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Engineering Review

05/30/2019 6:10:55 PM

dsdnijkamp

EPC Planning & Community  
Development Department

Townhomes at Bradley Crossroads  
Traffic Impact Study  
PCD File No. PPR1846  
(LSC #194210)  
May 21, 2019

Traffic Engineer's Statement

This traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.



Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

A handwritten signature in black ink, appearing to be 'A', written over a horizontal line.

Date

5/17/19



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May 21, 2019

David R. Gorman, P.E.  
M.V.E., Inc.  
1903 Lelaray Street, Suite 200  
Colorado Springs, CO 80909

RE: Townhomes at Bradley Crossroads  
El Paso County, CO  
Traffic Impact Study  
LSC #194210

Dear Mr. Gorman,

LSC Transportation Consultants, Inc. has prepared this traffic impact study for the proposed Townhomes at Bradley Crossroads residential development with 78 townhome units in El Paso County, Colorado. Located at El Paso County parcel ID 6502407102, the currently vacant 5.24-acre site is situated south of Bradley Road, north of Gladiator Drive, east of Lincoln Plaza Drive, and west of Hancock Expressway.

Three access points are proposed for the property (all existing):

- Three-quarter-movement access to Bradley Road
- Right-in/right-out (RIRO) access on Main Street
- Full-movement access to Gladiator Drive

The previous report by LSC for this site was dated March 22, 2019. This report has been prepared for submittal to El Paso County.

## **REPORT CONTENTS**

The preparation of this report included the following:

- An inventory of existing roadway and traffic conditions on Bradley Road, Main Street, Gladiator Drive, and Lincoln Plaza Drive adjacent to the site, including surface conditions, functional classification, widths, pavement markings, traffic control signs, posted speed limits, intersection and access spacing, roadway and intersection alignments, roadway grades, and auxiliary turn lanes.

- Weekday peak-hour turning movement traffic counts at the intersection of Bradley Road/Lincoln Plaza Drive and Hancock Expressway/Bradley Road.
- Estimated average weekday traffic (AWT) volumes for all access points adjacent to the proposed residential development on Bradley Road and Main Street.
- Projections of 20-year background traffic volumes on Bradley Road, Main Street, Gladiator Drive, and Lincoln Plaza Drive adjacent to the site.
- The proposed site land use and access plan.
- Estimates of average weekday and weekday peak-hour trip generation for the proposed Townhomes at Bradley Crossroads development and the estimated directional distribution of site-generated vehicle-trips on the streets and intersections adjacent to the site.
- Projected site-generated and resulting total peak-hour intersection traffic volumes at the site access points on Bradley Road and Main Street.
- Projected total daily and peak-hour traffic volumes on Bradley Road and Main Street adjacent to the site.
- Intersection level of service analysis at all access points adjacent to the proposed residential development on Bradley Road and Main Street.
- Evaluation of existing and long-term projected intersection volumes to determine the short-term requirements for auxiliary right-/left-turn lanes on Bradley Road and Main Street adjacent to the site based on the criteria in El Paso County's *Engineering Criteria Manual* (ECM). Also included are potential long-term lane requirements.
- Findings and recommendations.

## **LAND USE AND ACCESS**

Figure 1 shows the site location relative to the adjacent and nearby streets. The proposed Townhomes at Bradley Crossroads residential development is proposed to contain approximately 78 multi-family dwelling units. Located at El Paso County parcel ID 6502407102, the site is southwest of the intersection of Hancock Expressway/Bradley Road.

Figure 1 shows the area circulation and access points to the public streets and Figure 2 contain the proposed site plan showing the individual residential units, on-site circulation, and the development entry points.

Three existing access points to the adjacent public streets will be used by the property, with one on Bradley Road, one on Main Street and one on Gladiator Drive. All are currently two-way stop-sign-controlled (TWSC):

- Three-quarter access on Bradley Road (800 feet west of Hancock Expressway/Bradley Road)
- Right-in/Right-out access on Main Street (410 feet south of Hancock Expressway/Bradley Road)
- A full-movement access to Gladiator Drive.

## PREVIOUS AREA TRAFFIC REPORTS

LSC has completed the following traffic studies for Lincoln Plaza/Bradley Crossroads:

- March 18, 2005 – For the entire Lincoln Plaza development, which included this site plus all other adjacent parcels (some of which have since been developed). This most recent version of this study was dated.
- May 10, 2006 – For the adjacent townhome development.
- June 10, 2008 – For Bradley Crossroads, which was a study for the remaining land in the original Lincoln Plaza development east of the townhome site which has since been developed adjacent to Lincoln Plaza Drive.
- May 13, 2010 – Addendum to the TIS for Bradley Crossroads
- July 12, 2010 – Trip Generation Memorandum for Bradley Crossroads Lots 6 and 7

## Other Area Traffic Reports

The Bradley Storage Time development (dated June 1, 2017) for the site located on the north side of the intersection of Lincoln Plaza Drive/Bradley Road. The LSC study for the Proby/Hancock Commercial center (dated January 26, 2015) was also utilized, in part, to estimate the background traffic volumes at the Bradley/Hancock/Main Street intersection.

## Previously Approved Land Use

The previous report for Bradley Crossroads (June 10, 2008) and the addendum report prepared in 2010 were based on a land-use site plan showing mini-warehouse land use for **most of (but not all of)** the portion of Bradley Crossroads now representing the currently proposed townhome site. This new proposed land use (townhomes) would have a greater traffic impact than if mini warehouses were to be constructed. However, this project is part of the larger overall Bradley Crossroads project with shared access points to the public street system. Therefore, the comparison should include all of Bradley Crossroads. The other uses currently assumed for the

remaining commercial lots include about 19,500 square feet of retail/shopping center building space plus one 3,000 square-foot fast food restaurant. These assumptions for land uses have been updated to reflect current 2019 market conditions based on discussions with the property owner. However, these are estimates only and are subject to change. A trip generation comparison to the Bradley Crossroads report trip generation estimate is presented in the trip generation section of this report.

The previously completed infrastructure, (including auxiliary turn lanes, turn lane storage taper and storage lengths, etc.) would still be adequate for the currently proposed townhome land uses. The current trip generation estimate remains lower than the original 2006 study upon which original recommendations for the turn lane infrastructure was based.

## ROAD AND TRAFFIC CONDITIONS

Figure 1 shows the streets adjacent to and in the vicinity of the site. Adjacent streets serving the site are identified below followed by a brief description of each:

**Bradley Road** extends from just west of Academy Boulevard to Goldfield Drive. Bradley Road is classified as a Principal Arterial on the El Paso County *Major Transportation Corridors Plan (MTCP)*. Adjacent to the site, Bradley Road is a two-lane roadway with left-turn lanes and right-turn lanes at Lincoln Plaza Drive and a posted speed limit of 40 miles per hour (mph). The MTCP shows expansion of Bradley Road to a four-lane Principal Arterial by 2040.

**Hancock Expressway** is a Principal Arterial that extends north from Bradley Road and west to Fountain Boulevard, where it becomes Union Boulevard. South of Bradley Road, Hancock Expressway becomes Main Street. The intersection of Hancock/Main/Bradley is signalized with raised medians and left-turn lanes. Adjacent to the site, Hancock Expressway is a four-lane street with a raised median and a posted speed limit of 40 mph.

**Lincoln Plaza Drive** is a 40-foot-wide, two-lane Urban Local street that extends south from Bradley Road to Witches Hollow Lane.

**Gladiator Drive** is a two-lane Urban Local street that extends east-to-west from Lincoln Plaza Drive to Main Street. The eastbound approach of Gladiator Drive at Main Street is striped for exclusive left and right-turn lanes.

**Pleasant Port View** is a 28-foot-wide, two-lane, private access street connecting Bradley Road and Gladiator Drive, as shown in Figure 1 and Figure 2. The intersection of Bradley Road/Pleasant Port View is a three-quarter movement intersection, with the northbound left-turn movement prohibited.

## Existing Traffic Volumes

Vehicular turning movement counts were conducted at the following intersections:

- Hancock Expressway/Bradley Road
  - Tuesday, March 12, 2019 from 6:30-8:30 a.m.
  - Tuesday, May 14, 2019 from 4:00-6:00 p.m.
- Bradley Road/Lincoln Plaza Drive
  - Wednesday, March 6, 2019 from 6:30-8:30 a.m.
  - Wednesday, March 6, 2019 from 4:00-6:00 p.m.
- Main Street/right-in/right-out (RIRO) access
  - Tuesday, March 12, 2019 from 6:30-8:30 a.m.
- Main Street/Gladiator Drive
  - Wednesday, May 8, 2019 from 6:30-8:30 a.m.
  - Tuesday, May 7, 2019 from 4:00-6:00 p.m.
- Gladiator Drive/Pleasant Port View
  - Wednesday, May 8, 2019 from 6:30-8:30 a.m.
  - Tuesday, May 7, 2019 from 4:00-6:00 p.m.

Figure 3 shows these turning movement volumes, as well as the average weekday traffic volumes (estimated based on factored peak-hour count data) on the study area streets. Raw count data is attached.

## TRIP GENERATION

Estimates of the vehicle-trips projected to be generated by the Townhomes at Bradley Crossroads residential development have been made using the nationally published trip generation rates from *Trip Generation, 10<sup>th</sup> Edition, 2017* by the Institute of Transportation Engineers (ITE). ITE Land Use Category 220 – “Multi-Family Housing (Low-Rise),” along with corresponding trip generation rates, have been used to develop the trip generation estimates for site buildout. Figure 2 shows the site plan with 78 dwelling units within the proposed residential development.

Table 1 below presents a summary of the estimated site trip generation. A detailed trip generation estimate for the development, including ITE rates for the proposed land uses, is presented in Table 17 (attached).

**Table 1: Estimated Site Vehicle-Trip Generation**

Analysis Period	Weekday		
	In	Out	Total
Morning Peak Hour	9	29	38
Evening Peak Hour	30	18	48
Daily/24-hour	275	275	549

The proposed Townhomes at Bradley Crossroads residential development is projected to generate about 549 vehicle-trips on the average weekday during a 24-hour period, with approximately half entering and half exiting the site. During the morning peak hour, approximately 9 entering vehicles and 29 exiting vehicles would be generated. Approximately 30 entering and 18 exiting vehicles would be generated by the site during the evening peak hour.

The Appendix Table (attached) presents a current background trip generation estimate for the commercial portion and the overall Bradley Crossroads development and a comparison to prior reports. The overall trip generation is comparable to the prior 2010 and 2008 studies, although the morning peak hour trip estimate is slightly higher, and the evening peak hour trip estimate is slightly lower than the prior studies.

## **TRIP DISTRIBUTION AND ASSIGNMENT**

### **Trip Directional Distribution**

Estimating the directional distribution of site-generated vehicle-trips to the study area roads and intersections is a necessary component in determining the site's traffic impacts. Figure 4 shows the percentages of the site-generated vehicle-trips projected to be oriented to and from the site's major approaches. Estimates have been based on the following factors: the proposed new land use, the area street and road system serving the site, and the site's geographic location relative to unincorporated El Paso County and the City of Colorado Springs.

### **Site-Generated Traffic**

Site-generated traffic volumes at the proposed site access points on Bradley Road and Main Street have been calculated by applying the directional distribution percentages estimated by LSC (from Figure 4) to the trip generation estimates (from Table 17). Figure 5 shows the projected site-generated traffic volumes for the weekday morning and evening peak hours.

### **Existing-Plus-Site-Generated Traffic Volumes**

Figure 6 shows the sum of the existing traffic volumes (from Figure 3) and site-generated peak-hour traffic volumes (shown in Figure 5). These volumes represent the projected short-term total traffic following site buildout.

### **Estimated Future 2040 Background Traffic Volumes**

Figure 7 shows the projected 20-year background traffic volumes for the year 2040. Background volumes include increases in through traffic and trips generated by other area future development, but do **not** include projected traffic to be generated by the proposed Townhomes at Bradley Crossroads residential development. Estimated 2040 background traffic volumes on Bradley Road and Main Street have been based in-part on estimates from the Bradley Storage Time report (which were based on projected 2040 volumes in the MTCP) with adjustments given the current traffic data. Background traffic volumes include estimates of additional trips to be generated by the remaining adjacent commercial parcels (which are currently vacant).

### **Future 2040 Total Traffic Volumes**

Figure 8 shows the projected 2040 total traffic volumes, which are the sum of 2040 background traffic volumes (from Figure 7) plus the site-generated traffic volumes (from Figure 5).

### **LEVEL OF SERVICE ANALYSIS**

The following intersections have been analyzed to determine the projected intersection levels of service for short- and long-term traffic scenarios for the morning and evening peak-hour time periods:

- Bradley Road/Lincoln Plaza Drive
- Three-quarter access on Bradley Road
- RIRO access on Main Street
- Bradley Road/Main Street
- Main Street/Gladiator Drive
- Gladiator Drive/Pleasant Port View

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 2 shows the level of service delay ranges for signalized and unsignalized intersections.



**Table 2: Intersection Levels of Service Delay Ranges**

Level of Service	Signalized Intersections	Unsignalized Intersections
	Average Control Delay (seconds per vehicle)	Average Control Delay (seconds per vehicle) <sup>1</sup>
A	≤ 10.0	≤ 10.0
B	10.1 – 20.0	10.1 – 15.0
C	20.1 – 35.0	15.1 – 25.0
D	35.1 – 55.0	25.1 – 35.0
E	55.1 – 80.0	35.1 – 50.0
F	≥ 80.1	≥ 50.1













<sup>1</sup> For unsignalized intersections, if V/C is > 1.00, then LOS is LOS F regardless of the projected average control delay per vehicle

### Unsignalized Intersections

A summary of LOS during the weekday morning and evening peak hours for the following unsignalized intersections is shown in Table 3 and Table 4. Detailed Synchro and SimTraffic reports are attached.

- Bradley Road/Lincoln Plaza Drive
- Bradley Road/three-quarter access
- Main Street/RIRO access
- Main Street/Gladiator Drive
- Gladiator Drive/Pleasant Port View

**Table 3: Unsignalized Intersection Level of Service Analysis Results (Part 1)**

Scenario	Bradley Rd/Lincoln Plaza Dr*									RI/RO Access		Bradley + 3/4 Access			
	Traffic Control	EBL	WBL	NBL <sup>1</sup>	NBT <sup>1</sup>	NBR <sup>1</sup>	SBR <sup>2</sup>	SBT <sup>2</sup>	SBL <sup>2</sup>	Traffic Control	EBR	Traffic Control	NBR	WBL	
															
A.M. Peak Hour															
2019 Existing	TWSC	-	A	C	-	B	-	-	-	TWSC	B	TWSC	A	A	
2019 Existing + Site						A									
2040 Background		B	A	C	A	A	B	A	C		C		B	A	
2040 Background + Site		A				B	C								
P.M. Peak Hour															
2019 Existing	TWSC	-	A	C	-	B	-	-	-	TWSC	B	TWSC	B	A	
2019 Existing + Site						A									B
2040 Background		A	A	C	A	B	A	A	C		B		B		
2040 Background + Site				D		C			D						

\* SimTraffic analysis results shown in place of Synchro output for this intersection only. SimTraffic simulations indicated sufficient gaps would be created due to signalized intersection of Main St/Bradley Rd. This would allow several NBL turning vehicles to exit at a time.






<sup>1</sup> NB approach is actually a single-lane approach in the short term, but SimTraffic LOS results above are shown for individual NB turning movements

<sup>2</sup> SB approach is actually a single-lane approach in the short term, but SimTraffic LOS results above are shown for individual SB turning movements

TWSC = two-way stop sign control

EBL = eastbound left, WBL = westbound left, NBL = northbound left, SBL = southbound left

**Table 4: Unsignalized Intersection Level of Service Analysis Results (Part 2)**

Scenario	Main St/Gladiator Dr			Gladiator/Pleasant Port			
	Traffic Control	NBL	EBL	EBR	Traffic Control	EBL	SBL
							
A.M. Peak Hour							
2019 Existing	TWSC	A	C	B	TWSC	A	A
2019 Existing + Site							
2040 Background		B	D	B		A	A
2040 Background + Site							
P.M. Peak Hour							
2019 Existing	TWSC	A	C	B	TWSC	A	A
2019 Existing + Site							
2040 Background		B	D	B		A	A
2040 Background + Site							
EBL = eastbound left, WBL = westbound left, NBL = northbound left, SBL = southbound left							





As shown in Table 3 and Table 4, all turning movements/intersection approaches at all proposed site access intersections with Bradley Road, Gladiator Drive, and Main Street are projected to operate at LOS D or better during both peak periods through the 20-year horizon if they are to remain two-way stop-sign-controlled (TWSC).

Note: the level of service at the intersection of Bradley/Lincoln Plaza has been based on model results from a SimTraffic simulation analysis to better account for traffic gaps created on Bradley Road due to the traffic signal at the “upstream” intersection of Main/Hancock/Bradley. Although the northbound approach is striped for a single-lane approach, SimTraffic provides control delay simulation results for each turning movement. As such, Table 3 shows separate levels of service for left-, through-, and right-turning movements on the northbound and southbound approaches.

### Signalized Intersection

A summary of signalized LOS for all short- and long-term traffic scenarios during the weekday morning and evening peak hours is shown in Table 5. Detailed Synchro reports are attached.

**Table 5: Intersection Level of Service Analysis Results (Signalized)**

Scenario	Hancock Expressway/Main St/Bradley Road					
	Traffic Control	Overall	EBL	WBL	NBL	SBL
						
A.M. Peak Hour						
2019 Existing	Signal	B	B	B	B	D
2019 Existing + Site						
2040 Background		C	C	C	C	B
2040 Background + Site						C
P.M. Peak Hour						
2019 Existing	Signal	B	B	B	B	C
2019 Existing + Site						
2040 Background		C	C	D	B	C
2040 Background + Site						
EBL = eastbound left, WBL = westbound left, NBL = northbound left, SBL = southbound left						

For all individual turning movements and overall, the signalized intersection of Bradley Road/Main Street are projected to operate at LOS D or better during both peak hours through the 2040 horizon year.

#### TRAFFIC SIGNAL WARRANT ANALYSIS

The intersection of Bradley Road/Lincoln Plaza Drive has been analyzed to evaluate the potential for meeting a warrant(s) for a traffic control signal in the future. The combination of major street approach volumes (includes the sum of northbound and southbound approach volumes) and minor street left-turn volumes (eastbound approach) were analyzed to determine **if** the combination would exceed the threshold criteria for Four-Hour Vehicular Volume Traffic Signal Warrants and applicable other warrants in the *2009 Manual on Uniform Traffic Control Devices (MUTCD)*.

A summary of traffic signal warrant results is described in Table 6, followed by a description of each warrant.

**Table 6: Traffic Signal Warrants Summary**

MUTCD Traffic Signal Warrants	LSC Analysis Performed (if applicable to this intersection)
Warrant 1 – Eight-Hour Vehicular Volume	Analyzed the Four Hours counted for the AM and PM Peaks (2 hours in AM and 2 Hours in PM)*
Warrant 2 – Four-Hour Vehicular Volume	Analyzed the Four Hours counted for the AM and PM Peaks (2 hours in AM and 2 Hours in PM)
Warrant 3 – Peak Hour	Not applicable
Warrant 4 – Pedestrian Volume	Not likely applicable as this is not a location with significant volumes of crossing pedestrians
Warrant 5 – School Crossing	Not applicable
Warrant 6 – Coordinated Signal System	Not applicable
Warrant 7 – Crash Experience	Criteria A - LSC is not aware of any "trial of alternatives" by EPC Public Works at this location
	Criteria B - LSC has requested Intersection Crash History from the Colorado State Patrol to verify that Criteria B* of Warrant 7 has not been satisfied. Although not anticipated, if crash history indicates that Criteria B is satisfied, LSC will submit an updated traffic report.
	Criteria C - LSC has analyzed the Four Hours counted for the AM and PM Peaks (2 hours in AM and 2 Hours in PM) against volume thresholds in Criteria C (80 percent values of Warrant No. 1)
Warrant 8 – Roadway Network	Not applicable
Warrant 9 – Intersection Near a Grade Crossing	Not applicable
<p>* Note: LSC has performed an analysis of the four hours counted for the AM and PM peak periods. AM Counts were conducted between 6:30 am and 8:30 am to determine the AM peak hour volumes and PM Counts were conducted between 4:00 pm and 6:00 pm to determine the PM peak hour volumes. The four hour volume data collected plus estimated site traffic volumes for these same hours as well as 2040 future projections for these same four hours, have been evaluated against the Warrant 1 volume thresholds, the Warrant 2 volume thresholds, and the Criteria C thresholds in Warrant 7. This analysis of these four hours has been performed in lieu of an analysis of the off-peak hours as well in order to first determine if thresholds are met during the side-street and major street peak traffic. The major street traffic peak traffic occurs during the PM and given the primarily residential development served by Lincoln Plaza Drive, the side-street traffic peaks during the AM.</p>	
<p>**Warrant 7, Criteria A: Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash.</p>	

For Warrants 1, 2 and 7, LSC has performed an analysis of the four hours counted for the AM and PM peak periods. AM Counts were conducted between 6:30 am and 8:30 am to determine the AM peak hour volumes and PM Counts were conducted between 4:00 pm and 6:00 pm to determine the PM peak hour volumes. The four-hour volume data collected plus estimated site traffic volumes for these same hours as well as 2040 future projections for these same four hours, have been evaluated against the Warrant 1 volume thresholds, the Warrant 2 volume thresholds, and the Criteria C thresholds in Warrant 7.

This analysis of these four hours has been performed first, without the inclusion off-peak hours, in order to provide an indication that a warrant may be met or may be close to being met. In order for the Four-Hour Traffic Signal Warrant to be satisfied, the four hours analyzed or some combination of four peak/off peak hours would need to exceed the volume thresholds. In the case of the eight-hour warrant, the four hours analyzed plus four other hours of the day (or some other combination of eight hours would need to meet the eight-hour volume thresholds. The major street traffic peak traffic occurs during the PM and given the primarily residential development served by Lincoln Plaza Drive, the side-street traffic peaks during the AM.

Four separate one-hour periods within the following morning and late afternoon/evening periods have been analyzed:

- 6:30 a.m. – 7:30 a.m.
- 7:30 a.m. -- 8:30 a.m.
- 4:00 p.m. – 5:00 p.m.
- 5:00 p.m. - 6:30 p.m.

### Warrant 1 – Eight-Hour Vehicular Volume Warrant

The details of this warrant are contained in Section 4C.02 of the MUTCD.

### **2019 Existing Plus Site-Generated Traffic**

#### Condition A

Zero of the four studied one-hour analysis periods are projected to meet eight-hour vehicular volume criteria for the short-term background-plus-site traffic scenario. A minimum of 500 vehicles on the major street (total of both approaches) and 150 vehicles (higher-volume minor street approach, one direction only) are required to satisfy “Condition A” during each of the eight hours analyzed. Refer to Table 7 for the major/minor street volume combinations used for the “Condition A” Eight-Hour Vehicular Volume Warrant analysis during the short-term background plus site-generated traffic condition.

**Table 7: Major/Minor Volumes for Signal Warrant No. 1 (Condition A)**

Start Time	End Time	Volumes		Condition A Thresholds		Meets 8-Hour Warrant Thresholds?
		Major Street	Minor Street	Major Street (one lane)	Minor Street (one lane)	
6:30 AM	7:30 AM	1034	73	500	150	No
7:30 AM	8:30 AM	731	77	500	150	No
4:00 PM	5:00 PM	1030	47	500	150	No
5:00 PM	6:00 PM	1027	42	500	150	No
<b><i>Number of hours meeting warrant thresholds/ Hours required to satisfy the warrant</i></b>						<b><i>0 / 8</i></b>
Note: Condition A thresholds are based on MUTCD Table 4C-1 (100% Values)						

#### Condition B

Zero of the four studied one-hour analysis periods are projected to meet eight-hour vehicular volume criteria for the short-term background-plus-site traffic condition. A minimum of 750 vehicles on the major street (total of both approaches) and 75 vehicles (higher-volume minor street approach, one direction only) are required to satisfy “Condition B” during each of the eight hours. Refer to Table 8 for the major/minor street volume combinations used for the “Condition

B" Eight-Hour Vehicular Volume Warrant analysis during the short-term background plus site-generated traffic condition.

**Table 8: Major/Minor Volumes for 8-Hour Signal Warrants (Condition B)**

Start Time	End Time	Volumes		Condition B Thresholds		Meets 8-Hour Warrant Thresholds?
		Major Street	Minor Street	Major Street (one lane)	Minor Street (one lane)	
6:30 AM	7:30 AM	1034	73	750	75	No
7:30 AM	8:30 AM	731	77	750	75	No
4:00 PM	5:00 PM	1030	47	750	75	No
5:00 PM	6:00 PM	1027	42	750	75	No
<b><i>Number of hours meeting warrant thresholds/ Hours required to satisfy the warrant</i></b>						<b><i>0 / 8</i></b>
Note: Condition B thresholds are based on MUTCD Table 4C-1 (100% Values)						

### Projected 2040 Total Traffic Volumes

Similar tables (9 and 10) have been prepared for the projected 2040 Background-plus-site-generated traffic condition.

