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Traffic Committee AGENDA

SECOND MEETING *OF THE TRAFFIC COMMITTEE*
TO BE HELD ON ***WEDNESDAY, MAY 7, 2008*** *AT* ***4:00 P.M.***
IN ***COMMITTEE ROOM C-13B****, TOM DAVIES SQUARE*

DECLARATION OF PECUNIARY INTEREST

MANAGERS' REPORTS **PAGE NO.**

1. Report dated April 30th, 2008 from the General Manager of Infrastructure Services regarding Traffic Committee - Terms of Reference. **1 - 2**
(RECOMMENDATION PREPARED)

   (The report provides information and recommendations regarding the terms of reference for the Traffic Committee. Staff recommends that the Traffic Committee hear matters and make decisions regarding transportation issues.)

2. Report dated April 30th, 2008 from the General Manager of Infrastructure Services regarding All-way Stop Policy. **3 - 10**
(RECOMMENDATION PREPARED)

   (The report describes the benefits and disadvantages of all-way stop control. Information is provided regarding the existing Ontario Traffic Manual (OTM) warrants for all-way tops. Based on a survey of other municipalities and direction from the Traffic Committee, staff is recommending a modified all-way stop warrant be approved based on the same principals as the OTM, but with lower minimum volume and collision requirements.)

3. Report dated April 25, 2008 from the General Manager of Infrastructure Services regarding Traffic Control - Spruce Meadows Subdivision Phase 2, Hazelton Subdivision Phase 1, Algonquin 2 Subdivision Phase 4, Moonglo West Subdivision Phase 3, Moonlight Ridge Subdivision Phase 1 and Belanger Trottier Subdivision.
(RECOMMENDATION PREPARED) **11 - 23**

   (A number of subdivisions are currently being developed in the City of Greater Sudbury. As part of these developments, the City of Greater Sudbury will assume new public roadways. To provide a safe and orderly flow of traffic, traffic control signs will be required at newly created intersections. The report recommends that a by-law be passed to amend Traffic and Parking By-Law 2001-1 in the City of Greater Sudbury, to implement the recommended changes, all in accordance with the report from the General Manager of Infrastructure Services dated April 25, 2008.)

CORRESPONDENCE FOR INFORMATION ONLY

4. Report dated April 25th, 2008 from the General Manager of Infrastructure Services regarding Intersection Traffic Control Devices. **24 - 26**
(FOR INFORMATION ONLY)

(The report provides general information on the various types of traffic control in the City of Greater Sudbury.)

NEXT MEETING DATE

ADJOURNMENT (RESOLUTION PREPARED)

COMMITTEE MEMBERS
Councillor Cimino
Councillor Rivest
Councillor Landry-Altmann

DISTRIBUTION
Mayor and Members of Council
CAO and SMT
R. Swiddle
R. Falcioni
D. Kivi
D. Shelsted
A. Haché

ANGIE HACHÉ
CITY CLERK

LIZ COLLIN
PLANNING COMMITTEE SECRETARY

Request for Recommendation
Traffic Committee

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Type of Decision

Meeting Date	May 7, 2008					Report Date	April 30, 2008			
Recommendation		X	Yes		No		Priority	x	High		Low
			Direction Only				Type of Meeting	x	Open		Closed

Report Title

Traffic Committee - Terms of Reference

Policy Implications + Budget Impact

	This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified

X	Background attached

Recommendation

That the Traffic Committee hear matters and make decisions regarding transportation and traffic engineering matters.

That staff direct reports dealing with traffic and transportation issues to the Traffic Committee for review and approval.

That the Traffic Committee review policies and procedures for traffic related matters and make recommendations to City Council for final approval.

That requests for traffic studies that are not in accordance with Council policy be referred to the Traffic Committee for approval prior to staff undertaking the work.

	Recommendation attached

Recommended by the Department Head

Greg Clausen, P. Eng.
General Manager of Infrastructure Services

Recommended by the C.A.O.

Mark Mieto
Chief Administrative Officer

Report Authored By	Division Review
Dave Kivi, Coordinator of Transportation and Traffic, Engineering Services	Robert M. Falcioni, P. Eng. Director of Roads and Transportation

Background

At the Traffic Committee meeting held on September 18, 2007, the following recommendation was presented.

> 2007-04 Landry-Altmann-Rivest: THAT Terms of Reference be prepared for the Traffic Committee to include a review of existing policies that relate to stop signs, speed limits and pedestrian crossing;
>
> AND THAT the review include information from other cities and policy to deal with anomalies that currently exist in our City.

It is staff's recommendation that the Traffic Committee hear matters and make decisions regarding transportation matters. Staff will direct reports dealing with Traffic and Transportation issues to the Traffic Committee for review and approval including amendments to the Traffic and Parking By-law.

Staff recommends that the Traffic Committee review policies and procedures for traffic related matters and make recommendations for approval by City Council. A partial list of traffic policies that need to be developed includes the following:

1) All-Way Stop Policy
2) Speed Limit Policy
3) Pedestrian Crossing Policy
4) Traffic Calming Policy
5) On-Street Parking Policy
6) Access Policy

It is also recommended that requests for traffic studies that are not in accordance with established policy be referred to the Traffic Committee for approval prior to staff undertaking the work.

Staff further recommends that the Traffic Committee schedule meetings on an ad hoc basis.

Request for Recommendation
Traffic Committee

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Type of Decision

Meeting Date	May 7, 2008					Report Date	April 30, 2008			
Recommendation		X	Yes		No		Priority	x	High		Low
			Direction Only				Type of Meeting	x	Open		Closed

Report Title

All-Way Stop Policy

Policy Implications + Budget Impact

	This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified

X	Background attached

Recommendation

That the City of Greater Sudbury approve the modified warrant for determining the need for all-way stops. The modified warrant reduces the minimum volume and collision threshold as described in the report dated April 30, 2008 from the General Manager of Infrastructure Services.

That only those requests for all-way stops that satisfy the minimum warrants be brought forward for Council's consideration.

	Recommendation attached

Recommended by the Department Head

Greg Clausen, P. Eng.
General Manager of Infrastructure Services

Recommended by the C.A.O.

Mark Mieto
Chief Administrative Officer

3

Report Authored By	Division Review
Dave Kivi, Coordinator of Transportation and Traffic, Engineering Services	Robert M. Falcioni, P. Eng. Director of Roads and Transportation

Introduction

At the Traffic Committee meeting held on September 18, 2007, staff was requested to survey other municipalities regarding their All-Way Stop policies and recommend an All-Way stop policy for the City of Greater Sudbury.

In late November 2007 a survey was sent to over 30 Ontario municipalities requesting information regarding their policies and procedures related to All-Way stops and number of other traffic related issues. As of February 2008, a total of 12 surveys have been returned to us. In addition to these, we were able to find All-Way stop policies for a number of other municipalities through an internet literature review. A summary of the survey questions and responses received are contained in Exhibit "A".

