Vision: *The City of Greater Sudbury is a growing, world-class community bringing talent, technology and a great northern lifestyle together.*

Agenda

Operations Committee

meeting to be held

Monday, July 9th, 2012

at 9:00 am

Tom Davies Square

OPERATIONS COMMITTEE AGENDA

Operations Committee Meeting
Monday, July 9, 2012
Tom Davies Square

COUNCILLOR JACQUES BARBEAU, CHAIR

Claude Berthiaume, Vice-Chair

9:00 a.m. OPERATIONS COMMITTEE MEETING
COUNCIL CHAMBER

Council and Committee Meetings are accessible. For more information regarding accessibility, please call 3-1-1 or email clerks@greatersudbury.ca.

DECLARATIONS OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

CONSENT AGENDA

(For the purpose of convenience and for expediting meetings, matters of business of repetitive or routine nature are included in the Consent Agenda, and all such matters of business contained in the Consent Agenda are voted on collectively.

A particular matter of business may be singled out from the Consent Agenda for debate or for a separate vote upon the request of any Councillor. In the case of a separate vote, the excluded matter of business is severed from the Consent Agenda, and only the remaining matters of business contained in the Consent Agenda are voted on collectively.

Each and every matter of business contained in the Consent Agenda is recorded separately in the minutes of the meeting.)

ROUTINE MANAGEMENT REPORTS

C-1. Report dated June 26, 2012 from the General Manager of Infrastructure Services regarding Standardization of Transit Fleet with Nova Buses. **6 - 7**
(RECOMMENDATION PREPARED)

(This report recommends the standardization of the transit fleet by continuing our purchase agreement with Nova Bus, a division of Prevost Car Inc.)

CORRESPONDENCE FOR INFORMATION ONLY

C-2. Report dated May 28, 2012 from the General Manager of Infrastructure Services regarding Winter Control Operations Update - April 2012. **8 - 10**
(FOR INFORMATION ONLY)

(This report provides information for Council on the updated projected financial results of the 2012 Winter Control Operations, up to and including April 2012.)

C-3. Report dated May 14, 2012 from the General Manager of Infrastructure Services regarding Cost Comparison - Use of City Forces versus Contractors - Paris Street Watermain Break. **11 - 15**
(FOR INFORMATION ONLY)

(As requested by Council, this report compares the cost of using City forces versus hiring a Contractor to complete the Paris Street Watermain Break.)

REGULAR AGENDA

MANAGERS' REPORTS

R-1. Report dated June 13, 2012 from the General Manager of Infrastructure Services regarding Removal of School Bus Loading Zones. **16 - 20**
(RECOMMENDATION PREPARED)

(Staff has been informed by the Sudbury Student Services Consortium that the school bus loading zone on Davidson Street is no longer required and may be removed. Staff reviewed the remainder of the school bus loading zones and confirmed with the Consortium that several others may also be removed. This report recommends the removal of several school bus loading zones and the removal of any related parking prohibitions.)

R-2. Report dated May 30, 2012 from the General Manager of Infrastructure Services regarding New Traffic Signal Installations - Kelly Lake Road and Copper Street. **21 - 22**
(RECOMMENDATION PREPARED)

(As part of the City's Capital Construction Program, new traffic signals are being constructed at the intersection of Kelly Lake Road and Copper Street. The contract for this project will be tendered this summer by the City and it is expected that the project will be completed later this summer. An amendment to the City's Traffic and Parking By-Law 2010-1 is required to implement the new traffic signals.)

R-3. Report dated May 30, 2012 from the General Manager of Infrastructure Services regarding Kingsway at Third Avenue - Traffic Signals. **23 - 27**
(RECOMMENDATION PREPARED)

(The report evaluates the need for traffic signals at the intersection of the Kingsway and Third Avenue. Other options to improve safety at the intersection will also be reviewed.)

R-4. Report dated June 26, 2012 from the General Manager of Infrastructure Services regarding Informational Agricultural Equipment Signage. **28 - 29**
(RECOMMENDATION PREPARED)

(Councillors Berthiaume, Dupuis and Dutrisac have requested the installation of these signs along City roadways.)

