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NOV 17 1988
CITY MANAGER

The Traffic Committee Meeting was called to order at 7:35 PM in the Lower Level Conference Room of Troy City Hall on November 16, 1988 by Chair Peggie Perry.

ITEM: 1 ROLL CALL

PRESENT: Sam Coleman
Arthur Cotsonika
Ted Halsey
Robert Hanna
Peggie Perry
William Rudell

ABSENT: John Diefenbaker

Also present were the following:

- 5 - Deborah Miela, 2410 Dalesford
 - 6 - Susan Zacharski, 4410 Deacon
Diane Sacco, 1682 Hallmark
Beverly Bunting Fieroh, 4457 Gaylord
Walt Feifer, 4603 Tipton
 - 7 - Kenneth Fish, Beaumont Hospital, 44201 Dequindre
 - 8 - Dave Spencer, Walsh College, 3838 Livernois
Geoffrey Sleeman, Walsh College, 3838 Livernois
- and Richard F. Beaubien, Transportation Engineer
Robert Matlick, Fire Inspector
Lt. Edward Murphy, Traffic Safety Unit

ITEM: 2 MINUTES - OCTOBER 19, 1988

Moved by Halsey
Supported by Hanna

Recommend that the minutes of the October 19, 1988 Traffic Committee meeting be approved as printed.

YEAS: 6 Coleman, Cotsonika, Halsey, Hanna, Perry, Rudell
NAYS: 0
ABSENT: 1 Diefenbaker

MOTION PASSED

ITEM: 3 VISITORS TIME

No one was present to discuss items not on the agenda.

ITEM: 4

INSTALL TRAFFIC SIGNAL AT LONG LAKE/CALVERT

Gail Sammut, 5133 Allison, has suggested the installation of a traffic signal at this intersection. This was scheduled for discussion at the Traffic Committee meeting of October 19, 1988, but it was tabled at the request of Ms. Sammut. On October 6, 1988, a fatal accident occurred at this intersection when a motorist northbound on Calvert misjudged the gap available in Long Lake traffic. The northbound vehicle was struck broadside by a vehicle eastbound on Long Lake.

We examined the accident experience at the intersection of Long Lake and Calvert to determine whether there was a pattern of accidents which suggested the need for a traffic signal. A traffic signal would be warranted at the intersection if we found five or more accidents during a twelve month period which might have been corrected by installation of a traffic signal. The type of accidents which we would normally expect to be able to correct with a traffic signal are the right angle type.

The table below shows accident experience at Long Lake and Calvert for the first nine months of 1988 and the six preceding years. Although there are some right angle accidents, the frequency of this type of accident is less than five during a twelve month period. Therefore, the accident experience at Long Lake and Calvert would not warrant traffic signal installation under Warrant 6 (Accident Experience) in the Michigan Manual of Uniform Traffic Control Devices.

LONG LAKE/CALVERT
ACCIDENT EXPERIENCE

<u>YEAR</u>	<u>TOTAL ACCIDENTS</u>	<u>RIGHT ANGLE ACCIDENTS</u>
1988 (9 mos.)	3	2
1987	1	1
1986	3	1
1985	1	0
1984	5	1
1983	3	1
1982	1	0

The attached collision diagrams for this intersection for the years 1986, 1987, and 1988 indicate that Warrant 6, Accident Experience, is not met because accidents at this location are a relatively rare occurrence.

A traffic signal warrant study was conducted on October 13, 1988 for the intersection of Long Lake and Calvert. This study indicates that traffic volumes on Calvert are high enough to warrant a traffic signal only between 7:00 AM and 8:00 AM and between 12:00 Noon and 1:00 PM. To meet the requirements of Warrant 2, Interruption of Continuous Traffic, this volume level must be equal or exceeded for 8 hours during an average day.

No one appeared before the Committee on behalf of this item.

When Mr. Halsey recommended that a traffic signal not be installed at Long Lake/Calvert, Mr. Hanna asked if this precluded a signal anywhere in the area. Mr. Halsey said that he did not know where to place a signal because he did not

Item 4 Contd.

believe that a signal at Long Lake/Tyler would help Calvert. The backup on Long Lake would prevent left turns from Calvert anyway. Mr. Hanna felt that a signal at Long Lake/Tyler would just give some interruption in traffic and, since it would be one-half way between John R and Rochester, it would allow signal progression.

The Committee could not understand why Gail Sammut was not present since she had requested that the item be tabled from the October 19 meeting for consideration at the November 16 meeting, at which time petitions could be submitted. Susan Zacharski, present at the meeting for another item, stated that petitions were being circulated through many subdivisions because they had been given to all of the soccer coaches whose teams play at Jay Cee Park. The Committee felt that they should hear from the people in the area before making any recommendation.

Moved by Halsey

Supported by Coleman

Recommend that a traffic signal not be installed at Long Lake/Calvert.

YEAS: 6 Coleman, Cotsonika, Halsey, Hanna, Perry, Rudell

NAYS: 0

ABSENT: 1 Diefenbaker

MOTION PASSED

ITEM: 5 INSTALL STOP SIGNS AT GLYNDEBOURNE/CHALGROVE/DALESFORD

Debbie Dobroy, 2161 Chalgrove, has called to express her concern about the confusion motorists experience when approaching the intersection of Glyndebourne/Chalgrove/Dalesford. There are some sight restrictions because of nearby trees and it is not entirely clear which path motorists should be taking. However, there have been no reported accidents at the intersection during the past three years.

One approach to address this confusion would be to install stop signs on intersection approaches where sight distance is restricted. Another approach would be to modify the intersection to create two separate intersections as indicated on the attached sketch. This would create an intersection of Glyndebourne and Chalgrove and a second intersection of Dalesford and Glyndebourne.

This item was discussed at the October, 1988 Traffic Committee meeting, but it was tabled to allow time to gather traffic count information on the streets involved. This traffic count information is attached. Daily traffic volumes were 43 on Dalesford, 92 on Chalgrove, and 207 on Glyndebourne. The attached aerial photographs show how this intersection might be modified to create two "T" intersections.

Deborah Miela, 2410 Dalesford, appeared before the Committee out of curiosity because she just moved in three months ago. She stated that she spoke with Debbie Dobroy who was concerned about where her daughter stands to wait for

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the school bus. She said that it was unclear to her, however, as to the location of the bus stop. She wondered why all of the suggested resolutions seem to be for stopping east-west traffic, not Glyndebourne where there is rapid traffic and the most traffic.

Mr. Beaubien explained that the right of way is given to the street which is more important and having the higher traffic volume, such as Glyndebourne which is a collector street.

Mr. Beaubien reported that he had received a call from Patricia Lowring who believes that there is not enough traffic to do anything different at this intersection. Also, the attached letter was received from Dr. Weinberger who believes that the best solution is modifying the Glyndebourne/Chalgrove/Dalesford intersection to create a T-intersection at Glyndebourne/Chalgrove and a 4-way intersection at Glyndebourne/Dalesford.

Mr. Halsey feels there is a problem at this intersection, even if it is just shrubs and bushes. Mr. Beaubien agreed that there is some sight restriction.

The Committee discussed cutting back the island for better alignment of Glyndebourne, seeding the island for creating a T-intersection at Glyndebourne/Chalgrove and a 4-way intersection at Glyndebourne/Dalesford, and the signing of these intersections.

Moved by Halsey
Supported by Perry

Recommend that the Glyndebourne/Chalgrove/Dalesford intersection be modified to create a T-intersection at Glyndebourne/Chalgrove and a 4-way intersection at Glyndebourne/Dalesford and that a stop sign be installed on Chalgrove at Glyndebourne.

YEAS: 6 Coleman, Cotsonika, Halsey, Hanna, Perry, Rudell
NAYS: 0
ABSENT: 1 Diefenbaker

MOTION PASSED

Moved by Halsey
Supported by Hanna

Recommend that stop signs be installed on Dalesford at Glyndebourne.

YEAS: 6 Coleman, Cotsonika, Halsey, Hanna, Perry, Rudell
NAYS: 0
ABSENT: 1 Diefenbaker

MOTION PASSED

ITEM: 6

INSTALL 4-WAY STOP AT NORTHFIELD/DURAND

Susan Zacharski, 4410 Deacon, has suggested the installation of a 4-way stop at the intersection of Northfield/Durand/Wintergreen. She is concerned about the speed of traffic on Northfield Parkway and she believes that the sight distance for northbound traffic approaching Durand is limited. This item was discussed at the October, 1988 Traffic Committee meeting, but it was tabled to allow time to gather information on 1988 traffic counts, sight distance, and speed studies.

Traffic counts at the Northfield/Durand/Wintergreen intersection were completed on October 19, 1988. The table below compares the 1988 traffic counts at this intersection with similar counts conducted in 1987.

DAILY TRAFFIC VOLUMES
NORTHFIELD/DURAND/WINTERGREEN

<u>Direction of Travel</u>	<u>Daily Traffic August 1987</u>	<u>Daily Traffic October 1988</u>
Northbound and Southbound Northfield Parkway	818	1438
Eastbound Wintergreen	371	519
Westbound Durand	523	398

The table shows that Northfield Parkway traffic has increased to 1,438 vehicles per day. Northfield Parkway was constructed as a collector street in the middle of Section 17, with continuity from Wattles to Long Lake Road. As the more important roadway carrying higher volumes of traffic, it should be given right of way at the Northfield/Durand/Wintergreen intersection. Stop signs have already been posted on Durand at Northfield Parkway and on Wintergreen at Northfield Parkway.

Installation of a 4-way stop at this intersection would be warranted if there were an accident pattern which could be corrected by stop sign installation. Right angle accidents are normally the type of accidents which we could expect to reduce by the installation of a 4-way stop. If we were to find accident experience of 5 or more right angle accidents during a 12 month period, installation of a 4-way stop would be warranted. However, in this case, there are no reported accidents at the Northfield/Durand/Wintergreen intersection.

Installation would also be warranted if traffic volumes approaching the intersection exceeded 500 vehicles per hour for an 8 hour period. The counts conducted at the intersection in October, 1988 indicated that this volume warrant is not met.

A survey crew reviewed the intersection sight distance question. On October 31, 1988, this crew found that an intersection sight distance of 250 feet was available for northbound motorists on Northfield Parkway. Within that 250 foot intersection sight distance area, they found that the berm on private property was not a restriction to sight distance. For speeds of 35 mph on Northfield Parkway, however, a 350 foot intersection sight distance would be desirable. The berm on private property is, in fact, a restriction to sight distance between 250 feet and 350 feet from Durand. Therefore, warning signs have been

Item 6 Contd.

posted on Northfield Parkway in advance of the Durand intersection. The first warning sign warns motorists that there is an intersection ahead and the second warning sign warns of limited sight distance.

A radar speed study was conducted on Northfield Parkway at Durand and Wintergreen between 12:45 PM and 1:45 PM on November 7. The average speed recorded was 38 mph.

Susan Zacharski, 4410 Deacon, appeared before the Committee and said that she would like to hear the Committee's comments before offering hers.

Mrs. Perry stated that the traffic volume warrant is still not met.

Mr. Halsey asked Mrs. Zacharski her feeling on a cul-de-sac. Mrs. Zacharski stated that it would not be her favorite choice because there is so much crossing by children between the two subdivisions, and she did not feel that a cul-de-sac would stop them from crossing at this location.

Beverly Bunting Fieroh, 4457 Gaylord, spoke up to say that she has observed a lot of traffic and many kids on Northfield Parkway walking, riding bikes, etc. She suggested looking to the future when there will be the new high school at Long Lake and Northfield Parkway. When the children are walking to this school, they will be crossing all along Northfield Parkway.

Mr. Halsey indicated concern about stops on Northfield Parkway at Durand because of the hill. There may be a problem when it is icy. Also, the roadway is curved and when motorists come around the curve, they may not be able to stop in time to avoid hitting a vehicle stopped at the stop sign. He believes a 4-way stop may cause more problems that it would eliminate.

Mr. Cotsonika questioned topographical information and suggested getting rid of the sight restriction.

Mr. Beaubien explained how it was attempted to design the roadway within the topographical limits. The design combination gives a sight distance of 250 feet. Signs have been installed to warn motorists of the intersection and limited sight distance. Cutting down the berm will not give an additional 100 feet of sight distance, but rebuilding the road would. Northfield Parkway was built in stages - three different construction periods - making the plans harder to review. Being built in pieces made it more difficult to see the complete plan.

Walt Feifer, 4603 Tipton, said that he is against a cul-de-sac because there are only two entrances to the subdivision - Durand and Perrin. If there was a cul-de-sac on Durand, all of the traffic would be moved to Perrin. He expressed concern about the congestion of all of the traffic where children will be crossing to get to the new high school when it is built. There will be parking to the north of the crossing and adult education every night - a traffic problem for everybody.

Item 6 Contd.

Beverly Bunting Fieroh mentioned that there are stakes on the berms for the City to do landscaping on top of the berms. It was decided that the berm is secondary - the road is the problem. The landscaping on the berms will not affect the current sight distance.

Mr. Halsey gave his opinion of the problem with children on Northfield Parkway being a parental responsibility. He felt that through their homeowners association, they should make them understand that Northfield Parkway is a collector street. He understands that we cannot legislate children off of the roadways, and that parents cannot be with them all the time, but suggested using the sidewalks.

