Traffic Impact Study
for the proposed

Route 434 Mixed Use Development

Town of Owego, Tioga County, New York

July, 2005

Project No. 25008

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2. TRIP GENERATION, SEVENTH EDITION, INSTITUTE OF TRANSPORTATION ENGINEERS, 2003.
3. A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), 2004.
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EXECUTIVE SUMMARY

OVERVIEW

The purpose of this report is to identify the potential traffic impact associated with the proposed Route 434 Mixed Use development in the Town/Village of Owego, Tioga County, New York. This report investigates the existing and projects the future weekday AM and PM peak hour travel conditions at the site access drives and adjacent intersections affected by the development. The operating characteristics of the access points and impacts to the adjacent roadway network are identified.

The proposed site is bounded by Southside Drive (NYS Route 434) to the north, commercial office, residential and agricultural land uses to the east and west, and Strong Road to the south in the Town/Village of Owego, Tioga County, New York. The site is currently vacant. The proposed development consists of 90,000± square feet of office space, 100,000± square feet of light industrial uses, 30,000± square feet retail space, a 15,000± square feet health care facility, 70 units of senior independent living, 30 units of townhouses, 30 units of multi-family residential homes, a 50 unit assisted living facility, 26 single family homes, and open space and park area. Access is planned via one proposed driveway on Southside Drive (NYS Route 434) and one driveway on Strong Road. Internal connections to the adjacent residential development to the west may also be provided as development continues.

The study area consists of four existing intersections surrounding the project site: Southside Drive/Halstead Avenue, Southside Drive/Court Street, Court-Park Streets/Front Street, Montrose Turnpike/Strong Road. A comprehensive inventory of the existing roadway network operations was developed and peak period traffic volume data were collected by SRF & Associates (SRFA). Discussions with Town/Village of Owego indicated that there are other projects that are currently planned and/or under construction within the project study area that could add specific site generated traffic to the roadway network surrounding the project site. Therefore, increases in current traffic volumes have been included to account for nearby known future developments and other growth in ambient traffic volumes over the build out period for the proposed development (five years).

Site generated traffic volumes for the proposed development, based on data contained in the Institute of Traffic Engineers (ITE) Trip Generation, are distributed to the network based on existing travel patterns, population centers, and existing highway conditions.

CONCLUSIONS AND RECOMMENDATIONS

This report addresses the traffic impact that can be expected from development of the proposed Route 434 Mixed Use development in the Town/Village of Owego. It indicates that the existing transportation network can adequately accommodate the projected traffic volumes and resulting impacts to study area intersections. Both site driveways provide adequate sight distance for safe ingress and egress at the site.

The following list summarizes recommendations to be considered as a result of this development:

1. Provide two new full access driveways to the site. One driveway will access at Southside Drive (Route 434) and the other will access at Strong Road.

2. Construct the main site driveway along Route 434 with two exiting lanes (one left turn lane and one right turn lane) and one entering lane.

3. Construct the secondary site driveway at Strong Road with one exiting lane and one entering lane.

4. Both driveways shall be stop controlled at their intersections with the adjacent street.

5. The Town should remove any vegetation along Montrose Turnpike that currently obstructs sight distance at the Strong Road intersection.

6. A southbound right turn lane and a northbound left turn lane are recommended at the main site driveway intersection with Route 434 prior to completion of the Phase I development.

7. The applicant should conduct an interim traffic assessment after the first office building (approximately 45,000 s.f.) is constructed and in operation to determine the timing of the recommended right and left turn lanes.

8. It is imperative that site amenities such as signs and landscaping be located so as not to interfere with sight distance at the site driveways. In addition, any existing vegetation that blocks sight distance from the Route 434 site driveway should be cleared to the extent practicable.

I. INTRODUCTION

The purpose of this report is to identify the potential traffic impact associated with the proposed Route 434 Mixed Use development in the Town of Owego, Tioga County, New York. The operating characteristics of the proposed access points and impacts to the adjacent roadway network are identified.

In an effort to define traffic impact, this analysis determines the extent of existing traffic conditions, projects background traffic flow including area growth, and projects changes in traffic flow due to the proposed development.

II. PROJECT LOCATION

The proposed site is bounded by Southside Drive (NYS Route 434) to the north, commercial, office, residential and agricultural land uses to the east and west, and Strong Road to the south in the Town/Village of Owego, Tioga County, New York. The site is currently vacant. Access is planned via one driveway on Southside Drive and one driveway on Strong Road; internal connections to the adjacent residential neighborhood to the west will also be provided for both pedestrians and motorists. The site location and the project study area are illustrated in **Figure 1** (all figures are included in Section X at the end of this report). The study area consists of four existing intersections surrounding the project site: Southside Drive/Halstead Avenue, Southside Drive/Court Street, Court/Park Street/Front Street, Montrose Turnpike/Strong Road. The lands adjacent to the proposed development site location consist primarily of residential, commercial, and agricultural uses along Route 434 and Strong Road.

III. EXISTING HIGHWAY SYSTEM

Four existing intersections are studied in detail in this Report: the intersections of Southside Drive with Halstead Avenue-Lackawanna Avenue and Court Street; Montrose Turnpike with Strong Road; and the Court/Park Street/Front Street intersection. The existing lane geometry at each of the study intersections is depicted in **Figure 2**.

Southside Drive (Route 434) is owned and maintained by the New York State Department of Transportation (NYSDOT) within the vicinity of the study area. West of Court Street, Southside Drive becomes a county highway. The NYSDOT highway segment within the study area is functionally classified as an urban minor arterial type highway with a posted speed limit of 40 mph.

Front Street is a local road connecting Court and Park Streets (Route 96) to the historic downtown area of the Village of Owego. Existing development along Front Street, within the vicinity of the proposed site, is primarily residential/commercial. The posted speed limit along Front Street is 30 mph.

Court Street (Route 96) is a local road connecting Front Street (Route 17C) and Southside Drive (Route 434). The posted speed limit along Court Street is 30 mph.

Halstead Avenue and Lackawanna Avenue are local streets under the jurisdiction of the Village of Owego. Strong Road and Montrose Turnpike are local streets under jurisdiction of the Town of Owego. The posted speed limits are 30 mph on Halstead Avenue and Lackawanna Avenue, 45 mph on Montrose Turnpike and 55 mph on Strong Road respectively.

IV. EXISTING TRAFFIC CONDITIONS

A. Peak Intervals for Analysis

Given the functional characteristics of the corridor and the land use proposed for the site (residential/commercial), the peak hours selected for analysis are the weekday AM and PM peaks. The combination of site traffic and adjacent through traffic produces the greatest demand during these time periods.

B. Existing Peak Hour Volumes

Peak hour volumes at the Court/Front Street and Court Street/Route 434 intersections were obtained from the Binghamton Metropolitan Transportation Study (BMTS). Data was collected on July 15 and 16 2003, after the new bridge was opened to vehicular traffic.

The other two study area intersections, Route 434/Halstead-Lackawanna Avenues and Montrose Turnpike/Strong Road were collected by SRF & Associates on June 1 and 2, 2005. Based on the count data, the peak hours were identified to be between 7:00 to 8:00 AM and 4:45 to 5:45 PM.

All turning movement count data was collected on typical weekdays/weekends. Given the varied collection dates of the individual turning movement counts and the availability of previously collected NYSDOT data, all traffic volumes were reviewed to confirm the accuracy and relative balance of the collective traffic counts. All traffic volumes were found to balance within the network within reasonable and expected variations. The actual differences in traffic volumes can be attributed to temporal variations (seasonal), and the single event nature associated with the isolated turning movement counts at each of the locations. Peak hour traffic volumes, depicting the existing 2005 vehicular movements at each study intersection, are illustrated in **Figure 3**.

Existing Average Daily Traffic (ADT) information was obtained from the New York State Department of Transportation (NYSDOT) *Traffic Volume Report 2003*. **Figure 4** illustrates the ADT volumes on the study roadways.

C. *Area Growth*

Construction of the proposed development will occur in phases and is anticipated to be completed in approximately five years (2010). For analysis purposes, an interim development phase (2008) will be analyzed.

Information provided by the Tioga County Planning Department indicated that there are several developments that are approved and/or under construction within the vicinity of the proposed development. These developments include a new Lockheed-Martin facility, a hotel, and residential subdivision.

A background growth rate was determined based on historical traffic volumes in the area. A review of historical NYSDOT traffic volume data on Routes 17C, 96 and 434 in the vicinity of the site indicates that although traffic volumes in the area have fluctuated over the years, there has been no sustained growth in traffic volumes in the vicinity of the site. To conservatively account for potential increases in background traffic, traffic volumes attributed to the approved development identified above were added to existing traffic volumes resulting in background conditions for the first phase of the proposed development (2008). A growth rate of 1.0% has been applied to the 2008 background traffic volumes to calculate background traffic volumes at full build out of the proposed development (2010). **Figures 5A and 5B** show the background traffic volumes at the time of Phase 1 and full build-out of the proposed Route 434 Mixed Use development respectively.

V. *PROPOSED DEVELOPMENT*

A. *Description*

The proposed site is bounded by Southside Drive to the north, commercial, residential and agricultural land uses to the east and west, and StrongRoad to the south in the Town/Village of Owego, Tioga County, New York. The site is currently vacant. Access to the site will be provided via two new proposed driveways. The main driveway will be located along Southside Drive (Route 434) located approximately 1,350 feet east of Halstead Avenue. A secondary driveway will be provided along Strong Road located approximately 2,150 feet east of Montrose Turnpike primarily for the residential portion of the development. In addition, internal connections to the residential subdivision

to the west may be provided in future phases and as development of the residential lands continues.

The proposed site will be developed in phases over the next five years. The first phase is expected to be completed in 2008 and will include the following uses:

- 90,000± square feet of office space
- 100,000± square feet of light industrial uses
- 30,000± square feet retail neighborhood center
- 26 single family homes

The remainder of the site is expected to be completed in 2010 with the following uses:

- 73,500± square feet congregate care/independent living senior housing facilities
- 40,000± square feet assisted living facilities
- 41,400± square feet residential townhouses.
- 38,400± square feet residential rental apartments

B. Site Traffic Generation

The next step in the evaluation is to determine the additional traffic expected to be generated by the proposed development. The volume of traffic generated by a site is based on the land use and size of the development. Trip generation is an estimate of the number of trips generated by a specific building or land use. These trips represent the volume of traffic entering and exiting the driveways. Trip generation estimates, based on data contained in the Institute of Traffic Engineers (ITE) Trip Generation were used to derive trip generation estimates for the proposed site uses. Table I summarizes the volume of projected trips for the weekday AM and PM peak hours. All trip generation calculations are included in Appendix A2 of this report.

TABLE I
TOTAL SITE GENERATED TRAFFIC VOLUMES

Land Use	Square footage/ (number of units)	AM PEAK		PM PEAK	
		ENTER	EXIT	ENTER	EXIT
Office	90,000±	122	17	23	112
Light Industrial	100,000±	81	11	12	86
Retail	30,000±	19	12	54	59
Single Family Homes	(26 units)	3	11	9	5
Phase 1 Site Generated Volumes		225	51	98	262
Senior housing Independent	73,500±	3	1	7	5
Senior housing Assisted	40,000±	6	3	7	14
Residential Townhouses	(30 units)	7	14	11	11
Residential Rental Apartments	(30 units)	4	15	22	12
Open Space	37± Acres	37	23	18	43
Institutional	15,000±	18	7	17	24
Full Development Site Generated Volumes		300	114	180	371

C. *Site Traffic Distribution*

The cumulative effect of site traffic on the transportation network is dependent on the origins and destinations of that traffic and the location of the access drives serving the site.

The proposed arrival/departure distribution of traffic to be generated at this site is considered a function of several parameters, including the following:

- Population centers in the area
- Existing traffic patterns within the study area
- Existing highway network
- Existing traffic conditions and controls
- Site access drive locations for the development

Figures 6A and 6B show the anticipated trip distribution pattern percentages for Phase 1 and full build out of the proposed development respectively.

Figures 7A and 7B show the peak hour site generated trips assigned to the adjacent highways for Phase 1 and Full Build out of the proposed development.

D. Projected Future Traffic Volumes

The projected full development design hour traffic volumes were developed for each peak by combining the future background traffic conditions (Figures 5A and 5B), and projected site generated volumes (Figures 7A and 7B) to yield the total traffic conditions expected under each phase of development. **Figures 9A and 9B** show the total weekday AM and PM peak hour volumes anticipated at Phase 1 and Full development of the proposed site.

VI. OPERATIONAL ANALYSES

Capacity analysis is a technique used for determining a measure of effectiveness for a section of roadway and/or intersection based on the number of vehicles during a specific time period. The measure of effectiveness used for the capacity analysis is referred to as a Level of Service (LOS). Levels of Service are calculated to provide an indication of the amount of delay that a motorist experiences while traveling along a roadway or through an intersection. Since the most amount of delay to motorists usually occurs at intersections, the capacity analysis specifically focuses on intersections.

Six Levels of Service are defined for analysis purposes. They are assigned letter designations, from "A" to "F", with LOS "A" representing the best conditions and LOS "F" the worst. Suggested ranges of service capacity and an explanation of Levels of Service are included in the Appendix.

The standard procedure for capacity analysis of signalized and unsignalized intersections is outlined in the 2000 Highway Capacity Manual (HCM 2000) published by the Transportation Research Board. Traffic analysis software, Synchro, which is based on procedures and methodologies contained in the HCM 2000, was used to analyze operating conditions at study area intersections. The procedure yields a Level of Service (LOS) based on the HCM 2000 as an indicator of how well intersections operate.

Existing operating conditions during the peak study periods are evaluated to determine a basis for comparison with the projected future conditions. Existing operating conditions are documented in the field and modeled using traffic analysis software. The traffic analysis models are calibrated based on the actual field observations.

Tables II and III indicate the level of service results for existing, background (2008 and 2010), and both phases of the proposed development. The discussion following the table summarizes the existing, background, and future capacity conditions for each phase.

TABLE II
INTERSECTION CAPACITY ANALYSIS RESULTS

DESCRIPTION	2005 EXISTING CONDITIONS		2008 BACKGROUND CONDITIONS		PHASE I (2008) DEVELOPMENT CONDITIONS	
	AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK
Front Street/Court-Park Streets						
EB - Front Street	B	B	B	B	B	B
WB - Front Street	B	B	B	B	B	B
NB - Court Street	A	B	A	B	B	B
SB - Park Street	B	B	B	B	B	B
Overall LOS (delay in sec/veh)	**B**	**B**	**B**	**B**	**B**	**B**
Southside Drive/Court Street						
EB - Southside Drive (Route 434)	A	A	A	A	A	A
WB - Southside Drive (Route 434)	A	A	A	A	A	A
SB - Court Street	A	B	A	B	B	B
Overall LOS (delay in sec/veh)	A	A	A	A	A	A
Southside Dr/Lackawanna-Halstead Aves						
EB Left- Southside Drive (Route 434)	A	A	A	A	A	A
WB Left- Southside Drive (Route 434)	A	A	A	A	A	A
NB Thru/right - Halstead Ave	A	A	A	A	B	A
NB Left - Halstead Ave	C	D	D	D	E	F (89.6)
SB - Lackawanna Ave	B	C	B	C	C	E
Strong Road/Montrose Turnpike						
EB - Dickinson Road	A	A	A	A	A	B
WB - Strong Road	A	A	A	A	A	A
NB Left - Montrose Tpke	A	A	A	A	A	A
SB Left - Montrose Tpke	A	A	A	A	A	A
Southside Drive/Site Driveway	NA		NA			
WB Left - Southside Drive (Route 434)					A	A
NB - Site Driveway					B	C
Strong Road/Site Driveway	NA		NA			
EB Left - Strong Road					A	A
SB - Site Driveway					A	A

TABLE III
INTERSECTION CAPACITY ANALYSIS RESULTS

DESCRIPTION	2010 BACKGROUND CONDITIONS		2010 FULL DEVELOPMENT CONDITIONS	
	AM PEAK	PM PEAK	AM PEAK	PM PEAK
Front Street/Court-Park Streets				
EB – Front Street	B	B	B	B
WB – Front Street	B	B	B	C
NB – Court Street	B	B	B	B
SB - Park Street	B	B	B	B
Overall LOS (delay in sec/veh)	**B**	**B**	**B**	**B**
Southside Drive/Court Street				
EB – Southside Drive (Route 434)	A	A	A	A
WB – Southside Drive (Route 434)	A	A	A	A
SB – Court Street	A	B	B	B
Overall LOS (delay in sec/veh)	**A**	**A**	**A**	**A**
Southside Dr/Lackawanna-Halstead Aves				
EB Left– Southside Drive (Route 434)	A	A	A	A
WB Left– Southside Drive (Route 434)	A	A	A	A
NB Thru/right – Halstead Ave	A	A	B	A
NB Left – Halstead Ave	D	E	F (54.5)	F (164.2)
SB - Lackawanna Ave	B	C	C	F (50.7)
Strong Road/Montrose Turnpike				
EB – Dickinson Road	A	A	A	B
WB – Strong Road	A	A	A	A
NB Left - Montrose Tpke	A	A	A	A
SB Left - Montrose Tpke	A	A	A	A
Southside Drive/Site Driveway				
WB Left - Southside Drive (Route 434)	NA		A	A
NB - Site Driveway			C	D
Strong Road/Site Driveway				
EB Left - Strong Road	NA		A	A
SB - Site Driveway			A	A

Front Street/Court Street

The intersection of Route 17C (Front Street) with Route 96 (Court Street) currently operates at an above average Level of Service (LOS "B" or better) on all approaches during the AM and PM peak periods. No changes in levels of service are anticipated under 2008 or 2010 background conditions or Phase I development conditions. The westbound Front Street approach changes from LOS "B" to "C" during the PM peak hour between the 2010 background and full development conditions. This change in LOS is a result of a borderline condition and the actual change in delay is 3.8 seconds per vehicle. No improvements are warranted or recommended at this intersection.

Southside Drive/Court Street

The intersection of Southside Drive with Court Street currently operates at an above average Level of Service (LOS "B" or better) on all approaches during the AM and PM peak periods. No changes in levels of service are anticipated under 2008 or 2010 background conditions or Phase I development conditions. The southbound Court Street approach changes from LOS "B" to "C" during the PM peak hour between the 2010 background and full development conditions. The westbound Front Street approach changes from LOS "B" to "C" during the PM peak hour between the 2010 background and full development conditions. This change in level of service will be mitigated by the actuated operation of the traffic signal (i.e. the traffic signal will automatically adjust to provide the appropriate green times for the traffic volume demand). No improvements are warranted or recommended at this intersection.

Southside Drive/Lackawanna-Halstead Avenues

The intersection of Southside Drive with Lackawanna-Halstead Avenues operates at an acceptable Level of Service (LOS "D" or better) on all approaches during the AM and PM peak periods under existing and 2008 background conditions. Under the 2010 background conditions, the northbound left turns exiting Halstead Avenue are expected to operate LOS "D" and "E" during the AM and PM peak hours respectively. The AM peak hour levels of service change from "B" to "C" and "D" to "E" on the northbound and southbound approaches between background and Phase I development conditions and from "B" to "C" and "D" to "F" between 2010 background and full development conditions. During the PM peak hour, the northbound approach is projected to change from LOS "D" and LOS "E" under the 2008 and 2010 background conditions to LOS "F" under the Phase I and full development conditions. This analysis does not consider the effect of the Apple Blossom Road connection to Southside Drive. The Apple Blossom Road connection will relieve Halstead Avenue and its intersection with Southside Drive. The operating conditions projected during the peak hours are characteristic of side roads on heavily trafficked arterials such as Southside Drive (Route 434). Mitigation to alleviate these levels of service would consist of signalization of the intersection. However, the traffic volumes exiting the side roads are relatively low during the peak hours and it is unlikely that any of the warrants for signalization would be met. The intersection should be monitored for the need for future improvements such as additional lanes or alternative traffic control.

Strong Road/Montrose Turnpike

The Strong Road/Montrose Turnpike intersection is projected to operate at acceptable levels of service (LOS "B" or better) on all approaches under all conditions. No improvements are warranted or recommended at this intersection.

Southside Drive/Proposed Site Driveway

The proposed site driveway intersection with Southside Drive is projected to operate at an above average level of service, LOS "A" on the eastbound and westbound approaches under phase I and full development conditions. The northbound approach will operate at LOS "C" or better under both phase I and full development conditions. Based on the analyses, the site driveway should provide two lanes for egress from the site and one lane for ingress. In

addition, an eastbound right turn lane is recommended along Route 434 as discussed in section VII of this report.

Strong Road/Secondary Site Drive
The secondary site driveway is projected to operate at an above average level of service, LOS "A" on all approaches under full development conditions. No improvements are warranted or recommended at this site drive.

VII. LEFT TURN TREATMENT WARRANTS

Volume warrants for a westbound left turn lane at the main site driveway on Route 434 were investigated using the Transportation Research Board's NCHRP Report 279, Intersection Channelization Design Guide, 1985. Provisions for left turn lane facilities should be established where traffic volumes are high enough and safety considerations are sufficient to warrant the additional lane.

Based on the analysis results in this traffic study, the site driveway intersection with Route 434 marginally meets warrants for the installation of a left turn lane at full development.

In addition, volume warrants for an eastbound right turn lane along Route 434 at the proposed site driveway were investigated using the Transportation Research Board's NCHRP Report 279, Intersection Channelization Design Guide, 1985. The combination of projected volumes suggests that an eastbound right turn lane is warranted on NY Route 434 at the site driveway intersection under the Phase I development conditions.

Given the phased nature of the development, an interim traffic assessment is recommended after the first office building (approximately 45,000 s.f.) is constructed and in operation. The traffic volumes can then be re-evaluated to determine the timing of the right and left turn lanes on Route 434. Both auxiliary turn lanes are recommended prior to completion of the Phase I development.

Additionally it is recommended that underground conduit be installed during the phase 1 construction at the intersection of the main site driveway and Southside Drive (Route 434) to facilitate installation of a traffic signal if it becomes necessary in the future.

VIII. SIGHT DISTANCE INVESTIGATION

Sight distances were investigated at the proposed driveways on Southside Drive and Strong Road. Additionally, existing sight distance conditions were reviewed at the Montrose Turnpike/Strong Road intersection. Sight distance is provided at intersections to allow drivers to perceive the presence of potentially conflicting vehicles. This should occur in sufficient time for a motorist to stop or adjust their speed, as appropriate, to avoid a collision at the intersection. Sight distance is also provided at intersections to allow the drivers of stopped vehicles a sufficient view of the intersecting highway to anticipate and avoid potential

incidents. If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions. To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road.
The American Association of State Highway and Transportation Officials' (AASHTO) 2004 A Policy on Geometric Design of Highways and Streets was used as a reference, to establish the required stopping sight distance and desirable intersection sight distance for the site access drives.

Required stopping distances and desirable intersection sight distances are based on the design speed for a given section of roadway, generally the design speed is the posted speed limit plus 5 mph. In this case, the posted speed limit is 40 mph along Southside Drive and 55 mph along Strong Road in the vicinity of the site driveways. Hence a design speed of 45 mph was used for sight distance along Southside Drive and 60 mph was used along Strong Road. The required stopping sight distance and desirable intersection sight distance based on the design speed are shown in Table IV.

TABLE IV
SIGHT DISTANCE REQUIREMENTS AND MEASUREMENTS

Intersection	Desirable Intersection Sight Distance for Left Turn from Stop (ft)	Required Stopping Sight Distance (ft)	Available Sight Distance (ft) to the:	
			Left	Right
Main driveway on Southside Drive (@ 45mph)	500'	360'	>1,000'	510'
Secondary driveway on Strong Road (@ 60mph)	665'	570'	>1,000'	>1,000'
Strong Road/Montrose Turnpike intersection (@ 50mph)	555'	425'	189'	523'

The available sight distances to the right and left from the main site driveway on Southside Drive and from the secondary site driveway on Strong Road exceed the desirable requirement for intersection sight distance and required stopping distance.

The available sight distances at the Strong Road/Montrose Turnpike intersection are less than the desirable sight distance for the design speed. The available sight distance to the right (north) is not critically limited based on NYSDOT criteria. However, the sight distance to the left (south) is critically limited and an advance warning sign is required. An advance warning is currently posted for northbound traffic on Montrose Turnpike. Removal of any vegetation that currently limits sight distance is recommended.

IX. CONCLUSIONS AND RECOMMENDATIONS

This report addresses the traffic impact that can be expected from development of the proposed Route 434 Mixed Use development in the Town/Village of Owego. It indicates that the existing transportation network can adequately accommodate the projected traffic volumes and resulting impacts to study area intersections. Both site driveways provide adequate sight distance for safe ingress and egress at the site.

The following list summarizes recommendations to be considered as a result of this development:

1. Provide two new full access driveways to the site. One driveway will access at Southside Drive (Route 434) and the other will access at Strong Road.

2. Construct the main site driveway along Route 434 with two exiting lanes (one left turn lane and one right turn lane) and one entering lane.

3. Construct the secondary site driveway at Strong Road with one exiting lane and one entering lane.

4. Both driveways shall be stop controlled at their intersections with the adjacent street.

5. The Town should remove any vegetation along Montrose Turnpike that currently obstructs sight distance at the Strong Road intersection.

6. A southbound right turn lane and a northbound left turn lane are recommended at the main site driveway intersection with Route 434 prior to completion of the Phase I development.

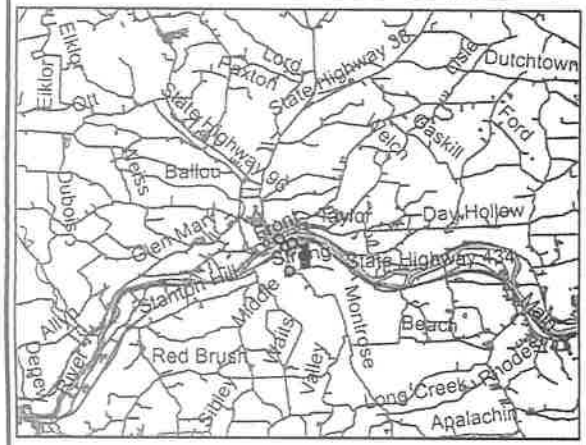
7. The applicant should conduct an interim traffic assessment after the first office building (approximately 45,000 s.f.) is constructed and in operation to determine the timing of the recommended right and left turn lanes.

8. It is imperative that site amenities such as signs and landscaping be located so as not to interfere with sight distance at the site driveways. In addition, any existing vegetation that blocks sight distance from the Route 434 site driveway should be cleared to the extent practicable.

X. FIGURES

Figures 1 through 8B are included on the following pages.

