

AGENDA
BOROUGH OF NORWOOD
MAYOR AND COUNCIL
WORK SESSION/EXECUTIVE MEETING
DECEMBER 17, 2008
8:00 PM

MAYOR BARSA

COUNCILMAN BRIZZOLARA
COUNCILMAN KNIGIN
COUNCIL PRESIDENT SCOTT

COUNCILMAN GUERCIO
COUNCILMAN RAPAPORT
COUNCILMAN CONDOLEO

Call to order

Flag Salute & Moment of Silence

Statement of Compliance: Adequate notice of this meeting has been provided in accordance with the Open Public Meeting Law, P.L. 1975, Ch. 231, setting forth the time, date, place and purpose of this Public Meeting through a legal notice published in the Record and Press Journal.

Roll Call of the Council:

Mayor Barsa _____	
Councilman Brizzolara _____	Councilman Guercio _____
Councilman Knigin _____	Councilman Rapaport _____
Council President Scott _____	Councilman Condoleo _____

Presentation by Neglia Engineering re Summit Street Traffic Calming

Approval of Resolution 08:211 re payment of bills and vouchers in the amount of \$4,766,573.89

Items for Discussion:

- Chief Krapels' recommendation to amend Borough's Code Chapter 50-13 re police rules and regulations
- Capital Budget

Borough Attorney Report

Borough Administrator Report

General Public Comment:

Approval of Resolution 08:212 authorizing the Mayor and Council to proceed in Closed Session to discuss personnel matters. Formal action may be taken upon reconvening in open session.

Adjournment:

Borough of Norwood
Work Session
December 17, 2008

The Work/Executive Meeting of the Mayor and Council of the Borough of Norwood was held on the above date.

Mayor Barsa called the meeting to order at 8:06 PM.

Mayor Barsa led the Council and those in attendance in a salute to the American flag and asked for a moment of silence.

Mayor Barsa stated:

Adequate notice of this meeting has been provided in accordance with the Open Public Meeting Law, P.L. 1975, Ch. 231, setting forth the time, date, place and purpose of this Public Meeting through a legal notice published in the Record and Press Journal.

PRESENT AT ROLL CALL:

Mayor	James Barsa
Councilman	Michael Knigin
Council President	Barry Scott
Councilman	Anthony Guercio
Councilman	Allen Rapaport
Councilman	Edward Condoleo

ALSO PRESENT:

Borough Attorney	Andrew Fede
Borough Engineers	Matthew Neuls and Brian Intendola

ABSENT:

Councilman	Tom Brizzolara
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Presentation by Neglia Engineering for Traffic Calming:

Mayor Barsa informed that the Borough received a grant from the NJ Department of Transportation for the intersections of Summit Street and Rockland Avenue, Summit Street and Hudson Avenue, High Street and Rockland Avenue, High Street and Hudson Avenue and Summit Street and South Avenue. Mayor Barsa invited Mr. Brian Intendola and Mr. Matthew Neuls from Neglia Engineering to come forward for their presentation. Mr. Intendola gave a brief overview of the proposed project that includes raised intersections and speed tables. Mr. Intendola referenced an interim status report dated October 22, 2007, (Attachment "A"). Following the presentation, a motion was made by Mr. Rapaport and seconded by Mr. Scott to open the meeting to the public. All Council Members present voted in favor of the motion.

Mr. Anthony Plescia, 444 Summit Street questioned how high the speeds were on Summit Street to warrant the installation of speed tables and expressed concern that the speed tables would pose a maintenance problem for the DPW.

Mr. Frank Marino, 420 High Street informed that for the third time in thirty-years a truck has struck his home. Mr. Marino expressed concern for the stability of a vehicle after it hits the raised intersection. Mr. Marino said he felt the area needed an increase in police presence to deter speeding and that the proposal was too dangerous to put into the neighborhood.

The resident from 394 Summit Street said he felt the speeds cars travel down the street are greater than what was reported. He is concerned with a vehicle hitting the speed tables at 50 mph as well as what the speed tables will do to property values. He suggested the placement of a camera to record the speeds and then the police could send tickets. Chief Krapels responded that those cameras are placed on traffic lights and are not for speeding.

Ruth Falkenstern, 970 Blanch Avenue informed that the Borough is immune from design liability and improper installation liability for the design and installation of the speed tables.

Ray DiBiasa, 500 Summit Street said he recalled from a previous meeting that the Mayor and Council had agreed to move forward with this project. He has 2 young children and sees that the speeding is more prevalent and agrees with other members of the public that the speeds are in excess of 35 mph. Mr. DiBiasa said he didn't feel that the Borough Engineer would design a project that was a liability.

Joseph Ascolese, 400 High Street suggested installing four-way stop signs and/or switching the stop signs and increasing the police presence in the area. Mr. Ascolese referenced the strict enforcement in the Borough of Emerson and said that if the Norwood Police stepped up enforcement in this area word would get around that you cannot speed in Norwood. Mayor Barsa acknowledged the great efforts of the Norwood Police Department in issuing tickets to speeders including those that are Norwood residents.

George Hertzberg, 24 Carter Street suggested that the Borough gather statistics on the successfulness of the speed tables to get cars to slow down. The Borough Engineer offered that studies have shown an 18% decrease in speed when speed tables are installed.

A discussion ensued regarding the use of a message board showing the speed a car is traveling. Chief Krapels offered the pros and cons on installing such signs. Other suggestions offered were putting an ad in the newspaper alerting the residents of stricter enforcement, milling the intersections and leaving them grooved, increasing police presence in the area, removing the double yellow line, prohibiting turns at certain intersections and placing "No Thru Traffic" signs for certain times during the day.

The following residents offered to have speed humps or signage placed in front of their homes; 377 High Street, 500 Summit Street and 290 Summit Street.

There being no other member of the public wishing to be heard, motion to close the meeting to the public was made by Mr. Scott, seconded by Mr. Rapaport and declared carried upon the affirmative vote of all Council Members present.

Mr. Condoleo reminded that the Borough received a DOT grant for this project and that a contract must be awarded by September 2009. The Council should move forward with the project or petition the DOT to approve allocation of the money for another project. Mr. Scott said that he felt the raised intersections could be of value to the Borough and cited the ones on Lydecker in Englewood as a deterrent to speeding. Mr. Guercio said he felt that a solution needs to be found for the area and the Council should make a decision on whether to scrap the project or not. Mr. Rapaport said he felt it was important for everyone to realize that the Police Department's resources are limited and that enforcement comes with a price. Mr. Rapaport expressed concern that if we do not do this project and return the funds to the State, any future projects will not be approved by NJ DOT. It was moved by Mr. Scott and seconded by Mr. Rapaport to table further discussion on this project for one month. All Council Members present voted in favor of the motion. Further discussion will take place at the January 28, 2009 work session.

The Mayor declared a five-minute recess.

Approval of Resolution 08:209 Authorizing the payment of Bills and Vouchers in the amount of \$4,766,573.89:

Motion was made by Mr. Condoleo and seconded by Mr. Knigin to approve Resolution 08:209. On the roll call vote, all Council Members present voted in favor of the motion.

Items for discussion:

Amending Chapter 50-13 re: Police Rules and Regulations – It was the consensus of the Council that Mr. Fede, Borough Attorney review the proposed amendments and prepare the necessary ordinance for Council review at the next work session.

Capital Budget – A bond ordinance will be prepared to be voted on in January 2009.

General Public Comment:

Mayor Barsa asked for a motion to open the meeting to the public. The motion was made by Mr. Guercio, seconded by Mr. Scott and declared carried upon the affirmative vote of all Council Members present.

Mrs. Mary Benardella, 800 Broadway complained about the garbage that is throne onto the street from motorists. She requested that a “no littering” sign and a “curb you dog” sign be place in the vicinity of her home. Mayor Barsa said this would be taken care of.

Mr. George Hertzberg, 24 Carter Street summed up the discussion regarding the speeding on Summit and High Street and said that Carter Street is also used as a cut-through and he would be willing to have a speed table placed in front of his home.

Mr. Stu Bran, 101 Aspen Court asked if there was any property adjacent to the Northwoods town house development that could be used for a dog park. Mr. Rapaport questioned Mr. Bran if the Northwoods Association would be willing to pay for the installation of a dog park. Mr. Bran said he would have to take that question back to the Association. Mr. Scott said he would look into the request, but if it were put on Borough property then it would have to be opened to all residents.

No other member of the public wishing to be heard, a motion to close the meeting to the public was made by Mr. Scott, seconded by Mr. Knigin and declared carried upon the affirmative vote of all Council Members present.

Closed Session: Approval of Resolution 08:210 for the purpose of discussing personnel issues:

Motion approving Resolution 08:210 was made by Mr. Scott seconded by Mr. Knigin and declared carried upon the affirmative vote of all Council Members present.

Mayor Barsa resumed open session at 10:10 PM.

Adjournment:

Motion to adjourn at 10:10 PM was made by Mr. Knigin, seconded by Mr. Condoleo and declared carried upon the affirmative vote of all Council Members present.

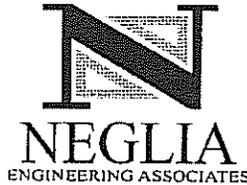
Respectfully submitted,



Lorraine L. McMackin, RMC, CMC
Administrator/Clerk

ATTACHMENT "A"

Civil Engineering
Municipal Engineering
Traffic Engineering
Planning
Land Surveying
Construction Management



Joseph E. Neglia, P.E., P.L.S., P.P.
CEO, Chairman of the Board
Michael J. Neglia, P.E., P.L.S., P.P.
President
Dominick Villano, P.E.
Gregory Polyniak, P.E., P.P.
Daniel Kaufman, P.E., P.P.
Brian Intindola, P.E.
Joann Signa

October 22, 2007

Borough of Norwood
455 Broadway
Norwood, NJ 07648-1219
Attn.: Mayor Barsa and Borough Council

**RE: INTERIM STATUS REPORT
TRAFFIC CALMING INVESTIGATION
SUMMIT STREET AND VICINITY
BOROUGH OF NORWOOD, BERGEN COUNTY, NEW JERSEY**

Honorable Mayor Barsa and Council Members:

This report has been submitted to advise you of our progress to date on the referenced project. As you are aware, Neglia Engineering Associates ("NEA") is performing a Traffic Calming Investigation for the area bound by Summit Street to the west, the municipal boundary to the north, High Street to the east and Broadway to the south, with a focus on Summit Street. Please see the attached Traffic Calming Study Location Map. The need for this study arises from resident concerns about speeding and the perception unsafe driving in the area.

