VILLAGE OF DOWNERS GROVE REPORT FOR THE VILLAGE COUNCIL MEETING JANUARY 3, 2012 AGENDA

SUBJECT: TYPE:		SUBMITTED BY:	
	Resolution ✓ Ordinance		
Prince Street closure -	Motion	Tom Dabareiner, AICP	
Right-of-Way Vacation	Discussion Only	Community Development Director	

SYNOPSIS

An ordinance has been prepared vacating the 66-foot wide by 600-foot long portion of the Prince Street right-of-way located between Grant Street on the south, Sherman Street on the north and immediately adjacent to and west of the Downers Grove North High School properties. Approval of the vacation requires five affirmative votes.

STRATEGIC PLAN ALIGNMENT

The goals for 2011 to 2018 include Exceptional Municipal Services.

FISCAL IMPACT

Per the Village Council policy, the Village Council determines the amount and type of compensation, if any, that is required. Staff recommends the Village Council waive the \$147,722 fair market value for the right-of-way.

The fair market value is based on the latest assessment of land adjacent to the right-of-way. The portion of the right-of-way which would be encumbered by an easement would be discounted while the portion of the right-of-way that is not encumbered would be fully valued. The table below summarizes the estimated value:

Fortion of right-of-way encumbered by a public dramage, utility and utility access easement							
Adjacent	Square Foot	SF of ROW to be	Estimated	Encumbered			
Property Address	Land Value	vacated	Value	Value			
4434 Prince Street	\$ 7.44	29,470	\$ 219,256.80	\$ 72,355			

Portion of right-of-way encumbered by a public drainage, utility and utility access easement

Portion of right-of-way not encumbered with an easement

Adjacent Property Address	Square Foot Land Value	SF of ROW to be vacated		Estimated Value
4434 Prince Street	\$ 7.44	10,130		75,367
		Total value of street to be vacated	\$	147,722

RECOMMENDATION

Approval on the January 10, 2012 active agenda. Approval of the vacation requires five affirmative votes.

BACKGROUND

Community High School District 99 (CHSD99) is requesting that the Village vacate a 66-foot wide by 600-foot long portion of the Prince Street right-of-way located between Grant Street on the south and

Sherman Street on the north. The vacation would result in the closure of this portion of Prince Street. The street is immediately adjacent to the west side of the Downers Grove North High School property. The right-of-way is improved with a 28-foot wide street, a sidewalk on the east side and street trees on both sides. The petitioner owns all six parcels that abut the right-of-way proposed to be vacated.

The proposed street closure and vacation would enable CHSD99 to undertake a comprehensive redevelopment of the area. The request would allow CHSD99 to construct a new parking lot, a plaza with a bathroom building and canopy and a walkway running north and south from Grant Street to Sherman Street.

Based on the Village's Right-of-Way Vacation Policy (Resolution #2003-58), staff contacted the utility companies and outside public agencies (including the Police, Fire and Public Works Departments, School Districts, Sanitary District and Downers Grove Park District) to determine if any rights to the public right-of-way should be retained. The right-of-way contains gas, sanitary sewer, storm sewer and water mains. Primary cable and electric service lines are located within the Grant and Sherman Street rights-of-way and are not affected by the proposed vacation.

Staff recommends retaining a public drainage, utility and utility access easement over a 48-foot wide by 600-foot long portion of the right-of-way being vacated. Additionally, the easements will cover portions of the sanitary sewer, storm sewer and water mains that run to the east and connect to mains within the Main Street right-of-way. The easement provisions will provide adequate space for any future utility maintenance and needs. Except for a driveway, walkway, landscaping and fencing, future construction within the easement will be prohibited. The petitioners have been informed of this requirement and are not objecting.

A traffic impact study was completed due to the proposed closure of Prince Street. The study found that the proposed street closure would not result in significant impacts to the adjacent road network. Currently, the street is almost exclusively used for school related traffic. The study found non-school related traffic destined for Ogden Avenue typically uses Saratoga Avenue due to the presence of a traffic light at that intersection. Staff reviewed the traffic impact study and concurred with its findings.

Staff believes the proposed street closure is consistent with the Comprehensive Plan. The Comprehensive Plan recommends that the Village 'promote the continued operation and improvement of both public and private school facilities, ensure they do not impact residential neighborhoods, and cooperate with the various organizations to maintain high quality school sites and facilities.' The proposed street closure meets this recommendation by providing the School District an opportunity to improve their facilities in a high quality manner while eliminating on-street bus stacking and not negatively impacting the adjacent road system in the neighborhood.

The Plan Commission considered the petition at their November 7, 2011 meeting. A number of residents spoke with concerns regarding traffic operations and the thoroughness of the original study. These concerns included:

- 1. Congestion at the intersections of Grant and Prince Streets and Grant Street and Saratoga Avenue;
- 2. Parking on Prince Street south of Grant Street; and
- 3. Overflow bus and vehicle parking on Saratoga Avenue.

The petitioner completed an additional traffic study on November 29, 2011 to examine resident concerns. The study found:

- 1. The highest intersection traffic volumes (Grant Street and Saratoga Avenue, Grant and Prince Streets, Sherman Street and Saratoga Avenue and Sherman and Prince Streets) occur during the morning peak hour (7:30-8:30 am), the evening peak hour (5:30-6:30 pm) had the second highest intersection volumes while the afternoon peak hour (3:00-4:00 pm) had the lowest intersection traffic volumes. The study found the morning peak hour experienced 1,117 vehicles within the four intersections, which is 169 more vehicles than the evening peak hour and 219 more vehicles than the afternoon peak hour. The study found all intersections operate with minimal delay during these peak hours.
- 2. The study also observed parents circling the block and parking in no parking/standing zones while dropping-off or picking up students. While this activity did not result in traffic delays, it did result in confusing and irregular movements, including U-turns within the intersection of Grant and Prince Streets. With the addition of a proposed parking lot immediately north of Grant Street, it is anticipated that student pick-up and drop-off will take place within the parking lot and eliminate much of the on-street confusion.
- 3. With the addition of the parking lot it is anticipated that the overflow parking that is observed on Saratoga Avenue during after-school events will be relocated to the parking lot.

Staff believes the additional traffic counts completed are consistent with the original study findings. Staff will monitor and review parking, access and intersection controls in response to resident concerns to determine if adjustments to the development are necessary.

The Plan Commission found the proposed closure of Prince Street and right-of-way vacation is consistent with the Village's Right-of-Way Vacation Policy (Resolution #2003-58), the Zoning Ordinance and Comprehensive Plan. Based on their analysis, the Plan Commission unanimously recommended approval of the right-of-way vacation. Staff concurs with the Plan Commission's recommendation.

ATTACHMENTS

Aerial Map Ordinance Plat of Vacation Staff Report with attachments dated November 7, 2011 Minutes of the Plan Commission Hearing dated November 7, 2011 Neighborhood comments from October 27, 2011 CHSD99 neighborhood meeting Revised easement sketch dated November 7, 2011 Memo - traffic impact study addendum dated November 30, 2011

ORDINANCE NO.

AN ORDINANCE VACATING A CERTAIN PORTION OF THE PRINCE STREET RIGHT-OF-WAY LOCATED IMMEDIATELY WEST OF AND ADJACENT TO DOWNERS GROVE NORTH HIGH SCHOOL <u>IN THE VILLAGE OF DOWNERS GROVE</u>

WHEREAS, it has been determined by the Council of the Village of Downers Grove in DuPage County, Illinois, that it is in the public interest to vacate a certain portion of a 66-foot wide by 600-foot long portion of the Prince Street right-of-way located between Grant Street on the south and Sherman Street on the north and immediately west of and adjacent to Downers Grove North High School property in Downers Grove, Illinois, in said Village hereinafter more particularly described; and

WHEREAS, there are certain public service facilities situated in said portion of said right-of-way, and the Village Council has determined that it is necessary and in the public interest to reserve such rights-of-way and easements as are in the judgment of the Council necessary or desirable for continuing public service by means of those facilities and for the maintenance, renewal and reconstruction thereof; and

WHEREAS, the required public notice has been given and a public hearing respecting said vacation has been conducted in accordance with applicable law; and

WHEREAS, the Village Council, after due investigation and consideration, has determined that the nature and extent of the public use and the public interest to be served is such as to warrant the vacation of said portion of said right-of-way.

NOW, THEREFORE, BE IT ORDAINED by the Council of the Village of Downers Grove, in DuPage County, Illinois, as follows:

SECTION 1. That the following described property, to wit:

A 66-foot wide by 600-foot long portion of the Prince Street right-of-way located between Grant Street on the south and Sherman Street on the north and immediately west of and adjacent to Downers Grove North High School

Described as:

That part of the southwest quarter of Section 5, Township 38 North, Range 11, East of the Third Principal Meridian, described as follows: that part of Prince Street as heretofore dedicated in E.H. Prince and Company's Addition to Downers Grove according to the plat thereof recorded September 30, 1891 as Document Number 43600 described as beginning at the northeast corner of Lot 1 in Block 30 in said E.H. Prince and Company's Addition; thence along the easterly extension of the north line of said Lot 1, a distance of 66 feet to the northwest corner of Lot 24 in Block 29 in said E.H. Prince and Company's Addition; thence south along the west line of said Block 29, a distance of 600 feet to the southwest corner of Lot 13 in said Block 29; thence along the westerly extension of the south line of said Lot 13, a distance of 66 feet to the southeast corner of Lot 12 in said Block 30; then north along the east line of said Block 30, a distance of 600 feet to the point of beginning, in DuPage County, Illinois.

(hereinafter referred to as the "Prince Street Vacated Right-of-Way"), is hereby vacated, and that it is hereby declared that the same is no longer required for public use and that the public interest will be served by such vacation.

<u>SECTION 2</u>. An easement is hereby reserved for and granted to the Village of Downers Grove, County of DuPage, and to utility companies operating under franchise from the said Village including, but not limited to AT&T, Commonwealth Edison Company, Comcast, the Downers Grove Sanitary District and their respective successors and assigns jointly and severally, over all areas marked "public utilities easement reservation" on the plat of vacation of the vacated street right-of-way as described herein for the perpetual right, privilege and authority to construct, reconstruct, repair, inspect, maintain, and operate various utility transmission and distribution systems and community antenna television systems and all necessary appliances and other structures and appurtenances as may be deemed necessary by said Village and for any and all municipal purposes, over, upon, along, under and through said indicated easements, together with the right of access across the property to do any of the above work. The right is also granted to cut down, trim or remove any trees, shrubs, or other plants that interfere with the operation of the utilities. No permanent buildings or structures shall be placed on said easements, but same may be used for gardens, shrubs, landscaping, driveways, fences ("Improvements") and other purposes that do not then or later interfere with the aforesaid uses and rights. Any installations of Improvements placed in the easement shall be at the property owner's sole expense and the Village shall not be responsible for repairing, maintaining or replacing any Improvements. The property owners shall indemnify and hold harmless the Village, its agents, officers and employees against all injuries, deaths, losses, damages, claims, suits, judgments, costs and expenses which may arise directly or indirectly from the installation of any and Improvements in the easement area. The Village shall not be responsible or liable for any damage incurred to the Improvements during or as a result of any repair, maintenance, operation, use or installation of equipment or facilities within the easement area. All installations of Improvements shall be subject to the ordinances of the Village of Downers Grove. Easements are hereby reserved for and granted to the Village of Downers Grove and other governmental authorities having jurisdiction of the land over the entire easement area for ingress, egress and the performance of any and all municipal and other governmental services.

<u>SECTION 3</u>. This vacation shall be subject to the following conditions:

- 1. The vacation shall substantially conform to the staff report dated November 7, 2011.
- 2. Prior to Village Council consideration, a Mylar copy of the Final Plat of Vacation indicating the required easements per the revised attached easement sketch identifying a 46-foot wide easement shall be prepared and submitted to the Village.
- 3. A mountable curb shall be provided onto the plaza at the south end of the vacated right-of-way.
- 4. The 16-foot wide walkway shall be redesigned to provide a 20-foot width that can accommodate an 80,000 pound emergency vehicle.
- 5. The northern gate shall include a lockbox and be designed such that a single individual can operate the gate.

<u>SECTION 4</u>. That the Mayor and Clerk of the Village of Downers Grove are hereby authorized to sign the plat of vacation of the Prince Street Vacated Right-of-Way described herein.

<u>SECTION 5</u>. That a certified copy of this ordinance and an accurate Plat of the Prince Street Vacated Right-of-Way, which specifically includes the easement language contained in Section 2 of this ordinance, shall be filed for record by the Clerk of the Village of Downers Grove in the Office of the Recorder of Deeds, DuPage County, Illinois, at the Petitioner's expense.

<u>SECTION 6</u>. That all ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

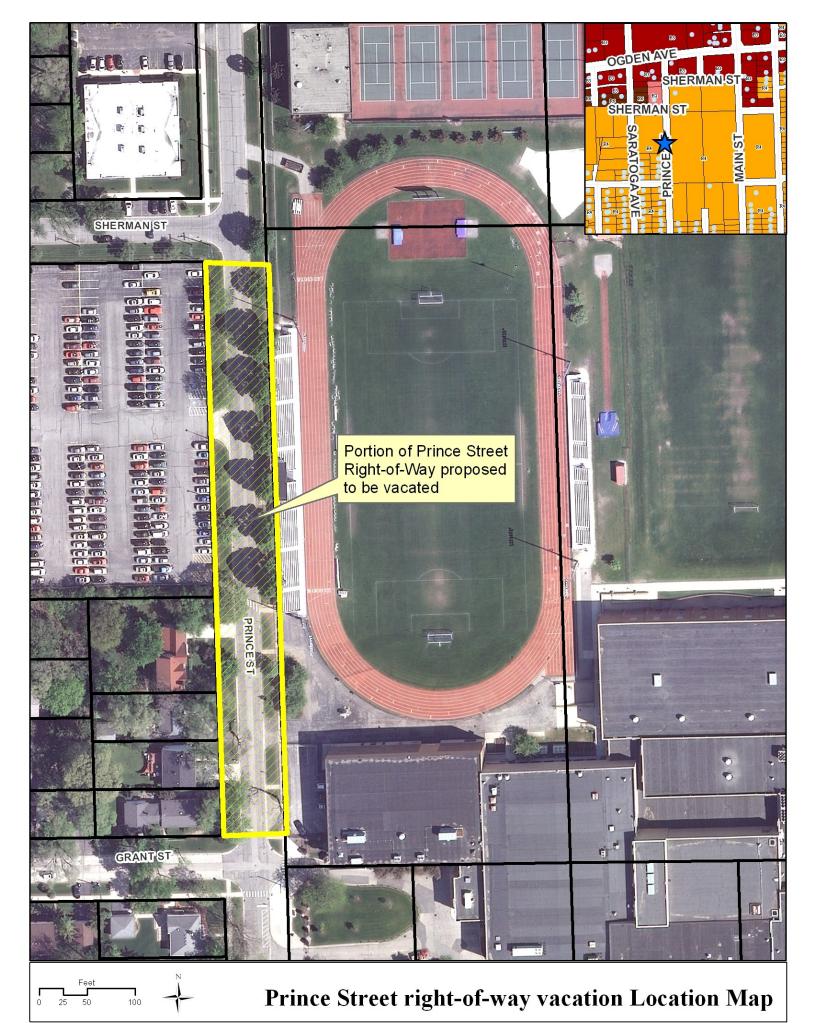
<u>SECTION 7</u>. That this ordinance shall be in full force and effect from and after its passage and publication in pamphlet form as provided by law.

Mayor

Passed: Published: Attest: _____

Village Clerk

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VILLAGE OF DOWNERS GROVE REPORT FOR THE PLAN COMMISSION NOVEMBER 7, 2011 AGENDA

SUBJECT:	Түре:	SUBMITTED BY:
PC-38-11		
Prince Street, between Grant Street		Stan Popovich, AICP
and Sherman Street	Right-of-Way Vacation	Planner

REQUEST

The petitioner is requesting the vacation of a 66-foot wide by 600-foot long portion of the Prince Street right-ofway located between Grant Street on the south, Sherman Street on the north and immediately adjacent to and west of the Downers Grove North High School properties.

NOTICE

The application has been filed in conformance with applicable procedural and public notice requirements.

GENERAL INFORMATION

OWNER:	Village of Downers Grove 801 Burlington Road Downers Grove, IL 60515
APPLICANTS:	Community High School District 99 6301 Springside Avenue Downers Grove, IL 60516

PROPERTY INFORMATION

EXISTING ZONING:	R-4 Single Family Residence District (adjacent properties)
EXISTING LAND USE:	Prince Street Right-of-Way
PROPERTY SIZE:	39,600 square feet
PINS:	n/a (right-of-way)

SURROUNDING ZONING AND LAND USES

	ZONING	FUTURE LAND USE PLAN
NORTH:	R-4 Single Family Residence District	Institutional
	and B-2, General Retail Business	
SOUTH:	R-4 Single Family Residence District	Single Family Residential
EAST:	R-4 Single Family Residence District	Institutional
WEST:	R-4 Single Family Residence District	Institutional

ANALYSIS

SUBMITTALS

This report is based on the following documents, which are on file with the Department of Community Development:

- 1. Application/Petition for Public Hearing
- 2. Project Narrative
- 3. Legal description of the Prince Street right-of-way proposed to be vacated
- 4. Comprehensive redevelopment plans
- 5. Village alley vacation policy (Resolution #2003-58)

PROJECT DESCRIPTION

Community High School District 99 (CHSD99) is requesting the Village vacate the entire Prince Street right-of-way located between Grant Street on the south and Sherman Street on the north to CHSD99. The proposed right-of-way measures 66 feet wide by 600 feet long. The right-of-way is currently improved with a 28-foot wide street with a sidewalk on the east side of the right-of-way and parkway trees on both sides. The petitioner is requesting the Village consider a right-of-way vacation to enable the school district to address parking needs and create an additional athletic field for Downers Grove North High School (DGN).

Currently, there are six parcels that abut the right-of-way, all of which are owned by CHSD99. A single large parcel is located on the east side of the right-of-way while five parcels are located on the west side. The east parcel houses a DGN building and football field. The northernmost western parcel is currently a parking lot for DGN. Single family homes are located on the remaining four western parcels. As shown in the table below, the entire right-of-way would be vacated to CHSD99:

Address	Requested	Requested	Approximate	
	Width	Length	Increase in Area	
Prince Street ROW	66 feet	600 feet	39,600 square feet	

The proposed right-of-way vacation would enable CHSD99 to undertake a comprehensive redevelopment of the entire block located between Sherman Street on the north, Prince Street on the east, Grant Street on the south and Saratoga Avenue on the west being redeveloped. Per the CHSD99 redevelopment proposal, a soccer field will be constructed on the northern two-thirds of the block while a parking lot for faculty parking and bus drop-off and pick-up will be located on the southern one-third of the block. The vacated right-of-way would be used partly as an entrance to the parking lot at the intersection of Prince Street and Grant Street. A portion of the right-of-way would be converted to a plaza adjacent to the proposed parking lot. The plaza would include a bathroom building and an open canopy. The canopy, located within the vacated right-of-way, would include columns and a roof but not be enclosed by walls. The canopy is intended to provide a place of cover from the weather for students waiting for transportation. Extending north from the plaza, a 16-foot wide walkway would run north to the Sherman Street right-ofway between the soccer and football fields. The remaining width would be converted to green space. At the intersection of Prince Street and Sherman Street, a mountable curb and gate are proposed for emergency vehicle access. The vacation of the Prince Street right-of-way is necessary to accommodate the redevelopment

Per the Village's Right-of-Way Vacation Policy (Resolution #2003-58), staff contacted the utility companies and outside public agencies (including the Police, Fire and Public Works Departments, School Districts, Sanitary District and Downers Grove Park District) to determine if any rights to the public right-

of-way should be retained. The Sanitary District has a sanitary sewer main running down the center of the Prince Street right-of-way. A sanitary main also runs east from the Prince Street main to connect to a sanitary sewer main at Main Street. A Village water main is located within the parkway adjacent to the western curb of Prince Street. A second water main running east-west immediately south of the track connects the Prince Street water main to a water main in the Main Street right-of-way to the east. Additionally, a Village storm sewer runs down the east side of Prince Street. Similar to the sanitary sewer and water mains, a storm sewer connects the Prince Street storm sewer to a Main Street storm sewer immediately south of the track. Comcast and AT&T do not have any utilities within the right-of-way. Overhead electric lines are located within the southern section of both the Grant Street and Sherman Street right-of-way to provide service to the existing football field press box. It is anticipated that this service will be relocated during the proposed improvements. A gas line is located immediately east of the east of the runs across the right-of-way.

The applicant is proposing to dedicate a 45-foot wide public drainage, utility and utility access easement within the right-of-way. It is the Village's opinion that the 45-foot wide easement is not sufficient to provide access to the existing utilities and to provide adequate space for any future utility needs. The Village requires a minimum of 10-feet adjacent to each utility. Therefore, the Village is recommending maintaining a 51-foot wide easement. The easement would extend 26 feet to the west of the centerline of Prince Street and 25 feet to the east of the centerline. This additional area would provide the Village with a minimum of 10-feet adjacent to each utility and ensure that there is sufficient access to the existing utilities and to provide adequate space for any future utility needs.

The southern 93 feet of the easement would be reduced to a 48-foot width to accommodate the proposed canopy structure. The Village believes the reduction of the easement in this area will not adversely affect the Village's ability to maintain the utilities in this portion of the right-of-way. To accommodate the sanitary sewer main that runs from Prince Street to Main Street, the existing easement located over the football field parcel will be extend to connect to the 51-foot wide easement over Prince Street. To accommodate the water and sewer mains that run from Prince Street to Main Street, a 35-foot wide public drainage, utility and utility access easement will be provided over those lines. As such, any construction within the easements will be restricted to walkways, driveways, landscaping and fencing. The petitioner has been informed of this requirement and restrictions and does not object to the easement.

The petitioner completed a traffic impact study to determine the impact of the street closure and to address other issues related to the proposed comprehensive redevelopment at DGN. The study found that the proposed vacation and closure of Prince Street between Grant Street and Sherman Street would not result in significant impacts to traffic flow within the area. The study noted existing traffic on this portion of the right-of-way are primarily related to school buses and existing school parking areas and that all non-school related traffic destined for Ogden Avenue most likely uses the intersection of Ogden Avenue and Saratoga Avenue due to the intersection being signalized. The study found that the adjacent roadway network will continue to function at a similar level of service as it does today.

The Village reviewed the traffic impact study and concurred with its findings related to the vacation of the Prince Street right-of-way. The existing right-of-way sees minimal non-school related traffic. Additionally, during the school year, Prince Street between Lincoln Street and Sherman Street and Grant Street between Prince Street and Saratoga Avenue are closed to traffic between 3 p.m. and 4 p.m. to accommodate school busses. Staff believes the adjacent street system is sufficient to accommodate the re-directed traffic associated with the vacation of Prince Street.

COMPLIANCE WITH THE COMPREHENSIVE PLAN

The Community Facilities section of the Comprehensive Plan recommends that the Village 'promote the continued operation and improvement of both public and private school facilities, ensure they do not impact residential neighborhoods, and cooperate with the various organizations to maintain high quality school sites and facilities.' The proposed Prince Street right-of-way vacation meets this recommendation by providing the school district an opportunity to improve their athletic and parking facilities in a high quality manner. The proposed bus parking within a parking lot will eliminate on-street bus stacking adjacent to 15 residential properties along Prince Street south of DGN. Staff concurs with the traffic impact study which notes the proposed vacation will not negatively affect the adjacent road system in the neighborhood. Staff believes the proposed right-of-way vacation is consistent with the Comprehensive Plan.

COMPLIANCE WITH THE ZONING ORDINANCE

The surrounding properties are all zoned R-4 single family residence district. The right-of-way vacation will increase the DGN property by 39,600 square feet. If the right-of-way is vacated, the petitioner will be able to undertake a comprehensive redevelopment of this block. The proposed improvements will be required to meet all Zoning Ordinance requirements. Because an easement is being placed on a 51-foot wide portion of the vacated right-of-way, no new buildings or structures, other than a walkway, driveway, landscaping and fencing, could be constructed within the easement. Staff believes the proposed vacation is consistent with the Zoning Ordinance.

PUBLIC SAFETY REQUIREMENTS

The Fire Department and the Police Department have reviewed the plans for the proposed vacation. The Fire Department requires that the 16-foot wide walkway be modified so that it is 20-feet wide to accommodate emergency vehicles. If CHSD99 desires, the walkway could be a combination of hard pavement and a grass paver system, as long as the walkway can accommodate a total vehicle weight of 80,000 pounds. Additionally, the Fire Department requires a mountable curb on the plaza to accommodate emergency vehicles arriving from the south while the northern gate must include a lockbox and be operable by a single individual.

The Police Department reviewed the proposed vacation and found no concerns with the proposed rightof-way vacation. The department did have some operational questions regarding the parking lots as well and those have been forwarded to the petitioner.

NEIGHBORHOOD COMMENT

Notice was provided to all property owners 250 feet or less from the adjacent right-of-way properties in addition to posting the public hearing sign and publishing the legal notice. Staff has not received any written neighborhood comment regarding the proposal at this time.

The petitioner held a neighborhood meeting on October 27, 2011. The results of the neighborhood meeting will be available at the November 7 Plan Commission meeting.

FINDINGS OF FACT

Compliance with the Procedure to be followed in the Vacation of Streets, Alleys, and Public Rights-of-Way (Resolution #2003-58)

The Village's right-of-way vacation policy asks two key questions when it comes to determining if a right-ofway can be vacated. These questions and staff's findings are listed below:

- > Is there written consent of at least two property owners who abut the proposed parcel to be vacated?
 - The petitioner is the only property owner who abuts the proposed right-of-way to be vacated.

- > Are there any known public interests served the parcel?
 - As noted above, staff contacted the utility companies and outside public agencies to 0 determine the extent of pubic interest. Based on their replies, staff has determined the public interests can be addressed by retaining a 51-foot wide public drainage, utility and utility access easement as depicted on the attached sketch. As such, the petitioners will not be able to construct any permanent structure, other than a walkway, driveway, landscaping or fence, within the dedicated easements. The petitioners have been informed of the easement requirements and do not object to them.
 - The traffic impact study found that the proposed vacation will not negatively impact the 0 surrounding transportation system. The study found that current traffic using Prince Street can be accommodated on Saratoga Avenue without a decrease in the level of service currently being provided.

Based on these findings, staff believes the request complies with the Village policy outlined in Resolution #2003-58 and recommends vacating the entire 66-foot wide by 600-foot long Prince Street right-of-way to the petitioner with a 51-foot wide public drainage, utility and utility access easement placed over the right-ofway to be vacated.

Per the right-of-way vacation policy, staff has determined the fair market value of the vacated right-of-way based on the latest assessment of land adjacent to the right-of-way. When land will be encumbered with an easement, land is generally valued at one-third (1/3) of the value of the same property that does not have an easement. As such, the portion of the right-of-way that will be encumbered with an easement will be valued at one-third, while the remaining portion of the right-of-way will be valued at full value. Based on the required easements, 30,761 square feet of the 39,600 square foot right-of-way will be encumbered with a public drainage, utility and utility access easement. The remaining 8,839 square feet of vacated right-of-way will not be encumbered with an easement.

The table below summarizes the estimated value:

roution of right-or-way encumbered by a public dramage, durity and durity access easement							
Adjacent	Land	Lot Size	Square Foot	SF of ROW to	Estimated	Encumbered	
Property Address	Value	(Square Feet)	Land Value	be vacated	Value	Value	
4434 Prince Street	\$ 98,140	13,188	\$ 7.44	30,761	\$ 228,911.48	\$ 75,541	

Portion of right-of-way	y encumbered by a	public drainage, utilit	ty and utility access easemer	nt
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Portion of right-of-way not encumbered with an easement						
Adjacent	Land	Lot Size	Square Foot	SF of ROW to	Estimated	
Property Address	Value	(Square Feet)	Land Value	be vacated	Value	
4434 Prince Street	\$ 98,140	13,188	\$ 7.44	8,839	\$ 65,77	

Total value of Right-of-Way to be vacated \$ 141,317

Per the right-of-way vacation policy, the Village Council determines the amount and type of compensation, if any, that is required. CHSD99 has requested waiving the compensation fee. Staff recommends the Village waive the \$141,317 compensation fee.

RECOMMENDATIONS

Staff believes the proposed right-of-way vacation is consistent with the Village's Comprehensive Plan, right-of-way vacation policy (Resolution #2003-58) and surrounding zoning and land use classifications. Based on the findings listed above, staff recommends that the Plan Commission make a motion recommending approval of the Prince Street right-of-way vacation associated with PC-38-11 to the Village Council subject to the conditions below:

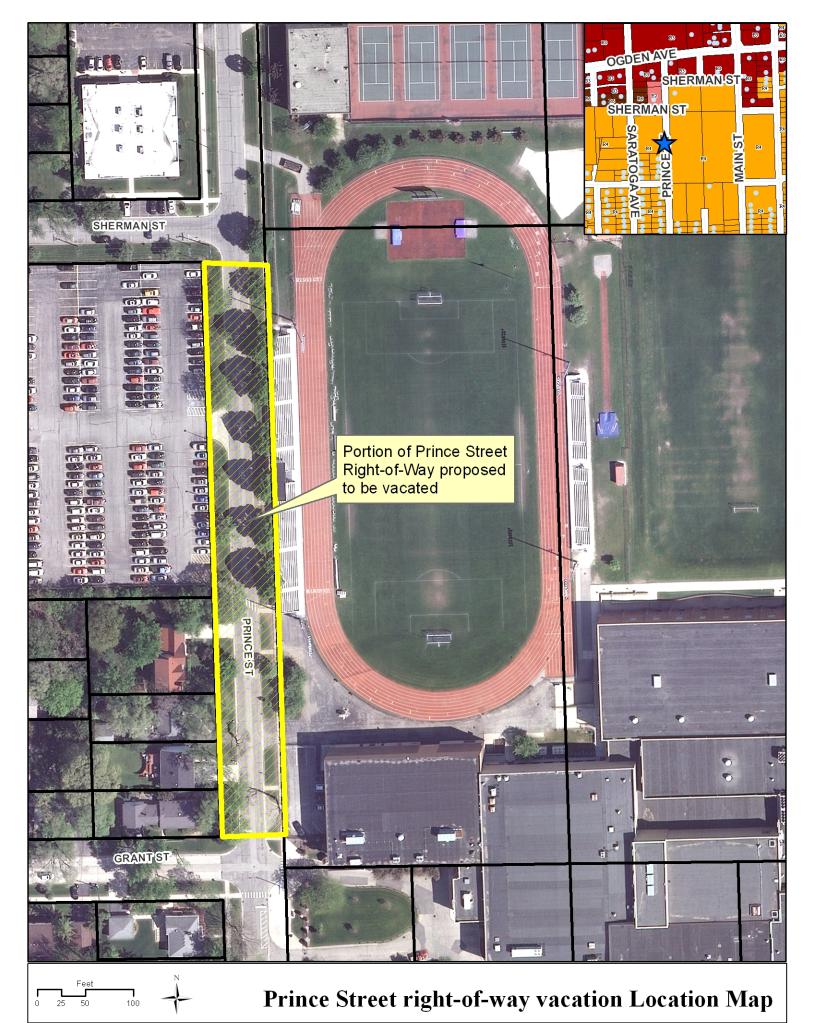
- 1. The vacation shall substantially conform to the staff report dated November 7, 2011.
- 2. Prior to final Village Council consideration, a Mylar copy of the Final Plat of Vacation indicating the required easements per the attached easement sketch shall be prepared and submitted to the Village.
- 3. The Village shall waive the \$141,317 compensation for the vacated right-of-way.
- 4. A mountable curb shall be provided onto the plaza at the south end of the vacated right-of-way.
- 5. The 16-foot wide walkway shall be redesigned to provide a 20-foot width that can accommodate an 80,000 pound emergency vehicle.
- 6. The northern gate shall include a lockbox and be designed such that a single individual can operate the gate.

Staff Report Approved By:

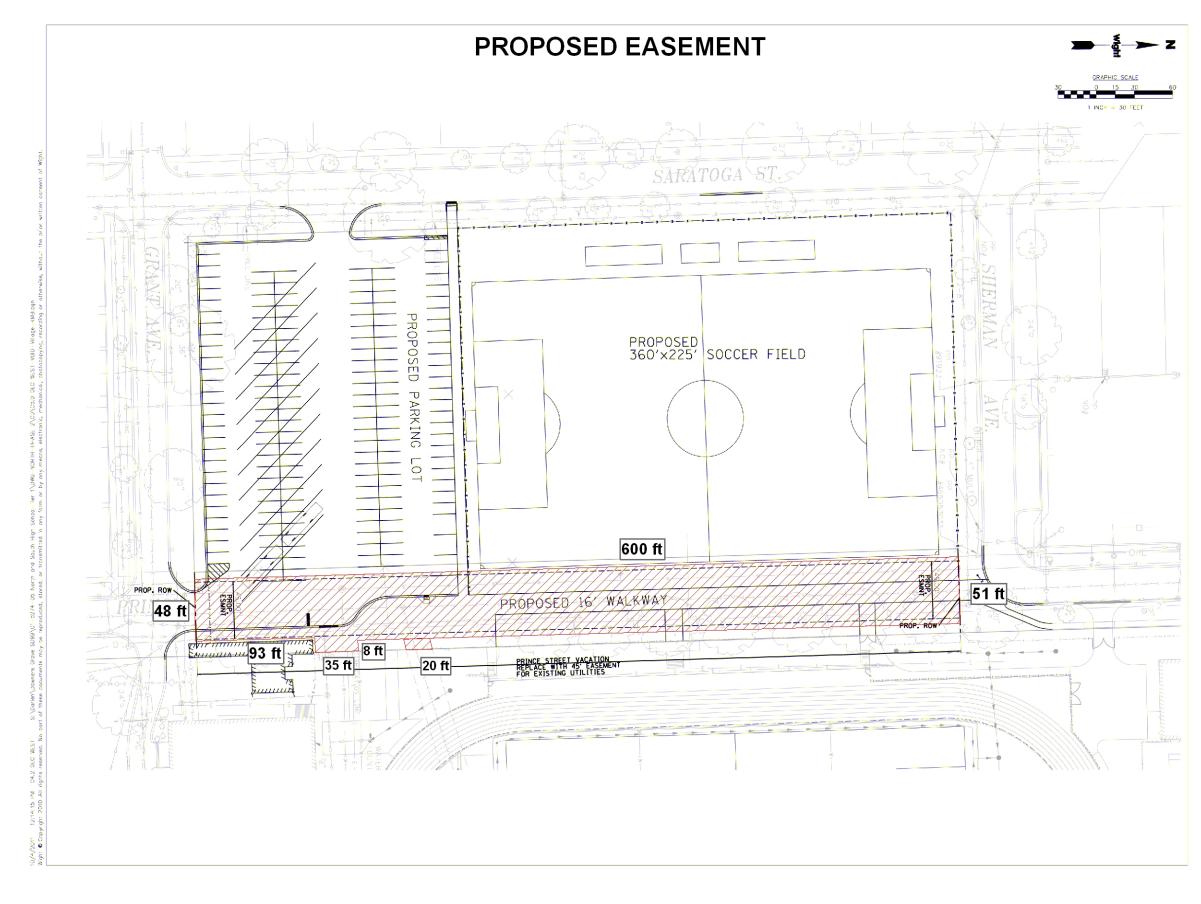
Tom Dabareiner, AICP Director of Community Development

TD:sp -att

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P:\P&CD\PROJECTS\PLAN COMMISSION\2011 PC Petition Files\PC-38-11\PC-38-11 Maps







Wight & Company wightco.com 2500 North Frontage Road Darien, IL 60561 P 630.969.7000 F 630.969.7070

NORTH HIGH SCHOOL MSP 2011 TIER 1 PHASE 2

4436 Main St. Downers Grove, IL

GEOMETRIC PLAN WEST

Project Number OI-5274-06 Drawn By: KMB Sheet:





Description:	Rights-of-Way	· · ·	-
Res. or Ord. #:	Res. 2003-58	Effective Date:	7/1/03
Category:	Planning and Community Development	t	
-	New Council Policy X Amends Previous Policy Dated:	6/24/74, 8/11/80, 10/21/91, 7/6/93, and 4/5/99	
	Description of Previous Policy (if different	rent from above):	
	Vacation of Streets or Alleys or Po	ortions Thereof	

RESOLUTION 2003-58

RESOLUTION ESTABLISHING A PROCEDURE TO BE FOLLOWED IN THE VACATION OF STREETS, ALLEYS AND PUBLIC RIGHTS-OF-WAY IN THE VILLAGE OF DOWNERS GROVE, ILLINOIS

WHEREAS, pursuant to applicable law, the Village Council of the Village of Downers Grove has the power and authority to vacate streets, alleys and public rights-of-way within the jurisdiction of the Village; and

WHEREAS, the Council of the Village of Downers Grove has determined that it is in the best interests of the Village to establish a procedure to be followed in determining whether a particular street, alley or rightof-way should be vacated, the method by which such vacation should be accomplished, and the compensation, if any, to be paid with respect thereto,

NOW, THEREFORE, BE IT RESOLVED by the Council of the Village of Downers Grove, in DuPage County, Illinois, as follows:

1. That the following procedure shall, in all events, be followed in processing, considering and acting upon requests for the vacation of streets, alleys and public rights-of-way located within the corporate limits of the Village of Downers Grove:

- a. The person or persons desiring the vacation of a particular street, alley or public right-ofway (the "Petitioner"), shall file with the Village a written petition on a prescribed form requesting such vacation, which petition shall contain the following information:
 - (i) name and address of the Petitioner;

(ii) the location, and if possible, the legal description of the street, alley or public right-of-way to be vacated (the "Parcel");

- (iii) names and addresses of all owners of record of property abutting upon the Parcel, and a statement as to the frontage in terms of lineal feet of each parcel of property so abutting the Parcel;
- (iv) a statement as to the type of any known public service facilities over, under or upon the Parcel, and the name of the public utility owning the same.
- (v) the written consent of at least two property owners who abut the proposed parcel to be vacated.
- (vi) a fee of three hundred dollars (\$300.00) shall be paid to the Village, provided that no such fee shall be required if the Petitioner is a public body. This fee shall be used to pay for Staff processing of the petition, hearing notice publication and plat recordation costs. This fee does not include the cost of the plat preparation or the appraisal(s) of the fair market value of the Parcel (as outlined in section 1(g)).
- b. Staff shall cause written notice of the proposed vacation of the Parcel to be mailed to all public utilities with a request that such utilities inform the Village of any easements over, under, or upon the Parcel which must be retained at the time of vacation, and to units of local government having an interest in the Parcel. Failure of any such owner of record or public utility to receive such notice shall not invalidate, impair or otherwise affect the validity of any vacation that may thereafter occur.
- c. Staff shall evaluate the request and prepare a staff report, taking into consideration the nature of the request, including known public interests, if any, served by the Parcel. In doing so, Staff shall verify the information contained in the petition in order to assure that all required owners of property abutting the Parcel are named and that all existing public service facilities have been disclosed, if any, to the Village to affect such vacation. The following informational items shall be included in the staff report:
 - (i) A map showing the location of the proposed street, alley or public right-ofway to be vacated.
 - (ii) Information as to current and future use of the street, alley or public right-ofway including:
 - (a) watermains
 - (b) storm sewers or storm drainage conveyance or storage facilities
 - (c) sanitary sewers
 - (d) electric utilities
 - (e) natural gas utilities
 - (f) telephone utilities
 - (g) vehicular access, public or private
 - (h) pedestrian access, public or private
 - (i) public open space
 - (iii) A recommendation with regard to retention of easements, if any, within the Parcel for the benefit of public utilities, potential use of the parcel for public walkways or bike trails and access of adjacent property owners.

- (iv) A recommendation regarding the vesting of title to the property upon vacation of the street, alley or public right-of-way. The instrument dedicating the street, alley or public right-of-way must be examined to determine if the specific devolution of the title upon vacation thereof is provided for in the document. If no specific devolution of title is provided for, then a recommendation regarding the vesting rights of the abutting property owners must be made. The Village, in its discretion, may grant title to the entire vacated street, alley or public right-of-way to only one abutting property owner.
- d. Staff shall forward the petition to the Village Traffic Engineer who shall be responsible for reviewing the request to determine the potential future need for the Parcel, the potential for increased traffic associated with the vacation of the Parcel, and an estimate of future costs to the Village associated with the vacation. This information shall be incorporated into the staff report.
- e. Upon completion of the staff report, the staff report and the petition shall be referred to the Plan Commission for public hearing. Notice of the time and place of such hearing shall be given not more than thirty (30) nor less than fifteen (15) days before the date thereof, by publishing such notice at least once in one or more newspapers of general circulation within the Village. In addition, copies of such notice shall be sent by the Village to the owners of record of property abutting the Parcel.
- f. The Plan Commission shall forward its recommendation regarding vacation of the Parcel to the Village Council for its consideration.
- g. Prior to the petition being considered by the Village Council, the Petitioner must submit an appraisal conducted by a certified appraiser. The Village, in its sole discretion, may consider an alternate assessment of the current market value of the Parcel in lieu of an appraisal.
 - i) If the appraisal submitted by the Petitioner is disputed by the Village, the Village in its sole discretion may obtain a second independent appraisal, at Village expense.
 - ii) If the Petitioner disputes the second appraisal, the Village will contact a third independent appraiser to perform a review appraisal, the cost of which shall be paid by the Petitioner. The Village Council shall then make a final determination of market value which shall be binding on all parties.
- h. The Village Council shall determine:
 - (i) Whether the Parcel or portion thereof, is no longer necessary for public use and whether the public interest will be served by such vacation request.
 - (ii) Whether the Parcel or portion thereof, should be vacated and whether public utility easements and any ingress-egress easements are to be maintained.
 - (iii) The amount and type of compensation, if any, to be required as a condition to the effectiveness of the vacation of the parcel.
- i. The Petitioner shall be notified of the decision of the Village Council, and of any conditions placed on the vacation. If the Petitioner desires to proceed with such vacation, the Petitioner shall provide a plat of vacation with reservation of required easements, if any, in a form as prescribed by the Village.

- j. After a statement by the Village Manager that the plat has been prepared and submitted, the Village Council shall consider the ordinance. If the Village Council determines to adopt such ordinance, it shall do so by a 3/4 vote of its members.
- k. Upon passage of the ordinance, the Village Clerk shall record the ordinance and the plat in the Office of the Recorder of Deeds of DuPage County and file such documents with the DuPage County Clerk. Copies of the recorded documents shall be sent by the Village Clerk to the office of the assessor for the township in which the Parcel is located and notice of the effectiveness of the vacation shall be sent to the owners of record of the property abutting the Parcel.

2. The validity of any vacation otherwise carried out in accordance with applicable law shall not be invalidated, impaired or otherwise affected by noncompliance with any part of the procedure set forth herein.

3. That Resolutions 74-34, 80-45, 91-43, 99-22 and all other resolutions or parts of resolutions in conflict with the provisions of this resolution are hereby repealed.

4. That this resolution shall be in full force and effect from and after its passage and approval as provided by law.

Brian J. Krajewski, Mayor

Passed: July 1, 2003 Attest: April Holden, Village Clerk

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PROJECT NARRATIVE

FOR

CHSD 99 – NORTH HIGH SCHOOL MSP 2011 TIER 1 IMPROVEMENTS

Community High School District 99 is proposing to modify the site conditions at North HS to address athletic and parking needs of the high school. This endeavor is divided into two (2) Phases. The first phase, constructed this summer, was to address athletic needs by replacing the grass football field with synthetic turf, replacing the track, moving the softball field to the west side of Main Street and creating a playable grass area to the north of the relocated softball field for PE and athletics. Phase 2, scheduled for the spring/summer of 2012, will address the parking needs and create an additional athletic field. Phase 2 will occur to the east and west of the high school. Please refer to the attached color rendering depicting all improvements.

To address the student parking needs the existing east parking lot and softball field will be removed for a new parking lot between Grant Avenue and Sherman Street. This parking lot is divided into a north and south lot by an 8' walkway running west/east. The southern lot will serve as the parent drop off and main handicap parking and will have an access off of Grant Avenue. This new Grant access is slightly east of the existing access to allow more queuing at the Main Street Intersection. The northern section is for student parking and will have an 8' walk on the west side to transfer students to the signalized intersection at Main Street. A fence is proposed to the west of this walkway to block students from freely crossing Main Street. To access this northern lot two locations are proposed; one off of Sherman Street and one off of Highland Avenue.

For the western improvements the seven (7) residential houses along Prince Street, Grant Avenue and Saratoga Avenue will be demolished and a vacation of Prince Street between Sherman Street and Grant Avenue is requested. The houses are now owned by CHSD 99 and will be demolished so that the new west parking lot can be located closer to the school' west entrance. The new west parking lot will be faculty parking and service as the bus drop off and pick up. The vacation of Prince Street is being requested to create a much needed additional athletic field to bring an athletic event back on school campus and to connect this field with the track area for one athletic complex. At the current location of Prince Street, a 16' wide walkway is being proposed for pedestrians, district maintenance vehicles and emergency vehicles. Mountable curb and a gate are proposed at the southeast corner of Prince and Sherman for vehicle access. The attached Geometric Plan West (24x36) depicts the improvements to the west and the 16' walkway within the requested Vacation of Prince Street.

October 26, 2011

Village of Downers Grove-Ovic Center Department of Community Development 801 Burlington Ave. Downers Grove, IL 60515-4782

Re: PC-38-11 Prince Street Right-of-Way Vacation

To Whom It May Concern:

Community High School District 99, a public taxing body, hereby requests waiver of compensation fees associated with the vacation of Prince Street in the amount of \$142,115. District 99 believes the taxpayers of the Village and School District are best served by waiving these fees.

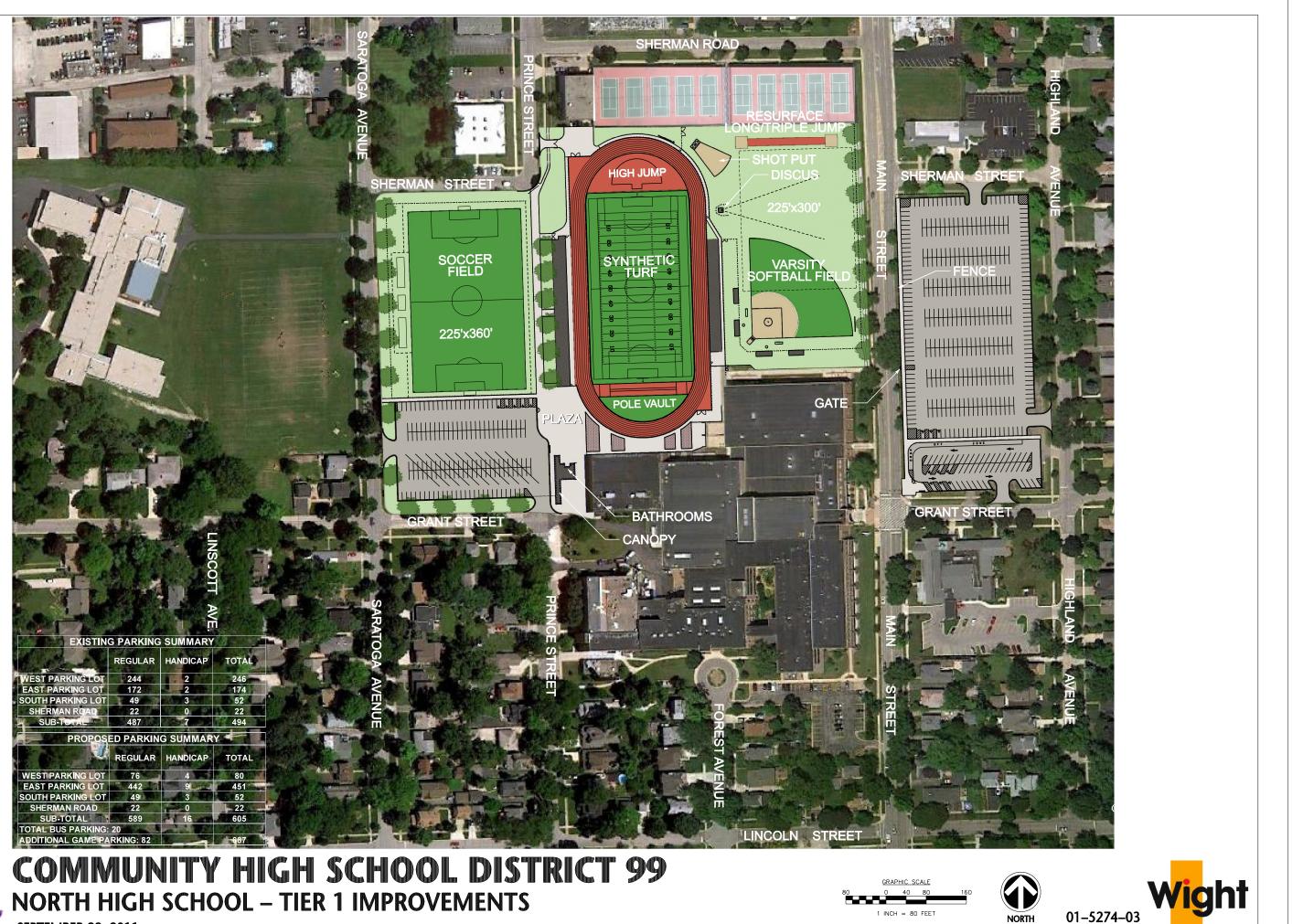
The vacation of Prince Street, between the intersections of Grant Street to the south and Sherman Avenue to the north, will allow the school district to improve the North High School campus by connecting its western-most property with the main campus, thereby providing better pedestrian and school bus access to the campus in a safer and more effective manner.

We would appreciate your consideration and approval to waive these fees. Should you have any questions, please do not hesitate to contact me at 630-795-7142.

Sncerely,

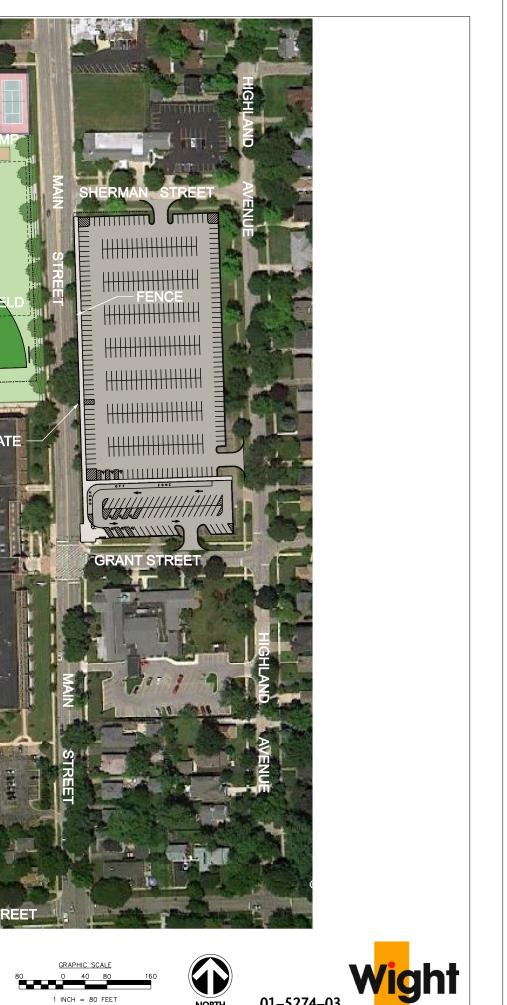
Martin W. Schack

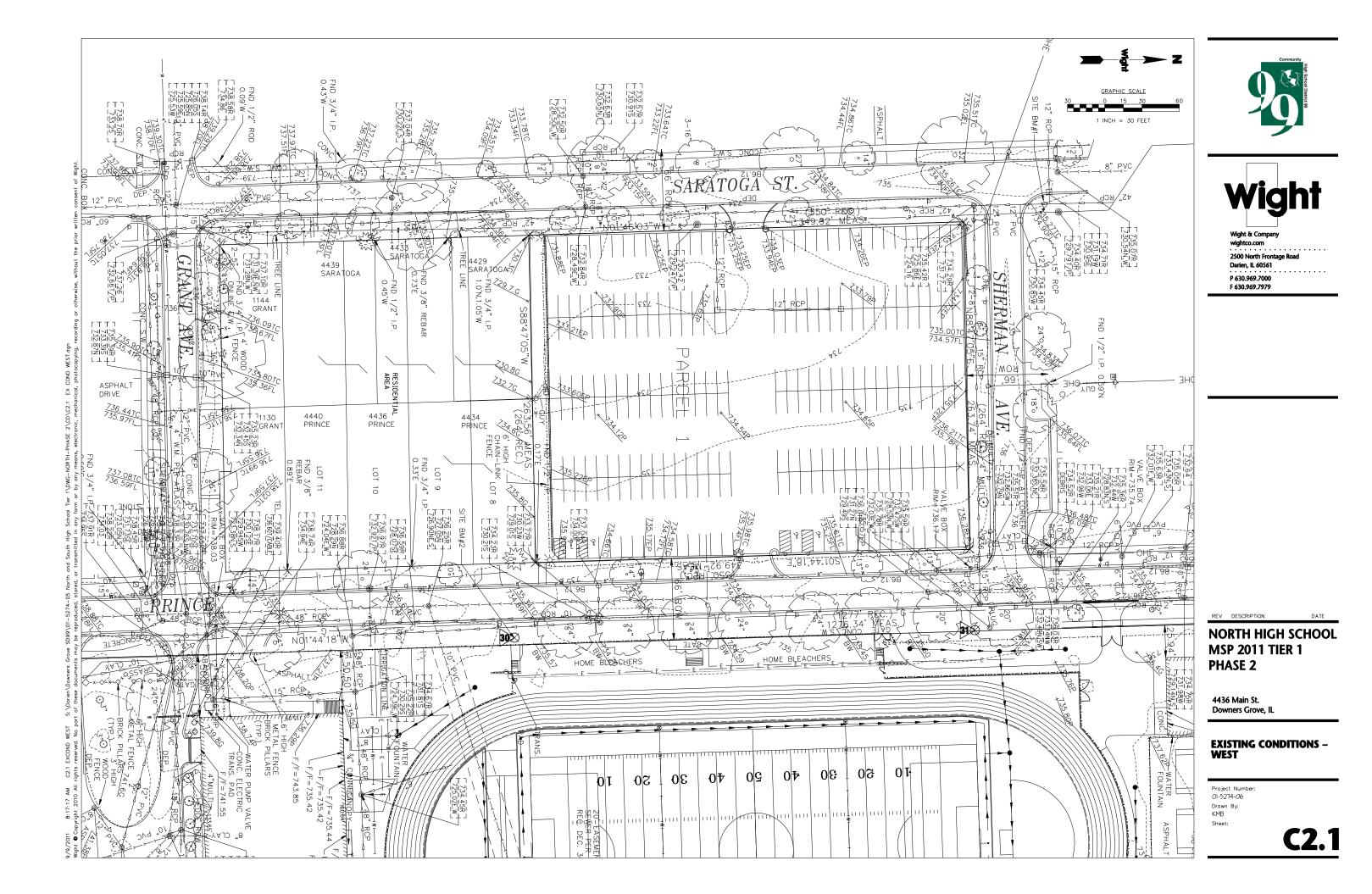
cc. Dr. Mark McDonald-School Superintendent Bill White-Board of Education President Mark Staehlin-Controller

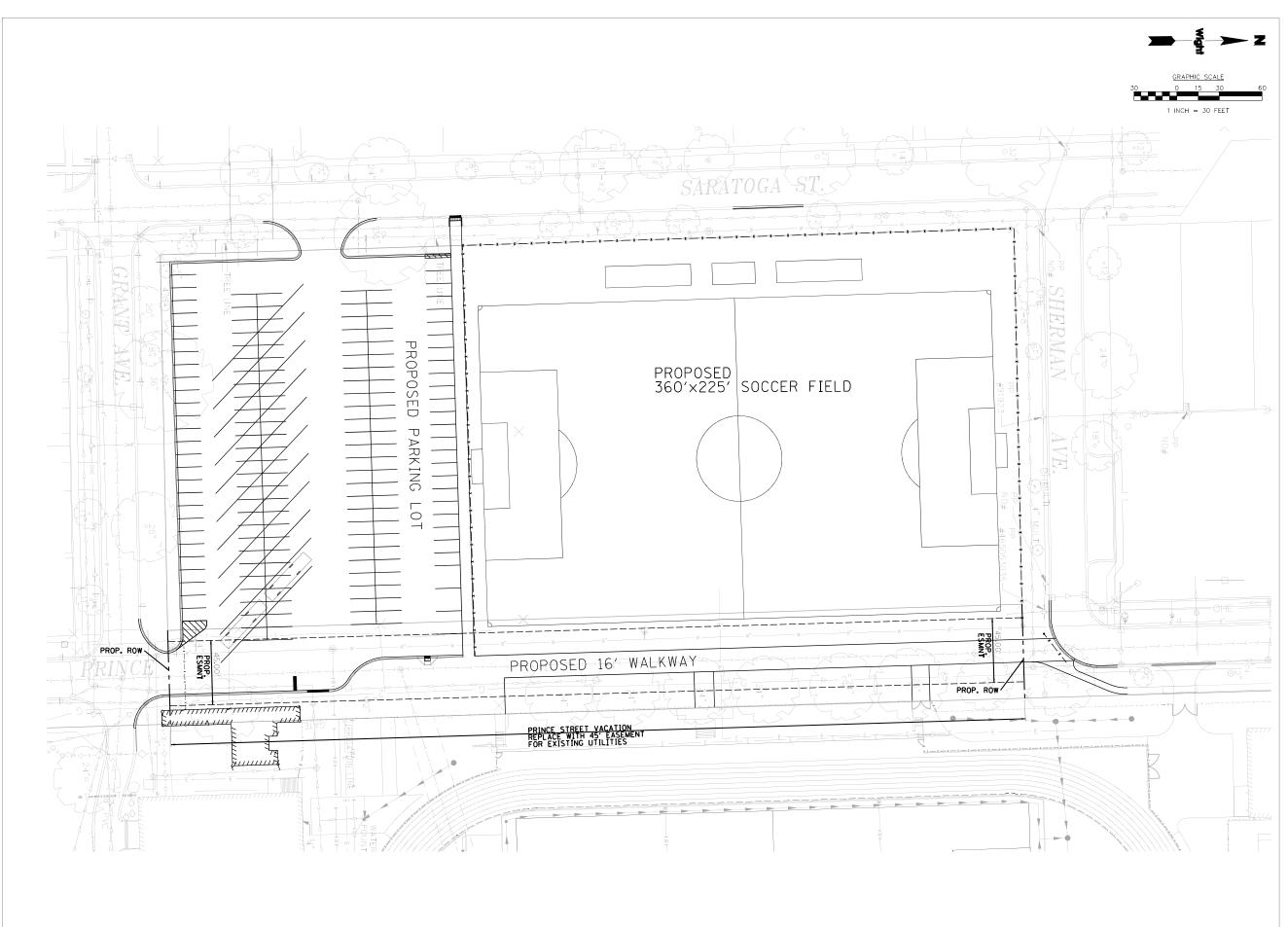




SEPTEMBER 29, 2011







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 Wight & Company

 wightco.com

 2500 North Frontage Road

 Darien, IL 60561

 P 630.969.7000

 F 630.969.7979

REV DESCRIPTION

NORTH HIGH SCHOOL

DATE

MSP 2011 TIER 1 PHASE 2

4436 Main St. Downers Grove, IL

GEOMETRIC PLAN WEST

Project Number: 01-5274-06 Drawn By: KMB Sheet:





Traffic Impact Study Proposed North High School Site Improvements

Prepared for Community High School District 99

Submitted by Regina Webster & Associates, Inc.

