

AGENDA
TRAFFIC COMMITTEE MEETING
NOVEMBER 17, 2004 - 7:30 P.M.
LOWER LEVEL CONFERENCE ROOM
TROY CITY HALL
500 W. BIG BEAVER ROAD

1. Roll Call
2. Minutes – October 20, 2004
3. Install traffic signal at Square Lake and Donaldson
Requested by Bela Shah, 123 Millstone Street
4. Install all-way STOP signs at Larchwood and Bellingham
Requested by John Marion of 1863 Larchwood and Carol Marshall of Executone
Telecommunications, Livonia
5. Visitors' Time
6. Other Business
7. Adjourn

cc: Traffic Committee Members, Including Ex-Officio Members
Captain Ed Murphy, Police Department
Lt. Scott McWilliams, Police Department
Lt. Robert Matlick, Fire Department
John K. Abraham, Traffic Engineer

and cc: Item 3 Residents within 300 feet of Square Lake and Donaldson
Bela Shah, 123 Millstone Street
Stu Redpath, Principal, Smith Middle School
Troy Schools, 4400 Livernois 48085

Item 4 Residents within 300 feet of Larchwood and Bellingham
John Marion, 1863 Larchwood
Carol Marshall, Executone Telecommunications
30927 Schoolcraft Road, Livonia, 48150

TRAFFIC COMMITTEE

MESSAGE TO VISITORS, DELEGATIONS AND CITIZENS

The Traffic Committee is composed of seven Troy citizens who have volunteered their time to the City to be involved in traffic and safety concerns. The stated role of this Committee is:

- a. To give first hearing to citizens' requests and obtain their input.
- b. To make recommendations to the City Council based on technical considerations, traffic surveys, established standards, and evaluation of citizen input.
- c. To identify hazardous locations and recommend improvements to reduce the potential for traffic accidents.

Final decisions on sidewalk waivers will be made by the Committee at this meeting.

The recommendations and conclusions arrived at on regular items this evening will be forwarded to the City Council for their final action. Any citizen can discuss these recommendations before City Council. The items discussed at the Traffic Committee meeting will be placed on the City Council Agenda by the City Manager. The earliest date these items might be considered by City Council would normally be 10 days to 2 weeks from the Traffic Committee meeting. If you are interested, you may wish to contact the City Manager's Office in order to determine when a particular item is on the Agenda.

Persons wishing to speak before this Committee should attempt to hold their remarks to no more than 5 minutes. Please try to keep your remarks relevant to the subject at hand. Please speak only when recognized by the Chair. These comments are made to keep this meeting moving along. Anyone wishing to be heard will be heard; we are here to listen and help in solving or resolving your particular concerns.

AGENDA EXPLANATION
TRAFFIC COMMITTEE MEETING
NOVEMBER 17, 2004

1. **Roll Call**
2. **Minutes – October 20, 2004**
3. **Install Traffic Signal at Square Lake and Donaldson**
(This item was tabled at the October meeting to obtain input from the Troy School District)

Mrs. Bela Shah, 123 Millstone Street, indicated that it is very difficult to make turns onto Square Lake from Donaldson. She also mentioned that this is a dangerous intersection and that she has seen near crashes many times. The morning peak hour between 7:00 am and 8:00 am is particularly busy due to the traffic from Smith Middle School at the south end of Donaldson, and she feels that a traffic signal will help make the intersection safer.

This is a 3-way intersection with Donaldson terminating into Square Lake road. The intersection is also around 1,350 feet from the signalized intersection of Square Lake and Livernois. Traffic signals are installed at locations that satisfy some thresholds of traffic volumes, traffic crashes traffic delays as stated in the Michigan Manual of Uniform Traffic Control Devices (MMUTCD). Traffic volume and traffic crash studies were performed for this intersection to see if the “thresholds,” also called “warrants,” are met for the intersection.