Accident Data

NEA submitted a request to Chief Krapels of the Norwood Police Department on August 1, 2007 for accident data from January 1, 2004 to present, for the area bound by Summit Street to the west, the municipal boundary to the north, High Street to the east and Broadway to the south. In addition, we also requested a list of citations issued for the same dates and areas.

Based on the accident data provided, a total of 21 accidents were reported in the study area during the three and a half year study period. Of these 21, seven (7) were located at the intersection of Broadway and Summit Street and six (6) were located at the intersection of Rockland Avenue and High Street. At both of these intersections, the majority of the collisions were a direct result of motorists failing to yield the right-of-way.

Typically traffic calming measures are investigated at locations where accidents frequently occur and where the traffic calming measures would eliminate these accidents. In this case, "frequent" is generally defined as five or more accidents of the same type per year over a period of years¹. None of the intersections in our

¹ Per the Manual on Uniform Traffic Control Devices ("MUTCD")



study area have frequent enough accidents to meet this definition.

Volume/Speed Data

NEA issued a proposal to the Borough of Norwood on March 15, 2007. Since that time, several rounds of traffic volume and speed data collection have been performed. Automatic Traffic Recorders (ATRs) were placed along Summit Street, Rockland Avenue, High Street and Hudson Avenue from Friday, March 9, 2007 until Friday, March 16, 2007. Please see the attached Automatic Traffic Recorder Location Map. A manual traffic count was performed to supplement this data at the intersection of Hudson Avenue and Summit Street on Thursday April 12, 2007 from 2:00 p.m. until 5:00 p.m.

A second set of ATRs were placed in the study area from Wednesday, September 12, 2007 until Thursday, September 20, 2007 to record the traffic volumes as well as speed data. Three of these ATRs were placed in various locations along Summit Street while the fourth ATR was placed along Rockland Avenue between Summit Street and High Street. One of these ATRs was placed near the northerly end of Summit Street in an area that was specifically noted as an area of concern for speeding.

Manual speed data was collected using a radar gun at the same locations to verify the ATR data. This was done on Friday, September 28, 2007 from 2:30 p.m. to 4:00 p.m. and again on Saturday, September 30, 2007 from 12:00 p.m. until 2:00 p.m.

Based on this information, we observed the following average daily traffic volumes ("ADT") and peak hour traffic volumes for Summit Street, Rockland Avenue, High Street and Hudson Avenue:

	ADT	PEAK HOUR
Summit Street	764	83
Rockland Avenue	873	84
High Street	498	48
Hudson Avenue	442	45

Note that this data includes traffic in both the northbound and southbound or eastbound and westbound directions. These volumes were consistent with the data collected in the second set of ATRs and by the manual traffic counts at the intersection of Summit Street and Hudson Avenue.

The existing traffic volumes indicate that all four roadways are classified as residential access streets which have a maximum ADT of 1,500 vehicles. Typically these streets have a paved cross section of twenty eight feet with 21 feet designated as the traveled way and one 7 foot wide parking lane. Field measurements show Summit Street to have a paved cross section of 30 feet near the intersection with Hudson Avenue. Parking is permitted along Summit Street throughout the study area.

The following travel speeds were observed along Summit Street:

SPEED (MPH)	# OF VEHICLES	%	CUMULATIVE %
0.0 to 19.9	646	12.8%	12.8%
20.0 to 24.9	790	15.7%	28.5%
25.0 to 29.9	1631	32.4%	60.9%
30.0 to 34.9	1394	27.7%	88.6%
35.0 to 39.9	480	9.5%	98.1%
40.0 to 44.9	83	1.6%	99.7%
45.0 +	9	0.3%	100.0%
Total	5033		

This represents an entire week's worth of data. As indicated, 88.6% of the traffic was traveling at 35 miles per hour or less, with only 9 vehicles during the study week traveling over 45 miles per hour. It should be noted that the Manual for Uniform Traffic Control Devices ("MUTCD") recommends that speed limits be established by collecting the speeds of free flowing traffic on the subject roadway and setting the posted speed limit within 5 miles per hour of the existing 85th percentile travel speed. Based on this requirement, the speed limit would be set at either 30 or 35 miles per hour. The supplementary speed data recorded using individual radar gun readings consisted of a total of 186 data points. This data showed an 85th percentile speed of 31 miles per hour with a high of 37 miles per hour.

Data provided by the Norwood Police Department indicates a total of 340 moving violations were issued from January 1, 1996 until August 2007 when the data was reviewed. Of the 340, 62, or 18%, were issued between February and August of 2007. This is indicative of a concerted effort by the Norwood PD to address the situation; however given staffing limitations, it may be difficult to maintain these levels of enforcement.

Summit Street, High Street, Rockland Avenue and Hudson Avenue are all classified as Residential Access Streets per the Residential Site Improvement Standards. This is the lowest classification of street as a function ADT and a 28' cartway with is recommended. This provides a 21' section for two-way traffic and one seven foot parking lane. The existing cartway on Summit Street is 30' near the intersection with Hudson Avenue.

Traffic calming methods

Traffic calming is a loosely defined term which is generally applied to any technique used to decrease the speed and/or volume of traffic flow by physical or non-physical means. Data available from the Institute of Transportation Engineers ("ITE") indicates that non-physical measures such as additional traffic striping are ineffective. There are many physical measures which can be implemented, including but not limited to roundabouts, speed humps, chicanes, diverters, choke points and roadway narrowing. Stop signs are *not* to be used for speed control.

Based on our interpretation of the New Jersey statutes, speed humps would not be permitted along Summit Street due to the fact that Summit Street extends into Northvale and they can only be constructed on streets which are totally contained within the municipality. Representatives of NJDOT were contacted and they were not willing to make any interpretation of this statute, but suggested that legal counsel would be better interpreter of the applicable statute. Based on the broad definition of speed humps in the statute, it is possible that raised intersections also fall under the same restriction; therefore we have also eliminated raised intersections from consideration. Please see the following statute excerpt (39:4-8.10) specific to speed humps:

“A municipality may construct a speed hump on totally self-contained two-lane residential streets and on totally self-contained one-way residential streets under municipal jurisdiction which have no direct connection with any street, in any other municipality, have fewer than 3,000 vehicles per day, with a posted speed of 30 mph or less, and on one-way streets connecting to county roads.”

In any case, this would leave a number of other options for traffic calming. Non physical traffic calming measures generally do not have a significant impact on travel speeds, however most physical measures have the effect of lowering the average travel speed (by up to 20%) based on data provided by the ITE. The following table gives average decreases in speed as a result of various measures along with approximate unit costs. Attached to this report are examples of each traffic calming measure presented on the following table.

TECHNIQUE	% SPEED DECREASE	UNIT COST*
Circle	11%	\$22,000 ²
Chicane	4%	\$16,500
Chokers	4%	\$10,000
Center Island	Undetermined	\$9,000 ²
Median Barrier	Undetermined	\$7,500
Half-Closure	19%	\$50,000 ³
Speed Table	18%	\$10,000

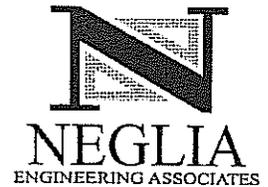
*costs reflect standard concrete and bituminous installations

As indicated, the traffic calming measures have the intended effect of decreasing the average travel speed; however it is not to the extent that many people would commonly anticipate. It may decrease the average speed from 35 miles per hour to 30 miles per hour, but that would be the limit that could reasonably be expected. In addition, any traffic calming proposed will likely not impact the motorist who is inclined to travel well outside the normal range of travel speed.

Aside from speed humps, the New Jersey Department of Transportation does not offer specific requirements for traffic calming measures. The statute states “a municipality may construct traffic calming measures where appropriate.” Among the measures which were considered, the center island and median barrier raise aesthetic concerns for the Borough and would be of questionable effectiveness. Additionally,

² May require property taking, which is not included in the unit cost.

³ Not applicable along Summit Street due to the requirement of NJDOT approval.



the construction of a center island would require right-of-way taking unless the Borough was to eliminate on-street parking. Constructing a circle at one of the study intersections would also require property taking and would have limited effectiveness as speeding appears to be more of a concern toward the northerly end of Summit Street where there are no intersecting streets. A half-closure would require approval from the County as it would effectively make Summit Street a one-way street in some locations. Given the speed and volume data as well as the accident history in this location, it is highly unlikely that the DOT would approve this measure.

A speed table is installed as a long raised speed hump with a flat section in the middle and ramps on the ends; sometimes constructed with brick or other textured materials on the flat section. Speed tables are also referred to as flat top speed humps, trapezoidal humps, speed platforms, raised crosswalks, or raised crossings. Applications include local and collector streets and main roads through small communities. Speed tables are typically long enough for the entire wheelbase of a passenger car to rest on top and work well in combination with textured crosswalks, curb extensions, and curb radius reductions and can include a crosswalk. The speed table as a vertical deflection is not specifically cited in NJSA (39:4-8.10).

Other methods which would be effective as well as approvable at these locations are the chicane and the choker. The choker narrows the roadway to the width of one to one and a half lanes at mid-block locations and the chicane forces traffic through an artificially created "s-curve" on the roadway.

The negatives to these methods are the cost to implement them, noise from vehicles slowing down to maneuver through the choker/chicane and then speeding up after passing through, the potential for vehicle damage and the delays incurred by emergency vehicles responding to calls. It should be noted that many of these negatives are experienced by all forms of traffic calming.

Recommendations

Of the roadways in the study area, Summit Street has the combination of relatively high traffic volumes and travel speeds. Summit Street experiences just over one vehicle per minute during the peak periods of the day and 88% of the existing traffic volume is within 10 miles per hour of the posted speed limit. We feel the installation of traffic calming measures in the study area would have a limited effect and the accident history, volume and speed data do not support the need for any such measures.

Should the Borough wish to proceed with the implementation of traffic calming at this location, the installation of a series of speed tables along Summit Street would be the most appropriate method. Chicanes or chokers at mid-block locations along Summit Street and potentially Rockland Avenue would also be a plausible approach to addressing traffic calming issues.

Please review this information at your earliest convenience and contact our office to discuss how you would like us to proceed.



Very truly yours,
Neglia Engineering Associates

A handwritten signature in black ink, appearing to read 'Brian A. Intindola', followed by a horizontal line.