Background

It is a common perception that All-Way stops are the answer to neighborhood traffic problems. People often believe that they reduce speeding and improve safety. The purpose of an All-Way stop is to alternate right-of-way at an intersection. All-Way stops can be an effective traffic control device when installed at busy intersections with similar traffic volumes and characteristics. All-Way stops disrupt the flow of traffic and introduce delay to all drivers within the intersection. Therefore, they should only be installed at intersections based on the vehicle and pedestrian volumes or at intersections having a high collision frequency.

Speed Control

Often times, All-Way stops are requested by residents to slow traffic down on a roadway. Unfortunately, All-Way stops are not effective as speed control devices. Studies have shown that speeds are only reduced in close proximity to the sign, and mid-block speeds actually increase after stops signs are installed as drivers attempt to make up for lost time.

Safety

It is common belief that All-Way stops will increase safety at an intersection. Stop signs can reduce certain types of collisions such as right angle or turning types if they are prevalent at an intersection. However, the unwarranted installation of All-Way stops increases driver frustration, reduces compliance, and creates disrespect for stop signs. This behavior can spread to other intersection where stop signs are required. The inappropriate use of All-Way stops can decrease safety for pedestrians and cyclists, especially young children, as they expect drivers to actually stop at the sign.

Environment and Economic Impact

All-Way stops are relatively inexpensive to install, which is one reason they are requested so often. However, they can greatly increase fuel consumption, noise, and air pollution, due to constant braking and acceleration

that occurs. It has been reported that additional gasoline consumed from one stop sign on a typical collector road is 25 litres per day or 9,125 litres per year.

The Ministry of Municipal Affairs and Housing indicates that a typical four-way stop generates the following emissions on a yearly basis:

657 kg of Hydro Carbons
8,760 kg of Carbon Monoxide
675 kg of Nitrogen Oxide
65,700 kg of Carbon Dioxide

All-Way Stop Warrant

As previously mentioned, All-Way stops can be an effective means of traffic control when installed under the proper circumstances. Currently, the City of Greater Sudbury follows Provincial Warrants published in the "Ontario Traffic Manual" for determining the need for All-Way stop control. This warrant is used by five (5) of the twelve (12) municipalities surveyed and is the most commonly used warrant in Ontario. The use of standard criteria, or warrants, is very important for determining the need for All-Way stops and other traffic control devices. Warrants provide a method of analysis that is based on engineering principles which can be applied consistently at intersections throughout the City of Greater Sudbury.

The following is some of the criteria that is used in the Provincial Warrant:

Minimum Volume Warrant

1) **Arterial and Major Collector Roads:**

   a) Total vehicle volume on all approaches exceeds 500 vehicles per hour for an eight (8) period, and

   b) A combined vehicle and pedestrian volume from the minor street is more than 200 per hour for the same eight (8) hours, and

   c) The traffic volume on the intersecting streets is similar and does not exceed a split of 70/30.

2) **Minor and Local Streets**

   a) Total vehicle volume for all approaches exceeds 350 vehicles for the highest hour, and the volume split does not exceed 75/25 for three-way control and 65/35 for four-way control.

Collision Warrant

For both major and minor roadways, All-Way stops are warranted when there is an average of four (4) or more collisions per year over a three (3) year period. Only those collisions that are susceptible to correction, though multi-way stop control must be considered, such as angle and turning movement collisions.

Other Considerations

The Ontario Traffic Manual states that all-way stops should not be used under the following conditions.

- As a speed control device
- Solely to protect pedestrians, especially school aged children
- Where traffic would be required to stop on grades
- At offset intersections, or intersections with poor geometry or more than four (4) legs
- On multi-lane approaches
- Higher speed roadways (speed limit greater than 60 km/h)
- Where visibility of the sign is hampered by curves
- Within 250 metres of traffic signals or another stop sign
- On truck or bus routes, except in industrial areas where two such routes cross

Modified Warrant

Based on the comments of the Traffic Committee that the Provincial All-Way Stop Warrants are too restrictive; staff has developed an alternative warrant based on the survey results and policies used by other Ontario municipalities. This Warrant is based on the same principles contained in the Ontario Traffic Manual. The main difference is that the traffic volume and collision warrants have been reduced for lower volume collector roads and residential roadways. If approved, the proposed warrant would be similar to the warrants used in the cities of Toronto and Oakville. A summary of this warrant is shown in Exhibit "B", and described below.

Minimum Volume Warrant

1) **Arterial and major collector roadways with Annual Average Daily Traffic volume (AADT) greater than 5,000.**

   a) Traffic volume and collision warrant remains as per the Ontario Traffic Manual.

2) **Minor collector roads with an AADT between 1,000 and 5,000.**

   a) Total vehicle volume on all approaches reduced from 500 vehicles per hour for eight (8) hours to 350 vehicles per hour for only four (4) hours.

   b) The combined vehicle and pedestrian volume on the minor approach reduced from 200 per hour for eight (8) hours to 140 per hour for only four (4) hours.

   c) The volume split remains at a ratio of 70/30.

   d) Collision frequency is reduced from four (4) per year to three (3) per year over a three (3) year period. Only collisions that may be corrected with an all-way stop are to be considered.

3) **Local roads with an AADT less than 1,000.**

   a) The total vehicle volume on all approaches reduced from 350 vehicles in the highest hour to 250 vehicles per hour for a four (4) hour period.

b) Simplify the volume split at a ratio of 70/30 for all conditions where a split of 75/25 for the three-way control and 65/35 for four-way control are currently required.

c) Collision frequency is cut in half from four (4) collisions per year to two (2) collisions per year for a three (3) year period. Only collisions that may be corrected with an all-way stop are to be considered.

Other Considerations

Remain as per the Ontario Traffic Manual.

Procedures

In order to ensure that all-way stops serve their intended purpose and make the best use of staff time, it is recommended that the following procedures be followed.

1) Requests for all-way stops related to a speeding problem will be referred to the City's Speed Watch Program and the Traffic Calming Policy, which is currently being developed.

2) Requests for all-way stops related to right of way control or to correct a collision problem will be analyzed based on the approved all-way stop policy.

3) Only those intersections that satisfy the requirements for all-way stop control will be brought forward to the Traffic Committee for consideration.

