LINE ADJACENT TO ALL PROPERTY LINES.

FIRE ALARM NOTE: A FIRE ALARM SYSTEM IS REQUIRED AS PER F.F.P.C. 7TH ED. NFPA 101 SECTION 28.3.4

ALL MECHANICAL EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW.

GREEN CERTIFICATION: NATIONAL GREEN BUILDING STANDARD CERTIFICATION

SITE LIGHTING: ALL EXTERNAL LIGHTING FIXTURES SHOULD MEET THE REQUIREMENTS OF THE INTERNATIONAL DARK SKY ASSOCIATION.

PROVIDE A KNOX BOX AS PER N.F.P.A. 118.2.2.1 (7TH ED.) FIELD FIRE INSPECTOR TO DECODE LOCATION OF THE ACCESS BOX.

TWO WAY RADIO COMPLIANCE: BUILDING WILL BE IN COMPLIANCE WITH N.F.P.A. 1, 11.10 AND BROWARD COUNTY CODE AMENDMENT 118.2 FOR TWO WAY RADIO COMMUNICATION.

PENETRATION AND JOINT PROTECTION: INSPECTIONS OF FIRE STOP SYSTEMS AND FIRE RESISTIVE JOINT SYSTEMS SHALL BE IN ACCORDANCE WITH NFPA 1 12.3.2.1, AND 12.3.2.2.

NOTE: ALL CHANGES TO THE DESIGN WILL REQUIRE PLANNING REVIEW MAY BE SUBJECT TO BOARD APPROVAL.

Kaller Architecture logo and professional seal for Joseph B. Kaller, Registered Architect, Florida R.A. # 0009239.

PROJECT TITLE: PINNACLE 441 MIXED USE, 890 N SR7, HOLLYWOOD, FLORIDA 33024.

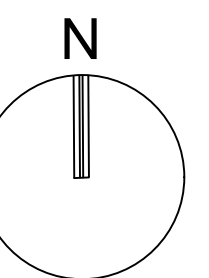
SHEET TITLE: BUILDING DATA SITE NOTES.

REVISIONS table with columns: No., DATE, DESCRIPTION.

PROJECT No., DATE, DRAWN BY, CHECKED BY.

SHEET: SP-0

This drawing, as an instrument of service, is and shall remain the property of the Architect and shall not be reproduced, published or used in any way without the permission of the Architect.



GRAPHIC SCALE  
 0 60 120  
 SCALE: 1" = 60'  
 NOTE: PRINTED DRAWING SIZE  
 MAY HAVE CHANGED FROM  
 ORIGINAL. VERIFY SCALE USING  
 BAR SCALE ABOVE.

**KEITH**  
 301 East Atlantic Blvd. Pompano  
 Beach, FL 33060  
 PH: (954) 788-3400  
 Florida Certificate of Authorization: 7928  
 Licensed Business Number: 6860

REVISIONS		
NO.	DESCRIPTION	DATE

**PRELIMINARY PLAN  
 NOT FOR CONSTRUCTION**  
 THESE PLANS ARE NOT FULLY PERMITTED  
 AND ARE SUBJECT TO REVISIONS MADE  
 DURING THE PERMITTING PROCESS.  
 RESPONSIBILITY FOR THE USE OF THESE  
 PLANS PRIOR TO OBTAINING PERMITS FROM  
 ALL AGENCIES HAVING JURISDICTION OVER  
 THE PROJECT WILL FALL SOLELY UPON THE  
 USER.

ISSUE DATE: **AUGUST 2022**  
 DESIGNED BY: **MC/BI/CL**  
 DRAWN BY: **BI/CL**  
 CHECKED BY: **TD/MC**  
 BID-CONTRACT:

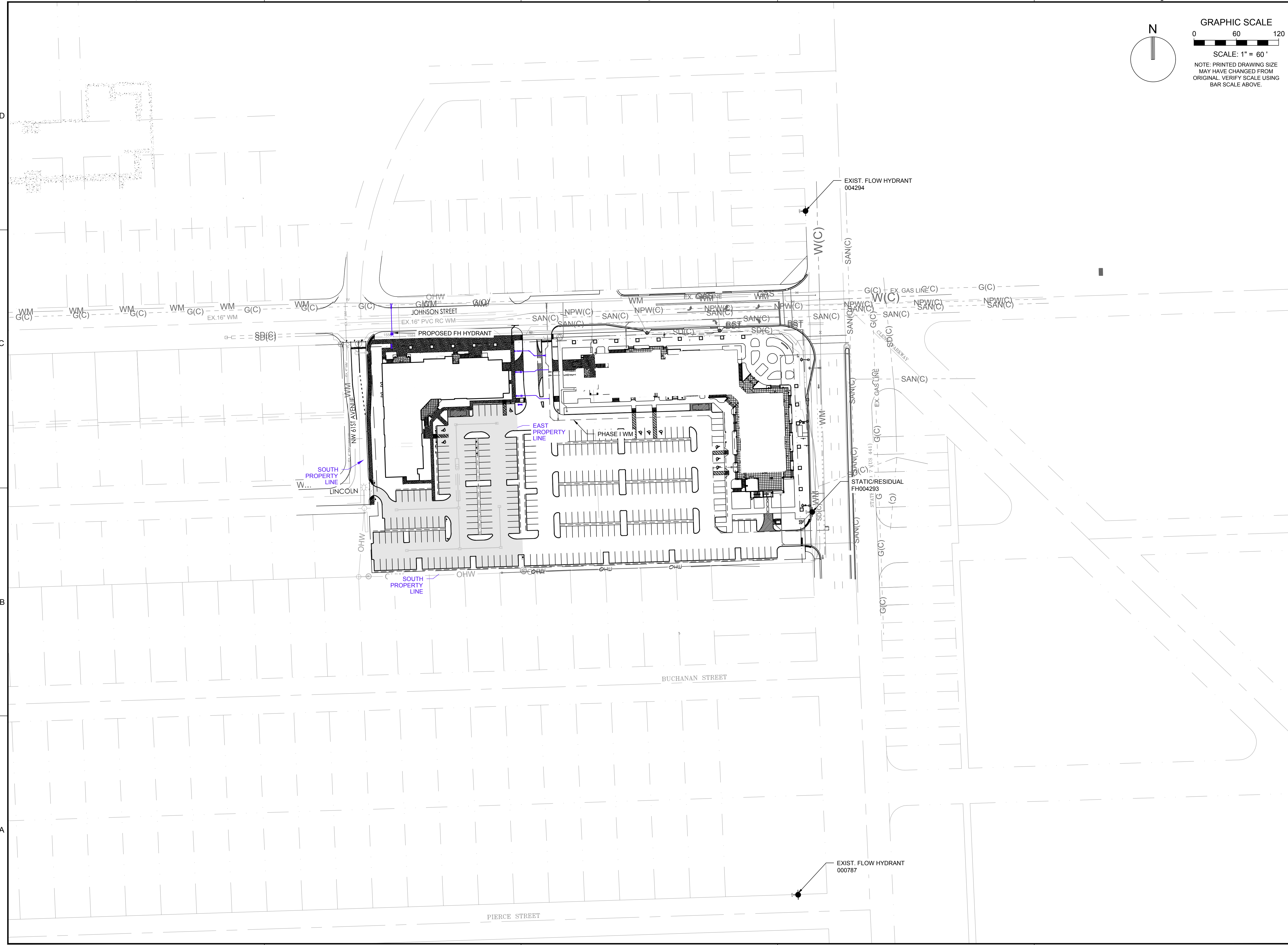
**THOMAS F. DONAHUE, P.E.**  
 FLORIDA REG. NO. 60529  
 (FOR THE FIRM)



**PROJECT**  
**PINNACLE 441  
 PHASE 2**

**SHEET TITLE**  
**FIRE SERVICE  
 EXHIBIT**

**SHEET NUMBER** **EX-103**  
**PROJECT NUMBER** **11074.03**



Plotted by: clouds On Saturday, November 5, 2022 5:41:21 PM  
 Drawing name: S:\11074.03 - Pinnacle 441 - Phase 2 - Pinnacle 441 - Phase 2, Hollywood - Pinnacle 441 Phase 2 LLC\Engineering\Cad\Drawings\11074.03-EX-103 Fire Flow Exhibit.dwg  
**STATUS: PRELIMINARY TAC**

## TYPES OF CONSTRUCTION

### Comparisons of Various Classification Sources

IBC/IFC:	UBC/UFC:	NFPA:	NFIRS:	BOCA:	SBC:	COMMON TERMINOLOGY:
----	----	I (443)	1	1-A	I	Fire Resistive, Non-combustible
Type I-A	Type I-FR	I (332)	1	1-B	II	Fire Resistive, Non-combustible
Type I-B	Type II-FR	II (222)	1	2-A	----	Fire Resistive, Non-combustible
Type II-A	Type II-1 Hr.	II (111)	3	2-B	IV-1 Hr.	Protected Non-combustible
Type II-B	Type II-N	II (000)	4	2-C	IV-unp.	Unprotected Non-combustible
Type III-A	Type III-1 Hr	III (211)	5	3-A	V-1 Hr.	Protected Ordinary
Type III-B	Type III-N	III (200)	6	3-B	V-unp.	Unprotected Ordinary
Type IV	Type IV (H.T.)	IV (2HH)	2	4	III	Heavy Timber
Type V-A	Type V-1 Hr	V (111)	7	5-A	VI-1 Hr.	Protected Combustible
Type V-B	Type V-N	V (000)	8	5-B	VI-unp.	Unprotected Combustible