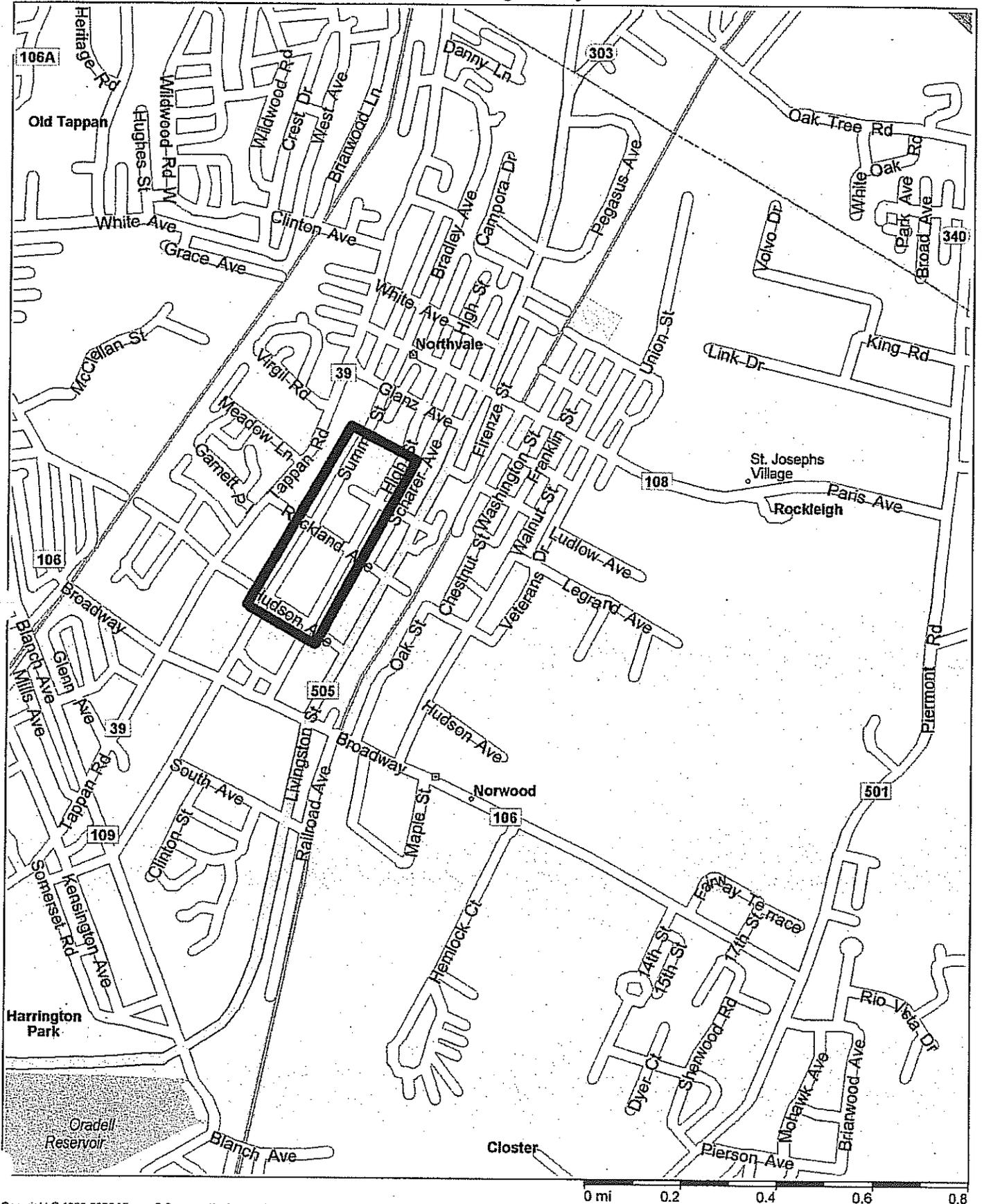
Brian A. Intindola, P.E.
Principal

Very truly yours,
Neglia Engineering Associates

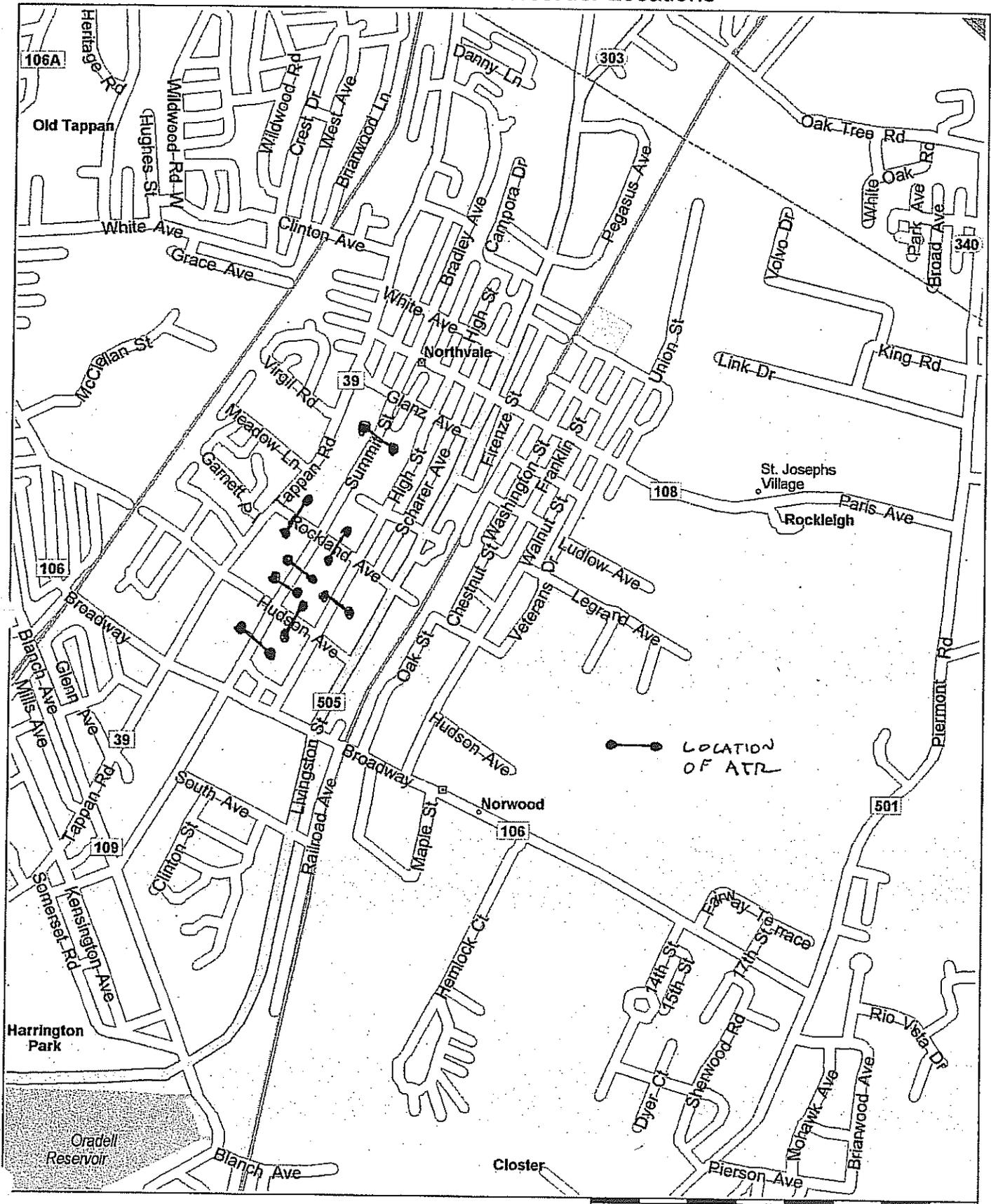
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William P. Stimmel, P.E.
Project Manager

Traffic Calming Study Area



Automatic Traffic Recorder Locations



ATI - DATA MANAGEMENT SYSTEM
60 MINUTES, 2 CHANNEL VEHICLE COUNT

REFERENCE: 88001200
LOCATION: HUDSON AVE BET HIGH ST & SUMMIT ST
ATR #: 970085
COMMENTS: LOC #4

FILENAME: 970085A.DAT
WEEK OF MONDAY 03/05/07

CH1 : WB CH2 : EB

HOUR BEGINS	Monday 5		Tuesday 6		Wednesday 7		Thursday 8		Friday 9		Saturday 10		Sunday 11		WEEKDAY AVERAGE	
	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2
12 AM	*	*	*	*	*	*	*	*	*	*	3	5	2	2	*	*
1	*	*	*	*	*	*	*	*	*	*	2	0	2	1	*	*
2	*	*	*	*	*	*	*	*	*	*	0	0	3	1	*	*
3	*	*	*	*	*	*	*	*	*	*	0	0	1	0	*	*
4	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	*
5	*	*	*	*	*	*	*	*	*	*	0	0	0	0	*	*
6	*	*	*	*	*	*	*	*	*	*	3	3	2	1	*	*
7	*	*	*	*	*	*	*	*	*	*	8	3	5	1	*	*
8	*	*	*	*	*	*	*	*	*	*	14	8	9	4	*	*
9	*	*	*	*	*	*	*	*	*	*	14	11	9	7	*	*
10	*	*	*	*	*	*	*	*	*	*	23	10	14	9	11	12
11	*	*	*	*	*	*	*	*	*	*	17	17	17	9	14	14
12 PM	*	*	*	*	*	*	*	*	*	*	21	16	15	14	12	14
1	*	*	*	*	*	*	*	*	*	*	12	15	17	17	13	13
2	*	*	*	*	*	*	*	*	*	*	10	9	12	14	12	11
3	*	*	*	*	*	*	*	*	*	*	11	17	13	14	27	33
4	*	*	*	*	*	*	*	*	*	*	11	15	9	13	23	17
5	*	*	*	*	*	*	*	*	*	*	16	15	16	8	24	27
6	*	*	*	*	*	*	*	*	*	*	13	9	12	13	15	23
7	*	*	*	*	*	*	*	*	*	*	10	5	8	16	19	15
8	*	*	*	*	*	*	*	*	*	*	4	3	10	12	11	10
9	*	*	*	*	*	*	*	*	*	*	8	4	8	3	4	9
10	*	*	*	*	*	*	*	*	*	*	1	6	8	6	4	5
11	*	*	*	*	*	*	*	*	*	*	5	3	1	1	1	2
TOTALS	*	*	*	*	*	*	*	*	*	*	206	174	185	164	213	218