Mrs. Zacharski stated that she was not referring to children playing on the street, but to children crossing. She said that she is not only concerned about children. She believes that adults are also at risk - coming out Durand or Wintergreen is the problem. Beverly Bunting Fieroh agreed that it is a problem for motorists.

Although there are no reported accidents at this intersection since it was opened in 1987, the residents remarked that they have observed near collisions.

Mr. Beaubien summarized the options: 1) a cul-de-sac on Durand; 2) rebuild the road; and 3) warn motorists, which we have done. He stated that he is not sure we will get good compliance with a 4-way stop.

Walt Feifer commented that it costs much more for other options than for stop signs. He emphasized that stop signs should be tried - if they work, great; if not, pull them out.

Susan Zacharski noted that she has petitions for a 4-way stop at the intersection of Northfield/Durand/Wintergreen but declined submitting them for inclusion with the minutes. She said that she did not have as many signatures as she wanted and will present the petitions to City Council.

Mr. Hanna felt that there should be no change at the present time. He said that Northfield Parkway will be here for a long time. Warrants are not met for a 4-way stop, and once stop signs are put in, they are difficult to remove. Other solutions will be looked at after the traffic increases for the new high school. Mrs. Perry concurred about observing the area after the school opens.

Walt Feifer expressed his dislike for having to put up with the problem for three more years when the new high school is expected to be completed.

Mr. Hanna explained about why stop signs should not be installed without meeting warrants and that they must be self policing to be effective.

Mr. Feifer said that he would bet that of the 728 cars northbound on Northfield Parkway, most are not through traffic now. They turn into the subdivisions. Most of the people driving are women with children. He believes stop signs will slow people down. Mr. Cotsonika pointed out that if they are turning at the intersection, they would be slowing down anyway.

Item 6 Contd.

Moved by Hanna
Supported by Perry

Recommend that no change be made to the existing traffic control devices at Northfield/Durand/Wintergreen.

YEAS: 5 Coleman, Cotsonika, Halsey, Hanna, Perry
NAYS: 1 Rudell
ABSENT: 1 Diefenbaker

MOTION PASSED

Mr. Rudell was opposed because he does not think the answer is doing nothing. He does not know the answer, but believes they should look for one.

Susan Zacharski indicated that at least the problem is recognized, there is agreement that there is a problem, and it goes on record that the City has received sufficient notice to know there is a problem at the intersection of Northfield/Durand/Wintergreen.

ITEM: 7 INSTALL TRAFFIC SIGNAL AT SOUTH BEAUMONT HOSPITAL DRIVE AND DEQUINDRE

Kenneth Fish, of the Troy Beaumont Hospital, has suggested the installation of a traffic signal on Dequindre at one of the Beaumont Hospital driveways. He feels a signal would be helpful in gaining access to Dequindre during peak traffic periods. In October, 1988, we conducted traffic counts on Dequindre and the two Beaumont Hospital drives. The results of these traffic counts are shown in the attached traffic signal warrant studies.

These studies indicate that there is not enough traffic on the north drive to the Hospital to warrant traffic signal installation. However, there is sufficient traffic on the south Beaumont Hospital drive to warrant a traffic signal installation for operation during the afternoon peak traffic hours only - 3:00 PM to 6:00 PM.

There is only one reported accident at this location during 1987, and it was not the right angle type which might be corrected by traffic signal installation. Therefore, the traffic signal would not be warranted on the basis of accident experience. The south drive to Beaumont Hospital is approximately 2,200 feet from South Boulevard. The ideal location for a mid-mile traffic signal would be exactly half way between Square Lake and South Boulevard. Because the distance along Dequindre between Square Lake and South Boulevard is nearly 6,000 feet, the ideal location for a mid-mile signal would be approximately 3,000 feet south of South Boulevard. For comparison, Ranieri Street is 2,300 feet north of Square Lake.

Item 7 Contd.

Kenneth Fish, from Troy Beaumont Hospital, appeared before the Committee. He said that he has had several complaints from employees about gaining access to Dequindre during peak traffic periods. He noted that there have been a couple of accidents - one involved 4 cars and another 2 cars. Vehicles travel on Dequindre at or above the speed limit and traffic has increased. The hospital has a 3 story addition and also an addition to the south side of the building. Outpatient facilities mean more doctors, patients, employees, and visitors. They expect even more increases, and Mr. Fish believes it is appropriate to have a signal operate at the peak period time of 3:00-5:00 PM.

Mr. Halsey questioned access. Mr. Fish mentioned a ring road around the building and that he believes many would switch to the south exit if there was a light.

Mr. Beaubien stated that the south drive meets Warrant 2 and that he would recommend that the signal operate only during the afternoon peak period.

Moved by Rudell
Supported by Halsey

Recommend that a traffic signal be installed on Dequindre at the south driveway to the Troy Beaumont Hospital.

YEAS: 6 Coleman, Cotsonika, Halsey, Hanna, Perry, Rudell
NAYS: 0
ABSENT: 1 Dieffenbaker

MOTION PASSED

ITEM: 8 REVIEW OF TRAFFIC PATTERNS ON LIVERNOIS AT WALSH COLLEGE

We have recently reviewed the pattern of turning movements along Livernois in the vicinity of Walsh College in response to concerns expressed by Troy Meadows homeowners. Survey results are attached for information. Our survey showed a lack of compliance with the current regulation at the north drive of Walsh College. This regulation prohibits left turns onto Livernois during the afternoon peak traffic period. The regulation was approved when Livernois was a 2-lane road. At that time there were several accidents involving motorists making a left turn out of this drive. Since Livernois Road conditions have changed, this regulation no longer seems appropriate.

This item was discussed at the Traffic Committee meeting in June, 1988, but no recommendations were made. Walsh College representatives advised that a larger enrollment and more driveway traffic movements could be expected in the Fall. Turning movement counts conducted at the Walsh College drive in October, 1988 are attached. Peak hour traffic movements at these driveways were, indeed, higher in October than they were in May.

David Spencer of Walsh College appeared before the Committee to express his concern for safety. He spoke of the growth the college anticipates in 1990.

Item 8 Contd.

There will be a 27,000 square foot addition, parking will increase from 571 to 1,000, and evening students are expected to increase from 500 to approximately 1,000. He related that they are in negotiations with the City of Troy and the Oakland County Drain Commission trying to get right-of-way on a parcel of property abutting to the east. This would allow construction of a two lane road for an exit onto Wattles Road. However, financing of the two lane road and the negotiations are presently up in the air.

He continued by saying that from 4:00-6:00 PM, Monday through Thursday and some on Friday, is the main problem. He feels that the "No Left Turn, 4-6PM" sign could be removed from the Walsh College drive to Livernois because the widening of Livernois to five lanes has alleviated some of the problem.

Moved by Hanna

Supported by Rudell

Recommend that the "No Left Turn, 4-6PM" sign be removed from the Walsh College drive to Livernois.

YEAS: 6 Coleman, Cotsonika, Halsey, Hanna, Perry, Rudell

NAYS: 0

ABSENT: 1 Dieferbaker

MOTION PASSED

ITEM: 9 INSTALL YIELD SIGNS ON PADDINGTON AT PALMERSTON

Following a right angle accident at the intersection of Paddington and Palmerston on October 12, 1988, Lt. Murphy suggested reviewing the intersection to see whether a traffic control device should be installed. Currently there are no stop or yield signs posted at the intersection.

A review of the accident records indicates a right angle accident on January 2, 1988, but no accidents occurring at the intersection in 1985, 1986, or 1987.

Houses on the northwest and southeast corners of the intersection restrict the motorist's view of traffic on the intersecting street. Because of this sight restriction, yield signs should be installed on one of the two streets. The safe approach speed is less than 25 mph. The safe approach speed is the maximum speed at which a vehicle can approach an intersection and still be able to stop in time to avoid a collision with a vehicle approaching on the intersecting street.

Because Palmerston serves as a collector road in this section, it is a street of more importance and should be given right of way. Therefore, installation of yield signs on Paddington at Palmerston was recommended.

Moved by Hanna

Supported by Halsey

Recommend that yield signs be installed on Paddington at Palmerston.

Item 9 Contd.

YEAS: 6 Coleman, Cotsonika, Halsey, Hanna, Perry, Rudell
NAYS: 0
ABSENT: 1 Diefenbaker

MOTION PASSED

ITEM: 10 INSTALL YIELD SIGN ON RIVER VALLEY AT LONGVIEW

At the October, 1988 Traffic Committee meeting, one of the Committee members suggested the need for a traffic control device at the intersection of River Valley and Longview. Houses on the northwest and southwest corners of this intersection restrict the motorist's view of traffic on Longview. Because the safe approach speed is less than 25 mph, installation of a yield on River Valley at Longview was recommended. The safe approach speed is the maximum speed at which a vehicle can approach an intersection and still be able to stop in time to avoid a collision with a vehicle approaching on the intersecting street.

Moved by Hanna
Supported by Coleman

Recommend that a yield sign be installed on River Valley at Longview.

YEAS: 6 Coleman, Cotsonika, Halsey, Hanna, Perry, Rudell
NAYS: 0
ABSENT: 1 Diefenbaker

MOTION PASSED

ITEM: 11 OTHER BUSINESS

Mr. Halsey inquired about the problem at the Michigan Bell drive to Stephenson, north of 14 Mile Road. Mr. Beaubien reported that Denise Coates had called to ask when the signal was to be moved and that he had to tell her that City Council did not approve moving the signal, but concurred with the Traffic Committee recommendation.

Lt. Murphy was asked if there is a speeding problem on Northfield Parkway. He answered that there is not a speeding problem but there is a sight restriction at the Northfield/Durand/Wintergreen intersection.

Moved by Halsey
Supported by Rudell

Recommend that the December Traffic Committee meeting be held on the second Wednesday of the month (December 14) instead of the third Wednesday of the month.

Item 11 Contd.

YEAS: 6 Coleman, Cotsonika, Halsey, Hanna, Perry, Rudell
NAYS: 0
ABSENT: 1

MOTION PASSED

ITEM: 12 ADJOURN

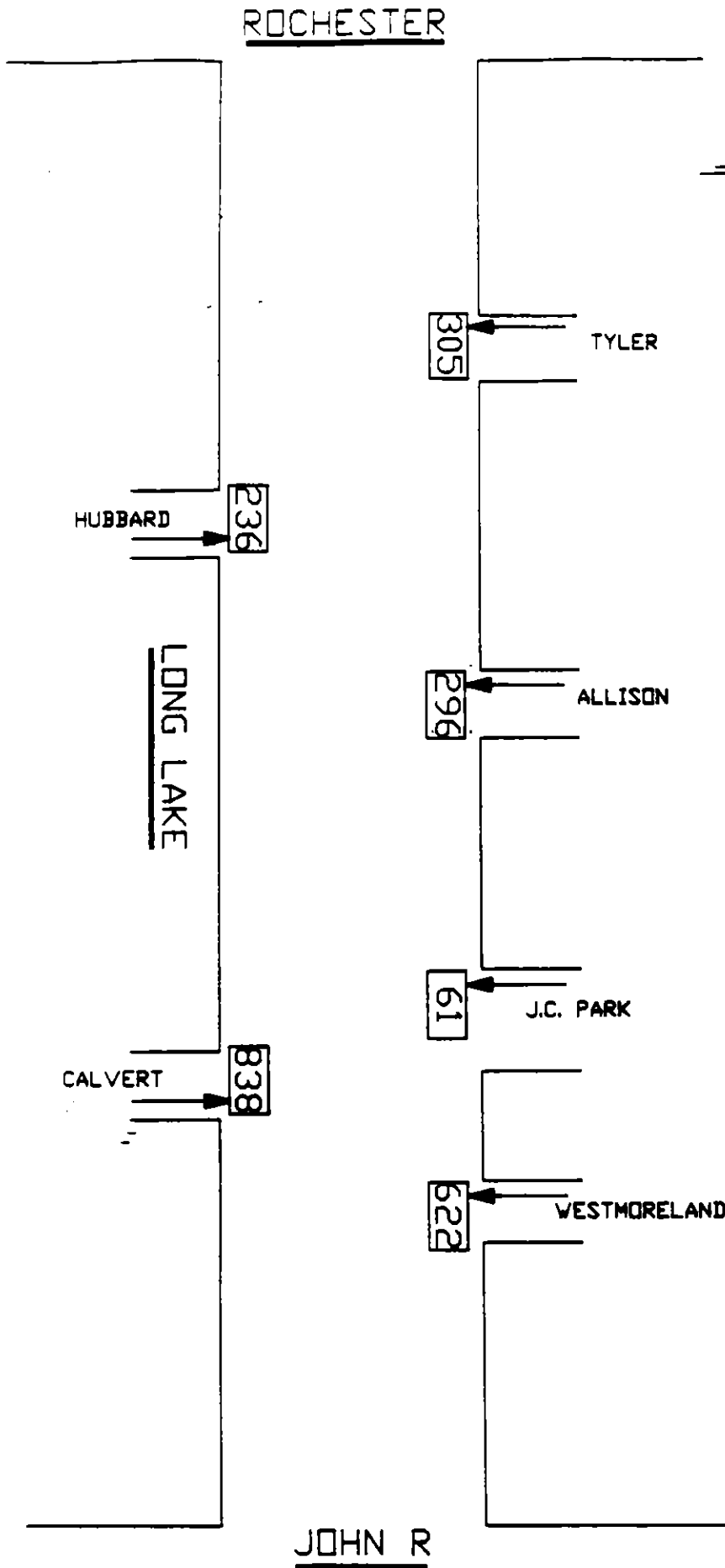
The Traffic Committee meeting of November 16, 1988 adjourned at 9:00 PM.