IBC/IFC – International Building Code / International Fire Code

UBC/UFC – Uniform Building Code / Uniform Fire Code

NFPA – National Fire Protection Association

NFIRS – National Fire Incident Reporting System

BOCA – BOCA / National Building Code

SBC – Standard / Southern Building Code

# PRELIMINARY STORMWATER MANAGEMENT CALCULATIONS

PROJECT NO. 11074.03  
ISSUED: NOVEMBER 2023



## PINNACLE 441 PHASE 2 HOLLYWOOD, FL 33024



Thomas F. Donahue, P.E.  
Florida Reg No. 60529  
(For the Firm)

Florida Engineering Business License: CA7928  
Florida Surveyor and Mapper Business License: LB6860  
Florida Landscape Architecture Business License: LC26000457  
301 E. Atlantic Boulevard, Pompano Beach, FL 33060  
954-788-3400

[www.KEITHteam.com](http://www.KEITHteam.com)

Pompano Beach (HQ) • Fort Lauderdale • Miami • West Palm Beach • Orlando • Tallahassee



# TABLE OF CONTENTS

## **I. Introduction**

- 1 Project Location
- 2 Project Description

## **II. Stormwater Management Criteria**

- 1 Basis of Design
- 2 South Florida Water Management District (SFWMD) and Broward County Resilient Environment Department (BCRED) Requirements
- 3 Summary of Storm Stages
- 4 Stormwater Management Pre-Development Calculations
- 5 Stormwater Management Post-Development Calculations

## **III. Appendix**

- Appendix A**.....Future Conditions Groundwater Elevation Map
- Appendix B**.....Hydraulic Conductivity Test
- Appendix C**.....Broward County General Soil Map
- Appendix D**.....FEMA Flood Insurance Rate Map
- Appendix E**.....Broward County 100 Year Flood Map 2060
- Appendix F**.....SFWMD rainfall Maps

## I. INTRODUCTION

### 1 **Project Location.**

The project is located on 6028 Johnson St, Hollywood, Broward County, Florida (Section 13, Township 51 South, and Range 41 East). In review of the Broward County - Surface Water Management Licensing Section - Drainage District Boundary Map, the site is located within the jurisdiction of South Florida Water Management District (SFWMD).

### 2 **Project Description**

The purpose of this report is to provide an analysis of the stormwater management system for the proposed development of a 1.67-acre site. The proposed site will be developed as a residential multi-story building.

According to the Broward County Surface Water Management Licensed Projects interactive map, the existing site is located within Flatwoods soils of the Hallandale-Margate Association.

To achieve the required water quality and provide adequate flood protection, the proposed stormwater management system will consist of a series of drainage inlets that convey runoff through an exfiltration trench system and underground storage.

KEITH performed a pre-development versus post-development analysis. The pre-development analysis was based on the information provided on the Boundary and Topographic Survey. The existing site conditions included concrete pads, landscape areas, and driveway/parking areas; which were considered to determine the current site stage/storage curve number.

The post-development analysis was performed by incorporating the proposed improvements which includes a series of drainage inlets and 140 linear feet of new exfiltration trench that will collect and convey runoff through properly sized pipes to underground storage. To achieve the required water quality and provide adequate flood protection, the runoff will be held in the exfiltration trench system and controlled by an inverted baffle set at an elevation of 5.00' NAVD.

It should be noted that these calculations include the on and off site improvements. However, in the future this will be separated and additional exfiltration trench may be required on 61<sup>st</sup> to provide quality and quantity. We are anticipating on meeting with BCRED for a pre-application meeting to discuss methodology.

## II. STORMWATER MANAGEMENT CRITERIA

### 1 Basis of Design

The project's stormwater management (SWM) system design is based on the South Florida Water Management District (SFWMD) and the Broward County Resilient Environment Department (BCRED) criteria.

### 2 SFWMD / BCRED Requirements

- **Flood Protection:** The lowest floor elevation shall be set at or above the elevation required in the Florida Building Code (FBC) or at least 18 inches (residential buildings) or 6 inches (non-residential buildings) above the highest point of the crown of all streets adjacent to the site per section 154.50(C).1.a and 154.50(C).1.b of the City of Hollywood Code of Ordinances. The minimum finished floor elevation based on FBC criteria requires the elevation of the lowest floor to be 1.00' above the FEMA Base Flood Elevation (BFE) or at the Design Flood Elevation (DFE), whichever is higher.

Per the FEMA Flood maps the site is located within Flood Zone AH (10' NAVD) and Flood Zone X (0.2% Annual Chance Flood Hazard). The building resides within the flood hazard area (Zone AH), so the BFE for the site was established as 10.00' NAVD. The DFE as established by the Broward County 100-Year Flood Map 2060 is approximately 10.50' NAVD, and the highest point of the crown of the street adjacent to the site is 9.81' NAVD.

Per the criteria described above the minimum finished floor elevation (FFE) for the building area is 11.31' NAVD, however, we are proposing a finished floor elevation of **11.40'** NAVD to allow for a 0.09 ft construction tolerance.

- **Driveway and Parking Lot:** Per SFWMD ERP Handbook Volume II Section 3.5. In cases where the local government does not specify criteria with jurisdiction, the following design criteria for drainage and flood protection shall be used: frequency – 5 years, duration 1 day (road centerlines) or 1 hour (parking lots served by exfiltration trench systems). We are meeting the 5-year 1 hour for the parking lot served by exfiltration trench.
- **Water Quality:** The water quality treatment to be provided should be equal to the greater of 1-inch over the site or 2.5-inch times the percentage of impervious area. The required volume will be treated within the proposed exfiltration trench.

## **II.3 SUMMARY OF STORM STAGES**

# SUMMARY OF STORM STAGES

## Pinnacle 441- Phase II Stormwater Management Calculations Summary

Storm Event	Pre-Development Stage (ft NAVD)	Post-Development Stage (ft NAVD)
25-year 3-day	10.20	10.11
100-year 3-day	10.44	10.44

11.40 ' NAVD Min. Finished Floor Elevation

**PRELIMINARY 11/22**

## **II.4 STORMWATER MANAGEMENT PRE-DEVELOPMENT CALCULATIONS**

**PRELIMINARY 11/22**

**STORMWATER MANAGEMENT CALCULATIONS**

for

**Pinnacle 441 Phase 2**  
**Pre-Development Conditions**

KEITH & ASSOCIATES, INC.

DATE PREPARED: 9/7/2022

DATE REVISED: 11/6/2022

PROJECT: 11074.03

PREPARED BY: DK, MC

CHECKED BY: MC, TD

**I. Given/Design Criteria**

**A. Site Coverage:**

PROJECT DESCRIPTION	AREA (ac)	AREA (%)
Concrete Area Low	0.04	2.40
Concrete Area High	0.10	5.99
Pavement Area Low	0.03	1.80
Pavement Area High	0.34	20.36
Pervious	1.16	69.46
<b>Total Water Management System</b>	<b>1.67</b>	<b>100.00</b>
	<b>1.67</b>	

Impervious surfaces: 0.51 ac = 31%  
Pervious surfaces: 1.16 ac = 69%

**B. Water Level Elevation**

**2.00** ft., NAVD

Per Broward County Future Conditional Groundwater Elevations Map

**C. Design Storm Rainfall Amounts**

5 year, 1 hour storm..... **7.20** inches  
25 year, 3 day storm..... **14.00** inches  
100 year, 3 day storm..... **17.00** inches

Used to Establish:  
Minimum volume retainage by exfiltration trench...  
Minimum perimeter elevation...  
Minimum finish floor elevation...

**II. Computations**

**A. Compute Soil Storage and SCS Curve Number**

Surface Use	Area (Acres)	Begin Elev. (NAVD)	End Elev. (NAVD)	Avg Elev. (NAVD)	Storage Type (L, V)
Concrete Area Low	0.04	9.35	9.50	9.43	-
Concrete Area High	0.10	9.50	10.00	9.75	
Pavement Area Low	0.03	8.50	9.00	8.75	-
Pavement Area High	0.34	9.00	9.76	9.38	
Pervious	1.16	9.10	9.70	9.40	L
Weighted Avg Site Elevation				<b>9.41</b>	

**PRELIMINARY 11/22**

1. Wet season water elev..... **2.00** NAVD  
 Avg. site elevation..... **9.41** NAVD  
 Avg. pervious area elevation..... **9.40** NAVD  
 Depth to water table..... **7.40** FT
  
2. Assuming 25% void space reduction, available ground storage is..... **6.75** in  
**Per SCS Broward County Soils Atlas soils are Flatwoods Soils Type.**  
 Compute Available Soil Storage  
     = Storage available x pervious area  
     = 6.75 in x 1.16 ac / 12 in/ft  
     = **0.65** ac-ft
  
3. Convert to site-wide moisture storage, S  
     S = Available soil storage/site area  
     = 0.65 ac-ft / 1.67 ac \* 12 in/ft  
     S = **4.69** in
  