**Table 9: Major/Minor Volumes for 8-Hour Signal Warrants (Condition A)**

Start Time	End Time	Volumes		Condition A Thresholds		Meets 8-Hour Warrant Thresholds?
		Major Street	Minor Street	Major Street (two or more lanes)	Minor Street (one lane)	
6:30 AM	7:30 AM	1431	112	600	150	No
7:30 AM	8:30 AM	1011	118	600	150	No
4:00 PM	5:00 PM	1474	73	600	150	No
5:00 PM	6:00 PM	1470	66	600	150	No
<b><i>Number of hours meeting warrant thresholds/ Hours required to satisfy the warrant</i></b>						<b><i>0 / 8</i></b>
Note: Condition A thresholds are based on MUTCD Table 4C-1 (100% Values)						

**Table 10: Major/Minor Volumes for 8-Hour Signal Warrants (Condition B)**

Start Time	End Time	Volumes		Condition B Thresholds		Meets 8-Hour Warrant Thresholds?
		Major Street	Minor Street	Major Street (two or more lanes)	Minor Street (one lane)	
6:30 AM	7:30 AM	1431	112	900	75	Yes
7:30 AM	8:30 AM	1011	118	900	75	Yes
4:00 PM	5:00 PM	1474	73	900	75	No
5:00 PM	6:00 PM	1470	66	900	75	No
<b><i>Number of hours meeting warrant thresholds/ Hours required to satisfy the warrant</i></b>						<b><i>2 / 8</i></b>
Note: Condition B thresholds are based on MUTCD Table 4C-1 (100% Values)						

Table 10 shows that two of the four hours analyzed (two out of eight total hours needed) would meet the satisfy the warrant criteria.

#### **Warrant 2 - Four-Hour Vehicular Warrant**

Details of this warrant are contained in Section 4C.03 of the MUTCD.

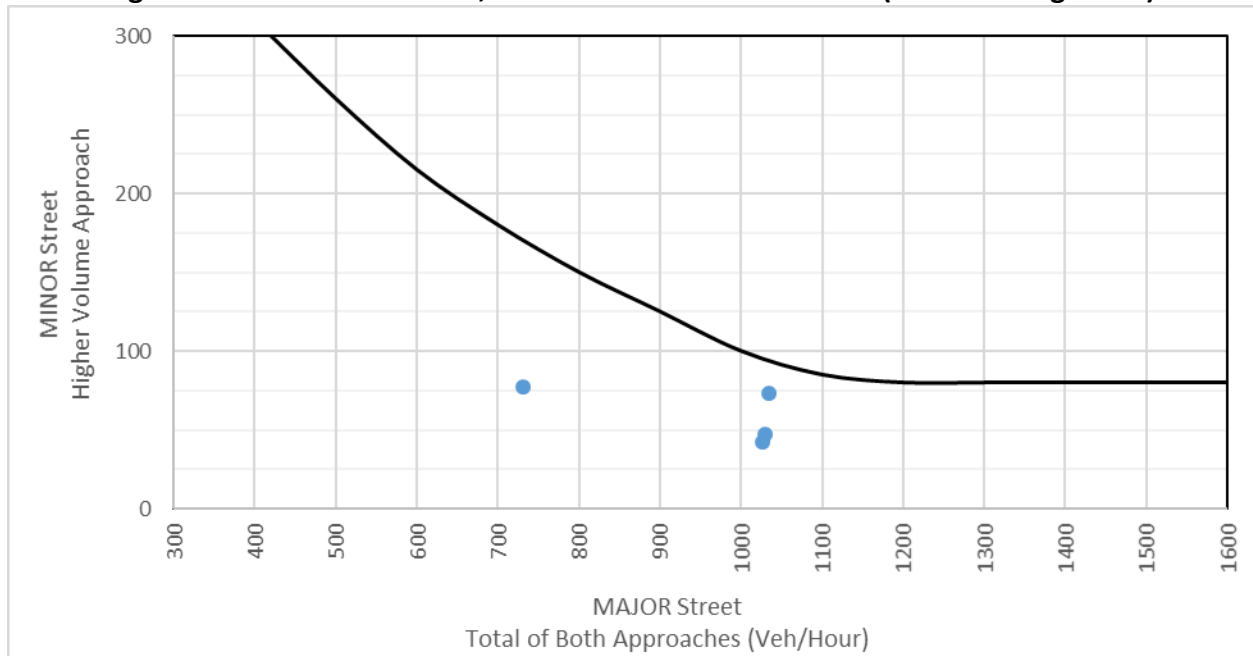
MUTCD Warrant 2 (Four-Hour Vehicular Volume) contains a graph with threshold curves based on major and minor street traffic volumes, the number of intersection approach lanes on the major and minor streets, and the speed of the major street. This graph is shown in MUTCD Figure 4C-1.

#### **2019 Existing Plus Site-Generated Traffic**

Results from the four-hour traffic signal warrant analysis for the short-term background plus site-generated traffic scenario are shown in the Warrant 2, Four-Hour Vehicular Volume (MUTCD Figure 4C-1) signal warrant chart in Figure 9. Fewer than four (zero) separate major/minor street volume data points exceeded the minimum threshold curve for an intersection with one lane for the major approach and one lane for the minor (northbound) approach. As a result, the Four-Hour Vehicular Volume Traffic Signal Warrant threshold at the intersection of Bradley Road/Lincoln Plaza Drive is **not** projected to be exceeded during the morning or evening peak periods based on the 2019 existing plus site-generated traffic scenario.

Note: Northbound right turns have not been included in the side-street volumes.

**Figure 9: MUTCD Warrant 2, Four-Hour Vehicular Volume (2019 Existing + Site)**



Major and minor street volumes shown in Figure 9 above are summarized in Table 11 below.

**Table 11: Major/Minor Volumes for 4-Hour Signal Warrants (Short-Term Background + Site)**

Start	End	Major Street Volume	Minor Street Volume	4-Hour Warrant Threshold Met?
6:30	7:30	1034	73	No
7:30	8:30	731	77	No
4:00	5:00	1030	47	No
5:00	6:00	1027	42	No

### 2040 Total Traffic

Note: The 2016 update to the MTCP shows expansion of Bradley Road to a four-lane roadway by 2040. As such, the MUTCD curve for an intersection with two lanes for the major approach and one lane for the minor (northbound) approach was used for the 2040 total traffic scenario.

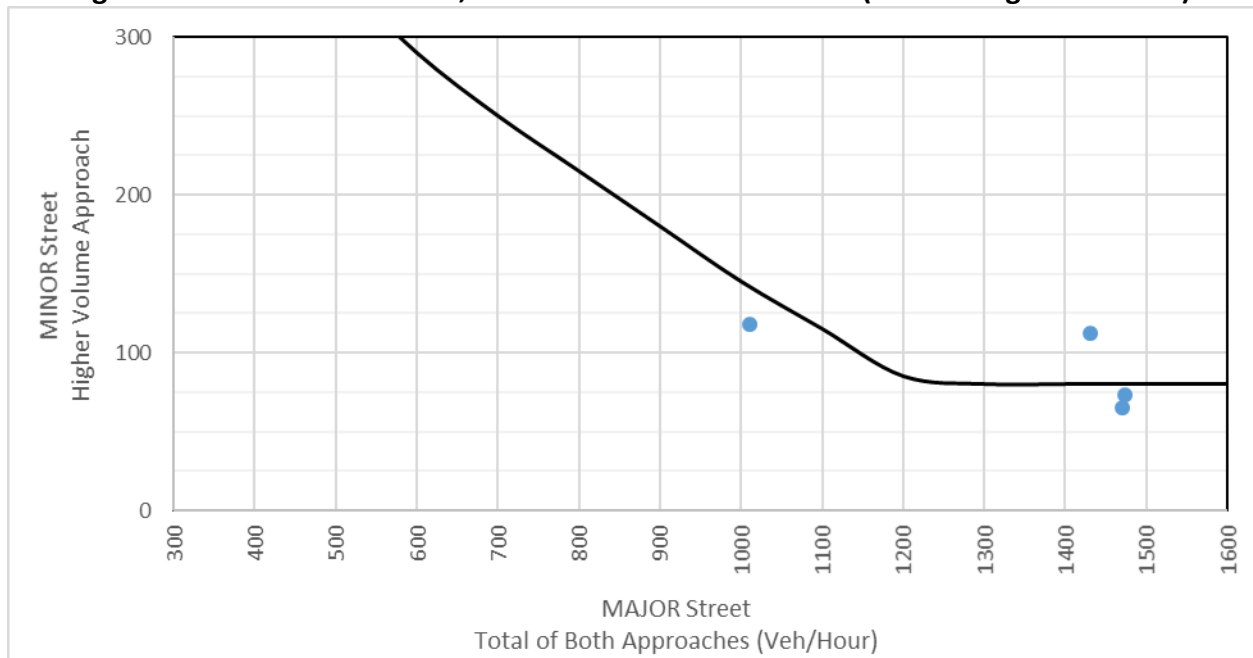
Results from the four-hour traffic signal warrant analysis for the 2040 background-plus-site-generated traffic scenario are shown in the Warrant 2, Four-Hour Vehicular Volume (MUTCD Figure 4C-1) signal warrant chart in Figure 10. Fewer than four (one) separate major/minor street volume data points exceeded the minimum threshold curve to meet a signal warrant. As a result, the Four-Hour Vehicular Volume Traffic Signal Warrant is **not** projected to be met at the



intersection of Bradley Road/Lincoln Plaza Drive for the 2040 background plus site-generated traffic scenario.

Note: Northbound right turns have not been included in the side-street volumes.

**Figure 10: MUTCD Warrant 2, Four-Hour Vehicular Volume (2040 Background + Site)**



Major and minor street volumes shown in Figure 10 above are summarized in Table 12 below.

**Table 12: Major/Minor Volumes for 4-Hour Volume Signal Warrants (2040 Background + Site)**

Start	End	Major Street Volume	Minor Street Volume	8-Hour Warrant Threshold Met?
6:30	7:30	1431	112	Yes
7:30	8:30	1011	118	No
4:00	5:00	1474	73	No
5:00	6:00	1470	66	No

### Warrant 3 – Peak Hour

Warrant 3, which is only applied in unusual cases in which large numbers of vehicles use a facility over a short time, was not applicable to this study.

### Warrant 4 – Pedestrian Volume

Warrant 4 is not likely applicable, as few pedestrians were observed during data collection periods.

### **Warrant 5 – School Crossing**

Warrant 5, related to school crossings, was not applicable since the intersection is not designated as a school crossing.

### **Warrant 6 – Coordinated Signal System**

Warrant 6 is considered when adding a signal is necessary to maintain proper platooning of vehicles within a coordinated signal system. However, this warrant was not applicable because the distance between the intersection of Bradley Road/Lincoln Plaza Drive and the signalized intersection of Hancock Expressway/Main Street/Bradley Road is less than 1,000 feet.

### **Warrant 7 – Crash Experience**

From the MUTCD: *The Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal.*

Details of this warrant are contained in Section 4C.08 of the MUTCD. There are three parts to this warrant [taken from the MUTCD]:

*Standard:*

*The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:*

- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and*
- B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and*
- C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the*

*same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.*

Based on the review of the crash data, part B of this warrant is not satisfied as fewer than five crashes *of types susceptible to correction by a traffic control signal* have occurred within the past 12 months. Please refer to the crash history data spreadsheet provided with this submittal for details.

### 2019 Existing Plus Site-Generated Traffic

As shown in Table 13, the volume thresholds in Part C, Condition A of this warrant are not projected to be exceeded in the short-term.

**Table 13: Existing + Site Major/Minor Volumes for Crash Signal Warrants (Condition A)**

Start Time	End Time	Volumes		Condition A Thresholds		Meets 8-Hour Warrant Thresholds?
		Major Street	Minor Street	Major Street (one lane)	Minor Street (one lane)	
6:30 AM	7:30 AM	1034	73	400	120	No
7:30 AM	8:30 AM	731	77	400	120	No
4:00 PM	5:00 PM	1030	47	400	120	No
5:00 PM	6:00 PM	1027	42	400	120	No
<b><i>Number of hours meeting warrant thresholds/ Hours required to satisfy the warrant</i></b>						<b><i>0 / 8</i></b>
Note: Condition A thresholds are based on MUTCD Table 4C-1 (80% Values)						

As shown in Table 14, two hours of the volume thresholds in Part C, Condition B of this warrant are projected to be exceeded in the short-term.

**Table 14: Existing-Plus-Site Major/Minor Volumes for Crash Signal Warrants (Condition B)**

Start Time	End Time	Volumes		Condition B Thresholds		Meets 8-Hour Warrant Thresholds?
		Major Street	Minor Street	Major Street (one lane)	Minor Street (one lane)	
6:30 AM	7:30 AM	1034	73	600	60	Yes
7:30 AM	8:30 AM	731	77	600	60	Yes
4:00 PM	5:00 PM	1030	47	600	60	No
5:00 PM	6:00 PM	1027	42	600	60	No
<b><i>Number of hours meeting warrant thresholds/ Hours required to satisfy the warrant</i></b>						<b><i>2 / 8</i></b>
Note: Condition B thresholds are based on MUTCD Table 4C-1 (80% Values)						

### 2040 Total Traffic

As shown in Table 15, the volume thresholds in Part C, Condition A of this warrant are not projected to be exceeded in the long-term.

**Table 15: 2040 Major/Minor Volumes for Crash Signal Warrants (Condition A)**

Start Time	End Time	Volumes		Condition A Thresholds		Meets 8-Hour Warrant Thresholds?
		Major Street	Minor Street	Major Street (two or more lanes)	Minor Street (one lane)	
6:30 AM	7:30 AM	1431	112	480	120	No
7:30 AM	8:30 AM	1011	118	480	120	No
4:00 PM	5:00 PM	1474	73	480	120	No
5:00 PM	6:00 PM	1470	66	480	120	No
<b><i>Number of hours meeting warrant thresholds/ Hours required to satisfy the warrant</i></b>						<b><i>0 / 8</i></b>
Note: Condition A thresholds are based on MUTCD Table 4C-1 (80% Values)						

As shown in Table 16, four hours of the volume thresholds in Part C, Condition B of this warrant are projected to be exceeded in the long-term. Other hours (off peak hours) may be met as well, However, A, B and C conditions would all need to be met before this warrant would be satisfied.

**Table 16: 2040 Major/Minor Street Volumes for Crash Signal Warrants (Condition B)**

Start Time	End Time	Volumes		Condition B Thresholds		Meets 8-Hour Warrant Thresholds?
		Major Street	Minor Street	Major Street (two or more lanes)	Minor Street (one lane)	
6:30 AM	7:30 AM	1431	112	720	60	Yes
7:30 AM	8:30 AM	1011	118	720	60	Yes
4:00 PM	5:00 PM	1474	73	720	60	Yes
5:00 PM	6:00 PM	1470	66	720	60	Yes
<b><i>Number of hours meeting warrant thresholds/ Hours required to satisfy the warrant</i></b>						<b><i>4 / 8</i></b>
Note: Condition B thresholds are based on MUTCD Table 4C-1 (80% Values)						

### **Warrant 8 – Roadway Network**

Even though the intersection had over five hours of at least 1,000 vehicles per hour on a non-normal business day (Saturday), Warrant 8 is not applicable. None of the three MUTCD-defined characteristics of the intersection are true, which state the intersection must:

- Be part of a street or highway system that serves as the principal network for through traffic
- Include rural or suburban highways outside, entering, or traversing a city
- Appear as a major route on the City of Houston's 2012 Major Thoroughfare and Freeway Plan

### **Warrant 9 – Intersection Near At-Grade Crossing**

Warrant 9 was not applicable since the intersection of Bradley Road/Lincoln Plaza Drive is not located near an at-grade crossing.

### **AUXILIARY TURN LANE ANALYSIS**

Auxiliary left- and right-turn lanes already have been constructed on Bradley Road between the intersections of Bradley Road/Lincoln Plaza Drive and Bradley Road/Hancock/Main Street in anticipation of future buildout of all these undeveloped parcels. These lane improvements were approved and constructed as part of the overall/greater Lincoln Plaza development.

## **ROADWAY IMPROVEMENT FEE PROGRAM**

This project will be required to participate in the El Paso County Road Improvement Fee Program. It is our understanding that the Townhomes at Bradley Crossroads applicant will opt out of the two PID options. The 2019 “full fee” amount is \$2,407 per multi-family dwelling unit. Based on 78 dwelling units, the total building permit fee would be \$187,746.

## **CONCLUSIONS**

The site is projected to generate about 549 new driveway vehicle-trips on the average weekday.

During the weekday morning peak hour of adjacent street traffic, 9 vehicles would enter the site while 30 vehicles would exit.

During the weekday evening peak hour of adjacent street traffic, 30 vehicles would enter the site while 18 vehicles would exit.

All individual turning movements and approaches at all studied intersections are projected to operate at LOS D or better during both peak hours through the 2040 horizon year.

As this project is part of a larger previously approved and partially completed development, the offsite and onsite roadway infrastructure is already in-place.

Projected future volumes at the currently unsignalized intersection of Bradley Road/Lincoln Plaza Drive would **not** exceed the MUTCD threshold criteria for Eight Hour or Four-Hour Vehicular Volume Traffic Signal Warrants based on the four hours analyzed (the morning and early evening “commuter” peak periods). Please refer to the traffic signal warrant section for additional details.

\* \* \* \* \*

Please contact me if you have any questions regarding this report.

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

By: Jeffrey C. Hodsdon, P.E.  
Principal

JCH:JAB

Enclosures: Table 17  
Figure 1 - Figure 8  
Traffic Count Reports  
Synchro LOS Reports  
SimTraffic LOS Reports

### Table 17: Detailed Trip Generation Estimate

ITE				Trip Generation Rates <sup>(1)</sup>					Total Trips Generated				
				Value	Units	Average	A.M.		P.M.		Average	A.M.	
Code	Description	Weekday	In			Out	In	Out	Weekday	In	Out	In	Out
220	Multi-Family Housing (Low-Rise)	78	DU	7.04	0.11	0.37	0.38	0.22	549	9	29	30	18
(1) DU = dwelling units													
(2) Source: Trip Generation, 10th Edition, 2017, by the Institute of Transportation Engineers (ITE)													



**Appendix Table: Bradley Crossroads Background Trip Generation Estimate and Trip Generation Comparison**

ITE				Value	Units	Trip Generation Rates <sup>(1)</sup>				Total Trips Generated						
						Average	A.M.		P.M.	Average	A.M.		P.M.			
Code	Description					Weekday	In	Out	In	Out	Weekday	In	Out	In	Out	
		Currently Proposed Land Uses														
220		Multi-Family Housing (Low-Rise)			78	DU	7.04	0.11	0.37	0.38	0.22	549	9	29	30	18
		Bradley Crossroads - Future Commercial Land Uses														
820		Shopping Center			19.500	KSF	90.04	3.64	2.23	3.62	3.92	1756	71	43	71	77
		Fast Food			3.000	KSF	470.95	20.50	19.69	16.99	15.68	1413	61	59	51	47
		Subtotal										3169	132	103	122	124
		Existing														
948	Lot 7A	Automated Car Wash			1	Tunnel	775.00	19.38	19.38	38.75	38.75	775	19	19	39	39
	Lot 6A	Convenience Store w/ Gas Pumps			8	VFP						1302	41	41	54	54
												2077	60	60	93	93
		Current Bradley Crossroads Total										5795	201	192	244	234
		Previous Trip Generation Estimates														
		Bradley Crossroads (2008)										6926	216	178	331	321
		Bradley Crossroads Addendum (2010)										6545	225	200	295	282
(1) DU = dwelling units																
(2) Source: Trip Generation, 10th Edition, 2017, by the Institute of Transportation Engineers (ITE)																

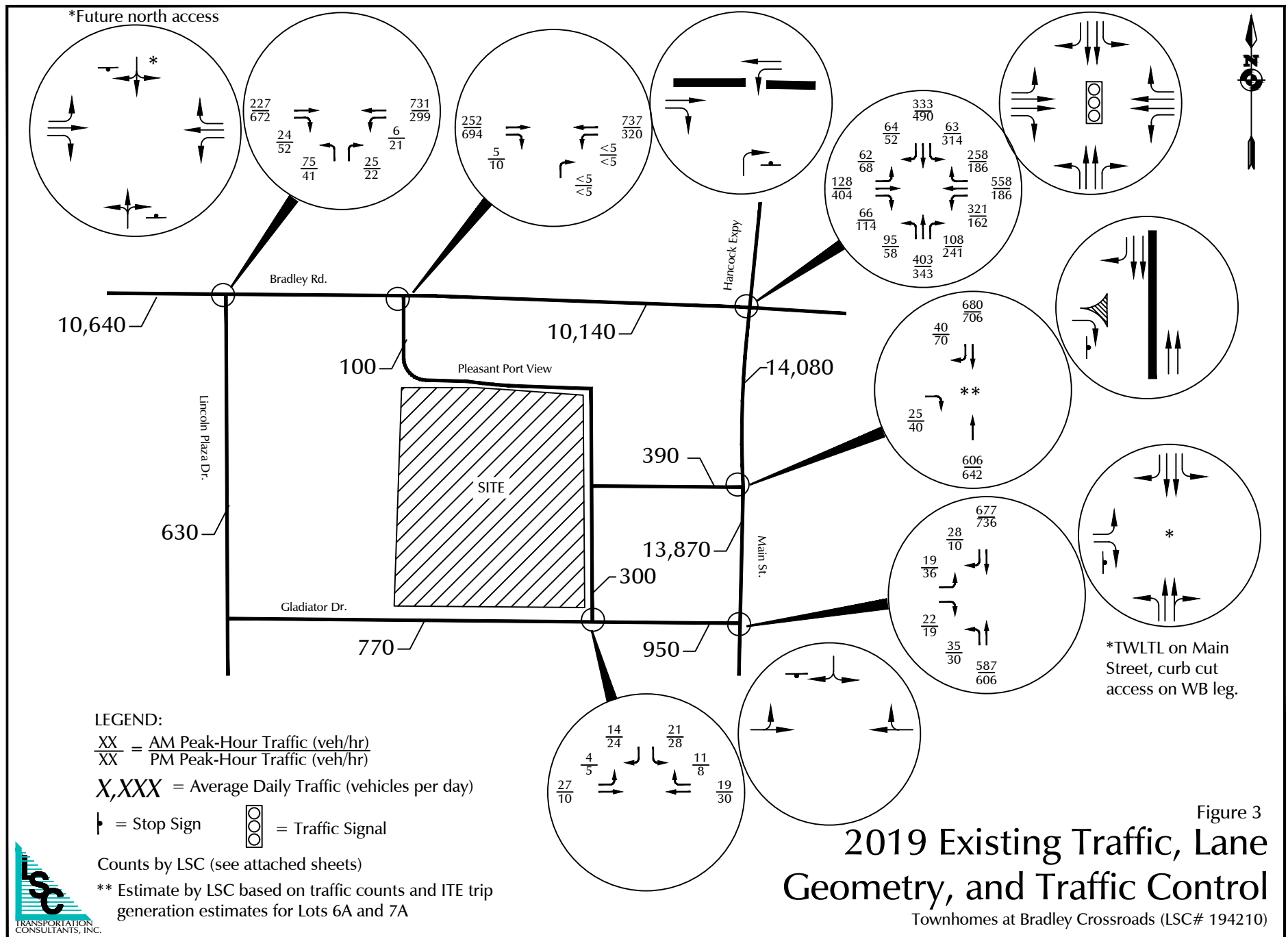


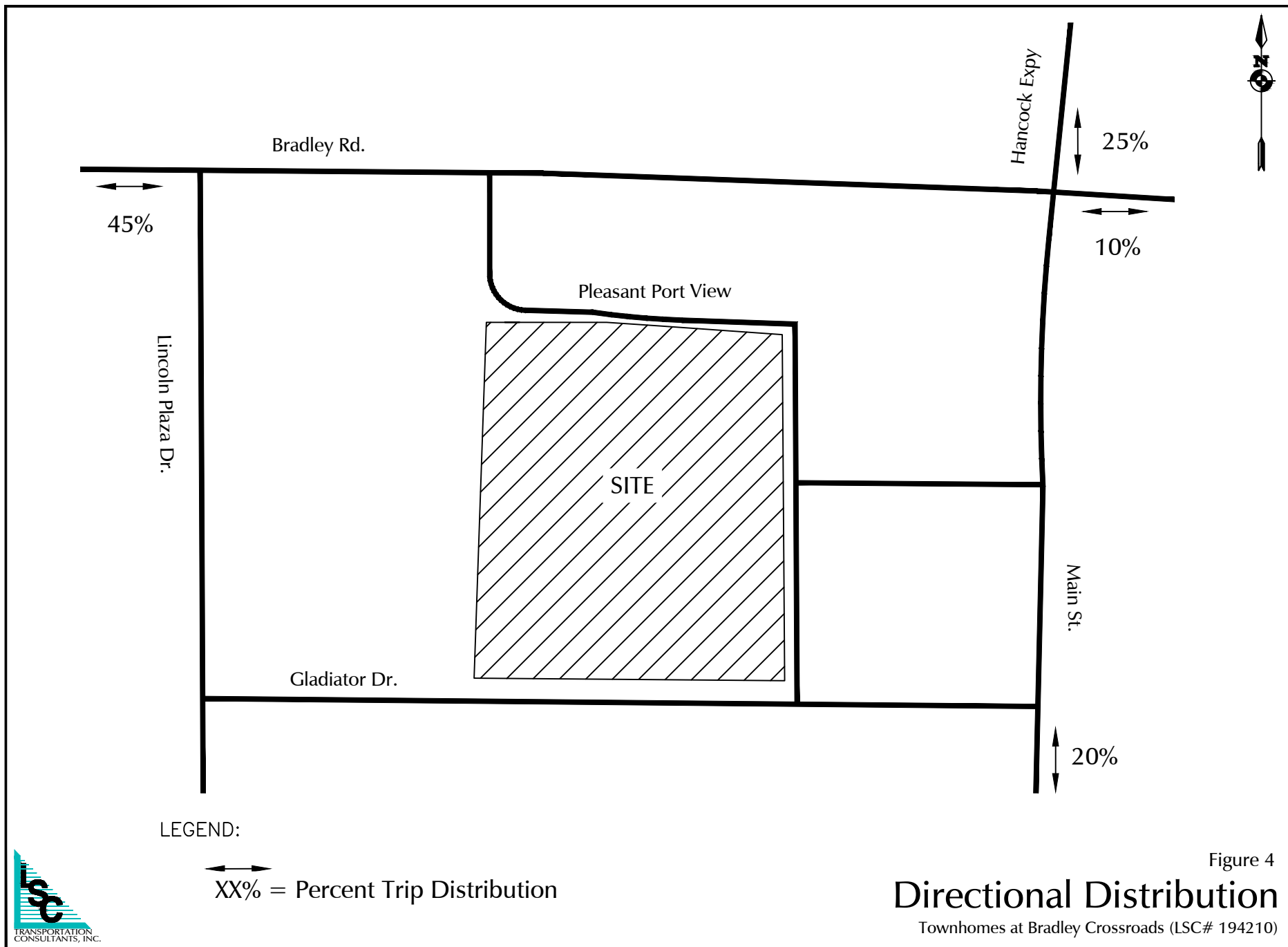
Not to  
scale





Townhomes at Bradley Crossroads (LSC# 194210)