EXHIBIT: A

TRAFFIC SURVEY
ALL-WAY STOP

Municipality	All-Way Stop Warrant	Detailed Engineering Analysis	Council or Committee Report
City of Waterloo	OTM Book 5	Review traffic count, collisions, geometrics and operational constraints	Only those that meet the warrants.
City of Barrie	OTM Book 5	Review traffic count, collisions, geometrics and operational constraints	All of the requests.
City of Windsor	Minimum vehicle volumes on all approaches Collector & local = 250 veh per hour Minimum vehicular + Pedestrian volume Collector & Local = 150 veh per hour	Review traffic count, collisions, geometrics and operational constraints. Speed concerns are refered to the traffic calming policy.	Only those that meet the warrants.
City of Brockville	OTM Book 5	Review traffic count, collisions, geometrics and operational constraints	Only those that meet the warrants.
City of Oakville	Minimum vehicle volumes on all approaches Major collector = 400 veh per hour Minor collector = 350 veh per hour Local = 300 veh per hour Minimum vehicular + Pedestrian volume Major collector = 160 veh per hour Minor collector = 140 veh per hour Local = 120 veh per hour Collision history Arterial & Major collector 5 per year over a 3 year period	Review traffic count, collisions, geometrics and operational constraints	All of the requests.
City of Cambridge	OTM Book 5 (Modified) Minimum vehicle volumes on all approaches Local = 250 veh per hour	Review traffic count, collisions, geometrics and operational constraints. Speed concerns are referred to the traffic calming policy.	Report is prepared when the request is volume based or when the request is pushed forward by a Councilor.
City of Vaughan	OTM Book 5	Review traffic count, collisions, geometrics and operational constraints	All of the requests.
City of London	Minimum vehicle volumes on all approaches Minor Collector = 350 veh per hour	Review traffic count (5 peak hours), collisions, geometrics and operational constraints	Only 10% of the major issues are reported to Council.
City of Niagara Falls	Minimum vehicle volumes on all approaches Minor collector & Local = 350 veh per hour Minimum vehicular + Pedestrian volume Minor collector & Local = 160 veh per hour	Assess speed to determine if there is a speeding problem (speed study). Assess whether an all way stop is warranted based on collisions, visibility problems and 8 hour TMC. Petition households within 75 m of the intersection preference.	Reports are only prepared for intersections which meet the warrant, unless it is a specific request from committee or council. If it is not warranted, a letter would be typically sent to residents within the 75 m of the intersection to advise of the decision.
Town of Newmarket	Modified OTM Book 5 warrant without the directional splits but an increased emphasis on pedestrian activity.	Review TMC and all-way stop warrant analysis.	All of the requests.

Municipality	All-Way Stop Warrant	Detailed Engineering Analysis	Council or Committee Report
City of Guelph	OTM Book 5	Review traffic count, collisions, geometrics and operational constraints. When a local road intersects another local road only the peak hour volume is looked at initially.	No, unless directed specifically by Council to report back on the matter.
Region of Niagara	OTM Book 5	Review traffic count, collisions, geometrics and operational constraints	No, only respond back to the individual request.

EXHIBIT: B

Greater Grand Sudbury

CITY OF GREATER SUDBURY
ALL-WAY STOP WARRANTS

Location: _____ Date: _____
Date of TM Count: _____ Analyst: _____
Type of Intersection: _____

All-Way Stop Warrant Summary			
Warrant #1	Minimum Vehicle Volume		%
Warrant #2	Collision History		%
Warrant #3	Traffic Control Signals		Y/N
	All-Way Stop Warranted?		Y/N

Warrant #1 - Minimum Vehicle Volume

Roadway Type	Arterial/Major Collector	Minor Collector	Local	Vehicles per hour	Percent Compliance
AADT	> 5000	1000 - 5000	< 1000		
Count Period	7 hours	4 peak hours	4 peak hours		
Total vehicle volume from all approaches is ≥	500/hr	350/hr	250/hr		
Veh + Pedestrian volumes from side street is ≥	200/hr	140/hr	N/A		
Traffic Split	70/30	70/30	70/30	/	**Y/N**

Warrant #2 - Collision History

Roadway Type	Arterial/Major Collector	Minor Collector	Local	Number of Collisions per year	Percent Compliance
Collisions per Year over 3 year period	4*	3*	2*		

Warrant #3 **Traffic Control Signals are warranted and urgently needed, signs to be used as interim measures.** **Y/N**

* Only those collisions susceptible to relief through multi-way stop control must be consider (i.e. right angle and turning types).

- If the intersection meets warrant # 1, then the all-way stop is recommended regardless of the remaining warrants.
- If the intersection does not meet warrant #1 and does not meet warrant #2, then the all-way stop is not recommended.
- If the intersection does not meet warrant #1 and does meet warrant #2, then the all-way stop is recommended.

Request for Recommendation
Traffic Committee

Greater | Grand Sudbury
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Type of Decision

Meeting Date	May 7, 2008				Report Date	April 25, 2008			
Recommendation	X	Yes		No	Priority	x	High		Low
		Direction Only			Type of Meeting	x	Open		Closed

Report Title

Traffic Control - Spruce Meadows Subdivision Phase 2, Hazelton Subdivision Phase 1, Algonquin 2 Subdivision Phase 4, Moonglo West Subdivision Phase 3, Moonlight Ridge Subdivision Phase 1 and Belanger Trottier Subdivision

Policy Implications + Budget Impact

	This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified

X	Background attached

Recommendation

That Shane Street at Fleetwood Drive intersection be controlled with a "Stop" sign facing southbound traffic on Fleetwood Drive, and;

That Shelbourne Street at Prescott Street and Alliston Street intersection be controlled with "Stop" signs facing both westbound traffic on Prescott Street and eastbound traffic on Alliston Street, and;

That Trailview Drive at Trailside Court intersection be controlled with a "Stop" sign facing southbound traffic on Trailside Court, and;

That Moonrock Avenue at Nova Drive be controlled with a "Stop" sign facing southbound traffic on Nova Drive, and;

That Rheal Street at Equinox Crescent be controlled with a "Stop" sign facing southbound traffic on Equinox Crescent, and;

X	Recommendation attached

Recommended by the Department Head

Greg Clausen, P. Eng.
General Manager of Infrastructure Services

Recommended by the C.A.O.

Mark Mieto
Chief Administrative Officer

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Report Authored By	Division Review
Dave Kivi, Coordinator of Transportation and Traffic Engineering Services	Robert M. Falcioni, P. Eng. Director of Roads and Transportation

Recommendation - continued:

That Rheal Street at Estelle Street be controlled with a "Stop" sign facing northbound traffic on Estelle Street, and;

That Trottier Avenue at Anizette Court intersection be controlled with a "Yield" sign facing southbound traffic on Anizette Court, and;

That McNevin Street at McKeen Street intersection be controlled with a "Yield" sign facing westbound traffic on McKeen Street, and;

That a By-Law be passed to amend Traffic and Parking By-Law 2001-1 in the City of Greater Sudbury, to implement the recommended changes, all in accordance with the report from the General Manager of Infrastructure Services, dated April 25, 2008.

Background:

At the March 26, 2008 meeting of Council of the City of Greater Sudbury, By-Law 2008-60T was referred to the Traffic Committee.

By-Law 2008-60T was required to amend Traffic and Parking By-Law 2001-1 in the City of Greater Sudbury, to implement the recommended changes to traffic control in accordance with the report from the General Manager of Infrastructure Services, dated March 19, 2008 (see Exhibit 'A'). Staff recommends that the proposed traffic control be approved for the various subdivisions.

Request for Decision
City Council

Greater Grand Sudbury
www.greatersudbury.ca

Type of Decision

Meeting Date	March 26, 2008				Report Date	March 19, 2008			
Decision Requested	x	Yes		No	Priority	x	High		Low
	Direction Only				Type of Meeting	x	Open		Closed

Report Title

Traffic Control - Spruce Meadows Subdivision Phase 2, Hazelton Subdivision Phase 1, Algonquin 2 Subdivision Phase 4, Moonglo West Subdivision Phase 3, Moonlight Ridge Subdivision Phase 1 and Belanger Trottier Subdivision

Budget Impact / Policy Implication

	This report has been reviewed by the Finance Division and the funding source has been identified.

