

Presented To:	Traffic Committee
Presented:	Tuesday, Apr 27, 2010
Report Date	Tuesday, Apr 20, 2010
Type:	Managers' Reports

## Request for Decision

### All-Way Stop Control - (1) Woodbine Avenue at Agincourt and (2) Grandview Boulevard at Moss Street

#### Recommendation

That the intersection of Grandview Boulevard at Moss Street be controlled by an all-way stop, and;

That a by-law be passed by City Council to amend Traffic and Parking By-Law 2010-1 in the City of Greater Sudbury to implement the recommended change all in accordance with the report from the General Manager of Infrastructure Services dated April 21, 2010.

#### **Background**

##### 1) Woodbine Avenue at Agincourt Avenue

At the August 26<sup>th</sup>, 2009 Traffic Committee meeting, staff was directed to conduct a peak hour traffic count at the intersection of Woodbine Avenue and Agincourt Avenue while college classes were still in session, to determine if an all-way stop is warranted.

Woodbine Avenue at Agincourt Avenue is a three legged intersection located four blocks west of Barry Downe Road (see Exhibit 'A'). Currently this intersection is controlled with a Stop sign facing southbound traffic on Agincourt Avenue. An all-way stop warrant for this intersection was previously completed based on a turning movement count that was conducted on June 13, 2008. The Minimum Volume Warrant at that time indicated that the volumes on Woodbine Avenue and Agincourt Avenue met 53% of the minimum requirements (see Exhibit 'B').

Applying the data from the turning movement count that was conducted on March 24, 2010 to the Minimum Volume Warrant indicates that the new side street volume from Agincourt Avenue is 51 vehicles per hour were 140 vehicles per hour is required (see Exhibit 'C'). A review of the City's collision information from 2004, 2008 and 2009, revealed that there were no collisions that may be susceptible to relief through an all-way stop during this three year period. For a Minor Collector roadway, the Collision Warrant requires a minimum of three collisions per year over a three year period.

Based on the traffic volumes and collision history, staff does not recommend installing an all-way stop at the

#### Signed By

##### **Report Prepared By**

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Co-ordinator of Transportation & Traffic  
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*Digitally Signed Apr 21, 10*

##### **Division Review**

Robert Falcioni, P.Eng.  
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##### **Recommended by the Department**

Greg Clausen, P.Eng.  
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##### **Recommended by the C.A.O.**

Doug Nadorozny  
Chief Administrative Officer  
*Digitally Signed Apr 22, 10*

intersection of Woodbine Avenue and Agincourt Avenue.

As previously approved by City Council, No Parking signs have been installed on the north side of Woodbine Avenue from Agincourt Avenue to 120 metres east of Agincourt Avenue. This section of Woodbine Avenue will also be evaluated under the City's Traffic Calming Policy.

## 2) Grandview Boulevard at Moss Street

At the December 3<sup>rd</sup>, 2009 Traffic Committee meeting, staff was directed to conduct a peak hour traffic count at the intersection of Grandview Boulevard and Moss Street prior to April 2010 to determine if an all-way stop is warranted.

Grandview Boulevard at Moss Street is a three legged intersection located north of Lasalle Boulevard (see Exhibit 'D'). Currently this intersection is controlled with a Stop sign facing westbound traffic on Moss Street.

Applying the data from the turning movement count that was conducted on March 24, 2010 to the City's new Minimum Volume Warrant indicates that the total vehicle volume meets 91% of the volume requirements (see Exhibit 'E'). A review of the City's collision information from 2004, 2008 and 2009, revealed that there were no collisions that may be susceptible to relief through an all-way stop during this three year period. For a Minor Collector roadway, the Collision Warrant requires a minimum of three collisions per year over a three year period.

While the traffic volumes fall just below the warrants, staff recommends installing an all-way stop at the intersection of Grandview Boulevard and Moss Street. To address concerns with pedestrian crossings, crosswalks will also be painted in conjunction with installing the all-way stop.