FIGURE 1 - SITE LOCATION AND STUDY AREA



Legend

- Study Intersection
- Study Area
- Site_Location

N

0 1,000 2,000 Feet

ROUTE 434 MIXED USE
OWEGO, NY

SRF ASSOCIATES
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Traffic Engineering & Planning Consultants

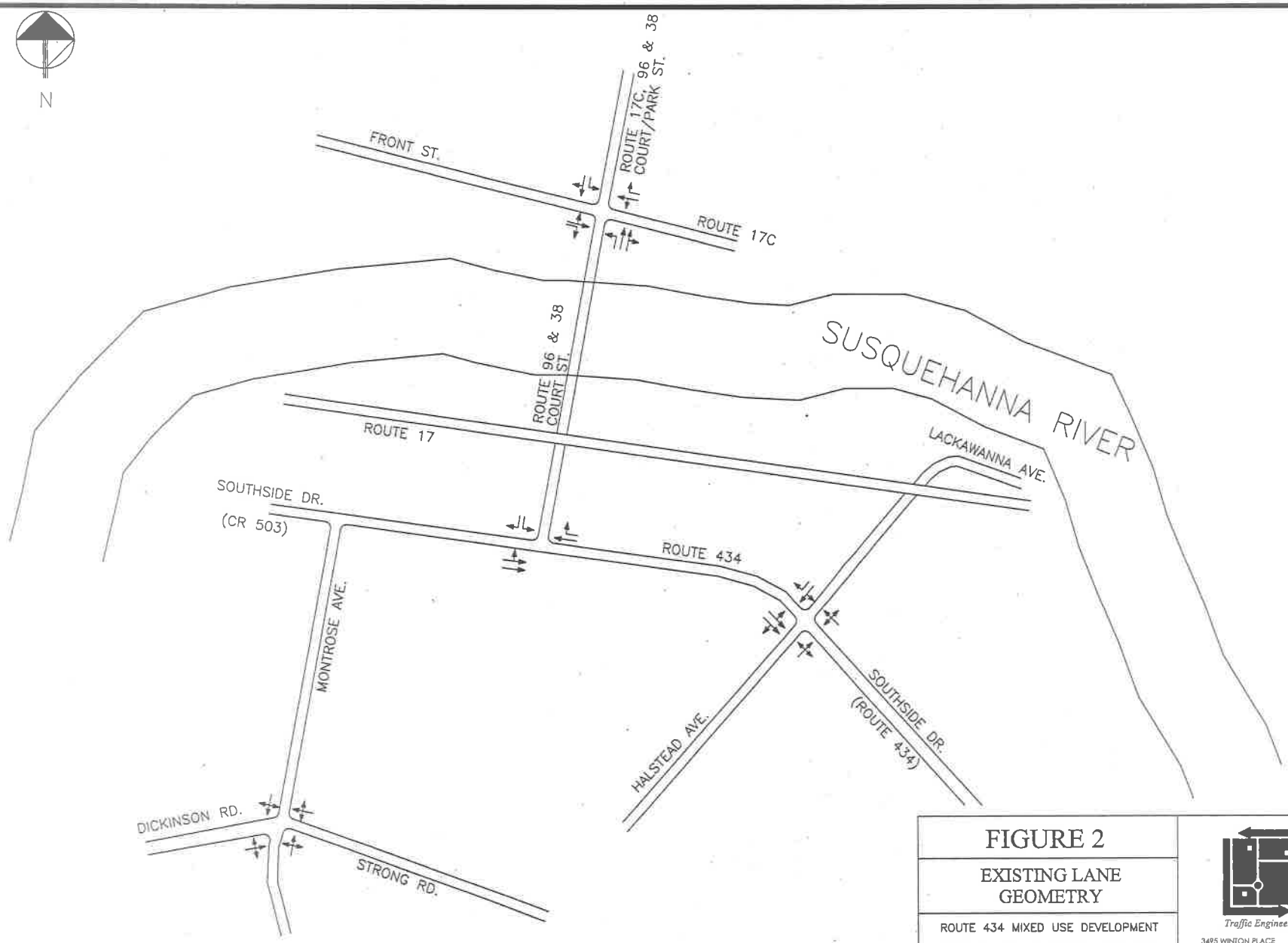

FIGURE 2

EXISTING LANE GEOMETRY

ROUTE 434 MIXED USE DEVELOPMENT

TOWN/VILLAGE OF OWEGO, NEW YORK

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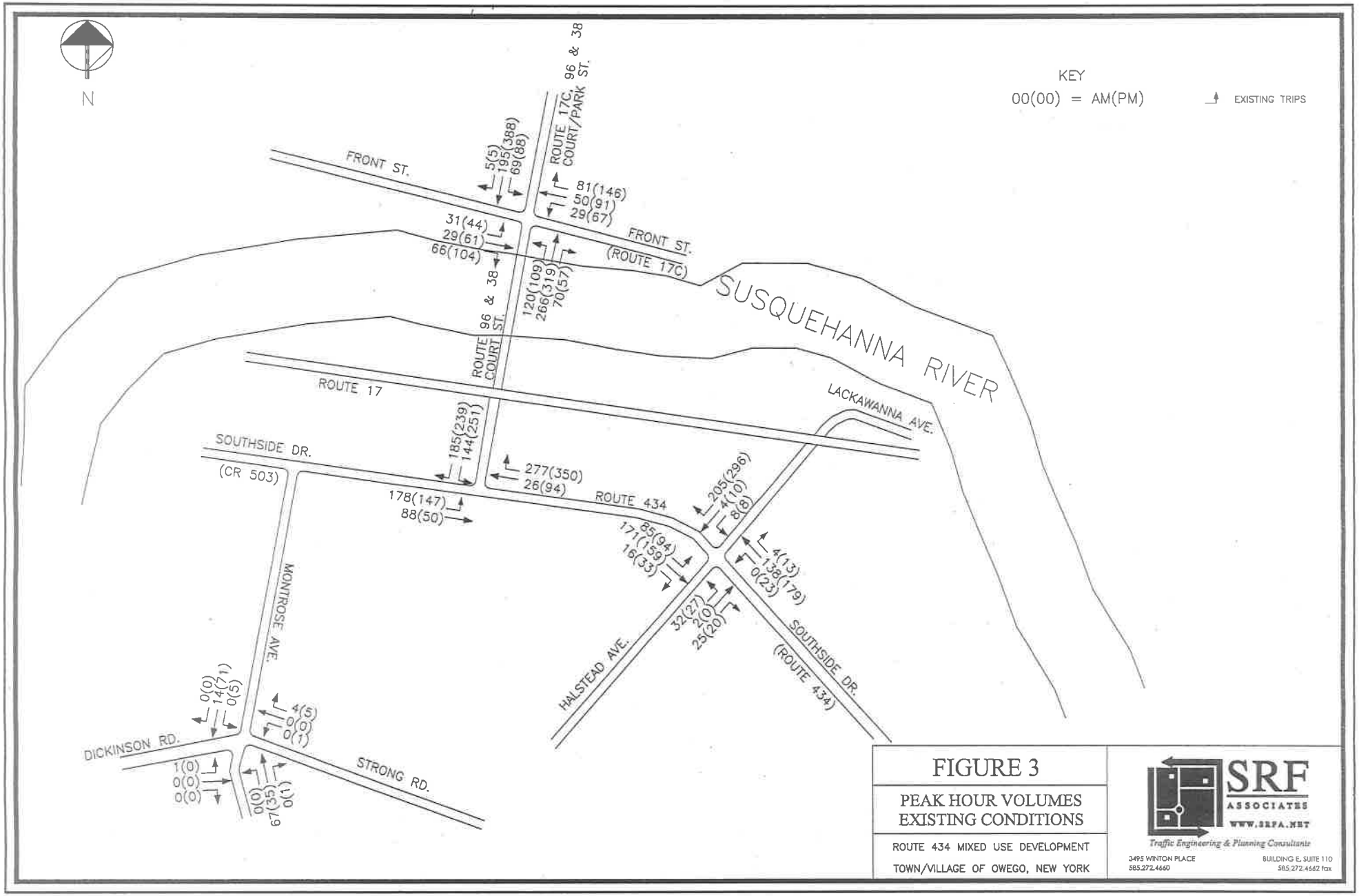

FIGURE 3

PEAK HOUR VOLUMES EXISTING CONDITIONS

ROUTE 434 MIXED USE DEVELOPMENT

TOWN/VILLAGE OF OWEGO, NEW YORK

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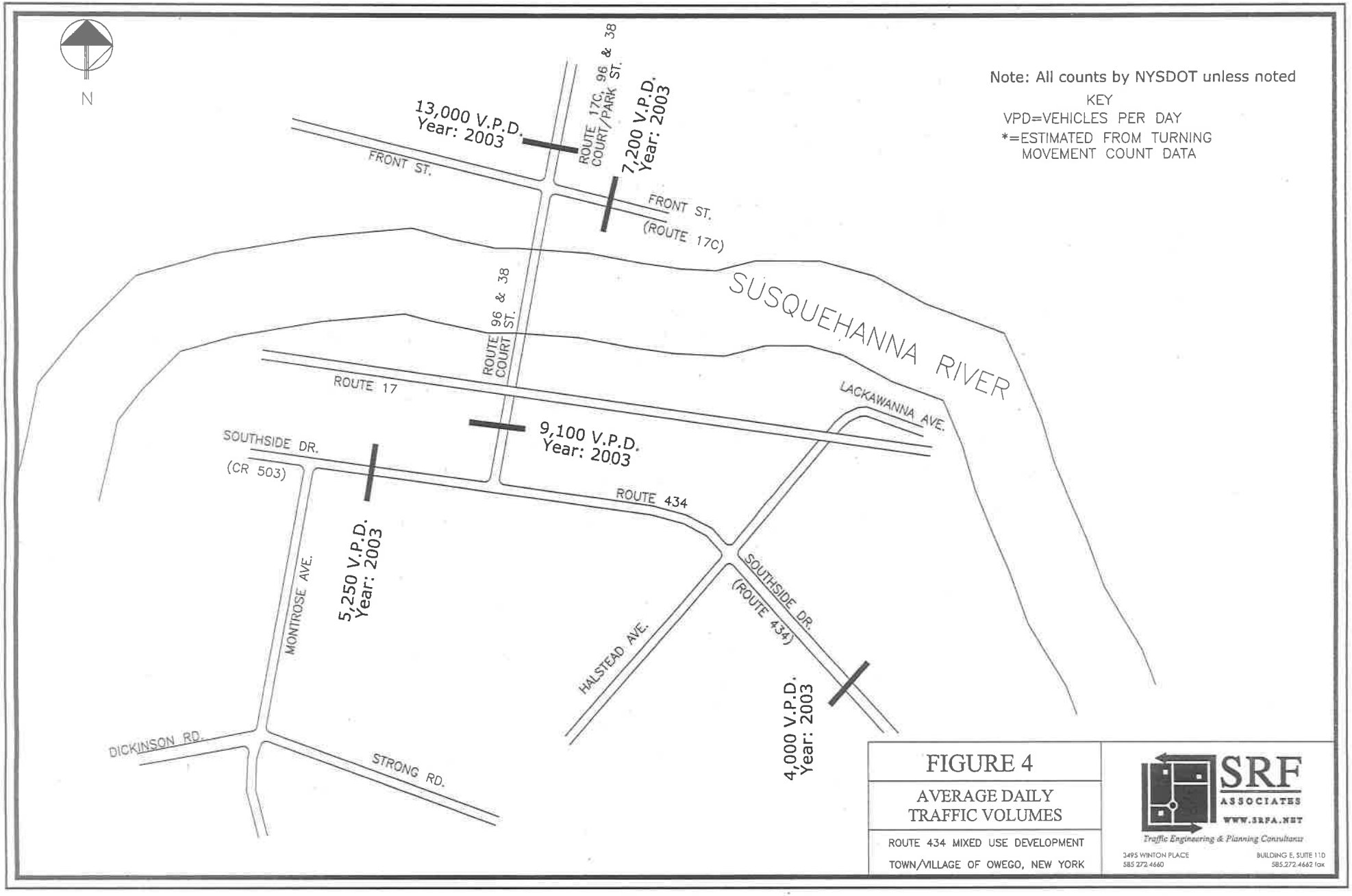

FIGURE 4

AVERAGE DAILY TRAFFIC VOLUMES

ROUTE 434 MIXED USE DEVELOPMENT

TOWN/VILLAGE OF OWEGO, NEW YORK

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3495 WINTON PLACE BUILDING E, SUITE 110
585.272.4660 585.272.4662 fax

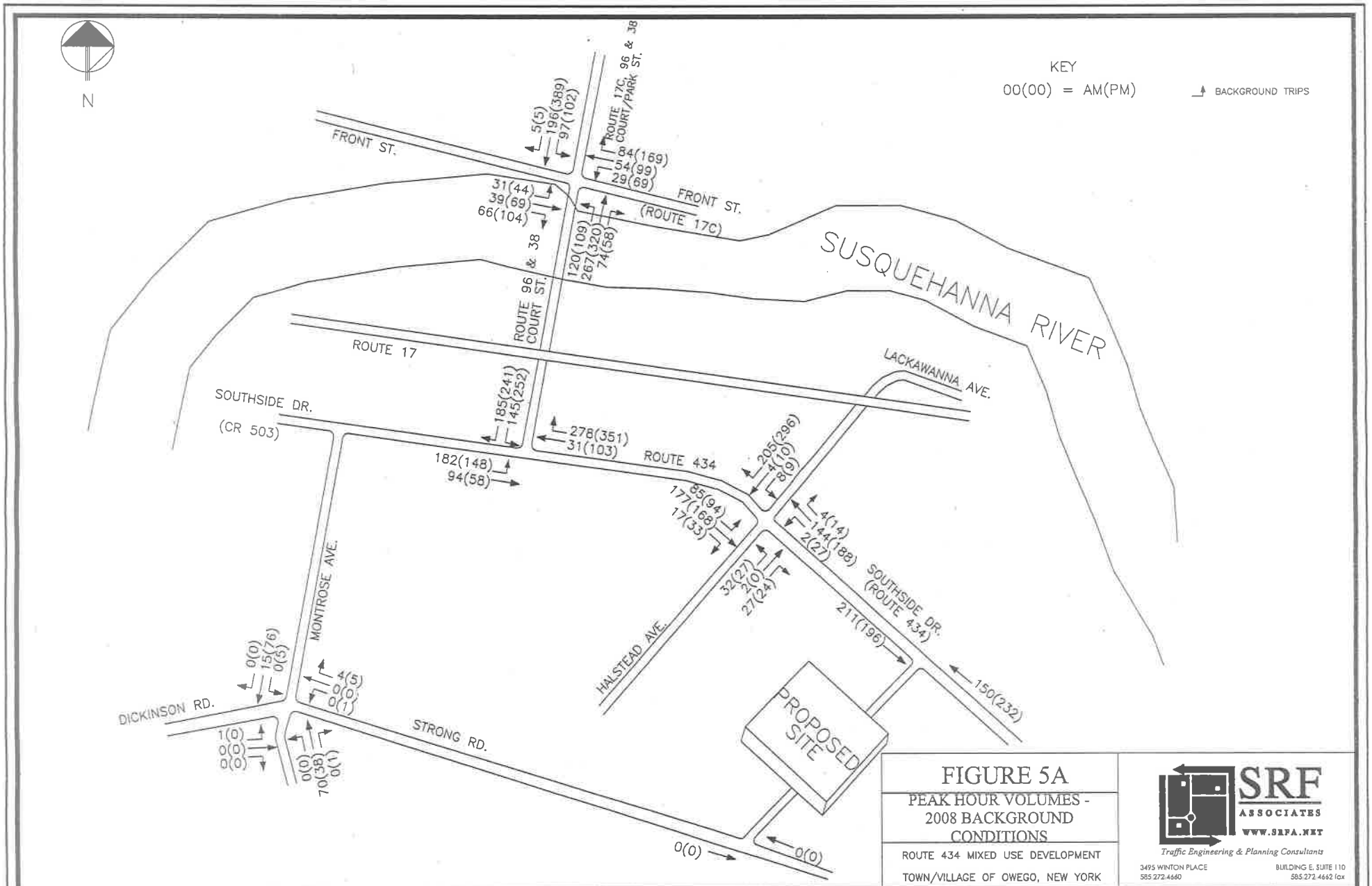

FIGURE 5A

PEAK HOUR VOLUMES - 2008 BACKGROUND CONDITIONS

ROUTE 434 MIXED USE DEVELOPMENT

TOWN/VILLAGE OF OWEGO, NEW YORK

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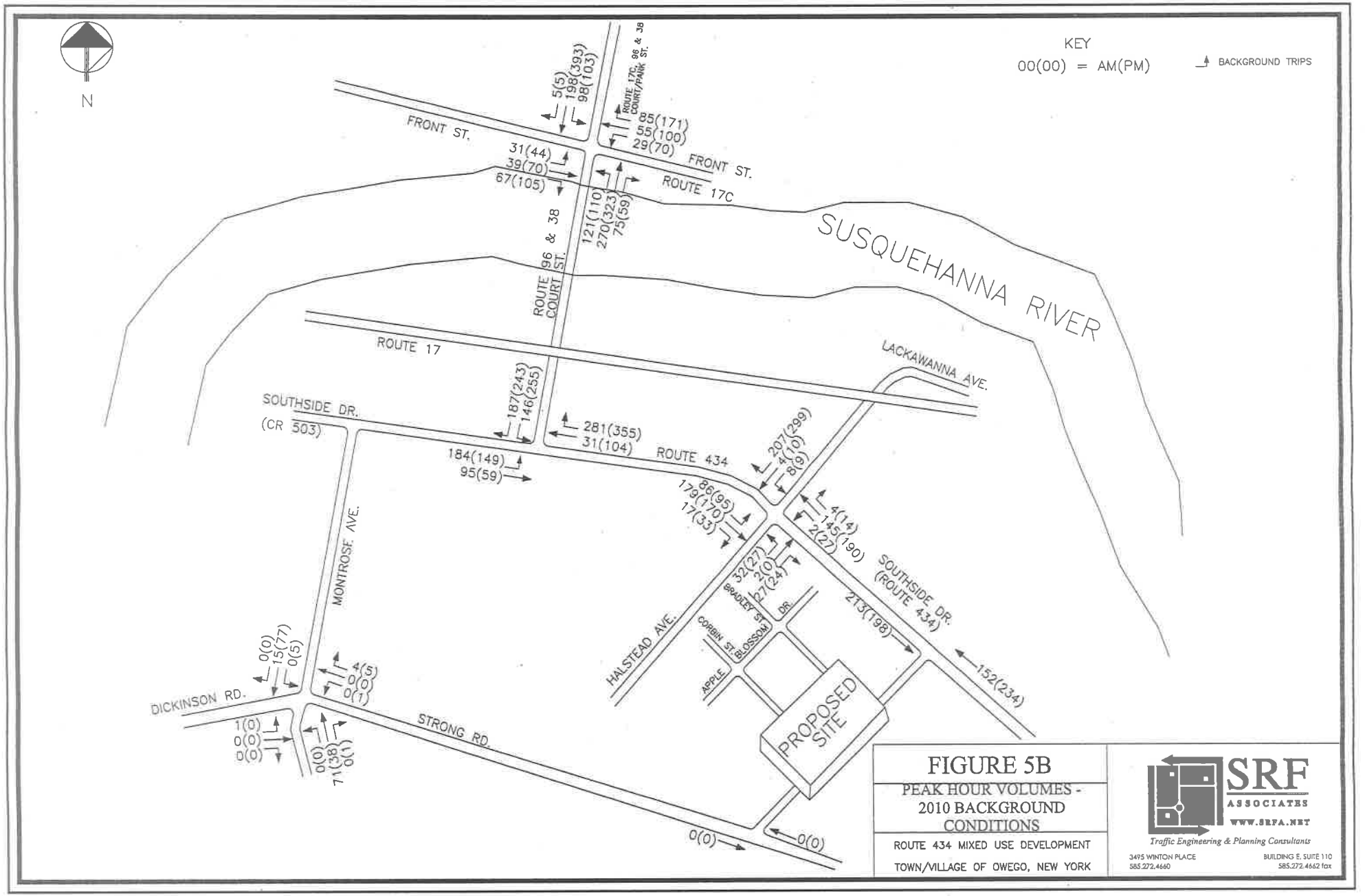

FIGURE 5B

PEAK HOUR VOLUMES - 2010 BACKGROUND CONDITIONS

ROUTE 434 MIXED USE DEVELOPMENT

TOWN/VILLAGE OF OWEGO, NEW YORK

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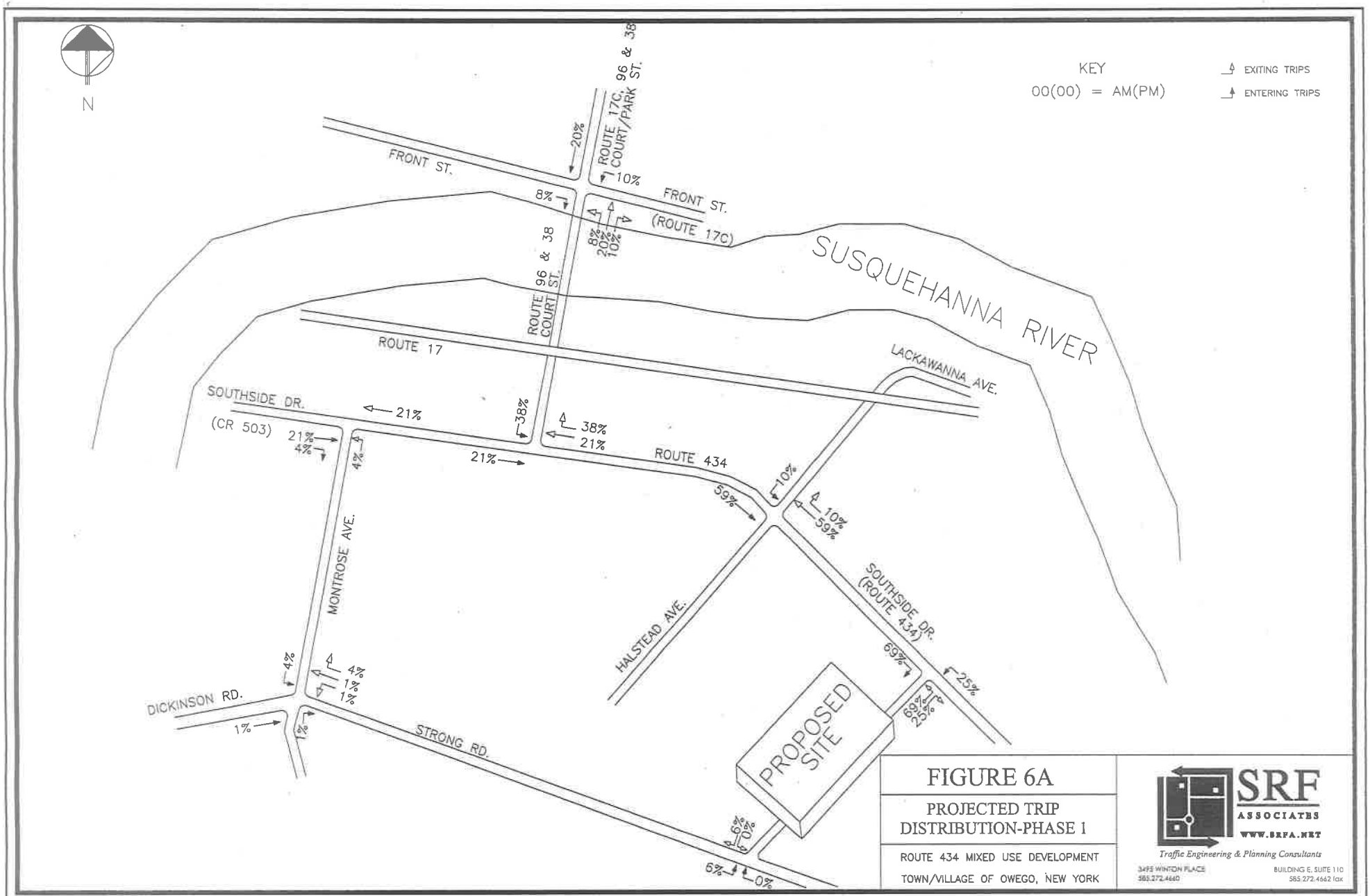

FIGURE 6A

PROJECTED TRIP DISTRIBUTION-PHASE 1

ROUTE 434 MIXED USE DEVELOPMENT

TOWN/VILLAGE OF OWEGO, NEW YORK

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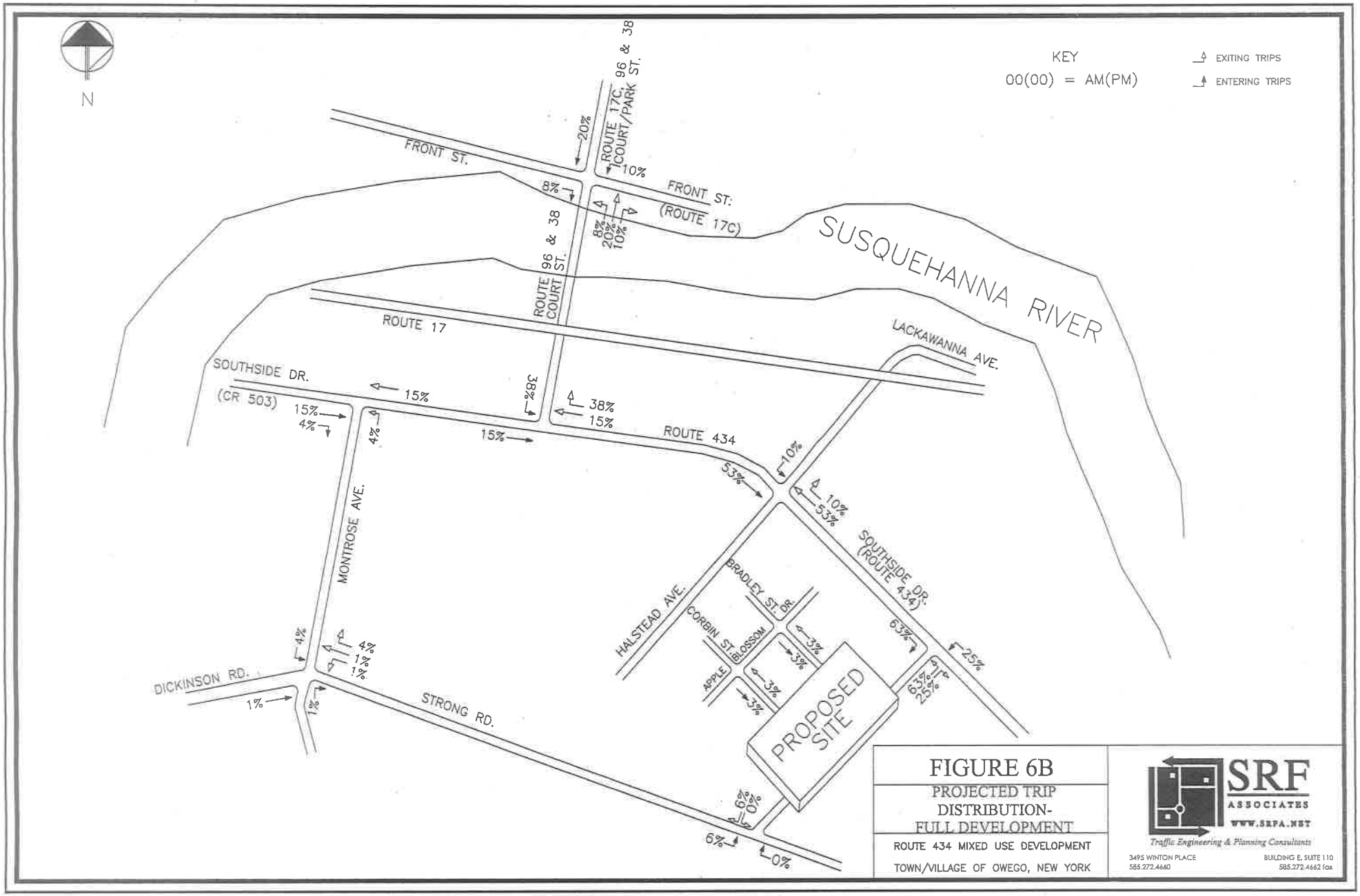

FIGURE 6B

PROJECTED TRIP DISTRIBUTION- FULL DEVELOPMENT

ROUTE 434 MIXED USE DEVELOPMENT

TOWN/VILLAGE OF OWEGO, NEW YORK

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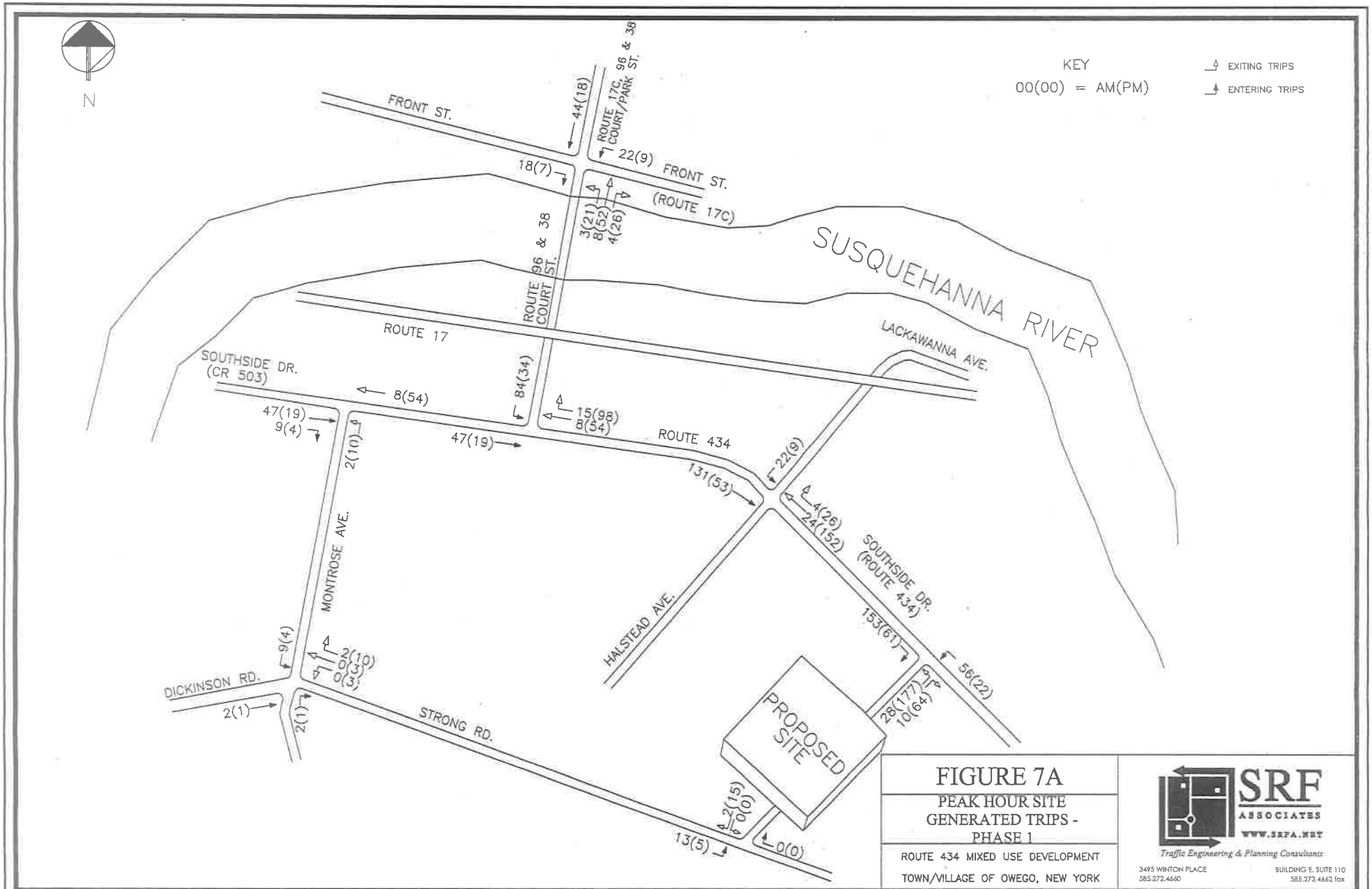

