ENGINEERS
PLANNERS
SURVEYORS

May 11, 2016
Updated December 11, 2017

Mr. Spencer B. Jones
Dawn Homes Management
20 Corporate Woods Boulevard
Albany, New York 12211

RE: Updated Traffic Evaluation, Sandidge Way Residential Development, Fuller Road, City of Albany, Albany County, New York; CM Project No. 117-314

Dear Mr. Jones:

Creighton Manning Engineering, LLP (CM) conducted a *Traffic Impact Assessment* dated May 11, 2016 for the proposed *Sandidge Way Residential Development* located on the west side of Fuller Road (CR 156) in the City of Albany. This letter is an update to the original letter and includes revisions to the site plan and a response to comments received during the public hearing, from the Albany County Planning Board, and the County of Albany Department of Public Works. The following additional items are addressed:

- The original letter evaluated impacts associated with 173 apartments. The trip generation estimate has been updated to account for an increase to 252 apartment units.
- Assessment of a second site access driveway into the development that will intersect Fuller Road opposite Alumni Drive.
- Evaluation of available sight distance at the existing Sandidge Way intersection and the proposed site access driveway located opposite Alumni Drive.
- Re-evaluation of future traffic conditions with a 2022 design year.
- Review of Fuller Road capacity after completion of the project.

This evaluation is based on the revised "Site Plan" dated October 17, 2017 prepared by Hershberg & Hershberg included under Attachment A.

1.0 Project Description

The proposed project includes the construction of 252 apartments on two parcels totaling approximately 6.5 acres located on the west side of Fuller Road along Sandidge Way. Access to the site is proposed via Sandidge Way and a full access driveway on Fuller Road opposite Alumni Drive. The proposed project is expected to be completed in 2022. The project location is shown on Figure 1.

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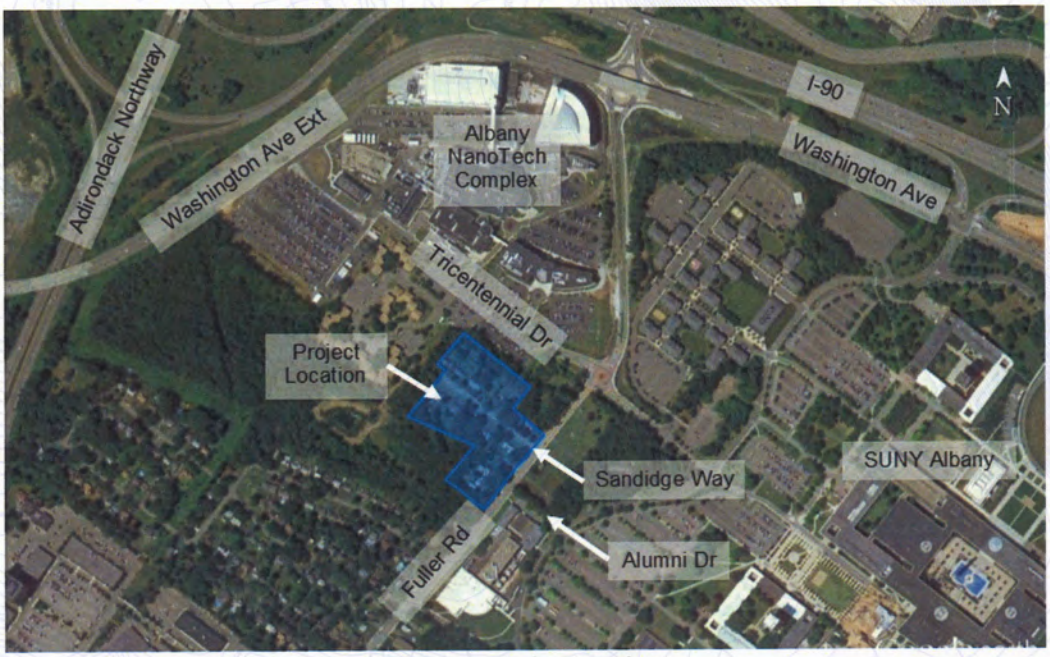
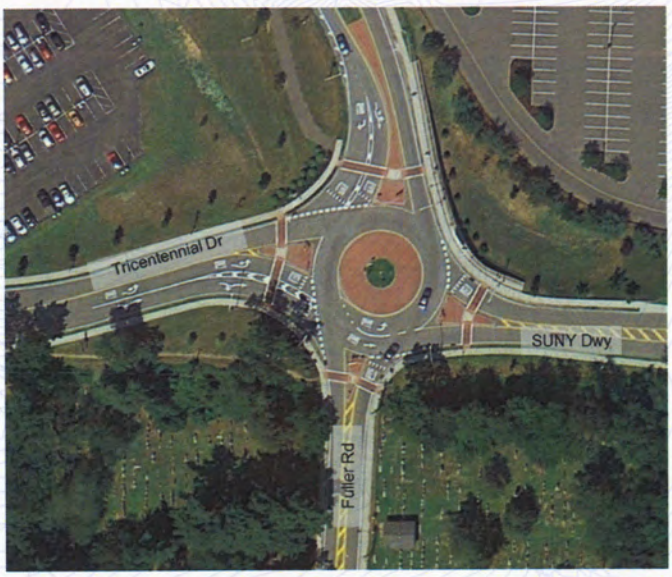


Figure 1 – Project Location

2.0 Existing Conditions

Roadway Serving the Site

Fuller Road (Albany CR 156) provides north-south access between Western Avenue (US Route 20) and Central Avenue (NY Route 5). North of the site, Fuller Road provides access to Interstate 90 (I-90) via Interchange 2. In the project vicinity Fuller Road is a two-lane roadway with one 11-foot wide travel lane in each direction, a 12-foot wide center two way left-turn lane (TWLTL), and 1 to 4-foot wide paved shoulders. North of Sandidge Way, the center turn median transitions to a striped median extending to the Tricentennial Drive roundabout intersection. Pedestrians are accommodated via the 5-foot wide sidewalks located on both sides of Fuller Road. Traffic volume data collected by CM shows that Fuller Road serves approximately 13,300 vehicles per day (vpd) near the project site and heavy vehicles account for approximately two percent of daily traffic. The posted speed limit adjacent to the project site is 30-mph. Land use along Fuller Road near the site is residential, commercial, educational, and a cemetery.



Study Intersections

The Fuller Road/Tricentennial Drive intersection is a four leg intersection operating with a single lane roundabout, except on the southern end of the roundabout which has two-lanes as illustrated in the adjacent image. The northbound and westbound approaches each consist of a single approach lane, the eastbound approach consists of a left-turn lane and a shared through/right-turn lane, and

the southbound approach consists of a shared left-turn/through lane and a right-turn lane. All approaches to the roundabout operate under yield sign control. There are sidewalks on both sides of all approaches to the intersection and a multi-use path on the west side of Fuller Road on the southbound approach. Each leg of the intersection has marked crosswalks.

The Fuller Road/Sandidge Way intersection is a three leg intersection operating under stop control on the eastbound Sandidge Way approach. The northbound Fuller Road approach provides a two-way left-turn lane (TWLTL) for left turn movements, and a single lane for through travel movements. The southbound Fuller Road approach provides a single lane for shared through/right-turn movements. The eastbound Sandidge Way approach provides a single lane for shared left-turn and right-turn movements. There are sidewalks on both sides of Fuller Road and Sandidge Way. There is a marked crosswalk across Sandidge Way at the intersection. Sandidge Way is a small residential side street that dead ends with approximately ten single family homes that are no longer occupied.

The Fuller Road/Alumni Drive intersection is a three leg intersection operating under stop control on the westbound Alumni Drive approach. The northbound Fuller Road approach provides a single lane for shared through/right-turn movements while the southbound Fuller Road approach provides a TWLTL for left turn movements and a single lane for through travel movements. The westbound Alumni Drive approach provides a single lane for shared left-turn and right-turn movements. There are sidewalks on both sides of Fuller Road but no sidewalks on Alumni Drive. There is a marked crosswalk across Alumni Drive at the intersection. Alumni Drive provides access to University Drive and the *UAlbany* campus.

Transit

Transit service in the study area is provided by the Capital District Transportation Authority (CDTA). Bus stops are located on both sides of Fuller Road at Sandidge Way and are served by CDTA Routes 114, 117, 190, and 712. Route 114 travels from Crossgates Mall to the Albany-Rensselaer train station, Route 117 travels from Guilderland to Colonie, Route 190 travels from Crossgates Mall to Latham Farms, and Route 712 travels from Crossgates Mall to Downtown Albany. The four routes generally provide service Monday through Saturday from 6:00 a.m. till 11:00 p.m. with limited service on Sunday.

It is noted that CDTA is currently progressing the Washington/Western Bus Rapid Transit (BRT) project in the City of Albany. A proposed BRT line will start at the Albany Bus Terminal, travel through the *Harriman* and *UAlbany* campuses, intersect Fuller Road at the Alumni Drive intersection, and continue on to a new terminal at *Crossgates Mall*. Based on this concept, Alumni Drive would be converted into an exclusive bus facility that would restrict all other vehicular traffic. If this alternative is progressed, the CDTA study recommends that a traffic signal be installed at the Fuller Road/Alumni Drive intersection in order to help facilitate bus movements from Alumni Drive.

Data Collection

This traffic study focuses on the weekday AM and PM peak periods since these time periods correspond to peak operations at the site and peak traffic conditions on the surrounding roadway network. Turning movement counts were conducted at the Fuller Road/Tricentennial Drive roundabout on Thursday, March 31, 2016 during the morning peak period from 7:00 to

9:00 a.m. and on Wednesday, March 30, 2016 during the afternoon peak period from 4:00 to 6:00 p.m. In addition, supplemental traffic counts were conducted at the Fuller Road/Alumni Drive intersection on November 28, 2017 during the morning peak period from 7:30 to 9:00 a.m. and during the afternoon peak period from 4:00 to 5:30 p.m. The traffic counts were completed on a typical weekday when *UAlbany* and the *Albany NanoTech Complex* were in session. The raw traffic volumes are included in Attachment B. It is noted that the 2016 traffic volumes were increased by one percent per year based on information provided by the Capital District Transportation Committee (CDTC) to represent 2017 traffic counts. These peak hour traffic volumes provide existing traffic conditions at the study area intersections and are shown on Figure 2-1 and form the basis for all traffic forecasts.

It is noted that CM collected peak hour traffic volume data on March 30, 2016 and November 28, 2017 when school was in session and after *Commerce Hub* (a large tenant with approximately 200 employees) was operating in the *ZEN* building. A review of data used in the *Student Housing and Expanded Parking Project SUNY Poly Campus* (dated January 27, 2016) evaluation was collected in December 2015 prior to *Commerce Hub* occupying the *ZEN* building. This explains discrepancies in traffic volumes identified by the County of Albany DPW for the original study. The traffic volumes collected by CM are the most recent counts and best represent the current peak hour conditions in the corridor.

An automatic traffic recorder (ATR) was also placed on Fuller Road, approximately 200 feet south of Sandidge Way, on Wednesday, March 30, 2016 to continuously record traffic volume and vehicle speed data for a period of several days.

3.0 Sight Distance Evaluation

The available intersection sight distance from the existing Fuller Road/Sandidge Way intersection and the proposed Site Driveway intersection on Fuller Road opposite Alumni Drive was measured from the perspective of a vehicle looking in both directions along Fuller Road to determine if adequate sight lines are provided. The intersection sight distance looking straight ahead for a vehicle traveling north on Fuller Road turning left onto Sandidge Way or into the proposed Site Driveway was also measured, as illustrated in Diagram 1. The available intersection sight distance on a side street should provide drivers a sufficient view of the intersecting highway to allow vehicles to enter or exit the intersection without excessively slowing vehicles traveling at or near the operating speed on the intersecting mainline.

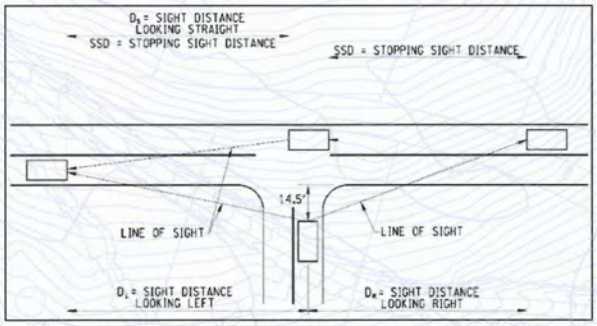


Diagram 1 – Generic Intersection and Stopping Sight Distance Measurements

Stopping sight distance (the length of roadway ahead that is visible to the driver) was also measured on Fuller Road at Sandidge Way and the proposed Site Driveway intersection. The available stopping sight distance on a roadway should be of sufficient length to enable a vehicle traveling at or near the operating speed to stop before reaching a stationary object in its path.

The posted speed limit on Fuller Road adjacent to the project site is 30-mph. Traffic speed data collected by CM shows that the 85th percentile speed on Fuller Road near the project site is approximately 40-mph. The available sight distances compared to the guidelines presented in AASHTO's *A Policy on Geometric Design of Highways and Streets*, 2011 and NYSDOT design guidance (EB 17-007) for a 40-mph operating speed on Fuller Road are summarized in Table 1. (Note: Based on the NYS Highway Design Manual Section 2.6.1, design speeds are to be rounded to the nearest 5-mph value.)

Table 1 – Sight Distance Summary (Feet)

Intersection	Intersection Sight Distance[1]						Stopping Sight Distance[2]	
	Right Turn from Sandidge Way or Site Driveway (D_L)	Crossing Maneuver from Site Driveway		Left Turn from Sandidge Way or Site Driveway		Left Turn from Fuller Road (D_S)	SSD_{NB}	SSD_{SB}
		Looking Left (D_L)	Looking Right (D_R)	Looking Left (D_L)	Looking Right (D_R)			
Fuller Road/Sandidge Way								
Available	465[3]	NA	NA	465[3]	>900	465[3]	>900	465[3]
Recommended[5]	385	385	385	445	445	325	305	305
Fuller Road/Alumni Drive/Site Driveway								
Available	700[3]	700[3]	>750	700[3]	>750	700[3]	>750	700[3]
Recommended[5]	385	385	385	445	445	325	305	305

[1] = Intersection sight distance is measured at 14.5 feet back from the travel way at an eye height of 3.5-ft and object height of 3.5-ft.
[2] = $SSD_{NB, SB}$ = Stopping sight distance measured for a 2-foot object located in the path of northbound and southbound vehicles on Fuller Road.
[3] = Clear sight lines are available to the Tricentennial Drive intersection.
[5] = Sight distance measurements are compared to AASHTO recommended distances for a 40-mph operating speed.
XX = Available sight distance
NA = Not Applicable

The sight distance evaluation indicates that the available intersection and stopping sight distances at the Fuller Road/Sandidge Way intersection and at the Fuller Road/Alumni Drive/Site Driveway intersection meet AASHTO guidelines for the 40-mph operating speed.

It is recommended that any site signing be placed a minimum of fifteen feet back from the travel way and that the landscaping plan consider sight lines in order to maintain visibility at the Sandidge Way and the proposed Site Driveway.

4.0 Traffic Assessment

Trip Generation

Trip generation determines the quantity of traffic expected to travel to/from a given site. The Institute of Transportation Engineers' (ITE) *Trip Generation*, 10th Edition, is the industry standard used for estimating trip generation for proposed land uses based on data collected

at similar uses. The trip generation for the revised site was estimated using land use code (LUC) 221 for Multifamily Housing (Mid-Rise). Table 2 summarizes the trip generation estimate for the AM and PM peak hours.