Regina Webster & Associates, Inc. 8619 W. Bryn Mawr Avenue Suite 602 Chicago, Illinois 60631 773.283.2600 phone 773.283.2602 fax www.RWAengineers.com

1. SUMMARY

This report presents the findings of a Traffic Impact Study (TIS) conducted for the proposed improvements at North High School in Downers Grove, Illinois. The purpose of the TIS is to analyze the expected traffic impacts to the surrounding roadways as a result of the proposed improvements to the school, including parking reconfiguration and vacating a portion of Prince Street to accommodate improvements to the school's athletic facilities. As shown in Figure 1, the school is located on a site bounded on the north by Ogden Avenue (US Route 34), on the east by Highland Avenue, on the west by Saratoga Avenue, and on the south by Lincoln Street.

The analyses presented in this report resulted in the following conclusions and recommendations:

Conclusions

- The study intersections that currently operate above acceptable levels are expected to continue to do so with the proposed school improvements.
- The study intersections that currently do not operate at acceptable levels are not expected to be significantly impacted with the proposed school improvements.
- The vacating of Prince Street between Sherman Street and Grant Street is not expected to result in significant impacts to traffic flow within the study area.

Recommendations

RWA recommends that the following actions be taken to ensure efficient traffic operations:

- Utilization of the gate in the fence on the west side of the East Parking Lot to serve as a pedestrian connection between the parking and the athletic fields on game days will create the need for a temporary mid-block crossing of Main Street. It is recommended that traffic control personnel be utilized to facilitate this crossing at these times.
- Consider developing and communicating a plan for parents that drop off and pick up students to reduce any confusion or conflicts that may arise from changing traffic patterns associated with the vacating of the portion of Prince Street.



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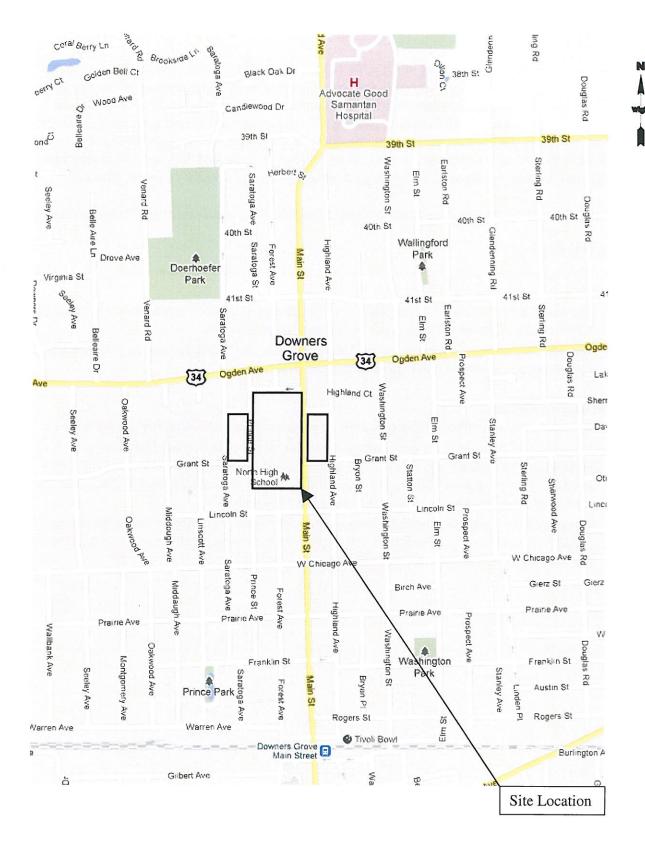


Figure 1: Site Location Map



Study Methodology

This study involved an assessment of the traffic impacts of the planned school improvements, which will be completed prior to the start of the 2012-2013 school year. A five-year horizon (2017) was used to study the future traffic operations. This assumed a background growth in regional traffic in addition to expected changes in the volume and distribution of school related traffic.

Existing intersection turning movement volume data was obtained for traffic, pedestrian, and bicycle movements for the periods around the start and end of the school day. The counts were conducted between 7:00 AM and 9:00 AM and between 2:00 PM and 4:00 PM on Wednesday and Thursday September 7 and 8, 2011, at the following 12 intersections:

- Ogden Avenue and Saratoga Avenue
- Ogden Avenue and Prince Street
- Ogden Avenue and Main Street
- Ogden Avenue and Highland Avenue
- Sherman Street and Saratoga Avenue
- Sherman Street and Prince Street
- Sherman Avenue and Main Street
- Grant Street and Saratoga Avenue
- Grant Street and Prince Street
- Grant Street and Main Street
- Grant Street and Highland Avenue
- Main Street and Lincoln Street

The current information was used in the evaluation of existing conditions and the formation of traffic and operational projections for the school based on the proposed improvements. The forecasted 2017 condition was developed considering the reconfiguration and addition of parking spaces and the proposed vacating of a portion of Prince Street.

Study intersections were analyzed for both existing and future conditions and conclusions were made based on the results. Existing and future pedestrian activity was also considered as part of the study.



2. EXISTING CONDITIONS

RWA conducted a field reconnaissance to collect relevant information pertaining to adjacent land uses, the surrounding roadway network, traffic controls, and existing traffic volumes at each of the study intersections outlined above.

Roadway Network

The area roadways included in the study are Ogden Avenue, Saratoga Avenue, Prince Street, Main Street, Highland Avenue, Sherman Street, Grant Street, and Lincoln Street. These roadways are described in more detail below.

Ogden Avenue (US Route 34) is an east-west arterial and a major US Route. The roadway includes two travel lanes in each direction, with additional left-turn lanes at major intersections. Sidewalk exists adjacent to the roadway, separated by grass landscaping.

Saratoga Avenue is a local street at the west end of the study area. The roadway is oriented north and south. The roadway includes one travel lane in each direction. Sidewalk exists adjacent to the roadway on the west side, separated by grass.

Prince Street is a local street near the center of the study area. The roadway is oriented north and south. The roadway includes one travel lane in each direction. Sidewalk exists adjacent to the roadway on either side at various points, separated by grass.

Main Street is a collector street near the center of the study area. The roadway is oriented north and south. The roadway includes two travel lanes in each direction, with additional left-turn lanes at major intersections. Sidewalk exists adjacent to the roadway on either side at various points, directly adjacent to the roadway near Ogden Avenue and then separated by grass further to the south.

Highland Avenue is a local street at the east end of the study area. The roadway is oriented north and south. The roadway includes one travel lane in each direction. Sidewalk exists adjacent to the roadway on both sides, separated by grass.

Sherman Street is a local street near the center of the study area. The roadway exists in two separate segments, to the west and east of North High School, that are physically separated by the school. The roadway is oriented east and west. The roadway includes one travel lane in each direction. Sidewalk exists adjacent to the roadway on the north side, separated by grass.

Grant Street is a local street near the south end of the study area. The roadway exists in two separate segments, to the west and east of North High School, that are physically separated by the school. The roadway is oriented east and west. The roadway includes one travel lane in each direction. Sidewalk exists adjacent to the roadway on the south side of the west segment, and on both sides of the east segment, separated by grass.

Lincoln Street is a local street at the south end of the study area. The roadway is oriented east and west. The roadway includes one travel lane in each direction. Sidewalk exists adjacent to the roadway on both sides, separated by grass.



Existing Site and Parking

The existing North High School consists of one school building to accommodate approximately 2,200 students and 300 full-time staff members. The main pedestrian building entrance is on the east side of the school directly west of the intersection of Main Street and Grant Street. Other pedestrian entrances exist on the south and west sides of the school. The existing site is shown in Figure 2.

Parking is currently provided to students and faculty in three lots and along Sherman Road between Prince Street and Main Street. Parking is by permit only. The school's student handbook indicates that student parking is available to seniors and those students with medical or other special needs. One parking lot is located west of the school, with access from both Saratoga Avenue and Prince Street. Another parking lot is located just east of the school, with access from Highland Avenue and Grant Street. A third faculty lot is located south of the school, with access from the main drop off on Forest Avenue and an exit-only driveway to Main Street. The following is a breakdown of the existing school parking supply.

Table 1 - Existing Parking Supply

Location	Parking Supply
West Parking Lot	246
East Parking Lot	174
South Parking Lot	52
Sherman Road	22
Total	494

Student Drop Off

Today, many parents who drop off students do so within the drop off on the south side of the school. Field observations indicated that this operates well with minimal queuing. Some parents drop off students elsewhere around the school such as on Prince Street to the west and within the East Parking Lot. This drop off activity was not observed to cause any significant issues with traffic operations around the school. On the contrary the distribution of drop offs appears to mute any impacts that can be experienced when drop off activity is concentrated at one location.

While drop off activity was observed to function well, it was noted that transportation related information on the school's website included guidance and policies on bus transportation and parking but did not include guidance on dropping students off.



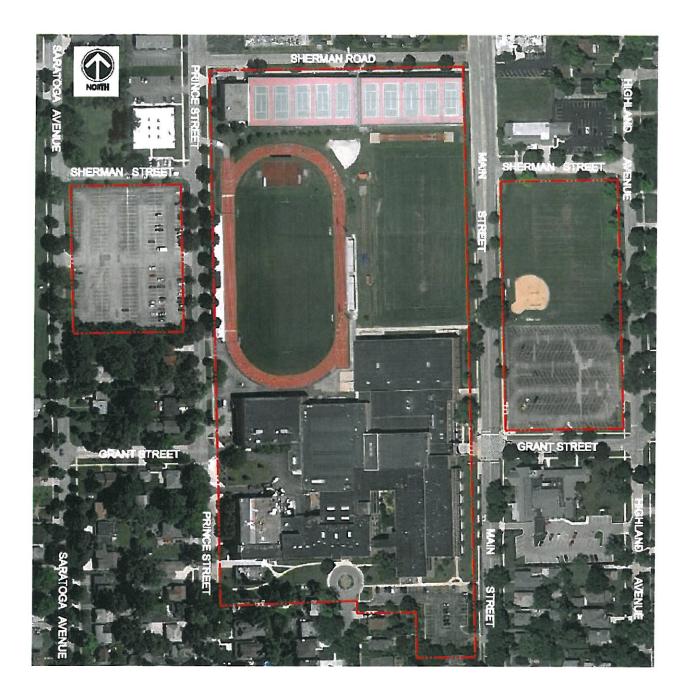


Figure 2: Existing Site



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Transit

The school is served by twenty (20) school buses for transporting students between home and school, six (6) bus routes connecting the school with the Technology Center of DuPage and two (2) activity bus routes. Bus transportation is provided for students who live at least 1.5 miles from school. Students are required to have and display an ID card to ride buses offered by the school.

There are currently two Pace bus routes that operate within several blocks of the school, Routes 461 and 464. These routes stop along Main Street just south of Ogden Avenue, approximately onequarter mile from the school entrance, and serve the North High School attendance area. The Downers Grove Metra station is located approximately three quarters of a mile south of the school on Main Street.

Traffic Volumes

RWA collected traffic volumes at the three study intersections on September 7 and 8, 2011, during the hours of 7:00 AM to 9:00 AM (Morning) and 2:00 PM to 4:00 PM (Afternoon). The periods for data collection were chosen to coincide with the start and end of the school day. Most students begin their day at 8:00 AM and are dismissed at 3:20 PM. The morning peak hour was found to occurred from 7:30 AM to 8:30 AM and the afternoon peak hour occurred from 3:00 PM to 4:00 PM. Figures 3 and 4 show the existing peak hour traffic volumes. For the purposes of this report, the two peak hours analyzed are noted as Morning and Afternoon, as indicated above.



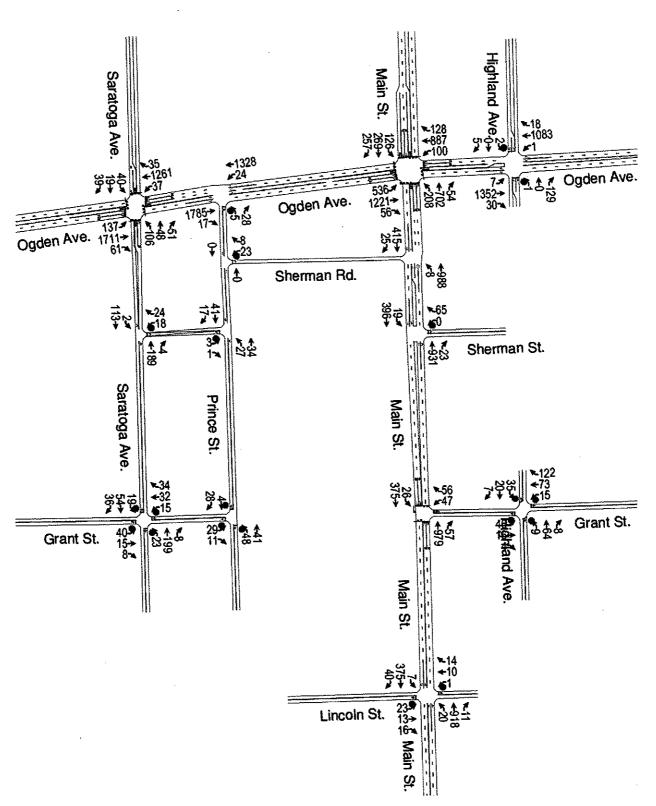


Figure 3: Existing Morning 2011 Traffic Volumes



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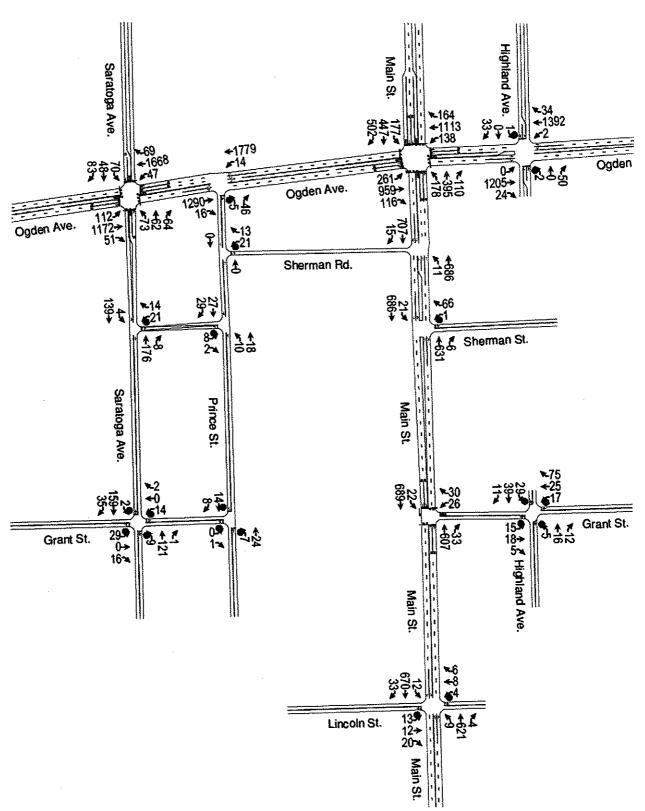


Figure 4: Existing Afternoon 2011 Traffic Volumes



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3. PROPOSED IMPROVEMENTS

The proposed improvements include the addition and relocation of athletic facilities, a reconfiguration of available parking, and vacating the portion of Prince Street between Grant Street and Sherman Street. A new varsity softball field will be constructed just north of the school building, on the west side of Main Street. This area is currently vacant. The existing east parking lot will be expanded to the north into the area currently occupied by a softball field, with access points on Grant Street, Highland Avenue, and Sherman Street. A new soccer field will be constructed west of the school, in the space currently occupied by the west parking lot. A new bus and school faculty parking lot will be constructed west of the school, with access to Grant Street and Saratoga Avenue. This space is currently a residential area. Additionally, the existing track and field area will be reconstructed in the same space. No change in the number of students or faculty is anticipated as a result of the proposed improvements but the available parking supply is expected to increase.

A total of 494 parking spaces exist for use by the school today. The plan proposes an increase in parking supply of 193 spaces for a total supply of 687 as detailed in Table 2.

Location	Darking Supply
	Parking Supply
West Parking Lot	162
East Parking Lot	451
South Parking Lot	52
Sherman Road	22
Total	687

Table 2 – Proposed Parking Supply

About half of the West Parking Lot will be reserved on school days for use by school buses such that 80 of the 162 spaces will be available for use.

Figure 5 shows the proposed improvements to the North High School site.





Figure 5: Proposed Site Plan



4. TRAFFIC IMPACT STUDY

Background Traffic Growth

This analysis accounts for the overall growth in background traffic by the year 2017 (five years after the scheduled completion of the improvements), by applying an annual growth rate to the existing year 2011 through traffic data on Ogden Avenue and on Main Street for the next five years. No other significant development projects are known to be planned in the vicinity of the site. While historical traffic data on these routes was not available, it is expected that regional development may result in only modest increases in regionally generated traffic volumes. Therefore, a growth rate of 0.5% per year was assumed along Ogden Avenue and Main Street to account for local and regional ambient growth.

Modal Split

Observations indicated that the majority of school staff typically arrives via automobile. Students arrive either on foot, by bus, are dropped off by parents, drive themselves or ride with another student who drives. A handful of students bike to school.

Based on field observations conducted on September 8, 2011 in the Morning peak hour, the observed mode split at North High School was as follows:

- 22% Walk
- 1% Bike
- 11% Drive themselves
- 10% Ride with another student
- 28% Dropped off by parents
- 28% Arrive by bus

This mode split was used as an input towards the determination of the school's vehicular trip generation.



Site-Generated Traffic

Data and analysis contained in the Institute of Transportation Engineers publication *Trip Generation*, 8^{th} Edition was reviewed for expected trip generation associated with the school. The calculated vehicle trips from ITE were compared to field observations. It was found that trip estimates based on ITE were not representative of the traffic volumes associated with North High School. The discrepancy is most likely due to variations in bus service and parking supply between North High School and the sites included in ITE data. Therefore *Trip Generation* data was not used as part of this study.

It was determined that the vehicle trip generation associated with North High School is most influenced by the available parking supply and the school's ability to issue parking permits for students. Any change to site related vehicle trips are expected to result from the proposed increase in overall parking supply by approximately 100 available spaces for use on a typical school day.

A correlation between parking supply and vehicle trips associated with that supply was determined based on the existing parking inventory, traffic count data and field observations. This correlation between vehicle trips and parking supply for the East and West parking lots were determined as follows:

Table 1 – Parking Lot Related Vehicle Trips

Parking Lot	Douling Supply	Mori	ning Peal	k Hour	Afteri	noon Peak	Hour
r ar king Lot	Parking Supply	IN	OUT	Total	IN	OUT	Total
West Parking Lot	246	134	13	147	7	72	79
East Parking Lot	174	65	14	79	17	54	71
Subtotal	420	1 99	27	226	24	126	150
Trips per Parking Space	e (% IN, % OUT, Rate)	88%	12%	0.54	16%	84%	0.36

The trip generation rates based on the parking supply for the Morning and Afternoon peak hours were used to estimate the expected increase in vehicle trips associated with the proposed parking supply.

Table 2 – Expected Future Parking Lot Related Vehicle Trips

Parking Lot	Darking Supply	Mor	ning Peal	k Hour	After	noon Peak	Hour
Farking Lot	Parking Supply	IN	OUT	Total	IN	OUT	Total
West Parking Lot	80	38	5	43	5	24	29
East Parking Lot	451	215	29	244	26	136	162
Subtotal	531	253	34	287	31	160	191

Comparing Tables 1 and 2, it is expected that the future school related vehicle trips are expected to increase by about 60 during the Morning Peak Hour and by about 40 during the Afternoon Peak Hour. It is noted that these volumes do not include the numbers of buses that will be expected to use the West Parking Lot for drop-off and pick-up activities. The rerouting of existing bus volumes were conducted as part of the redistribution of assignment of site traffic discussed below.



Directional Distribution and Assignment of Site Traffic

The directional distribution of site traffic was determined based on an analysis of the existing traffic patterns at the study intersections, the roadway network and the school's attendance boundaries.

The expected distribution of future school traffic will be affected by the proposed vacating of Prince Street between Grant Street and Sherman Street, which is currently closed to traffic from 3:00 PM to 4:00 PM due to bus operations, and the changes to parking supply and locations of parking lot access points. This portion of Prince Street primarily serves the school and a residential area around the intersection of Prince Street and Grant Street. Vehicles seeking access to this residential area will be redirected primarily to Saratoga Avenue.

These aspects were considered when developing the directional distribution of traffic and assigning site traffic to the roadway network. The Future Background volumes discussed previously were rerouted based on the anticipated direction of approach to obtain the Total Future traffic volumes illustrated in Figures 6 and 7.



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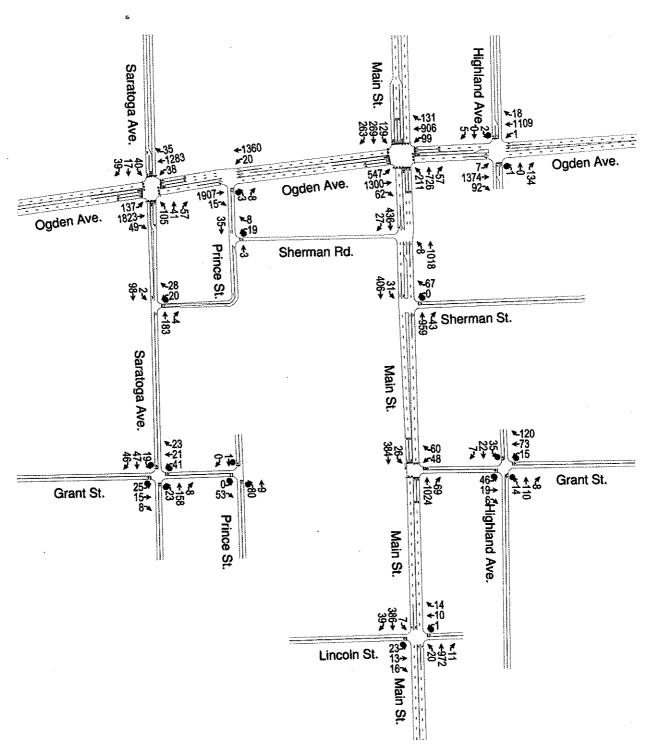


Figure 6: Total Future (2017) Morning Traffic Volumes



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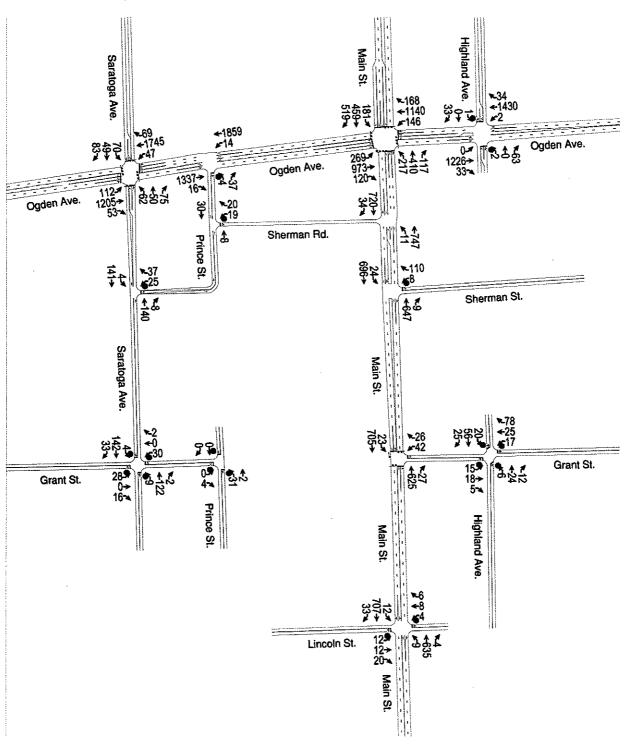


Figure 7: Total Future (2017) Afternoon Traffic Volumes



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5. CAPACITY ANALYSIS

Intersection capacity analyses were performed for the study intersections during the Morning and Afternoon peak hours to determine their levels of service (LOS). LOS is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience¹. Version 8.0 of the Synchro software was used to calculate the LOS at each intersection in the Existing and Future scenarios. Operational LOS reflects delays experienced by the motorist and are designated a letter grade of A through F. LOS A represents the best operating conditions and LOS F the worst. LOS C or better is considered within acceptable limits. The *Highway Capacity Manual* defines level-of-service for signalized and unsignalized intersections as a function of the average vehicle control delay in seconds per vehicle (sec). The Synchro software models level-of-service based on *Highway Capacity Manual*. Level-of-service criteria are summarized in Table 3 below.

Level of Service Grade	Signalized Intersection (sec)	Unsignalized Intersection (sec)
А	≤10	≤10
В	10-20	10-15
С	20-35	15-25
D	35-55	25-35
E	55-80	35-50
F	≥80	≥50

Table 3 – LOS criteria for Control Delay at Intersection

Lane Configuration and Traffic Controls

The intersections of Ogden Avenue with both Saratoga Avenue and Main Street, along with the intersection of Grant Street and Main Street are currently signalized. The remaining study intersections are currently unsignalized and there are no known plans in place to signalize any of these intersections.

The intersection of **Ogden Avenue and Saratoga Avenue** has two-lane approaches in the eastbound and westbound directions, with additional left-turn lanes in both directions. The northbound and southbound directions have one through lane and an additional left-turn lane at the intersection. The intersection is signalized.

The intersection of **Sherman Street and Saratoga Avenue** has one-lane approaches in the north-, south-, and westbound directions. Sherman Street terminates at Saratoga Avenue to the west, forming a T-intersection. Westbound traffic along Sherman Street is stop-controlled at the intersection.

The intersection of **Grant Street and Saratoga Avenue** contains one-lane approaches in all four directions. The intersection is all-way stop controlled.

The intersection of **Ogden Avenue and Prince Street** has two-lane approaches in the eastbound and westbound directions, with an additional left-turn lane in the westbound direction. This turn lane is an extension of the westbound left-turn lane at Saratoga Avenue, and has only approximately 25 feet

¹ Highway Capacity Manual 2000, Transportation Research Board



of storage approaching Prince Street. The intersection has a one-lane approach in the northbound direction. Prince Street terminates at Ogden Avenue to the north, forming a T-intersection. Northbound traffic is stop-controlled at the intersection.

The intersection of **Sherman Road and Prince Street** contains one-lane approaches in the north-, south-, and westbound directions. Sherman Road terminates at Prince Street to the west, forming a T-intersection. Westbound traffic along Sherman Road is stop-controlled at the intersection.

The intersection of **Sherman Street and Prince Street** contains one-lane approaches in the north-, south-, and eastbound directions. Sherman Street terminates at Prince Street to the east, forming a T-intersection. Eastbound traffic along Sherman Street is stop-controlled at the intersection. With the proposed improvements and the proposed vacating of Prince Street between Grant Street and Sherman Street, this intersection will become a curve with traffic approaching in the southbound and eastbound directions, with no stop control.

The intersection of **Grant Street and Prince Street** contains one-lane approaches in the north-, south-, and eastbound directions. Grant Street terminates at Prince Street to the east, forming a T-intersection. All traffic is stop-controlled at the intersection. With the proposed improvements including the proposed vacating of Prince Street between Grant Street and Sherman Street and the construction of a parking lot, this intersection will continue to operate as a T-intersection with the parking lot driveway serving as the north leg of the intersection. All approaches will continue to be stop-controlled.

The intersection of **Ogden Avenue and Main Street** contains two-lane approaches in all four directions. There are also left-turn lanes at the intersection in all four directions, and a right-turn lane at the intersection in the southbound direction. The intersection is signalized.

The intersection of **Sherman Road and Main Street** contains two-lane approaches in the northbound and southbound directions, with an additional left-turn lane at the intersection in the northbound direction. Sherman Road terminates at Main Street to the east, forming a T-intersection. Traffic along Sherman Road operates one-way in the westbound direction, leaving no eastbound traffic or stop-control at the intersection.

The intersection of **Sherman Street and Main Street** has two-lane approaches in the northbound and southbound directions, and a one-lane approach in the westbound direction. Sherman Street terminates at Main Street to the west, forming a T-intersection. Westbound traffic along Sherman Street is stop-controlled at the intersection.

The intersection of **Grant Street and Main Street** has two-lane approaches in the northbound and southbound directions, and a one-lane approach in the westbound direction. Grant Street terminates at Main Street to the west, forming a T-intersection. The intersection is signalized, and also has a pedestrian-only phase for the crossing of both Main Street and Grant Street.

The intersection of **Lincoln Street and Main Street** contains two-lane approaches in both the northbound and southbound directions, and one-lane approaches in both the eastbound and westbound directions. The intersection is two-way stop-controlled, with the control on eastbound and westbound traffic along Lincoln Street.



The intersection of **Ogden Avenue and Highland Avenue** contains two-lane approaches in the eastbound and westbound directions. The northbound and southbound directions each contain one through lane and an additional left-turn lane at the intersection. Northbound and southbound traffic is stop-controlled at the intersection.

The intersection of **Grant Street and Highland Avenue** contains one-lane approaches in all four directions. The intersection is all-way stop controlled.

The existing traffic controls and lane configuration included in the capacity analyses are illustrated in Figure 8. Future expected traffic controls and lane configuration due to the vacating of Prince Street between Grant Street and Sherman Street are shown in Figure 9.



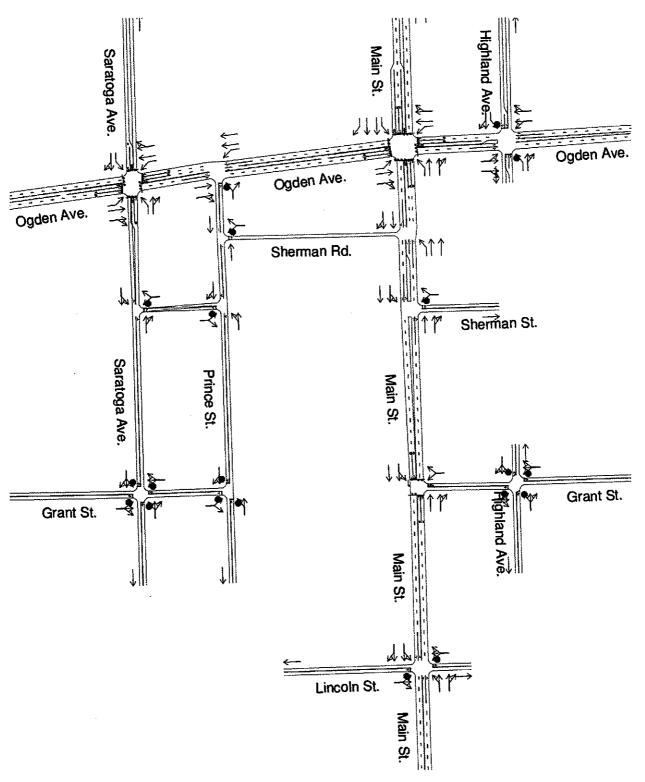


Figure 8: Existing Lane Configuration



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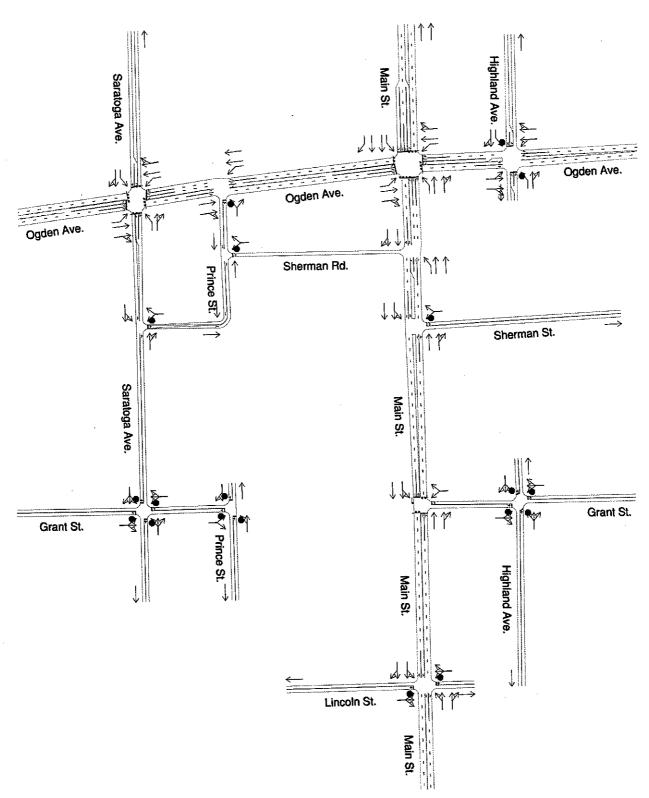


Figure 9: Proposed Future Lane Configuration



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Table 4 includes the capacity analysis results for the Morning and Afternoon peak hours for both the existing and future scenarios.

Table 4 – Capacity Analysis Results

				Time P	eriod			
Intersection (Approach)	Mor	ning P	eak Hoi	ır	After	noon i	Peak He	our
Intersection (Approach)	Exist	ing	Futu	ire	Exist	ing	Futi	ıre
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Ogden Avenue and Saratog	a Avenue							
Overall	22.4	C	26.0	C	23.8	C	27.5	C
Northbound	49.4	D	44.8	D	41.1	D	40.4	D
Westbound	19.9	B	17.9	B	23.1	C	30.3	C
Eastbound	20.1	C	28.8	C	19.6	B	20.1	C
Southbound	. 44.4	D	41.1	D	40.7	D	40.7	D
Sherman Street and Saratog				_		_		_
Westbound	10.5	B	10.4	<u> </u>	10.6	B	10.2	В
Grant Street and Saratoga A								
Overall	8.8	A	8.5	A	8.3	A	8.3	A
Northbound	9.5	Α	8.9	Α	8.2	A	8.3	A
Westbound	8.3	Α	8.3	A	8.0	Α	8.1	Α
Eastbound	8.5	A	8.2	A	8.0	А	7.9	A
Southbound	8.2	A	8.0	A	8.5	A	8.4	A
Ogden Avenue and Prince S	Street							
Northbound	14.6	В	17.4	С	10.9	В	11.0	В
Sherman Road and Prince S	treet							
Westbound	9.0	Α	9.1	Α	9.4	A	9.5	Α
Sherman Street and Prince S	Street							
Eastbound	9.3	А			9.1	А		
Grant Street and Prince Street	et							
Overall	7.4	А	7.4	Α	7.0	A	7.2	А
Northbound	7.7	А	7.8	А	7.2	А	7.3	A
Southbound	6.7	А	6.5	А	6.8	Α	6.9	А
Eastbound	7.4	А	6.8	А	6.5	А	6.4	А
Ogden Avenue and Main St	reet							
Overall	69.5	Е	76.7	Е	54.8	D	59.0	Е
Northbound	52.6	Е	44.4	D	43.6	D	40.7	D
Westbound	141.6	F	183.4	F	91.8	F	104.8	F
Eastbound	47.0	D	45.0	D	34.4	c	35.4	D
Southbound	34.1	č	33.4	C	39.2	D	40.8	D
Sherman Street and Main St				-		_	.010	_
Westbound	11.9	В	10.1	В	11.8	в	10.4	в
Grant Street and Main Stree		<u>.</u>	10.1	<u> </u>	11.0		10.4	
Overall		В	19.9	В	15.4	р	120	р
	18.2					B	15.8	B
Northbound	19.9 20.4	B	21.4	C	13.6	B	13.9	B
Westbound	29.4	C	29.6	C	30.0	C	30.7	C
Southbound	11.0	B	13.3	В	15.8	В	16.2	В



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Table 4 – Capacity Analysis Results (continued)

				Time P	eriod			
Intersection (Approach)	Mor	ning P	eak Hoi	ır	After	noon i	Peak He	our
intersection (Approach)	Exist	ing	Futu	ire	Exist	ing	Futu	ıre
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Lincoln Street and Main Str	reet							
Eastbound	31.8	D	34.3	D	30.2	D	24.1	С
Westbound	26.3	D	28.4	D	29.5	D	26.1	D
Ogden Avenue and Highlan	d Avenu	e						
Northbound	11.6	в	12.3	В	10.4	В	10.5	В
Southbound	16.7	С	17.1	С	17.9	С	18.4	С
Grant Street and Highland A	Avenue							
Overall	8.3	Α	8.7	Α	7.6	A	7.7	A
Northbound	8.2	Α	8.8	Α	7.4	Α	7.5	Α
Westbound	8.5	Α	8.8	А	7.5	А	7.6	Α
Eastbound	8.1	Α	8.4	Α	7.6	Α	7.7	А
Southbound	8.2	Α	8.4	Α	7.8	Α	7.9	Α

The capacity analysis found that the intersection of Ogden Avenue and Main Street is currently over capacity operating at an overall LOS E in the Morning and LOS D in the Afternoon with some approaches operating at LOS F. Additionally, the Saratoga Approaches to the signalized intersection with Ogden Avenue operate at LOS D in the Morning and Afternoon currently. The stop controlled approaches of Lincoln Street at Main Street also operate at LOS D today. The remaining intersections and approaches were found to operate at acceptable levels of service under existing conditions.

The future conditions capacity analysis found that the study intersections are expected to operate at the same level of service that they do currently with two exceptions. The overall LOS at the intersection of Ogden Avenue and Main Street is shown to operate at a LOS E in the future compared with a LOS D in the Afternoon today. It is noted however, that the existing Afternoon delay at this intersection is at the upper threshold of the LOS D designation. The overall delay is expected to increase only 4.2 seconds.

In general, the capacity analysis found that the proposed improvements, including the vacating of Prince Street as proposed, are expected to have minimal impact on the operations of the roadway network surrounding the school.



6. ADDITIONAL ANALYSIS

Pedestrians and Bicycles

The existing school generates a significant amount of pedestrian activity on the streets and intersections adjacent to and in the vicinity of the school. Pedestrian activity at the study intersections is primarily related to the school. The mode split discussed above indicates that about 22% of the students walk to school on a daily basis. While the number of students, and therefore the number of pedestrians, is not expected to increase with the proposed improvements, providing sufficient pedestrian accommodations and connections and addressing possible conflicts with vehicular traffic are an important aspect of the project.

The existing pedestrian crossing volume at the intersection of Grant Street and Main Street is expected to increase as a result of the proposed increase in parking supply east of Main Street. This crossing is currently served by a striped pedestrian crossing with ramps, pedestrian push-buttons, and a traffic signal that includes a pedestrian-only phase.

It is anticipated that the proposed parking area east of Main Street will be fenced along its west side, concentrating pedestrians to the crossing at the intersection of Main Street and Grant Street. A gate in the fence is proposed in the vicinity of the athletic fields. It is expected that this gate will remain closed on school days but may be opened for use by the school on days of athletic events. The gate is located mid-block along Main Street and no pedestrian crossing of the street is proposed in this location. Therefore, if the gate were to be used it is recommended that traffic control personnel be used at the location of the gate to facilitate a temporary crossing of Main Street for pedestrians between the athletic fields and the parking lot.

The use of bicycles as a mode of transport to and from a school is typically a small portion of all trips. Field observations indicated that approximately 1% of students bike to school, and the existing bike racks were sufficient to accommodate these students. The residential sidewalks and roadways around the proposed site generally appear to be bicycle-friendly. It is understood that the existing bike racks will remain in place after the proposed improvements to the school. These characteristics will continue to encourage students to bike to the school.



Proposed Vacating of Prince Street between Grant Street and Sherman Street

The proposed improvements at North High School include vacating Prince Street between Grant Street and Sherman Street as a result of the parking reconfiguration and athletic improvements. A residential block bounded by Prince Street on the east, Grant Street on the south, Saratoga Avenue on the west, and the existing North High School parking area on the north will also be converted into a future parking area. Approximately eight residences are included in this area.

The portion of Prince Street proposed to be vacated primarily serves the residential block that will be replaced by the future parking area. Residential areas to the south may also use Prince Street to access Ogden Avenue. In addition to residential traffic, Prince Street carries traffic to and from the school. All existing traffic along Prince Street between Grant Street and Sherman Street will be rerouted as a result of the proposed improvements.

Existing school traffic on this portion of Prince Street is primarily related to buses and the existing parking area. Existing bus operations allow buses to flow north on Prince Street, and to either turn west at Grant Street or Sherman Street and proceed to Saratoga Avenue or to turn east at Ogden Avenue. Future bus traffic will use the proposed parking area north of Grant Street, and will then exit to the west onto Saratoga Avenue. Effectively, northbound buses along Prince Street will be shifted from the intersection of Prince Street and Ogden Avenue to the intersection of Saratoga Street and Ogden Avenue. This intersection is signalized, allowing buses a better opportunity to turn onto Ogden Avenue.

Existing school traffic related to the parking area north of Grant Street accesses the parking lot from either Saratoga Avenue or Prince Street. All southbound vehicles accessing this area from Prince Street will be shifted onto Saratoga Avenue. Northbound vehicles accessing the parking area from Prince Street will still be able to maintain this route. Additionally, this parking area is planned to be reduced in size, resulting in less overall traffic in this area with a slight shift of the traffic from Prince Street onto Saratoga Avenue.

Residential traffic currently using the portion of Prince Street proposed to be vacated will be shifted onto other local streets, primarily Saratoga Avenue. Because the intersection of Saratoga Avenue and Ogden Avenue is signalized, it is expected that most of the current non-school related traffic destined for Ogden Avenue to the north already uses Saratoga Avenue as opposed to using Prince Street. Southbound traffic from Ogden Avenue would already use Saratoga Avenue as well, as the signalization provides better access to the area.

Some drop off activity currently occurs on the portion of Prince Street that is proposed to be vacated. It is expected that in the future, this activity will occur on Grant Street between Saratoga Avenue and Prince Street or on Prince Street south of Grant Street. This will somewhat concentrate this activity on the west side of the school which is currently spread out along Prince Street. The volume of cars projected to use this area is not expected to cause operational concerns. It is recommended, however, that the school consider creating and distributing guidelines for parents dropping off and picking up students to help encourage continued, smooth pick up / drop off operations.

Overall, traffic operations on the study roadway network adjacent to the school are expected to continue to function at a similar level of service as they do today with the proposed vacating of Prince Street between Sherman Street and Grant Street.



7. CONCLUSIONS AND RECOMMENDATIONS

The analysis presented in this report has resulted in the following conclusions and recommendations.

Conclusions

- The study intersections that currently operate above acceptable levels are expected to continue to do so with the proposed school improvements.
- The study intersections that currently do not operate at acceptable levels are not expected to be significantly impacted with the proposed school improvements.
- The vacating of Prince Street between Sherman Street and Grant Street is not expected to result in significant impacts to traffic flow within the study area.

Recommendations

RWA recommends that the following actions be taken to ensure efficient traffic operations:

- Utilization of the gate in the fence on the west side of the East Parking Lot to serve as a pedestrian connection between the parking and the athletic fields on game days will create the need for a temporary mid-block crossing of Main Street. It is recommended that traffic control personnel be utilized to facilitate this crossing at these times.
- Consider developing and communicating a plan for parents that drop off and pick up students to reduce any confusion or conflicts that may arise from changing traffic patterns associated with the vacating of the portion of Prince Street.



Appendix A

Existing Traffic Data Collection Reports



Traffic Impact Study: Proposed North High School Improvements

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Section 2

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Grant St & Highland Ave Downers Grove, IL 7:00 AM - 9:00 AM Sunny, Dry

File Name : Grant St & Highland Ave Am Site Code : 00000000 Start Date : 9/8/2011 Page No : 1

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07:00 AM	1	4	0	3	8	12	5	4	0	21	0	11	1	3	15	1	0	5	3	9	53
07:15 AM	1	7	5	3	16	32	13	2	2	49	0	24	3	4	31	2	4	4	2	12	108
07:30 AM	3	8	8	13	32	44	32	8	1	85	2	25	3	19	49	2	7	11	3	23	189
07:45 AM	4	5	23	20	52	54	24	3	- 1	82	3	18	6	9	36	2	6	17	ō	25	195
Total	9	24	36	39	108	142	74	17	4	237	5	78	13	35	131	7	17	37	8	69	545
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08:00 AM	0	2	2	0	4	12	12	2	0	26	3	10	0	0	13	0	2	15	1	18	61
08:15 AM	0	5	2	5	12	12	5	2	5	24	0	11	0	2	13	0	1	3	2	6	55
08:30 AM	0	6	1	1	8	10	2	2	0	14	0	2	0	0	2	1	2	2	ō	5	29
08:45 AM	2	4	3	2	. 11	17	4	1	2	24	0	7	1	3	11	1	1	2	Ó	4	50
Total	2	17	8	8	35	51	23	7	7	88	3	30	1	5	39	2	6	22	3	33	195
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Grand Total	11	41	44	47	143	193	97	24	11	325	8	108	14	40	170	9	23	59	11	102	740
Apprch %	7.7	28.7	30.8	32.9		59.4	29.8	7.4	3.4		4.7	63.5	8.2	23.5		8.8	22.5	57.8	10.8		
Total %	1.5	5.5	5.9	6.4	19.3	26.1	13,1	3.2	1.5	43.9	1 .I	14.6	1.9	5.4	23	1.2	3.1	8	1.5	13.8	
PCs	11	40	44	36	131	193	96	24	3	316	8	108	14	6	136	9	22	56	9	96	679
% PCs	100	97.6	100	76.6	91.6	100	99	100	27.3	97.2	100	100	100	15	80	100	95.7	94.9	81.8	94.1	91.8
SUs	0	1	0	11	12	0	1	0	8	9	0	0	0	3	3	0	1	3	2	6	30
% SUs	0	2.4	0	23.4	8.4	0	1	0	72.7	2.8	0	0	0	7.5	1.8	0	4.3	5.1	18.2	5.9	4.1
MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	31	31	0	0	0	0	0	31
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Grant St & Highland Ave Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry File Name : Grant St & Highland Ave Pm Site Code : 00000000 Start Date : 9/8/2011 Page No : 1

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02:00 PM	0	2	3	1	6	11	3	0	0	14	1	2	1	0	4	2	5	0	0	7	31
02:15 PM	1	7	3	2	13	8	9	3	1	21	0	5	1	0	6	0	2	0	2	4	44
02:30 PM	0	7	7	4	18	13	7	2	0	22	1	3	1	11	16	5	3	1	2	11	67
02:45 PM	3	3	1	2	9	12	3	3	0	18	3	5	0	0	8	1	0	3	0	4	39
Total	4	19	14	9	46	44	22	8	1	75	5	15	3	11	34	8	10	4	4	26	181
03:00 PM	1	3	3	,	8	19	4	1	0	24	1	1	0	1	3	1	1	5	0	7	42
03:00 PM		11	9	37	62	30	4	0	2	49	6	1	4	25	41	1	5	5	2	15	167
03:30 PM	2	15	11	21	50	17	0	0	5	36	4	5	-4-	15	25		5	2	8	15	107
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Grand Total	15	58	43	73	189	119	47	25	12	203	17	31	8	54	110	13	28	19	15	75	577
Apprch %	7.9	30.7	22.8	38.6		58.6	23.2	12.3	5.9		15.5	28.2	7.3	49.1		17.3	37.3	25.3	20		
Total %	2.6	10.1	7.5	12.7	32.8	20.6	8.1	4.3	2.1	35.2	2.9	5.4	1.4	9.4	19.1	2.3	4.9	3.3	2.6	13	
PCs	14	57	43	60	174	116	44	24	6	190	16	30	8	27	81	12	27	19	14	72	517
% PCs	93.3	98.3	100	82.2	92.1	97.5	93.6	96	50	93.6	94.1	96.8	100	50	73.6	92.3	96.4	100	93.3	.96	89.6
SUs	1	1	0	13	15	3	3	1	6	13	1	1	0	1	3	1	1	0	1	3	34
% SUs	6.7	1.7	0	17.8	7.9	2.5	6.4	4	50	6.4	5.9	3.2	0	1,9	2,7	7.7	3.6	0	6.7	4	5.9
MUs	0	0	0	0	0	0	0	0	0	0	0	0	· 0	26	26	0	0	0	0	0	26
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07:00 AM	4	1	0	0	5	2	1	0	1	4	0	8	3	2	13	0	0	2	0	2	24
07:15 AM	5	0	1	0	6	0	0	0	2	2	0	20	4	19	43	2	0	7	1	10	61
07:30 AM	15	0	1	1	17	1	0	0	1	2	0	12	20	30	62	3	0	18	0	21	102
07:45 AM	13	2	1	0	16	0	0	0	2	. 2	0	14	20	24	58	6	0	11	1	18	94
Total	37	3	3	1	44	3	1	0	6	10	0	54	47	75	176	11	0	38	2	51	281
08:00 AM	0	0	1	0	1	0	0	0	0	0	0	5	4	4	13	1	0	0	1	2	16
08:15 AM	0	2	0	0	2	0	0	0	0	0	0	10	4	0	14	1	0	0	0	1	17
08:30 AM	1.	1	1	0	3	0	1	1	1	3	1	8	4	1	14	0	1	0	0	1	21
08:45 AM	0	4	0	0	4	0	. 2	0	2	4	0	3	1	1	5	0	1	1	0	2	15
Total	1	7	2	0	10	0	3	1	3	7	1	26	13	6	46	2	2	1	1	6	69
Grand Total	38	10	5	1	54	3	4	1	9	17	1	80	60	81	222	13	2	39	3	57	350
Apprch %	70.4	18.5	9.3	1.9		17.6	23.5	5.9	52.9		0.5	36	27	36.5		22.8	3.5	68.4	5.3		
Total %	10.9	2.9	1.4	0.3	15.4	0.9	1.1	0.3	2.6	4.9	0.3	22.9	17.1	23.1	63.4	3.7	0.6	11.1	0.9	16.3	
PCs	36	9	3	1	49	2	3	1	5	11	1	60	56	77	194	12	2	38	1	53	307
% PCs	94.7	90	60	100	90.7	66.7	75	100	55.6	64.7	100	75	93.3	95.1	87.4	92.3	100	97.4	33.3	93	87.7
Sus	1	1	2	0	4	0	1	0	4	5	0	20	4	. 4	28	1	0	1	2	4	41
% Sus	2.6	10	40	0	7.4	0	25	0	44.4	29.4	0	25	6.7	4.9	12.6	7.7	0	2.6	66.7	7	11.7
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% Mus	2.6	0	0	. 0	1.9	33.3	0	0	0	5.9	0	0	0	0	0	0	0	0	0	0	0.6

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Grant St & Prince St Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry File Name : Grant St & Prince St Pm Site Code : 00000000 Start Date : 9/7/2011 Page No : 1

								Gro	ups Prin	nted- PC	<u>s - SUs</u>	- MUs									
			rince S				(Grant S	St]	I	Prince S	St				Grant S	St		
		<u> </u>	uthbou	ind			W	<u>estbou</u>	nd			N	<u>orthboι</u>	ind			<u>E</u>	astbour	nd		
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
02:00 PM	2	7	0	0	9	0	0	0	1	1	0	2	1	0	3	1	0	1	0	2	15
02:15 PM	1	6	1	0	8	1	0	0	0	1	0	3	0	0	3	0	2	0	0	2	14
02:30 PM	2	5	0	1	8	0	0	1	7	8	0	4	1	6	11	3	0	1	0	4	31
02:45 PM	1	6	1	0	8	0	1	0	0	1	0	0	1	1	2	2	. 0	0	0	2	13
Total	6	24	2	1	33	1	1	1	8	11	0	9	3	7	19	6	2	2	0	10	73
03:00 PM	1	0	1	0	2	1	0	0	12	13	1	8	0	5	14	1	0	0	1	2	31
03:15 PM	1	2	0	6	9	0	0	0	30	30	0	9	0	58	67	0	0	0	1	1	107
03:30 PM	4	4	0	0	8	0	0	0	30	30	0	4	4	16	24	0	0	0	5	5	67
03:45 PM	2	8	1	0	11	0	1	0	30	31	0	3	3	4	10	0	0	0	0	0	52
Total	8	14	2	6	30	1	1	0	102	104	1	24	7	83	115	1	0	0	7	8	257
Grand Total	14	38	4	7	63	2	2	1	110	115	1	33	10	90	134	7	2	2	7	18	330
Apprch %	22.2	60.3	6.3	11.1		1.7	1.7	0.9	95.7		0.7	24.6	7.5	67.2		38.9	11.1	11.1	38.9		
Total %	4.2	11.5	1.2	2.1	19.1	0.6	0.6	0.3	33.3	34,8	0.3	10	3	27.3	40.6	2.1	0.6	0.6	2.1	5.5	
PCs	11	35	4	6	56	2	2	0	109	113	1	16	3	87	107	7	2	2	7	18	294
% PCs	78.6	92.1	100	85.7	88.9	100	100	0	99.1	98.3	100	48.5	30	96.7	79.9	100	100	100	100	100	89.1
SUs	3	3	0	1	7	0	0	1	1	2	0	17	7	3	27	0	0	0	0	0	36
% SUs	21.4	7.9	0	14.3	11.1	0	0	100	0.9	1.7	0	51.5	70	3.3	20.1	0	0	0	0	0	10.9
MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MUs	0	0.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Grant St & Saratoga Ave Downers Grove, IL 7:00 AM - 9:00 AM Sunny, Dry

File Name : Grant St & Saratoga Ave Am Site Code : 00000000 Start Date : 9/7/2011 Page No : 1

	,							Gro	ups Prin	nted-PC:	<u>s - SUs</u>	- MUs				_					
			ratoga /					Grant S				Sa	atoga /	Ave				Grant S	St]
		1	puthbou				W	estbou	nd			<u>N</u>	orthbou	ind			E	astbour	nd		
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
07:00 AM	3	6	0	0	9	4	3	1	0	8	2	29	2	0	33	2	0	5	1	8	58
07:15 AM	4	14	3	0	21	3	2	4	0	9	5	53	4	9	71	3	2	9	0	14	115
07:30 AM	12	17	12	0	41	12	15	8	0	35	3	86	5	14	108	0	6	4	0	10	194
07:45 AM	16	15	7	2	40	16	14	7	. 1	38	3	69	8	19	99	4	8	13	1	26	203
Total	35	52	22	2	111	35	34	20	1	90	13	237	19	42	311	9	16	31	2	58	570
08:00 AM	2	7	0	1	10	4	2	0	0	6	2	29	4	8	43	0	0	6	3	9	68
08:15 AM	6	15	0	0	21	2	1	0	0	3	0	15	6	1	22	4	1	7	6	18	64
08:30 AM	8	16	0	1	25	1	3	0	4	8	0	23	7	8	38	3	1	7	1	12	83
08:45 AM	4	18		0	22	2	. 1	1	1	5	1	24	2	0	27	6	1	7	3	17	71
Total	20	56	0	2	78	9	7	1	5	22	3	91	19	17	130	13	3	27	13	56	286
																		·			
Grand Total	55	108	22	4	189	44	41	21	6	112	16	328	38	59	441	22	19	58	15	114	856
Apprch %	29.1	57 .1	11.6	2.1		39.3	36.6	18,8	5.4		3.6	74.4	8.6	13.4		19.3	16.7	50.9	13.2		
Total %	6.4	12.6	2.6	0.5	22.1	5.1	4.8	2.5	0.7	13.1	1.9	38.3	4.4	6.9	51.5	2.6	2.2	6.8	1.8	13.3	
PCs	54	100	21	0	175	43	38	19	1	101	15	327	37	56	435	19	19	55	6	99	810
% PCs	98.2	92.6	95.5	0	92.6	97.7	92.7	90.5	16.7	90.2	93.8	99.7	97.4	94.9	98.6	86.4	100	94.8	40	86.8	94.6
SUs	1	8	1	4	14	1	3	2	5	11	1	1	1	3	6	3	0	3	9	15	46
% SUs	1.8	7.4	4.5	100	7.4	2.3	7.3	9.5	83.3	9.8	6.2	0.3	2.6	5.1	1.4	13.6	0	5.2	60	13.2	5.4
MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Grant St & Saratoga Ave Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry

 File Name
 : Grant St & Saratoga Ave Pm

 Site Code
 : 00000000

 Start Date
 : 9/7/2011

 Page No
 : 1

								Grou	ups Prin	ted-PCs	s - SUs	- MUs				,					
	5	SARAT	OGA				GRAN	JT				SARAT	OGA			1	GRAN	νT			
	1	So	uthbou	nd			W	estbou	nd			N	orthbou	ind				astbour	nd		
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
02:00 PM	2	17	0	0	19	1	2	0	0	3	0	13	0	3	16	0	2	2	1	5	43
02:15 PM	1	22	0	0	23	0	1	0	0	1	1	23	1	3	28	0	2	4	0	6	58
02:30 PM	8	45	1	0	54	3	0	0	1	4	1	30	2	3	36	3	1	2	2	8	102
02:45 PM	8	23	1	0	32	2	1	0	0	3	0	14	5	13	32	13	2	10	1	. 26	93
Total	19	107	2	0	128	6	4	0	1	11	2	80	8	22	112	16	7	18	4	45	296
	1					I .	_			_				_							
03:00 PM	8	29	1	0	38	I	0	1	0	2	1	24	4	2	31	1	0	3	0	4	75
03:15 PM	14	43	0	3	60	0	0	1	2	3	0	36	1	41	78	12	0	15	3	30	171
03:30 PM	6	63	0	0	69	1	0	6	2	9	0	37	2	17	56	2	0	6	2	10	144
03:45 PM	7	24	1		33	0	0	6	0	6	0	24	2	6	32	1	0	5	3	9	80
Total	35	159	2	4	200	2	0	14	4	20	1	121	9	66	197	16	0	29	8	53	470
					200				-	21	1 2	201	17	00	200	20	7	477	10	00	744
Grand Total	54	266	.4	4	328	8	4	14	5	31	3	201	17	88	309	32	- 1	47	12	98	766
Appreh %	16.5	81.1	1.2	. 1.2	42.0	25.8	12.9	45.2	16.1			65	5.5 2.2	28.5 11.5	40.3	32.7 4.2	7.1 0.9	48 6.1	12.2 1.6	12.8	
Total %	48	34.7	0.5	0.5	<u>42.8</u> 311	6	0.5	<u>1.8</u> 6	0.7	<u>4</u> 20	0.4	<u>26.2</u> 196	16	85	300	4.2	0.9	46	<u> </u>	<u>12.8</u> 91	722
PCs		256 96.2	4 100	75	94.8	75	100	42.9	4 80	20 64.5	100	97.5	94.1	65 96.6	97.1	100	100	40 97.9	50	92.9	94.3
<u> </u>	88.9	10	0	<u></u>	<u>94.8</u> 17	2	0	44.9	1	04.3 11	100	91.5	94.1	<u>90.0</u> 3	97.1	100	001	97.9	<u> </u>	92.9	<u>94.3</u> 44
SUs % SUs	6 11.1	3.8	0	25	5.2	25	0	57.1	20	35.5	0	2.5	5.9	3.4	2.9		0	2.1	50	7.1	5.7
<u>% SUS</u> MUs	11.1	<u>3.8</u> 0	0	<u></u> 0	5.2	25	0	<u>- 37.1</u> 0	0	<u> </u>	0	<u>2.5</u> 0	<u>.9</u> 0	<u> </u>	2.9		0	<u> </u>	0	0	<u> </u>
% MUs		0	0	0	0	0	0	0	Ň	0		0	0	- 0	0		0	ň	Õ	ŏ	0 0
70 MUS	ΕU	v	U	0	U	U U	U	0	v	0	1 0	0	. V	v	U	I V	0	v	v	0	0

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Main St & Grant St Downers Grove, IL 7:00 AM - 9:00 AM Sunny, Dry

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File Name : Main St & Grant St AM Site Code : 00000000 Start Date : 9/8/2011 Page No : 1

						····		Gro	ups Prin	nted- PC:	s - SUs	- MUs									_
			Main S					Grant S					Main S	St				Grant S	t]
	[T	<u>puthbor</u>					estbou	nd			N	orthbou	ind			E	astbour	nd		
Start Time	Right	Thru	Left		App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	70	5	49	124	7	0	5	0	12	8	198	0	2	208	0	0	0	0	0	344
07:15 AM	0	81	4	80	165	14	0	2	1	17	5	174	0	2	181	0	0	0	0	0	363
07:30 AM	0	88	5	137	230	25	0	15	1	41	23	267	0	16	306	0	0	0	1	1	578
<u>07:45 AM</u>	0	116	13	138	267	19	0	24	0	43	20	275	0	16	311	0	0	0	0	0	621
Total	0	355	27	404	786	65	0	46	2	113	56	914	0	36	1006	0	0	0	1	1	1906
08:00 AM	0	90	5	8	103	8	0	4	1	13	12	235	0	2	249	0	. 0	0	0	0	365
08:15 AM	Ō	81	3	10	94	4	ŏ	4	Ô	8	2	202	Ő	õ	204	ů ř	. 0	ŏ	õ	0	305
08:30 AM	Ō	121	5	7	133	3	ŏ	Ó	ĩ	4	3	161	ŏ	ĩ	165	l n	ň	ŏ	0	0	300
08:45 AM	Ō	109	4	14	127	3	ŏ	2	ò	5	2	280	Ő	1	283	n n	0	0	ŏ	0	415
Total	0	401	17	39	457	18	Ő	10	2	30	19	878	, Ŭ	4	901	0	Ő	0	0	0	1388
Grand Total	0	756	44	443	1243	83	θ	56		142			0		1007		0				
Appreh %	Ö	60.8	3.5	35.6	1243	58	. 0		4	143	75	1792	0	40	1907	0	0	0	1	1	3294
Total %	0	23	5.5 1.3	33.0 13.4	37.7	2.5		39.2	2.8	4.2	3.9	94	0	2.1	67 0	0	0	0	100	0	
PCs	0	710	43	431	1184	83	0	<u>1.7</u> 55	0.1	4.3	2.3	54.4	0	1.2	57.9	0	0	0			
% PCs	0	93.9	97.7	97.3	95.3	100			25	139	72	1747	0	39	1858	0	0	0	0	0	3181
SUs	0	<u>95.9</u> 44	<u>97.7</u>		95.5 57	0	0	98.2	25		96	97.5	0	97.5	97.4	0	0	0	0	0	96.6
% SUs	0	44 5.8	2.3	12 2.7		0	•	1 1 0	3	4	3	44	0		48	0	0	0	1	1	110
<u>% SUS</u> MUs	0	<u> </u>	<u> </u>	<u> </u>	<u>4.6</u> 2	0	0	<u>1.8</u> 0	75	2.8	4	2.5		2.5	2.5	0	0	0	100	100	3.3
% MUs	0	0.3	0	0	0.2	0	0	-	0	0	0	1	0	0	1	0	0	0	0	0	3
% WUS	U	0.5	0	0	0.2	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0.1

8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Main St & Grant St Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry File Name: Main St & Grant St PMSite Code: 00000000Start Date: 9/8/2011Page No: 1

								Grou	ups Prin	nted- PC:	<u>s - SUs</u>	- MUs				,					
			Main S	St			(Grant S	st				Main S	St			(Grant S	St		
		Sc	outhbou	ind			W	estbou	nd			N	orthbou	ind			<u> </u>	astbou	nd		
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
02:00 PM	0	154	5	5	164	5	0	2	0	7	4	109	0	0	113	0	0	0	0	0	284 5
02:15 PM	0	157	3	53	213	4	0	4	0	8	1	129	0	1	131	0	0	0	0	0	352
02:30 PM	0	144	4	17	165	7	0	4	1	12	2	136	0	1	139	0	0	0	0	0	316
02:45 PM	0	185	2	10	197	3	0	3	1	7	4	136	0	1	141	0	0	0	0	0	345
Total	0	640	14	85	739	19	0	13	2	34	11	510	0	3	524	0	0	0	0	0	1297
03:00 PM	0	162	3	10	175	4	0	3	0	7	8	154	0	5	167	0	0	0	0	0	349
03:15 PM	0	166	8	141	315	11	0	8	2	21	12	135	0	39	186	0	0	0	1	1	523
03:30 PM	0	188	3	106	297	8	0	11	0	19	5	175	0	4	184	0	0	0	0	0	500
03:45 PM	0	173	8	53	234	7	0	4	0	11	8	143	0	2	153	0	0	0	0	0	398
Total	0	689	22	310	1021	30	0	26	2	58	33	607	0	50	690	0	0	0	1	1	1770
Grand Total	0	1329	36	395	1760	49	0	39	4	92	44	1117	0	53	1214	0	0	0	1	1	3067
Apprch %	ň	75.5	2	22.4		53.3	õ	42,4	4.3	/-	3.6	92	Ő	4.4		Ő	Ő	ŏ	100	-	
Total %	ő	43.3	1.2	12.9	57.4	1.6	ŏ	1.3	0.1	3	1.4	36.4	ŏ	1.7	39.6	Ŏ	Õ	Ő	0	0	
PCs	0	1280	34	389	1703	47	0	37	3	87	44	1087	0	52	1183	0	0	0	1	1	2974
% PCs	0	96.3	94.4	98.5	96.8	95.9	0	94.9	75	94.6	100	97.3	0	98.1	97.4	0	0	0	100	100	97
SUs	0	44	2	6	52	2	0	2	1	5	0	28	0	1	29	0	0	0	0	0	86
% SUs	0	3.3	5.6	1.5	3	4.1	0	5.1	25	5.4	0	2.5	0	1.9	2.4	0	0	0	0	0	2.8
MUs	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
% MUs	0	0.4	0	0	0.3	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0.2

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Main St & Lincoln St Downers Grove, IL 7:00 AM - 9:00 AM Sunny, Dry

File Name : Lincoln St & Main St AM Site Code : 00000000 Start Date : 9/8/2011 Page No : 1

		•						Gro	ups Pr	inted- P	Cs - S	Us - M	Us								
	ĺ		Main S				-	incoln					Main S				L	incoln	St		
			outhbo					estbo				N	orthbo	und			E	astbou	und		
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
07:00 AM	6	68	1	0	75	2	1	1	1	5	1	169	3	1	174	0	2	9	1	12	266
07:15 AM	12	68	3	0	83	2	1	0	1	4	4	158	5	2	169	2	2	8	1	13	269
07:30 AM	14	88	1	0	103	5	2	0	5	12	4	254	11	0	269	8	3	8	6	25	409
07:45 AM	20	116	4	0	140	3	6	1 [·]	1	11	5	242	4	0	251	6	5	7	0	18	420
Total	52	340	9	0	401	12	10	2	8	32	14	823	23	3	863	16	12	32	8	68	1364
					1																
08:00 AM	1	92	1	0	94	4	1	0	2	7	1	228	2	0	231	1	5	5	1	12	344
08:15 AM	5	79	1	0	85	2	1	0	0	3	1	194	3	0	198	1	0	3	0	4	290
08:30 AM	5	116	0	1	122	3	7	1	1	12	0	135	5	1	141	2	4	3	3	12	287
08:45 AM	1	110	0	0	111	4	0	0	1	5	5	241	1	0	247	4	3	4	0	11	374
Total	12	397	2	1	412	13	9	1	4	27	7	798	11	1	817	8	12	15	4	39	1295
0	~ ~	707			640	~~		-												,	
Grand Total	64	737	11	1	813	25	19	3	12	59	21	1621	34	4	1680	24	24	47	12	107	2659
Apprch %	7.9	90.7	1.4	0.1		42.4	32.2	5.1	20.3		1.2	96.5	2	0.2		22.4	22.4	43.9	11.2		
Total %	2.4	27.7	0.4	0	30.6	0.9	0.7		0.5	2.2	0.8	61	1.3	0.2	63.2	0.9	0.9	1.8	0.5	4	
PCs	56	698	11	1	766	25	18	3	11	57	20	1573	29	1	1623	22	24	47	11	104	2550
<u>% PCs</u> SUs	87.5	94.7	100	100	94.2	100	94.7	100	91.7	96.6	95.2	97	<u>85.3</u>	25	96.6	91.7	100	100	91.7	97.2	95.9
% SUs	7 10.9	38 5.2	0	0	45	0	1	0	1	2	1	47	5	_3	56	2	0	0	1	3	106
% 30s	10.9	<u> </u>	0	0	5.5	0	5.3	0	8.3	3.4	4.8	2.9	14.7	75	3.3	8.3	0	0	8.3	2.8	4
% MUs	16	•	0	•	2	•	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
	1.6	0.1	U	0	0.2	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0.1

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Main St & Lincoln St Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry File Name: Lincoln St & Main St PMSite Code: 00000000Start Date: 9/8/2011Page No: 1

								Gro	ups Pri	nted-P	<u>Cs - Sl</u>	<u>Js - M</u>	Us									
			Main S	St			L	incoln	St				Main S	St			L	.incoln	St			581 X 11
		<u> </u>	outhbo	und			<u> </u>	lestbo	und			<u> N</u>	orthbo	und			<u> </u>	astbou	ind			
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	l ŝ
02:00 PM	3	149	4	0	156	1	0	0	0	1	3	109	1	0	113	0	2	2	0	4	274	2
02:15 PM	10	149	2	0	161	4	1	1	0	6	1	128	5	0	134	1	2	1	0	4	305	
02:30 PM	5	141	2	1	149	0	2	0	3	5	0	134	3	0	137	3	3	4	1	11	302	2
02:45 PM	. 5	180	3	0	188	3	1	0	1	5	0	114	2	0	116	2	2	0	0	4	313	2
Total	23	619	11	1	654	8	4	1	4	ຸ 17	4	485	11	0	500	6	9	7	1	23	1194	Ļ.
03:00 PM	15	149	1	1	166	1	3	2	0	6	0	155	5	0	160	2	0	1	0	3	335	
03:15 PM	2	169	3	3	177	2	2	1	1	6	3	141	3	1	148	7	8	2	8	25	356	,
03:30 PM	10	185	4	2	201	0	2	1	0	3	1	172	0	0	173	11	2	7	4	24	401	- E
03:45 PM	6	167	4	0	177	3	1	0	1	5	0	153	1	0	154	0	2	3	7	12	348	\$ -
Total	33	670	12	6	721	6	8	4	2	20	4	621	9	1	635	20	12	13	19	64	1440	
Grand Total	56	1289	23	7	1375	14	12	5	6	37	8	1106	20	1	1135	26	21	20	20	87	2634	
Apprch %	4.1	93.7	1.7	0.5		37.8	32.4	13.5	16.2		0.7	97.4	1.8	0.1		29.9	24.1	23	23			÷
Total %	2.1	48.9	0.9	0.3	52.2	0.5	0.5	0.2	0.2	1.4	0.3	42	0.8	0	43.1	1	0.8	0.8	0.8	3.3		
PCs	47	1248	22	4	1321	13	11	4	4	32	6	1077	16	0	1099	23	21	20	20	84	2536	
% PCs	83.9	96.8	95.7	57.1	96.1	92.9	91.7	80	66.7	86.5	75	97.4	80	0	96.8	88.5	100	100	100	96.6	96.3	
SUs	9	36	1	3	49	1	1	1	2	5	2	27	4	1	34	3	0	0	0	3	91	
% SUs	16.1	2.8	4.3	42.9	3.6	7.1	8.3	20	33.3	13.5	25	2.4	20	100	3	11.5	0	0	0	3.4	3.5	1
MUs	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7	
% MUs	0	0.4	0	0	0.4	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0.3	977

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Main St & Sherman St Downers Grove, IL 7:00 AM - 9:00 AM Sunny, Dry

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File Name : Main St & Sherman St AM Site Code : 00000000 Start Date : 9/8/2011 Page No : 1

									Grou	ips Prii	nted- PCs	- SUs	- MUs									
				Main S				Sh	erman	St				Main S	t			Sh	ierman	St		
				uthbou	nd				estbou	nd			N	<u>orthbou</u>	nd			E	astbour	nd		
	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
	07:00 AM	0	78	9	0	87	7	0	0	2	9	7	172	0	0	179	0	0	0	0	0	275
•	07:15 AM	0	76	8	0	84	14	0	0	1	15	4	173	0	0	177	0	0	0	0	0	276
	07:30 AM	0	92	9	0	101	15	0	0	3	18	5	264	0	4	273	0	0	0	0	0	392
	07:45 AM	0	125	4	0	129	27	0	0	7	34	10	241	0	1	252	0	. 0	0	0	0	415
	Total	0	371	30	0	401	63	0	0	13	76	26	850	0	5	881	0	0	0	0	0	1358
	08:00 AM	0	95	5	0	100	14	0	0	2	16	6	227	0	0	233	0	0	0	0	0	349
	08:15 AM	0	84	1	0	85	9	0	0	1	10	2	199	0	1	202	0	0	0	0	0	297
	08:30 AM	0	111	3	0	114	12	0	0	1	13	2	139	0	0	141	0	0	0	0	0	268
	08:45 AM	0	111	6	0	117	16	0	0	1	17	5	245	0	0	250	0	0	0	0	0	384
	Total	0	401	15	0	416	51	0	0	5	56	15	810	0	1	826	0	0	0	0	0	1298
	Grand Total	0	772	45	0	817	114	0	0	18	132	41	1660	0	6	1707	0	0	0	0	0	2656
	Apprch %	0	94.5	5.5	0		86.4	0	0	13.6		2.4	97.2	0	0.4		0	0	0	0		
	Total %	0	29.1	1.7	0	30.8	4.3	0	0	0.7	5	1.5	62.5	0	0.2	64.3	0	0		0	0	
	PCs	0	726	44	0	770	114	0	0	16	130	40	1616	0	6	1662	0	0	0	0	0	2562
	% PCs	. 0	94	97.8	0	94.2	100	0	0	88.9	98.5	97.6	97.3	0	100	97.4	0	0	0	0	0	96.5
	SUs	0	43	1	0	44	Ó	0	0	2	2	1	43	0	0	44	0	0	0	0	0	90
	% SUs	0	5.6	2.2	0	5.4	0	0	. 0	11.1	1.5	2.4	2.6	0	0	2.6	0	0	0	0	0	3.4
	MUs	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
	% MUs	0	0.4	0	0	0.4	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0.2

8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Main St & Sherman St Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry File Name : Main St & Sherman St PM Site Code : 00000000 Start Date : 9/8/2011 Page No : 1

								Grou	ups Prin	nted- PCs	s - SUs	- MUs										4
			Main S	št			Sh	erman	Ŝt				Main S	t			Sł	nerman	St			~ · (
	l	So	uthbou	ind			W	estbou	nd			N	orthbou	ind			E	astbour	nd			
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	
02:00 PM	0	146	1	0	147	11	0	0	0	11	0	113	0	0	113	0	0	0	0	0	271	~ 1
02:15 PM	0	154	3	0	157	12	0	0	0	12	1	135	0	0	136	0	0	0	0	0	305	
02:30 PM	0	128	1	0	129	9	0	0	1	10	2	141	0	0	143	0	0	0	0	0	282	71
02:45 PM	0	160	4	0	164	11	0	0	1	12	3	113	0	0	116	0	0	0	0		292	
Total	0	588	9	0	597	43	0	0	2	45	6	502	0	0	508	0	0	0	0	0	1150	8.1
03:00 PM	0	175	2	0	177	9	0	0	0	9	0	153	0	0	153	0	0	0	0	0	339	
03:15 PM	Ō	158	6	Ō	164	13	Ō	Ō	3	16	Ĩ	143	Ō	õ	144	Ō	õ	õ	õ	Ő	324	
03:30 PM	Ō	181	6	2	189	17	Ō	Ō	10	27	3	179	ō	4	186	Ö	Ő	ō	Ō	Ō	402	
03:45 PM	0	172	7	1	180	27	0	1	6	34	2	156	0	1	159	0	0	0	Ó	Ó	373	1207
Total	0	686	21	3	710	66	0	1	19	86	6	631	0	5	642	0	0	0	0	0	1438	
Grand Total	0	1274	30	3	1307	109	0	1	21	131	12	1133	Ω	5	1150	0	0	0	0	0	2588	
Appreh %	0	97.5	2.3	0.2	1507	83.2	0	0.8	16	1.71	12	98.5	Ő	0.4	11.00	Ň	Ő	0	0	v	2,300	
Total %	0	49.2	1.2	0.1	50.5	4.2	Ő	0.0	0.8	5.1	0.5	43.8	ň	0.4	44.4	Ň	Ő	0	Ő	0		: 1
PCs	0	1223	30	2	1255	102	0	1	20	123	12	1101	0	1	1114	ň	0	0	0	0	2492	
% PCs	ő	96	100	66.7	96	93.6	ŏ	100	95.2	93.9	100	97.2	Ň	20	96.9	Ň	ŏ	ŏ	Ő	ŏ	96.3	- 11 j
SUs	0	47	0	1	48	6	· 0	0	1	7	0	30	Ő	4	34	Ő	0	Ő	ő	0	89	
% SUs	Ő	3.7	ŏ	33.3	3.7	5.5	Ő	Ő	4.8	5.3	ŏ	2.6	Ő	80	3	Ő	ŏ	õ	ő	ŏ	3.4	i., i
MUs	0	4	Ŏ	0	4	1	Ő	Ő	0	1	Ŏ	2	Ŏ	0	2	Ŏ	Ő	Ö	Ő	0	7	
% MUs	0	0.3	Ō	Ō	0.3	0.9	0	Ō	Ō	0.8	0	0.2	Ó	Ō	0.2	0	Ō	0	Ō	0	0.3	<u> </u>

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Ogden Ave & Highland Ave Downers Grove, IL 7:00 AM - 9:00 AM Sunny, Dry

File Name : Ogden Ave & Highland Ave AM Site Code : 00000000 Start Date : 9/8/2011 Page No : 1

										nted- PC:	<u>ș - SUs</u>	- MUs									-
			ghland					gden A					ghland				C)gden A	ve		
			uthbou		1			estbou					orthbou				E	astbour	nd		
Start Time	Right	Thru	Left		App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	2	0	0	0	2	1	199	0	0	200	17	0	3	0	20	21	236	0	0	257	479
07:15 AM	0	0	0	0	0	3	216	0	2	221	14	0	0	5	19	9	292	0	0	301	541
07:30 AM	0	0	0	4	4	5	296	1	1	303	30	0	0	0	30	16	325	0	0	341	678
07:45 AM	2	0	0	0	2	5	279	0	1_	285	46	0	1	1	48	8	358	2	0	368	703
Total	4	0	0	4	8	14	990	1	4	1009	107	0	4	6	117	54	1211	2	0	1267	2401
00.00.434		~		•			• • •					_		_							
08:00 AM	0	0	1	0	1	4	248	0	0	252	37	0	0	8	45	1	337	2	0	340	638
08:15 AM	5	0	1	0	4	4	260	0	0	264	16	0	0	2	18	5	332	3	1	341	627
08:30 AM	2	0	U	1	3	4	299	1	0	304	10	0	0	1	11	7	309	5	0	321	639
08:45 AM	<u> </u>	0	1		6	4	250	<u> </u>		254	14	0	0	0	14	4	337	1	0	342	616
Total	10	0	3	1	14	16	1057	1	0	1074	77	0	0	11	88	17	1315	11	1	1344	2520
Grand Total	14	0	3	5	22	30	2047	~		2002	104		,						-		
	63.6	0	13.6	22.7	22	1.4	2047	2	4	2083	184	0	4	17	205	71	2526	13	1	2611	4921
Apprch % Total %	0.3	0	15.0	0.1	0.4	0.6	98.3 41.6	0.1	0.2	40.2	89.8	0	2	8.3	4.2	2.7	96.7	0.5	0	60 1	
PCs	14	0	3	4	21	30	1955	0	0.1	<u>42.3</u> 1988	<u>3.7</u> 181	0	0.1	<u>0.3</u> 16	4.2	1.4	51.3	0.3	0	53.1	1606
% PCs	100	0	100	80	95.5	100	95.5	100	25	95.4	98.4	0	75			70	2394	12	100	2477	4686
SUs	0	0	100	1	75.5	0	<u>93.5</u> 74	0	3	<u>93.4</u> 77	98.4	0		94.1	97.6	<u>98.6</u>	94.8	92.3	100	94.9	95.2
% SUs	Ö	0	Ő	20	4.5	0	3.6	0	75	3.7	1.6	0	25	1 5.9	2.4		97	7.7	0	99	182
MUs	0	0	0	0	<u>+.5</u> 0	0	18	0	0	18	1.0	0	<u></u> 0	<u> </u>		1.4	<u>3.8</u> 35	<u> </u>	0	<u>3.8</u> 35	<u>3.7</u> 53
% MUs	Ő	Ő	Ő	0	ŏ	ŏ	0.9	0	ŏ	0.9	0	0	0	0	0	0	35 1.4	0	0		33
70 1003	, U	v	0	0	U I	v	0.9	. V	U	0.9	. 0	0	U	U	U	U	1,4	U	U	1.5	1,1

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602

www.RWAengineers.com

Ogden Ave & Highland Ave Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry

File Name : Ogden Ave & Highland Ave PM Site Code : 00000000 Start Date : 9/8/2011 Page No : 1

								Gro	ups Prin	nted- PC:	<u>s - SUs</u>	- MUs										
		Hi	ghland	Ave			C	gden A	ve				ghland					gden A				
		Sc	uthbou	ind			W	estbou	nd			<u> </u>	orthbou	ind			<u>E</u>	astbou	nd			. 33
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	
02:00 PM	3	0	3	0	6	10	268	1	0	279	6	0	0	1	7	4	288	1	0	293	585	Ś. ś
02:15 PM	5	0	1	0	6	5	278	2	0	285	7	0	0	0	7	8	281	0	0	289	587	
02:30 PM	3	0	0	0	3	6	328	1	1	336	10	0	1	3	14	8	275	0	2	285	638	7
02:45 PM	5	0	1	0	6	10	308	1	0	319	7	0	1	1	9	5	297	0	0	302	636	
Total	16	0	5	0	21	31	1182	5	1	1219	30	0	2	5	37	25	1141	1	2	1169	2446	
03:00 PM	8	0	0	2	10	6	354	1	0	361	3	0	0	2	5	3	285	0	2	290	666	
03:15 PM	12	Õ	1	1	14	8	336	0	Õ	344	11	Ō	1	0	12	15	299	Ō	0	314	684	
03:30 PM	6	Ó	Ő	8	14	10	355	1	Ō	366	25	0	1	0	26	3	315	0	0	318	724	
03:45 PM	7	Ó	0	2	9	10	347	0	0	357	11	0	0	4	15	3	306	0	0	309	690	2)
Total	33	0	1	13	47	34	1392	2	0	1428	50	0	2	6	58	24	1205	0	2	1231	2764	
Grand Total	49	0	6	13	68	65	2574	7	1	2647	80	0	4	11	95	49	2346	1	4	2400	5210	
Apprch %	72.1	ň	8.8	19.1	~~	2.5	97.2	0.3	0	2017	84.2	ŏ	4.2	11.6		2	97.8	ō	0.2	1100	0210	
Total %	0.9	ŏ	0.1	0.2	1.3	1.2	49.4	0.1	ŏ	50.8	1.5	ŏ	0.1	0.2	1.8	0.9	45	` ŏ	0.1	46.1		- 1
PCs	49	Ő	6	12	67	65	2489	6	0	2560	79	0	4	11	94	45	2269	1	4	2319	5040	
% PCs	100	Ő	100	92.3	98.5	100	96.7	85.7	Ō	96.7	98.8	Ō	100	100	98.9	91.8	96.7	100	100	96.6	96.7	
SUs	0	0	0	1	1	0	74	1	1	76	1	0	0	0	1	4	66	0	0	70	148	
% SUs	0	0	0	7.7	1.5	0	2.9	14.3	100	2.9	1.2	0	0	0	1.1	.8.2	2.8	0	0	2.9	2.8	
MUs	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	11	0	0	11	22	
% MUs	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	0	0.5	0	0	0.5	0.4	1.3

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Ogden Ave & Main St Downers Grove, IL 7:00 AM - 9:00 PM Sunny, Dry File Name : Ogden Ave & Main St AM Site Code : 00000000 Start Date : 9/8/2011 Page No : 1

								Grou	<u>ips Prin</u>	nted- PCs	s - SUs	- MUs									_
			Main S				0	gden A	ve				Main S	St			0	gden A	ve		
			uthbou	ind				estbou	nd			<u> </u>	orthbou	ind			Ē	astbour	nd		
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
07:00 AM	39	56	30	0	125	22	184	14	0	220	13	134	38	0	185	15	228	94	0	337	867
07:15 AM	39	65	24	0	128	21	202	16	3	242	14	135	39	0	188	21	266	137	2	426	984
07:30 AM	81	75	31	1	188	30	257	27	5	319	27	142	59	0	228	20	291	125	1	437	1172
07:45 AM	63	81	35	1	180	35	236	26	7	304	5	193	58	0	256	17	330	151	0	498	1238
Total	222	277	120	2	621	108	879	83	15	1085	59	604	194	0	857	73	1115	507	3	1698	4261
08:00 AM	49	58	28	0	135	34	209	19	1	263	13	188	42	0	243	10	292	125	0	427	1068
08:15 AM	64	55	32	0	151	29	185	28	0	242	9	179	49	0	237	9	308	135	0	452	1082
08:30 AM	56	75	32	0	163	40	244	30	0	314	19	152	31	0	202	30	264	131	0	425	1104
<u> 08:45 AM </u>	52		36	0	147	37	221	26	0	284	21	153	49	0	223	22	278	127	0	427	1081
Total	221	247	128	0	596	140	859	103	1	1103	62	672	171	0	905	71	1142	518	0	1731	4335
Grand Total	443	524	248	2	1217	248	1738	186	16	2188	121	1276	365	0	1762	144	2257	1025	3	3429	8596
Apprch %	36.4	43.1	20.4	0.2		11.3	79.4	8.5	0.7		6.9	72.4	20.7	0		4.2	65.8	29.9	0.1		ł
Total %	5.2	6.1	2.9	0	14.2	2.9	20.2	2.2	0.2	25.5	1.4	14.8	4.2	0	20.5	1.7	26.3	11.9	0	39.9	
PCs	424	504	235	1	1164	240	1663	170	12	2085	113	1257	349	0	1719	131	2152	1012	3	3298	8266
% PCs	95.7	96.2	94.8	50	95.6	96.8	95.7	91.4	75	95.3	93.4	98.5	95.6	0	97.6	91	95.3	98.7	100	96.2	96.2
SUs	12	19	10	1	42	7	58	15	4	84	8	19	14	0	41	12	71	8	0	91	258
% SUs	2.7	3.6		50	3.5	2.8	3.3	8.1	25	3.8	6.6	1.5	3.8	0	2.3	8.3	3.1	0.8	0	2.7	3
MUs	7	1	3	0	11	1	17	1	0	19	0	0	2	0	2	1	34	5	0	40	72
% MUs	1.6	0.2	1.2	0	0.9	0.4	1	0.5	0	0.9	0	0	0.5	0	0.1	0.7	1.5	0.5	0	1.2	0.8

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Ogden Ave & Main St Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry File Name : Ogden Ave & Main St PM Site Code : 00000000 Start Date : 9/8/2011 Page No : 1

								Gro	ups Prin	nted- PC:	<u>s - SUs</u>	- MUs										4.4
			Main S	t			0	gden A	ve				Main S	St			0	gden A	ve			
		S	outhbou	nd			W	/estbou	nd			N	<u>orthboı</u>	ind			E	astbour	nd			
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	
02:00 PM	104	116	46	0	266	37	207	33	2	279	18	79	39	0	136	24	236	70	0	330	1011	11
02:15 PM	106	91	51	0	248	21	223	31	0	275	28	85	42	0	155	24	217	61	0	302	980	
02:30 PM	112	90	60	0	262	37	263	26	0	326	17	75	41	0	133	24	206	79	0	309	1030	53
02:45 PM	110	121	44	0	275	23	228	31	1	283	22	92	47	0	161	22	238	70	0	330	1049	
Total	432	418	201	0	1051	118	921	121	3	1163	85	331	169	0	585	94	897	280	0	1271	4070	
	1					4										,						
03:00 PM	133	99	44	1	277	45	288	36	0	369	33	80	27	0	140	24	216	60	0	300	1086	1.0
03:15 PM	109	107	53	1	270	26	259	31	0	316	23	103	54	0	180	39	238	64	1	342	1108	4
03:30 PM	124	116	33	2	275	39	296	35	7	377	27	94	46	1	168	35	281	79	2	397	1217	l Anna I
03:45 PM	136	125	47	1	309	54	270	36	2	362	27	118	51	1	197	18	224	58	0	300	1168	4
Total	502	447	177	5	1131	164	1113	138	9	1424	110	395	178	2	685	116	959	261	3	1339	4579	
Grand Total	934	865	378	5	2182	282	2034	259	12	2587	195	726	347	2	1270	210	1856	541	3	2610	8640	100 A
	42.8	39.6	17.3	0.2	2102	10.9	2034 78,6	10	0.5	2307		57.2	27.3	0.2	1270	210			-	2610	8649	11
Appreh % Total %	42.8	39.0 10	4.4	0.2	25.2	3.3	23.5	10	0.5	20.0	15.4				147		71.1	20.7	0.1	10.0		÷.)
PCs	898	841	368	5	2112	278	1953	245	12	<u>29.9</u> 2488	2.3 191	<u>8.4</u> 709	<u>4</u> 336	0	<u>14.7</u> 1238	<u>2.4</u> 194	21.5	<u>6.3</u> 527	0	30.2	0260	
% PCs	96.1	97.2	97.4	100	96.8	98.6	96	243 94.6	100	2400 96.2	97.9	97.7	96.8	100	97.5				-	2522	8360	÷ į
SUs	26	23	10	0	59		71	13	0	<u>90.2</u> 88						92.4	96.9	97.4	100	96.6	96.7	
% SUs	2.8	2.7	2.6	0	2.7	4 1.4	3.5	15	0		15	14	11 3.2	0	28 2.2	13 6.2	45	10	0	68	243	<u> </u>
<u>% SUS</u> MUs	2.8	2.7	<u></u> 0	0	<u> </u>	1.4	<u>3.3</u> 10			3.4	1.5	<u>1.9</u> 3		0		0.2	2.4	1.8	0	2.6	2.8	- • •
% MUs	10	0.1	0	0	0.5	. 0	0.5	0.4	0	11	0.5	-	0	0	4		13	4	0	20	46	
70 MUS	1.1	U.I	U	U	0.5	· U	0.5	0.4	U	0.4	0.5	0.4	0	0	0.3	1.4	0.7	0.7	0	0.8	0.5	

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Ogden Ave & Prince St Downers Grove, IL 7:00 AM - 9:00 AM Sunny, Dry

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File Name : Ogden Ave & Prince St AM Site Code : 00000000 Start Date : 9/7/2011 Page No : 1

-									Gro	ups Pri	nted- PC	s - Sus	- Mus									
				Prince S					gden A				I	Prince S	St			0	gden A	ve		
				uthbou				- W	estbou	nd			<u>N</u>	<u>orthbou</u>	ind			E	astbour	nd		
S	tart 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
	07:00 AM	0	0	0	0	0	0	201	8	0	209	8	0	0	0	8	2	306	0	0	308	525
	07:15 AM	0	0	0	0	0	0	272	4	1	277	11	0	2	0	13	1	351	0	0	352	642
	07:30 AM	0	0	0	0	0	0	290	15	12	317	14	0	4	2	20	6	362	0	9	377	714
	07:45 AM	0	0	0	1	1	0	255	7	0	262	9	0	1	0	10	8	441	0	4	453	726
	Total	0	0	0	1	1	0	1018	34	13	1065	42	0	7	2	51	17	1460	0	13	1490	2607
		_										,										,
	08:00 AM	0	0	0	0	0	0	297	0	0	297	2	0	0	0	2	1	425	0	0	426	725
	08:15 AM	0	0	0	0	0	0	285	2	0	287	3	0	0	0	3	2	399	0	0	401	691
	08:30 AM	0	0	0	0	0	0	314	2	0	316	4	0	1	0	5	1	407	0	0	408	729
	08:45 AM	0	0	0	0	0	0	279	10	0	289	4	0	4		8	1	408	0	0	409	706
	Total	0	0	0	0	0	0	1175	14	0	1189	13	0	5	0	18	5	1639	0	0	1644	2851
	1	-	-		_												1					
	Grand Total	0	0	0	1	1	0	2193	48	13	2254	55	0	12	2	69	22	3099	0	13	3134	5458
	Apprch %	0	0	0	100		0	97.3	2.1	0.6		79.7	0	17.4	2.9		0.7	98.9	0	0.4		
_	Total %	0	0	0	0	0	0	40.2	0.9	0.2	41.3	1	0	0.2	0	1.3	0.4	56.8	.0	0.2	57.4	
	PCs	0	0	0	1	1	0	2090	48	13	2151	45	0	10	2	57	19	2988	0	13	3020	5229
	% PCs	0	0	0	100	100	0	95.3	100	100	95.4	81.8	0	83.3	100	82.6	86.4	96.4	0	100	96.4	95.8
	Sus	0	0	0	0	0	0	78	0	0	78	9	0	2	0	11	2	81	0	0	83	172
	% Sus	0	0	0	0	0	0	3.6	0	0	3.5	16.4	0	16.7	0	15.9	9.1	2.6	0	0	2.6	3.2
	Mus	0	0	0	0	0	0	25	0	0	25	1	0	0	0	1	1	30	0	0	31	57
	% Mus	0	0	0	0	0	0	1.1	0	0	1.1	1.8	0	0	0	1.4	4.5	1	0	0	1	1

8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602

www.RWAengineers.com

Ogden Ave & Prince St Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry File Name: Ogden Ave & Prince St PMSite Code: 00000000Start Date: 9/7/2011Page No: 1

									<u>- MUs</u>	<u>s - SUs</u>	nted-PC:	ups Prin	Grou								
]		ve	gden A	0			t	Prince S	J				gden A					Prince S	-		
		nd	astbou	E			nd	orthbou	N			nd	(estbou				nd	uthbou			
Ini. Total	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	Start Time
560	249	1	0	245	3	3	0	0	0	3	307	1	5	301	0	1	1	0	0	0	02:00 PM
669	331	0	3	325	3	10	1	2	0	7	328	0	4	324	0	0	0	0	02:15 PM		
633	304	0	0	302	2	8	1	3	0	4	320	3	3	314	0	1	1	0	02:30 PM		
665	336	0	0	328	8	5	0	3	0	2	324	0	5	319	0	0	0_	0	02:45 PM		
2527	1220	1	3	1200	16	26	2	8	0	16	1279	4	17	1258	0	2	2	0	0	0	Total
615	281	0	0	279	2	6	0	0	0	6	328	0	3	325	0	0	0	0	0	0	03:00 PM
658	273	0	0	269	4	5	0	0	0	5	379	11	5	363	0	1	1	0	0	0	03:15 PM
641	272	0	0	267	5	28	2	2	0	24	340	15	4	321	0	1	1	0	0	0	03:30 PM
709	290	0	0	285	5	17	3_	3_	0_	11	402	0	2	400	0	0	0	0	0	0	03:45 PM
2623	1116	0	0	1100	16	56	5	5	0	46	1449	26	14	1409	[0	2	2	0	0	0	Total
5150	2336	1	3	2300	32	82	7	13	0	62	2728	30	31	2667	0	4	4	0	0	0	Grand Total
		0	0.1	98.5	1.4		8.5	15.9	0	75.6		1.1	1.1	97.8	0		100	0	0	0	Apprch %
	45.4	0	0.1	44.7	0.6	1.6	0.1	0.3	0	1.2	53	0.6	0.6	51.8	0	0.1	0.1	0	0	0	Total %
4936	2245	1	3	2210	31	76	7	12	0	57	2612	30	28	2554	0	3	3	0	0	0	PCs
95.8	96.1	100	100	96.1	96.9	92.7	100	92.3	0	91.9	95.7	100	90.3	95.8	0	75	75	0	0	0	% PCs
175	72	0	0	71	1	6	0	1	0	5	96	0	3	93	0	1	1	0	0	0	SUs
3.4	3.1	0	0	3.1	3.1	7.3	0	7.7	0	8.1	3.5	0_	9.7	3.5	0		25	0	0	0	% SUs
39	19	0	0	19	0	0	0	0	0	0	20	0	0	20	0	0	0	0	0	0	MUs
0.8	0.8	0	0	0.8	0	0	.0	0	0	0	0.7	• 0	0	0.7	0	0	0	0	0	0	% MUs

8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Ogden Ave & Saratoga Ave Downers Grove, IL 7:00 AM - 9:00 AM Sunny, Dry

File Name : Ogden Ave & Saratoga Ave AM Site Code : 00000000 Start Date : 9/7/2011 Page No : 1

· · · · · · · · · · · · · · · · · · ·								Gro	ups Pi	rinted- P	Cs - S	us - M	us								
	.		ratoga					gden /				Sa	ratoga	Ave			0	gden A	\ve		
L			puthbo					lestbo	und 🔄			<u> </u>	<u>orthbo</u>	und			E	astbou	Ind		
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
07:00 AM	14	1	4	0	19	6	207	3	0	216	8	10	11	0	29	8	296	17	1	322	586
07:15 AM	9	7	8	0	24	4	267	5	3	279	13	15	27	0	55	17	334	18	3	372	730
07:30 AM	9	8	11	1	29	4	322	11	8	345	16	9	30	0	55	35	387	28	8	458	887
07:45 AM	14	9	10	0	33	11	286	15	6	318	18	20	45	. 0	83	13	454	33		506	940
Total	46	25	33	1	105	25	1082	34	17	1158	55	54	113	0	222	73	1471	96	18	1658	3143
08:00 AM	9	2	9	0	20	7	283	4	1	295	10	13	13	1	37	2	395	35	2	434	786
08:15 AM	7	0	10	1	18	13	276	7	0	296	7	6	18	0	31	11	386	41	1	439	784
08:30 AM	17	8	15	0	40	12	300	9	2	323	8	14	11	1	34	6	393	35	1	435	832
08:45 AM	20	4	12	0	36	7	285	8	1	301	11	13	10	0	34	6	393	26	3	428	799
Total	53	14	46	1	114	39	1144	28	4	1215	36	46	52	2	136	25	1567	137	7	1736	3201
Grand Total	99	39	79	2	219	64	2226	62	21	2373	91	100	165	2	358	98	3038	233	25	3394	6344
Apprch %	45.2	17.8	36.1	0.9		2.7	93.8	2.6	0.9		25.4	27.9	46.1	0.6		2.9	89.5	6.9	0.7		
Total %	1.6	0.6	1.2	0	3.5	1	35.1	1	0.3	37.4	1.4	1.6	2.6	0	5.6	1.5	47.9	3.7	0.4	53.5	
PCs	96	37	74	2	209	61	2122	59	18	2260	88	98	157	2	345	96	2927	230	16	3269	6083
<u>% PCs</u>	97	94.9	93.7	100	95.4	95.3	95.3	95.2	85.7	95.2	96.7	98	95.2	100	96.4		96.3	98.7	64	96.3	95.9
Sus	3	2	4	0	9	2	82	3	3	90	3	2	8	0	13	1	84	2	9	96	208
% Sus	3	5.1	5.1	0	4.1	3.1	3.7	4.8	14.3	3.8	3.3	2	4.8	0	3.6	1	2.8	0.9	36	2.8	3.3
Mus	0	0	1	0	1	1	22	0	0	23	0	0	0	0	0	1	27	1	0	29	53
% Mus	0	0	1.3	0	0.5	1.6	1	0	0	1	0	0	0	0	0	1	0.9	0.4	0	0.9	0.8

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Ogden Ave & Saratoga Ave Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry

File Name : Ogden Ave & Saratoga Ave PM Site Code : 00000000 Start Date : 9/7/2011 Page No : 1

								Gro	ups Pri	nted- PC	s - Sus	- Mus										
		SARAT	OGA				OGDI	EN			1	SARAT	OGA				OGDI	EN				e-~,
		Sc	uthbou	nd			<u> </u>	estbou/	nd			<u> </u>	orthbou	ind			E	astbour	ıd			
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	
02:00 PM	24	11	15	0	50	19	.304	0	1	324	3	6	8	1	18	9	235	22	0	266	658	4.1
02:15 PM	25	12	28	1	66	13	319	7	1	340	6	10	9	0	25	8	310	24	2	344	775	
02:30 PM	21	7	12	0	40	12	312	9	0	333	13	11	15	0	39	7	288	31	10	336	748	1
02:45 PM	14	8	32	0	54	14	311	7	0	332	5	16	9	0	30	13	310	33	49	405	821	
Total	84	38	87	1	210	58	1246	23	2	1329	27	43	41	1	112	37	1143	110	61	1351	3002	4.1
	,										1					,						
03:00 PM	15	16	20	1	52	14	301	9	0	324	9	17	10	0	36	9	247	34	1	291	703	1
03:15 PM	20	7	11	0	38	17	346	20	0	383	19	11	14	1	45	25	269	23	5	322	788	
03:30 PM	27	9	11	1	48	17	349	12	7	385	26	19	39	3	87	11	283	21	7	322	842	
03:45 PM	21	16	28	0	65	21	415	6	7	449	10	15	10	0	35	6	263	34	3		855	
Total	83	48	70	2	203	69	1411	47	14	1541	64	62	73	4	203	51	1062	112	16	1241	3188	
	1					1		-						-		1 00						
Grand Total	167	86	157	3	413	127	2657	70	16	2870	91	105	114	5	315	88	2205	222	77	2592	6190	
Appreh %	40.4	20.8	38	0.7	<i>(</i> -	4.4	92.6	2.4	0.6		28.9	33.3	36.2	1.6		3.4	85.1	8.6	3			1.1
Total %	2.7	1.4	2.5	0	6.7	2.1	42.9	1.1	0.3	46.4	1.5	1.7	1.8	0.1	5.1	1.4	35.6	3.6	1.2	41.9		
PCs	165	85	156	3	409	125	2535	68	14	2742	89	104	103	4	300	83	2115	222	73	2493	5944	
<u>% PCs</u>	98.8	98.8	99.4	100	99	98.4	95.4	97.1	87.5	95.5	97.8	99	90.4	80	95.2	94.3	95.9	100	94.8	96.2	96	
Sus	1	1	1	0	3		103	2	2	109	2	1	11	1	15	5	71	0	4	80	207	
% Sus	0.6	1.2	0.6	0	0.7	1.6	3.9	2.9	12.5	3.8	2.2		9.6	20	4.8	5.7	3.2	· 0	5.2	3.1	3.3	
Mus		0	0	0	1	0	19	0	0	. 19	0	0	0	0	0	0	19	0	0	19	39	
% Mus	0.6	0	0	0	0.2	0	0.7	0	0	0.7	0	0	0	0	0	0	0.9	0	0	0.7	0.6	- /

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Prince St & Sherman Rd Downers Grove, IL 7:00 AM - 9:00 AM Sunny, Dry

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File Name : Prince St & Sherman Rd AM Site Code : 00000000 Start Date : 9/7/2011 Page No : 1

Groups Printed- PCs - SUs - MUs

		-							0.0	950 2 1	niçu-i	00 00	20 101	<u></u>								
		· ·		rince				Sh	ermar	n Rd			F	Prince :	St			Sh	erman	Rd		}
		L,	So	uthbo	<u>und</u>			W	estbou	und			Ne	orthbou	und			E	astbou	nd		
	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
	07:00 AM	0	0	0	0	0	1	0	6	0	7	0	0	0	0	0	0	0	0	0	0	7
	07:15 AM	0	0	0	0	0	1	0	8	2	11	0	· 0	0	0	0	0	0	0	0	0	11
	07:30 AM	0	0	0	0	0	6	0	8	33	47	0	0	0	1	1	0	0	0	0	0	48
5	07:45 AM	0	0	0	0		0	0	7	10	17	0	0	0	2	2	0	0	0	0	0	19
	Total	0	0	0	0	0	8	0	29	45	82	0	0	0	3	3	0	0	0	0	0	85
	MA 00:80	0	0	0	0	0	1	0	3	1	5	0	0	0	0	0	0	0	0	0	0	5
	08:15 AM	0	0	0	0	0	1	0	5	1	7	0	0	0	0	0	0	0	0	0	0	7
	08:30 AM	0	0	0	0	0	3	0	5	0	8	0	· 0	0	2	2	0	0	0	0	0	10
	08:45 AM	0	0	0	0	0	1	0	0	Ó	1	0	0	0	0	0	0	0	0	0	0	1
	Total	0	0	0	0	0	6	0	13	2	21	0	0	0	2	2	0	0	Ö	0	0	23
	-																					
	Grand Total	0	0	0	0	0	14	0	42	47	103	0	0	0	5	5	0	0	0	0	0	108
	Apprch %	0	0	0	0		13.6	0	40.8	45.6		0	0	0	100		0	0	0	0		
	Total %	0	0	0	0	0	13	0	38.9	43.5	95.4	0	0	0	4.6	4.6	0	0	0	0	0	
	PCs	0	0	0	0	0.	14	0	41	47	102	0	0	0	3	3	0	0	0	0	0	105
·	% PCs	0	0	0	0	0	100	0	97.6	100	99	0	0	0	60	60	0	0	0	0	0	97.2
	SUs	0	0	0	0	0	0	0	1	0	1	0	0	0	2	2	0	0	0	0	0	3
	% SUs	0	0	0	0	0	0	0	2.4	0	1	0	0	0	40	40	0	0	0	0	0	2.8
	MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	% MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Prince St & Sherman Rd Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry File Name : Prince St & Sherman Rd PM Site Code : 00000000 Start Date : 9/7/2011 Page No : 1

2

								Gro	ups Pr	inted- P	<u>Cs - Sl</u>	Js - M	Js								
		F	rince	St				ermar					Prince					ermar			
-		Sc	uthbo	und			W	estbo	und			<u> </u>	orthbo	<u>und</u>			<u> </u>	astbou	<u>und</u>		L
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
02:00 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	2	2	0	0	0	0	0	4
02:15 PM	0	0	0	0	0	2	0	4	0	6	0	0	0	1	1	0	0	0	0	0	7
02:30 PM	0	0	0	0	0	3	0	3	8	14	0	0	0	0	0	0	0	0	0	0	14
02:45 PM	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	5	0	12	8	25	0	0	0	3	3	0	0	0	0	0	28
03:00 PM	0	0	0	0	0	0	0	5	1	6	0	0	0	1	1	0	0	0	0	0	7
03:15 PM	Ō	ō	ō	ō	Ō	1	Ō	5	31	37	ō	Õ	ŏ	7	7	Ō	Ō	Ō	Ō	ŏ	44
03:30 PM	ō	ō	ō	ō	ō	8	õ	6	41	55	ō	õ	ō	8	8	Ō	Õ	Ō	Ō	ŏ	63
03:45 PM	0	Ō	ź.	2	2	4	Ó	5	5	14	Ó	Ó	0	1	1	0	0	0	0	0	17
Total	0	0	0	2	2	13	0	21	78	112	0	0	0	17	17	0	0	0	0	0	131
Grand Total		0	^	2	2	18	0	33	86	137		0	•	20	20	0	0	0	0	0	159
	0	0	0	100	2	13.1	0	24.1	62.8	157		0	0	100	20		0	0	0	U	159
Apprch %	0	-	0	1.3	1.3	11.3	0	20.8	02.0 54.1	86.2		0	0	12.6	12.6	0	0	0	0	0	ĺ
<u>Total %</u> PCs	0	0	0	2	2	18	0	30	. 54. 1 86	134	0	0	0	12.0	12.0	0	0	<u> </u>	<u>v</u>	0	155
% PCs	0	•	0	100	100	100	0	90.9	100	97.8	0 0	0	ŏ	95	95	Ő	0	ŏ	0	0	97.5
<u> </u>	0	0		00	0	0	0	30.9	0	<u>97.0</u> 3	0	0		90	90	0	0	0	0	0	97.5
% SUs	0	-	0	0	0	0	0	9.1	0	2.2	0	0	0	5	5	0	0	0	0	0	2.5
<u>% SUS</u> MUs	0	0	<u> </u>	0	0	0	0	<u>9.1</u> 0	0	2.2	0	0	0	0	0		0	0	0	0	2.5
	0	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0
% MUs	U	U	Ų	U	U	1 0	U	U	U	0	U U	U	U	U	0		U	v	U	0	i U

8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Prince St & Sherman St Downers Grove, IL 7:00 AM - 9:00 AM Sunny, Dry File Name : Prince St & Sherman St AM Site Code : 00000000 Start Date : 9/7/2011 Page No : 1

	-							Gro	ups Pr	inted- P	Cs - Sl	<u>Us - M</u>	Us								
		-	Prince					ermai				F	Prince	St			Sł	iermai	n St		
		Sç	uthbo				W	estbol				<u>N</u>	orthbo	und		,	E	astbou	Ind		
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
07:00 AM	1	11	0	0	12	0	0	0	4	4	0	9	1	0	10	0	0	0	0	0	26
07:15 AM	2	14	0	0	16	0	0	0	5	5	0	14	7	1	22	0	0	1	0	1	4 4
07:30 AM	9	17	0	2	28	0	0	0	30	30	0	12	13	0	25	1	0	2	6	9	92
07:45 AM	3	22	0	1	26	0	0	0	12	12	0	11	12	2	25	0	0	0	5	5	68
Total	15	64	0	3	82	0	0	0	51	51	0	46	33	3	82	1	0	3	11	15	230
08:00 AM	3	1	0	0	4	0	0	0	0	0	0	4	1	0	5	0	0	1	0	4	10
08:15 AM	2	4	ň	ŏ	3	õ	Ö	Å	Ő	ő	ő	7	1	ŏ	8	Ő	ŏ		0		
08:30 AM	2	6	ň	ŏ	9	Ň	Ő	Ő	0	0	0	4	1	0	5	0	0	0	0	0	11
08:45 AM	5	5	Ő	Ő	5	Ő	ő	Ö	0	0	0	3		1		0	0	1	U 4	- 1	14
Total	8	13	0	0	21	0	0	0	0	0	0	18	3	1	22	0	0	2		2	<u>11</u> 46
TUtar	0	15	U	0	21	U	U	U	U	U	U	10	3	1	22	U	U	2	1	3	40
Grand Total	23	77	0	3	103	0	0	0	51	51	0	64	36	4	104	1	0	5	12	18	276
Apprch %	22.3	74.8	0	2.9		0	0	0	100		0	61.5	34.6	3.8		5.6	0	27.8	66.7		
Total %	8.3	27.9	0	1.1	37.3	0	0	0	18.5	18.5	0	23.2	13	1.4	37.7	0.4	0	1.8	4.3	6.5	
PCs	23	72	0	3	98	0	0	0	51	51	0	53	26	3	82	1	0	5	12	18	249
<u>% PCs</u>	100	93.5	0	100	95.1	0	0	0	100	100	0	82.8	72.2	75	78.8	100	0	100	100	100	90.2
SUs	0	4	0	0	4	0	0	0	0	0	0	10	10	1	21	0	0	0	0	0	25
% SUs	0	5.2	0	0	3.9	0	0		0	0	0	15.6	27.8	25	20.2	0	0	0	0	0	9.1
MUs	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
% MUs	0	1.3	0	0	1	0	0	0	0	0	0	1.6	0	0	1	0	0	0	0	0	0.7

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Prince St & Sherman St Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry

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File Name : Prince St & Sherman St PM Site Code : 00000000 Start Date : 9/7/2011 Page No : 1

								Gro	uos Pr	inted- P	Cs - SI	Js - M	Us								
		F	rince	St			Sh	erma					Prince	St			S	nerma	n St		
		So	uthbo	und			W	estbo	und			N	orthbo	und			E	astbou	und		
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
02:00 PM	1	10	0	0	11	0	0	0	0	0	0	3	0	0	3	2	0	1	0	3	17
02:15 PM	1	8	0	0	9	0	0	0	0	0	0	3	2	0	5	0	0	1	0	1	15
02:30 PM	6	8	0	0	14	0	0	0	7	7	0	4	1	2	7	0	0	1	3	4	32
02:45 PM	1.	11	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Total	9	37	0	0	46	0	0	0	7	7	0	10	3	2	15	2	0	3	3	8	76
03:00 PM	3	5	0	0	8	1	0	0	1	2	0	3	2	0	5	1	0	1	1	3	18
03:15 PM	11	2	0	7	20	0	0	0	59	59	0	0	0	0	0	0	0	2	2	4	83
03:30 PM	11	10	0	1	22	1	0	0	23	24	0	9	7	0	16	0	0	4	12	16	78
03:45 PM	4	10	0	0	14	0	0	0	5	5	0	6	1	0	7	1	0	1	1	3	29
Total	29	27	0	8	64	2	0	0	88	90	0	18	10	0	28	2	0	8	16	26	208
	ı.					ı.					,					1					
Grand Total	38	64	0	8	110	.2	0	0	95	97	0	28	13	2	43	4	0	11	19	34	284
Apprch %	34.5	58.2	· 0			2.1	0	0	97.9		0	65.1	30.2	4.7		11.8	0	32.4	55.9		
Total %	13.4	22.5	0	2.8	38.7	0.7	0	0	33.5	34.2	0	9.9	4.6	0.7	15.1	1.4	0	3.9	6.7	12	
PCs	36	57	0	2	95	0	0	0	95	95	0	22	5	2	29	4	0	11	18	33	252
% PCs	94.7	89.1	0	25	86.4	0	0	0	100	97.9	0	78.6	38.5	100	67.4	100	0	100	94.7	97.1	88.7
SUs	2	7	0	6	15	1	0	0	0	1	0	6	8	0	14	0	0	0	1	1	31
% SUs	5.3	10.9	0	75	13.6	50	0	0	0	1	0	21.4	61.5	0	32.6	0	0	0	5.3	2.9	10.9

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8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Saratoga Ave & Sherman St Downers Grove, IL 7:00 AM - 9:00 AM Sunny, Dry

File Name : Saratoga Ave & Sherman St AM Site Code : 00000000 Start Date : 9/7/2011 Page No : 1

Groups Printed- PCs - SUs - MUS

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			uthbou					estbou				1	<u>orthbou</u>					astbour			ļ
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
07:00 AM	0	13	0	0	13	0	0	2	3	5	0	26	0	1	27	0	0	0	3	3	48
07:15 AM	0	27	0	0	27	7	0	2	2	11	1	43	1	0	45	0	0	0	2	2	85
07:30 AM	0	54	2	0	56	13	0	8	5	26	2	54	0	9	65	0	0	0	13	13	160
07:45 AM	0	29	0	0	29	7	0	9	7	23	1	74	0	2	77	0	0	0	6	6	135
Total	0	123	2	0	125	27	0	21	17	65	4	197	1	12	214	0	0	0	24	24	428
08:00 AM	0	8	0	1	9	2	0	1	0	3	1	39	0	0	40	0	0	Û	2	2	54
08:15 AM	0	22	0	1	23	2	0	0	Ó	2	Ō	22	0	Ō	22	ů	ŏ	ň	0	0	47
08:30 AM	0	23	Ó	2	25	2	Ō	Ō	2	4	Ő	30	õ	ĩ	31	Ő	ő	ŏ	ŏ	ŏ	60
08:45 AM	0	17	2	0	19	0	ñ	Ô	1	1	1	27	ñ	ō	28	Ň	ň	Ň	· ř	ž	51
Total	0	70	2	4	76	6	Ö	1	3	10	2	118	Ő	1	121	Ů	Ő	Ő	5	5	212
0 17.1		103			201		•	-	~~			···-			22.5						
Grand Total	0	193	4	4	201	33	0	22	20	75	6	315	1	13	335	0	0	0	29	29	640
Apprch %	0	96	2	2		44	0	29.3	26.7		1.8	94	0.3	3.9		0	0	0	100		
Total %	0	30.2	0.6	0.6	31.4	5.2	0	3.4	3.1	11.7	0.9	49.2	0.2	2	52.3	0	0	0	4.5	4.5	
PCs	0	187	4	3	194	27	0	18	14	59	6	309	0	12	327	0	0	0	26	26	606
% PCs	0	96.9	100	75	96.5	81.8	0	81.8	70	78.7	100	98.1	0	92.3	97.6	0	0	0	89.7	89.7	94.7
SUs	0	6	0	1	7	6	0	4	6	16	0	6	1	1	8	0	0	0	3	3	34
% SUs	0	3.1	0	25	3.5	18.2	0	18.2	30	21.3	0	1.9	100	7.7	2.4	0	0	0	10.3	10.3	5.3
MUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Saratoga Ave & Sherman St Downers Grove, IL 2:00 PM - 4:00 PM Sunny, Dry

File Name : Saratoga Ave & Sherman St PM Site Code : 0000000 Start Date : 9/7/2011 Page No : 1

								Gro	<u>ıps Pri</u>	nted- PC:	s - SUs	- MUs										
	:	SARAT	OGA				SHERM	MAN			:	SARAT	OGA				SHERM	MAN				× · 1
		Sc	uthbou	nd	,		N	estbou/	nd			<u> </u>	<u>orthbou</u>	nd			E	astbou	nd			
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. Totai	
02.00 PM	0	17	1	0	18	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	32	4.1
02:15 PM	0	21	0	0	21	3	0	0	0	3	2	23	0	0	25	0	0	0	0	0	49	
02:30 PM	0	24	0	0	24	3	0	3	27	33	1	39	0	0	40	0	0	0	2	2	99	the second
02:45 PM	0	29	0	1	30	1	0	. 0	29	30	0	27	0	4	31	0	0	0	4	4	95	
Total	0	91	1	1	93	7	0	3	56	66	3	103	0	4	110	0	0	0	6	6	275	с. С. т.
03:00 PM	0	38	0	0	38	3	0	- 3	0	6	0	27	0	0	27	0	0	0	0	0	71	
03:15 PM	Ō	44	Ō	Ō	44	3	Ō	4	12	19	3	46	Ō	i	50	Ō	0	Ō	2	2	115	
03:30 PM	0	29	2	0	31	5	0	12	1	18	5	72	0	0	77	0	Ó	Ó	2	2	128	
03:45 PM	0	28	2	0	30	3	0	2	2	7	0	31	0	2	33	0	0	0	3	3	73	<u>(</u>
Total	0	139	4	0	143	14	0	21	15	50	8	176	0	3	187	0	0	0	7	7	387	
Grand Total	0	230	5	1	236	21	0	24	71	116	11	279	0	7	297	0	0	0	13	13	662	
Apprch %	Ň	97.5	2.1	0.4	200	18.1	Ö	20.7	61.2	110	3.7	93.9	Ő	2.4	271	Ő	ň	0	100	1.5	002	
Total %	ŏ	34.7	0.8	0.2	35.6	3,2	Ő	3.6	10.7	17.5	1.7	42.1	ŏ	1.1	44.9	ŏ	ň	ŏ	2	2		
PCs	Ő	222	5	. 1	228	16	Ő	18	68	102	11	272	0	7	290	0	0	0	9	9	629	
% PCs	Ő	96.5	100	100	96.6	76.2	0	75	95.8	87.9	100	97.5	ŏ	100	97.6	ŏ	ŏ	ŏ	69.2	69.2	95	1.1
SUs	Ō	8	0	0	8	5	0	6	3	14	0	7	Ō	0	7	Ŭ.	Ő	0	4	4	33	11
% SUs	0	3.5	Ō	0	3.4	23.8	0	25	4.2	12.1	Ō	2.5	ō	0	2,4	Ō	Ō	ō	30.8	30.8	5	
MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ō	Ó	0	0	0	
% MUs	0	0	0	0	0	0	0	0	0	. 0	0	0	0	0	0	0	0	0	0	0	0	× 1

Appendix B

Existing Capacity Analysis Worksheets



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Traffic Impact Study: Proposed North High School Improvements

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HCM Signalized Intersection Capacity Analysis 26: Main St. & Ogden Ave.