FIGURE 7A

PEAK HOUR SITE GENERATED TRIPS - PHASE 1

ROUTE 434 MIXED USE DEVELOPMENT

TOWN/VILLAGE OF OWEGO, NEW YORK

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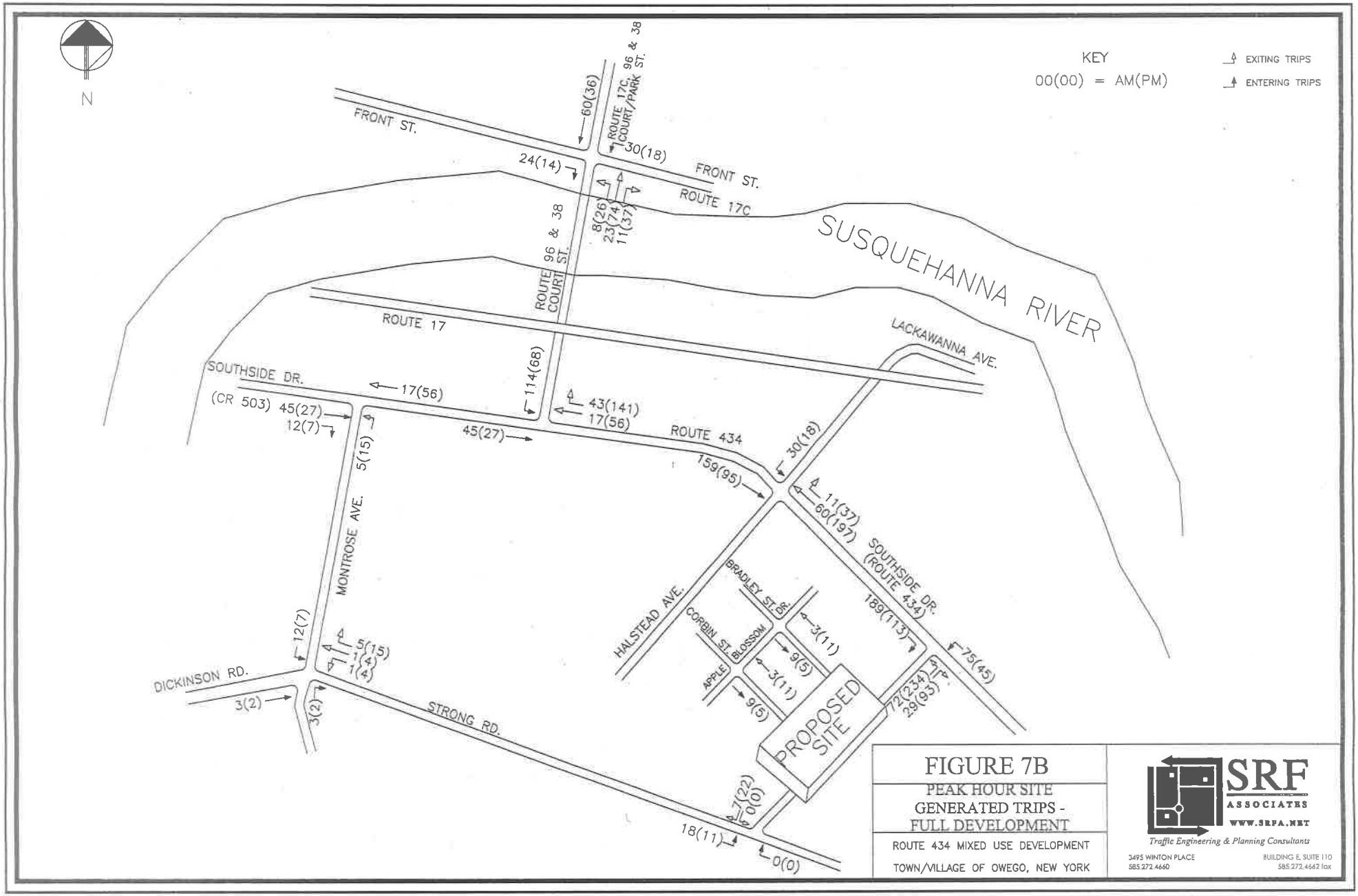

FIGURE 7B

PEAK HOUR SITE GENERATED TRIPS - FULL DEVELOPMENT

ROUTE 434 MIXED USE DEVELOPMENT

TOWN/VILLAGE OF OWEGO, NEW YORK

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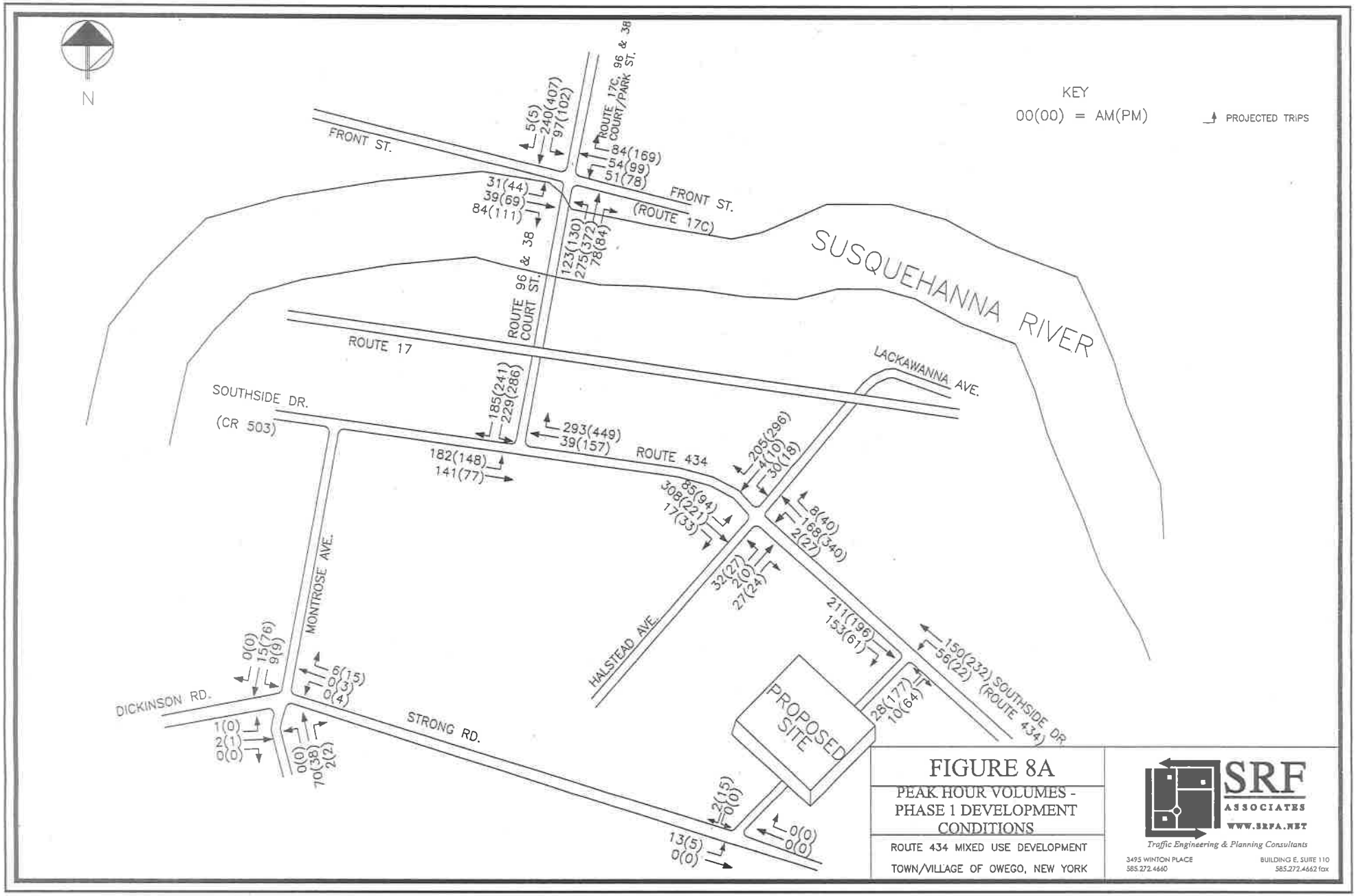

FIGURE 8A

PEAK HOUR VOLUMES - PHASE 1 DEVELOPMENT CONDITIONS

ROUTE 434 MIXED USE DEVELOPMENT

TOWN/VILLAGE OF OWEGO, NEW YORK

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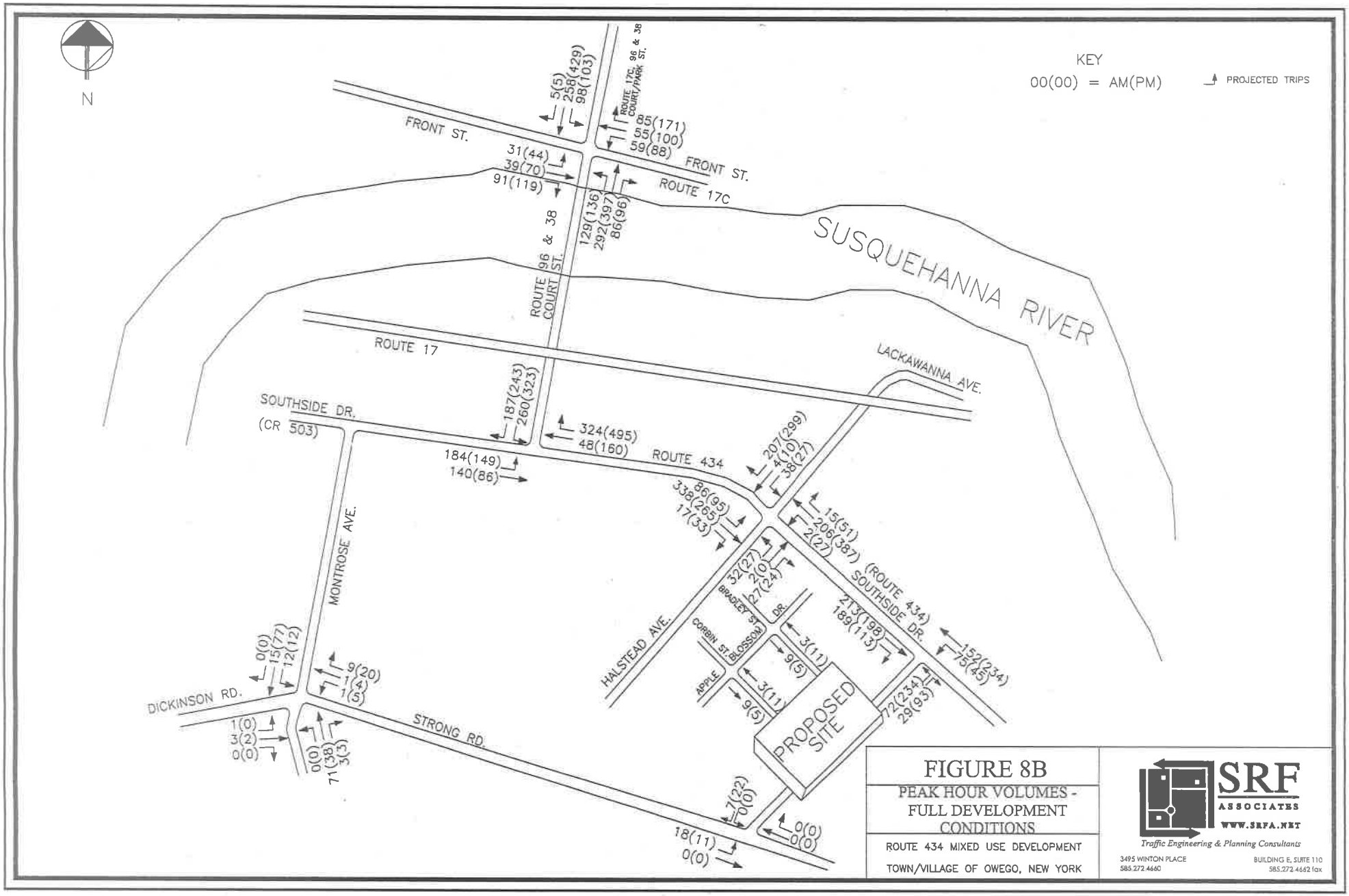

FIGURE 8B

PEAK HOUR VOLUMES - FULL DEVELOPMENT CONDITIONS

ROUTE 434 MIXED USE DEVELOPMENT

TOWN/VILLAGE OF OWEGO, NEW YORK

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A1

Collected Traffic Volume Data

SRF & Associates
3495 Winton Place, Bldg E, Suite 110
Rochester, New York 14623
Phone: 585.272.4660

File Name : halstead.434.AM
Site Code : 00025008
Start Date : 6/2/2005
Page No : 1

Groups Printed- Unshifted

	Halstead Southbound				Route 434 Westbound				Halstead Northbound				Route 434 Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	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	
07:00 AM	49	0	2	0	2	33	0	0	4	0	8	0	6	34	15	0	153
07:15 AM	58	0	1	0	1	31	0	0	13	1	9	0	2	52	37	0	205
07:30 AM	52	1	1	0	0	49	0	0	4	1	11	0	3	38	19	0	179
07:45 AM	46	3	4	0	1	25	0	0	4	0	4	0	5	47	14	0	153
Total	205	4	8	0	4	138	0	0	25	2	32	0	16	171	85	0	690
08:00 AM	42	1	2	0	3	28	0	0	11	0	5	0	4	38	6	0	140
08:15 AM	35	0	3	0	1	27	0	0	2	1	10	0	2	39	13	0	133
08:30 AM	49	0	0	0	1	27	2	0	5	1	5	0	7	45	8	0	150
08:45 AM	46	1	0	0	3	39	1	0	3	0	7	0	1	36	20	0	157
Total	172	2	5	0	8	121	3	0	21	2	27	0	14	158	47	0	580
Grand Total	377	6	13	0	12	259	3	0	46	4	59	0	30	329	132	0	1270
Apprch %	95.2	1.5	3.3	0.0	4.4	94.5	1.1	0.0	42.2	3.7	54.1	0.0	6.1	67.0	26.9	0.0	
Total %	29.7	0.5	1.0	0.0	0.9	20.4	0.2	0.0	3.6	0.3	4.6	0.0	2.4	25.9	10.4	0.0	

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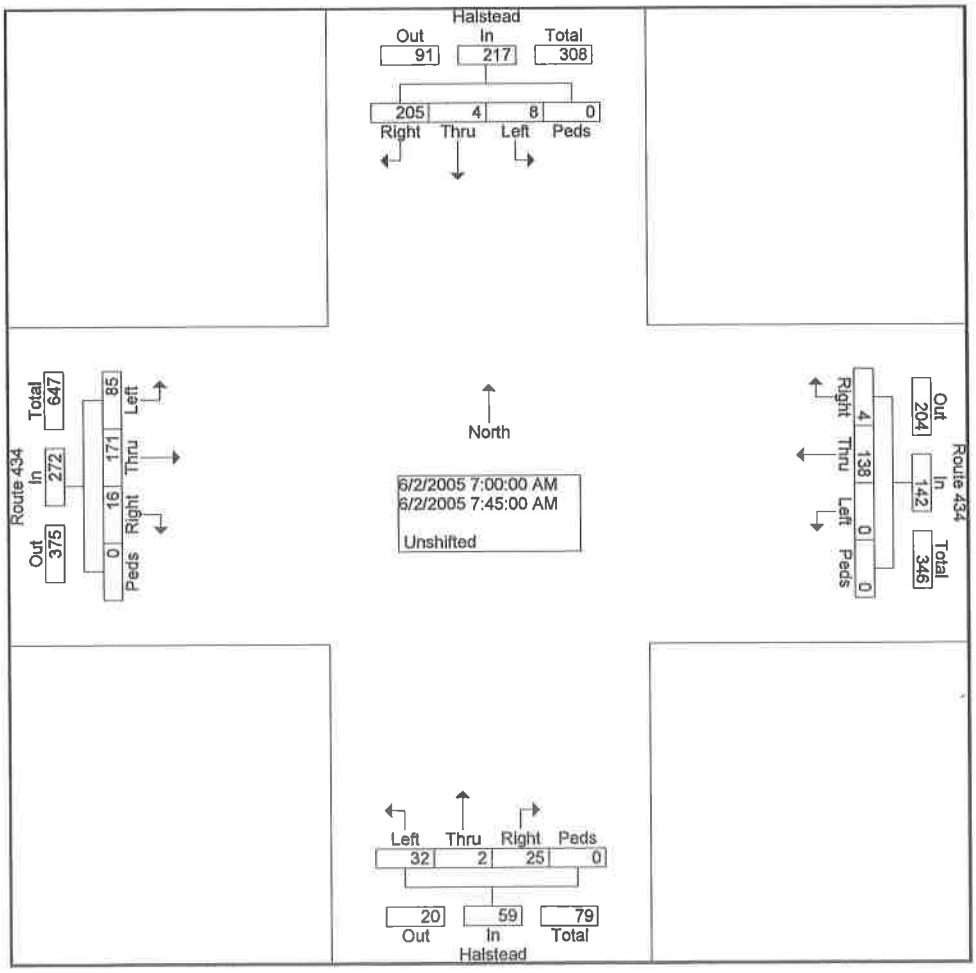
Site Code : 00025008
Start Date : 6/2/2005
Page No : 2

	Halstead Southbound					Route 434 Westbound					Halstead Northbound					Route 434 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	205	4	8	0	217	4	138	0	0	142	25	2	32	0	59	16	171	85	0	272	690
Percent	94.5	1.8	3.7	0.0		2.8	97.2	0.0	0.0		42.4	3.4	54.2	0.0		5.9	62.9	31.3	0.0		
07:15 Volume	58	0	1	0	59	1	31	0	0	32	13	1	9	0	23	2	52	37	0	91	205
Peak Factor																					0.841
High Int.	07:15 AM					07:30 AM					07:15 AM					07:15 AM					
Volume	58	0	1	0	59	0	49	0	0	49	13	1	9	0	23	2	52	37	0	91	
Peak Factor					0.919					0.724					0.641					0.747	



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File Name : halstead.434.PM
Site Code : 00025008
Start Date : 6/1/2005
Page No : 1

Groups Printed- Unshifted

	Southbound				Westbound				Northbound				Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	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	63	4	1	0	4	47	5	0	4	0	2	0	5	45	30	0	210
04:15 PM	57	2	0	0	6	52	3	0	3	0	8	0	7	47	23	0	208
04:30 PM	65	2	0	0	1	36	3	0	3	0	5	0	6	49	26	0	196
04:45 PM	53	1	2	0	5	40	4	0	7	0	9	0	8	41	29	0	199
Total	238	9	3	0	16	175	15	0	17	0	24	0	26	182	108	0	813
05:00 PM	65	3	2	1	4	44	9	0	3	0	3	0	9	42	20	0	205
05:15 PM	93	4	3	0	4	46	6	0	6	0	5	0	10	35	22	0	234
05:30 PM	85	2	1	0	0	49	4	0	4	0	10	0	6	41	23	0	225
05:45 PM	59	3	3	0	2	41	5	0	5	0	8	0	5	43	15	0	189
Total	302	12	9	1	10	180	24	0	18	0	26	0	30	161	80	0	853
Grand Total	540	21	12	1	26	355	39	0	35	0	50	0	56	343	188	0	1666
Apprch %	94.1	3.7	2.1	0.2	6.2	84.5	9.3	0.0	41.2	0.0	58.8	0.0	9.5	58.4	32.0	0.0	
Total %	32.4	1.3	0.7	0.1	1.6	21.3	2.3	0.0	2.1	0.0	3.0	0.0	3.4	20.6	11.3	0.0	

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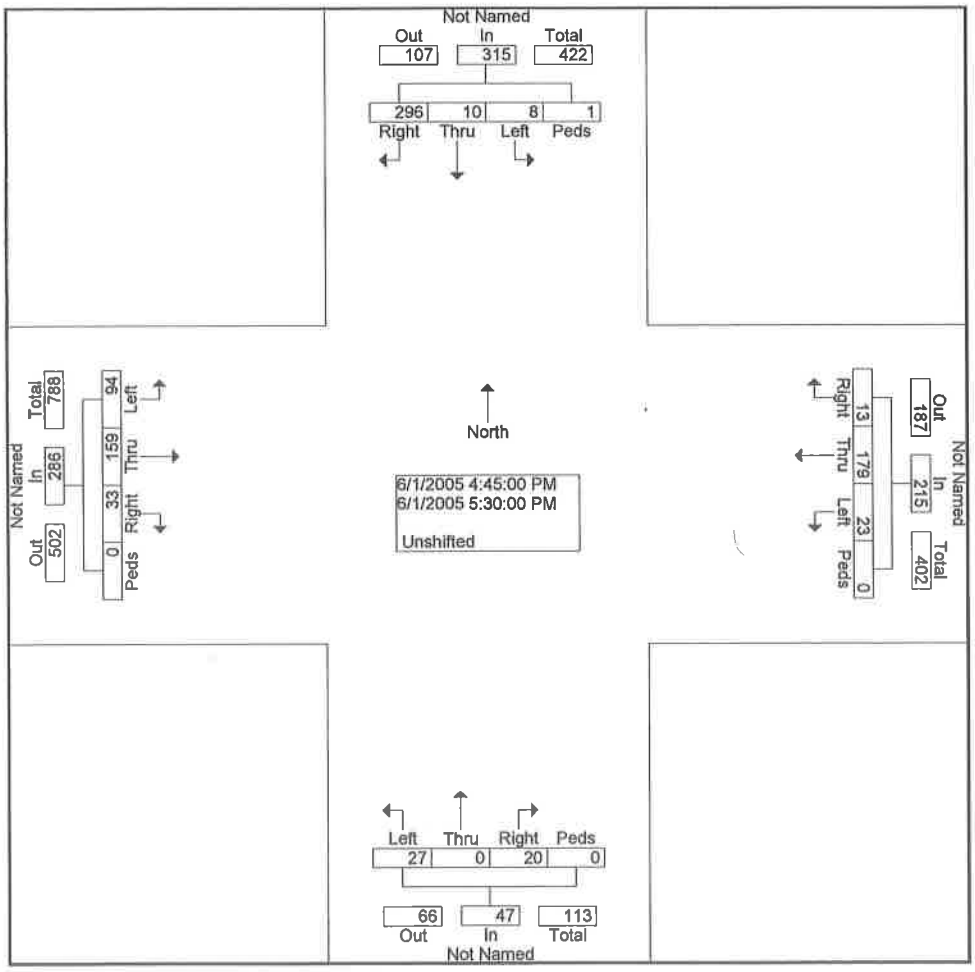
Page No : 2

	Southbound					Westbound					Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	296	10	8	1	315	13	179	23	0	215	20	0	27	0	47	33	159	94	0	286	863
Percent	94.0	3.2	2.5	0.3		6.0	83.3	10.7	0.0		42.6	0.0	57.4	0.0		11.5	55.6	32.9	0.0		
05:15 Volume	93	4	3	0	100	4	46	6	0	56	6	0	5	0	11	10	35	22	0	67	234
Peak Factor																					0.922
High Int.	05:15 PM					05:00 PM					04:45 PM					04:45 PM					
Volume	93	4	3	0	100	4	44	9	0	57	7	0	9	0	16	8	41	29	0	78	
Peak Factor					0.788					0.943					0.734					0.917	



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File Name : montrose.strong.AM
Site Code : 00025008
Start Date : 6/2/2005
Page No : 1

Groups Printed- Unshifted

	Montrose Tpke. Southbound				Strong Rd. Westbound				Montrose Tpke. Northbound				Dickerson Rd. Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	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	
07:00 AM	0	4	0	0	1	0	0	0	0	12	0	0	0	0	0	0	17
07:15 AM	0	3	0	0	1	0	0	0	0	27	0	0	0	0	1	0	32
07:30 AM	0	3	0	0	0	0	0	0	0	12	0	0	0	0	0	0	15
07:45 AM	0	4	0	0	2	0	0	0	0	16	0	0	0	0	0	0	22
Total	0	14	0	0	4	0	0	0	0	67	0	0	0	0	1	0	86
08:00 AM	0	4	1	0	1	0	0	0	0	8	0	0	0	0	1	0	15
08:15 AM	0	2	1	0	1	0	1	0	0	12	1	0	0	0	1	0	19
08:30 AM	0	4	2	0	2	0	0	0	0	14	0	0	0	0	0	0	22
08:45 AM	1	2	4	0	6	0	0	0	0	8	0	0	0	1	0	0	22
Total	1	12	8	0	10	0	1	0	0	42	1	0	0	1	2	0	78
Grand Total	1	26	8	0	14	0	1	0	0	109	1	0	0	1	3	0	164
Apprch %	2.9	74.3	22.9	0.0	93.3	0.0	6.7	0.0	0.0	99.1	0.9	0.0	0.0	25.0	75.0	0.0	
Total %	0.6	15.9	4.9	0.0	8.5	0.0	0.6	0.0	0.0	66.5	0.6	0.0	0.0	0.6	1.8	0.0	

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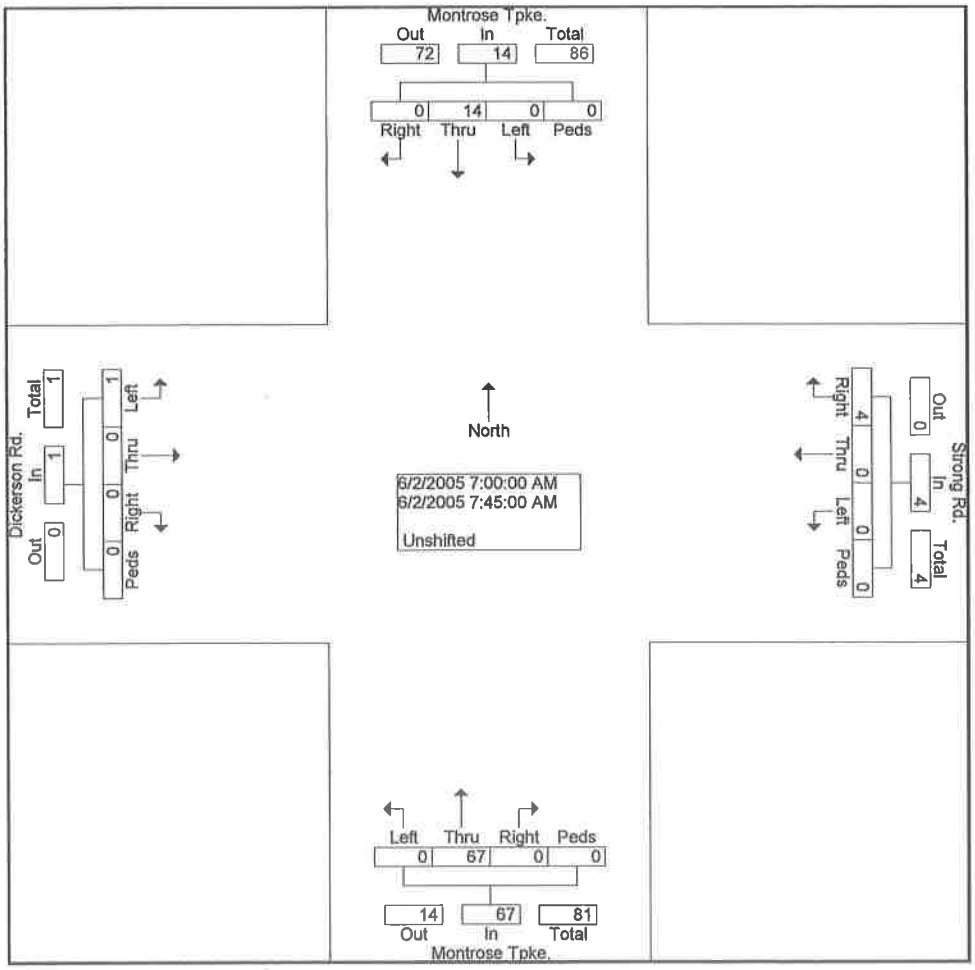
File Name : montrose.strong.AM
Site Code : 00025008
Start Date : 6/2/2005
Page No : 2