4. SCS Curve Number, CN  
     CN = 1000/(S+10)  
     CN = **68**



Project Name: Pinnacle 441 Ph2 - 25yr 3d - PRE

Reviewer: MC

Project Number: 11074.03

Period Begin: Jan 01, 2000;0000 hr End: Jan 04, 2000;0000 hr Duration: 72 hr

Time Step: 0.016 hr, Iterations: 10

Basin 1: On-site

Method: Santa Barbara Unit Hydrograph

Rainfall Distribution: SFWMD - 3day

Design Frequency: 25 year

3 Day Rainfall: 14 inches

Area: 1.67 acres

Ground Storage: 4.69 inches

Time of Concentration: 0.17 hours

Initial Stage: 2 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
2.00	0.00
2.50	0.00
3.00	0.00
3.50	0.00
4.00	0.00
4.50	0.00
5.00	0.00
5.50	0.00
6.00	0.00
6.50	0.00
7.00	0.00
7.50	0.00
8.00	0.00
8.50	0.00
9.00	0.01
9.50	0.24
10.00	0.99
10.50	1.83
11.00	2.66
11.50	3.50
12.00	4.33

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
On-site	10.20	72.00	2.00	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
On-site	1.33	0.00	0.00	0.00	1.33	0.00

**PRELIMINARY 11/22**

Project Name: Pinnacle 441 Ph2 - 100yr 3d - PRE

Reviewer: MC

Project Number: 11074.03

Period Begin: Jan 01, 2000;0000 hr End: Jan 04, 2000;0000 hr Duration: 72 hr

Time Step: 0.016 hr, Iterations: 10

Basin 1: On-site

Method: Santa Barbara Unit Hydrograph

Rainfall Distribution: SFWMD - 3day

Design Frequency: 100 year

3 Day Rainfall: 17 inches

Area: 1.67 acres

Ground Storage: 4.69 inches

Time of Concentration: 0.17 hours

Initial Stage: 2 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
2.00	0.00
2.50	0.00
3.00	0.00
3.50	0.00
4.00	0.00
4.50	0.00
5.00	0.00
5.50	0.00
6.00	0.00
6.50	0.00
7.00	0.00
7.50	0.00
8.00	0.00
8.50	0.00
9.00	0.01
9.50	0.24
10.00	0.99
10.50	1.83
11.00	2.66
11.50	3.50
12.00	4.33

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
On-site	10.44	72.00	2.00	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
On-site	1.73	0.00	0.00	0.00	1.73	0.00

**PRELIMINARY 11/22**

## **II.5 STORMWATER MANAGEMENT POST-DEVELOPMENT CALCULATIONS**

**PRELIMINARY 11/22**

**STORMWATER MANAGEMENT CALCULATIONS**  
for  
**Pinnacle 441 PH2**  
**Post-Development Conditions**

KEITH & ASSOCIATES, INC.  
DATE PREPARED: 9/7/2022  
DATE REVISED: 11/6/2022  
PROJECT: 11074.03  
PREPARED BY: DK, MC  
CHECKED BY: MC/TD

**I. Given/Design Criteria**

**A. Site Coverage:**

PROJECT DESCRIPTION	AREA (ac)	AREA (%)
Building (FFE =11.40')	0.35	20.96
Pervious	0.32	19.16
Sidewalk	0.13	7.78
Pavement	0.83	49.70
Plaza Area	0.04	2.40
<b>Total Water Management System</b>	<b>1.67</b>	<b>100.00</b>
	<b>1.67</b>	

Impervious surfaces: 1.35 ac = 81%  
Pervious surfaces: 0.32 ac = 19%

**B. Minimum Elevations**

1. Finished Floors **11.40** ft., NAVD Per City of Miramar Code of Ordinances

**C. Water Level Elevation** **2.00** ft., NAVD Per Broward County Future Conditional Groundwater Elevations Map

**D. Design Storm Rainfall Amounts**

5 year, 1 hour storm.....	<b>7.20</b> inches	Used to Establish: Minimum volume retainage by exfiltration trench...
25 year, 3 day storm.....	<b>14.00</b> inches	Minimum perimeter elevation...
100 year, 3 day storm.....	<b>17.00</b> inches	Minimum finish floor elevation...

**II. Computations**

**A. Water Quality requirements:**

**1. Compute the first inch of runoff from the developed project area:**

$$= 1 \text{ inch} \times 1.67 \text{ acres} \times (1\text{ft}/12\text{in.})$$

$$= \mathbf{0.14} \text{ ac-ft for the first inch of runoff}$$

**2 Compute 2.5 inches times the percentage of impervious area:**

a. Site area for water quality pervious/impervious calculations only:

$$= \text{Total area less (water surface + roof)}$$

$$= 1.67 \text{ ac} - (0.35 \text{ ac})$$

$$= \mathbf{1.32} \text{ ac of site area for water quality}$$

b. Impervious area for water quality calculations only:

$$= 1.32 \text{ ac} - 0.32 \text{ ac}$$

$$= \mathbf{1.00} \text{ ac of impervious area}$$

c. Percentage of impervious area for water quality:

$$= 1.00 \text{ ac} / 1.32 \text{ ac} \times 100\%$$

$$= \mathbf{75.8\%} \text{ impervious}$$

PRELIMINARY 11/22

d. For 2.5 inches times the percentage of impervious:

$$\begin{aligned} &= 2.5 \text{ in} \times 75.8\% \\ &= \mathbf{1.89} \text{ inches to be treated} \end{aligned}$$

e. Compute volume required for quality detention:

$$\begin{aligned} &= 1.89 \text{ in} \times 1.67 \text{ ac} \times 1 \text{ ft}/12 \\ &= \mathbf{0.26} \text{ ac-ft required detention storage} \end{aligned}$$

3. Since  $\mathbf{0.26}$  ac-ft is more than the  $\mathbf{0.14}$  ac-ft computed for the first inch of runoff, the volume of  $\mathbf{0.26}$  ac-ft. controls.

All water quality will be provided within the proposed exfiltration trench.

**B. Compute Soil Storage and SCS Curve Number**

Surface Use	Area (Acres)	Begin Elev. (NAVD)	End Elev. (NAVD)	Avg Elev. (NAVD)	Storage Type (L, V)
Building (FFE =11.40')	0.35	11.40	11.40	11.40	-
Pervious	0.32	8.30	10.30	9.30	L
Sidewalk	0.13	9.60	10.30	9.95	L
Pavement	0.83	8.55	9.60	9.08	L
Plaza Area	0.04	10.30	11.40	10.85	L
Weighted Avg Site Elevation				<b>9.72</b>	

1. Wet season water elev..... **2.00** NAVD  
 Avg. site elevation..... **9.72** NAVD  
 Avg. pervious area elevation..... **9.30** NAVD  
 Depth to water table..... **7.30** FT

2. Assuming 25% void space reduction, available ground storage is..... **6.75** in

**Per SCS Broward County Soils Atlas soils are Flatwoods Soils Type.**

Compute Available Soil Storage

$$\begin{aligned}
 &= \text{Storage available} \times \text{pervious area} \\
 &= 6.75 \text{ in} \times 0.32 \text{ ac} / 12 \text{ in/ft} \\
 &= \mathbf{0.18} \text{ ac-ft}
 \end{aligned}$$

3. Convert to site-wide moisture storage, S

$$\begin{aligned}
 S &= \text{Available soil storage/site area} \\
 &= 0.18 \text{ ac-ft} / 1.67 \text{ ac} * 12 \text{ in/ft} \\
 S &= \mathbf{1.29} \text{ in}
 \end{aligned}$$

4. SCS Curve Number, CN

$$\begin{aligned}
 \text{CN} &= 1000 / (S + 10) \\
 \text{CN} &= \mathbf{88}
 \end{aligned}$$

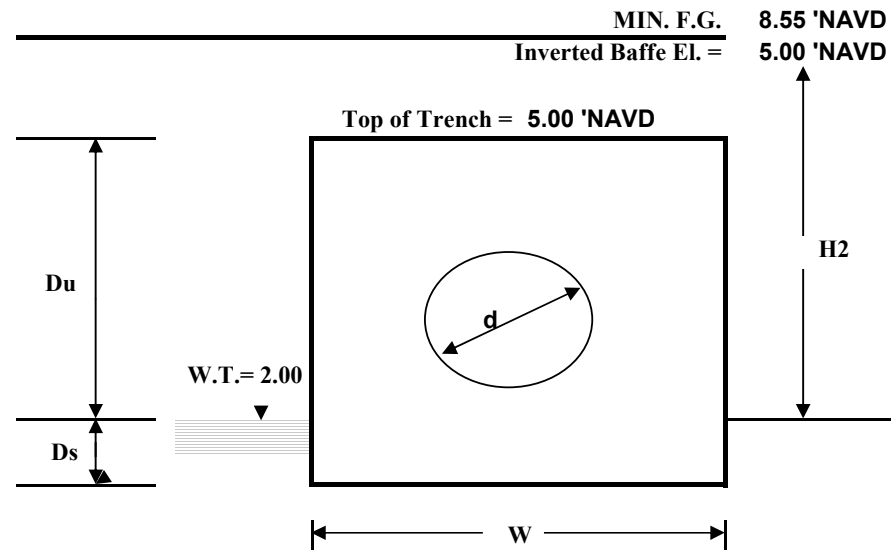
## EXFILTRATION TRENCH CALCULATIONS

<b>PROJECT TITLE</b>	<b>PROJECT NO.</b>	<b>DATE</b>
Pinnacle 441 Phase II	11074.03	9/8/2022
<b>LOCATION</b>	<b>LATEST REVISION</b>	
City of Hollywood	11/6/2022	

**Trench Design Formula:**  
 $V = L * [K * (H_2 * W + 2 * H_2 * D_u - D_u^2 + 2 * H_2 * D_s) + (1.39 \times 10^{-4}) * W * D_u]$

- L= Length of Trench Required (feet)
- V= Volume Treated (acre-inch)
- W= Trench Width (feet)
- K= Hydraulic Conductivity (CFS/Ft<sup>2</sup> -FT Head)
- H<sub>2</sub>= Depth to Water Table (feet)
- D<sub>u</sub> = Non saturated Trench (feet)
- D<sub>s</sub>= Saturated Trench Depth (feet)
- d= diameter (inch)
- F.G.= finish grade

- d= 18
- L = 140
- W = 5.00
- K = 1.76E-03
- H<sub>2</sub> = 3.00
- D<sub>u</sub> = 3.00
- D<sub>s</sub> = 1.00
- Trench Height= 4.00



- V (Treated ) = 7.68 ac-in.
- V (Treated WQ) = 0.64 ac-ft.**
- V (Required WQ) = 0.26 ac-ft.**
- 0.5 V (ADD) = 0.19 ac-ft.**
- V (TOTAL) = 0.26 + 0.19 = 0.45 ac-ft.**

Maximum exfiltration trench volume storage allowed for stage/storage calculations = 0.267 ac-ft/ac \* Site Acreage  
 = 0.267 ac-ft/ac \* 1.67  
 = 0.45 ac-ft

The total volume in the exfiltration trench is 0.45 Ac-ft, which will be added to the stage/storage calculations.

