

TRAFFIC IMPACT STUDY

REPORT FOR:

DECATUR CLASSICAL SCHOOL



7030 NORTH SACRAMENTO AVENUE
CHICAGO, ILLINOIS

PREPARED BY:



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V3 Project No. 17040.02

October 31, 2018



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I. INTRODUCTION

The Chicago Public School system is proposing an expansion of the existing Stephan Decatur Classical Elementary School located at 7030 North Sacramento Avenue in Chicago, Illinois. V3 Companies has been retained by the Public Building Commission of Chicago to perform a traffic impact analysis for the proposed expansion. A site location map is included as Figure 1.

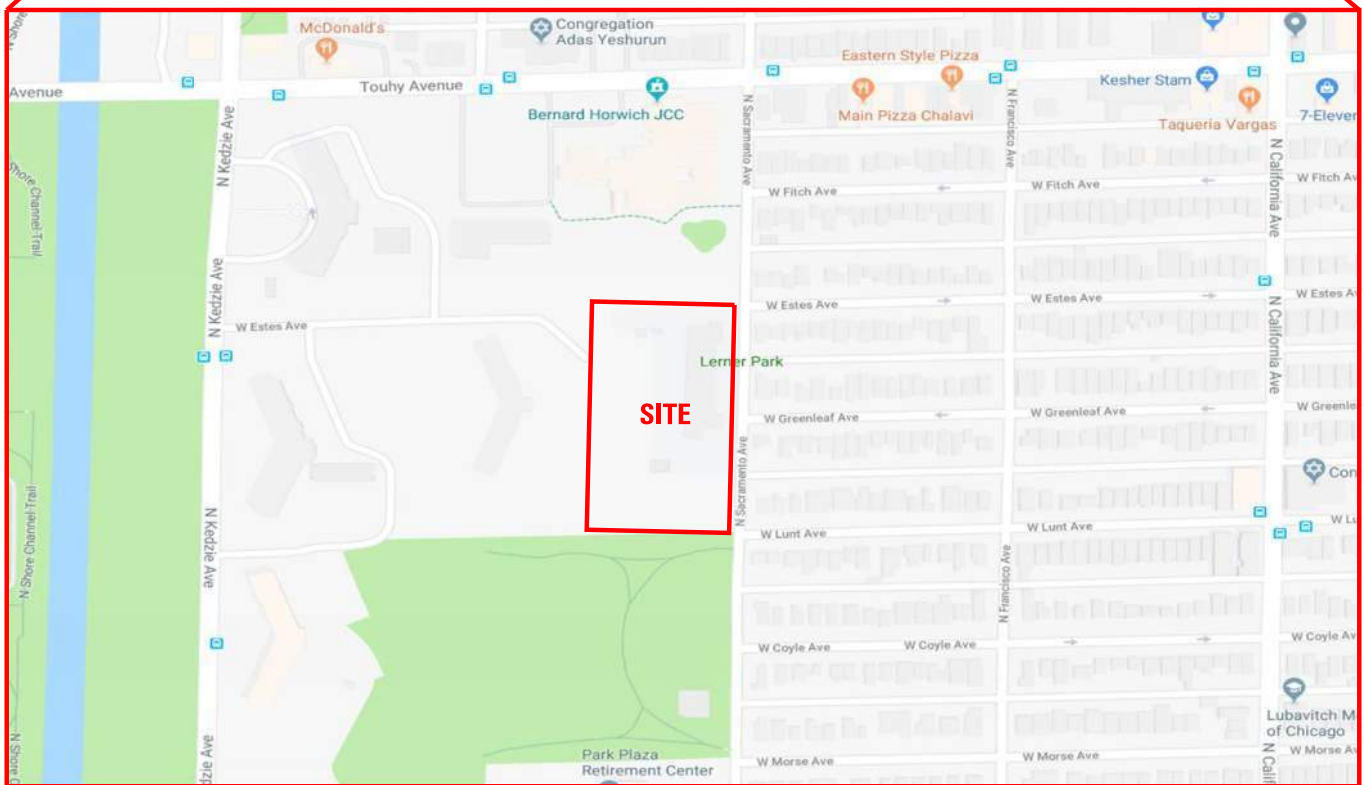
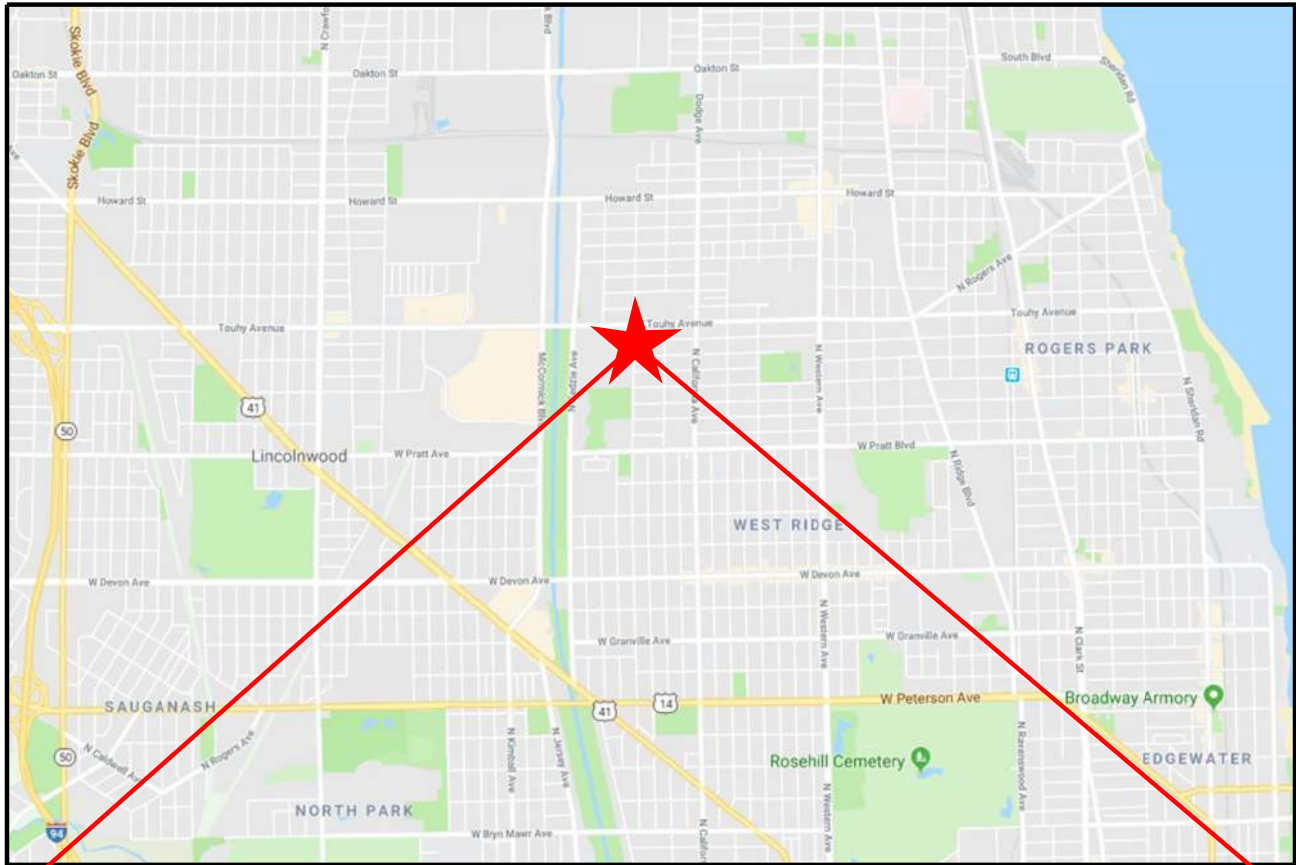
Decatur has a current enrollment of 282 students across kindergarten to sixth grade. The students are supported by 31 faculty and staff members. The school operates Monday through Friday with classes beginning at 7:45 am and ending at 2:45 pm. School buses are provided for students. Students that do not ride the bus either walk, bike, or are picked-up/dropped-off. The existing surface parking lot located on the north side of the school is for faculty and staff only.

The proposed expansion will allow for an increase in capacity for the existing grade levels as well as expanding to provide seventh and eighth grades. This will result in a total capacity of 630 students and 60 faculty and staff. The proposed improvements include constructing an annex south of the existing building, adding a new parking lot south and west of the annex, and improvements to the existing building. The new parking lot will be accessed as the fourth leg of the intersection of Sacramento Avenue and Lunt Avenue and will tie into the existing parking lot on the north side of the school. The existing lot will be reconfigured. The conceptual site plan is provided in Figure 2.

The purpose of this report is to evaluate the anticipated traffic and pedestrian impacts from the proposed Decatur expansion. The study area consists of the following existing intersections:

- Sacramento Avenue/Estes Avenue
- Sacramento Avenue/Greenleaf Avenue
- Sacramento Avenue/Lunt Avenue

This report includes a description of existing conditions, data collection, capacity analysis, evaluation of data, and conclusions.



**DECATUR CLASSICAL
ELEMENTARY SCHOOL**

**FIGURE 1
SITE LOCATION MAP**

CHICAGO

ILLINOIS





NOT TO SCALE

**DECATUR CLASSICAL
ELEMENTARY SCHOOL**

**FIGURE 2
CONCEPTUAL SITE PLAN**

CHICAGO

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II. PROJECT CONDITIONS

Land Uses

A variety of land uses exist near the site which include residential, office and institutional buildings. The land uses and locations are presented in Figure 3.

Roadway System

The characteristics of the roadways in the vicinity of the site are presented below. The existing lane configurations at the study area intersections are illustrated in Figure 4.

Sacramento Avenue is a north-south local street with one travel lane in each direction and sidewalks on both sides of the street. North of Estes Avenue, on-street parking is limited to 15-minute parking in the southbound direction and prohibited in the northbound direction from 8:00 am to 1:30 pm on weekdays. Sacramento Avenue is signed for no on-street parking in either direction between Estes Avenue and Lunt Avenue at any time. However, short-time curbside school activity is intended to occur in the southbound direction. South of Lunt Avenue, parking is prohibited in the southbound direction at all times along the Lerner Park frontage. There are no restrictions on parking in the northbound direction south of Lunt Avenue. Crosswalks are provided on all legs of the study area intersections, with the exception of the south leg of the intersection with Estes Avenue. Due to the offset approaches of Estes Avenue and the school driveway, the existing northbound stop bar location is not compatible with a crosswalk.

Estes Avenue is a one-way roadway with one eastbound travel lane. On-street parking is allowed in both directions without restrictions. Continuous sidewalk is provided on both sides of Estes Avenue. The intersection with Sacramento Avenue is all-way stop controlled as the school parking lot is slightly offset on the east side of the intersection.

Greenleaf Avenue is a one-way roadway with one westbound travel lane. On-street parking is allowed in both directions without restrictions. Continuous sidewalk is provided on both sides of Greenleaf Avenue. The Greenleaf Avenue approach to the intersection with Sacramento Street is stop-controlled, while the Sacramento Street approaches are uncontrolled. A crossing guard is located at Greenleaf Avenue and Sacramento Avenue during school arrival and departure times. The crossing guard was observed crossing students on the east and south legs of the intersection.

Lunt Avenue is an east-west local street with one travel lane in each direction. On-street parking is allowed in both directions without restrictions. Continuous sidewalk is provided on both sides of Lunt Avenue. The intersection at Sacramento Street is all-way stop controlled.



Existing Operations/On-Site Circulation

Decatur School has defined operations for school buses and pick-up/drop-off activities during the school arrival and departure periods as documented in the 2017-18 Parent Handbook.

Morning Arrival

The school day begins at 7:45 am with teachers picking up students at assigned spots in the playground. Bus arrival times are staggered during the morning arrival period. Buses arrive southbound on Sacramento and stop on the school frontage between Estes Avenue and Greenleaf Avenue. School personnel meet the bus to assist students to exit the bus and enter the school. Buses depart the site southbound immediately after unloading the students.

Parents and guardians are instructed to drop-off students curbside on southbound Sacramento Avenue between Greenleaf Avenue and Lunt Avenue start. Early drop off begins at 7:30 am. School staff is present to help students exit vehicles quickly and safely. Despite the published instructions to parents, drop-offs were also observed in the bus drop-off area as well as on Estes Avenue, Greenleaf Avenue, Lunt Avenue, and northbound Sacramento Avenue.

Afternoon Departure

The school day ends at 2:45 pm. All buses arrive to the school to stage prior to the end of the school day. Buses are parked on Sacramento Avenue along the school frontage from Estes Avenue to Lunt Avenue. Beginning at 2:45, school staff walks groups of children to each bus one at a time. Exits are staggered so the number of groups outside concurrently is limited. Each bus departs as it is loaded. Therefore, there is never more than one bus moving near the school at a time. It was observed that most buses depart prior to 3:00 pm.

Students that are not riding the buses are not released until close to 3:00 pm, after most buses have departed. The school does not provide specific curb-side pick-up instructions. The morning procedure is not available since the buses queue in the curbside area used in the morning period. Parents were observed parking in all areas that allow on-street parking, including Sacramento Avenue north of Estes Avenue and south of Lunt Avenue, Estes Avenue, and on Greenleaf Avenue and Lunt Avenue. Parking for pick-up was observed to start around 2:15 pm, with the pace of parking increasing as school release approached.

The volume of evening pick-ups was noticeably lower than the morning drop-offs. This is likely due to after school activities. Students were observed playing in the school playground and meeting for formal after school clubs and programs. A secondary round of pick-ups was observed beginning at 3:40 pm, which likely corresponds to the end of the various after school activities. The volume of the second round of pick-ups was less significant than the initial round of pick-ups at school release.