% AVERAGE WEEKDAY

AM PK HR VOLUME

PM PK HR VOLUME

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ATI - DATA MANAGEMENT SYSTEM
60 MINUTES, 2 CHANNEL VEHICLE COUNT

REFERENCE: 88001200

LOCATION: HUDSON AVE BET HIGH ST & SUMMIT ST

ATR # : 970085

COMMENTS : LOC #4

FILENAME: 970085A.DAT
WEEK OF MONDAY 03/12/07

CH1 : WB CH2 : EB

HOUR BEGINS	Monday 12		Tuesday 13		Wednesday 14		Thursday 15		Friday 16		Saturday 17		Sunday 18		WEEKDAY AVERAGE	
	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2
12 AM	2	1	2	0	2	2	2	3	4	2	*	*	*	*	2	2
1	0	1	0	1	0	1	0	1	4	1	*	*	*	*	1	1
2	0	0	0	0	0	0	1	0	1	0	*	*	*	*	0	0
3	0	0	0	0	0	0	0	0	0	0	*	*	*	*	0	0
4	0	0	1	1	1	0	2	0	1	1	*	*	*	*	1	0
5	3	0	2	1	6	2	3	1	4	0	*	*	*	*	4	1
6	9	3	14	3	10	5	11	4	11	2	*	*	*	11	3	
7	13	7	16	6	18	6	12	10	11	6	*	*	*	14	7	
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9	21	8	17	8	12	4	17	7	22	5	*	*	*	18	6	
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11	21	8	16	17	9	14	14	17	10	3	*	*	*	14	12	
12 PM	8	13	11	21	16	12	15	7	17	16	*	*	*	13	14	
1	5	16	17	10	11	15	12	8	0	3	*	*	*	9	10	
2	16	10	15	7	15	14	15	12	*	*	*	*	*	15	11	
3	29	31	21	22	19	19	24	16	*	*	*	*	*	23	22	
4	19	18	12	18	24	21	21	15	*	*	*	*	*	19	18	
5	19	18	18	19	18	22	15	15	*	*	*	*	*	18	19	
6	17	23	18	13	15	24	22	23	*	*	*	*	*	18	21	
7	13	16	9	16	11	14	11	13	*	*	*	*	*	11	15	
8	14	14	8	9	12	11	7	12	*	*	*	*	*	10	12	
9	7	5	3	5	7	11	3	4	*	*	*	*	*	5	6	
10	4	3	5	5	5	4	2	6	*	*	*	*	*	4	6	
11	2	3	5	3	2	4	4	2	*	*	*	*	*	3	3	
TOTALS	261	216	255	208	255	233	259	209	127	58	*	*	*	255	213	

% AVERAGE

WEEKDAY 102.4 101.4 100.0 97.7 100.0 109.4 101.6 98.1 49.8 27.2

AM PK HR 8:00 8:00 8:00 11:00 8:00 10:00 8:00 8:00 8:00 8:00 8:00 8:00 8:00 8:00 8:00 8:00

VOLUME 25 12 35 17 31 18 34 17 32 13 31 31 31 31 31 31

PM PK HR 3:00 3:00 3:00 3:00 4:00 6:00 3:00 6:00 12:00 12:00 12:00 12:00 12:00 12:00 12:00 12:00

VOLUME 29 31 21 22 24 24 24 23 17 16 17 16 16 16 16 16

ATI - DATA MANAGEMENT SYSTEM
60 MINUTES, 2 CHANNEL VEHICLE COUNT

REFERENCE: 88000400
LOCATION: HIGH ST BET ROCKLAND AVE & HUDSON AVE
ATR #: 970015
COMMENTS: LOC #1

FILENAME: 970015A.DAT
WEEK OF MONDAY 03/05/07

CH1: SB CH2: NB

HOUR	Monday 5		Tuesday 6		Wednesday 7		Thursday 8		Friday 9		Saturday 10		Sunday 11		WEEKDAY AVERAGE	
	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2
12 AM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	3	5	6	3	*	*
2	*	*	*	*	*	*	*	*	*	*	1	2	1	4	*	*
3	*	*	*	*	*	*	*	*	*	*	1	0	0	0	*	*
4	*	*	*	*	*	*	*	*	*	*	0	1	0	3	*	*
5	*	*	*	*	*	*	*	*	*	*	1	0	1	1	*	*
6	*	*	*	*	*	*	*	*	*	*	2	0	1	0	*	*
7	*	*	*	*	*	*	*	*	*	*	2	0	1	0	*	*
8	*	*	*	*	*	*	*	*	*	*	6	3	1	1	*	*
9	*	*	*	*	*	*	*	*	*	*	14	7	3	4	*	*
10	*	*	*	*	*	*	*	*	19	10	5	6	6	5	19	10
11	*	*	*	*	*	*	*	*	10	14	17	8	8	12	10	14
12 PM	*	*	*	*	*	*	*	*	13	8	19	23	14	17	13	8
1	*	*	*	*	*	*	*	*	14	14	20	20	22	14	14	14
2	*	*	*	*	*	*	*	*	17	6	11	18	24	16	17	6
3	*	*	*	*	*	*	*	*	24	19	21	17	20	17	24	19
4	*	*	*	*	*	*	*	*	16	31	16	23	22	16	16	31
5	*	*	*	*	*	*	*	*	17	17	21	21	18	15	17	17
6	*	*	*	*	*	*	*	*	25	23	18	17	16	24	25	23
7	*	*	*	*	*	*	*	*	21	26	15	13	16	16	21	26
8	*	*	*	*	*	*	*	*	23	23	9	7	19	11	23	23
9	*	*	*	*	*	*	*	*	6	9	7	13	9	8	6	9
10	*	*	*	*	*	*	*	*	7	5	3	9	6	10	7	5
11	*	*	*	*	*	*	*	*	11	14	2	8	2	9	11	14
TOTALS	*	*	*	*	*	*	*	*	227	228	222	231	218	209	227	228

% AVERAGE
WEEKDAY

100.0 100.0

AM PK HR VOLUME: 9:00 10:00 11:00 11:00 11:00 11:00 11:00 11:00 11:00 11:00 11:00 11:00 11:00 11:00 11:00 11:00 11:00 10:00

PM PK HR VOLUME: 5:00 3:00 2:00 3:00 2:00 3:00 2:00 3:00 2:00 3:00 2:00 3:00 2:00 3:00 2:00 3:00 2:00 3:00 5:00 3:00

ATI - DATA MANAGEMENT SYSTEM
60 MINUTES, 2 CHANNEL VEHICLE COUNT

REFERENCE: 88000400

LOCATION : HIGH ST BET ROCKLAND AVE & HUDSON AVE

ATR # : 970015

COMMENTS : LOC #1

FILENAME: 970015A.DAT

WEEK OF MONDAY 03/12/07

CHI : SB CH2 : NB

HOUR BEGINS	Monday 12		Tuesday 13		Wednesday 14		Thursday 15		Friday 16		Saturday 17		Sunday 18		WEEKDAY AVERAGE	
	CHI	CH2	CHI	CH2	CHI	CH2	CHI	CH2	CHI	CH2	CHI	CH2	CHI	CH2	CHI	CH2
12 AM	6	5	2	4	2	1	3	1	2	4	*	*	*	*	3	3
1	0	1	0	0	0	0	0	3	1	2	*	*	*	*	0	1
2	2	0	0	0	0	0	1	3	5	1	*	*	*	2	1	1
3	0	0	0	0	0	0	0	0	0	0	*	*	*	0	0	0
4	3	0	2	0	1	0	1	0	2	2	*	*	*	2	0	0
5	4	0	6	4	3	0	4	0	4	0	*	*	*	2	0	0
6	12	1	13	4	10	1	4	1	10	2	*	*	*	4	1	1
7	18	8	18	11	18	7	26	10	18	7	*	*	*	10	2	2
8	25	10	15	16	21	10	18	11	17	14	*	*	*	20	9	9
9	15	12	9	12	9	10	10	6	7	6	*	*	*	19	12	12
10	6	6	15	9	10	8	11	11	7	11	*	*	*	10	9	9
11	9	12	13	10	20	16	21	5	12	10	*	*	*	10	9	9
12 PM	20	13	17	18	16	22	22	12	25	9	*	*	*	15	11	11
1	15	15	25	19	22	17	9	13	*	*	*	*	*	20	15	15
2	11	11	14	18	9	14	27	17	*	*	*	*	*	18	16	16
3	21	27	23	19	19	27	15	24	*	*	*	*	*	15	15	15
4	15	27	23	11	26	21	21	20	*	*	*	*	*	20	24	24
5	19	20	14	31	22	30	20	28	*	*	*	*	*	21	20	20
6	23	18	25	22	22	26	27	21	*	*	*	*	*	19	27	27
7	16	12	15	21	15	16	12	12	*	*	*	*	*	24	22	22
8	19	13	19	11	11	17	8	10	*	*	*	*	*	15	15	15
9	9	7	3	13	8	9	8	12	*	*	*	*	*	14	13	13
10	2	9	2	7	3	11	13	4	*	*	*	*	*	7	10	10
11	5	3	0	1	3	5	1	3	*	*	*	*	*	5	8	8
TOTALS	275	230	273	261	270	268	282	227	110	68	*	*	*	275	246	246

% AVERAGE

WEEKDAY	100.0	93.5	99.3	106.1	98.2	108.9	102.5	92.3	40.0	27.6
AM PK HR	8:00	9:00	7:00	8:00	8:00	11:00	7:00	8:00	7:00	8:00
VOLUME	25	12	18	16	21	16	26	11	18	14
PM PK HR	6:00	3:00	1:00	5:00	4:00	5:00	2:00	5:00	12:00	12:00
VOLUME	23	27	25	31	26	30	27	28	25	9

WEEKDAY	100.0	93.5	99.3	106.1	98.2	108.9	102.5	92.3	40.0	27.6
AM PK HR	8:00	9:00	7:00	8:00	8:00	11:00	7:00	8:00	7:00	8:00
VOLUME	25	12	18	16	21	16	26	11	18	14
PM PK HR	6:00	3:00	1:00	5:00	4:00	5:00	2:00	5:00	12:00	12:00
VOLUME	23	27	25	31	26	30	27	28	25	9

WEEKDAY	100.0	93.5	99.3	106.1	98.2	108.9	102.5	92.3	40.0	27.6
AM PK HR	8:00	9:00	7:00	8:00	8:00	11:00	7:00	8:00	7:00	8:00
VOLUME	25	12	18	16	21	16	26	11	18	14
PM PK HR	6:00	3:00	1:00	5:00	4:00	5:00	2:00	5:00	12:00	12:00
VOLUME	23	27	25	31	26	30	27	28	25	9