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Movement			- BR			anii tire				9 - (S 3]. (S	Sele-	3 a
Lane Configurations	۲,	≜ ↑		٦	4 1>		ኘ	† 1>		٣	^	7
Volume (vph)	536	1221	56	100	887	128	208	702	54	126	269	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0	(1995) 1995) 1995)	3.0	6.0		3.0	6.0	3.
Lane Util. Factor	1.00	0.95		1.00	0.95	an a 1 1 1 ann a 1 1 1 ann a 1 1 2 1 an	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.9
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.99	est all a second	1.00	1.00	0.8
Fit Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3516		1770	3465		1769	3490		1770	3539	1573
FIt Permitted	0.11	1.00		0.12	1.00		0.48	1.00		0.13	1.00	1.00
Satd. Flow (perm)	201	3516		219	3465	es fig visit is	893	3490	12229-887	240	3539	157:
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	583	1327	61	109	964	139	226	763	59	137	292	27
RTOR Reduction (vph)	0	3	0	0	9	0	0	4	0	0	0	37
Lane Group Flow (vph)	583	1385	0	109	1094	0	226	818	0	137	292	24/
Confl. Peds. (#/hr)	2	ananonan ana kenabana kana	and the Carol and Andre and a set Office Cards	inerited degits to the graduation of the state	A MARAN AND SO MARKAN	2		laint woons a sing laint	13	13	ananyan termeteksi	50005082-0697
Tum Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		eur et 1	6	-
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	72.0	59.9		43.1	34.0		45.2	33.3	******	40.8	31.1	66.1
Effective Green, g (s)	72.0	59.9		43.1	34.0		45.2	33.3		40.8	31.1	66.1
Actuated g/C Ratio	0.55	0.46		0.33	0.26		0.35	0.26		0.31	0.24	0.51
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	3.(
Vehicle Extension (s)	3.0	3.0	a paga ka ka na paga paga paga paga paga paga paga	3.0	3.0	59.945 <u>194</u> 7283486945	3.0	3.0	anazinne) e neostane	3.0	3.0	3.0
Lane Grp Cap (vph)	534	1620		181	906		391	894		189	847	800
v/s Ratio Prot	c0.29	0.39		0.04	c0.32	38.2865.052 S	c0.05	c0.23		c0.05	0.08	0.08
v/s Ratio Perm	0.31			0.16			0.15			0.17	0.00 Na	0.07
v/c Ratio	1.09	0.86		0.60	1.21		0.58	0.91	908030 47494 4896 47	0.72	0.34	0.30
Uniform Delay, d1	39.2	31.2		32.3	48.0		32.0	47.0		35.5	41.0	18.6
Progression Factor	0.64	0.93		1.00	1.00	ana ang ang ang ang ang ang ang ang ang	0.90	0.94	NGCA GGIDAGENI	1.00	1.00	1.00
Incremental Delay, d2	58.0	2.8		5.5	103.8		1.9	14.6		12.9	1.1	0.2
Delay (s)	83.1	31.8		37.8	151.8		30.7	58.7		48.4	42.1	18.8
Level of Service	F	C		D	F	9 (9 (6) 3	C	E		D	D	E
Approach Delay (s)		47.0	and and a state of the second	nanga ki si kating kating	141.6		indenistas, to en tanis i	52.6		2000-2012 -2 72-201	34.1	
Approach LOS	1898 S.S.	D			F			D			C	
menseelleenStimman												
HCM Average Control Delay HCM Volume to Capacity ra			69.5 1.02	H(CM Level	of Servic	e		E			
Actuated Cycle Length (s)			130.0	S	im of lost	time (s)			15.0			
ntersection Capacity Utilizat	xxxxxxxxxxxxxxXXXXXXXXXXXXXXXXXXXXXXXX	10000000000000000000000000000000000000	03.2%		U Level o		ustation Parketti	688927-0. MAR	G	sater/Zeriti	needinis-1 Addenie	2576EADARS

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Analysis Period (min) c Critical Lane Group

HCM Signalized Intersection Capacity Analysis 28: Saratoga Ave. & Ogden Ave.

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viovement			s esk	a di ka		QUE 8	MABLE	NAB EA	an Bra	533	SB()	
Lane Configurations		ተ ጮ		٦	≜ ∱		1	B	10140100-000-000-000-000-00	٦	þ	Course of the second second
Volume (vph)	137	1711	61	37	1261	35	106	48	51	40	19	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	an a
Frpb, ped/bikes	1.00	1.00		1.00	1.00	Serverad	1.00	0.98		1.00	0.96	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	Sa 64 7 8 14	0.96	1.00		0.97	1.00	an a
Frt	1.00	0.99		1.00	1.00		1.00	0.92		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00	i de la compañía de Compañía de la compañía de la compañí	0.95	1.00		0.95	1.00	WINDOWSKI
Satd. Flow (prot)	1770	3518	M. S. S. S.	1770	3522		1702	1677		1715	1618	6038655
Flt Permitted	0.12 223	1.00	an a	0.05	1.00		0.72	1.00		0.67 1211	1.00	TANAN SAN
Satd. Flow (perm)		3518	0.00	92	3522	0.00	1283	1677	0.00		1618	<u></u>
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	149	1860	66	40	1371	38	115	52	55	43	21	42
RTOR Reduction (vph) Lane Group Flow (vph)	0 149	2 1924	0 • 0	0 40	1 1408	0 0	0 115	29 78	0 0	0 43	34 29	0 0
Confl. Peds. (#/hr)	149 2	1924	• U 1	40 1	1400	2	113× 17			45 15	29	0 17
Tum Type	 pm+pt	NA	<u> </u>	pm+pt	NA	<u> </u>	Perm	NA	13	Perm	NA	
Protected Phases	ріптрі 7	۲N/۹ 4		эрштрс 3	N/A 8		reilli	2		reilli	6	
Permitted Phases	4	4		8	U		2	۲ مرکز اور اور		6	U SPECIOESTER	
Actuated Green, G (s)	92.8	84.6		86.5	81.3		25.2	25.2		25.2	25.2	
Effective Green, g (s)	92.8	84.6		86.5	81.3		25.2	25.2		25.2	25.2	
Actuated g/C Ratio	0.71	0.65		0.67	0.63		0.19	0.19		0.19	0.19	
Clearance Time (s)	3.0	6.0		3.0	6:0		6.0	6.0		6:0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	620203355-4123-
Lane Grp Cap (vph)	260	2289		128	2203		249	325		235	314	
v/s Ratio Prot	c0.04	c0.55		0.01	0.40	NATANAN MANANANANANANANANANANANANANANANANAN	800980, 00 90 0 76888	0.05			0.02	250,4669,559
v/s Ratio Perm	0.37			0.20			c0.09			0.04		
v/c Ratio	0.57	0.84	1999-9 Coulor-Dharodd Yeda	0.31	0.64	and a second representation	0.46	0.24	ele generaria i dangar	0.18	0.09	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Uniform Delay, d1	12.2	17.5		18.7	15.2		46.4	44.3		43.8	43.0	
Progression Factor	1.00	1.00		1.68	1.27		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.0	3.0		0.5	0.2	100000	6.1	1.7	2. Store 1	1.7	0.6	
Delay (s)	15.3	20.5		31.9	19.5	h Mitt har sala harba sha araashi walaa	52.4	46.0	and a share water and a share of	45.5	43.6	and the later state of the state of the
Level of Service	В	C .		C	В		D	D		D	D	
Approach Delay (s)		20.1			19.9	1000 - 1 000 - 1000		49.4	www.communator.com/art		44.4	vervoent of
Approach LOS	6.86.99	C			B			D		Q. 2. 94	D	
mersection Summary and												
HCM Average Control Dela			22.4	H	CM Level	of Servic	e		C			
HCM Volume to Capacity r	atio		0.72						anger <u>r</u> eres	and a state of the second s		CERESARIA.
Actuated Cycle Length (s)			130.0		um of lost			9 (A) (A)	9.0	1997 (S. 1897) 1997 - S. 1997 (S. 1997)		
Intersection Capacity Utiliz	ation		79.2%	IC	U Level o	t Service			D			
Analysis Period (min)			15	NE STA	te de la compañía de							

c Critical Lane Group

Synchro 8 Report Page 2

9/21/2011

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Martin Contraction

HCM Signalized Intersection Capacity Analysis 31: Main St. & Grant St.

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Movement	ostos ViBlade		NBN B	s și din și	a si ka		
Lane Configurations	¥	N. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	† }		ine Stere e Aster Doorenting	4 †	
Volume (vph)	47	56	979	57	26	375	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	son per
Total Lost time (s)	6.0		6.0	inens e		6.0	
Lane Util. Factor	1.00		0.95		endiscontervisiones	0.95	228.7420
Frt	0.93		0.99			1.00	
Fit Protected	0.98		1.00		in an	1.00	verae
Satd. Flow (prot)	1687		3510			3528	
Flt Permitted	0.98		1.00			0.81	-
Satd: Flow (perm)	1687		3510			2858	iin ii
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	(1951) - Martin
Adj. Flow (vph)	51	61	1064	62	28	408	
RTOR Reduction (vph)	56	0	6	0	0	0	an a
Lane Group Flow (vph)	56	0	1120	0	0	436	ssen.
Tum Type	NA		NA		Perm	NA	1597K
Protected Phases	8		2	ener 11	185.61.62.	6	
Permitted Phases	5.8	8	07.0		6	07.0	1940:
Actuated Green, G (s)	Section Section Stream Stream Stream Stream		27.2			27.2	
Effective Green, g (s) Actuated g/C Ratio	5.8 0.09		27.2 0.42			27.2 0.42	-
Clearance Time (s)	0.09 6.0		6.0			0.42 6.0	
Vehicle Extension (s)	0.0 3.0		6.0 3.0		555 (S-1184)	6.0 3.0	SS.
Lane Grp Cap (vph)	<u>3.0</u> 151		1469			<u>3.0</u> 1196	GS)
v/s Ratio Prot	c0.03		c0.32			1190	
v/s Ratio Prot	60.03		UU.3Z			0.15	
v/c Ratio	0.37		0.76	<u>.</u>		0.15	Cártin Cártin
Uniform Delay, d1	0.37 27.9		0.76 16.1			0,36 13.0	
Progression Factor	1.00		1.00			0.78	522 S
incremental Delay, d2	1.6		3.8			0.78	9993
Delay (s)	29.4	NGC 61. (U	19.9			11.0	- -
Level of Service	<u>с</u>		B	4453 20055		B	39525
Approach Delay (s)	29.4		19.9			11.0	
Approach LOS	C		В			В	889)
intersection Summary	Ű					5	
HCM Average Control Delay	v		18.2	H	CM Level	of Service	
HCM Volume to Capacity ra			0.69				22
Actuated Cycle Length (s)	nna ann ann an ann ann an ann an ann an	en concentation	65.0	surrestations Su	im of lost	time (s)	165972)
Intersection Capacity Utiliza	tion		46.1%		U Level o		
Analysis Period (min)	an an an an an Anna Anna Anna Anna Anna Anna Anna Anna	en en de la state de la state de la state. La secte de la state	15	inet ration i di d	unan na sana ang kanang ka Kanang kanang		isisiside.
c Critical Lane Group							9200

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HCM Unsignalized Intersection Capacity Analysis 5: Prince St. & Ogden Ave.

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Movement		6.35	-		NBLOO	NER	
Lane Configurations	<u>ት</u> ጉ		ካ	<u></u>	¥		
Volume (veh/h)	1785	17	24	1328	5	28	
Sign Control	Free	1007.009970-20130980	noordin en son oordinger	Free	Stop		19969999999
Grade	0%			0%	0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	neological au
Hourly flow rate (vph)	1940	18	26	· 1443	5	30	E.S.
Pedestrians	13			12	2		
Lane Width (ft)	12.0	Sector Sector		12.0	12.0		
Walking Speed (ft/s)	4.0		17241220 bet seven streets	4.0	4.0		
Percent Blockage	1			<u>1</u>	0		
Right turn flare (veh)	V PARATO SA	ana ang ang ang ang ang ang ang ang ang	weenser in Neory	an a	AND-arrist-service and and arrists		. Na Malana ana ara ar
Median type	None			TWLTL			
Median storage veh)			anien wernen aus	2			anstructures.
Upstream signal (ft)	320	66.00		673			
pX, platoon unblocked	New York Works		0.55		0.68	0.55	(2782)/1232/H
vC, conflicting volume vC1, stage 1 conf vol			1961		2738	993	
vC1, stage 1 conf vol					1951 787		5882G
vC2, stage 2 com vol			1112		943	0	
tC, single (s)			4.1		940 6.8	6.9	NG DE A
tC, 2 stage (s)			.		5.8	0:9	abar -
tF (s)			2.2		3.5	3.3	New York
p0 queue free %			<u>92</u>		96	95	CERES (
cM capacity (veh/h)			343		151	590	1690G91
Volume Total	1293	665	26	722	722	36	
Volume Left	0	0 18	26	· 0 0	0.	5	CEN 94733
Volume Right cSH	1700	1700	0	1700	0	30 410	ATEMENA) ATEMENEN
Volume to Capacity	0.76	0.39	343 0.08	0.42	1700 0.42	0.09	
Queue Length 95th (ft)	0.70	0.39	0.00 6	0.4Z 0	0.42 0	7	(1999) (1999)
Control Delay (s)	0.0	0.0	16.4	0.0	0.0	14:6	2989223
Lane LOS	0.0	0.0	C.T		0.0	B	Contraction of the
Approach Delay (s)	0.0		0.3			14.6	
Approach LOS						В	KENEN.
••						-	
Intersection Summary							
Average Delay			0.3		are successions and the second		ang
Intersection Capacity Utiliza	tion		63.2%	ICI	J Level o	f Service B	
Analysis Period (min)		Maria ana amin'ny fanana amin'ny fanana amin'ny fanana amin'ny fanana amin'ny fanana amin'ny fanana amin'ny fa	15				an a

HCM Unsignalized Intersection Capacity Analysis 9: Main St. & Lincoln St.

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	<i>F</i>	-	•	•	-	*		T		۰	¥	*
Novement	<u> 1917) (1917)</u>				<u> 18 19 19 19 19 19 19 19 19 19 19 19 19 19 </u>	0015 S		NI.T		SB	S BIL	8.SD)
ane Configurations		4	and memory operation		4	lanu'a componentent (calo	al an anna 12, islean 12 ann abhaile	4 î a		Million Delor de Marinero Santa	4Þ	
/olume (veh/h)	23	13	16	1	10	14	20	918	11	7	375	- 4(
Sign Control		Stop			Stop			Free			Free	
Grade	0.00	0%	0.00	0.00	0%	0.02	0.00	0%	0.00	0.92	0%	<u>^</u>
eak Hour Factor	0.92 25	0.92 14	0.92 17	0.92 1	0.92 11	0.92 15	0.92 22	0.92 998	0.92 12	0.92	0.92 408	0.9 4
ourly flow rate (vph) edestrians	23	14 7		19 19 19 19 19 19 19 19 19 19 19 19 19 1	- ۱۱- 8	ึ่ง	LL	990	12	O	400	4
ane Width (ft)		12.0			12.0							
alking Speed (ft/s)		4.0	21026461968		4.0				6894994597		94395-15243-C	
ercent Blockage					1							394
ight turn flare (veh)	an de la destante de la desta de la de La desta de la d			1294ACA8124CC58784CB	25722621322000	to de la compañía de	ganengangan kant			Palation disk without them.		09404610240
edian type	2 - 19 <u>1 - 19</u> 1 - 193	149953 (SA)				16 <i>19</i> 10 1	8-13-19-101 S	None			None	
edian storage veh)				1999 - 1999 - 1999 - 1999 - 1999 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -					1		5, p	
ostream signal (ft)		640 A.	644 80 49		16 M 8	in an	endensis de	an gala			658	
K, platoon unblocked		r mana antaŭ o cum mate	02-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-	lance and the second second			nos felesíszeten visztára				water all Dente Les would	0-20030225560
C, conflicting volume	1015	1513	233	1299	1529	513	458			1018		
C1, stage 1 conf vol								1997/979222929	er werden oorde		9953-09559A	Stantos
2, stage 2 conf vol				1000		= 1.0				1010	988,89,669	li en
Cu, unblocked vol	1015	1513	233	1299	1529	513	458			1018	en an	
; single (s)	7.5	6.5	6.9	7.5	6.5	6,9	.4.1			4.1		932247
;, 2 stage (s) (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
(s) O queue free %	85	0 88	98	99	90	97	<u>2.2</u> 98			99	0.000.200.000.0	
V capacity (veh/h)	166	114	765	101	111	503	1093			673		
renien kane <i>ll</i>												
olume Total	57	27	521	511	211	247						
olume Left	25	-1	22	0	8	0						
olume Right	17	15		12	0	43						9-8-1 1
saaraan saaraa saara SH	190	196	1093	1700	673	1700	adente Samere Salado de Leo.	a Angelong ang ang ang ang ang ang ang ang ang a	Sector and Contract Constants	ing the second secon	e ja presida junt konstruktionen ander an	siisten didesastina.
olume to Capacity	0.30	0.14	0.02	0.30	0.01	0.15					1. S. 188 163.	
ueue Length 95th (ft)	30	12	2	0	1	0	and a Party see a solution data and a	1	Taxan Const with a factor from the Table of the		-	
ontrol Delay (s)	31.8	26.3	0.6	0.0	0.5	0.0						
ane LOS	D	D	A		A		senes and the second second			Sector (1996)	y (2000) september a	na an a
pproach Delay (s)	31.8	26.3	0.3	1918-1913 1	0.2		te de de	in an		\$ 6 4 4	u Agride Gales I	Gelik (
pproach LOS	D	D										
tersection softmany												
verage Delay			1.9									
tersection Capacity Utiliza	ition	19 (A 194	56.3%	IC	U Level o	f Service			В			
nalysis Period (min)			15						and the second		an la hair an	GANGLAR**
							21505255	and states of the			t SAMA	Y SS

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HCM Unsignalized Intersection Capacity Analysis 12: Prince St. & West Parking Lot

9/21/2011

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		•	ì	I	¥	-			
Movement						Sec. BROOM			
Lane Configurations	¥			र्स	4Î				
Volume (veh/h)	0	0	9	61	32	10			
Sign Control	Stop			Free	Free				nan harran da san san san san san san san san san sa
Grade	0%			0%	0%				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			 n 1999 an an Anna an An
Hourly flow rate (vph)	0	0	10	66	35	11			
Pedestrians									
Lane Width (ft)					40 M 80				
Walking Speed (ft/s)	-								
Percent Blockage		0.612-0						1912 (B) (C)	
Right turn flare (veh)									
Median type			a la contration	None	None		1918) S. 1918 		
Median storage veh)									
Upstream signal (ft)		63.53	18 60 M	5. S. S. S.				- 1948 (M. 16)	1946 - A B
pX, platoon unblocked		11-7° A							
vC, conflicting volume	126	40	46						
vC1, stage 1 conf vol	anni ka la ana anna anna anna a saonna a a	10 17.1 Philip 12 18.1 - 19.1 - 19.1 - 19.1 - 19.1	to contract and the second						
vC2, stage 2 conf vol					8.8-st				never en la companya de la companya
vCu, unblocked vol	126	40	46						
tC, single (s)	6.4	6.2	.4.1						
tC, 2 stage (s)	landrichtele warmen bezonter an wearte	17. 11. 11. 11. 11. 11. 11. 11. 11. 11.			will a file south of the stress of the				
tF (s)	3.5	3:3	2.2	0.00.00.00					副教授授任
p0 queue free %	100	100	99	ana di membanya menangka ka					
cM capacity (veh/h)	863	1031	1562						
Difection /Cane:			46 E (M						
Volume Total	0	76	46						
Volume Left	0	10	40 0						
Volume Right	0	0	11	0.000					
cSH	1700	1562	1700						
Volume to Capacity	0.00	0.01	0.03						
Queue Length 95th (ft)	0.00	0	0						MCGREALECTOR:
Control Delay (s)	0.0	1.0	0.0						
Lane LOS	A	A							MARCEN INCORE
Approach Delay (s)	0.0	1.0	0.0						
Approach LOS	A	ers oriente son part d'Alla		erinaa Birina.					
Intersection Summary									
Average Delay		33/10955/19604046#	0.6						at the definition of the solution
Intersection Capacity Utiliza	ation		13.7%	IC	U Level c	f Service		A	
Analysis Period (min)			15		Na sana ang ang ang ang ang ang ang ang ang				
									YENNE L

HCM Unsignalized Intersection Capacity Analysis 14: Saratoga Ave. & West Parking Lot

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Aevement		A Market			(S SBI water and the second	
ane Configurations	¥		Þ		an even more a sub-tain	र्स	Van Poloian
/olume (veh/h)	3	10	183	90	25	106	
Sign Control	Stop		Free			Free	1
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	075393
lourly flow rate (vph)	3	11	199	98	27	115	a.s
Pedestrians		X.S. (57.056)					<i>162.74</i>
ane Width (ft)							
Valking Speed (ft/s)							8284D
Percent Blockage Right turn flare (veh)							(49)/3
Aedian type	I AMERICAN		None	a na ana an		None	857 F
Aedian storage veh)		ana se an c	INOUE		1988-1993. Maria	NOTE	S9773
Jpstream signal (ft)						658	545
X, platoon unblocked						000	
C, conflicting volume	417	248			297		6345 1
C1, stage 1 conf vol		CTU			EVI.		25.15
C2, stage 2 conf vol							
Cu, unblocked vol	417	248			297		824941
C, single (s)	6.4	6.2			4.1		
C, 2 stage (s)							1927 (Vis)
F (s)	3.5	3.3			2.2		
0 queue free %	99	99	an 24 Y AN (1997 BARNIN) NA (1995 B		98		a an Adama
M capacity (veh/h)	579	791			1265		
/olume Total	14	297	142				
/olume Left	1 4 3	231 0	27				
/olume Right	11	98	0				
SH	729	1700	1265				458782
olume to Capacity	0.02	0.17	0.02				
Queue Length 95th (ft)	1	0	2				62,029
Control Delay (s)	10.0	0.0	1.7				
ane LOS	В	ne establice, el 62, 76860 pli	A	, aan an	こ うろう ひろう ひろう ひろう ひろう ひろう ひろう ひろう ひろう ひろう	nenn an a	courres.
pproach Delay (s)	10.0	0.0	1.7	an the second			
pproach LOS	В	******		1999 - 1999 - 1999 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	************************	n na sevena del canentera del tarta manda constructura della della canenta del da manda mattera del tarta da da La sevena del canentera della constructura della constructura della della della della della della della della d	10.0001
nersealen Summan			9. (9. ch - 6.				
verage Delay			0.8				
ntersection Capacity Utiliza	tion		35.4%	ICI	llevelo	of Service A	
alysis Period (min)	****		15	19			
	nen marte rakeva roka va terek		10		energi street st		en de la comunicación de la comunic

Synchro 8 Report Page 4

HCM Unsignalized Intersection Capacity Analysis 15: Saratoga Ave. & Grant St.

15: Saratoga Ave. a	& Grant	St.									9/2	1/2011
	۲ <u>ب</u>	+	\mathbf{F}	4	+	•	•	1	1	4	ţ	~
vicuement												
Lane Configurations		4			4			\$			4	
Sign Control		Stop	a series en		Stop			Stop			Stop	
Volume (vph)	40	15	8	15	32	34	23	199	8	19	54	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	16	9	16	35	37	25	216	9	21	59	39
Direction Lenesk less status				018-16 <i>1</i> 49								
Volume Total (vph)	68	88	250	118								
Volume Left (vph)	43	16	25	21								
Volume Right (vph)	9	37	9	39		n 1996 ann an Anna an A		0029 No.48970 Condex N.C.42740 FO	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	n ya kalan seji wijangin (200, 100 mga janga) ya		
Hadj (s)	0.08	-0.18	0.03	-0.13								
Departure Headway (s)	5.0	4.7	4.5	4.4		·····						
Degree Utilization, x	0.09	0.11	0.31	0.15		6.8.6		16 S. C.	6.548.2	49893	(† 61 A) - 3	
Capacity (veh/h)	664	705	777	762			Dellar Aurent State 1982 (1983)	nio manio finis na concert		14. Storie 1. 1770 a Carlo Managaria an	Maurine Aurilla Datasana mauna	a dia mana amin'ny fisiana
Control Delay (s)	8.5	8.3	9.5	8.2								
Approach Delay (s)	8.5	8.3	9.5	8.2								Contraction (v)
Approach LOS	Α.	A	A	A								
INGES GENOMOS UNITAL CARACTER												
Delay			8.8									
HCM Level of Service	and a finite sector of a first of the sector of the		Α			in produkti i Sana Indonesia (Sa			entres cherry d'hectric d'agenc	an waarin togo owgen dy	9999 Y 1993 Y 1995 Y	1000001-51-17
Intersection Capacity Utilizat	ion		33.5%	ICL	J Level of	Service			Α		Nggalag	
Analysis Period (min)			15							4	Witche	

HCM Unsignalized Intersection Capacity Analysis 16: Prince St. & Grant St.

9/21/2011

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dovencerverserverserver								
Lane Configurations	¥			र्स	ŧÎ			
Sign Control	Stop			Stop	Stop			
Volume (vph)	29	11	48	41	4	28		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly flow rate (vph)	32	12	52	45	4	30		
	1964 - 1979							
Volume Total (vph)	43	97	35					
Volume Left (vph)	32	52	0				General concernance of the	
Volume Right (vph)	12	0	30					
Hadj (s)	0.01	0.14	-0.49					
Departure Headway (s)	4.2	4.2	3.6	**************************************		and and a second se	aanaanna taanaa ah a	anna an ann an an an an an an an an an a
Degree Utilization, x	0.05	0.11	0.03	na de de l		5 15 An Or IQ	a da se le sector de la	n on it is the second
Capacity (veh/h)	829	843	978					
Control Delay (s)	7.4	7.7	6.7					
Approach Delay (s)	7.4	7.7	6.7					
Approach LOS	A	A	A					
Incised to the sufficiency of the second								
Delay			7.4					
HCM Level of Service			A					
Intersection Capacity Utiliza	tion		30.1%	IC	U Level o	Service	A	
Analysis Period (min)			15				***	

Synchro 8 Report Page 6

North HS 9/14/2011 Existing AM Peak Hour

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HCM Unsignalized Intersection Capacity Analysis 18: Highland Ave. & Grant St.

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18: Highland Ave. & (Grant	St.	•								9/2	1/2011
	≯	+	\mathbf{r}	1	+	×.	4	1	1	1	Ļ	~
Meventeniessonserverserverse	(a) (a) (a) (a)	ane to d		a 4031.22		2 <u>2 0 0 0 0 0</u>	an Rikaa	ANE TANK				
Lane Configurations		4			4			\$			4	
Sign Control	18 g - 1	Stop			Stop			Stop			Stop	
Volume (vph)	46	16	4	15	73	122	9	64	8	35	20	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0:92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	50	17	4	16	79	133	10	70	9	38	22	8
Dréchtin Lêne és sin a la service	12 ST 5	s or size										
Volume Total (vph)	72	228	88	67								
Volume Left (vph)	50	16	10	38	12 S							
Volume Right (vph)	4	133	9	8			an all and an					100994020203030 A
Hadj (s)	0.14	-0.30	0.00	0.08								
Departure Headway (s)	4.7	4.1	4.6	4.8								
Degree Utilization, x	0.09	0.26	0.11	0.09	Sec. 7		84 S 16 A	-98-85 A.S.		19.49		
Capacity (veh/h)	735	843	722	700								
Control Delay (s)	8.1	8.5	8.2	8.2								
Approach Delay (s)	8.1	8.5	8.2	8.2	NNO1-NJ Index Name area							
Approach LOS	A	A	A	A			6-60-66					
INGINE AND IN SUMMORY ASSESSMENT	94.020.020											
Delay			8.3									
HCM Level of Service	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	norma do Contral de Contral de California	A	na na na shikara na shekara na sh	9.000000000000000000000000000000000000		nama Olisi Disebbili (1944)		ang kantanan digin digin		1.000 A.2600	
Intersection Capacity Utilization			36.7%	IC	U Level o	f Service			Α			
Analysis Period (min)			15			a a constant gan de la marchade de la de la de l	en man en de Mandale de Legelle de Legelle de	an parti parti de la Calendaria de Calendaria de Calendaria de Calendaria de Calendaria de Calendaria de Calend Comparte de Calendaria de Ca	n manana ng kang pang pang pang pang pang pang pang p	an a ann 2000 an 1966 an 1966 an 1966 an 1966 an 1976 a		********

North HS 9/14/2011 Existing AM Peak Hour

Synchro 8 Report Page 7

HCM Unsignalized Intersection Capacity Analysis 20: Prince St. & Sherman Rd.

9/21/2011

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No. Constant

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	4	•	†	1	*	ţ
viovement	A CONTRACTOR OF THE OWNER	Sta 13 200	S. (N 51			SBT
Lane Configurations	¥		ł		nan na hear ann an dhaonn an	<u>^</u>
Volume (veh/h)	23	8	Ö	0	0	Ò
Sign Control	Stop		Free	nielise von server op het nie in	an ann an taonachta	Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	- 25	9	0	0	0	0
Pedestrians	45		3			
Lane Width (ft)	12.0		12.0		• S.	
Walking Speed (ft/s)	4.0	ineneniara sedara	4.0		n a mananan an an an an an an an an an	
Percent Blockage	<u> </u>	9.61.568	0			
Right turn flare (veh)	ana mananga ang ang ang ang ang ang ang ang a	an a	ureessaa ar waxee	anto verago goti e destr		Tur nada minimum antan ing manakan turi perintakai danan mula kanan kanan kanan kanan kanan kanan kanan kana k I
Median type			None			None
Median storage veh)	ne na tanàna amin'ny kaodim-paositra dia mampika dia kaominina dia kaominina dia kaominina dia kaominina dia ka	SIM 1514 DAM	SILLES (M. LARSEN)	verienteren		
Upstream signal (ft)		9 / 9 / 9 / 9	El Destanti			
pX, platoon unblocked	10		EDGE AGE (EQ.	STRONG TAUAN	1	
vC, conflicting volume	48	45			45	
vC1, stage 1 conf vol						
vC2, stage 2 conf.vol vCu, unblocked vol	48	45			45	
tC, single (s)	40 6.4	40 6.2	699273365		40	
tC, 2 stage (s)	0.4	U.2			t,U	
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	99			100	
cM capacity (veh/h)	923	986			1504	
Diversion skane //		NRA				
Volume Total	34	0	0			
Volume Left	25	0	0			
Volume Right		0	Ő	18-19-19-19	1.2012	
cSH	939	1700	1700			
Volume to Capacity	0.04	0.00	0.00			
Queue Length 95th (ft)	3	0	0			
Control Delay (s)	9.0	0.0	0.0	9346.45-52		
Lane LOS	A					
Approach Delay (s)	9.0	0.0	0.0		1999	
Approach LOS	А					
ntersection Summary						
Average Delay	en son andere en son a son a son a son a	entering gast a production	9.0	والمعارض والمعاري والمعاري والمعارية	nd da hendu on under hain heit.	
Intersection Capacity Utiliz Analysis Period (min)	ation		21.1% 15	ICI	J Level a	of Service A
				900 SOR		
	ALALES AND	spermeterdes	enerat d'AZZ	er under Stationer St Stationer Stationer St	er en sen sen sen sen sen sen sen sen sen	

Synchro 8 Report Page 8

HCM Unsignalized Intersection Capacity Analysis 21: Main St. & Sherman Rd.

9/21/2011

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Movement	e Eile			8 . NO 8 .		SBR
Lane Configurations			٦	<u>^</u>	4ħ	
Volume (veh/h)	0	0	8	988	415	25
Sign Control	Stop	Cardo Mantanio (Sinio Indonesia		Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	9	1074	451	27
Pedestrians Lane Width (ft)	14 0.0					
Walking Speed (ft/s)	0.0 4.0					
Percent Blockage	4.0					
Right turn flare (veh)	and and a second se					
Median type		Geografia	185 Fel 34	None	None	
Median storage veh)	ina, katal pangana pangan dan bu	nation and and a second second	estitution võnj		an an the state of the second seco	
Upstream signal (ft)				905	321	
pX, platoon unblocked	0.94	0.94	0.94	- and - construction of the second		een herroord dat de verden een de verden de verden dat in de verden de verden de de de verden de de verden de v Naam werden dat de verden de verd
vC, conflicting volume	1033	253	492	6.992	200,000	
vC1, stage 1 conf vol		anistateinei waran anen	SIGNAL AND A STOCK	da o in 14 kite datas til 6 villi san	el tala la diman ferrar de la	
vC2, stage 2 conf vol						
vCu, unblocked vol	889	68	324			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s) tF (s)	3.5	3.3	2.2			
p0 queue free %	3:5 100	3.3 100	2.2 99			
cM capacity (veh/h)	264	919	1155			
		0/2012-1-1-2 ⁻² -1-2 ⁻² -2-2 ⁻² -2-2 ⁻² -2 ²	na mandrina de canto de canton de			
Direction (Canera 2012)	uning sain	873159270				
Volume Total	9	537	537	301	178	
Volume Left	9	0 0	0	0	0	
Volume Right cSH	0 1155	1700	0 1700	0 1700	27 1700	
Volume to Capacity	0.01	0.32	0.32	0.18	0.10	
Queue Length 95th (ft)	0.01	0.52	0.32	0.10	0.10	
Control Delay (s)	8.1	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	0.1			0.0		
Approach LOS	 			and a second of the supply fields	er en	en en men worden en en en ander besteren mensen andere begen person ander ander an en en ander ander bestere ve
mersection summary						
Average Delay			0.0			
Intersection Capacity Utiliza	ation		30.6%	ام)	U Level of	Service A
Analysis Period (min)	4091		30.0 <i>7</i> 6 15			n
	estrado da	an ila sita		M. S. CAR		
			under verschrieftige		aasterikeesise	

HCM Unsignalized Intersection Capacity Analysis 22: Main St. & Sherman St.

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Movement	(in the second se	ANBRA .		NIN .	851.	SACE
Lane Configurations	۲	65	ተጉ 931	23	19	41↑ 396
Volume (veh/h) Sign Control	Stop	60	Free	23	19	Free
Grade	0%	le sa la s	0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	71	1012	25	21	430
Pedestrians	13 12.0					6 12.0
Lane Width (ft) Walking Speed (ft/s)	12.0 4.0					4.0
Percent Blockage	1					- 1
Right turn flare (veh)	an a	net universitien ni	ne overeretet for dieren	Essentit Konstante	an oo saacaa sa saaco	
Median type	n an the second second		None		19 A G	None
Median storage veh)					u an	
Upstream signal (ft)	0.95	0.93	645	en de la di	0.93	581
pX, platoon unblocked vC, conflicting volume	1294	537			1050	
vC1, stage 1 conf vol	1207	001			1000	
vC2, stage 2 conf vol						
vCu, unblocked vol	984	353		aleman sector and screen	904	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s) tF (s)	3.5	3.3			2.2	
p0 queue free %	3.3 100	88			2.2 97	
cM capacity (veh/h)	225	589			688	
Direction Alense 4						
Volume Total	71	675	362	164	287	
Volume Left	0	0	0	21	0	
Volume Right	71	0	25	Ô	0	
cSH	589	1700	1700	688	1700	and a state of the s
Volume to Capacity	0.12	0.40	0.21	0.03	0.17	
Queue Length 95th (ft) Control Delay (s)	10 11.9	0 0.0	0 0.0	2 1.6	0 0.0	
Lane LOS	н. а В	v.v	0.0	A	0.0	
Approach Delay (s)	11.9	0.0		0.6		
Approach LOS	В		, and a second secon	anan a santana a sa a sa a sa a sa a	ad a new fait include a constant	
Average Delay			0.7			
Intersection Capacity Utiliz	ation		39.4%	ICI	J Level o	f Service
Analysis Period (min)			15			

Synchro 8 Report Page 10

E.C.

9/21/2011

HCM Unsignalized Intersection Capacity Analysis 24: Saratoga Ave. & Sherman St.

9/21/2011

	1	▲	1	~	1	Ļ				
Movement	A SAMELAN	Malkes	S. BISS		S. 10	381				
Lane Configurations	- ¥		ţ,			đ	***********************			
Volume (veh/h)	18	24	189	4	2	113				
Sign Control	Stop		Free	094,0080,028880,028880	9909932946765699743	Free		nation contractivities and a		030823999734
Grade	0%		0%			0%				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	n de skille her fanne ekkelen an stille fan de skille	tening and a star in a second differ	a internet produced and an and a strategy of the strategy of the strategy of the strategy of the strategy of th	1.01.076 kitob
Hourly flow rate (vph)	20	26	205	4	2	123				
Pedestrians	21		2			11			n mana na ang sa kana na sa kana n	a conservation of a
Lane Width (ft)	12.0		12.0			12.0				
Walking Speed (ft/s)	4.0		4.0			4.0				
Percent Blockage	2		. 0			- 1	6.646 8 2			
Right turn flare (veh)										
Median type) (BAN) (Le 174 (L		None			None		Sugar Barris	1998) (S. 1993) 1997	
Median storage veh)	en e	nown were a start of a st	and the second	on the second state of the second	anderen Herman, av. son er er	an the second state of the second state	and a construction of the second second	Worker & Fighteen by referenced to read		14 - W - July 1 - July 1 - July 1
Upstream signal (ft)		1313(A	51 (S 1998		de la deri	452	8. 8. de las - /	3. M. Harris &	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
pX, platoon unblocked			alaalahaa samaan							an baar taar kee
vC, conflicting volume	358	240	1994 (SA)		231					
vC1, stage 1 conf vol			and a start of the second s						teritaten area area area area area area area ar	
vC2, stage 2 conf vol			19 A 19 A							
vCu, unblocked vol	358	240			231					anne an te
tC, single (s)	6.4	6.2			4.1					
tC, 2 stage (s)	<u>л</u> г	0.0		805696969						
tF (s)	3.5 97	3.3 97			2.2					
p0 queue free %	97 627	97 778			100					
cM capacity (veh/h)	021	110-			-1314					
encellone Cane Decension	的合同的变形的									
Volume Total	46	210	125							
Volume Left	20	0	2							, and a second
Volume Right	26	4	0							
cSH	705	1700	1314	and a second of the second of the	feature recently must be an e					
Volume to Capacity	0.06	0.12	0.00	23 S - 4					en e	
Queue Length 95th (ft)	5	0	0	an a contra and active or	and the second secon		10, 1, 11 7 18, 1997, 1997, 1977, 1977, 1979, 1979, 1979, 1979, 1979, 1979, 1979, 1979, 1979, 1979, 1979, 1979,	a da anticipa da funcione da una da competencia da com		
Control Delay (s)	10.5	0.0	0.1							
Lane LOS	B		A	an a	a an		909-1009-109-000000101-00-00	an management and an an international	u den faste versamen son die "In fisien en terdemonie i	secondaria da
Approach Delay (s)	10.5	0.0	0.1		618-10-1		9 G S S S S			
Approach LOS	В									
Intersection automative sea			100 50 500				9 <u>10</u> 6 9 9			
Average Delay			1.3							
Intersection Capacity Utiliza	ition		24.9%	ICI	J Level o	f Service		Α		
Analysis Period (min)	en e	a a competenza de la comp	15		antan ing the second		trantsis (1995) (1993) (1995)	n man para tanàna mandritra		105-831-8555
	1980 (N 1986)			0.46698						
1 Construction of the const 	nen anderen er en		aan ah			ana ana amang kang kang kang kang kang kang kang k	na nanana sita katisti	r-andre and a state of the stat	na sa na katalan katalan katalan katala katala. Katalan	enter tradici

HCM Unsignalized Intersection Capacity Analysis 25: Prince St. & Sherman St.

9/21/2011

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Movament	San State Line		N RILLON	SND	V	T SER
Lane Configurations	Y			f ì	<u></u> ∔	GEN
Volume (veh/h)	т 3	1	27	শ 34	41	17
Sign Control	Stop	an chu chu chu	<u></u>	Free	Free	μ
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	1	29	37	45	18
Pedestrians		ES GANGGA BANA	600/098.87778.0882	2		
ane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0	ana ana ang katalang kang pang pang kang kang kang kang kang kang kang k		4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type	1. AQ 63 (F. F.)	S (A. Strick)		None	None	
Median storage veh)						
Jpstream signal (ft)						
oX, platoon unblocked		en maret en manage sambleaur one			and construction and the state of the state	
C, conflicting volume	163	67	74			
/C1, stage 1 conf vol						
/C2, stage 2 conf vol			9 4 A A			
Cu, unblocked vol	163	67	74			
C, single (s)	6.4	6.2	4.1			
C, 2 stage (s)						
F.(s)	3.5	3.3	2.2			
0 queue free %	100	100	98 4 5 4 0			
cM capacity (veh/h)	802	986	1512			
Direction Alamadian Alama						
/olume Total	4	66	63			
/olume Left	3	29	0			
/olume Right	1	0	18			
SH	841	1512	1700			
/olume to Capacity	0:01	0.02	0.04			
Queue Length 95th (ft)	0	1	0			
Control Delay (s)	9.3	3.4	0:0		5.5453	
ane LOS	A 9.3	A 3.4	0.0			
Approach Delay (s)		ંગ.4	U.U		0.5329.53	
Approach LOS	A					
ntersection Summary						
Average Delay			2.0			
ntersection Capacity Utiliza	tion	694694694	20.6%	IC	U Level o	if Service A
Analysis Period (min)			15			

Synchro 8 Report Page 12

HCM Unsignalized Intersection Capacity Analysis 27: Highland Ave. & Ogden Ave.

27: Highland Ave.											1	21/201
	× 1	→	\mathbf{r}	 Image: A second s	-		1	T	1	•	Ŧ	-
Movement	EBLS		SEBR.	s (glis)	8.0E9F	Milita		stain Balsa		58. 1985	(s) (s) (s)	8B)
ane Configurations		र्ब कि		1971 - 1995 - 1996 - 1997 - 1999 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	41>		٦	12		٦	Ą	
/olume (veh/h)		1352	- 30	1	1083	18	1	0	129	2	0	
Sign Control		Free			Free		ta da anticipada de constato en	Stop			Stop	
Frade		0%			0%			0%		806 (d. 1	-0%	
eak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
ourly flow rate (vph)	8	1470	- 33	1	1177	20	1	0	140	2	0	
edestrians		1 12.0			2			11			4	a de la cale
ane Width (ft) /alking Speed (ft/s)		4.0			12.0 4.0			12.0			12.0	
ercent Blockage		4.0 0			4.0 0			4.0 1			4.0	9259703S
light turn flare (veh)	MAN ABSISSIAN	an 1999 - 1 999 - 1999	antan tara		v						0	n sode.
ledian type	Nexter Mon	None	an a		rwltl	an a			66.703.843			
ledian storage veh)		TIONS	12142 (29)	SATAKS.	2			ener ener				999-97. J
pstream signal (ft)		369										12072 1
X, platoon unblocked	1222200343-02004-031-0	**********		0.64			0.64	0.64	0.64	0.64	0.64	9459-939 945-9392
C, conflicting volume	1201	6.0056		1513			2109	2715	764	2085	2722	603
C1, stage 1 conf vol					1963 - 1964 - 1964 - 1964 - 1964 - 1964 - 1964 - 1964 - 1964 - 1964 - 1964 - 1964 - 1964 - 1964 - 1964 - 1964 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 - 1967 -		1512	1512		1193	1193	20032007-222
C2, stage 2 conf vol							597	1203	Store St.	892	1528	
Cu, unblocked vol	1201			693			1618	2558	0	1581	2568	603
C, single (s)	4.1	guiduara)		4.1			7,5	6.5	6.9	7.5	6.5	6.9
C, 2 stage (s)	an a	let Altron en traces	an a	and the second second second second			6.5	5.5		6.5	5.5	
(s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
0 queue free %	99			100			99	100	80	99	100	99
M capacity (veh/h)	575			573			215	176	691	180	177	440
Interno and a second	742	767	590	608	1	140	2	5				
olume Left	8	0	1	000	1	0	2 2	0 0				
olume Right	Ő	33	0	20	0	140	0	5				
SH	575	1700	573	1700	215	691	180	440				0852.000
olume to Capacity	0.01	0.45	0.00	0.36	0.01	0.20	0.01	0.01				
ueue Length 95th (ft)	1	0	0	0	0	19	1	1			1999 MODAWQAD 199	
ontrol Delay (s)	0.4	0.0	0.1	0.0	21.8	11.5	25.2	13.3	-30 Q. 20			
ane LOS	A		A	na serie de la construcción de la c	С	В	D	B		nandeladni nežislanji nežis	antan di Kalon da Kalon di Kalon di Ka	and a second second
pproach Delay (s)	0.2		0:0		11.6		16.7		4			1 1. 53 / 12
pproach LOS					В		С		none many particular y constraint (a constraint (ner of entries in discussions	1996-1997-1997-1997-199	
lesedien Summary					ning Sal							
verage Delay	e on the second seco		0.7	Selo subscribe and	a a a a a a a a a a a a a a a a a a a	96 9667 X 2016 774 7	and the second secon		00000-019-0001-000-001-01-			200000000000
tersection Capacity Utiliza	tion		58.5%	ICI	J Level of	Service			B			
nalysis Period (min)	NESS STATES		15									en server

HCM Unsignalized Intersection Capacity Analysis 34: Grant St. & East Parking Lot

9/21/2011

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Novement	60,66		MBI S			SBR
Lane Configurations	nun enterreturnet deuen Vesticiet	4	}	Annesian Antoine an Antoine	¥	
Volume (veh/h)	. 17	66	-89	0	0	14
Sign Control		Free	Free	tinin ar air air air air air air air air air	Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	72	97	0	0	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)			.			
Percent Blockage			9495102193	Bertarde E		
Right turn flare (veh)		NIS ST			GERCESER	
Median type		None	None			
Median storage veh)		145			(*************************************	
Upstream signal (ft)		641				
pX, platoon unblocked vC, conflicting volume	97			85.465 SM	205	97
vC1, stage 1 conf vol	91			8958.862	200	97
vC1, stage 1 conf vol						
vCu, unbiocked vol	97				205	97
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)	T.I.				0.т	V.Z
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	98
cM capacity (veh/h)	1497				773	960
Volume Total	90	97	15			
Volume Left	18	0	0			
Volume Right	0	0	15		2010	
cSH	1497	1700	960	e dan bel energie de riveradan i deri	an annaich 16 fean a' bhfaile ann	
Volume to Capacity	0.01	0.06	0.02			
Queue Length 95th (ft)	1	0	1	restantes da TS de trabadante di Cara	a bio materia anna a charadh	
Control Delay (s)	1.6	0.0	8.8			
Lane LOS	A	(1999)	A		a mainte de la casa de	
Approach Delay (s)	1.6	0.0	8.8	19 91 - 19 9		
Approach LOS			A			
intersection Summary						
Average Delay	eesbergtapiis interpretainen	his sugaran tarimina	1.4		a la factoria de la compañía de la c	
Intersection Capacity Utiliza	tion		21.1%	ICI	J Level o	of Service A
Analysis Period (min)		asing and a second	15		na infailteanta o como	
		egelegelige S				

Synchro 8 Report Page 14

HCM Unsignalized Intersection Capacity Analysis 37: Highland Ave. & East Parking Lot

9/21/2011

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Movement	E E E E			NES .		<u>SPR</u>	
Lane Configurations	· ۲۲			÷.	þ		
Volume (veh/h)		0	37	195	62	11	
Sign Control	Stop	a ann a dha ch Chron Alban, C	yra man charachara	Free	Free	an a	1997-1999-1998-1999-1999-1999-1999-1999-
Grade	0%		S. 2 2	0%	0%		pantes in com
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	ne de de Bler Neuenne de la dinéer et la des sectores de la compañía de la compañía de la compañía de la compañ
Hourly flow rate (vph) Pedestrians	0	0	40	212	67	12	
Lane Width (ft) Walking Speed (ft/s)			9992358M	i Meneria			
Percent Blockage Right turn flare (veh)							
Median type Median storage veh)				None	None		
Upstream signal (ft) pX, platoon unblocked							
vC; conflicting volume vC1, stage 1 conf vol	366	73	79				
vC2, stage 2 conf vol	366	73	79				
tC, single (s) tC, 2 stage (s)	6.4	6.2	4.1				
tF/(s) p0 queue free %	3.5 100	3.3 100	2.2 97				
cM capacity (veh/h)	617	988	1519				
Direction Lane 4.	0	252	79				
Volume Left Volume Right	0 0	40 0	0 12				
cSH Volume to Capacity	1700 0.00	1519 0.03	1700 0.05				
Queue Length 95th (ft) Control Delay (s)	0 0.0	2 1.4	0 0.0				
Lane LOS Approach Delay (s)	A 0.0	A 1.4	0.0				
Approach LOS	A	1.7	U.U				
Intersection Summary Average Delay			1.0		1012131		
Intersection Capacity Utiliza Analysis Period (min)	ition		22.3% 15	ICI	J Level of	Service A	
			10				

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HCM Signalized Intersection Capacity Analysis 26: Main St. & Ogden Ave.