Peggie Perry, Chair

PP:ct

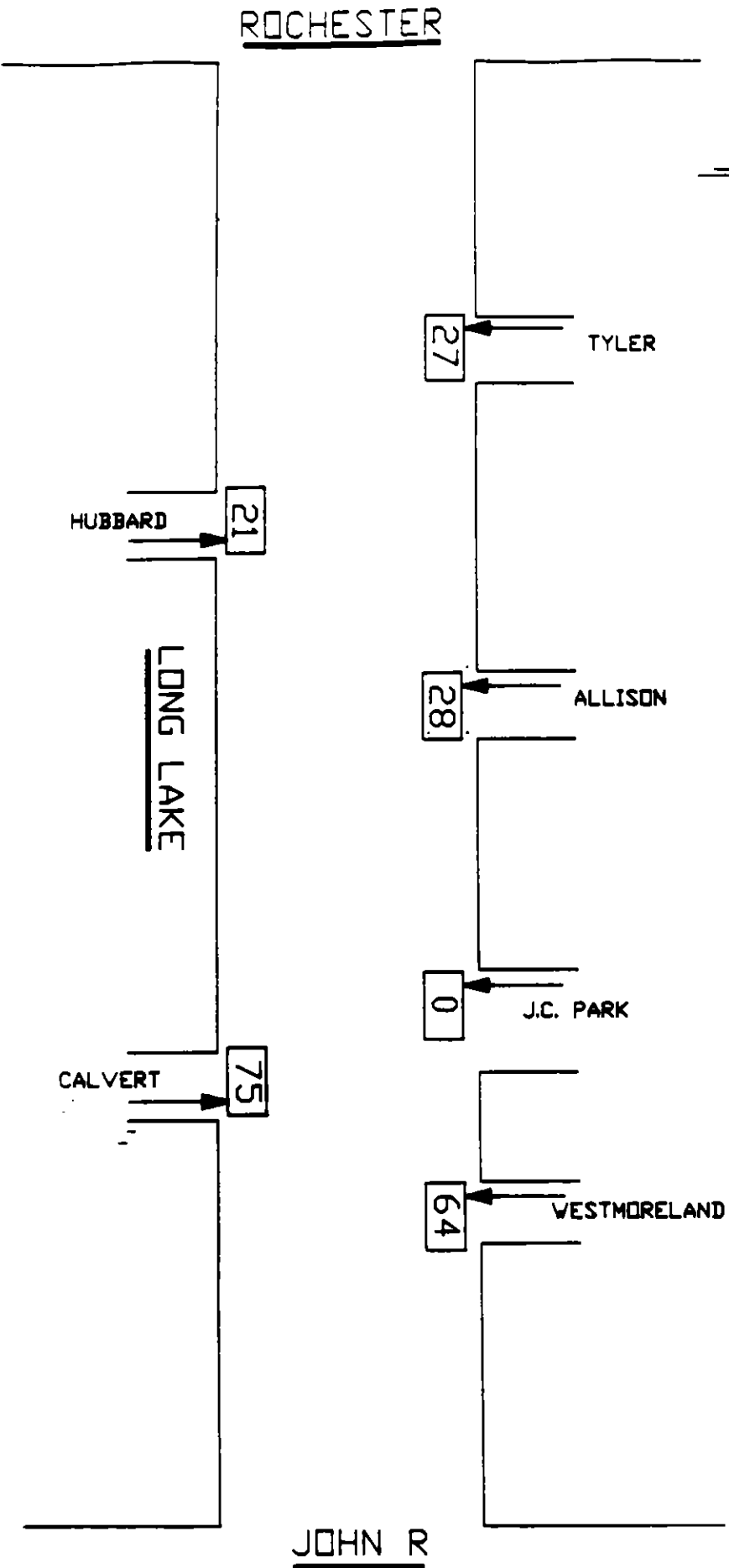
Att.

CITY OF TROY
DAILY TRAFFIC VOLUME
(NDV-09-88)

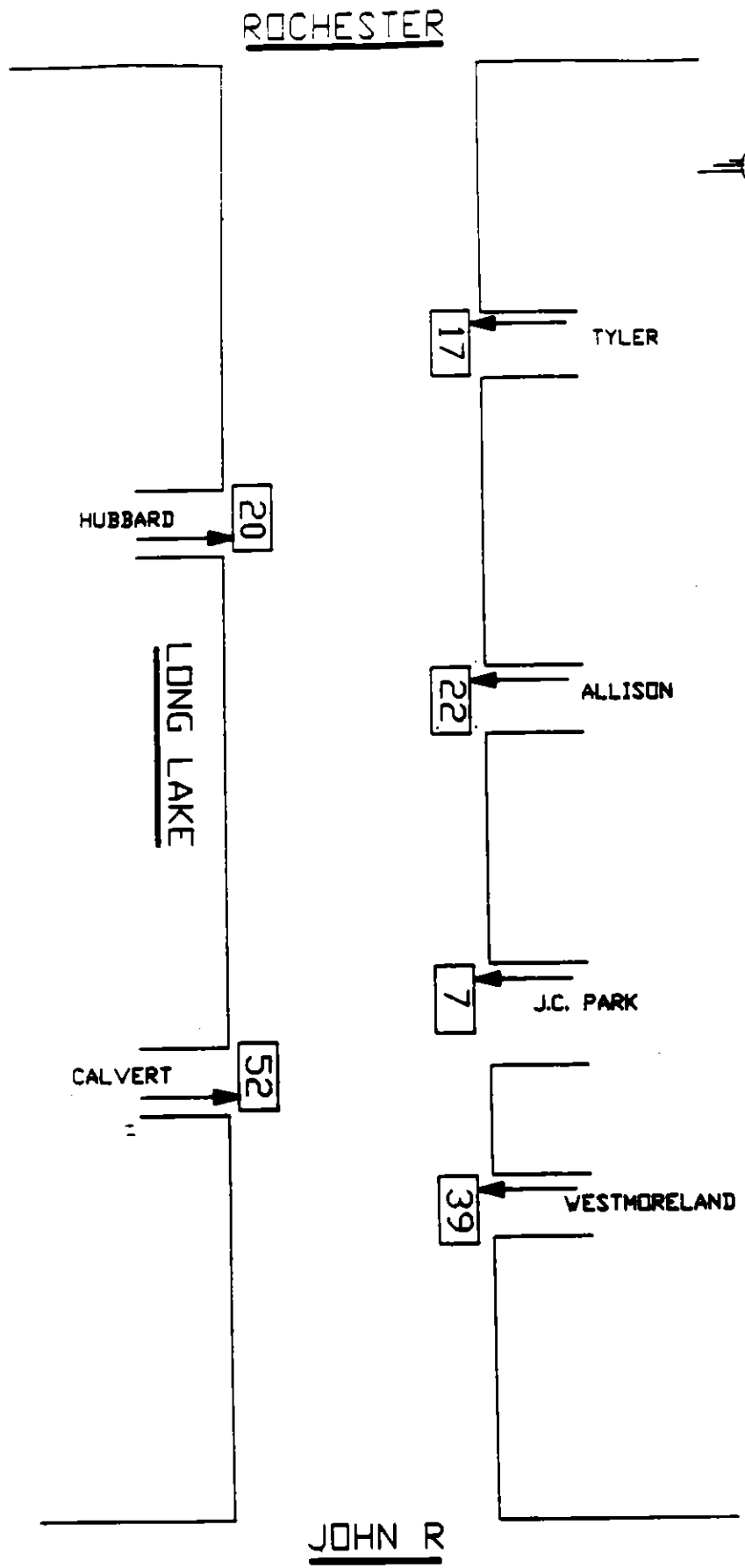


CITY OF TROY

PEAK HOUR VOLUME (7:00-8:00 AM)
(NOV-09-88)



CITY OF TRDY
PEAK HOUR VOLUME (5:00-6:00 PM)
(NOV-09-88)



CITY OF TROY
TRAFFIC ENGINEERING DEPARTMENT
INTERSECTION VEHICLE VOLUME
TRAFFIC SIGNAL WARRANT STUDY

INTERSECTION OF: CALVERT AND LONG LAKE

DATA COLLECTION BEGAN
DAY : THURSDAY
DATE: 10:13:88
TIME: 0000

WEATHER/RD COND: DRY

(CALVERT)				(LONG LAKE)			
SPEED LIMIT 25 MPH				SPEED LIMIT 45 MPH			
TIME	NORTH BOUND	SOUTH BOUND	NB&SB TOTAL	EAST BOUND	WEST BOUND	EB&WB TOTAL	TOTAL
MACH NO 20	00			29	26		
=====							
12- 1 AM	2	0	2	104	59	163	165
1- 2	2	0	2	58	26	84	86
2- 3	5	0	5	39	32	71	76
3- 4	1	0	1	24	13	37	38
4- 5	4	0	4	41	24	65	69
5- 6	10	0	10	105	107	212	222
6- 7	50	0	50	372	496	868 **	918
7- 8	75 +	0	75	610	778	1388 **	1463
8- 9	49	0	49	450	674	1124 **	1173
9-10	43	0	43	450	522	972 **	1015
10-11	32	0	32	528	584	1112 **	1144
11-12	34	0	34	607	633	1240 **	1274
12- 1 PM	72 +	0	72	635	694	1329 **	1401
1- 2	42	0	42	626	644	1270 **	1312
2- 3	41	0	41	756	693	1449 **	1490
3- 4	55	0	55	927	837	1764 **	1819
4- 5	53	0	53	1088	830	1918 **	1971
5- 6	52	0	52	1101	916	2017 **	2069

6- 7	59	0	59	935	770	1705 **	1754
7- 8	61	0	61	678	591	1269 **	1
8- 9	39	0	39	522	356	878 **	917
9-10	28	0	28	590	263	853 **	881
10-11	22	0	22	304	146	450 *	472
11-12	7	0	7	190	76	266	273
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TOTL	838	0	838	11740	10764	22504	23342

CITY OF TROY
TRAFFIC ENGINEERING DEPARTMENT
INTERSECTION VEHICLE VOLUME
TRAFFIC SIGNAL WARRANT STUDY

INTERSECTION OF: CALVERT AND LONG LAKE

DATA COLLECTION BEGAN
DAY : THURSDAY
DATE: 10:13:88
TIME: 0000

WEATHER/RD COND: DRY

WARRANT NO. 1: MINIMUM VEHICULAR VOLUME -
MET FOR 0 HOURS OF REQUIRED 8 HOURS

- * MAJOR ROAD - MINIMUM WARRANT VALUE OF 420 VPH EQUALED OR EXCEEDED
- + MINOR ROAD - MINIMUM WARRANT VALUE OF 140 VPH EQUALED OR EXCEEDED

WARRANT NO. 2: INTERRUPTION OF CONTINUOUS TRAFFIC -
MET FOR 2 HOURS OF REQUIRED 8 HOURS

- * MAJOR ROAD - MINIMUM WARRANT VALUE OF 630 VPH EQUALED OR EXCEEDED
- + MINOR ROAD - MINIMUM WARRANT VALUE OF 70 VPH EQUALED OR EXCEEDED

ACCIDENT EXPERIENCE: FOR PERIOD FROM 01/87 TO 12/87

1 TOTAL ACCIDENTS	
1 RIGHT ANGLE ACCIDENTS	.11 ACCIDENTS PER MILLION VEH
0 LEFT TURNING ACCIDENTS	25

NOTE: THE APPLICABLE WARRANT VALUES ARE 70 % OF THE REQUIREMENTS DUE TO -
THE 95TH PERCENTILE SPEED OF MAJOR STREET TRAFFIC EXCEEDS 40 MPH

PAGE 2 OF 2

END OF TRS RUN

COLLISION DIAGRAM



LONG LAKE

PD

8-15-86 1:35 PM DRY

8-15-86 2:11 PM DRY

5-13-86 5:55 PM DRY

CALVERT

SYMBOLS

- MOVING VEHICLE
- BACKING VEHICLE
- PEDESTRIAN
- PARKED VEHICLE
- FIXED OBJECT
- FATAL ACCIDENT
- INJURY ACCIDENT

TYPES OF COLLISIONS

- REAR END
- HEAD ON
- SIDE SWIPE
- OUT OF CONTROL
- LEFT TURN

RIGHT ANGLE

SHOWN FOR EACH ACCIDENT:

1. DATE AND TIME
2. WEATHER CONDITIONS

INTERSECTION LONG LAKE AND CALVERT
 PERIOD 1 YEAR FROM JAN. 1986 TO DEC. 1986
 BY KDB DATE 10-13-88

COLLISION DIAGRAM

LONG LAKE

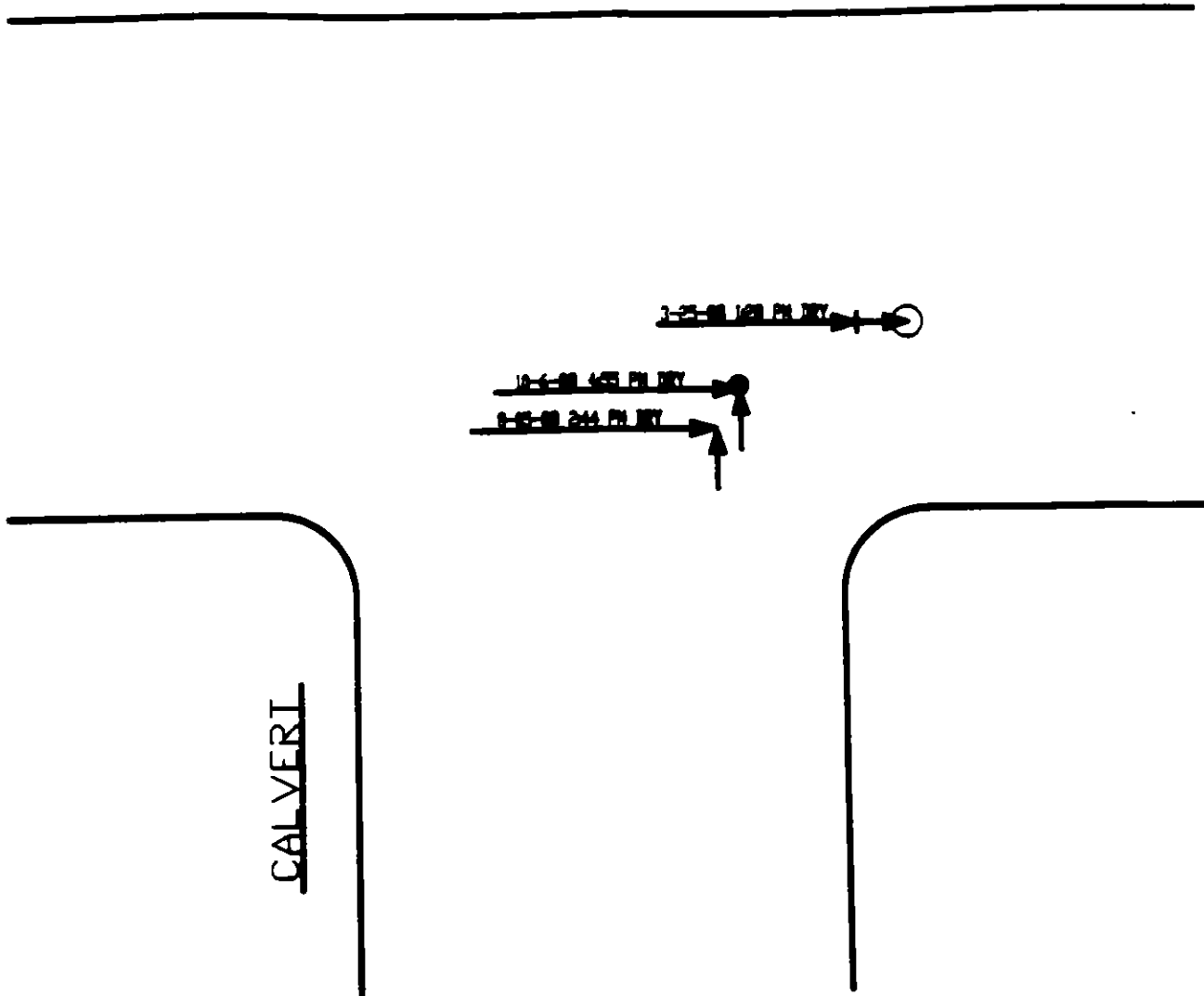


CALVERT

SYMBOLS		TYPES OF COLLISIONS	
MOVING VEHICLE BACKING VEHICLE PEDESTRIAN PARKED VEHICLE FIXED OBJECT FATAL ACCIDENT INJURY ACCIDENT	REAR END HEAD ON SIDE SWIPE OUT OF CONTROL LEFT TURN	RIGHT ANGLE	SHOWN FOR EACH ACCIDENT: 1. DATE AND TIME 2. WEATHER CONDITIONS
INTERSECTION <u>LONG LAKE</u> AND <u>CALVERT</u> PERIOD <u>1 YEAR</u> FROM <u>JAN. 1987</u> TO <u>DEC. 1987</u> BY <u>KDB</u> DATE <u>10-13-88</u>			

COLLISION DIAGRAM

LONG LAKE



SYMBOLS		TYPES OF COLLISIONS	
MOVING VEHICLE BACKING VEHICLE PEDESTRIAN PARKED VEHICLE FIXED OBJECT FATAL ACCIDENT INJURY ACCIDENT	REAR END HEAD ON SIDE SWIPE OUT OF CONTROL LEFT TURN	RIGHT ANGLE	SHOWN FOR EACH ACCIDENT: 1. DATE AND TIME 2. WEATHER CONDITIONS
INTERSECTION <u>LONG LAKE</u> AND <u>CALVERT</u> PERIOD <u>8 MONTHS</u> FROM <u>JAN. 1988</u> TO <u>AUG. 1988 (INC. OCT. FATAL)</u> BY <u>KDB</u> DATE <u>10-13-88</u>			

City of Troy

LOCATION N-S Glyndebourne
South of Dalesford
 DATE 10/11-12/88

HOURLY TRAFFIC VOLUMES

DATE	MON 88/10/10	TUE 11	WED 12	THU 13	FRI 14	SAT 15	SUN 16
START HOUR							
0	-	-	1	-	-	-	-
1	-	-	0	-	-	-	-
2	-	-	0	-	-	-	-
3	-	-	0	-	-	-	-
4	-	-	0	-	-	-	-
5	-	-	6	-	-	-	-
6	-	-	10	-	-	-	-
7	-	-	23	-	-	-	-
8	-	-	21	-	-	-	-
9	-	-	6	-	-	-	-
10	-	-	8	-	-	-	-
11	-	12	-	-	-	-	-
12	-	9	-	-	-	-	-
13	-	9	-	-	-	-	-
14	-	12	-	-	-	-	-
15	-	16	-	-	-	-	-
16	-	11	-	-	-	-	-
17	-	17	-	-	-	-	-
18	-	20	-	-	-	-	-
19	-	11	-	-	-	-	-
20	-	3	-	-	-	-	-
21	-	7	-	-	-	-	-
22	-	3	-	-	-	-	-
23	-	0	-	-	-	-	-

TOTAL			207				
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Sta. No.	Direction	
27	N-S	Glyndebourne, South of Dalesford

500 W. BIG BEAVER ROAD - TROY, MICHIGAN 48064 - PHONE: (AREA 313) 524-3379

Section 6

CITY OF TROY

LOCATION: E-W CHALGROVE
WEST OF COOLIDGE

HOURLY TRAFFIC VOLUMES

DATE	MON 88/11/07	TUE 8	WED 9	THU 10	FRI 11	SAT 12	SUN 13
START HOUR							
0		3					
1		0					
2		0					
3		0					
4		0					
5		2					
6		2					
7		1					
8		5					
9		3					
10		4					
11		2					
12	6						
13	4						
14	9						
15	9						
16	6						
17	11						
18	9						
19	8						
20	2						
21	2						
22	2						
23	2						
TOTAL		92					

STA. NO DIRECTION

29 E-W CHALGROVE, WEST OF COOLIDGE

"500 W. BIG BEAVER - TROY, MICHIGAN 48084 - PHONE: (313) 524-3379

City of Troy

LOCATION E-W DalesfordEast of Glyndebourne

HOURLY TRAFFIC VOLUMES

DATE 10/11-12/88

DATE	MON 88/10/10	TUE 11	WED 12	THU 13	FRI 14	SAT 15	SUN 16
------	-----------------	-----------	-----------	-----------	-----------	-----------	-----------

START HOUR

0	-	-	0	-	-	-	-
1	-	-	0	-	-	-	-
2	-	-	0	-	-	-	-
3	-	-	0	-	-	-	-
4	-	-	1	-	-	-	-
5	-	-	1	-	-	-	-
6	-	-	0	-	-	-	-
7	-	-	2	-	-	-	-
8	-	-	2	-	-	-	-
9	-	-	0	-	-	-	-
10	-	-	<u>1</u>	-	-	-	-
11	-	6	-	-	-	-	-
12	-	4	-	-	-	-	-
13	-	2	-	-	-	-	-
14	-	2	-	-	-	-	-
15	-	2	-	-	-	-	-
16	-	2	-	-	-	-	-
17	-	5	-	-	-	-	-
18	-	4	-	-	-	-	-
19	-	5	-	-	-	-	-
20	-	1	-	-	-	-	-
21	-	0	-	-	-	-	-
22	-	1	-	-	-	-	-
23	-	1	-	-	-	-	-

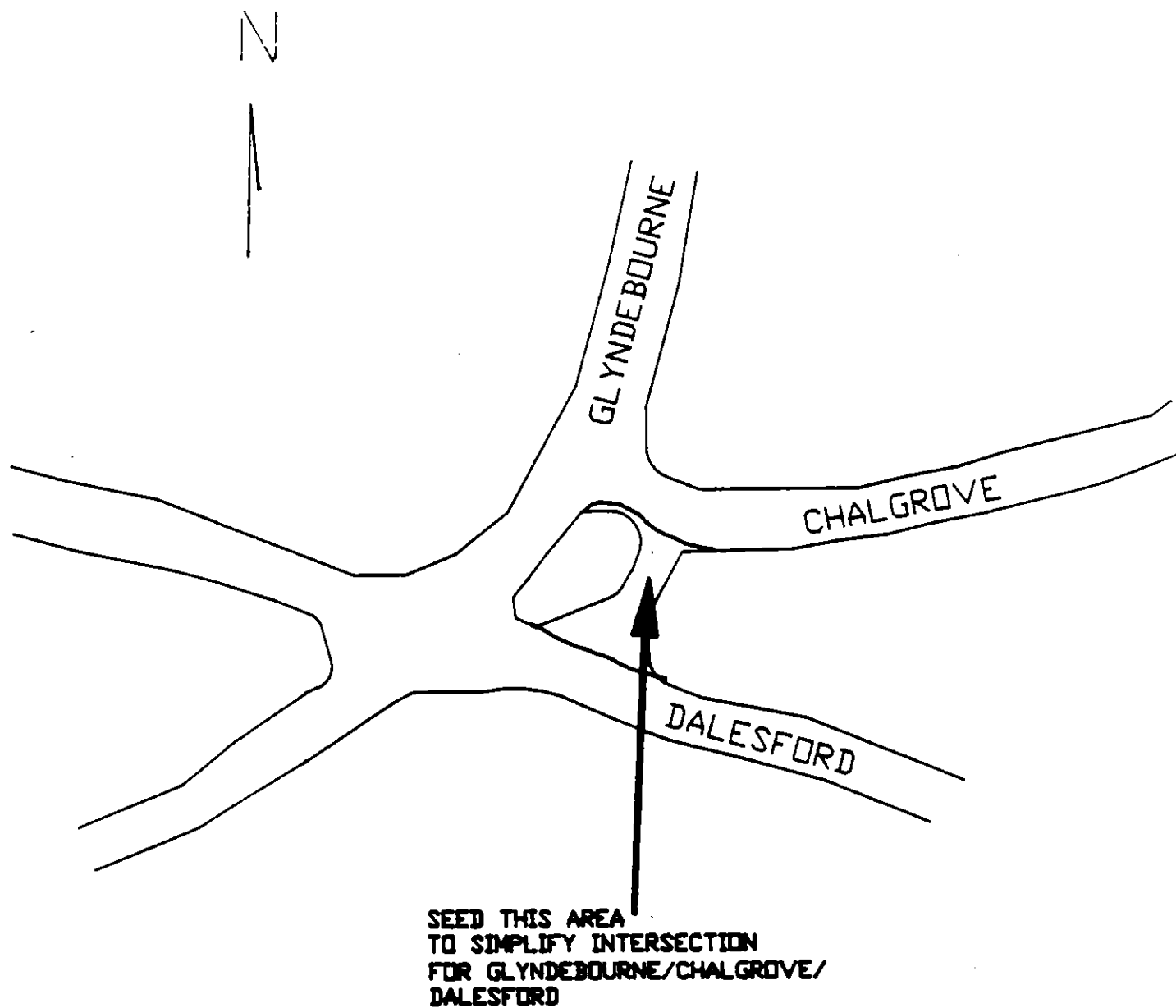
TOTAL

43

Sta. No.	Direction	
28	E-W	Dalesford, E. of Glyndebourne

500 W. BIG BEAVER ROAD - TROY, MICHIGAN 48064 - PHONE: (AREA 313) 524-3379

PROPOSED INTERSECTION REALIGNMENT FOR GLYNDEBOURNE, CHALGROVE AND DALESFORD



GLYNDEBOURNE/CHALGROVE/DALESFORD



GLYNDEBOURNE

CHALGROVE

DALESFORD

CREATE "T" INTERSECTION
AT CHALGROVE/GLYNDEBOURNE

GLYNDEBOURNE

CHALGROVE

DALESFORD

N



CREATE "T" INTERSECTION
AT CHALGROVE/DALESFORD

GLYNDERBURN

CHALGROVE

DALESFORD

N



KENNETH A. WEINBERGER, M.D.
RHEUMATOLOGY

November 14, 1988

Traffic Committee
Traffic Engineering
City of Troy
500 W. Big Beaver Rd.
Troy MI 48084-5285

REC'D

NOV 15 88

CITY OF TROY
TRAFFIC ENGINEERING
AND RIGHT OF WAY

To whom it may concern:

I write about a tabled item which will apparently be discussed again at the meeting of November 16, 1988. This involves item number 5, "Install Stop Signs at Glyndebourne/Chalgrove/Dalesford".