	Montrose Tpke. Southbound					Strong Rd. Westbound					Montrose Tpke. Northbound					Dickerson Rd. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	0	14	0	0	14	4	0	0	0	4	0	67	0	0	67	0	0	1	0	1	86
Percent	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
07:15 Volume	0	3	0	0	3	1	0	0	0	1	0	27	0	0	27	0	0	1	0	1	32
Peak Factor																					0.672
High Int.	07:00 AM					07:45 AM					07:15 AM					07:15 AM					
Volume	0	4	0	0	4	2	0	0	0	2	0	27	0	0	27	0	0	1	0	1	
Peak Factor					0.875					0.500					0.620					0.250	



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File Name : montrose.strong.PM
Site Code : 00025008
Start Date : 6/1/2005
Page No : 1

Groups Printed- Unshifted

	Montrose Tpke. Southbound				Dickerson Rd. Westbound				Montrose Tpke. Northbound				Strong Rd. Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	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	0	12	2	0	0	0	0	0	0	5	0	0	0	0	0	0	19
04:15 PM	0	12	1	0	2	0	0	0	1	12	0	0	0	0	0	0	28
04:30 PM	0	20	2	0	0	0	0	0	0	6	0	0	0	0	0	0	28
04:45 PM	0	16	2	0	0	0	1	0	0	13	0	0	0	0	0	0	32
Total	0	60	7	0	2	0	1	0	1	36	0	0	0	0	0	0	107
05:00 PM	0	23	0	0	3	0	0	0	0	4	0	0	0	0	0	0	30
05:15 PM	1	17	1	0	0	0	0	0	0	5	0	0	0	0	0	0	24
05:30 PM	0	14	1	0	0	0	0	0	0	8	0	0	0	0	0	0	23
05:45 PM	0	19	2	0	0	0	0	0	0	14	0	0	0	0	0	0	35
Total	1	73	4	0	3	0	0	0	0	31	0	0	0	0	0	0	112
Grand Total	1	133	11	0	5	0	1	0	1	67	0	0	0	0	0	0	219
Apprch %	0.7	91.7	7.6	0.0	83.3	0.0	16.7	0.0	1.5	98.5	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.5	60.7	5.0	0.0	2.3	0.0	0.5	0.0	0.5	30.6	0.0	0.0	0.0	0.0	0.0	0.0	

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File Name : montrose.strong.PM
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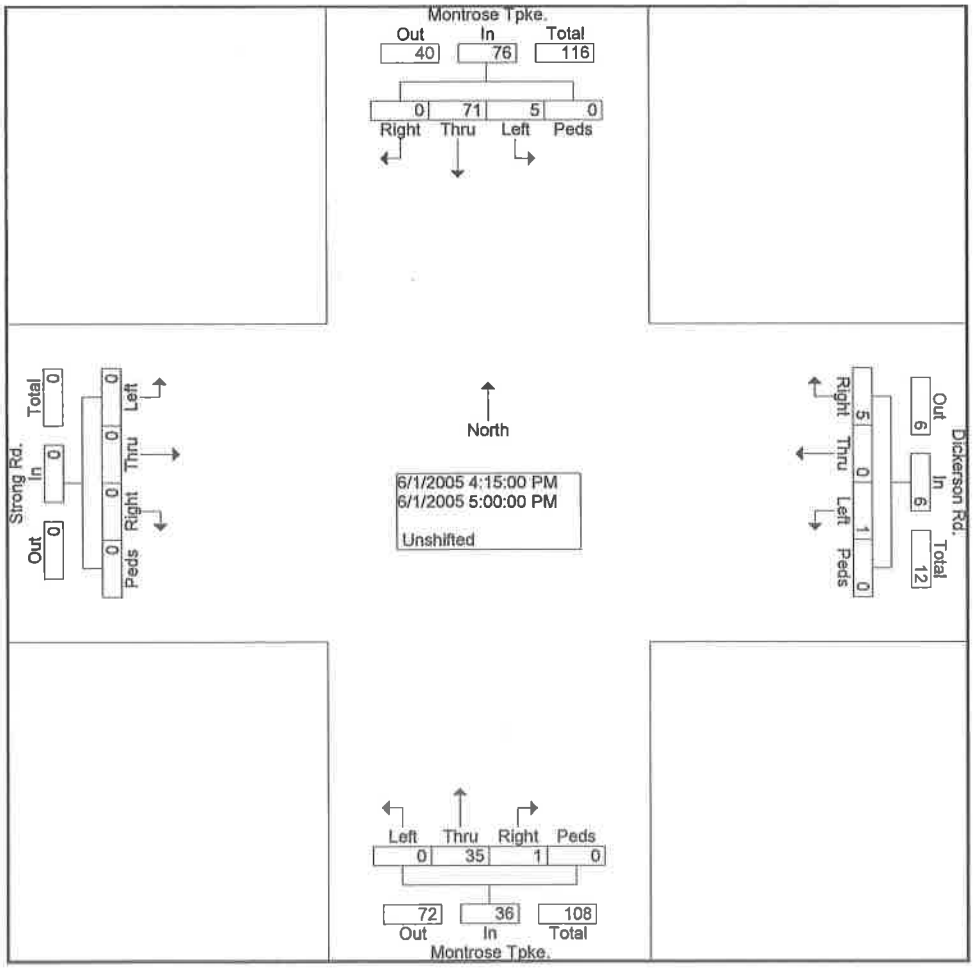
Start Date : 6/1/2005
Page No : 2

	Montrose Tpke. Southbound					Dickerson Rd. Westbound					Montrose Tpke. Northbound					Strong Rd. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	0	71	5	0	76	5	0	1	0	6	1	35	0	0	36	0	0	0	0	0	118
Percent	0.0	93.4	6.6	0.0		83.3	0.0	16.7	0.0		2.8	97.2	0.0	0.0		0.0	0.0	0.0	0.0		
04:45 Volume	0	16	2	0	18	0	0	1	0	1	0	13	0	0	13	0	0	0	0	0	32
Peak Factor																					0.922
High Int.	05:00 PM					05:00 PM					04:15 PM					3:45:00 PM					
Volume	0	23	0	0	23	3	0	0	0	3	1	12	0	0	13						
Peak Factor					0.826					0.500					0.692						

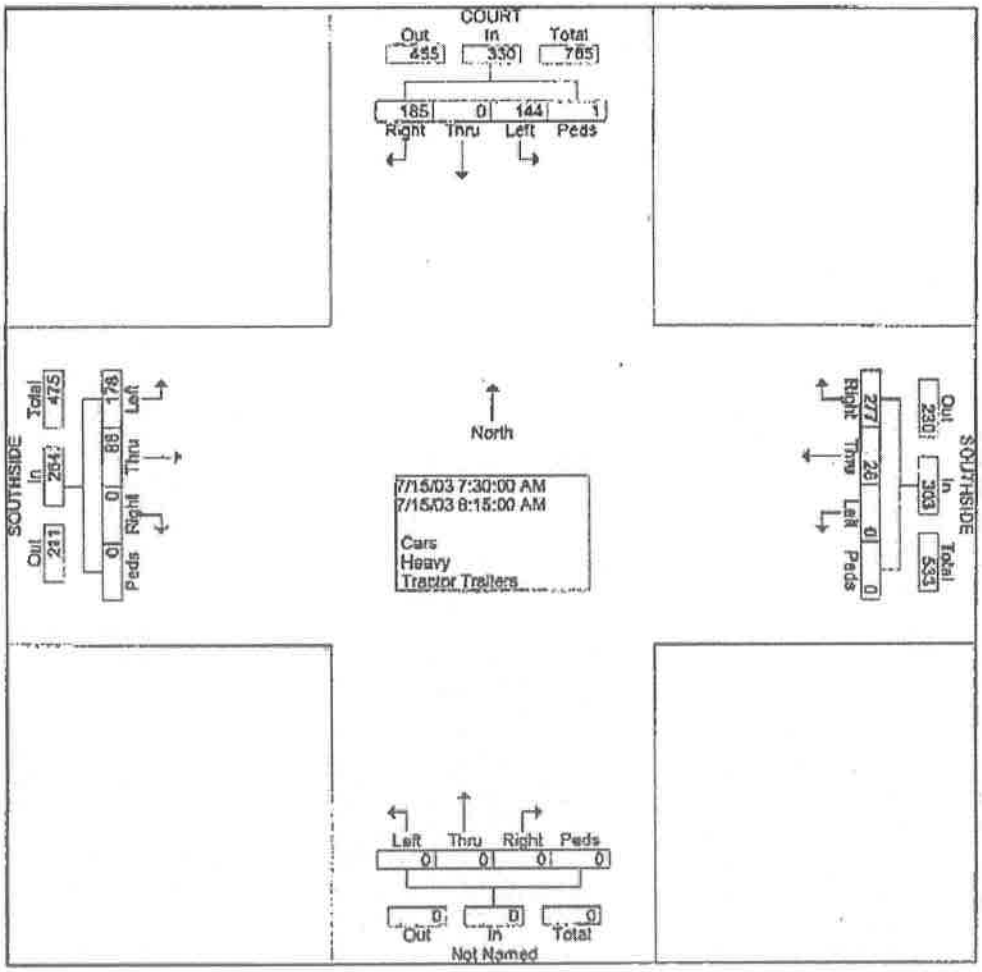


BINGHAMTON METROPOLITAN TRANSPORTATION S
BROOME COUNTY OFFICE BUILDING P.O. BOX 1
BINGHAMTON, NEW YROK 13902

Zach Staff
outhside/Court
VO
Sunny

File Name : 235am
Site Code : 00000235
Start Date : 07/15/2003
Page No : 2

	COURT From North					SOUTHSIDE From East					From South					SOUTHSIDE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 09:15 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	185	0	144	1	330	277	26	0	0	303	0	0	0	0	0	0	86	178	0	264	897
Percent	56.	0.0	43.	0.3		91.	8.6	0.0	0.0		0.0	0.0	0.0	0.0		0.0	32.	67.	0.0		
08:15	44	0	38	1	83	92	8	0	0	100	0	0	0	0	0	0	20	40	0	60	
Peak Factor																					
High Int.	07:30 AM					08:15 AM					6:45:00 AM					07:30 AM					
Volume	60	0	44	0	104	92	8	0	0	100	0	0	0	0	0	0	31	48	0	79	
Peak					0.79					0.75										0.83	

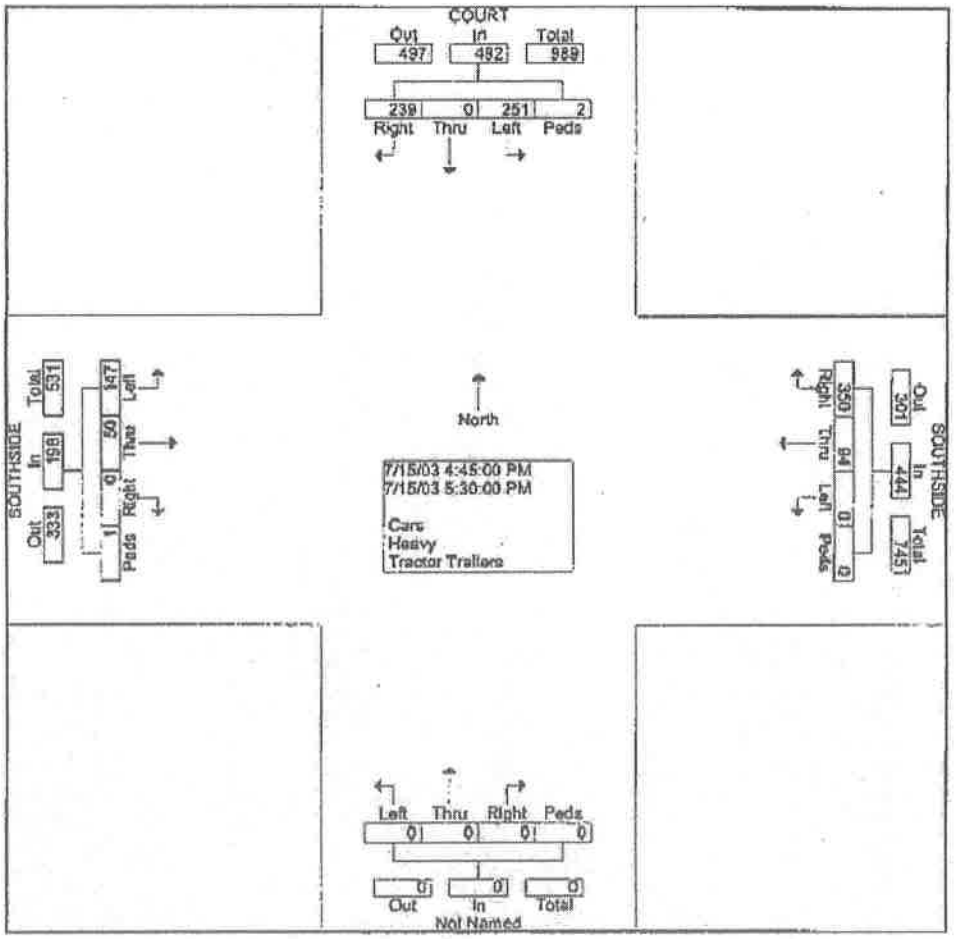


BINGHAMTON METROPOLITAN TRANSPORTATION S
BROOME COUNTY OFFICE BUILDING P.O. BOX 1
BINGHAMTON, NEW YROK 13902

Zach Staff
outhside/Court
VO
Sunny

File Name : 235pm
Site Code : 00000235
Start Date : 07/15/2003
Page No : 2

	COURT From North					SOUTHSIDE From East					From South					SOUTHSIDE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 03:00 PM to 05:30 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	239	0	251	2	492	350	94	0	0	444	0	0	0	0	0	0	50	147	1	198	
Percent	48.	0.0	51.	0.4		78.	21.	0.0	0.0		0.0	0.0	0.0	0.0		0.0	25.	74.	0.5		
04:45	49	0	56	2	107	94	28	0	0	122	0	0	0	0	0	0	19	45	1	65	
Peak Factor																					
High Int.	05:15 PM					04:45 PM					2:45:00 PM					04:45 PM					
Volume	68	0	70	0	138	94	28	0	0	122	0	0	0	0	0	0	19	45	1	65	
Peak					0.89					0.91										0.76	

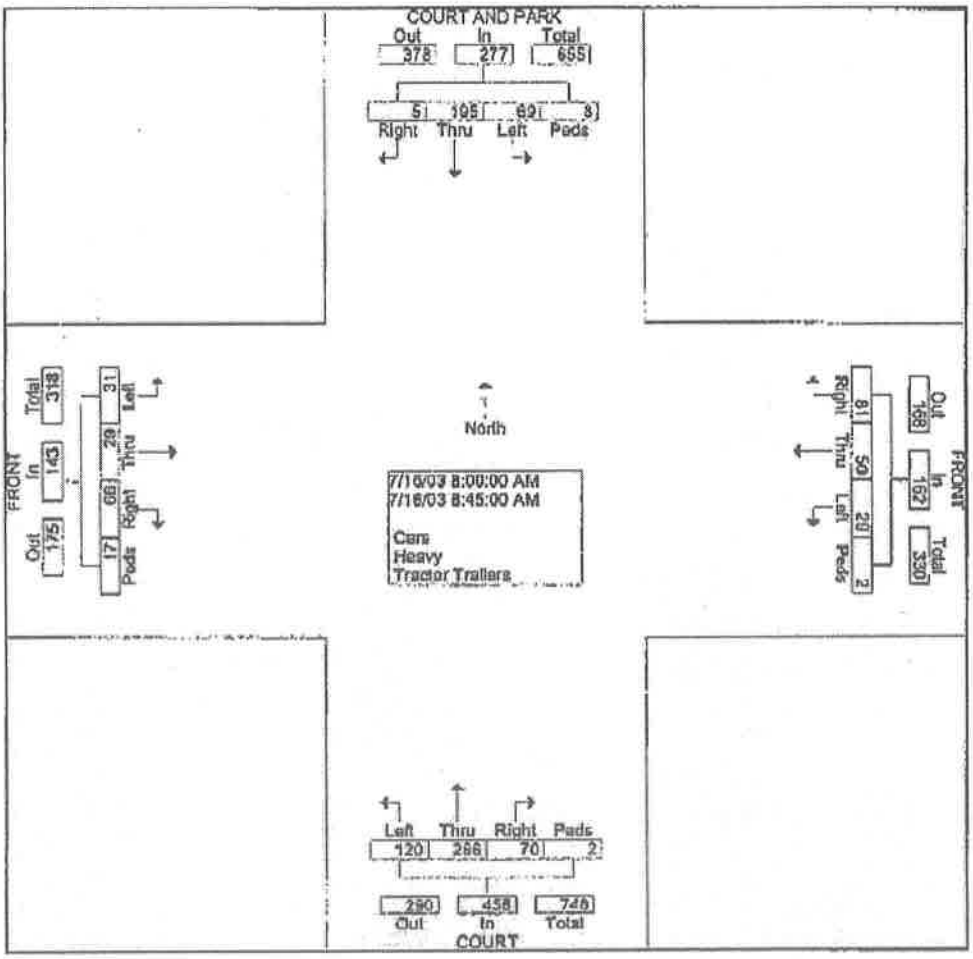


BINGHAMTON METROPOLITAN TRANSPORTATION S
BROOME COUNTY OFFICE BUILDING P.O. BOX 1
BINGHAMTON, NEW YROK 13902

Zach Staff
Court/Park/Front
√O
Partly Sunny

File Name : 236am
Site Code : 00000236
Start Date : 07/16/2003
Page No : 2

	COURT AND PARK From North					FRONT From East					COURT From South					FRONT From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 09:15 AM - Peak 1 of 1																					
Intersection	08:00 AM																				
Volume	5	195	69	8	277	81	50	29	2	162	70	266	120	2	458	66	29	31	17	143	1040
Percent	1.8	70.	24.	2.9		50.	30.	17.	1.2		15.	58.	26.	0.4		46.	20.	21.	11.		
08:15	2	48	22	2	74	20	13	3	0	36	22	70	45	0	137	16	5	7	2	30	277
Peak Factor																					0.939
High Int.	08:45 AM					08:45 AM					08:15 AM					08:00 AM					
Volume	2	55	15	4	76	24	15	7	1	47	22	70	45	0	137	16	11	7	5		
Peak					0.91					0.86					0.83						

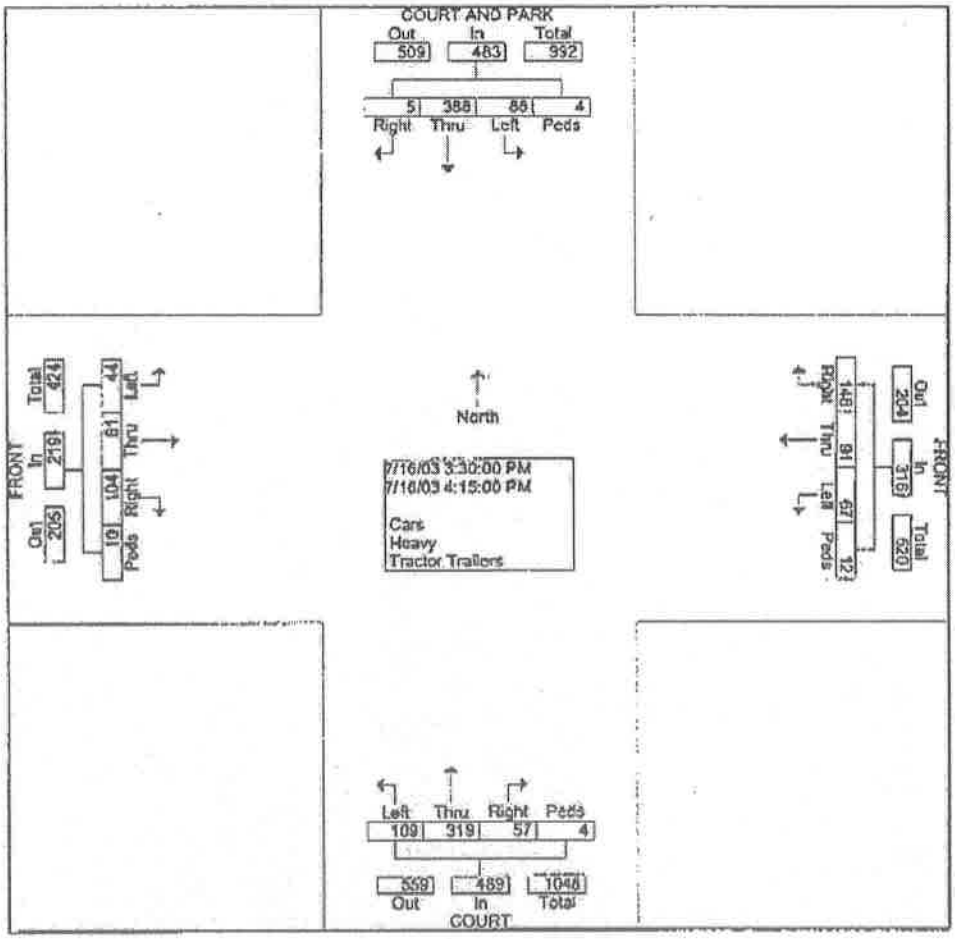


BINGHAMTON METROPOLITAN TRANSPORTATION S
BROOME COUNTY OFFICE BUILDING P.O. BOX 1
BINGHAMTON, NEW YROK 13902

Zach Staff
urt/Front/Park
vO
Sunny

File Name : 236pm
Site Code : 00000236
Start Date : 07/16/2003
Page No : 2

	COURT AND PARK From North					FRONT From East					COURT From South					FRONT From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 03:00 PM to 05:30 PM - Peak 1 of 1																					
Intersection	03:30 PM																				
Volume	5	388	86	4	483	146	91	67	12	316	57	319	109	4	489	104	61	44	10	219	
Percent	1.0	80.	17.	0.8		46.	28.	21.	3.8		11.	65.	22.	0.8		47.	27.	20.	4.6		
03:30	1	125	20	0	146	42	24	15	0	81	8	83	29	2	122	19	10	11	3	43	
Peak Factor																					
High Int.	03:30 PM					03:45 PM					04:15 PM					03:45 PM					
Volume	1	125	20	0	146	43	22	19	7	91	17	92	22	1	132	35	18	13	2	68	
Peak					0.82					0.86					0.92					0.80	



A2

Miscellaneous Traffic Data and Calculations

SRF ASSOCIATES
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Traffic Engineering & Planning Consultants

Proposed Route 434 Mixed Use Development.

Documentation of Ambient Traffic Volume Growth

Roadway	Segment ends at	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Annual Growth
Route 434	Route 17 access WB exit 64	-	7650	-	7750	7150	-	-	7050	-	-	7200	-	7200	-0.55%
Route 434	Route 17 access EB & WB exit 65	-	-	4250	-	-	3400	-	-	3800	4100	-	-	3350	-2.35%
Route 96	Route 17 access EB exit 64	-	-	5750	-	-	4200	-	-	5850	-	-	-	5250	-0.91%
Route 96	Route 434	-	-	10100	-	-	9250	-	-	13200	-	-	-	9100	-1.04%
Route 96	17C WB Overlap Junction 17C EB	10500	-	-	10600	-	9150	-	-	-	11200	-	-	13000	1.80%
Route 17C	Owego East Village Line	-	7650	-	7750	7750	-	-	7800	-	-	7200	-	7200	-0.55%
														average	-0.60%