X	**Background Attached**

Recommendation

That Shane Street at Fleetwood Drive intersection be controlled with a "Stop" sign facing southbound traffic on Fleetwood Drive, and;

That Shelbourne Street at Prescott Street and Alliston Street intersection be controlled with "Stop" signs facing both westbound traffic on Prescott Street and eastbound traffic on Alliston Street, and;

That Trailview Drive at Trailside Court intersection be controlled with a "Stop" sign facing southbound traffic on Trailside Court, and;

That Moonrock Avenue at Nova Drive be controlled with a "Stop" sign facing southbound traffic on Nova Drive, and;

That Rheal Street at Equinox Crescent be controlled with a "Stop" sign facing southbound traffic on Equinox Crescent, and;

x	**Recommendation Continued**

Recommended by the Department

Greg Clausen, P. Eng.
General Manager of Infrastructure Services

Recommended by the C.A.O.

Mark Mieto
Chief Administrative Officer

Report Prepared By	Division Review
Dave Kivi Co-ordinator of Transportation & Traffic Engineering Services	Robert M. Falcioni, P. Eng. Director of Roads and Transportation

Recommendation - continued:

That Rheal Street at Estelle Street be controlled with a "Stop" sign facing northbound traffic on Estelle Street, and;

That Trottier Avenue at Anizette Court intersection be controlled with a "Yield" sign facing southbound traffic on Anizette Court, and;

That McNevin Street at McKeen Street intersection be controlled with a "Yield" sign facing westbound traffic on McKeen Street, and;

That a By-Law be passed to amend Traffic and Parking By-Law 2001-1 in the City of Greater Sudbury, to implement the recommended changes, all in accordance with the report from the General Manager of Infrastructure Services, dated March 19, 2008.

Background:

There are currently many new subdivisions being developed in the City of Greater Sudbury. The following report recommends the appropriate traffic control at the newly assumed intersections:

I. Spruce Meadows Subdivision - Phase 2, Azilda

Phase 2 of Spruce Meadows Subdivision is currently being developed in Azilda (see Exhibit "A"). The City of Greater Sudbury will assume both Shane Street and Fleetwood Drive as public roads.

Fleetwood Drive intersects with Shane Street at a right angle and forms a "T" intersection. It is recommended that traffic at this intersection be controlled with a "Stop" sign facing southbound traffic on Fleetwood. This is a standard form of traffic control at a "T" intersection.

II. Hazelton Subdivision - Phase 1, Sudbury

Hazelton Subdivision is currently being developed north of Bancroft Drive (see Exhibit "B"). The City of Greater Sudbury will assume Shelbourne Street, Prescott Street and Alliston Street as public roads.

Prescott Street and Alliston Street intersect with Shelbourne Street at a right angle and form a "Cross" intersection. It is recommended that traffic at this intersection be controlled with "Stop" signs facing both westbound traffic on Prescott Street and eastbound traffic on Alliston Street.

III. Algonquin 2 Subdivision - Phase 4, Sudbury

Algonquin 2 Subdivision is currently being developed in the south end of the City (see Exhibit "C"). The City of Greater Sudbury will assume Trailside Court as a public road.

Trailside Court intersects with Trailview Drive at a right angle and forms a "T" intersection. It is recommended that traffic at this intersection be controlled with a "Stop" sign facing southbound traffic on Trailside Court.

IV. Moonglo West Subdivision - Phase 3, Sudbury

Moonglo West Subdivision is currently being developed west of Regent Street (see Exhibit "D"). The City of Greater Sudbury will assume Moonrock Avenue (from the west limit at Arnold Street to the west limit at Nova Drive).

Moonrock Avenue intersects with Nova Drive at a right angle and forms a "Cross" intersection. It is recommended that traffic at this intersection be controlled with a "Stop" sign facing southbound traffic on Nova Drive. In the future when Nova Drive is extended to the south, a "Stop" sign facing northbound traffic on Nova Drive will be installed.

V. Moonlight Ridge Subdivision - Phase 1, Sudbury

Moonlight Ridge Subdivision is currently being developed east of Levesque Street (see Exhibit "E"). The City of Greater Sudbury will assume an extension of Rheal Street from Estelle Street to the east limit at Equinox Crescent.

Rheal Street now extends easterly beyond Estelle Street to form a "T" intersection. It is recommended that a "Stop" sign facing northbound traffic be placed on Estelle Street.

Equinox Crescent intersects with Rheal Street at a right angle and forms a "T" intersection. It is recommended that traffic at this intersection be controlled with a "Stop" sign facing southbound traffic on Equinox Crescent. In the next Phase, Rheal Street will be extended further east to Hines Street and Equinox Crescent will be extended southerly to Rheal Street to form a second "T" intersection.

VI. Belanger Trottier Subdivision, Chelmsford

Belanger Trottier Subdivision is currently being developed in Chelmsford (see Exhibit "F"). The City of Greater Sudbury will assume Trottier Avenue and Anizette Court as public roads.