I will not be able to attend the meeting but wish to express a preference. I believe that the best solution to the problem is suggested resolution D, modifying the Glyndebourne/Chalgrove/Dalesford intersection to create a T intersection at Glyndebourne/Chalgrove and a 4 way intersection at Glyndebourne/Dalesford.

I live down the block on Glyndebourne.

Sincerely,



Kenneth A. Weinberger, M.D.
6383 Glyndebourne
Troy MI 48098

KAW/pjb

DD: 11/14/88

City of Troy

LOCATION NB Northfield ParkwaySouth of Durand

HOURLY TRAFFIC VOLUMES

DATE 10/11-12/88

DATE	MON 88/10/10	TUE 11	WED 12	THU 13	FRI 14	SAT 15	SUN 16
------	-----------------	-----------	-----------	-----------	-----------	-----------	-----------

START HOUR

0	-	-	3	-	-	-	-
1	-	-	0	-	-	-	-
2	-	-	4	-	-	-	-
3	-	-	1	-	-	-	-
4	-	-	0	-	-	-	-
5	-	-	2	-	-	-	-
6	-	-	4	-	-	-	-
7	-	-	19	-	-	-	-
8	-	-	25	-	-	-	-
9	-	-	31	-	-	-	-
10	-	-	24	-	-	-	-
11	-	30	-	-	-	-	-
12	-	26	-	-	-	-	-
13	-	33	-	-	-	-	-
14	-	53	-	-	-	-	-
15	-	56	-	-	-	-	-
16	-	78	-	-	-	-	-
17	-	123	-	-	-	-	-
18	-	74	-	-	-	-	-
19	-	41	-	-	-	-	-
20	-	30	-	-	-	-	-
21	-	50	-	-	-	-	-
22	-	14	-	-	-	-	-
23	-	7	-	-	-	-	-

TOTAL

728

Sta. No.	Direction	
29	NB	Northfield Parkway, South of Durand

500 W. BIG BEAVER ROAD - TROY, MICHIGAN 48064 - PHONE: (AREA 313) 524-3379

City of Troy

Section 17

LOCATION SB Northfield Parkway

North of Durand

HOURLY TRAFFIC VOLUMES

DATE 10/18/88

DATE	MON 88/10/17	TUE 18	WED 19	THU 20	FRI 21	SAT 22	SUN 23	AVERAGES 5-DAY 7-DAY	
START HOUR									
0	-	1	4	-	-	-	-	-	-
1	-	0	0	-	-	-	-	-	-
2	-	2	2	-	-	-	-	-	-
3	-	0	1	-	-	-	-	-	-
4	-	1	1	-	-	-	-	-	-
5	-	3	3	-	-	-	-	-	-
6	-	15	18	-	-	-	-	-	-
7	-	63	58	-	-	-	-	-	-
8	-	38	51	-	-	-	-	-	-
9	-	30	-	-	-	-	-	-	-
10	-	29	-	-	-	-	-	-	-
11	-	42	-	-	-	-	-	-	-
12	-	39	-	-	-	-	-	-	-
13	33	44	-	-	-	-	-	-	-
14	41	56	-	-	-	-	-	-	-
15	44	56	-	-	-	-	-	-	-
16	47	55	-	-	-	-	-	-	-
17	50	61	-	-	-	-	-	-	-
18	53	69	-	-	-	-	-	-	-
19	37	44	-	-	-	-	-	-	-
20	27	13	-	-	-	-	-	-	-
21	19	28	-	-	-	-	-	-	-
22	6	14	-	-	-	-	-	-	-
23	2	7	-	-	-	-	-	-	-
TOTALS									
12HR 7-19	-	582	-	-	-	-	-	-	-
16HR 6-22	-	682	-	-	-	-	-	-	-
18HR 6-24	-	703	-	-	-	-	-	-	-
24HR 0-24	-	710	-	-	-	-	-	-	-

City of Troy

LOCATION WB Durand
East of Northfield Parkway
 DATE 10/11-12/88

HOURLY TRAFFIC VOLUMES

DATE	MON 88/10/10	TUE 11	WED 12	THU 13	FRI 14	SAT 15	SUN 16
START HOUR							
0	-	-	1	-	-	-	-
1	-	-	1	-	-	-	-
2	-	-	5	-	-	-	-
3	-	-	0	-	-	-	-
4	-	-	0	-	-	-	-
5	-	-	8	-	-	-	-
6	-	-	20	-	-	-	-
7	-	-	36	-	-	-	-
8	-	-	37	-	-	-	-
9	-	-	14	-	-	-	-
10	-	-	8	-	-	-	-
11	-	16	-	-	-	-	-
12	-	17	-	-	-	-	-
13	-	7	-	-	-	-	-
14	-	25	-	-	-	-	-
15	-	32	-	-	-	-	-
16	-	34	-	-	-	-	-
17	-	36	-	-	-	-	-
18	-	33	-	-	-	-	-
19	-	21	-	-	-	-	-
20	-	18	-	-	-	-	-
21	-	20	-	-	-	-	-
22	-	7	-	-	-	-	-
23	-	2	-	-	-	-	-

TOTAL

398

Sta. No.	Direction	
20	WB	Durand, East of Northfield Parkway

500 W. BIG BEAVER ROAD - TROY, MICHIGAN 48064 - PHONE: (AREA 313) 524-3379

City of Troy

LOCATION EB Wintergreen
West of Northfield Parkway
 DATE 10/11-12/88

HOURLY TRAFFIC VOLUMES

	MON	TUE	WED	THU	FRI	SAT	SUN
DATE	88/10/10	11	12	13	14	15	16
START HOUR							
0	-	-	3	-	-	-	-
1	-	-	0	-	-	-	-
2	-	-	1	-	-	-	-
3	-	-	1	-	-	-	-
4	-	-	0	-	-	-	-
5	-	-	9	-	-	-	-
6	-	-	9	-	-	-	-
7	-	-	47	-	-	-	-
8	-	-	32	-	-	-	-
9	-	-	52	-	-	-	-
10	-	-	30	-	-	-	-
11	-	19	-	-	-	-	-
12	-	25	-	-	-	-	-
13	-	28	-	-	-	-	-
14	-	29	-	-	-	-	-
15	-	47	-	-	-	-	-
16	-	55	-	-	-	-	-
17	-	47	-	-	-	-	-
18	-	37	-	-	-	-	-
19	-	19	-	-	-	-	-
20	-	16	-	-	-	-	-
21	-	11	-	-	-	-	-
22	-	1	-	-	-	-	-
23	-	1	-	-	-	-	-

TOTAL

519

Sta. No.	Direction	
26	EB	Wintergreen, West of Northfield Parkway

500 W. BIG BEAVER ROAD - TROY, MICHIGAN 48064 - PHONE: (AREA 313) 524-3379

CITY OF TROY
TRAFFIC ENGINEERING DEPARTMENT
INTERSECTION VEHICLE VOLUME
TRAFFIC SIGNAL WARRANT STUDY

INTERSECTION OF: DEQUINDRE AND BEAUMONT DRIVE (NORTH)

DATA COLLECTION BEGAN
DAY : WEDNESDAY
DATE: 10:19:88
TIME: 0000

WEATHER/RD COND: DRY

(DEQUINDRE)				(BEAUMONT DRIVE (NORTH))			
SPEED LIMIT 45 MPH				SPEED LIMIT 25 MPH			
TIME	NORTH BOUND MACH NO 29	SOUTH BOUND 27	NB&SB TOTAL	EAST BOUND 25	WEST BOUND 00	EB&WB TOTAL	TOTAL
12- 1 AM	101	85	186	38	0	38	224
1- 2	37	39	76	16	0	16	92
2- 3	29	19	48	12	0	12	60
3- 4	36	19	55	8	0	8	63
4- 5	65	42	107	9	0	9	116
5- 6	133	219	352 *	30	0	30	382
6- 7	383	931	1314 **	61	0	61	1375
7- 8	567	967	1534 **	60	0	60	1594
8- 9	576	676	1252 **	54	0	54	1306
9-10	458	414	872 **	45	0	45	917
10-11	395	409	804 **	79 +	0	79	883
11-12	466	433	899 **	59	0	59	958
12- 1 PM	522	514	1036 **	55	0	55	1091
1- 2	551	505	1056 **	46 .	0	46	1 2
2- 3	580	579	1159 **	76 +	0	76	1235

3- 4	778	610	1388 **	153 1+	0	153	1546
4- 5	862	613	1475 **	145 1+	0	145	1630
5- 6	968	748	1716 **	76 +	0	76	171
6- 7	798	502	1300 **	53	0	53	1353
7- 8	425	341	766 **	52	0	52	818
8- 9	328	258	586 **	54	0	54	640
9-10	292	282	574 **	215 1+	0	215	789
10-11	190	176	366 *	170 1+	0	170	536
11-12	126	149	275	184 1+	0	184	459
	-----	-----	-----	-----	-----	-----	-----
TOTL	9666	9530	19196	1755	0	1755	20951

CITY OF TROY
TRAFFIC ENGINEERING DEPARTMENT
INTERSECTION VEHICLE VOLUME
TRAFFIC SIGNAL WARRANT STUDY

INTERSECTION OF: DEQUINDRE AND BEAUMONT DRIVE (NORTH)

DATA COLLECTION BEGAN
DAY : WEDNESDAY
DATE: 10/12/88
TIME: 0000

WEATHER/RD COND: DRY

WARRANT NO. 1: MINIMUM VEHICULAR VOLUME -
MET FOR 4 HOURS OF REQUIRED 8 HOURS

* MAJOR ROAD - MINIMUM WARRANT VALUE OF 350 VPH EQUALED OR EXCEEDED
+ MINOR ROAD - MINIMUM WARRANT VALUE OF 140 VPH EQUALED OR EXCEEDED

WARRANT NO. 2: INTERRUPTION OF CONTINUOUS TRAFFIC -
MET FOR 6 HOURS OF REQUIRED 8 HOURS

MAJOR ROAD - MINIMUM WARRANT VALUE OF 525 VPH EQUALED OR EXCEEDED
+ MINOR ROAD - MINIMUM WARRANT VALUE OF 70 VPH EQUALED OR EXCEEDED

ACCIDENT EXPERIENCE: FOR PERIOD FROM 01/87 TO 12/87

1 TOTAL ACCIDENTS
1 RIGHT ANGLE ACCIDENTS .13 ACCIDENTS PER MILLION VEHICLES
0 LEFT TURNING ACCIDENTS

NOTE: THE APPLICABLE WARRANT VALUES ARE 70 % OF THE REQUIREMENTS DUE TO -
THE 95TH PERCENTILE SPEED OF MAJOR STREET TRAFFIC EXCEEDS 40 MPH

PAGE 2 OF 2

END OF TRS RUN

CITY OF TROY
TRAFFIC ENGINEERING DEPARTMENT
INTERSECTION VEHICLE VOLUME
TRAFFIC SIGNAL WARRANT STUDY

INTERSECTION OF: DEQUINDRE AND BEAUMONT DRIVE (SOUTH)

DATA COLLECTION BEGAN
DAY : WEDNESDAY
DATE: 10:19:88
TIME: 0000

WEATHER/RD COND: DRY

(DEQUINDRE)				(BEAUMONT DRIVE (SOUTH))			
-----				-----			
SPEED LIMIT 45 MPH				SPEED LIMIT 25 MPH			
TIME	NORTH BOUND	SOUTH BOUND	NB&SB TOTAL	EAST BOUND	WEST BOUND	EB&WB TOTAL	TOTAL
	MACH NO 29	27		25	00		
=====							
12- 1 AM	101	85	186	10	0	10	196
1- 2	37	39	76	1	0	1	77
2- 3	29	19	48	4	0	4	52
3- 4	36	19	55	2	0	2	57
4- 5	65	42	107	1	0	1	108
5- 6	133	219	352 *	10	0	10	362
6- 7	383	931	1314 **	12	0	12	1326
7- 8	567	967	1534 **	32	0	32	1566
8- 9	576	676	1252 **	53	0	53	1305
9-10	458	414	872 **	111 +	0	111	983
10-11	395	409	804 **	164 !+	0	164	968
11-12	466	433	899 **	174 !+	0	174	1073
12- 1 PM	522	514	1036 **	149 !+	0	149	1185
1- 2	551	505	1056 **	134 +	0	134	1190
2- 3	580	579	1159 **	163 !+	0	163	1322
3- 4	778	610	1388 **	247 !+	0	247	1635
4- 5	862	613	1475 **	242 !+	0	242	1717
5- 6	968	748	1716 **	191 !+	0	191	1907
6- 7	798	502	1300 **	90 +	0	90	1390
7- 8	425	341	766 **	86 +	0	86	852

3-9	323	258	586 **	90	+	0	90	575
9-10	292	282	574 **	26		0	26	
10-11	190	176	366 *	13		0	13	3
11-12	125	149	275	13		0	13	238
	-----	-----	-----	-----		-----	-----	-----
TOTL	9566	9530	19196	2018		0	2018	21214