Table 2 – Trip Generation Summary

Land Use	Units	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Multifamily Housing (Mid-Rise)	252	22	63	85	66	42	108

The proposed site is expected to generate 85 new vehicle trips during the AM peak hour and 108 new vehicle trips during the PM peak hour. It is anticipated that the magnitude of traffic generated by the site on any one approach for off-site intersections will be less than the NYSDOT and ITE threshold of 100 site generated vehicles. This guidance was developed as a tool to identify locations where the magnitude of traffic generated has the potential to impact operations at off-site intersections and screen out locations from requiring detailed analysis that do not reach the 100 vehicle threshold and are unlikely to require mitigation. As previously noted, due to the proximity of the adjacent Fuller Road/Tricentennial Drive intersection, the study includes a detailed evaluation of this intersection in addition to the Fuller Road/Sandidge Way and Fuller Road/Alumni Drive/Site Driveway intersections which will provide direct access to the site.

Future Traffic Volumes

To evaluate the operations of the study intersections, traffic projections were prepared for the 2022 design year. Information provided by CDTC indicates that traffic volumes in the study area have increased by approximately one percent per year over the last several years; therefore, the 2017 Existing traffic volumes were increased by one percent per year for five years to represent general growth in the study area anticipated by the 2022 design year. In addition, conversations with representatives from the City of Albany and the Town of Guilderland indicated that the ZEN Building located on the SUNY Nanotechnology Campus on Tricentennial Drive was completed and was at about 50 percent occupancy at the time of the 2016 turning movement counts and there are two student housing facilities on Washington Avenue that will be fully occupied prior to completion of the proposed project. It is anticipated that the ZEN building will be fully occupied by the 2022 design year; therefore, traffic volumes associated with full occupancy of the ZEN building were added to the roadway network. Trips associated with the student housing facility are included in the one percent background growth provided by CDTC.

The 2022 No-Build traffic volumes are shown on Figure 2-2 and represent the expected traffic volumes in 2022 without construction of the proposed apartment development. It is noted that the general background growth has reasonably taken into account all expected growth in the area that may occur over the next five years prior to the construction of the proposed project.

Traffic generated by the proposed project was distributed at the study intersections based on existing travel patterns, probable travel routes, and population centers surrounding the site. It is expected that 60 percent of the site generated traffic will travel to and from the north on Fuller Road and 40 percent will travel to and from the south on Fuller Road. The resulting trip

distributions to the study area for the development are shown on Figure 3-1. This distribution of traffic results in 51 new vehicle trips north of the site and 34 new vehicle trips south of the site during the AM peak hour. This also indicates that the site will result in 65 new vehicle trips north of the site and 43 new vehicle trips south of the site during the PM peak hour. The traffic assignments for the proposed development are shown on Figure 3-2. The results of the site generated traffic assignment were added to the 2022 No-Build traffic volumes to develop the 2022 Build traffic volumes. The 2022 Build traffic volumes are shown on Figure 4 and represent future traffic conditions after the completion of the project.

Traffic Operations

Intersection Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. Intersection evaluations were made using Synchro Software (Version 10) and SIDRA Intersection (Version 7), which automate the procedures contained in the *Highway Capacity Manual.* It is noted that the SIDRA and Vissim software programs are the only analysis software approved by the New York State Department of Transportation (NYSDOT) for roundabout analysis per the Highway Design Manual (HDM). The roundabout analysis for the *SUNY Poly Project* used Synchro which is not on the NYSDOT list of approved software for roundabout analysis; therefore, a comparison of the analysis results is not applicable. Table 3 summarizes the results of the level of service calculations for the proposed project. The detailed levels of service analyses are included in Attachment C.

Table 3 – Level of Service Summary

Intersection		Control	AM Peak Hour				PM Peak Hour			
			Existing 2017	No-Build 2022	Build 2022	Build w/ Imp 2022	Existing 2017	No-Build 2022	Build 2022	Build w/ Imp 2022
Fuller Rd/Tricentennial Dr		RA								
Tricentennial Dr EB	L		B (11.7)	B (12.1)	B (12.2)	--	B (16.0)	C (23.1)	C (28.0)	--
	TR		A (6.9)	A (7.2)	A (7.4)	--	B (11.0)	B (15.4)	B (18.3)	--
Tricentennial Dr WB	LTR		A (7.0)	A (7.5)	A (7.9)	--	B (16.5)	C (27.0)	C (30.4)	--
Fuller Rd NB	LTR		A (5.9)	A (7.3)	A (7.7)	--	B (12.7)	C (24.3)	C (34.7)	--
Fuller Rd SB	LT		A (5.3)	A (6.0)	A (6.0)	--	A (4.0)	A (4.2)	A (4.3)	--
	R		A (4.5)	A (5.1)	A (5.1)	--	A (4.3)	A (4.6)	A (4.7)	--
Overall			A (5.4)	A (6.2)	A (6.4)	--	B (10.7)	B (16.8)	C (20.8)	--
Fuller Rd/Sandidge Way		U								
Sandidge Way EB	LR		--	--	C (18.6)	B (14.3)	--	--	D (25.2)	C (17.4)
Fuller Rd NB	L		--	--	A (8.3)	A (8.3)	--	--	A (9.6)	A (9.6)
Fuller Road/Alumni Drive/ Site Driveway		U								
Site Driveway EB	[LTR]		--	--	B (13.4)	--	--	--	C (16.7)	--
Alumni Drive WB	L[T]R		B (13.1)	B (13.7)	B (14.5)	--	B (14.3)	C (15.1)	C (17.3)	--
Fuller Road NB	[L]		--	--	A (8.2)	--	--	--	A (9.4)	--
Fuller Road SB	L		A (8.5)	A (8.7)	A (8.7)	--	A (8.1)	A (8.2)	A (8.2)	--

RA, U = Roundabout or Unsignalized intersection
EB, WB, NB, SB = Eastbound, Westbound, Northbound, and Southbound intersection approaches
L, T, R = Left-turn, Through, and/or Right-turn movements
X (Y.Y) = Level of service (Average delay in seconds per vehicle)
-- = Not Applicable

The following observations are noted regarding the capacity evaluations:

- Fuller Road/Tricentennial Drive – During the AM peak hour, this intersection will operate at an overall LOS A with all intersection approaches operating at LOS B or

better through Build 2022 traffic volume conditions. During the PM peak hour, this intersection currently operates at an overall LOS B with all intersection approaches operating at LOS B or better. In the 2022 No-Build condition, this intersection will continue to operate at an overall LOS B during the PM peak hour; however, the northbound and westbound approaches and the eastbound left turn lane will operate at LOS C. In the 2022 Build condition, all movements will continue to operate similar to No-Build conditions with the overall intersection operating at LOS C with an increase in overall delay of approximately four seconds. No improvements are recommended.

The Sandidge Way intersection with Fuller Road is located approximately 425 feet south of the northbound yield bar at the Fuller Road/Tricentennial Drive roundabout. Vehicle queues on the northbound approach were reviewed to determine if the vehicle queue will extend past the Sandidge Way intersection. Table 4 summarizes the Average and 95th Percentile vehicle queue for the AM and PM peak hours under Existing, No-Build, and Build conditions.

Table 4 – Vehicle Queue Summary (feet)

Condition	AM Peak Hour		PM Peak Hour	
	Average	95th Percentile	Average	95th Percentile
Existing	34	84	69	171
No-Build	47	118	120	299
Build	57	140	166	412

The data shows that the average and 95th percentile queues on the Fuller Road northbound approach to the Fuller Road/Tricentennial Drive roundabout are not expected to block Sandidge Way.

- Fuller Road/Sandidge Way – Under Build conditions, the eastbound stop-controlled Sandidge Way approach provides access to the site and operates at LOS C during the AM peak hour with less than 19 seconds of average vehicle delay and at LOS D during the PM peak hour with less than 26 seconds of average vehicle delay. The northbound left-turn movement operates at LOS A during the AM and PM peak hours with less than 10 seconds of average vehicle delay. It is recommended that this intersection continue to operate as an unsignalized intersection. A review of field conditions indicates that Fuller Road has a striped median north of Sandidge Way. To improve the flow of traffic for drivers exiting the site to travel north on Fuller Road, it is recommended that the existing hatched median be re-striped to provide a short center TWLTL (as shown). This TWLTL can be utilized by drivers exiting the site to perform a two stage left turn; meaning they cross southbound Fuller Road traffic and rest in the median area before merging into northbound traffic. As shown, this improvement reduces the delay for exiting traffic to LOS B with less than 15 seconds of

average vehicle delay during the AM peak hour and LOS C during the PM peak hour with less than 18 seconds of average vehicle delay.

- Fuller Road/Alumni Drive/Site Driveway – The level of service analysis indicates that the westbound Alumni Drive approach currently operates at LOS B conditions during both peak hours and will operate at LOS B/C during the AM and PM peak hours during No-Build conditions. After build-out of the site, the westbound Alumni Drive approach will continue to operate at LOS B/C during the AM and PM peak hours with an increase in delay of approximately three seconds or less. The southbound Fuller Road left turn movement will operate at LOS A through Build conditions during both peak hours. After construction of the proposed development, the eastbound Site Driveway approach will operate at LOS B/C during the AM and PM peak hours. In addition, the northbound Fuller Road left turn movement will operate at LOS A during both peak hours after build-out of the site.

  As noted above, a traffic signal may be installed at the Fuller Road/Alumni Drive intersection in order to help facilitate bus movements from Alumni Drive. The eastbound Site Driveway approach would be included in the design and phasing of the traffic signal. This intersection would operate adequately under traffic signal control after build-out of the site and the inclusion of a BRT route on Alumni Drive.

Fuller Road Capacity

The Albany County Planning Board identified a concern with the original assessment associated with project-related impacts to Fuller Road. Fuller Road is classified as an "urban principal arterial other". Information published by CDTC for mid-block capacity thresholds indicates that a three-lane arterial can serve 2,500 vehicles per hour (1,250 in each direction) and operate at LOS D conditions. In the 2022 Build conditions accounting for traffic associated with the 252 proposed apartment units, a general increase in background traffic, and full occupancy of the *ZEN* building on the *SUNY Poly* campus, Fuller Road at the project site is expected to serve approximately 930 vehicles (490 vehicles peak one direction) during the AM peak hour and approximately 1,375 vehicles (820 vehicles peak one direction) during the PM peak hour. The projected peak hour traffic volumes are well below the LOS D threshold identified by CDTC. In addition, the *Fuller Road (County Route 156) Corridor Improvement* Traffic Analysis dated February 11, 2008 documented a future projected 2029 traffic volume condition of approximately 1,405 vehicles during the PM peak hour (840 vehicles peak one direction) travelling on Fuller Road in the project vicinity, which is higher than the future PM peak hour traffic volumes (1,375 vehicles) for the *Sandidge Way Residential Development* project and also below the CDTC LOS D thresholds. The following can be concluded from this volume assessment:

- The future projected traffic volumes on Fuller Road after construction of the *Sandidge Way Residential Development* (930 AM peak hour, 1,375 PM peak hour) adjacent to the project site are between 1,125 and 1,570 vehicles less than the CDTC LOS D threshold of 2,500 vehicles.
- The future projected traffic volumes on Fuller Road after construction of the *Sandidge Way Residential Development* (1,375 PM peak hour) are lower than the future 2029 volumes (1,405 PM peak hour) anticipated and designed for in the Fuller Road corridor by the County as part of the 2008 study.

5.0 Conclusions

The proposed project includes the construction of a residential apartment development with 252 units. The project is expected to generate 85 new vehicle trips during the AM peak hour and 108 new vehicle trips during the PM peak hour. Access to the site is proposed via Sandidge Way and a full access driveway on Fuller Road opposite Alumni Drive. The proposed project is expected to be completed in 2022. The following is noted regarding the proposed project:

- Multi-modal access to the proposed *Sandidge Way Residential Development* is served by the existing sidewalk network on both sides of Fuller Road and CDTA Routes 114, 117, 190, and 712.
- Level of service analysis indicates that the Fuller Road/Tricentennial Drive roundabout controlled intersection will continue to provide adequate operations during both peak hours after construction of the proposed development. Vehicle queuing on the northbound Fuller Road approach will not impact operations of the Sandidge Way intersection located approximately 425 feet to the south.
- The Sandidge Way approach to Fuller Road will operate at LOS C during the AM peak hour and LOS D during the PM peak hour. It is recommended that the existing hatched median on Fuller Road north of Sandidge Way be re-striped to provide a TWLTL allowing vehicles exiting the site to perform a two-stage left-turn. With this roadway striping change, the Sandidge Way approach to Fuller Road will operate at LOS B/C during the AM and PM peak hours.
- The level of service analysis indicates that the unsignalized Fuller Road/Alumni Drive/Site Driveway intersection will operate adequately after build-out of the site. It is noted that this intersection will continue to operate adequately if a signal is installed as part of a BRT route being progressed by CDTA.
- The sight distance evaluation indicates that the available intersection and stopping sight distances at the Fuller Road/Sandidge Way intersection and at the Fuller Road/Alumni Drive/Site Driveway intersection meet AASHTO guidelines for the 40-mph operating speed. It is recommended that any site signing be placed a minimum of fifteen feet back from the travel way and that the landscaping plan consider sight lines in order to maintain visibility at the Sandidge Way and the proposed Site Driveway.
- The future projected traffic volumes on Fuller Road after construction of the *Sandidge Way Residential Development* adjacent to the project site are between 1,125 and 1,570 vehicles less than the CDTC LOS D threshold of 2,500 vehicles. In addition, the future projected traffic volumes on Fuller Road are lower than the future 2029 volumes anticipated and designed for in the Fuller Road corridor by the County as part of the 2008 study.

Please call our office if you have any questions or comments regarding the above analysis.