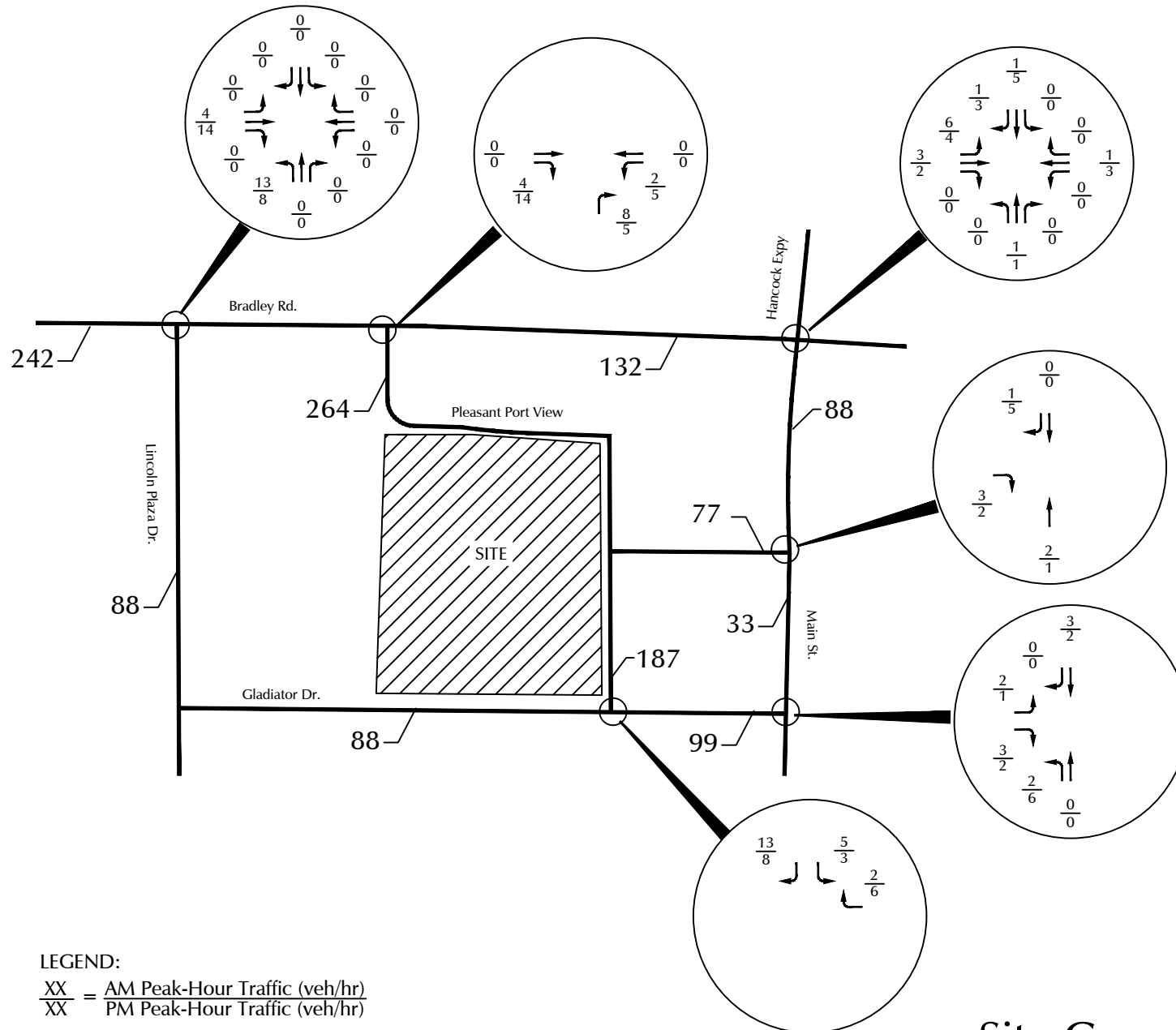
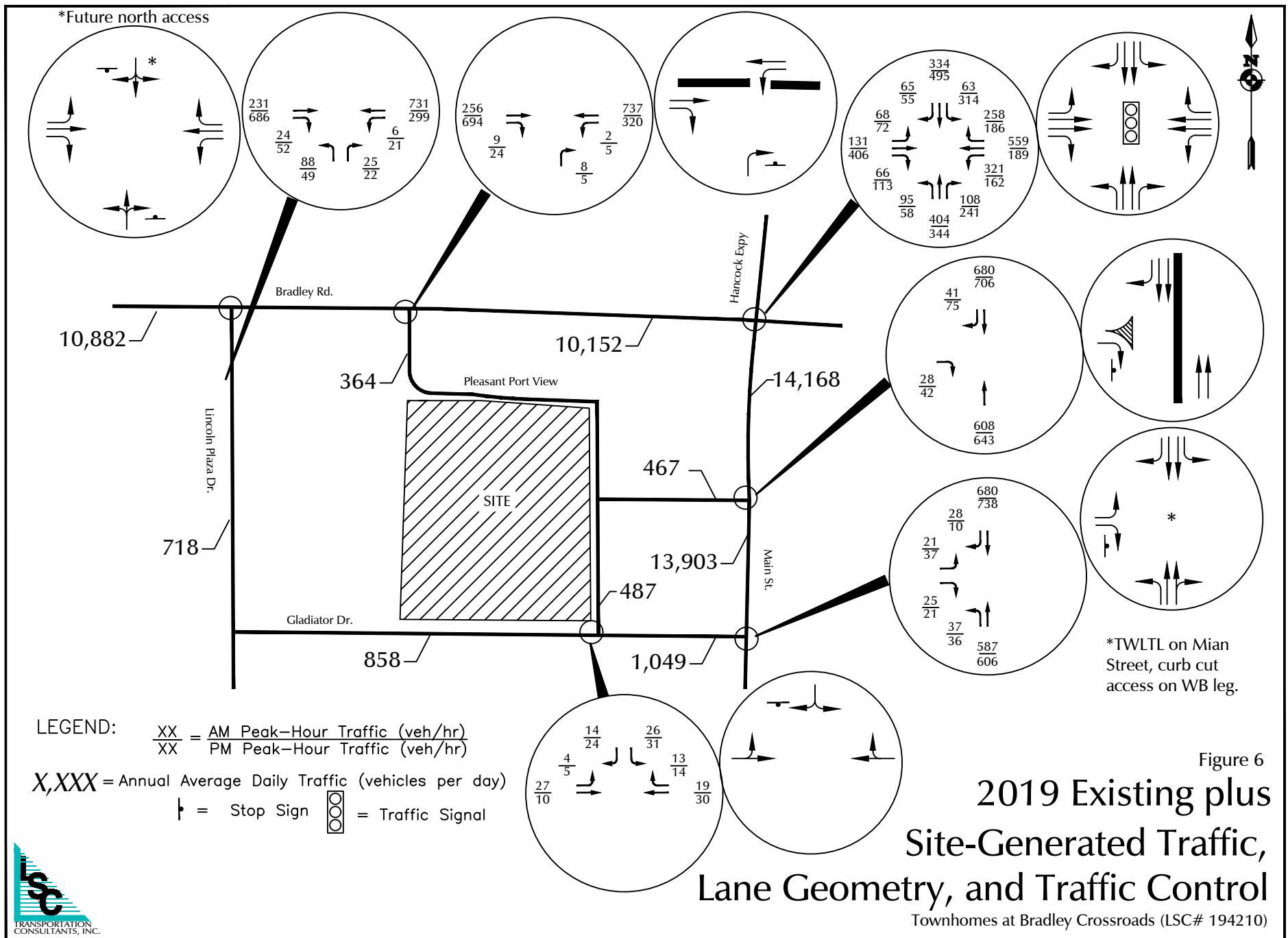
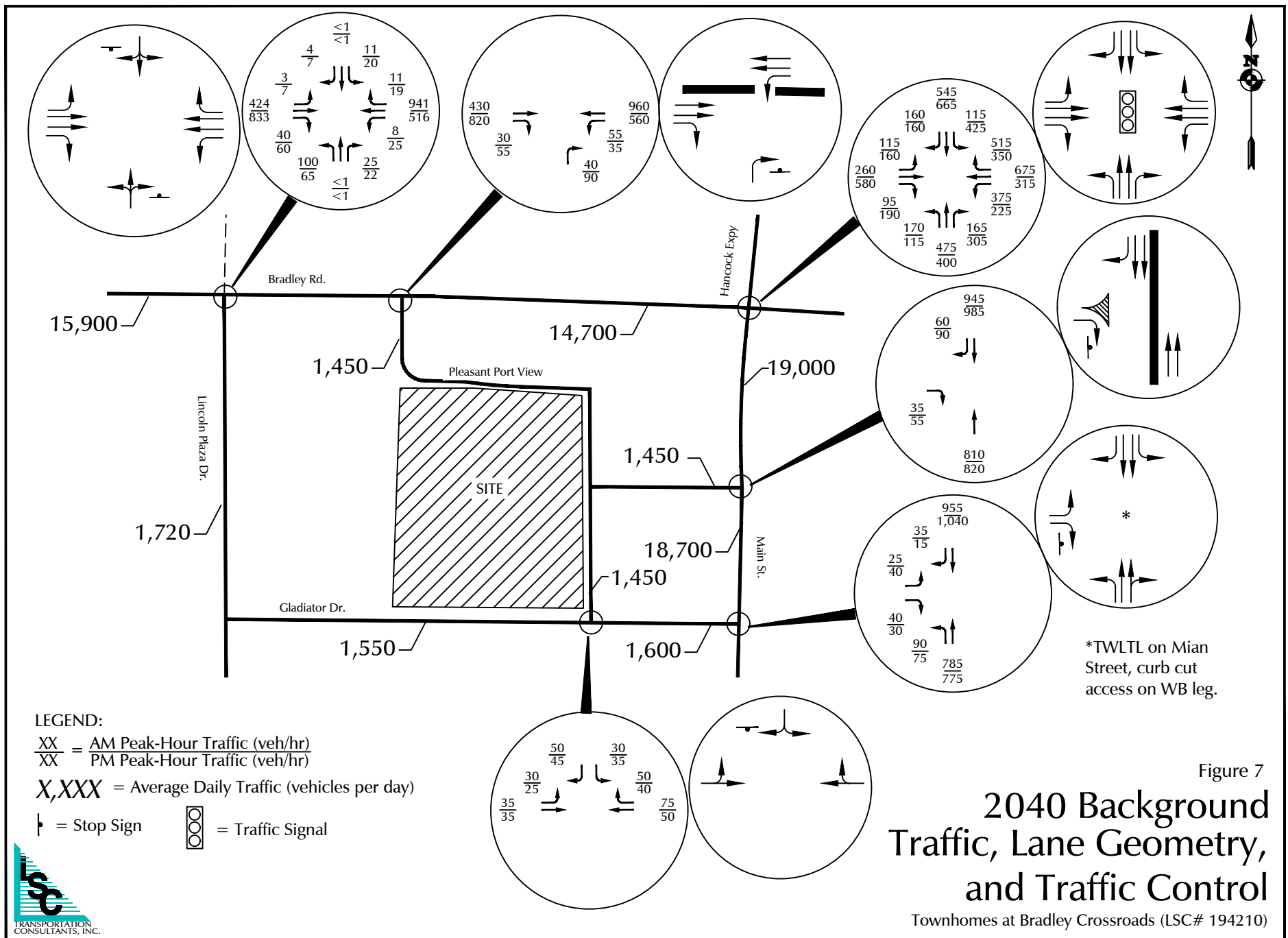
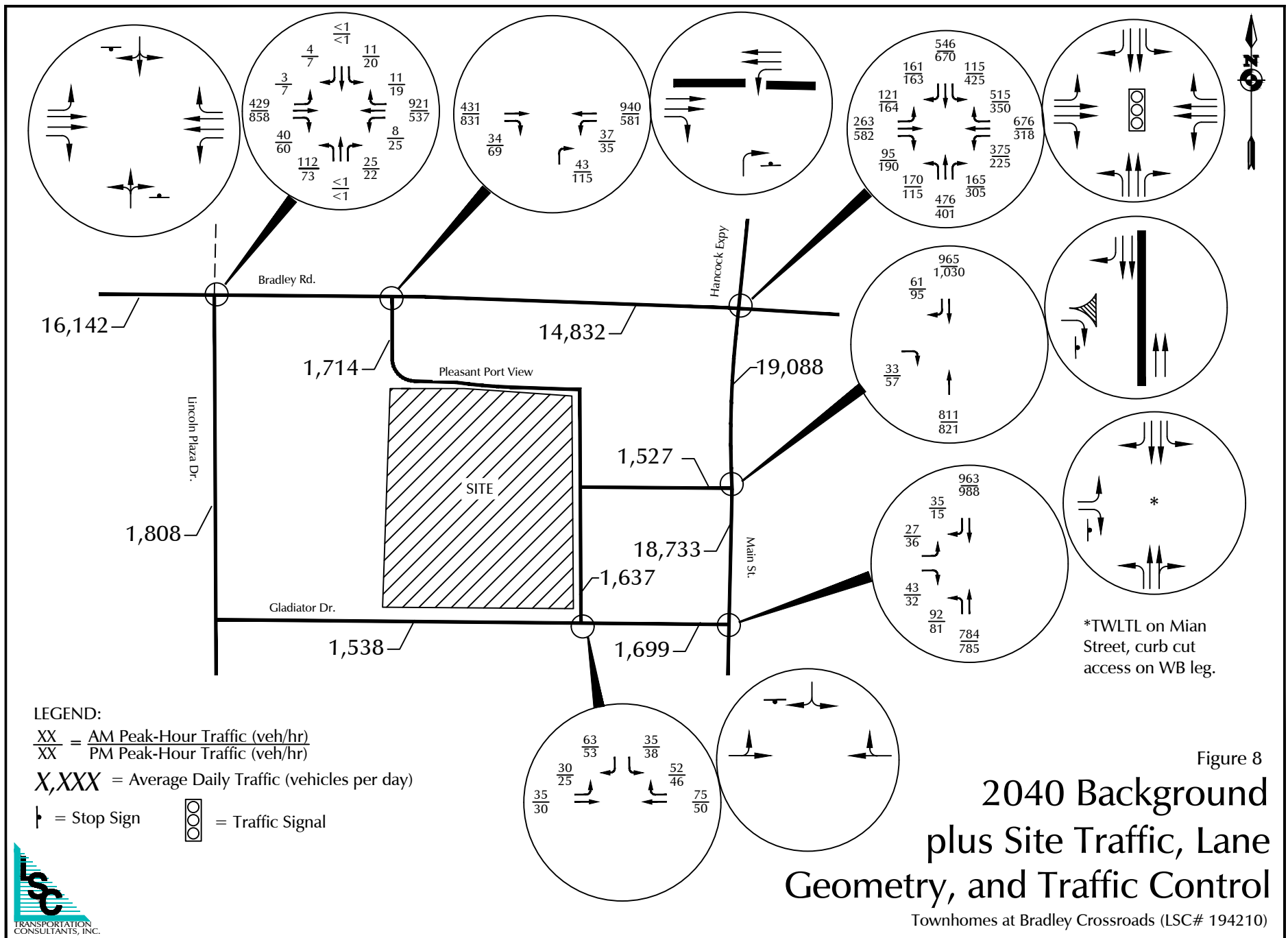


Figure 5  
**Site-Generated Traffic**  
 Townhomes at Bradley Crossroads (LSC# 194210)











# LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210  
Colorado Springs, CO 80905  
719-633-2868

File Name : Lincoln Plaza Dr-Bradley Rd AM

Site Code : 194210

Start Date : 3/6/2019

Page No : 1

## Groups Printed- Unshifted

Start Time	Southbound					Bradley Rd Westbound					Lincoln Plaza Dr Northbound					Bradley Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
06:45 AM	0	0	0	0	0	0	158	0	0	158	15	0	8	0	23	0	55	4	0	59	240
Total	0	0	0	0	0	0	158	0	0	158	15	0	8	0	23	0	56	4	0	60	241
07:00 AM	0	0	0	0	0	3	195	0	0	198	15	0	9	0	24	0	59	9	0	68	290
07:15 AM	0	0	0	0	0	0	225	0	0	225	24	0	4	0	28	0	57	6	0	63	316
07:30 AM	0	0	0	0	0	3	153	0	0	156	21	0	4	0	25	0	56	5	0	61	242
07:45 AM	0	0	0	0	0	3	100	0	0	103	17	0	6	0	23	0	60	5	0	65	191
Total	0	0	0	0	0	9	673	0	0	682	77	0	23	0	100	0	232	25	0	257	1039
08:00 AM	0	0	0	0	0	1	110	0	0	111	8	0	8	0	16	0	65	3	0	68	195
08:15 AM	0	0	0	0	0	3	114	0	0	117	18	0	3	0	21	0	43	4	0	47	185
Grand Total	0	0	0	0	0	13	1055	0	0	1068	118	0	42	0	160	0	396	36	0	432	1660
Apprch %	0	0	0	0		1.2	98.8	0	0		73.8	0	26.2	0		0	91.7	8.3	0		
Total %	0	0	0	0	0	0.8	63.6	0	0	64.3	7.1	0	2.5	0	9.6	0	23.9	2.2	0	26	



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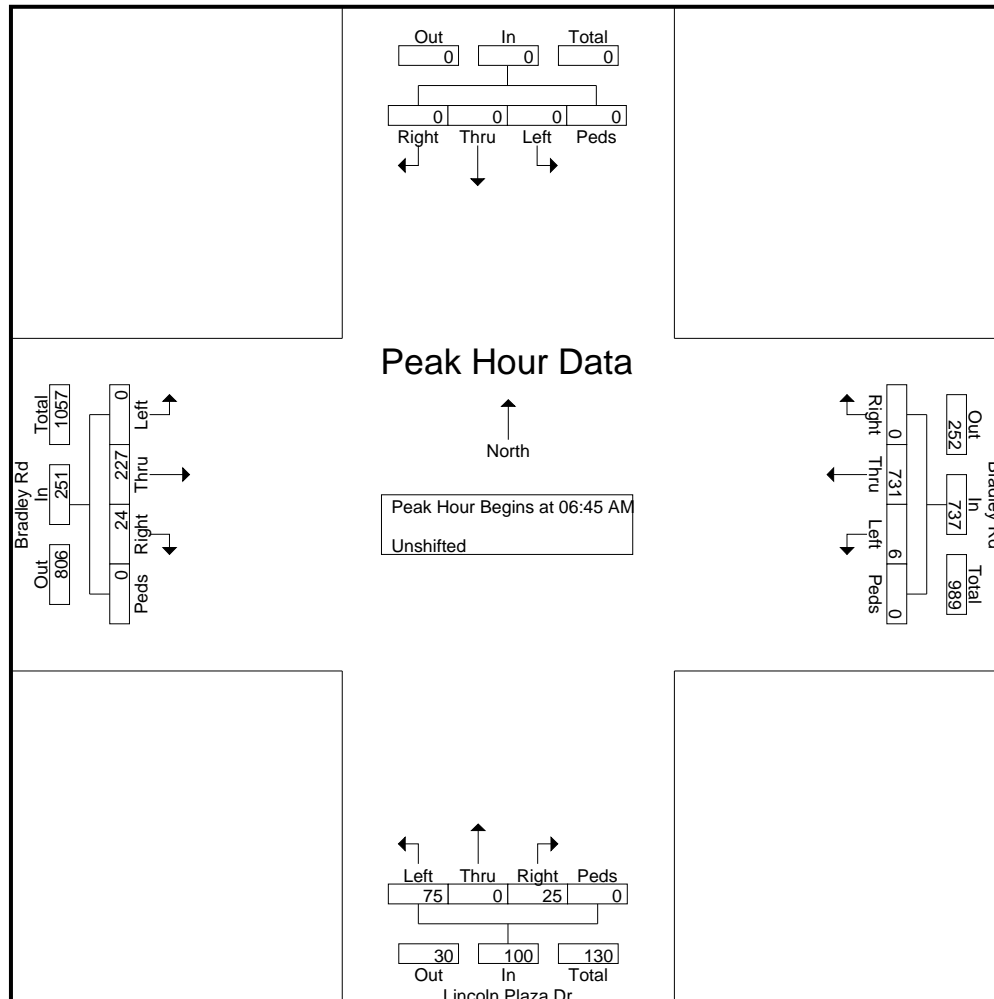
File Name : Lincoln Plaza Dr-Bradley Rd AM

Site Code : 194210

Start Date : 3/6/2019

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	Southbound					Bradley Rd Westbound					Lincoln Plaza Dr Northbound					Bradley Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 06:45 AM																					
06:45 AM	0	0	0	0	0	0	158	0	0	158	15	0	8	0	23	0	55	4	0	59	240
07:00 AM	0	0	0	0	0	3	195	0	0	198	15	0	9	0	24	0	59	9	0	68	290
07:15 AM	0	0	0	0	0	0	225	0	0	225	24	0	4	0	28	0	57	6	0	63	316
07:30 AM	0	0	0	0	0	3	153	0	0	156	21	0	4	0	25	0	56	5	0	61	242
Total Volume	0	0	0	0	0	6	731	0	0	737	75	0	25	0	100	0	227	24	0	251	1088
% App. Total	0	0	0	0	0	0.8	99.2	0	0	0	75	0	25	0	0	0	90.4	9.6	0	0	0
PHF	.000	.000	.000	.000	.000	.500	.812	.000	.000	.819	.781	.000	.694	.000	.893	.000	.962	.667	.000	.923	.861





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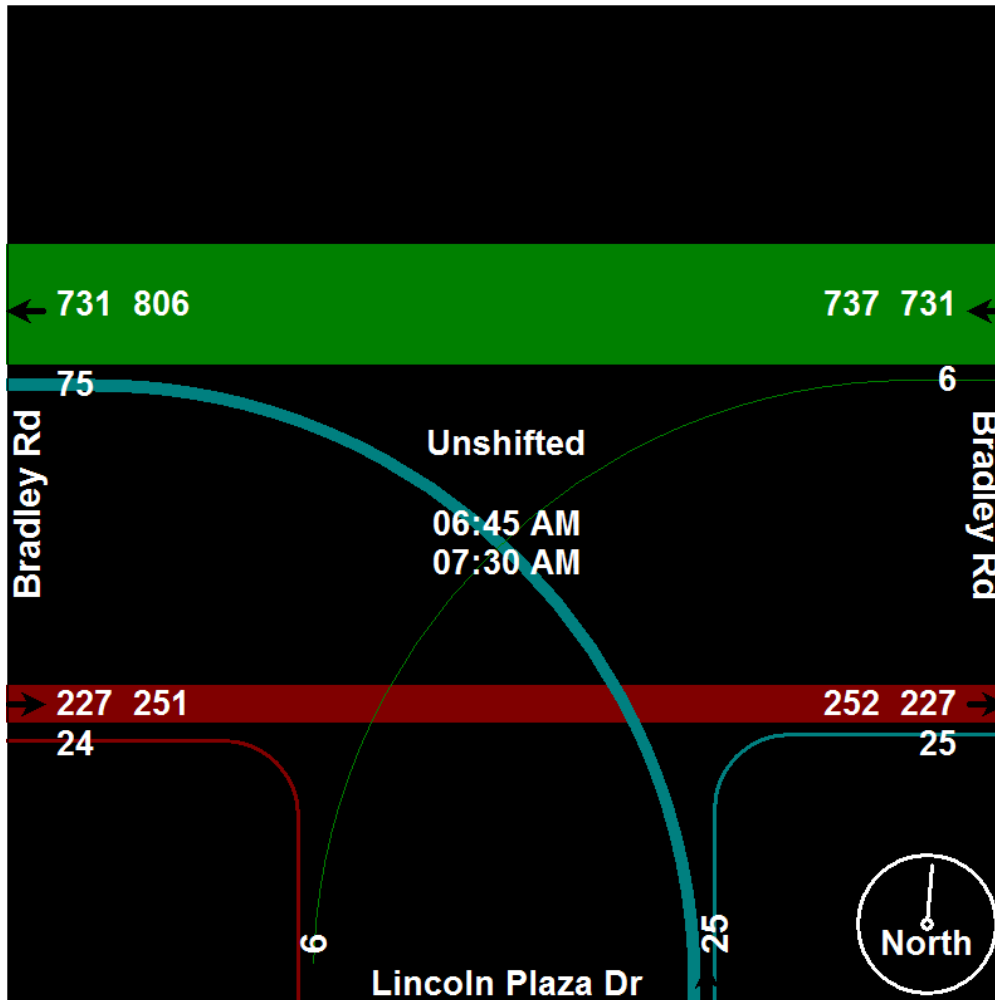
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File Name : Lincoln Plaza Dr-Bradley Rd PM