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Movement				MAN MELLO		$\langle \langle i \hat{\mu} \hat{\mu} \hat{\mu} \rangle \rangle$				Si S	<u> </u>	SBR
Lane Configurations	٦	ተኈ		`	ት ቅ		`	† î>		hayac or <u>cons</u> ana	**	t
Volume (vph)	261	959	116	138	1113	164	178	395	110	177	447	502
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	88.8141	1.00	1.00		1.00	0.99	<u>66</u> 7 987 989	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	45555555555	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3476	975 B)	1770	3460		1768	3398	18 S. H.	1767	3539	1565
Flt Permitted	0.08	1.00	Diriotakena	0.15	1.00	indreisennen in	0.36	1.00	WEIRSWEIN VIDERS	0.26	1.00	1.00
Satd. Flow (perm)	148	3476		271	3460		677	3398		486	3539	1565
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	284	1042	126	150	1210	178	193	429	120	192	486	546
RTOR Reduction (vph)	0	7	0	0	8	0	0	19	0	0 Sendere strettere	0	26
Lane Group Flow (vph)	284	1161	0	150	1380	0	193	530	0	192	486	520
Confl. Peds. (#/hr)	5		2	2		5	3		9	9		3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	7	4	utili berin Manata Dabawa	3	8	de Calebraga (anternation o	5	2	• No. 1995 July 10 of the local second	1	6	7
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	72.0	59.1	1 NOP 20 10 10 10 10 10 10 10 10 10	57.1	47.2		41.0	33.0		45.0	35.0	56.8
Effective Green, g (s)	72.0	59.1		57.1	47.2		41.0	33.0		45.0	35.0	56.8
Actuated g/C Ratio	0.55	0.45	The second s	0.44	0.36	ومعارفه والمؤرب المحمولين	0.32	0.25		0.35	0.27	0.44
Clearance Time (s)	3.0	6.0		3.0	6:0		3.0	6.0		3.0	6.0	3.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	354	1580	a an an a	233	1256		281	863		267	953	684
v/s Ratio Prot	c0.13	0.33	Alexandra (1990) - 1970 - 1970	0.05	c0.40		0.04	0.16		c0.06	0.14	c0.13
v/s Ratio Perm	0.31	9		0.23		a de la sec	0.17	887 (S. 14		0.19		0.20
v/c Ratio	0.80	0.73		0.64	1.10		0.69	0.61		0.72	0.51	0.76
Uniform Delay, d1	37.9	29:0		24.4	41.4		36.6	42.9		32.7	40.2	30.8
Progression Factor	1.64	0.82	a sultan untractor	1.00	1.00		0.96	0.96		1.00	1.00	1.00
Incremental Delay, d2	10.3	1.5		6.0	57.0		6.7	3.2	and we	8,9	- 1.9	4.9
Delay (s)	72.2	25.2	A	30.4	98.4		41.9	44.2		41.6	42.2	35.7
Level of Service	E	С		С	F		D	D		D	D	D
Approach Delay (s) Approach LOS		34.4 C		an a	91.8 F			43.6 D			39.2 D	
Intersection Summary HCM Average Control Dela HCM Volume to Capacity ra			54.8 0.90	HO	MiLevel	of Servic	e		D			
Actuated Cycle Length (s)			130.0		m of lost			gen de de	15.0			
Intersection Capacity Utiliza	tion		91.6%	IC	U Level of	f Service			F			

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Analysis Period (min) c Critical Lane Group 9/21/2011

HCM Signalized Intersection Capacity Analysis 28: Saratoga Ave. & Ogden Ave.

	≯	-	\mathbf{r}	1	←	A.	•	Ť	1	\$	Ļ	4
Movement					n ng sa	Maria				S::	888 818 18	0000
Lane Configurations	۲	†Þ		٣	朴诤		ሻ	4		ሻ	<u>}</u>	
Volume (vph)	112	1172	51	47	1668	69	73	62	64	70	48	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	9.490C
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	al falla falla e se su a	1.00	1.00	angang karala
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.98		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.97	1.00	1990 - California de California de California (California) 1990 - California de California (California)	0.97	1.00	*******
Frt	1.00	0.99	6.049.5	1.00	0.99		1.00	0.92		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00	1488200009489899999999	0.95	1.00	ana 1040-1040 amin'ny fisiana mampika	0.95	1.00	
Satd. Flow (prot)	1770	3512		1770	3514		1717	1680		1723	1632	
Flt Permitted	0.05	1.00	an an the party in the second second	0.14	1.00		0.62	1.00		0.63	1.00	e-19-972.000407.945
Satd. Flow (perm)	100	3512		265	3514		1117	1680		1138	1632	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	122	1274	55	51	1813	75	79	67	70	76	52	90
RTOR Reduction (vph)	0	2	0	0	2	0	0	29	0	0	48	0
Lane Group Flow (vph)	122	1327	0	51	1886	0	79	108	0	76	94	0
Confl. Peds. (#/hr)	2	n katalan ni es a la der ander ander en diter, e	4	4	ni ni se	2	16	fanning of Several Market	14	14	na na Santa na tang mang na salahasi ta	16
Tum Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4	, 99, 99, 99, 99, 99, 99, 99, 99, 99, 9	3	8		1994 - W. M. C. B.	2	in a suite ann an taise i tha i bailtean ann an taise i tha i bailtean ann an taise i tha a bailtean ann ann a	1999 - Dan Barlan (h. 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999	6	an de la composition de la contract
Permitted Phases	4	de salar		8	6 19. di 16.		2			6	Geografia	
Actuated Green, G (s)	85.6	77.0		77.1	71.5		32.4	32.4		32.4	32.4	
Effective Green, g (s)	85.6	77.0		77.1	71.5		. 32.4	32.4		32.4	32.4	
Actuated g/C Ratio	0.66	0.59		0.59	0.55		0.25	0.25		0.25	0.25	
Clearance Time (s)	3.0	6.0		3.0	6.0	2 A 44	6.0	6.0		6.0	6.0	8.088 S.
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	208	2080	ar da ar	222	1933		278	419		284	407	
v/s Ratio Prot	c0.05	0.38		0.01	c0.54			0.06			0.06	
v/s Ratio Perm	0.34			0.13	ene staff		c0.07			0.07		
v/c Ratio	0.59	0.64		0.23	0.98		0.28	0.26		0.27	0.23	-
Uniform Delay, d1	33.2	17.4		13.3	28.4		39.4	39.1		39.3	38.9	
Progression Factor	1.00	1.00		0.63	0.55		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.2	0.7	26.04	0.2	8.0		2.6	1.5		2.3	1.3	
Delay (s)	37.4	18.0	NAVA PROVIDE TO POPULATION	8.6	23.5	en eksteren berten ber	42.0	40.6	or control Miles Tricemented	41.6	40.2	
Level of Service	D	В		A	C	6.6.6.4	D	D		D	D	
Approach Delay (s)	na an an Indonesia Managara an an an an an an	19.6			23.1	n multiplication in a static durant	heed dearman and the rest of the fields	41.1	nidentificane divinite facultations	An entropy and a second second	40.7	
Approach LOS		В			C			D			D	900 T
nicise el in Summary												
HCM Average Control Dela	ay		23.8	H	CM Level	of Servic	e		C			
HCM Volume to Capacity r	atio		0.74									
Actuated Cycle Length (s)		49 i g i se t	130.0	S	im of lost	time (s)			15.0			
Intersection Capacity Utiliz			90.2%		U Level c				E			
Analysis Poriod (min)			46			CONDUCT OF	en e	ta Tang		NAMES (SAM)	1920 (* 1739) 1920 (* 1739)	

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Analysis Period (min) c Critical Lane Group

Review of the

9/21/2011

HCM Signalized Intersection Capacity Analysis 31: Main St. & Grant St.

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Movement	WEIL			a filiante de la compañía de la comp		Sal	
Lane Configurations	¥		≜ †⊅			41	
Volume (vph)	26	30	607	33	22	689	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.0		6.0	e de la ser		6.0	
Lane Util. Factor	1.00		0.95	to 10. A subjection of antipage specific a		0.95	
Frt	0.93	e operation	0.99		Sec. 34	1.00	
Flt Protected	0.98	en verse doer proving	1.00			1.00	
Satd. Flow (prot)	1688		3512			3534	
Fit Permitted	0.98	544445444444444	1.00	the sense same takes	1987 - 1988 - 1988 - 1987 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 -	0.92	
Satd. Flow (perm)	1688		3512		99.53-840.	3254	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	28	33	660	36	24	749	
RTOR Reduction (vph)	31	0	6	0	0	0	
Lane Group Flow (vph)	30	0	690	0	0	773	
Turn Type	NA	a an	NA	101-10 cm/000 0 5 500 In 1010	Perm	NA	
Protected Phases	8		2			6	
Permitted Phases			ulation in the state of the		6		
Actuated Green, G (s)	4.4		28.6			28.6	
Effective Green, g (s)	4.4	•	28.6	astra contactor	waanaana atama	28.6	
Actuated g/C Ratio	0.07		0.44			0.44	
Clearance Time (s)	6.0		6.0			6.0	
Vehicle Extension (s)	3.0		3.0			3.0	
Lane Grp Cap (vph)	114		1545			1432	
v/s Ratio Prot	c0.02		0.20				
v/s Ratio Perm						c0.24	
v/c Ratio	0.27		0.45			0.54	
Uniform Delay, d1	28.8		12.7			13.4	
Progression Factor	1.00 1.2		1.00			1.09	
Incremental Delay, d2 Delay (s)	30.0		0.9 13.6			1.3 45 9	
Level of Service	50:0 C	u <i>nin sedin</i> e	10,0 B	Galage (). (All	esessie der d	15.8 B	
Approach Delay (s)	30.0	88072538	13.6		5402522	B 15.8	
Approach LOS						and the second second second second	
Intersection Summary	0		D			В	
HCM Average Control Delay	, ,		15.4	HC	M Level	of Service	B
HCM Volume to Capacity rat			0.50				
Actuated Cycle Length (s)	a a a serie de la construir de	and a second	65.0	Su	m of lost	time (s)	32.0
Intersection Capacity Utilizat	ion		48.3%			f Service	Â
Analysis Period (min)	nanona a di Sentera di Sentera di Sentera di Sentera	una - no en totales del besto	15	an - e - mart Con Dela Sala	n a stan na managan di sana dia 1944	na na sa si si per na possa UNE Se SA A	n , ennen 14 ennen er ennen samt Halenblands etter etter fordatiske sketeris Artenisie Kostele Beldi (Kostele) I
c Critical Lane Group	Star In						

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HCM Unsignalized Intersection Capacity Analysis 5: Prince St. & Ogden Ave.

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Movement		Soliton Ky			Nev a Lor	NBR
Lane Configurations	∱ ⊅		٦	^	¥	
/olume (veh/h)	1290	16	14	1779	5	46
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1402	17	15	1934	5	50
Pedestrians	and the second second second second	an fra stabilitation and a surger		26	5	
ane Width (ft)				12.0	12.0	
Valking Speed (ft/s)		a a sela se donte de como de como de como		4.0	4.0	
Percent Blockage			12.2.2	2	0	
Right turn flare (veh)						
Nedian type	None	8 E 7 I I		TWLTL		
/ledian storage veh)				2		
Jpstream signal (ft)	320		1940 - 1941 - 1941 - 1941 - 1941 - 1941 - 1941 - 1941 - 1941 - 1941 - 1941 - 1941 - 1941 - 1941 - 1941 - 1941 -	673	1990 B	
X, platoon unblocked			0.75		0.78	0.75
C, conflicting volume			1425		2413	741
C1, stage 1 conf vol					1416	
C2, stage 2 conf vol			- 19 - 19 - 19 - 19 - 19 - 19 - 19 - 19		997	
Cu, unblocked vol		ant as an an in such that if an	897		791	0
C, single (s)			4.1		6.8	6.9
C, 2 stage (s)		and the second in the second second			5.8	
F (s)			2.2	and a second	3.5	3.3
0 queue free %			97		98	94
M capacity (veh/h)			561		265	791
Median Jane Hole Solar		19 19 19 19 19 19 19 19 19 19 19 19 19 1		(1.1.1) · S. p. 1.11		
/olume Total	935	485	15	967	967	55
olume Left	0	0	15	0	0	5
olume Right	0	17	0	Ŏ	0	50
SH	1700	1700	561	1700	1700	662
olume to Capacity	0.55	0.29	0.03	0.57	0.57	0.08
Queue Length 95th (ft)	0.00	0.20	2	0.01	0.07	7
Control Delay (s)	0.0	0.0	11.6	0.0	0.0	10.9
ane LOS			B		a de la companya de l La companya de la comp	B
Approach Delay (s)	0.0		0.1			10.9
opproach LOS					DET ET EL ESTE	B
nersestion Summary						
verage Delay		u la traduction de construires	0.2	water and the second	Apply and a part of a second	
ntersection Capacity Utiliza	tion		65.8%	S IC	U Level o	f Service C
analysis Period (min)		Managara Parkatan	15	Lation restains from the st	under under medere	
					Contractor (1974	

HCM Unsignalized Intersection Capacity Analysis 9: Main St. & Lincoln St.

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		-		•	-					*		-
vovement so a se se se se										ે સામેક		<u> (</u>
ane Configurations		4			4	MINISTAN AND AND AND AND AND AND AND AND AND A	1.41 MIC 1949 CONTO (APRIL 10	đþ			4Þ	u Thành à màng t
/olume (veh/h)	13	12	20	4	8	6	9	621	4	12	670	
Sign Control		Stop			Stop			Free		an a	Free	antere s
Srade	0.00	0%	0.00	0.00	0%	~ ~~	~ ~~	0%	2000	- <u></u>	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.
lourly flow rate (vph) edestrians	14	13 19	22	4	9	7	10	675	4	13	728	9- M
ane Width (ft)		12.0			2 12.0			1 12.0		Seven de la	6 12.0	Sec.44
Valking Speed (ft/s)		4.0			4.0			4.0			4.0	
ercent Blockage	59230-73				4.0 0			0			4.0 1	
Right turn flare (veh)	THE EXCENTION				65 96 78 4 97 7	37701034273333		.			CONTRACTOR SE	9399-9244
/ledian type							1999 - SA	None			None	
ledian storage veh)	ett - skala statistik et usat	nelten sint sonderförklad	tan dalam kata di sala di	uniterier and an an a stability of the	an a	Color a Baccalera Val	ELEEN ALA KELY		alesi da di ta	alan tahir si tahu.	2010-00-00-00-00-00-00-00-00-00-00-00-00-	allesterit.
lpstream signal (ft)		an an an an a' she				Sectores					658	
X, platoon unblocked				e de de la calencia de la calencia de	ada ya mwana na mwana kao mpany	a na shi ka shekara ka shi ka shekara s			e e fossi e destrigen della de e		an an Shiring an Shirin	eri 2020 de de 1
C, conflicting volume	1165	1492	402	1118	1508	348	783			681		
C1, stage 1 conf vol												
C2, stage 2 conf vol			a de la composición d	1994) - M		Sector Sector						
Cu, unblocked vol	1165	1492	402	1118	1508	348	783	nia mainina minina manina manin		681	et anno 1000 anno 1000 anno	ana ana ana a
C, single (s)	7.5	6.5	6.9	- 7.5	6.5	6.9	4.1			4.1		
C, 2 stage (s)												
= (s) 0	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		States.
0 queue free %	89 132	89 117	96 588	97 137	92 114	99 644	99 818			99 906		
M capacity (veh/h)			*****	Construction of the second		044	010			900		
ncentingenerikasiseerik olume Total	49	20	347	342	377	400						
olume Left	49 14	20 4		342 0	3// 13	400 0						980N98
olume Right	22	7	0	4	0	36						187 <i>1</i> 67.
SH	191	166	818	- 1700	906	1700			90253-923-929)			
olume to Capacity	0.26	0.12	0.01	0.20	0.01	0.24						
ueue Length 95th (ft)	24	10	1	0	1	0						STRACTS)
ontrol Delay (s)	30.2	29.5	0.4	0.0	0.5	0.0						
ane LOS	D	D	A	anosalalasina, kosta art	A	2030-977-9760-9777		energe overligt her journe	en en en antespisado sistema	ana menantatan kan	ar an	101212A09489
pproach Delay (s)	30.2	29.5	0.2		0.2						k gest is	
pproach LOS	D	D										
neisection Summary												
verage Delay			1.5									
ntersection Capacity Utiliza	tion	1943 AN	40.0%	IC	U Level o	f Service			A			
nalysis Period (min)			15									

Synchro 8 Report Page 2

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HCM Unsignalized Intersection Capacity Analysis 12: Prince St. & West Parking Lot

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				STARE A		SBR	
ane Configurations	Y	0	~	र्भ 24	4	7	
/olume (veh/h)	0 Ctop	U S	0	entra antesna antesna antesna	22		icheologia se
Sign Control Grade	Stop 0%			Free 0%	Free 0%		and and an an
Peak Hour Factor	0.92	0.92	0.92	0%	0%	0.92	
Hourly flow rate (vph)	0.92	0.92	0.92	0.92	0.92	8	501 kg (d) (d)
Pedestrians	V	V	v	20	24	0	
Lane Width (ft)							8.46.46.45.40
Valking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type		516) A A	17934 (SA	None	None		
Median storage veh)	- 2000 (1997) -	restante de		110116	HOLIG		
Jpstream signal (ft)							
X, platoon unblocked							
C, conflicting volume	54	28	32				
/C1, stage 1 conf vol		*********	dennad statute or a filler				NE SECONDECTO
C2, stage 2 conf vol							
Cu, unblocked vol	54	28	32			***************************************	9.000 CONCER (CONCER)
C, single (s)	6.4	6.2	4.1				
C, 2 stage (s)						amit nen i fan den en e	Particle Court & Court of Courts of Courts of Courts of Co
F (s)	3.5	3.3	2.2				
0 queue free %	100	100	100				
M capacity (veh/h)	954	1048	1581				
Ingoing an	1995 (m. 1995) (479) (1.75 48 9/2				
/olume Total	0	26	32				
/olume Left	0	0	0	1999 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -			****
/olume Right	0	0	8				
SH	1700	1581	1700				
olume to Capacity	0.00	0.00	0.02				
Queue Length 95th (ft)	0	0	0	man any second story a fram following			
Control Delay (s)	0.0	0.0	0.0				e esti de s
ane LOS	A				ingenergenera verserver		Reaction and the second second
Approach Delay (s)	0.0	0.0	0.0	er de arte			6999999
\pproach LOS	A						
anchsechions summary							
verage Delay	הידייי הנוגניניניני אייניי		0.0	Cred/Weitz accesses	CI AND INCOME THE AND		an an ann a' an
ntersection Capacity Utiliza	tion		6.7%	IC	J Level o	Service A	
nalysis Period (min)			15				

HCM Unsignalized Intersection Capacity Analysis 14: Saratoga Ave. & West Parking Lot

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Movement	0.6) 0.6)			<u>ar</u> BRad	es i s	88. J. 16. S.	
ane Configurations	Y	101128/a0/accommentation	1	*************************		4	
/olume (veh/h)	32	36	_152	0	0	160	
Sign Control	Stop		Free			Free	
Grade	0%	<u>.</u>	0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph) Pedestrians	35	39	165	0	0	174	
-eoestnans Lane Width (ft)		199 200 200					
Lane Width (it) Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			None			None	
Median storage veh)		n an tha an the state of the second secon		CAN SINTA IN	0.0357.025533		
Jpstream signal (ft)						667	
X, platoon unblocked	e temperation	na shekarar na	ala de sente de Filment de H	***************************************			nan na han s Na han na han n
C conflicting volume	339	165			165		
C1, stage 1 conf vol	an dan series di dalam di dala Nationali	a te de senan de la contra de la consecta de la con	an a		13 MARONALOUNDY 4194 (11)	annaidh an ann ann ann ann ann ann ann ann ann	na an a
/C2, stage 2 conf vol	12.00		in and				
Cu, unblocked vol	339	165			165		
C, single (s)	6.4	6.2			4.1		
C, 2 stage (s)			and a star to be a star of				
F (s)	3.5	3.3			2.2		
00 queue free %	95	96			100		
M capacity (veh/h)	657	879			1413		
An Gearlann a Ghne 77			243 S M				
/olume Total	- 74	165	174				
/olume Left	35	0	0				
/olume Right	39	0	0				
:SH	758	1700	1413				
olume to Capacity	0.10	0.10	0.00	are est		6.6.6.6	
Queue Length 95th (ft)	8	0	0				
Control Delay (s)	10.3	0.0	0.0				
ane LOS	B						
Approach Delay (s)	10.3	0.0	0.0				
Approach LOS	В						
nierseeren Stimmany							
Verage Delay	101.1225-14140-0-1-4	territed, carried on the	1.8		204 Marina (stransfer and state to the too	andre f. S. a. (1991) (1991) and 1991) and 1991) and 1991	
ntersection Capacity Utilizat	ion	18 (d. 18)	19.1% 15	ICI	U Level o	f Service	Α
Analysis Period (min)							

Synchro 8 Report Page 4

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HCM Unsignalized Intersection Capacity Analysis

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15: Saratoga Ave. &	Grant	St.										1/2011
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Movement			20156165			Q19]?.@/				(SS)	×899	
Lane Configurations		\$			4			4			\$	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	29	0	16	14	0	2	9	121	1	2	159	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	32	0	17	15	0	2	10	132	1	2	173	38
Unseline Zenezie State State												
Volume Total (vph)	49	17	142	213								
Volume Left (vph)	32	15	10	2								
Volume Right (vph)	17	2	1	38								
Hadj (s)	-0.05	0.13	0.04	-0,07								
Departure Headway (s)	4.7	4.9	4.3	4.1		a has b ^{ar} a - Maadaa a						
Degree Utilization, x	0.06	0.02	0.17	0.25							e en	
Capacity (veh/h)	710	674	807	851		antan menangan series	112771/#MR647277907410	ana ang ang ang ang ang ang ang ang ang	n di wisianda tinana na sa		anona arrad constructor	de Alfrede Andrews 1
Control Delay (s)	8.0	8.0	8.2	8.5		5.20%			de de la composition			
Approach Delay (s)	8.0	8.0	8.2	8.5					NE STA SHE I FRANKS			
Approach LOS	A	. A	A	A								
Intersteisioni Spinnos py Astrony												
Delay			8.3									
HCM Level of Service	e en ange Wels Her en Hill Belef	al na mangang kana kana kana kana kana kana kan	A	**************************************	nananan menerinta perta 2000/2015		an constant de la California de California de California de California de California de California de Californi	***************************************	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			an a
Intersection Capacity Utilization	n eest		31.7%	ICI	J Level of	Service			A			
Analysis Period (min)			15									
CONTRACTOR C	CERTSA AND INCOMENDARY OF		ACCORPORATION AND A CONTRACTOR AND A CONTRA	000000000000000000000000000000000000000	0221003022550225702225702	000000000000000000000000000000000000000	50012532002055521045	SUNCERNAL REAL CONTRA	tana ay ang	hiltochalartaisen Hokeador.	en esta a se esta de la calega d	CHEMIC CONTRACT

HCM Unsignalized Intersection Capacity Analysis 16: Prince St. & Grant St.

ţ 1 t Y Lane Configurations 4 Þ Sign Control Stop Stop Stop Volume (vph) 0 1 7 24 14 8 Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 0.92 Hourly flow rate (vph) 0 8 26 9 15 1 Volume Total (vph) 34 24 1 Volume Left (vph) 0 8. 0 Volume Right (vph) 0 9 1 -0.57 0.08 -0.18 Hadj (s) Departure Headway (s) 3.5 4.0 3.7 Degree Utilization, x 0.00 0.04 0.02 Capacity (veh/h) 1018 895 953 Control Delay (s) 6.8 6.5 7.2 Approach Delay (s) 6.5 7.2 6.8 Approach LOS A A A Delay 7.0 HCM Level of Service А Intersection Capacity Utilization 26.9% ICU Level of Service Analysis Period (min) 15

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Synchro 8 Report Page 6

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HCM Unsignalized Intersection Capacity Analysis 18: Highland Ave & Grant St

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18: Highland Ave. &	Grant	St.		,	,						9/2	1/2011
	≯	-	\mathbf{r}	•	4	*	•	1	~	1	Ļ	~
Movement				\$. 1911 - S	1.50 (50 (50 (50 (50 (50 (50 (50 (50 (50 (28 8 1812.82	933 A	8336
Lane Configurations	MINESE CONTRACTOR	4	N/AC-WEAV-CARDAD CONSTRAINT AND		Ф	in to March 7 or some of the same by		♠			\$	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	18	5	17	25	75	5	16	12	29	39	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	20	5	18	27	82	5	17	13	32	42	12
Direction dance # Constant		en vie style		ର ପ୍ରକାଶ ମହ								
Volume Total (vph)	41	127	36	86								
Volume Left (vph)	16	18	5	32								
Volume Right (vph)	5	82	13	12						91455 89 589599		
Hadj (s)	0.03	-0.32	-0.15	0.02								
Departure Headway (s)	4.3	3.9	4.2	4.3		en combro de la comprese de la comprese de la	innin Master a motor sum		noriened frankriger	n na stanska (1999 man 1999 pol	58597575552 948597927 2	3322299C35Gerr 3.
Degree Utilization, x	0.05	0:14	0.04	0.10			9.06 Stat				851 (94 <i>0</i> 47)	
Capacity (veh/h)	798	894	812	799			t det hersendaniseren forde			aren di pintersenteri e	na sena de serie de deservação de serie	en hander om en " .
Control Delay (s)	7.6	7.5	7.4	7.8								
Approach Delay (s)	7.6	7.5	7.4	7.8								ana manga sa sa sa sa
Approach LOS	A	Á	Α	A								
in create lens an un crystal and												
Delay			7.6									
HCM Level of Service		1989 (1988) (1998) (1998) 1989 (1998) (1998)	A	****************								986982664,4)7
Intersection Capacity Utilization	on		29.9%	IC	U Level of	Service		4	A			
Analysis Period (min)	***************************************	en e	15	00000000000000000000000000000000000000	a manga ng kang kang kang kang kang kang ka							and and a second second

HCM Unsignalized Intersection Capacity Analysis 20: Prince St. & Sherman Rd.

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Movement	2				() () () ()	SBT
Lane Configurations	Ý		Ť			^
Volume (veh/h)	21	13	0	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
-lourly flow rate (vph)	23	14	0	0	0	0
Pedestrians	78	and the set of the second set	17		-stari conta territti della della	2
₋ane Width (ft)	12.0		12.0		69.006	12.0
Nalking Speed (ft/s)	4.0	a parte da reconstante da	4.0	ovatriaismasaasa	en con con contrar.	4.0
Percent Blockage	7	55 SE 1997			9-19-50-90	0
Right turn flare (veh)	9.1879.000.07.07.07.07.07		CHANNER AND	waxaa kuluu	ANDRAMARK	
Median type			None			None
Median storage veh)			Ø73367 4945	76777797878		
Upstream signal (ft)						
oX, platoon unblocked	95	80			78	
/C; conflicting volume /C1, stage 1 conf vol	90	ου			/0	
VC1, stage 1 conf vol						
Cu, unblocked vol	95	80			78	
C, single (s)	6.4	6.2			4.1	
C, 2 stage (s)	8948-044 9 4-0488			anan ing Kasa		
F (s)	3.5	3.3	6.2004-6	100.00	2.2	
00 queue free %	97	98			100	
cM capacity (veh/h)	834	915			1422	
Direction Lanes						
Volume Total	37	0	0			
Volume Left	23	0	0			
Volume Right	14	0	Õ		1999 (J. 177	
SH	863	1700	1700	aine na seo a		
Volume to Capacity	0.04	0.00	0.00	he financi		
Queue Length 95th (ft)	3	0	0		CLOBADICEUTREST	
Control Delay (s)	9.4	0.0	0.0			
ane LOS	A	e NG AN, KARANAN YAN PANERA (J. 2			naediateenasti	en en som en helen om kalende kalende kalendere som en som en som en kalende som hande som en som en som en so I de som en s
Approach Delay (s)	9.4	0.0	0.0	ana an		
Approach LOS	A	and a star of a section.		1		
ntersection Summary						
Average Delay			9.4			
Intersection Capacity Utilizat	ion		23.2%	SI - S	U Level o	of Service A
Analysis Period (min)	nananata tani shini shini shikil	er nær som menne i det for før	15	an an an tha an tha tha an tao an		ynn e sennenning a sangerenetin i stelenet het son gemin verste senderfor folklikke gydet skilderet i seles son I
		1917 - MAN		金花 的复数		

Synchro 8 Report Page 8

HCM Unsignalized Intersection Capacity Analysis 21: Main St. & Sherman Rd.

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Movement						SBR		
Lane Configurations			ሻ	*	≜ †₽			
Volume (veh/h)	0	0	11	686	707	15		
Sign Control	Stop			Free	Free			
Grade	0%			0%	0%			nie star startst
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	an a stand and a stand of the stand	and a stated from a subfraction of a second state of the
Hourly flow rate (vph)	0	0	12	746	768	16		
Pedestrians	15				3			
Lane Width (ft)	0.0				12.0			
Walking Speed (ft/s)	4.0				4.0			en en anten en anten
Percent Blockage	0				0		6.6666866666	
Right turn flare (veh)		anan sebaga	9 <i>842234</i> 4	NICE SAME				
Median type Median storage veh)				None	None			
Upstream signal (ft)	esen (* 1973)	59.4 <i>2</i> 772.03		905	321			
pX, platoon unblocked	0.89	0.89	0.89	903	521			
vC, conflicting volume	1191	407	800					
vC1, stage 1 conf vol	IIVI	TUI	000					
vC2, stage 2 conf vol								
vCu, unblocked vol	960	76	519					
tC, single (s)	6.8	6.9	4.1					
tC, 2 stage (s)							00000000000000000000000000000000000000	a na antara ana ana ana ana ana ana ana ana ana
tF (s)	3.5	3.3	2.2		12 3 C .			
p0 queue free %	100	100	99					
cM capacity (veh/h)	222	860	925					
Direction Lanet -								
Volume Total	12	373	373	512	272			
Volume Left	12	0/0	0	0	0			
Volume Right	0	Ő	Ö	Ő	16			
cSH	925	1700	1700	1700	1700			
Volume to Capacity	0.01	0.22	0.22	0.30	0.16			
Queue Length 95th (ft)	1	0	0	0	0	na an a	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	en de la company de la comp
Control Delay (s)	8.9	0.0	0.0	0.0	0.0			
Lane LOS	А							 Consistent concernence de la constant de l en constant de la consta
Approach Delay (s)	0.1	a second		0.0				
Approach LOS								
mensection/Summary								
Average Delay			0.1					
Intersection Capacity Utilizatio	n		23.4%		U Level o	Service	· A	
Analysis Period (min)	an thomailte health		15	ene a ser a se		an a		en son een een en de besternikkerd die
	0489/85-94	8.998						

HCM Unsignalized Intersection Capacity Analysis 22: Main St. & Sherman St.

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Mavement	9969 WB106				ಹಿಕ್ರ	SET
Lane Configurations	Y		† î>			
Volume (veh/h)	1	66	631	6	21	686
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	72	686	7	23	746
Pedestrians	19		3			5
Lane Width (ft)	12.0		12.0			12:0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	- 2	en e	0		nderet de	0
Right turn flare (veh)		NEW SKIMBER	NT-		ATES ET AN	K12221
Median type			None			None
Median storage veh)	***		645		Se	581
Upstream signal (ft) pX, platoon unblocked	0.89		040			001
vC, conflicting volume	1130	370			711	
vC1, stage 1 conf vol	0011	010			<u></u>	
vC2, stage 2 conf vol						
vCu, unblocked vol	905	370			711	
tC, single (s)	6.8	6.9		GA 19 74 2	4.1	
tC, 2 stage (s)					N. S. TANK	
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	88			97	
cM capacity (veh/h)	236	614			870	
Dicedional Cancelland and Cancelland Cancelland	73	457	235	271	497	
Volume Left	, j 1	4J7 0	235	211	4 <i>51</i> 0	
Volume Right	72	0	7	23	0	
cSH	600	1700	1700	870	1700	
Volume to Capacity	0.12	0.27	0.14	0.03	0.29	
Queue Length 95th (ft)	10	0	0	2	0.20	
Control Delay (s)	11.8	0.0	0.0	1.0		
Lane LOS	B			A		
Approach Delay (s)	11.8	0.0		0.4		
Approach LOS	B	000003007007598299	E A STALLANDER STALLEN.	ander all the Article States of the	nerz aszeriettettettettettettettettettettettettett	en om mensen som se se som
mersection Summany						
Average Delay			0.7			
Intersection Capacity Utiliza	ation		0.7 46:8%	INI -		of Service A
Analysis Period (min)			40:0 <i>%</i> 15	JUI	o Level C	A A
rinalysis renou (mm)			IJ			
		A. TAKA	e <i>nter</i> R			

Synchro 8 Report Page 10

HCM Unsignalized Intersection Capacity Analysis 24: Saratoga Ave. & Sherman St.

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Movement		A91358		e Maixe	a sin Lev	SBT
Lane Configurations	Y		þ	10.00000000000000000000000000000000000		
Volume (veh/h)	21	14	176	8	4	139
Sign Control Grade	Stop		Free 0%			Free
Peak Hour Factor	0% 0.92	0.92	0%	0.92	0.92	0% 0.92
Hourly flow rate (vph)	23	0.92	191	0.92	0.92	151
Pedestrians	<u>20</u> 15	10	191 3	3		IUI:
Lane Width (ft)	12.0		12.0			
Walking Speed (ft/s)	4.0		4.0			
Percent Blockage	1		0			
Right turn flare (veh)					a langan kana di dingka kan	en e
Median type			None		1999 - E. S.	None
Median storage veh)						
Upstream signal (ft)	-16-18-19-1 19-18-19-19-19-19-19-19-19-19-19-19-19-19-19-					452
pX, platoon unblocked			ANTIGEN ANTIGEN ANTIGEN		alanian taina dan kaba	
vC, conflicting volume	- 373	211			215	
vC1, stage 1 conf vol		909500500				
vC2, stage 2 conf vol vCu, unblocked vol	373	21 1			215	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	UIT	9.Z				
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	98			100	
cM capacity (veh/h)	616	819			1338	
DirectionAlene#1512657201						
Volume Total	38	200	155			
Volume Left	23	0200	100 4			
Volume Right	15	9	0			
cSH	684	1700	1338			
Volume to Capacity	0.06	0.12	0.00			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	10.6	0.0	0.2			
Lane LOS	B	an nation and a set	Α	ander i Allanae diel van onder en offiniel oorde	and a state of the state of the state of the	
Approach Delay (s)	10.6	0.0	0.2			
Approach LOS	В					
Average Delay			1.1			
Intersection Capacity Utilization	1		21.2%	ICI	J Level o	f Service A
Analysis Period (min)			15	م معرف المحمد والرجمي الروحين		
				976753		

HCM Unsignalized Intersection Capacity Analysis 25: Prince St. & Sherman St.

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ane Configurations V 4 A folume (veh/fi) 8 2 10 16 27 29 gin Control Stop Free Free Free 500 brade 0% 0% 0% 0% 0% ceak Hour Factor 0.92 0.92 0.92 0.92 0.92 cedestrians 16 8 3 3 3 3 cedestrians 16 8 3 3 3 3 valking Speed (f/s) 4.0 4.0 4.0 4.0 4.0 4.0 erecent Blockage 1 11 12.0 12.0 14 4.0 recont Blockage 1 77 7 1 10 5 1 1 Cy atage 2 conf vol 22 100 61 77 2	23. FINCE SL & SI		51.				3/21/201
ane Configurations V 4 Image: state of the state		٨	\mathbf{F}		1	Ļ	4
Odume (ven/h) 8 2 10 16 27 29 ign Control Stop Free State	Movement			avik Biza			BBR
lign Control Stop Free Free Free variade 0% 0% 0% 0% variade 0% 0.92 0	Lane Configurations	¥					
Brade 0% 0% 0% eack Hour Factor 0.92 0.92 0.92 0.92 0.92 vedestrians 16 8 8 8 8 are Width (ft) 12.0 12.0 14.0 14.0 Vedestrians 16 8 8 1 Valking Speed (fts) 4.0 4.0 1 Valking Speed (fts) 4.0 4.0 1 Vedestrians and (ft) X. 1 1 Valking Speed (fts) 4.0 4.0 1 Vedian type None None None Vedian type None None None C, stage 1 conf vol 77 7 7 C1, stage 1 conf vol 110 61 77 C, stage 2 conf vol 7 7 7 Cu, unblocked vol 110 61 77 C(stage 1 conf vol 110 61 77 C(u, unblocked vol 110 61 77 C(u, unblocked vol 110 91 90	Volume (veh/h)	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	2	10	11.54532.2253.8553.525.2552.555	2573756274-554294625	29
leak Hour Factor 0.92 0.92 0.92 0.92 0.92 0.92 louinty flow rate (vph) 9 2 11 20 29 32 velocity flow rate (vph) 12.0 12.0 12.0 12.0 Valking Speed (fits) 4.0 4.0 1 1 recent Blockage 1 1 1 1 1 ledian storage veh) None None None Velockage 1 vigit tum flare (veh) Edian storage veh) None None None Velockage 1 1 V, platoon unblocked C, conflicting volume 110 61 77 C, stage 1 conf vol 22, stage 2 conf vol 22 0 24 1 22 20 0 22 0 24 1 22 0 22 0 24 1 24 10 1 0 10 10 10 10 10 10 10 10 10 10 10	Sign Control				states and a boot to all a second		
lourly flow rate (vph) 9 2 11 20 29 32 redestinas 16 8 ane Widh (ft) 12.0 Valking Speed (ft/s) 4.0 4.0 Valking Speed (ft/s) 4.0 4.0 Valking Speed (ft/s) 4.0 4.0 Valking Speed (ft/s) 4.0 Value (vel) Valking Speed (ft/s) 4.0 Value (vel) Value (vel) (vel) 4.0 Value (vel) (vel) Value (vel) (vel) 4.0 Value (vel) Value (vel) (vel) 4.0 Value (vel) (vel) (vel) (vel) (v	Grade						
edestrians 16 8 ane Widh (ft) 12.0 12.0 Valking Speed (ft/s) 4.0 4.0 recrent Blockage 1 1 tight turn flare (veh) 1 1 fedian storage veh) None None ledian storage veh) Valking Speed (ft/s) 10 // stop 1 conf vol C, conflicting volume 10 61 C2, stage 2 conf vol C, stage 1 conf vol C2, stage 2 conf vol C, stage 1 conf vol C2, stage 2 conf vol C, stage 1 conf vol C2, stage 2 conf vol C2, stage 2 conf vol C4, unblocked vol 110 61 77 C, childer (stage 1 conf vol C2, stage 2 conf vol C2 41 C C C4, unblocked vol 110 61 77 C C2, stage (s)					The second s	a service and the service of the service of	
ane Width (ft) 12.0 12.0 Valking Speed (ft/s) 4.0 4.0 veroent Blockage 1 1 ight turn flare (veh) None None fedian storage veh) None None jøsteam signal (ft) X. pateom signal (ft) X. platoon unblocked C. conflicting volume 10 61 77 C1. stage 1 conf vol C2, stage 2 conf vol C2 41 2.2 stage (s) 7. (s) 6.4 6.2 4.1 2.2 2.1 2.2 2.2 0 queue free % 99 100 99		18947) (Selection all services of these	2	11	-20		32
Valking Speed (ft/s) 4.0 4.0 erecent Blockage 1 1 tight turn flare (veh) None None ledian storage veh) None None /pstream signal (ft) X platoen unblocked C, conflicting volume 110 61 77 C1, stage 1 conf vol C2, stage 2 conf vol Cu, unblocked C2, stage 2 conf vol Cu, unblocked C, conflicting volume 10 C2, stage 2 conf vol Cu, unblocked C, conflicting volume 10 C2, stage 2 conf vol Cu, unblocked C, conflicting volume 10 C2, stage (s) 55 3.3 2.2 0 O queue free % 99 100 99 99 Mcapacity (veh/h) 863 991 1502 Insertionseme###################################				-			
Percent Blockage 1 1 tight tum flare (veh) None None fedian storage veh) None None lpstream signal (ft) X, platoon unblocked C, conflicting volume 10 61 77 C1, stage 1 conf vol C2, stage 2 conf vol C2, stage 2 conf vol C4 10 61 77 C, conflicting volume 10 61 77 C2, stage 2 conf vol C4 41 C2 41 C2 2 stage (s) F F F 50 3.5 3.3 2.2 0 0 queue free % 99 100 99 F		and the state of the					
Itelian type None None Icedian storage veh) pistream signal (ft) X, platoon unblocked C, conflicting volume 110 61 77 C1, stage 1 conf vol C2, stage 2 conf vol C2, stage 2 conf vol C2, stage 2 conf vol C2, stage 2 conf vol 0 64 6.2 4.1 C2, stage (s) 6.4 6.2 4.1 C3, stage (s) 6.4 6.2 4.1 C2, stage (s) 7 7 7 C(s) 3.5 3.3 2.2 0 0 queue free % 99 100 99 Mcapacity (weh/h) 863 991 1502 Mcalicon + mit/fill 11 30 61 Olume Left 9 11 0 0 SH 886 1502 1700 100 Colume Right 2 0 32 10		THE TRUE STORES AND A DOCUMENTS OF				with the ball of the Park Style Park	
Median type None None fedian storage veh) Ipstream signal (ff) X, platoon unblocked C, conflicting volume 10 61 77 C1, stage 1 conf vol 22, stage 2, conf vol 22, stage 2, conf vol Cu, unblocked vol 110 61 77 C, single (s) 6.4 6.2 4.1 C, 2 stage (s)		9.65%) - 1 .6		10 C C C C C C C C C C C C C C C C C C C		1	
Indefinition storage veh) /pstream signal (ft) X, platoon unblocked C; conflicting volume 110 61 77 C1, stage 1 conf vol C2; stage 2 conf vol Cu, unblocked vol 110 61 77 C, stage 2 conf vol Cu, unblocked vol 110 61 77 C, stage (s) 6.4 6.2 4.1 C, 2 stage (s)			unto ostantes	SANTA MATRI			
hystream signal (ft) X, platon unblocked C, conflicting volume 10 61 77 C1, stage 1 conf vol C2, stage 2 conf vol Cu, unblocked vol 110 61 77 C. single (s) 6.4 6.2 4.1 C, 2 stage (s) 5 3.3 2.2 O queue free % 99 100 99 M capacity (veh/h) 863 991 1502 Medition Harber 11 30 61 folume Left 9 11 0 folume Right 2 0 32 SH 886 1502 1700 Oldume to Capacity 0.01 0.04 Dueue Length 95th (ft) 1 1 0 Colume ToElay (s) 9.1 2.7 0.0 ane LOS A A A pproach Delay (s) 9.1 2.7 0.0 approach LOS A A A uersection Summer 1.8 2% ICU Level of Service A				a da serie de la composición de la comp	None	None	
X, platoon unblocked C, conflicting volume 110 61 77 C1, stage 1 conf vol C2, stage 2 conf vol 0 Cu, unblocked vol 110 61 77 C, single (s) 6.4 6.2 4.1 C, 2 stage (s) 5 3.3 2.2 0 quee free % 99 100 99 M capacity (veh/h) 863 991 1502 Neabon Lane# 20 32 32 O quee free % 99 100 99 M capacity (veh/h) 863 991 1502 NBASION Lane# 20 32 32 Olume Total 11 30 61 'olume Left 9 11 0 Olume Kight 2 0 32 SH 886 1502 1700 'olume Longth 95th (ft) 1 1 0 'ontrol Delay (s) 9.1 2.7 0.0 ane LOS A A pproach LOS A A hersectio						942-03-58	
C, conflicting volume 110 61 77 C1, stage 1 conf vol C2, stage 2 conf vol C2, stage 2 conf vol Cu, unblocked vol 110 61 77 Single (s) 6.4 6.2 4.1 C, 2 stage (s)							
C1, stage 1 conf vol C2, stage 2 conf vol Cu, unblocked vol 110 61 77 C, single (s) 6.4 6.2 4.1 C, 2 stage (s) 5 3.3 2.2 C queue free % 99 100 99 M capacity (veh/h) 863 991 1502 Rection Lens # 4 11 30 61 folume Total 11 30 61 folume Right 2 0 32 SH 886 1502 1700 olume to Capacity 0.01 0.04 ueue Length 95th (ft) 1 1 0 control Delay (s) 9.1 2.7 0.0 ane LOS A A pproach Delay (s) 9.1 2.7 0.0 approach LOS A A Hersection Summery 1.8 1.8 tersection Capacity Utilization 18.2% ICU Level of Service A		140	C4	77			
C2, stage 2 conf vol Cu, unblocked vol 110 61 77 C, single (s) 6.4 6.2 4.1 C, 2 stage (s) 3.5 3.3 2.2 0 queue free % 99 100 99 M capacity (veh/h) 863 991 1502 Nicotion lane #22 224/283 NB1 SD1 Jolume Total 11 30 61 Yolume Left 9 11 0 Yolume Right 2 0 32 SH 886 1502 1700 Yolume to Capacity 0.01 0.04 2 Leue Length 95th (ft) 1 1 0 Yontrol Delay (s) 9.1 2.7 0.0 ane LOS A A A pproach LOS A A A tersection Suffmary 1.8 12/7 0.0 tersection Capacity Utilization 18.2% ICU Level of Service A		110	0.1	- 11			
Cu, unblocked vol 110 61 77 C, single (s) 6.4 6.2 4.1 2, 2 stage (s) - - (s) 3.5 3.3 2.2 0 queue free % 99 100 99 M capacity (velv/h) 863 991 1502 Rection Hand # 886 1502 160 folume Total 11 30 61 olume Right 2 0 32 SH 886 1502 1700 colume to Capacity 0.01 0.04 ueue Length 95th (ft) 1 1 0 control Delay (s) 9.1 2.7 0.0 ane LOS A A A pproach LOS A A tersection Capacity Utilization 1.8 100							
C, single (s) 6.4 6.2 4.1 C, 2 stage (s)		110	61	77			
C, 2 stage (s) F (s) 3.5 3.3 2.2 0 queue free % 99 100 99 M capacity (veh/h) 863 991 1502 Methon Hans # 400 (100 (100 (100 (100 (100 (100 (100 (er an all an eine Marken i Scherken war de seu ar branken er fan de mensken werder. Die staar van Grei Allia Chardoo M						
F (s) 3.5 3.3 2.2 0 queue free % 99 100 99 M capacity (veh/h) 863 991 1502 intertion Earles# EB 1 NB 1 581 folume Total 11 30 61 folume Right 2 0 32 SH 886 1502 1700 folume to Capacity 0.01 0.04 Queue Length 95th (ft) 1 1 1 1 0 Aontrol Delay (s) 9.1 2.7 0.0 ane LOS A A A piproach Delay (s) 9.1 2.7 0.0 A A ipproach LOS A A itersection Summery 1.8 verage Delay 1.8 itersection Capacity Utilization 18.2%		V.7	U-Z	1 .1			
0 queue free % 99 100 99 M capacity (veh/h) 863 991 1502 inekton stans Itel (veh/h) 863 991 1502 viewe Total 11 30 61 'olume Left 9 11 0 'olume Right 2 0 32 SH 886 1502 1700 'olume to Capacity 0.01 0.04 Queue Length 95th (ft) 1 1 1 0 0 control Delay (s) 9.1 2.7 opproach Delay (s) 9.1 2.7 opproach LOS A A retresection Stimmary 1.8 verage Delay 1.8 tersection Capacity Utilization 18.2% ICU Level of Service		3.5	3.2	22			
M capacity (veh/h) 863 991 1502 Itection same Itel 3 SD1 folume Total 11 30 61 folume Left 9 11 0 folume Right 2 0 32 SH 886 1502 1700 folume to Capacity 0.01 0.01 0.04 Queue Length 95th (ft) 1 1 0 Control Delay (s) 9.1 2.7 0.0 ane LOS A A pproach LOS A A Itersection Softmany 1.8 1.8 werage Delay 1.8 1CU Level of Service A	n aueue free %	2.5. Color - C					
Inscription Image: Point of the second							
Olume Total 11 30 61 'olume Left 9 11 0 'olume Right 2 0 32 SH 886 1502 1700 'olume to Capacity 0.01 0.04 ueue Length 95th (ft) 1 1 0 control Delay (s) 9.1 2.7 0.0 ane LOS A A ipproach Delay (s) 9.1 2.7 0.0 ipproach LOS A A itersection Summary 1.8 10 itersection Capacity Utilization 18.2% ICU Level of Service A			and a support of the support of the support of the				
Yolume Left 9 11 0 Yolume Right 2 0 32 SH 886 1502 1700 Yolume to Capacity 0.01 0.04 0.04 Queue Length 95th (ft) 1 1 0 Control Delay (s) 9.1 2.7 0.0 ane LOS A A pproach Delay (s) 9.1 2.7 0.0 ane LOS A A pproach Delay (s) 9.1 2.7 0.0 ane LOS A A A verage Delay 1.8 1.8 1.8 ntersection Capacity Utilization 18.2% ICU Level of Service A							
Colume Right 2 0 32 SH 886 1502 1700 Volume to Capacity 0.01 0.04 Queue Length 95th (ft) 1 1 0 Control Delay (s) 9.1 2.7 0.0 ane LOS A A Approach Delay (s) 9.1 2.7 0.0 approach LOS A A Nersection Summery 1 1.8 Nerage Delay 1.8 Itersection Capacity Utilization 18.2% ICU Level of Service A	na furnisésén feljast sítas víszta hutavezi elő el försztélető kitasárá billátás szerzenesi tesztekésés	operation protocol and a second s	eduna and an and the second second				
SH 886 1502 1700 Yolume to Capacity 0.01 0.04 Queue Length 95th (ft) 1 1 0 Control Delay (s) 9.1 2.7 0.0 ane LOS A A Approach Delay (s) 9.1 2.7 0.0 approach LOS A A Itersection Summery 1.8 werage Delay 1.8 Itersection Capacity Utilization 18.2%	A DESCRIPTION OF THE REPORT OF T		no con constantino da seconda se				
Volume to Capacity 0.01 0.04 Queue Length 95th (ft) 1 1 0 Control Delay (s) 9.1 2.7 0.0 ane LOS A A Approach Delay (s) 9.1 2.7 0.0 approach Delay (s) 9.1 2.7 0.0 approach LOS A A Attraction Summery 1 1.8 Attraction Capacity Utilization 18.2% ICU Level of Service A		Carlo Car	antes sources the state	Strates of the second second second			
Dueue Length 95th (ft) 1 1 0 Control Delay (s) 9.1 2.7 0.0 ane LOS A A Approach Delay (s) 9.1 2.7 0.0 pproach Delay (s) 9.1 2.7 0.0 pproach LOS A A ntersection Stimmary 1 1.8 exerage Delay 1.8 ICU Level of Service A	A TELE MARK AND A TELEVISION AND A TELEVISION AND AND A TELEVISION AND A TEL		CONTRACTOR AND	A DATE OF THE POST OF THE ADDRESS			
control Delay (s) 9.1 2.7 0.0 ane LOS A A pproach Delay (s) 9.1 2.7 0.0 pproach LOS A hersection Summary everage Delay 1.8 hersection Capacity Utilization 18.2% ICU Level of Service A		contract interaction and the strategies	eren persenta a para da sensa da se	and the second			
ane LOS A A pproach Delay (s) 9.1 2.7 0.0 pproach LOS A hersection Summary verage Delay 1.8 hersection Capacity Utilization 18:2% ICU Level of Service A							
pproach Delay (s) 9.1 2.7 0.0 pproach LOS A tersection Suffmany verage Delay 1.8 tersection Capacity Utilization 18.2% ICU Level of Service A		metro écono de conso lo reverse	and spanning second	U.U			
A A A A A A A A A A A A A A A A A A A							
ntersection Summary verage Delay 1.8 ntersection Capacity Utilization 18:2% ICU Level of Service A		and the state of the second	Z.189	0.0			
verage Delay 1.8 Itersection Capacity Utilization 18.2% ICU Level of Service A		A					
ntersection Capacity Utilization 18.2% ICU Level of Service A	menseelien Stimmeny						
ntersection Capacity Utilization 18.2% ICU Level of Service A	Average Delay						
		tion		18.2%	ICI	J Level o	f Service A
	Analysis Period (min)			15			
				6 6 6 6	-12:50 -00:00		

Synchro 8 Report Page 12

HCM Unsignalized Intersection Capacity Analysis 27: Highland Ave. & Ogden Ave.

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27: Highland Ave.	& Ogder		9/21/2011									
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Movement				00/ <u>0/2</u> 12-00		a weire			A A A A A A A A A A A A A A A A A A A	8-68-13 1 -8	S S M	() () () ()
Lane Configurations	and a second second second	4Þ	NY Vertexana Karabara		4 þ	anan walaki wana paga	٦	þ		٦	Þ	
Volume (veh/h)	0	1205	24	2	1392	34	2	0	50	<u>.</u>	0	3
Sign Control		Free			Free			Stop			Stop	NN STADA
Grade Peak Hour Factor	0.92	0% 0.92	0.92	0.92	0%	0.00	0.00	0%	0.00	0.00	0%	
Hourly flow rate (vph)	0.92	1310	26	0.92	0.92 1513	0.92 37	0.92 2	0.92 0	0.92 54	0.92 1	0.92 0	9.0 5
Pedestrians	U	2	20	_	1010	- 10	C	6	54		13	
ane Width (ft)		12.0						12.0			12.0	
Valking Speed (ft/s)		4.0						4.0			4.0	382678
Percent Blockage		0						1		6 C 2 S	1	9820
Right turn flare (veh)	n an galangan kan kang di kan kan kan kan kang di kang	anna, arraidh na dhailteanna	1 et anna de décisión e de 1999 et é	an na an a					14931997479737797898989999			
Median type	signiferitig des	None	i de la seconda d Seconda de la seconda de la		FWLTL							
Median storage veh)	n de mante a l'anna anna an	-			2							
Jpstream signal (ft)	60.0 46.26	369					-10 E -15-			000 C		
X, platoon unblocked	an da tanàna amin'ny fisiana dia mampiasa dia ma	an Station American Street and	a completion and constants	0.73		nau contra mente a tra	0.73	0.73	0.73	0.73	0.73	
C, conflicting volume	1563			1342			-2128	2896	674	2258	2891	- 79
/C1, stage 1 conf vol							1329	1329		1549	1549	a an
C2, stage 2 conf vol	4500			700	-506.394		799	1567		709	1342	
Cu, unblocked vol	1563 4.1			730 4.1	169 (SU 67)	918849738	1806 7.5	2858 6.5	0 6.9	1985	2850	79
C, single (s) C, 2 stage (s)	47 U			4.0		99.099.695.60	7.5 6.5	5.5	0.9	7.5 6.5	6.5 5.5	6
F (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3
0 queue free %	100			100			99	100	93	99	100	<u>بر</u> ع
M capacity (veh/h)	414			632			201	141	788	113	142	32
/olume Total	655	681	759	793	2	54	1	36				
olume Left	0	0	2	0	2	0	1	0	and the second secon		théológica a service e a sub-se	
olume Right	0	26	0	37	0	54	0	36				38 <i>9</i> 0
SH	414	1700	632	1700	201	788	113	329	Ser su gene		nimere	00597A
olume to Capacity	0.00	0.40	0.00	0.47	0.01	0.07	0.01	0.11				
lueue Length 95th (ft) ontrol Delay (s)	0 0.0	0 0.0	0 0.1	0 0.0	1 024	6	1	9 17.3			CARANA	MOEKS
ane LOS	0.0	0.0	Second and second s	0.0	23.1 C	9.9	37.1	с 17.3 С				
pproach Delay (s)	0.0		A 0.0		10.4	A	E 17.9	U				6724 i
pproach LOS	0.0		0.0		B		н. э С					
tersection Summary												
verage Delay			0.4									
tersection Capacity Utiliza	tion		51.6%	ICI	J Level of	f Service		1913 - 1918	A	e le la la	5. J. C. A.	
nalysis Period (min)			15			ang a sanang na san gang barang di	an an an star page of South South South South	anan sheka ka sa ta	a oraș în activat de la Cântre Martine (Cântre Cântre Cântre Cântre Cântre Cântre Cântre Cântre Cântre Cântre C	aana (1999), ahaa ta (1983).	en en ser en en en en en en ser se	erentetetetetetetetetetetetetetetetetete
											129 H (S) (S)	

HCM Unsignalized Intersection Capacity Analysis 34: Grant St. & East Parking Lot

9/21/2011

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Movement			8 W BI - 9		2018 6 1 4 <i>1</i> 2	SBR
Lane Configurations		4	þ		¥	
Volume (veh/h)	17	38	.41	0	0	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	41	45	0	0	16
Pedestrians		E MARTINE A				
Lane Width (ft)		9999				
Walking Speed (ft/s)						
Percent Blockage			598, A.U.S.			
Right turn flare (veh)			NI	1212310202		
Median type		None	None			
Median storage veh) Upstream signal (ft)		145				
pX, platoon unblocked		140				
vC, conflicting volume	45				123	45
vC1, stage 1 conf vol	TU				Ιζ	90
vC2, stage 2 conf.vol				2.2.2.3		
vCu, unblocked vol	45				123	45
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)	1564				862	1025
Volume Total	60	45	16			
Volume Left	18 0	0 0	0 16			
Volume Right cSH	1564	1700	1025			
Volume to Capacity	0.01	0.03	0.02			
Queue Length 95th (ft)	1	0.03	0:02 1			
Control Delay (s)	2.3	0.0	8.6			
Lane LOS	A	0.0	0.0 A			
Approach Delay (s)	2.3	0.0	8.6			
Approach LOS			A			
niersection Summary						
Average Delay			2.3			
Intersection Capacity Utiliza	ation	609/80	19.6%	ICI	U Level o	of Service A
Analysis Period (min)			15			

Synchro 8 Report Page 14

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HCM Unsignalized Intersection Capacity Analysis 37: Highland Ave. & East Parking Lot

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Movement			, NBC		T Second					
Lane Configurations	Ŷ			र्स	Þ					
Volume (veh/h)	13	26	0	106	53	0				
Sign Control	Stop	800,000, 000 ,000,000		Free	Free				STREET STELLE	entra antina da cara a
Grade	0%	6.000 M		0%	0%					AM ANTAR AN AN A
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				Ali an
Hourly flow rate (vph)	14	28	0	115	58	0				
Pedestrians							ngor and an in antige group of the same and a		a se na mana da se	
Lane Width (ft)	gale statute	2-53 No.5		92.49 B	19 19 19 19				86 <i>8</i> 6 9	6 6 M A C -
Walking Speed (ft/s)	er men en faartelijk Mensen faand die aan de saartelijk									
Percent Blockage				a dia amin'ny faritr'i An		1997 - 1997 -				
Right turn flare (veh)	e contractor a second				and the second second second					
Median type				None	None			e ligi teginig ng		이 가 봐 봐 안 !
Median storage veh)	n andre miller and see a second of the second		Neurosia da un eta destructura	Marina ana ara-	r to the first to the Ale La Cherry and	N 100 Mart 10 Mart 10 Mart 100 Mart	1. S S March & J		nd F. Mind Hause	
Upstream signal (ft)	in due s a	ta de Reda	960e5 (9).2	ulana di	ede si i	e le les de la	191 (S. 18 1941)			
pX, platoon unblocked					THERE					
vC, conflicting volume	173	58	58							
vC1, stage 1 conf vol							addalard oraș e transferați			
vC2, stage 2 conf vol	470	50	50							
vCu, unblocked vol	173 6.4	58	58			eneralistatika				nimen en son ander menner
tC, single (s)	0.4	6.2	4.1		332X					
tC, 2 stage (s) tF (s)	.3.5	3.3	2.2							
p0 queue free %	3.3 98	97	2.2							
cM capacity (veh/h)	817	1009	1547							
		AND AN AND AN AND AN AND AN AND AN								ndenskonderskover e
Direction Aleme#ic_uccc	EBM									
Volume Total	42	115	58							
Volume Left	14 28	0	0							
Volume Right	28 935	0 1547	0 1700							
Volume to Capacity	935	0.00	0.03			(1922) - <u>1</u> 722				
Queue Length 95th (ft)		0.00 0	0.03							
Control Delay (s)	9.0	0.0	0.0							
Lane LOS	3.0 A	0.0	0.0							
Approach Delay (s)	9.0	0.0	0.0	04343734						
Approach LOS	v. 0 A		v.v							
	73 									
Intersection Summary										
Average Delay			1.8	an internet here and a second		na filma an ann an a		landal en información dominantes	(20.00 0000000000000000000000 00000000000	Construction of Construction of the second
Intersection Capacity Utiliz	ation		15.6%	ICI	J Level of	Service		A	ner Golden (h	
Analysis Period (min)			15		a a a a a a a a a a a a a a a a a a a					
			06775-1949				10,000,000,000			

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Appendix C

Future Capacity Analysis Worksheets



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Traffic Impact Study: Proposed North High School Improvements

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HCM Signalized Intersection Capacity Analysis 26: Main St. & Ogden Ave.