**DECATUR CLASSICAL
ELEMENTARY SCHOOL**

**FIGURE 3
LAND USE MAP**

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LEGEND

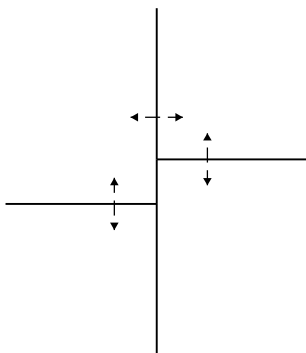


- EXISTING STOP SIGN

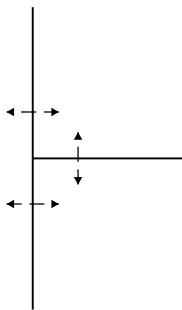
← → - EXISTING CROSSWALK

CROSSWALK LOCATIONS

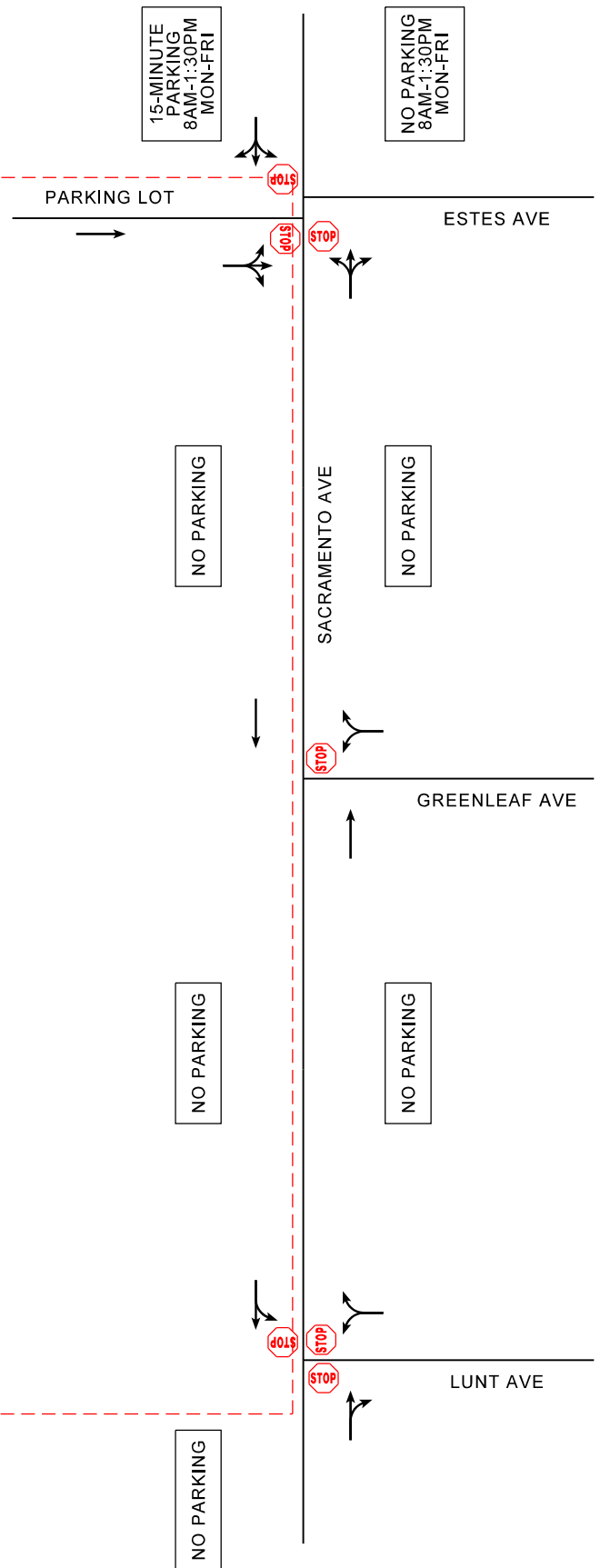
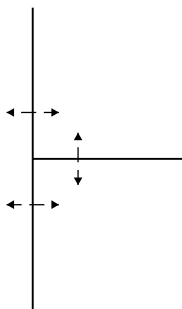
SACRAMENTO / ESTES



SACRAMENTO / GREENLEAF



SACRAMENTO / LUNT



**DECATUR CLASSICAL
ELEMENTARY SCHOOL**

**FIGURE 4
EXISTING LANE CONFIGURATION**

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Traffic Volumes

To assist in the evaluation of the traffic impact on the roadway system resulting from the proposed development, existing vehicular, pedestrian, and bicycle volumes were collected at the study area intersections.

Vehicle and pedestrian counts were collected at the intersections of Sacramento Avenue/Estes Avenue, Sacramento Avenue/Greenleaf Avenue, and Sacramento Avenue/Lunt Avenue on Monday, October 22, 2018 and Tuesday, October 23, 2018. The morning counts occurred from 7:00 am to 9:00 am and the afternoon counts occurred from 2:00 pm to 4:00 pm to capture the expected peak hours of school related traffic. Additional evening counts were collected from 5:00 pm to 9:00 pm. No school activity was observed during the evening collection period.

The traffic volumes collected indicate that the weekday peak hours occur from 7:30 am to 8:30 am, 2:45 pm to 3:45 pm, and 5:00 pm to 6:00 pm. The two days of counts were averaged at the three study area intersections to determine the existing peak hour traffic volumes, which is illustrated in Figure 5. A summary of the traffic volumes collected in fifteen minute increments is provided in Appendix A.

Proposed Development

Decatur Annex Plan & Proposed Site Circulation

The proposed improvement at Decatur School consists of a new annex building located to the south of the existing school building. The new building will be attached to the existing building, which will be renovated. The new building will displace the existing playground, which will be replaced by a new playground west of the existing building.

The proposed improvement includes a new drive aisle and parking lot to the west of the school. The drive aisle is accessed as the fourth leg of the intersection of Sacramento Avenue and Lunt Avenue and will continue around the school to tie into the existing parking lot to the north of the school. The existing parking lot will be reconfigured.

It is recommended that the parking lot continue to function under the existing condition and provide parking for faculty and staff only. However, as part of the expansion, it is recommended that the school utilize the new drive aisle that travels around the school for pick-up and drop-off operations in addition to the current operations as part of the traffic management plan. This could be facilitated by operating the drive aisle as a one-way drive during school pick-up and drop-off activities, with vehicles entering at Lunt Avenue and traveling clockwise around the school. Clockwise pick-up and drop-off operations will allow students to travel between vehicles and the school without the need to cross the drive aisle and between vehicles.



For drop-off operations in the morning, parents and guardians should be instructed to enter the parking lot at the Lunt Avenue driveway, travel westbound, then northbound, then eastbound back to Sacramento Avenue at Estes Avenue. The drop off area should be on the north side of the school near Sacramento Avenue. For pick-up operations, parents should follow the same process and queue along the curb for short term parking while meeting the students. Queueing the vehicles on the proposed drive aisle will mitigate the impact of increased on-street parking demands by parents, particularly during the afternoon pick-up period.

The proposed lane configuration for is illustrated in Figure 6.

Roadway Development

There are no known proposed land development projects or planned roadway improvements in the vicinity of the site that will impact the study area intersections.

LEGEND

- SCHOOL START PEAK HOUR

(##) - SCHOOL END PEAK HOUR

[##] - AFTER HOURS PEAK HOUR

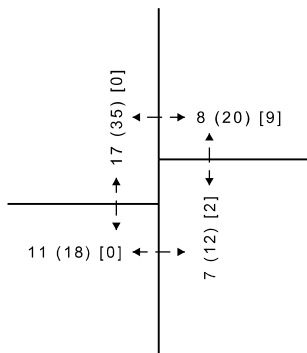
SCHOOL START PEAK HOUR: 7:30 AM - 8:30 AM

SCHOOL END PEAK HOUR: 2:45 PM - 3:45 PM

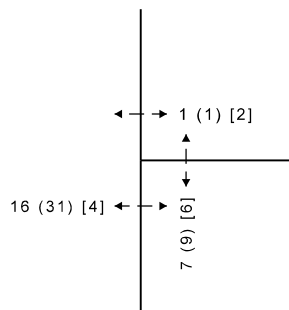
AFTER HOURS PEAK HOUR: 5:00 PM - 6:00 PM

PEDESTRIAN VOLUME DIAGRAMS

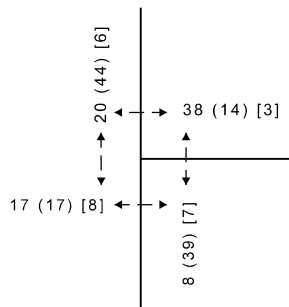
SACRAMENTO / ESTES



SACRAMENTO / GREENLEAF



SACRAMENTO / LUNT



PARKING LOT

1 (8) [2]
1 (3) [0]
1 (6) [2]

2 (8) [2]
170 (148) [277]
28 (39) [40]

ESTES AVE

7 (2) [1]
194 (133) [158]
22 (15) [14]

SACRAMENTO AVE

178 (163) [279]
0 (0) [0]

34 (16) [22]
30 (15) [13]

GREENLEAF AVE

183 (137) [151]
0 (0) [0]

154 (129) [199]
60 (58) [93]

66 (46) [39]
23 (16) [24]

LUNT AVE

110 (93) [113]
22 (16) [15]

**DECATUR CLASSICAL
ELEMENTARY SCHOOL**




**FIGURE 5
EXISTING VEHICULAR TRAFFIC
AND PEDESTRIAN VOLUMES**

CHICAGO

ILLINOIS

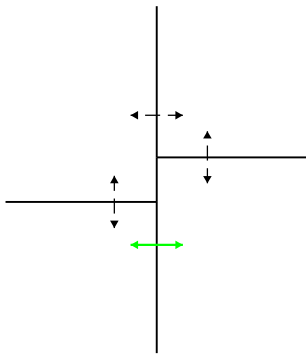


LEGEND

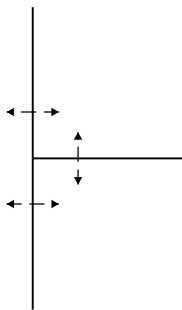
-  - EXISTING STOP SIGN
-  - EXISTING CROSSWALK
-  - PROPOSED CROSSWALK

CROSSWALK LOCATIONS

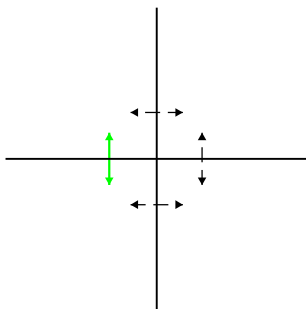
SACRAMENTO / ESTES



SACRAMENTO / GREENLEAF



SACRAMENTO / LUNT



**DECATUR CLASSICAL
ELEMENTARY SCHOOL**

**FIGURE 6
PROPOSED LANE
CONFIGURATION**

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III. TRAFFIC FORECASTS

Project Traffic Volumes

Trip Generation

Decatur School currently accommodates 282 students and 31 faculty members. The proposed expansion will bring the total to 630 students and 60 faculty members. Typically, project traffic is estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. However, the data in the manual is typically comprised of suburban sites with little to no ability for students to walk or bike to school. Decatur School is an urban neighborhood elementary school with high walkability. Therefore, local generation rates are established based on the characteristics of the existing Decatur School.

The pick-up and drop-off operations of the existing school were observed during data collection. The two-day average drop-off and pick-up operation for the existing school is summarized in Table 1.

Table 1: Existing Drop-Off & Pick-Up Activity

Time Period	Location	Avg. Volume	Total Avg. Volume
AM Drop-Off	NB Sacramento Avenue	11	84
	SB Sacramento Avenue	71	
	Greenleaf Avenue	1	
	Lunt Avenue	1	
PM Pick-Up	NB Sacramento Avenue	0	34
	SB Sacramento Avenue	26	
	Greenleaf Avenue	6	
	Lunt Avenue	2	

For the existing school, there was an average of 84 vehicles dropping-off students in the morning and 34 vehicles picking-up students in the afternoon. As noted previously, the volume of pick-ups in the afternoon is reduced due to after school activities spreading pick-up times over multiple hours. Since the existing parking lot is intended for faculty and staff only, it is assumed that all vehicles entering the parking lot in the morning and departing in the afternoon are staff trips. Nine vehicles were observed entering the lot during the am peak hour, and seventeen vehicles were observed exiting the lot during the afternoon peak hour.



It is assumed that the ratio of pick-up and drop-off operations and faculty and staff usage of the parking lot will remain consistent following the expansion of the school. The future projected enrollment will be 630 students, which is a 123 percent increase over the existing enrollment. The future projected faculty is 60, which is a 94 percent increase over the existing staff level. The projected number of future vehicular trips to the site is summarized in Table 2.

Table 2: Vehicular Trip Generation

Time Period	Vehicle Trip Type	Vehicle Trips		
		Existing	New	Total
AM	Student Drop-Off	84	104	188
	Staff Entering	9	8	17
PM	Student Pick-Up	34	42	76
	Staff Existing	17	16	33

It is projected that the Decatur School annex will result in 104 new drop-offs in the morning and 42 pick-ups in the afternoon, as well as 8 new faculty trips in the morning and 16 new faculty trips in the afternoon.

Specific information regarding the future number of buses is not available. However, it is assumed that the future bus operations will not affect the ratio of personal pick-up/drop-offs and that the buses will continue to stage on the school frontage on southbound Sacramento Avenue. If the proposed improvements at the school will require additional buses, it is recommended that the buses stage on southbound Sacramento Street, south of Lunt Avenue. No adjustment to on-street parking signage is necessary, as parking is currently prohibited adjacent to Lerner Park.

No school activities were observed to occur during the 5:00 pm to 9:00 pm data collection period. Therefore, it is concluded that the proposed improvements at the school will not typically impact the roadway network in the 5:00 pm to 9:00 pm period.

Trip Distribution and Assignment

The direction from which traffic approaches and departs a site is a function of numerous variables, including location of residences, location of employment centers, location of commercial/retail centers, available roadway systems, location and number of access points, and level of congestion on adjacent road systems. The distribution of inbound and outbound trips varies due to the directional curbside pick-up and drop-off operations and the one-way streets in the area.