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Start Date : 3/6/2019

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**Groups Printed- Unshifted**

	<b>Southbound</b>				<b>Bradley Rd Westbound</b>				<b>Lincoln Plaza Dr Northbound</b>				<b>Bradley Rd Eastbound</b>				
<b>Start Time</b>	<b>Left</b>	<b>Thru</b>	<b>Right</b>	<b>Peds</b>	<b>Left</b>	<b>Thru</b>	<b>Right</b>	<b>Peds</b>	<b>Left</b>	<b>Thru</b>	<b>Right</b>	<b>Peds</b>	<b>Left</b>	<b>Thru</b>	<b>Right</b>	<b>Peds</b>	<b>Int. Total</b>
16:00	0	0	0	0	7	88	0	0	7	0	6	0	0	155	14	0	277
16:15	0	0	0	0	6	72	0	0	10	0	6	0	0	143	5	0	242
16:30	0	0	0	0	3	78	0	0	10	0	10	0	0	163	11	0	275
16:45	0	0	0	0	6	80	0	0	12	0	7	0	0	171	14	0	290
Total	0	0	0	0	22	318	0	0	39	0	29	0	0	632	44	0	1084
17:00	0	0	0	0	5	62	0	0	10	0	7	0	0	172	13	0	269
17:15	0	0	0	0	5	67	0	0	8	0	2	0	0	174	15	0	271
17:30	0	0	0	0	5	90	0	0	11	0	6	0	0	155	10	0	277
17:45	0	0	0	0	6	87	0	0	6	0	2	0	0	126	21	0	248
Total	0	0	0	0	21	306	0	0	35	0	17	0	0	627	59	0	1065
Grand Total	0	0	0	0	43	624	0	0	74	0	46	0	0	1259	103	0	2149
Apprch %	0	0	0	0	6.4	93.6	0	0	61.7	0	38.3	0	0	92.4	7.6	0	
Total %	0	0	0	0	2	29	0	0	3.4	0	2.1	0	0	58.6	4.8	0	

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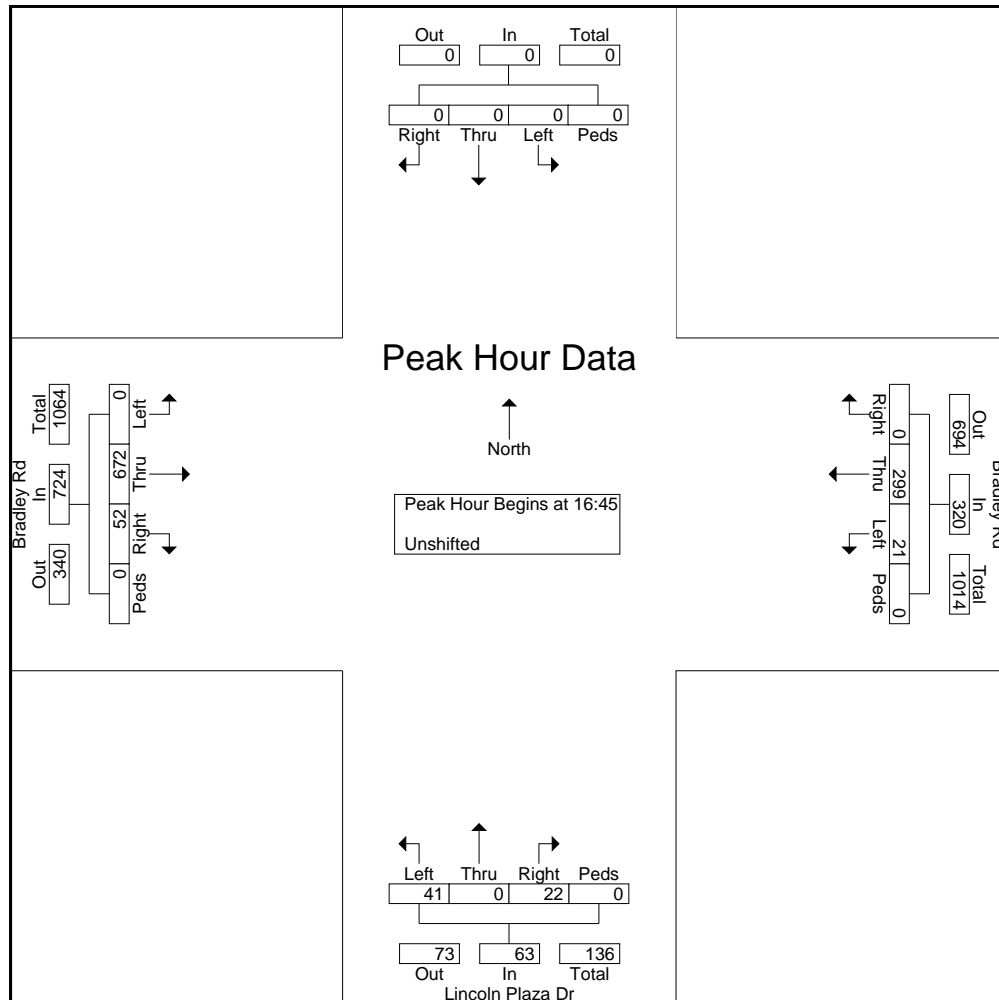
File Name : Lincoln Plaza Dr-Bradley Rd PM

Site Code : 194210

Start Date : 3/6/2019

Page No : 2

	Southbound					Bradley Rd Westbound					Lincoln Plaza Dr Northbound					Bradley Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. 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	0	0	0	0	0	6	80	0	0	86	12	0	7	0	19	0	171	14	0	185	290
17:00	0	0	0	0	0	5	62	0	0	67	10	0	7	0	17	0	172	13	0	185	269
17:15	0	0	0	0	0	5	67	0	0	72	8	0	2	0	10	0	174	15	0	189	271
17:30	0	0	0	0	0	5	90	0	0	95	11	0	6	0	17	0	155	10	0	165	277
Total Volume	0	0	0	0	0	21	299	0	0	320	41	0	22	0	63	0	672	52	0	724	1107
% App. Total	0	0	0	0	0	6.6	93.4	0	0		65.1	0	34.9	0		0	92.8	7.2	0		
PHF	.000	.000	.000	.000	.000	.875	.831	.000	.000	.842	.854	.000	.786	.000	.829	.000	.966	.867	.000	.958	.954



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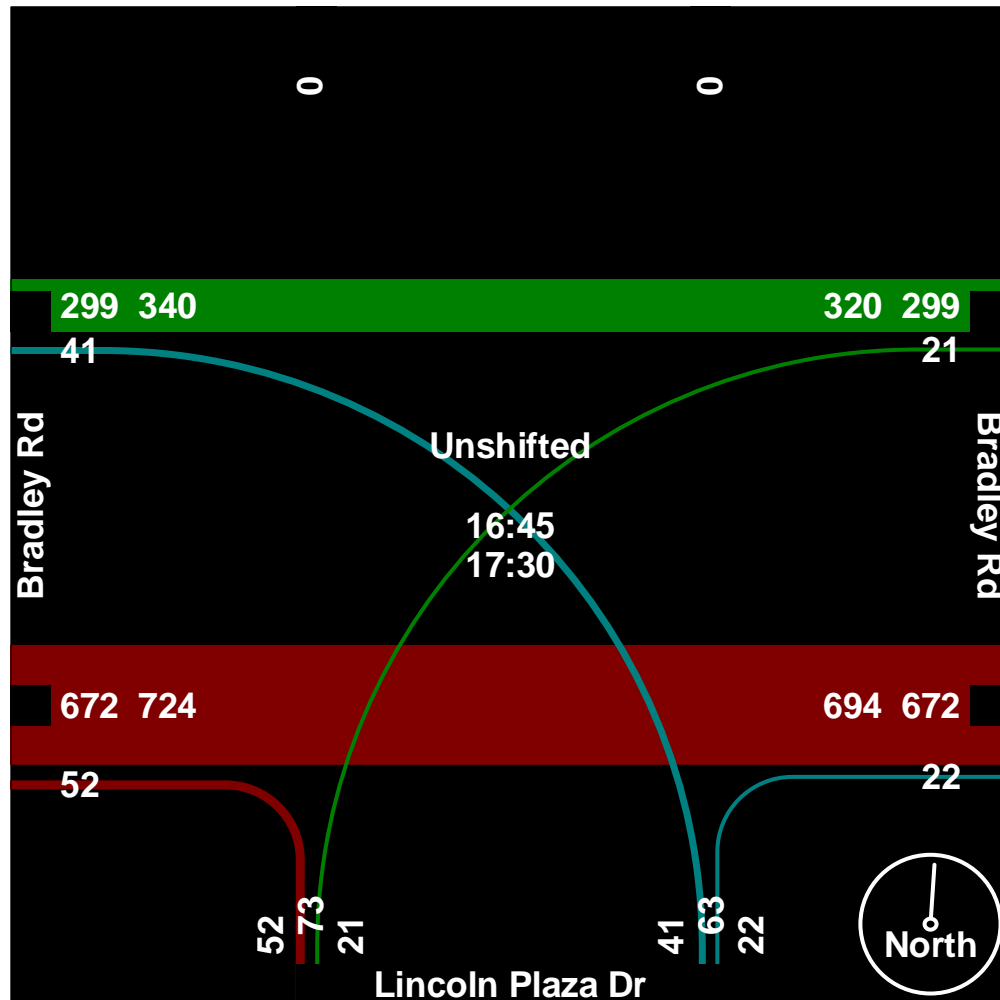
719-633-2868

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File Name : Main St -Bradley Rd AM

Site Code : 00194210

Start Date : 3/12/2019

Page No : 1

**Groups Printed- Unshifted**

	<b>Main St Southbound</b>				<b>Bradley Rd Westbound</b>				<b>Main St Northbound</b>				<b>Bradley Rd Eastbound</b>				
<b>Start Time</b>	<b>Left</b>	<b>Thru</b>	<b>Right</b>	<b>Peds</b>	<b>Left</b>	<b>Thru</b>	<b>Right</b>	<b>Peds</b>	<b>Left</b>	<b>Thru</b>	<b>Right</b>	<b>Peds</b>	<b>Left</b>	<b>Thru</b>	<b>Right</b>	<b>Peds</b>	<b>Int. Total</b>
06:30	14	44	13	0	46	103	47	0	16	83	15	0	12	30	7	0	430
06:45	8	91	16	0	92	131	41	0	21	64	15	0	20	31	14	0	544
Total	22	135	29	0	138	234	88	0	37	147	30	0	32	61	21	0	974
07:00	19	123	25	0	133	154	51	0	24	101	27	1	15	29	25	0	727
07:15	21	59	13	0	57	153	74	0	29	141	42	0	7	30	16	0	642
07:30	15	60	10	0	39	120	92	0	21	97	24	0	20	38	11	0	547
07:45	16	78	12	0	46	100	55	0	17	70	20	0	14	42	12	0	482
Total	71	320	60	0	275	527	272	0	91	409	113	1	56	139	64	0	2398
08:00	21	56	13	0	35	69	60	0	15	61	23	0	13	44	16	0	426
08:15	33	63	10	0	77	81	50	0	11	67	26	0	11	21	12	0	462
Grand Total	147	574	112	0	525	911	470	0	154	684	192	1	112	265	113	0	4260
Apprch %	17.6	68.9	13.4	0	27.5	47.8	24.7	0	14.9	66.3	18.6	0.1	22.9	54.1	23.1	0	
Total %	3.5	13.5	2.6	0	12.3	21.4	11	0	3.6	16.1	4.5	0	2.6	6.2	2.7	0	



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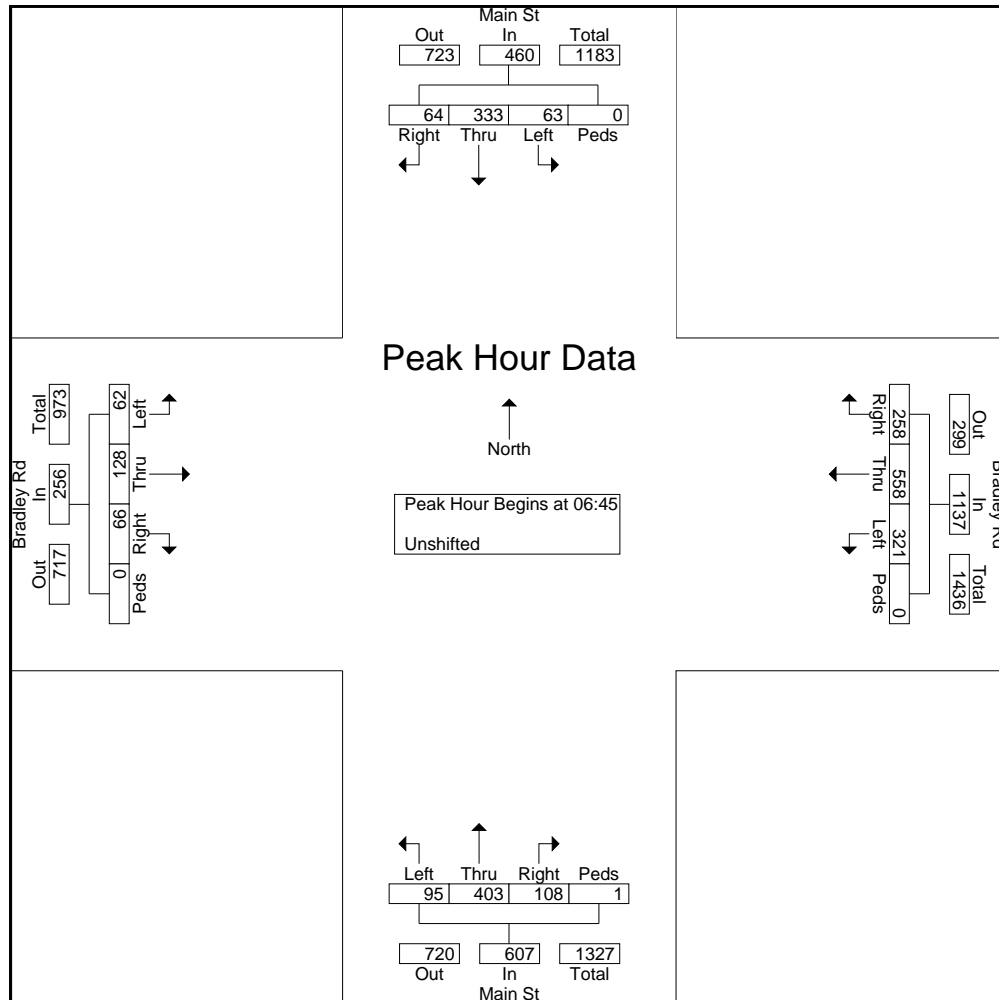
File Name : Main St -Bradley Rd AM

Site Code : 00194210

Start Date : 3/12/2019

Page No : 2

	Main St Southbound					Bradley Rd Westbound					Main St Northbound					Bradley Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 06:45																					
06:45	8	91	16	0	115	92	131	41	0	264	21	64	15	0	100	20	31	14	0	65	544
07:00	19	123	25	0	167	133	154	51	0	338	24	101	27	1	153	15	29	25	0	69	727
07:15	21	59	13	0	93	57	153	74	0	284	29	141	42	0	212	7	30	16	0	53	642
07:30	15	60	10	0	85	39	120	92	0	251	21	97	24	0	142	20	38	11	0	69	547
Total Volume	63	333	64	0	460	321	558	258	0	1137	95	403	108	1	607	62	128	66	0	256	2460
% App. Total	13.7	72.4	13.9	0		28.2	49.1	22.7	0		15.7	66.4	17.8	0.2		24.2	50	25.8	0		
PHF	.750	.677	.640	.000	.689	.603	.906	.701	.000	.841	.819	.715	.643	.250	.716	.775	.842	.660	.000	.928	.846



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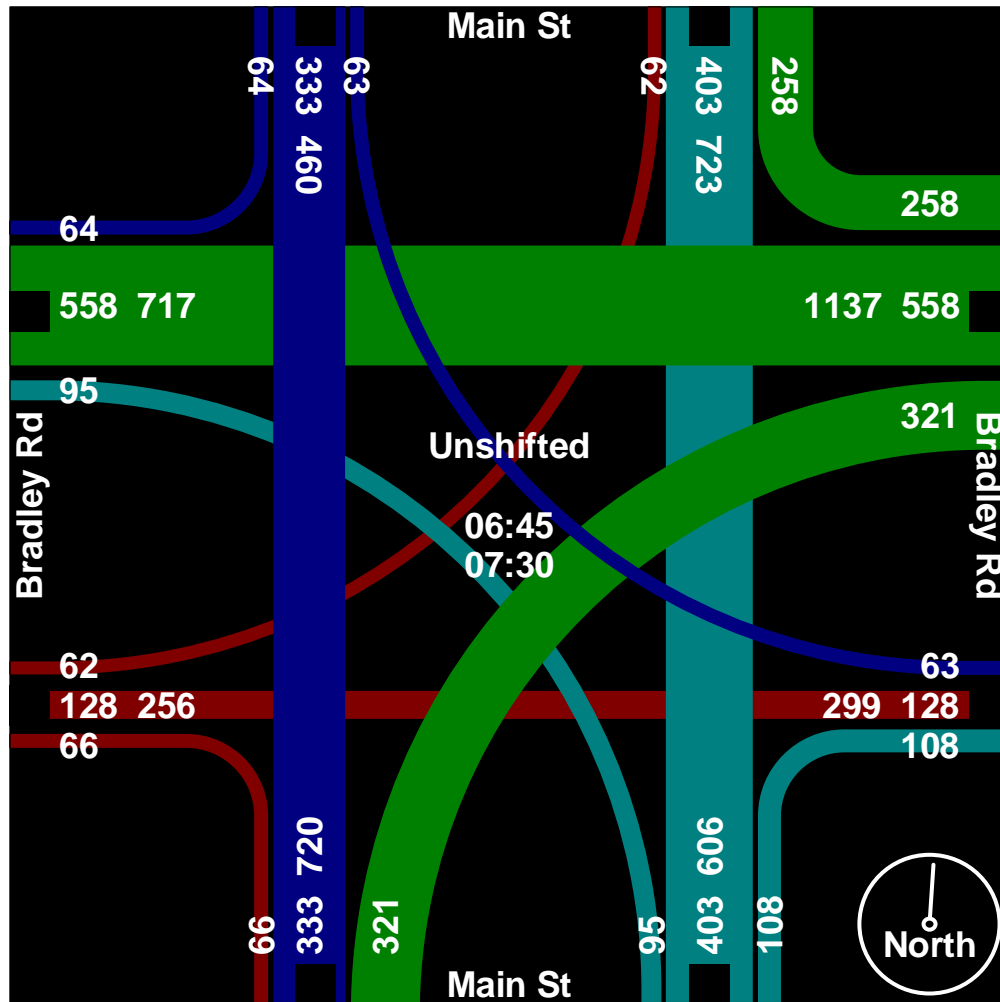
545 E Pikes Peak Ave, Suite 210  
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719-633-2868

File Name : Main St -Bradley Rd AM

Site Code : 00194210

Start Date : 3/12/2019

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# LSC Transportation Consultants, Inc.

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File Name : Hancock Expressway - Bradley Rd PM 5-14

Site Code : 00194210

Start Date : 5/14/2019

Page No : 1

## Groups Printed- Unshifted

	Hancock Expressway Southbound					Bradley Rd Westbound					Main St Northbound					Bradley Rd Eastbound					
Start Time	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Int. Total
04:00 PM	51	95	16	0	162	40	50	32	0	122	15	63	88	1	167	10	113	12	0	135	586
04:15 PM	93	120	8	1	222	43	53	44	0	140	10	86	64	1	161	16	84	27	0	127	650
04:30 PM	66	107	18	0	191	31	51	44	0	126	17	74	66	5	162	20	125	28	0	173	652
04:45 PM	75	158	10	0	243	37	35	65	2	139	15	91	52	3	161	18	89	38	0	145	688
Total	285	480	52	1	818	151	189	185	2	527	57	314	270	10	651	64	411	105	0	580	2576
05:00 PM	80	105	16	0	201	51	47	33	0	131	16	92	59	0	167	14	106	21	0	141	640
05:15 PM	89	119	14	0	222	40	30	42	0	112	10	65	55	0	130	17	94	33	0	144	608
05:30 PM	84	112	17	0	213	43	65	61	0	169	10	65	55	0	130	17	112	18	1	148	660
05:45 PM	64	96	8	0	168	36	44	30	0	110	10	60	53	0	123	12	110	26	0	148	549
Total	317	432	55	0	804	170	186	166	0	522	46	282	222	0	550	60	422	98	1	581	2457
Grand Total	602	912	107	1	1622	321	375	351	2	1049	103	596	492	10	1201	124	833	203	1	1161	5033
Apprch %	37.1	56.2	6.6	0.1		30.6	35.7	33.5	0.2		8.6	49.6	41	0.8		10.7	71.7	17.5	0.1		
Total %	12	18.1	2.1	0	32.2	6.4	7.5	7	0	20.8	2	11.8	9.8	0.2	23.9	2.5	16.6	4	0	23.1	



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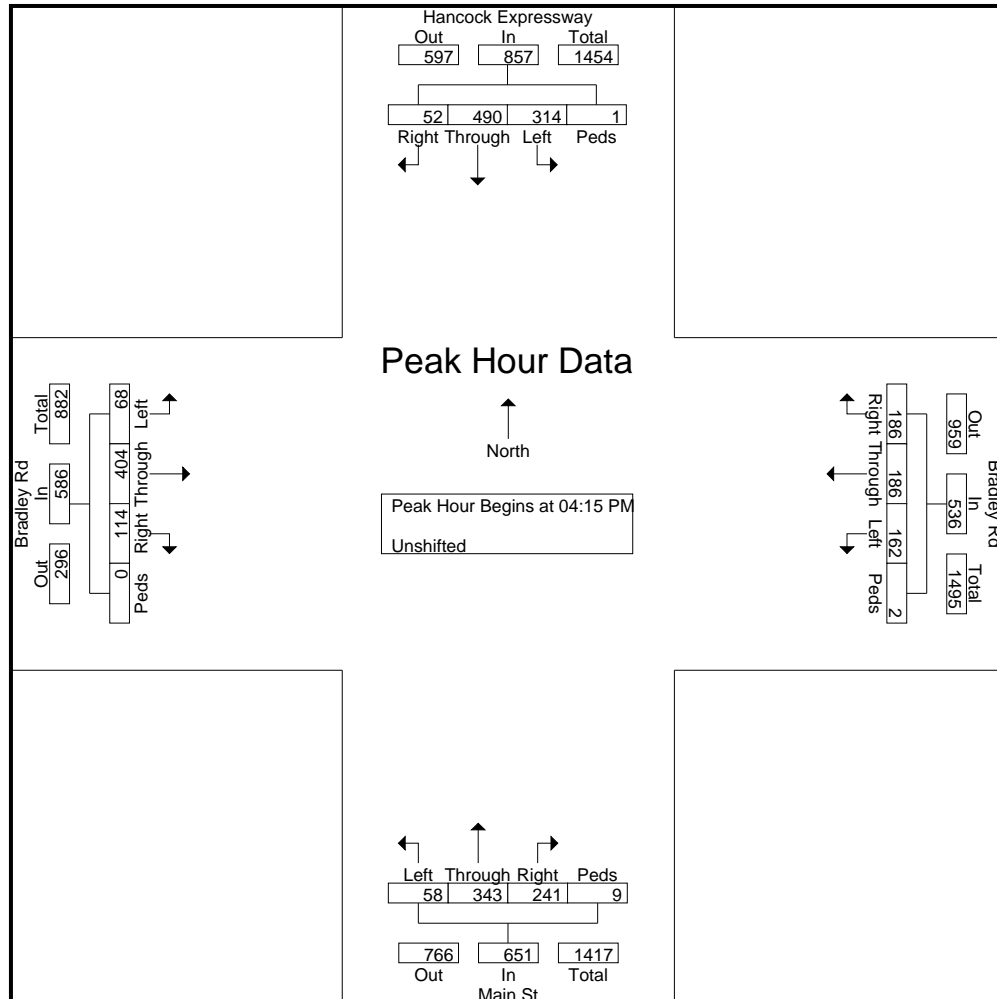
File Name : Hancock Expressway - Bradley Rd PM 5-14