CITY OF GREATER SUDBURY  
SCHEDULE "O" TO BY-LAW 2001-1

STOPS AT INTERSECTIONS

(1)  
Intersection

(2)  
Direction of Travel

**ADD:**

Grandview Boulevard – Moss Street (Sudbury)

North and South on Grandview Boulevard  
West on Moss Street

CITY OF GREATER SUDBURY  
SCHEDULE "N" TO BY-LAW 2001-1  
THROUGH HIGHWAYS

(1)  
Highway

(2)  
From

(3)  
To

**DELETE:**

Grandview Boulevard  
(Sudbury)

East Limit, Montrose Avenue

North Limit, Wedgewood Drive

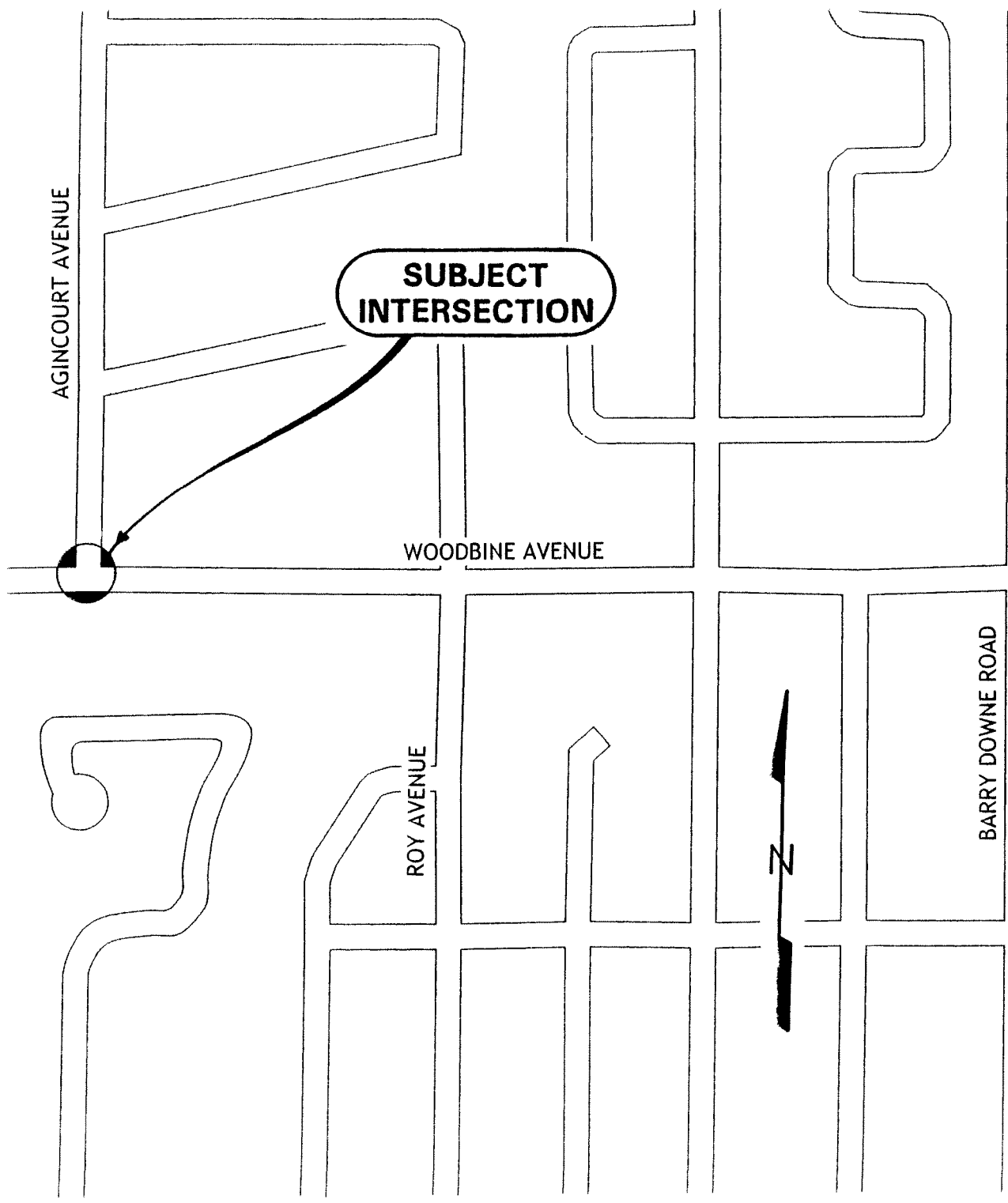
**ADD:**


Grandview Boulevard  
(Sudbury)