Route 434 25008.0

Town of Owego, NY

BACKGROUND TRAFFIC TRIP GENERATION

SRF ASSOCIATES
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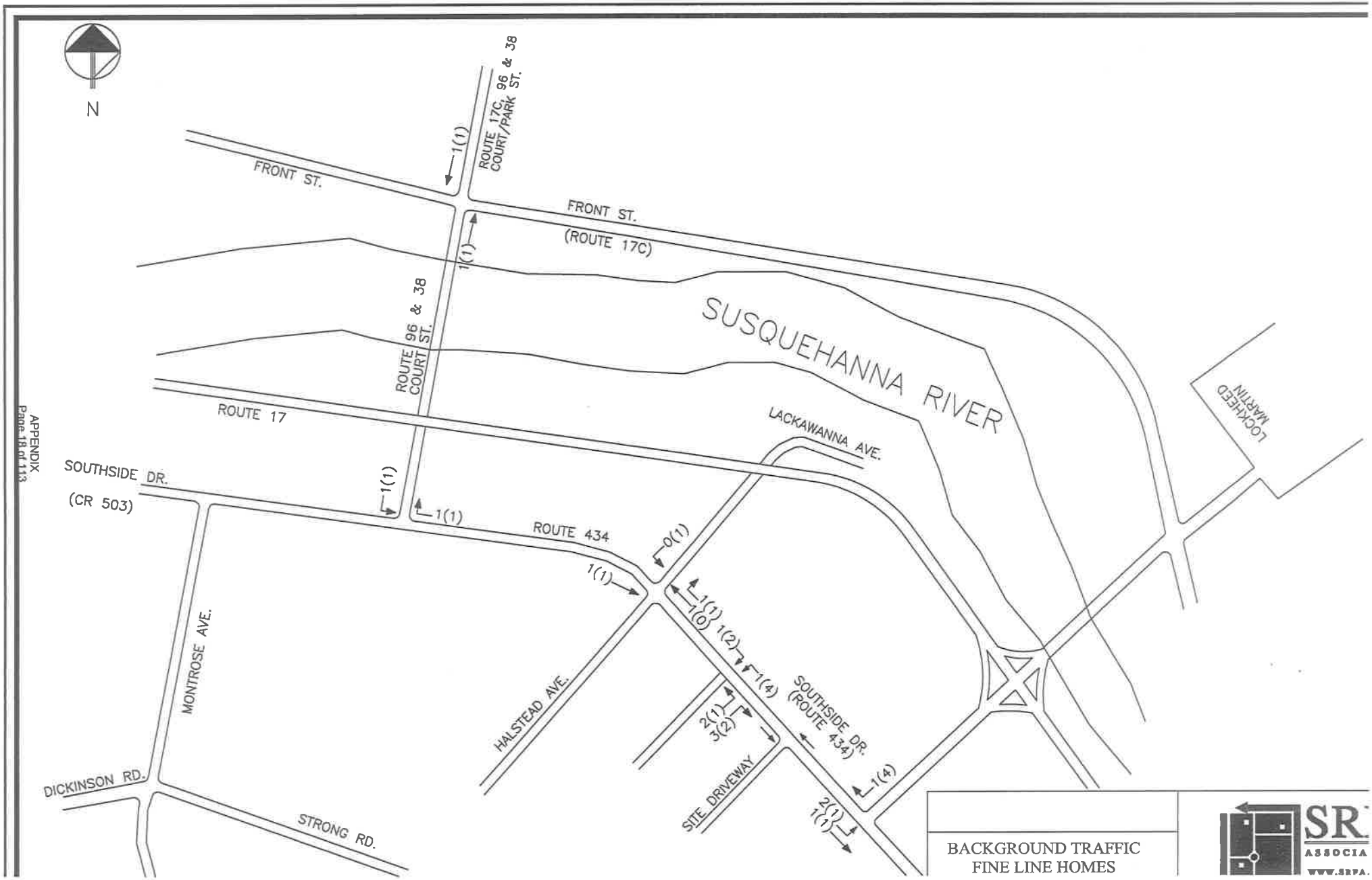
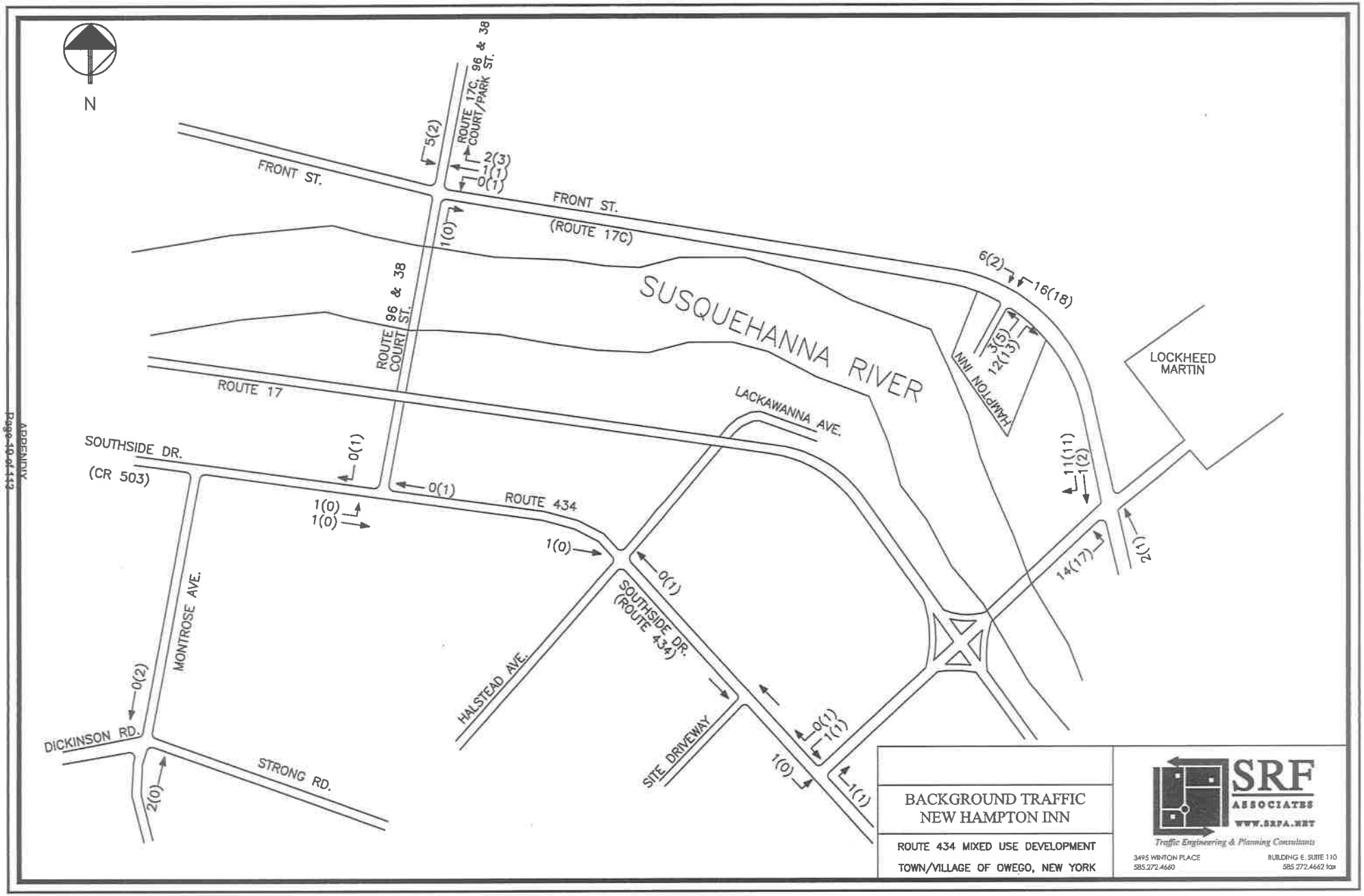
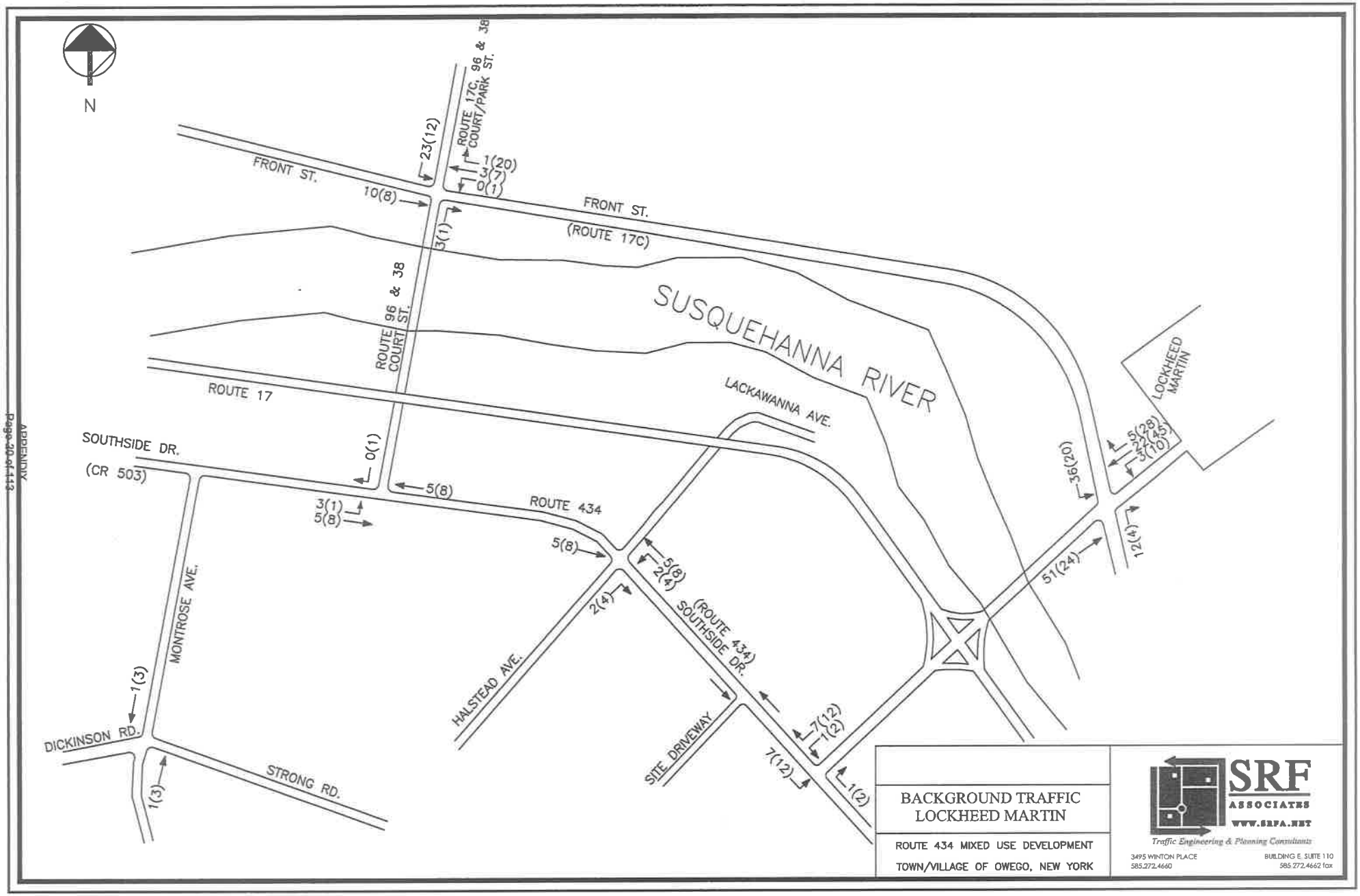
Type of Land Use	No of Building	SF	Total (SF)	Total Units	ITE		AM		PM	
							ENTER	EXIT	ENTER	EXIT
Lockheed Martin	1	176,000	176,000	1	Manufacturing Facility		99	30	48	83
New Hampton Inn Hotel	1		-	66	Hotel		22	15	20	18
Residential	3	10,000	30,000	3	Residential 9 single family units		2	5	6	3
						Totals:	**123**	**50**	**74**	**104**



BACKGROUND TRAFFIC
FINE LINE HOMES

SR ASSOCIA
www.srpa.


N
FRONT ST.
ROUTE 17C, 96 & 38 COURT/PARK ST.
5(2)
2(3)
1(1)
0(1)
FRONT ST.
(ROUTE 17C)
1(0)
6(2)
16(18)
SUSQUEHANNA RIVER
ROUTE 96 & 38 COURT ST.
HAMPTON INN
3(5)
12(13)
LOCKHEED MARTIN
ROUTE 17
LACKAWANNA AVE.
SOUTHSIDE DR.
(CR 503)
0(1)
0(1)
ROUTE 434
1(0)
1(0)
1(0)
11(11)
1(2)
14(17)
1(2)
0(1)
SOUTHSIDE DR. (ROUTE 434)
MONTROSE AVE.
0(2)
DICKINSON RD.
HALSTEAD AVE.
SITE DRIVEWAY
0(1)
1(1)
1(0)
1(1)
STRONG RD.
2(0)
BACKGROUND TRAFFIC
NEW HAMPTON INN
ROUTE 434 MIXED USE DEVELOPMENT
TOWN/VILLAGE OF OWEGO, NEW YORK
SRF ASSOCIATES
WWW.SRFA.NET
Traffic Engineering & Planning Consultants
3495 WINTON PLACE
585.272.4660
BUILDING E, SUITE 110
585.272.4662 fax



BACKGROUND TRAFFIC
LOCKHEED MARTIN

ROUTE 434 MIXED USE DEVELOPMENT
TOWN/VILLAGE OF OWEGO, NEW YORK

SRF ASSOCIATES
WWW.SRFA.NET
Traffic Engineering & Planning Consultants
3495 WINTON PLACE
585.272.4660
BUILDING E, SUITE 110
585.272.4662 fax

Route 434 - Intermediate Phase 25008.0
Town of Owego, NY

PHASE 1 TRIP GENERATION

SRF ASSOCIATES
WWW.SRFA.NET
Traffic Engineering & Planning Consultants

Type of Land Use	No of Building	SF	Total (SF)	Total Units	ITE		AM		PM	
							ENTER	EXIT	ENTER	EXIT
Office (Commercial)	2	45,000	90,000	2	General/Office Build/DU (Rates)		122	17	23	112
Light Industrial	3		100,000		Light Industrial/General/SF (Rates)		81	11	12	86
Residential	26	43,560	1,132,560	26	Single family luxury homes		5	16	9	5
Retail	3	10,000	30,000	3	Neighborhood Center (Rates)		19	12	54	59
						Totals:	**227**	**56**	**98**	**262**

Route 434
Town of Owego, NY

25008.0

FULL DEVELOPMENT TRIP GENERATION

Type of Land Use	No of Building	SF	Total (SF)	Total Units	ITE		AM		PM	
							ENTER	EXIT	ENTER	EXIT
Office (Commercial)	2	45,000	90,000	2	General/Office Build/DU (Rates)		122	17	23	112
Light Industrial	3		100,000		Light Industrial/General/SF (Rates)		81	11	12	86
Retail	3	10,000	30,000	3	Neighborhood Center (Rates)		19	12	54	59
Residential	1	73,500	73,500	70	Residential/Congregate Care/DU (Rates)		3	1	7	5
Residential	1	40,000	40,000	50	Residential/Assisted Living/DU (Rates)		6	3	7	14
Town Houses	30	1,200	36,000	1	Residential/Rental Townhouse/DU (Rates)		7	14	11	11
Apartments	30	1,100	33,000	1	Residential/Rental Apartment/DU (Rates)		4	15	22	12
Residential	26	43,560	1,132,560	26	Residential/Luxury Homes/ (Rates & Equations))		3	11	9	5
Open Space/Recreational			37 Acres		Recreation Community Center (Rates)		37	23	18	43
Institutional	1	15,000	15,000	1	Health Care Facility (SRF Data)		18	7	17	24
						Totals:	**300**	**114**	**180**	**371**

ROUTE 434 MIXED USE DEVELOPMENT
AM PEAK

LOCATION NUMBER	INTERSECTION DESCRIPTION	Approach / Movement Number	Existing Volume	Bkgrd Growth (2008) Lockheed	Bkgrd Growth (2008) Hampton Inn	Bkgrd Growth (2008) Pine Lane Homes	Bkgrd Growth (2008)	Phase 1 Enter	Phase 1 Exit	Phase 1 Trips Enter 222	Phase 1 Trips Exit 40	Phase 1 Site Trips	Phase 1 Build Volumes	Bkgrd Growth (2010) 1.0%	Full Development Enter	Full Development Exit	Full Development Trips Enter 300	Full Development Trips Exit 114	Full Development Site Trips	Full Development Build Volumes
			A	B	C	D	E	Dist. % F	Dist. % G	H	I	J	K	L	Dist. % M	Dist. % N	O	P	Q	R
1	NYS Route17C/ Route 96																			
	SR	1.01	5	0	0	0	5			0	0	0	5	5			0	0	0	5
	ST	1.02	195	0	0	1	196	20%		44	0	44	240	198	20%		60	0	60	258
	SL	1.03	69	23	5	0	97			0	0	0	97	98			0	0	0	98
	WR	1.04	81	1	2	0	84			0	0	0	84	85			0	0	0	85
	WT	1.05	50	3	1	0	54			0	0	0	54	55			0	0	0	55
	WL	1.06	29	0	0	0	29	10%		22	0	22	51	29	10%		30	0	30	59
	NR	1.07	70	3	1	0	74		10%	0	4	4	78	75		10%	0	11	11	86
	NT	1.08	266	0	0	1	267		20%	0	8	8	275	270		20%	0	23	23	292
	NL	1.09	120	0	0	0	120		8%	0	3	3	123	121		8%	0	8	8	129
	ER	1.10	66	0	0	0	66	8%		18	0	18	84	67	5%		24	0	24	91
	ET	1.11	29	10	0	0	39			0	0	0	39	39			0	0	0	39
	EL	1.12	31	0	0	0	31			0	0	0	31	31			0	0	0	31
2	Route 96/ Route 434																			
	SR	2.01	185	0	0	0	185			0	0	0	185	187			0	0	0	187
	ST	2.02	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	SL	2.03	144	0	0	1	145	38%		84	0	84	229	146	38%		114	0	114	260
	WR	2.04	277	0	0	1	278		38%	0	15	15	293	281		38%	0	43	43	324
	WT	2.05	28	3	0	0	31		21%	0	8	8	39	31		15%	0	17	17	48
	WL	2.06	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NR	2.07	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NT	2.08	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NL	2.09	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ER	2.10	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ET	2.11	88	5	1	0	94	21%		47	0	47	141	95	15%		45	0	45	140
	EL	2.12	178	3	1	0	182			0	0	0	182	184			0	0	0	184
3	Halstead Ave./ Southside Dr. (Rte. 434)																			
	SR	3.01	205	0	0	0	205			0	0	0	205	207			0	0	0	207
	ST	3.02	4	0	0	0	4			0	0	0	4	4			0	0	0	4
	SL	3.03	8	3	0	0	8	10%		22	0	22	30	8	10%		30	0	30	38
	WR	3.04	4	0	0	0	4		10%	0	4	4	8	4		10%	0	11	11	15
	WT	3.05	136	5	0	1	144		58%	0	24	24	168	145		53%	0	60	60	206
	WL	3.06	0	2	0	0	2			0	0	0	2	2			0	0	0	2
	NR	3.07	25	2	0	0	27			0	0	0	27	27			0	0	0	27
	NT	3.08	2	0	0	0	2			0	0	0	2	2			0	0	0	2
	NL	3.09	32	0	0	0	32			0	0	0	32	32			0	0	0	32
	ER	3.10	16	0	0	1	17			0	0	0	17	17			0	0	0	17
	ET	3.11	171	5	0	1	177	59%		131	0	131	308	179	53%		159	0	159	338
	EL	3.12	85	0	0	0	85			0	0	0	85	86			0	0	0	86
4	Montrose Ave./ Strong Rd.																			
	SR	4.01	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ST	4.02	14	1	0	0	15			0	0	0	15	15			0	0	0	15
	SL	4.03	0	0	0	0	0	4%		9	0	9	9	0	4%		12	0	12	12
	WR	4.04	4	0	0	0	4		4%	0	2	2	6	4		4%	0	5	5	9
	WT	4.05	0	0	0	0	0		1%	0	0	0	0	0		1%	0	1	1	1
	WL	4.06	0	0	0	0	0		1%	0	0	0	0	0		1%	0	1	1	1
	NR	4.07	0	0	0	0	0	1%		2	0	2	2	0	1%		3	0	3	3
	NT	4.08	67	1	2	0	70			0	0	0	70	71			0	0	0	71
	NL	4.09	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ER	4.10	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ET	4.11	0	0	0	0	0	1%		2	0	2	2	0	1%		3	0	3	3
	EL	4.12	1	0	0	0	1			0	0	0	1	1			0	0	0	1

ROUTE 434 MIXED USE DEVELOPMENT
AM PEAK

LOCATION NUMBER	INTERSECTION DESCRIPTION	Approach / Movement Number	Existing Volume	Bkgrd Growth (2008) Lockheed	Bkgrd Growth (2008) Hampton Inn	Bkgrd Growth (2008) Fine Lane Homes	Bkgrd Growth (2008)	Phase 1 Enter	Phase 1 Exit	Phase 1 Trips Enter 222	Phase 1 Trips Exit 40	Phase 1 Site Trips	Phase 1 Build Volumes	Bkgrd Growth (2010) 1.0%	Full Development Enter	Full Development Exit	Full Development Trips Enter 300	Full Development Trips Exit 114	Full Development Site Trips	Full Development Build Volumes
			A	B	C	D	E	Dist. % F	G	H	I	J	K	L	Dist. % M	Dist. % N	O	P	Q	R
5	Northern Driveway/ Southside Dr. (Rte. 434)																			
	SR	5.01	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ST	5.02	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	SL	5.03	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	WR	5.04	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	WT	5.05	142	7	0	1	150			0	0	0	150	152			0	0	0	152
	WL	5.06	0	0	0	0	0	25%		56	0	56	56	0	25%		76	0	75	75
	NR	5.07	0	0	0	0	0		25%	0	10	10	10	0		25%	0	29	29	29
	NT	5.08	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NL	5.09	0	0	0	0	0		69%	0	25	28	28	0		63%	0	72	72	72
	ER	5.10	0	0	0	0	0	69%		153	0	153	153	0	63%		189	0	189	189
	ET	5.11	204	75	1	1	211			0	0	0	211	213			0	0	0	213
	EL	5.12	0	0	0	0	0			0	0	0	0	0			0	0	0	0
6	Southern Driveway/ Strong Rd.																			
	SR	6.01	0	0	0	0	0		6%	0	2	2	2	0		6%	0	7	7	7
	ST	6.02	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	SL	6.03	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	WR	6.04	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	WT	6.05	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	WL	6.06	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NR	6.07	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NT	6.08	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NL	6.09	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ER	6.10	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ET	6.11	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	EL	6.12	0	0	0	0	0	6%		13	0	13	13	0	6%		18	0	18	18

ROUTE 434 MIXED USE DEVELOPMENT
PM PEAK

LOCATION NUMBER	INTERSECTION DESCRIPTION	Approach / Movement Number	Existing Volume	Bkgrd Growth (2008) Lockheed	Bkgrd Growth (2008) Hampton Inn	Bkgrd Growth (2008) Fine Line Homes	Bkgrd Growth (2008)	Phase 1 Enter	Phase 1 Exit	Phase 1 Trips Enter 69	Phase 1 Trips Exit 257	Phase 1 Site Trips	Phase 1 Build Volumes	Bkgrd Growth (2010) 10%	Full Development Enter	Full Development Exit	Full Development Trips Enter 180	Full Development Trips Exit 371	Full Development Site Trips	Full Development Build Volumes
			A	B	C	D	E	Dist. % F	G	H	I	J	K	L	Dist. % M	Dist. % N	O	P	Q	R
1	NYS Route17C/ Route 96																			
	SR	1.01	5	0	0	0	5			0	0	0	5	5			0	0	0	5
	ST	1.02	388	0	0	1	389	20%		18	0	18	407	393	20%		36	0	36	429
	SL	1.03	88	12	2	0	102			0	0	0	102	103			0	0	0	103
	WR	1.04	146	20	3	0	169			0	0	0	169	171			0	0	0	171
	WT	1.05	91	7	1	0	99			0	0	0	99	100			0	0	0	100
	WL	1.06	57	1	1	0	59	10%		9	0	9	78	70	10%		18	0	18	88
	NR	1.07	57	1	0	0	58		10%	0	26	26	84	59		10%	0	37	37	96
	NT	1.08	319	0	0	1	320		20%	0	52	52	372	323		20%	0	74	74	397
	NL	1.09	109	0	0	0	109		8%	0	21	21	130	110		8%	0	28	28	138
	ER	1.10	104	0	0	0	104	8%		7	0	7	111	105	8%		14	0	14	119
	ET	1.11	61	8	0	0	69			0	0	0	69	70			0	0	0	70
	EL	1.12	44	0	0	0	44			0	0	0	44	44			0	0	0	44
2	Route 96/ Route 434																			
	SR	2.01	239	1	1	0	241			0	0	0	241	243			0	0	0	243
	ST	2.02	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	SL	2.03	251	0	0	1	252	38%		34	0	34	286	255	38%		68	0	68	323
	WR	2.04	350	0	0	1	351		38%	0	98	98	449	355		38%	0	141	141	495
	WT	2.05	94	8	1	0	103		21%	0	54	54	157	104		15%	0	56	56	160
	WL	2.06	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NR	2.07	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NT	2.08	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NL	2.09	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ER	2.10	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ET	2.11	50	8	0	0	58	21%		19	0	19	77	59	15%		27	0	27	85
	EL	2.12	147	1	0	0	148			0	0	0	148	149			0	0	0	149
3	Halstead Ave./ Southside Dr. (Rte. 434)																			
	SR	3.01	296	0	0	0	296			0	0	0	296	299			0	0	0	299
	ST	3.02	10	0	0	0	10			0	0	0	10	10			0	0	0	10
	SL	3.03	8	0	0	1	9	10%		9	0	9	18	9	10%		18	0	18	27
	WR	3.04	13	0	0	1	14		10%	0	26	26	40	14		10%	0	37	37	51
	WT	3.05	179	8	1	0	188		59%	0	152	152	340	190		53%	0	197	197	387
	WL	3.06	23	4	0	0	27			0	0	0	27	27			0	0	0	27
	NR	3.07	20	4	0	0	24			0	0	0	24	24			0	0	0	24
	NT	3.08	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NL	3.09	27	0	0	0	27			0	0	0	27	27			0	0	0	27
	ER	3.10	33	0	0	0	33			0	0	0	33	33			0	0	0	33
	ET	3.11	159	8	0	1	168	59%		53	0	53	221	170	53%		95	0	95	265
	EL	3.12	94	0	0	0	94			0	0	0	94	95			0	0	0	95
4	Montrose Ave./ Strong Rd.																			
	SR	4.01	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ST	4.02	71	3	2	0	76			0	0	0	76	77			0	0	0	77
	SL	4.03	5	0	0	0	5	4%		4	0	4	9	5	4%		7	0	7	12
	WR	4.04	5	0	0	0	5		4%	0	10	10	15	5		4%	0	15	15	20
	WT	4.05	0	0	0	0	0		1%	0	3	3	3	0		1%	0	4	4	4
	WL	4.06	1	0	0	0	1		1%	0	3	3	4	1		1%	0	4	4	5
	NR	4.07	1	0	0	0	1	1%		1	0	1	2	1	1%		2	0	2	3
	NT	4.08	35	3	0	0	38			0	0	0	38	38			0	0	0	38
	NL	4.09	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ER	4.10	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ET	4.11	0	0	0	0	0	1%		1	0	1	1	0	1%		2	0	2	2
	EL	4.12	0	0	0	0	0			0	0	0	0	0			0	0	0	0

ROUTE 434 MIXED USE DEVELOPMENT
PM PEAK

LOCATION NUMBER	INTERSECTION DESCRIPTION	Approach / Movement Number	Existing Volume	Bkgrd Growth (2006) Lockheed	Bkgrd Growth (2006) Hampton Inn	Bkgrd Growth (2006) Pine Line Homes	Bkgrd Growth (2006)	Phase 1 Enter	Phase 1 Exit	Phase 1 Trips Enter 89	Phase 1 Trips Exit 257	Phase 1 Site Trips	Phase 1 Build Volumes	Bkgrd Growth (2010) 10%	Full Development Enter	Full Development Exit	Full Development Trips Enter 180	Full Development Trips Exit 371	Full Development Site Trips	Full Development Build Volumes
			A	B	C	D	E	Dist. % F	Dist. % G	H	I	J	K	L	Dist. % M	Dist. % N	O	P	Q	R
5	Northern Driveway/ Southside Dr. (Rte. 434)																			
	SR	5.01	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ST	5.02	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	SL	5.03	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	WR	5.04	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	WT	5.05	216	12	1	4	232			0	0	0	232	234			0	0	0	234
	WL	5.06	0	0	0	0	0	25%		22	0	22	22	0	25%		45	0	45	45
	NR	5.07	0	0	0	0	0		25%	0	64	64	64	0		25%	0	93	93	93
	NT	5.08	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NL	5.09	0	0	0	0	0		69%	0	177	177	177	0		163%	0	234	234	234
	ER	5.10	0	0	0	0	0	69%		61	0	61	61	0	63%		113	0	113	113
	ET	5.11	187	8	0	1	196			0	0	0	196	198			0	0	0	198
	EL	5.12	0	0	0	0	0			0	0	0	0	0			0	0	0	0
6	Southern Driveway/ Strong Rd.																			
	SR	6.01	0	0	0	0	0		6%	0	15	15	15	0		6%	0	22	22	22
	ST	6.02	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	SL	6.03	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	WR	6.04	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	WT	6.05	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	WL	6.06	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NR	6.07	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NT	6.08	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	NL	6.09	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ER	6.10	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	ET	6.11	0	0	0	0	0			0	0	0	0	0			0	0	0	0
	EL	6.12	0	0	0	0	0	6%		5	0	5	5	0	6%		11	0	11	11

Left Turn Lane Warrant Worksheet

Intersection/ Location	Time Period	Number of Left Turns	Percent Left Turns	Advancing Volume	Opposing Volumes	Warrant Met?
	AM PEAK					
	PM PEAK					

Intersection/ Location	Time Period	Number of Left Turns	Percent Left Turns	Advancing Volume	Opposing Volumes	Warrant Met?
	AM PEAK					
	PM PEAK					

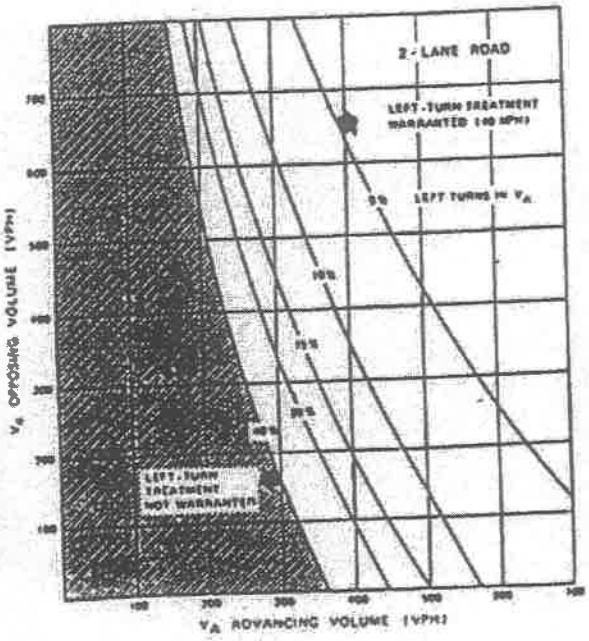
Intersection/ Location	Time Period	Number of Left Turns	Percent Left Turns	Advancing Volume	Opposing Volumes	Warrant Met?
	AM PEAK					
	PM PEAK					

Reference: _____

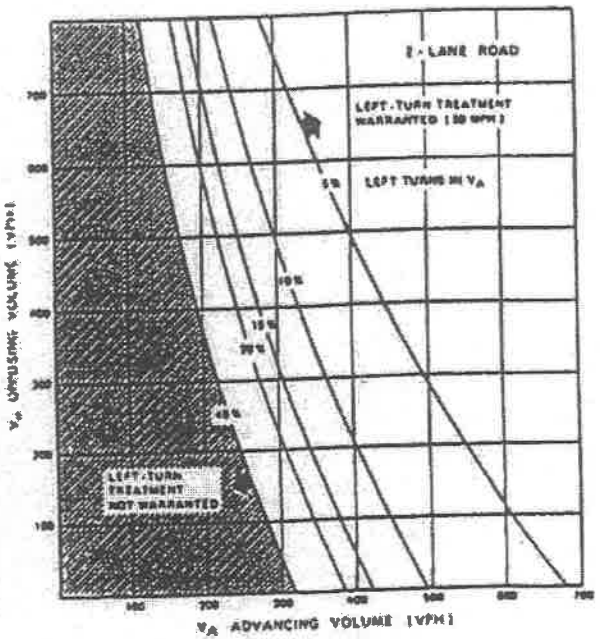
UNSIGNALIZED LEFT-TURN LANE WARRANTS

2-LANE ROADS

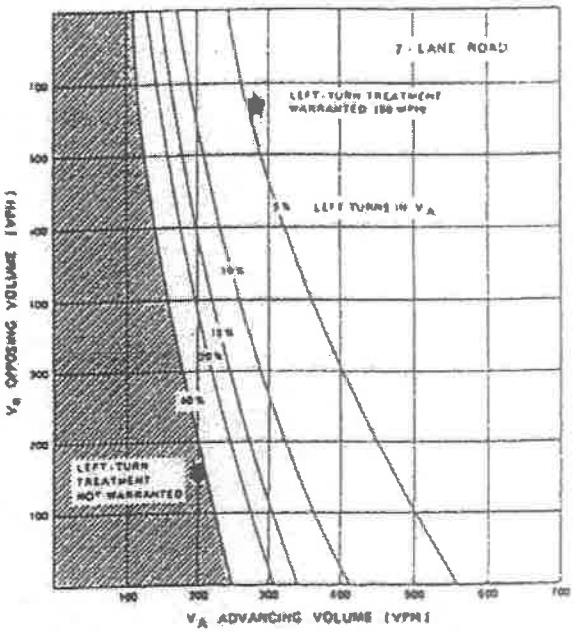
40 mph



50 mph

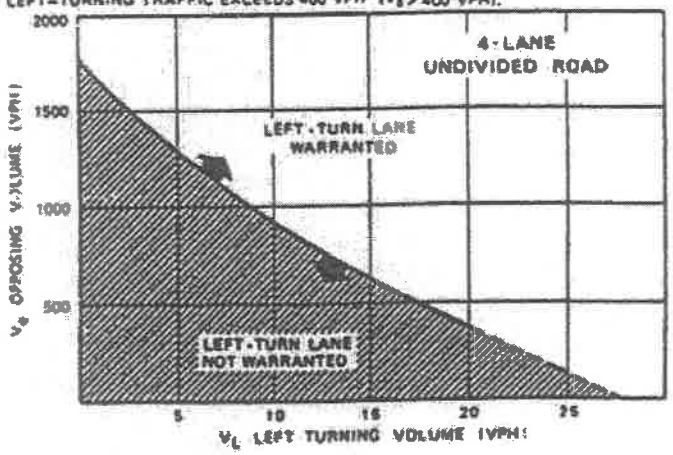


60 mph



4-LANE UNDIVIDED ROAD

NOTE WHEN V_o < 400 VPH (dashed line), A LEFT-TURN LANE IS NOT NORMALLY WARRANTED UNLESS THE ADVANCING VOLUME (V_A) IN THE SAME DIRECTION AS THE LEFT-TURNING TRAFFIC EXCEEDS 400 VPH (V_o > 400 VPH).