R-5. Report dated June 26, 2012 from the General Manager of Infrastructure Services regarding Stoop and Scoop Signage Along Urban Residential Roadways. **30 - 32**
(RECOMMENDATION PREPARED)

(Councillor Dupuis requested the installation of these signs along City roadways.)

ADDENDUM

CIVIC PETITIONS

QUESTION PERIOD AND ANNOUNCEMENTS

NOTICES OF MOTION

ADJOURNMENT

BRIGITTE SOBUSH, DEPUTY CITY CLERK

FRANCA BORTOLUSSI, COUNCIL ASSISTANT

Request for Decision

Standardization of Transit Fleet with Nova Buses

Presented To:	Operations Committee
Presented:	Monday, Jul 09, 2012
Report Date	Tuesday, Jun 26, 2012
Type:	Routine Management Reports

Recommendation

That the Operations Committee recommend that Council approves the extension of the current procurement agreement with Nova Bus, a division of Prevost Car Inc., until 2017 subject to the annual acceptance of the purchase price as established by the Nova Bus Standard Pricing Policy.

Finance Implications

Greater Sudbury Transit can meet its capital needs for bus replacements for the foreseeable future by utilizing several sources of funding including, the Transit - Equipment and Vehicle Reserve Fund, Provincial Gas Tax funding and Capital Envelopes as detailed within the Transit Long Term Capital Financial Plan.

Signed By

Report Prepared By
Eric Bertrand
Manager of Fleet Services
Digitally Signed Jun 26, 12

Division Review
Roger Sauvé
Director of Transit & Fleet Services
Digitally Signed Jun 26, 12

Recommended by the Department
Greg Clausen, P.Eng.
General Manager of Infrastructure Services
Digitally Signed Jun 26, 12

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed Jun 26, 12

Background

The Greater Sudbury Transit fleet is comprised of sixty (60) buses, which collectively travel in excess of four (4) million kilometres annually. The average cost of a new fully accessible forty (40) foot bus in Ontario exceeds $450,000.00. The Transit Long Term Capital Financial Plan which has been approved by Council recommends replacing buses when they have seen approximately eighteen (18) years of active service, depending on the condition of the bus.

The current Greater Sudbury Transit fleet includes thirty-two (32) Nova Buses. The Nova Bus has proven to be the best fit for our City as it is the most reliable, functional and economical bus available in the industry. One major factor is the stainless steel structure which eliminates the need for mid-life rebuild due to corrosion. The Nova bus provides overall good customer service with few if any complaints and is the preferred choice of our maintenance staff and our operators.

The Transit Long Term Capital Financial Plan currently recommends replacing three (3) buses in 2013, five (5) buses in 2015 and four (4) buses in 2016.

The City of Greater Sudbury has received a proposal from Nova Bus, a division of Prevost Car Inc., which

extend the agreement to buy buses for a period of up to ten (10) years using the 2011 base price and applying inflationary and currency adjustments annually as detailed in the Nova Bus Standard Pricing Policy.

Staff have reviewed the proposal and recommends moving forward with a standardized fleet by purchasing Nova Buses. This does not commit the City to purchasing any or all of its buses from Nova Bus should circumstances change, it simply guarantees a price for up to 10 years.

Orders for buses must be placed almost one (1) year prior to the requested delivery date. Standardizing the fleet and having a vendor of record will allow Transit staff to strategically plan for delivery dates and place orders based on replacement requirements rather than manufacturer's availability dates.

Previously, Greater Sudbury Transit negotiated excellent purchase prices with Nova Bus. The new proposal will secure our price which is currently below the Provincial average and better than the Provincial Joint Procurement Agreement.

Therefore staff recommends that the Operations Committee recommend that Council approve the extension of the current procurement agreement with Nova Bus, a division of Prevost Car Inc., until 2017 subject to the annual acceptance of the purchase price as established by the Nova Bus Standard Pricing Policy.