The intersection is controlled by a STOP sign on Donaldson at Square Lake, and sight distance studies show that there are no major sight obstructions at this intersection. Donaldson is a residential street and the approaches to Donaldson on Square Lake provide for a passing lane and a right turn lane to make left and right turns onto Donaldson safely.

Traffic volume studies show that around 7,600 vehicles enter the intersection from and east and west while around 1500 vehicles enter the intersection northbound from Donaldson in a day. There is heavy use of the intersection between 7:00 am and 8:00 am. During this one hour there were around 340 vehicles going east and west on Square Lake and around 250 vehicles going northbound onto Square Lake. However, none of the traffic volume warrants stated in the MMUTCD are met for this intersection. Adding traffic signals normally increases congestion on the major road; in this case on Square Lake Road.

A crash analysis revealed the following reported crashes in the vicinity of the intersection (200 feet radius):

Type of crash	2003	2002	2001
Angle (broad side)	1	1	1
Sideswipe	1	1	1
Rear end		1	

The MMUTCD traffic crash warrant states that a traffic signal is warranted if the installation of the signal will prevent at least 5 “correctible” crashes in a year. Traffic signals normally correct the angle-type crash concerns and as seen, the average crash experience at this intersection has been one per year. Therefore, the traffic crash warrant also is not met for the intersection. National studies also show that installation of traffic signals that are not “warranted” as per the MMUTCD can result in higher traffic crash experience. Unwarranted signals have been documented to increase number of crashes, particularly of the rear-end type.

Traffic signals are located preferably at half-mile points for effective traffic flow. When the distance between signals is less than a half mile, progressive traffic flow may be adversely affected and may result in higher congestion, and backing up of traffic from one intersection to the other, creating gridlock. A signal at Donaldson would be around 1400 feet from the one at Livernois and Square Lake, which is around a quarter of a mile.

Traffic volumes and traffic crash history indicate that a traffic signal installation is not warranted for this intersection. However, Mr. Kilmer thinks that there should be a signal at this location that would be operational only during school times for the safety of the children walking the way to school.

This item was first considered at the October meeting. No one, including the petitioner, attended the meeting to address the committee. However, Mr. Kilmer suggested that there could be a signal at this location that would be operational only during school times for the safety of the children walking to school. At that time, the committee tabled the item to give the Traffic Engineer an opportunity to consult with THE Troy School District and Smith Middle School staff.

Dr. Abraham stated that if a traffic signal were installed solely for the purpose of enhancing safety of school traffic, cost participation from the school board would be required. Traffic signals cost around \$100,000 to \$120,000 installed, and it may be hard to justify public funds to pay for the signal when the major benefit is only to school traffic.

SUGGESTED RESOLUTIONS:

- a. Recommend installation of a traffic signal at Square Lake and Donaldson.
- b. Recommend no changes.

4. Install All-Way STOP Signs at Larchwood and Bellingham

John Marion of 1863 Larchwood and Carol Marshall of Executone Telecommunications have requested all-way STOP signs at the intersection of Larchwood and Bellingham. Mr. Marion contacted Lt. McWilliams regarding speeding concerns on Larchwood and in response the radar trailer was deployed on the street in addition to selective enforcement. Mr. Marion reported that he was in a near miss traffic crash at the intersection. The intersection has a small jog and since Bellingham has opened up to both Big Beaver and Maple, there is a marked increase in Bellingham traffic. Ms. Marshall wrote a letter to the Michigan Department of Transportation regarding this intersection, but since MDOT does not have jurisdiction over this intersection the matter was referred back to us.

The intersection of Larchwood and Bellingham is in the predominantly industrial area of Troy. Larchwood runs west off John R road and intersects Bellingham around quarter of a mile from John R. Bellingham today runs from Maple to Big Beaver. Previously Bellingham ended north of Larchwood, but with the development of the Big Beaver Airport into an industrial / office area, the road was extended all the way to Big Beaver. The intersection is controlled by 2 STOP signs on Bellingham at Larchwood, installed many years ago. The north and south legs of the intersection are offset by a few feet and the west leg of the intersection has a curve just west of the intersection. Field observations show that there were many STOP sign violations at the intersections and some confusion at the intersection due to the geometrics.