Respectfully submitted,
Creighton Manning Engineering, LLP

Mark Nadolny
Project Manager

Attachments

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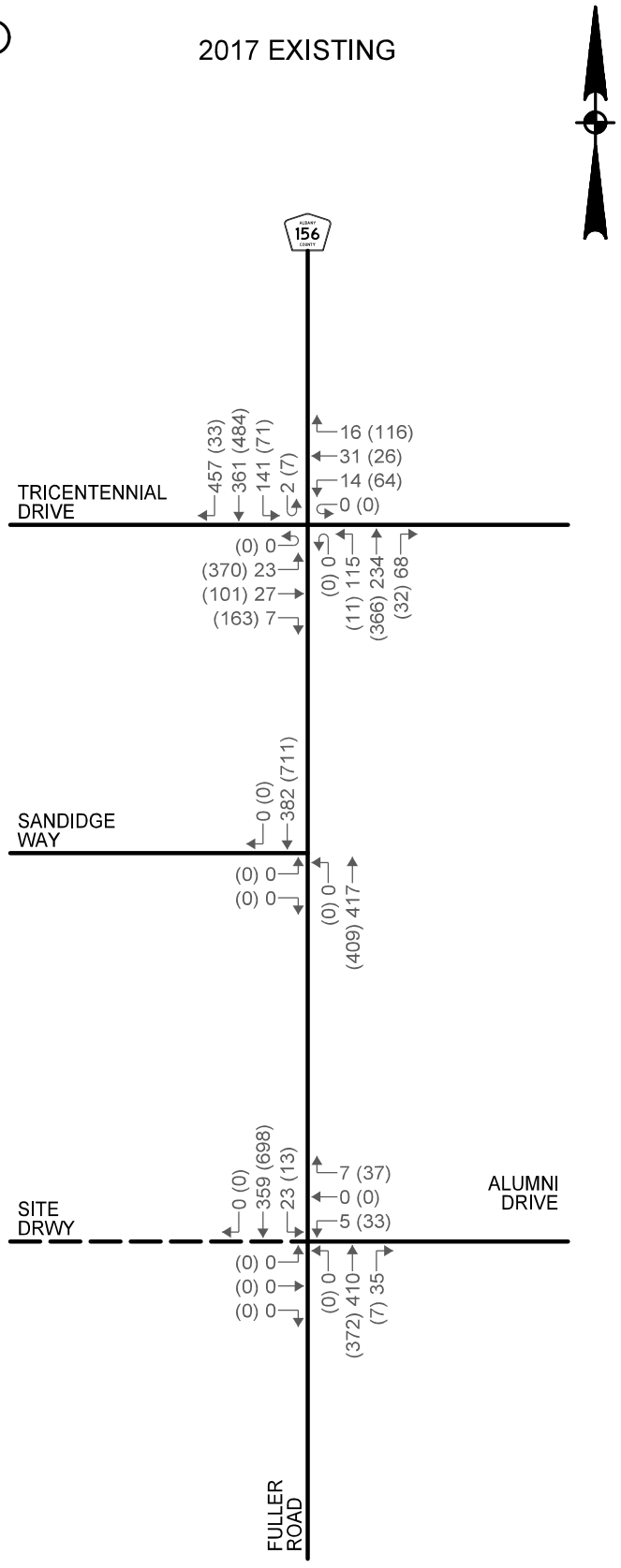

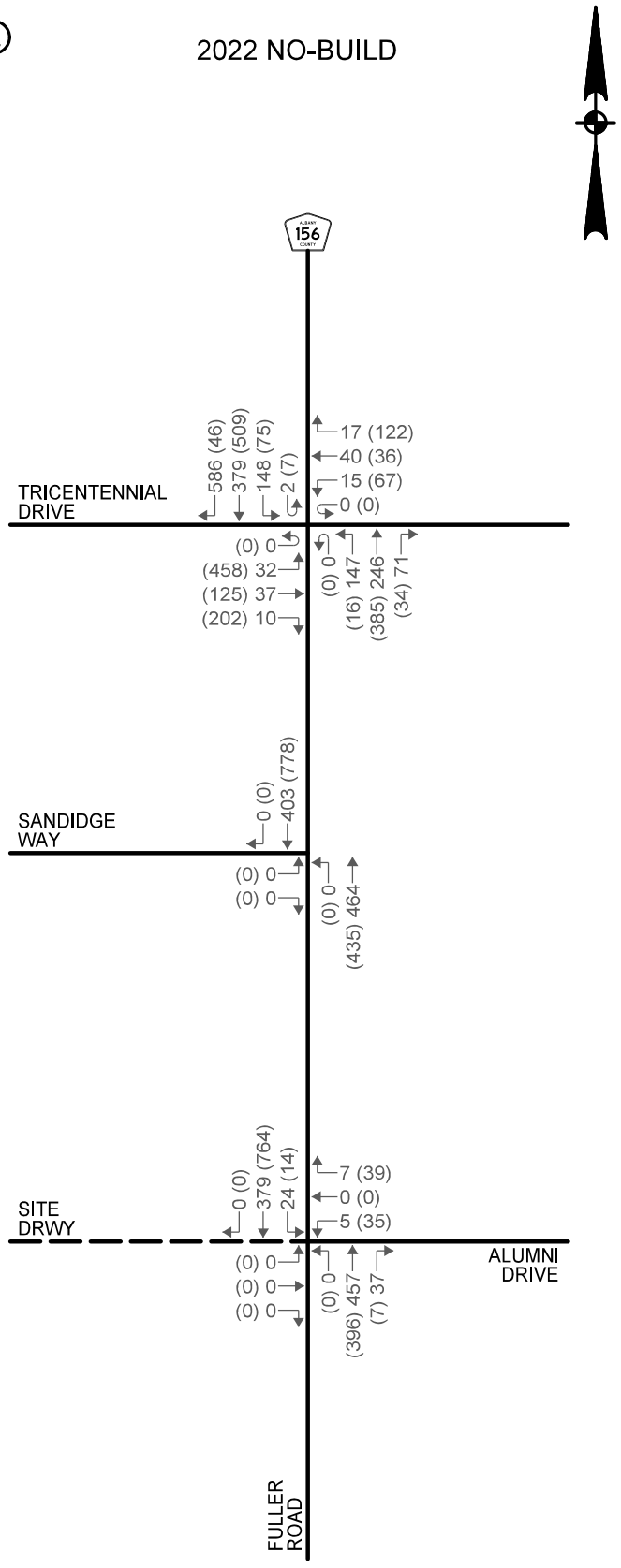

TRAFFIC VOLUMES

SANDIDGE WAY RESIDENTIAL DEVELOPMENT
CITY OF ALBANY, NEW YORK

Creighton Manning

PROJECT: 117-314	DATE: 12/2017	FIGURE: 2

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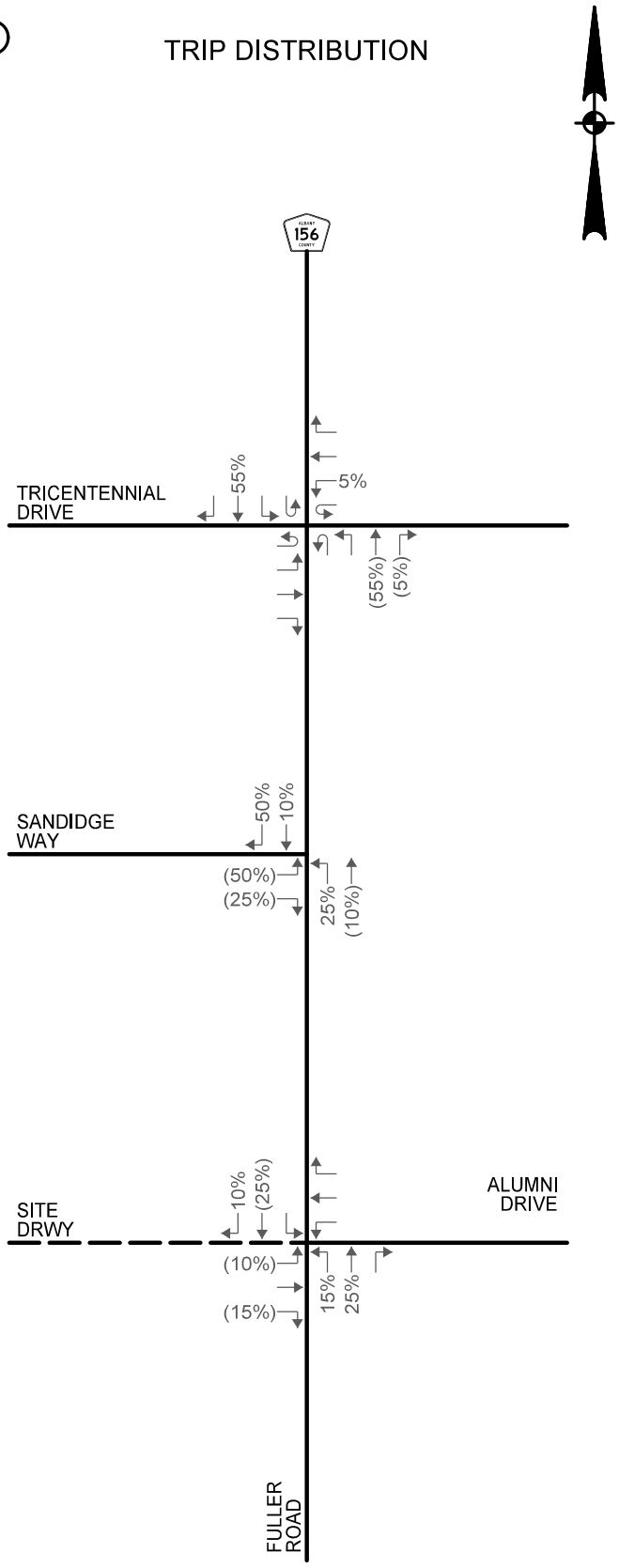
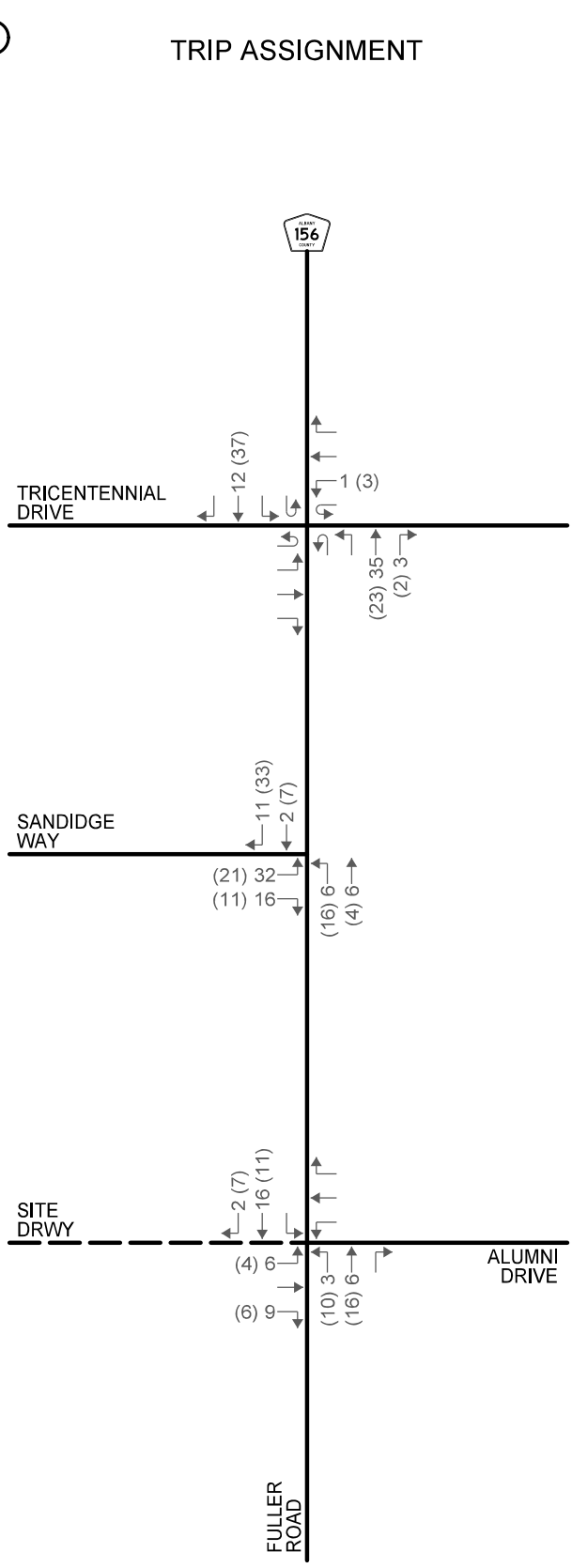
1 TRIP DISTRIBUTION



LEGEND:
ENTERING (EXITING)

2 TRIP ASSIGNMENT



LEGEND:
AM PEAK HOUR (PM PEAK HOUR)

TRAFFIC VOLUMES

SANDIDGE WAY RESIDENTIAL DEVELOPMENT
CITY OF ALBANY, NEW YORK

Creighton Manning

PROJECT: 117-314	DATE: 12/2017	FIGURE: 3

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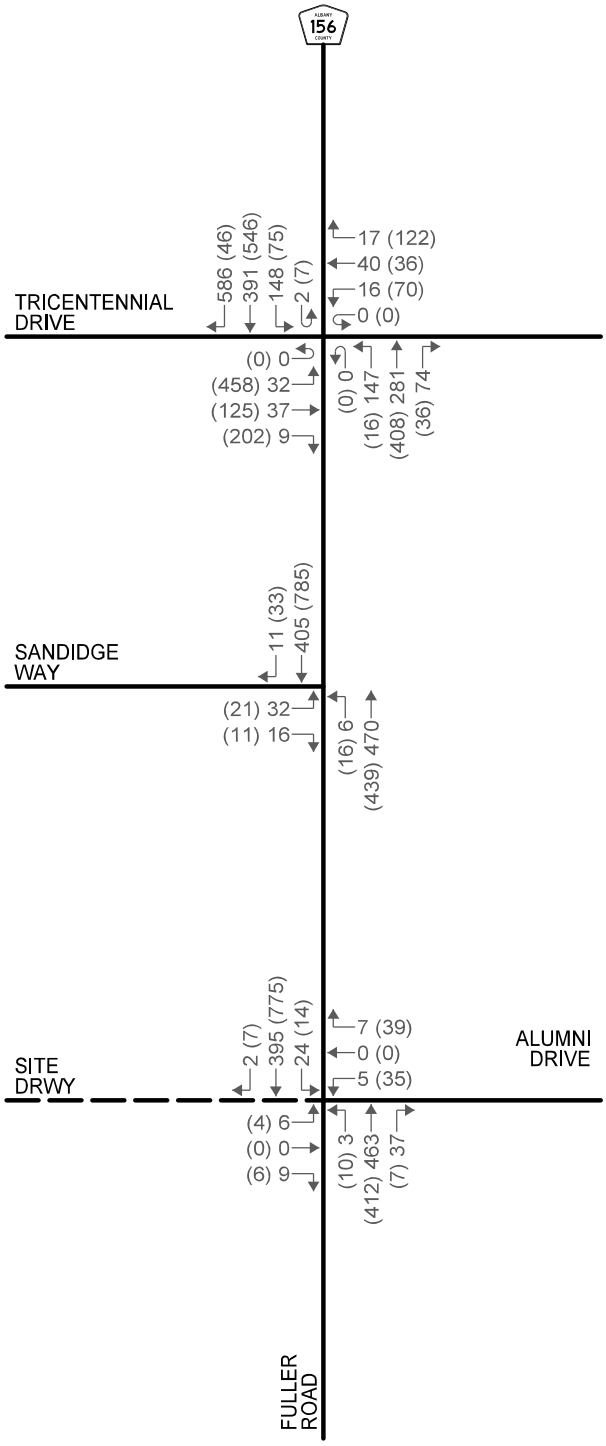
2022 BUILD



LEGEND:
AM PEAK HOUR (PM PEAK HOUR)