ATI - DATA MANAGEMENT SYSTEM
60 MINUTES, 2 CHANNEL VEHICLE COUNT

REFERENCE: 88000500
LOCATION : SUMMIT ST BET ROCKLAND AVE & HUDSON AVE.
ATR # : 970084
COMMENTS : LOC #3

FILENAME: 970084A.DAT
WEEK OF MONDAY 03/12/07

HOUR	Monday 12		Tuesday 13		Wednesday 14		Thursday 15		Friday 16		Saturday 17		Sunday 18		WEEKDAY AVERAGE	
	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2
12 AM	0	1	0	3	0	1	1	6	1	0	*	*	*	*	0	2
1	0	1	0	0	0	2	1	0	1	0	*	*	*	*	1	1
2	0	0	0	0	0	0	0	2	1	0	*	*	*	*	0	0
3	0	1	0	0	0	0	2	0	0	0	*	*	*	*	0	0
4	1	0	0	1	1	0	1	0	1	0	*	*	*	*	1	0
5	2	3	2	4	1	4	0	1	2	2	*	*	*	*	1	3
6	9	6	10	15	10	5	11	7	4	17	*	*	*	*	9	10
7	12	17	15	18	14	23	22	12	17	16	*	*	*	*	16	17
8	30	43	34	56	35	52	33	54	33	47	*	*	*	*	33	50
9	20	24	18	19	21	17	18	27	18	20	*	*	*	*	19	21
10	13	11	9	10	23	22	17	16	14	16	*	*	*	*	15	15
11	23	24	31	32	20	33	35	25	12	17	*	*	*	*	24	26
12 PM	34	34	18	31	23	27	25	29	19	37	*	*	*	*	24	32
1	23	30	27	19	28	14	21	22	5	17	*	*	*	*	21	20
2	32	32	19	29	18	29	21	20	0	17	*	*	*	*	18	25
3	41	31	45	25	43	22	50	32	1	5	*	*	*	*	36	23
4	41	37	37	19	39	37	41	33	1	2	*	*	*	*	32	26
5	15	32	35	32	39	27	31	35	*	*	*	*	*	*	30	32
6	32	26	25	18	35	34	28	28	*	*	*	*	*	*	30	27
7	28	28	17	31	12	23	17	16	*	*	*	*	*	*	19	25
8	25	28	9	16	26	26	15	14	*	*	*	*	*	*	19	21
9	13	12	14	11	27	11	12	4	*	*	*	*	*	*	17	10
10	6	6	9	6	7	7	7	9	*	*	*	*	*	*	7	7
11	3	2	4	4	4	4	4	2	*	*	*	*	*	*	4	3
TOTALS	403	429	379	399	426	420	413	394	130	213	*	*	*	*	376	396
% AVERAGE	832		778		846		807									
WEEKDAY	107.2	108.3	100.8	100.8	113.3	106.1	109.8	99.5	34.6	53.8						
AM PK HR	8:00	8:00	8:00	8:00	8:00	8:00	11:00	8:00	8:00	8:00	*	*	*	*	8:00	8:00
VOLUME	30	43	34	56	35	52	35	54	33	47	*	*	*	*	33	50
PM PK HR	3:00	4:00	3:00	5:00	3:00	4:00	3:00	5:00	12:00	12:00	*	*	*	*	3:00	12:00
VOLUME	41	37	45	32	43	37	50	35	19	37	*	*	*	*	36	32

ATI - DATA MANAGEMENT SYSTEM
60 MINUTES, 2 CHANNEL VEHICLE COUNT

FILENAME: 96055A.DAF
WEEK OF MONDAY 03/05/07

REFERENCE: 88000300
LOCATION : ROCKLAND AVE BET HIGH ST & SUMMIT ST
ATR # : 96055
COMMENTS : LOC #2

CH1 : WB CH2 : RB

HOUR BEGINS	Monday 5		Tuesday 6		Wednesday 7		Thursday 8		Friday 9		Saturday 10		Sunday 11		WEEKDAY AVERAGE	
	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2
12 AM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
8	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
8	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
TOTALS	*	*	*	*	*	*	*	*	424	329	483	379	404	334	424	329

% AVERAGE
WEEKDAY

AM PK HR
VOLUME

PM PK HR
VOLUME

100.0 100.0

10:00 9:00
21 25

5:00 6:00
53 39

11:00 10:00
27 31

4:00 12:00
47 33

11:00 11:00
27 31

5:00 6:00
53 39

10:00 10:00
21 25

4:00 12:00
47 33

11:00 11:00
27 31

5:00 6:00
53 39

10:00 9:00
21 25

4:00 12:00
47 33

11:00 11:00
27 31

5:00 6:00
53 39

10:00 9:00
21 25

4:00 12:00
47 33

ATI - DATA MANAGEMENT SYSTEM
60 MINUTES, 2 CHANNEL VEHICLE COUNT

REFERENCE: 88000300
LOCATION: ROCKLAND AVE BET HIGH ST & SUMMIT ST
ATR # : 96055
COMMENTS : LOC #2

FILENAME: 96055A.DAT
WEEK OF MONDAY 03/12/07

HOUR	Monday 12		Tuesday 13		Wednesday 14		Thursday 15		Friday 16		Saturday 17		Sunday 18		WEEKDAY AVERAGE	
	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2
12 AM	1	0	2	2	0	3	3	3	5	1	*	*	*	*	2	2
1	2	1	1	0	0	0	3	3	0	0	*	*	*	*	1	0
2	2	1	1	1	2	1	2	2	1	2	*	*	*	*	2	1
3	0	0	0	0	0	1	0	0	0	0	*	*	*	*	0	0
4	0	1	0	1	1	1	1	1	0	1	*	*	*	*	0	0
5	1	2	1	3	1	1	2	2	2	3	*	*	*	*	1	3
6	3	11	4	11	4	9	2	7	7	9	*	*	*	4	9	
7	16	23	23	18	23	24	25	21	18	20	*	*	*	21	21	
8	24	29	34	38	29	42	29	35	35	28	*	*	*	30	34	
9	18	28	13	24	24	26	19	36	18	29	*	*	*	18	29	
10	15	9	17	11	23	19	15	28	19	15	*	*	*	18	16	
11	37	20	32	29	23	28	41	38	23	15	*	*	*	31	26	
12 PM	38	23	28	31	21	15	30	24	26	23	*	*	*	29	23	
1	21	19	21	24	41	24	27	19	2	4	*	*	*	22	18	
2	26	27	38	22	41	22	40	24	*	*	*	*	*	36	24	
3	44	39	50	33	33	42	32	35	*	*	*	*	*	40	37	
4	41	23	37	21	40	34	43	30	*	*	*	*	*	40	27	
5	59	29	49	20	53	33	63	29	*	*	*	*	*	56	28	
6	46	25	51	23	53	29	58	36	*	*	*	*	*	52	28	
7	34	25	33	42	45	14	32	15	*	*	*	*	*	36	24	
8	39	15	28	16	36	17	27	19	*	*	*	*	*	33	17	
9	15	7	17	8	26	10	15	7	*	*	*	*	*	18	8	
10	11	3	11	7	10	2	8	5	*	*	*	*	*	10	4	
11	5	0	3	1	5	4	4	2	*	*	*	*	*	4	2	
TOTALS	498	360	494	386	534	403	520	419	156	150	*	*	*	504	382	

% AVERAGE

WEEKDAY	98.8	94.2	98.0	101.0	106.0	105.5	103.2	109.7	31.0	39.3
AM PK HR	11:00	8:00	8:00	8:00	8:00	8:00	11:00	11:00	8:00	9:00
VOLUME	37	29	34	38	29	42	41	38	35	29
PM PK HR	5:00	3:00	6:00	7:00	5:00	3:00	5:00	6:00	12:00	12:00
VOLUME	59	39	51	42	53	42	63	36	26	23
WEEKDAY	11:00	8:00	11:00	8:00	11:00	8:00	11:00	8:00	11:00	8:00
VOLUME	31	34	31	31	31	31	31	31	31	31
WEEKDAY	5:00	3:00	5:00	3:00	5:00	3:00	5:00	3:00	5:00	3:00
VOLUME	56	37	56	37	56	37	56	37	56	37