A3

Level of Service: Criteria and Definitions

Level of Service Criteria

Highway Capacity Manual 2000

SIGNALIZED INTERSECTIONS

Level of Service is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Level of Service for signalized intersections is defined in terms of delay specifically, average total delay per vehicle for a 15 minute analysis period. The ranges are as follows:

Level of Service	Description	Delay Time (seconds)
A	Little or no delay	< 10
B	Minor, short delay	10.1 – 20
C	Average delay	15.1 – 35
D	Long but acceptable delay	25.1 – 55
E	Long and approaching unacceptable delay	35.1 – 80
F	Long unacceptable delay	>80

UNSIGNALIZED INTERSECTIONS

Level of Service for unsignalized intersections is also defined in terms of delay. However, the delay criteria are different from a signalized intersection. The primary reason for this is driver expectation that a signalized intersection is designed to carry higher volumes than an unsignalized intersection. The total delay threshold for any given Level of Service is less for an unsignalized intersection than for a signalized intersection. The ranges are as follows:

Level of Service	Delay Time (seconds)
A	< 10
B	10.1 - 15
C	15.1 - 25
D	25.1 - 35
E	35.1 - 50
F	>50

A4

Level of Service Calculations: Existing Conditions

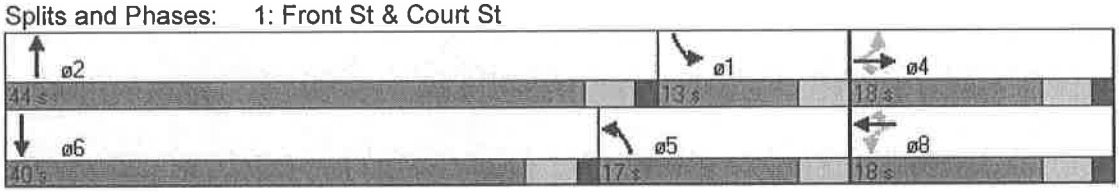
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		65	0		85	295		25	0		0
Storage Lanes	0		1	0		1	1		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt			0.850			0.850		0.969			0.997	
Flt Protected		0.975			0.982		0.950			0.950		
Satd. Flow (prot)	0	1816	1583	0	1829	1583	1770	3430	0	1770	1857	0
Flt Permitted		0.827			0.877		0.950			0.950		
Satd. Flow (perm)	0	1540	1583	0	1634	1583	1770	3430	0	1770	1857	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73			94		67			2	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1073			640			1461			308	
Travel Time (s)		24.4			14.5			33.2			7.0	
Volume (vph)	31	29	66	29	50	81	120	266	70	69	195	5
Peak Hour Factor	0.91	0.91	0.91	0.86	0.86	0.86	0.83	0.83	0.83	0.91	0.91	0.91
Adj. Flow (vph)	34	32	73	34	58	94	145	320	84	76	214	5
Lane Group Flow (vph)	0	66	73	0	92	94	145	404	0	76	219	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phases	4	4	4	8	8	8	5	2		1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	11.5	23.5		11.5	23.5	
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	44.0	0.0	13.0	40.0	0.0
Total Split (%)	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	22.7%	58.7%	0.0%	17.3%	53.3%	0.0%
Maximum Green (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.5	39.0		9.5	35.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	0.0	1.5		0.0	1.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	8.0	8.0	8.0	8.0	8.0	8.0		8.0			8.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		11.5	11.5		11.5	11.5	10.8	34.4		10.6	31.5	
Actuated g/C Ratio		0.20	0.20		0.19	0.19	0.18	0.63		0.18	0.58	
v/c Ratio		0.22	0.20		0.29	0.24	0.44	0.19		0.25	0.20	
Control Delay		15.4	5.9		15.4	5.6	16.1	7.8		16.3	11.1	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		15.4	5.9		15.4	5.6	16.1	7.8		16.3	11.1	
LOS		B	A		B	A	B	A		B	B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.4			10.4			10.0			12.4	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 54.7
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay: 10.7 Intersection LOS: B
Intersection Capacity Utilization 38.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Front St & Court St

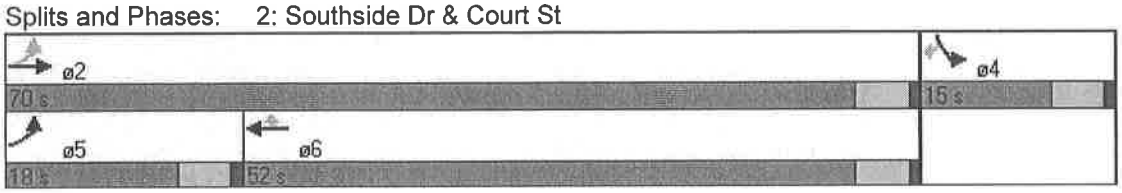


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	190
Storage Lanes	1			1	1	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.968			0.950	
Satd. Flow (prot)	0	3426	1863	1583	1770	1583
Flt Permitted		0.730			0.950	
Satd. Flow (perm)	0	2584	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				369		234
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	839		1461	
Travel Time (s)		5.3	19.1		33.2	
Volume (vph)	178	88	26	277	144	185
Peak Hour Factor	0.83	0.83	0.75	0.75	0.79	0.79
Adj. Flow (vph)	214	106	35	369	182	234
Lane Group Flow (vph)	0	320	35	369	182	234
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phases	5	2	6	6	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	21.0	10.0	10.0	10.0	10.0
Total Split (s)	18.0	70.0	52.0	52.0	15.0	15.0
Total Split (%)	21.2%	82.4%	61.2%	61.2%	17.6%	17.6%
Maximum Green (s)	13.0	65.0	47.0	47.0	10.0	10.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Min	Min
Act Effct Green (s)		9.7	9.6	9.6	12.8	12.8
Actuated g/C Ratio		0.34	0.34	0.34	0.49	0.49
v/c Ratio		0.37	0.06	0.47	0.21	0.26
Control Delay		7.0	6.1	1.8	7.6	2.3
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		7.0	6.1	1.8	7.6	2.3
LOS		A	A	A	A	A
Approach Delay		7.0	2.2		4.6	
Approach LOS		A	A		A	

Intersection Summary

Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 26.3			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay: 4.4		Intersection LOS: A	
Intersection Capacity Utilization 33.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Southside Dr & Court St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	85	171	16	0	138	4	32	2	25	8	4	205
Peak Hour Factor	0.74	0.74	0.74	0.72	0.72	0.72	0.64	0.64	0.64	0.91	0.91	0.91
Hourly flow rate (vph)	115	231	22	0	192	6	50	3	39	9	4	225
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		839										
pX, platoon unblocked												
vC, conflicting volume	197			253			668	669	126	580	677	194
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	197			253			668	669	126	580	677	194
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			100			78	99	96	98	99	72
cM capacity (veh/h)	1373			1310			230	346	900	353	342	814

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1
Volume Total	230	137	197	50	42	238
Volume Left	115	0	0	50	0	9
Volume Right	0	22	6	0	39	225
cSH	1373	1700	1310	230	805	758
Volume to Capacity	0.08	0.08	0.00	0.22	0.05	0.31
Queue Length 95th (ft)	7	0	0	20	4	34
Control Delay (s)	4.3	0.0	0.0	24.9	9.7	11.9
Lane LOS	A			C	A	B
Approach Delay (s)	2.7		0.0	18.0		11.9
Approach LOS				C		B

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	4	1	0	0	0	67	0	0	14	0
Peak Hour Factor	0.25	0.25	0.25	0.50	0.50	0.50	0.62	0.62	0.62	0.87	0.87	0.87
Hourly flow rate (vph)	0	0	16	2	0	0	0	108	0	0	16	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	124	124	16	140	124	108	16			108		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	124	124	16	140	124	108	16			108		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	98	100	100	100	100			100		
cM capacity (veh/h)	850	766	1063	817	766	946	1601			1483		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	16	2	108	16
Volume Left	0	2	0	0
Volume Right	16	0	0	0
cSH	1063	817	1601	1483
Volume to Capacity	0.02	0.00	0.00	0.00
Queue Length 95th (ft)	1	0	0	0
Control Delay (s)	8.4	9.4	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	8.4	9.4	0.0	0.0
Approach LOS	A	A		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	13.5%	ICU Level of Service	A
Analysis Period (min)	15		

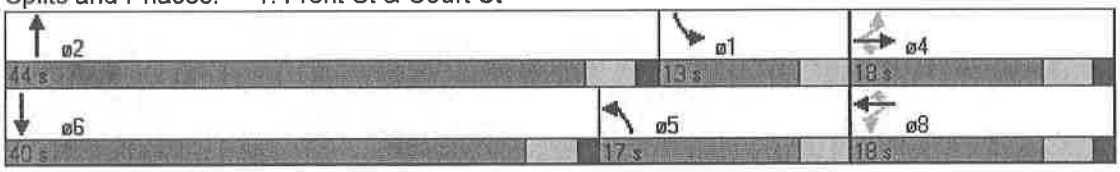
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		65	0		85	295		25	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt			0.850			0.850		0.977			0.998	
Flt Protected		0.980			0.979		0.950			0.950		
Satd. Flow (prot)	0	1825	1583	0	1824	1583	1770	3458	0	1770	1859	0
Flt Permitted		0.673			0.781		0.950			0.950		
Satd. Flow (perm)	0	1254	1583	0	1455	1583	1770	3458	0	1770	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121			182		42			1	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1073			640			1461			308	
Travel Time (s)		24.4			14.5			33.2			7.0	
Volume (vph)	44	61	104	67	91	146	109	319	57	88	388	5
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.82	0.82	0.82	0.92	0.92	0.92
Adj. Flow (vph)	51	71	121	84	114	182	133	389	70	96	422	5
Lane Group Flow (vph)	0	122	121	0	198	182	133	459	0	96	427	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phases	4	4	4	8	8	8	5	2		1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	11.5	23.5		11.5	23.5	
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	44.0	0.0	13.0	40.0	0.0
Total Split (%)	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	22.7%	58.7%	0.0%	17.3%	53.3%	0.0%
Maximum Green (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.5	39.0		9.5	35.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	0.0	1.5		0.0	1.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	8.0	8.0	8.0	8.0	8.0	8.0		8.0			8.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		12.4	12.4		12.6	12.6	9.0	26.6		13.1	27.8	
Actuated g/C Ratio		0.21	0.21		0.21	0.21	0.15	0.47		0.22	0.49	
v/c Ratio		0.46	0.28		0.64	0.38	0.49	0.28		0.25	0.47	
Uniform Delay, d1		21.5	0.0		22.5	0.0	23.1	9.6		21.5	11.1	
Control Delay		23.9	6.5		27.4	6.2	24.0	13.9		17.8	14.6	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		23.9	6.6		27.4	6.3	24.0	13.9		17.8	14.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		C	A		C	A	C	B		B	B	
Approach Delay		15.3			17.3			16.2			15.2	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 56.8
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 51.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Front St & Court St

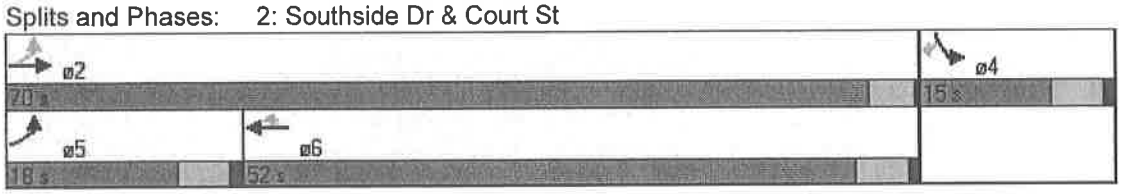


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	190
Storage Lanes	0			0	0	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.964			0.950	
Satd. Flow (prot)	0	3412	1863	1583	1770	1583
Flt Permitted		0.709			0.950	
Satd. Flow (perm)	0	2509	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				461		269
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30	30		30	
Link Distance (ft)		236	839		1461	
Travel Time (s)		5.4	19.1		33.2	
Volume (vph)	147	50	94	350	251	239
Peak Hour Factor	0.91	0.91	0.76	0.76	0.89	0.89
Adj. Flow (vph)	162	55	124	461	282	269
Lane Group Flow (vph)	0	217	124	461	282	269
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phases	5	2	6	6	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	10.0	10.0	10.0	10.0
Total Split (s)	18.0	70.0	52.0	52.0	15.0	15.0
Total Split (%)	21.2%	82.4%	61.2%	61.2%	17.6%	17.6%
Maximum Green (s)	13.0	66.0	47.0	47.0	10.0	10.0
Yellow Time (s)	4.0	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	None	None	Min	Min
Walk Time (s)		5.0				
Flash Dont Walk (s)		11.0				
Pedestrian Calls (#/hr)		0				
Act Effct Green (s)		20.6	10.1	10.1	11.1	11.1
Actuated g/C Ratio		0.52	0.25	0.25	0.28	0.28
v/c Ratio		0.15	0.26	0.62	0.57	0.42
Uniform Delay, d1		4.9	11.9	0.0	12.3	0.0
Control Delay		4.8	11.6	2.8	20.4	5.0
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		4.8	11.6	2.8	20.4	5.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS		A	B	A	C	A
Approach Delay		4.8	4.7		12.9	
Approach LOS		A	A		B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 39.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 8.1		Intersection LOS: A	
Intersection Capacity Utilization 36.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Southside Dr & Court St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	94	159	33	23	179	13	27	0	20	8	10	296
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.73	0.73	0.73	0.78	0.78	0.78
Hourly flow rate (vph)	103	175	36	24	190	14	37	0	27	10	13	379
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		839										
pX, platoon unblocked												
vC, conflicting volume	204			211			652	653	105	568	664	197
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	204			211			652	653	105	568	664	197
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			98			78	100	97	97	96	53
cM capacity (veh/h)	1365			1357			170	350	929	366	345	811

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1
Volume Total	191	124	229	37	27	403
Volume Left	103	0	24	37	0	10
Volume Right	0	36	14	0	27	379
cSH	1365	1700	1357	170	929	755
Volume to Capacity	0.08	0.07	0.02	0.22	0.03	0.53
Queue Length (ft)	6	0	1	20	2	80
Control Delay (s)	4.5	0.0	1.0	32.1	9.0	15.1
Lane LOS	A		A	D	A	C
Approach Delay (s)	2.8		1.0	22.2		15.1
Approach LOS				C		C

Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	0	1	0	5	0	35	1	5	71	0
Peak Hour Factor	0.25	0.25	0.25	0.50	0.50	0.50	0.69	0.69	0.69	0.82	0.82	0.82
Hourly flow rate (vph)	0	0	0	2	0	10	0	51	1	6	87	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	160	151	87	150	150	51	87			52		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	160	151	87	150	150	51	87			52		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	99	100			100		
cM capacity (veh/h)	795	738	972	815	738	1016	1510			1554		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	12	52	93
Volume Left	0	2	0	6
Volume Right	0	10	1	0
cSH	1700	976	1510	1554
Volume to Capacity	0.00	0.01	0.00	0.00
Queue Length (ft)	0	1	0	0
Control Delay (s)	0.0	8.7	0.0	0.5
Lane LOS	A	A		A
Approach Delay (s)	0.0	8.7	0.0	0.5
Approach LOS	A	A		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	17.8%	ICU Level of Service	A
Analysis Period (min)	15		

A5

Level of Service Calculations: 2008 Background Conditions

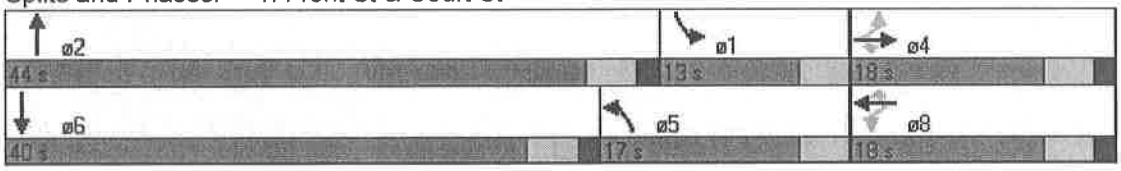
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		65	0		85	295		25	0		0
Storage Lanes	0		1	0		1	1		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt			0.850			0.850		0.968			0.997	
Flt Protected		0.978			0.983		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1831	1583	1770	3426	0	1770	1857	0
Flt Permitted		0.845			0.879		0.950			0.950		
Satd. Flow (perm)	0	1574	1583	0	1637	1583	1770	3426	0	1770	1857	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73			98		72			2	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1073			640			1461			308	
Travel Time (s)		24.4			14.5			33.2			7.0	
Volume (vph)	31	39	66	29	54	84	120	267	74	97	196	5
Peak Hour Factor	0.91	0.91	0.91	0.86	0.86	0.86	0.83	0.83	0.83	0.91	0.91	0.91
Adj. Flow (vph)	34	43	73	34	63	98	145	322	89	107	215	5
Lane Group Flow (vph)	0	77	73	0	97	98	145	411	0	107	220	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phases	4	4	4	8	8	8	5	2		1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	11.5	23.5		11.5	23.5	
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	44.0	0.0	13.0	40.0	0.0
Total Split (%)	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	22.7%	58.7%	0.0%	17.3%	53.3%	0.0%
Maximum Green (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.5	39.0		9.5	35.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	0.0	1.5		0.0	1.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	8.0	8.0	8.0	8.0	8.0	8.0		8.0			8.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		11.4	11.4		11.4	11.4	10.7	27.9		11.0	25.0	
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.18	0.48		0.18	0.43	
v/c Ratio		0.26	0.21		0.31	0.26	0.46	0.25		0.34	0.28	
Uniform Delay, d1		20.6	0.0		20.8	0.0	20.6	7.4		22.7	10.8	
Control Delay		16.0	6.0		16.1	5.6	17.3	9.5		17.2	12.5	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		16.0	6.0		16.1	5.6	17.3	9.5		17.2	12.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B	A		B	A	B	A		B	B	
Approach Delay		11.1			10.8			11.5			14.0	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 58.7
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 12.0 Intersection LOS: B
Intersection Capacity Utilization 38.4% ICU Level of Service A
Analysis Period (min) 15

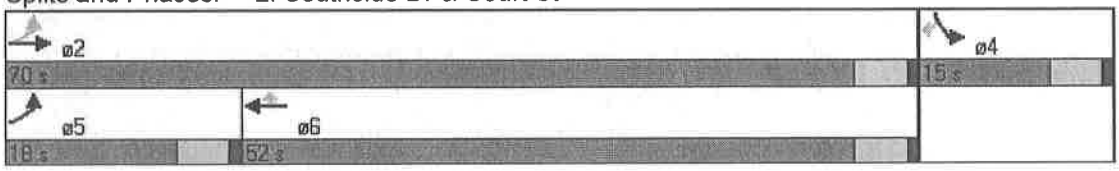
Splits and Phases: 1: Front St & Court St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	190
Storage Lanes	1			1	1	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.968			0.950	
Satd. Flow (prot)	0	3426	1863	1583	1770	1583
Flt Permitted		0.729			0.950	
Satd. Flow (perm)	0	2580	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				371		234
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	839		1461	
Travel Time (s)		5.3	19.1		33.2	
Volume (vph)	182	94	31	278	145	185
Peak Hour Factor	0.83	0.83	0.75	0.75	0.79	0.79
Adj. Flow (vph)	219	113	41	371	184	234
Lane Group Flow (vph)	0	332	41	371	184	234
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phases	5	2	6	6	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	21.0	10.0	10.0	10.0	10.0
Total Split (s)	18.0	70.0	52.0	52.0	15.0	15.0
Total Split (%)	21.2%	82.4%	61.2%	61.2%	17.6%	17.6%
Maximum Green (s)	13.0	65.0	47.0	47.0	10.0	10.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Min	Min
Act Effct Green (s)		9.8	9.7	9.7	12.8	12.8
Actuated g/C Ratio		0.34	0.34	0.34	0.48	0.48
v/c Ratio		0.38	0.07	0.48	0.21	0.26
Uniform Delay, d1		7.9	7.1	0.0	5.1	0.0
Control Delay		7.1	6.1	1.8	7.6	2.4
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		7.1	6.1	1.8	7.6	2.4
LOS		A	A	A	A	A
Approach Delay		7.1	2.3		4.7	
Approach LOS		A	A		A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 26.4			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 4.5		Intersection LOS: A	
Intersection Capacity Utilization 34.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Southside Dr & Court St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	85	177	17	2	144	4	32	2	27	8	4	205
Peak Hour Factor	0.74	0.74	0.74	0.72	0.72	0.72	0.64	0.64	0.64	0.91	0.91	0.91
Hourly flow rate (vph)	115	239	23	3	200	6	50	3	42	9	4	225
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		839										
pX, platoon unblocked												
vC, conflicting volume	206			262			691	692	131	601	700	203
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	206			262			691	692	131	601	700	203
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			100			77	99	95	97	99	72
cM capacity (veh/h)	1363			1299			220	334	894	339	331	804

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1
Volume Total	234	143	208	50	45	238
Volume Left	115	0	3	50	0	9
Volume Right	0	23	6	0	42	225
cSH	1363	1700	1299	220	802	747
Volume to Capacity	0.08	0.08	0.00	0.23	0.06	0.32
Queue Length (ft)	7	0	0	21	4	34
Control Delay (s)	4.2	0.0	0.1	26.1	9.8	12.1
Lane LOS	A		A	D	A	B
Approach Delay (s)	2.6		0.1	18.3		12.1
Approach LOS				C		B

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	0	0	0	0	4	0	70	0	0	15	0
Peak Hour Factor	0.25	0.25	0.25	0.50	0.50	0.50	0.62	0.62	0.62	0.87	0.87	0.87
Hourly flow rate (vph)	4	0	0	0	0	8	0	113	0	0	17	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	138	130	17	130	130	113	17			113		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	138	130	17	130	130	113	17			113		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	99	100			100		
cM capacity (veh/h)	825	760	1062	842	760	940	1600			1477		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	8	113	17
Volume Left	4	0	0	0
Volume Right	0	8	0	0
cSH	825	940	1600	1477
Volume to Capacity	0.00	0.01	0.00	0.00
Queue Length (ft)	0	1	0	0
Control Delay (s)	9.4	8.9	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	9.4	8.9	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	13.7%	ICU Level of Service	A	
Analysis Period (min)	15			

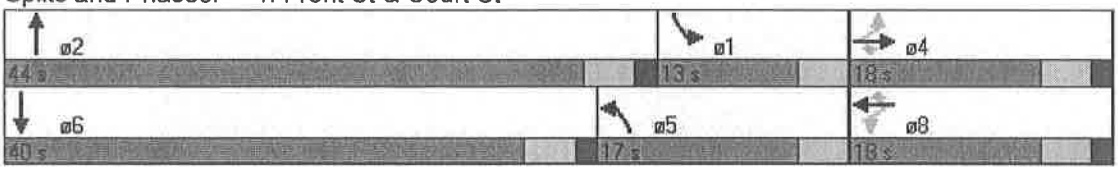
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		65	0		85	295		25	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt			0.850			0.850		0.977			0.998	
Flt Protected		0.981			0.980		0.950			0.950		
Satd. Flow (prot)	0	1827	1583	0	1825	1583	1770	3458	0	1770	1859	0
Flt Permitted		0.650			0.762		0.950			0.950		
Satd. Flow (perm)	0	1211	1583	0	1419	1583	1770	3458	0	1770	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121			211		42			1	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1073			640			1461			308	
Travel Time (s)		24.4			14.5			33.2			7.0	
Volume (vph)	44	69	104	69	99	169	109	320	58	102	389	5
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.82	0.82	0.82	0.92	0.92	0.92
Adj. Flow (vph)	51	80	121	86	124	211	133	390	71	111	423	5
Lane Group Flow (vph)	0	131	121	0	210	211	133	461	0	111	428	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phases	4	4	4	8	8	8	5	2		1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	11.5	23.5		11.5	23.5	
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	44.0	0.0	13.0	40.0	0.0
Total Split (%)	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	22.7%	58.7%	0.0%	17.3%	53.3%	0.0%
Maximum Green (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.5	39.0		9.5	35.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	0.0	1.5		0.0	1.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	8.0	8.0	8.0	8.0	8.0	8.0		8.0			8.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		12.5	12.5		12.5	12.5	8.8	22.2		12.9	23.5	
Actuated g/C Ratio		0.23	0.23		0.23	0.23	0.15	0.40		0.22	0.43	
v/c Ratio		0.47	0.27		0.65	0.40	0.49	0.32		0.29	0.54	
Uniform Delay, d1		19.1	0.0		20.0	0.0	22.0	10.7		20.6	12.4	
Control Delay		24.9	6.6		28.8	6.1	24.4	14.5		18.4	15.5	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		24.9	6.6		28.8	6.2	24.4	14.5		18.4	15.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		C	A		C	A	C	B		B	B	
Approach Delay		16.1			17.4			16.7			16.1	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 55
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 16.6 Intersection LOS: B
Intersection Capacity Utilization 52.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Front St & Court St