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Vovement	e (5).						(8)8 <u>(8)</u> 8	a di Biran		() () () () () () () () () () () () () (SET.	88) 19
ane Configurations		†ß	an bas that many and more than the	٦	† }	- Kondona and an and an and a state	ሻ	≜î ∳		۲	* *	ĩ
/olume (vph)	547	1300	62	99	906	131	211	726	57	129	269	26
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	190
Fotal Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	3.
ane Util. Factor.	1.00	0.95		1.00	0.95	annan faminan second or canad	1.00	0.95	Narya, 2011 Wei Die 1874 - 1777 - 17	1.00	0.95	1.0
rpb, ped/bikes	1:00	1.00		1.00	1.00	240-01-5	1.00	1.00	-18 B	1.00	1.00	0.9
lpb, ped/bikes	1.00	1.00	en vermen en trebe in desertations	1.00	1.00	5 - 11 AL 18402 MARTING	1.00	1.00	and a state of the second	1.00	1.00	1.0
it .	1.00	0.99		1.00	0.98		1.00	0.99		1.00	1.00	0.8
Fit Protected	0.95	1.00		0.95	1.00	ine and a mean come	0.95	1.00		0.95	1.00	1.0
Satd. Flow (prot)	1770	3515	192 S. 183	1770	3465	San de C	1768	3490	States (Dr.)	1770	3539	157
It Permitted	0.11	1.00		0.12	1.00	an a	0.50	1.00	Zavranska vrsta sveta s	0.12	1.00	1.0
Satd. Flow (perm)	213	3515	2 (S - 1995) 1	233	3465		924	3490		233	3539	157
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.9
\dj. Flow (vph)	595	1413	67	108	985	142	229	789	62	140	292	28
RTOR Reduction (vph)	0	3	0	0	9	0	0	4	0	0	0	3
ane Group Flow (vph)	595	1477	0	108	1118	0	229	847	0	140	292	25
Confl. Peds. (#/hr)	2					2	1		13	13		
Tum Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+o
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4	8		8			2			6		
Actuated Green, G (s)	72.0	59.9		41.1	32.0		44.3	33.3		41.7	32.0	69.
Effective Green, g (s)	72.0	59.9		41.1	32.0		44.3	33.3		41.7	32.0	69.
ctuated g/C Ratio	0.55	0.46		0.32	0.25		0.34	0.26		0.32	0.25	0.5
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0	10.015	3.0	6.0	3.
/ehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.
ane Grp Cap (vph)	561	1620		181	853		386	894		189	871	83
/s Ratio Prot	c0.30	0.42		0.04	c0.32		c0.05	c0.24		c0.06	0.08	0.0
/s Ratio Perm	0.29			0.15			0.15			0.18	19 i - 19 i	0.0
/c Ratio	1.06	0.91		0.60	1.31		0.59	0.95		0.74	0.34	0.30
Jniform Delay, d1	38.5	32.6		- 34.2	49.0		33.1	47.5		35.3	40.3	17.
Progression Factor	0.56	1.02		1.00	1.00		0.66	0.73		1.00	1.00	1.0
ncremental Delay, d2	42.9	3.9		5.2	148.2	exerci d	1.7	15.3		14.4	1.0 //	0.
)elay (s)	64.5	37.2		39.4	197.2		23.4	50.0		49.7	41.3	17.
evel of Service	E	D		D	F.		C	D		D	D	
pproach Delay (s)		45.0			183.4			44.4			33.4	
Approach LOS		D			F	698 Q. Q		. D		2011 (A 16	C	
Itersection Summary ICM Average Control Dela ICM Volume to Capacity ra Actuated Cycle Length (s) Intersection Capacity Utiliza Analysis Period (min) Critical Lane Group	itio	1	76.7 1.05 130.0 05.3% 15	Si	CM Level im of lost U Level o	time (s)			E 15.0 G			

HCM Signalized Intersection Capacity Analysis 28: Saratoga Ave. & Ogden Ave.

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Mevement			e e e e e e e e e e e e e e e e e e e	and stars	2.40/B)		NB			8. SI31. S	~~~331 	S38
Lane Configurations	۲	† ‡		٦	∱ î≽		۲	Þ		٦	4	
Volume (vph)	137	1823	49	38	1283	35	105	41	57	40	17	- 39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	80.0012
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1:00	1.00		1.00	1.00	8	1.00	0.97		1.00	0.96	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.96	1.00		0.97	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.90	
Fit Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd: Flow (prot)	1770	3523		1770	3523		1702	1654		1715	1606	
Fit Permitted	0.10	1.00		0.05	1.00		0.72	1.00		0.68	1.00	
Satd. Flow (perm)	195	3523	한 방송 관계	96	3523		1286	1654		1225	1606	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	149	1982	53	41	1395	38	114	45	62	43	18	42
RTOR Reduction (vph)	0	1	0	0	2	0	0	38	0	0	33	0
Lane Group Flow (vph)	149	2034	Ō	41	1431	0	114	69	0	43	27	0
Confl. Peds. (#/hr)	2	negenitelise en recente canante a conse	1	1	and 1999 and 1999 and 1999 a	2	17		15	15	2000-000 - 000 - 000-000 - 000-000 - 000-000-000-000-000-000-000-000-000-000-000-000-000-000-000-000-000-000-0 1000-000-	17
Tum Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4	nan an ann an	3	8	ternistande filmi de la la secola d'he	000000 1999 - 2 100 a C no Land Ch	2	an a	1999-1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	6	******
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	89.1	80.9		82.5	77.3	2018/2012/2017/2017/2017/2017	28.9	28.9		28.9	28.9	
Effective Green, g (s)	89.1	80.9		82.5	77.3		28.9	28.9		28.9	28.9	
Actuated g/C Ratio	0.69	0.62		0.63	0.59	Presidente fa l'annable d'Annable d'Annable d'Annable d'Annable d'Annable d'Annable d'Annable d'Annable d'Annab	0.22	0.22		0.22	0.22	
Clearance Time (s)	3.0	6.0		3.0	6.0	3.194 M	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	240	2192		128	2095		286	368		272	357	
v/s Ratio Prot	c0.04	c0.58	anta de a tracta antala	0.01	0.41		angewaar van Anderson (1995)	0.04	47 A MARTIN MARTINI AND AND	n Sopra (" of Galantin) - Galantin (Sonra)	0.02	GQMANAJARIAN SOAT
v/s Ratio Perm	0.38			0.19		62-53-584	c0.09			0.04		
v/c Ratio	0.62	0.93		0.32	0.68	nter en tres en rokes en h	0.40	0.19		0.16	0.08	ang shind da nas
Uniform Delay, d1	15.3	21.9		25.3	18.0		43.1	41.0		40.7	40.0	
Progression Factor	1.00	1.00	ana ang kang sang sang sang sa	1.56	0.95	19967 - 2497 - 200	1.00	1.00	enderen de seu Countre	1.00	1.00	. 970. 1978 (978) (98) (98) (98) (98) (98) (98) (98) (9
Incremental Delay, d2	4.9	7.5	630596	0.1	0.1		4.1	1.1		1.2	0.4	
Delay (s)	20.2	29.4	rang da sey kaya da sar	39.4	17.2		47.2	42.1		42.0	40.4	0505666712
Level of Service	С	С		D	В		D	D		D	D	
Approach Delay (s)	en i substanti da faste se <u>ra</u> (1981)	28.8	ara, 2439299(8,9458)	1998-000 (1997), TE - 984 (19	17.9	a may be a san an 67973	seon de un contración.	44.8	anna staipastili	anaan ku katal Web	41.1	and and a second se
Approach LOS	-2-28-2-3-8	<u> </u>			В	634642M		D			D	\$8 80%
		en anter anter a n de la composition anter		oransi shi chi dathi	anna an taon 200			anan ing ta dikin			noest i ei ettetile.	ana ang ang ang ang ang ang ang ang ang
mersenion/Sammany												
HCM Average Control Del			26.0	H(CM Level	of Servic	e		C		88.978	
HCM Volume to Capacity r	atio		0.75		enterna entre consta			ani an ann an	Seascond Responsibility	eessa an an taraan a		vaalastetta tara

Sum of lost time (s) ICU Level of Service

130.0

82.0%

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Intersection Capacity Utilization Analysis Period (min)

c Critical Lane Group

Actuated Cycle Length (s)

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HCM Signalized Intersection Capacity Analysis 31: Main St. & Grant St.

10/3/2011

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Movement	ON AVELS	a Wielka		MARKS.			
Lane Configurations	À		≜ †⊅			ৰা	
Volume (vph)	48	60	1024	69	26	384	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.0	er en de la	6.0		alde (ge istor	6.0	
Lane Util. Factor	1.00		0.95			0.95	
Frt	0.93		0.99			1.00	
Flt Protected	0.98		1.00			1.00	
Satd. Flow (prot)	1686		3506	e gere s	1997, 2017, 201	3528	8.999
Flt Permitted	0.98		1.00			0.78	
Satd. Flow (perm)	1686	a see s	3506			2777	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	52	65	1113	75	28	417	9419/292 9
RTOR Reduction (vph)	59	0	7	0	0	0	
Lane Group Flow (vph)	58	0	1.181	0	0	445	14 - E. S. S.
Tum Type	NA		NA		Perm	NA	
Protected Phases	8		2			6	
Permitted Phases	- Constantine Color Ser Maderal		1940-069 Northweiter	997 948 - 260 A. 667 944 25 26	6	eline neriekte finne teoria	6.967.97.062.67.67.67.67.6
Actuated Green, G (s)	5.8	(engelsen)	27.2			27.2	
Effective Green, g (s)	5.8		27.2		t se prime de la calificación L	27.2	989533554A665
Actuated g/C Ratio	0.09		0.42			0.42	
Clearance Time (s)	6.0	ana a destas de caberdeso	6.0	********	alaanaa cachara marada yo	6.0	konna antara kara
Vehicle Extension (s)	3.0		3.0			3.0	
Lane Grp Cap (vph)	150		1467		ang ang algo pangang ang ang ang ang	1162	July and Longer Construction
v/s Ratio Prot	c0.03		c0.34				
v/s Ratio Perm	6899485674555555586948	******	and an	999999999999999999999999999999999999999		0.16	
v/c Ratio	0.39		0.81			0.38	
Uniform Delay, d1	27.9		16.6			13.1	
Progression Factor	1.00		1.00			0.95	Selle Ro
Incremental Delay, d2	1.6		4.8	alle Stellen te bried		0.9	1823-18793 (1825-18
Delay (s)	29.6	0.850.9	21.4			13.3	
_evel of Service	C		C	88.000.400.709		B	
Approach Delay (s)	29.6	en an Asia	21.4			13.3	
Approach LOS	C		<u>с</u>			B	
ntersection Sumpary	Ŭ		U U			Ľ	
HCM Average Control Delay			19.9	H	CM Level	of Service	
HCM Volume to Capacity rati	ō 👘	2 2 2 2	0.73				
Actuated Cycle Length (s)		1949 - 1940 - 1974 - 1974 - 1974 - 1974 - 1974 - 1974 - 1974 - 1974 - 1974 - 1974 - 1974 - 1974 - 1974 - 1974 -	65.0		im of lost		
Intersection Capacity Utilizati	on		46.8%	IC	U Level o	f Service	
Analysis Period (min)		na na dina amin'na amin'ny sarah	15				
c Critical Lane Group			re 33.	6 10 10 4			54 (D. 186)

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HCM Unsignalized Intersection Capacity Analysis 5: Prince St. & Ogden Ave.

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Movement			A 15	A A B L		
Lane Configurations	<u>†þ</u>		4	^	Y	
Volume (veh/h)	1907	15	20	1360	3	8
Sign Control	Free			Free	Stop	CALLER COMP.
Grade	0%			0%	0%	A 00
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2073	16	22	1478	3	9
Pedestrians	13 12.0			12 12.0	2 12.0	
Lane Width (ft)	4.0			4.0	4.0	
Walking Speed (ft/s) Percent Blockage	4.0 1			4.U 1	4.0	e geografik
Right turn flare (veh)					eestense V ool	
Median type	None	s is and		TWLTL		
Median storage veh)				2	0.194801.789\$ 	942-83-6-6-8-8 1
Upstream signal (ft)	320	8892		673		
pX, platoon unblocked		aartees Hessellik	0.42	enederitettet de Tacille II.	0.54	0.42
vC, conflicting volume			2091		2879	1059
vC1, stage 1 conf vol	n telsterne denne telsten versterne forsterne det	an far an		5442.47444444444444444444	2083	
vC2, stage 2 conf vol					796	
vCu, unblocked vol			836		803	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)	and and the second s	-		-down-Witherford (1000/7323)-	5.8	
tF (s)			2.2	45 Beerland	3.5	3.3
p0 queue free %			93		98	98
cM capacity (veh/h)			333		162	450
Elines of long the first of the long					NV:NV:	
Volume Total	1382	707	22	739	739	12
Volume Left	0	0	22	0	0	3
Volume Right	0	16	0	0	0	9
cSH	1700	1700	333	1700	1700	303
Volume to Capacity	0.81	0.42	0.07	0.43	0.43	0.04
Queue Length 95th (ft)	0	0	5	0	0	3
Control Delay (s)	0.0	0.0	16.6	0.0	0.0	17.4
Lane LOS	A 6		C o o			C 17.4
Approach Delay (s)	0.0		0.2			17.4 C
Approach LOS						U U
intersection/Sammary/222						
Average Delay			0.2			1100-/11-00-224*/770-00
Intersection Capacity Utiliz	zation		66.5%	IC	U Level o	of Service
Analysis Period (min)	and the second	a a a a a a a a a a a a a a a a a a a	15		reregen a literatur al antari	
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HCM Unsignalized Intersection Capacity Analysis 9: Main St. & Lincoln St.

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Movement			B ERKS		AWE T					6. SD182		
Lane Configurations		ф	hided and discourse a speed with the firm		4	i d'Allandi, Banadi Pinadat dina		4î»			đħ	
Volume (veh/h)	23	13	-16	1	10	14	20	972	. 11	7	386	39
Sign Control		Stop	aliantelles enclasses	a wata wata ang sa sa ma	Stop	*****	an generation and a second of	Free			Free	Server The Control of a
Grade		0%			0%			0%		19 Q (S) (S)	0%	
Peak Hour Factor	0.92 25	0.92 14	0.92 17	0.92	0.92 11	0.92 15	0.92 22	0.92 1057	0.92 12	0.92 8	0.92 420	0.92 42
Hourly flow rate (vph) Pedestrians	ZJ	14 7	17	State Les	8 8	ાગ	- <u>-</u>	1037	12	0	420	42
Lane Width (ft)		12.0			12.0						e û seres	6.646
Walking Speed (ft/s)		4.0			4.0					quality in the later later		
Percent Blockage		1			1							
Right turn flare (veh)	in the Alastan Alastan		and and the second						antanana kao mpika mpika			arrant.com
Median type		ageca aya						None			None	
Median storage veh) Upstream signal (ft)											658	
pX, platoon unblocked	0.99	0.99	0.99	0.99	0.99		0.99	1999 (Br. 19	C. SHE 93		000	8849473
vC, conflicting volume	1055	1583	238	1363	1598	542	469			1076		
vC1, stage 1 conf vol		an an tha tha an tha		1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999	1990,000,000,000,000,000,000,000,000,000						RAN SELVER SALAS IN	962379398793 ₉₉
vC2, stage 2 conf vol								See a				
vCu, unblocked vol	1036	1569	210	1347	1584	542	444			1076		Servitusus II
tC, single (s)	7.5	6.5	6.9	7,5	6.5	6.9	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 %	84	4.0 86	98	99	4.0 89	97	98			<u>2.2</u> 99		
cM capacity (veh/h)	157	104	783	91	102	481	1095			639		
Volume Total	57	27	550	540	217	252						
Volume Left	25	1	22	0	8	0					1992,229,229,229,229,229	
Volume Right	17	15	0	12	0	42					ang aga an	
cSH	178	181	1095	1700	639	1700		1052-000-000-0000-0000-0000			n addren a far an	vasterstar (2001
Volume to Capacity	0.32	0.15	0.02	0.32	0.01	0.15				arait a a	i da Collec	
Queue Length 95th (ft)	32	13	2 0.6	0	1 0.5	0 0.0						- Maria da
Control Delay (s) Lane LOS	34.3 D	28.4 D	0.0 A	0.0	0:0 A	0.0						
Approach Delay (s)	34.3	28.4	0.3		0.2							
Approach LOS	D	D	99999 9999 9999						999999997999999	an an ann an		65686789300
Intersection Summary												
Average Delay			1.9									
Intersection Capacity Utilizati	on		57.8%		ULevelo	f Service			В			
Analysis Period (min)		n an tha	15			a de la caractería de la caractería			LASKA A	elinen an an		2326669922)

North HS 10/3/2011 Future AM Peak Hour

Synchro 8 Report Page 2

10/3/2011

HCM Unsignalized Intersection Capacity Analysis 15: Saratoga Ave. & Grant St.

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15: Saratoga Ave.	& Grant	St.	•		,						10/	3/2011
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Mexementeerseesseessee										<u>angalan</u>		
Lane Configurations		4			4			4	0106000000000000000000		4	9-020820/13670/h
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	15	8	41	21	23	23	158	8	19	47	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0:92	0.92	0.92	0.92
Hourly flow rate (vph)	27	16	9	45	23	25	25	172	9	21	51	50
Directional and a second			1913 IV									
Volume Total (vph)	52	92	205	122								
Volume Left (vph)	27	45	25	21								
Volume Right (vph)	9	25	9	50								
Hadj (s)	0.04	-0.03	0.03	-0.18		1999 (M. 1997) 1997 - 1997 (M. 1997)						
Departure Headway (s)	4.8	4.7	4.4	4.3			11 - 11 - 11 - 11 - 11 - 11 - 11 - 11		10007			
Degree Utilization, x	0.07	0.12	0.25	0.15			din dir dir	9 (C.976)	di se de l	6 20 20 20	-9749-987	
Capacity (veh/h)	686	709	782	789		ananan an	• by a supply out of the	rational statements where the statement	מיני המיני איני איני איני איני איני איני	nanan arta da anta anta anta anta anta	Webury Theory I was a second	
Control Delay (s)	8.2	8.3	8.9	8.0								
Approach Delay (s)	8.2	8.3	8.9	8.0								
Approach LOS	A	A	A	A								
NING COMPANY AND COMPANY	100100-00	8 G G B										
Delay			8.5									
HCM Level of Service			A	nnan interesti teresti della con		an oo kasana ahaana	second control controls		-energy Societist Classics	***************************************		neondaithe Produits
Intersection Capacity Utiliza	tion		30.1%	IC	U Level of	Service			A			
Analysis Period (min)	ana anan- 4140 2604446 baay 2020 200-2		15			a a ser a a sin a de la constat d'écologie			an an an an Anna an An			nna haanaa ka
			0. C.			94575 946 - U						

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North HS 10/3/2011 Future AM Peak Hour

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HCM Unsignalized Intersection Capacity Analysis 16: Prince St. & Grant St.

10/3/2011

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Mexemenia	(//in alle///	astrikasi.		es la tose		SBR
Lane Configurations	۲f			र्स	₽	
Sign Control	Stop			Stop	Stop	
Volume (vph)	0	53	80	9	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	58	87	10	0	1
orents dere de service			s spann			
Volume Total (vph)	58	97	1			· · · · · · · · ·
Volume Left (vph)	0	87	0			
Volume Right (vph)	58	0	1			
Hadj (s)	-0.57	0.21	-0.57			
Departure Headway (s)	3.6	4.2	3.5	12 million and desired the support of the	an incas, altra mainte francas	
Degree Utilization, x	0.06	0.11	0.00			
Capacity (veh/h)	982	831	990	Net Market and a state of the		
Control Delay (s)	6.8	7.8	6.5			
Approach Delay (s)	6.8	7.8	6.5			
Approach LOS	A	A	A			
intersection sommerse and			sala da da	a (2-2) k		
Delay			7.4			
HCM Level of Service		The second se	A			ne en en man en
Intersection Capacity Utilization	1		21.6%	ICI	J Level o	of Service A
Analysis Period (min)			15			
		Constant States				

53 1 Real Contraction Sector 200 Sub- Colorado 2 to the children of the factor 1 1

HCM Unsignalized Intersection Capacity Analysis 18: Highland Ave. & Grant St.

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Grant	St.									10/	/3/201
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	Contraction Contraction Contraction						Part of the state				
AND A REAL PORT OF THE REAL PORT	CHICK MANDAGENET TAKING SHOP	6	15	The second s	and the second se	14	where we are the state of the s	8	35		-
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1766544-1645-05-5665-005-	-18:00.0.0.0.0.00.00.00.00.00.00.00.00.00.0	and the second		Contraction (Contraction Constraints)	1000000,000,00000000000000000000000000	0.92	and the second states of the	N1550-XCM10042-XCM17043	0.92
52	21	7	16	79	130	15	120	9	38	24	8
			i sen di								
79	226	143	70								
52	16	15	38								
7	130	9	8					1999 1999 1999 1999 1999 1999 1999 199	na h o an thaite Danis (hip a Danis) an	404.2010 500.000 5470.000.000.00	
0.12	-0.30	0.02	0.08								
4.8	4.2	4.7	4.9								
0.11	0.27	0.19	0.09	\$. A. S.	2.01.01	2.89	9 (St. 17. 18)	0. 9 GA	e conte de	(m)	
696	804	CONTRACTOR AND	2000 CONTRACTOR DATA		ter a blann daen dae fan besker an anner da	and the sector of the					
ERANGERATION (PRESSA)	energy active the second of the	and the second second second second	Second Property and the South States								
A REAL PROPERTY OF COMPANY AND	TAXABLE MALE AND ADDRESS			and the second						Manharationale association	2000-000 MILLION 60
A	A	A	A								
		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -									
		8.7									
	and a second	A			anna an tha dallar ta chailte tha dallar an tha	ar an an an Anna an Ann			er er forste son en	non-paratol i gibiçistin e saştayağılar "dağı	ana di stata da angana (
n		37.7%	ICI	J Level o	f Service			A		1999-1997	
		15									
	48 0.92 52 79 52 7 0.12 4.8 0.11 696 8.4 8.4 8.4 A	Stop           48         19           0.92         0.92           52         21           48         0.92           52         21           48         0.92           52         16           7         130           0.12         -0.30           4.8         4.2           0.11         0.27           696         804           8.4         8.8           8.4         8.8           A         A	Hele       Hele       Hele         Stop	Here         Here         Here         Web           Stop         Stop         15 $0.92$ $0.92$ $0.92$ $0.92$ $0.92$ $0.92$ $0.92$ $0.92$ $0.92$ $52$ $21$ $7$ $16$ Her         ME         ME         SE 1 $7$ $16$ $15$ $38$ $7$ $130$ $9$ $8$ $0.12$ $0.30$ $0.02$ $0.08$ $4.8$ $4.2$ $4.7$ $4.9$ $0.11$ $0.27$ $0.19$ $0.09$ $696$ $804$ $716$ $681$ $8.4$ $8.8$ $8.8$ $8.4$ $8.4$ $8.8$ $8.4$ $8.7$ $A$	Here       Here       Here       Mere       Mere         Stop       Stop       Stop         48       19       6       15       73 $0.92$ $0.92$ $0.92$ $0.92$ $0.92$ $0.92$ 52       21       7       16       79         Here       Mere       Stop       Stop         79       226       143       70         52       16       15       38         7       130       9       8 $0.12$ $0.30$ $0.02$ $0.08$ 4.8       4.2       4.7       4.9 $0.11$ $0.27$ $0.19$ $0.09$ 696       804       716       681         8.4       8.8       8.8       8.4         8.4       8.8       8.8       8.4         A       A       A       A         Mathematical Additional Additiona	Here       Here       Here       AVBIN       A	Here       Left       WB2       WB2       WB2       WB2       MB2       MB2 $\bullet$ Stop       Stop       Stop       120       14         0.92       0.92       0.92       0.92       0.92       0.92       0.92         52       21       7       16       79       130       15         P1       ME4       SE1       SE1       SE1       SE1         79       226       143       70       52       16       15       38         7       130       9       8       38       38       38       38       38         7       130       9       8       38       38       38       38       38       39       37       30       15       38       39       37       30       10       37.7%       109       0.09       696       804       716       681       38       38       34       34       37       37.7%       1CU Level of Service       37.7%       1CU Level of Service       37.7%       1CU Level of Service       37       37.7%       1CU Level of Service       37       16       16       16       16       16       16       16 <td>A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A</td> <td>Indext       CER       WEG       WEG       WEG       WEG       MEG       MEG       MER</td> <td>Heil       Heil       Heil       Weil       NEL       NH1       NHR       SBE</td> <td>Here       Here       Net       Nee       Nee       Nee       See       <t< td=""></t<></td>	A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A	Indext       CER       WEG       WEG       WEG       WEG       MEG       MEG       MER	Heil       Heil       Heil       Weil       NEL       NH1       NHR       SBE	Here       Here       Net       Nee       Nee       Nee       See       See <t< td=""></t<>

Synchro 8 Report Page 5 HCM Unsignalized Intersection Capacity Analysis 20: Prince St. & Sherman Rd.

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Sector Sector

NO. 1.20M

P. C. S. C.

Momental case         Value		4	×.	1	*	*	Ļ
Volume (venh)       19       8       3       0       0       35         Sign Control       Stop       Free       Free       Free       Greade       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0%       0% <th>Mavement</th> <th>a a wisi a</th> <th></th> <th>av gližba se</th> <th></th> <th></th> <th>GBT</th>	Mavement	a a wisi a		av gližba se			GBT
Sign Control         Stop         Free         Free           Grade         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0%         0% <td>Lane Configurations</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Lane Configurations						
Grade         0%         0%         0%           Peak Hour Factor         0.92         0.92         0.92         0.92         0.92           Hourly flow rate (wh)         21         9         3         0         0         38           Pedestrians         45         3		200420340306666662726.004466663466	8	101000000000000000000000000000000000000	0	0	- Construction of the second description of the second description of the second br>second second s second second br>second second sec
Peak Hour Factor       0.92       0.92       0.92       0.92       0.92         Hourly flow rate (vph)       21       9       3       0       0       38         Pedestrians       45       3       3       3       3         Lane Width (ft)       12.0       12.0       Waking Speed (ft/s)       4.0       4.0         Percent Blockage       4       0       Right turn flare (veh)       Median storage veh)       Visiteam signal (ft)         Py, platoon unblocked       VC, conflicting volume       89       48       48         VC1, stage 1 conf vol       VC, stage 2 conf vol       VC, unblocked vol       89       48         VC2, stage 2 conf vol       VC2, unblocked vol       89       48       48         VC3, stage 1 conf vol       VC2, unblocked vol       89       48       48         VC2, stage 2 conf vol       VC2, stage (s)       5       3.3       2.2         If (s)       3.5       3.3       2.2       100       2.2         Volume ree %       98       99       100       2.4       2.4       2.4       2.4       2.4       2.4       2.4       2.4       2.4       2.4       2.4       2.4       2.4       2.4							
Hourly flow rate (vph)     21     9     3     0     38       Pedestrians     45     3       Lane Width (ft)     12.0     12.0       Walking Speed (ft/s)     4.0     4.0       Percent Blockage     4     0       Right turn flare (veh)     Median storage veh)     None       Median storage veh)     Vistream signal (ft)     PX, platon unblocked       VC2, stage 1 conf vol     VC2, stage 2 conf vol     VC2, stage 2 conf vol       VC2, stage 2 conf vol     VC2, stage 2 conf vol     VC2, stage 2 conf vol       VC2, stage 2 conf vol     89     48     48       US, gisto nublocked vol     89     48     48       VC3, stage 2 conf vol     VC2, stage 2 conf vol     VC2, stage 2 conf vol       VC4, stage 1 conf vol     V64     48     48       US, gisto 1 conf vol     VC2, stage 2 conf vol     VC2, stage 2 conf vol       VC1, stage 1 conf vol     89     48     48       U2, stage 2 conf vol     VC2, stage 2 conf vol     VC2, stage 2 conf vol       VC2, stage (s)     Ff (s)     3.5     3.3     2.2       p0 queue free %     98     99     100     20       Volume Total     29     3.8     20     20       Volume Right     9     0							
Pedestrians         45         3           Lane Width (ff)         12.0         12.0           Walking Speed (ft/s)         4.0         4.0           Percent Blockage         4         0           Right tum flare (veh)         None         None           Median storage veh)         None         None           Upstream signal (ft)         pX, platon unblocked         VC conflicting volume         89         48           vC1, stage 1 conf vol         VC2, stage 2 conf vol         VC         VC1, stage 1 conf vol         VC2, stage 2 conf vol           VC2, stage 2 conf vol         VC4, unblocked vol         89         48         48           VC2, stage 2 conf vol         VC4, unblocked vol         89         48         48           VC2, stage 2 conf vol         VC4, unblocked vol         89         48         48           VC2, stage 2 conf vol         VC4, unblocked vol         89         48         48           VC2, stage 2 conf vol         VC4         53.3.3         2.2         p0 queue free %         98         99         100           CM capacity (veh/h)         875         982         1500         90         100         20         20         20         20         20         20<	THE REPORT OF A DESCRIPTION OF A DESCRIP		COMPANY OF THE OWNER OF THE OWNER	THE REPORT OF A DAMAGE AND A	na mananana kata kata kata kata kata kata ka	and a second	
Lane Width (ft)       12.0       12.0         Walking Speed (ft/s)       4.0       4.0         Percent Blockage       4       0         Right turn flare (veh)       None       None         Median storage veh)       None       None         Dystream signal (ft)       pX, platon unblocked       VC: conflicting volume       89       48       48         vC2, stage 1 conf vol       VCL,			y y	ana nasima na na kana na	0	. U	38
Walking Speed (fr/s)       4.0       4.0         Percent Blockage       4       0         Right turn flare (veh)       More       None         Median storage veh)       Upstream signal (ft)       PX         pX, platoon unblocked       vC; conflicting volume       89       48         vC1, stage 1 conf vol       vC, stage 2 conf vol       vC, stage 2 conf vol         vC2, unblocked vol       89       48       48         VC1, stage 1 conf vol       vC, stage 2 conf vol       vC, stage 2 conf vol         vC2, unblocked vol       89       48       48         VC, single (s)       6.4       6.2       4.1         tC, 2 stage (s)       T       T       T         tF (s)       3.5       3.3       2.2         p0 queue free %       98       99       100         ckd capacity (veh/h)       875       982       1500         Draction bare       VA 1       VH 1       SE4         Volume Total       29       3       38         Volume Efight       9       0       0         Volume to Capacity       0.3       0       0         Volume to Capacity       0.3       0       0	a service based a second control of the base work whether to be during the based of the based		Santa Santa				
Percent Blockage       4       0         Right tum flare (veh)       None       None         Median storage veh)       Upstream signal (ft)       PX, platcon unblocked         vC, conflicting volume       89       48       48         vC1, stage 1 conf vol       VC2, stage 2 conf vol       VC2, stage 2 conf vol         vC2, stage 2 conf vol       VC2, unblocked vol       89       48       48         VC3, stage 3 conf vol       VC2, unblocked vol       89       48       48         VC1, stage (s)       6.4       6.2       4.1       10       10         rK (s) angle (s)       875       982       1500       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100		and the second stranger and the second stranger of the second second second second second second second second		and the second state of th			
Right turn flare (veh)       None       None       None         Median storage veh)       Upstream signal (ft)           yZ, platoon unblocked       vC; conflicting volume       89       48       48         vC1, stage 1 conf vol       vC2, stage 2 conf vol           vC2, stage 2 conf vol       vC1, stage 1 conf vol           vC1, stage 1 conf vol       89       48       48         tC, single (s)       6.4       6.2       4.1         tC, single (s)       3.5       3.3       2.2         p0 queue free %       98       99       100         cM capacity (veh/h)       875       982       1500         Drestion Labe       VH       VH       SH       48         Volume Total       29       3       38       48         Volume Right       9       0       0       25H       90         Volume Right       9       0       0       25H       200       20         Queue Length 95th (ft)       3       0       0       20       20       20       20         Queue Length 95th (ft)       3       0       0       20       20       20			1993 - B.Y.			719-72 S	
Median type         None         None           Median storage veh)         Upstream signal (ft)         PX, platoon unblocked           vC; conflicting volume         89         48         48           vC1, stage 1 conf vol         vC2, stage 2 conf vol         vC2, stage 2 conf vol           vC2, unblocked vol         89         48         48           tC, single (s)         6.4         6.2         4.1           tC, stage 2 (s)         tf (s)         3.5         3.3         2.2           p0 queue free %         98         99         100         cdk         cdk           vGM capacity (veh/h)         87.5         98.2         1500         median term         Volume Total         29         3         38         Volume Total         29         3         38         Volume Right         9         0         0         cs         SH         90.4         1700         Volume term         Volume Right         3         0         0         cs         cs         cs         cs				<b>Y</b> /8-			
Median storage veh)       Upstream signal (ft)         pX, platoon unblocked       xC, conflicting volume       89       48       48         vC1, stage 1 conf vol       vC2, stage 2 conf vol       vC4, unblocked vol       89       48       48         vC1, stage 1 conf vol       vC2, stage 2 conf vol       vC4, unblocked vol       89       48       48         vC1, stage (s)       6.4       6.2       4.1       4.1       4.1       4.1         tC, 2 stage (s)		, <b>1</b> 70-1703	<u>()</u>	None			None
Upstream signal (ft)       pX, platon unblocked         vC1, stage 1 conf vol       vC2, stage 2 conf vol         vC2, stage 2 conf vol       vC4, unblocked vol         vC2, stage 1 conf vol       vC4, unblocked vol         vC2, stage 1 conf vol       vC4, unblocked vol         vC2, stage 2 conf vol       vC4, unblocked vol         vC2, stage 2 conf vol       vC4, unblocked vol         vC2, stage (s)       6.4       6.2         tf (s)       3.5       3.3       2.2         D queue free %       98       99       100         cM capacity (veh/h)       875       982       1500         Dression Lane       VH M       NH M       SH M       SH M         Volume Total       29       3       38       Volume Right       9       0       0         Volume Right       9       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0 <td< td=""><td></td><td>he an albah has na Fas history</td><td>954 : 145: 5638×</td><td></td><td>ninina (hina dalaman)</td><td>ar faladi jeran kasta</td><td>ni an /td></td<>		he an albah has na Fas history	954 : 145: 5638×		ninina (hina dalaman)	ar faladi jeran kasta	ni an
vC; conflicting volume     89     48     48       vC1, stage 1 conf vol     vC2, stage 2 conf vol     vCu, unblocked vol     89     48       vCu, unblocked vol     89     48     48       tC, single (s)     6.4     6.2     4.1       tC, 2 stage (s)			an Carlonadh		an An An Alasa		
vC1, stage 1 conf vol         vC2, stage 2 conf vol         vCu, unblocked vol       89       48       48         tC, single (s)       6.4       6.2       4.1         tC, 2 stage (s)       1       1       1         tF (s)       3.5       3.3       2.2         p0 queue free %       98       99       100         cM capacity (veh/h)       875       982       1500         Discrition faile #       VB 10       NB 10       9B 4         Volume Total       29       3       38         Volume Left       21       0       0         CSH       904       1700       1700         Volume to Capacity       0.03       0.00       0.02         Queue Length 95th (ft)       3       0       0         Control Delay (s)       9.1       0.0       0.0         Lane LOS       A       A         Approach LOS       A       A         Average Delay       3.8       3.8	pX, platoon unblocked						
vC2, stage 2 conf vol       vCu, unblocked vol       89       48       48         tC, single (s)       6.4       6.2       4.1         tC, 2 stage (s)       tF (s)       3.5       3.3       2.2         p0 queue free %       98       99       100         cM capacity (veh/h)       875       982       1500         Directional and #       4VB #       NB #       989         Volume Total       29       3       38         Volume Total       29       3       38         Volume Right       9       0       0         cSH       904       1700       1700         Volume to Capacity       0.03       0.00       0.02         Queue Length 95th (ft)       3       0       0         Control Delay (s)       9.1       0.0       0.0         Lane LOS       A       A         Approach LOS       A       A         Intersection Summary       3.8		89	48			48	
vCu, unblocked vol     89     48     48       tC, single (s)     6.4     6.2     4.1       tC, 2 stage (s)     1     1       tF (s)     3.5     3.3     2.2       p0 queue free %     98     99     100       cM capacity (veh/h)     875     982     1500       Decetion and #     VB #     NH #     SH #       Volume Total     29     3     38       Volume Left     21     0     0       Volume Right     9     0     0       CSH     904     1700     1700       Volume to Capacity     0.03     0.00     0.02       Queue Length 95th (ft)     3     0     0       Control Delay (s)     9.1     0.0     0.0       Lane LOS     A     A       Approach LOS     A     A       Approach LOS     A     A       Average Delay     3.8							
tC, single (s)       6.4       6.2       4.1         tC, 2 stage (s)       1       1         tF (s)       3.5       3.3       2.2         p0 queue free %       98       99       100         cM capacity (veh/h)       875       982       1500         prection table #       VB #       NB #       SEM         Volume Total       29       3       38         Volume Left       21       0       0         Volume Right       9       0       0         cSH       904       1700       1700         Volume to Capacity       0.03       0.00       0.02         Queue Length 95th (ft)       3       0       0         Control Delay (s)       9.1       0.0       0.0         Lare LOS       A       Approach Delay (s)       9.1       0.0         Approach LOS       A       A       Approach LOS       A         Average Delay       3.8       3.8       4.8							
tC, 2 stage (s)         tF (s)       3.5       3.3       2.2         p0 queue free %       98       99       100         cM capacity (veh/h)       875       982       1500         Direction trans #       VM 11       SB4       Velume Total       29       3       38         Volume Total       29       3       38       Volume Total       29       3       38         Volume Endt       21       0       0       0       0       0       0         Volume Right       9       0       0       0       0       0       0       0         Volume to Capacity       0.03       0.00       0.02       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
tF (s)       3.5       3.3       2.2         p0 queue free %       98       99       100         cM capacity (veh/h)       875       982       1500         Drection lane #       VB ff       NH ff       SH ff         Volume Total       29       3       38         Volume Left       21       0       0         Volume Right       9       0       0         CSH       904       1700       1700         Volume to Capacity       0.03       0.00       0.02         Queue Length 95th (ft)       3       0       0         Control Delay (s)       9.1       0.0       0.0         Lane LOS       A       Approach Delay (s)       9.1       0.0         Approach LOS       A       A       Average Delay       3.8		6.4	6.2			4,1	
p0 queue free %       98       99       100         cM capacity (veh/h)       875       982       1500         Direction states#       WBIN       NBIN       SBIN         Volume Total       29       3       38         Volume Left       21       0       0         Volume Right       9       0       0         cSH       904       1700       1700         Volume to Capacity       0.03       0.00       0.02         Queue Length 95th (ft)       3       0       0         Control Delay (s)       9.1       0.0       0.0         Lane LOS       A       Approach Delay (s)       9.1       0.0         Approach LOS       A       A       Approach LOS       A         Average Delay       3.8       3.8       3.8			<u></u>			<u> </u>	
cM capacity (veh/h)         875         982         1500           Direction Lefter         VB II         NH II         SH II           Volume Total         29         3         38           Volume Left         21         0         0           Volume Right         9         0         0           cSH         904         1700         1700           Volume to Capacity         0.03         0.00         0.02           Queue Length 95th (ft)         3         0         0           Control Delay (s)         9.1         0.0         0.0           Lane LOS         A         Approach Delay (s)         9.1         0.0           Approach LOS         A         A         Average Delay         3.8		Card Hard Card Allow Marks Star Street Street				Surgent and an and a straight of the	
Dreation Lane //         VB //         VE //         SE//           Volume Total         29         3         38           Volume Left         21         0         0           Volume Right         9         0         0           CSH         904         1700         1700           Volume to Capacity         0.03         0.00         0.02           Queue Length 95th (ft)         3         0         0           Control Delay (s)         9.1         0.0         0.0           Lane LOS         A         Approach Delay (s)         9.1         0.0           Approach LOS         A         A         Approach LOS         A           Average Delay         3.8         3.8         3.8							
Volume Total         29         3         38           Volume Left         21         0         0           Volume Right         9         0         0           cSH         904         1700         1700           Volume to Capacity         0:03         0:00         0:02           Queue Length 95th (ft)         3         0         0           Control Delay (s)         9.1         0:0         0:0           Lane LOS         A         Approach Delay (s)         9:1         0:0           Approach LOS         A         Approach LOS         A           Average Delay         3.8         3.8			*******			1000	
Volume Left         21         0         0           Volume Right         9         0         0           cSH         904         1700         1700           Volume to Capacity         0.03         0.00         0.02           Queue Length 95th (ft)         3         0         0           Control Delay (s)         9.1         0.0         0.0           Lane LOS         A         Approach Delay (s)         9.1         0.0           Approach LOS         A         Approach LOS         A           Average Delay         3.8         3.8	survey and the second state of			and the second of the second			
Volume Right         9         0         0           cSH         904         1700         1700           Volume to Capacity         0.03         0.00         0.02           Queue Length 95th (ft)         3         0         0           Control Delay (s)         9.1         0.0         0.0           Lane LOS         A           Approach Delay (s)         9.1         0.0         0.0           Approach LOS         A         A           Average Delay         3.8         3.8		an a	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	an a			
CSH         904         1700         1700           Volume to Capacity         0.03         0.00         0.02           Queue Length 95th (ft)         3         0         0           Control Delay (s)         9.1         0.0         0.0           Lane LOS         A           Approach Delay (s)         9.1         0.0         0.0           Approach LOS         A           Arerage Delay         3.8	more a statement was not been as the statement of the statement was a statement of the				an a		
Volume to Capacity         0.03         0.00         0.02           Queue Length 95th (ft)         3         0         0           Control Delay (s)         9.1         0.0         0.0           Lane LOS         A         A           Approach Delay (s)         9.1         0.0         0.0           Approach LOS         A         A           Intersection Struttory         3.8         3.8		chan a laite dhalanna ta dhalan dhalanna	States and the second states of	2. Sector and the sector of the	ME LAT		
Queue Length 95th (ft)       3       0       0         Control Delay (s)       9.1       0.0       0.0         Lane LOS       A       A         Approach Delay (s)       9.1       0.0       0.0         Approach LOS       A       A         Aterage Delay       3.8       3.8		and the second	where it is a set of the bit and an owner of the	and a second a fail of a second second			
Control Delay (s)     9.1     0.0       Lane LOS     A       Approach Delay (s)     9.1     0.0       Approach LOS     A		000342 #099988.6030.69166260.69		ENVERSION CONSIGNO			
Lane LOS A Approach Delay (s) 9:1 0:0 0:0 Approach LOS A Mersection Summary Average Delay 3.8			and the below means the second				
Approach Delay (s)     9:1     0:0       Approach LOS     A       Intersection Summary     3.8		internation de la présentation de l La présentation de la présentation d	1999 <b>- 19</b> 99 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999			ada di San Sa	
Approach LOS A Intersection Summary Average Delay 3.8	where any any interaction of the second process of the second proces of the second proces of the second proces		0.0	0.0		ning and an Name and an	
Average Delay 3.8		and the second	an di mananan kana ka	50° 11° 1° 1710 1710 1700 1700	n na Alanta Alan	ar ge al a centra de ser c	
Average Delay 3.8							
				3.8			
	Intersection Capacity Ufiliza	ition		21.1%	ICI	J Level o	of Service A
Analysis Period (min) 15		anan afa atao - an afais	seomos a renda		erneriteisen in Longel	a town of the standard	naartennangen een vereen verden verden verden van die die verden die staat die die die die die die die die die Die die die die die die die die die die d
					an a		

Synchro 8 Report Page 6

## HCM Unsignalized Intersection Capacity Analysis 21: Main St. & Sherman Rd.

10/3/2011

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Movement				<u>a ki ki</u>		SPR
Lane Configurations			ሻ	<b>*</b>	<b>≜</b> tp	
Volume (veh/h)	0	0	8	1018	436	27
Sign Control	Stop			Free	Free	·
Grade	0%	0-0-004		0%	0%	
Peak Hour Factor	0.92	.0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	9	1107	474	29
Pedestrians	14	**********	rin Marin I from the state			
Lane Width (ft)	0.0			9 9 9 9		
Walking Speed (ft/s)	4.0		an tha an		00577594051576-7625574	
Percent Blockage	0					
Right turn flare (veh)	en en ser se	www.comeses	e a ser en a ser est			
Median type		4999-998 1999-1998		None	None	
Median storage veh)			ransalies a constant	a an	n da composition de la composition de l	
Upstream signal (ft)	national and	<u>i dudese</u>		905	321	
pX, platoon unblocked	0.81	0.94	0.94		nin an	
vC, conflicting volume	1073	266	517			
vC1, stage 1 conf vol					alam sasana	
vC2, stage 2 conf vol						
vCu, unblocked vol	274	84	352			
tC, single (s)	6.8	6.9	4,1		8 6 C C	
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100 556	100	99			
cM capacity (veh/h)	920	899	1128			
Direction Lane#////				<u>ezan en e</u>		
Volume Total	9	553	553	316	187	
Volume Left	9	0	0	0	0	
Volume Right	0	0	0	0	29	
cSH	1128	1700	1700	1700	1700	
Volume to Capacity	0.01	0.33	0.33	0.19	0.11	
Queue Length 95th (ft)	1	0	. 0	0	0	
Control Delay (s)	8.2	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	0.1	90.636.25	1990 A A A	0:0		
Approach LOS	The second s					
mersection summary						
Average Delay			0.0			
Intersection Capacity Utiliza	ation		31.5%	ICI	J Level o	of Service A
Analysis Period (min)			15			
	医颈筋炎 接口					Second states and second second second second second second

## HCM Unsignalized Intersection Capacity Analysis 22: Main St. & Sherman St.

10/3/2011

	4	٨.	1	1	<b>*</b>	Ļ	
Movement						8311.8.	
Lane Configurations	¥	10000716274804036070900705071	<b>ት</b> ች			<b>†</b> 1}	
Volume (veh/h)	0	67	959	43	31	406	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	73	1042	47	34	441	
Pedestrians	13					6	
Lane Width (ft)	12.0					12.0	
Walking Speed (ft/s)	4.0 1				9423-03-59	4.0 1	
Percent Blockage Right turn flare (veh)				929-60-765-95			
Median type			None			None	
Median storage veh)			INDUC	198231.692	USEKS SAN		
Upstream signal (ft)			645			581	
pX, platoon unblocked	0.76	0.73		NGC KELAKENG	0.73		
vC, conflicting volume	1367	564	8.5.60.06		1102	22.02.02.02	
vC1, stage 1 conf vol		an a					
vC2, stage 2 conf vol		563					
vCu, unblocked vol	564	0	nana manana di dana dana dana dana dana dana d	z azert azertek kerek kerek kerek kerek	416	na an a	ierzen zuen zuen euroaren erzen e Erzen zuen erzen
tC, single (s)	6.8	6.9			4.1		
tC, 2 stage (s)							
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	91			96		
cM capacity (veh/h)	328	784			828		
Direction some #200			NESS N				
Volume Total	73	695	394	181	294		
Volume Left	0	0	0	34	0		
Volume Right	73	0	47	0	0		
cSH	784	1700	1700	828	1700	odonist-tu-titoosiitustaasii	
Volume to Capacity	0.09	0.41	0.23	0.04	0.17		
Queue Length 95th (ft)	8	0	0	3	0		
Control Delay (s)	10.1	0.0	0.0	2.1	0.0		
Lane LOS	B	States and the second second	100 G//MG20-2004-000-000-000	A		a periode according to a second a second	
Approach Delay (s)	10.1	0.0	a sa na sa	0.8	a a da da da		
Approach LOS	В						
melsenionsummany							
Average Delay			0.7				
Intersection Capacity Utiliz	zation		47.8%	ICI	U Level c	f Service	A
Analysis Period (min)	gen gan program popular del del program a calle i dalla della della della della della della della della della d	na an ann a bhaile a' ann a' bhail	15	anan metet mili bermatikali sykin	gen van en die verster die dae dae 2000		en men sammen som ander at Samme Sakan som Sakan som som som sekar som
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Synchro 8 Report Page 8

## HCM Unsignalized Intersection Capacity Analysis 24: Saratoga Ave. & Sherman St.

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10/3/2011

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Movement	an an an Anna a			NPR	() () () () () () () () () () () () () (	SBI
Lane Configurations	Y		4Î			ব
Volume (veh/h)	20	28	183	4	2	98
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	30	199	4	2	107
Pedestrians	21		2	sidd a largel and a sumaria		11
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0	inter North al Annue Marine		4.0
Percent Blockage	2	9.2.3.6	0			
Right turn flare (veh) Median type		54445	None			None
Median storage veh)	an ann an An An Ann an Ann	anterense		28/830/83/28/		
Upstream signal (ft)		93238				452
pX, platoon unblocked						· ·
vC, conflicting volume	335	233			224	
vC1, stage 1 conf vol	alealan ar ganag	that i the set to subscribe the	ta da anticipada da antici Anticipada da anticipada da	kadalah Galaktara		
vC2, stage 2 conf vol						
vCu, unblocked vol	335	233	and and a fighter of the fighter of	, 2000, 200, 200, 200, 200, 200, 200, 2	224	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						near na real ar an conservation and conservation and an announced and and and and and and and and and an
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	96			100	
cM capacity (veh/h)	647	785			1321	
Direction Lane#section						
Volume Total	52	203	109			
Volume Left	22	0	2			
Volume Right	30	4	0			
SH	721 0.07	1700	1321			
Volume to Capacity	and subject to subject to a start of the subject to a sub	0.12	0.00			
Queue Length 95th (ft) Control Delay (s)	6 10.4	0 0.0	0 0.2			
Lane LOS	10.4 B	v.v	0.2 A			
Approach Delay (s)	10.4	0.0	0.2		SS 5.52	
Approach LOS	B	0.0	V.2			
	U					
Intersection Summary			1.5			
Average Delay Intersection Capacity Utiliza	dion		1.5	പറ	LL avel-	(Contract
	1001)				Level 0	of Service A
Analysis Period (min)		1910 (M. 19	15			

## HCM Unsignalized Intersection Capacity Analysis 27: Highland Ave. & Ogden Ave.

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Movement	2423 (E 3)2.23		e er			AND B	a (NBL)	San Singa	and a	() () () () () () () () () () () () () (	888 88 88 88 88 88 88 88 88 88 88 88 88	
Lane Configurations		4Þ		olicitori entito antine este	<b>€</b> †}		n na serie de la company de	þ	n umerati wilitawa tangan	<b>ኻ</b> 2	<b>þ</b>	Contrast Charles & Series
Volume (veh/h)	7	1374	92	1	1109	-18	1	0	134	2	0	5
Sign Control		Free			Free	an a	r ter mig 60ar 64a Meser	Stop	n Talan di Katalan Maniana	h del estreno dal servico.	Stop	energia de como
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	1493	100	1	1205	20	1	0	146	2	0	5
Pedestrians		1		antiko zatu okazeta	2	santa sena tan ken	an a	11		an a	4	anti a contra contra
Lane Width (ft)		12.0			12.0			12.0			12.0	SAN
Walking Speed (ft/s)		4.0	an management to the second	6 <b>53) (199</b> 0) (1995)	4.0	45557857.575885		4.0		TALIKKA SISTA POLINIS	4.0	
Percent Blockage	n en en er m	0	e estas de		0			<u> </u>		gana da d	0	
Right turn flare (veh)	i kuwani ani si shakati s	unterstandare da esta	na matsi wang salahi		**************************************					NERSET DE FAITE PROVE ATO	Shinanan Masilan Barawari	maan waxaa ahaa
Median type		None			TWLTL			nan in den den den den den den den den den de				
Median storage veh)	un gant mar a crust a sing	NG TAN DE LA TRANS		n managaintean an a	2	en andre see the	iero de locatio de surt.	en normalista		10000000000000000000000000000000000000	anna an thean	ang mangapat ang
Upstream signal (ft)	8 <u>8 16 1</u> 7 2	369						0.6785 C.S.A	103633			Market (*
pX, platoon unblocked		Kabulatarati ya		0.60			0.60	0.60	0.60	0.60	0.60	
vC, conflicting volume	1229			1604			2181	2801	810	2131	2841	618
vC1, stage 1 conf vol			in the second				1570	1570		1221	1221	acreanter
vC2, stage 2 conf vol					946-9746		611	1231		910	1620	
vCu, unblocked vol	1229		in an	684	e na cesto de la trade		1641	2670	0	1558	2736	618
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)		Carlos a como de la com					6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			99	100	77	99	100	99
cM capacity (veh/h)	561			540			216	171	646	172	168	431
Diranon cancal service								292				
Volume Total	754	847	604	622	1	146	2	5				
Volume Left	8	0	1	0	1	0	2	0	ret écclemation des returnes des returnes	1000 1000 Current Dutter 1000		
Volume Right	0	100	0	20	0	146	0	5				
cSH	561	1700	540	1700	216	646	172	431			enta Perintziati di mili di	2010-1910-1919-1919-1919-1919-1919-1919-
Volume to Capacity	0.01	0.50	0.00	0.37	0.01	0.23	0.01	0.01			909 N S	<b>Bellio</b> 10
Queue Length 95th (ft)	1	0	0	0	0	22	<b>1</b> 	1	27 <b>.8453</b> 1255831258553	ana ang ang ang ang ang ang ang ang ang	an a	1949-0047-101-0-0-0
Control Delay (s)	0.4	0.0	0.1	0.0	21.7	12.2	26.2	13.5				
Lane LOS	A		A		С	В	D	В				
Approach Delay (s)	0.2		0.0	Che Berley I	12.3		17.1					an an s
Approach LOS					В		С					
nielsenien Seninely												
Average Delay		i de la construcción de la definitación de la	0.8		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		NATION AND A COMPANY AND	Sandara ang tang tang tang		tinin teacheantin datai	anne a chuire à fait a' fhair	esta espectaria en
Intersection Capacity Utilization	tion	de de Art	61.4%	IC	U Level o	f Service		1915 - 1848 1917 - 1848	В	anin ini		
Analysis Period (min)	in an early for an descent of the	Langun basang ang kanang ka	15					an a far a star a s	into induced interaction for	a Bhalasa Daras na tra ata da ba	The obligation of the state of the state	and a second state

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10/3/2011

### HCM Signalized Intersection Capacity Analysis 26: Main St. & Ogden Ave.

	٦	<b>→</b>	$\mathbf{r}$	<		•	1	1	1	1	Ļ	4
Movement				W <u>el</u> es			<b>NBIS</b>	NET		s (\$13)	SPID	
Lane Configurations	<u>الا</u>	柏		٦	<u></u> ≜†⊅		٦			ሻ	<u>†</u> †	i
Volume (vph)	269	973	120	146	1140	168	217	410	117	181	459	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	190
Total Lost time (s)	3.0	6.0		3.0	6.0	2026/2010 2	3.0	6.0	S 85 1	3.0	6.0	3.
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.0
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	0.9
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.0
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	1.00	0.8
Fit Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.0
Satd. Flow (prot)	1770	3475	i e e e	1770	3460	S. 85 (* 17	1768	3396		1768	3539	156
Flt Permitted	0.08	1.00		0.14	1.00		0.35	1.00		0.24	1.00	1.0
Satd. Flow (perm)	150	3475		256	3460	an and the second s	655	3396		452	3539	156
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.9
Adj. Flow (vph)	292	1058	130	159	1239	183	236	446	127	197	499	56
RTOR Reduction (vph)	0	7	0	0	8	0	0	20	0	0	0	1
Lane Group Flow (vph)	292	1181	0	159	1414	0	236	553	0	197	499	54
Confl. Peds. (#/hr)	5		2	2		5	3		9	9		
Tum Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+o
Protected Phases	7	4		3	8		5	2	ne populate ( ), a port N was about	1	6	4. <b></b>
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	72.0	58.9		56.9	46.8		41.0	33.0		45.0	35.0	57.
Effective Green, g (s)	72.0	58.9		56.9	46.8	909 S S	41.0	33.0		45.0	35.0	57.
Actuated g/C Ratio	0.55	0.45		0.44	0.36		0.32	0.25	·	0.35	0.27	0.4
Clearance Time (s)	3.0	6.0		3.0	6.0	S. Andrewski	3.0	6.0	1969.9	3:0	6.0	3.
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.
Lane Grp Cap (vph)	360	1574		230	1246		275	862		258	953	68
v/s Ratio Prot	c0.14	0.34		0.05	c0.41	and any and a second and only	c0.05	0.16		c0.06	0.14	0.1
v/s Ratio Perm	0.31			0.25			c0.22			0.21		0.2
v/c Ratio	0.81	0.75		0.69	1.14		0.86	0.64		0.76	0.52	0.7
Uniform Delay, d1	38.1	29.5		24.9	41.6		39.9	43.2		33.3	40.4	31.
Progression Factor	1.62	0.84		1.00	1.00		0.74	0.76		1.00	1.00	1.0
ncremental Delay, d2	10.7	1.7		8.6	71.2	gegener e	21.4	3.5		12.6	2.1	6.
Delay (s)	72.4	26.3		33.6	112.8		51.0	36.5	an a	45.9	42.5	37.
Level of Service	E.	С		C	F	in Sector Sector	D	D		D	D	
Approach Delay (s)		35.4			104.8			40.7		negeos nos o recententes en estes	40.8	ne o novi wowate
Approach LOS	S. S. M. S. S.	D			in services			D			D	
Approach LOS Intersection Summany HCM Average Control Dela HCM Volume to Capacity ra Actuated Cycle Length (s)		and a set of the set of the	59.0 0.96 130.0	Manufactor de la constance	out the second second second second second		÷	Contraction of the second second second	E 18:0		A REAL PROPERTY AND A REAL	

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## HCM Signalized Intersection Capacity Analysis 28: Saratoga Ave. & Ogden Ave.