For Information Only

Winter Control Operations Update - April 2012

Presented To:	Operations Committee
Presented:	Monday, Jul 09, 2012
Report Date	Monday, May 28, 2012
Type:	Correspondence for Information Only

Recommendation

For Information Only

Background

Report attached.

Signed By

Report Prepared By
Shawn Turner
Manager of Financial & Support Services
Digitally Signed May 28, 12

Division Review
David Shelsted, MBA, P.Eng.
Director of Roads & Transportation Services
Digitally Signed May 28, 12

Recommended by the Department
Greg Clausen, P.Eng.
General Manager of Infrastructure Services
Digitally Signed May 28, 12

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed May 28, 12

BACKGROUND

This report provides the projected financial results of the 2012 winter roads operations up to and including April 2012. The projected result for the month of April is a $470,000 under expenditure as shown in Table 1. For the first four months of 2012 the projected result is a $920,000 under expenditure. Certain estimates were necessary to account for outstanding invoices.

Table 1
2012 Winter Control Summary
For the Month Ending: April 30, 2012

	Annual Budget	April			2012 YTD		
		Budget	Actual	Variance	Budget	Actual	Variance
Administration & Supervision	2,081,259	336,997	336,669	328	1,378,857	1,380,564	(1,707)
Sanding/Salting/Plowing	6,065,348	544,633	79,113	465,520	4,039,929	3,732,950	306,979
Snow Removal	929,486	0	0	0	768,896	276,422	492,474
Sidewalk Maintenance	834,440	16,689	7,310	9,379	525,696	530,814	(5,118)
Winter Ditching/Spring Cleanup	1,448,650	520,297	545,693	(25,396)	1,162,188	1,019,228	142,960
Miscellaneous Winter Roads	3,814,025	478,133	460,475	17,658	2,152,317	2,169,358	(17,041)
Totals	15,173,208	1,896,749	1,429,260	467,489	10,027,883	9,109,336	918,547

April Winter Control Activities

As shown in Table 2 below, the City received 32 centimetres or 177 percent of the average April snowfall. This was primarily the result of one snowfall on April 20th. The monthly under expenditure for April is approximately $470,000, largely attributable to a positive variance in Sanding/Salting/Plowing.

TABLE 2
2012 Snowfall

	Jan.	Feb.	Mar.	Apr.	Nov.	Dec.	Total
Normal 30 year avg. (cm)	64	50	39	18	32	64	267
2012 Actual (cm)	98	42	45	32			
% of Actual to Normal	153	84	116	177			

Year to Date Winter Control Activities

During the first four months of 2012, the City realized an under expenditure of approximately $920,000. $500,000 of the under expenditure is attributable to Snow Removal and $300,000 is related to an under expenditure in Sanding/Salting/Plowing.

Summary

In summary, winter control operations in the month of April resulted in an under expenditure of approximately $470,000. For the first four months of 2012, winter control operations are under budget by approximately $920,000 or 9.2 percent of the year to date budget.

For Information Only

Cost Comparison - Use of City Forces versus Contractors - Paris Street Watermain Break

Presented To:	Operations Committee
Presented:	Monday, Jul 09, 2012
Report Date	Monday, May 14, 2012
Type:	Correspondence for Information Only

Recommendation

For Information Only

Signed By

Report Prepared By
Nick Benkovich
Director of Water/Wastewater Services
Digitally Signed May 14, 12

Recommended by the Department
Greg Clausen, P.Eng.
General Manager of Infrastructure Services
Digitally Signed May 14, 12

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed May 16, 12

Introduction

During the 2012 budget meeting held on December 5, 2011 Council requested an information report explaining the cause and detailing the costs emanating from a watermain break repair on Paris Street about 30m south of the intersection of Ramsey Lake Road. This report provides the requested information including a detailed explanation of the mechanisms causing the break and a cost comparison between the City's contracted service provider and City forces for the same repair.