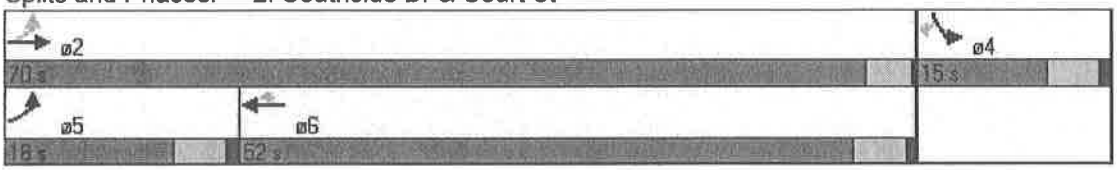
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	190
Storage Lanes	0			0	0	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.965			0.950	
Satd. Flow (prot)	0	3415	1863	1583	1770	1583
Flt Permitted		0.708			0.950	
Satd. Flow (perm)	0	2506	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				462		271
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30	30		30	
Link Distance (ft)		236	839		1461	
Travel Time (s)		5.4	19.1		33.2	
Volume (vph)	148	58	103	351	252	241
Peak Hour Factor	0.91	0.91	0.76	0.76	0.89	0.89
Adj. Flow (vph)	163	64	136	462	283	271
Lane Group Flow (vph)	0	227	136	462	283	271
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phases	5	2	6	6	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	10.0	10.0	10.0	10.0
Total Split (s)	18.0	70.0	52.0	52.0	15.0	15.0
Total Split (%)	21.2%	82.4%	61.2%	61.2%	17.6%	17.6%
Maximum Green (s)	13.0	66.0	47.0	47.0	10.0	10.0
Yellow Time (s)	4.0	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	None	None	Min	Min
Walk Time (s)		5.0				
Flash Dont Walk (s)		11.0				
Pedestrian Calls (#/hr)		0				
Act Effct Green (s)		20.8	10.2	10.2	11.1	11.1
Actuated g/C Ratio		0.52	0.26	0.26	0.28	0.28
v/c Ratio		0.16	0.29	0.62	0.58	0.43
Uniform Delay, d1		4.9	11.8	0.0	12.3	0.0
Control Delay		4.8	11.7	2.8	20.6	5.0
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		4.8	11.7	2.8	20.6	5.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS		A	B	A	C	A
Approach Delay		4.8	4.8		13.0	
Approach LOS		A	A		B	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 40
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 8.1 — Intersection LOS: A
Intersection Capacity Utilization 36.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Southside Dr & Court St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	94	168	33	27	188	14	27	0	24	9	10	296
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.73	0.73	0.73	0.78	0.78	0.78
Hourly flow rate (vph)	103	185	36	29	200	15	37	0	33	12	13	379
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		839										
pX, platoon unblocked												
vC, conflicting volume	215			221			681	682	110	597	692	207
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	215			221			681	682	110	597	692	207
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			98			77	100	96	97	96	52
cM capacity (veh/h)	1352			1345			159	335	922	346	330	799

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1
Volume Total	196	129	244	37	33	404
Volume Left	103	0	29	37	0	12
Volume Right	0	36	15	0	33	379
cSH	1352	1700	1345	159	922	738
Volume to Capacity	0.08	0.08	0.02	0.23	0.04	0.55
Queue Length (ft)	6	0	2	22	3	84
Control Delay (s)	4.5	0.0	1.1	34.4	9.0	15.6
Lane LOS	A		A	D	A	C
Approach Delay (s)	2.7		1.1	22.5		15.6
Approach LOS				C		C

Intersection Summary			
Average Delay	8.7		
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	0	1	0	5	0	38	1	5	76	0
Peak Hour Factor	0.25	0.25	0.25	0.50	0.50	0.50	0.69	0.69	0.69	0.82	0.82	0.82
Hourly flow rate (vph)	0	0	0	2	0	10	0	55	1	6	93	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	171	161	93	161	161	56	93			57		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	171	161	93	161	161	56	93			57		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	99	100			100		
cM capacity (veh/h)	783	728	964	802	729	1011	1502			1548		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	12	57	99
Volume Left	0	2	0	6
Volume Right	0	10	1	0
cSH	1700	969	1502	1548
Volume to Capacity	0.00	0.01	0.00	0.00
Queue Length (ft)	0	1	0	0
Control Delay (s)	0.0	8.8	0.0	0.5
Lane LOS	A	A		A
Approach Delay (s)	0.0	8.8	0.0	0.5
Approach LOS	A	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

A6

Level of Service Calculations: Phase 1 Development Conditions

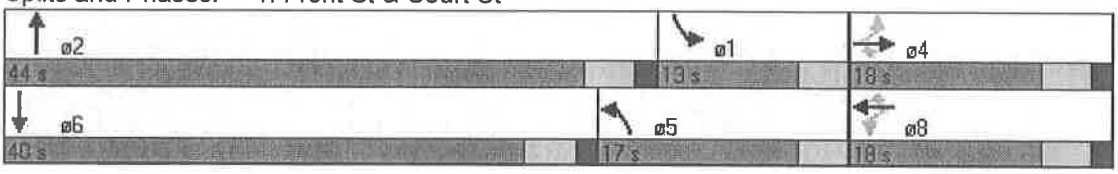
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		65	0		85	295		25	0		0
Storage Lanes	0		1	0		1	1		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt			0.850			0.850		0.967			0.997	
Flt Protected		0.978			0.976		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1818	1583	1770	3422	0	1770	1857	0
Flt Permitted		0.836			0.820		0.950			0.950		
Satd. Flow (perm)	0	1557	1583	0	1527	1583	1770	3422	0	1770	1857	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			92			98		74			2	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1073			640			1461			308	
Travel Time (s)		24.4			14.5			33.2			7.0	
Volume (vph)	31	39	84	51	54	84	123	275	78	97	240	5
Peak Hour Factor	0.91	0.91	0.91	0.86	0.86	0.86	0.83	0.83	0.83	0.91	0.91	0.91
Adj. Flow (vph)	34	43	92	59	63	98	148	331	94	107	264	5
Lane Group Flow (vph)	0	77	92	0	122	98	148	425	0	107	269	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phases	4	4	4	8	8	8	5	2		1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	11.5	23.5		11.5	23.5	
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	44.0	0.0	13.0	40.0	0.0
Total Split (%)	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	22.7%	58.7%	0.0%	17.3%	53.3%	0.0%
Maximum Green (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.5	39.0		9.5	35.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	0.0	1.5		0.0	1.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	8.0	8.0	8.0	8.0	8.0	8.0		8.0			8.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		12.3	12.3		12.3	12.3	10.7	28.8		12.0	26.8	
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.17	0.47		0.18	0.44	
v/c Ratio		0.25	0.24		0.41	0.25	0.49	0.26		0.33	0.33	
Uniform Delay, d1		21.1	0.0		21.8	0.0	22.0	7.9		23.2	11.3	
Control Delay		16.7	5.8		17.9	5.8	19.0	10.4		17.5	13.1	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		16.7	5.8		17.9	5.8	19.0	10.4		17.5	13.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B	A		B	A	B	B		B	B	
Approach Delay		10.8			12.5			12.7			14.3	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 61.1
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 12.9 Intersection LOS: B
Intersection Capacity Utilization 42.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Front St & Court St

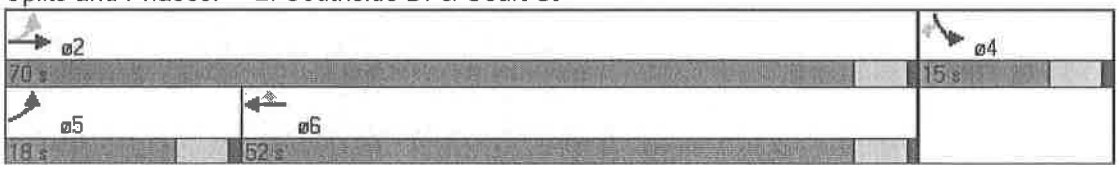


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	190
Storage Lanes	1			1	1	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.973			0.950	
Satd. Flow (prot)	0	3444	1863	1583	1770	1583
Flt Permitted		0.741			0.950	
Satd. Flow (perm)	0	2623	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				391		234
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	839		1461	
Travel Time (s)		5.3	19.1		33.2	
Volume (vph)	182	141	39	293	229	185
Peak Hour Factor	0.83	0.83	0.75	0.75	0.79	0.79
Adj. Flow (vph)	219	170	52	391	290	234
Lane Group Flow (vph)	0	389	52	391	290	234
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phases	5	2	6	6	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	21.0	10.0	10.0	10.0	10.0
Total Split (s)	18.0	70.0	52.0	52.0	15.0	15.0
Total Split (%)	21.2%	82.4%	61.2%	61.2%	17.6%	17.6%
Maximum Green (s)	13.0	65.0	47.0	47.0	10.0	10.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Min	Min
Act Effct Green (s)		10.6	10.6	10.6	11.0	11.0
Actuated g/C Ratio		0.36	0.36	0.36	0.37	0.37
v/c Ratio		0.42	0.08	0.48	0.44	0.32
Uniform Delay, d1		7.2	6.3	0.0	7.0	0.0
Control Delay		7.4	6.1	1.8	10.3	3.0
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		7.4	6.1	1.8	10.3	3.0
LOS		A	A	A	B	A
Approach Delay		7.4	2.3		7.0	
Approach LOS		A	A		A	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 29.7
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 5.6 Intersection LOS: A
Intersection Capacity Utilization 36.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Southside Dr & Court St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	85	308	17	2	168	8	32	2	27	30	4	205
Peak Hour Factor	0.74	0.74	0.74	0.72	0.72	0.72	0.64	0.64	0.64	0.91	0.91	0.91
Hourly flow rate (vph)	115	416	23	3	233	11	50	3	42	33	4	225
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		839										
pX, platoon unblocked												
vC, conflicting volume	244			439			904	907	220	726	913	239
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	244			439			904	907	220	726	913	239
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	91			100			67	99	95	88	98	70
cM capacity (veh/h)	1319			1117			150	250	784	273	248	762

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1
Volume Total	323	231	247	50	45	263
Volume Left	115	0	3	50	0	33
Volume Right	0	23	11	0	42	225
cSH	1319	1700	1117	150	683	605
Volume to Capacity	0.09	0.14	0.00	0.33	0.07	0.43
Queue Length (ft)	7	0	0	34	5	55
Control Delay (s)	3.4	0.0	0.1	40.5	10.6	15.4
Lane LOS	A		A	E	B	C
Approach Delay (s)	2.0		0.1	26.3		15.4
Approach LOS				D		C

Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	2	0	0	0	6	0	70	2	9	15	0
Peak Hour Factor	0.25	0.92	0.25	0.92	0.92	0.92	0.62	0.62	0.92	0.92	0.87	0.87
Hourly flow rate (vph)	4	2	0	0	0	7	0	113	2	10	17	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	157	152	17	152	151	114	17			115		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	157	152	17	152	151	114	17			115		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	100	100	99	100			99		
cM capacity (veh/h)	799	735	1062	809	736	939	1600			1474		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	6	7	115	27
Volume Left	4	0	0	10
Volume Right	0	7	2	0
cSH	775	939	1600	1474
Volume to Capacity	0.01	0.01	0.00	0.01
Queue Length (ft)	1	1	0	1
Control Delay (s)	9.7	8.9	0.0	2.7
Lane LOS	A	A		A
Approach Delay (s)	9.7	8.9	0.0	2.7
Approach LOS	A	A		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	18.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	211	153	56	150	28	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	229	166	61	163	30	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			396		597	312
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			396		597	312
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		93	99
cM capacity (veh/h)			1163		441	728

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	396	224	41
Volume Left	0	61	30
Volume Right	166	0	11
cSH	1700	1163	492
Volume to Capacity	0.23	0.05	0.08
Queue Length (ft)	0	4	7
Control Delay (s)	0.0	2.6	13.0
Lane LOS		A	B
Approach Delay (s)	0.0	2.6	13.0
Approach LOS			B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	13	0	0	0	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	0	0	0	0	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				28	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				28	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	100
cM capacity (veh/h)	1623				978	1085

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	14	0	2
Volume Left	14	0	0
Volume Right	0	0	2
cSH	1623	1700	1085
Volume to Capacity	0.01	0.00	0.00
Queue Length (ft)	1	0	0
Control Delay (s)	7.2	0.0	8.3
Lane LOS	A		A
Approach Delay (s)	7.2	0.0	8.3
Approach LOS			A

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

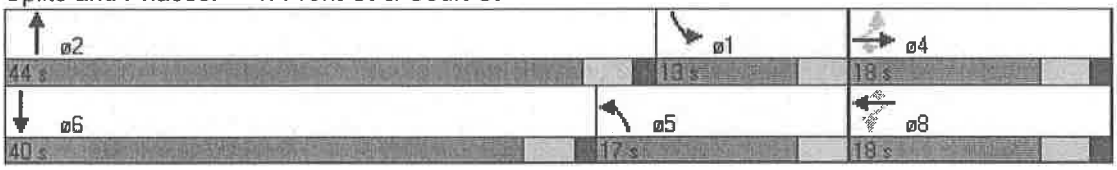
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		65	0		85	295		25	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt			0.850			0.850		0.972			0.998	
Flt Protected		0.981			0.978		0.950			0.950		
Satd. Flow (prot)	0	1827	1583	0	1822	1583	1770	3440	0	1770	1859	0
Flt Permitted		0.617			0.751		0.950			0.950		
Satd. Flow (perm)	0	1149	1583	0	1399	1583	1770	3440	0	1770	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			129			211		55			1	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1073			640			1461			308	
Travel Time (s)		24.4			14.5			33.2			7.0	
Volume (vph)	44	69	111	78	99	169	130	372	84	102	407	5
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.82	0.82	0.82	0.92	0.92	0.92
Adj. Flow (vph)	51	80	129	98	124	211	159	454	102	111	442	5
Lane Group Flow (vph)	0	131	129	0	222	211	159	556	0	111	447	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phases	4	4	4	8	8	8	5	2		1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	11.5	23.5		11.5	23.5	
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	44.0	0.0	13.0	40.0	0.0
Total Split (%)	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	22.7%	58.7%	0.0%	17.3%	53.3%	0.0%
Maximum Green (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.5	39.0		9.5	35.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	0.0	1.5		0.0	1.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	8.0	8.0	8.0	8.0	8.0	8.0		8.0			8.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		13.1	13.1		13.1	13.1	9.3	18.9		13.9	23.3	
Actuated g/C Ratio		0.24	0.24		0.24	0.24	0.16	0.34		0.24	0.42	
v/c Ratio		0.49	0.27		0.67	0.40	0.56	0.46		0.26	0.57	
Uniform Delay, d1		18.7	0.0		19.7	0.0	22.8	13.1		18.3	12.6	
Control Delay		27.0	6.7		31.9	6.3	26.1	15.8		18.5	16.1	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		27.0	6.7		31.9	6.3	26.1	15.8		18.5	16.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		C	A		C	A	C	B		B	B	
Approach Delay		17.0			19.4			18.1			16.6	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 55.7
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 17.8 Intersection LOS: B
Intersection Capacity Utilization 55.1% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Front St & Court St



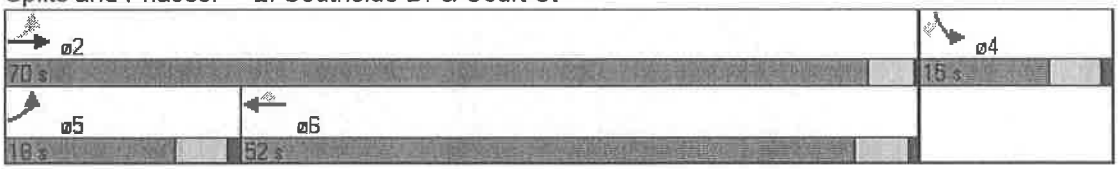
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	190
Storage Lanes	0			0	0	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.968			0.950	
Satd. Flow (prot)	0	3426	1863	1583	1770	1583
Flt Permitted		0.688			0.950	
Satd. Flow (perm)	0	2435	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				591		271
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30	30		30	
Link Distance (ft)		236	839		1461	
Travel Time (s)		5.4	19.1		33.2	
Volume (vph)	148	77	157	449	286	241
Peak Hour Factor	0.91	0.91	0.76	0.76	0.89	0.89
Adj. Flow (vph)	163	85	207	591	321	271
Lane Group Flow (vph)	0	248	207	591	321	271
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phases	5	2	6	6	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	10.0	10.0	10.0	10.0
Total Split (s)	18.0	70.0	52.0	52.0	15.0	15.0
Total Split (%)	21.2%	82.4%	61.2%	61.2%	17.6%	17.6%
Maximum Green (s)	13.0	66.0	47.0	47.0	10.0	10.0
Yellow Time (s)	4.0	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	None	None	Min	Min
Walk Time (s)		5.0				
Flash Dont Walk (s)		11.0				
Pedestrian Calls (#/hr)		0				
Act Effct Green (s)		23.1	12.4	12.4	11.2	11.2
Actuated g/C Ratio		0.54	0.29	0.29	0.26	0.26
v/c Ratio		0.17	0.38	0.67	0.69	0.44
Uniform Delay, d1		4.7	11.8	0.0	13.9	0.0
Control Delay		4.6	11.7	2.9	27.3	5.5
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		4.6	11.7	2.9	27.3	5.5

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS		A	B	A	C	A
Approach Delay		4.6	5.2		17.3	
Approach LOS		A	A		B	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 42.4
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 9.5 — Intersection LOS: A
Intersection Capacity Utilization 42.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Southside Dr & Court St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	94	221	33	27	340	40	27	0	24	18	10	296
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.73	0.73	0.73	0.78	0.78	0.78
Hourly flow rate (vph)	103	243	36	29	362	43	37	0	33	23	13	379
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		839										
pX, platoon unblocked												
vC, conflicting volume	404			279			914	929	140	801	926	383
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	404			279			914	929	140	801	926	383
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	91			98			52	100	96	90	95	38
cM capacity (veh/h)	1151			1281			77	237	883	243	238	615

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1
Volume Total	225	158	433	37	33	415
Volume Left	103	0	29	37	0	23
Volume Right	0	36	43	0	33	379
cSH	1151	1700	1281	77	883	542
Volume to Capacity	0.09	0.09	0.02	0.48	0.04	0.77
Queue Length (ft)	7	0	2	50	3	171
Control Delay (s)	4.3	0.0	0.7	89.6	9.2	30.1
Lane LOS	A		A	F	A	D
Approach Delay (s)	2.5		0.7	51.8		30.1
Approach LOS				F		D

Intersection Summary			
Average Delay	13.4		
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1	0	4	3	15	0	38	2	9	76	0
Peak Hour Factor	0.25	0.92	0.25	0.92	0.92	0.92	0.69	0.69	0.92	0.92	0.82	0.82
Hourly flow rate (vph)	0	1	0	4	3	16	0	55	2	10	93	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	186	169	93	169	168	56	93			57		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	186	169	93	169	168	56	93			57		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	99	100	98	100			99		
cM capacity (veh/h)	755	719	964	790	720	1010	1502			1547		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1	24	57	102
Volume Left	0	4	0	10
Volume Right	0	16	2	0
cSH	719	914	1502	1547
Volume to Capacity	0.00	0.03	0.00	0.01
Queue Length (ft)	0	2	0	0
Control Delay (s)	10.0	9.0	0.0	0.7
Lane LOS	B	A		A
Approach Delay (s)	10.0	9.0	0.0	0.7
Approach LOS	B	A		

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	22.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	196	61	22	232	177	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	213	66	24	252	192	70
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			279		546	246
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			279		546	246
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		61	91
cM capacity (veh/h)			1283		489	793

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	279	276	262
Volume Left	0	24	192
Volume Right	66	0	70
cSH	1700	1283	545
Volume to Capacity	0.16	0.02	0.48
Queue Length (ft)	0	1	65
Control Delay (s)	0.0	0.8	17.6
Lane LOS		A	C
Approach Delay (s)	0.0	0.8	17.6
Approach LOS			C

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰↱	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	5	0	0	0	15	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	0	0	16	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				11	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				11	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1623				1006	1085

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	5	0	16
Volume Left	5	0	16
Volume Right	0	0	0
cSH	1623	1700	1006
Volume to Capacity	0.00	0.00	0.02
Queue Length (ft)	0	0	1
Control Delay (s)	7.2	0.0	8.6
Lane LOS	A		A
Approach Delay (s)	7.2	0.0	8.6
Approach LOS			A

Intersection Summary			
Average Delay	8.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

A7

Level of Service Calculations: Phase 1 Development Conditions with Mitigation

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	211	153	56	150	28	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	229	166	61	163	30	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			396		514	229
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			396		514	229
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		94	99
cM capacity (veh/h)			1163		493	810

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	229	166	224	30	11
Volume Left	0	0	61	30	0
Volume Right	0	166	0	0	11
cSH	1700	1700	1163	493	810
Volume to Capacity	0.13	0.10	0.05	0.06	0.01
Queue Length (ft)	0	0	4	5	1
Control Delay (s)	0.0	0.0	2.6	12.8	9.5
Lane LOS			A	B	A
Approach Delay (s)	0.0		2.6	11.9	
Approach LOS				B	

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	13	0	0	0	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	0	0	0	0	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				28	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				28	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	100
cM capacity (veh/h)	1623				978	1085

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	14	0	2
Volume Left	14	0	0
Volume Right	0	0	2
cSH	1623	1700	1085
Volume to Capacity	0.01	0.00	0.00
Queue Length (ft)	1	0	0
Control Delay (s)	7.2	0.0	8.3
Lane LOS	A		A
Approach Delay (s)	7.2	0.0	8.3
Approach LOS			A

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	196	61	22	232	177	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	213	66	24	252	192	70
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			279		513	213
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			279		513	213
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		62	92
cM capacity (veh/h)			1283		511	827

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	213	66	276	192	70
Volume Left	0	0	24	192	0
Volume Right	0	66	0	0	70
cSH	1700	1700	1283	511	827
Volume to Capacity	0.13	0.04	0.02	0.38	0.08
Queue Length (ft)	0	0	1	43	7
Control Delay (s)	0.0	0.0	0.8	16.2	9.8
Lane LOS			A	C	A
Approach Delay (s)	0.0		0.8	14.5	
Approach LOS				B	

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	5	0	0	0	15	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	0	0	16	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				11	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				11	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1623				1006	1085

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	5	0	16
Volume Left	5	0	16
Volume Right	0	0	0
cSH	1623	1700	1006
Volume to Capacity	0.00	0.00	0.02
Queue Length (ft)	0	0	1
Control Delay (s)	7.2	0.0	8.6
Lane LOS	A		A
Approach Delay (s)	7.2	0.0	8.6
Approach LOS			A

Intersection Summary			
Average Delay	8.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

A8

Level of Service Calculations: 2010 Background Conditions

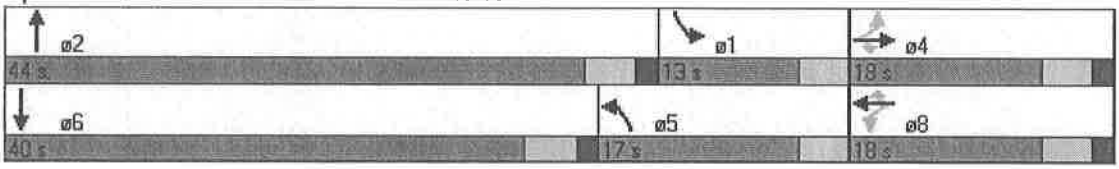
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		65	0		85	295		25	0		0
Storage Lanes	0		1	0		1	1		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt			0.850			0.850		0.967			0.997	
Flt Protected		0.978			0.983		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1831	1583	1770	3422	0	1770	1857	0
Flt Permitted		0.845			0.880		0.950			0.950		
Satd. Flow (perm)	0	1574	1583	0	1639	1583	1770	3422	0	1770	1857	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			74			99		72			2	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1073			640			1461			308	
Travel Time (s)		24.4			14.5			33.2			7.0	
Volume (vph)	31	39	67	29	55	85	121	270	75	98	198	5
Peak Hour Factor	0.91	0.91	0.91	0.86	0.86	0.86	0.83	0.83	0.83	0.91	0.91	0.91
Adj. Flow (vph)	34	43	74	34	64	99	146	325	90	108	218	5
Lane Group Flow (vph)	0	77	74	0	98	99	146	415	0	108	223	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phases	4	4	4	8	8	8	5	2		1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	11.5	23.5		11.5	23.5	
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	44.0	0.0	13.0	40.0	0.0
Total Split (%)	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	22.7%	58.7%	0.0%	17.3%	53.3%	0.0%
Maximum Green (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.5	39.0		9.5	35.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	0.0	1.5		0.0	1.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	8.0	8.0	8.0	8.0	8.0	8.0		8.0			8.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		11.5	11.5		11.5	11.5	10.7	28.0		11.1	25.2	
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.18	0.48		0.18	0.43	
v/c Ratio		0.26	0.21		0.32	0.26	0.47	0.25		0.34	0.28	
Uniform Delay, d1		20.6	0.0		20.9	0.0	20.7	7.5		22.8	10.9	
Control Delay		16.0	6.0		16.2	5.6	17.3	9.6		17.3	12.6	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		16.0	6.0		16.2	5.6	17.3	9.6		17.3	12.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B	A		B	A	B	A		B	B	
Approach Delay		11.1			10.9			11.6			14.1	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 58.9
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 12.1 Intersection LOS: B
Intersection Capacity Utilization 38.6% ICU Level of Service A
Analysis Period (min) 15

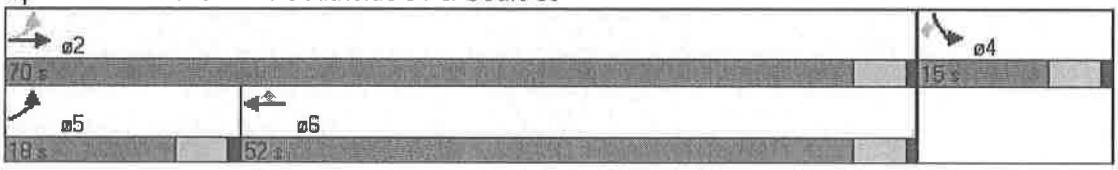
Splits and Phases: 1: Front St & Court St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	190
Storage Lanes	1			1	1	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.968			0.950	
Satd. Flow (prot)	0	3426	1863	1583	1770	1583
Flt Permitted		0.729			0.950	
Satd. Flow (perm)	0	2580	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				375		237
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	839		1461	
Travel Time (s)		5.3	19.1		33.2	
Volume (vph)	184	95	31	281	146	187
Peak Hour Factor	0.83	0.83	0.75	0.75	0.79	0.79
Adj. Flow (vph)	222	114	41	375	185	237
Lane Group Flow (vph)	0	336	41	375	185	237
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phases	5	2	6	6	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	21.0	10.0	10.0	10.0	10.0
Total Split (s)	18.0	70.0	52.0	52.0	15.0	15.0
Total Split (%)	21.2%	82.4%	61.2%	61.2%	17.6%	17.6%
Maximum Green (s)	13.0	65.0	47.0	47.0	10.0	10.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Min	Min
Act Effct Green (s)		9.8	9.8	9.8	9.8	9.8
Actuated g/C Ratio		0.35	0.35	0.35	0.35	0.35
v/c Ratio		0.37	0.06	0.47	0.30	0.33
Uniform Delay, d1		6.6	5.9	0.0	6.4	0.0
Control Delay		7.1	6.1	1.8	8.2	2.8
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		7.1	6.1	1.8	8.2	2.8
LOS		A	A	A	A	A
Approach Delay		7.1	2.3		5.1	
Approach LOS		A	A		A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 85		
Actuated Cycle Length: 27.7		
Natural Cycle: 40		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.47		
Intersection Signal Delay: 4.7		Intersection LOS: A
Intersection Capacity Utilization 34.3%		ICU Level of Service A
Analysis Period (min) 15		

Splits and Phases: 2: Southside Dr & Court St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	86	179	17	2	145	4	32	2	27	8	4	207
Peak Hour Factor	0.74	0.74	0.74	0.72	0.72	0.72	0.64	0.64	0.64	0.91	0.91	0.91
Hourly flow rate (vph)	116	242	23	3	201	6	50	3	42	9	4	227
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		839										
pX, platoon unblocked												
vC, conflicting volume	207			265			698	698	132	607	707	204
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	207			265			698	698	132	607	707	204
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	91			100			77	99	95	97	99	72
cM capacity (veh/h)	1361			1296			217	331	892	336	327	803

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1
Volume Total	237	144	210	50	45	241
Volume Left	116	0	3	50	0	9
Volume Right	0	23	6	0	42	227
cSH	1361	1700	1296	217	799	745
Volume to Capacity	0.09	0.08	0.00	0.23	0.06	0.32
Queue Length (ft)	7	0	0	22	5	35
Control Delay (s)	4.2	0.0	0.1	26.5	9.8	12.1
Lane LOS	A		A	D	A	B
Approach Delay (s)	2.6		0.1	18.6		12.1
Approach LOS				C		B

Intersection Summary				
Average Delay	6.2			
Intersection Capacity Utilization	46.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	4	1	0	0	0	71	0	0	15	0
Peak Hour Factor	0.25	0.25	0.25	0.50	0.50	0.50	0.62	0.62	0.62	0.87	0.87	0.87
Hourly flow rate (vph)	0	0	16	2	0	0	0	115	0	0	17	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	132	132	17	148	132	115	17			115		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	132	132	17	148	132	115	17			115		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	98	100	100	100	100			100		
cM capacity (veh/h)	840	759	1062	808	759	938	1600			1475		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	16	2	115	17
Volume Left	0	2	0	0
Volume Right	16	0	0	0
cSH	1062	808	1600	1475
Volume to Capacity	0.02	0.00	0.00	0.00
Queue Length (ft)	1	0	0	0
Control Delay (s)	8.4	9.5	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	8.4	9.5	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	13.7%	ICU Level of Service	A	
Analysis Period (min)	15			