All-way STOP signs are meant to assign right-of-way at high volume intersections, and have been demonstrated not to be an effective speed control device. These are installed in accordance with the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) that stipulates thresholds for traffic volumes and traffic crashes that have to be met. The MMUTCD states that installation of a multi-way STOP would be warranted under one of the following conditions:

- ❖ *Where traffic signals are warranted and urgently needed, the multi-way STOP is an interim measure that can be installed quickly to control traffic while arrangements are being made for traffic signal installation.*
- ❖ *An accident problem as indicated by five or more reported accidents of the type susceptible to correction by a multi-way STOP during a 12-month period. Such accidents include right and left turn collisions.*
- ❖ *Minimum Traffic Volume – The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour for any eight hours of an average day.*

Traffic studies indicate that Bellingham carries around 4800 vehicles in a day while Larchwood carries around 3100 vehicles in a day. The minimum traffic volume warrant is met for 5 hours of the day when 500 vehicles or more enter the intersection. For another five hours of the day the intersection had 400 or more entering vehicles.

Traffic crash records show that there were 4 broad side type reported crashes at this intersection during the last 3 years.

Considering the high volume of traffic and intersection geometrics, four way STOP signs may help decrease confusion and increase safety at the intersection.

SUGGESTED RESOLUTIONS:

- a. To recommend installing all-way STOP signs at the intersection of Larchwood and Bellingham.
- b. Recommend no changes.

5. Visitors' Time

Items not on the agenda.

6. Other Business

Items not on the agenda which Traffic Committee members may wish to discuss.

7. Adjourn

LIVERNOIS

ITEM 3

CUTTING

DONALDSON

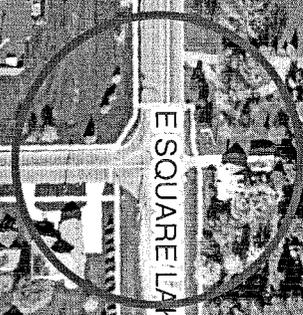
E SQUARE LAKE

MARTELL

FOLKSTONE

TARA

COTSWOLD



Square Lake and Donaldson

Warrant Summary

Urban values apply.

Warrant 1 - Minimum Vehicular Volumes

NOT SATISFIED. Required values reached for 0 hours.

Criteria--Main St.: 500; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 0 hours.

Criteria--Main St.: 750; Side St.: See Volume Summary.

Warrant 3 - Minimum Pedestrian Volumes

NOT SATISFIED. Ped volume too low.

Criteria--Peak Hour: 190, 4th high Hour: 100

Warrant 4 - School Crossing

NOT APPLICABLE. Gap data has not been defined.

Warrant 5 - Progressive Movement

NOT SATISFIED for approach(es): Eastbound Westbound

Warrant 6 - Accident Experience

NOT SATISFIED. 1 correctable accidents is fewer than required 5.

Corr. Accidents: 1; RA Acc.: 1; LT Acc.: 0; Other Acc.: 1.

Warrant 7 - Systems Warrant

NOT SATISFIED. Peak hour total entering volume 989 < 800

- Approaches which are part of principal through traffic network.

E- Approaches which are highways outside, entering or crossing a city.

E- Approaches which appear as a major route in an official plan.

Warrant 8 - Combination of Warrants

NOT SATISFIED. Required values reached for 0 hours.

Criteria--Main: 600; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

NOT SATISFIED. Required values reached for 0 hours.

Warrant 10 - Peak Hour Delay

NOT SATISFIED. Peak hour (17) volume too low.

Warrant 11 - Peak Hour Volume

NOT SATISFIED.

Press any key to see other warrants, or <esc> to return.