PRELIMINARY 11/22



Project: Pinnacle 441 Phase 2	Date:
Project No.: 11074.03	11/6/2022
Computed by: MC	Page:
Checked by: TD	1

**COMPUTING WORKSHEET**

**Underground Storage Volume Calculations**

**Additional Water Quantity Volume Required to be Stored:**

$$0.15 \text{ ac-ft} \times 43,560 \text{ ft}^2 / 1 \text{ ac} = 6,534.00 \text{ ft}^3$$

**Water Quantity Volume Provided via Underground Storage:**

**Location 1**

Volume of Pipe:

$$r = 0.75 \text{ ft}$$

$$h = 897 \text{ ft}$$

$$V_P = \pi r^2 h = \pi \times 0.75^2 \times 897 = 1584.33 \text{ ft}^3$$

Volume of Rock (Assuming 40% Stone Porosity):

$$\text{Area (A)} = 2,955.00 \text{ ft}^2$$

$$\text{Depth (D)} = 3.00 \text{ ft}$$

$$V_R = (AD - V_P)(40\%) = (2,955.00 \times 3.00 - 1584.33) \times (0.40) = 2,912.27 \text{ ft}^3$$

Total Volume for Location 1:

$$V_1 = V_P + V_R = 1584.33 + 2,912.27 = 4,496.60 \text{ ft}^3$$

**Location 2**

Volume of Pipe:

$$r = 0.75 \text{ ft}$$

$$h = 866 \text{ ft}$$

$$V_P = \pi r^2 h = \pi \times 0.75^2 \times 866 = 1529.57 \text{ ft}^3$$

Volume of Rock (Assuming 40% Stone Porosity):

$$\text{Area (A)} = 2,738.00 \text{ ft}^2$$

$$\text{Depth (D)} = 3.00 \text{ ft}$$

$$V_R = (AD - V_P)(40\%) = (2,738.00 \times 3.00 - 1529.57) \times (0.40) = 2,673.77 \text{ ft}^3$$

Total Volume for Location 2:

$$V_2 = V_P + V_R = 1529.57 + 2,673.77 = 4,203.34 \text{ ft}^3$$

**Total Water Quantity Volume Provided via Underground Storage:**

$$V_T = V_1 + V_2 = 8,699.94 \text{ ft}^3$$

$$8,699.94 \text{ ft}^3 > 6,534.00 \text{ ft}^3 \quad \text{OKAY}$$

$$8,699.94 \text{ ft}^3 \times 1 \text{ ac} / 43,560 \text{ ft}^2 = 0.20 \text{ ac-ft}$$

**PRELIMINARY 11/22**



## STAGE - STORAGE TABLE

### Post-Development Conditions

Stage (ft)	Site Storage (Ac-ft)	Exfiltration Trench Storage (ac-ft)	Underground Storage (ac-ft)	Total Storage (ac-ft)
2.00	0.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	0.00
3.00	0.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	0.00
4.00	0.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	0.00
5.00	0.00	0.45	0.15	0.60
5.50	0.00	0.45	0.15	0.60
6.00	0.00	0.45	0.15	0.60
6.50	0.00	0.45	0.15	0.60
7.00	0.00	0.45	0.15	0.60
7.50	0.00	0.45	0.15	0.60
8.00	0.00	0.45	0.15	0.60
8.20	0.00	0.45	0.15	0.60
8.50	0.00	0.45	0.15	0.60
9.00	0.12	0.45	0.15	0.72
9.50	0.47	0.45	0.15	1.07
10.00	1.01	0.45	0.15	1.61
10.50	1.64	0.45	0.15	2.24
11.00	2.29	0.45	0.15	2.89
11.50	2.94	0.45	0.15	3.54

**PRELIMINARY 11/22**

## 5 YEAR - 1 HOUR CALCULATION

PROJECT TITLE	PROJECT NO.	DATE
Pinnacle 441 Phase II	11074.03	11/6/2022
<b>LOCATION</b>		
City of Hollywood		
<b>Design Formula:</b>		
$Q_R = (P - 0.2 * S^2) / (P + 0.8 * S)$ $V = Q_R * A_T$ $L = V / [K * (H2 * W + 2 * H2 * Du - Du^2 + 2 * H2 * Ds) + (1.39 * 10^{-4}) * W * Du]$		
<p> <math>Q_R</math> = Accumulated runoff (in)  <math>P</math> = Accumulated rainfall (in) (3.2 in for 5 year-1 hour per SFWMD)  <math>S</math> = Effective soil storage (in)  <math>V</math> = Runoff Volume (acre-inch)  <math>A_T</math> = Total Drainage Area (acres)  <math>L</math> = Length of Trench (feet)  <math>W</math> = Trench Width (feet)  <math>K</math> = Hydraulic Conductivity (CFS/Ft<sup>2</sup> -FT Head)  <math>H2</math> = Depth to Water Table (feet)  <math>Du</math> = Non saturated Trench (feet)  <math>Ds</math> = Saturated Trench Depth (feet) </p> <p> <math>P = 3.2</math>  <math>S = 1.29</math>  <math>A_T = 1.67</math>  <math>K = 1.76E-03</math>  <math>W = 5.00</math>  <math>H2 = 3.00</math>  <math>Du = 3.00</math>  <math>Ds = 1.00</math> </p> <p> <math>Q_R = 2.04</math> in  <math>V = 3.41</math> (acre-inch)  <math>L = 62.16</math> feet </p> <p> <b>L (Required) = 62.16 feet</b>  <b>L (Provided) = 140 feet</b> </p>		

PRELIMINARY 11/22

Project Name: Pinnacle 441 Ph 2 - 25 yr 3 d w/ ET & US

Reviewer: MC

Project Number: 11074.03

Period Begin: Jan 01, 2000;0000 hr End: Jan 04, 2000;0000 hr Duration: 72 hr

Time Step: 0.016 hr, Iterations: 10

Basin 1: On-site

Method: Santa Barbara Unit Hydrograph

Rainfall Distribution: SFWMD - 3day

Design Frequency: 25 year

3 Day Rainfall: 14 inches

Area: 1.67 acres

Ground Storage: 1.29 inches

Time of Concentration: 0.17 hours

Initial Stage: 2 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
2.00	0.00
2.50	0.00
3.00	0.00
3.50	0.00
4.00	0.00
4.50	0.00
5.00	0.60
5.50	0.60
6.00	0.60
6.50	0.60
7.00	0.60
7.50	0.60
8.00	0.60
8.20	0.60
8.50	0.60
9.00	0.72
9.50	1.07
10.00	1.61
10.50	2.24
11.00	2.89

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
On-site	10.11	72.00	2.00	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
On-site	1.74	0.00	0.00	0.00	1.74	0.00

**PRELIMINARY 11/22**

Project Name: Pinnacle 441 Ph 2 - 100 yr 3 d w/ ET & US

Reviewer: MC

Project Number: 11074.03

Period Begin: Jan 01, 2000;0000 hr End: Jan 04, 2000;0000 hr Duration: 72 hr

Time Step: 0.016 hr, Iterations: 10

Basin 1: On-site

Method: Santa Barbara Unit Hydrograph

Rainfall Distribution: SFWMD - 3day

Design Frequency: 100 year

3 Day Rainfall: 17 inches

Area: 1.67 acres

Ground Storage: 1.29 inches

Time of Concentration: 0.17 hours

Initial Stage: 2 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
2.00	0.00
2.50	0.00
3.00	0.00
3.50	0.00
4.00	0.00
4.50	0.00
5.00	0.60
5.50	0.60
6.00	0.60
6.50	0.60
7.00	0.60
7.50	0.60
8.00	0.60
8.20	0.60
8.50	0.60
9.00	0.72
9.50	1.07
10.00	1.61
10.50	2.24
11.00	2.89

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
On-site	10.44	72.00	2.00	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
On-site	2.16	0.00	0.00	0.00	2.16	0.00