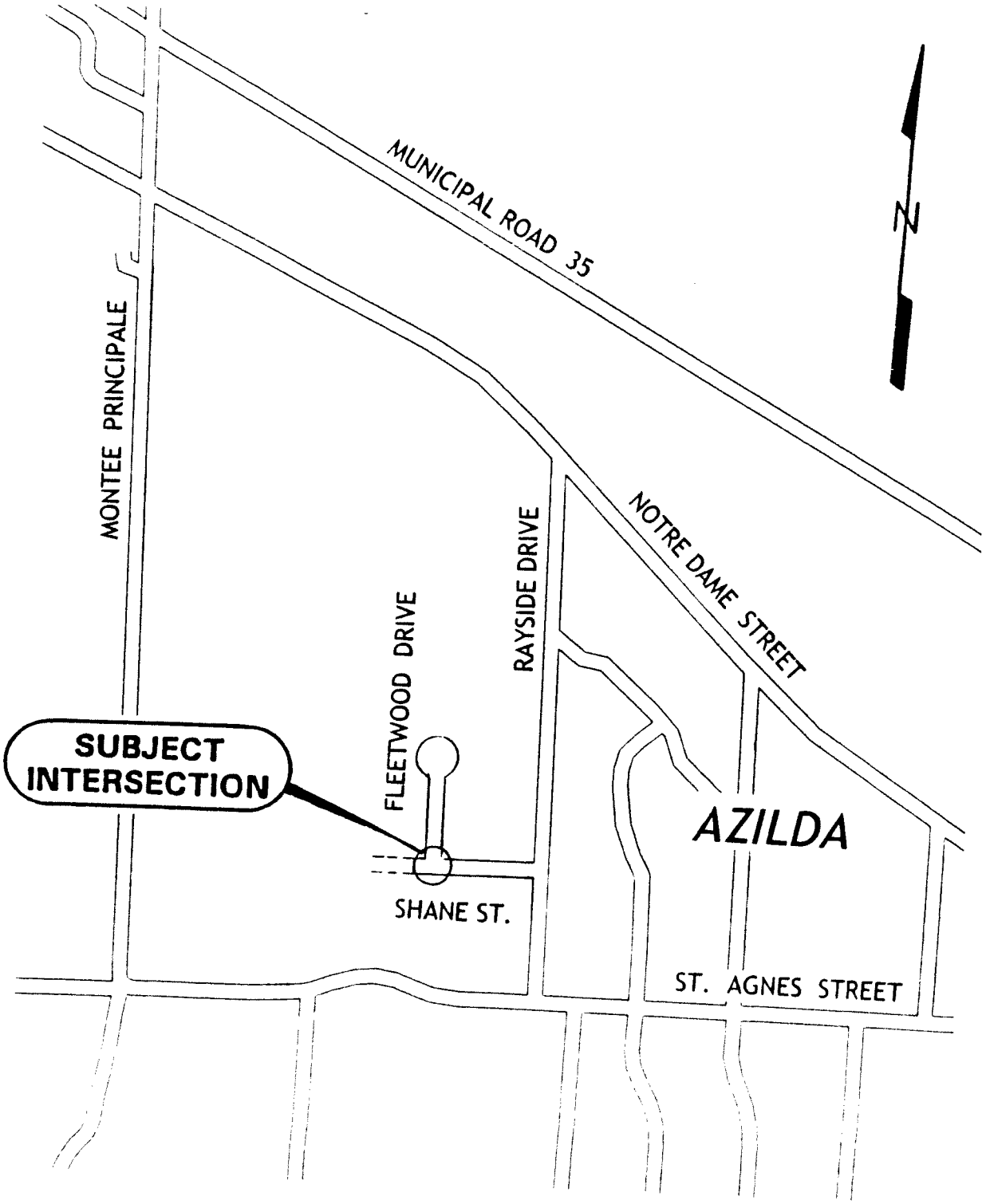
Anizette Court intersects with Trottier Avenue at a right angle and forms a "T" intersection. Due to low traffic volume from Anizette Court and adequate sight distances, it is recommended that traffic at this intersection be controlled with a "Yield" sign facing southbound traffic on Anizette Court. "Yield" signs are appropriate when sight lines are good and stopping is not alway required.

VII. McNevin Street at McKeen Street, Copper Cliff

McKeen Street intersects McNevin Street forming a "T" intersection (see Exhibit "G"). Currently, there is no traffic control at the intersection. Uncontrolled intersections have no "Stop" or "Yield" signs and the "Right of Way" rule applies. Under this rule, the driver on the left yields the " Right of Way " to the vehicle on the right. Uncontrolled intersections are becoming less common in urban areas. It is recommended that traffic at this intersection be controlled with a "Yield" sign facing westbound traffic on McKeen Street.

It is recommended that a By-Law be passed to amend Traffic and Parking By-Law 2001-1 in the City of Greater Sudbury, to implement the above recommended changes.