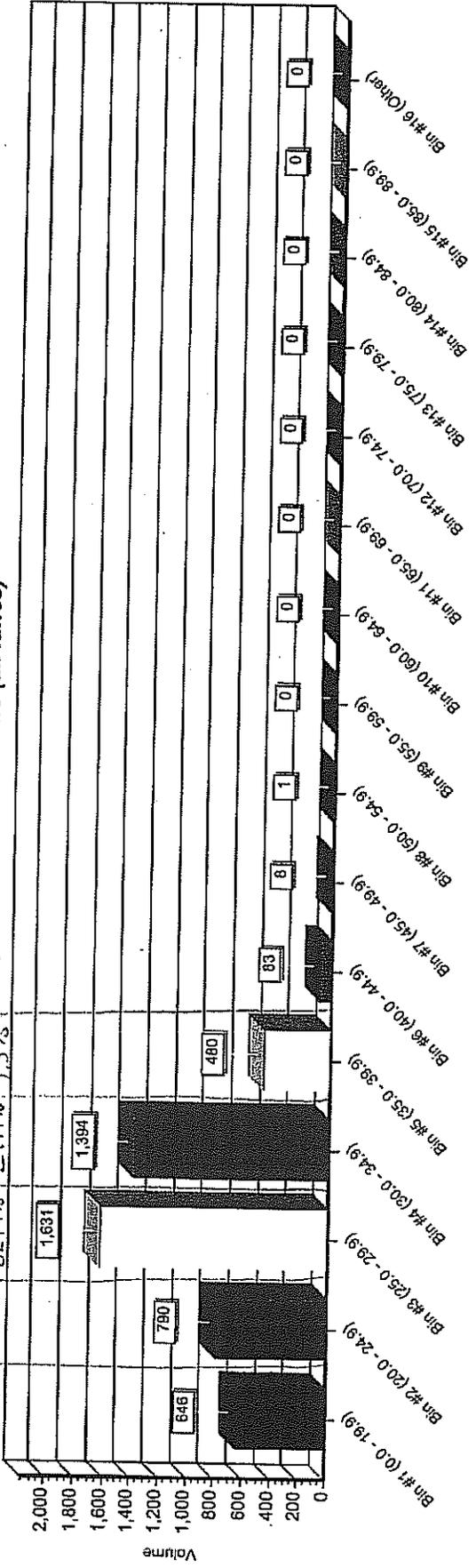
Commit south of Glenz

0737004 Speed Class Charts For Data From: 14:00 - 09/12/2007 To: 13:59 - 09/20/2007

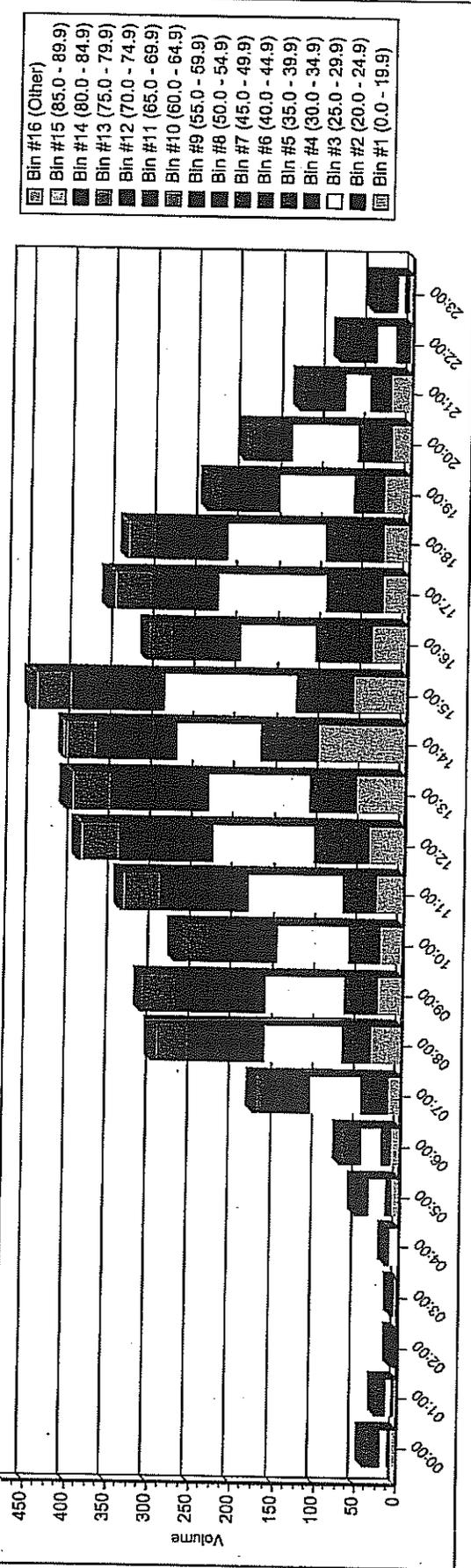
Speed Class vs. Volume (all lanes)

→ 28.5 → 60.9 → 88.6 → 98.1
 12.8% | 15.7% | 32.4% | 27.7% | 7.5%

Σ = 5033



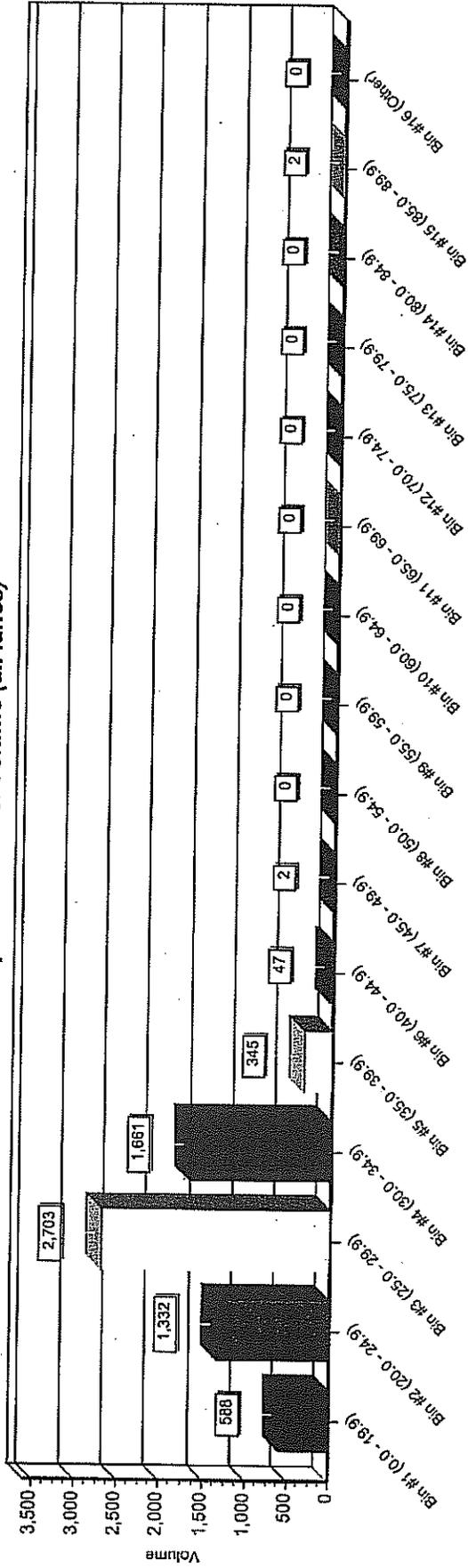
Speed Class vs. Time (all lanes)



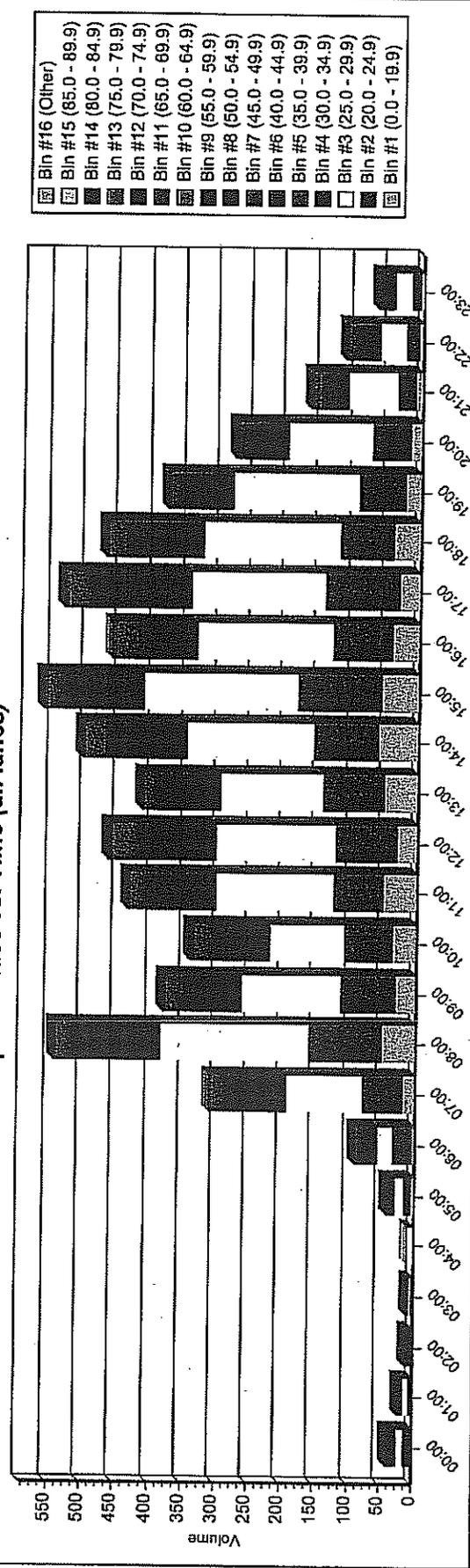
See mit between Norwood/Hudson

0737001 Speed Class Charts For Data From: 13:00 - 09/12/2007 To: 12:59 - 09/20/2007

Speed Class vs. Volume (all lanes)



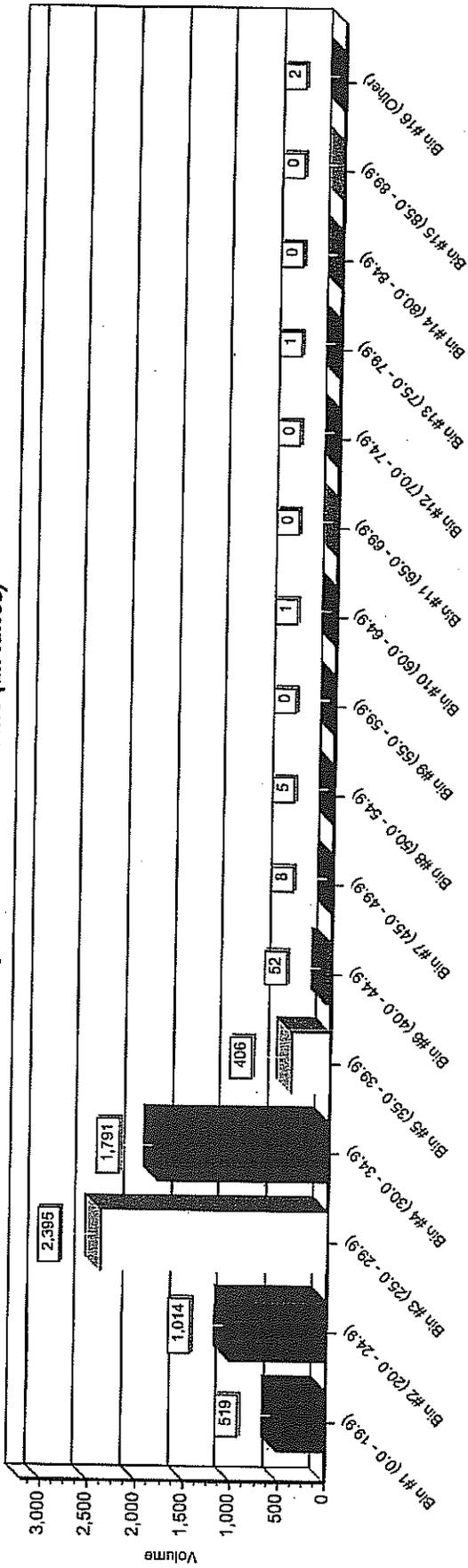
Speed Class vs. Time (all lanes)