A majority of trips related to Decatur School occur on Sacramento Avenue. A significant portion of trips also occur on Lunt Avenue. Fewer trips occur on Estes Avenue and Greenleaf Avenue,



which are one-way neighborhood streets. The distribution of inbound and outbound trips is not symmetrical due to the one-way streets in the area and the directional curb side pick-up/drop-off operations.

The addition of the one-way drive aisle will significantly alter the way that the existing school traffic behaves on the roadway network. To account for these changes, an adjustment is made to remove the existing school traffic to allow for redistribution. The adjustment to remove the existing school trips is illustrated in Figure 7.

The directional distribution and assignment of total school trips, which includes both existing and new trips, is illustrated in Figure 8.

Future Traffic Volumes

The existing school trip adjustment and total school trips are added to the existing traffic volumes to obtain the future with project traffic volumes for the study intersections. Future with project traffic volumes are depicted in Figure 9.

LEGEND

- SCHOOL START PEAK HOUR

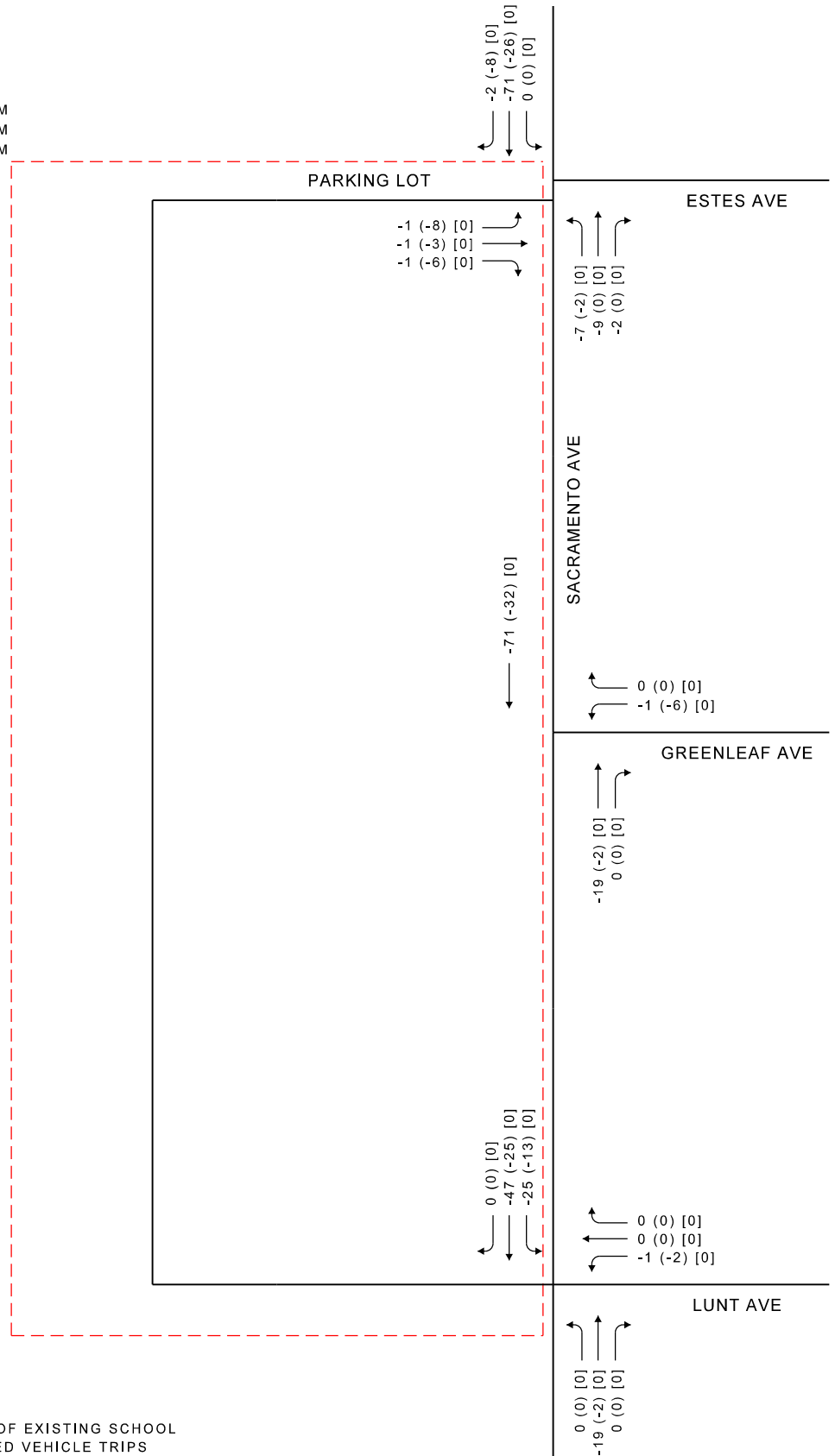
(##) - SCHOOL END PEAK HOUR

[##] - AFTER HOURS PEAK HOUR

SCHOOL START PEAK HOUR: 7:30 AM - 8:30 AM

SCHOOL END PEAK HOUR: 2:45 PM - 3:45 PM

AFTER HOURS PEAK HOUR: 5:00 PM - 6:00 PM



NOTE:

ADJUSTMENT OF EXISTING = REMOVAL OF EXISTING SCHOOL
SCHOOL TRIPS RELATED VEHICLE TRIPS

**DECATUR CLASSICAL
ELEMENTARY SCHOOL**

**FIGURE 7
ADJUSTMENT OF EXISTING
SCHOOL TRIPS**

CHICAGO

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LEGEND

- SCHOOL START PEAK HOUR

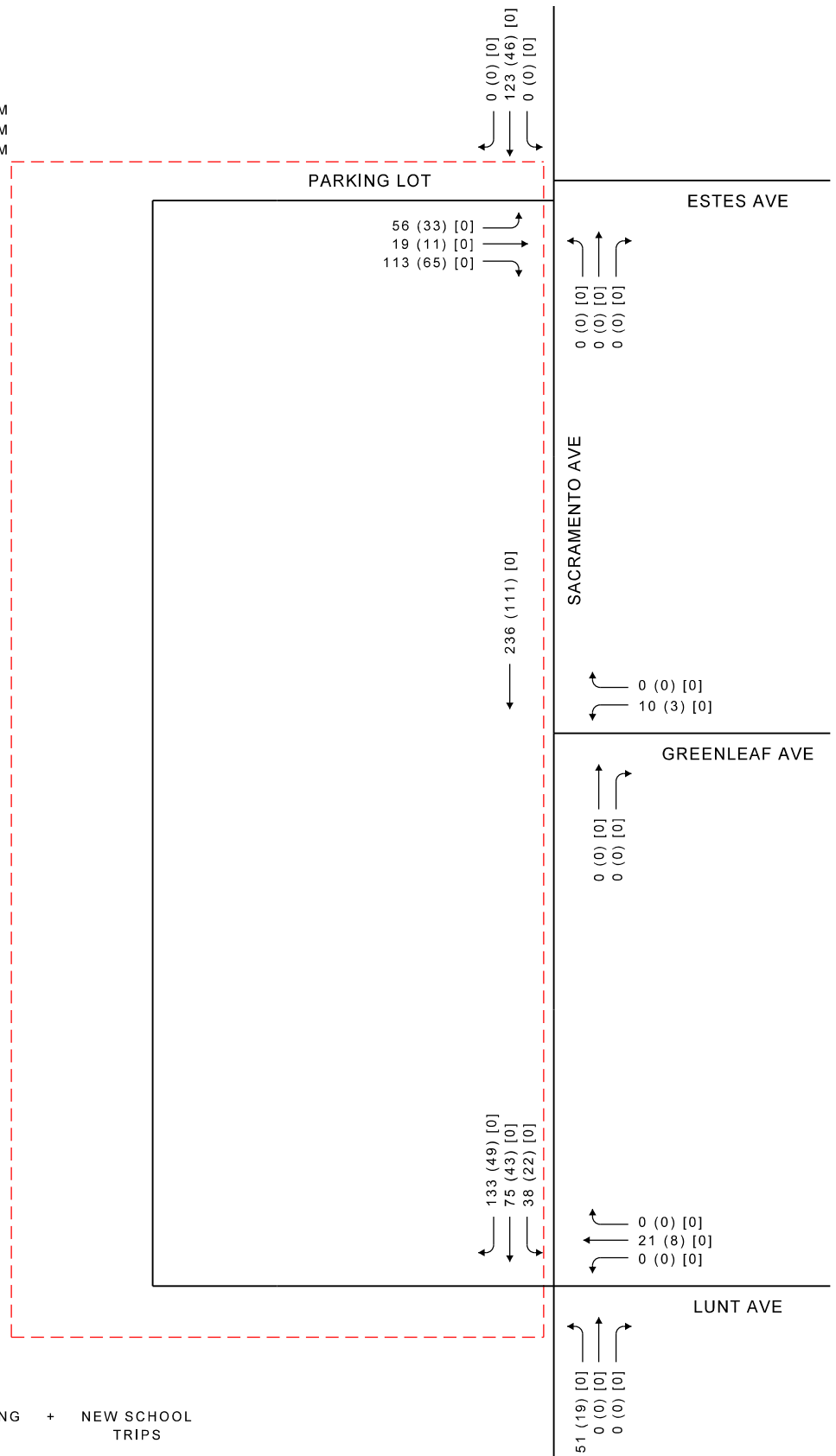
(##) - SCHOOL END PEAK HOUR

[##] - AFTER HOURS PEAK HOUR

SCHOOL START PEAK HOUR: 7:30 AM - 8:30 AM

SCHOOL END PEAK HOUR: 2:45 PM - 3:45 PM

AFTER HOURS PEAK HOUR: 5:00 PM - 6:00 PM



**DECATUR CLASSICAL
ELEMENTARY SCHOOL**

**FIGURE 8
TOTAL SCHOOL TRIPS
WITH EXPANSION**

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LEGEND

- SCHOOL START PEAK HOUR

(##) - SCHOOL END PEAK HOUR

[##] - AFTER HOURS PEAK HOUR

SCHOOL START PEAK HOUR: 7:30 AM - 8:30 AM

SCHOOL END PEAK HOUR: 2:45 PM - 3:45 PM

AFTER HOURS PEAK HOUR: 5:00 PM - 6:00 PM

PARKING LOT

56 (33) [2]
19 (11) [0]
113 (65) [2]

0 (0) [2]
222 (168) [277]
28 (39) [40]

ESTES AVE

0 (0) [1]
185 (133) [158]
20 (15) [14]

SACRAMENTO AVE

343 (242) [279]

34 (16) [22]
39 (12) [13]

GREENLEAF AVE

164 (135) [151]
0 (0) [0]

133 (49) [0]
182 (147) [199]
73 (67) [93]

66 (46) [39]
21 (8) [0]
22 (14) [24]

LUNT AVE

51 (19) [0]
91 (91) [113]
22 (16) [15]

NOTE:

FUTURE WITH PROJECT = ADJUSTMENT OF EXISTING + TOTAL SCHOOL TRIPS
TRAFFIC VOLUME SCHOOL TRIPS WITH EXPANSION
(FIGURE 7) (FIGURE 8)

**DECATUR CLASSICAL
ELEMENTARY SCHOOL**

**FIGURE 9
FUTURE WITH PROJECT
TRAFFIC VOLUMES**

CHICAGO

ILLINOIS





IV. TRAFFIC ANALYSIS

Capacity Analysis

The operation of a facility is evaluated based on level of service (LOS) calculations obtained by analytical methods defined in the Transportation Research Board's Highway Capacity Manual (HCM), 2010 Edition. The concept of LOS is defined as a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

There are six LOS letter designations, from A to F, with LOS A representing the best operating conditions and LOS F the worst.

The LOS of an intersection is based on the average control delay per vehicle. For a signalized intersection, the delay is calculated for each lane group and then aggregated for each approach and for the intersection as a whole. Generally, the LOS is reported for the intersection as a whole. For an unsignalized intersection, the delay is only calculated and reported for each minor movement. An overall intersection LOS is not calculated.

There are different LOS criteria for signalized and unsignalized intersections primarily due to driver perceptions of transportation facilities. The perception is that a signalized intersection is expected to carry higher traffic volumes and experience a greater average delay than an unsignalized intersection. Typically, various state and local governments adopt operating standards varying between LOS C and LOS E, depending on the area's size and roadway characteristics. The LOS criteria for signalized and unsignalized intersections are provided in Table 3.

Table 3: Level of Service Definitions for Signalized and Unsignalized Intersections

Level of Service	Signalized Intersection Control Delay (seconds/vehicle)	Unsignalized Intersection Control Delay (seconds/vehicle)
A	≤ 10	≤ 10.0
B	> 10.0 and ≤ 20.0	> 10.0 and ≤ 15.0
C	> 20.0 and ≤ 35.0	> 15.0 and ≤ 25.0
D	> 35.0 and ≤ 55.0	> 25.0 and ≤ 35.0
E	> 55.0 and ≤ 80.0	> 35.0 and ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, *Highway Capacity Manual 2010*, National Research Council, 2010.

The study area consists of the stop-controlled intersections of Sacramento Avenue/Estes Avenue, Sacramento Avenue/Greenleaf Avenue, and Sacramento Avenue/Lunt Avenue. The proposed drive aisle will be accessible as the west leg of the existing three-leg intersection at Sacramento Avenue/Lunt Avenue.



Capacity analysis is performed with Synchro 9 (Version 9.2.914.6). Multiple Synchro scenarios are created to evaluate the existing and future with project traffic volumes for the school start, school end, and after-hours peak hours. Level of service results are summarized in Table 4. Supporting analysis worksheets from Synchro 9 for the existing and future traffic conditions are provided in Appendices B and C.