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Movement	EBL			NA BLOO				SINE A		SBL		S
Lane Configurations	۲	<b>†</b> ‡		٦	忭		٦	el el		٦	\$	
Volume (vph)	112	1205	53	47	1745	69	62	50	75	70	49	-83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6:0	69 (e 49 C	3.0	6.0	de la constante	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	10.00	1.00	0.97	0.0040-00	1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.97	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.91		1.00	0.91	
Fit Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3511		1770	3515	6.7.256	1717	1648		1723	1634	
Flt Permitted	0.05	1.00		0.13	1.00		0.62	1.00		0.63	1.00	
Satd. Flow (perm)	99	3511	1997 - 1992 1997 - 1992	244	3515		1114	1648		1141	1634	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	122	1310	58	51	1897	75	67	54	82	76	53	90
RTOR Reduction (vph)	0	2	0	0	2	0	0	42	0	0	47	0
Lane Group Flow (vph)	122	1366	Ó	51	1970	0	67	94	0	76	96	0
Confl. Peds. (#/hr)	2	nya panjaha wa antara kita pininga ya	4	4. 	alan yakat u ya sa ta kasala kasala	2	16	an an tha an	14	14	na an a	16
Tum Type	pm+pt	NA	10 E A A	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8		and a space of the second s	2		he Bolangar (1996) territor an di territori da Bolanda	6	an a
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	85.6	77.0		77.7	72.1		32.4	32.4		32.4	32.4	
Effective Green, g (s)	85.6	77.0		77.7	72.1		32.4	32.4		32.4	32.4	(Sec. 1
Actuated g/C Ratio	0.66	0.59		0.60	0.55		0.25	0.25		0.25	0.25	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	and and an optimized and an and an	3.0	3.0		3.0	3.0		3.0	3.0	-Abert was reber two-
Lane Grp Cap (vph)	200	2080		212	1949		278	411		284	407	
v/s Ratio Prot	c0.05	0.39		0.01	c0.56	ang a wasan san san asin	Spanes <del>, pr</del> aestanessa	0.06	an der Strein der Australe	8885-870777-1474-969 9	0.06	~566669269
v/s Ratio Perm	0.35			0.13			0.06			c0.07		Gy And
v/c Ratio	0.61	0.66		0.24	1.01		0.24	0.23		0.27	0.24	1992) - MARE
Uniform Delay, d1	34.1	17.7		13.5	29.0		39.0	38.9		39.3	38.9	
Progression Factor	1.00	1.00		0.64	0.58	1989/18/19/19/19/19/19/19/19/19/19/19/19/19/19/	1.00	1.00	2014/2014/2017/14/U	1.00	1.00	anan natsara
Incremental Delay, d2	5.2	0.8		0.2	14.1		2.0	1.3		2.3	1.4	
Delay (s)	39.3	18.4	8689569 - 4695 Millio	8.8	30.8	PERSONAL SECOND	41.0	40.1	ereziazztea 1850)	41.6	40.3	nisilari, siladaloo
Level of Service	D	В		A	C		D	D		Ď	D	
Approach Delay (s)	4 1994 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 199 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	20.1		en eller son en falla eller son	30.3		11119 (S.C. 6.377) (283)	40.4	20149022040367135367	1996 A. Set 1977 A. 433	40.7	73799 <b>79</b> 284898
Approach LOS	9. S. M. M.	C C			C			D		<b>1</b> 16 an	D	6.44
Intersection Summary	un en antañ an 1970 (ha 1985)	ante contratio		andan (DA) (DA)						negaretse si Galica	uner of the	en andre de die die die die die die die die die
HCM Average Control Dela	W		27.5	Ľ۱	CM Level	of Service			C			
HCM Volume to Capacity ra		568 M.) (-583	0.76	e se		UT UCI VICE				anto - 183	ener Philip	tonense e
Actuated Cycle Length (s)			130.0	Ci	um of lost	time (c)			15.0			
Intersection Capacity Utiliza	ation		92.2%		U Level o				13.0 F			99279993
Apolycic Poriod (min)			32.270 1E		O LEVELO		Server so		Г Magazous	3512 - 55 Z	846-1-1-20	7888.28899

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Analysis Period (min) c Critical Lane Group

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## HCM Signalized Intersection Capacity Analysis 31: Main St. & Grant St.

10/3/2011

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Movement	WIEL.	N/1215	NBI		AN SELS		
Lane Configurations	W.		<del>أناب</del>			<del>4</del> †	
Volume (vph)		30	625	27	23	705	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	na an an ann ann an an ann ann ann ann
Total Lost time (s)	6.0	8 6 6 9 9	6.0	San De San d		6.0	
Lane Util. Factor	1.00		0.95		ne domini di tendi di structuri.	0.95	
Frt	0.94		0.99			1.00	
Fit Protected	0.97		1.00			1.00	
Satd. Flow (prot)	1704	2 (3 / M)	3517		- 18-33-191	3534	
Flt Permitted	0.97		1.00			0.92	
Satd. Flow (perm)	1704		3517			3247	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	42	33	679	29	25	766	
RTOR Reduction (vph)	31	0	5	0	0	0	
Lane Group Flow (vph)	44	0	703	0	0	791	
Turn Type	NA		NA		Perm	NA	· · · · · · · · · · · · · · · · · · ·
Protected Phases	8		2			6	
Permitted Phases					6		anana araa ta anda marana marana mara ta araa mata na marana ta marana (asa na tang anga marana ta tang akana d
Actuated Green, G (s)	4.6	a gunda	28.4		13.2.5	28.4	
Effective Green, g (s)	4.6		28.4			28.4	
Actuated g/C Ratio	0.07		0.44			0.44	
Clearance Time (s)	6.0		6.0			6.0	· · · · · · · · · · · · · · · · · · ·
Vehicle Extension (s)	3.0		3.0			3.0	
Lane Grp Cap (vph)	121		1537			1419	
v/s Ratio Prot	c0.03		0.20				
v/s Ratio Perm						c0.24	
v/c Ratio	0.37		0.46		999 (B. 1997) 1997 - 1997	0.56	
Uniform Delay, d1	28.8	fourtheast of the same second	12.9			13.6	
Progression Factor	1.00		1.00			1.09	
Incremental Delay, d2	1.9	antari dan menjalar dalam	1.0	na de la comencia esta de la comunicación de la comunicación de la comunicación de la comunicación de la comuni	a da teoretta e la transmissión in color	1.4	
Delay (s)	30.7		13.9			16.2	
Level of Service	<b>C</b>		В	1 - 2014 - 2014 - 2014 - 2014 - 2015	and the second	B	
Approach Delay (s)	30.7		13.9	602426		16.2	
Approach LOS	С		В			В	
Intersection Commany							
HCM Average Control Delay			15.8	H	CM Level	of Service	В
HCM Volume to Capacity ra	tio	55. H.	0.53				
Actuated Cycle Length (s)			65.0		um of lost		32.0
Intersection Capacity Utiliza	tion	10. S.	50.2%	- IC	U Level o	f Service	A
Analysis Period (min)		App2 shows by the at the second	15		منطقة المسر الروانية والن	Managara a garana mara	
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## HCM Unsignalized Intersection Capacity Analysis 5: Prince St. & Ogden Ave.

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<b>†</b> ₽ 1337 Free 0% 0.92	16 0.92	<b>1</b> 4 0.92	<b>↑↑</b> 1854 Free 0%	¥ 4 Stop		
1337 Free 0% 0.92	0.92	14 0.92	1854 Free 0%	4 Stop	37	
Free 0% 0.92	0.92	0.92	Free 0%	Stop		1.6.14.11
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### HCM Unsignalized Intersection Capacity Analysis 9: Main St. & Lincoln St.

9: Main St. & Linco			apacit	y Analy	y515						10/3	3/2011
	٠	+	$\mathbf{F}$	<	÷	×.	•	1	1	\$	<b>↓</b>	~
Movement						ane se	a NBL				SBI	
Lane Configurations Volume (veh/h)	12	<b>4</b> 12	20	4	<b>↔</b> 8	6	9	<b>41</b> 2 635	4	12	<b>41</b> 2 707	33
Sign Control		Stop			Stop			Free			Free	
Grade Peak Hour Factor	0.92	0% 0.92	0.92	0.92	0% 0.92	0.92	0.92	0% 0.92	0.92	0.92	0% 0.92	0.92
Hourty flow rate (vph)	13	13	22	- 4	9	0.32	10	690	4	13	768	36
Pedestrians		19			2			1			6	
Lane Width (ft) Walking Speed (ft/s)		12.0 4.0			12.0 4.0			12.0 4.0			12.0 4.0	
Percent Blockage		2			0			0				
Right turn flare (veh)		na an			Sector Harris		a a cara a cara	None		alaris Alari	None	iitaekon.
Median type Median storage veh)	C ENTR							None			NUTE	2842 B C
Upstream signal (ft)											658	
pX, platoon unblocked vC, conflicting volume	0.86 1213	0.86 1548	0.86 422	0.86 1154	0.86 1563	355	0.86 823			697		
vC1, stage 1 conf vol	12:10	IUTU	- <i>TLL</i>	I IUT	1000	000	ULU					E CARA
vC2, stage 2 conf vol	000	4000	40	004	4000	255	400			607		
vCu, unblocked vol tC, single (s)	933 7.5	1320 6.5	18 6.9	864 7.5	1338 6.5	355 6.9	482 4.1			697 4.1		
tC, 2 stage (s)	11.27.1 (CON 9.1765 VI-260) - 4763						an fa fan sin de fan in fan fan fan de fan fan fan sin de fan sin de fan de fan fan fan sin de fan sin de fan s			ini Casa an Casaran Angelan	600906106082-61 60097095001700	enales arte-
tF (s) p0 queue free %	3.5 92	4.0 90	3.3 98	3.5 98	4.0 93	3,3 99	2.2 99			2.2 99		84644
cM capacity (veh/h)	170	129	897	186	126	637	916			894		
Direction Lencer						(0.00 y) ()						
Volume Total	48	20	355	349	397	420			-			
Volume Left Volume Right	13 22	4	10 0	0 4	13 0	0 36				an a	Carra da	
cSH	236	190	916	1700	894	1700						ana
Volume to Capacity	0.20 18	0.10 8	0.01 1	0.21 0	0.01	0.25 0						
Queue Length 95th (ft) Control Delay (s)	24.1	o 26.1	0.4	0.0	1 0.5	0.0						
Lane LOS	С	D	A		A							
Approach Delay (s) Approach LOS	24.1 C	26.1 D	0.2		0.2		en leten Artik	Ge Stalen		188.698898 1		
Intersection Summer	ý v											
Average Delay			1.2									
Intersection Capacity Utiliza	tion		41.0%	IC	U Level o	f Service			A			
Analysis Period (min)			15									
		nazzen da	ana tang tang tang tang tang tang tang t	an an the second state of the second seco	aanteente 77430	reszentetetetetetetetetetetetetetetetetetet	en sen an the Carl	and the test of the set	rpesson Algebracies	anen an	an an an tha	an an taona br>Taona an taona an taon

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Synchro 8 Report Page 2

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### HCM Unsignalized Intersection Capacity Analysis 15: Saratoga Ave. & Grant St.

15: Saratoga Ave. 8	& Grant	St.		,	,						10/	3/2011
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eleven en e						MIL.				5 <u>2</u> ]	a doita	(Sp)e
Lane Configurations		4	a tanun matanan si mara		4			<b>4</b> )		1.1.01.0.07701375904/PPP274	4	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	28	0	16	30	0	2	9	122	2	4	142	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	0	17	33	0	2	10	133	2	4	154	36
Birection where we want to				\$\$. 10								
Volume Total (vph)	48	35	145	195								
Volume Left (vph)	30	33	10	4								
Volume Right (vph)	17	2	2	36								
Hadj (s)	-0.06	0.18	0.04	-0.07								
Departure Headway (s)	4.6	4.9	4.3	4.2								
Degree Utilization, x	0:06	0.05	0.17	0.23	est de side	1. N. W. W.	de state		19 (49 (5) S	en den sy sy		
Capacity (veh/h)	712	675	800	839 -	Nobertan az adıra ardan	Amor Havenburger i Dopustikow	teste ta structura da contributo	in Countral Adams is a mar.	n muung promining (spinse provinse)			
Control Delay (s)	7,9	8.1	8.3	8.4	Sec.2							
Approach Delay (s)	7.9	8.1	8.3	8.4		57 (2007) (1000)			12155010-10000-0001175572			esegana esperant
Approach LOS	A	A	A	A								
RICHSERIUMAUUUUURA												
Delay			8.3									
HCM Level of Service	a guaran mananan kanang ang katalan		A	naan sa kalang kanisa di kalisisi	nannai seinisten etaist (s			*****	menne fotost i tro-1002 (20)	onandostanain (2220)	an mangan di kangan d	en nemen distriction in factor
Intersection Capacity Utilizat	ion		31.2%	IC	U Level of	Service			A			
Analysis Period (min)			15									
							(**********					

North HS 10/3/2011 Future PM Peak Hour

HCM Unsignalized Intersection Capacity Analysis 16: Prince St. & Grant St.

#### 10/3/2011

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Vovenomezazzasta			a NGS S		s SDI Z	SER
Lane Configurations	Y			ধ	4	
Sign Control	Stop			Stop	Stop	
/olume (vph)	0	4	31	2	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	4	34	2	0	0
			9. F. B. B.			
/olume Total (vph)	4	- 36	0			
/olume Left (vph)	0	34	0			
/olume Right (vph)	4	0	0		olitik, distantif toba alamit'ark birari.	
Hadj (s)	-0.57	0.22	0.00			
Departure Headway (s)	3.4	4.1	3.9			
Degree Utilization, x	0.00	0:04	0.00		9-9-17-6)	
Capacity (veh/h)	1036	858	900			
Control Delay (s)	6.4	7.3	6.9			
Approach Delay (s)	6.4	7.3	0.0			
Approach LOS	A	A	A			
				Selferie (		
Delay			7.2			
-ICM Level of Service	anan ang ang ang ang ang ang ang ang ang		A			
ntersection Capacity Utiliza	tion		13.3%	IC	U Level o	of Service A
Analysis Period (min)	an a	0409080×1992606080	15	waanaadii.addii 66	*********************	

Synchro 8 Report Page 4

North HS 10/3/2011 Future PM Peak Hour

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# HCM Unsignalized Intersection Capacity Analysis 18: Highland Ave. & Grant St.

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18: Highland Ave. 8	& Grant	St.		, , 							10/3	3/2011
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Me Vennem and a second		an an that An tao an	* 5								<b>N</b> III	SER
Lane Configurations		4			4			4			4	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	18	5.	17	25	78	6	24	12	20	56	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	20	5	18	27	85	7	26	13	22	61	27
		a wixana										
Volume Total (vph)	41	130	46	110								
Volume Left (vph)	16	18	7	22								
Volume Right (vph)	5	85	13	27		10722-1000-0-1000-0-100				an a		Contraction of the
Hadj (s)	0.03	-0.33	-0.11	-0.07				12.497-037	96 ST 59 M			
Departure Headway (s)	4.4	4.0	4.3	4.2	Antonista bi "r barr an annous					11 harmente fak ferend far einer er		
Degree Utilization, x	0.05	0.14	0.05	0:13				- 47-789 - 31	e en en en	l sacto		
Capacity (veh/h)	778	871	796	813		et Madda - Indiana Andrean - Tarr	and a second statement and	nomininereo un ch	ent melone ette streve staare			demili de sinton
Control Delay (s)	7.7	7.6	7.5	7.9								
Approach Delay (s)	7.7	7.6	7.5	7.9								anderer of the
Approach LOS	A	A	Α	A								
nersector summery												
Delay			7.7									
HCM Level of Service			А									
Intersection Capacity Utilizat	ion		29.8%	ICL	J Level of	Service			A			
Analysis Period (min)			15					et and a management		1	1000 - 1000 - 100 - 10 - 10 - 10	10000000000000
							0000					

# HCM Unsignalized Intersection Capacity Analysis 20: Prince St. & Sherman Rd.

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West-Color

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Movement		10.6] <		NER .	SBL	3BA
Lane Configurations	Y	10100-0070-0071-0071-0000	t		and the Contract of the Autor	
Volume (veh/h)	19	20	8	0	0	30
Sign Control	Stop	an a	Free	a la chean a chean anna anna anna anna anna anna anna	nan nimati Kaneri ni briazi	Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	22	9	0	0	33
Pedestrians	78	Sanan kana kana kana kana kana kana kana	17			2
Lane Width (ft)	12.0		12.0	<u> (d. 16. 50)</u>		12.0
Walking Speed (ft/s)	4.0	9769722746766	4.0			4.0
Percent Blockage	7.		1	<u>198-08 055</u>		0
Right turn flare (veh)				seestaa.		<b>H</b>
Median type			None			None
Median storage veh)			BARREN AND	NEN ES MOLS		
Upstream signal (ft)	<b>8 8 8</b> 198		ensk dis		daeta sa diki	
pX, platoon unblocked	136	89			87	
VC, conflicting volume	100	09			01	
vC1, stage 1 conf vol						
vCu, unblocked vol	136	89			87	
C, single (s)	6.4	6.2		(Marine Marine)	4.1	
tC, 2 stage (s)	ν.η	V.2			Tel	
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	98			100	
cM capacity (veh/h)	790	905			1411	
Direction Lans//						
Volume Total	42	9	33			
Volume Left	21	0	0			
Volume Right	22	Ŭ 0	0	de Gode A		
cSH	845	1700	1700	1992 (1992-2002)		
Volume to Capacity	0.05	0.01	0.02			
Queue Length 95th (ft)	4 served and the serv	0	0	onten en e	ING PARADIMATIN	
Control Delay (s)	9.5	0.0	0.0		0.64345	
Lane LOS	A	indestration (Contention)				
Approach Delay (s)	9.5	0.0	0.0			
Approach LOS	A	ango orangeno.	9617194817 T. T. 49975	an serie da br>Serie da serie da ser	n an ann an taraich an tarai	a nakati nati man manana wanana na kananana kanananan kanananan kanana ta manan ta manan ma ma ma ma ma ma ma A
Intersection Summary						
Average Delay		needen konstantiitiitiit	4.8		~~~~	аланын каланалан каланалан калан
Intersection Capacity Utiliza	ition		23.2%	IC	U Level o	f Service A
Analysis Period (min)	unan saisan kara an dala	a ang san ang san	15	an an tha	an Norad (Nordal) (Nordal)	na ana ang ang ang ang ang ang ang ang a
			la de la casa		4.C.	

Synchro 8 Report Page 6

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# HCM Unsignalized Intersection Capacity Analysis 21: Main St. & Sherman Rd.

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Movement			, Meneral de la companya		Nasenat	SBR
Lane Configurations			۲	竹	<u>ት</u> ቡ	
Volume (veh/h)	0	0	11	747	720	34
Sign Control	Stop		14900-12940-004 (463)963	Free	Free	na n
Grade	0%	8 9 8 Q		0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	12	812	783	37
Pedestrians	15			and the second as further as formers	3	
Lane Width (ft)	0.0				12.0	
Walking Speed (ft/s)	4.0	ana ang ang ang ang ang ang ang ang ang	with the the second states and the second	nd October and and the set	4.0	
Percent Blockage	0				0	
Right turn flare (veh)	na ang ang ang ang ang ang ang ang ang a	assanta ana				
Median type				None	None	
Median storage veh)		tatestates				
Upstream signal (ft)	0.04	0.00	0.00	905	321	
pX, platoon unblocked	0.91	0.88	0.88	8.68.88		
vC, conflicting volume	1249	425	835			
vC1, stage 1 conf vol vC2, stage 2 conf vol	le telstation of the	6.62.52				
vCu, unblocked vol	783	84	548			
tC, single (s)	6.8	6.9	4.1		-Serondari	
tC, 2 stage (s)	v.v	0.0	77.1			
tF (s)	3.5	3.3	2.2			
p0 queue free %	· 100	100	99			
cM capacity (veh/h)	297	847	899			
Directional ane#2000	12	406	406	522	298	
Volume Left	12	-00+ 0	400 0	0	230	
Volume Right	0	0	Ŭ O	0	37	
cSH	899	1700	1700	1700	1700	
Volume to Capacity	0.01	0.24	0.24	0.31	0.18	
Queue Length 95th (ft)	1	0	0	0	0	
Control Delay (s)	9.1	0.0	0.0	0.0	0.0	
Lane LOS	A		219399742.76829			
Approach Delay (s)	0.1			0.0		
Approach LOS	nun ertertationen en geschigten standarten ber	anaran merangki mering peper	an contraction (Contraction (Contraction)	ander and the second second		n an
ntersection Summary						
Average Delay			0.1			
Intersection Capacity Utiliza	ation		24.4%	ାମ	U Level o	f Service A
Analysis Period (min)			<u>دم</u> مبر 15	ener 191		
	ingen er sti					
				onaetse	penangan sa	

# HCM Unsignalized Intersection Capacity Analysis 22: Main St. & Sherman St.

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Movement	ilian Albina	an si		an Brazz		SASE (			
Lane Configurations	¥		ተኈ	*****	urð I marfanð Ár Annsonda sattaran.	41	an ann a tha caoine an tha thairtean a strangen an thairtean an th		A147-07-211-214-02
Volume (veh/h)	8	110	647	9	24	696			
Sign Control	Stop		Free	Vezde strade state hans		Free			Vinet Marea
Grade	0%		0%			0%			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			STALLAN .
Hourly flow rate (vph)	9	120	703	10	26	757			
Pedestrians	19		3			5			
Lane Width (ft)	12.0 4.0		12.0 4.0			12.0 4.0			1999
Walking Speed (ft/s)	4.0 2		4.U 0			4.0 0		1999 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997	
Percent Blockage Right turn flare (veh)	۷ وروند	1991 - EN 1991 -	U	12 (2) (3) (4)		U			
Median type			None			None			NS/64
Median storage veh)	1972-1988-1979-1979 1		INUIC		982498978 9	INDITE			SAC AC
Upstream signal (ft)			645			581			
pX, platoon unblocked	0.94	0.89			0.89	<u></u>			SEDUTS.
vC, conflicting volume	1161	381			732				
vC1, stage 1 conf vol	*****	ranala <del>r</del> keladi sebah k	an a	1052470558744559252					1227.02
vC2, stage 2 conf vol				1203.200					
vCu, unblocked vol	549	72	and the second second second second		465				esternise:
C, single (s)	6.8	6.9			4.1				
C, 2 stage (s)									
F (s)	3.5	3.3			2.2				
p0 queue free %	98	86		Marina Persidan armada arma	97				vostatinis du
cM capacity (veh/h)	420	855			962				ABIO10 AREACE
Mineau(antilear(ear			sa ya sisiya		9. S. B. M.				
/olume Total	128	469	244	278	504				
/olume Left	9	0	0	26	0				2052240
/olume Right	120	0	10	0	0				
:SH	799	1700	1700	962	1700	n para gan da para gan da gan da para mperana	ana kanalara shadan kana kana karibaka biya kariba ka sana kariba	neg allen de gener gelet fon de la de l	- 9-90 <b>-</b> - 16 24-
/olume to Capacity	0.16	0.28	0.14	0.03	0.30				
Queue Length 95th (ft)	14	0	0	2	0				
Control Delay (s)	10.4	0.0	0.0	1.1	0.0				
Lane LOS	В			A					(1993 (1914)
Approach Delay (s)	10.4	0.0		0.4		ENG SIG			
Approach LOS	<b>B</b> -								
Magazilini Shimazili 🖉									
Average Delay			1.0						
Intersection Capacity Utilization	ation		51.9%	ICI	J Level c	f Service		A	
Analysis Period (min)	ayaaaaaan ahay oo ayaaa tir daa inta addin dhe	a a agus an	15	n na na na kao kaominina dia mampilia dia 497	an an an sao an	en e	, an a sa an	ne e presente consignante en reconstruir e construir d'Alfric al L'est d'Alfric de la construir d'est à Alfric	
		1997			NENCONS				1

# HCM Unsignalized Intersection Capacity Analysis 24: Saratoga Ave. & Sherman St.

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Movement	0 (a)				SEL	SBT
Lane Configurations	Y		4			र्स
Volume (veh/h)	25	37	140	8	4	141
Sign Control	Stop		Free	and the Clifford And Constraints Clifford		Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	40	152	9	4	153
Pedestrians	15		3			en lan mundersetzetzetzen eren eren eren eren eren eren eren zu eren zu eren eren eren eren eren eren eren ere
Lane Width (ft)	12.0	b for conde	12.0			
Walking Speed (ft/s)	4.0		4.0			
Percent Blockage	. 1		0			
Right turn flare (veh)						
Median type			None	nto de la		None
Median storage veh)	and a state of the second s	100000 - 10000 - 10000 - 10000-	11. June 100 111 100 100			
Upstream signal (ft)				n de la desta br>Esta de la desta		452
pX, platoon unblocked			ta shina ta shina a sa	201.130/07.14.19.10-11110-	and these measures	
vC, conflicting volume	336	172			176	
vC1, stage 1 conf vol	eesse waard all soo soo soo soo soo soo soo soo soo s		1046erzőkizőtőr umularom			
vC2, stage 2 conf vol						
vCu, unblocked vol	336	172	SOMO BAR SOUTHO		176	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)		~ ~		an a		
lF (s)	3.5	3.3		and set of the	2.2	
p0 queue free %	96	95 004			100	
cM capacity (veh/h)	647	861			1383	
Binevition de la de de la developeración de la developeración de la developeración de la developeración de la d						
Volume Total	67	161	158			
Volume Left	27	0	4		neer me a see ura travera	
Volume Right	40	9	0			
SH	760	1700	1383		en martin de la deseñada des	
Volume to Capacity	0.09	0.09	0.00			
Queue Length 95th (ft)	7	0	0		and a cost of a star	
Control Delay (s)	10.2	0.0	0.2			
_ane LOS	B		A	TING TANK		
Approach Delay (s)	10.2	0.0	0.2	la setti di	1995 (M. 1997) 1997 - Maria br>1997 - Maria Ma	
Approach LOS	В					
nersection Summary						
Average Delay			1.9			· · · · · · · · · · · · · · · · · · ·
ntersection Capacity Utilization	CONTRACTOR CONTRACTOR OF		a sa ka sa ka sa ka sa ka	8155560-755777279	a an	
	on 👘		21.0%	ાદા	J Level of	l Service A
Analysis Period (min)	on		21.0% 15	ICU	J Level of	Service A

## HCM Unsignalized Intersection Capacity Analysis 27: Highland Ave. & Ogden Ave.

27: Highland Ave. &			apaon	y Anaiy	/515						10/3	3/2011
	≯	1	*	4	-	•	•	1	1	1	Ļ	~
Movement Lane Configurations Volume (veh/h) Sign Control Grade	0	<b>1226</b> Free の%	33	2 2	<b>41</b> <b>1</b> 430 Free 0%	34	2	<b>1</b> <b>1</b> 0 Stop 0%	63	<b>NGBL</b> <b>1</b> 1	€ SBN 0 Stop 0%	33
Peak Hour Factor Hourly flow rate (vph) Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh)	0.92 0	0.92 1333 2 12:0 4.0 0	0.92	0.92	0.92 1554	0.92 37	0.92 2	0.92 0 6 12:0 4.0 1	0.92	0.92 1	0.92 0 13 12.0 4.0 1	0.92
Median type Median storage veh) Upstream signal (ft)		None 369			WLTL 2							
pX, platoon unblocked vC, conflicting volume vC1, stage 1 conf vol vC2, stage 2 conf vol	1604			0.72 1374			0.72 2176 1357 819	0.72 2965 1357 1609	0.72 690	0.72 2325 1590 735	0.72 2965 1590 1374	811
vCu, unblocked vol tC, single (s) tC, 2 stage (s) tF (s)	1604 4.1 2.2			749 4.1 2.2			1859 7.5 6.5 3.5	2952 6.5 5.5 4.0	0 6.9 3.3	2065 7.5 6.5 3.5	2951 6.5 5.5 4.0	811 6.9 3.3
p0 queue free % cM capacity (veh/h)	100 399			100 615			99 195	100 135	91 779	99 106	100 136	89 319
Volume Total Volume Left Volume Right cSH Volume to Capacity Queue Length 95th (ft)	666 0 399 0:00 0	702 0 36 1700 0.41 0	779 2 0 615 0.00 0	814 0 37 1700 0.48 0	2 2 0 195 0:01 1	68 0 68 779 0.09 7	1 1 0 106 0.01	36 0 36 319 0.11 9				
Control Delay (s) Lane LOS Approach Delay (s) Approach LOS	0.0	0.0	0.1 A 0.0	0.0	23.7 C 10.5 B	10.1 B	39.2 E 18.4 C	17.7 C				
Intersection Southnary Average Delay Intersection Capacity Utilizat Analysis Period (min)	ion		0.5 52.7% 15	IC	U Level o	f Service			A			

Synchro 8 Report Page 10

Sec. 19

**PC-38-11** A petition seeking a right-of-way vacation of a 66-foot wide by 600-foot long portion of the Prince Street right-of-way located between Grant Street on the south and Sherman Street on the north and immediately west of and adjacent to Downers Grove North High School property in Downers Grove, IL; Community High School District 99, Petitioner; Village of Downers Grove, Owner.

Chairman Jirik swore in those individuals who would be speaking on File PC-38-11.

Mr. Stan Popovich, Planner, directed the commissioners' attention to the overhead and explained the petition was a for a vacation of a 66-foot wide by 600-foot long right-of-way ("ROW") along Prince Street, between Grant and Sherman Streets and immediately west of the Downers Grove High School football field. The current ROW included a 28-foot wide street with a sidewalk on the east side and parkway trees on both sides of the street. The six parcels adjacent to the proposed vacated ROW were owned by Community High School District 99 ("District"), petitioner. The District was proposing a comprehensive redevelopment of the area to include a new athletic field, parking lots, and a portion of the Prince Street ROW to be vacated. The only item under Plan Commission review, however, was the vacation of the ROW. Per staff, associated uses for high schools were permitted uses within the R-4 zoning districts.

Existing conditions were noted on the overhead, followed by the proposed improvements, which included the following: a new parking lot on south side of the large parcel between Saratoga, Grant, Prince and Sherman Streets; a soccer field on the north side of that parcel; a new paved walkway on the converted ROW; a plaza on the south end with a new bathroom building and canopy. On the south side of the ROW a new entrance to the proposed parking lot would be installed. A gate would also be installed adjacent to Sherman Street to block off the walkway so vehicles could not drive in the area.

Mr. Popovich confirmed that all utility companies were contacted. He proceeded to explain, more specifically, the location of the utilities within the ROW.

Mr. Popovich pointed out that some revisions were made to the proposal since it was originally submitted by the petitioner, such as the original 45 foot wide easement proposed for access to the utilities was revised to 46 feet, after discussions with staff, the petitioner, and the school district. The extra foot to the west would allow the Village to have 10 feet of space between the existing water main and the western edge of the easement. Proposed revisions include the incorporation of easement stubs to provide access for the storm sewer, sanitary sewer and water main. Staff noted that the revision was now for a 46-foot wide by 600-foot long easement. The petitioner was aware that no permanent structures would be allowed within the easement area.

Continuing, it was reported that a traffic study for this project was done and it was found that the street closure would not result in a significant impact to traffic flow in the area. Most of the traffic in the area was school-related. Non-school related traffic to Ogden Avenue would typically use Saratoga Avenues since there was an existing traffic light at Ogden Avenue. Staff reviewed the traffic impact study with the Public Works department and the traffic manager agreed with the findings in regard to the proposed vacation.

Mr. Popovich discussed that the Comprehensive Plan calls for the Village to promote the continued operation and improvements to school facilities and ensure that they do not impact residential

neighborhoods and to cooperate with the school districts to maintain high quality sites and facilities. Staff believed the proposed ROW vacation complies with this recommendation. With this vacation, bus stacking would be eliminated along Prince Street between Grant and Lincoln and not impact the adjacent residential neighborhood.

Staff believed the proposal was consistent with the Village's Comprehensive Plan and Zoning Ordinance, and met the requirements of the Village's police department. However, the fire department did have concerns, and requires including a 20 foot walkway versus a 16 foot walkway; a mountable curb on the south side of the ROW between the plaza and parking area (for emergency vehicles); and a gate on the north side to include a lock box to be operable by one person.

Mr. Popovich indicated the appropriate notice was provided for this proposal. Staff received no correspondence regarding the request from the neighbors. Mr. Popovich indicated the Director of Public Works received correspondence from a neighbor regarding the design of the proposed parking lot east of Main Street. The District held an October 27, 2011 neighborhood meeting on this proposal and the results of the meeting were on the dais. There appeared no significant concerns with the vacation and the comments were primarily related to changing the parking hours on Prince Street and lifting the parking ban, which staff could address after the improvements were made.

Per the Vacation Policy, Mr. Popovich stated that consent was required by two property owners and, in this case, there was only one property owner adjacent to the proposed ROW. Mr. Popovich noted known public interests such as the location of utilities within the ROW have been addressed. Additionally, the traffic study found the proposed vacation will not negatively impact the surrounding neighborhood. Staff concurs and believed the Vacation Policy was being met. Staff, however, was recommending to waive the compensation fee, typically required.

Mr. Popovich stated staff recommended the Plan Commission forward a positive recommendation to the Village Council with the conditions listed on page 6 of staff's report. He reminded the Commission that two revisions were necessary to the original conditions: Condition No. 2 shall read, "Prior to final Village Council consideration, a Mylar copy of the Final Plat of Vacation indicating the required easements per the **revised easement sketch identifying a 46 foot wide easement** shall be prepared and submitted to the Village." Condition 3 shall read, "The Village shall waive the <u>\$153,513.00</u> compensation for the vacated right-of-way."

Chairman Jirik reminded the commissioners that tonight's request was for a vacation of land only.

Mr. Matejczyk confirmed with Mr. Popovich that the vacation was going to facilitate the use of the proposed parking lot. Mr. Popovich noted that there would be an entrance with the existing ROW serving on the south side as an entrance to the parking facility and continuing through to Saratoga Avenue. He identified those properties owned by the school district along Saratoga. Also, he clarified that the stubs in the revised 46 foot wide easement were indicated in the revised easement sketch, per Mrs. Rabatah's question.

Mr. Waechtler asked about waiving the compensation for the property. Mr. Popovich stated the Village Council makes the final decision about payment for rights of way per the vacation policy. He indicated staff typically makes a recommendation in terms of the value of the right-of-way so the Plan Commission and public were aware.

Chairman recalled the Plan Commission took no position on such recommendations in the past. Chairman Jirik could not recall if there was another instance where compensation was waived for a right of way.

Mr. O'Brien, also raised the fact that the Village has a fee waiver policy which allows staff to waive fees for governments and not-for-profits where no direct costs are incurred by the Village. Mr. O'Brien indicated he was not aware of any other waivers since the current right of way policy was adopted in 2003. He stated that there were no other cases where an public agency or not-for-profit applied for a vacation.

Mr. Mark McDonald, Superintendent for School District 99, 412 Bunning Drive, Downers Grove, discussed the petition in depth, noting that North High School was constructed on a small amount of land initially and the school district began purchasing properties back in the 1990s, which were the properties under discussion. The last home was purchased in July 2011. Planning for the two high school campuses began back in 2009 but no source of revenue existed until the summer of 2010. During this time he reported the Board of Education charged the school's administration to address three issues at the north campus: safety, adding or making better use of the existing space at the campus, and to create facilities on the campus to conduct more activities and athletic events on the campus. Details followed on how each of these three issues were being addressed; specifically, vacating Prince Street west of the stadium for the purpose of enlarging the campus contiguous and relocating and redefining the bus loading areas.

Continuing, Mr. McDonald stated the current homes that the school district owned would, therefore, be converted to green space and a bus drop-off and pick-up. The vacation allowed for the consolidation of spaces within the existing campus, eliminated through-traffic, and allowed for the relocation of bus drop-offs and pick-ups in the south area of the campus, which he believed was the safest location for the facility.

Mr. Byron Wyns, Wight & Company, 2500 N. Frontage Road, Darien, Illinois, engineers for the project, discussed that his offices did work closely with the school district in creating a safe design for the students and vehicular traffic. He welcomed questions.

Responding to commissioner questions, Mr. McDonald reported that the school the district owned eight homes on nine lots. Bus ridership was estimated at 500 to 600 students and those students would be boarding at the newly designed parking area. Asked whether the property on the east side of Main Street would still be utilized, Mr. McDonald stated it would, only for parking. As to those students crossing Main Street during the day, he noted they were students crossing daily for physical education classes and for football practice in the fall. In the spring, students involved in softball crossed Main Street. With the new proposal, he said those students were removed from crossing the street, except for the early morning hours, arriving at school or in the afternoon, exiting school. Students would complete their physical education classes and after-school activities without crossing a street.

Chairman Jirik opened up the meeting to public comment.

Mr. Chris Patterson, 4502 Prince Street, Downers Grove, fully supported vacating Prince Street. His concern was traffic control on Prince Street, south of Grant between Grant and Lincoln, due to parents waiting to pick up their students while in the bus parking zone. He asked if there would be parking and traffic controls to address this issue. For this specific issue, the chairman felt that the Traffic and Parking Commission could address his concerns. Mr. O'Brien explained the appropriate steps that would take place to address such issues as the petition moved forward and as well as stating that District 99 would be educating the parents and installing appropriate signage.

Ms. Mary Plasman, 4440 Saratoga, Downers Grove, asked the commission to not approve or hold off the vacation until the parking and traffic issues were resolved. She believed the vacation would impact the area in ways not considered in the traffic report, i.e., no information about the drop-off and pick-up area with the sports buses and the waiting parents. Other concerns included the buses exiting their area and barely having enough room to turn out of the driveway and wait for the stop sign at Saratoga and Grant Streets. She believed the vacation would have a negative impact on the traffic on Saratoga. She stated the traffic report reflected times when students were basically in school. Ms. Plasman stated that Saratoga was a narrow street, since she could not back out of her driveway currently. She asked if the 600 feet length of the vacation could be shortened in order to have room for the school district to rearrange the entrance/exit of the parking lot. While she did not oppose the plan, she believed approval of the petition would negatively affect her property. Ms. Plasman indicated that her property was a rental house and the new parking lot would make the property less attractive to prospective renter. She also added that the construction traffic will be heavy and she did not want that traffic parking on Saratoga.

For the record, Mr. Waechtler, stated his understanding was that Mrs. Plasman was asking if it would be better to shorten the parking lot and relocate it eastward, to allow more room for the buses to make turns, wherein Ms. Plasman clarified it was a narrow street problem and the driveway exiting onto Saratoga was directly across from her property. She believed removing the homes already devalued her rental property because she could not command a higher rent.

In responding to the Chairman's questions, Mr. Popovich explained the review process for the parking lots, noting the proposed parking lots and improvements to the school's property was "construction by right" because public high schools are permitted uses in the R-4 district. He went on to indicate the proposed parking lot would have to comply with the Village's screening and construction standards.

Chairman Jirik asked there was anything that prohibits the development of either parking lot should the vacation not be approved. Mr. Popovich indicated the improvements could be made even if the vacation is not approved. He indicated the closure of Prince Street is the only portion of the plan that could not be completed without the vacation.

Chairman Jirik went on to confirm that could the parking lots be developed as outlined if the vacation is denied. Mr. Popovich indicated they could, noting the parking lot design that was on the overhead would be slightly modified because a vehicle would be coming off of Prince Street. Regardless of the outcome of this meeting, Mr. Popovich confirmed with the Chairman that the parking lots could be developed without the vacation.

Ms. Cindy Schram, 4442 Saratoga, Downers Grove, stated her concern was that if the petitioner was allowed its vacation, what were her rights to work with the school district. She was looking to the Village to assist the owners so the proposal worked. She supported the proposal, but stated safety concerns existed in the parking lot and the bus drivers could not see late-coming students. She

stated she had no parking at any time in front of her house since buses were loading students or vehicles were constantly parking and blocking her driveway. She wanted to work with the Village and the school district to resolve this issue, since it was the first time many of the neighbors had heard about the proposal.

Ms. Jenny Bauman, 4500 Prince Street, Downers Grove, stated she found out about this proposal about one week before she was due to close on her home. She found issues with the traffic report, noting it identified the peak times between the hours of 2:00 p.m. and 4:00 p.m. She stated the school lets out at 3:20 p.m. and Prince Street was blocked off during these times. She believed that the morning and afternoon traffic flowed well, but problems arose when students were let out of their athletic programs between 4:00 p.m. and 7:00 p.m. Parents parked on Prince Street to pick up kids and creating congestion for residents in the area. Ms. Bauman went on to indicate she did not receive support from the police department during congested times and stated that the existing rules for safety were not being enforced. She stated she attended the open house meeting and came away from that meeting with the petitioner having no clear plan for the drop-off and pick-up of the students. She believed the traffic report when it said the volume of cars expected to use the area would not cause operational concerns; she stated there were operational concerns now.

Ms. Bauman explained that the school did not communicate drop-off/pick-up or other traffic patterns to the parents at any of the orientation meetings she attended. She indicated that only the on-site parking rules were explained. She supported keeping the greenscape and not removing trees.

Mr. Tom Smith, 1205 Grant Street, Downers Grove, shared the same concerns of his neighbors and he supported the vacation of Prince Street, as it was necessary. This was the first time he heard about the proposal and believed there was a lack of community involvement from the school district. He supported more study of the traffic impacts and possible modifications to the parking lot and bus pick-up area.

No further comments followed. Chairman Jirik closed public participation. Commissioners had no follow-up questions to the public.

Mr. Byron Wyns, for Wight & Company, responded by explaining that the pick-up and drop-off area was designed to accommodate the off-street pick-up area into the parking zone after the buses leave, which included a designated area and a canopy area. He confirmed, as the above neighbor had stated, that there was no formal plan in place, as he was in discussions with the school district on how to address the issue and stated he "knows that there has to be something formal put in place" which was the design that was presented. He stated there was thought put behind the plan.

While the Chairman confirmed with staff that the commission had no purview over the parking lot at this time, he asked for staff's view on a motion, if the petitioner chose to voluntarily meet with the neighbors. In response, Mr. O'Brien explained that the petitioner would be encouraged to work with the surrounding neighbors to address concerns. However, if the Plan Commission believed that the traffic concerns had not been adequately addressed by the traffic study with regard to the traffic circulation on Prince Street, the Commission could request more information and have the petitioner return to a future meeting.

The Chairman pointed out that the petition was for a vacation, but the buses have to go somewhere, which was not in the purview of this Commission.

Mr. Beggs indicated he could only view this petition supposing there was no parking lot plans, then the question was whether it was a proper request, which he was considering.

Mr. Waechtler noted he did not recall any past vacations with as many ramifications as this request. He thought the two issues were separate but inter-related. He reiterated the District held a neighborhood meeting on October 27. Mr. Waechtler acknowledged that the Commission received a list of concerns raised by the neighbors at that meeting. He questioned whether those concerns were addressed by the School District. He agreed there were unanswered questions and the vacation request was much more than a simple vacation where a garage may be involved.

Clarifying his understanding of Mr. Waechtler's comments, the Chairman understood Mr. Waechtler's comments that a response to the neighbors concerns to traffic issues should have been included to assist the Commission in its review. Mr. Waechtler concurred, stating along with some more related items. Chairman Jirik stated it was "the impact of a vacation on an existing activity, which was more than a level of service."

Superintendent Mark McDonald responded by explaining that he held a public meeting with the Board of Education back in January, 2009 and discussed the need to create such a plan, which was posted on the web site. Another meeting was held in the fall of 2009, revealing such a plan, and issues of safety were addressed. The purchase of the properties began in 2009 and the school district spoke to affected neighbors. A letter was sent to the neighbors, of which he did not see because he was not employed by the district then, inviting them to a meeting. He was not aware of a plan from the 1990's because he did not begin working in the district until 2003. As to community involvement, he reported that over 100 people were involved from the community, including booster club parents, parent club meetings at North, and public agencies. The plan was initially presented to the Board of Education in January 2011 but the board did not vote on the plan at that time. A second public meeting was held on January 31, 2011 to address issues found by the Board of Education at that time. The meetings were publicized in the Downers Grove media and have been on the district's website.

Mr. Keith Matune, member of the Board of Education for Downers Grove North and South ("BOE"), and having been a prior student at North, discussed that the BOE was charged with the safety of approximately 2,000 students at North. He stated the Master Site Program and Plan addresses that very fairly. He discussed the streets crossings he did as a student over Main Street and the buses lining up since the 1970s. If a change was not made, he stated more of the same would continue. Approximately 25% to 33% of the students ride the bus. With the way the buses were currently lined up, he said a safety hazard existed, along with other issues, and addressing it was a better and safe move. He reiterated the ROW vacation was primarily about safety.

Mr. Marty Schack, director of physical plant and operations for the district, said he was employed since 1983 with the district and has been trying to address and correct the issues at North High School over the years. He viewed the traffic problems as vehicular and pedestrian and one of the reasons for the vacation was that students would not have to cross Prince Street if vacated. He did not want to duplicate the problem on Main Street. Placing the buses in the bus parking lot allowed better control of the students to their buses. He cited the positives occurring at South High School

with a similar bus parking layout. Secondly, as to public input, he reported the open house two weeks ago was encouraged by Village staff and a list of neighbor concerns were heard, a copy of which the Commissioners had. He stated the district was considering those concerns as it goes through further design and review with the Village. No new concerns were raised and he wanted to ensure those attending tonight's meeting that the district was listening in order to work with the designer and traffic engineer. Lastly, he noted the District's traffic engineer was present and believed the study was comprehensive.

Mr. Charles Teuer, traffic engineer with Regina Webster & Associates, responded by explaining how the scope of study was developed and approved by Village staff. The Village agreed with the times that would be observed for traffic volumes and levels of service.

Chairman Jirik, again, reiterated that it in his mind there was a single issue that the Commission needed to think about, which was -- are there traffic effects or other effects that would result from the closing of a street that the commission believed were significant enough that more information was necessary or not. He agreed this was a unique situation and the street was also unique. He opened up the meeting to questions for the petitioner on matters of traffic.

Per Mr. Hose's question about the costs and delays to the school district if the Commission were to ask for more information, Mr. Teuer could not respond to the question. Dialog followed that it depended upon if there was a relevancy and what it was to study further.

Mr. Waechtler asked if Mr. Teuer and others involved in the petition, had time to address the neighbors' concerns, wherein Mr. Teuer stated he received the list on the dais and was in the process of updating the traffic study accordingly.

Chairman Jirik asked to what extent the items on the list were specifically related to the vacation wherein Mr. Byron Wyns, with Wight & Company, responded that the comments Mr. Teuer was addressing were staff comments regarding the traffic study and were not directly related to all the issues on the list from the October 27th meeting. He clarified there were two different sets of comments and Mr. Teuer had the staff comments that were accumulated when the October 27 meeting was held. Many of those traffic issues were existing and not based on the new parking design. He emphasized he was working to address staff comments.

Asked if there were traffic issues directly related to the vacation, no comments were heard. No further closing statements were made by the petitioner.

The Chairman spelled out the four options available to the Commissioners on how to proceed with a motion. Mr. O'Brien reminded the Commissioners and public that the Village's planners, traffic manager and police department reviewed the traffic study. Staff asked the petitioner to study the surrounding street network to see if the closure of Prince Street would impact the traffic and pedestrian patterns in the neighborhood. He explained that overall the level of services for surrounding intersections remained with the closure of Prince Street. Mr. O'Brien indicated staff's finding, based on the applicant's traffic study, is that there would be no significant impacts to the traffic patterns if Prince Street is closed. However, he reminded the Commission that staff has some operational and site planning comments regarding the layout of the parking lot. These comments were forwarded to the petitioner and will have to be addressed in the petitioner's final site plan.

Mrs. Rabatah asked if the traffic flow between the hours of 4:00 p.m. and 7:00 p.m. would not be changed with the closure. Mr. O'Brien believed the level of service in the neighborhood would remain the same and some of those concerns raised by the neighbors were being addressed by getting the buses off of Prince Street and into the parking lots.

Chairman Jirik queried staff whether staff was recommending that the district prepare an operational plan, including regular communication with the neighbors, regular surveillance, and education of sports families on how to pick up their students. Mr. Popovich responded that the Village's traffic manager was advocating better education of the parents and students for the pickup and drop-off area. The traffic manager also believed traffic will be improved because specific parking spaces for the buses were being created, especially for organized sporting events. Mr. O'Brien called attention to the fact that a plan would be put in place by the District based on their traffic engineer's recommendation. He indicated once the parking lots were built, the Village would partner with the School District fine-tune on-street traffic regulations as has been occurring.

The Chairman believed that the plan would create a forum and if the neighbors were upset they could request to view the plan, and if parts of it were not working a document existed which could be worked upon to improve the situation. As part of the vacation, Mr. O'Brien was not sure if the Commission could require an operational plan. Mr. O'Brien also stated that staff had already asked the petitioner information regarding their use of the proposed parking lots.

Mr. Hose asked staff what its level of comfort was for the period of time outside of the two times already studied, wherein Mr. O'Brien explained that the two time periods were the peak hours typically experienced by schools. These time periods would be what one would expect to see in a traffic study. He indicated that during the afternoon peak, one would expect to see a greater drop in service at the intersections of the cross streets with Ogden Avenue as school let out. Saratoga was a street that he felt would experience a bit more traffic in the PM peak due to the signal at Ogden. Mr. O'Brien noted that Prince provides some relief to the road network.

Mr. O'Brien went on to explain that the evening peak for the road network is likely between the hours of 5-7 p.m. He indicated that although the traffic study did not specifically address these hours, it is likely that the road network would function similarly to the peaks identified for the school in the traffic study. Mr. O'Brien indicated these evening peaks would likely not be affected by the closure of Prince Street given its function in the street network. He indicated the traffic that would go to Prince would likely shift to another street in the grid.

Mr. Waechtler suggested clarifying Conditions No. 3 to adding a Condition No. 7 stating "District 99 will prepare an on-going operational plan for neighbors, traffic and parking objections." He asked for Commissioners' input on new Condition No. 7. The Chairman suggested, after hearing what staff reported above, to add the following parenthetical: "(This motion recognizes testimony by staff, noting that an operation plan that addresses traffic issues associated with changes that were brought about due to this vacation, will be prepared separately by the petitioner as part of the staff's permitting process.)"

The Chairman asked for other comments. There were none. As such, Chairman Jirik entertained a motion.

WITH RESPECT TO FILE PC 38-11, MR. COZZO MADE A MOTION THAT THE PLAN COMMISSION FORWARD A POSITIVE RECOMMENDATION TO THE VILLAGE COUNCIL APPROVING THE PRINCE STREET RIGHT-OF-WAY VACATION SUBJECT TO STAFF'S CONDITIONS LISTED BELOW:

- 1. THE VACATION SHALL SUBSTANTIALLY CONFORM TO THE STAFF REPORT DATED NOVEMBER 7, 2011.
- 2. PRIOR TO FINAL VILLAGE COUNCIL CONSIDERATION, A MYLAR COPY OF THE FINAL PLAT OF VACATION INDICATING THE REQUIRED EASEMENTS PER THE "REVISED EASEMENT SKETCH IDENTIFYING A 46 FT. WIDE EASEMENT" SHALL BE PREPARED AND SUBMITTED TO THE VILLAGE.
- 3. A MOUNTABLE CURB SHALL BE PROVIDED ONTO THE PLAZA AT THE SOUTH END OF THE VACATED RIGHT-OF-WAY.
- 4. THE 16-FOOT WIDE WALKWAY SHALL BE REDESIGNED TO PROVIDE A 20-FOOT WIDTH THAT CAN ACCOMMODATE AN 80,000 POUND EMERGENCY VEHICLE.
- 5. THE NORTHERN GATE SHALL INCLUDE A LOCKBOX AND BE DESIGNED SUCH THAT A SINGLE INDIVIDUAL CAN OPERATE THE GATE.
- 6. THIS MOTION RECOGNIZES TESTIMONY BY STAFF, NOTING THAT AN OPERATION PLAN THAT ADDRESSES TRAFFIC ISSUES ASSOCIATED WITH CHANGES THAT WERE BROUGHT ABOUT DUE TO THIS VACATION, WILL BE PREPARED SEPARATELY BY THE PETITIONER AS PART OF THE STAFF'S PERMITTING PROCESS.

#### SECONDED BY MR. HOSE.

Mr. Beggs stated he was not sure of staff's authority to make requirements under the permitting process. Mr. O'Brien responded that as part of the site plan approval, the Village will be granting ROW permits and access permits which will be an opportunity for the site plan issues to be addressed. He stated the Commission could strengthen the requirement if it chose, but again, reminded the Commission it was staff's intent to require the petitioner to answer some of the questions surrounding the site plan. Mr. Beggs reminded the Chairman that the Commission was dealing with a separate governmental body and not with a commercial establishment subject to the jurisdiction of the Village. In response, Mr. O'Brien stated that the district does have to comply with the Village's Zoning Ordinance, ROW permits and stormwater requirements.

The Chairman pointed out that if the Commission requires the operational plan as part of the vacation, the petitioner has no option but to prepare the plan.

However, Mr. Beggs disagreed. He stated the vacation depended upon whether the Commission was creating any hazard to the neighborhood by closing the street. Personally, he did not believe the Commission was creating a hazard and he did not hear of any hazards being raised at this time.

Mr. Waechtler commended District 99 for all its work over the years and was assured that the district would continue to work with the neighbors to resolve the issues. The Chairman concurred.