**PRELIMINARY 11/22**

### **III. APPENDIX**

**APPENDIX A**

**FUTURE CONDITIONS GROUNDWATER ELEVATION MAP**

**PRELIMINARY 11/22**



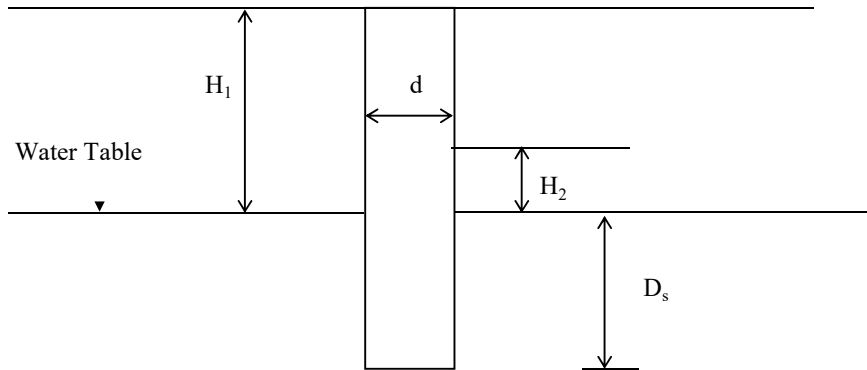
**PRELIMINARY 11/22**

**APPENDIX B**  
**HYDRAULIC CONDUCTIVITY TEST**

**PRELIMINARY 11/22**



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT  
" USUAL OPEN - HOLE TEST "**



**HYDRAULIC CONDUCTIVITY**

$$K = \text{Hydraulic Conductivity} = \frac{4Q}{\pi d(2H_2^2 + 4H_2D_s + H_2d)}$$

**1.73E-03 CFS/FT<sup>2</sup>-FT HEAD**

Time (Min.)	Flow (GPM)		
1	30.00	Q = Average Flow Rate =	0.066840 CFS
2	30.00		
3	30.00	d = Diameter of Test Hole =	3.0 inches
4	30.00		
5	30.00	H <sub>2</sub> = Head on Water Table =	8.3 feet
6	30.00		
7	30.00	D <sub>s</sub> = Depth below Ground Water Table =	1.7 feet
8	30.00		
9	30.00		
10	30.00		

TEST LOCATION :		See Drawing No. 1
TEST ELEVATION :	+9.0'	NAVD (estimated)
DEPTH TO WATER TABLE H <sub>1</sub> :	8.3'	Below Existing Grade
DEPTH OF TEST HOLE :	10.0'	Below Existing Grade
AVERAGE FLOW RATE:	30.00	GPM

**SOIL PROFILE :**

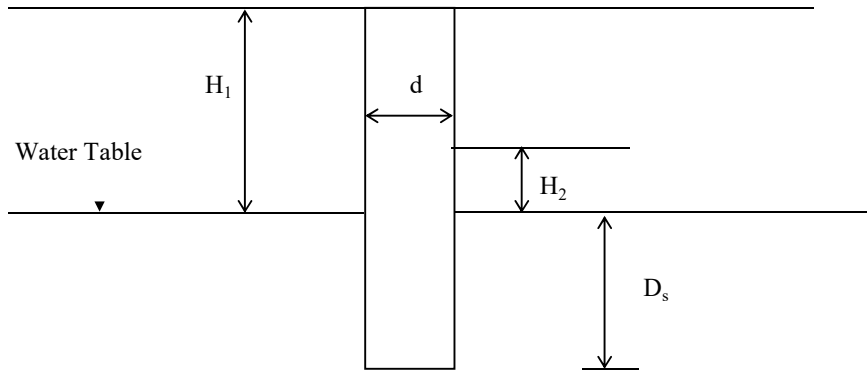
0.0' - 3.0'	1" of Asphalt over brown Sand
3.0' - 10.0'	Light brown Limestone

NOTES: 1) The subsurface profile is determined by cuttings & should not be relied upon as an accurate record of material type or for transition zones.  
2) K value calculated using PVC diameter of 3 inches

**PERCOLATION TEST**

<b>N   V   5</b>	<b>PROJECT NAME:</b> Pinnacle 441		
	<b>PROJECT LOCATION:</b> 890 North State Rd 7 (US 441) & 6024 Johnson St, Hollywood, Florida		
	<b>PROJECT NO:</b> 17170	<b>TEST DATE:</b> 02/24/2021	<b>TEST NO:</b> P-1
	<b>TESTED BY:</b> T. Carson / R. Jimenez		<b>CHECKED BY:</b> AB

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT  
" USUAL OPEN - HOLE TEST "**



**HYDRAULIC CONDUCTIVITY**

$K = \text{Hydraulic Conductivity} = 4Q / [\pi d (2H_2^2 + 4H_2 D_s + H_2 d)]$

**1.76E-03 CFS/FT<sup>2</sup>-FT HEAD**

Time (Min.)	Flow (GPM)		
1	30.00	Q = Average Flow Rate =	0.067954 CFS
2	30.00		
3	31.00	d = Diameter of Test Hole =	3.0 inches
4	31.00	H <sub>2</sub> = Head on Water Table =	8.3 feet
5	30.00		
6	30.00	D <sub>s</sub> = Depth below Ground Water Table =	1.7 feet
7	30.00		
8	31.00		
9	31.00		
10	31.00		

TEST LOCATION :		See Drawing No. 1
TEST ELEVATION :	+9.0'	NAVD (estimated)
DEPTH TO WATER TABLE H <sub>1</sub> :	8.3'	Below Existing Grade
DEPTH OF TEST HOLE :	10.0'	Below Existing Grade
AVERAGE FLOW RATE:	30.50	GPM

**SOIL PROFILE :**

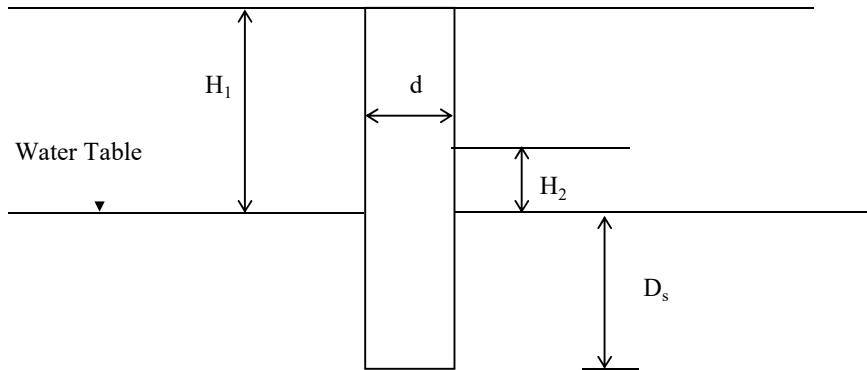
0.0' - 2.0'      1" of Asphalt over brown Sand  
2.0' - 10.0'    Light brown Limestone

- NOTES: 1) The subsurface profile is determined by cuttings & should not be relied upon as an accurate record of material type or for transition zones.  
2) K value calculated using PVC diameter of 3 inches

**PERCOLATION TEST**

<b>N   V   5</b>	<b>PROJECT NAME:</b> Pinnacle 441		
	<b>PROJECT LOCATION:</b> 890 North State Rd 7 (US 441) & 6024 Johnson St, Hollywood, Florida		
	<b>PROJECT NO:</b> 17170	<b>TEST DATE:</b> 02/24/2021	<b>TEST NO:</b> P-2
	<b>TESTED BY:</b> T. Carson / R. Jimenez		<b>CHECKED BY:</b> AB

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT  
" USUAL OPEN - HOLE TEST "**



**HYDRAULIC CONDUCTIVITY**

$$K = \text{Hydraulic Conductivity} = \frac{4Q}{\pi d(2H_2^2 + 4H_2D_s + H_2d)}$$

**1.79E-03 CFS/FT<sup>2</sup>-FT HEAD**

Time (Min.)	Flow (GPM)		
1	31.00	Q = Average Flow Rate =	0.068845 CFS
2	31.00		
3	31.00	d = Diameter of Test Hole =	3.0 inches
4	30.00		
5	31.00	H <sub>2</sub> = Head on Water Table =	8.2 feet
6	31.00		
7	31.00	D <sub>s</sub> = Depth below Ground Water Table =	1.8 feet
8	31.00		
9	31.00		
10	31.00		

TEST LOCATION :		See Drawing No. 1
TEST ELEVATION :	+9.0'	NAVD (estimated)
DEPTH TO WATER TABLE H <sub>1</sub> :	8.2'	Below Existing Grade
DEPTH OF TEST HOLE :	10.0'	Below Existing Grade
AVERAGE FLOW RATE:	30.90	GPM

**SOIL PROFILE :**  
 0.0' - 2.0' 1" of Asphalt over brown Sand  
 2.0' - 10.0' Light brown Limestone

NOTES: 1) The subsurface profile is determined by cuttings & should not be relied upon as an accurate record of material type or for transition zones.  
 2) K value calculated using PVC diameter of 3 inches