Square Lake and Donaldson

Hour	Main	Side--Dir.	Warrant 1	Warrant 2	Warrant 8
0	27	9 N			
1	20	3 N			
2	16	3 N			
3	13	1 N			
4	19	3 N			
5	32	8 N			
6	113	10 N			
7	316	40 N			
8	337	247 N	SIDE	SIDE	SIDE
9	296	117 N		SIDE	
10	315	51 N			
11	423	65 N			
12	524	57 N			
13	387	49 N			
14	473	70 N			
15	642	65 N	MAIN		
16	805	168 N	--BOTH--	SIDE	--BOTH--
17	834	155 N	--BOTH--	SIDE	--BOTH--
18	629	116 N	MAIN	SIDE	
19	462	78 N		SIDE	
20	314	43 N			
21	223	74 N			
22	115	24 N			
23	40	10 N			



ITEM 4

JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

GLORIA J. JEFF
DIRECTOR

October 13, 2004

Ms. Carol A. Marshall
Operations Director
Executone Telecommunications
30927 Schoolcraft Road
Livonia, Michigan 48150

Dear Ms. Marshall:

This is in response to your letter of September 28, 2004, regarding the intersection of Bellingame and Larchwood in the City of Troy. The Michigan Department of Transportation (MDOT) takes great pride in our transportation system. However, the intersection of Bellingame and Larchwood is not a state trunkline and is under the jurisdiction of the City of Troy. By copy of this letter, we will forward your correspondence to Mr. John Abraham, the city's Traffic and Safety Engineer for consideration. Mr. Abraham can be reached at 248-524-3300.

If you have any questions, please feel free to contact me, at 248-451-0001.

Sincerely,

A handwritten signature in cursive script that reads "Lori Swanson for".

Randy McKinney, P.E.

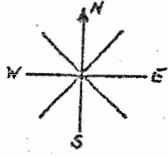
Manager

Oakland Transportation Service Center

cc: J. Abraham
L. Tibbits
G. Johnson

COLLISION DIAGRAM

ITEM 4



INDICATE NORTH
BY ARROW

PERIOD: 3yr
FROM 1/1/01
TO 12/31/03

LARCHWOOD

BELLINGHAM

4/14/01
7:40

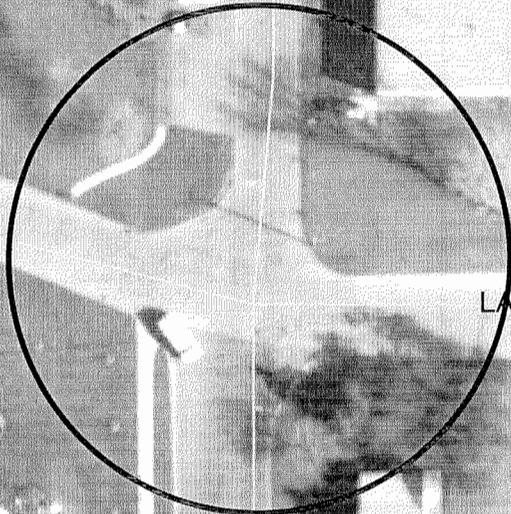
5/7/03
19:59

4/19/01
18:45

2/11/03
6:30

SYMBOLS	TYPES OF COLLISIONS	FOR EACH ACCIDENT SHOW:
<p>← MOVING VEHICLE</p> <p>↔ BACKING VEHICLE</p> <p>--- PEDESTRIAN</p> <p>▣ PARKED VEHICLE</p> <p>□ FIXED OBJECT</p> <p>○ INJURY ACCIDENT</p> <p>● FATAL ACCIDENT</p>	<p>← ← REAR END</p> <p>→ → HEAD ON</p> <p>↔ SIDE SWIPE</p> <p>↘ RIGHT ANGLE</p> <p>↙ LEFT TURN HEAD ON</p> <p>↘ OUT OF CONTROL</p>	<p>1. Date & Time</p> <p>2. Weather & Road Surface Conditions</p> <p><u>BELLINGHAM</u> &</p> <p><u>LARCHWOOD</u></p> <p>BY: <u>HA</u> DATE: <u>1/5/04</u></p>





LARCHWOOD

BELLINGHAM