EXHIBIT: A



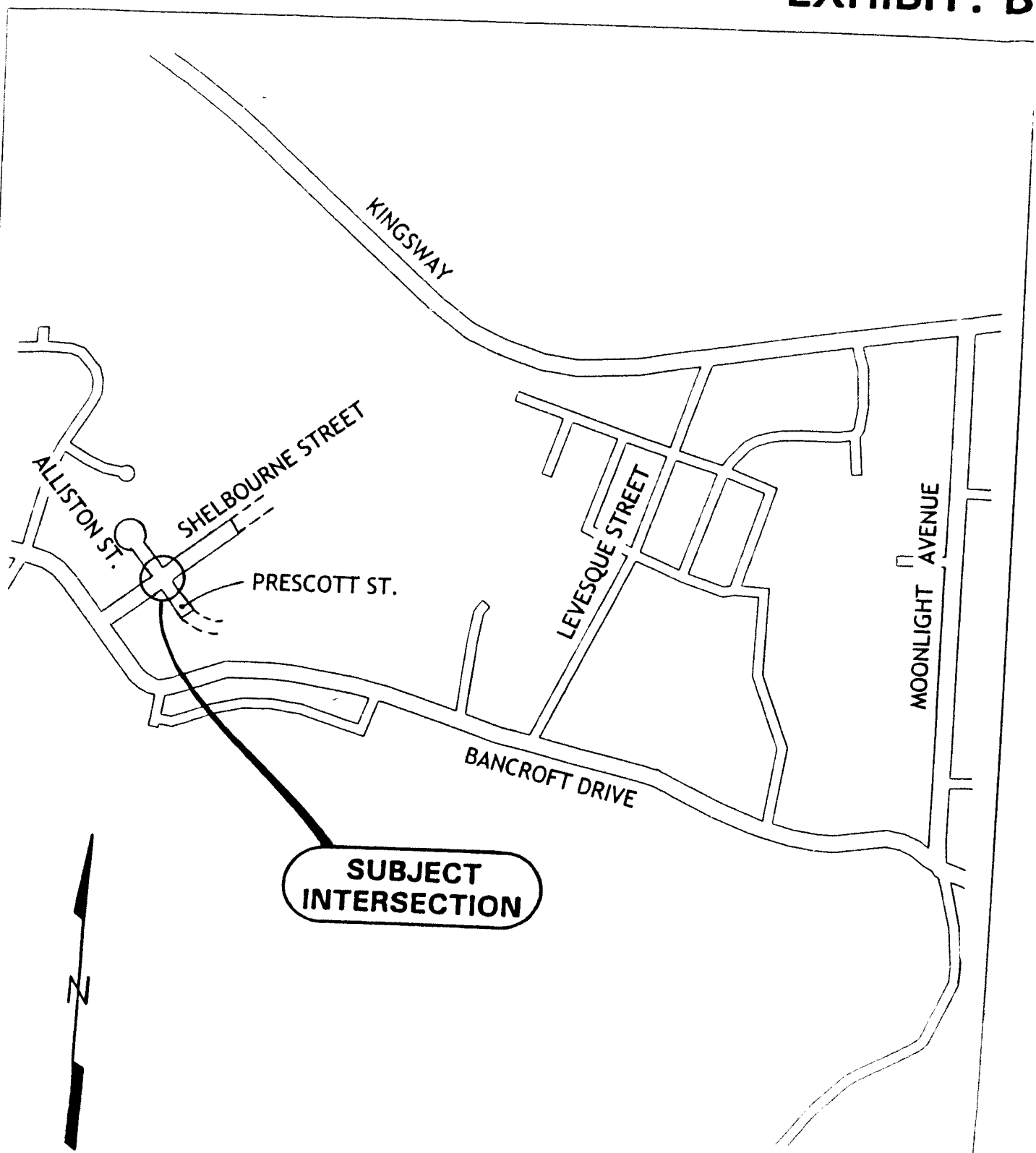
Sudbury

SPRUCE MEADOWS SUBDIVISION
PHASE 2

TRAFFIC CONTROL

NOT TO SCALE

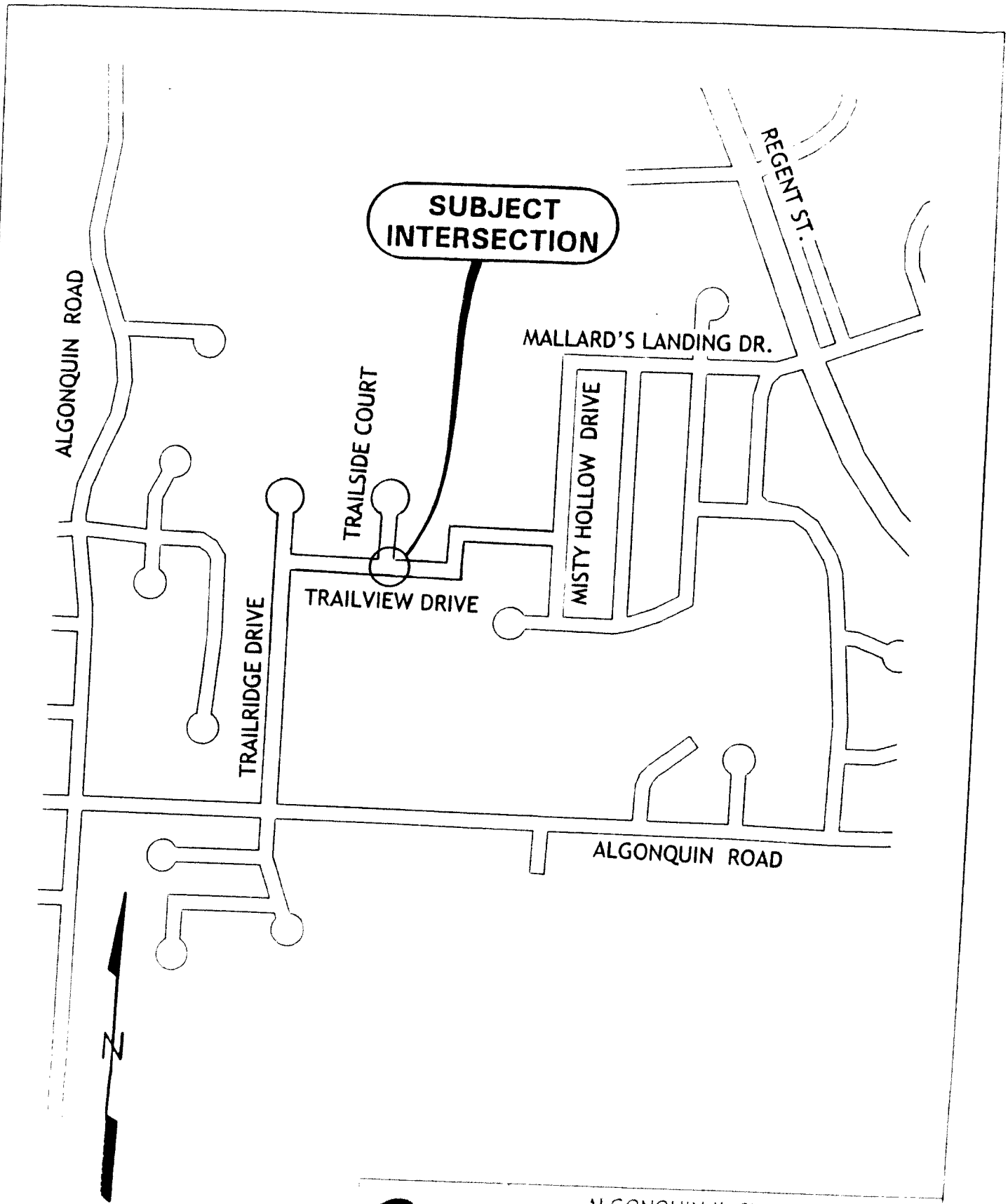
EXHIBIT: B



Sudbury

HAZELTON SUBDIVISION
PHASE 1
TRAFFIC CONTROL
NOT TO SCALE

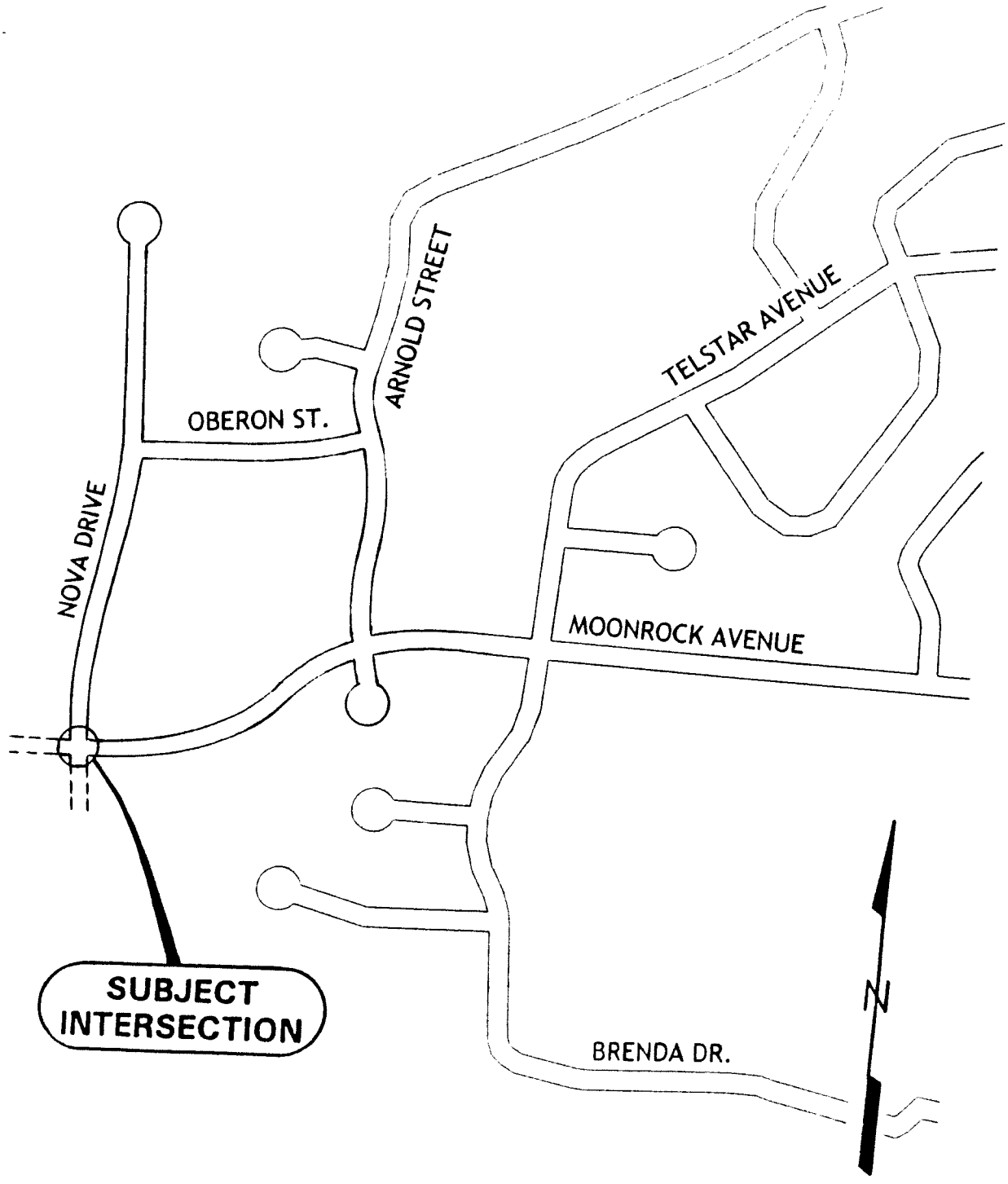
EXHIBIT: C



Sudbury

ALGONQUIN II SUBDIVISION
PHASE 4
TRAFFIC CONTROL
NOT TO SCALE

EXHIBIT: D



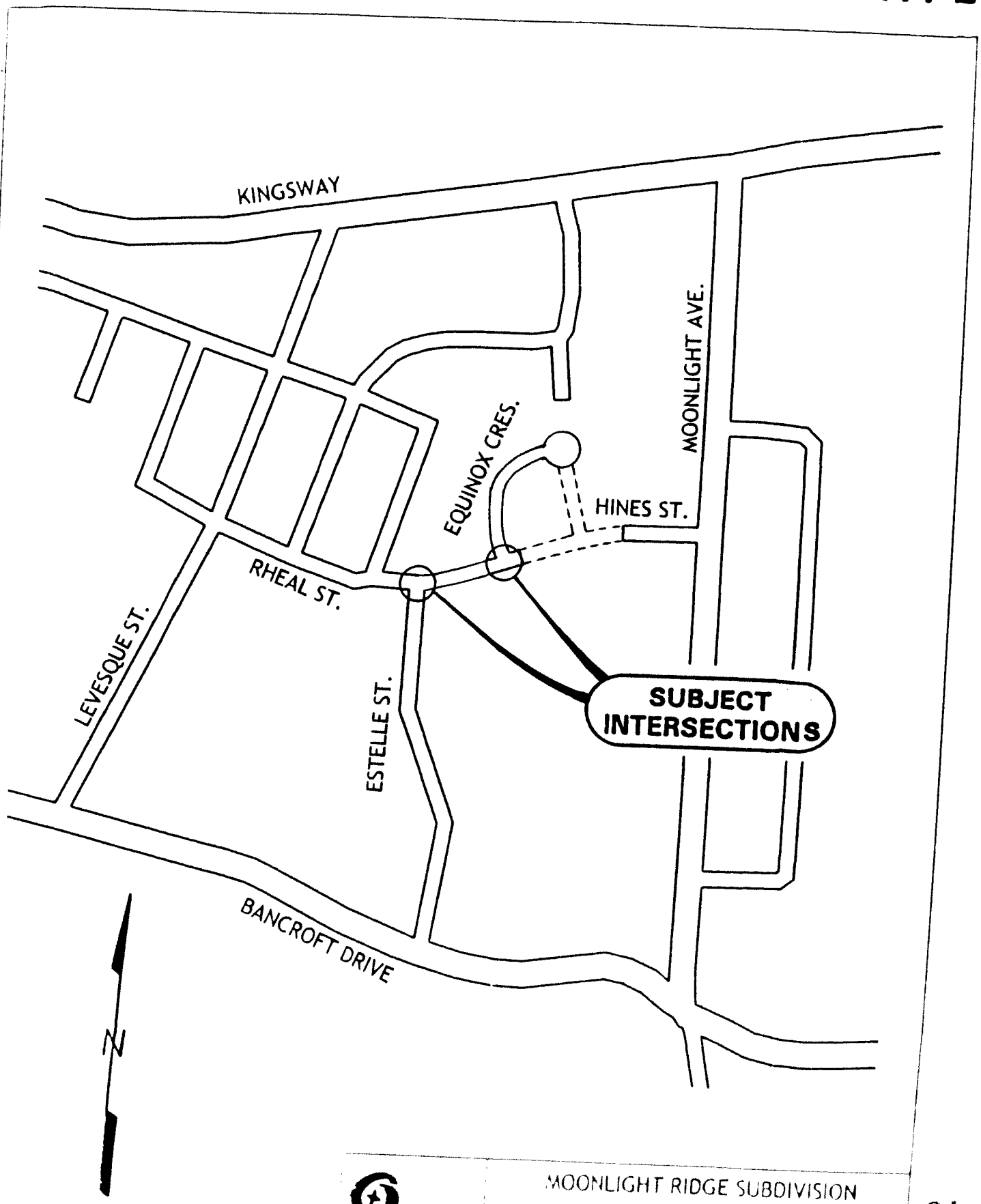
Sudbury

MOONGLO WEST SUBDIVISION
PHASE 3

TRAFFIC CONTROL

NOT TO SCALE

EXHIBIT: E



Sudbury

MOONLIGHT RIDGE SUBDIVISION
PHASE 1
TRAFFIC CONTROL

EXHIBIT: F

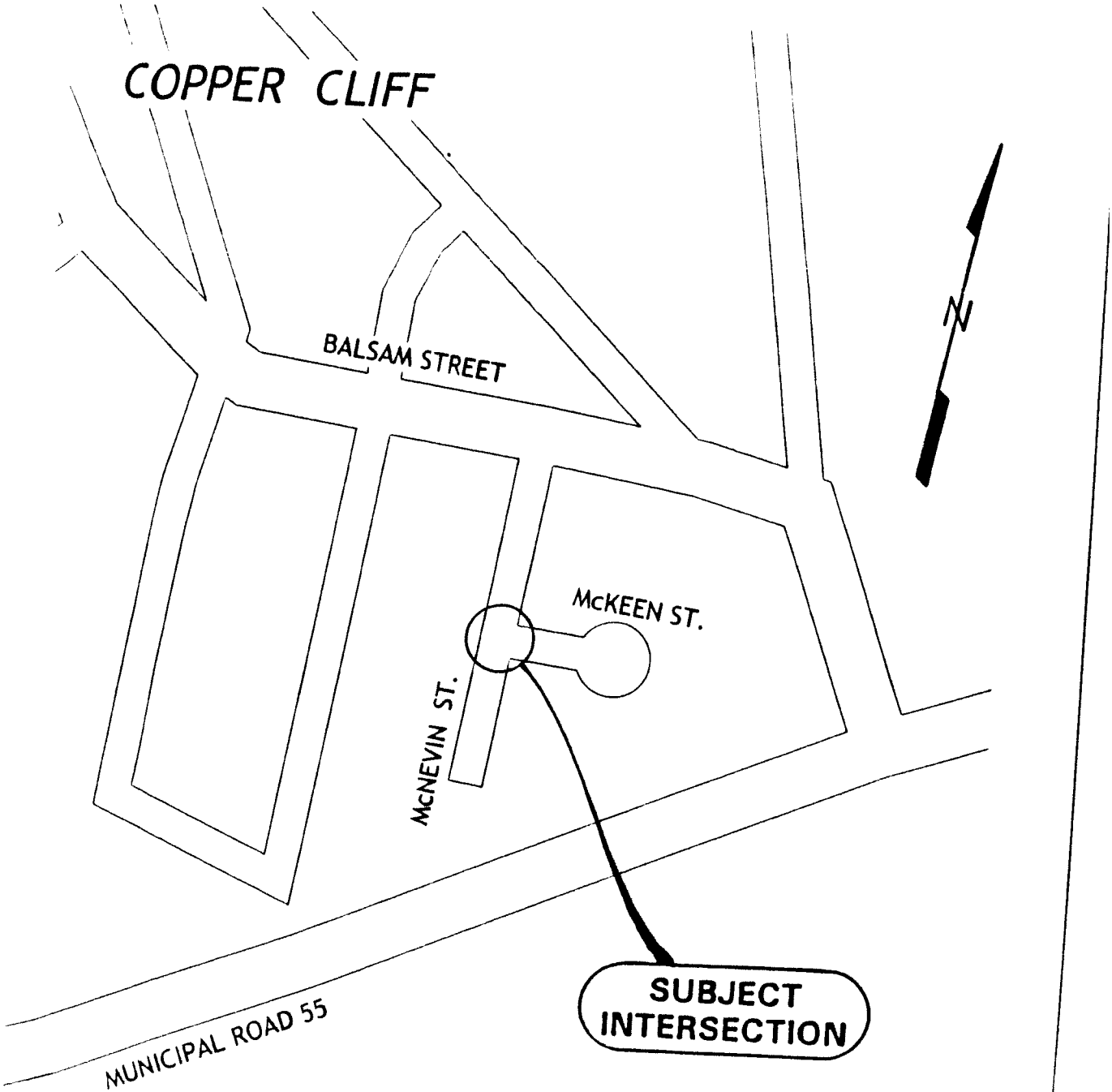
Sudbury

BELANGER TROTTIER SUBDIVISION

TRAFFIC CONTROL

NOT TO SCALE

EXHIBIT: C



Sudbury

McNEVIN STREET at McKEEN STREET

TRAFFIC CONTROL

Request for Recommendation
Traffic Committee

Greater | Grand Sudbury
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Type of Decision

Meeting Date	May 7, 2008					Report Date	April 25, 2008			
Recommendation			Yes	X	No		Priority	x	High		Low
		Direction Only					Type of Meeting	x	Open		Closed

Report Title

Intersection Traffic Control Devices

Policy Implications + Budget Impact

	This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified

X	Background attached

Recommendation

For Information Only

	Recommendation attached

Recommended by the Department Head

Greg Clausen, P. Eng.
General Manager of Infrastructure Services

Recommended by the C.A.O.

Mark Mieto
Chief Administrative Officer

Report Authored By	Division Review
Dave Kivi, Coordinator of Transportation and Traffic Engineering Services	Robert M. Falcioni, P. Eng. Director of Roads and Transportation

Background:

With respect to traffic control there are two main types of intersections that drivers will encounter on our roadways; Uncontrolled and Controlled.

Uncontrolled intersections have no signs or traffic signals, and are usually found in areas where there is not much traffic. If two vehicles come to an uncontrolled intersection from different roads at the same time, the driver on the left must let the driver on the right go first. This is often referred to as the Right of Way Rule. Uncontrolled intersections are becoming less common in urban areas. When drivers approach an intersection that does not have a stop or yield sign facing them, they may assume that the other direction must stop or yield to them.