Site Code : 00194210

Start Date : 5/14/2019

Page No : 2

	Hancock Expressway Southbound					Bradley Rd Westbound					Main St Northbound					Bradley Rd Eastbound					
Start Time	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Int. Total
<b>Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1</b>																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	93	120	8	1	222	43	53	44	0	140	10	86	64	1	161	16	84	27	0	127	650
04:30 PM	66	107	18	0	191	31	51	44	0	126	17	74	66	5	162	20	125	28	0	173	652
04:45 PM	75	158	10	0	243	37	35	65	2	139	15	91	52	3	161	18	89	38	0	145	688
05:00 PM	80	105	16	0	201	51	47	33	0	131	16	92	59	0	167	14	106	21	0	141	640
Total Volume	314	490	52	1	857	162	186	186	2	536	58	343	241	9	651	68	404	114	0	586	2630
% App. Total	36.6	57.2	6.1	0.1		30.2	34.7	34.7	0.4		8.9	52.7	37	1.4		11.6	68.9	19.5	0		
PHF	.844	.775	.722	.250	.882	.794	.877	.715	.250	.957	.853	.932	.913	.450	.975	.850	.808	.750	.000	.847	.956





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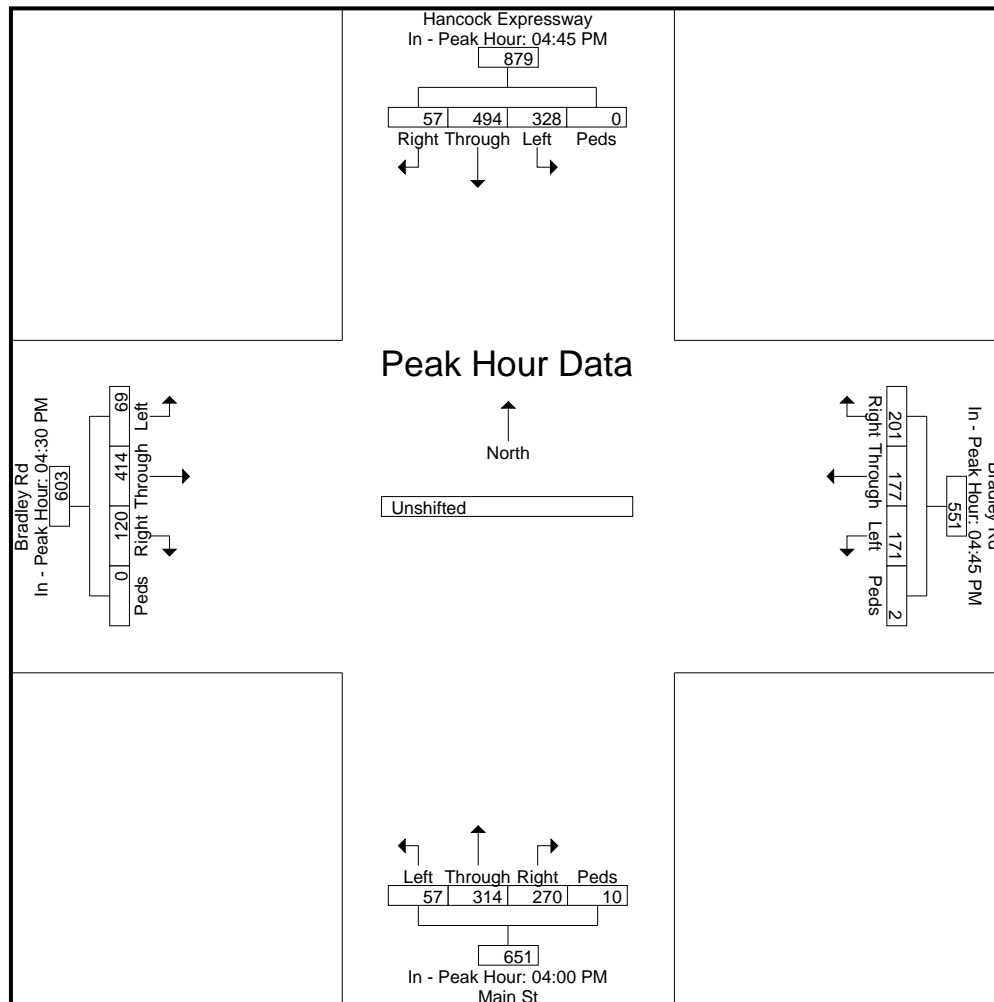
File Name : Hancock Expressway - Bradley Rd PM 5-14

Site Code : 00194210

Start Date : 5/14/2019

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	Hancock Expressway Southbound					Bradley Rd Westbound					Main St Northbound					Bradley Rd Eastbound					
Start Time	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Int. Total
<b>Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1</b>																					
Peak Hour for Each Approach Begins at:																					
	04:45 PM					04:45 PM					04:00 PM					04:30 PM					
+0 mins.	75	158	10	0	243	37	35	65	2	139	15	63	88	1	167	20	125	28	0	173	
+15 mins.	80	105	16	0	201	51	47	33	0	131	10	86	64	1	161	18	89	38	0	145	
+30 mins.	89	119	14	0	222	40	30	42	0	112	17	74	66	5	162	14	106	21	0	141	
+45 mins.	84	112	17	0	213	43	65	61	0	169	15	91	52	3	161	17	94	33	0	144	
Total Volume	328	494	57	0	879	171	177	201	2	551	57	314	270	10	651	69	414	120	0	603	
% App. Total	37.3	56.2	6.5	0		31	32.1	36.5	0.4		8.8	48.2	41.5	1.5		11.4	68.7	19.9	0		
PHF	.921	.782	.838	.000	.904	.838	.681	.773	.250	.815	.838	.863	.767	.500	.975	.863	.828	.789	.000	.871	



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File Name : Main St - RIRO SO. Bradley Rd AM

Site Code : 00194210

Start Date : 3/12/2019

Page No : 1

**Groups Printed- Bank 1**

	<b>Main St Southbound</b>				<b>Westbound</b>				<b>Main St Northbound</b>				<b>RIRO SO. Bradley Eastbound</b>				
<b>Start Time</b>	<b>Left</b>	<b>Thru</b>	<b>Right</b>	<b>Peds</b>	<b>Left</b>	<b>Thru</b>	<b>Right</b>	<b>Peds</b>	<b>Left</b>	<b>Thru</b>	<b>Right</b>	<b>Peds</b>	<b>Left</b>	<b>Thru</b>	<b>Right</b>	<b>Peds</b>	<b>Int. Total</b>
06:30	0	0	12	0	0	0	0	0	0	0	0	0	0	0	2	0	14
06:45	0	0	7	0	0	0	0	0	0	0	0	0	0	0	4	0	11
Total	0	0	19	0	0	0	0	0	0	0	0	0	0	0	6	0	25
07:00	0	0	10	0	0	0	0	0	0	0	0	0	0	0	4	0	14
07:15	0	0	14	0	0	0	0	0	0	0	0	0	0	0	3	0	17
07:30	0	0	9	0	0	0	0	0	0	0	0	0	0	0	7	0	16
07:45	0	0	6	0	0	0	0	0	0	0	0	0	0	0	6	0	12
Total	0	0	39	0	0	0	0	0	0	0	0	0	0	0	20	0	59
08:00	0	0	8	0	0	0	0	0	0	0	0	0	0	0	3	0	11
08:15	0	0	9	0	0	0	0	0	0	0	0	0	0	0	9	0	18
Grand Total	0	0	75	0	0	0	0	0	0	0	0	0	0	0	38	0	113
Apprch %	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	
Total %	0	0	66.4	0	0	0	0	0	0	0	0	0	0	0	33.6	0	

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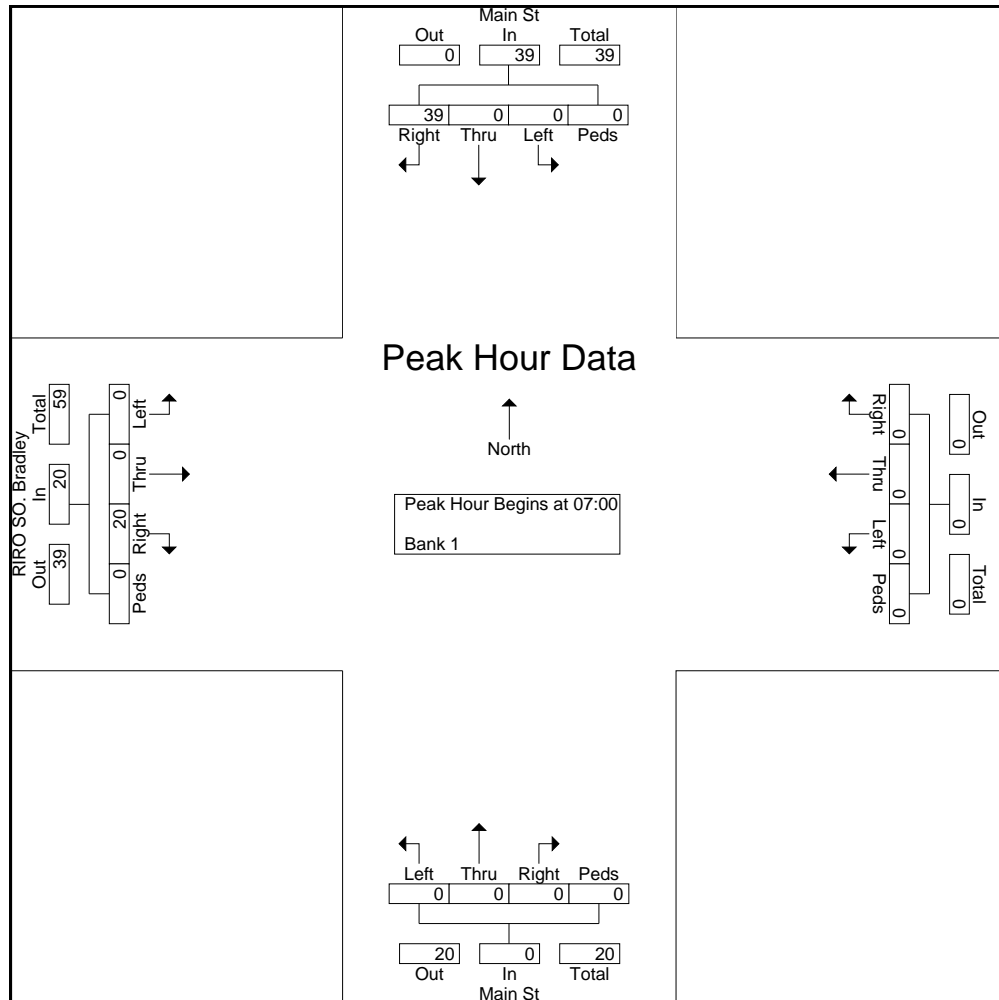
File Name : Main St - RIRO SO. Bradley Rd AM

Site Code : 00194210

Start Date : 3/12/2019

Page No : 2

	Main St Southbound					Westbound					Main St Northbound					RIRO SO. Bradley Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	14
07:15	0	0	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	17
07:30	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	16
07:45	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	12
Total Volume	0	0	39	0	39	0	0	0	0	0	0	0	0	0	0	0	0	20	0	20	59
% App. Total	0	0	100	0		0	0	0	0		0	0	0	0		0	0	100	0		
PHF	.000	.000	.696	.000	.696	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.714	.000	.714	.868



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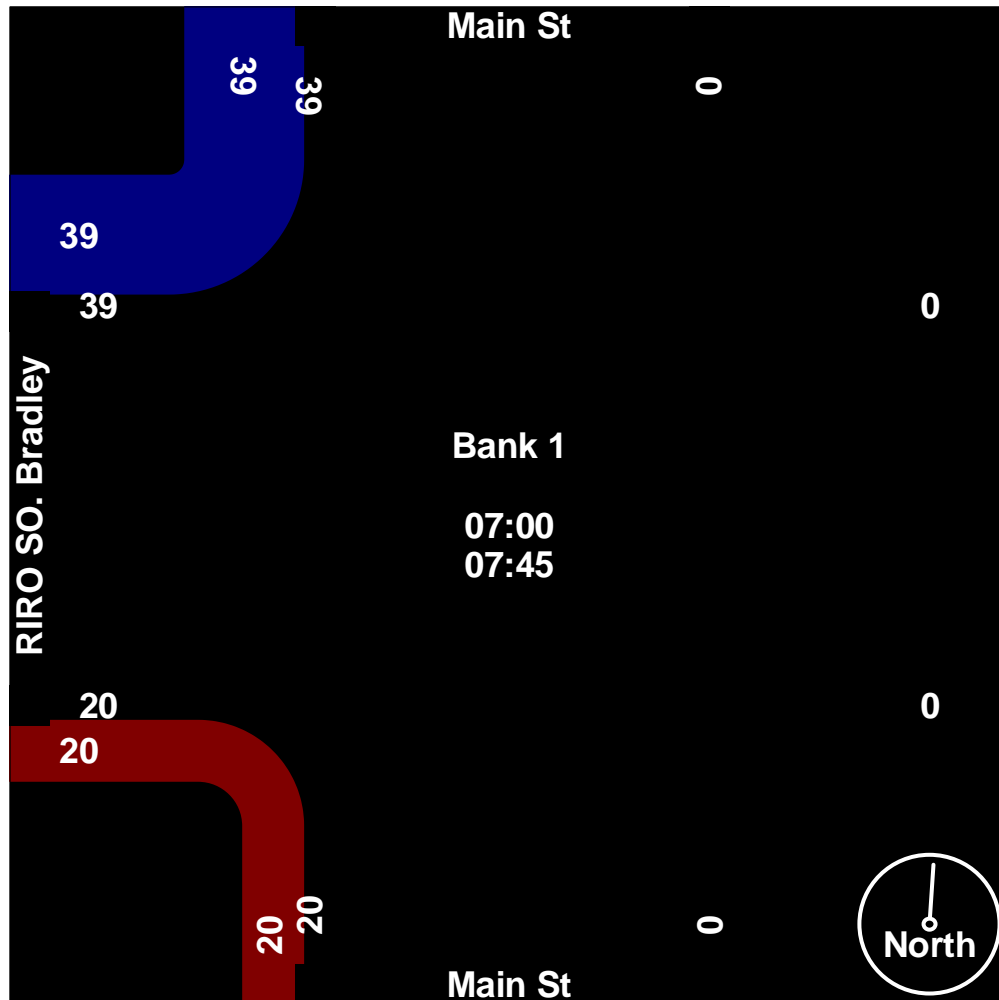
719-633-2868

File Name : Main St - RIRO SO. Bradley Rd AM

Site Code : 00194210

Start Date : 3/12/2019

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719-633-2868

File Name : Main St - RIRO SO. Bradley Rd PM

Site Code : 00194210

Start Date : 3/18/2019

Page No : 1

**Groups Printed- Bank 1**

	Hancock Exp Southbound				Westbound				Hancock Exp Northbound				RIRO SO Bradley Rd Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
15:00	0	0	10	0	0	0	0	0	0	0	0	0	0	0	9	0	19
15:15	0	0	16	0	0	0	0	0	0	0	0	0	0	0	9	0	25
15:30	0	0	18	0	0	0	0	0	0	0	0	0	0	0	10	0	28
15:45	0	0	14	0	0	0	0	0	0	0	0	0	0	0	9	0	23
Total	0	0	58	0	0	0	0	0	0	0	0	0	0	0	37	0	95
16:00	0	0	13	0	0	0	0	0	0	0	0	0	0	0	8	0	21
16:15	0	0	16	0	0	0	0	0	0	0	0	0	0	0	8	0	24
16:30	0	0	17	0	0	0	0	0	0	0	0	0	0	0	14	0	31
16:45	0	0	9	0	0	0	0	0	0	0	0	0	0	0	9	0	18
Total	0	0	55	0	0	0	0	0	0	0	0	0	0	0	39	0	94
Grand Total	0	0	113	0	0	0	0	0	0	0	0	0	0	0	76	0	189
Apprch %	0	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	
Total %	0	0	59.8	0	0	0	0	0	0	0	0	0	0	0	40.2	0	

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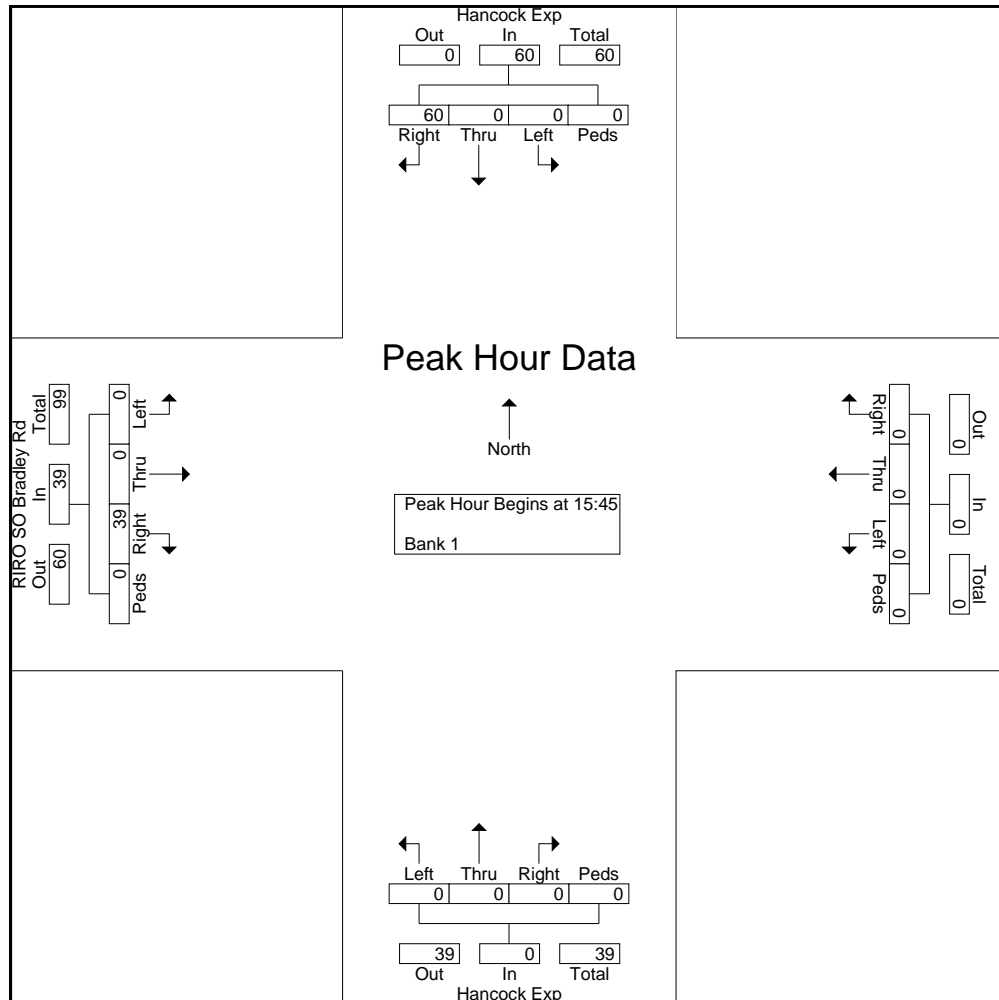
File Name : Main St - RIRO SO. Bradley Rd PM

Site Code : 00194210

Start Date : 3/18/2019

Page No : 2

	Hancock Exp Southbound					Westbound					Hancock Exp Northbound					RIRO SO Bradley Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 15:00 to 16:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:45																					
15:45	0	0	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	23
16:00	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	21
16:15	0	0	16	0	16	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	24
16:30	0	0	17	0	17	0	0	0	0	0	0	0	0	0	0	0	0	14	0	14	31
Total Volume	0	0	60	0	60	0	0	0	0	0	0	0	0	0	0	0	0	39	0	39	99
% App. Total	0	0	100	0		0	0	0	0		0	0	0	0		0	0	100	0		
PHF	.000	.000	.882	.000	.882	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.696	.000	.696	.798



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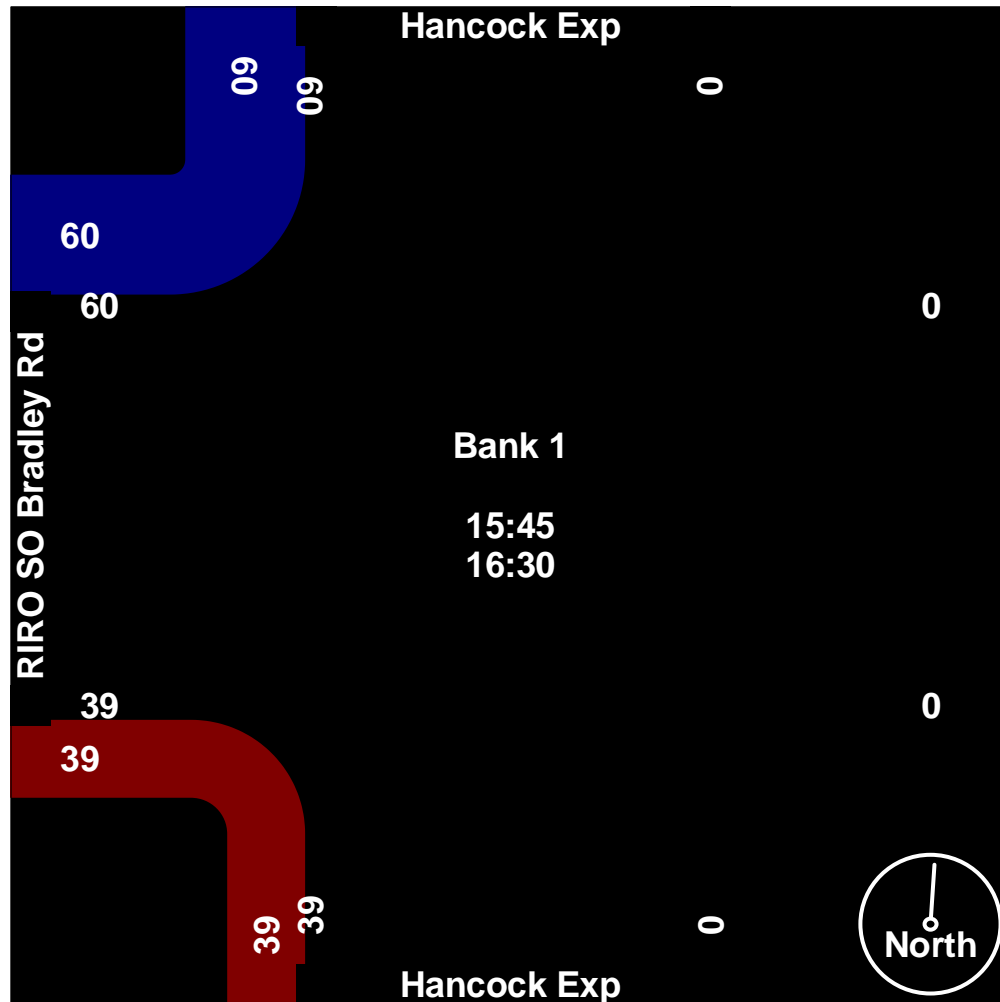
719-633-2868

File Name : Main St - RIRO SO. Bradley Rd PM

Site Code : 00194210

Start Date : 3/18/2019

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719-633-2868

File Name : Main St - Gladiator Dr AM

Site Code : 194210

Start Date : 5/8/2019

Page No : 1

## Groups Printed- Unshifted

Start Time	Main St Southbound					Gladiator Dr Westbound					Main St Northbound					Gladiator Dr Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:30 AM	0	0	4	0	4	0	0	0	0	0	1	0	0	0	1	7	0	8	0	15	20
06:45 AM	0	0	2	0	2	0	0	1	0	1	3	0	0	0	3	1	0	4	0	5	11
Total	0	0	6	0	6	0	0	1	0	1	4	0	0	0	4	8	0	12	0	20	31
07:00 AM	0	0	7	0	7	0	0	0	0	0	8	0	0	0	8	3	1	9	0	13	28
07:15 AM	0	0	10	0	10	0	0	0	0	0	16	0	0	0	16	6	0	6	0	12	38
07:30 AM	0	0	9	0	9	0	0	0	0	0	7	0	0	0	7	7	0	3	0	10	26
07:45 AM	0	0	2	0	2	0	0	0	0	0	4	0	0	0	4	3	0	4	0	7	13
Total	0	0	28	0	28	0	0	0	0	0	35	0	0	0	35	19	1	22	0	42	105
08:00 AM	1	0	2	0	3	1	0	0	0	1	3	0	0	0	3	7	0	2	0	9	16
08:15 AM	0	0	1	0	1	0	0	1	0	1	2	0	1	0	3	7	0	10	0	17	22
Grand Total	1	0	37	0	38	1	0	2	0	3	44	0	1	0	45	41	1	46	0	88	174
Apprch %	2.6	0	97.4	0		33.3	0	66.7	0		97.8	0	2.2	0		46.6	1.1	52.3	0		
Total %	0.6	0	21.3	0	21.8	0.6	0	1.1	0	1.7	25.3	0	0.6	0	25.9	23.6	0.6	26.4	0	50.6	