**PERCOLATION TEST**

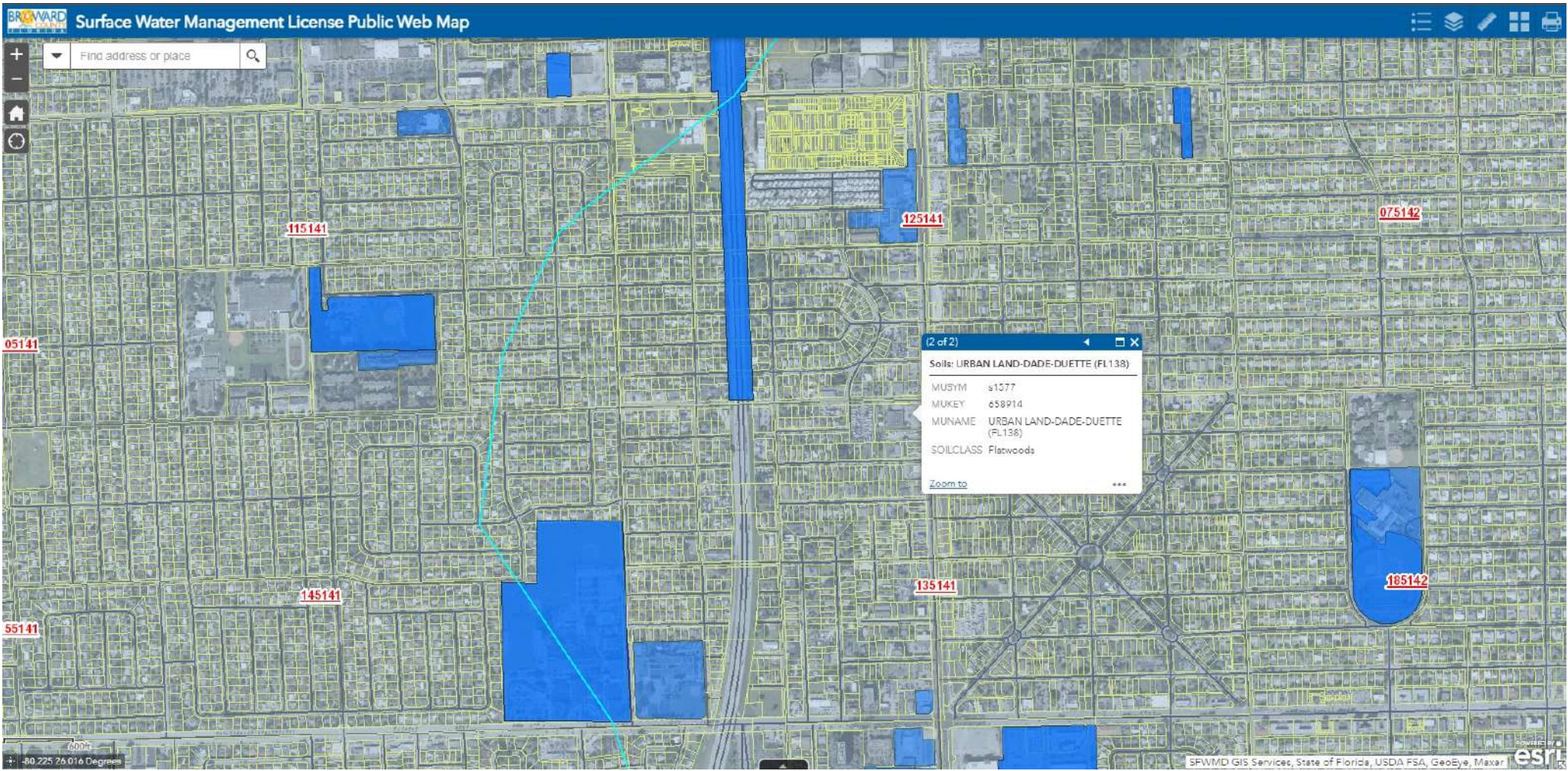
<b>N   V   5</b>	<b>PROJECT NAME:</b> Pinnacle 441		
	<b>PROJECT LOCATION:</b> 890 North State Rd 7 (US 441) & 6024 Johnson St, Hollywood, Florida		
	<b>PROJECT NO:</b> 17170	<b>TEST DATE:</b> 02/24/2021	<b>TEST NO:</b> P-3
	<b>TESTED BY:</b> T. Carson / R. Jimenez		<b>CHECKED BY:</b> AB

**PRELIMINARY 11/22**

**APPENDIX C**

**BROWARD COUNTY GENERAL SOIL MAP**

**PRELIMINARY 11/22**



**PRELIMINARY 11/22**

**APPENDIX D**

**FEMA FLOOD INSURANCE RATE MAP**

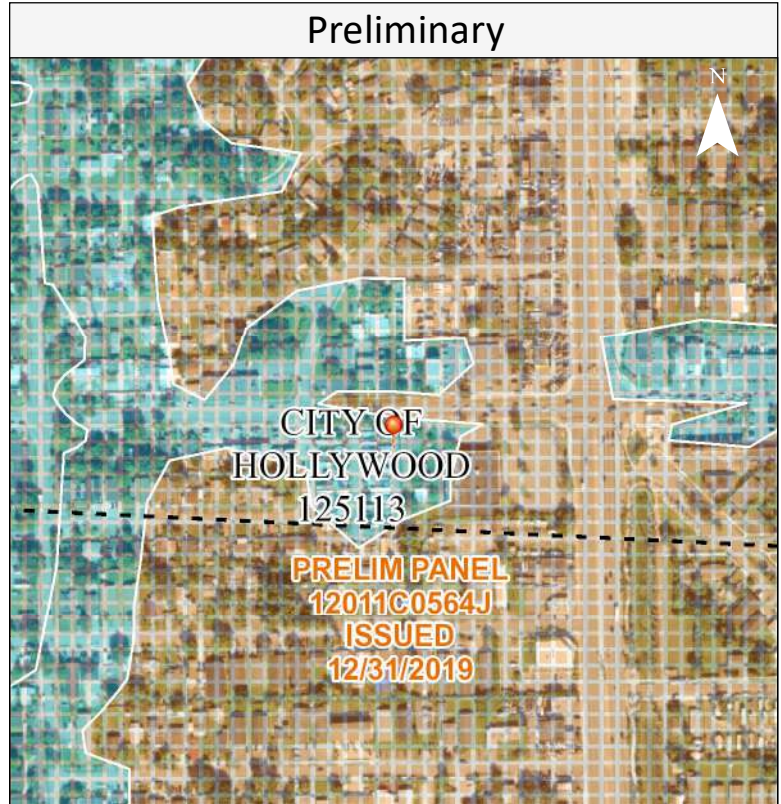
**PRELIMINARY 11/22**

# Comparison of Flood Hazard

Effective & Preliminary Flood Hazards



FEMA



Effective	
POI Longitude/Latitude	-80.2094, 26.0175
Effective FIRM Panel	12011C0564H
Effective Date	8/18/2014
Flood Zone	AH
Static BFE*	10.0 Feet
Flood Depth	Not Available
Vertical Datum	NAVD88

Preliminary	
POI Longitude/Latitude	-80.2094, 26.0175
Preliminary FIRM Panel	12011C0564J
Preliminary Issue Date	12/31/2019
Flood Zone	AH
Estimated Static BFE*	10.0 Feet
Estimated Flood Depth	Not Available
Vertical Datum	NAVD88

\* A **Base Flood Elevation** is the expected elevation of flood water during the 1% annual chance storm event. Structures below the estimated water surface elevation may experience flooding during a base flood event.

Hazard Level	Flood Hazard Zone
High Flood Hazard	<b>AE, A, AH, AO, VE and V Zones.</b> Properties in these flood zones have a 1% chance of flooding each year. This represents a 26% chance of flooding over the life of a 30-year mortgage.
Moderate Flood Hazard	<b>Shaded Zone X.</b> Properties in the moderate flood risk areas also have a chance of flooding from storm events that have a less than 1% chance of occurring each year. Moderate flood risk indicates an area that may be provided flood risk reduction due to a flood control system or an area that is prone to flooding during a 0.2% annual chance storm event. These areas may have been indicated as areas of shallow flooding by your community.  <b>Unshaded Zone X.</b> Properties on higher ground and away from local flooding sources have a reduced flood risk when compared to the Moderate and High Flood Risk categories. Structures in these areas may be affected by larger storm events, in excess of the 0.2% annual chance storm event.
Low Flood Hazard	<b>Insurance Note:</b> High Risk Areas are called 'Special Flood Hazard Areas' and flood insurance is mandatory for federally backed mortgage holders. Properties in Moderate and Low Flood Risk areas may purchase flood insurance at a lower-cost rate, known as Preferred Risk Policies. See your local insurance agent or visit <a href="https://www.fema.gov/national-flood-insurance-program">https://www.fema.gov/national-flood-insurance-program</a> for more information.

**Disclaimer:** This report is for informational purposes only and is not authorized for official use. The positional accuracy may be compromised in some areas. Please contact your local floodplain administrator for more information or go to [www.fema.gov](https://www.fema.gov) to view an official copy of the Flood Insurance Rate Maps.