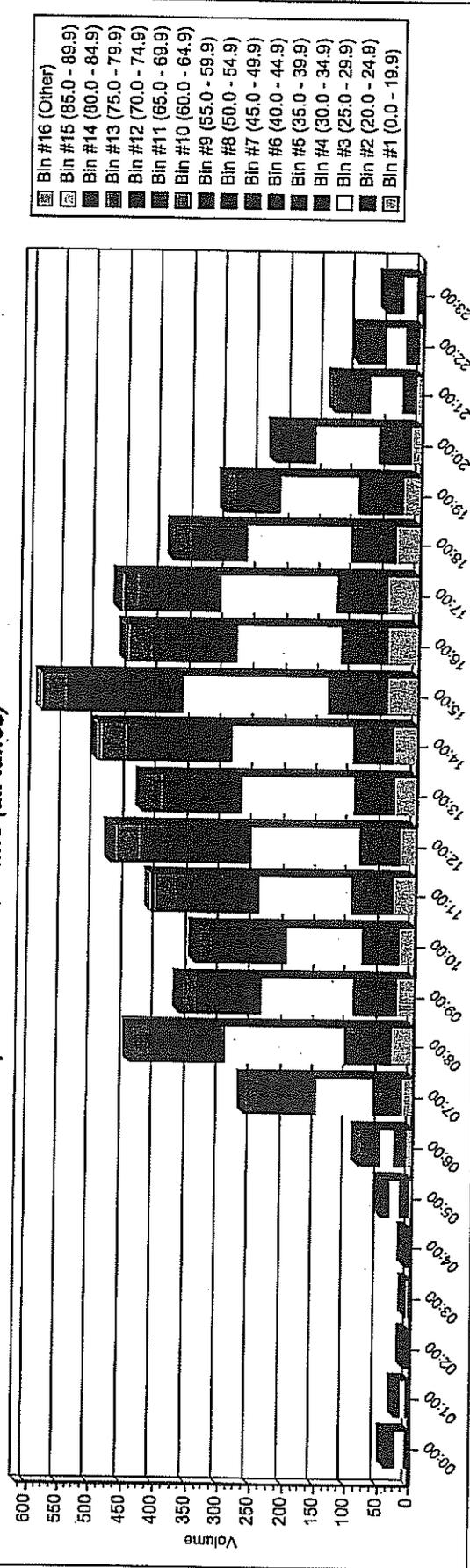
Scott helps Hudson; Rockland

0737002 Speed Class Charts For Data From: 13:00 - 09/12/2007 To: 12:59 - 09/20/2007

Speed Class vs. Volume (all lanes)



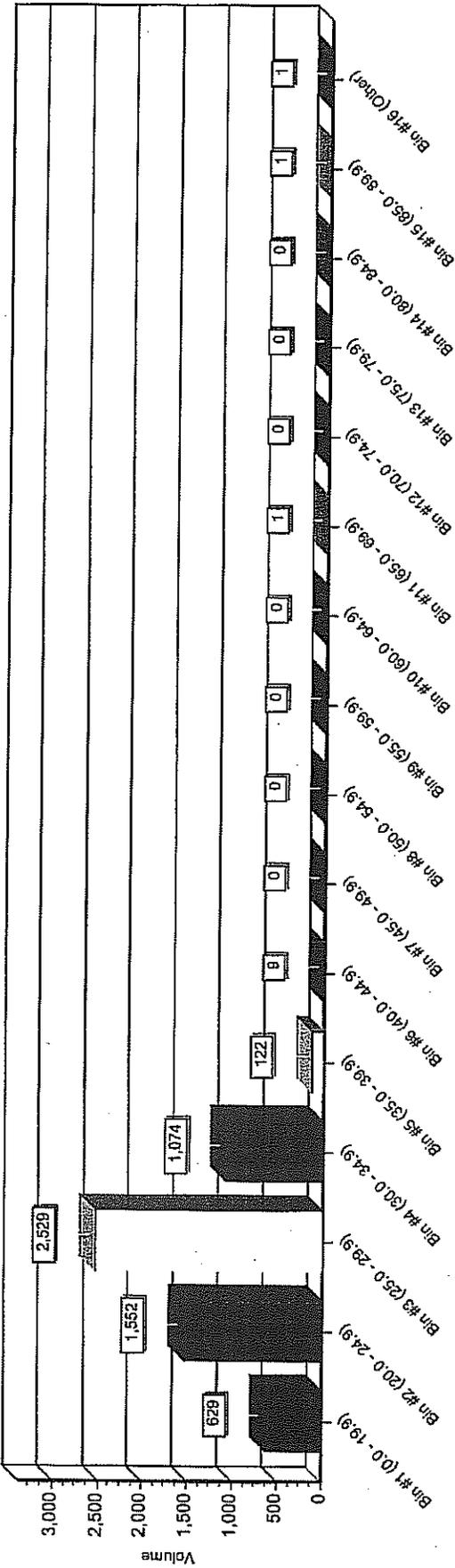
Speed Class vs. Time (all lanes)



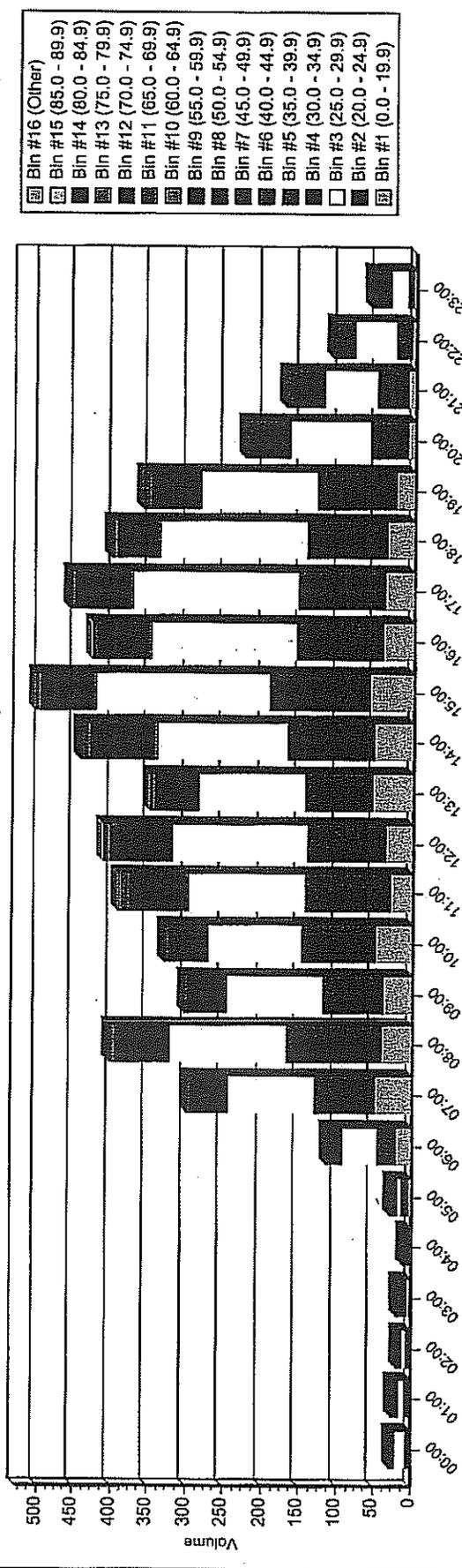
1. bond hold, Summit, Tappan

0737003 Speed Class Charts For Data From: 14:00 - 09/12/2007 To: 14:59 - 09/20/2007

Speed Class vs. Volume (all lanes)



Speed Class vs. Time (all lanes)



Mariela Mitre

From: Mariela Mitre
Sent: Thursday, August 16, 2007 1:00 PM
To: Bill Stimmel
Subject: Summit street index of citations - NORWMUN07.012

Moving Violations

1996-February 2007
Summit St. = 181
High St. = 22
Hudson Ave. = 27
Rockland Ave. = 48

February 2007-present
Summit St. = 55
High St. = 2
Hudson Ave. = 1
Rockland Ave. = 4

Total:
Summit St. = 236
High St. = 24
Hudson Ave. = 28
Rockland Ave. = 52



NEGLIA ENGINEERING ASSOCIATES
 34 Park Avenue - P.O. Box 426
 Lyndhurst, NJ 07071
 Phone (201) 939-8805 Fax (201) 939-0846