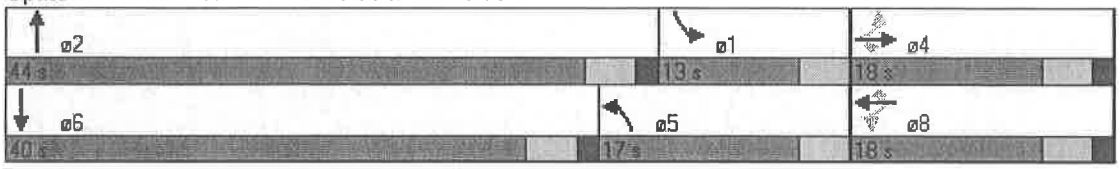
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		65	0		85	295		25	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt			0.850			0.850		0.977			0.998	
Flt Protected		0.981			0.980		0.950			0.950		
Satd. Flow (prot)	0	1827	1583	0	1825	1583	1770	3458	0	1770	1859	0
Flt Permitted		0.642			0.758		0.950			0.950		
Satd. Flow (perm)	0	1196	1583	0	1412	1583	1770	3458	0	1770	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122			214		43			1	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1073			640			1461			308	
Travel Time (s)		24.4			14.5			33.2			7.0	
Volume (vph)	44	70	105	70	100	171	110	323	59	103	393	5
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.82	0.82	0.82	0.92	0.92	0.92
Adj. Flow (vph)	51	81	122	88	125	214	134	394	72	112	427	5
Lane Group Flow (vph)	0	132	122	0	213	214	134	466	0	112	432	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phases	4	4	4	8	8	8	5	2		1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	11.5	23.5		11.5	23.5	
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	44.0	0.0	13.0	40.0	0.0
Total Split (%)	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	22.7%	58.7%	0.0%	17.3%	53.3%	0.0%
Maximum Green (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.5	39.0		9.5	35.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	0.0	1.5		0.0	1.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	8.0	8.0	8.0	8.0	8.0	8.0		8.0			8.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		12.6	12.6		12.6	12.6	8.8	22.1		12.9	23.4	
Actuated g/C Ratio		0.23	0.23		0.23	0.23	0.15	0.40		0.22	0.43	
v/c Ratio		0.48	0.27		0.66	0.40	0.49	0.33		0.29	0.55	
Uniform Delay, d1		19.1	0.0		19.9	0.0	22.0	10.8		20.6	12.5	
Control Delay		25.2	6.6		29.4	6.1	24.5	14.5		18.5	15.6	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		25.2	6.6		29.4	6.2	24.5	14.5		18.5	15.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		C	A		C	A	C	B		B	B	
Approach Delay		16.3			17.8			16.7			16.2	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 55
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 16.7 Intersection LOS: B
Intersection Capacity Utilization 52.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Front St & Court St



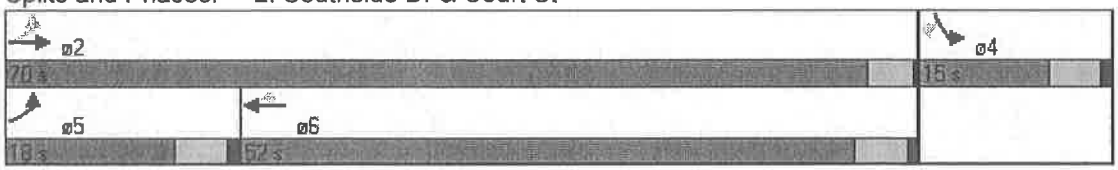
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	190
Storage Lanes	0			0	0	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.965			0.950	
Satd. Flow (prot)	0	3415	1863	1583	1770	1583
Flt Permitted		0.707			0.950	
Satd. Flow (perm)	0	2502	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				467		273
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30	30		30	
Link Distance (ft)		236	839		1461	
Travel Time (s)		5.4	19.1		33.2	
Volume (vph)	149	59	104	355	255	243
Peak Hour Factor	0.91	0.91	0.76	0.76	0.89	0.89
Adj. Flow (vph)	164	65	137	467	287	273
Lane Group Flow (vph)	0	229	137	467	287	273
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phases	5	2	6	6	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	10.0	10.0	10.0	10.0
Total Split (s)	18.0	70.0	52.0	52.0	15.0	15.0
Total Split (%)	21.2%	82.4%	61.2%	61.2%	17.6%	17.6%
Maximum Green (s)	13.0	66.0	47.0	47.0	10.0	10.0
Yellow Time (s)	4.0	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	None	None	Min	Min
Walk Time (s)		5.0				
Flash Dont Walk (s)		11.0				
Pedestrian Calls (#/hr)		0				
Act Effct Green (s)		20.8	10.2	10.2	11.1	11.1
Actuated g/C Ratio		0.52	0.26	0.26	0.28	0.28
v/c Ratio		0.16	0.29	0.62	0.58	0.43
Uniform Delay, d1		4.9	11.9	0.0	12.4	0.0
Control Delay		4.8	11.7	2.8	21.0	5.0
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		4.8	11.7	2.8	21.0	5.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS		A	B	A	C	A
Approach Delay		4.8	4.8		13.2	
Approach LOS		A	A		B	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 40
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 8.2 Intersection LOS: A
Intersection Capacity Utilization 36.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Southside Dr & Court St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	95	170	33	27	190	14	27	0	24	9	10	299
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.73	0.73	0.73	0.78	0.78	0.78
Hourly flow rate (vph)	104	187	36	29	202	15	37	0	33	12	13	383
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		839										
pX, platoon unblocked												
vC, conflicting volume	217			223			687	688	112	602	699	210
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	217			223			687	688	112	602	699	210
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			98			76	100	96	97	96	52
cM capacity (veh/h)	1350			1343			155	332	920	342	327	796

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1
Volume Total	198	130	246	37	33	408
Volume Left	104	0	29	37	0	12
Volume Right	0	36	15	0	33	383
cSH	1350	1700	1343	155	920	735
Volume to Capacity	0.08	0.08	0.02	0.24	0.04	0.55
Queue Length (ft)	6	0	2	22	3	86
Control Delay (s)	4.5	0.0	1.1	35.3	9.1	15.8
Lane LOS	A		A	E	A	C
Approach Delay (s)	2.7		1.1	23.0		15.8
Approach LOS				C		C

Intersection Summary				
Average Delay	8.8			
Intersection Capacity Utilization	57.0%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	0	1	0	5	0	38	1	5	77	0
Peak Hour Factor	0.25	0.25	0.25	0.50	0.50	0.50	0.69	0.69	0.69	0.82	0.82	0.82
Hourly flow rate (vph)	0	0	0	2	0	10	0	55	1	6	94	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	172	163	94	162	162	56	94			57		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	172	163	94	162	162	56	94			57		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	99	100			100		
cM capacity (veh/h)	781	727	963	801	728	1011	1500			1548		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	12	57	100
Volume Left	0	2	0	6
Volume Right	0	10	1	0
cSH	1700	969	1500	1548
Volume to Capacity	0.00	0.01	0.00	0.00
Queue Length (ft)	0	1	0	0
Control Delay (s)	0.0	8.8	0.0	0.5
Lane LOS	A	A		A
Approach Delay (s)	0.0	8.8	0.0	0.5
Approach LOS	A	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		

A9

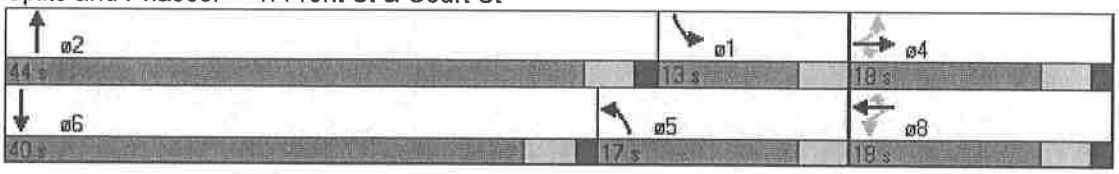
Level of Service Calculations: Full Development Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		65	0		85	295		25	0		0
Storage Lanes	0		1	0		1	1		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt			0.850			0.850		0.966			0.997	
Flt Protected		0.978			0.975		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1816	1583	1770	3419	0	1770	1857	0
Flt Permitted		0.832			0.802		0.950			0.950		
Satd. Flow (perm)	0	1550	1583	0	1494	1583	1770	3419	0	1770	1857	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100			99		79			2	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1073			640			1461			308	
Travel Time (s)		24.4			14.5			33.2			7.0	
Volume (vph)	31	39	91	59	55	85	129	292	86	98	258	5
Peak Hour Factor	0.91	0.91	0.91	0.86	0.86	0.86	0.83	0.83	0.83	0.91	0.91	0.91
Adj. Flow (vph)	34	43	100	69	64	99	155	352	104	108	284	5
Lane Group Flow (vph)	0	77	100	0	133	99	155	456	0	108	289	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phases	4	4	4	8	8	8	5	2		1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	11.5	23.5		11.5	23.5	
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	44.0	0.0	13.0	40.0	0.0
Total Split (%)	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	22.7%	58.7%	0.0%	17.3%	53.3%	0.0%
Maximum Green (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.5	39.0		9.5	35.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	0.0	1.5		0.0	1.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	8.0	8.0	8.0	8.0	8.0	8.0		8.0			8.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		12.6	12.6		12.6	12.6	10.8	29.5		12.3	27.6	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.17	0.48		0.19	0.44	
v/c Ratio		0.25	0.26		0.45	0.25	0.52	0.27		0.33	0.35	
Uniform Delay, d1		21.5	0.0		22.5	0.0	22.6	8.1		23.7	11.5	
Control Delay		17.2	5.8		19.0	5.8	19.9	10.6		17.9	13.3	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		17.2	5.8		19.0	5.9	19.9	10.6		17.9	13.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B	A		B	A	B	B		B	B	
Approach Delay		10.8			13.4			13.0			14.6	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 62.1			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 13.2		Intersection LOS: B	
Intersection Capacity Utilization 43.9%		ICU Level of Service A	
Analysis Period (min) 15			

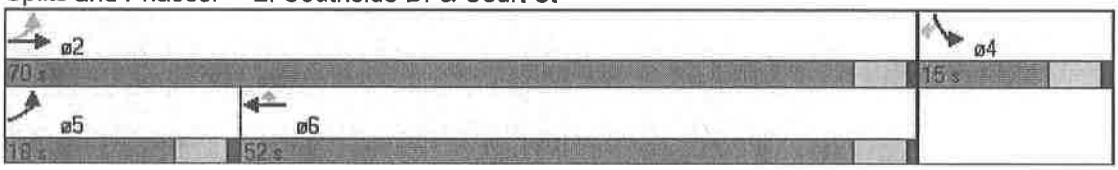
Splits and Phases: 1: Front St & Court St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	190
Storage Lanes	1			1	1	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.972			0.950	
Satd. Flow (prot)	0	3440	1863	1583	1770	1583
Flt Permitted		0.735			0.950	
Satd. Flow (perm)	0	2601	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				432		237
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	839		1461	
Travel Time (s)		5.3	19.1		33.2	
Volume (vph)	184	140	48	324	260	187
Peak Hour Factor	0.83	0.83	0.75	0.75	0.79	0.79
Adj. Flow (vph)	222	169	64	432	329	237
Lane Group Flow (vph)	0	391	64	432	329	237
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phases	5	2	6	6	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	21.0	10.0	10.0	10.0	10.0
Total Split (s)	18.0	70.0	52.0	52.0	15.0	15.0
Total Split (%)	21.2%	82.4%	61.2%	61.2%	17.6%	17.6%
Maximum Green (s)	13.0	65.0	47.0	47.0	10.0	10.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Min	Min
Act Effct Green (s)		10.7	10.7	10.7	11.1	11.1
Actuated g/C Ratio		0.36	0.36	0.36	0.37	0.37
v/c Ratio		0.42	0.10	0.51	0.50	0.32
Uniform Delay, d1		7.2	6.3	0.0	7.2	0.0
Control Delay		7.4	6.1	1.9	11.2	3.0
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		7.4	6.1	1.9	11.2	3.0
LOS		A	A	A	B	A
Approach Delay		7.4	2.4		7.7	
Approach LOS		A	A		A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 85		
Actuated Cycle Length: 29.8		
Natural Cycle: 45		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.51		
Intersection Signal Delay: 5.8		Intersection LOS: A
Intersection Capacity Utilization 37.9%		ICU Level of Service A
Analysis Period (min) 15		

Splits and Phases: 2: Southside Dr & Court St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	86	338	17	2	206	15	32	2	27	38	4	207
Peak Hour Factor	0.74	0.74	0.74	0.72	0.72	0.72	0.64	0.64	0.64	0.91	0.91	0.91
Hourly flow rate (vph)	116	457	23	3	286	21	50	3	42	42	4	227
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		839										
pX, platoon unblocked												
vC, conflicting volume	307			480			1005	1013	240	807	1014	297
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	307			480			1005	1013	240	807	1014	297
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	91			100			59	99	94	82	98	67
cM capacity (veh/h)	1251			1079			121	215	761	236	214	700

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1
Volume Total	345	251	310	50	45	274
Volume Left	116	0	3	50	0	42
Volume Right	0	23	21	0	42	227
cSH	1251	1700	1079	121	648	524
Volume to Capacity	0.09	0.15	0.00	0.41	0.07	0.52
Queue Length (ft)	8	0	0	44	6	75
Control Delay (s)	3.3	0.0	0.1	54.5	11.0	19.1
Lane LOS	A		A	F	B	C
Approach Delay (s)	1.9		0.1	33.8		19.1
Approach LOS				D		C

Intersection Summary			
Average Delay	7.6		
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	3	0	1	1	9	0	71	3	12	15	0
Peak Hour Factor	0.25	0.92	0.25	0.92	0.92	0.92	0.62	0.62	0.92	0.92	0.87	0.87
Hourly flow rate (vph)	4	3	0	1	1	10	0	115	3	13	17	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	170	161	17	161	159	116	17			118		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	170	161	17	161	159	116	17			118		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	100	100	99	100			99		
cM capacity (veh/h)	779	725	1062	796	726	936	1600			1470		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	7	12	118	30
Volume Left	4	1	0	13
Volume Right	0	10	3	0
cSH	754	898	1600	1470
Volume to Capacity	0.01	0.01	0.00	0.01
Queue Length (ft)	1	1	0	1
Control Delay (s)	9.8	9.1	0.0	3.3
Lane LOS	A	A		A
Approach Delay (s)	9.8	9.1	0.0	3.3
Approach LOS	A	A		

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	213	189	75	152	72	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	232	205	82	165	78	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			437		662	334
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			437		662	334
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		80	96
cM capacity (veh/h)			1123		396	708

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	437	247	110
Volume Left	0	82	78
Volume Right	205	0	32
cSH	1700	1123	453
Volume to Capacity	0.26	0.07	0.24
Queue Length (ft)	0	6	23
Control Delay (s)	0.0	3.2	15.5
Lane LOS		A	C
Approach Delay (s)	0.0	3.2	15.5
Approach LOS			C

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	18	0	0	0	0	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	0	0	0	0	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				39	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				39	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	99
cM capacity (veh/h)	1623				961	1085

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	20	0	8
Volume Left	20	0	0
Volume Right	0	0	8
cSH	1623	1700	1085
Volume to Capacity	0.01	0.00	0.01
Queue Length (ft)	1	0	1
Control Delay (s)	7.2	0.0	8.3
Lane LOS	A		A
Approach Delay (s)	7.2	0.0	8.3
Approach LOS			A

Intersection Summary			
Average Delay	7.6		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

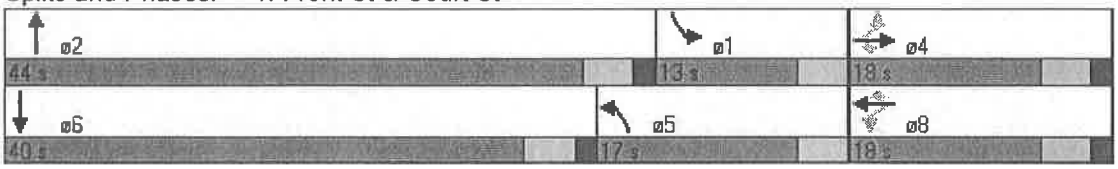
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		65	0		85	295		25	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt			0.850			0.850		0.971			0.998	
Flt Protected		0.981			0.977		0.950			0.950		
Satd. Flow (prot)	0	1827	1583	0	1820	1583	1770	3437	0	1770	1859	0
Flt Permitted		0.582			0.739		0.950			0.950		
Satd. Flow (perm)	0	1084	1583	0	1377	1583	1770	3437	0	1770	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			138			214		60			1	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1073			640			1461			308	
Travel Time (s)		24.4			14.5			33.2			7.0	
Volume (vph)	44	70	119	88	100	171	136	397	96	103	429	5
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.82	0.82	0.82	0.92	0.92	0.92
Adj. Flow (vph)	51	81	138	110	125	214	166	484	117	112	466	5
Lane Group Flow (vph)	0	132	138	0	235	214	166	601	0	112	471	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phases	4	4	4	8	8	8	5	2		1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	11.5	23.5		11.5	23.5	
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	44.0	0.0	13.0	40.0	0.0
Total Split (%)	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	22.7%	58.7%	0.0%	17.3%	53.3%	0.0%
Maximum Green (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.5	39.0		9.5	35.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	0.0	1.5		0.0	1.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	8.0	8.0	8.0	8.0	8.0	8.0		8.0			8.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		13.6	13.6		13.6	13.6	9.5	19.4		13.6	23.4	
Actuated g/C Ratio		0.24	0.24		0.24	0.24	0.16	0.34		0.23	0.41	
v/c Ratio		0.50	0.28		0.71	0.39	0.58	0.49		0.27	0.61	
Uniform Delay, d1		18.8	0.0		19.9	0.0	23.2	13.3		18.9	13.2	
Control Delay		29.8	6.8		35.3	6.4	27.1	15.8		19.3	16.6	
Queue Delay		0.0	0.0		0.0	0.1	0.0	0.0		0.0	0.0	
Total Delay		29.8	6.8		35.3	6.5	27.1	15.8		19.3	16.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		C	A		D	A	C	B		B	B	
Approach Delay		18.0			21.6			18.3			17.1	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 56.5
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 18.7 Intersection LOS: B
Intersection Capacity Utilization 57.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Front St & Court St



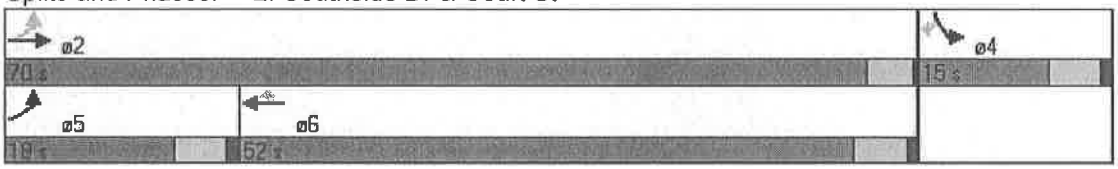
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	190
Storage Lanes	0			0	0	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.969			0.950	
Satd. Flow (prot)	0	3429	1863	1583	1770	1583
Flt Permitted		0.689			0.950	
Satd. Flow (perm)	0	2439	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				651		273
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30	30		30	
Link Distance (ft)		236	839		1461	
Travel Time (s)		5.4	19.1		33.2	
Volume (vph)	149	86	160	495	323	243
Peak Hour Factor	0.91	0.91	0.76	0.76	0.89	0.89
Adj. Flow (vph)	164	95	211	651	363	273
Lane Group Flow (vph)	0	259	211	651	363	273
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phases	5	2	6	6	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	10.0	10.0	10.0	10.0
Total Split (s)	18.0	70.0	52.0	52.0	15.0	15.0
Total Split (%)	21.2%	82.4%	61.2%	61.2%	17.6%	17.6%
Maximum Green (s)	13.0	66.0	47.0	47.0	10.0	10.0
Yellow Time (s)	4.0	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	0.5	1.0	1.0	1.0	1.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	None	None	Min	Min
Walk Time (s)		5.0				
Flash Dont Walk (s)		11.0				
Pedestrian Calls (#/hr)		0				
Act Effct Green (s)		24.1	13.4	13.4	11.2	11.2
Actuated g/C Ratio		0.56	0.31	0.31	0.26	0.26
v/c Ratio		0.17	0.37	0.69	0.79	0.45
Uniform Delay, d1		4.6	11.6	0.0	14.9	0.0
Control Delay		4.5	11.4	3.0	34.7	5.7
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		4.5	11.4	3.0	34.7	5.7

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS		A	B	A	C	A
Approach Delay		4.5	5.1		22.2	
Approach LOS		A	A		C	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 43.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 11.2 Intersection LOS: B
Intersection Capacity Utilization 45.6% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Southside Dr & Court St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	95	265	33	27	387	51	27	0	24	27	10	299
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.73	0.73	0.73	0.78	0.78	0.78
Hourly flow rate (vph)	104	291	36	29	412	54	37	0	33	35	13	383
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		839										
pX, platoon unblocked												
vC, conflicting volume	466			327			1021	1042	164	884	1033	439
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	466			327			1021	1042	164	884	1033	439
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			98			31	100	96	84	94	32
cM capacity (veh/h)	1092			1229			53	202	852	210	204	566

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1
Volume Total	250	182	495	37	33	431
Volume Left	104	0	29	37	0	35
Volume Right	0	36	54	0	33	383
cSH	1092	1700	1229	53	852	476
Volume to Capacity	0.10	0.11	0.02	0.69	0.04	0.90
Queue Length (ft)	8	0	2	71	3	255
Control Delay (s)	4.1	0.0	0.7	164.2	9.4	50.7
Lane LOS	A		A	F	A	F
Approach Delay (s)	2.4		0.7	91.4		50.7
Approach LOS				F		F

Intersection Summary			
Average Delay	20.7		
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	2	0	5	4	20	0	38	3	12	77	0
Peak Hour Factor	0.25	0.92	0.25	0.92	0.92	0.92	0.69	0.69	0.92	0.92	0.82	0.82
Hourly flow rate (vph)	0	2	0	5	4	22	0	55	3	13	94	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	201	178	94	178	177	57	94			58		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	201	178	94	178	177	57	94			58		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	99	99	98	100			99		
cM capacity (veh/h)	733	709	963	777	711	1010	1500			1546		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	2	32	58	107
Volume Left	0	5	0	13
Volume Right	0	22	3	0
cSH	709	910	1500	1546
Volume to Capacity	0.00	0.03	0.00	0.01
Queue Length (ft)	0	3	0	1
Control Delay (s)	10.1	9.1	0.0	1.0
Lane LOS	B	A		A
Approach Delay (s)	10.1	9.1	0.0	1.0
Approach LOS	B	A		

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	24.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	198	113	45	234	234	93
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	215	123	49	254	254	101
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			338		629	277
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			338		629	277
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		41	87
cM capacity (veh/h)			1221		428	762

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	338	303	355
Volume Left	0	49	254
Volume Right	123	0	101
cSH	1700	1221	489
Volume to Capacity	0.20	0.04	0.73
Queue Length (ft)	0	3	147
Control Delay (s)	0.0	1.6	29.5
Lane LOS		A	D
Approach Delay (s)	0.0	1.6	29.5
Approach LOS			D

Intersection Summary			
Average Delay	11.0		
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	11	0	0	0	0	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	0	0	0	0	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				24	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				24	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	98
cM capacity (veh/h)	1623				985	1085

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	12	0	24
Volume Left	12	0	0
Volume Right	0	0	24
cSH	1623	1700	1085
Volume to Capacity	0.01	0.00	0.02
Queue Length (ft)	1	0	2
Control Delay (s)	7.2	0.0	8.4
Lane LOS	A		A
Approach Delay (s)	7.2	0.0	8.4
Approach LOS			A

Intersection Summary			
Average Delay	8.0		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

A10

Level of Service Calculations: Full Development Conditions with Mitigation

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	213	189	75	152	72	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	232	205	82	165	78	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			437		560	232
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			437		560	232
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		83	96
cM capacity (veh/h)			1123		454	808

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	232	205	247	78	32
Volume Left	0	0	82	78	0
Volume Right	0	205	0	0	32
cSH	1700	1700	1123	454	808
Volume to Capacity	0.14	0.12	0.07	0.17	0.04
Queue Length (ft)	0	0	6	15	3
Control Delay (s)	0.0	0.0	3.2	14.6	9.6
Lane LOS			A	B	A
Approach Delay (s)	0.0		3.2	13.2	
Approach LOS				B	

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	37.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	18	0	0	0	0	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	0	0	0	0	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				39	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				39	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	99
cM capacity (veh/h)	1623				961	1085

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	20	0	8
Volume Left	20	0	0
Volume Right	0	0	8
cSH	1623	1700	1085
Volume to Capacity	0.01	0.00	0.01
Queue Length (ft)	1	0	1
Control Delay (s)	7.2	0.0	8.3
Lane LOS	A		A
Approach Delay (s)	7.2	0.0	8.3
Approach LOS			A

Intersection Summary			
Average Delay	7.6		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	198	113	45	234	234	93
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	215	123	49	254	254	101
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			338		567	215
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			338		567	215
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		45	88
cM capacity (veh/h)			1221		465	825

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	215	123	303	254	101
Volume Left	0	0	49	254	0
Volume Right	0	123	0	0	101
cSH	1700	1700	1221	465	825
Volume to Capacity	0.13	0.07	0.04	0.55	0.12
Queue Length (ft)	0	0	3	81	10
Control Delay (s)	0.0	0.0	1.6	21.7	10.0
Lane LOS			A	C	A
Approach Delay (s)	0.0		1.6	18.4	
Approach LOS				C	

Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↱	↳		Y	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	11	0	0	0	0	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	0	0	0	0	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				24	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				24	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	98
cM capacity (veh/h)	1623				985	1085

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	12	0	24
Volume Left	12	0	0
Volume Right	0	0	24
cSH	1623	1700	1085
Volume to Capacity	0.01	0.00	0.02
Queue Length (ft)	1	0	2
Control Delay (s)	7.2	0.0	8.4
Lane LOS	A		A
Approach Delay (s)	7.2	0.0	8.4
Approach LOS			A

Intersection Summary			
Average Delay	8.0		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
REGION SIX
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PETER E. WHITE, P.E.
REGIONAL DIRECTOR

THOMAS J. MADISON, JR.
ACTING COMMISSIONER

November 15, 2005

Town of Owego
2354 SR 434
Apalachin, NY 13732

Re: Traffic Impact Study, Town of Owego,
Rt. 434 Mixed Use Development, July 2005

Town of Owego Officials:

Our Traffic office received the subject Traffic Impact Study in late October, 2005 and comments as follows:

- Page V:, #2: The driveway onto 434 should be nominal 24' width commercial, one lane in, one lane out.
  #7: What is meant by the "timing" of the turn lanes?
  #8: Removal of vegetation along Rt. 434 should be included in the Highway Work Permit application to NYSDOT.
- Page 3: (C.) The 1% growth is acceptable. However, the pending projects listed in the second paragraph need to be clarified, and associated traffic volumes included in the NO BUILD scenario.
- Page 4: (A.) Mitigation for both phases (full build) needs to be included in the original NYSDOT Permit.
  (B.) The trip generation calculations - Appendix A2 - was not included in the copy of our Traffic Impact Study; please forward A2 to our Traffic office.
- Page 6: (D.) Our Traffic Impact Study copy stops at Figure 8B. Please provide Figures 9A and 9B (full development volumes).
  (VI.) Please provide electronic copies (CD) of all HCM analyses.
- Page 7-9: How does the developer propose to mitigate the LOS impacts? Specifically, the PM peak impacts to the 434 @ Halstead/Lackawanna (LOSF) are unacceptable to this Department.
- Page 10: (Turn Lanes). Both the eastbound right and westbound left turn lanes will be required in the original NYSDOT Permit.
- Page 11: What impedes the sight distance to the "Right" of the new driveway?

- Page 12: Full build impacts need to be addressed now, not on nebulous future after-studies.

- General: This Traffic Impact Study needs to be revised; it is unacceptable to this Department in present form.

Very truly yours,

Gary Funk, Regional Traffic Engineer

GF:pr

cc: W. F. Piatt, Senior Transportation Analyst, Planning & Program Group
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