Table 4: Unsignalized Intersection Capacity Analysis Results

Intersection / Approach	School Start				School End				After Hours			
	Existing		Future with Project		Existing		Future with Project		Existing		Future with Project	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Sacramento Avenue/Estes Avenue												
NB Approach	8.6	A	9.5	A	8.0	A	8.4	A	8.3	A	8.3	A
SB Approach	8.5	A	10.2	B	8.4	A	9.0	A	9.7	A	9.7	A
EB Approach	7.8	A	9.5	A	7.7	A	8.2	A	7.9	A	7.9	A
76th Street/Proposed North Driveway												
WB Approach	10.6	B	11.7	B	10.0	B	10.2	A	10.2	B	10.2	A
Sacramento Avenue/Estes Avenue												
NB Approach	8.1	A	9.0	A	7.8	A	8.2	A	8.2	A	8.2	A
SB Approach	8.9	A	11.2	B	8.5	A	9.1	A	9.7	A	9.7	A
WB Approach	7.9	A	8.8	A	7.6	A	7.9	A	8.0	A	8.0	A

In the existing condition, all minor movements operate at LOS B or better. The proposed school configuration includes both a redistribution of existing school vehicular trips and an increase in new vehicular trips. In the future configuration, all school related trips will enter the proposed clockwise drive aisle at the intersection of Sacramento Avenue and Lunt Avenue. The vehicles will then exit via eastbound movements at the all-way stop controlled intersection of Sacramento Avenue and Estes Avenue. Despite the redistribution and increase in overall traffic, all minor movements continue to operate at LOS B or better.

Overall, it is concluded that no mitigation is warranted for the unsignalized intersections in the study area.

Queue Analysis

The 95th percentile queue lengths are analyzed based on the Synchro models. The queue lengths for all stop-controlled approaches are summarized in Table 6.



Table 5: 95th Percentile Queue Lengths, in feet

Intersection / Approach	School Start		School End		After Hours	
	Existing	Future with Project	Existing	Future with Project	Existing	Future with Project
Sacramento Avenue/Estes Avenue						
NB Approach	28	28	15	18	20	20
SB Approach	23	25	23	28	45	45
EB Approach	0	38	3	13	0	0
76th Street/Proposed North Driveway						
WB Approach	8	10	3	3	5	5
Sacramento Avenue/Lunt Avenue						
NB Approach	15	20	13	20	15	15
SB Approach	28	68	23	35	40	40
WB Approach	10	13	5	8	8	8

In the existing condition, 95th percentile queue lengths are less than two vehicles at all stop controlled intersections. The longest queues occur on the southbound approaches to Estes Avenue and Lunt Avenue during the 5:00 pm to 6:00 pm time period, which are 45 and 40 feet, respectively.

The addition of new and redistributed school traffic impacts a number of approaches in the study area. However, the increases in queue lengths are generally minor. The longest projected queues in the future with project scenario is 68 feet on the southbound approach to Lunt Avenue, which is less than three vehicles. The eastbound approach on Estes Avenue, which will be the primary exit for vehicles departing the school, is projected to have a queue of 38 feet. The proposed development is not expected to have any impact in the evening hours after school hours.

Overall, it is concluded that no mitigation is warranted for the queue lengths at the study area intersections.

Pedestrian Recommendations

There are several opportunities to improve pedestrian operations and safety at the study area intersections.

At the intersection of Sacramento Avenue and Estes Avenue, crosswalks are provided on the north and east legs of the intersection. A crosswalk is not provided on the south leg, as the crosswalk would align with the center of the parking lot driveway based on the existing northbound stop bar location. Pedestrians were observed crossing at this location despite the lack of a crosswalk. It is recommended that the northbound stop bar be relocated to the south to allow for the installation of a crosswalk and ADA compliant ramps south of the school



driveway. The presence of a crosswalk will increase driver expectancy and awareness of the stop control at the intersection. Additionally, no crosswalk is striped on the west leg of the intersection, since the pavement is a traversable sidewalk style driveway. It is recommended that the traversable sidewalk style is replaced by a traditional roadway pavement driveway with a crosswalk and ADA compliant ramps to increase awareness of both drivers and pedestrians to the potential vehicular/pedestrian interactions at this location. It is also recommended that additional supplemental stop signs are installed on the far side on all approaches.

The northbound and southbound approaches to the intersection of Sacramento Avenue and Greenleaf Avenue are uncontrolled. A crossing guard is present at this intersection to assist with crossing on the east and south legs of the intersection. It is noted that while there are several School Crossing signs in the area of the school, there are no signs located at the crosswalks that the crossing guard uses. It is recommended that additional School Crossing signs are installed, including arrows pointing to the crosswalks used by the crossing guard.

The proposed driveway at Sacramento Avenue and Lunt Avenue will form the fourth leg at the intersection. It is recommended that a traditional crosswalk is constructed on the new driveway.



V. CONCLUSIONS & RECOMMENDATIONS

The purpose of this study is to evaluate the potential vehicular and pedestrian traffic impacts for an expansion of the Stephan Decatur Classical Elementary School located at 7030 North Sacramento Avenue in Chicago, Illinois. The school currently has an attendance of 282 students and 31 faculty and staff members. The proposed expansion will result in a maximum enrollment of 630 students and 60 faculty and staff members, an increase of 348 students and 29 faculty and staff members.

The traditional trip generation methods are not applicable for this study since this is an urban neighborhood elementary school with high walkability. Therefore, local generation rates are established based on the characteristics of the existing Decatur School. It is projected that the Decatur School annex will result in 104 new drop-offs during the morning peak hour and 42 pick-ups during the afternoon peak hour, as well as eight new faculty trips in the morning and 16 new faculty trips in the afternoon.

Parking is restricted along Sacramento Avenue along the school frontage from Estes Avenue to Lunt Avenue, no modifications are recommended.

School buses currently drop-off and pick-up students along Sacramento Avenue, no modifications are recommended.

The proposed improvement includes a new drive aisle and parking lot to the west of the school. It is recommended that the school utilize the new drive aisle for pick-up and drop-off operations as part of the traffic management plan. This could be facilitated by operating the drive aisle as a one-way drive during school pick-up and drop-off activities, with vehicles entering at Lunt Avenue and traveling clockwise around the school. Clockwise operations will allow students to travel between vehicles and the school without the need to cross the drive aisle or between vehicles. For drop-off operations, parents should be instructed to stop at a designated area, preferable on the north side of the school near the drive aisle exit at Sacramento Avenue and Estes Avenue. For pick-up operations, parents should queue along the curb for short term parking while meeting the students. Queueing the vehicles on the proposed drive aisle will mitigate the impact of increased on-street parking demands by parents, particularly during the afternoon pick-up period.

Overall, no issues are anticipated with delays or queues during the peak hours of school related operations.

Several recommendations are made for pedestrian safety and operations at the study area intersections:

Sacramento Avenue & Estes Avenue

- Install crosswalk across Sacramento Avenue on south leg of intersection
- Shift northbound stop bar to the south of the school driveway



- Convert school driveway from traversable sidewalk to traditional crosswalk
- Install supplemental stop signs on all approaches

Sacramento Avenue & Greenleaf Avenue

- Install additional School Crossing signs in the northbound and southbound direction at the pedestrian crossings along Sacramento Avenue

Sacramento Avenue & Lunt Avenue

- Install traditional crosswalk on proposed school driveway
-



APPENDIX A

EXISTING TRAFFIC COUNTS

V3 Companies

7325 Janes Avenue
Woodridge, IL 60517

Project: Decatur School
Location: Chicago, IL
Weather: Dry
Counted by: CS

File Name : Day 1 Estes
Site Code : 00000000
Start Date : 10/22/2018
Page No : 1

Groups Printed- Unshifted

	Parking Lot Eastbound					Estes Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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
07:00 AM	0	0	0	0	0	0	0	0	0	0	2	33	1	1	37	3	22	6	0	31	68
07:15 AM	1	0	0	0	1	0	0	0	0	0	3	22	3	2	30	3	24	3	0	30	61
07:30 AM	0	0	0	2	2	0	0	0	3	3	4	42	4	2	52	2	39	2	0	43	100
07:45 AM	0	0	0	5	5	0	0	0	0	0	1	63	12	4	80	12	70	0	0	82	167
Total	1	0	0	7	8	0	0	0	3	3	10	160	20	9	199	20	155	11	0	186	396
08:00 AM	1	1	1	4	7	0	0	0	3	3	2	39	6	2	49	11	44	0	2	57	116
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	51	2	0	53	4	30	0	1	35	88
08:30 AM	0	0	0	0	0	0	0	0	1	1	0	47	5	1	53	12	29	0	2	43	97
08:45 AM	0	0	1	0	1	0	0	0	6	6	0	51	5	5	61	5	18	1	2	26	94
Total	1	1	2	4	8	0	0	0	10	10	2	188	18	8	216	32	121	1	7	161	395

*** BREAK ***

02:00 PM	0	1	1	0	2	0	0	0	3	3	0	30	6	1	37	11	27	2	4	44	86
02:15 PM	0	0	0	2	2	0	0	0	0	0	1	23	2	0	26	7	27	0	0	34	62
02:30 PM	1	0	3	4	8	0	0	0	6	6	0	33	4	4	41	13	26	3	19	61	116
02:45 PM	5	0	2	5	12	0	0	0	18	18	0	42	3	0	45	15	44	8	8	75	150
Total	6	1	6	11	24	0	0	0	27	27	1	128	15	5	149	46	124	13	31	214	414
03:00 PM	5	1	2	9	17	0	0	0	5	5	0	24	1	3	28	7	32	0	0	39	89
03:15 PM	1	1	1	0	3	0	0	0	4	4	0	25	1	0	26	10	31	1	0	42	75
03:30 PM	0	0	3	3	6	0	0	0	1	1	2	46	8	3	59	13	44	4	0	61	127
03:45 PM	4	1	5	9	19	0	0	0	15	15	1	38	5	1	45	11	46	5	0	62	141
Total	10	3	11	21	45	0	0	0	25	25	3	133	15	7	158	41	153	10	0	204	432

*** BREAK ***

Grand Total	18	5	19	43	85	0	0	0	65	65	16	609	68	29	722	139	553	35	38	765	1637
Apprch %	21.2	5.9	22.4	50.6		0	0	0	100		2.2	84.3	9.4	4		18.2	72.3	4.6	5		
Total %	1.1	0.3	1.2	2.6	5.2	0	0	0	4	4	1	37.2	4.2	1.8	44.1	8.5	33.8	2.1	2.3	46.7	

	Parking Lot Eastbound					Estes Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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 07:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	2	2	0	0	0	3	3	4	42	4	2	52	2	39	2	0	43	100
07:45 AM	0	0	0	5	5	0	0	0	0	0	1	63	12	4	80	12	70	0	0	82	167
08:00 AM	1	1	1	4	7	0	0	0	3	3	2	39	6	2	49	11	44	0	2	57	116
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	51	2	0	53	4	30	0	1	35	88
Total Volume	1	1	1	11	14	0	0	0	6	6	7	195	24	8	234	29	183	2	3	217	471
% App. Total	7.1	7.1	7.1	78.6		0	0	0	100		3	83.3	10.3	3.4		13.4	84.3	0.9	1.4		
PHF	.250	.250	.250	.550	.500	.000	.000	.000	.500	.500	.438	.774	.500	.500	.731	.604	.654	.250	.375	.662	.705

V3 Companies

7325 Janes Avenue
Woodridge, IL 60517

File Name : Day 1 Estes

Site Code : 00000000

Start Date : 10/22/2018

Page No : 2

	Parking Lot Eastbound					Estes Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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 02:15 PM to 03:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:45 PM																					
02:45 PM	5	0	2	5	12	0	0	0	18	18	0	42	3	0	45	15	44	8	8	75	150
03:00 PM	5	1	2	9	17	0	0	0	5	5	0	24	1	3	28	7	32	0	0	39	89
03:15 PM	1	1	1	0	3	0	0	0	4	4	0	25	1	0	26	10	31	1	0	42	75
03:30 PM	0	0	3	3	6	0	0	0	1	1	2	46	8	3	59	13	44	4	0	61	127
Total Volume	11	2	8	17	38	0	0	0	28	28	2	137	13	6	158	45	151	13	8	217	441
% App. Total	28.9	5.3	21.1	44.7		0	0	0	100		1.3	86.7	8.2	3.8		20.7	69.6	6	3.7		
PHF	.550	.500	.667	.472	.559	.000	.000	.000	.389	.389	.250	.745	.406	.500	.669	.750	.858	.406	.250	.723	.735

V3 Companies

7325 Janes Avenue
Woodridge, IL 60517

Project: Decatur School
Location: Chicago, IL
Weather: Dry
Count by: EF

File Name : Day 1 Greenleaf
Site Code : 00000000
Start Date : 10/22/2018
Page No : 1

Groups Printed- Unshifted

Start Time	Eastbound					Greenleaf Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					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	
07:00 AM	0	0	0	0	0	0	0	3	3	6	0	0	0	0	0	0	0	0	0	0	6
07:15 AM	0	0	0	5	5	5	0	5	0	10	0	0	0	2	2	0	0	0	0	0	17
07:30 AM	0	0	0	15	15	21	0	11	0	32	0	0	0	3	3	0	0	0	0	0	50
07:45 AM	0	0	0	3	3	6	0	12	0	18	0	0	0	3	3	0	0	0	0	0	24
Total	0	0	0	23	23	32	0	31	3	66	0	0	0	8	8	0	0	0	0	0	97
08:00 AM	0	0	0	1	1	4	0	7	0	11	0	0	0	0	0	0	0	0	0	0	12
08:15 AM	0	0	0	0	0	3	0	7	0	10	0	0	0	2	2	0	0	0	0	0	12
08:30 AM	0	0	0	0	0	2	0	6	0	8	0	0	0	0	0	0	0	0	0	0	8
08:45 AM	0	0	0	3	3	3	0	9	0	12	0	0	0	0	0	0	0	0	0	0	15
Total	0	0	0	4	4	12	0	29	0	41	0	0	0	2	2	0	0	0	0	0	47