Controlled intersections have traffic signals or signs to assign right of way. A number of traffic control devices are available to assist in the allocation of right of way between vehicles in an intersection, increasing in level of control from a yield sign to a stop sign up to full traffic control signal.

Yield Signs

Yield signs can be an effective control device at intersections or roundabouts where the normal Right of Way rule does not provide for safe and convenient traffic movement, and stop signs on one or more approaches is too restrictive.

Drivers approaching a yield sign must slow down and stop if necessary and wait till the way is clear before driving through the intersection or roundabout.

Generally, a yield sign should be considered on a minor road approach where right of way control is needed and stopping on the minor road is not always required. Adequate sight distance must also be available such that a safe approach speed on the minor road exceeds 15 km/h.

Yield signs may also be appropriate at the following locations:

1) At each approach to a roundabout

2) On an entrance ramp to a freeway or expressway

3) Where there is a channelized right turn lane

4) Within an intersection of a road with a divided highway

Stop Signs

The purpose of a stop sign is to clearly assign right of way between vehicles approaching an intersection from different directions when traffic signals are not required and yield signs are not appropriate. The stop sign requires the driver to stop the vehicle before entering the intersection, yield to any traffic in or approaching the intersection and then proceed only when the way is clear.

Stop signs should be considered at the intersection of a minor road with a major road or a through street. Stop signs should also be used when the Right Hand Rule or yield control would be unduly hazardous or at intersections that experience a pattern of collisions that can be corrected by stop control.

When reviewing traffic control requirements for new subdivisions or at intersections under construction, it is difficult to know if sight lines will be restricted due to topography, landscaping or parking. Therefore, we often recommend that stop signs be installed facing traffic on the minor road. While more restrictive than a yield sign, stop signs can provide a higher level of safety due to unforeseen circumstances.