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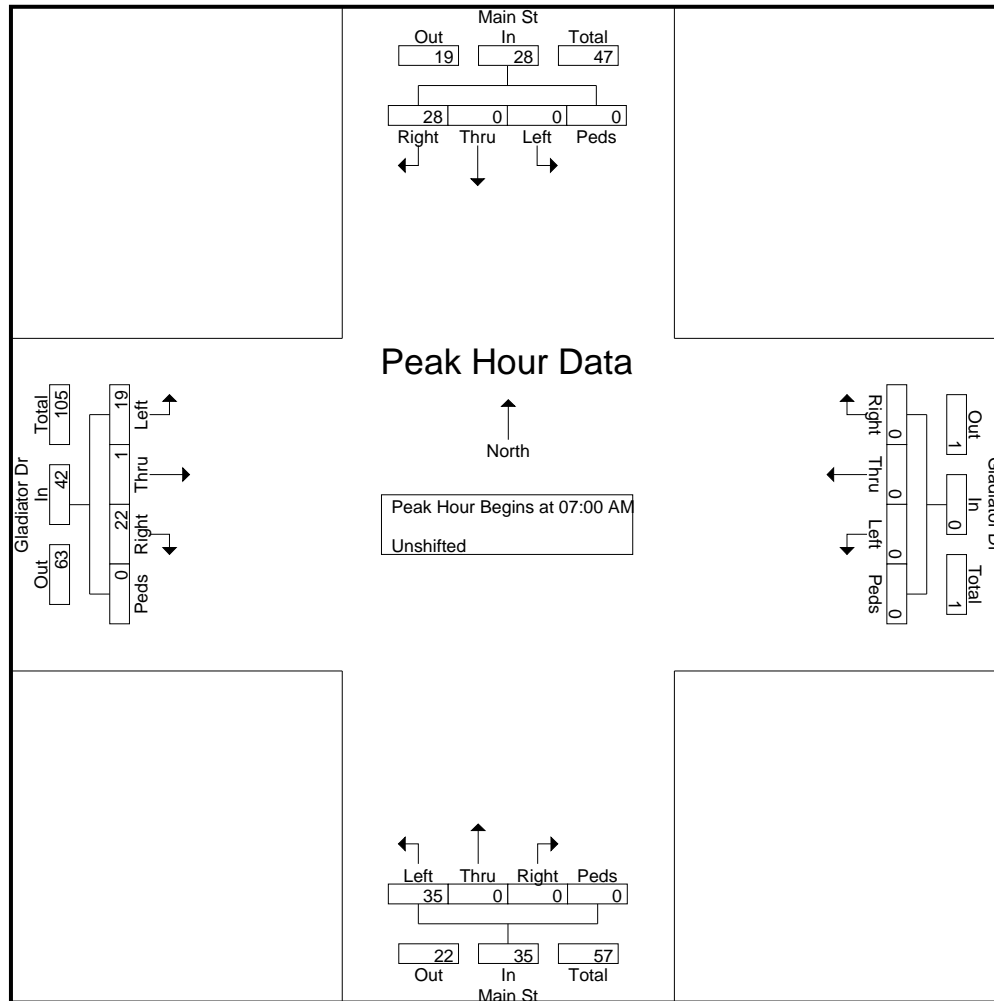
File Name : Main St - Gladiator Dr AM

Site Code : 194210

Start Date : 5/8/2019

Page No : 2

	Main St Southbound					Gladiator Dr Westbound					Main St Northbound					Gladiator Dr Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	7	0	7	0	0	0	0	0	8	0	0	0	8	3	1	9	0	13	28
07:15 AM	0	0	10	0	10	0	0	0	0	0	16	0	0	0	16	6	0	6	0	12	38
07:30 AM	0	0	9	0	9	0	0	0	0	0	7	0	0	0	7	7	0	3	0	10	26
07:45 AM	0	0	2	0	2	0	0	0	0	0	4	0	0	0	4	3	0	4	0	7	13
Total Volume	0	0	28	0	28	0	0	0	0	0	35	0	0	0	35	19	1	22	0	42	105
% App. Total	0	0	100	0		0	0	0	0		100	0	0	0		45.2	2.4	52.4	0		
PHF	.000	.000	.700	.000	.700	.000	.000	.000	.000	.000	.547	.000	.000	.000	.547	.679	.250	.611	.000	.808	.691





# LSC Transportation Consultants, Inc.

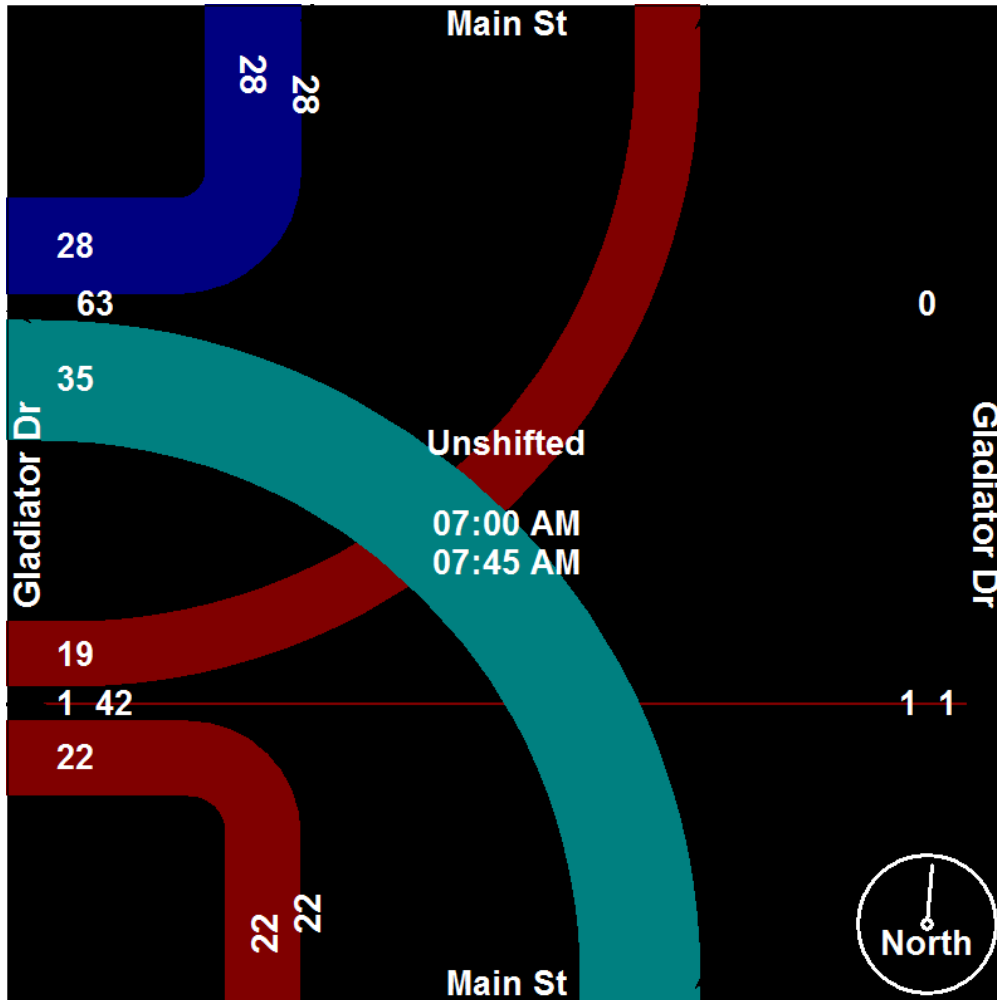
545 E Pikes Peak Ave, Suite 210  
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File Name : Main St - Gladiator Dr AM

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545 E Pikes Peak Ave, Suite 210

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File Name : Main St - Gladiator Dr PM

Site Code : 194210

Start Date : 5/7/2019

Page No : 1

## Groups Printed- Unshifted

Start Time	Main St Southbound					Westbound					Main St Northbound					Gladiator Dr Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
04:00 PM	0	0	1	0	1	0	0	0	0	0	8	0	0	0	8	12	0	9	0	21	30
04:15 PM	0	0	2	0	2	0	0	0	0	0	6	0	0	0	6	4	0	2	0	6	14
04:30 PM	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8	8	0	3	0	11	19
04:45 PM	0	0	7	0	7	0	0	0	0	0	8	0	0	0	8	12	0	5	0	17	32
Total	0	0	10	0	10	0	0	0	0	0	30	0	0	0	30	36	0	19	0	55	95
05:00 PM	1	0	2	0	3	0	0	0	0	0	6	0	0	0	6	4	0	6	0	10	19
05:15 PM	0	0	2	0	2	0	0	0	0	0	10	0	1	0	11	3	0	3	0	6	19
05:30 PM	0	0	5	0	5	1	0	0	0	1	7	0	0	0	7	7	0	6	0	13	26
05:45 PM	0	0	2	0	2	0	0	1	0	1	6	0	0	0	6	1	0	6	0	7	16
Total	1	0	11	0	12	1	0	1	0	2	29	0	1	0	30	15	0	21	0	36	80
Grand Total	1	0	21	0	22	1	0	1	0	2	59	0	1	0	60	51	0	40	0	91	175
Apprch %	4.5	0	95.5	0		50	0	50	0		98.3	0	1.7	0		56	0	44	0		
Total %	0.6	0	12	0	12.6	0.6	0	0.6	0	1.1	33.7	0	0.6	0	34.3	29.1	0	22.9	0	52	



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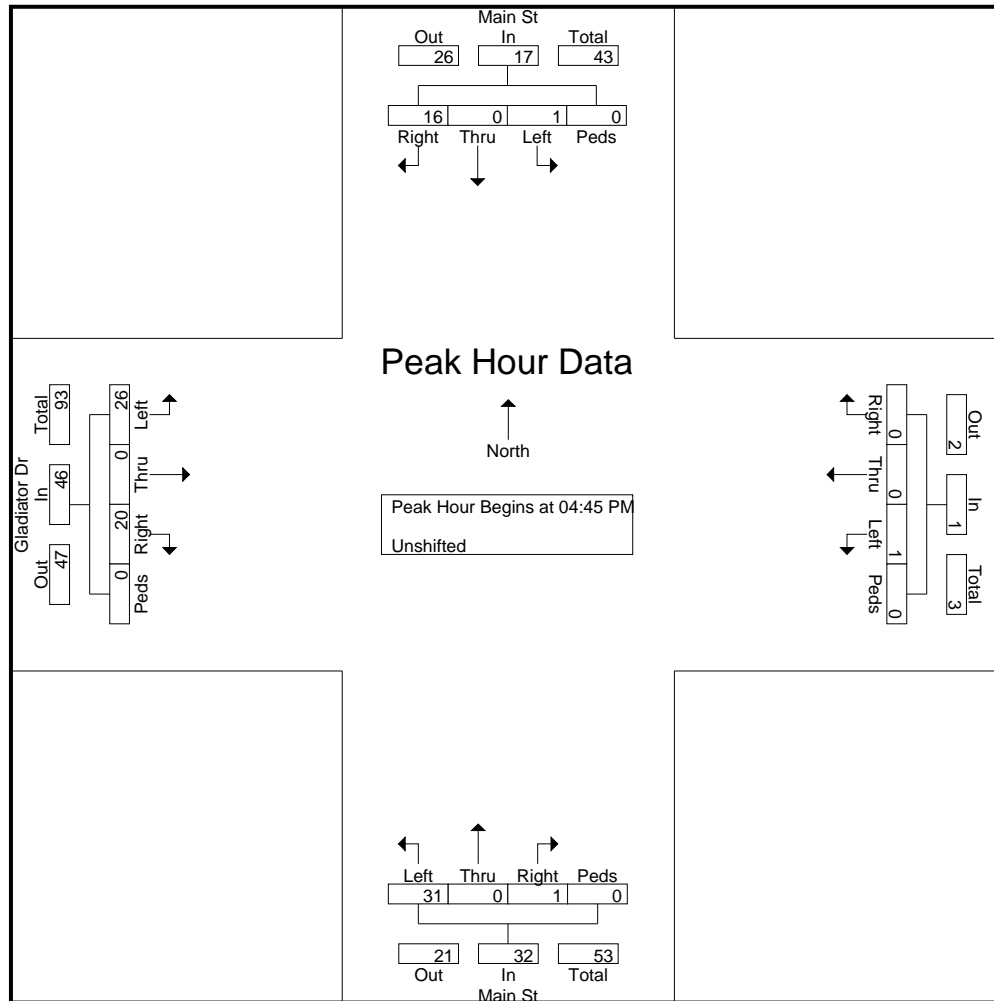
File Name : Main St - Gladiator Dr PM

Site Code : 194210

Start Date : 5/7/2019

Page No : 2

	Main St Southbound					Westbound					Main St Northbound					Gladiator Dr Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	7	0	7	0	0	0	0	0	8	0	0	0	8	12	0	5	0	17	32
05:00 PM	1	0	2	0	3	0	0	0	0	0	6	0	0	0	6	4	0	6	0	10	19
05:15 PM	0	0	2	0	2	0	0	0	0	0	10	0	1	0	11	3	0	3	0	6	19
05:30 PM	0	0	5	0	5	1	0	0	0	1	7	0	0	0	7	7	0	6	0	13	26
Total Volume	1	0	16	0	17	1	0	0	0	1	31	0	1	0	32	26	0	20	0	46	96
% App. Total	5.9	0	94.1	0		100	0	0	0		96.9	0	3.1	0		56.5	0	43.5	0		
PHF	.250	.000	.571	.000	.607	.250	.000	.000	.000	.250	.775	.000	.250	.000	.727	.542	.000	.833	.000	.676	.750







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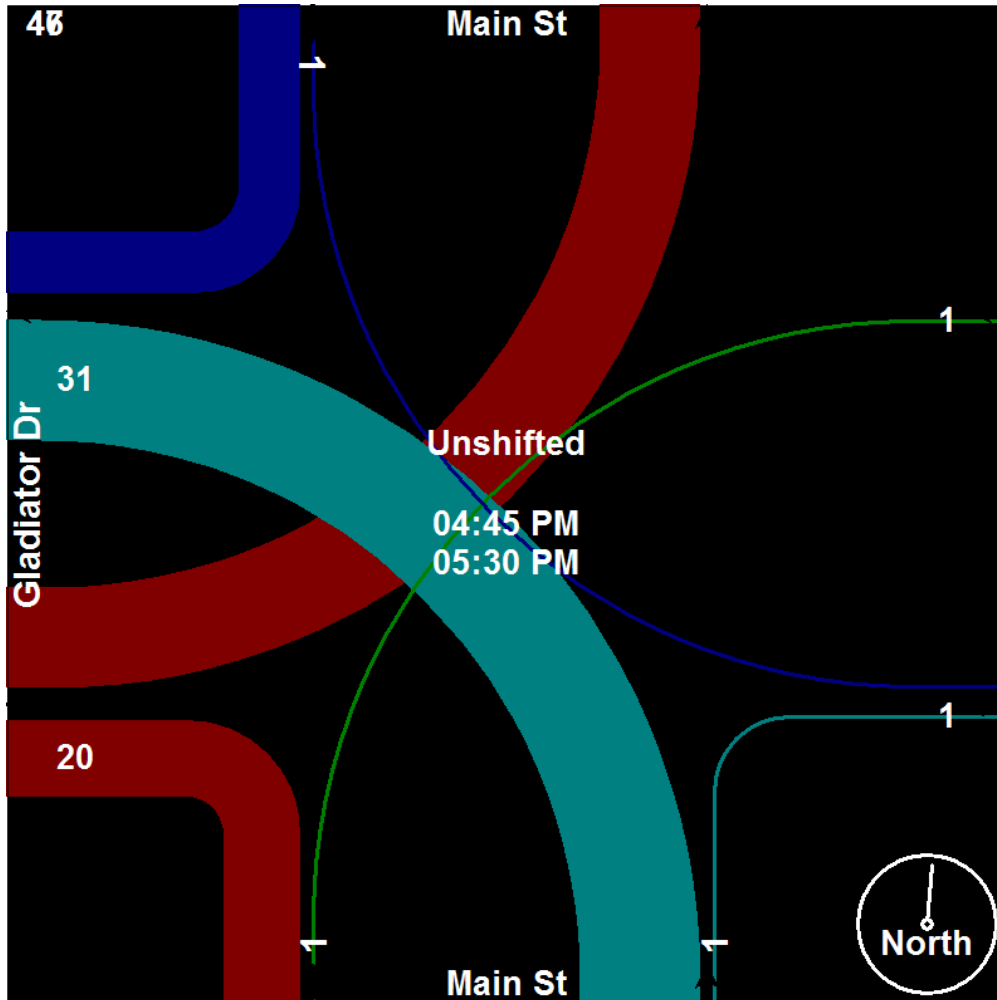
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File Name : Main St - Gladiator Dr PM

Site Code : 194210

Start Date : 5/7/2019

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# LSC Transportation Consultants, Inc.

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719-633-2868

File Name : Gladiator Dr - Pleasant Port View AM

Site Code : 194210

Start Date : 5/8/2019

Page No : 1

## Groups Printed- Bank 1

	Pleasant Port View Southbound				Gladiator Dr Westbound				Harrison SD Northbound				Gladiator Dr Eastbound				Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
06:30	7	0	6	0	3	1	1	0	0	0	1	0	0	9	0	0	28
06:45	1	0	3	0	3	1	1	0	0	0	0	0	3	4	0	0	16
Total	8	0	9	0	6	2	2	0	0	0	1	0	3	13	0	0	44
07:00	6	2	4	0	8	2	3	0	1	0	1	0	1	10	3	0	41
07:15	4	1	2	0	16	6	4	0	0	0	2	0	0	5	5	0	45
07:30	5	0	5	0	9	5	2	0	0	0	1	0	3	5	1	0	36
07:45	3	0	3	0	1	3	2	0	0	0	1	0	0	4	3	0	20
Total	18	3	14	0	34	16	11	0	1	0	5	0	4	24	12	0	142
08:00	5	0	1	0	0	1	4	0	0	0	1	0	1	3	1	0	17
08:15	10	0	3	0	1	1	1	0	0	0	0	0	2	7	0	0	25
Grand Total	41	3	27	0	41	20	18	0	1	0	7	0	10	47	13	0	228
Apprch %	57.7	4.2	38	0	51.9	25.3	22.8	0	12.5	0	87.5	0	14.3	67.1	18.6	0	
Total %	18	1.3	11.8	0	18	8.8	7.9	0	0.4	0	3.1	0	4.4	20.6	5.7	0	

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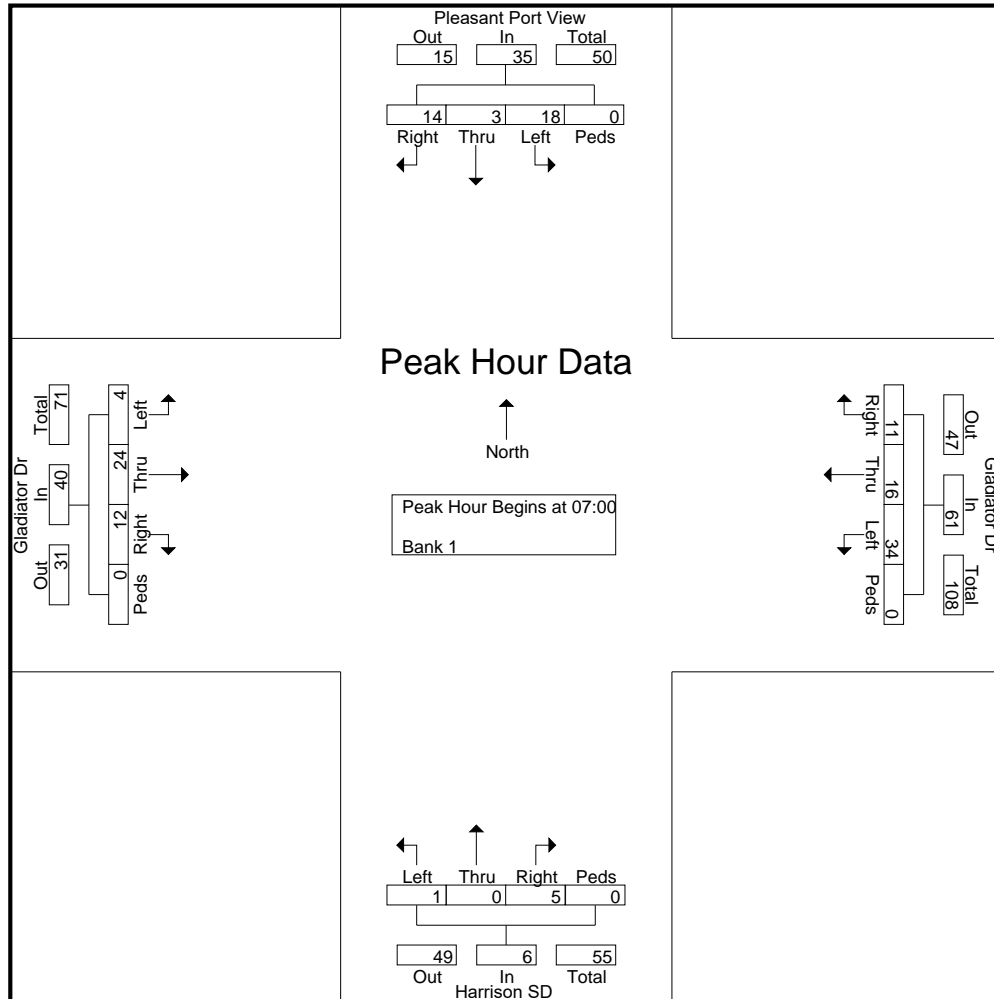
File Name : Gladiator Dr - Pleasant Port View AM

Site Code : 194210

Start Date : 5/8/2019

Page No : 1

	Pleasant Port View Southbound					Gladiator Dr Westbound					Harrison SD Northbound					Gladiator Dr Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	6	2	4	0	12	8	2	3	0	13	1	0	1	0	2	1	10	3	0	14	41
07:15	4	1	2	0	7	16	6	4	0	26	0	0	2	0	2	0	5	5	0	10	45
07:30	5	0	5	0	10	9	5	2	0	16	0	0	1	0	1	3	5	1	0	9	36
07:45	3	0	3	0	6	1	3	2	0	6	0	0	1	0	1	0	4	3	0	7	20
Total Volume	18	3	14	0	35	34	16	11	0	61	1	0	5	0	6	4	24	12	0	40	142
% App. Total	51.4	8.6	40	0		55.7	26.2	18	0		16.7	0	83.3	0		10	60	30	0		
PHF	.750	.375	.700	.000	.729	.531	.667	.688	.000	.587	.250	.000	.625	.000	.750	.333	.600	.600	.000	.714	.789



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File Name : Gladiator Dr - Pleasant Port View PM

Site Code : 194210

Start Date : 5/7/2019

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## Groups Printed- Bank 1

	Pleasant Port View Southbound				Gladiator Dr Westbound				Harrison SD Northbound				Gladiator Dr Eastbound				Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
16:00	10	0	4	0	0	0	2	0	1	0	7	0	1	0	0	0	25
16:15	4	0	5	0	2	0	3	0	2	0	4	0	0	0	0	0	20
16:30	4	0	11	0	0	0	2	0	4	0	4	0	1	0	0	0	26
16:45	10	0	4	0	0	0	1	0	1	0	2	0	3	0	0	0	21
Total	28	0	24	0	2	0	8	0	8	0	17	0	5	0	0	0	92
17:00	5	0	4	0	0	0	3	0	2	0	1	0	2	0	0	0	17
17:15	2	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	6
17:30	10	0	4	0	0	0	3	0	0	0	2	0	3	0	0	0	22
17:45	2	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	6
Total	19	0	11	0	1	0	10	0	2	0	3	0	5	0	0	0	51
Grand Total	47	0	35	0	3	0	18	0	10	0	20	0	10	0	0	0	143
Apprch %	57.3	0	42.7	0	14.3	0	85.7	0	33.3	0	66.7	0	100	0	0	0	
Total %	32.9	0	24.5	0	2.1	0	12.6	0	7	0	14	0	7	0	0	0	

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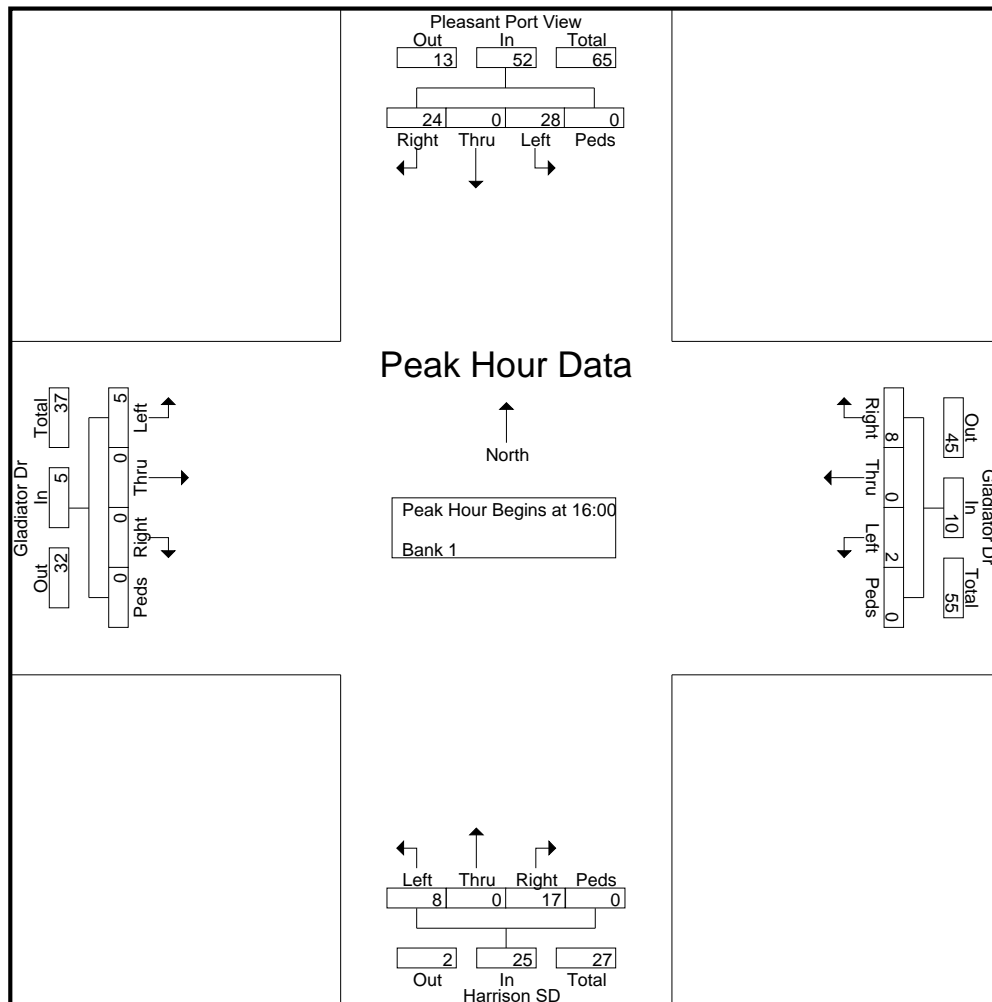
File Name : Gladiator Dr - Pleasant Port View PM