*** BREAK ***

02:00 PM	0	0	0	0	0	0	0	5	2	7	0	0	0	1	1	0	0	0	0	0	8
02:15 PM	0	0	0	4	4	4	0	4	0	8	0	0	0	1	1	0	0	0	0	0	13
02:30 PM	0	0	0	3	3	4	0	7	2	13	0	0	0	2	2	0	0	0	0	0	18
02:45 PM	0	0	0	19	19	5	0	6	0	11	0	0	0	0	0	0	0	0	5	5	35
Total	0	0	0	26	26	13	0	22	4	39	0	0	0	4	4	0	0	0	5	5	74
03:00 PM	0	0	0	6	6	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	11
03:15 PM	0	0	0	2	2	3	0	3	0	6	0	0	0	5	5	0	0	0	0	0	13
03:30 PM	0	0	0	7	7	3	0	6	0	9	0	0	0	2	2	0	0	0	0	0	18
03:45 PM	0	0	0	0	0	2	0	10	2	14	0	0	0	2	2	0	0	0	0	0	16
Total	0	0	0	15	15	11	0	21	2	34	0	0	0	9	9	0	0	0	0	0	58

*** BREAK ***

Grand Total	0	0	0	68	68	68	0	103	9	180	0	0	0	23	23	0	0	0	5	5	276
Apprch %	0	0	0	100		37.8	0	57.2	5		0	0	0	100		0	0	0	100		
Total %	0	0	0	24.6	24.6	24.6	0	37.3	3.3	65.2	0	0	0	8.3	8.3	0	0	0	1.8	1.8	

	Eastbound					Greenleaf Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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 07:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	15	15	21	0	11	0	32	0	0	0	3	3	0	0	0	0	0	50
07:45 AM	0	0	0	3	3	6	0	12	0	18	0	0	0	3	3	0	0	0	0	0	24
08:00 AM	0	0	0	1	1	4	0	7	0	11	0	0	0	0	0	0	0	0	0	0	12
08:15 AM	0	0	0	0	0	3	0	7	0	10	0	0	0	2	2	0	0	0	0	0	12
Total Volume	0	0	0	19	19	34	0	37	0	71	0	0	0	8	8	0	0	0	0	0	98
% App. Total	0	0	0	100		47.9	0	52.1	0		0	0	0	100		0	0	0	0		
PHF	.000	.000	.000	.317	.317	.405	.000	.771	.000	.555	.000	.000	.000	.667	.667	.000	.000	.000	.000	.000	.490

V3 Companies

7325 Janes Avenue
Woodridge, IL 60517

File Name : Day 1 Greenleaf

Site Code : 00000000

Start Date : 10/22/2018

Page No : 2

	Eastbound					Greenleaf Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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 02:45 PM to 03:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:45 PM																					
02:45 PM	0	0	0	19	19	5	0	6	0	11	0	0	0	0	0	0	0	0	5	5	35
03:00 PM	0	0	0	6	6	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	11
03:15 PM	0	0	0	2	2	3	0	3	0	6	0	0	0	5	5	0	0	0	0	0	13
03:30 PM	0	0	0	7	7	3	0	6	0	9	0	0	0	2	2	0	0	0	0	0	18
Total Volume	0	0	0	34	34	14	0	17	0	31	0	0	0	7	7	0	0	0	5	5	77
% App. Total	0	0	0	100		45.2	0	54.8	0		0	0	0	100		0	0	0	100		
PHF	.000	.000	.000	.447	.447	.700	.000	.708	.000	.705	.000	.000	.000	.350	.350	.000	.000	.000	.250	.250	.550

V3 Companies

7325 Janes Avenue
Woodridge, IL 60517

Project: Decatur School
Location: Chicago, IL
Weather: Dry
Count by: RA/CS

File Name : Day 1 Lunt
Site Code : 00000000
Start Date : 10/22/2018
Page No : 1

Groups Printed- Unshifted

	Eastbound					Lunt Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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
07:00 AM	0	0	0	1	1	6	0	16	1	23	0	18	2	3	23	6	13	0	4	23	70
07:15 AM	0	0	0	0	0	4	0	14	0	18	0	12	6	1	19	9	14	0	0	23	60
07:30 AM	0	0	0	12	12	5	0	13	5	23	0	23	5	4	32	23	41	0	9	73	140
07:45 AM	0	0	0	5	5	4	0	21	3	28	0	42	8	3	53	20	57	0	6	83	169
Total	0	0	0	18	18	19	0	64	9	92	0	95	21	11	127	58	125	0	19	202	439
08:00 AM	0	0	0	1	1	8	0	16	0	24	0	24	5	0	29	12	41	0	0	53	107
08:15 AM	0	0	0	0	0	6	0	15	0	21	0	30	2	0	32	11	24	0	2	37	90
08:30 AM	0	0	0	1	1	6	0	8	1	15	0	34	2	2	38	10	21	0	1	32	86
08:45 AM	0	0	0	0	0	7	0	10	0	17	0	35	1	1	37	3	19	0	3	25	79
Total	0	0	0	2	2	27	0	49	1	77	0	123	10	3	136	36	105	0	6	147	362
*** BREAK ***																					
02:00 PM	0	0	0	0	0	0	0	8	5	13	0	23	3	6	32	6	23	0	3	32	77
02:15 PM	0	0	0	0	0	3	0	12	1	16	0	14	3	1	18	10	18	0	0	28	62
02:30 PM	0	0	0	3	3	5	0	5	10	20	0	23	4	4	31	9	22	0	13	44	98
02:45 PM	0	0	0	12	12	3	0	14	5	22	0	25	3	0	28	20	39	0	23	82	144
Total	0	0	0	15	15	11	0	39	21	71	0	85	13	11	109	45	102	0	39	186	381
03:00 PM	0	0	0	8	8	2	0	12	0	14	0	16	2	10	28	14	25	0	7	46	96
03:15 PM	0	0	0	0	0	5	0	12	0	17	0	18	7	22	47	17	33	0	10	60	124
03:30 PM	0	0	0	4	4	6	0	17	6	29	0	34	5	30	69	16	35	0	12	63	165
03:45 PM	0	0	0	7	7	7	0	12	5	24	0	19	3	10	32	17	38	0	4	59	122
Total	0	0	0	19	19	20	0	53	11	84	0	87	17	72	176	64	131	0	33	228	507
*** BREAK ***																					
05:00 PM	0	0	0	2	2	6	0	4	0	10	0	23	6	1	30	33	42	0	0	75	117
05:15 PM	0	0	0	1	1	7	0	12	0	19	0	40	2	1	43	21	63	0	0	84	147
05:30 PM	0	0	0	5	5	8	0	17	4	29	0	29	7	3	39	26	54	0	0	80	153
05:45 PM	0	0	0	0	0	5	0	5	1	11	0	19	4	0	23	12	40	0	0	52	86
Total	0	0	0	8	8	26	0	38	5	69	0	111	19	5	135	92	199	0	0	291	503
06:00 PM	0	0	0	0	0	3	0	6	0	9	0	20	9	3	32	18	37	0	0	55	96
06:15 PM	0	0	0	6	6	9	0	10	0	19	0	22	3	4	29	23	45	0	0	68	122
06:30 PM	0	0	0	0	0	4	0	9	0	13	0	28	3	0	31	8	44	0	0	52	96
06:45 PM	0	0	0	1	1	2	0	8	1	11	0	26	5	2	33	14	42	0	0	56	101
Total	0	0	0	7	7	18	0	33	1	52	0	96	20	9	125	63	168	0	0	231	415
07:00 PM	0	0	0	3	3	3	0	14	0	17	0	16	8	0	24	13	33	0	0	46	90
07:15 PM	0	0	0	0	0	3	0	7	0	10	0	27	4	0	31	18	23	0	0	41	82
07:30 PM	0	0	0	0	0	1	0	4	0	5	0	16	0	0	16	11	20	0	0	31	52
07:45 PM	0	0	0	0	0	3	0	8	0	11	0	17	2	0	19	7	22	0	0	29	59
Total	0	0	0	3	3	10	0	33	0	43	0	76	14	0	90	49	98	0	0	147	283
08:00 PM	0	0	0	0	0	1	0	2	0	3	0	20	3	0	23	7	19	0	0	26	52
08:15 PM	0	0	0	0	0	2	0	3	0	5	0	17	2	3	22	9	28	0	0	37	64
08:30 PM	0	0	0	0	0	2	0	1	0	3	0	26	2	0	28	8	24	0	0	32	63
08:45 PM	0	0	0	0	0	1	0	5	0	6	0	19	1	0	20	7	22	0	0	29	55
Total	0	0	0	0	0	6	0	11	0	17	0	82	8	3	93	31	93	0	0	124	234
Grand Total	0	0	0	72	72	137	0	320	48	505	0	755	122	114	991	438	1021	0	97	1556	3124
Apprch %	0	0	0	100		27.1	0	63.4	9.5		0	76.2	12.3	11.5		28.1	65.6	0	6.2		
Total %	0	0	0	2.3	2.3	4.4	0	10.2	1.5	16.2	0	24.2	3.9	3.6	31.7	14	32.7	0	3.1	49.8	

V3 Companies

7325 Janes Avenue
Woodridge, IL 60517

	Eastbound					Lunt Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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 07:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	12	12	5	0	13	5	23	0	23	5	4	32	23	41	0	9	73	140
07:45 AM	0	0	0	5	5	4	0	21	3	28	0	42	8	3	53	20	57	0	6	83	169
08:00 AM	0	0	0	1	1	8	0	16	0	24	0	24	5	0	29	12	41	0	0	53	107
08:15 AM	0	0	0	0	0	6	0	15	0	21	0	30	2	0	32	11	24	0	2	37	90
Total Volume	0	0	0	18	18	23	0	65	8	96	0	119	20	7	146	66	163	0	17	246	506
% App. Total	0	0	0	100		24	0	67.7	8.3		0	81.5	13.7	4.8		26.8	66.3	0	6.9		
PHF	.000	.000	.000	.375	.375	.719	.000	.774	.400	.857	.000	.708	.625	.438	.689	.717	.715	.000	.472	.741	.749

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 02:45 PM

02:45 PM	0	0	0	12	12	3	0	14	5	22	0	25	3	0	28	20	39	0	23	82	144
03:00 PM	0	0	0	8	8	2	0	12	0	14	0	16	2	10	28	14	25	0	7	46	96
03:15 PM	0	0	0	0	0	5	0	12	0	17	0	18	7	22	47	17	33	0	10	60	124
03:30 PM	0	0	0	4	4	6	0	17	6	29	0	34	5	30	69	16	35	0	12	63	165
Total Volume	0	0	0	24	24	16	0	55	11	82	0	93	17	62	172	67	132	0	52	251	529
% App. Total	0	0	0	100		19.5	0	67.1	13.4		0	54.1	9.9	36		26.7	52.6	0	20.7		
PHF	.000	.000	.000	.500	.500	.667	.000	.809	.458	.707	.000	.684	.607	.517	.623	.838	.846	.000	.565	.765	.802

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	0	0	0	2	2	6	0	4	0	10	0	23	6	1	30	33	42	0	0	75	117
05:15 PM	0	0	0	1	1	7	0	12	0	19	0	40	2	1	43	21	63	0	0	84	147
05:30 PM	0	0	0	5	5	8	0	17	4	29	0	29	7	3	39	26	54	0	0	80	153
05:45 PM	0	0	0	0	0	5	0	5	1	11	0	19	4	0	23	12	40	0	0	52	86
Total Volume	0	0	0	8	8	26	0	38	5	69	0	111	19	5	135	92	199	0	0	291	503
% App. Total	0	0	0	100		37.7	0	55.1	7.2		0	82.2	14.1	3.7		31.6	68.4	0	0		
PHF	.000	.000	.000	.400	.400	.813	.000	.559	.313	.595	.000	.694	.679	.417	.785	.697	.790	.000	.000	.866	.822

V3 Companies

7325 Janes Avenue
Woodridge, IL 60517

Project: Decatur School
Location: Chicago, IL
Weather: Dry
Count by: RS

File Name : Day 2 Estes
Site Code : 00000001
Start Date : 10/23/2018
Page No : 1

Groups Printed- Unshifted

	Parking Lot Eastbound					Estes Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	29	2	3	34	2	17	7	2	28	62
07:15 AM	0	0	0	1	1	0	0	0	1	1	6	32	3	2	43	7	26	2	6	41	86
07:30 AM	0	0	0	8	8	0	0	0	1	1	2	40	5	2	49	6	44	2	8	60	118
07:45 AM	0	1	0	2	3	0	0	0	5	5	1	65	10	2	78	14	56	0	15	85	171
Total	0	1	0	11	12	0	0	0	7	7	9	166	20	9	204	29	143	11	31	214	437
08:00 AM	0	0	0	0	0	0	0	0	1	1	2	39	2	1	44	3	33	0	2	38	83
08:15 AM	0	0	0	0	0	0	0	0	2	2	1	49	2	0	52	3	23	0	5	31	85
08:30 AM	0	0	0	0	0	0	0	0	2	2	0	32	2	3	37	4	32	0	1	37	76
08:45 AM	0	0	0	0	0	0	0	0	1	1	0	43	4	2	49	6	18	0	5	29	79
Total	0	0	0	0	0	0	0	0	6	6	3	163	10	6	182	16	106	0	13	135	323
*** BREAK ***																					
02:00 PM	0	0	0	0	0	0	0	0	0	0	2	36	2	0	40	10	26	0	1	37	77
02:15 PM	1	0	0	0	1	0	0	0	2	2	1	15	2	2	20	12	36	0	6	54	77
02:30 PM	2	1	1	5	9	0	0	0	3	3	1	25	4	0	30	14	31	0	11	56	98
02:45 PM	1	0	1	12	14	0	0	0	9	9	0	32	5	7	44	5	41	1	39	86	153
Total	4	1	2	17	24	0	0	0	14	14	4	108	13	9	134	41	134	1	57	233	405
03:00 PM	3	4	0	6	13	0	0	0	0	0	1	23	3	2	29	8	37	2	9	56	98
03:15 PM	0	0	0	0	0	0	0	0	1	1	0	34	2	6	42	4	24	0	7	35	78
03:30 PM	1	0	3	0	4	0	0	0	2	2	1	39	6	2	48	15	42	0	7	64	118
03:45 PM	1	1	0	3	5	0	0	0	5	5	1	48	6	4	59	13	27	0	14	54	123
Total	5	5	3	9	22	0	0	0	8	8	3	144	17	14	178	40	130	2	37	209	417
*** BREAK ***																					
Grand Total	9	7	5	37	58	0	0	0	35	35	19	581	60	38	698	126	513	14	138	791	1582
Apprch %	15.5	12.1	8.6	63.8		0	0	0	100		2.7	83.2	8.6	5.4		15.9	64.9	1.8	17.4		
Total %	0.6	0.4	0.3	2.3	3.7	0	0	0	2.2	2.2	1.2	36.7	3.8	2.4	44.1	8	32.4	0.9	8.7	50	