The watermain break was on 900mm "Hypresscon" concrete pressure pipe installed in 1993. Given the relatively young age of the infrastructure involved staff commissioned a forensic investigation to establish the cause of the break and provide a condition assessment of the pipe itself. This report also presents the findings of the forensic investigation.

Background

On October 10, 2011 staff discovered a leak on the 900mm "Hypresscon" water main located on the west side of Paris Street and south of the intersection of Ramsey Lake Road. The leak occurred in a particularly sensitive location as the large watermain involved conveys water from the Ellis Reservoir and the Wanapitei Water Treatment Plant and David Street Filtration Plant to the entire south end of the Sudbury Distribution System. The location of the break had some additional risk factors to consider; Health Sciences North is located adjacent to the break location and both the intersection of Paris St at Ramsey Lake Road and Paris Street itself are extremely busy multi-lane thoroughfares.

Because of the sensitivity of the location, substantial preplanning was conducted prior to commencing the repair to deal with several potentially significant risk issues:

- Arrangements for full time police presence for traffic control and to assure access to the hospital for emergency vehicles;
- Coordination with hospital officials to maintain an uninterrupted water supply and minimize disruptions to hospital services;
- Public notifications to the travelling public through regular public service announcements and public advisories.

Following completion of preparations for traffic control and alternate water supply for the hospital (and contingency plans); excavation commenced on October 15 to effect the repairs. Because of the scope of the work and the requirement to work around the clock and weekends the City's contractor was called in to perform the repair. Once the pipe was exposed, it was confirmed that the pipe was leaking at a pipe joint which eventually caused a break at a pipe joint. Closed circuit television camera inspection identified a second area of concern south of the original location. Excavation at another suspected break location about 50m south of the initial location was also undertaken. Repairs to both areas of the watermain were completed on October 19 and final road restoration was completed using permanent repair methodology (See Appendix 1) October 27, 2012.

Part A – Forensic Investigation

Forensic Assessment Report

The watermain that failed is a 900mm 'Hypresscon" concrete pressure pipe installed in 1993 to American Water Works Association (AWWA) Standard C301. This type of pipe is known to be very dependable with a typical expected lifespan of at least 75 years. Greater Sudbury has experienced very few breaks on our inventory of this type of pipe, therefore based on industry experience this break was considered to be premature. Consequently, staff commissioned Genivar Inc. to investigate and determine the cause of the break and provide a general condition assessment of the watermain.

The following is a summary of relevant extracts from the Genivar Report to illustrate findings related to the cause of the break:

Cause of the Break (Initial Location)

- Based on the assessment, it is believed that the break was caused by improper installation of the rubber gasket around the spigot of the pipe at the invert.
- At the break location the gasket was found to be not properly embedded within the spigot groove but rather protruding outside the spigot and pinched between the spigot and bell.
- The pinched gasket eventually permitted water to leak outside the pipe causing localized deterioration of the pipe which eventually caused the watermain to break.

The Genivar Report goes on to explain the failure mechanism through the following progression of events:

1. *"Over time, leaking water from the pinched gasket location would have eroded the pipe's concrete liner and would have caused deterioration of the grout surrounding the joint. The initial water leakage may have been minor and may not have been detectable during commissioning. Any initial watermain leakage may have been within the allowable two hour leakage according to provincial hydrostatic testing guidelines*
2. *As the concrete liner eroded a larger crack would be created resulting in increased water leakage that would undermine the existing pipe bedding.*

3. *The existing lateral forces on the pipe combined with compromised bedding would have further increased the gap at the obvert (top)of the joint resulting in increased flows from the pipe joint and an increase in pressure that would ultimately exceed the pipe's loading capacity leading to the break."*

Genivar also concluded that the recent (2009) major road reconstruction on this section of Paris St. would not have contributed to the break of the watermain as only road resurfacing and curb relocation occurred at the watermain break location.

Second Potential Break Location (52m South of Original Break Location)

A closed circuit television (CCTV) investigation of adjacent sections of watermain identified an open crack on the internal lining of the pipe at a second location about 52m south of the original location of the break. Genivar states that upon excavation to permit further investigation the crack was found to minor with little penetration into the concrete liner and the crack did not pose any issues to the structural integrity of the pipe.