TRAFFIC VOLUMES

SANDIDGE WAY RESIDENTIAL DEVELOPMENT
CITY OF ALBANY, NEW YORK

Creighton Manning

PROJECT:	117-314	DATE:	12/2017	FIGURE:	4

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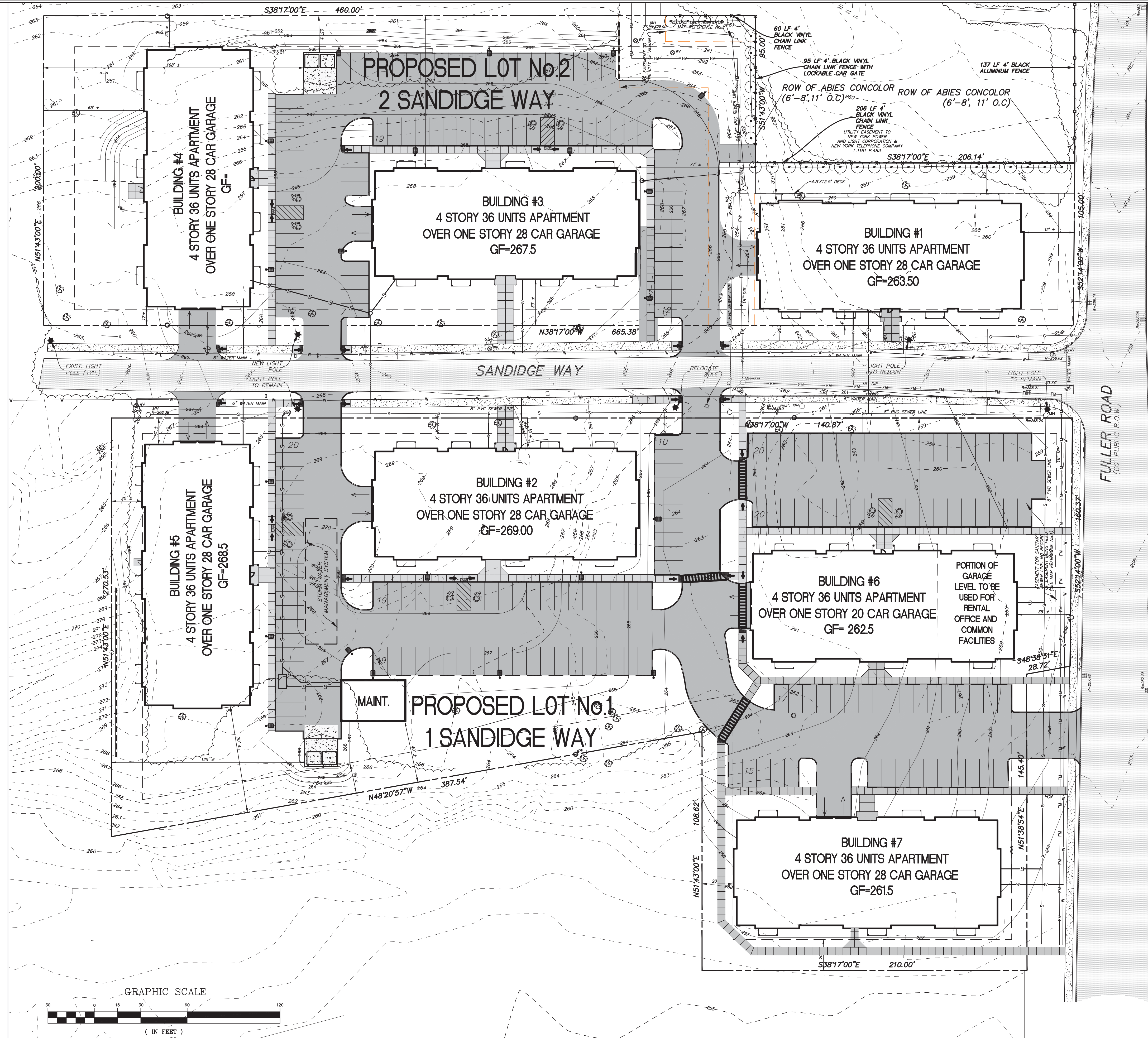
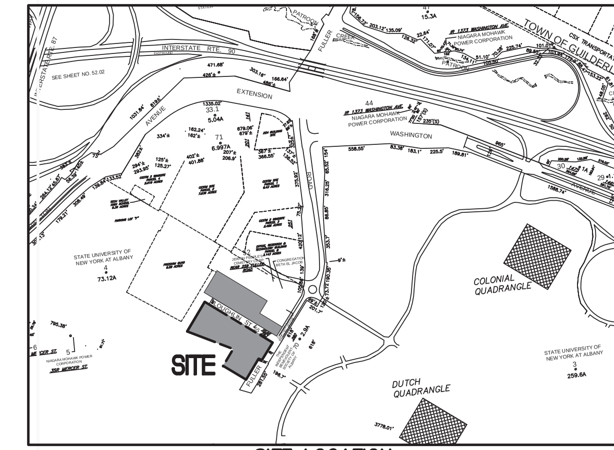
Attachment A
Site Plan

Sandidge Way Residential Development
City of Albany, New York



BUILDING #4
4 STORY 36 UNITS APARTMENT
OVER ONE STORY 28 CAR GARAGE
GF=
BUILDING #3
4 STORY 36 UNITS APARTMENT
OVER ONE STORY 28 CAR GARAGE
GF=267.5
BUILDING #1
4 STORY 36 UNITS APARTMENT
OVER ONE STORY 28 CAR GARAGE
GF=263.50
BUILDING #5
4 STORY 36 UNITS APARTMENT
OVER ONE STORY 28 CAR GARAGE
GF=268.5
BUILDING #2
4 STORY 36 UNITS APARTMENT
OVER ONE STORY 28 CAR GARAGE
GF=269.00
BUILDING #6
4 STORY 36 UNITS APARTMENT
OVER ONE STORY 20 CAR GARAGE
GF= 262.5
PORTION OF GARAGE LEVEL TO BE USED FOR RENTAL OFFICE AND COMMON FACILITIES
BUILDING #7
4 STORY 36 UNITS APARTMENT
OVER ONE STORY 28 CAR GARAGE
GF=261.5
PROPOSED LOT No.2
2 SANDIDGE WAY
PROPOSED LOT No.1
1 SANDIDGE WAY
MAINT.
SANDIDGE WAY
FULLER ROAD
(60' PUBLIC R.O.W.)
STORM WATER MANAGEMENT SYSTEM
ROW OF ABIES CONCOLOR (6'-8',11' O.C)
60 LF 4' BLACK VINYL CHAIN LINK FENCE
95 LF 4' BLACK VINYL CHAIN LINK FENCE WITH LOCKABLE CAR GATE
206 LF 4' BLACK VINYL CHAIN LINK FENCE
137 LF 4' BLACK ALUMINUM FENCE
S38°17'00"E 460.00'
N38°17'00"W 665.38'
S38°17'00"E 206.14'
N38°17'00"W 140.87'
S38°17'00"E 210.00'
N48°20'57"W 387.54'
S48°38'31"E 28.72'
GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.



SITE LOCATION

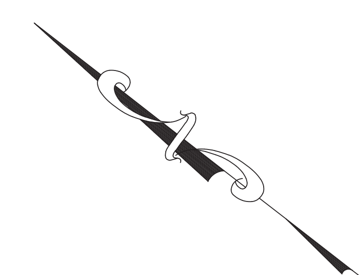
NOT TO SCALE

PROPOSED SITE COVERAGE STATISTICS (LOT #1)			
DESCRIPTION	S.F.	ACRES	%
GROSS SITE AREA	169,554	3.89	100.00
BUILDING COVERAGE	47,880	1.10	28.27
SIDEWALK COVERAGE	5,521	0.12	3.08
IMPERVIOUS AREA	42,169	1.22	31.35
POROUS PAVEMENT AREA	52,224	1.21	31.11
PERVIOUS AREA -GRASS	63,929	1.46	37.53
PERVIOUS AREA	116,153	2.67	68.64

PROPOSED SITE COVERAGE STATISTICS (LOT #2)			
DESCRIPTION	S.F.	ACRES	%
GROSS SITE AREA	113,400	2.60	100.00
BUILDING COVERAGE	35,910	0.82	31.54
SIDEWALK COVERAGE	2,956	0.07	2.69
IMPERVIOUS AREA	38,866	0.89	34.23
POROUS PAVEMENT AREA	26,233	0.60	23.08
GRASS & LANDSCAPING	48,301	1.11	42.69
PERVIOUS AREA	74,534	1.71	65.77

PARKING ANALYISIS TABLE	
PROPOSED RESIDENTIAL UNITS	252
REQUIRED PARKING SPACES	252
PROPOSED GARAGE PARKING SPACES	188
PROPOSED SURFACE OFF STREET PARKING SPACES	213
TOTAL PARKING SPACES AVAILABLE	401

PLANT MATERIAL FOR CEMETARY SCREENING					
SYM	BOTANICAL NAME	COMMON NAME	SIZE	AMT.	COMMENTS
		TREES			
AB	ABIES CONCOLOR	WHITE FIR	6'-8' HT.	31	B & B



FOR MUNICIPAL APPROVAL ONLY-NOT INTENDED FOR CONSTRUCTION

HERSHBERG & HERSHBERG
Consulting Engineers and Land Surveyors
18 Locust Street
Albany, New York 12203

STATE OF NEW YORK · DANIEL R. HERSHBERG · 044226 · LICENSED PROFESSIONAL ENGINEER & LAND SURVEYOR

REMARKS	DATE

REVISIONS

SITE PLAN
SANDIDGE WAY
ALBANY, NEW YORK

FILE: 160093 | SCALE: 1"=30' | BY: AS | CHK: DRH | DATE: 10/17/17 | 160093-4.DWG

C 3

Attachment B
Traffic Volume Data

Sandidge Way Residential Development
City of Albany, New York

Project No.: 116-047
Counted By: DJK, KD, DMQ, MM
Location: Albany, NY
Comments:

File Name : TM116047AM
Site Code : 116-047
Start Date : 3/31/2016
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - School Buses

	Tricentennial Drive Eastbound					Tricentennial Drive Westbound					Fuller Road Northbound					Fuller Road Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	4	5	6	0	15	1	4	2	0	7	15	38	4	0	57	8	35	52	0	95	174
07:15 AM	18	6	6	0	30	2	5	3	0	10	19	33	3	0	55	14	54	87	0	155	250
07:30 AM	28	5	8	0	41	3	2	6	0	11	18	45	4	0	67	7	69	103	1	180	299
07:45 AM	16	3	3	0	22	1	10	8	0	19	35	48	6	0	89	7	81	137	0	225	355
Total	66	19	23	0	108	7	21	19	0	47	87	164	17	0	268	36	239	379	1	655	1078
08:00 AM	6	4	2	0	12	5	13	3	0	21	31	55	8	0	94	25	84	123	0	232	359
08:15 AM	5	6	3	0	14	2	8	6	0	16	20	54	21	0	95	33	89	104	2	228	353
08:30 AM	6	14	0	0	20	2	7	5	0	14	33	61	20	0	114	51	95	111	0	257	405
08:45 AM	6	3	2	0	11	5	3	2	0	10	30	62	18	0	110	31	89	114	0	234	365
Total	23	27	7	0	57	14	31	16	0	61	114	232	67	0	413	140	357	452	2	951	1482
Grand Total	89	46	30	0	165	21	52	35	0	108	201	396	84	0	681	176	596	831	3	1606	2560
Apprch %	53.9	27.9	18.2	0		19.4	48.1	32.4	0		29.5	58.1	12.3	0		11	37.1	51.7	0.2		
Total %	3.5	1.8	1.2	0	6.4	0.8	2	1.4	0	4.2	7.9	15.5	3.3	0	26.6	6.9	23.3	32.5	0.1	62.7	
Passenger Veh	74	36	26	0	136	19	47	35	0	101	194	385	84	0	663	172	571	809	2	1554	2454
% Passenger Veh	83.1	78.3	86.7	0	82.4	90.5	90.4	100	0	93.5	96.5	97.2	100	0	97.4	97.7	95.8	97.4	66.7	96.8	95.9
Heavy Veh	3	9	0	0	12	2	3	0	0	5	4	8	0	0	12	3	22	10	1	36	65
% Heavy Veh	3.4	19.6	0	0	7.3	9.5	5.8	0	0	4.6	2	2	0	0	1.8	1.7	3.7	1.2	33.3	2.2	2.5
School Buses	12	1	4	0	17	0	2	0	0	2	3	3	0	0	6	1	3	12	0	16	41
% School Buses	13.5	2.2	13.3	0	10.3	0	3.8	0	0	1.9	1.5	0.8	0	0	0.9	0.6	0.5	1.4	0	1	1.6

Project No.: 116-047
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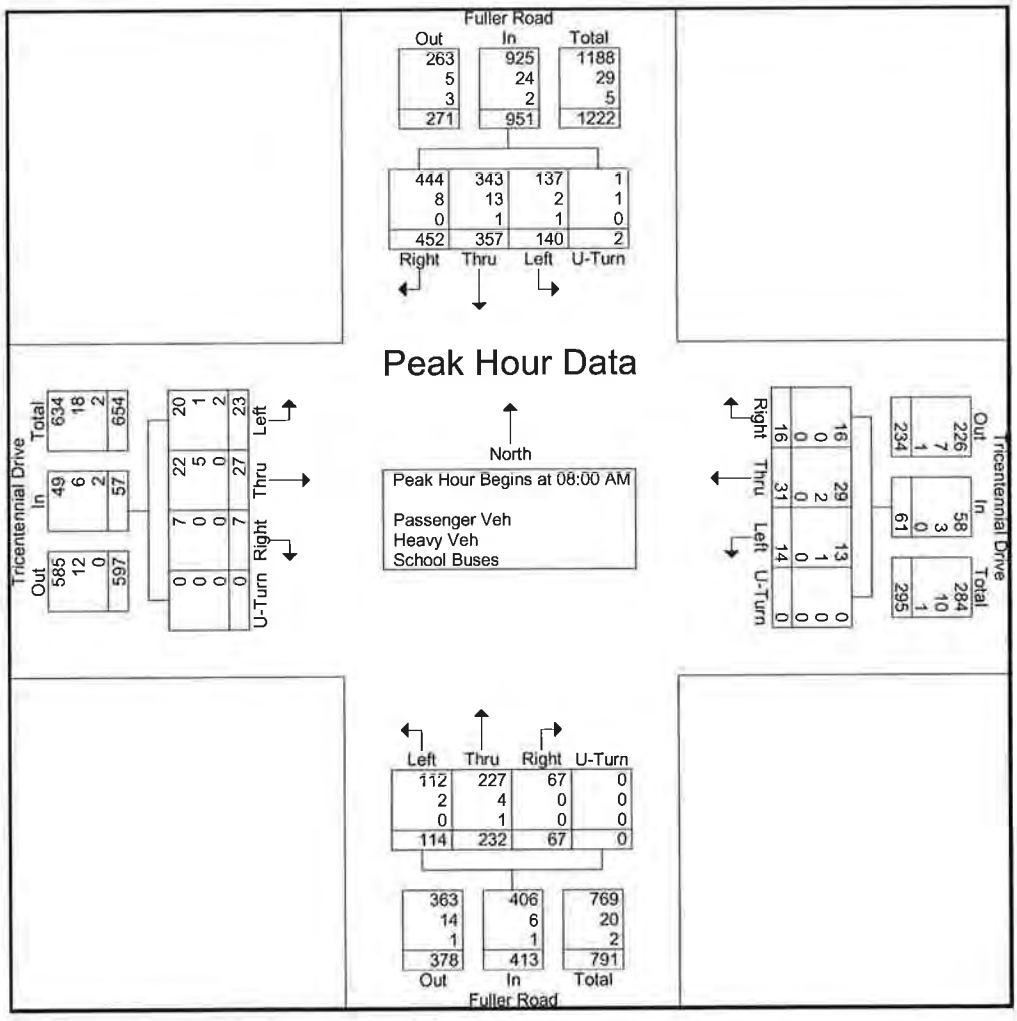
File Name : TM116047AM
Site Code : 116-047
Start Date : 3/31/2016
Page No : 2