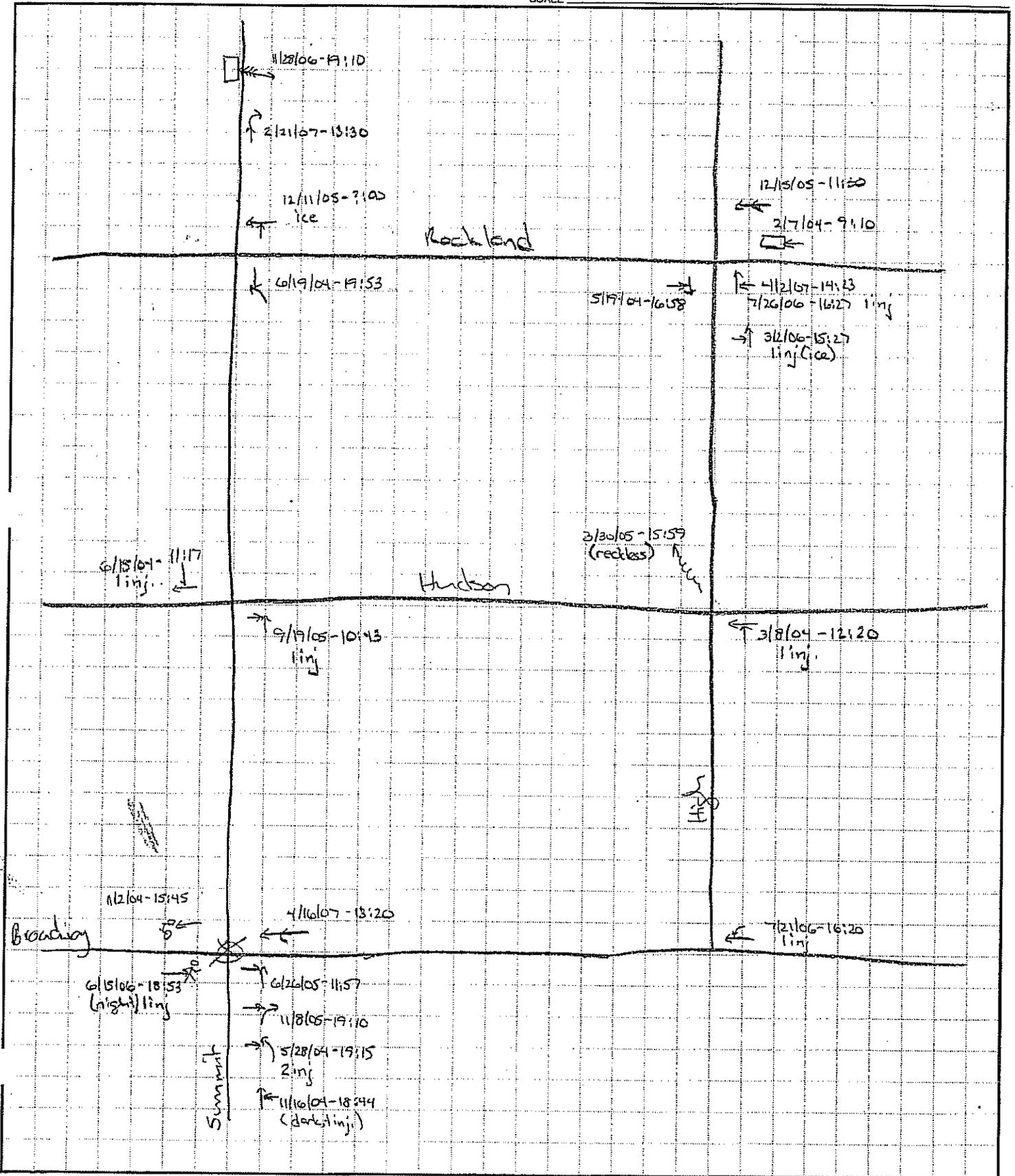
JOB NORW MUM 07.012

SHEET NO. _____ OF _____

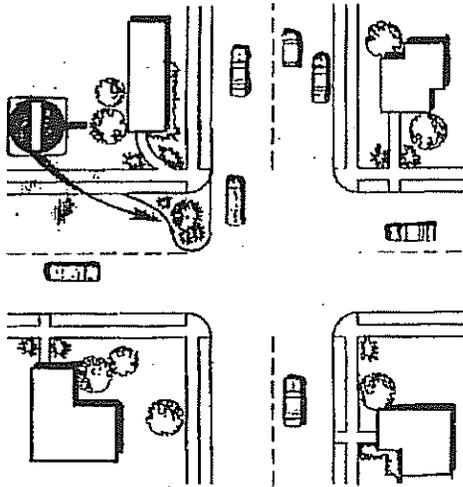
CALCULATED BY WPS DATE 10/2/07

CHECKED BY _____ DATE _____

SCALE _____



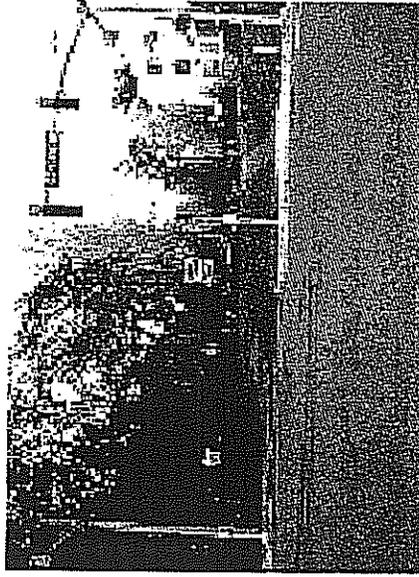
Half Closures (partial closures, one-way closures, directional closures)



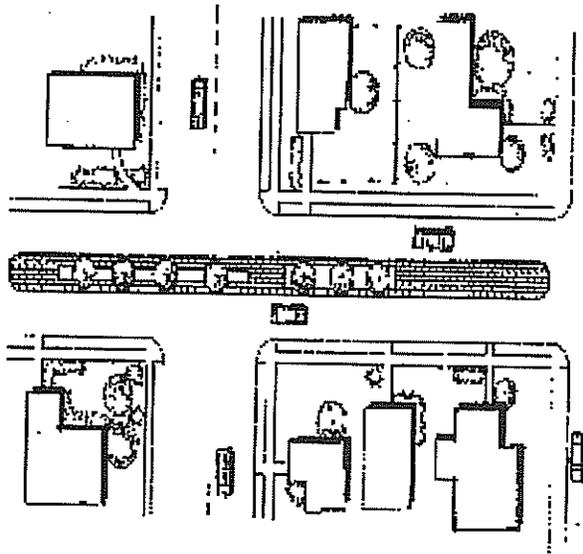
San Jose, CA



Bellevue, WA



Median Barriers (median diverter, forced turn island, island diverter)



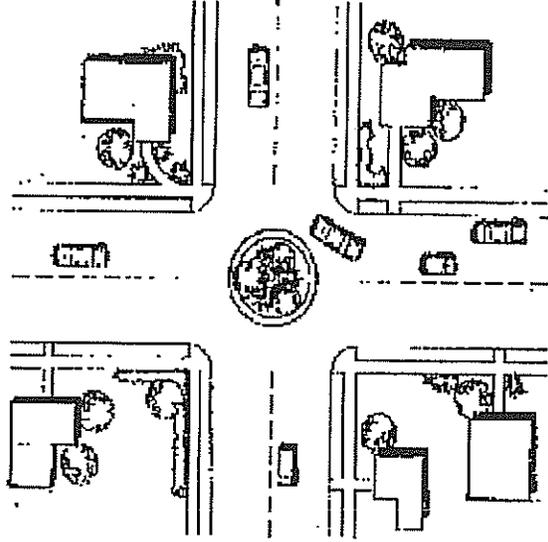
San Diego, CA



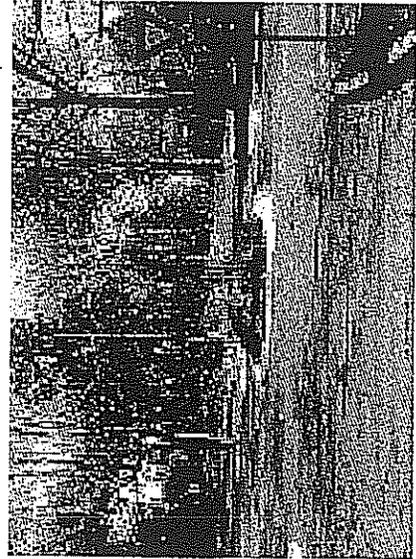
Berkeley, CA



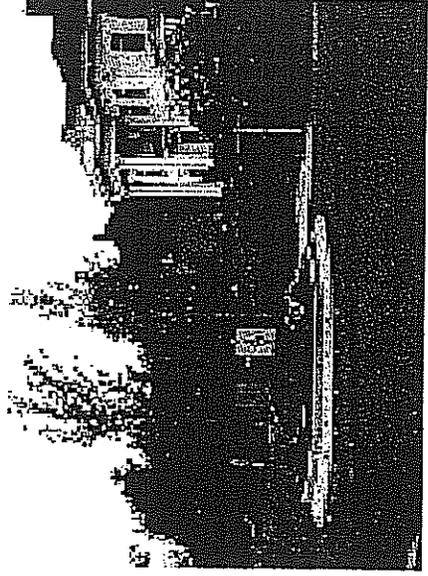
Traffic Circles (rotaries, intersection islands)



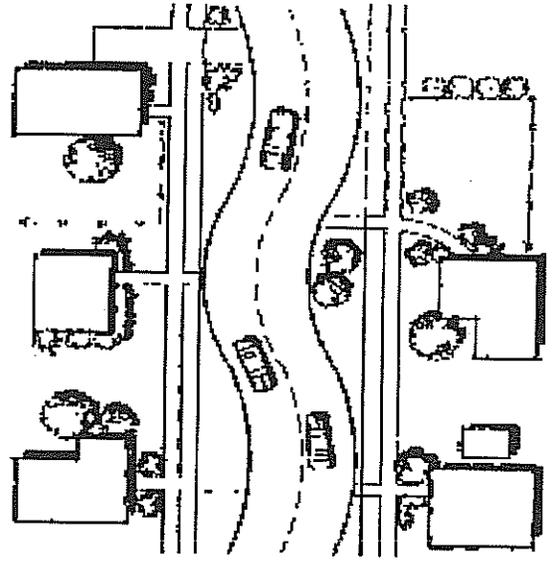
Charlotte, NC



Portland, OR

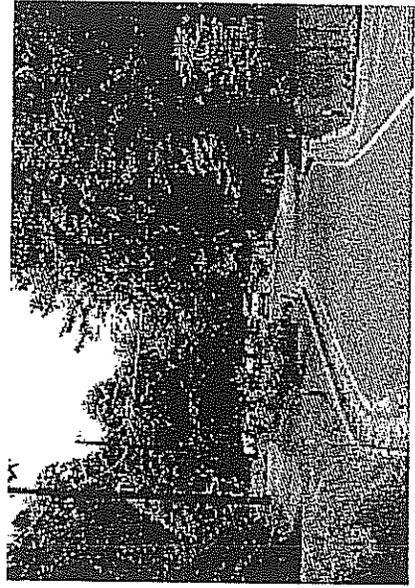


Chicanes (deviations, serpentine, reversing curves)



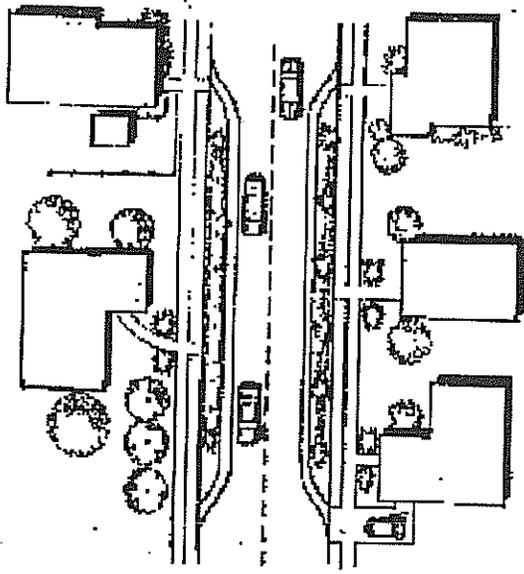
Montgomery County,
MD

Alachua, FL

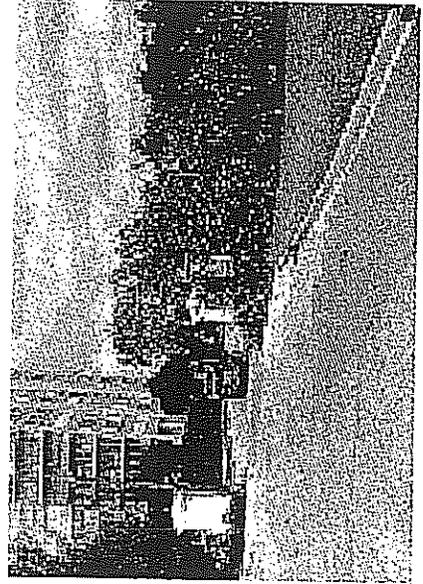


Chokers

(pinch points, midblock narrowings, curb extensions, midblock yield points)



Ft. Lauderdale, FL



Cambridge, MA