Watermain Condition Assessment

The Genevar report also provided a general condition analysis of a 187m section of the water main via CCTV inspection extending 64m north and 123m south of the initial break location. This inspection confirmed that except for the one break location, the watermain was found to be in good condition.

This confirms that although manufacturer's warranties had long since expired, the 900mm watermain condition is consistent with manufacturer's expectations and should continue to maintain its integrity for the remainder of its expected lifespan.

Part B - Repair Costs

On October 15, 2011 the City's contractor (under authority of Tender Eng 11-42: Emergency Water & Wastewater Repairs) commenced work to repair the broken watermain. Total costs for the repair total to approximately $351,300 which includes the costs for policing (traffic control), CCTV inspection of adjacent pipe sections, pipe entry, and visual inspections, pipe and repair materials, and road reconstruction and paving, materials, equipment, and labour.

Comparison with City Forces

To develop a cost comparison between completing the repair with City forces compared to Contractor it was necessary to use key assumptions. These key assumptions are presented in **Appendix 1** which is attached to this report.

The total repair costs for City forces to perform the repair are estimated at **$417,400**. A breakdown of the details of this cost comparison is presented in Table 1 below:

Table 1 – Actual Contracted Costs versus Estimated City Costs

Cost	Contractor	City Estimate
Police Traffic Control	$40, 627	$40, 627
Pipe & Repair Parts	$63,580	$63,580
Inspections- (CCTV & Visual)	$2,737	$2,737
Contractor – Labour & Equipment	$244,400	$310,500
Total	**$351,300**	**$417,408**

The cost difference of just over **$66,100** is primarily from Collective Bargaining Agreement requirements that restrict employees from working shift work and specifies premium pay rates apply for any work done by CGS employees prior to 8 am or after 4:30 pm Monday to Friday or for any work on weekends.

To reduce the cost difference between contractors and City forces to complete more of these types of repairs in the future, we continue to explore any opportunity to obtain consent from the local union for straight time afternoon and weekend shifts which could reduce a portion of this cost difference.

Additionally, we continue working on building greater operational efficiencies into the routine procedures for infrastructure repairs both within the Water / Wastewater and Roads operational Divisions.

Appendix 1: Key Assumptions

To make a cost comparison between the City and contractor the following key assumptions were used to develop the estimate for City staff costs:

1. **Common Costs** - Many of the costs are independent of labour and some equipment costs and so would remain whether the repair was completed by either City forces or contractors. For example, police traffic control, pipe & repair materials, preplanning and contingency (to deploy emergency hose reel) if necessary, and inspections would be the same under each scenario.

2. **Permanent Road Restoration Methodology** - To produce overall savings, permanent road restoration methodology was used. Despite the additional time and resources spent during this initial repair phase this methodology was implemented in an effort to minimize future settlement and / or differential heaving of the road sub-base granular materials leading to future rework.

   Permanent road repair methodology prescribes the use of native materials where appropriate and a compaction procedure for granular backfill materials that stipulates that the material be backfilled in 46cm lifts and compacted to minimum compaction standards before adding the next layer of material. Achieving proper compaction standards depends on the moisture content of the material being compacted. If the material is too wet or too dry compaction standards cannot be achieved. This factor significantly impacted the completion timing of the road repair portion of this job because wet weather and conditions made compaction work difficult. However, the increased time and costs will be beneficial in the long term.

3. **Staffing** - City staff costs have been substituted directly for each contractor employee; crew sizes, productivity, and employee work hours were rated equally for our cost comparison.

4. **Collective Bargaining Agreement** – With the exception of the two notes below, the current CGS Collective Bargaining Agreement (CBA) requirements have been factored into estimating costs for City forces, including necessary premium rates associated with evenings and weekend work.

i) Overtime premiums for City staff were calculated and time and one half for all overtime despite the fact that some portion of the premiums would be payable at double time for Sunday work because of difficulties in estimating this distinction. Meal allowances were not calculated although would likely have applied.
ii) It should be noted that only base hourly rates for City staff were used for the estimates as it would not be possible to accurately estimate the Pay for Knowledge Premiums for Ministry of Environment certification licenses in the labour cost estimate without knowing exactly which specific employees were on site.