PAGE 1 OF 2

DATE	TIME	WIND	WAVE	WAVE	WAVE	WAVE	WAVE	WAVE
01/01	01	0	01	01	01	01	01	01
01/01	02	0	01	01	01	01	01	01
01/01	03	0	01	01	01	01	01	01
01/01	04	0	01	01	01	01	01	01
01/01	05	0	01	01	01	01	01	01
01/01	06	0	01	01	01	01	01	01
01/01	07	0	01	01	01	01	01	01
01/01	08	0	01	01	01	01	01	01
01/01	09	0	01	01	01	01	01	01
01/01	10	0	01	01	01	01	01	01
01/01	11	0	01	01	01	01	01	01
01/01	12	0	01	01	01	01	01	01
01/01	13	0	01	01	01	01	01	01
01/01	14	0	01	01	01	01	01	01
01/01	15	0	01	01	01	01	01	01
01/01	16	0	01	01	01	01	01	01
01/01	17	0	01	01	01	01	01	01
01/01	18	0	01	01	01	01	01	01
01/01	19	0	01	01	01	01	01	01
01/01	20	0	01	01	01	01	01	01
01/01	21	0	01	01	01	01	01	01
01/01	22	0	01	01	01	01	01	01
01/01	23	0	01	01	01	01	01	01
01/01	24	0	01	01	01	01	01	01

CITY OF TROY
TRAFFIC ENGINEERING DEPARTMENT
INTERSECTION VEHICLE VOLUME
TRAFFIC SIGNAL WARRANT STUDY

INTERSECTION OF: DEQUINDRE AND BEAUMONT DRIVE (SOUTH)

DATA COLLECTION PERIOD
DAY : WEDNESDAY
DATE: 10/17/88
TIME: 0000

WEATHER/RD COND: DRY

WARRANT NO. 1: MINIMUM VEHICULAR VOLUME -
MET FOR 7 HOURS OF REQUIRED 8 HOURS

- * MAJOR ROAD - MINIMUM WARRANT VALUE OF 350 VPH EQUALED OR EXCEEDED
- + MINOR ROAD - MINIMUM WARRANT VALUE OF 140 VPH EQUALED OR EXCEEDED

WARRANT NO. 2: INTERRUPTION OF CONTINUOUS TRAFFIC -
MET FOR 12 HOURS OF REQUIRED 8 HOURS

- * MAJOR ROAD - MINIMUM WARRANT VALUE OF 525 VPH EQUALED OR EXCEEDED
- + MINOR ROAD - MINIMUM WARRANT VALUE OF 70 VPH EQUALED OR EXCEEDED

ACCIDENT EXPERIENCE: FOR PERIOD FROM 01/87 TO 12/87

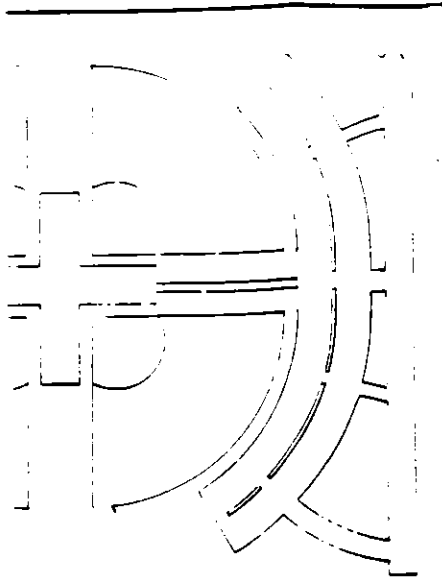
1 TOTAL ACCIDENTS
0 RIGHT ANGLE ACCIDENTS .12 ACCIDENTS PER MILLION VEHICLE
0 LEFT TURNING ACCIDENTS

NOTE: THE APPLICABLE WARRANT VALUES ARE 70 % OF THE REQUIREMENTS DUE TO -
THE 95TH PERCENTILE SPEED OF MAJOR STREET TRAFFIC EXCEEDS 40 MPH

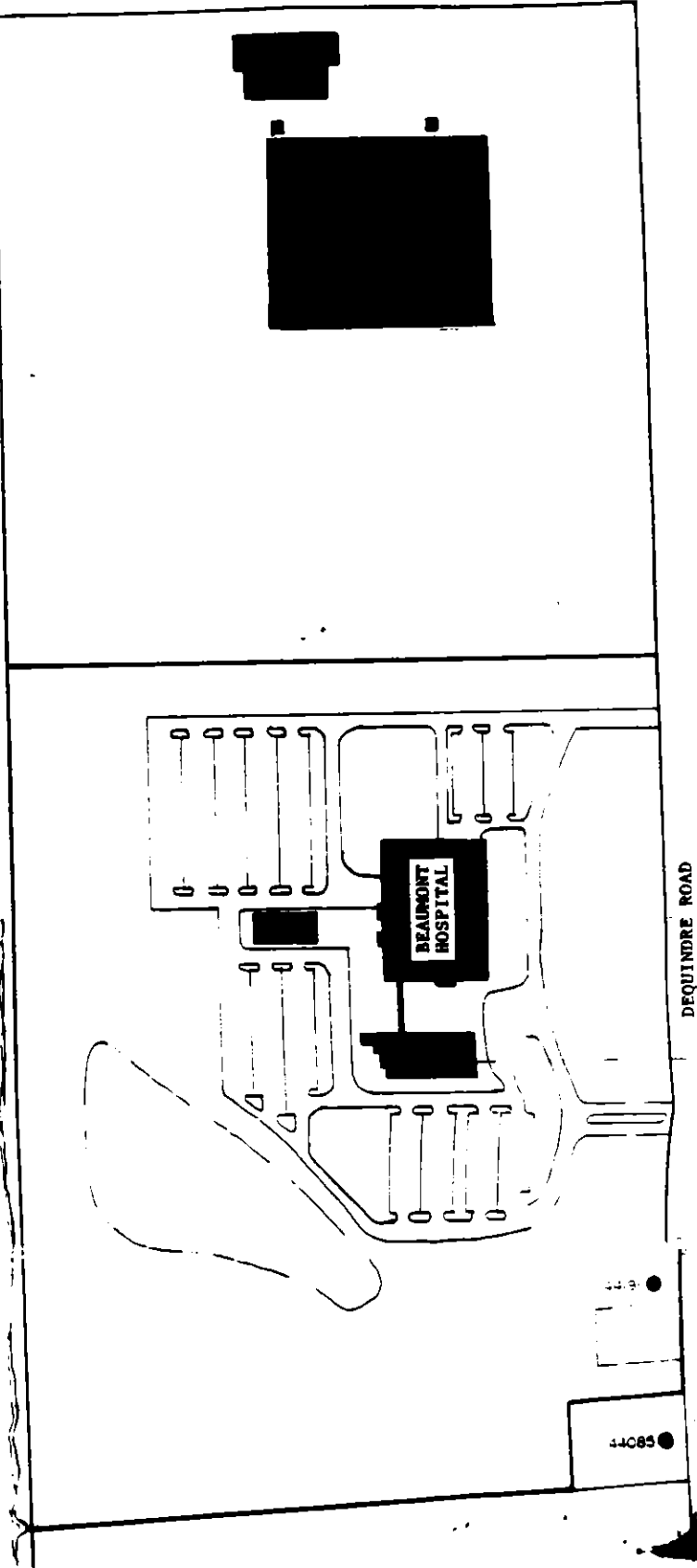
PAGE 2 OF 2

END OF TRS RUN

SOUTH BOULEVARD



N



DEQUINDRE ROAD

BEAUMONT
HOSPITAL

44.9

44085

City of Troy

LOCATION WB WALSH COLLEGE (NORTH)DRIVE to Livernois

HOURLY TRAFFIC VOLUMES

DATE 10/19-10/20/88

DATE	MON 88/10/17	TUE 18	WED 19	THU 20	FRI 21	SAT 22	SUN 23
------	-----------------	-----------	-----------	-----------	-----------	-----------	-----------

START HOUR

0	-	-	-	2	-	-	-
1	-	-	-	0	-	-	-
2	-	-	-	0	-	-	-
3	-	-	-	1	-	-	-
4	-	-	-	1	-	-	-
5	-	-	-	1	-	-	-
6	-	-	-	2	-	-	-
7	-	-	-	2	-	-	-
8	-	-	-	14	-	-	-
9	-	-	-	18	-	-	-
10	-	-	42	-	-	-	-
11	-	-	100	-	-	-	-
12	-	-	121	-	-	-	-
13	-	-	43	-	-	-	-
14	-	-	139	-	-	-	-
15	-	-	94	-	-	-	-
16	-	-	85	-	-	-	-
17	-	-	111	-	-	-	-
18	-	-	116	-	-	-	-
19	-	-	183	-	-	-	-
20	-	-	83	-	-	-	-
21	-	-	301	-	-	-	-
22	-	-	89	-	-	-	-
23	-	-	6	-	-	-	-

TOTAL

1,554

Sta. No.	Direction	
28	WB	Walsh College Drive (North) to Livernois

500 W. BIG BEAVER ROAD - TROY, MICHIGAN 48064 - PHONE: (AREA 313) 524-3379

City of Troy

LOCATION EB WALSH COLLEGE (South)DRIVE To Livernois

HOURLY TRAFFIC VOLUMES

DATE 10/19-10/20/88

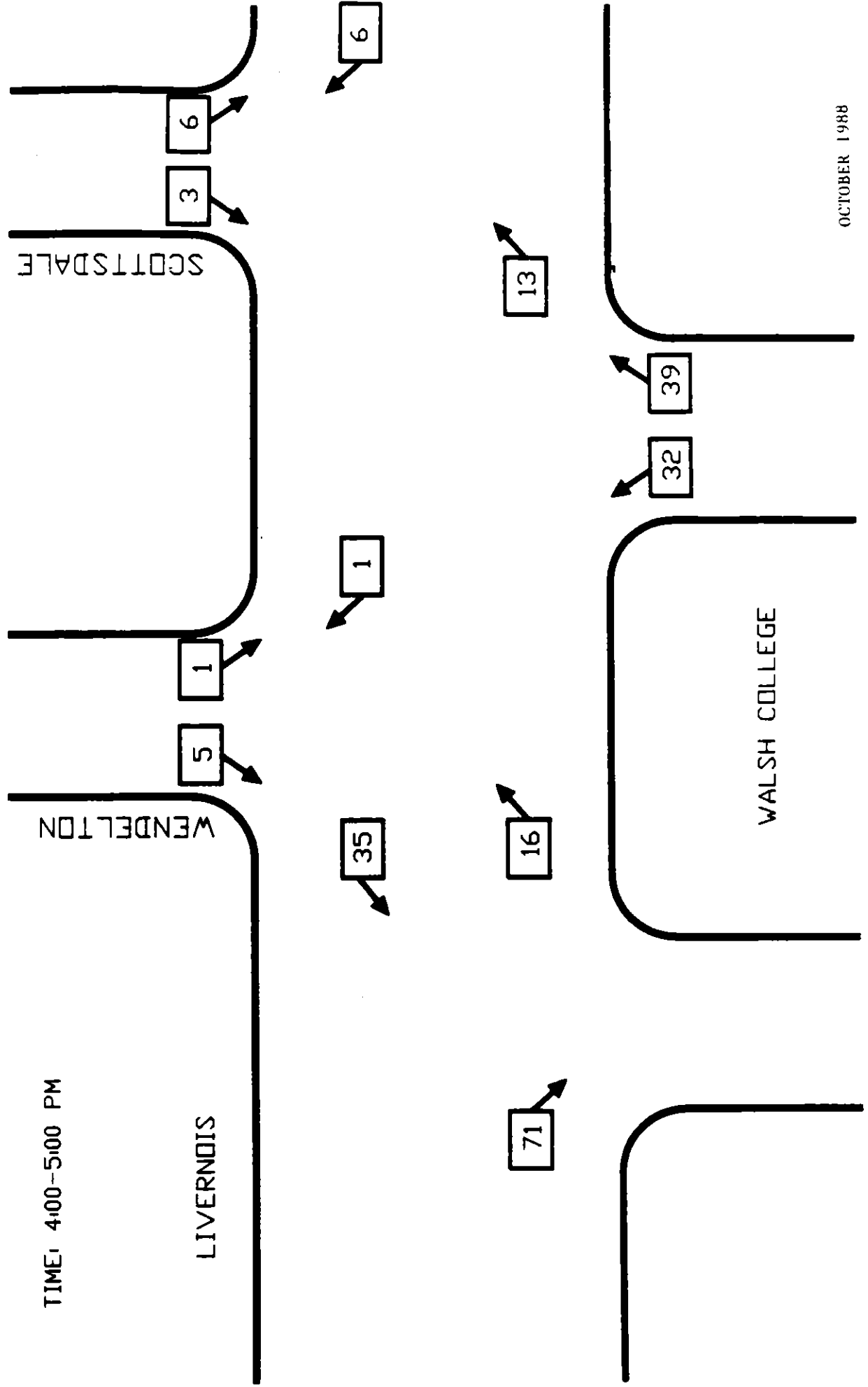
DATE	MON 88/10/17	TUE 18	WED 19	THU 20	FRI 21	SAT 22	SUN 23
START HOUR							
0	-	-	-	0	-	-	-
1	-	-	-	4	-	-	-
2	-	-	-	0	-	-	-
3	-	-	-	1	-	-	-
4	-	-	-	1	-	-	-
5	-	-	-	1	-	-	-
6	-	-	-	5	-	-	-
7	-	-	-	17	-	-	-
8	-	-	-	122	-	-	-
9	-	-	-	95	-	-	-
10	-	-	91	-	-	-	-
11	-	-	70	-	-	-	-
12	-	-	177	-	-	-	-
13	-	-	90	-	-	-	-
14	-	-	54	-	-	-	-
15	-	-	93	-	-	-	-
16	-	-	138	-	-	-	-
17	-	-	240	-	-	-	-
18	-	-	215	-	-	-	-
19	-	-	109	-	-	-	-
20	-	-	14	-	-	-	-
21	-	-	17	-	-	-	-
22	-	-	6	-	-	-	-
23	-	-	2	-	-	-	-