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNR/S/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**PRELIMINARY 11/22**

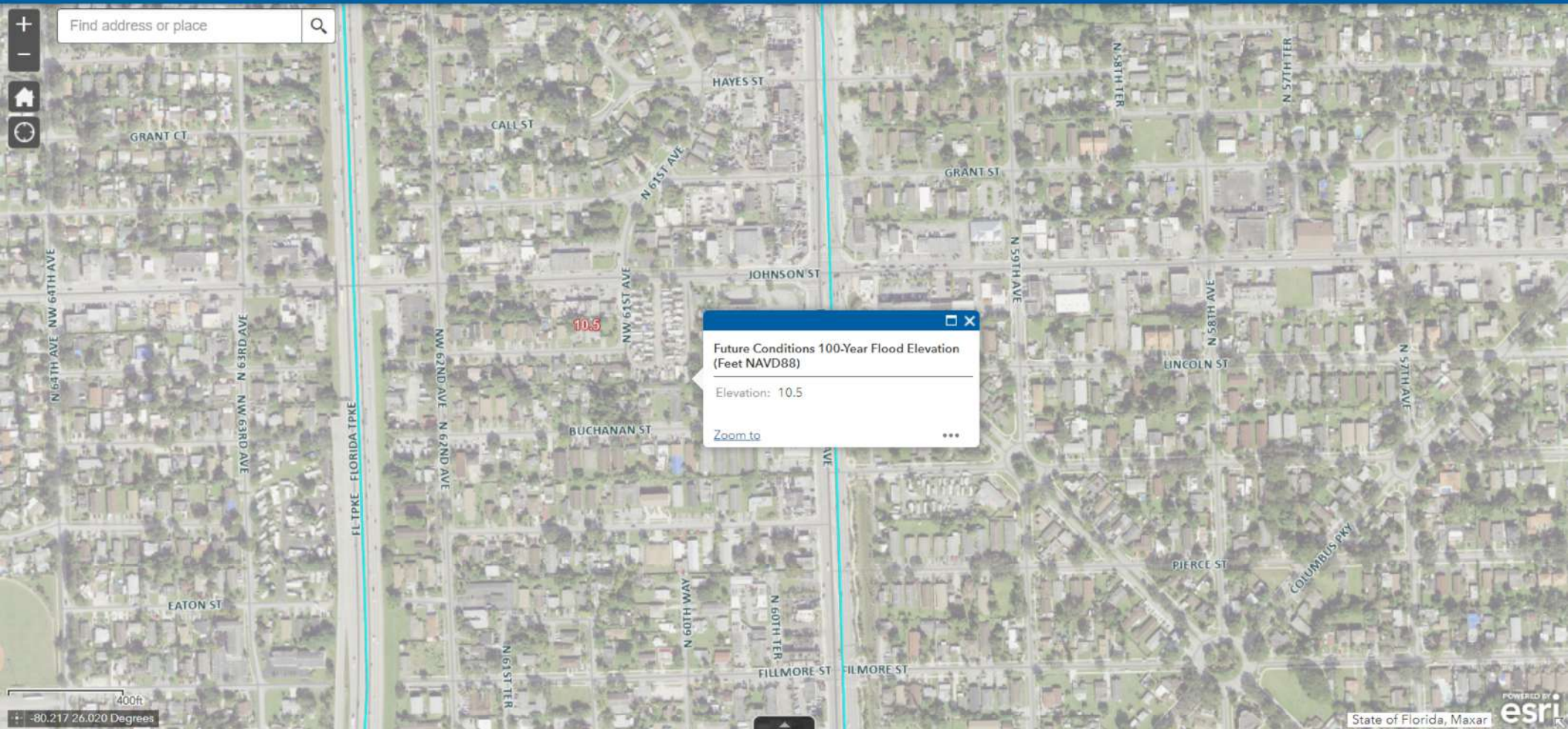
**APPENDIX E**

**BROWARD COUNTY 100 YEAR FLOOD MAP 2060**

**PRELIMINARY 11/22**



# Future Conditions 100-Year Flood Map 2060



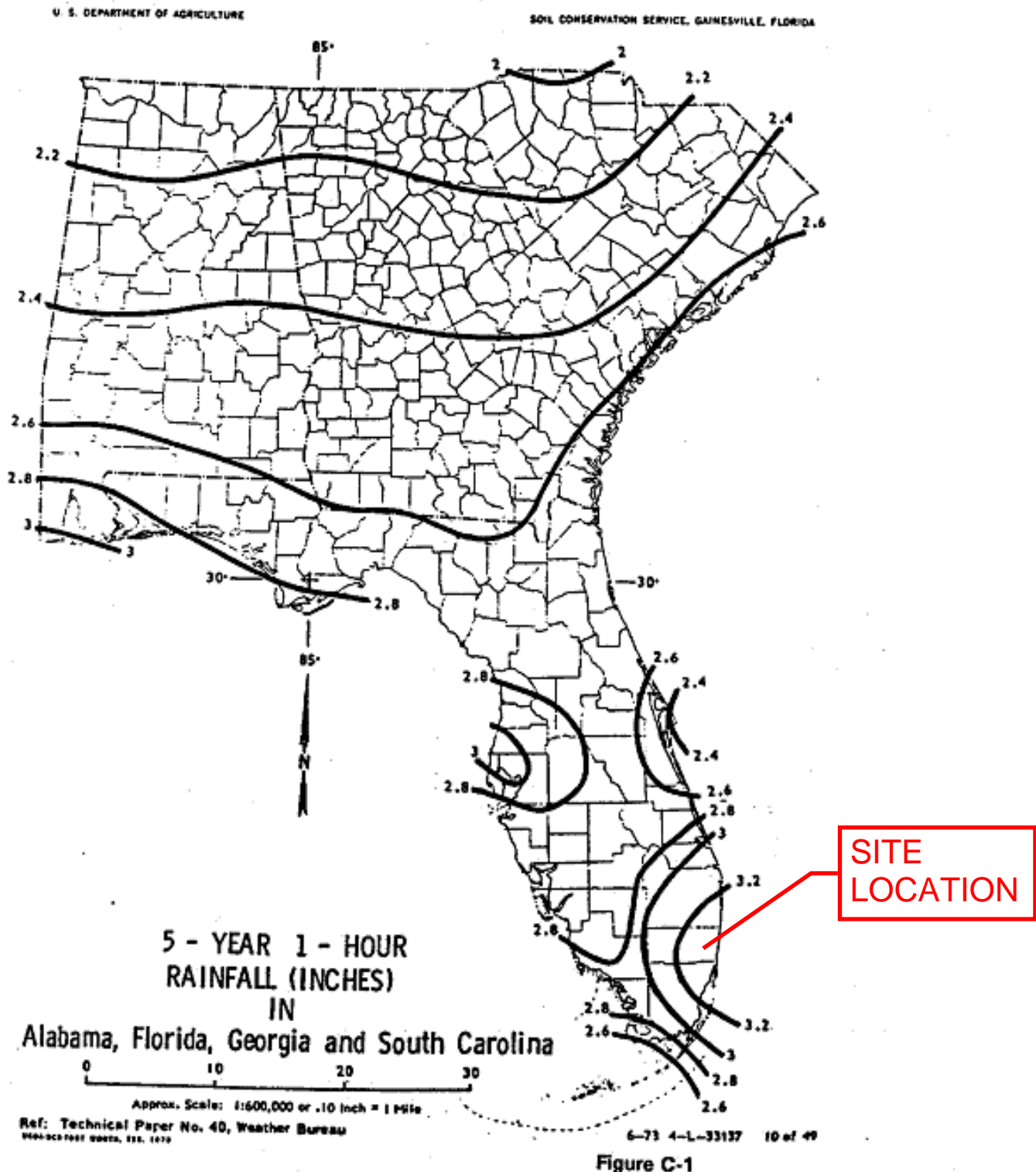
**PRELIMINARY 11/22**

**APPENDIX F**

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT RAINFALL  
MAPS**

**PRELIMINARY 11/22**

Appendix C: Isohyetal Maps  
from SFWMD Technical Memorandum, *Frequency Analysis of One and Three Day  
Rainfall Maxima for central and southern Florida, Paul Trimble, October 1990.*