East Limit, Montrose Avenue

North Limit, Moss Street

EXHIBIT: A



	ALL-WAY STOP CONTROL		
	WOODBINE AVENUE at AGINCOURT AVENUE		
	NOT TO SCALE		2010-04-15

**EXHIBIT: B**
**CITY OF GREATER SUDBURY  
ALL-WAY STOP WARRANTS**

Location:	Woodbine @ Agincourt	Date:	April 16, 2010
Date of TM Count:	June 13, 2008	Analyst:	JR
Type of Intersection:	3 Way		
Roadway Type	Minor Collector		
AADT of Main Road:	4800		

**All-Way Stop Warrant Summary**

Warrant #1	Minimum Vehicle Volume	53.3	%
Warrant #2	Collision History	22.2	%
Warrant #3	Traffic Control Signals	No	Y/N

<b>All-Way Stop Warranted?</b>	<b>No</b>	Y/N
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**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	477	100.0%
Veh + Pedestrian volume from side street is ≥	200/hr	140/hr	N/A	77	55.0%
Traffic Split	70/30	70/30	70/30	84 / 16	53.3%

**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*	2/3	22.2%

<b>Warrant #3</b>	<b>Traffic Control Signals are warranted and urgently needed, signs to be used as interim measures.</b>	<b>No</b>	<b>Y/N</b>
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\* Only those collisions susceptible to relief through multi-way stop control must be considered (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.

**EXHIBIT: C**
**CITY OF GREATER SUDBURY**  
**ALL-WAY STOP WARRANTS**

Location:	<u>Woodbine Ave at Agincourt Ave</u>	Date:	<u>April 16, 2010</u>
Date of TM Count:	<u>March 24, 2010</u>	Analyst:	<u>JR</u>
Type of Intersection:	<u>T</u>		
Roadway Type	<u>Minor Collector</u>		
AADT of Main Road:	<u>4600</u>		

**All-Way Stop Warrant Summary**

Warrant #1	Minimum Vehicle Volume	<u>36.4</u>	%
Warrant #2	Collision History	<u>0.0</u>	%
Warrant #3	Traffic Control Signals	<u>No</u>	Y/N

<b>All-Way Stop Warranted?</b>	<u>No</u>	Y/N
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**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 $\geq$	500/hr	350/hr	250/hr	412	100.0%
Veh + Pedestrian volume from side street is $\geq$	200/hr	140/hr	N/A	51	36.4%
Traffic Split	70/30	70/30	70/30	88 / 12	40.0%