Through Highways

A Through Highway is defined in the Highway Traffic Act as " a highway or part of highway designated as such by the Minister or by By-Law of municipality, and every such highway shall be marked by a stop sign or yield sign in compliance with the regulations of the Ministry". This means that all roads that intersect with a "Through Highway" shall be controlled with a stop sign, yield sign or traffic signals. Designating roadways as Through Highways provides a benefit to maintaining the City's Traffic and Parking By-Law 2001-1 as each intersection does not have to be listed within schedules for stop and yield signs. Through Highways also offer some flexibility in deciding whether a stop sign or yield sign is appropriate and allow for changes more easily.

All Way Stop Control

In some circumstances, it may be appropriate to install stop signs on all approaches to an intersection. The purpose of an All Way Stop is to alternate Right of Way at an intersection. All-Way Stops can be an effective means of traffic control when installed at busy intersections with similar traffic volumes.

At an intersection with stop signs at all corners, you must yield right of way to the first vehicle to come to a complete stop. If two vehicles stop at the same time, the vehicle on the left must yield to the vehicle on the right.

Traffic Signals

The Ontario Traffic Manual states that "the function of a traffic control signal is to alternate the right of way between conflicting streams of vehicular traffic or vehicular traffic and pedestrians crossing a roadway with maximum safety and efficiency".

The need for traffic signals is based on a number of criteria that requires a comprehensive engineering analysis to determine if they will provide a benefit to the intersection operation. Vehicle and pedestrian volume, collisions, speed, lane configuration and other geometric factors are all considered when determining if traffic signals are required.

Traffic signals can cost up to $150,000 to install and $3,000 to $4,000 annually to operate and maintain. Therefore, they should only be installed when they are warranted.