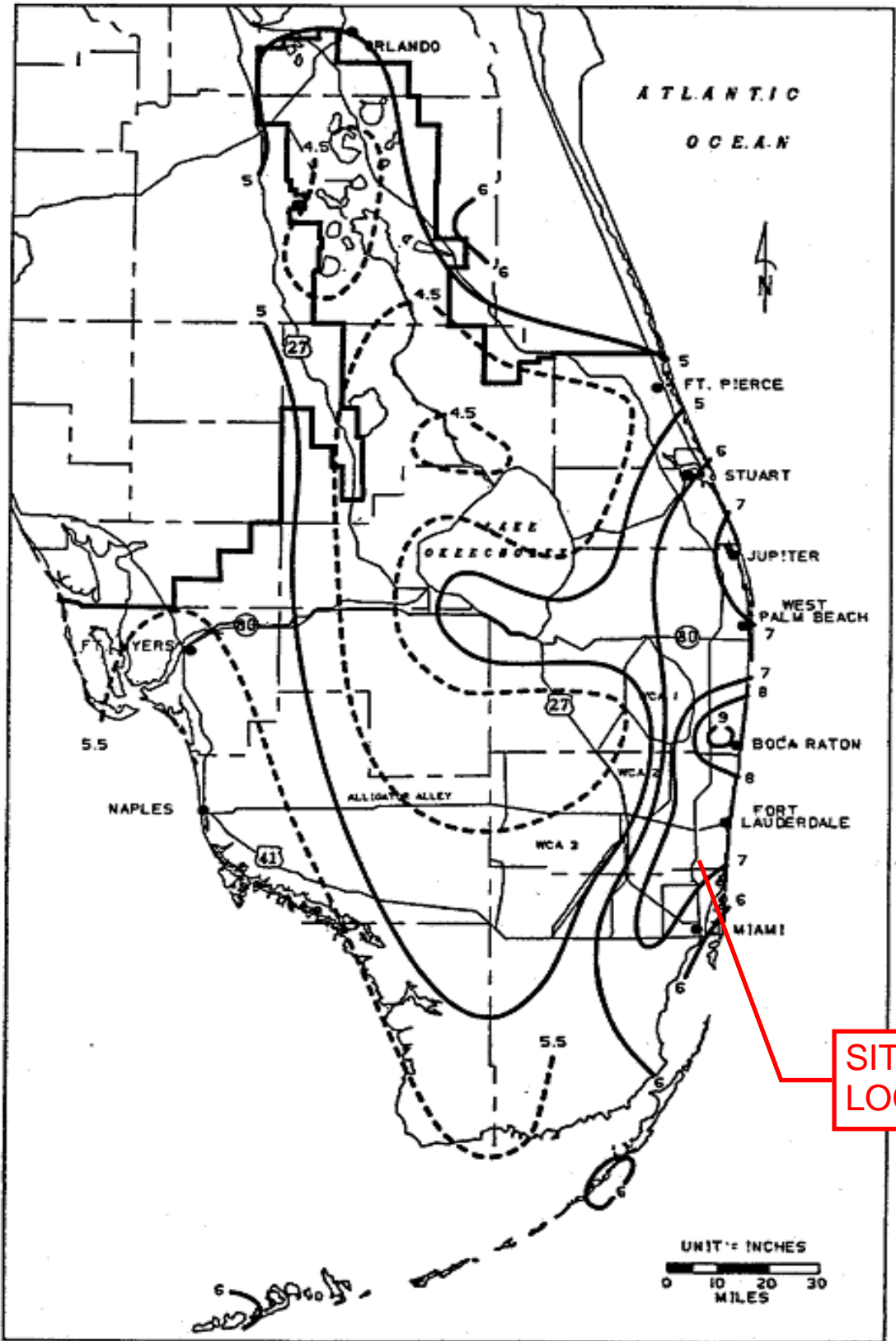


FIGURE C-3. 1-DAY RAINFALL: 5-YEAR RETURN PERIOD

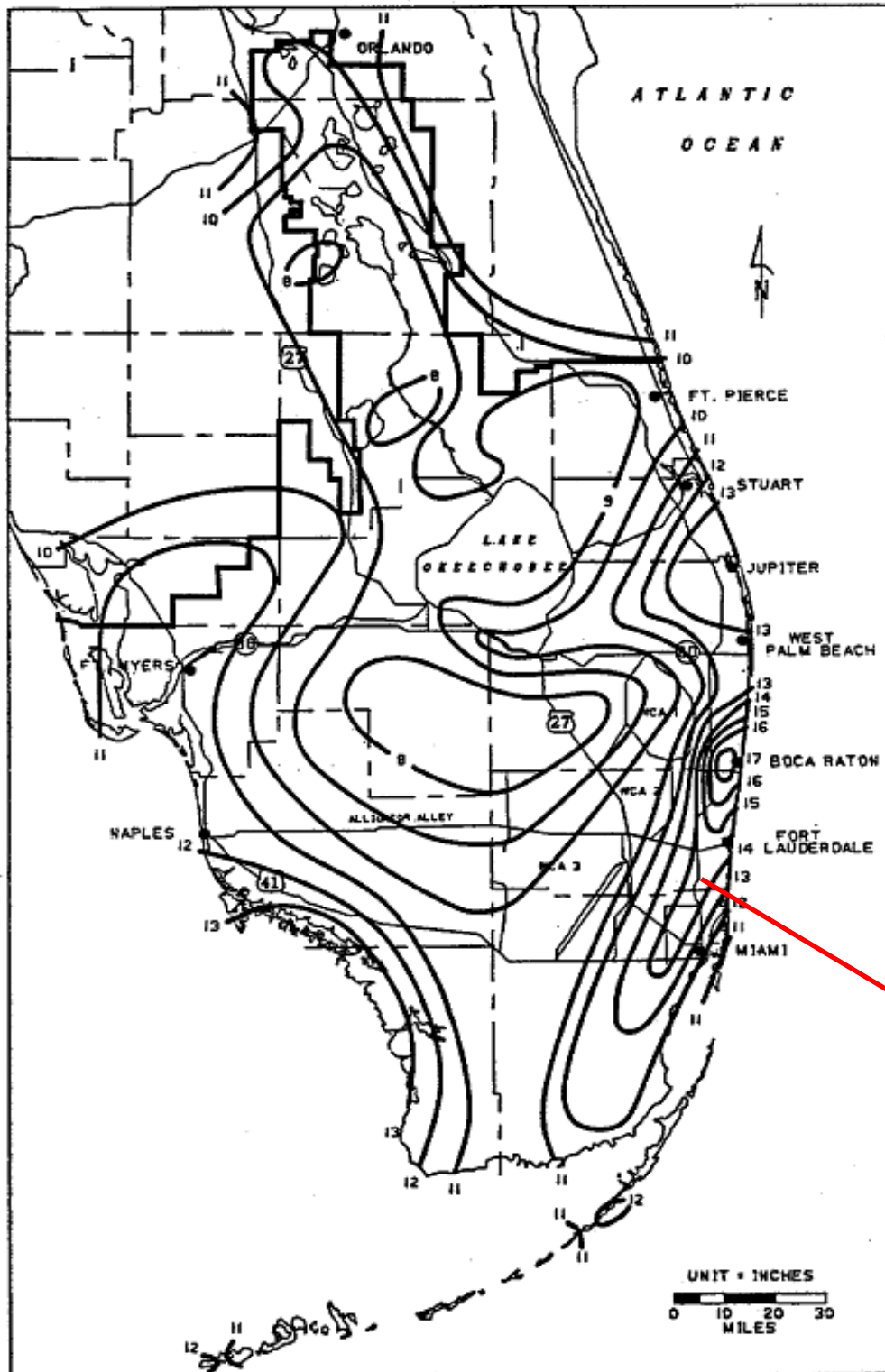


FIGURE C-8. 3-DAY RAINFALL: 25-YEAR RETURN PERIOD

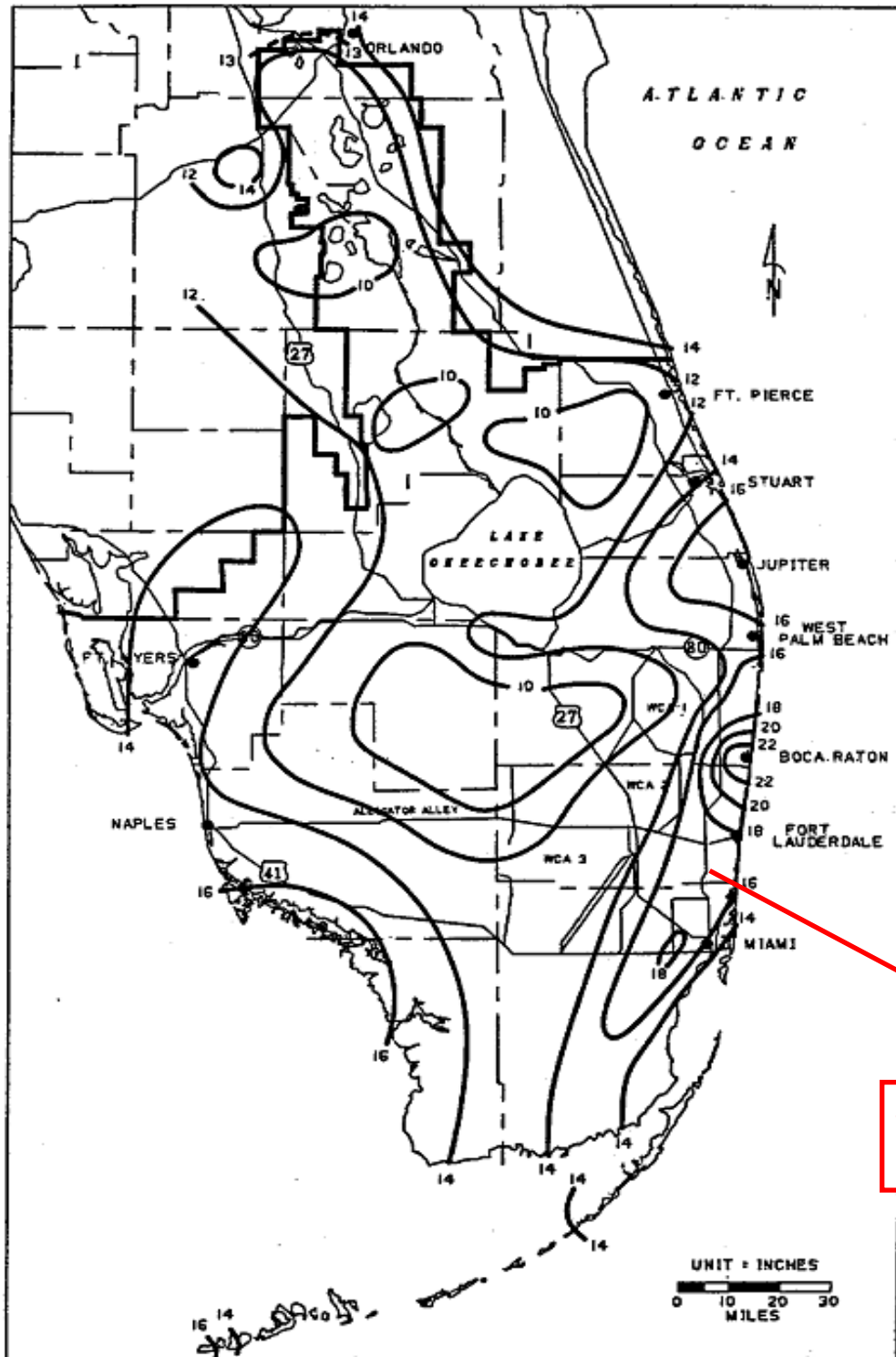


FIGURE C-9. 3-DAY RAINFALL: 100-YEAR RETURN PERIOD