	Tricentennial Drive Eastbound					Tricentennial Drive Westbound					Fuller Road Northbound					Fuller Road Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 7:00:00 AM to 8:45:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 8:00:00 AM																					
8:00:00 AM	**6**	4	2	0	12	**5**	**13**	3	0	**21**	31	55	8	0	94	25	84	**123**	0	232	359
8:15:00 AM	5	6	**3**	0	14	2	8	**6**	0	16	20	54	**21**	0	95	33	89	104	**2**	228	353
8:30:00 AM	6	**14**	0	0	**20**	2	7	5	0	14	**33**	61	20	0	**114**	**51**	**95**	111	0	**257**	**405**
8:45:00 AM	6	3	2	0	11	5	3	2	0	10	30	**62**	18	0	110	31	89	114	0	234	365
Total Volume	23	27	7	0	57	14	31	16	0	61	114	232	67	0	413	140	357	452	2	951	1482
% App. Total	40.4	47.4	12.3	0		23	50.8	26.2	0		27.6	56.2	16.2	0		14.7	37.5	47.5	0.2		
PHF	.958	.482	.583	.000	.713	.700	.596	.667	.000	.726	.864	.935	.798	.000	.906	.686	.939	.919	.250	.925	.915
Passenger Veh	20	22	7	0	49	13	29	16	0	58	112	227	67	0	406	137	343	444	1	925	1438
% Passenger Veh	87.0	81.5	100	0	86.0	92.9	93.5	100	0	95.1	98.2	97.8	100	0	98.3	97.9	96.1	98.2	50.0	97.3	97.0
Heavy Veh	1	5	0	0	6	1	2	0	0	3	2	4	0	0	6	2	13	8	1	24	39
% Heavy Veh	4.3	18.5	0	0	10.5	7.1	6.5	0	0	4.9	1.8	1.7	0	0	1.5	1.4	3.6	1.8	50.0	2.5	2.6
School Buses	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	1	1	0	0	2	5
% School Buses	8.7	0	0	0	3.5	0	0	0	0	0	0	0.4	0	0	0.2	0.7	0.3	0	0	0.2	0.3



Project No.: 116-047
Counted By: AMM, AKP, DMQ, MM
Location: Albany, NY
Comments:

File Name : TM116047PM
Site Code : 116-047
Start Date : 3/30/2016
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - School Buses

	Tricentennial Drive Eastbound					Tricentennial Drive Westbound					Fuller Road Northbound					Fuller Road Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	81	26	27	0	134	19	8	54	0	81	6	90	14	0	110	15	114	9	3	141	466
04:15 PM	54	21	29	0	104	11	9	26	0	46	5	81	4	0	90	13	83	7	2	105	345
04:30 PM	63	18	32	0	113	15	6	32	0	53	1	108	11	0	120	10	141	9	2	162	448
04:45 PM	73	20	39	0	132	14	6	21	0	41	2	96	5	0	103	13	107	12	1	133	409
Total	271	85	127	0	483	59	29	133	0	221	14	375	34	0	423	51	445	37	8	541	1668
05:00 PM	120	35	47	0	202	20	8	35	0	63	3	84	7	0	94	16	119	8	2	145	504
05:15 PM	110	27	43	0	180	14	6	27	0	47	5	74	9	0	88	31	112	4	2	149	464
05:30 PM	80	31	33	0	144	25	7	28	0	60	2	80	10	0	92	20	96	6	0	122	418
05:45 PM	58	22	26	0	106	15	6	26	0	47	2	59	10	0	71	21	126	7	1	155	379
Total	368	115	149	0	632	74	27	116	0	217	12	297	36	0	345	88	453	25	5	571	1765
Grand Total	639	200	276	0	1115	133	56	249	0	438	26	672	70	0	768	139	898	62	13	1112	3433
Apprch %	57.3	17.9	24.8	0		30.4	12.8	56.8	0		3.4	87.5	9.1	0		12.5	80.8	5.6	1.2		
Total %	18.6	5.8	8	0	32.5	3.9	1.6	7.3	0	12.8	0.8	19.6	2	0	22.4	4	26.2	1.8	0.4	32.4	
Passenger Veh	639	193	274	0	1106	133	51	248	0	432	23	670	70	0	763	139	883	61	13	1096	3397
% Passenger Veh	100	96.5	99.3	0	99.2	100	91.1	99.6	0	98.6	88.5	99.7	100	0	99.3	100	98.3	98.4	100	98.6	99
Heavy Veh	0	7	2	0	9	0	0	1	0	1	3	2	0	0	5	0	3	1	0	4	19
% Heavy Veh	0	3.5	0.7	0	0.8	0	0	0.4	0	0.2	11.5	0.3	0	0	0.7	0	0.3	1.6	0	0.4	0.6
School Buses	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	12	0	0	12	17
% School Buses	0	0	0	0	0	0	8.9	0	0	1.1	0	0	0	0	0	0	1.3	0	0	1.1	0.5

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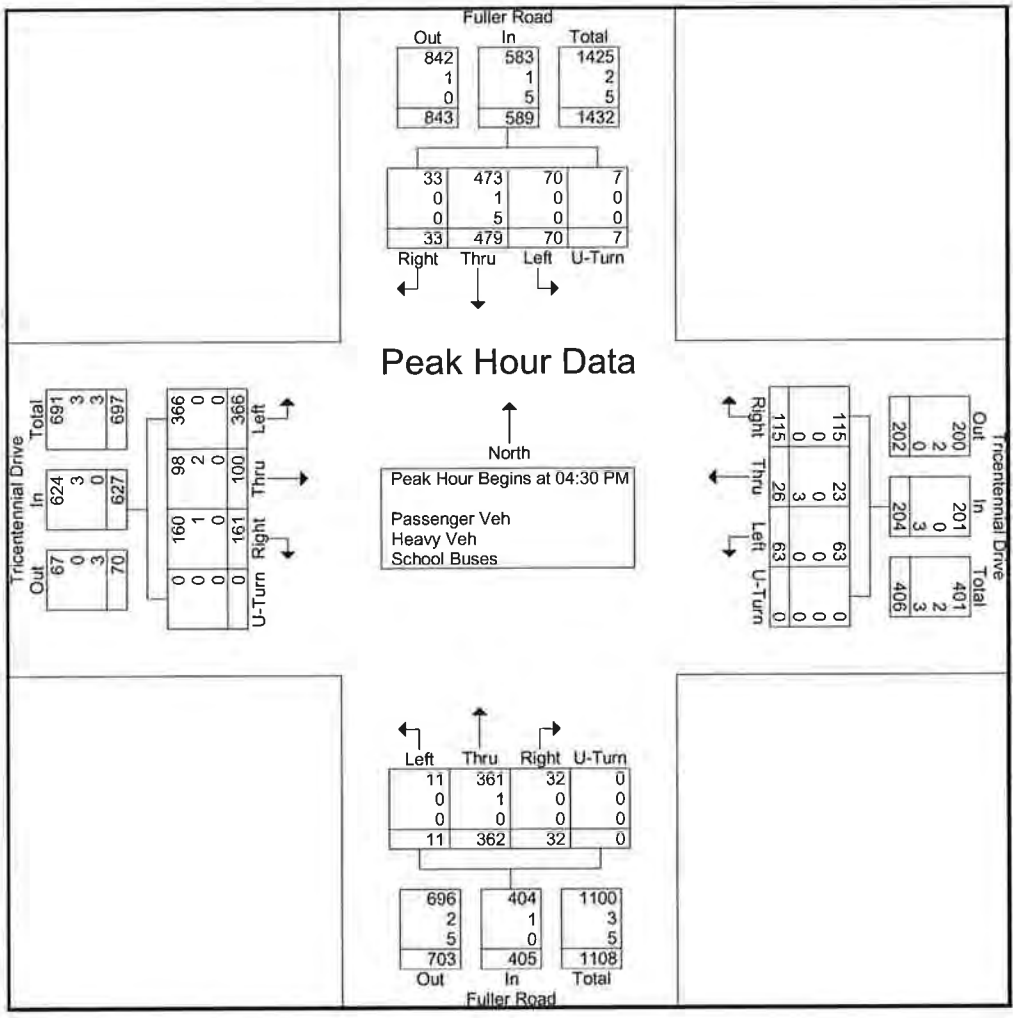
	Tricentennial Drive Eastbound					Tricentennial Drive Westbound					Fuller Road Northbound					Fuller Road Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 4:30:00 PM																					
4:30:00 PM	63	18	32	0	113	15	6	32	0	53	1	**108**	**11**	0	**120**	10	**141**	9	**2**	**162**	448
4:45:00 PM	73	20	39	0	132	14	6	21	0	41	2	96	5	0	103	13	107	**12**	1	133	409
5:00:00 PM	**120**	**35**	**47**	0	**202**	**20**	**8**	**35**	0	**63**	3	84	7	0	94	16	119	8	2	145	**504**
5:15:00 PM	110	27	43	0	180	14	6	27	0	47	**5**	74	9	0	88	**31**	112	4	2	149	464
Total Volume	366	100	161	0	627	63	26	115	0	204	11	362	32	0	405	70	479	33	7	589	1825
% App. Total	58.4	15.9	25.7	0		30.9	12.7	56.4	0		2.7	89.4	7.9	0		11.9	81.3	5.6	1.2		
PHF	.763	.714	.856	.000	.776	.788	.813	.821	.000	.810	.550	.838	.727	.000	.844	.565	.849	.688	.875	.909	.905
Passenger Veh	366	98	160	0	624	63	23	115	0	201	11	361	32	0	404	70	473	33	7	583	1812
% Passenger Veh	100	98.0	99.4	0	99.5	100	88.5	100	0	98.5	100	99.7	100	0	99.8	100	98.7	100	100	99.0	99.3
Heavy Veh	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	5
% Heavy Veh	0	2.0	0.6	0	0.5	0	0	0	0	0	0	0.3	0	0	0.2	0	0.2	0	0	0.2	0.3
School Buses	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	8
% School Buses	0	0	0	0	0	0	11.5	0	0	1.5	0	0	0	0	0	0	1.0	0	0	0.8	0.4



Project No.: 117-314
Counted By: DJK
Location: Albany, NY
Comments:

File Name : TM117314AM1
Site Code : 17-314-1
Start Date : 11/28/2017
Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - School Buses

	Alumni Drive Westbound			Fuller Road Northbound			Fuller Road Southbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:30 AM	1	3	4	0	2	2	4	0	4	10
07:45 AM	0	1	1	0	3	3	2	0	2	6
Total	1	4	5	0	5	5	6	0	6	16
08:00 AM	2	0	2	0	9	9	3	0	3	14
08:15 AM	1	2	3	0	6	6	7	0	7	16
08:30 AM	2	3	5	0	10	10	7	0	7	22
08:45 AM	0	2	2	0	10	10	6	0	6	18
Total	5	7	12	0	35	35	23	0	23	70
Grand Total	6	11	17	0	40	40	29	0	29	86
Apprch %	35.3	64.7		0	100		100	0		
Total %	7	12.8	19.8	0	46.5	46.5	33.7	0	33.7	
Passenger Veh	5	10	15	0	40	40	29	0	29	84
% Passenger Veh	83.3	90.9	88.2	0	100	100	100	0	100	97.7
Heavy Veh	1	1	2	0	0	0	0	0	0	2
% Heavy Veh	16.7	9.1	11.8	0	0	0	0	0	0	2.3
School Buses	0	0	0	0	0	0	0	0	0	0
% School Buses	0	0	0	0	0	0	0	0	0	0

Project No.: 117-314
Counted By: DJK
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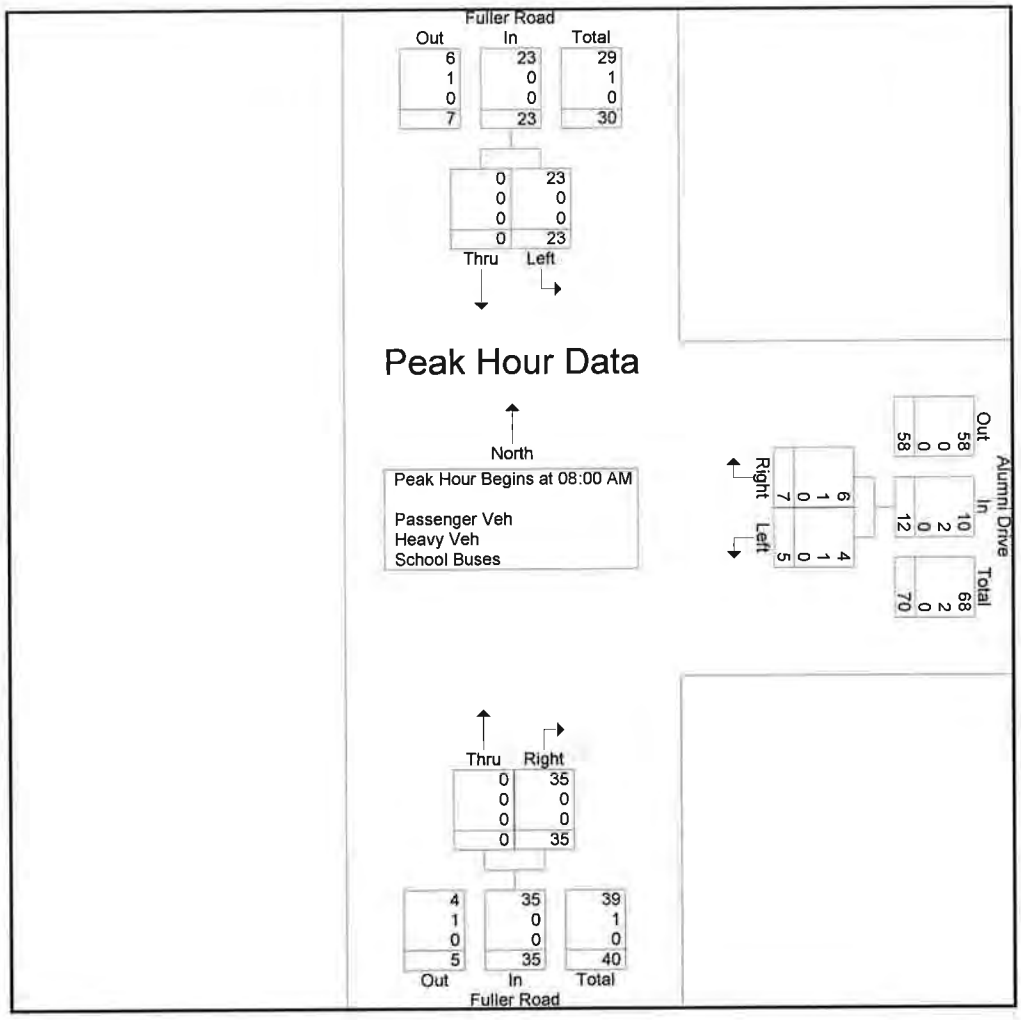
Page No : 2

	Alumni Drive Westbound			Fuller Road Northbound			Fuller Road Southbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 7:30:00 AM to 8:45:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 8:00:00 AM										
8:00:00 AM	**2**	0	2	0	9	9	3	0	3	14
8:15:00 AM	1	2	3	0	6	6	**7**	0	**7**	16
8:30:00 AM	2	**3**	**5**	0	**10**	**10**	7	0	7	**22**
8:45:00 AM	0	2	2	0	10	10	6	0	6	18
Total Volume	5	7	12	0	35	35	23	0	23	70
% App. Total	41.7	58.3		0	100		100	0		
PHF	.625	.583	.600	.000	.875	.875	.821	.000	.821	.795
Passenger Veh	4	6	10	0	35	35	23	0	23	68
% Passenger Veh	80.0	85.7	83.3	0	100	100	100	0	100	97.1
Heavy Veh	1	1	2	0	0	0	0	0	0	2
% Heavy Veh	20.0	14.3	16.7	0	0	0	0	0	0	2.9
School Buses	0	0	0	0	0	0	0	0	0	0
% School Buses	0	0	0	0	0	0	0	0	0	0