	Parking Lot Eastbound					Estes Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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 07:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	8	8	0	0	0	1	1	2	40	5	2	49	6	44	2	8	60	118
07:45 AM	0	1	0	2	3	0	0	0	5	5	1	65	10	2	78	14	56	0	15	85	171
08:00 AM	0	0	0	0	0	0	0	0	1	1	2	39	2	1	44	3	33	0	2	38	83
08:15 AM	0	0	0	0	0	0	0	0	2	2	1	49	2	0	52	3	23	0	5	31	85
Total Volume	0	1	0	10	11	0	0	0	9	9	6	193	19	5	223	26	156	2	30	214	457
% App. Total	0	9.1	0	90.9		0	0	0	100		2.7	86.5	8.5	2.2		12.1	72.9	0.9	14		
PHF	.000	.250	.000	.313	.344	.000	.000	.000	.450	.450	.750	.742	.475	.625	.715	.464	.696	.250	.500	.629	.668

V3 Companies

7325 Janes Avenue
Woodridge, IL 60517

File Name : Day 2 Estes

Site Code : 00000001

Start Date : 10/23/2018

Page No : 2

	Parking Lot Eastbound					Estes Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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 02:45 PM to 03:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:45 PM																					
02:45 PM	1	0	1	12	14	0	0	0	9	9	0	32	5	7	44	5	41	1	39	86	153
03:00 PM	3	4	0	6	13	0	0	0	0	0	1	23	3	2	29	8	37	2	9	56	98
03:15 PM	0	0	0	0	0	0	0	0	1	1	0	34	2	6	42	4	24	0	7	35	78
03:30 PM	1	0	3	0	4	0	0	0	2	2	1	39	6	2	48	15	42	0	7	64	118
Total Volume	5	4	4	18	31	0	0	0	12	12	2	128	16	17	163	32	144	3	62	241	447
% App. Total	16.1	12.9	12.9	58.1		0	0	0	100		1.2	78.5	9.8	10.4		13.3	59.8	1.2	25.7		
PHF	.417	.250	.333	.375	.554	.000	.000	.000	.333	.333	.500	.821	.667	.607	.849	.533	.857	.375	.397	.701	.730

V3 Companies

7325 Janes Avenue
Woodridge, IL 60517

Project: Decatur School
Location: Chicago, IL
Weather: Dry
Count by: CF

File Name : Day 2 Greenleaf
Site Code : 00000000
Start Date : 10/23/2018
Page No : 1

Groups Printed- Unshifted

Start Time	Eastbound					Greenleaf Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					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	
07:00 AM	0	0	0	0	0	1	0	7	0	8	0	0	0	2	2	0	0	0	0	0	10
07:15 AM	0	0	0	2	2	7	0	7	0	14	0	0	0	4	4	0	0	0	0	0	20
07:30 AM	0	0	0	11	11	17	0	8	0	25	0	0	0	2	2	0	0	0	103	103	141
07:45 AM	0	0	0	2	2	2	0	8	2	12	0	0	0	2	2	0	0	0	7	7	23
Total	0	0	0	15	15	27	0	30	2	59	0	0	0	10	10	0	0	0	110	110	194
08:00 AM	0	0	0	0	0	4	0	9	0	13	0	0	0	2	2	0	0	0	1	1	16
08:15 AM	0	0	0	0	0	2	0	5	0	7	0	0	0	0	0	0	0	0	4	4	11
08:30 AM	0	0	0	0	0	1	0	5	0	6	0	0	0	1	1	0	0	0	1	1	8
08:45 AM	0	0	0	2	2	2	0	5	0	7	0	0	0	0	0	0	0	0	0	0	9
Total	0	0	0	2	2	9	0	24	0	33	0	0	0	3	3	0	0	0	6	6	44
*** BREAK ***																					
02:00 PM	0	0	0	0	0	1	0	6	1	8	0	0	0	0	0	0	0	0	1	1	9
02:15 PM	0	0	0	0	0	3	0	1	0	4	0	0	0	1	1	0	0	0	2	2	7
02:30 PM	0	0	0	13	13	4	0	5	1	10	0	0	0	3	3	0	0	0	0	0	26
02:45 PM	0	0	0	22	22	5	0	5	0	10	0	0	0	3	3	0	0	0	4	4	39
Total	0	0	0	35	35	13	0	17	2	32	0	0	0	7	7	0	0	0	7	7	81
03:00 PM	0	0	0	0	0	3	0	0	0	3	0	0	0	3	3	0	0	0	4	4	10
03:15 PM	0	0	0	1	1	4	0	5	1	10	0	0	0	3	3	0	0	0	3	3	17
03:30 PM	0	0	0	5	5	3	0	5	1	9	0	0	0	2	2	0	0	0	7	7	23
03:45 PM	0	0	0	2	2	3	0	5	0	8	0	0	0	1	1	0	0	0	12	12	23
Total	0	0	0	8	8	13	0	15	2	30	0	0	0	9	9	0	0	0	26	26	73
*** BREAK ***																					
Grand Total	0	0	0	60	60	62	0	86	6	154	0	0	0	29	29	0	0	0	149	149	392
Apprch %	0	0	0	100		40.3	0	55.8	3.9		0	0	0	100		0	0	0	100		
Total %	0	0	0	15.3	15.3	15.8	0	21.9	1.5	39.3	0	0	0	7.4	7.4	0	0	0	38	38	

	Eastbound					Greenleaf Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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 07:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	11	11	17	0	8	0	25	0	0	0	2	2	0	0	0	103	103	141
07:45 AM	0	0	0	2	2	2	0	8	2	12	0	0	0	2	2	0	0	0	7	7	23
08:00 AM	0	0	0	0	0	4	0	9	0	13	0	0	0	2	2	0	0	0	1	1	16
08:15 AM	0	0	0	0	0	2	0	5	0	7	0	0	0	0	0	0	0	0	4	4	11
Total Volume	0	0	0	13	13	25	0	30	2	57	0	0	0	6	6	0	0	0	115	115	191
% App. Total	0	0	0	100		43.9	0	52.6	3.5		0	0	0	100		0	0	0	100		
PHF	.000	.000	.000	.295	.295	.368	.000	.833	.250	.570	.000	.000	.000	.750	.750	.000	.000	.000	.279	.279	.339

V3 Companies

7325 Janes Avenue
Woodridge, IL 60517

File Name : Day 2 Greenleaf

Site Code : 00000000

Start Date : 10/23/2018

Page No : 2

	Eastbound					Greenleaf Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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 02:45 PM to 03:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:45 PM																					
02:45 PM	0	0	0	22	22	5	0	5	0	10	0	0	0	3	3	0	0	0	4	4	39
03:00 PM	0	0	0	0	0	3	0	0	0	3	0	0	0	3	3	0	0	0	4	4	10
03:15 PM	0	0	0	1	1	4	0	5	1	10	0	0	0	3	3	0	0	0	3	3	17
03:30 PM	0	0	0	5	5	3	0	5	1	9	0	0	0	2	2	0	0	0	7	7	23
Total Volume	0	0	0	28	28	15	0	15	2	32	0	0	0	11	11	0	0	0	18	18	89
% App. Total	0	0	0	100		46.9	0	46.9	6.2		0	0	0	100		0	0	0	100		
PHF	.000	.000	.000	.318	.318	.750	.000	.750	.500	.800	.000	.000	.000	.917	.917	.000	.000	.000	.643	.643	.571

V3 Companies

7325 Janes Avenue
Woodridge, IL 60517

Project: Decatur School
Location: Chicago, IL
Weather: Dry
Count by: DP/CF

File Name : Day 2 Lunt
Site Code : 00000003
Start Date : 10/23/2018
Page No : 1

Groups Printed- Unshifted

	Eastbound					Lunt Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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
07:00 AM	0	0	0	1	1	6	0	9	0	15	0	16	3	3	22	5	11	0	2	18	56
07:15 AM	0	0	0	1	1	7	0	16	0	23	0	20	7	4	31	8	17	0	2	27	82
07:30 AM	0	0	0	10	10	6	0	13	8	27	0	25	8	4	37	17	40	0	14	71	145
07:45 AM	0	0	0	4	4	3	0	25	1	29	0	37	5	0	42	19	45	0	5	69	144
Total	0	0	0	16	16	22	0	63	9	94	0	98	23	11	132	49	113	0	23	185	427
08:00 AM	0	0	0	0	0	7	0	12	1	20	0	19	4	0	23	10	43	0	1	54	97
08:15 AM	0	0	0	1	1	4	0	10	0	14	0	34	2	0	36	4	20	0	3	27	78
08:30 AM	0	0	0	1	1	8	0	5	0	13	0	26	5	0	31	6	25	0	2	33	78
08:45 AM	0	0	0	0	0	4	0	14	0	18	0	31	2	0	33	4	20	0	0	24	75
Total	0	0	0	2	2	23	0	41	1	65	0	110	13	0	123	24	108	0	6	138	328
*** BREAK ***																					
02:00 PM	0	0	0	4	4	0	0	7	0	7	0	25	2	1	28	9	16	0	3	28	67
02:15 PM	0	0	0	0	0	3	0	6	3	12	0	13	2	1	16	9	29	0	8	46	74
02:30 PM	0	0	0	1	1	6	0	8	8	22	0	19	2	0	21	15	23	0	15	53	97
02:45 PM	0	0	0	4	4	2	0	7	12	21	0	26	3	8	37	10	47	0	25	82	144
Total	0	0	0	9	9	11	0	28	23	62	0	83	9	10	102	43	115	0	51	209	382
03:00 PM	0	0	0	1	1	7	0	2	3	12	0	17	1	1	19	16	25	0	6	47	79
03:15 PM	0	0	0	3	3	4	0	14	0	18	0	19	3	4	26	12	21	0	2	35	82
03:30 PM	0	0	0	2	2	3	0	14	1	18	0	31	7	2	40	10	33	0	3	46	106
03:45 PM	0	0	0	3	3	2	0	15	1	18	0	28	4	0	32	12	25	0	12	49	102
Total	0	0	0	9	9	16	0	45	5	66	0	95	15	7	117	50	104	0	23	177	369
*** BREAK ***																					
05:00 PM	0	0	0	0	0	4	0	10	0	14	0	31	4	2	37	23	47	0	2	72	123
05:15 PM	0	0	0	2	2	4	0	11	0	15	0	32	0	1	33	20	44	0	1	65	115
05:30 PM	0	0	0	6	6	6	0	10	0	16	0	27	2	4	33	27	40	0	3	70	125
05:45 PM	0	0	0	0	0	7	0	8	1	16	0	24	4	1	29	23	67	0	6	96	141
Total	0	0	0	8	8	21	0	39	1	61	0	114	10	8	132	93	198	0	12	303	504
06:00 PM	0	0	0	0	0	3	0	10	0	13	0	29	1	5	35	23	39	0	4	66	114
06:15 PM	0	0	0	2	2	5	0	7	0	12	0	26	7	1	34	17	30	0	5	52	100
06:30 PM	0	0	0	0	0	2	0	6	0	8	0	26	3	0	29	18	37	0	0	55	92
06:45 PM	0	0	0	0	0	6	0	7	0	13	0	24	5	1	30	13	32	0	2	47	90
Total	0	0	0	2	2	16	0	30	0	46	0	105	16	7	128	71	138	0	11	220	396
07:00 PM	0	0	0	0	0	3	0	3	0	6	0	23	2	0	25	8	16	0	2	26	57
07:15 PM	0	0	0	0	0	4	0	6	0	10	0	12	2	9	23	7	25	0	4	36	69
07:30 PM	0	0	0	0	0	0	0	3	0	3	0	22	3	11	36	10	21	0	0	31	70
07:45 PM	0	0	0	1	1	1	0	10	0	11	0	19	2	2	23	10	23	0	1	34	69
Total	0	0	0	1	1	8	0	22	0	30	0	76	9	22	107	35	85	0	7	127	265
08:00 PM	0	0	0	0	0	4	0	6	0	10	0	20	2	3	25	9	20	0	1	30	65
08:15 PM	0	0	0	0	0	0	0	3	0	3	0	26	1	0	27	18	25	0	0	43	73
08:30 PM	0	0	0	0	0	3	0	4	0	7	0	21	4	0	25	4	22	0	4	30	62
08:45 PM	0	0	0	0	0	2	0	0	0	2	0	8	0	0	8	7	11	0	3	21	31
Total	0	0	0	0	0	9	0	13	0	22	0	75	7	3	85	38	78	0	8	124	231
Grand Total	0	0	0	47	47	126	0	281	39	446	0	756	102	68	926	403	939	0	141	1483	2902
Apprch %	0	0	0	100		28.3	0	63	8.7		0	81.6	11	7.3		27.2	63.3	0	9.5		
Total %	0	0	0	1.6	1.6	4.3	0	9.7	1.3	15.4	0	26.1	3.5	2.3	31.9	13.9	32.4	0	4.9	51.1	