#### **ROLL CALL:**

#### AYE: MR. COZZO, MR. HOSE, MR. BEGGS, MR. MATEJCZYK, MRS. RABATAH, MR. WAECHTLER, CHAIRMAN JIRIK NAY: NONE

#### **MOTON CARRIED. VOTE: 7-0**

Staff referenced the meeting dates for 2012 on the dais. Mr. O'Brien stated one agenda item will be on the December agenda. Copies of the Comprehensive Plan were also available after the meeting. Copies were also on-line and at the library.

Mr. Beggs added that the discussion on the last petition was very beneficial.

# THE MEETING WAS ADJOURNED AT 10:05 P.M. ON MOTION BY MR. WAECHTLER, SECONDED BY MRS. RABATAH. MOTION CARRIED UNANIMOUSLY BY VOICE VOTE OF 7-0.

/s/ Celeste K. Weilandt Celeste K. Weilandt (As transcribed by MP-3 audio)

#### Master Site Plan Phase 2 Open House Neighborhood Comments

#### Landscaping

- Save as many trees as possible.
- More green space.
- Adequate landscaping along Grant (West side of school) to block noise/view.
- Additional line of trees between bus parking and soccer field.
- Highland parkway would like more green space & trees.

#### Parent Pick-up & Drop off areas

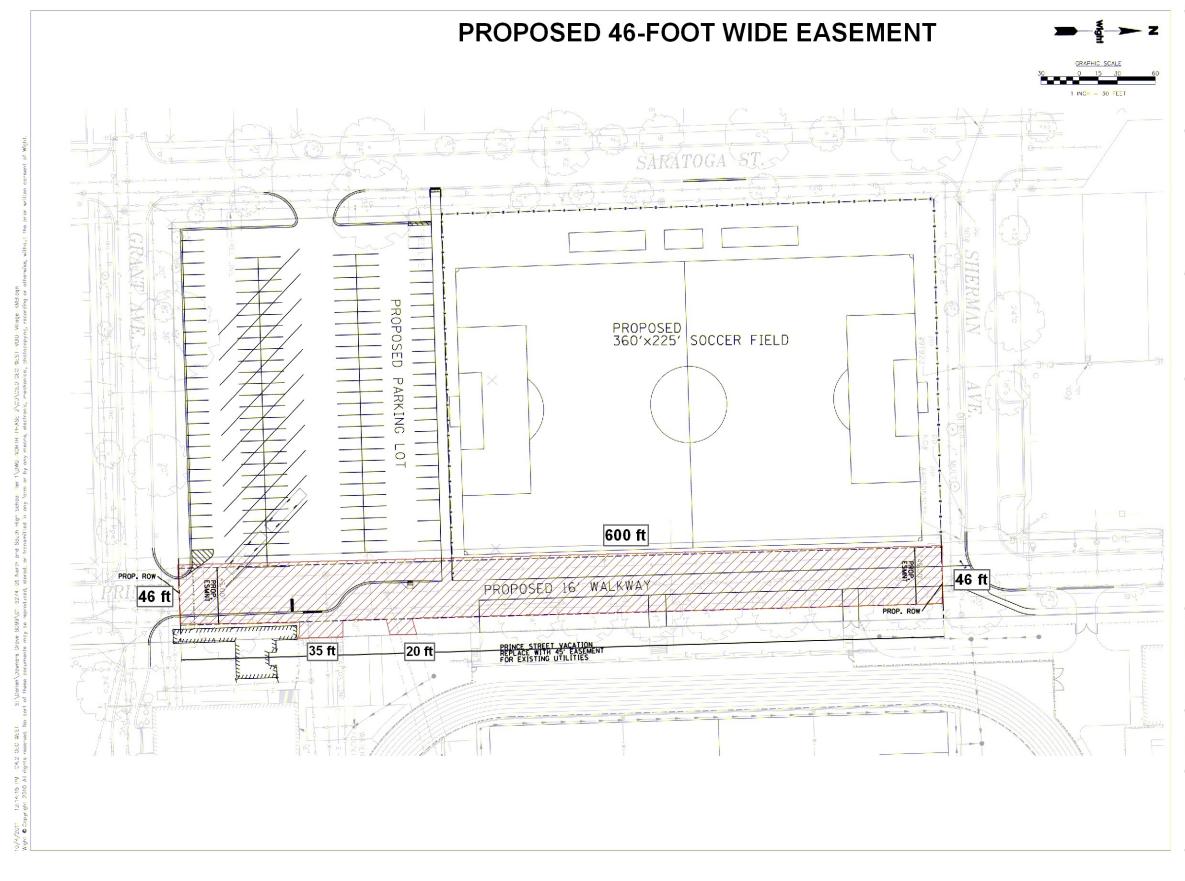
- Educate parents & students of new traffic flow and pick up area including after school hours.
- Clear signage & direction needs to be provided for new bus staging areas.

#### Prince Street closure

- Restricted parking hours as opposed to no parking anytime (similar to Lincoln St).
- Parking ban on Prince to be lifted at least on weekends.

#### Safety Concerns

- Review of a 4-way stop sign at Grant & Highland to alleviate congestion & better pedestrian crossing with increased number of cars.
- Grant & Highland stop sign NE corner view is obstructed by large pine tree.
- Residential homes on Highland have obstructed view to North when backing out of driveways due to large pine tree.
- Highland parking lot entrance location directly across from residential driveway is dangerous.
- Stop sign at Highland & Lincoln to alleviate speeding from Grant to Chicago Ave.
- Traffic at Grant & Prince currently not being enforced. Safety needs to be addressed.
- One way on Grant & Prince (one block West & South of school) to improve traffic.
- Widen Grant & Sherman to include turn lanes for flow onto Main Street.
- Study traffic jam at the 4 way stop at Saratoga & Grant.
- Move driveway across from 4440 Saratoga further North to avoid being directly across residential driveway for safety reasons.







Wight & Company wightco.com 2500 North Frontage Road Darien, IL 60561 P 630.969.7000 F 630.969.7979

REV DESCRIPTION DATE

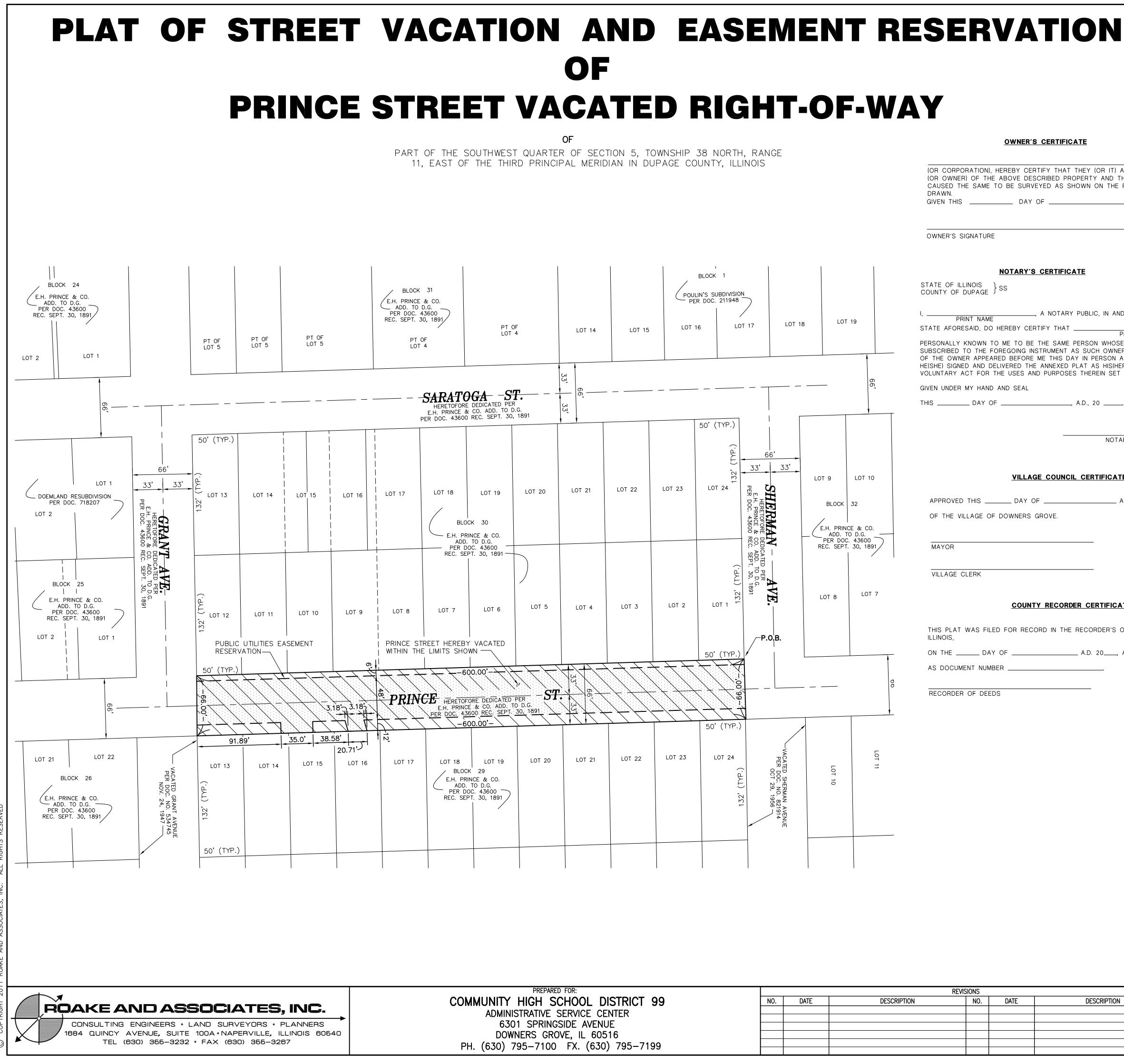
NORTH HIGH SCHOOL MSP 2011 TIER 1 PHASE 2

4436 Main St. Downers Grove, IL

GEOMETRIC PLAN WEST

Project Number OI-5214-06 Drawn By: KMB Sheet:





## OWNER'S CERTIFICATE

(OR CORPORATION), HEREBY	CERTIFY T
(OR OWNER) OF THE ABOVE	DESCRIBED
CAUSED THE SAME TO BE S	URVEYED A
DRAWN.	
GIVEN THIS [	DAY OF

OWNER'S SIGNATURE

STATE OF ILLINOIS

COUNTY OF DUPAGE

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STATE	AFORESAID,	DO	HEREBY	CERTIFY	Т

PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME(S) IS(ARE) SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNER(S) OR REPRESENTATIVE(S) OF THE OWNER APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE(SHE) SIGNED AND DELIVERED THE ANNEXED PLAT AS HIS(HER) OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND SEAL

THIS _____ DAY OF _____

APPROVED THIS _____ DAY OF _____ A.D. 20___ BY THE COUNCIL OF THE VILLAGE OF DOWNERS GROVE.

MAYOR

VILLAGE CLERK

THIS PLAT WAS FILED FOR RECORD IN THE RECORDER'S OFFICE OF DUPAGE COUNTY, ILLINOIS,

AS DOCUMENT NUMBER _____

RECORDER OF DEEDS

99
99

		REVI	SIONS								
NO.	DATE	DESCRIPTION	NO.	DATE	PRINCE STREET VACATED RIGHT-OF-WAY						
						PLAT OF STREET VACATION AND EASEMENT RESERVATION					
						DRN./CKD. BY: PRS/CAH FILE: 7045VAC FLD. BK./PG.: 236/1 SHEET NO.					
						SCALE:         1"=50'         DATE:         11/14/11         JOB NO.:         704.005         OF					



## LINE LEGEND

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## PROPERTY LINE CENTER LINE STREET VACATION BOUNDARY EASEMENT RESERVATION LINE RIGHT-OF-WAY VACATION AREA

EASEMENT RESERVATION AREA

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_ INDIVIDUALS THAT THEY (OR IT) ARE THE OWNERS ED PROPERTY AND THEY (OR IT) HAVE AS SHOWN ON THE PLAT HEREON

____, A.D., 20_____

### NOTARY'S CERTIFICATE

A NOTARY PUBLIC, IN AND FOR SAID COUNTY IN THE

PRINT NAME

_____ A.D., 20 _____

NOTARY SIGNATURE

#### VILLAGE COUNCIL CERTIFICATE

#### COUNTY RECORDER CERTIFICATE

ON THE _____ DAY OF _____ A.D. 20___, AT ____ O'CLOCK ____M.

#### EASEMENT RESERVATION PROVISIONS

AN EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF DOWNERS GROVE, COUNTY OF DUPAGE, AND TO UTILITY COMPANIES OPERATING UNDER FRANCHISE FROM THE SAID VILLAGE LIMITED TO AT&T. NICOR. THE DOWNERS GROVE SANITARY DISTRICT AND THEIR RESPECTIVE SUCCESSORS AND ASSIGNS JOINTLY AND SEVERALLY, OVER ALL AREAS MARKED "PUBLIC UTILITIES EASEMENT RESERVATION" ON THE PLAT OF VACATION OF THE VACATED STREET RIGHT-OF-WAY AS DESCRIBED HEREIN FOR THE PERPETUAL RIGHT PRIVILEGE AND AUTHORITY TO CONSTRUCT, RECONSTRUCT, REPAIR, INSPECT MAINTAIN. AND OPERATE VARIOUS UTILITY TRANSMISSION AND DISTRIBUTION SYSTEMS AND COMMUNITY ANTENNA TELEVISION SYSTEMS AND ALL NECESSARY APPLIANCES AND OTHER STRUCTURES AND APPURTENANCES AS MAY BE DEEMED NECESSARY BY SAID VILLAGE AND FOR ANY AND ALL MUNICIPAL PURPOSES, OVER, UPON, ALONG, UNDER AND THROUGH SAID INDICATED EASEMENTS. TOGETHER WITH THE RIGHT OF ACCESS ACROSS THE PROPERTY TO DO ANY OF THE ABOVE WORK. THE RIGHT IS ALSO GRANTED TO CUT DOWN, TRIM OR REMOVE ANY TREES, SHRUBS, OR OTHER PLANTS THAT INTERFERE WITH THE OPERATION OF THE UTILITIES. NO PERMANENT BUILDINGS OR STRUCTURES SHALL BE PLACED ON SAID EASEMENTS. BUT SAME MAY BE USED FOR GARDENS, SHRUBS, LANDSCAPING, DRIVEWAYS, FENCES ("IMPROVEMENTS") AND OTHER PURPOSES THAT DO NOT THEN OR LATER INTERFERE WITH THE AFORESAID USES AND RIGHTS. ANY INSTALLATIONS OF IMPROVEMENTS PLACED IN THE EASEMENT SHALL BE AT THE PROPERTY OWNER?'S SOLE EXPENSE AND THE VILLAGE SHALL NOT BE RESPONSIBLE FOR REPAIRING, MAINTAINING OR REPLACING ANY IMPROVEMENTS. THE PROPERTY OWNERS SHALL INDEMNIFY AND HOLD HARMLESS THE VILLAGE, ITS AGENTS, OFFICERS AND EMPLOYEES AGAINST ALL INJURIES, DEATHS, LOSSES, DAMAGES CLAIMS, SUITS, JUDGMENTS, COSTS AND EXPENSES WHICH MAY ARISE DIRECTLY OR INDIRECTLY FROM THE INSTALLATION OF ANY AND IMPROVEMENTS IN THE EASEMENT AREA. THE VILLAGE SHALL NOT BE RESPONSIBLE OR LIABLE FOR ANY DAMAGE INCURRED TO THE IMPROVEMENTS DURING OR AS A RESULT OF ANY REPAIR, MAINTENANCE, OPERATION, USE OR INSTALLATION OF EQUIPMENT OR FACILITIES WITHIN THE EASEMENT AREA. ALL INSTALLATIONS OF IMPROVEMENTS SHALL BE SUBJECT TO THE ORDINANCES OF THE VILLAGE OF DOWNERS GROVE. EASEMENTS ARE HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF DOWNERS GROVE AND OTHER GOVERNMENTAL AUTHORITIES HAVING JURISDICTION OF THE LAND OVER THE ENTIRE EASEMENT AREA FOR INGRESS, EGRESS AND THE PERFORMANCE OF ANY AND ALL MUNICIPAL AND OTHER GOVERNMENTAL SERVICES.

#### PRINCE STREET VACATION LEGAL DESCRIPTION

THAT PART OF THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 38 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

THAT PART OF PRINCE STREET AS HERETOFORE DEDICATED IN E.H. PRINCE AND COMPANY'S ADDITION TO DOWNERS GROVE ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 30, 1891 AS DOCUMENT NUMBER 43600 DESCRIBED AS BEGINNING AT THE NORTHEAST CORNER OF LOT 1 IN BLOCK 30 IN SAID E.H. PRINCE AND COMPANY'S ADDITION: THENCE ALONG THE EASTERLY EXTENSION OF THE NORTH LINE OF SAID LOT 1, A DISTANCE OF 66 FEET TO THE NORTHWEST CORNER OF LOT 24 IN BLOCK 29 IN SAID E.H. PRINCE AND COMPANY'S ADDITION; THENCE SOUTH ALONG THE WEST LINE OF SAID BLOCK 29, A DISTANCE OF 600 FEET TO THE SOUTHWEST CORNER OF LOT 13 IN SAID BLOCK 29; THENCE ALONG THE WESTERLY EXTENSION OF THE SOUTH LINE OF SAID LOT 13, A DISTANCE OF 66 FEET TO THE SOUTHEAST CORNER OF LOT 12 IN SAID BLOCK 30; THENCE NORTH ALONG THE EAST LINE OF SAID BLOCK 30, A DISTANCE OF 600 FEET TO THE POINT OF BEGINNING, IN DUPAGE COUNTY, ILLINOIS.

#### SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS COUNTY OF DUPAGE ) SS

I, CHARLES A. HULSE, AN ILLINOIS LICENSED PROFESSIONAL LAND SURVEYOR HEREBY CERTIFY THAT THE ANNEXED PLAT HAS BEEN PREPARED FROM FIELD SURVEYS AND EXISTING PLATS AND RECORDS FOR THE PURPOSE OF VACATING STREET RIGHT-OF-WAY AND GRANTING AN EASEMENT RESERVATION.

THIS PLAT HAS BEEN PREPARED BY ROAKE AND ASSOCIATES, INC., ILLINOIS LICENSED PROFESSIONAL DESIGN FIRM NO. 807, LICENSE EXPIRES APRIL 30, 2013, UNDER MY PERSONAL DIRECTION FOR THE EXCLUSIVE USE OF THE CLIENT NOTED HEREON. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF

___, A.D., 20_____



ILLINOIS LICENSED PROFESSIONAL LAND SURVEYOR NO. 2955 LICENSE VALID THROUGH NOVEMBER 30, 2012 (NOT VALID WITHOUT ORIGINAL SIGNATURE)



8619 W. Bryn Mawr Avenue, Suite 602 * Chicago Illinois 60631 773 283 2600 * FAX 773 283 2602 www.RWAengineers.com

## Memorandum

From: Charles H. Teuer, PE, LEED Green Associate

Date: November 30, 2011

To: Community High School District 99

Subject: Proposed Site Improvements at North High School Traffic Analysis - Addendum

#### INTRODUCTION

This memorandum serves as an addendum to the Traffic Impact Study (TIS) completed for the proposed improvements at North High School. The purpose of this addendum is to establish the existing traffic patterns during the evening period on the west side of the school in the vicinity of the proposed vacation of Prince Street and evaluate the ability of the proposed plan to accommodate this traffic in the future.

#### **Traffic Volumes**

RWA collected traffic volumes between 4:00 PM and 7:00 PM on Tuesday November 29, 2011 at the following four intersections:

- Grant Street and Saratoga Avenue
- Grant Street and Prince Street
- Sherman Street and Saratoga Avenue
- Sherman Street and Prince Street

The peak hour of traffic within this time period was found to occur from 5:30 PM to 6:30 PM, considered the Evening Peak Hour for the purposes of this memorandum. The approach volumes for the Evening Peak Hour at each of the four intersections are tabulated below. The complete data is included as an Appendix to this memorandum.

Intersection	Southbound	Westbound	Northbound	Eastbound	Total
Grant Street and Saratoga Avenue	156	56	99	20	331
Grant Street and Prince Street	52	7	117	37	213
Sherman Street and Saratoga Avenue	142	28	119		289
Sherman Street and Prince Street	56		55	4	115
				Grand Total	948

#### Table 1 – Evening Existing Peak Hour Traffic Volumes (5:30 PM to 6:30 PM)

For comparison, the Morning (7:30 AM to 8:30 AM) and Afternoon Peak Hour volumes (3:00 PM to 4:00 PM) from the TIS are tabulated below.

Intersection	Southbound	Westbound	Northbound	Eastbound	Total
Grant Street and Saratoga Avenue	109	81	230	63	483
Grant Street and Prince Street	32		89	40	161
Sherman Street and Saratoga Avenue	115	42	193		350
Sherman Street and Prince Street	58		61	4	123
				Grand Total	1,117

Table 2 – Morning Existing Peak Hour Traffic Volumes (7:30 AM to 8:30 AM)

Intersection	Southbound	Westbound	Northbound	Eastbound	Total
Grant Street and Saratoga Avenue	196	16	131	45	388
Grant Street and Prince Street	22		31	1	54
Sherman Street and Saratoga Avenue	143	35	184		362
Sherman Street and Prince Street	56		28	10	94
				Grand Total	898

..... n . . . 

Comparing the total volumes for the four intersections between the above tables, it is noted that the traffic volumes overall during the Evening Peak Hour are about 170 less than the Morning Peak Hour and 50 higher than the Afternoon Peak Hour. These differences do not equate to numbers of cars as one car may pass through more than one intersection and be counted twice as a result, but it is an indication that the Evening Peak Hour experiences about 18% less activity than the Morning Peak Hour and 6% more activity than the Afternoon Peak Hour. The capacity analysis conducted as part of the TIS for these four intersections found that the intersections operate with minimal delay (Level of Service A) during both the Morning and Afternoon Peak Hours.

#### **Field Observations**

In addition to the traffic volume data collected, RWA made observations of the traffic operations. Following is a list of observations made:

- The majority of traffic on Prince Street was related to student pick-up/drop-off or access • to/from the student parking lot.
- Parents stopped at the curb in signed No Parking/Standing zones on Prince and Grant Streets to wait for students. This had the effect of briefly limiting the movement of through and turning traffic and was observed to result in queues of one or two vehicles at a time.
- Some drivers were observed to conduct U-Turn and backing maneuvers within the intersection of Prince and Grant Streets to change direction after making a pick-up or dropoff.
- No more than five vehicles were observed to be stopped illegally on Prince or Grants Streets at a time.
- Some parents were observed to circle the block waiting for students rather than stopping illegally.
- In general, queuing and delays at the intersection of Prince and Grant Streets were observed to be minimal, even during peak student pick-up times.



#### **Evaluation of Proposed Plan**

As described in the TIS, Prince Street is proposed to be vacated between Grant and Sherman Streets with the north leg of the Prince Street and Grant Street intersection to be a driveway to a new parking lot. The parking lot is expected to be used for school bus boarding and alighting and faculty parking during the day and to be available for event and other parking needs in the evenings and weekends.

As part of the analysis conducted in the TIS, existing traffic was redistributed on the roadway network to account for the closing of Prince Street. The analysis found that the four intersections discussed in this memorandum would continue to operate at LOS A in both the Morning and Afternoon Peak Hours, as they do currently. Given that the total Evening Peak Hour traffic volumes for these four intersections were found to fall between existing Morning and Afternoon Peak Hour volumes, it was concluded that the Evening Peak Hour traffic will also be accommodated by the proposed plan.

Field observations indicated that traffic operations in the study area, especially near the intersection of Prince and Grant Streets, was complicated by student pick-up and drop-off activity on both Prince Street and Grant Street primarily due to drivers waiting within signed No Parking/Standing zones. This complication was not observed to result in significant queuing or delay for motorists but did appear to result in confusing and irregular movements by drivers. The location of the proposed parking lot north of Grant Street with access from the intersection of Grant and Prince Streets is expected to allow this evening pick-up and drop-off activity to occur within the parking lot rather than on the public street. Adjacent to the proposed parking lot, a plaza and canopy are proposed which will provide a location for students to wait to be picked up. Accommodating this activity off of the public roadways is expected to result in improved traffic operations on Grant Street and the portion of Prince Street south of Grant Street that is proposed to remain.

## CONCLUSION

The assessments discussed in this memorandum resulted in the following conclusions:

- The traffic volumes observed during the Evening Peak Hour are within the range of the Morning and Afternoon Peak Hour volumes observed and used as a basis of the analysis in the TIS.
- The TIS analysis found that the four study intersection discussed herein are expected to continue to operate at LOS A following implementation of the proposed plan.
- Therefore, the proposed plan is expected to accommodate traffic well during the Evening Peak Hour as well.
- Accommodating evening pick-up and drop-off activity within the proposed parking lot is expected to further improve traffic operations on the public roadways.



# Appendix

Existing Traffic Data Collection Reports



8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631 773-283-2600 Fax: 773-283-2602 www.RWAengineers.com

Saratoga Ave & Grant St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Saratoga Ave & Grant St 4-7PM Site Code : 00000000 Start Date : 11/29/2011 Page No : 1

						Gr	oups P	rinted- Ca	rs - SUs								
		Sarato		1			t Ave			Sarato					nt Ave		
		From	North			From	East			From	South			From	West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	8	25	1	34	0	2	1	3	0	27	4	31	1	1	5	7	75
04:15 PM	7	25	2	34	0	0	5	5	1	21	2	24	4	1	6	11	74
04:30 PM	11	37	4	52	1	4	3	8	1	17	1	19	2	0	5	7	86
04:45 PM	9	33	3	45	6	4	8	18	0	20	1	21	0	2	6	8	92
Total	35	120	10	165	7	10	17	34	2	85	8	95	7	4	22	33	327
					1												
05:00 PM	5	35	2	42	0	1	8	9	3	22	0	25	2	3	1	6	82
05:15 PM	8	26	2	36	2	3	2	7	1	29	0	30	0	1	3	4	77
05:30 PM	9	33	1	43	1	4	3	8	0	22	0	22	0	2	4	6	79
05:45 PM	6	39	8	53	2	2	9	13	3	27	1	31	0	2		3	100
Total	28	133	13	174	5	10	22	37	7	100	1	108	2	8	9	19	338
06:00 PM	0	27	2	29	4	3	12	19	2	22	0	24	0	3	2	5	77
06:15 PM	3	26	2	31	3	5	8	16	0	22	0	22	0	3	3	6	75
06:30 PM	1	19	1	21	Ő	1	6	7	3	15	Ő	18	1	Ő	4	5	51
06:45 PM	3	29	1	33	1	0	7	8	0	13	0	13	0	Õ	5	5	59
Total	7	101	6	114	8	9	33	50	5	72	0	77	1	6	14	21	262
Grand Total	70	354	29	453	20	29	72	121	14	257	9	280	10	18	45	73	927
Apprch %	15.5	78.1	6.4		16.5	24	59.5		5	91.8	3.2		13.7	24.7	61.6		
Total %	7.6	38.2	3.1	48.9	2.2	3.1	7.8	13.1	1.5	27.7	1	30.2	1.1	1.9	4.9	7.9	
Cars	68	353	29	450	16	29	72	117	14	257	9	280	9	18	44	71	918
% Cars	97.1	99.7	100	99.3	80	100	100	96.7	100	100	100	100	90	100	97.8	97.3	99
SUs	2	1	0	3	4	0	0	4	0	0	0	0	1	0	1	2	9
% SUs	2.9	0.3	0	0.7	20	0	0	3.3	0	0	0	0	10	0	2.2	2.7	1
MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			ga Ave North				t Ave East				ga Ave South				nt Ave i West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analy	ysis Fron	n 04:00	PM to 0	)6:45 PM -	Peak 1	of 1			-				-				
Peak Hour for E	ntire Inte	rsection	Begins	at 05:00	PM												
05:00 PM	5	35	2	42	0	1	8	9	3	22	0	25	2	3	1	6	82
05:15 PM	8	26	2	36	2	3	2	7	1	29	0	30	0	1	3	4	77
05:30 PM	9	33	1	43	1	4	3	8	0	22	0	22	0	2	4	6	79
05:45 PM	6	39	8	53	2	2	9	13	3	27	1	31	0	2	1	3	100
Total Volume	28	133	13	174	5	10	22	37	7	100	1	108	2	8	9	19	338
% App. Total	16.1	76.4	7.5		13.5	27	59.5		6.5	92.6	0.9		10.5	42.1	47.4		
PHF	.778	.853	.406	.821	.625	.625	.611	.712	.583	.862	.250	.871	.250	.667	.563	.792	.845

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Saratoga Ave & Grant St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Saratoga Ave & Grant St 4-7PM Site Code : 00000000 Start Date : 11/29/2011 Page No : 2

							Gro	oups Print	ed- Cars	6							
		Sarato	ga Ave			Grar	nt Ave				oga Ave				nt Ave		
		From	North			From	n East			From	South			From	n West	-	
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	6	25	1	32	0	2	1	3	0	27	4	31	1	1	5	7	73
04:15 PM	7	25	2	34	0	0	5	5	1	21	2	24	3	1	6	10	73
04:30 PM	11	37	4	52	1	4	3	8	1	17	1	19	2	0	5	7	86
04:45 PM	9	33	3	45	3	4	8	15	0	20	1	21	0	2	6	8	89
Total	33	120	10	163	4	10	17	31	2	85	8	95	6	4	22	32	321
	ı.																
05:00 PM	5	35	2	42	0	1	8	9	3	22	0	25	2	3	1	6	82
05:15 PM	8	26	2	36	1	3	2	6	1	29	0	30	0	1	3	4	76
05:30 PM	9	33	1	43	1	4	3	8	0	22	0	22	0	2	4	6	79
05:45 PM	6	39	8	53	2	2	9	13	3	27	1	31	0	2	1	3	100
Total	28	133	13	174	4	10	22	36	7	100	1	108	2	8	9	19	337
						-								-	_	_	
06:00 PM	0	27	2	29	4	3	12	19	2	22	0	24	0	3	2	5	77
06:15 PM	3	26	2	31	3	5	8	16	0	22	0	22	0	3	3	6	75
06:30 PM	1	19	1	21	0	1	6	7	3	15	0	18	1	0	3	4	50
06:45 PM	3	28	1	32	1	0	7	8	0	13	0	13	0	0	5	5	58
Total	7	100	6	113	8	9	33	50	5	72	0	77	1	6	13	20	260
Grand Total	68	353	29	450	16	29	72	117	14	257	9	280	9	18	44	71	918
			29 6.4	450				117				200	-			71	910
Apprch %	15.1 7.4	78.4 38.5	6.4 3.2	49	13.7 1.7	24.8 3.2	61.5 7.8	12.7	5 1.5	91.8 28	3.2	30.5	12.7	25.4 2	62 4.8	7.7	
Total %	/.4	30.0	3.Z	49	1.7	J.Z	1.8	12.7	C.I	20	1	30.5	1	2	4.8	1.1	

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Saratoga Ave & Grant St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Saratoga Ave & Grant St 4-7PM Site Code : 00000000 Start Date : 11/29/2011 Page No : 3

							Group	s Printed-	SUs - N	ИUs							
		Sarato	ga Ave			Gran	t Ave			Sarato	oga Ave			Gran	nt Ave		
		From	North			From	n East			From	South			From	West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	3
Total	2	0	0	2	3	0	0	3	0	0	0	0	1	0	0	1	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
06:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Grand Total	2	1	0	3	4	0	0	4	0	0	0	0	1	0	1	2	9
Apprch %	66.7	33.3	0		100	0	0		0	0	0		50	0	50		
Total %	22.2	11.1	0	33.3	44.4	0	0	44.4	0	0	0	0	11.1	0	11.1	22.2	
SUs	2	1	0	3	4	0	0	4	0	0	0	0	1	0	1	2	9
% SUs	100	100	0	100	100	0	0	100	0	0	0	0	100	0	100	100	100
MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Saratoga Ave & Grant St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Saratoga Ave & Grant St Peds Site Code : 00000000 Start Date : 11/29/2011 Page No : 4

					Group	s Printed- P	eds & Bike	es					
	S	aratoga A	Ave		Grant Av	e		aratoga A			Grant Av	'e	
	(	Crossing	North Leg		Crossing	East Leg		Crossing	South Leg		Crossing	West Leg	
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	2	2	0	0	0	0	1	1	0	0	0	3
04:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	3	3	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	2	0	1	1	0	4	4	0	0	0	7
05:00 PM	0	0	0	0	0	0	0	6	6	0	1	1	7
05:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	7	7	0	1	1	8
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	1	1	2	0	0	0	2
06:30 PM	1	0	1	0	0	0	0	0	0	0	0	0	1
06:45 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
Total	1	0	1	0	0	0	1	3	4	0	0	0	5
Grand Total	1	2	3	0	1	1	1	14	15	0	1	1	20
Apprch %	33.3	66.7		0	100		6.7	93.3		0	100		
Total %	5	10	15	0	5	5	5	70	75	0	5	5	

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Prince St & Grant St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Prince St & Grant St 4-7PM Site Code : 00000000 Start Date : 11/29/2011 Page No : 1

						G	roups P	rinted- C	ars - SU	s - MUs							
		Prin	ce St			Gra	nt St			Prin	ce St			Gra	nt St		
		From	North			From	i East			From	South			From	West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	3	8	1	12	2	0	1	3	0	5	1	6	0	1	1	2	23
04:15 PM	1	9	0	10	0	0	0	0	0	6	3	9	0	0	4	4	23
04:30 PM	1	16	1	18	0	0	0	0	0	9	7	16	2	0	4	6	40
04:45 PM	7	8	0	15	0	1	0	1	0	14	10	24	1	0	2	3	43
Total	12	41	2	55	2	1	1	4	0	34	21	55	3	1	11	15	129
05:00 PM	2	9	2	13	0	0	1	1	1	10	8	19	4	0	5	9	42
05:15 PM	3	3	1	7	Ö	Ő	0	0	0	8	5	13	1	0	3	4	24
05:30 PM	1	6	0	7	1	Ő	1	2	Ő	7	8	15	1	Ő	5	6	30
05:45 PM	6	8	Õ	14	0	Õ	0	0	Ő	32	6	38	6	Õ	7	13	65
Total	12	26	3	41	1	0	2	3	1	57	27	85	12	0	20	32	161
				10						10							
06:00 PM	6	8	2	16	2	0	0	2	1	10	14	25	6	0	3	9	52
06:15 PM	4	10	1	15		2	0	3	2	21	16	39	6	0	3	9	66
06:30 PM	0	5	0	5	1	0	0	1	1	9	6	16	0	0	2	2	24
06:45 PM	<u> </u>	<u>7</u> 30	0	7 43	0	0	1	7	0	<u>13</u> 53	43	<u>20</u> 100	<u>2</u> 14	1	0	<u>3</u> 23	<u>31</u> 173
Total	10	30	3	43	4	2	1	1	4	53	43	100	14	1	8	23	173
Grand Total	34	97	8	139	7	3	4	14	5	144	91	240	29	2	39	70	463
Apprch %	24.5	69.8	5.8		50	21.4	28.6		2.1	60	37.9		41.4	2.9	55.7		
Total %	7.3	21	1.7	30	1.5	0.6	0.9	3	1.1	31.1	19.7	51.8	6.3	0.4	8.4	15.1	
Cars	34	96	7	137	7	3	4	14	5	140	87	232	29	2	39	70	453
% Cars	100	99	87.5	98.6	100	100	100	100	100	97.2	95.6	96.7	100	100	100	100	97.8
SU	0	1	1	2	0	0	0	0	0	4	4	8	0	0	0	0	10
% SU	0	1	12.5	1.4	0	0	0	0	0	2.8	4.4	3.3	0	0	0	0	2.2
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			ce St North				nt St East				ce St South				nt St West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analy	ysis Fron	n 04:00	PM to 0	)6:45 PM -	Peak 1	of 1			-				-				
Peak Hour for E	ntire Inte	rsection	Begins	at 05:30	PM												
05:30 PM	1	6	0	7	1	0	1	2	0	7	8	15	1	0	5	6	30
05:45 PM	6	8	0	14	0	0	0	0	0	32	6	38	6	0	7	13	65
06:00 PM	6	8	2	16	2	0	0	2	1	10	14	25	6	0	3	9	52
06:15 PM	4	10	1	15	1	2	0	3	2	21	16	39	6	0	3	9	66
Total Volume	17	32	3	52	4	2	1	7	3	70	44	117	19	0	18	37	213
% App. Total	32.7	61.5	5.8		57.1	28.6	14.3		2.6	59.8	37.6		51.4	0	48.6		
PHF	.708	.800	.375	.813	.500	.250	.250	.583	.375	.547	.688	.750	.792	.000	.643	.712	.807

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Prince St & Grant St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Prince St & Grant St 4-7PM Site Code : 00000000 Start Date : 11/29/2011 Page No : 2

							Gro	oups Print	ed- Cars	6							
		Prine	ce St			Gra	nt St			Prin	ce St			Gra	int St		
		From	North			From	n East			From	South			From	NWest		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	3	7	1	11	2	0	1	3	0	3	1	4	0	1	1	2	20
04:15 PM	1	9	0	10	0	0	0	0	0	6	3	9	0	0	4	4	23
04:30 PM	1	16	1	18	0	0	0	0	0	8	7	15	2	0	4	6	39
04:45 PM	7	8	0	15	0	1	0	1	0	14	7	21	1	0	2	3	40
Total	12	40	2	54	2	1	1	4	0	31	18	49	3	1	11	15	122
05:00 PM	2	9	2	13	0	0	1	1	1	10	8	19	4	0	5	9	42
05:15 PM	3	3	1	7	0 0	0	0	0		8	4	12	1	Ő	3	4	23
05:30 PM	1	6	0	7	1	Ő	1	2	0	7	8	15	1	0	5	6	30
05:45 PM	6	8	Õ	14	0	Õ	O	0	Ő	. 32	6	38	6	Õ	7	13	65
Total	12	26	3	41	1	0	2	3	1	57	26	84	12	0	20	32	160
06:00 PM	6	8	2	16	2	0	0	2	1	10	14	25	6	0	3	9	52
06:15 PM	4	10	2	10	2	2	0	2 3	2	21	16	39	6	0	3	9	65
06:30 PM	0	5	0	5	1	0	0	1	1	9	6	16	0	0	2	2	24
06:45 PM	0	7	0	7	0	0	1	1		12	7	19	2	1	0	3	30
Total	10	30	2	42	4	2	1	7	4	52	43	99	14	1	8	23	171
1 Otdi	10	00	2	-12	-	2	•	,	-	02	40	00	1-1		Ũ	20	, .
Grand Total	34	96	7	137	7	3	4	14	5	140	87	232	29	2	39	70	453
Apprch %	24.8	70.1	5.1		50	21.4	28.6		2.2	60.3	37.5		41.4	2.9	55.7		
Total %	7.5	21.2	1.5	30.2	1.5	0.7	0.9	3.1	1.1	30.9	19.2	51.2	6.4	0.4	8.6	15.5	

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Prince St & Grant St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Prince St & Grant St 4-7PM Site Code : 00000000 Start Date : 11/29/2011 Page No : 3

							Grou	ps Printed	- SUs -	MUs							
		Princ	ce St			Gra	nt St			Prin	ce St			Gra	nt St		
		From	North			From	East			From	South			From	West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	3
Total	0	1	0	1	0	0	0	0	0	3	3	6	0	0	0	0	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
1													1				ı
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2
1																	
Grand Total	0	1	1	2	0	0	0	0	0	4	4	8	0	0	0	0	10
Apprch %	0	50	50		0	0	0		0	50	50		0	0	0		
Total %	0	10	10	20	0	0	0	0	0	40	40	80	0	0	0	0	
SU	0	1	1	2	0	0	0	0	0	4	4	8	0	0	0	0	10
% SU	0	100	100	100	0	0	0	0	0	100	100	100	0	0	0	0	100
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Prince St & Grant St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Prince St & Grant St Peds Site Code : 00000000 Start Date : 11/29/2011 Page No : 4

					Group	s Printed- P	eds & Bik	es					
		Prince S	-		Grant S	t		Prince S			Grant St	-	
		Crossing	North Leg		Crossing	East Leg		Crossing	South Leg		Crossing	West Leg	
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	1	1	0	3	3	0	1	1	0	1	1	6
04:15 PM	0	0	0	1	1	2	0	2	2	0	0	0	4
04:30 PM	0	5	5	1	2	3	0	2	2	0	0	0	10
04:45 PM	0	0	0	1	10	11	0	0	0	0	1	1	12
Total	0	6	6	3	16	19	0	5	5	0	2	2	32
05:00 PM	0	0	0	0	4	4	0	3	3	0	2	2	9
05:15 PM	0	0	0	0	4	4	0	0	0	0	0	0	4
05:30 PM	0	0	0	0	1	1	0	1	1	0	0	0	2
05:45 PM	0	0	0	0	6	6	0	0	0	0	0	0	6
Total	0	0	0	0	15	15	0	4	4	0	2	2	21
06:00 PM	0	0	0	1	7	8	0	0	0	0	0	0	8
06:15 PM	0	0	0	0	10	10	1	0	1	0	0	0	11
06:30 PM	0	0	0	1	5	6	0	0	0	0	0	0	6
06:45 PM	0	0	0	0	2	2	0	0	0	0	0	0	2
Total	0	0	0	2	24	26	1	0	1	0	0	0	27
Grand Total	0	6	6	5	55	60	1	9	10	0	4	4	80
Apprch %	0	100		8.3	91.7		10	90		0	100		
Total %	0	7.5	7.5	6.2	68.8	75	1.2	11.2	12.5	0	5	5	

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Saratoga Ave & Sherman St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Saratoga Ave & Sherman St 4-7PM Site Code : 00000000 Start Date : 11/29/2011 Page No : 1

								inted- Ca	rs - SUs								
		Sarato		2			nan St				ga Ave				nan St		
		From	North			From	East			From	South			From	West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	36	0	36	4	0	2	6	1	36	0	37	0	0	0	0	79
04:15 PM	0	33	1	34	3	0	2	5	2	23	0	25	0	0	0	0	64
04:30 PM	0	39	0	39	5	0	2	7	0	28	0	28	0	0	0	0	74
04:45 PM	0	40	0	40	6	0	2	8	0	36	0	36	0	0	0	0	84
Total	0	148	1	149	18	0	8	26	3	123	0	126	0	0	0	0	301
05:00 PM	0	32	1	33	10	0	3	13	2	23	0	25	0	0	0	0	71
05:15 PM	0	37	1	38	5	0	1	6	1	37	0	38	0	0	0	0	82
05:30 PM	0	42	0	42	3	0	3	6	0	26	0	26	0	0	0	0	74
05:45 PM	0	42	1	43	4	0	8	12	1	24	0	25	0	0	0	0	80
Total	0	153	3	156	22	0	15	37	4	110	0	114	0	0	0	0	307
06:00 PM	0	28	2	30	4	0	2	6	0	36	0	36	0	0	0	0	72
06:15 PM	0	27	0	27	2	0	2	4	0	32	0	32	0	0	0	0	63
06:30 PM	0	24	2	26	2	0	1	3	0	17	0	17	0	0	0	0	46
06:45 PM	0	26	0	26	2	0	4	6	0	20	0	20	0	0	0	0	52
Total	0	105	4	109	10	0	9	19	0	105	0	105	0	0	0	0	233
Grand Total	0	406	8	414	50	0	32	82	7	338	0	345	0	0	0	0	841
Apprch %	0	98.1	1.9		61	0	39		2	98	0		0	0	0		
Total %	0	48.3	1	49.2	5.9	0	3.8	9.8	0.8	40.2	0	41	0	0	0	0	
Cars	0	403	8	411	49	0	32	81	7	333	0	340	0	0	0	0	832
% Cars	0	99.3	100	99.3	98	0	100	98.8	100	98.5	0	98.6	0	0	0	0	98.9
SUs	0	3	0	3	1	0	0	1	0	5	0	5	0	0	0	0	9
% SUs	0	0.7	0	0.7	2	0	0	1.2	0	1.5	0	1.4	0	0	0	0	1.1
MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			ga Ave North				nan St i East				ga Ave South				man St West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analy	ysis Fron	n 04:00	PM to 0	)6:45 PM -	Peak 1	of 1											
Peak Hour for E	ntire Inte	rsection	Begins	at 04:30	PM												
04:30 PM	0	39	0	39	5	0	2	7	0	28	0	28	0	0	0	0	74
04:45 PM	0	40	0	40	6	0	2	8	0	36	0	36	0	0	0	0	84
05:00 PM	0	32	1	33	10	0	3	13	2	23	0	25	0	0	0	0	71
05:15 PM	0	37	1	38	5	0	1	6	1	37	0	38	0	0	0	0	82
Total Volume	0	148	2	150	26	0	8	34	3	124	0	127	0	0	0	0	311
% App. Total	0	98.7	1.3		76.5	0	23.5		2.4	97.6	0		0	0	0		
PHF	.000	.925	.500	.938	.650	.000	.667	.654	.375	.838	.000	.836	.000	.000	.000	.000	.926

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Saratoga Ave & Sherman St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Saratoga Ave & Sherman St 4-7PM Site Code : 00000000 Start Date : 11/29/2011 Page No : 2

							Gro	oups Print	ed- Cars	6							
		Sarato	ga Ave			Sherr	man St			Sarato	oga Ave			Sherr	nan St		
		From	North			Fron	n East			From	South			From	West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	34	0	34	4	0	2	6	1	36	0	37	0	0	0	0	77
04:15 PM	0	33	1	34	3	0	2	5	2	23	0	25	0	0	0	0	64
04:30 PM	0	39	0	39	5	0	2	7	0	28	0	28	0	0	0	0	74
04:45 PM	0	40	0	40	6	0	2	8	0	33	0	33	0	0	0	0	81
Total	0	146	1	147	18	0	8	26	3	120	0	123	0	0	0	0	296
05:00 PM	0	32	1	33	10	0	3	13	2	23	0	25	0	0	0	0	71
05:15 PM	0	37	1	38	5	0	1	6	1	36	0	37	0	0	0	0	81
05:30 PM	0	42	0	42	3	0	3	6	0	26	0	26	0	0	0	0	74
05:45 PM	0	42	1	43	4	0	8	12	1	24	0	25	0	0	0	0	80
Total	0	153	3	156	22	0	15	37	4	109	0	113	0	0	0	0	306
06:00 PM	0	28	2	30	4	0	2	6	0	36	0	36	0	0	0	0	72
06:15 PM	0	27	0	27	2	0	2	4	0	32	0	32	0	0	0	0	63
06:30 PM	0	24	2	26	2	0	1	3	0	16	0	16	0	0	0	0	45
06:45 PM	0	25	0	25	1	0	4	5	0	20	0	20	0	0	0	0	50
Total	0	104	4	108	9	0	9	18	0	104	0	104	0	0	0	0	230
Grand Total	0	403	8	411	49	0	32	81	7	333	0	340	0	0	0	0	832
Apprch %	0	98.1	1.9		60.5	0	39.5		2.1	97.9	0		0	0	0		
Total %	0	48.4	1	49.4	5.9	0	3.8	9.7	0.8	40	0	40.9	0	0	0	0	

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Saratoga Ave & Sherman St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Saratoga Ave & Sherman St 4-7PM Site Code : 00000000 Start Date : 11/29/2011 Page No : 3

							Group	s Printed-	SUs - N	/Us							
		Sarato					nan St				oga Ave				man St		
		From				From	n East			From	South			From	n West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
Total	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
	•	•	•		•	•	•		•	•	•	•	•	•	•	•	•
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	•	0	0	0	0	•	0	0	•	1	0	1	0	0	0	0	1
06:45 PM	0	1	0	1	1	0	0	1	0	1	0	0	0	0	0	0	2
Total	0	I	0	1	I	0	0	I	0	1	0	I	0	0	0	0	3
Grand Total	0	3	0	3	1	0	0	1	0	5	0	5	0	0	0	0	9
Apprch %	0	100	0	-	100	0	0	-	0	100	0		0	0	0	-	
Total %	Ō	33.3	Ō	33.3	11.1	Ō	Ō	11.1	Ō	55.6	Ō	55.6	0	Ō	Ō	0	
SUs	0	3	0	3	1	0	0	1	0	5	0	5	0	0	0	0	9
% SUs	0	100	0	100	100	0	0	100	0	100	0	100	0	0	0	0	100
MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Saratoga Ave & Sherman St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Saratoga Ave & Sherman St Peds Site Code : 00000000 Start Date : 11/29/2011 Page No : 4

					Group	s Printed- P	eds & Bike	es					
		aratoga A		5	Sherman	St		aratoga A			Sherman		
			North Leg			East Leg		Crossing	South Leg		Crossing	West Leg	
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	0	1	1	0	1	1	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	1	1	0	1	1	1	0	1	3
04:45 PM	0	0	0	1	0	1	0	1	1	0	1	1	3
Total	0	1	1	1	1	2	0	3	3	1	2	3	9
05:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	1	0	0	0	1
1													
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	0	0	0	1	1	0	0	0	0	0	0	1
1													
Grand Total	0	1	1	1	2	3	0	4	4	1	2	3	11
Apprch %	0	100		33.3	66.7		0	100		33.3	66.7		
Total %	0	9.1	9.1	9.1	18.2	27.3	0	36.4	36.4	9.1	18.2	27.3	

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Prince St & Sherman St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Prince St & Sherman St 4-7PM Site Code : 00000000 Start Date : 11/29/2011 Page No : 1

								rinted- Ca	rs - SUs								
			ce St				nan St				ce St				nan St		
		From	North			From	East			From	South			From	West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	5	6	0	11	0	0	0	0	0	8	1	9	0	0	1	1	21
04:15 PM	5	9	0	14	0	0	0	0	0	7	0	7	0	0	3	3	24
04:30 PM	2	17	0	19	0	0	0	0	0	9	3	12	3	0	0	3	34
04:45 PM	3	17	0	20	0	0	0	0	0	10	2	12	0	0	0	0	32
Total	15	49	0	64	0	0	0	0	0	34	6	40	3	0	4	7	111
	1												1				
05:00 PM	10	10	0	20	0	0	0	0	0	9	6	15	2	0	0	2	37
05:15 PM	2	5	0	7	0	0	0	0	0	10	1	11	1	0	0	1	19
05:30 PM	6	6	0	12	0	0	0	0	0	5	0	5	0	0	0	0	17
05:45 PM	7	12	0	19	0	0	0	0	0	10	7	17	0	0	0	0	36
Total	25	33	0	58	0	0	0	0	0	34	14	48	3	0	0	3	109
		10	0	4.4	0	0	•	0		13	2	16	4	0	4	0	32
06:00 PM	4 0	10	0 0	14	0	0 0	0	0	0	13	3 2	16	0	0 0	2	2	
06:15 PM 06:30 PM	2	5	0	11 7	0	0	0	0		15	2	17	0	0	2	2	30 14
06:45 PM	2	5 6	0	7 8	-	0	0	0	0	6	1	10	0	0	2	0	20
	2	32	0	40	0	0	0	0	0	40	<u>4</u> 10	50	1	0	<u></u> 5	<u>2</u> 6	<u>20</u> 96
Total	0	32	0	40	0	0	0	0	0	40	10	50	I	0	5	0	90
Grand Total	48	114	0	162	0	0	0	0	0	108	30	138	7	0	9	16	316
Apprch %	29.6	70.4	0		0	0	0	-	0	78.3	21.7		43.8	0	56.2		
Total %	15.2	36.1	0	51.3	0	0	0	0	0	34.2	9.5	43.7	2.2	0	2.8	5.1	
Cars	48	112	0	160	0	0	0	0	0	106	29	135	7	0	9	16	311
% Cars	100	98.2	0	98.8	0	0	0	0	0	98.1	96.7	97.8	100	0	100	100	98.4
SUs	0	2	0	2	0	0	0	0	0	2	1	3	0	0	0	0	5
% SUs	0	1.8	0	1.2	0	0	0	0	0	1.9	3.3	2.2	0	0	0	0	1.6
MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			ce St North				nan St East				ce St South				nan St West		
Start Time	Right	Thru		App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analy	ysis Fron	n 04:00	PM to 0	)6:45 PM -	Peak 1	of 1			-				-				
Peak Hour for E	ntire Inte	rsection	Begins	at 04:15	PM												
04:15 PM	5	9	0	14	0	0	0	0	0	7	0	7	0	0	3	3	24
04:30 PM	2	17	0	19	0	0	0	0	0	9	3	12	3	0	0	3	34
04:45 PM	3	17	0	20	0	0	0	0	0	10	2	12	0	0	0	0	32
05:00 PM	10	10	0	20	0	0	0	0	0	9	6	15	2	0	0	2	37
Total Volume	20	53	0	73	0	0	0	0	0	35	11	46	5	0	3	8	127
% App. Total	27.4	72.6	0		0	0	0		0	76.1	23.9		62.5	0	37.5		
PHF	.500	.779	.000	.913	.000	.000	.000	.000	.000	.875	.458	.767	.417	.000	.250	.667	.858

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Prince St & Sherman St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Prince St & Sherman St 4-7PM Site Code : 00000000 Start Date : 11/29/2011 Page No : 2

							Gro	oups Print	ed- Cars	6							
		Prin	ce St			Sherr	nan St			Prin	ce St			Sherr	man St		
		From	North			From	n East			From	South			From	West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	5	5	0	10	0	0	0	0	0	6	1	7	0	0	1	1	18
04:15 PM	5	9	0	14	0	0	0	0	0	7	0	7	0	0	3	3	24
04:30 PM	2	17	0	19	0	0	0	0	0	9	3	12	3	0	0	3	34
04:45 PM	3	17	0	20	0	0	0	0	0	10	2	12	0	0	0	0	32
Total	15	48	0	63	0	0	0	0	0	32	6	38	3	0	4	7	108
05:00 PM	10	10	0	20	0	0	0	0	0	9	6	15	2	0	0	2	37
05:15 PM	2	5	0	7	0	0	0	0	0	10	1	11	1	0	0	1	19
05:30 PM	6	6	0	12	0	0	0	0	0	5	0	5	0	0	0	0	17
05:45 PM	7	12	0	19	0	0	0	0	0	10	7	17	0	0	0	0	36
Total	25	33	0	58	0	0	0	0	0	34	14	48	3	0	0	3	109
06:00 PM	4	10	0	14	0	0	0	0	0	13	3	16	1	0	1	2	32
06:15 PM	0	10	0	10	0	0	0	0	0	15	2	17	0	0	2	2	29
06:30 PM	2	5	0	7	0	0	0	0	0	6	1	7	0	0	0	0	14
06:45 PM	2	6	0	8	0	0	0	0	0	6	3	9	0	0	2	2	19
Total	8	31	0	39	0	0	0	0	0	40	9	49	1	0	5	6	94
Grand Total	48	112	0	160	0	0	0	0	0	106	29	135	7	0	9	16	311
Apprch %	30	70	0		0	0	0		0	78.5	21.5		43.8	0	56.2		
Total %	15.4	36	0	51.4	0	0	0	0	0	34.1	9.3	43.4	2.3	0	2.9	5.1	

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Prince St & Sherman St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Prince St & Sherman St 4-7PM Site Code : 00000000 Start Date : 11/29/2011 Page No : 3

							Group	s Printed-	SUs - N	ЛUs							
		Princ	ce St			Sherr	nan St			Prin	ce St			Sherr	nan St		1
		From	North			From	n East			From	South			From	West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	Õ	Õ	Õ	Õ	Õ	Õ	Õ	Õ	Õ	Õ	Õ	Õ	Õ	Õ	Õ	Õ	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Grand Total	0	2	0	2	0	0	0	0	0	2	1	3	0	0	0	0	5
Apprch %	0	100	0		0	0	0		0	66.7	33.3		0	0	0		1
Total %	0	40	0	40	0	0	0	0	0	40	20	60	0	0	0	0	1
SUs	0	2	0	2	0	0	0	0	0	2	1	3	0	0	0	0	5
% SUs	0	100	0	100	0	0	0	0	0	100	100	100	0	0	0	0	100
MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MUs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Prince St & Sherman St Downers Grove, IL 4:00 - 7:00 PM Cloudy, Dry File Name : Prince St & Sherman St Peds Site Code : 00000000 Start Date : 11/29/2011 Page No : 4

					Group	s Printed- P	eds & Bike	es					
		Prince S	it 🗌	S	Sherman	St		Prince S		:	Sherman	St	
			North Leg			East Leg			South Leg			West Leg	
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	4	4	0	0	0	0	0	0	4
04:15 PM	0	0	0	0	6	6	0	0	0	0	0	0	6
04:30 PM	0	0	0	0	8	8	0	1	1	0	1	1	10
04:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	0	0	0	19	19	0	1	1	0	1	1	21
05:00 PM	0	0	0	0	3	3	0	0	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	4	4	0	0	0	0	0	0	4
i													
06:00 PM	0	0	0	0	2	2	0	0	0	0	0	0	2
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	1	1	0	1	1	2
Total	0	0	0	0	2	2	0	1	1	0	1	1	4
1													
Grand Total	0	0	0	0	25	25	0	2	2	0	2	2	29
Apprch %	0	0		0	100		0	100		0	100		
Total %	0	0	0	0	86.2	86.2	0	6.9	6.9	0	6.9	6.9	