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Groups Printed- Passenger Veh - Heavy Veh - School Buses

	Alumni Drive Westbound			Fuller Road Northbound			Fuller Road Southbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	19	13	32	0	5	5	4	0	4	41
04:15 PM	11	9	20	0	4	4	6	0	6	30
04:30 PM	10	6	16	0	1	1	5	0	5	22
04:45 PM	4	14	18	0	3	3	3	0	3	24
Total	44	42	86	0	13	13	18	0	18	117
05:00 PM	8	9	17	0	3	3	0	0	0	20
05:15 PM	11	8	19	0	0	0	5	0	5	24
Grand Total	63	59	122	0	16	16	23	0	23	161
Apprch %	51.6	48.4		0	100		100	0		
Total %	39.1	36.6	75.8	0	9.9	9.9	14.3	0	14.3	
Passenger Veh	63	59	122	0	16	16	23	0	23	161
% Passenger Veh	100	100	100	0	100	100	100	0	100	100
Heavy Veh	0	0	0	0	0	0	0	0	0	0
% Heavy Veh	0	0	0	0	0	0	0	0	0	0
School Buses	0	0	0	0	0	0	0	0	0	0
% School Buses	0	0	0	0	0	0	0	0	0	0

Project No.: 117-314
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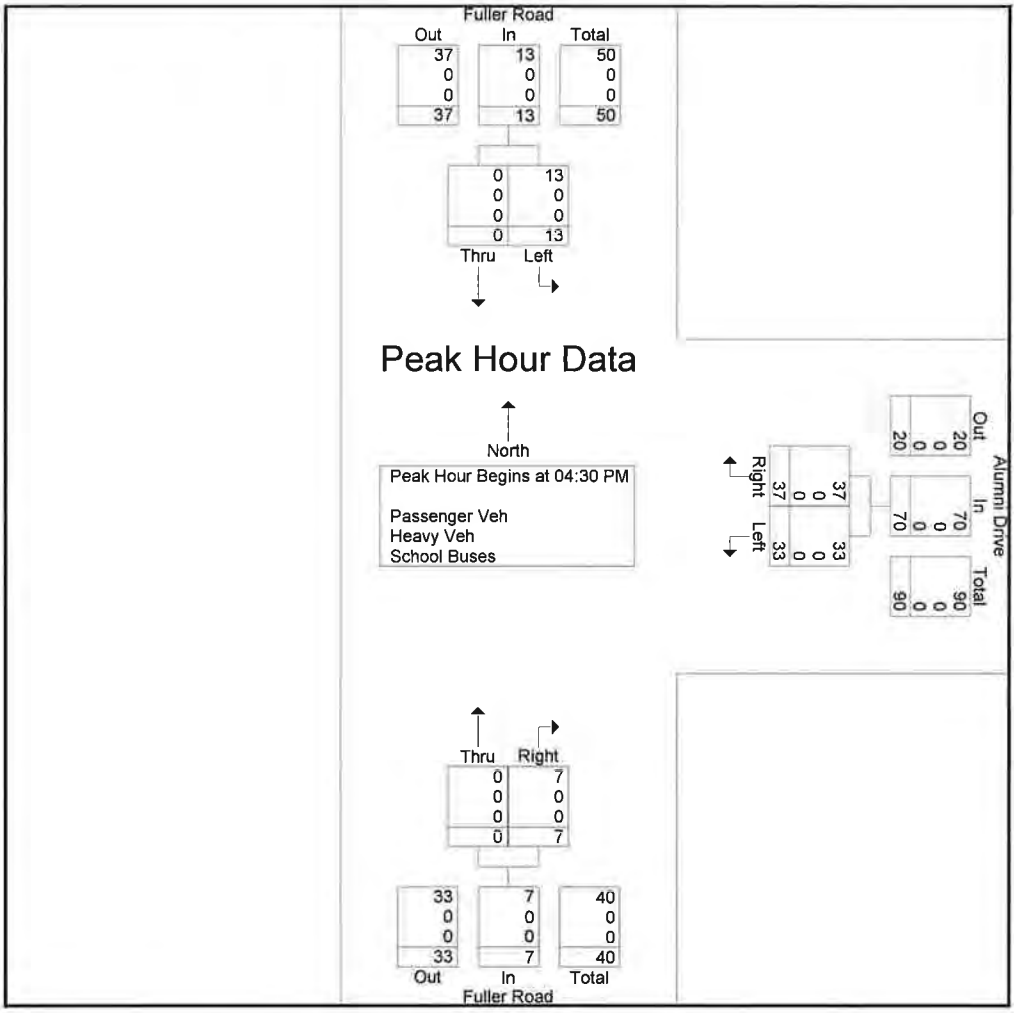
Comments:

File Name : TM117314PM1
Site Code : 17-314-1
Start Date : 11/28/2017
Page No : 2

	Alumni Drive Westbound			Fuller Road Northbound			Fuller Road Southbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 4:30:00 PM to 5:15:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 4:30:00 PM										
4:30:00 PM	10	6	16	0	1	1	**5**	0	**5**	22
4:45:00 PM	**4**	**14**	18	0	**3**	**3**	3	0	3	**24**
5:00:00 PM	8	9	17	0	3	3	0	0	0	20
5:15:00 PM	**11**	8	**19**	0	0	0	5	0	5	24
Total Volume	33	37	70	0	7	7	13	0	13	90
% App. Total	47.1	52.9		0	100		100	0		
PHF	.750	.661	.921	.000	.583	.583	.650	.000	.650	.938
Passenger Veh	33	37	70	0	7	7	13	0	13	90
% Passenger Veh	100	100	100	0	100	100	100	0	100	100
Heavy Veh	0	0	0	0	0	0	0	0	0	0
% Heavy Veh	0	0	0	0	0	0	0	0	0	0
School Buses	0	0	0	0	0	0	0	0	0	0
% School Buses	0	0	0	0	0	0	0	0	0	0



MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-355 -- English (ENU)

Datasets:

Site:	**[116-047] Located on Fuller Rd, 200' South of Loughlin St**
Attribute:	Loughlin St Apartments
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:08 Wednesday, March 30, 2016 => 8:48 Monday, April 04, 2016,
Zone:	
File:	116-047 0 2016-04-04 0849.EC0 (Plus)
Identifier:	FJ79ENC0 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**16:00 Wednesday, March 30, 2016 => 23:00 Sunday, April 03, 2016 (4.29167)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	North, South (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 300 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 46350 / 47201 (98.20%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-355
Site: 116-047.0.1NS
Description: **Located on Fuller Rd, 200' South of Loughlin St**
Filter time: **16:00 Wednesday, March 30, 2016 => 23:00 Sunday, April 03, 2016**
Scheme: Vehicle classification (Scheme F)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NS) Sp(5,100) Headway(>0) Span(0 - 300)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	*	*	*	51.0	55.0	71.0	84.0	53.0	65.3
0100-0200	*	*	*	44.0	48.0	44.0	56.0	46.0	48.0
0200-0300	*	*	*	16.0	36.0	47.0	45.0	26.0	36.0
0300-0400	*	*	*	20.0	33.0	42.0	37.0	26.5	33.0
0400-0500	*	*	*	26.0	24.0	34.0	19.0	25.0	25.8
0500-0600	*	*	*	59.0	77.0	38.0	27.0	68.0	50.3
0600-0700	*	*	*	250.0	246.0	103.0	34.0	248.0	158.3
0700-0800	*	*	*	548.0	564.0	180.0	95.0	556.0	346.8
0800-0900	*	*	*	817.0	750.0	303.0	87.0	783.5	489.3
0900-1000	*	*	*	729.0	730.0	476.0	122.0	729.5	514.3
1000-1100	*	*	*	689.0	700.0	720.0	206.0	694.5	578.8
1100-1200	*	*	*	**905.0**	**958.0**	**832.0**	**325.0**	**931.5**	**755.0**
1200-1300	*	*	*	1108.0	**1218.0**	**943.0**	423.0	**1163.0**	**923.0**
1300-1400	*	*	*	947.0	1062.0	904.0	423.0	1004.5	834.0
1400-1500	*	*	*	951.0	948.0	918.0	388.0	949.5	801.3
1500-1600	*	*	*	985.0	1013.0	838.0	345.0	999.0	795.3
1600-1700	*	*	1088.0	1160.0	1126.0	855.0	338.0	1124.7	913.4
1700-1800	*	*	1106.0	**1180.0**	1131.0	786.0	285.0	1139.0	897.6
1800-1900	*	*	870.0	879.0	851.0	656.0	272.0	866.7	705.6
1900-2000	*	*	707.0	703.0	654.0	580.0	221.0	688.0	573.0
2000-2100	*	*	546.0	521.0	535.0	484.0	165.0	534.0	450.2
2100-2200	*	*	353.0	339.0	384.0	316.0	96.0	358.7	297.6
2200-2300	*	*	157.0	167.0	229.0	200.0	83.0	184.3	167.2
2300-2400	*	*	100.0	101.0	127.0	183.0	*	109.3	127.8
Totals									
0700-1900	*	*	*	10898.0	11051.0	8411.0	3309.0	10941.3	8554.1
0600-2200	*	*	*	12711.0	12870.0	9894.0	3825.0	12770.0	10033.2
0600-0000	*	*	*	12979.0	13226.0	10277.0	*	13063.7	10328.1
0000-0000	*	*	*	13195.0	13499.0	10553.0	*	13308.2	10586.4
AM Peak	*	*	*	1100	1100	1100	1100		
	*	*	*	905.0	958.0	832.0	325.0		
PM Peak	*	*	*	1700	1200	1200	*		
	*	*	*	1180.0	1218.0	943.0	*		

*** - No data.**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-356 -- English (ENU)

Datasets:

Site:	**[116-047] Located on Fuller Rd, 200' South of Loughlin St**
Attribute:	Loughlin St Apartments
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:08 Wednesday, March 30, 2016 => 8:48 Monday, April 04, 2016,
Zone:	
File:	116-047 0 2016-04-04 0849.EC0 (Plus)
Identifier:	FJ79ENC0 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**16:00 Wednesday, March 30, 2016 => 23:00 Sunday, April 03, 2016 (4.29167)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	AB
Separation:	Headway > 0 sec, Span 0 - 300 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 18629 / 47201 (39.47%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-356
Site: 116-047.0.1NS
Description: **Located on Fuller Rd, 200' South of Loughlin St**
Filter time: **16:00 Wednesday, March 30, 2016 => 23:00 Sunday, April 03, 2016**
Scheme: Vehicle classification (Scheme F)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NB) Sp(5,100) Headway(>0) Span(0 - 300)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	*	*	*	24.0	26.0	38.0	38.0	25.0	31.5
0100-0200	*	*	*	24.0	27.0	19.0	23.0	25.5	23.3
0200-0300	*	*	*	9.0	21.0	20.0	25.0	15.0	18.8
0300-0400	*	*	*	10.0	13.0	17.0	17.0	11.5	14.3
0400-0500	*	*	*	10.0	13.0	18.0	9.0	11.5	12.5
0500-0600	*	*	*	32.0	46.0	21.0	8.0	39.0	26.8
0600-0700	*	*	*	158.0	138.0	56.0	11.0	148.0	90.8
0700-0800	*	*	*	278.0	298.0	100.0	**39.0**	288.0	178.8
0800-0900	*	*	*	**445.0**	385.0	151.0	13.0	**415.0**	248.5
0900-1000	*	*	*	371.0	367.0	229.0	0.0	369.0	241.8
1000-1100	*	*	*	314.0	317.0	349.0	0.0	315.5	245.0
1100-1200	*	*	*	393.0	**404.0**	**365.0**	0.0	398.5	**290.5**
1200-1300	*	*	*	**476.0**	**540.0**	372.0	0.0	**508.0**	347.0
1300-1400	*	*	*	473.0	517.0	**405.0**	0.0	495.0	**348.8**
1400-1500	*	*	*	428.0	420.0	364.0	0.0	424.0	303.0
1500-1600	*	*	*	425.0	405.0	358.0	0.0	415.0	297.0
1600-1700	*	*	457.0	469.0	441.0	331.0	0.0	455.7	339.6
1700-1800	*	*	416.0	444.0	423.0	338.0	0.0	427.7	324.2
1800-1900	*	*	314.0	340.0	326.0	292.0	0.0	326.7	254.4
1900-2000	*	*	284.0	289.0	272.0	228.0	0.0	281.7	214.6
2000-2100	*	*	251.0	201.0	221.0	219.0	0.0	224.3	178.4
2100-2200	*	*	163.0	156.0	164.0	127.0	0.0	161.0	122.0
2200-2300	*	*	77.0	88.0	108.0	87.0	0.0	91.0	72.0
2300-2400	*	*	40.0	44.0	62.0	85.0	*	48.7	57.8
Totals									
0700-1900	*	*	*	4856.0	4843.0	3654.0	52.0	4838.0	3418.4
0600-2200	*	*	*	5660.0	5638.0	4284.0	63.0	5653.0	4024.2
0600-0000	*	*	*	5792.0	5808.0	4456.0	*	5792.7	4153.9
0000-0000	*	*	*	5901.0	5954.0	4589.0	*	5920.2	4280.9
AM Peak	*	*	*	0800	1100	1100	0700		
	*	*	*	445.0	404.0	365.0	39.0		
PM Peak	*	*	*	1200	1200	1300	*		
	*	*	*	476.0	540.0	405.0	*		

* - No data.

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-357 -- English (ENU)

Datasets:

Site:	**[116-047] Located on Fuller Rd, 200' South of Loughlin St**
Attribute:	Loughlin St Apartments
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:08 Wednesday, March 30, 2016 => 8:48 Monday, April 04, 2016,
Zone:	
File:	116-047 0 2016-04-04 0849.EC0 (Plus)
Identifier:	FJ79ENC0 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**16:00 Wednesday, March 30, 2016 => 23:00 Sunday, April 03, 2016 (4.29167)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	BA
Separation:	Headway > 0 sec, Span 0 - 300 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 27721 / 47201 (58.73%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-357
Site: 116-047.0.1NS
Description: **Located on Fuller Rd, 200' South of Loughlin St**
Filter time: **16:00 Wednesday, March 30, 2016 => 23:00 Sunday, April 03, 2016**
Scheme: Vehicle classification (Scheme F)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(SB) Sp(5,100) Headway(>0) Span(0 - 300)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	*	*	*	27.0	29.0	33.0	46.0	28.0	33.8
0100-0200	*	*	*	20.0	21.0	25.0	33.0	20.5	24.8
0200-0300	*	*	*	7.0	15.0	27.0	20.0	11.0	17.3
0300-0400	*	*	*	10.0	20.0	25.0	20.0	15.0	18.8
0400-0500	*	*	*	16.0	11.0	16.0	10.0	13.5	13.3
0500-0600	*	*	*	27.0	31.0	17.0	19.0	29.0	23.5
0600-0700	*	*	*	92.0	108.0	47.0	23.0	100.0	67.5
0700-0800	*	*	*	270.0	266.0	80.0	56.0	268.0	168.0
0800-0900	*	*	*	372.0	365.0	152.0	74.0	368.5	240.8
0900-1000	*	*	*	358.0	363.0	247.0	122.0	360.5	272.5
1000-1100	*	*	*	375.0	383.0	371.0	206.0	379.0	333.8
1100-1200	*	*	*	**512.0**	**554.0**	**467.0**	**325.0**	**533.0**	**464.5**
1200-1300	*	*	*	632.0	678.0	**571.0**	423.0	655.0	**576.0**
1300-1400	*	*	*	474.0	545.0	499.0	423.0	509.5	485.3
1400-1500	*	*	*	523.0	528.0	554.0	388.0	525.5	498.3
1500-1600	*	*	*	560.0	608.0	480.0	345.0	584.0	498.3
1600-1700	*	*	631.0	691.0	685.0	524.0	338.0	669.0	573.8
1700-1800	*	*	690.0	**736.0**	**708.0**	448.0	285.0	**711.3**	573.4
1800-1900	*	*	556.0	539.0	525.0	364.0	272.0	540.0	451.2
1900-2000	*	*	423.0	414.0	382.0	352.0	221.0	406.3	358.4
2000-2100	*	*	295.0	320.0	314.0	265.0	165.0	309.7	271.8
2100-2200	*	*	190.0	183.0	220.0	189.0	96.0	197.7	175.6
2200-2300	*	*	80.0	79.0	121.0	113.0	83.0	93.3	95.2
2300-2400	*	*	60.0	57.0	65.0	98.0	*	60.7	70.0
Totals									
0700-1900	*	*	*	6042.0	6208.0	4757.0	3257.0	6103.3	5135.6
0600-2200	*	*	*	7051.0	7232.0	5610.0	3762.0	7117.0	6008.9
0600-0000	*	*	*	7187.0	7418.0	5821.0	*	7271.0	6174.1
0000-0000	*	*	*	7294.0	7545.0	5964.0	*	7388.0	6305.4
AM Peak	*	*	*	1100	1100	1100	1100		
	*	*	*	512.0	554.0	467.0	325.0		
PM Peak	*	*	*	1700	1700	1200	*		
	*	*	*	736.0	708.0	571.0	*		

* - No data.