V3 Companies

7325 Janes Avenue
Woodridge, IL 60517

	Eastbound					Lunt Avenue Westbound					Sacramento Avenue Northbound					Sacramento Avenue Southbound					
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 07:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	10	10	6	0	13	8	27	0	25	8	4	37	17	40	0	14	71	145
07:45 AM	0	0	0	4	4	3	0	25	1	29	0	37	5	0	42	19	45	0	5	69	144
08:00 AM	0	0	0	0	0	7	0	12	1	20	0	19	4	0	23	10	43	0	1	54	97
08:15 AM	0	0	0	1	1	4	0	10	0	14	0	34	2	0	36	4	20	0	3	27	78
Total Volume	0	0	0	15	15	20	0	60	10	90	0	115	19	4	138	50	148	0	23	221	464
% App. Total	0	0	0	100		22.2	0	66.7	11.1		0	83.3	13.8	2.9		22.6	67	0	10.4		
PHF	.000	.000	.000	.375	.375	.714	.000	.600	.313	.776	.000	.777	.594	.250	.821	.658	.822	.000	.411	.778	.800

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 02:45 PM

02:45 PM	0	0	0	4	4	2	0	7	12	21	0	26	3	8	37	10	47	0	25	82	144
03:00 PM	0	0	0	1	1	7	0	2	3	12	0	17	1	1	19	16	25	0	6	47	79
03:15 PM	0	0	0	3	3	4	0	14	0	18	0	19	3	4	26	12	21	0	2	35	82
03:30 PM	0	0	0	2	2	3	0	14	1	18	0	31	7	2	40	10	33	0	3	46	106
Total Volume	0	0	0	10	10	16	0	37	16	69	0	93	14	15	122	48	126	0	36	210	411
% App. Total	0	0	0	100		23.2	0	53.6	23.2		0	76.2	11.5	12.3		22.9	60	0	17.1		
PHF	.000	.000	.000	.625	.625	.571	.000	.661	.333	.821	.000	.750	.500	.469	.763	.750	.670	.000	.360	.640	.714

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	0	0	0	0	0	4	0	10	0	14	0	31	4	2	37	23	47	0	2	72	123
05:15 PM	0	0	0	2	2	4	0	11	0	15	0	32	0	1	33	20	44	0	1	65	115
05:30 PM	0	0	0	6	6	6	0	10	0	16	0	27	2	4	33	27	40	0	3	70	125
05:45 PM	0	0	0	0	0	7	0	8	1	16	0	24	4	1	29	23	67	0	6	96	141
Total Volume	0	0	0	8	8	21	0	39	1	61	0	114	10	8	132	93	198	0	12	303	504
% App. Total	0	0	0	100		34.4	0	63.9	1.6		0	86.4	7.6	6.1		30.7	65.3	0	4		
PHF	.000	.000	.000	.333	.333	.750	.000	.886	.250	.953	.000	.891	.625	.500	.892	.861	.739	.000	.500	.789	.894

Pick-up/Drop-off Operations
Monday, October 22, 2018

AM Peak Hour					
Time	Bus Arrive	SB Drop-Off (Sacramento)	NB Drop-Off (Sacramento)	Drop-Off on Greenleaf	Drop-off on Lunt
1					
2	6	8			
3	2	35	1	2	2
4	1	26	8		
5		3	1		
6		1			
7		1			
8		1			
PH Total	9	72	10	2	2

PM Peak Hour						
Time	Bus Arrive	Bus Depart	SB Pick-Up from North of Estes	SB Pick-Up from South of Estes	Pickup on Greenleaf	Pickup on Lunt
1						
2	6					
3	3	8	1			
4	2	3	15	6	7	2
5			1			
6						
7						
8			5			
PH Total	11	11	17	6	7	2

Pick-up/Drop-off Operations
Tuesday, October 23, 2018



AM Peak Hour					
Time	Bus Arrive	SB Drop-Off (Sacramento)	NB Drop-Off (Sacramento)	Dripoff on Greenleaf	Drop-off on Lunt
1		1			
2	4	13			
3	5	26			
4		25	9		
5	1	6	3		
6	1	1			
7					
8					
PH Total	10	70	12	0	0




PM Peak Hour						
Time	Bus Arrive	Bus Depart	SB Pick-Up from North of Estes	SB Pick-Up from South of Estes	Pickup on Greenleaf	Pickup on Lunt
1			1			
2	6		3			
3	3	5	8	11		
4	1	5	2	5	5	2
5						
6						
7						
8						
	10	10	13	16	5	2

Evening Hours Supplemental Counts

Monday, October 22, 2018

HOUR 1



Estes										
Vehicle								Ped		
Time Period	EB Left	EB Right	SB Left	SB Right	NB Left	NB Right		Time Period		
1	2		11			5		1	1	4
2	1	1	13			6		2	3	
3		1	8			4		3	4	
4			14					4	9	
TOTAL	3	2	46	0	0	15		TOTAL	17	4




Green Leaf							
Vehicle				Ped			
Time Period	WB Left	WB Right		Time Period			
1	2	2		1	1	4	
2	5	4		2	1		
3	5	8		3			
4	1	4		4			2
TOTAL	13	18		TOTAL	2	4	2

Evening Hours Supplemental Counts

Monday, October 22, 2018

HOUR 2



Estes										
Vehicle								Ped		
Time Period	EB Left	EB Right	SB Left	SB Right	NB Left	NB Right		Time Period		
5			14			2		5		
6			9			3		6		
7			7			1		7		
8			4			2		8		
TOTAL	0	0	34	0	0	8		TOTAL	0	0




Green Leaf							
Vehicle				Ped			
Time Period	WB Left	WB Right		Time Period			
5	2	10		5		2	
6	5	11		6		2	
7	4	9		7	2		
8	4	6		8			
TOTAL	15	36		TOTAL	2	4	0

Evening Hours Supplemental Counts

Monday, October 22, 2018

HOUR 3



Estes										
Vehicle								Ped		
Time Period	EB Left	EB Right	SB Left	SB Right	NB Left	NB Right		Time Period		
9			5			1		9		
10			4					10		
11			5					11		
12			4			2		12		
TOTAL	0	0	18	0	0	3		TOTAL	0	0




Green Leaf							
Vehicle				Ped			
Time Period	WB Left	WB Right		Time Period			
9	2	3		9	3		
10	1			10			
11	1	2		11			
12	2	5		12			
TOTAL	6	10		TOTAL	3	0	0

Evening Hours Supplemental Counts

Monday, October 22, 2018

HOUR 4



Estes										
Vehicle								Ped		
Time Period	EB Left	EB Right	SB Left	SB Right	NB Left	NB Right		Time Period		
13			9			3		13		
14			10			2		14		
15			1					15		
16			1					16		
TOTAL	0	0	21	0	0	5		TOTAL	0	0




Green Leaf							
Vehicle				Ped			
Time Period	WB Left	WB Right		Time Period			
13	4	5		13			
14	1	4		14			
15	1			15	1		
16	7	7		16			
TOTAL	13	16		TOTAL	1	0	0

Evening Hours Supplemental Counts

Tuesday, October 23, 2018

HOUR 1



Estes										
Vehicle								Ped		
Time Period	EB Left 15	EB Right 14	SB Left 4	SB Right 2	NB Left 12	NB Right 10		Time Period		
1		1	4	2	1	5		1		
2		1	7	1		4		2		
3			13		1			3		
4			10			3		4	1	
TOTAL	0	2	34	3	2	12		TOTAL	1	0




Green Leaf							
Vehicle				Ped			
Time Period	WB Left	WB Right		Time Period			
1	2	6		1			
2	2	6		2			
3	4	6		3	3	1	1
4	4	7		4	2	7	1
TOTAL	12	25		TOTAL	5	8	2

Evening Hours Supplemental Counts

Tuesday, October 23, 2018

HOUR 2



Estes										
Vehicle								Ped		
Time Period	EB Left	EB Right	SB Left	SB Right	NB Left	NB Right		Time Period		
5	1		12			4		5	1	
6			5			2		6		
7			11			4		7		
8			9			3		8		
TOTAL	1	0	37	0	0	13		TOTAL	1	0




Green Leaf							
Vehicle				Ped			
Time Period	WB Left	WB Right		Time Period			
5		7		5		5	
6	1	5		6		2	
7	3	4		7			
8		4		8		1	
TOTAL	4	20		TOTAL	0	8	0

Evening Hours Supplemental Counts

Tuesday, October 23, 2018

HOUR 3



Estes										
Vehicle								Ped		
Time Period	EB Left	EB Right	SB Left	SB Right	NB Left	NB Right		Time Period		
9			10					9		
10			4			2		10		
11			3			3		11		
12			3			2		12		
TOTAL	0	0	20	0	0	7		TOTAL	0	0




Green Leaf							
Vehicle				Ped			
Time Period	WB Left	WB Right		Time Period			
9	1	4		9			
10	3	2		10		1	
11	2	6		11			
12				12			
TOTAL	6	12		TOTAL	0	1	0

Evening Hours Supplemental Counts

Tuesday, October 23, 2018

HOUR 4

Estes										
Vehicle								Ped		
Time Period	EB Left	EB Right	SB Left	SB Right	NB Left	NB Right		Time Period		
13	1		3					13		
14			4			1		14		
15			4			6		15		
16			3					16		
TOTAL	1	0	14	0	0	7		TOTAL	0	0

Green Leaf							
Vehicle				Ped			
Time Period	WB Left	WB Right		Time Period			
13	2	5		13			
14	3	1		14			
15	3	5		15			
16	5	2		16			
TOTAL	13	13		TOTAL	0	0	0



APPENDIX B




CAPACITY ANALYSIS WORKSHEETS

EXISTING

Decatur Classical Elementary School
1: Sacramento Avenue & School Parking Lot/Estes Avenue

Existing Traffic Volume
Timing Plan: School Start

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	1	0	0	0	7	194	22	28	170	2
Future Vol, veh/h	1	1	1	0	0	0	7	194	22	28	170	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1	0	0	0	7	204	23	29	179	2
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.8	8.6	8.5
HCM LOS	A	A	A




Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	3%	33%	14%
Vol Thru, %	87%	33%	85%
Vol Right, %	10%	33%	1%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	223	3	200
LT Vol	7	1	28
Through Vol	194	1	170
RT Vol	22	1	2
Lane Flow Rate	235	3	211
Geometry Grp	1	1	1
Degree of Util (X)	0.264	0.004	0.242
Departure Headway (Hd)	4.043	4.744	4.136
Convergence, Y/N	Yes	Yes	Yes
Cap	883	759	863
Service Time	2.091	2.744	2.184
HCM Lane V/C Ratio	0.266	0.004	0.244
HCM Control Delay	8.6	7.8	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.1	0	0.9

Decatur Classical Elementary School
3: Sacramento Avenue & Lunt Avenue

Existing Traffic Volume
Timing Plan: School Start

Intersection

Intersection Delay, s/veh	8.5
Intersection LOS	A




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	66	110	22	60	154
Future Vol, veh/h	23	66	110	22	60	154
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	69	116	23	63	162
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.9	8.1	8.9
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	26%	28%
Vol Thru, %	83%	0%	72%
Vol Right, %	17%	74%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	132	89	214
LT Vol	0	23	60
Through Vol	110	0	154
RT Vol	22	66	0
Lane Flow Rate	139	94	225
Geometry Grp	1	1	1
Degree of Util (X)	0.165	0.113	0.267
Departure Headway (Hd)	4.281	4.345	4.262
Convergence, Y/N	Yes	Yes	Yes
Cap	841	828	829
Service Time	2.292	2.352	2.359
HCM Lane V/C Ratio	0.165	0.114	0.271
HCM Control Delay	8.1	7.9	8.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.4	1.1

Decatur Classical Elementary School
2: Sacramento Avenue & Greenleaf Avenue




Existing Traffic Volume
Timing Plan: School Start

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	34	183	0	0	178
Future Vol, veh/h	30	34	183	0	0	178
Conflicting Peds, #/hr	16	1	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	36	193	0	0	187
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	396	194	0	-	-	-
Stage 1	193	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	609	847	-	0	0	-
Stage 1	840	-	-	0	0	-
Stage 2	831	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	600	846	-	-	-	-
Mov Cap-2 Maneuver	600	-	-	-	-	-
Stage 1	840	-	-	-	-	-
Stage 2	818	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10.6	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 710		-			
HCM Lane V/C Ratio	- 0.095		-			
HCM Control Delay (s)	- 10.6		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.3		-			

Decatur Classical Elementary School
1: Sacramento Avenue & School Parking Lot/Estes Avenue

Existing Traffic Volume
Timing Plan: School End

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	3	6	0	0	0	2	133	15	39	148	8
Future Vol, veh/h	8	3	6	0	0	0	2	133	15	39	148	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	3	6	0	0	0	2	140	16	41	156	8
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8	8.4
HCM LOS	A	A	A




Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	1%	47%	20%
Vol Thru, %	89%	18%	76%
Vol Right, %	10%	35%	4%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	150	17	195
LT Vol	2	8	39
Through Vol	133	3	148
RT Vol	15	6	8
Lane Flow Rate	158	18	205
Geometry Grp	1	1	1
Degree of Util (X)	0.178	0.023	0.234
Departure Headway (Hd)	4.061	4.592	4.098
Convergence, Y/N	Yes	Yes	Yes
Cap	876	784	872
Service Time	2.119	2.592	2.145
HCM Lane V/C Ratio	0.18	0.023	0.235
HCM Control Delay	8	7.7	8.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.1	0.9

Decatur Classical Elementary School
3: Sacramento Avenue & Lunt Avenue

Existing Traffic Volume
Timing Plan: School End

Intersection

Intersection Delay, s/veh	8.1
Intersection LOS	A




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	46	93	16	58	129
Future Vol, veh/h	16	46	93	16	58	129
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	48	98	17	61	136
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.6	7.8	8.5
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	26%	31%
Vol Thru, %	85%	0%	69%
Vol Right, %	15%	74%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	109	62	187
LT Vol	0	16	58
Through Vol	93	0	129
RT Vol	16	46	0
Lane Flow Rate	115	65	197
Geometry Grp	1	1	1
Degree of Util (X)	0.131	0.077	0.23
Departure Headway (Hd)	4.11	4.223	4.198
Convergence, Y/N	Yes	Yes	Yes
Cap	859	854	848
Service Time	2.197	2.223	2.261
HCM Lane V/C Ratio	0.134	0.076	0.232
HCM Control Delay	7.8	7.6	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.2	0.9