TOTAL				1,562			
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Sta. No.	Direction	
26	EB	Walsh College Drive (South) to Livernois

500 W. BIG BEAVER ROAD - TROY, MICHIGAN 48064 - PHONE: (AREA 313) 524-3379

1988 TURNI MOVEMENTS AT WALSH DRIVES WENDELTON AND SCOTTSDALE

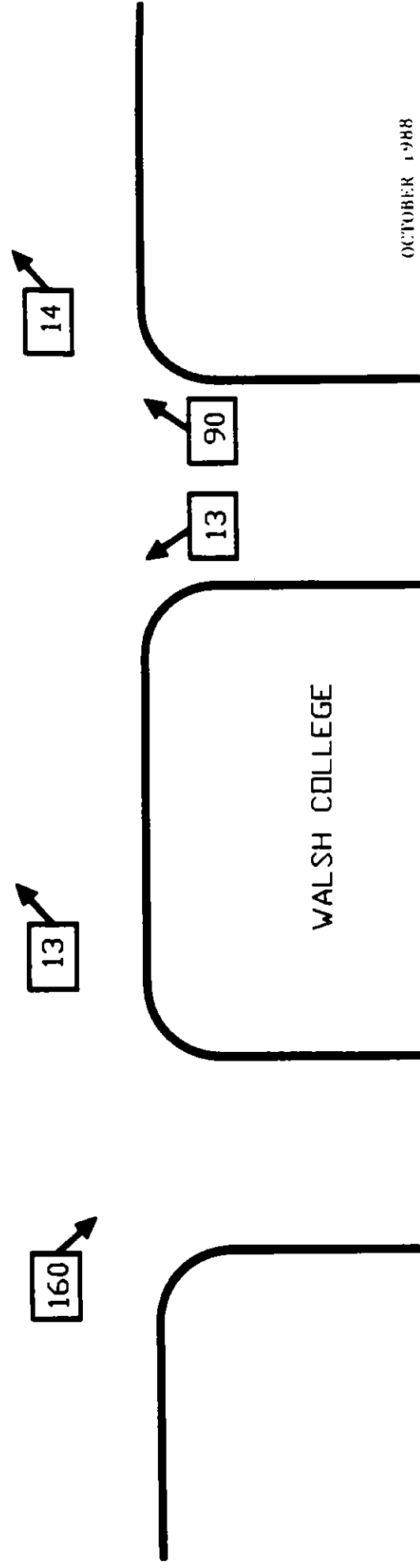
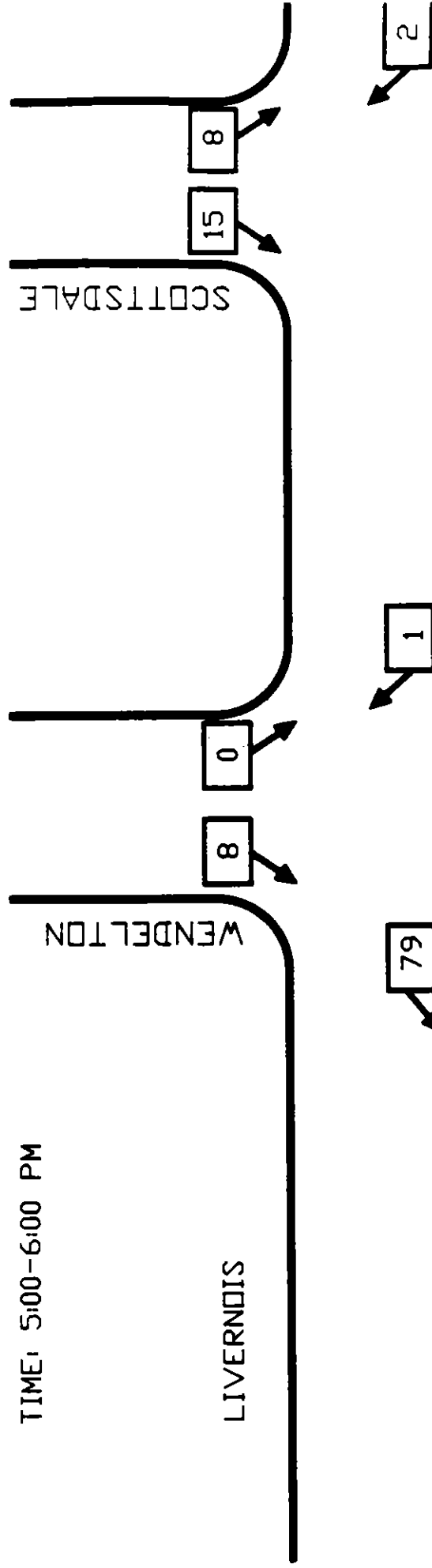


1988 TURNING MOVEMENTS

AT WALSH DRIVES WENDELTON AND SCOTTSDALE



TIME: 5:00-6:00 PM



City of Troy

Section 22

LOCATION E-W Walsh College North Drive

East of Livernois

HOURLY TRAFFIC VOLUMES

DATE 5/9-10/88

DATE	MON 88/05/09	TUE 10	WED 11	THU 12	FRI 13	SAT 14	SUN 15
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START HOUR

0	-	2	-	-	-	-	-
1	-	3	-	-	-	-	-
2	-	0	-	-	-	-	-
3	-	0	-	-	-	-	-
4	-	3	-	-	-	-	-
5	-	1	-	-	-	-	-
6	-	2	-	-	-	-	-
7	-	2	-	-	-	-	-
8	-	8	-	-	-	-	-
9	-	33	-	-	-	-	-
10	14	32	-	-	-	-	-
11	85	67	-	-	-	-	-
12	86	104	-	-	-	-	-
13	44	-	-	-	-	-	-
14	25	-	-	-	-	-	-
15	62	-	-	-	-	-	-
16	60	-	-	-	-	-	-
17	74	-	-	-	-	-	-
18	97	-	-	-	-	-	-
19	179	-	-	-	-	-	-
20	50	-	-	-	-	-	-
21	242	-	-	-	-	-	-
22	165	-	-	-	-	-	-
23	4	-	-	-	-	-	-

TOTAL

1241

Sta. No.	Direction	
27	E-W	Walsh College North Drive, East of Livernois

500 W. BIG BEAVER ROAD - TROY, MICHIGAN 48064 - PHONE: (AREA 313) 524-3379

City of Troy

Section 22

LOCATION E-W Walsh College South Drive
East of Livernois

HOURLY TRAFFIC VOLUMES

DATE 5/5-6/88

DATE	MON 88/05/02	TUE 03	WED 04	THU 05	FRI 06	SAT 07	SUN 08
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START HOUR

0	-	-	-	-	2	-	-
1	-	-	-	-	0	-	-
2	-	-	-	-	3	-	-
3	-	-	-	-	0	-	-
4	-	-	-	-	2	-	-
5	-	-	-	-	6	-	-
6	-	-	-	-	2	-	-
7	-	-	-	-	11	-	-
8	-	-	-	-	60	-	-
9	-	-	-	-	24	-	-
10	-	-	-	-	<u>44</u>	-	-
11	-	-	-	66	32	-	-
12	-	-	-	202	70	-	-
13	-	-	-	68	69	-	-
14	-	-	-	67	-	-	-
15	-	-	-	116	-	-	-
16	-	-	-	92	-	-	-
17	-	-	-	255	-	-	-
18	-	-	-	296	-	-	-
19	-	-	-	115	-	-	-
20	-	-	-	10	-	-	-
21	-	-	-	10	-	-	-
22	-	-	-	6	-	-	-
23	-	-	-	2	-	-	-

TOTAL

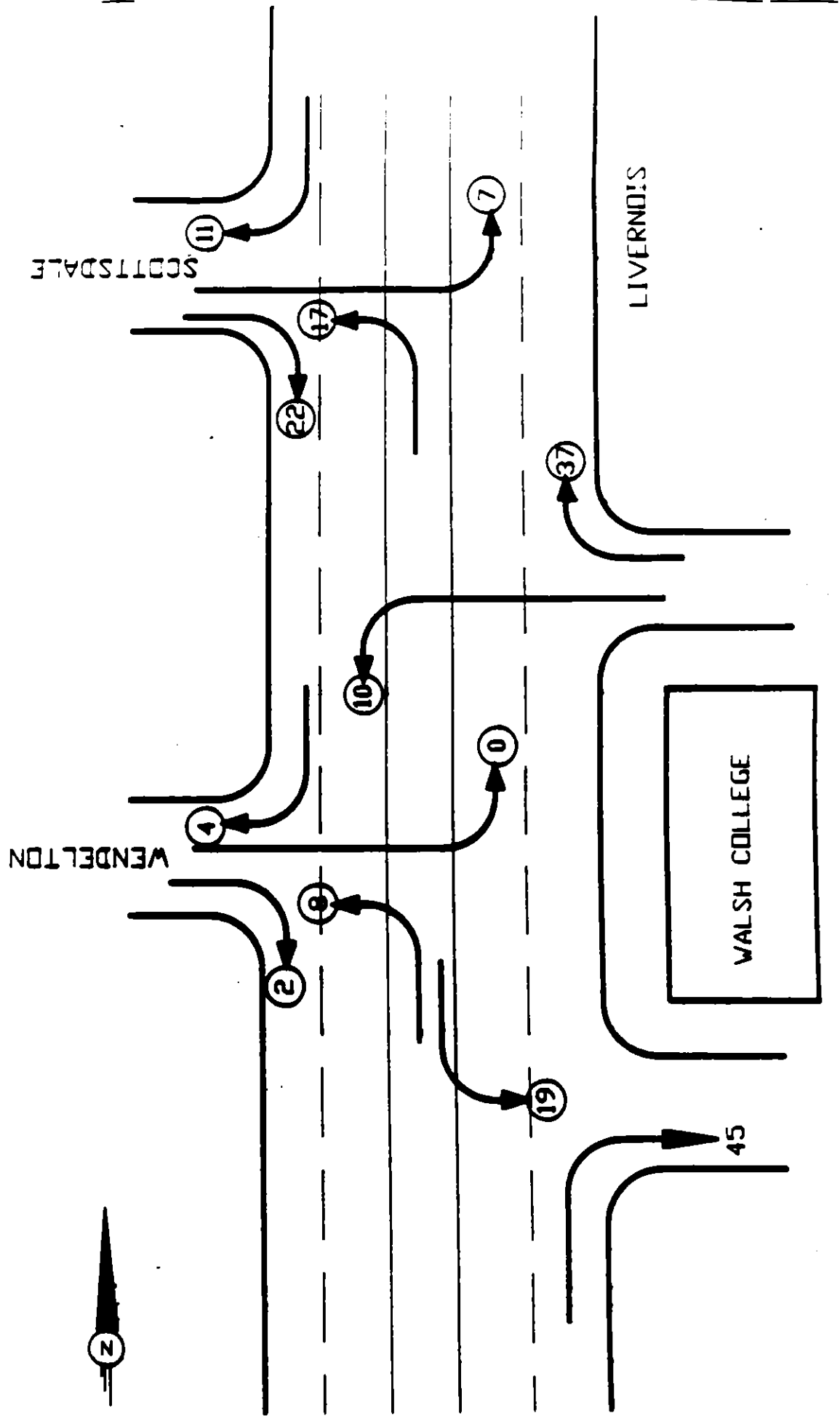
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Sta. No.	Direction	
22	E-W	Walsh College South Drive, East of Livernois