MetroCount Traffic Executive
Speed Statistics

SpeedStat-358 -- English (ENU)

Datasets:

Site:	**[116-047] Located on Fuller Rd, 200' South of Loughlin St**
Attribute:	Loughlin St Apartments
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:08 Wednesday, March 30, 2016 => 8:48 Monday, April 04, 2016,
Zone:	
File:	116-047 0 2016-04-04 0849.EC0 (Plus)
Identifier:	FJ79ENC0 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**16:00 Wednesday, March 30, 2016 => 23:00 Sunday, April 03, 2016 (4.29167)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	North, South (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 300 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 46350 / 47201 (98.20%)

Speed Statistics

SpeedStat-358
Site: 116-047.0.1NS
Description: **Located on Fuller Rd, 200' South of Loughlin St**
Filter time: **16:00 Wednesday, March 30, 2016 => 23:00 Sunday, April 03, 2016**
Scheme: Vehicle classification (Scheme F)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NS) Sp(5,100) Headway(>0) Span(0 - 300)

Vehicles = 46350
Posted speed limit = 30 mph, Exceeding = 42382 (91.44%), Mean Exceeding = 37.41 mph
Maximum = 73.8 mph, **Minimum** = 6.0 mph, **Mean** = 36.2 mph
85% Speed = 40.9 mph, **95% Speed** = 43.8 mph, **Median** = 36.5 mph
10 mph Pace = 32 - 42, **Number in Pace** = 34503 (74.44%)
Variance = 31.07, **Standard Deviation** = 5.57 mph

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 5	0	0.0%	0	0.0%	46350	100.0%	0.00	0.00	0.00
5 - 10	25	0.1%	25	0.1%	46325	99.9%	0.00	0.00	0.00
10 - 15	308	0.7%	333	0.7%	46017	99.3%	0.00	0.00	0.00
15 - 20	873	1.9%	1206	2.6%	45144	97.4%	0.00	0.00	0.00
20 - 25	571	1.2%	1777	3.8%	44573	96.2%	0.00	0.00	0.00
25 - 30	2191	4.7%	3968	8.6%	42382	91.4%	0.00	0.00	0.00
30 - 35	12186	26.3%	16154	34.9%	30196	65.1%	0.00	0.00	0.00
35 - 40	20146	43.5%	36300	78.3%	10050	21.7%	0.00	0.00	0.00
40 - 45	8499	18.3%	44799	96.7%	1551	3.3%	0.00	0.00	0.00
45 - 50	1381	3.0%	46180	99.6%	170	0.4%	0.00	0.00	0.00
50 - 55	145	0.3%	46325	99.9%	25	0.1%	0.00	0.00	0.00
55 - 60	21	0.0%	46346	100.0%	4	0.0%	0.00	0.00	0.00
60 - 65	1	0.0%	46347	100.0%	3	0.0%	0.00	0.00	0.00
65 - 70	2	0.0%	46349	100.0%	1	0.0%	0.00	0.00	0.00
70 - 75	1	0.0%	46350	100.0%	0	0.0%	0.00	0.00	0.00
75 - 80	0	0.0%	46350	100.0%	0	0.0%	0.00	0.00	0.00
80 - 85	0	0.0%	46350	100.0%	0	0.0%	0.00	0.00	0.00
85 - 90	0	0.0%	46350	100.0%	0	0.0%	0.00	0.00	0.00
90 - 95	0	0.0%	46350	100.0%	0	0.0%	0.00	0.00	0.00
95 - 100	0	0.0%	46350	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	30 (PSL)	3968	8.6%	42382	91.4%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-359 -- English (ENU)

Datasets:

Site:	**[116-047] Located on Fuller Rd, 200' South of Loughlin St**
Attribute:	Loughlin St Apartments
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:08 Wednesday, March 30, 2016 => 8:48 Monday, April 04, 2016,
Zone:	
File:	116-047 0 2016-04-04 0849.EC0 (Plus)
Identifier:	FJ79ENC0 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**16:00 Wednesday, March 30, 2016 => 23:00 Sunday, April 03, 2016 (4.29167)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	AB
Separation:	Headway > 0 sec, Span 0 - 300 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 18629 / 47201 (39.47%)

Speed Statistics

SpeedStat-359
Site: 116-047.0.1NS
Description: **Located on Fuller Rd, 200' South of Loughlin St**
Filter time: **16:00 Wednesday, March 30, 2016 => 23:00 Sunday, April 03, 2016**
Scheme: Vehicle classification (Scheme F)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NB) Sp(5,100) Headway(>0) Span(0 - 300)

Vehicles = 18629
Posted speed limit = 30 mph, Exceeding = 16657 (89.41%), Mean Exceeding = 37.59 mph
Maximum = 68.9 mph, **Minimum** = 6.0 mph, **Mean** = 36.0 mph
85% Speed = 41.4 mph, **95% Speed** = 44.3 mph, **Median** = 36.5 mph
10 mph Pace = 32 - 42, **Number in Pace** = 13209 (70.91%)
Variance = 40.15, **Standard Deviation** = 6.34 mph

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 5	0	0.0%	0	0.0%	18629	100.0%	0.00	0.00	0.00
5 - 10	9	0.0%	9	0.0%	18620	100.0%	0.00	0.00	0.00
10 - 15	238	1.3%	247	1.3%	18382	98.7%	0.00	0.00	0.00
15 - 20	581	3.1%	828	4.4%	17801	95.6%	0.00	0.00	0.00
20 - 25	202	1.1%	1030	5.5%	17599	94.5%	0.00	0.00	0.00
25 - 30	942	5.1%	1972	10.6%	16657	89.4%	0.00	0.00	0.00
30 - 35	4753	25.5%	6725	36.1%	11904	63.9%	0.00	0.00	0.00
35 - 40	7553	40.5%	14278	76.6%	4351	23.4%	0.00	0.00	0.00
40 - 45	3587	19.3%	17865	95.9%	764	4.1%	0.00	0.00	0.00
45 - 50	666	3.6%	18531	99.5%	98	0.5%	0.00	0.00	0.00
50 - 55	83	0.4%	18614	99.9%	15	0.1%	0.00	0.00	0.00
55 - 60	13	0.1%	18627	100.0%	2	0.0%	0.00	0.00	0.00
60 - 65	0	0.0%	18627	100.0%	2	0.0%	0.00	0.00	0.00
65 - 70	2	0.0%	18629	100.0%	0	0.0%	0.00	0.00	0.00
70 - 75	0	0.0%	18629	100.0%	0	0.0%	0.00	0.00	0.00
75 - 80	0	0.0%	18629	100.0%	0	0.0%	0.00	0.00	0.00
80 - 85	0	0.0%	18629	100.0%	0	0.0%	0.00	0.00	0.00
85 - 90	0	0.0%	18629	100.0%	0	0.0%	0.00	0.00	0.00
90 - 95	0	0.0%	18629	100.0%	0	0.0%	0.00	0.00	0.00
95 - 100	0	0.0%	18629	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	30 (PSL)	1972	10.6%	16657	89.4%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-360 -- English (ENU)

Datasets:

Site:	**[116-047] Located on Fuller Rd, 200' South of Loughlin St**
Attribute:	Loughlin St Apartments
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:08 Wednesday, March 30, 2016 => 8:48 Monday, April 04, 2016,
Zone:	
File:	116-047 0 2016-04-04 0849.EC0 (Plus)
Identifier:	FJ79ENC0 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**16:00 Wednesday, March 30, 2016 => 23:00 Sunday, April 03, 2016 (4.29167)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	BA
Separation:	Headway > 0 sec, Span 0 - 300 ft
Name:	Default Profile
Scheme:	Vehicle classification (Scheme F)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 27721 / 47201 (58.73%)

Speed Statistics

SpeedStat-360
Site: 116-047.0.1NS
Description: **Located on Fuller Rd, 200' South of Loughlin St**
Filter time: **16:00 Wednesday, March 30, 2016 => 23:00 Sunday, April 03, 2016**
Scheme: Vehicle classification (Scheme F)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(SB) Sp(5,100) Headway(>0) Span(0 - 300)

Vehicles = 27721
Posted speed limit = 30 mph, Exceeding = 25725 (92.80%), Mean Exceeding = 37.30 mph
Maximum = 73.8 mph, **Minimum** = 6.1 mph, **Mean** = 36.4 mph
85% Speed = 40.7 mph, **95% Speed** = 43.6 mph, **Median** = 36.5 mph
10 mph Pace = 32 - 42, **Number in Pace** = 21306 (76.86%)
Variance = 24.90, **Standard Deviation** = 4.99 mph

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 5	0	0.0%	0	0.0%	27721	100.0%	0.00	0.00	0.00
5 - 10	16	0.1%	16	0.1%	27705	99.9%	0.00	0.00	0.00
10 - 15	70	0.3%	86	0.3%	27635	99.7%	0.00	0.00	0.00
15 - 20	292	1.1%	378	1.4%	27343	98.6%	0.00	0.00	0.00
20 - 25	369	1.3%	747	2.7%	26974	97.3%	0.00	0.00	0.00
25 - 30	1249	4.5%	1996	7.2%	25725	92.8%	0.00	0.00	0.00
30 - 35	7433	26.8%	9429	34.0%	18292	66.0%	0.00	0.00	0.00
35 - 40	12593	45.4%	22022	79.4%	5699	20.6%	0.00	0.00	0.00
40 - 45	4912	17.7%	26934	97.2%	787	2.8%	0.00	0.00	0.00
45 - 50	715	2.6%	27649	99.7%	72	0.3%	0.00	0.00	0.00
50 - 55	62	0.2%	27711	100.0%	10	0.0%	0.00	0.00	0.00
55 - 60	8	0.0%	27719	100.0%	2	0.0%	0.00	0.00	0.00
60 - 65	1	0.0%	27720	100.0%	1	0.0%	0.00	0.00	0.00
65 - 70	0	0.0%	27720	100.0%	1	0.0%	0.00	0.00	0.00
70 - 75	1	0.0%	27721	100.0%	0	0.0%	0.00	0.00	0.00
75 - 80	0	0.0%	27721	100.0%	0	0.0%	0.00	0.00	0.00
80 - 85	0	0.0%	27721	100.0%	0	0.0%	0.00	0.00	0.00
85 - 90	0	0.0%	27721	100.0%	0	0.0%	0.00	0.00	0.00
90 - 95	0	0.0%	27721	100.0%	0	0.0%	0.00	0.00	0.00
95 - 100	0	0.0%	27721	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	30 (PSL)	1996	7.2%	25725	92.8%

Attachment C
Level of Service Analyses

Sandidge Way Residential Development
City of Albany, New York

LOS Definitions

The following is an excerpt from the 2010 Highway Capacity Manual (HCM).

Level of Service for Signalized Intersections

Level of Service (LOS) can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay *and* volume-to-capacity (v/c) ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a surrogate measure of driver discomfort and fuel consumption. The v/c ratio quantifies the degree to which a phase's capacity is utilized by a lane group. The following paragraphs describe each LOS.

LOS A describes operations with a control delay of 10 s/veh or less and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B describes operations with control delay between 10 and 20 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C describes operations with control delay between 20 and 35 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D describes operations with control delay between 35 and 55 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E describes operations with control delay between 55 and 80 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F describes operations with control delay exceeding 80 s/veh or a v/c ratio greater than 1.0. This level is typically assigned when the v/c ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

A lane group can incur a delay less than 80 s/veh when the v/c ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and v/c ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 80 s/veh represents failure from a delay perspective).

Average control delay and queue length at roundabout controlled intersections are calculated using SIDRA Intersection. The physical geometry such as entry lane width and approach flare, and traffic volume at the roundabout are factors that influence the intersection’s performance. The average delay reported using SIDRA Intersection is based on the signalized HCM Method of Delay for Level-of-Service.

Level of Service Criteria for Unsignalized Intersections

Level of service (LOS) for Two-Way Stop-Controlled (TWSC) intersections is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns by using criteria given in Exhibit 19-1. LOS is not defined for the intersection as a whole or for major-street approaches for three primary reasons: (a) major-street through vehicles are assumed to experience zero delay; (b) the disproportionate number of major-street through vehicles at a typical TWSC intersection skews the weighted average of all movements, resulting in a very low overall average delay for all vehicles; and (c) the resulting low delay can mask important LOS deficiencies for minor movements. LOS F is assigned to the movement if the volume-to-capacity (v/c) ratio for the movement exceeds 1.0, regardless of the control delay.

The LOS criteria for TWSC intersections are somewhat different from the criteria used in Chapter 18 for signalized intersections, primarily because user perceptions differ among transportation facility types. The expectation is that a signalized intersection is designed to carry higher traffic volumes and will present greater delay than an unsignalized intersection. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable than they are at signals, which can reduce users' delay tolerance.

The LOS criteria for All-Way Stop-Controlled (AWSC) intersections are given in Exhibit 20-2. LOS F is assigned if the v/c ratio of a lane exceeds 1.0, regardless of the control delay. For assessment of LOS at the approach and intersection levels, LOS is based solely on control delay.