Decatur Classical Elementary School
2: Sacramento Avenue & Greenleaf Avenue




Existing Traffic Volume
Timing Plan: School End

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	16	137	0	0	163
Future Vol, veh/h	15	16	137	0	0	163
Conflicting Peds, #/hr	31	1	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	17	144	0	0	172
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	347	145	0	-	-	-
Stage 1	144	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	650	902	-	0	0	-
Stage 1	883	-	-	0	0	-
Stage 2	831	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	631	901	-	-	-	-
Mov Cap-2 Maneuver	631	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 746		-			
HCM Lane V/C Ratio	- 0.044		-			
HCM Control Delay (s)	- 10		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.1		-			

Decatur Classical Elementary School
1: Sacramento Avenue & School Parking Lot/Estes Avenue

Existing Traffic Volume
Timing Plan: After Hours

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	2	0	0	0	1	158	14	40	277	2
Future Vol, veh/h	2	0	2	0	0	0	1	158	14	40	277	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	2	0	0	0	1	166	15	42	292	2
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.9	8.3	9.7
HCM LOS	A	A	A




Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	1%	50%	13%
Vol Thru, %	91%	0%	87%
Vol Right, %	8%	50%	1%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	173	4	319
LT Vol	1	2	40
Through Vol	158	0	277
RT Vol	14	2	2
Lane Flow Rate	182	4	336
Geometry Grp	1	1	1
Degree of Util (X)	0.21	0.006	0.382
Departure Headway (Hd)	4.143	4.834	4.098
Convergence, Y/N	Yes	Yes	Yes
Cap	856	745	873
Service Time	2.217	2.834	2.143
HCM Lane V/C Ratio	0.213	0.005	0.385
HCM Control Delay	8.3	7.9	9.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.8	0	1.8

Decatur Classical Elementary School
3: Sacramento Avenue & Lunt Avenue

Existing Traffic Volume
Timing Plan: After Hours

Intersection

Intersection Delay, s/veh	9.1
Intersection LOS	A




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	39	113	15	93	199
Future Vol, veh/h	24	39	113	15	93	199
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	41	119	16	98	209
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8	8.2	9.7
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	38%	32%
Vol Thru, %	88%	0%	68%
Vol Right, %	12%	62%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	128	63	292
LT Vol	0	24	93
Through Vol	113	0	199
RT Vol	15	39	0
Lane Flow Rate	135	66	307
Geometry Grp	1	1	1
Degree of Util (X)	0.162	0.085	0.36
Departure Headway (Hd)	4.335	4.609	4.217
Convergence, Y/N	Yes	Yes	Yes
Cap	831	781	842
Service Time	2.344	2.616	2.306
HCM Lane V/C Ratio	0.162	0.085	0.365
HCM Control Delay	8.2	8	9.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.3	1.6

Decatur Classical Elementary School
2: Sacramento Avenue & Greenleaf Avenue

Existing Traffic Volume
Timing Plan: After Hours

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	22	151	0	0	279
Future Vol, veh/h	13	22	151	0	0	279
Conflicting Peds, #/hr	4	2	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	23	159	0	0	294

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	457	161	0	-	-	-
Stage 1	159	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	562	884	-	0	0	-
Stage 1	870	-	-	0	0	-
Stage 2	753	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	560	882	-	-	-	-
Mov Cap-2 Maneuver	560	-	-	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	750	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 727	-
HCM Lane V/C Ratio	- 0.051	-
HCM Control Delay (s)	- 10.2	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.2	-






APPENDIX C

CAPACITY ANALYSIS WORKSHEETS FUTURE WITH PROJECT

Intersection

Intersection Delay, s/veh 9.8

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	19	113	0	0	0	0	185	20	28	222	0
Future Vol, veh/h	56	19	113	0	0	0	0	185	20	28	222	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	59	20	119	0	0	0	0	195	21	29	234	0
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.5	9.5	10.2
HCM LOS	A	A	B




Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	30%	11%
Vol Thru, %	90%	10%	89%
Vol Right, %	10%	60%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	205	188	250
LT Vol	0	56	28
Through Vol	185	19	222
RT Vol	20	113	0
Lane Flow Rate	216	198	263
Geometry Grp	1	1	1
Degree of Util (X)	0.28	0.26	0.343
Departure Headway (Hd)	4.663	4.729	4.687
Convergence, Y/N	Yes	Yes	Yes
Cap	768	756	763
Service Time	2.712	2.781	2.734
HCM Lane V/C Ratio	0.281	0.262	0.345
HCM Control Delay	9.5	9.5	10.2
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.1	1	1.5

Future with Project
3: Sacramento Avenue & Proposed Drive Aisle/Lunt Avenue

Decatur Classical Elementary School
Timing Plan: School Start

Intersection

Intersection Delay, s/veh 10.3
Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	0	0	0	22	21	66	0	51	91	22	73	182
Future Vol, veh/h	0	0	0	22	21	66	0	51	91	22	73	182
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	23	22	69	0	54	96	23	77	192
Number of Lanes	0	0	0	0	1	0	0	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.8	9	11.2
HCM LOS	A	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	31%	20%	19%
Vol Thru, %	55%	19%	47%
Vol Right, %	13%	61%	34%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	164	109	388
LT Vol	51	22	73
Through Vol	91	21	182
RT Vol	22	66	133
Lane Flow Rate	173	115	408
Geometry Grp	1	1	1
Degree of Util (X)	0.222	0.155	0.481
Departure Headway (Hd)	4.62	4.864	4.244
Convergence, Y/N	Yes	Yes	Yes
Cap	777	735	850
Service Time	2.654	2.908	2.27
HCM Lane V/C Ratio	0.223	0.156	0.48
HCM Control Delay	9	8.8	11.2
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.8	0.5	2.7

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement SBR

Lane Configurations

Traffic Vol, veh/h 133

Future Vol, veh/h 133

Peak Hour Factor 0.95

Heavy Vehicles, % 2

Mvmt Flow 140

Number of Lanes 0

Approach

Opposing Approach

Opposing Lanes

Conflicting Approach Left

Conflicting Lanes Left

Conflicting Approach Right




Conflicting Lanes Right

HCM Control Delay

HCM LOS

Future with Project
2: Sacramento Avenue & Greenleaf Avenue

Decatur Classical Elementary School
Timing Plan: School Start




Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	34	164	0	0	343
Future Vol, veh/h	39	34	164	0	0	343
Conflicting Peds, #/hr	16	1	0	7	7	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	36	173	0	0	361
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	550	174	0	-	-	-
Stage 1	173	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	496	869	-	0	0	-
Stage 1	857	-	-	0	0	-
Stage 2	694	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	488	868	-	-	-	-
Mov Cap-2 Maneuver	488	-	-	-	-	-
Stage 1	857	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.7	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 613		-			
HCM Lane V/C Ratio	- 0.125		-			
HCM Control Delay (s)	- 11.7		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.4		-			

Decatur Classical Elementary School
1: Sacramento Avenue & School Parking Lot/Estes Avenue

Future with Project
Timing Plan: School End

Intersection

Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	11	65	0	0	0	0	133	15	39	168	0
Future Vol, veh/h	33	11	65	0	0	0	0	133	15	39	168	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	12	68	0	0	0	0	140	16	41	177	0
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.2	8.4	9
HCM LOS	A	A	A




Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	30%	19%
Vol Thru, %	90%	10%	81%
Vol Right, %	10%	60%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	148	109	207
LT Vol	0	33	39
Through Vol	133	11	168
RT Vol	15	65	0
Lane Flow Rate	156	115	218
Geometry Grp	1	1	1
Degree of Util (X)	0.189	0.142	0.267
Departure Headway (Hd)	4.373	4.469	4.404
Convergence, Y/N	Yes	Yes	Yes
Cap	823	803	817
Service Time	2.392	2.491	2.421
HCM Lane V/C Ratio	0.19	0.143	0.267
HCM Control Delay	8.4	8.2	9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.5	1.1

Decatur Classical Elementary School
3: Sacramento Avenue & Proposed Drive Aisle/Lunt Avenue

Future with Project
Timing Plan: School End

Intersection

Intersection Delay, s/veh 8.7
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	0	0	0	14	8	46	0	19	91	16	67	147
Future Vol, veh/h	0	0	0	14	8	46	0	19	91	16	67	147
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	15	8	48	0	20	96	17	71	155
Number of Lanes	0	0	0	0	1	0	0	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.9	8.2	9.1
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	15%	21%	25%
Vol Thru, %	72%	12%	56%
Vol Right, %	13%	68%	19%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	126	68	263
LT Vol	19	14	67
Through Vol	91	8	147
RT Vol	16	46	49
Lane Flow Rate	133	72	277
Geometry Grp	1	1	1
Degree of Util (X)	0.159	0.089	0.315
Departure Headway (Hd)	4.329	4.453	4.101
Convergence, Y/N	Yes	Yes	Yes
Cap	832	809	864
Service Time	2.338	2.458	2.187
HCM Lane V/C Ratio	0.16	0.089	0.321
HCM Control Delay	8.2	7.9	9.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.3	1.4

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement SBR

Lane Configurations

Traffic Vol, veh/h 49

Future Vol, veh/h 49

Peak Hour Factor 0.95

Heavy Vehicles, % 2

Mvmt Flow 52

Number of Lanes 0

Approach

Opposing Approach

Opposing Lanes

Conflicting Approach Left

Conflicting Lanes Left

Conflicting Approach Right

Conflicting Lanes Right

HCM Control Delay




HCM LOS

Decatur Classical Elementary School
2: Sacramento Avenue & Greenleaf Avenue

Future with Project
Timing Plan: School End

Intersection

Int Delay, s/veh 0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	16	135	0	0	242
Future Vol, veh/h	12	16	135	0	0	242
Conflicting Peds, #/hr	31	1	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	17	142	0	0	255

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	428	143	0
Stage 1	142	-	-
Stage 2	286	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	584	905	0
Stage 1	885	-	0
Stage 2	763	-	0
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	567	904	-
Mov Cap-2 Maneuver	567	-	-
Stage 1	885	-	-
Stage 2	740	-	-

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




Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 720	-
HCM Lane V/C Ratio	- 0.041	-
HCM Control Delay (s)	- 10.2	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.1	-

Decatur Classical Elementary School
1: Sacramento Avenue & School Parking Lot/Estes Avenue

Future with Project
Timing Plan: After Hours

Intersection

Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	2	0	0	0	1	158	14	40	277	2
Future Vol, veh/h	2	0	2	0	0	0	1	158	14	40	277	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	2	0	0	0	1	166	15	42	292	2
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.9	8.3	9.7
HCM LOS	A	A	A




Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	1%	50%	13%
Vol Thru, %	91%	0%	87%
Vol Right, %	8%	50%	1%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	173	4	319
LT Vol	1	2	40
Through Vol	158	0	277
RT Vol	14	2	2
Lane Flow Rate	182	4	336
Geometry Grp	1	1	1
Degree of Util (X)	0.21	0.006	0.382
Departure Headway (Hd)	4.143	4.834	4.098
Convergence, Y/N	Yes	Yes	Yes
Cap	856	745	873
Service Time	2.217	2.834	2.143
HCM Lane V/C Ratio	0.213	0.005	0.385
HCM Control Delay	8.3	7.9	9.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.8	0	1.8

Decatur Classical Elementary School
3: Sacramento Avenue & Proposed Drive Aisle/Lunt Avenue

Future with Project
Timing Plan: After Hours

Intersection

Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	0	0	0	24	0	39	0	0	113	15	93	199
Future Vol, veh/h	0	0	0	24	0	39	0	0	113	15	93	199
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	25	0	41	0	0	119	16	98	209
Number of Lanes	0	0	0	0	1	0	0	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8	8.2	9.7
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	38%	32%
Vol Thru, %	88%	0%	68%
Vol Right, %	12%	62%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	128	63	292
LT Vol	0	24	93
Through Vol	113	0	199
RT Vol	15	39	0
Lane Flow Rate	135	66	307
Geometry Grp	1	1	1
Degree of Util (X)	0.162	0.085	0.36
Departure Headway (Hd)	4.335	4.609	4.217
Convergence, Y/N	Yes	Yes	Yes
Cap	831	781	842
Service Time	2.344	2.616	2.306
HCM Lane V/C Ratio	0.162	0.085	0.365
HCM Control Delay	8.2	8	9.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.3	1.6

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement SBR

Lane Configurations

Traffic Vol, veh/h 0

Future Vol, veh/h 0

Peak Hour Factor 0.95

Heavy Vehicles, % 2

Mvmt Flow 0

Number of Lanes 0

Approach

Opposing Approach

Opposing Lanes

Conflicting Approach Left

Conflicting Lanes Left

Conflicting Approach Right

Conflicting Lanes Right

HCM Control Delay




HCM LOS

Decatur Classical Elementary School
2: Sacramento Avenue & Greenleaf Avenue

Future with Project
Timing Plan: After Hours

Intersection

Int Delay, s/veh 0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	22	151	0	0	279
Future Vol, veh/h	13	22	151	0	0	279
Conflicting Peds, #/hr	4	2	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	23	159	0	0	294

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	457	161	0
Stage 1	159	-	-
Stage 2	298	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	562	884	-
Stage 1	870	-	-
Stage 2	753	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	560	882	-
Mov Cap-2 Maneuver	560	-	-
Stage 1	870	-	-
Stage 2	750	-	-

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

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 727	-
HCM Lane V/C Ratio	- 0.051	-
HCM Control Delay (s)	- 10.2	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.2	-