These differences will result in marginally understating the CGS' labour cost estimates.

5. **Employment Standards Act** – Because of the significant impact on costs, full compliance with the Employment Standards Act maximum daily and weekly hours of work criteria have been factored into the cost estimates.

This cost is driven by the requirement to provide employees in Ontario 11 hours of rest between shifts. For City staff, this means that if this 11 hour period is infringed on by extra work hours (ie overtime), staff must still be paid their base 40 hour week even though they may still be on the rest period and unavailable for work for portions of that entire period.

6. **Staff Availability** - Internal CGS staff would make themselves available to perform the repair work during overtime work periods daily for the 12 days including two weekends because overtime work is voluntary.

7. **Effect on Other Work Priorities** – Because these types of repairs would occupy a high percentage of existing Distribution and Collection employee resources if City crews performed it, we may have been left vulnerable if required to respond to other core maintenance work activities during this period. We have assumed no other core maintenance activities or emergencies requiring City Distribution and Collection crews would occur and can also be safely deferred. Accordingly, because of this assumption we have not attributed any costs to this issue.

Request for Decision

Removal of School Bus Loading Zones

Presented To:	Operations Committee
Presented:	Monday, Jul 09, 2012
Report Date	Wednesday, Jun 13, 2012
Type:	Managers' Reports

Recommendation

That the School Bus Loading Zones be removed from the following locations:

- Davidson Street and College Street (Sudbury) at Sudbury Secondary School
- Douglas Street and Horobin Street (Sudbury) at Princess Anne Public School
- Hyland Drive (Sudbury) at the former École St. Denis
- Jessie Street (Walden) at the former Jessie Hamilton Public School
- Robinson Drive (Sudbury) at the former Corpus Christi School
- Samson Street (Sudbury) at the former St. Michael's School
- Sixth Avenue (Walden) at Walden Public School

and;

That the existing parking restrictions be removed from the north side of Davidson Street,

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 changes all in accordance with the report from the General Manager of Infrastructure Services dated June 13, 2012.

Signed By

Report Prepared By
Dave Kivi
Co-ordinator of Transportation & Traffic Engineering Services
Digitally Signed Jun 13, 12

Division Review
David Shelsted, MBA, P.Eng.
Director of Roads & Transportation Services
Digitally Signed Jun 13, 12

Recommended by the Department
Greg Clausen, P.Eng.
General Manager of Infrastructure Services
Digitally Signed Jun 13, 12

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed Jun 13, 12

Background

Staff was informed by the Sudbury Student Services Consortium that several school bus loading zones are no longer required.

The purpose of a school bus loading zone is to protect school bus users while they are boarding and exiting the bus. The signs that are installed serve to caution drivers to be on guard for school bus pedestrian

traffic. While loading and unloading school children within the school bus loading zone, bus drivers do not activate the flashing red lights or extend the stop sign.