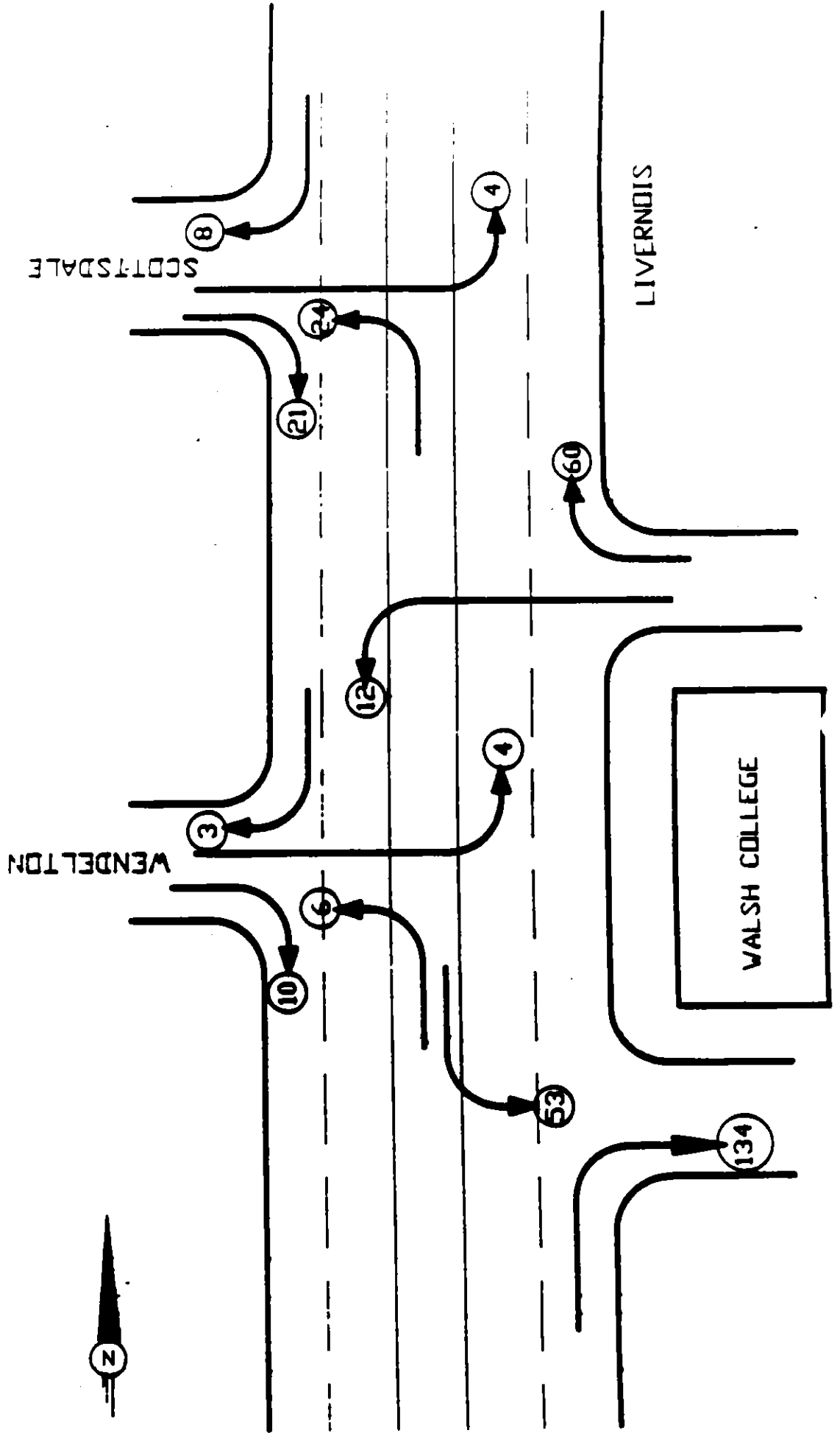
500 W. BIG BEAVER ROAD - TROY, MICHIGAN 48064 - PHONE: (AREA 313) 524-3379

MAY 1988

TURNING MOVEMENTS
FOR LIVERNDIS/WENDELTON/SCOTTSDALE/WALSH COLLEGE DRIVES
(4-5 PM)



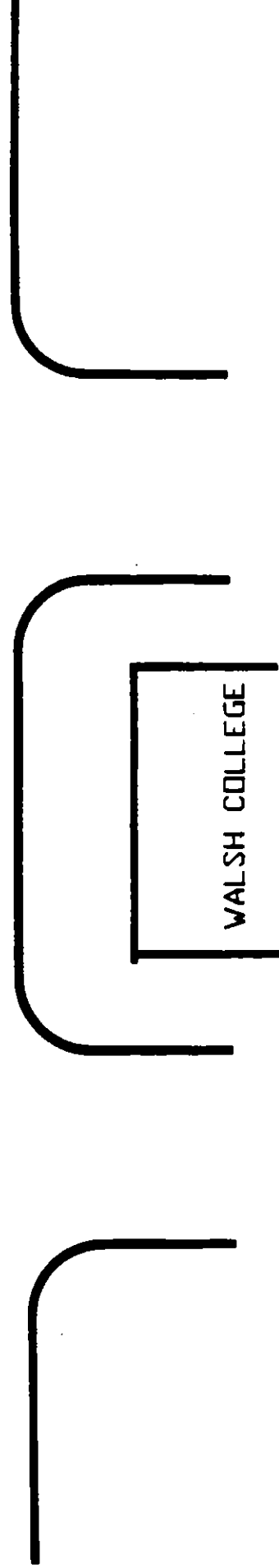
MAY 1988
 TURNING MOVEMENTS
 FOR LIVERNOIS/WENDELTON/SCOTTSDALE/WALSH COLLEGE DRIVES
 (5-6 PM)



COLLISION DIAGRAM
LIVERNOIS AT WALSH COLLEGE
1988 (THROUGH MARCH)

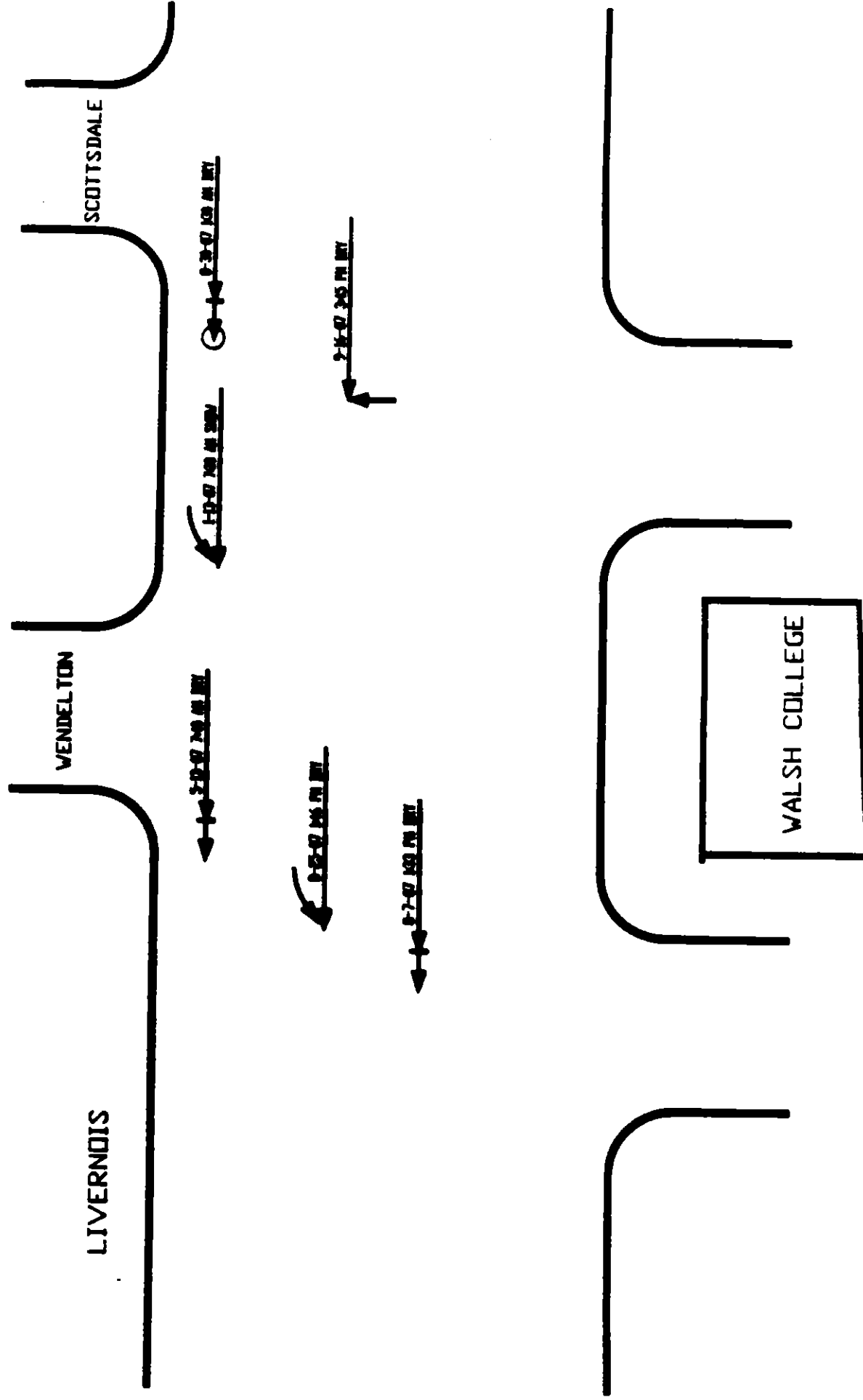


NO ACCIDENTS TO DATE

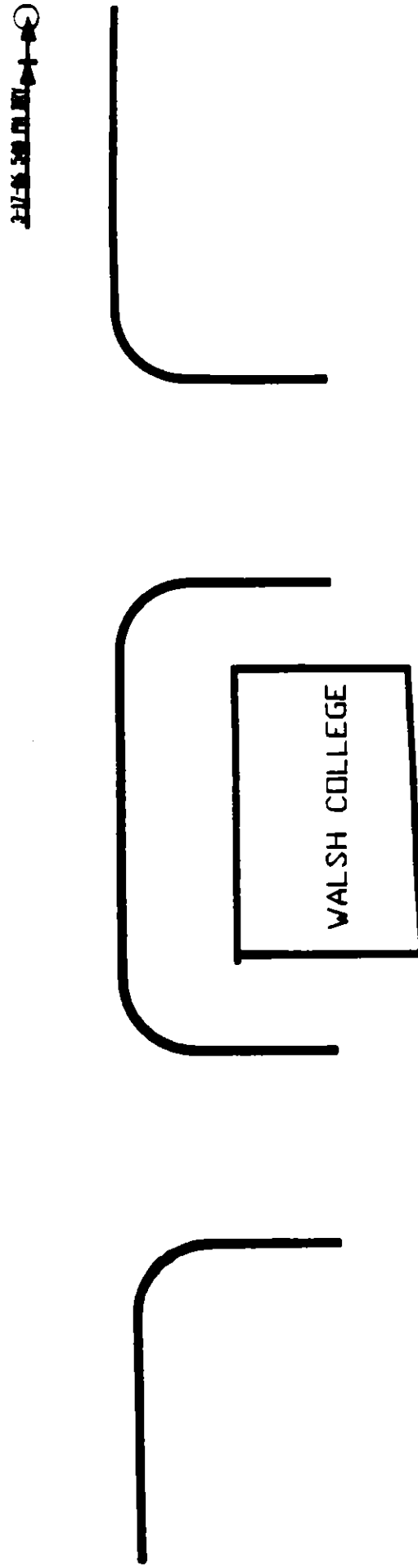
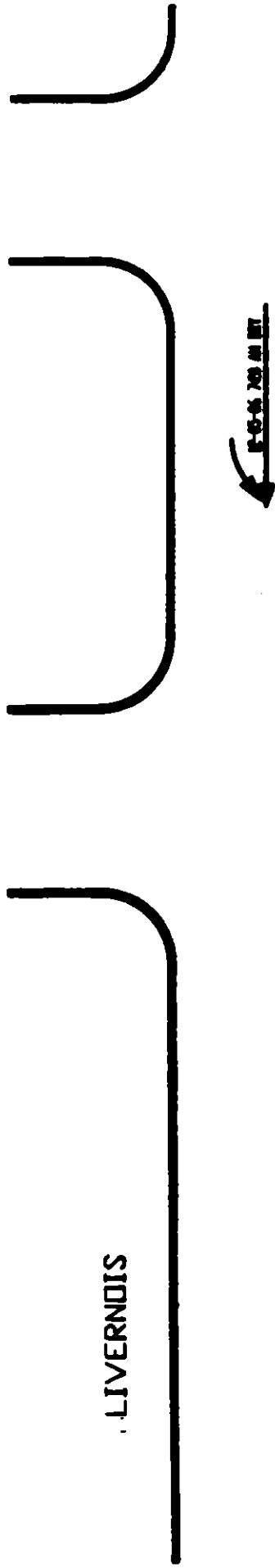


COLLISION DIAGRAM
LIVERNOIS AT WALSH COLLEGE

1987



COLLISION DIAGRAM
LIVERNOIS AT WALSH COLLEGE
1986



Section 19

CITY OF TROY

LOCATION: PADDINGTON
SOUTH OF PALMERSTON

HOURLY TRAFFIC VOLUMES

DATE	MON 88/10/24	TUE 25	WED 26	THU 27	FRI 28	SAT 29	SUN 30
START HOUR							
0		0					
1		0					
2		0					
3		1					
4		1					
5		0					
6		1					
7		3					
8		5					
9		8					
10		5					
11		4					
12	0						
13	6						
14	5						
15	3						
16	5						
17	7						
18	0						
19	5						
20	2						
21	0						
22	3						
23	1						
TOTAL		65					

STA. NO DIRECTION

 29 PADDINGTON, SOUTH OF PALMERSTON

"500 W. BIG BEAVER - TROY, MICHIGAN 48084 - PHONE: (313) 524-3379

Section 19

CITY OF TROY

LOCATION: PALMERSTON
WEST OF PADDINGTON

HOURLY TRAFFIC VOLUMES

DATE	MON 88/11/14	TUE 15	WED 16	THU 17	FRI 18	SAT 19	SUN 20
START HOUR							
0		1					
1		2					
2		3					
3		0					
4		1					
5		8					
6		5					
7		18					
8		11					
9		26					
10		9					
11		20					
12	17						
13	14						
14	16						
15	25						
16	24						
17	21						
18	22						
19	10						
20	5						
21	8						
22	6						
23	1						
TOTAL		273					

STA. NO DIRECTION

29 PALMERSTON, WEST OF PADDINGTON

"500 W. BIG BEAVER - TROY, MICHIGAN 48084 - PHONE: (313) 524-3379