**Warrant #2 - Collision History**

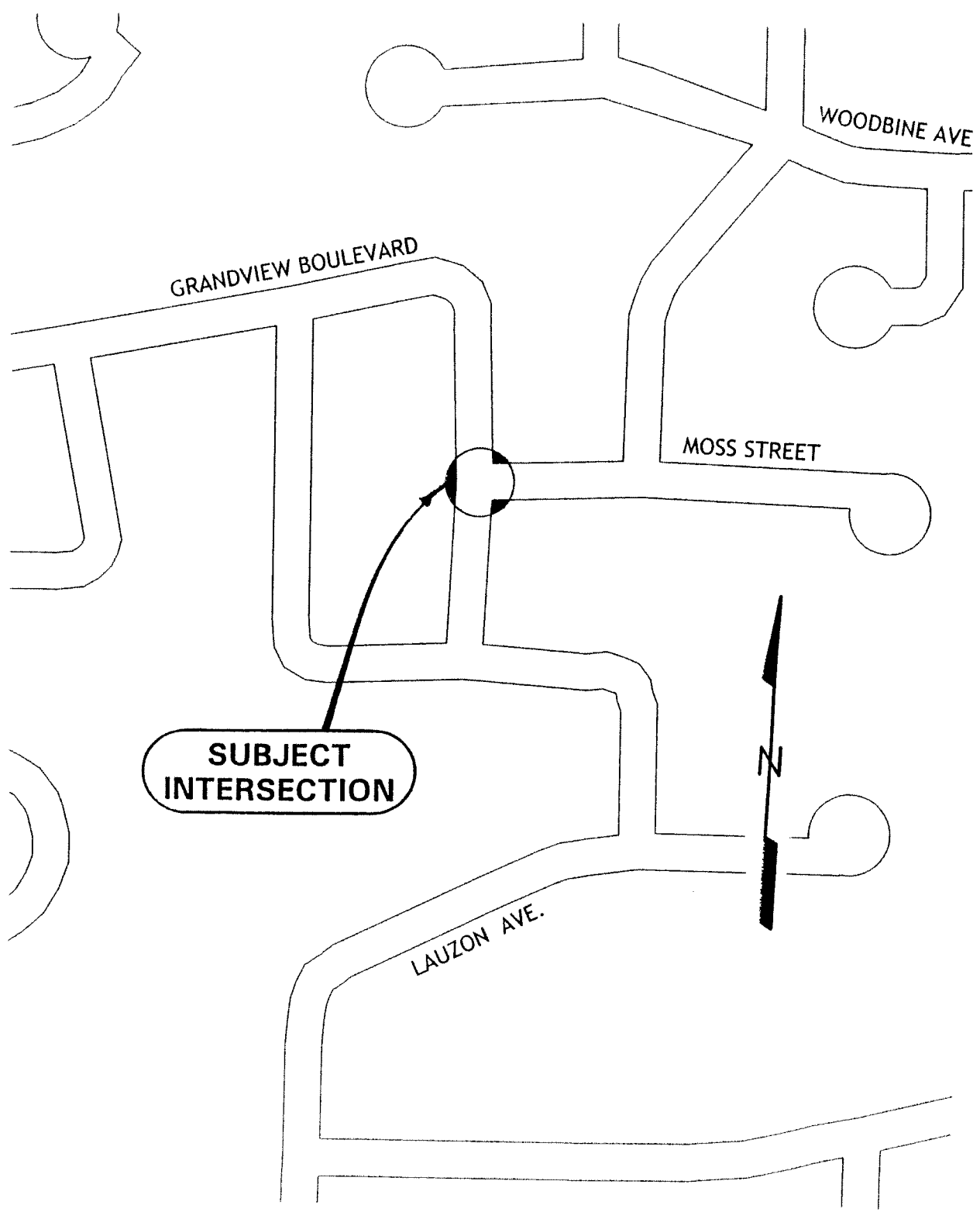
Roadway Type	Arterial/Major Collector	Minor Collector	Local	Number of Collisions per year	Percent Compliance
Collisions per Year over 3 year period	4*	3*	2*	0	0.0%


<b>Warrant #3</b>	<b>Traffic Control Signals are warranted and urgently needed, signs to be used as interim measures.</b>	<u>No</u>	Y/N
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\* Only those collisions susceptible to relief through multi-way stop control must be considered (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.

EXHIBIT: D



	ALL-WAY STOP CONTROL		
	GRANDVIEW BOULEVARD at MOSS STREET		
	NOT TO SCALE		2010-04-15



**EXHIBIT: E****CITY OF GREATER SUDBURY  
ALL-WAY STOP WARRANTS**

Location:	Grandview Blvd at Moss St	Date:	April 16, 2010
Date of TM Count:	March 23, 2010	Analyst:	JR
Type of Intersection:	T		
Roadway Type	Minor Collector		
ADT of Main Road:	2431		

**All-Way Stop Warrant Summary**

Warrant #1	Minimum Vehicle Volume	91.8	%
Warrant #2	Collision History	0.0	%
Warrant #3	Traffic Control Signals	No	Y/N

**All-Way Stop Warranted?** No 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 $\geq$	500/hr	350/hr	250/hr	321	91.8%
Veh + Pedestrian volume from side street is $\geq$	200/hr	140/hr	N/A	168	100.0%
Traffic Split	70/30	70/30	70/30	52 / 48	100.0%

**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*	0	0.0%

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

No

Y/N

\* Only those collisions susceptible to relief through multi-way stop control must be considered (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.