Site Code : 194210

Start Date : 5/7/2019

























Page No : 2

	Pleasant Port View Southbound					Gladiator Dr Westbound					Harrison SD Northbound					Gladiator Dr Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	10	0	4	0	14	0	0	2	0	2	1	0	7	0	8	1	0	0	0	1	25
16:15	4	0	5	0	9	2	0	3	0	5	2	0	4	0	6	0	0	0	0	0	20
16:30	4	0	11	0	15	0	0	2	0	2	4	0	4	0	8	1	0	0	0	1	26
16:45	10	0	4	0	14	0	0	1	0	1	1	0	2	0	3	3	0	0	0	3	21
Total Volume	28	0	24	0	52	2	0	8	0	10	8	0	17	0	25	5	0	0	0	5	92
% App. Total	53.8	0	46.2	0		20	0	80	0		32	0	68	0		100	0	0	0		
PHF	.700	.000	.545	.000	.867	.250	.000	.667	.000	.500	.500	.000	.607	.000	.781	.417	.000	.000	.000	.417	.885















Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd

2019 Existing  
AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	128	66	321	558	258	95	403	108	63	333	64
Future Volume (vph)	62	128	66	321	558	258	95	403	108	63	333	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	370		480	335		185	155		105	295		240
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	95			240			135			230		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.399			0.474			0.356			0.396		
Satd. Flow (perm)	743	3539	1583	883	3539	1583	663	3539	1583	738	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			307			164			164
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		793			845			428			866	
Travel Time (s)		15.4			16.5			7.3			14.8	
Peak Hour Factor	0.93	0.93	0.93	0.84	0.84	0.84	0.72	0.72	0.72	0.69	0.69	0.69
Adj. Flow (vph)	67	138	71	382	664	307	132	560	150	91	483	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	138	71	382	664	307	132	560	150	91	483	93
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6

Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd

2019 Existing  
AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.0	23.0	23.0	31.0	43.0	43.0	15.0	34.0	34.0	12.0	31.0	31.0
Total Split (%)	11.0%	23.0%	23.0%	31.0%	43.0%	43.0%	15.0%	34.0%	34.0%	12.0%	31.0%	31.0%
Maximum Green (s)	6.5	18.5	18.5	26.5	38.5	38.5	10.5	29.5	29.5	7.5	26.5	26.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	16.5	10.2	10.2	33.9	25.4	25.4	38.9	31.7	31.7	34.6	27.5	27.5
Actuated g/C Ratio	0.20	0.12	0.12	0.40	0.30	0.30	0.46	0.38	0.38	0.41	0.33	0.33
v/c Ratio	0.30	0.32	0.21	0.68	0.62	0.44	0.31	0.42	0.21	0.23	0.42	0.15
Control Delay	21.3	37.0	1.4	25.6	28.5	5.0	15.8	22.9	4.1	15.5	24.9	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	37.0	1.4	25.6	28.5	5.0	15.8	22.9	4.1	15.5	24.9	0.8
LOS	C	D	A	C	C	A	B	C	A	B	C	A
Approach Delay		24.0			22.3			18.4			20.2	
Approach LOS		C			C			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 83.8

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 21.0

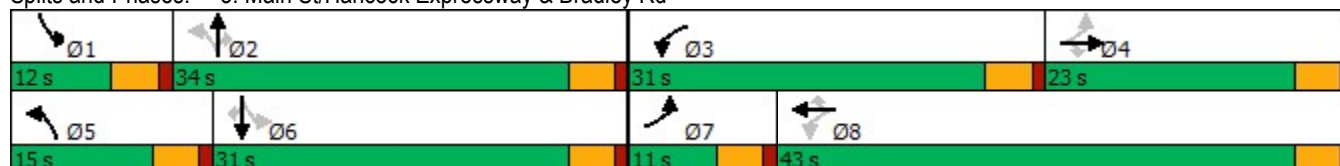
Intersection LOS: C

Intersection Capacity Utilization 52.3%

ICU Level of Service A

Analysis Period (min) 15







Splits and Phases: 3: Main St/Hancock Expressway & Bradley Rd



Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑↑		↗
Traffic Vol, veh/h	252	5	5	737	0	5
Future Vol, veh/h	252	5	5	737	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	220	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	82	82	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	274	5	6	899	0	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	279	0	-	274
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.13	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.219	-	-	3.319
Pot Cap-1 Maneuver	-	-	1282	-	0	764
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1282	-	-	764
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		9.7	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	764	-	-	1282	-	
HCM Lane V/C Ratio	0.007	-	-	0.005	-	
HCM Control Delay (s)	9.7	-	-	7.8	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	



Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗	↗↗	↗
Traffic Vol, veh/h	0	25	0	606	680	40
Future Vol, veh/h	0	25	0	606	680	40
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	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	72	72	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	35	0	842	971	57
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	486	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	527	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	527	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.3	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 527		-	-		
HCM Lane V/C Ratio	- 0.067		-	-		
HCM Control Delay (s)	- 12.3		-	-		
HCM Lane LOS	- B		-	-		
HCM 95th %tile Q(veh)	- 0.2		-	-		

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	22	35	587	677	28
Future Vol, veh/h	19	22	35	587	677	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	95	0	25	-	-	110
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	21	24	38	638	736	30




Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1131	368	766	0	-	0
Stage 1	736	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	197	629	843	-	-	-
Stage 1	435	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	188	629	843	-	-	-
Mov Cap-2 Maneuver	311	-	-	-	-	-
Stage 1	415	-	-	-	-	-
Stage 2	650	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	843	-	311	629	-	-
HCM Lane V/C Ratio	0.045	-	0.066	0.038	-	-
HCM Control Delay (s)	9.5	-	17.4	10.9	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.1	-	-

























HCM 6th TWSC  
15: Gladiator Dr & Pleasant Port View

2019 Existing  
AM

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	27	19	11	21	14
Future Vol, veh/h	4	27	19	11	21	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	29	21	12	23	15
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	33	0	-	0	64	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1579	-	-	-	942	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	985	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1579	-	-	-	939	1048
Mov Cap-2 Maneuver	-	-	-	-	939	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	985	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		8.8		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1579	-	-	-	980	
HCM Lane V/C Ratio	0.003	-	-	-	0.039	
HCM Control Delay (s)	7.3	0	-	-	8.8	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	













Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd

2019 Existing  
PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	404	114	162	186	186	58	343	241	314	490	52
Future Volume (vph)	68	404	114	162	186	186	58	343	241	314	490	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	370		480	335		185	155		105	295		240
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	95			240			135			230		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.624			0.231			0.466			0.401		
Satd. Flow (perm)	1162	3539	1583	430	3539	1583	868	3539	1583	747	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			213			204			274			164
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		793			845			428			866	
Travel Time (s)		15.4			16.5			7.3			14.8	
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.88	0.88	0.88	0.97	0.97	0.97
Adj. Flow (vph)	79	470	133	178	204	204	66	390	274	324	505	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	470	133	178	204	204	66	390	274	324	505	54
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6

Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd

2019 Existing  
PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.0	26.0	26.0	18.0	33.0	33.0	10.2	30.0	30.0	26.0	45.8	45.8
Total Split (%)	11.0%	26.0%	26.0%	18.0%	33.0%	33.0%	10.2%	30.0%	30.0%	26.0%	45.8%	45.8%
Maximum Green (s)	6.5	21.5	21.5	13.5	28.5	28.5	5.7	25.5	25.5	21.5	41.3	41.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	23.9	17.5	17.5	33.3	25.0	25.0	35.5	29.8	29.8	49.6	41.8	41.8
Actuated g/C Ratio	0.26	0.19	0.19	0.36	0.27	0.27	0.39	0.32	0.32	0.54	0.45	0.45
v/c Ratio	0.23	0.70	0.28	0.56	0.21	0.35	0.17	0.34	0.39	0.57	0.31	0.07
Control Delay	22.1	41.4	1.9	27.9	27.9	5.9	14.4	26.9	5.6	17.3	18.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.1	41.4	1.9	27.9	27.9	5.9	14.4	26.9	5.6	17.3	18.3	0.2
LOS	C	D	A	C	C	A	B	C	A	B	B	A
Approach Delay		31.5			20.2			17.8			16.8	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 92.2

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 21.2

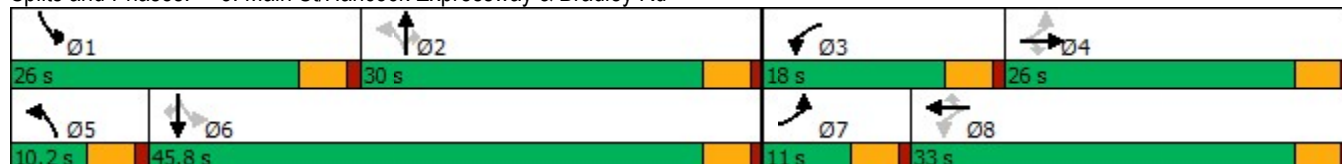
Intersection LOS: C

Intersection Capacity Utilization 62.0%

ICU Level of Service B







Analysis Period (min) 15

Splits and Phases: 3: Main St/Hancock Expressway & Bradley Rd



Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑↑		↗
Traffic Vol, veh/h	694	10	5	320	0	5
Future Vol, veh/h	694	10	5	320	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	220	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	84	84	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	723	10	6	381	0	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	733	0	-	723
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.13	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.219	-	-	3.319
Pot Cap-1 Maneuver	-	-	870	-	0	425
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	870	-	-	425
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		13.6	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	425	-	-	870	-	
HCM Lane V/C Ratio	0.013	-	-	0.007	-	
HCM Control Delay (s)	13.6	-	-	9.2	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	




Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗	↗↗	↗
Traffic Vol, veh/h	0	40	0	642	706	70
Future Vol, veh/h	0	40	0	642	706	70
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	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	50	0	730	802	80
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	401	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	599	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	599	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.6	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 599		-	-		
HCM Lane V/C Ratio	- 0.083		-	-		
HCM Control Delay (s)	- 11.6		-	-		
HCM Lane LOS	- B		-	-		
HCM 95th %tile Q(veh)	- 0.3		-	-		

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	19	30	606	736	10
Future Vol, veh/h	36	19	30	606	736	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	95	0	25	-	-	110
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	39	21	33	659	800	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1196	400	811	0	-	0
Stage 1	800	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	179	600	811	-	-	-
Stage 1	403	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	172	600	811	-	-	-
Mov Cap-2 Maneuver	292	-	-	-	-	-
Stage 1	386	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.4	0.5		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	811	-	292	600	-	-
HCM Lane V/C Ratio	0.04	-	0.134	0.034	-	-
HCM Control Delay (s)	9.6	-	19.2	11.2	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	0.1	-	-



Intersection

Int Delay, s/veh 4.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	10	30	8	28	24
Future Vol, veh/h	5	10	30	8	28	24
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	5	11	33	9	30	26

























Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	42	0	0 59 38
Stage 1	-	-	- 38 -
Stage 2	-	-	- 21 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1567	-	- 948 1034
Stage 1	-	-	- 984 -
Stage 2	-	-	- 1002 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1567	-	- 945 1034
Mov Cap-2 Maneuver	-	-	- 945 -
Stage 1	-	-	- 981 -
Stage 2	-	-	- 1002 -

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1567	-	-	-	984
HCM Lane V/C Ratio	0.003	-	-	-	0.057
HCM Control Delay (s)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2













Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd

2019 Existing + Site  
AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	131	66	321	559	58	95	404	108	63	334	65
Future Volume (vph)	68	131	66	321	559	58	95	404	108	63	334	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	370		480	335		185	155		105	295		240
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	95			240			135			230		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.399			0.464			0.357			0.397		
Satd. Flow (perm)	743	3539	1583	864	3539	1583	665	3539	1583	740	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			115			164			164
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		793			845			428			866	
Travel Time (s)		15.4			16.5			7.3			14.8	
Peak Hour Factor	0.93	0.93	0.93	0.84	0.84	0.84	0.72	0.72	0.72	0.69	0.69	0.69
Adj. Flow (vph)	73	141	71	382	665	69	132	561	150	91	484	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	141	71	382	665	69	132	561	150	91	484	94
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6

Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd

2019 Existing + Site  
AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	12.0	23.0	23.0	31.0	42.0	42.0	15.0	34.0	34.0	12.0	31.0	31.0
Total Split (%)	12.0%	23.0%	23.0%	31.0%	42.0%	42.0%	15.0%	34.0%	34.0%	12.0%	31.0%	31.0%
Maximum Green (s)	7.5	18.5	18.5	26.5	37.5	37.5	10.5	29.5	29.5	7.5	26.5	26.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	16.5	9.5	9.5	33.2	24.1	24.1	38.9	31.7	31.7	34.6	27.5	27.5
Actuated g/C Ratio	0.20	0.11	0.11	0.40	0.29	0.29	0.47	0.38	0.38	0.42	0.33	0.33
v/c Ratio	0.31	0.35	0.22	0.69	0.65	0.13	0.31	0.42	0.21	0.23	0.41	0.15
Control Delay	21.5	37.9	1.5	26.0	29.9	1.7	15.3	22.3	4.0	15.0	24.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.5	37.9	1.5	26.0	29.9	1.7	15.3	22.3	4.0	15.0	24.4	0.9
LOS	C	D	A	C	C	A	B	C	A	B	C	A
Approach Delay		24.6			26.8			18.0			19.8	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 83.1

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 22.4

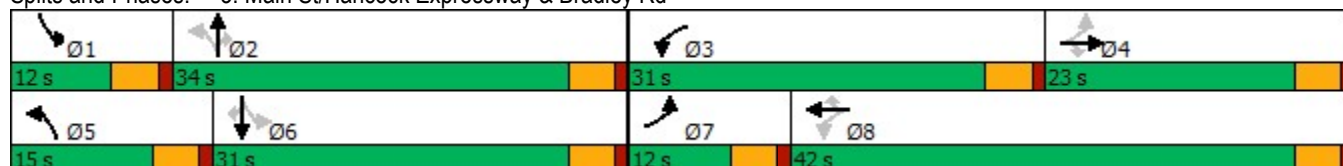
Intersection LOS: C

Intersection Capacity Utilization 52.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Main St/Hancock Expressway & Bradley Rd









Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑↑		↗
Traffic Vol, veh/h	256	9	2	737	0	8
Future Vol, veh/h	256	9	2	737	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	220	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	82	82	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	278	10	2	899	0	9
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	288	0	-	278
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.13	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.219	-	-	3.319
Pot Cap-1 Maneuver	-	-	1272	-	0	760
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1272	-	-	760
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		9.8	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	760	-	-	1272	-	
HCM Lane V/C Ratio	0.011	-	-	0.002	-	
HCM Control Delay (s)	9.8	-	-	7.8	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

HCM 6th TWSC  
4: Main St & RI/RO Access

2019 Existing + Site  
AM




Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗	↗↗	↗
Traffic Vol, veh/h	0	28	0	608	680	41
Future Vol, veh/h	0	28	0	608	680	41
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	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	72	72	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	39	0	844	971	59
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	486	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	527	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	527	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.4	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 527		-	-		
HCM Lane V/C Ratio	- 0.075		-	-		
HCM Control Delay (s)	- 12.4		-	-		
HCM Lane LOS	- B		-	-		
HCM 95th %tile Q(veh)	- 0.2		-	-		

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	25	37	587	680	28
Future Vol, veh/h	21	25	37	587	680	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	85	0	25	-	-	110
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	23	27	40	638	739	30

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1138	370	769	0	-	0
Stage 1	739	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	195	627	841	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	186	627	841	-	-	-
Mov Cap-2 Maneuver	308	-	-	-	-	-
Stage 1	412	-	-	-	-	-
Stage 2	647	-	-	-	-	-

























Approach	EB	NB	SB
HCM Control Delay, s	14	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	841	-	308	627	-	-
HCM Lane V/C Ratio	0.048	-	0.074	0.043	-	-
HCM Control Delay (s)	9.5	-	17.6	11	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.1	-	-

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	27	19	13	26	14
Future Vol, veh/h	4	27	19	13	26	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	29	21	14	28	15
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	35	0	-	0	65	28
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1576	-	-	-	941	1047
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	985	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1576	-	-	-	938	1047
Mov Cap-2 Maneuver	-	-	-	-	938	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	985	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		8.9		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1576	-	-	-	973	
HCM Lane V/C Ratio	0.003	-	-	-	0.045	
HCM Control Delay (s)	7.3	0	-	-	8.9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd













2019 Existing + Site  
PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	406	113	162	189	186	58	344	241	314	495	55
Future Volume (vph)	72	406	113	162	189	186	58	344	241	314	495	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	370		480	335		185	155		105	295		240
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	95			240			135			230		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.621			0.230			0.464			0.400		
Satd. Flow (perm)	1157	3539	1583	428	3539	1583	864	3539	1583	745	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			213			204			274			164
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		793			845			428			866	
Travel Time (s)		15.4			16.5			7.3			14.8	
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.88	0.88	0.88	0.97	0.97	0.97
Adj. Flow (vph)	84	472	131	178	208	204	66	391	274	324	510	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	472	131	178	208	204	66	391	274	324	510	57
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6



Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd

2019 Existing + Site  
PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.0	26.0	26.0	18.0	33.0	33.0	10.2	30.0	30.0	26.0	45.8	45.8
Total Split (%)	11.0%	26.0%	26.0%	18.0%	33.0%	33.0%	10.2%	30.0%	30.0%	26.0%	45.8%	45.8%
Maximum Green (s)	6.5	21.5	21.5	13.5	28.5	28.5	5.7	25.5	25.5	21.5	41.3	41.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	24.0	17.6	17.6	33.4	25.1	25.1	35.5	29.8	29.8	49.6	41.8	41.8
Actuated g/C Ratio	0.26	0.19	0.19	0.36	0.27	0.27	0.39	0.32	0.32	0.54	0.45	0.45
v/c Ratio	0.24	0.70	0.28	0.56	0.22	0.35	0.17	0.34	0.39	0.57	0.32	0.07
Control Delay	22.3	41.5	1.7	28.0	27.9	5.9	14.4	26.9	5.6	17.3	18.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	41.5	1.7	28.0	27.9	5.9	14.4	26.9	5.6	17.3	18.4	0.2
LOS	C	D	A	C	C	A	B	C	A	B	B	A
Approach Delay		31.6			20.3			17.8			16.8	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 92.2

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 21.3

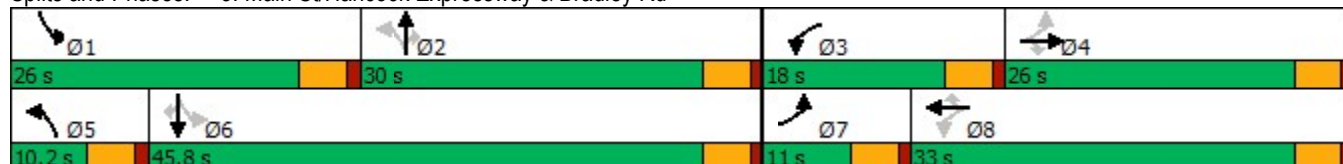
Intersection LOS: C

Intersection Capacity Utilization 62.1%

ICU Level of Service B







Analysis Period (min) 15




Splits and Phases: 3: Main St/Hancock Expressway & Bradley Rd



Intersection						
Int Delay, s/veh	4.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑↑		↗
Traffic Vol, veh/h	694	24	320	5	0	5
Future Vol, veh/h	694	24	320	5	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	220	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	84	84	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	723	25	381	6	0	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	748	0	-	723
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.13	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.219	-	-	3.319
Pot Cap-1 Maneuver	-	-	859	-	0	425
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	859	-	-	425
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		12.3		13.6	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	425	-	-	859	-	
HCM Lane V/C Ratio	0.013	-	-	0.443	-	
HCM Control Delay (s)	13.6	-	-	12.5	-	
HCM Lane LOS	B	-	-	B	-	
HCM 95th %tile Q(veh)	0	-	-	2.3	-	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗	↗	↗
Traffic Vol, veh/h	0	42	0	643	706	75
Future Vol, veh/h	0	42	0	643	706	75
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	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	53	0	731	802	85
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	401	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	599	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	599	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	11.6	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	599	-	-		
HCM Lane V/C Ratio	-	0.088	-	-		
HCM Control Delay (s)	-	11.6	-	-		
HCM Lane LOS	-	B	-	-		
HCM 95th %tile Q(veh)	-	0.3	-	-		

























Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	21	36	606	738	10
Future Vol, veh/h	37	21	36	606	738	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	95	0	25	-	-	110
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	40	23	39	659	802	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1210	401	813	0	-	0
Stage 1	802	-	-	-	-	-
Stage 2	408	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	175	599	810	-	-	-
Stage 1	402	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	167	599	810	-	-	-
Mov Cap-2 Maneuver	288	-	-	-	-	-
Stage 1	383	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.5	0.5		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	810	-	288	599	-	-
HCM Lane V/C Ratio	0.048	-	0.14	0.038	-	-
HCM Control Delay (s)	9.7	-	19.5	11.2	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	0.1	-	-

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	10	30	14	31	24
Future Vol, veh/h	5	10	30	14	31	24
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	5	11	33	15	34	26
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	48	0	-	0	62	41
Stage 1	-	-	-	-	41	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1559	-	-	-	944	1030
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	1002	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1559	-	-	-	941	1030
Mov Cap-2 Maneuver	-	-	-	-	941	-
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	1002	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.4	0		8.9		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1559	-	-	-	978	
HCM Lane V/C Ratio	0.003	-	-	-	0.061	
HCM Control Delay (s)	7.3	0	-	-	8.9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

# Lanes, Volumes, Timings

## 3: Main St/Hancock Expressway & Bradley Rd

2040 Background  
AM













												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	260	95	375	675	515	170	475	165	115	54	160
Future Volume (vph)	115	260	95	375	675	515	170	475	165	115	54	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	370		480	335		185	155		105	295		240
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	95			240			135			230		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.337			0.416			0.674			0.317		
Satd. Flow (perm)	628	3539	1583	775	3539	1583	1255	3539	1583	590	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			340			166			188
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		793			845			428			866	
Travel Time (s)		15.4			16.5			7.3			14.8	
Peak Hour Factor	0.93	0.93	0.93	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	124	280	102	441	794	606	200	559	194	135	64	188
Shared Lane Traffic (%)												
Lane Group Flow (vph)	124	280	102	441	794	606	200	559	194	135	64	188
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6

Lanes, Volumes, Timings  
2040 Background AM

Synchro 10 Report  
JAB

Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd

2040 Background  
AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	13.0	24.3	24.3	32.7	44.0	44.0	14.5	30.0	30.0	13.0	28.5	28.5
Total Split (%)	13.0%	24.3%	24.3%	32.7%	44.0%	44.0%	14.5%	30.0%	30.0%	13.0%	28.5%	28.5%
Maximum Green (s)	8.5	19.8	19.8	28.2	39.5	39.5	10.0	25.5	25.5	8.5	24.0	24.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	26.6	18.5	18.5	44.0	31.4	31.4	35.3	25.8	25.8	32.4	24.3	24.3
Actuated g/C Ratio	0.29	0.20	0.20	0.48	0.34	0.34	0.39	0.28	0.28	0.35	0.27	0.27
v/c Ratio	0.44	0.39	0.23	0.73	0.65	0.79	0.37	0.56	0.34	0.43	0.07	0.34
Control Delay	20.7	34.1	2.2	24.1	28.0	19.6	21.7	32.1	8.9	23.6	28.3	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	34.1	2.2	24.1	28.0	19.6	21.7	32.1	8.9	23.6	28.3	6.6
LOS	C	C	A	C	C	B	C	C	A	C	C	A
Approach Delay		24.4			24.3			25.2			16.1	
Approach LOS		C			C			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 91.5

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 23.7

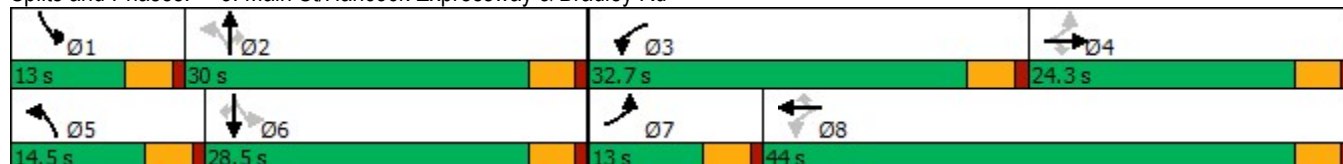
Intersection LOS: C

Intersection Capacity Utilization 62.6%

ICU Level of Service B

Analysis Period (min) 15







Splits and Phases: 3: Main St/Hancock Expressway & Bradley Rd






Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑		↗
Traffic Vol, veh/h	430	30	55	960	0	40
Future Vol, veh/h	430	30	55	960	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	220	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	85	85	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	467	33	65	1129	0	43
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	500	0	-	234
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	1060	-	0	768
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1060	-	-	768
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.5		10	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	768	-	-	1060	-	
HCM Lane V/C Ratio	0.057	-	-	0.061	-	
HCM Control Delay (s)	10	-	-	8.6	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-	



























Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗	↗↗	↗
Traffic Vol, veh/h	0	35	0	810	945	60
Future Vol, veh/h	0	35	0	810	945	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	72	72	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	49	0	1125	1350	86
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	675	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	396	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	396	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	15.4	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 396		-	-		
HCM Lane V/C Ratio	- 0.124		-	-		
HCM Control Delay (s)	- 15.4		-	-		
HCM Lane LOS	- C		-	-		
HCM 95th %tile Q(veh)	- 0.4		-	-		

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	40	90	785	955	35
Future Vol, veh/h	25	40	90	785	955	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	95	0	25	-	-	110
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	27	43	98	853	1038	38
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1661	519	1076	0	-	0
Stage 1	1038	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	88	502	644	-	-	-
Stage 1	302	-	-	-	-	-
Stage 2	497	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	75	502	644	-	-	-
Mov Cap-2 Maneuver	184	-	-	-	-	-
Stage 1	256	-	-	-	-	-
Stage 2	497	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	18.7	1.2		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	644	-	184	502	-	-
HCM Lane V/C Ratio	0.152	-	0.148	0.087	-	-
HCM Control Delay (s)	11.6	-	27.9	12.9	-	-
HCM Lane LOS	B	-	D	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.5	0.3	-	-

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	35	75	50	30	50
Future Vol, veh/h	30	35	75	50	30	50
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	33	38	82	54	33	54
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	136	0	-	0	213	109
Stage 1	-	-	-	-	109	-
Stage 2	-	-	-	-	104	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1448	-	-	-	775	945
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	920	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1448	-	-	-	757	945
Mov Cap-2 Maneuver	-	-	-	-	757	-
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	920	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.5	0		9.6		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1448	-	-	-	864	
HCM Lane V/C Ratio	0.023	-	-	-	0.101	
HCM Control Delay (s)	7.5	0	-	-	9.6	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	

Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd













2040 Background  
PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	580	190	225	315	350	115	400	305	425	665	160
Future Volume (vph)	160	580	190	225	315	350	115	400	305	425	665	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	370		480	335		185	155		105	295		240
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	95			240			135			230		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.542			0.156			0.391			0.286		
Satd. Flow (perm)	1010	3539	1583	291	3539	1583	728	3539	1583	533	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			221			385			286			165
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		793			845			428			866	
Travel Time (s)		15.4			16.5			7.3			14.8	
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.88	0.88	0.88	0.97	0.97	0.97
Adj. Flow (vph)	186	674	221	247	346	385	131	455	347	438	686	165
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	674	221	247	346	385	131	455	347	438	686	165
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6

Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd

2040 Background

PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	14.8	27.6	27.6	19.0	31.8	31.8	13.8	25.1	25.1	28.3	39.6	39.6
Total Split (%)	14.8%	27.6%	27.6%	19.0%	31.8%	31.8%	13.8%	25.1%	25.1%	28.3%	39.6%	39.6%
Maximum Green (s)	10.3	23.1	23.1	14.5	27.3	27.3	9.3	20.6	20.6	23.8	35.1	35.1
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	31.9	22.1	22.1	38.9	25.5	25.5	31.4	22.8	22.8	48.3	35.2	35.2
Actuated g/C Ratio	0.33	0.23	0.23	0.40	0.26	0.26	0.32	0.23	0.23	0.50	0.36	0.36
v/c Ratio	0.46	0.84	0.42	0.77	0.37	0.55	0.40	0.55	0.59	0.82	0.54	0.24
Control Delay	23.4	46.9	7.1	38.5	30.7	6.4	19.9	37.0	12.3	31.8	27.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	46.9	7.1	38.5	30.7	6.4	19.9	37.0	12.3	31.8	27.0	4.7
LOS	C	D	A	D	C	A	B	D	B	C	C	A
Approach Delay		34.7			23.1			25.4			25.8	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 97.2

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 27.3

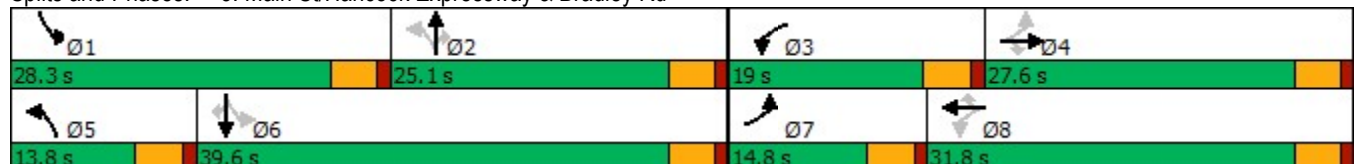
Intersection LOS: C

Intersection Capacity Utilization 78.1%

ICU Level of Service D







Analysis Period (min) 15

Splits and Phases: 3: Main St/Hancock Expressway & Bradley Rd






Intersection						
Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑		↑
Traffic Vol, veh/h	820	55	35	560	0	90
Future Vol, veh/h	820	55	35	560	0	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	220	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	84	84	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	854	57	42	667	0	98
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	911	0	-	427
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	743	-	0	576
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	743	-	-	576
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.6		12.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	576	-	-	743	-	
HCM Lane V/C Ratio	0.17	-	-	0.056	-	
HCM Control Delay (s)	12.5	-	-	10.1	-	
HCM Lane LOS	B	-	-	B	-	
HCM 95th %tile Q(veh)	0.6	-	-	0.2	-	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗	↗↗	↗
Traffic Vol, veh/h	0	55	0	820	985	90
Future Vol, veh/h	0	55	0	820	985	90
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	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	69	0	932	1119	102
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	560	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	472	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	472	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	13.9	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	472	-	-		
HCM Lane V/C Ratio	-	0.146	-	-		
HCM Control Delay (s)	-	13.9	-	-		
HCM Lane LOS	-	B	-	-		
HCM 95th %tile Q(veh)	-	0.5	-	-		

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	30	75	775	1040	15
Future Vol, veh/h	40	30	75	775	1040	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	95	0	25	-	-	110
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	43	33	82	842	1130	16
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1715	565	1146	0	-	0
Stage 1	1130	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	81	468	605	-	-	-
Stage 1	270	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	70	468	605	-	-	-
Mov Cap-2 Maneuver	173	-	-	-	-	-
Stage 1	233	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	24.4	1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	605	-	173	468	-	-
HCM Lane V/C Ratio	0.135	-	0.251	0.07	-	-
HCM Control Delay (s)	11.9	-	32.7	13.3	-	-
HCM Lane LOS	B	-	D	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1	0.2	-	-




Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	35	50	40	35	45
Future Vol, veh/h	25	35	50	40	35	45
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	27	38	54	43	38	49
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	97	0	-	0	168	76
Stage 1	-	-	-	-	76	-
Stage 2	-	-	-	-	92	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1496	-	-	-	822	985
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	932	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1496	-	-	-	807	985
Mov Cap-2 Maneuver	-	-	-	-	807	-
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	932	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.1	0		9.4		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1496	-	-	-	898	
HCM Lane V/C Ratio	0.018	-	-	-	0.097	
HCM Control Delay (s)	7.5	0	-	-	9.4	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	

Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd













2040 Background + Site

AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	263	95	375	676	515	170	476	165	115	546	161
Future Volume (vph)	121	263	95	375	676	515	170	476	165	115	546	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	370		480	335		185	155		105	295		240
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	95			240			135			230		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.320			0.393			0.224			0.352		
Satd. Flow (perm)	596	3539	1583	732	3539	1583	417	3539	1583	656	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			346			175			189
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		793			845			428			866	
Travel Time (s)		15.4			16.5			7.3			14.8	
Peak Hour Factor	0.93	0.93	0.93	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	130	283	102	441	795	606	200	560	194	135	642	189
Shared Lane Traffic (%)												
Lane Group Flow (vph)	130	283	102	441	795	606	200	560	194	135	642	189
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6

Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd

2040 Background + Site  
AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	12.0	24.0	24.0	28.0	40.0	40.0	17.0	34.2	34.2	13.8	31.0	31.0
Total Split (%)	12.0%	24.0%	24.0%	28.0%	40.0%	40.0%	17.0%	34.2%	34.2%	13.8%	31.0%	31.0%
Maximum Green (s)	7.5	19.5	19.5	23.5	35.5	35.5	12.5	29.7	29.7	9.3	26.5	26.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	24.6	17.2	17.2	42.4	30.5	30.5	40.8	29.9	29.9	35.9	27.4	27.4
Actuated g/C Ratio	0.26	0.18	0.18	0.45	0.32	0.32	0.43	0.32	0.32	0.38	0.29	0.29
v/c Ratio	0.53	0.44	0.24	0.79	0.69	0.81	0.59	0.50	0.31	0.39	0.63	0.32
Control Delay	26.0	37.2	2.4	30.6	31.3	21.8	24.7	29.1	7.1	20.2	33.5	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	37.2	2.4	30.6	31.3	21.8	24.7	29.1	7.1	20.2	33.5	6.0
LOS	C	D	A	C	C	C	C	C	A	C	C	A
Approach Delay		27.5			28.0			23.7			26.3	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 94.4

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 26.6

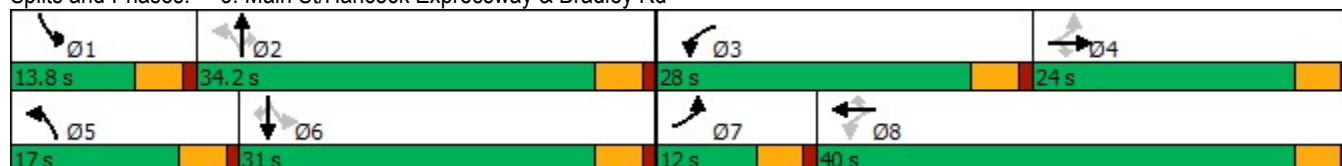
Intersection LOS: C

Intersection Capacity Utilization 67.6%

ICU Level of Service C







Analysis Period (min) 15

Splits and Phases: 3: Main St/Hancock Expressway & Bradley Rd



Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↘	↑↑		↗
Traffic Vol, veh/h	431	34	37	940	0	43
Future Vol, veh/h	431	34	37	940	0	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	220	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	85	85	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	468	37	44	1106	0	47
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	505	0	-	234
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	1056	-	0	768
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1056	-	-	768
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.3		10	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	768	-	-	1056	-	
HCM Lane V/C Ratio	0.061	-	-	0.041	-	
HCM Control Delay (s)	10	-	-	8.6	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	




Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗	↗↗	↗
Traffic Vol, veh/h	0	33	0	811	965	61
Future Vol, veh/h	0	33	0	811	965	61
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	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	72	72	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	46	0	1126	1379	87
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	690	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	388	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	388	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	15.5	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 388		-	-		
HCM Lane V/C Ratio	- 0.12		-	-		
HCM Control Delay (s)	- 15.5		-	-		
HCM Lane LOS	- C		-	-		
HCM 95th %tile Q(veh)	- 0.4		-	-		

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	27	43	92	784	963	35
Future Vol, veh/h	27	43	92	784	963	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	95	0	25	-	-	110
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	29	47	100	852	1047	38

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1673	524	1085	0	-	0
Stage 1	1047	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	87	498	639	-	-	-
Stage 1	299	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	73	498	639	-	-	-
Mov Cap-2 Maneuver	181	-	-	-	-	-
Stage 1	252	-	-	-	-	-
Stage 2	495	-	-	-	-	-

























Approach	EB	NB	SB
HCM Control Delay, s	19.1	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	639	-	181	498	-	-
HCM Lane V/C Ratio	0.156	-	0.162	0.094	-	-
HCM Control Delay (s)	11.7	-	28.7	13	-	-
HCM Lane LOS	B	-	D	B	-	-
HCM 95th %tile Q(veh)	0.6	-	0.6	0.3	-	-

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	35	75	52	35	63
Future Vol, veh/h	30	35	75	52	35	63
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	33	38	82	57	38	68
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	139	0	-	0	215	111
Stage 1	-	-	-	-	111	-
Stage 2	-	-	-	-	104	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1445	-	-	-	773	942
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	920	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1445	-	-	-	755	942
Mov Cap-2 Maneuver	-	-	-	-	755	-
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	920	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.5	0		9.7		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1445	-	-	-	865	
HCM Lane V/C Ratio	0.023	-	-	-	0.123	
HCM Control Delay (s)	7.5	0	-	-	9.7	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	

Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd













2040 Background + Site  
PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	582	190	225	318	350	115	401	305	425	670	163
Future Volume (vph)	164	582	190	225	318	350	115	401	305	425	670	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	370		480	335		185	155		105	295		240
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	95			240			135			230		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.535			0.156			0.389			0.291		
Satd. Flow (perm)	997	3539	1583	291	3539	1583	725	3539	1583	542	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			221			385			287			168
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		793			845			428			866	
Travel Time (s)		15.4			16.5			7.3			14.8	
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.88	0.88	0.88	0.97	0.97	0.97
Adj. Flow (vph)	191	677	221	247	349	385	131	456	347	438	691	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	191	677	221	247	349	385	131	456	347	438	691	168
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6



Lanes, Volumes, Timings  
3: Main St/Hancock Expressway & Bradley Rd

2040 Background + Site  
PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	15.0	28.0	28.0	19.0	32.0	32.0	13.8	27.0	27.0	26.0	39.2	39.2
Total Split (%)	15.0%	28.0%	28.0%	19.0%	32.0%	32.0%	13.8%	27.0%	27.0%	26.0%	39.2%	39.2%
Maximum Green (s)	10.5	23.5	23.5	14.5	27.5	27.5	9.3	22.5	22.5	21.5	34.7	34.7
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	32.4	22.3	22.3	38.9	25.6	25.6	31.9	23.4	23.4	47.8	34.8	34.8
Actuated g/C Ratio	0.33	0.23	0.23	0.40	0.26	0.26	0.33	0.24	0.24	0.49	0.36	0.36
v/c Ratio	0.46	0.83	0.41	0.77	0.37	0.55	0.40	0.53	0.58	0.85	0.54	0.25
Control Delay	23.3	45.8	7.0	38.4	30.5	6.4	19.6	35.8	11.6	34.1	27.4	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	45.8	7.0	38.4	30.5	6.4	19.6	35.8	11.6	34.1	27.4	4.7
LOS	C	D	A	D	C	A	B	D	B	C	C	A
Approach Delay		34.0			23.0			24.5			26.7	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 97

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 27.2

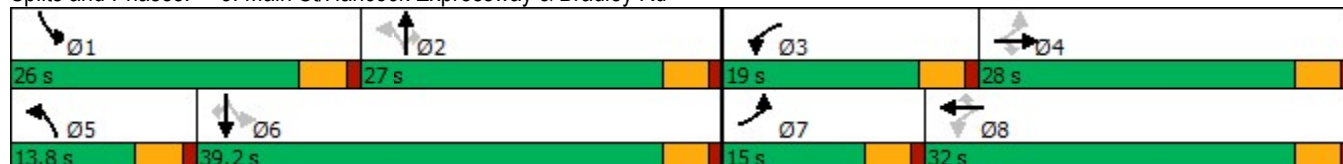
Intersection LOS: C

Intersection Capacity Utilization 78.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Main St/Hancock Expressway & Bradley Rd









Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↘	↑↑		↗
Traffic Vol, veh/h	831	69	35	581	0	115
Future Vol, veh/h	831	69	35	581	0	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	220	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	84	84	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	866	72	42	692	0	125
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	938	0	-	433
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	726	-	0	571
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	726	-	-	571
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.6		13.1	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	571	-	-	726	-	
HCM Lane V/C Ratio	0.219	-	-	0.057	-	
HCM Control Delay (s)	13.1	-	-	10.3	-	
HCM Lane LOS	B	-	-	B	-	
HCM 95th %tile Q(veh)	0.8	-	-	0.2	-	




Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	↗
Traffic Vol, veh/h	0	57	0	821	1030	95
Future Vol, veh/h	0	57	0	821	1030	95
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	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	71	0	933	1170	108

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	585	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	454	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	454	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	454	-	-
HCM Lane V/C Ratio	-	0.157	-	-
HCM Control Delay (s)	-	14.4	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.6	-	-

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	32	81	785	988	15
Future Vol, veh/h	36	32	81	785	988	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	95	0	25	-	-	110
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	39	35	88	853	1074	16
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1677	537	1090	0	-	0
Stage 1	1074	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	86	488	636	-	-	-
Stage 1	289	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	74	488	636	-	-	-
Mov Cap-2 Maneuver	181	-	-	-	-	-
Stage 1	249	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	22.1	1.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	636	-	181	488	-	-
HCM Lane V/C Ratio	0.138	-	0.216	0.071	-	-
HCM Control Delay (s)	11.6	-	30.3	12.9	-	-
HCM Lane LOS	B	-	D	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.8	0.2	-	-

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	30	50	46	38	53
Future Vol, veh/h	25	30	50	46	38	53
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	27	33	54	50	41	58
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	104	0	-	0	166	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	87	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1488	-	-	-	824	981
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	936	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1488	-	-	-	809	981
Mov Cap-2 Maneuver	-	-	-	-	809	-
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	936	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.4	0		9.5		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1488	-	-	-	901	
HCM Lane V/C Ratio	0.018	-	-	-	0.11	
HCM Control Delay (s)	7.5	0	-	-	9.5	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #1 7:00

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.2	3.1	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	0.2	0.1	2.4	0.8	13.3	4.4	1.6

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #2 7:15

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.3	3.2	0.0	0.0	0.2	0.1	0.1
Total Del/Veh (s)	0.3	0.0	2.1	0.8	13.5	7.5	1.9

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #3 7:30

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.3	3.9	0.0	0.0	0.2	0.2	0.1
Total Del/Veh (s)	0.3	0.1	3.7	1.0	24.1	11.8	2.9

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #4 7:45

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.3	3.9	0.0	0.0	0.1	0.1	0.2
Total Del/Veh (s)	0.3	0.1	5.2	1.0	14.0	6.9	1.8

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Entire Run

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.3	3.7	0.0	0.0	0.2	0.2	0.1
Total Del/Veh (s)	0.3	0.1	3.2	0.9	17.1	8.3	2.1

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #1 7:00

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.6	3.1	0.0	0.0	0.1	0.2	0.5
Total Del/Veh (s)	0.6	0.2	5.2	0.3	12.6	8.2	1.2

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #2 7:15

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.7	3.2	0.0	0.0	0.1	0.2	0.6
Total Del/Veh (s)	0.6	0.3	5.4	0.3	11.6	4.7	1.1

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #3 7:30

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.7	2.7	0.0	0.0	0.1	0.1	0.6
Total Del/Veh (s)	0.8	0.2	4.2	0.4	15.3	7.3	1.6

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #4 7:45

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.7	3.2	0.0	0.0	0.1	0.2	0.6
Total Del/Veh (s)	0.7	0.2	5.6	0.3	15.6	10.6	1.4

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Entire Run

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.7	3.0	0.0	0.0	0.1	0.2	0.6
Total Del/Veh (s)	0.7	0.2	5.1	0.3	14.5	8.3	1.3

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #1 7:00

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.2	3.3	0.0	0.0	0.2	0.3	0.2
Total Del/Veh (s)	0.3	0.1	4.2	2.2	13.5	8.0	2.9

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #2 7:15

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.3	3.5	0.0	0.0	0.1	0.1	0.2
Total Del/Veh (s)	0.3	0.1	5.0	2.2	14.4	5.8	2.9

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #3 7:30

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.3	3.7	0.0	0.0	0.2	0.2	0.2
Total Del/Veh (s)	0.3	0.1	6.4	2.8	21.3	9.5	3.8

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #4 7:45

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.3	3.6	0.0	0.0	0.2	0.1	0.2
Total Del/Veh (s)	0.3	0.1	4.2	2.6	18.8	9.2	3.6

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Entire Run

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.3	3.6	0.0	0.0	0.2	0.2	0.2
Total Del/Veh (s)	0.3	0.1	4.8	2.5	17.4	8.7	3.4



---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #1 7:00

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.8	2.9	0.1	0.2	0.1	0.1	0.7
Total Del/Veh (s)	0.7	0.4	4.3	0.5	11.5	5.0	1.3

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #2 7:15

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.7	2.9	0.1	0.2	0.1	0.2	0.6
Total Del/Veh (s)	0.7	0.3	3.5	0.5	11.8	5.7	1.2

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #3 7:30

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.8	3.1	0.2	0.3	0.1	0.2	0.7
Total Del/Veh (s)	0.9	0.2	5.6	0.6	18.1	8.2	1.8

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #4 7:45

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.7	3.2	0.1	0.2	0.1	0.1	0.6
Total Del/Veh (s)	0.6	0.2	3.8	0.5	12.2	3.9	1.2

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Entire Run

---

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.7	3.1	0.1	0.2	0.1	0.1	0.7
Total Del/Veh (s)	0.7	0.3	4.3	0.5	14.0	6.6	1.4

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #1 7:00

---

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	2.3	0.2	3.3	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.2
Total Del/Veh (s)	7.5	0.2	0.3	1.9	0.5	0.1	13.3	7.8	16.0	12.4	1.5

---

1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #2 7:15

---

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)		0.2	3.4	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1
Total Del/Veh (s)		0.2	0.3	4.5	0.4	0.2	13.9	5.6	16.1	4.5	1.4

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #3 7:30

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)		0.2	3.3	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.2
Total Del/Veh (s)		0.3	0.5	3.6	0.6	0.2	18.4	7.6	15.3	7.9	2.1

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #4 7:45

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)		0.2	3.3	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.2
Total Del/Veh (s)		0.2	0.4	2.3	0.5	0.2	15.1	8.1	12.1	7.0	1.8

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Entire Run

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	3.2	0.2	3.3	0.0	0.0	0.0	0.2	0.2	0.1	0.2	0.2
Total Del/Veh (s)	10.6	0.2	0.4	2.9	0.5	0.2	15.8	7.2	14.7	10.6	1.7

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #1 7:00

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	1.2	0.3	2.7	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.3
Total Del/Veh (s)	1.1	0.4	0.4	4.8	0.3	0.2	20.2	12.2	20.3	3.5	1.5

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #2 7:15

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	2.1	0.3	2.7	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.3
Total Del/Veh (s)	1.8	0.4	0.8	4.9	0.3	0.0	13.8	7.2	14.3	4.7	1.2

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #3 7:30

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	2.1	0.3	2.5	0.0	0.0	0.0	0.1	0.3	0.1	0.1	0.3
Total Del/Veh (s)	2.3	0.4	0.7	6.8	0.3	0.3	17.5	8.9	16.8	2.9	1.4

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #4 7:45

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	3.5	0.3	2.8	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.3
Total Del/Veh (s)	5.5	0.4	0.4	7.1	0.3	0.1	22.9	14.5	13.6	4.0	1.8

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Entire Run

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	2.8	0.3	2.7	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.3
Total Del/Veh (s)	3.4	0.4	0.6	6.2	0.3	0.2	19.6	11.2	16.3	3.7	1.5

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #1 7:00

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	2.3	0.2	3.5	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.2
Total Del/Veh (s)	5.4	0.3	0.5	3.2	0.5	0.2	13.1	6.1	17.2	12.7	1.6

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #2 7:15

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	3.5	0.2	3.4	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1
Total Del/Veh (s)	4.2	0.2	0.3	2.5	0.4	0.2	15.8	7.3	12.2	2.6	1.8

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #3 7:30

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	1.2	0.2	3.6	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.2
Total Del/Veh (s)	8.5	0.3	0.6	4.6	0.6	0.3	20.4	12.3	20.6	5.4	2.4

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #4 7:45

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)		0.2	3.2	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1
Total Del/Veh (s)		0.2	0.7	4.2	0.5	0.2	16.3	10.2	15.6	20.8	1.8

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Entire Run

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	2.6	0.2	3.4	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1
Total Del/Veh (s)	6.7	0.2	0.6	3.5	0.5	0.3	16.8	9.2	17.1	10.4	1.9

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #1 7:00

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	3.2	0.3	2.6	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.3
Total Del/Veh (s)	4.7	0.4	0.5	6.0	0.3	0.2	17.9	9.3	22.1	6.9	1.8

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #2 7:15

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	1.6	0.2	2.9	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.3
Total Del/Veh (s)	4.9	0.4	0.7	5.1	0.4	0.1	21.1	9.8	16.1	6.1	1.8

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #3 7:30

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	3.0	0.3	2.4	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.2
Total Del/Veh (s)	4.9	0.4	0.7	5.5	0.3	0.1	25.9	16.7	27.6	4.3	2.2

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Interval #4 7:45

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	2.4	0.3	2.7	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.3
Total Del/Veh (s)	2.2	0.4	0.4	5.3	0.3	0.1	20.8	10.7	19.0	5.7	1.9

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1: Lincoln Plaza Dr & Bradley Rd Performance by movement Entire Run

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	2.5	0.3	2.7	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.3
Total Del/Veh (s)	4.2	0.4	0.6	5.5	0.3	0.1	22.0	12.2	21.5	6.6	2.0