Exhibits 19-1/20-2:
Level-of-Service Criteria for Stop Controlled Intersections

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	v/c ≥ 1.0
10.0	A	F
>10.0 and ≤ 15.0	B	F
>15.0 and ≤ 25.0	C	F
>25.0 and ≤ 35.0	D	F
>35.0 and ≤ 50.0	E	F
>50.0	F	F

LANE SUMMARY

Site: 101 [Fuller/Tricentennial - Existing 2017 - AM Peak]

Fuller Road/Tricentennial Dr
Existing 2017
AM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Fuller Road NB													
Lane 1[d]	454	1.7	860	0.528	100	5.9	LOS A	3.3	84.0	Full	425	0.0	0.0
Approach	454	1.7		0.528		5.9	LOS A	3.3	84.0				
East: Tricentennial Drive WB													
Lane 1[d]	67	5.1	664	0.101	100	7.0	LOS A	0.5	13.6	Full	350	0.0	0.0
Approach	67	5.1		0.101		7.0	LOS A	0.5	13.6				
North: Fuller Road SB													
Lane 1[d]	548	3.6	1117	0.490	100	5.3	LOS A	3.8	97.0	Full	1100	0.0	0.0
Lane 2	497	2.0	1088	0.457	100	4.5	LOS A	3.4	85.3	Short	120	0.0	NA
Approach	1045	2.9		0.490		4.9	LOS A	3.8	97.0				
West: Tricentennial Drive EB													
Lane 1	26	12.5	562	0.046	100	11.7	LOS B	0.2	6.6	Short	200	0.0	NA
Lane 2[d]	37	15.1	616	0.060	100	6.9	LOS A	0.3	8.9	Full	425	0.0	0.0
Approach	63	14.0		0.060		8.9	LOS A	0.3	8.9				
Intersection	1629	3.0		0.528		5.4	LOS A	3.8	97.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: 101 [Fuller/Tricentennial - Existing 2017 - PM Peak]

Fuller Road/Tricentennial Dr
Existing 2017
PM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Fuller Road NB													
Lane 1[d]	451	0.0	588	0.766	100	12.7	LOS B	6.9	171.4	Full	425	0.0	0.0
Approach	451	0.0		0.766		12.7	LOS B	6.9	171.4				
East: Tricentennial Drive WB													
Lane 1[d]	227	1.5	450	0.506	100	16.5	LOS B	3.8	96.2	Full	350	0.0	0.0
Approach	227	1.5		0.506		16.5	LOS B	3.8	96.2				
North: Fuller Road SB													
Lane 1[d]	618	0.9	1250	0.494	100	4.0	LOS A	4.4	110.4	Full	1100	0.0	0.0
Lane 2	36	0.0	694	0.052	100	4.3	LOS A	0.3	6.6	Short	120	0.0	NA
Approach	654	0.8		0.494		4.0	LOS A	4.4	110.4				
West: Tricentennial Drive EB													
Lane 1[d]	408	0.0	691	0.590	100	16.0	LOS B	5.5	138.5	Short	200	0.0	NA
Lane 2	290	1.4	594	0.489	100	11.0	LOS B	3.7	93.8	Full	425	0.0	0.0
Approach	698	0.6		0.590		13.9	LOS B	5.5	138.5				
Intersection	2030	0.6		0.766		10.7	LOS B	6.9	171.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: 101 [Fuller/Tricentennial - No-Build 2022 - AM Peak]

Fuller Road/Tricentennial Dr
No-Build 2022
AM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Fuller Road NB													
Lane 1[d]	505	1.7	832	0.607	100	7.3	LOS A	4.6	117.6	Full	425	0.0	0.0
Approach	505	1.7		0.607		7.3	LOS A	4.6	117.6				
East: Tricentennial Drive WB													
Lane 1[d]	79	5.3	616	0.129	100	7.5	LOS A	0.7	17.9	Full	350	0.0	0.0
Approach	79	5.3		0.129		7.5	LOS A	0.7	17.9				
North: Fuller Road SB													
Lane 1	575	3.6	1011	0.569	100	6.0	LOS A	4.7	120.1	Full	1100	0.0	0.0
Lane 2[d]	637	2.0	1080	0.590	100	5.1	LOS A	5.0	128.1	Short	120	0.0	NA
Approach	1212	2.8		0.590		5.5	LOS A	5.0	128.1				
West: Tricentennial Drive EB													
Lane 1	36	12.6	532	0.067	100	12.1	LOS B	0.4	9.9	Short	200	0.0	NA
Lane 2[d]	50	15.3	582	0.086	100	7.2	LOS A	0.5	13.3	Full	425	0.0	0.0
Approach	86	14.2		0.086		9.3	LOS A	0.5	13.3				
Intersection	1883	3.1		0.607		6.2	LOS A	5.0	128.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: 101 [Fuller/Tricentennial - No-Build 2022 - PM Peak]

Fuller Road/Tricentennial Dr
No-Build 2022
PM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Fuller Road NB													
Lane 1[d]	479	0.0	519	0.923	100	24.3	LOS C	12.0	298.9	Full	425	0.0	0.0
Approach	479	0.0		0.923		24.3	LOS C	12.0	298.9				
East: Tricentennial Drive WB													
Lane 1[d]	248	1.9	368	0.674	100	27.0	LOS C	6.3	159.3	Full	350	0.0	0.0
Approach	248	1.9		0.674		27.0	LOS C	6.3	159.3				
North: Fuller Road SB													
Lane 1[d]	649	0.9	1212	0.536	100	4.2	LOS A	5.0	125.4	Full	1100	0.0	0.0
Lane 2	51	0.0	670	0.075	100	4.6	LOS A	0.4	9.8	Short	120	0.0	NA
Approach	700	0.8		0.536		4.3	LOS A	5.0	125.4				
West: Tricentennial Drive EB													
Lane 1[d]	504	0.0	655	0.770	100	23.1	LOS C	10.2	255.7	Short	200	0.0	NA
Lane 2	359	1.4	561	0.640	100	15.4	LOS B	6.2	156.1	Full	425	0.0	0.0
Approach	864	0.6		0.770		19.9	LOS B	10.2	255.7				
Intersection	2291	0.7		0.923		16.8	LOS B	12.0	298.9				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: 101 [Fuller/Tricentennial - Build 2022 - AM Peak]

Fuller Road/Tricentennial Dr
Build 2022
AM Peak
Roundabout

Lane Use and Performance													
	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Fuller Road NB													
Lane 1[d]	547	1.7	838	0.652	100	7.7	LOS A	5.5	140.4	Full	425	0.0	0.0
Approach	547	1.7		0.652		7.7	LOS A	5.5	140.4				
East: Tricentennial Drive WB													
Lane 1[d]	80	5.3	586	0.137	100	7.9	LOS A	0.7	19.3	Full	350	0.0	0.0
Approach	80	5.3		0.137		7.9	LOS A	0.7	19.3				
North: Fuller Road SB													
Lane 1	588	3.6	1014	0.580	100	6.0	LOS A	4.8	124.7	Full	1100	0.0	0.0
Lane 2[d]	637	2.0	1077	0.591	100	5.1	LOS A	5.1	129.2	Short	120	0.0	NA
Approach	1225	2.8		0.591		5.5	LOS A	5.1	129.2				
West: Tricentennial Drive EB													
Lane 1	36	12.6	521	0.069	100	12.2	LOS B	0.4	10.2	Short	200	0.0	NA
Lane 2[d]	50	15.3	571	0.088	100	7.4	LOS A	0.5	13.7	Full	425	0.0	0.0
Approach	86	14.2		0.088		9.4	LOS A	0.5	13.7				
Intersection	1938	3.1		0.652		6.4	LOS A	5.5	140.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: 101 [Fuller/Tricentennial - Build 2022 - PM Peak]

Fuller Road/Tricentennial Dr
Build 2022
PM Peak
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Fuller Road NB													
Lane 1[d]	507	0.0	515	0.985	100	34.7	LOS C	16.5	412.0	Full	425	0.0	4.1
Approach	507	0.0		0.985		34.7	LOS C	16.5	412.0				
East: Tricentennial Drive WB													
Lane 1[d]	252	1.9	355	0.708	100	30.4	LOS C	6.9	175.1	Full	350	0.0	0.0
Approach	252	1.9		0.708		30.4	LOS C	6.9	175.1				
North: Fuller Road SB													
Lane 1[d]	690	0.9	1205	0.573	100	4.3	LOS A	5.6	140.8	Full	1100	0.0	0.0
Lane 2	51	0.0	663	0.076	100	4.7	LOS A	0.4	9.8	Short	120	0.0	NA
Approach	741	0.8		0.573		4.3	LOS A	5.6	140.8				
West: Tricentennial Drive EB													
Lane 1[d]	504	0.0	614	0.821	100	28.0	LOS C	12.2	306.1	Short	200	0.0	NA
Lane 2	359	1.4	524	0.685	100	18.3	LOS B	7.1	178.7	Full	425	0.0	0.0
Approach	864	0.6		0.821		24.0	LOS C	12.2	306.1				
Intersection	2363	0.7		0.985		20.8	LOS C	16.5	412.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	16	6	470	405	11
Future Vol, veh/h	32	16	6	470	405	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	3	4	0
Mvmt Flow	37	18	7	540	466	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1027	473	479	0	-	0
Stage 1	473	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	262	595	1094	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	260	595	1094	-	-	-
Mov Cap-2 Maneuver	260	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	580	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.6	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1094	-	320	-	-
HCM Lane V/C Ratio	0.006	-	0.172	-	-
HCM Control Delay (s)	8.3	0	18.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	16	6	470	405	11
Future Vol, veh/h	32	16	6	470	405	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	3	4	0
Mvmt Flow	37	18	7	540	466	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1027	473	479	0	-	0
Stage 1	473	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	262	595	1094	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	260	595	1094	-	-	-
Mov Cap-2 Maneuver	391	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	580	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.3	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1094	-	441	-	-
HCM Lane V/C Ratio	0.006	-	0.125	-	-
HCM Control Delay (s)	8.3	0	14.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	11	16	439	785	33
Future Vol, veh/h	21	11	16	439	785	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	2	1	0
Mvmt Flow	22	11	16	453	809	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1311	826	843	0	-	0
Stage 1	826	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	177	375	802	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	172	375	802	-	-	-
Mov Cap-2 Maneuver	172	-	-	-	-	-
Stage 1	421	-	-	-	-	-
Stage 2	623	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.2	0.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	802	-	211	-	-
HCM Lane V/C Ratio	0.021	-	0.156	-	-
HCM Control Delay (s)	9.6	0	25.2	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	11	16	439	785	33
Future Vol, veh/h	21	11	16	439	785	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	2	1	0
Mvmt Flow	22	11	16	453	809	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1311	826	843	0	-	0
Stage 1	826	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	177	375	802	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	172	375	802	-	-	-
Mov Cap-2 Maneuver	302	-	-	-	-	-
Stage 1	421	-	-	-	-	-
Stage 2	623	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.4	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	802	-	324	-	-
HCM Lane V/C Ratio	0.021	-	0.102	-	-
HCM Control Delay (s)	9.6	0	17.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	7	410	35	23	359
Future Vol, veh/h	5	7	410	35	23	359
Conflicting Peds, #/hr	0	1	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	20	14	3	0	0	5
Mvmt Flow	6	8	471	40	26	413

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	957	493	0	0	512	0
Stage 1	492	-	-	-	-	-
Stage 2	465	-	-	-	-	-
Critical Hdwy	6.6	6.34	-	-	4.1	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.426	-	-	2.2	-
Pot Cap-1 Maneuver	265	553	-	-	1064	-
Stage 1	579	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	256	552	-	-	1063	-
Mov Cap-2 Maneuver	375	-	-	-	-	-
Stage 1	560	-	-	-	-	-
Stage 2	596	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	461	1063	-
HCM Lane V/C Ratio	-	-	0.03	0.025	-
HCM Control Delay (s)	-	-	13.1	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	7	457	37	24	379
Future Vol, veh/h	5	7	457	37	24	379
Conflicting Peds, #/hr	0	1	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	20	14	3	0	0	5
Mvmt Flow	6	8	525	43	28	436

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1040	549	0	0	569	0
Stage 1	548	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.6	6.34	-	-	4.1	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.426	-	-	2.2	-
Pot Cap-1 Maneuver	236	513	-	-	1013	-
Stage 1	545	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	227	512	-	-	1012	-
Mov Cap-2 Maneuver	349	-	-	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	579	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	429	1012	-
HCM Lane V/C Ratio	-	-	0.032	0.027	-
HCM Control Delay (s)	-	-	13.7	8.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	0	9	5	0	7	3	463	37	24	395	2
Future Vol, veh/h	6	0	9	5	0	7	3	463	37	24	395	2
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	20	0	14	0	3	0	0	5	0
Mvmt Flow	7	0	10	6	0	8	3	532	43	28	454	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1076	1093	455	1077	1073	556	456	0	0	576	0	0
Stage 1	511	511	-	561	561	-	-	-	-	-	-	-
Stage 2	565	582	-	516	512	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.3	6.5	6.34	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.3	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.3	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.68	4	3.426	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	199	216	609	182	222	508	1115	-	-	1007	-	-
Stage 1	549	540	-	482	513	-	-	-	-	-	-	-
Stage 2	513	502	-	510	540	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	190	207	609	173	213	507	1115	-	-	1006	-	-
Mov Cap-2 Maneuver	318	320	-	298	332	-	-	-	-	-	-	-
Stage 1	547	520	-	480	510	-	-	-	-	-	-	-
Stage 2	502	499	-	483	520	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.4	14.5	0	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1115	-	-	446	392	1006	-	-
HCM Lane V/C Ratio	0.003	-	-	0.039	0.035	0.027	-	-
HCM Control Delay (s)	8.2	0	-	13.4	14.5	8.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	37	372	7	13	698
Future Vol, veh/h	33	37	372	7	13	698
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	3	0	0	1
Mvmt Flow	34	38	384	7	13	720

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1136	390	0	0	393	0
Stage 1	390	-	-	-	-	-
Stage 2	746	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	225	663	-	-	1177	-
Stage 1	689	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	221	662	-	-	1176	-
Mov Cap-2 Maneuver	344	-	-	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	472	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	461	1176	-
HCM Lane V/C Ratio	-	-	0.157	0.011	-
HCM Control Delay (s)	-	-	14.3	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	39	396	7	14	764
Future Vol, veh/h	35	39	396	7	14	764
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	3	0	0	1
Mvmt Flow	36	40	408	7	14	788

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1230	414	0	0	417	0
Stage 1	414	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	198	643	-	-	1153	-
Stage 1	671	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	193	642	-	-	1152	-
Mov Cap-2 Maneuver	317	-	-	-	-	-
Stage 1	656	-	-	-	-	-
Stage 2	438	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	432	1152	-
HCM Lane V/C Ratio	-	-	0.177	0.013	-
HCM Control Delay (s)	-	-	15.1	8.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Intersection												
Int Delay, s/veh	1.2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	6	35	0	39	10	412	7	14	775	7
Future Vol, veh/h	4	0	6	35	0	39	10	412	7	14	775	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	1	0
Mvmt Flow	4	0	6	36	0	40	10	425	7	14	799	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1300	1285	803	1285	1285	431	806	0	0	434	0	0
Stage 1	831	831	-	451	451	-	-	-	-	-	-	-
Stage 2	469	454	-	834	834	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	140	166	387	143	166	629	828	-	-	1136	-	-
Stage 1	367	387	-	592	574	-	-	-	-	-	-	-
Stage 2	579	573	-	365	386	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	127	159	387	136	159	628	828	-	-	1134	-	-
Mov Cap-2 Maneuver	250	273	-	252	271	-	-	-	-	-	-	-
Stage 1	361	378	-	581	564	-	-	-	-	-	-	-
Stage 2	533	563	-	351	378	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.7	17.3	0.2	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	828	-	-	317	368	1134	-	-
HCM Lane V/C Ratio	0.012	-	-	0.033	0.207	0.013	-	-
HCM Control Delay (s)	9.4	0	-	16.7	17.3	8.2	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.8	0	-	-