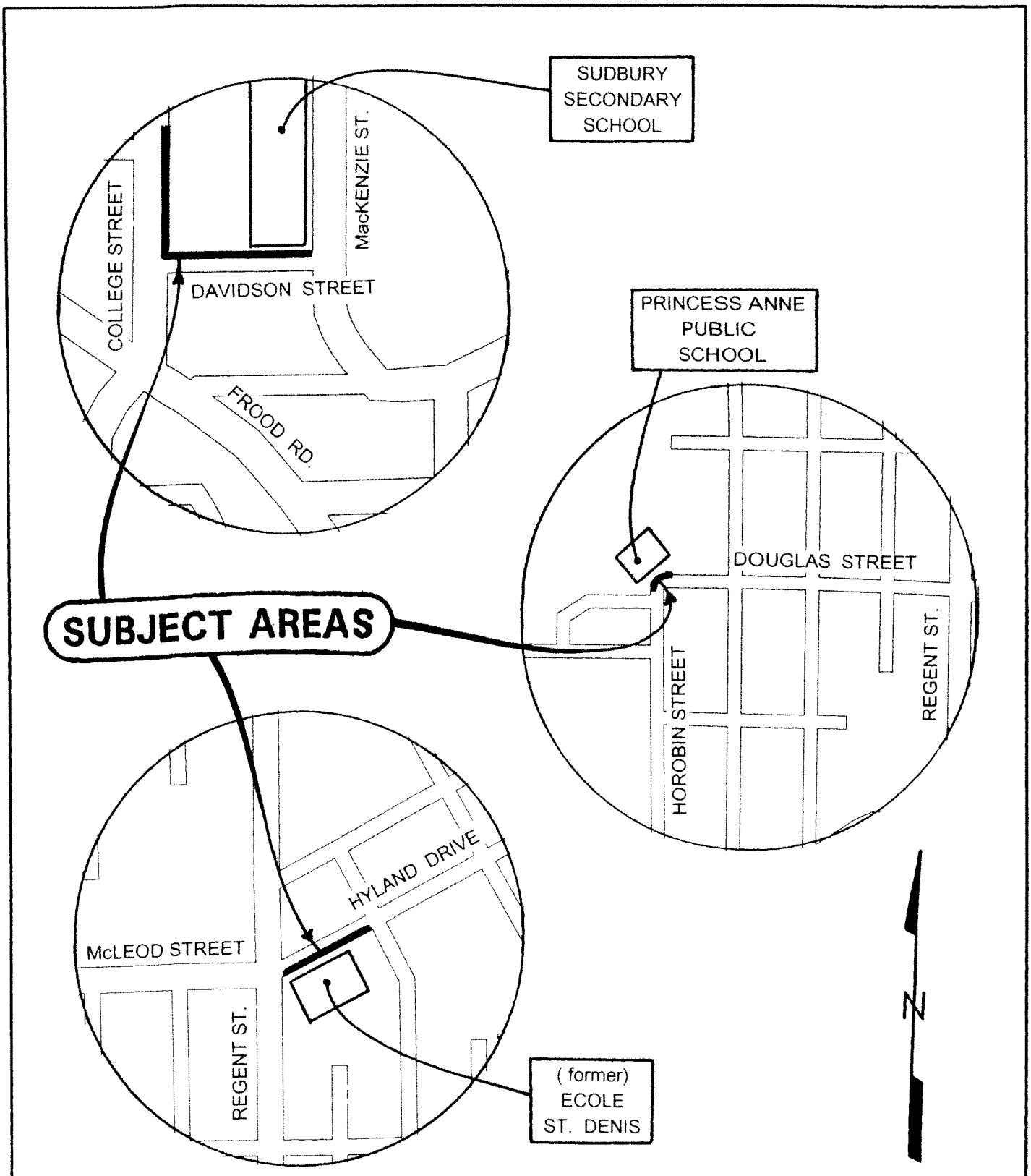
The following school bus loading zones (see **Exhibits ‘A’, ‘B’ and 'C'**) can be removed due to either the school closing or a redevelopment of the parking area which allows for bus loading and unloading to occur on school property:

- Davidson Street and College Street (Sudbury) at Sudbury Secondary School
- Douglas Street and Horobin Street (Sudbury) at Princess Anne Public School
- Hyland Drive (Sudbury) at the former Ecole St. Denis
- Jessie Street (Walden) at the former Jessie Hamilton Public School
- Robinson Drive (Sudbury) at the former Corpus Christi School
- Samson Street (Sudbury) at the former St. Michael School
- Sixth Avenue (Walden) at Walden Public School

In addition, within the school bus loading zone for Sudbury Secondary School, parking is currently prohibited on the north side of Davidson Street from 2:00 p.m. to 3:30 p.m., Monday to Friday. With the removal of the school bus loading zone, the parking restrictions on the north side can also be removed.

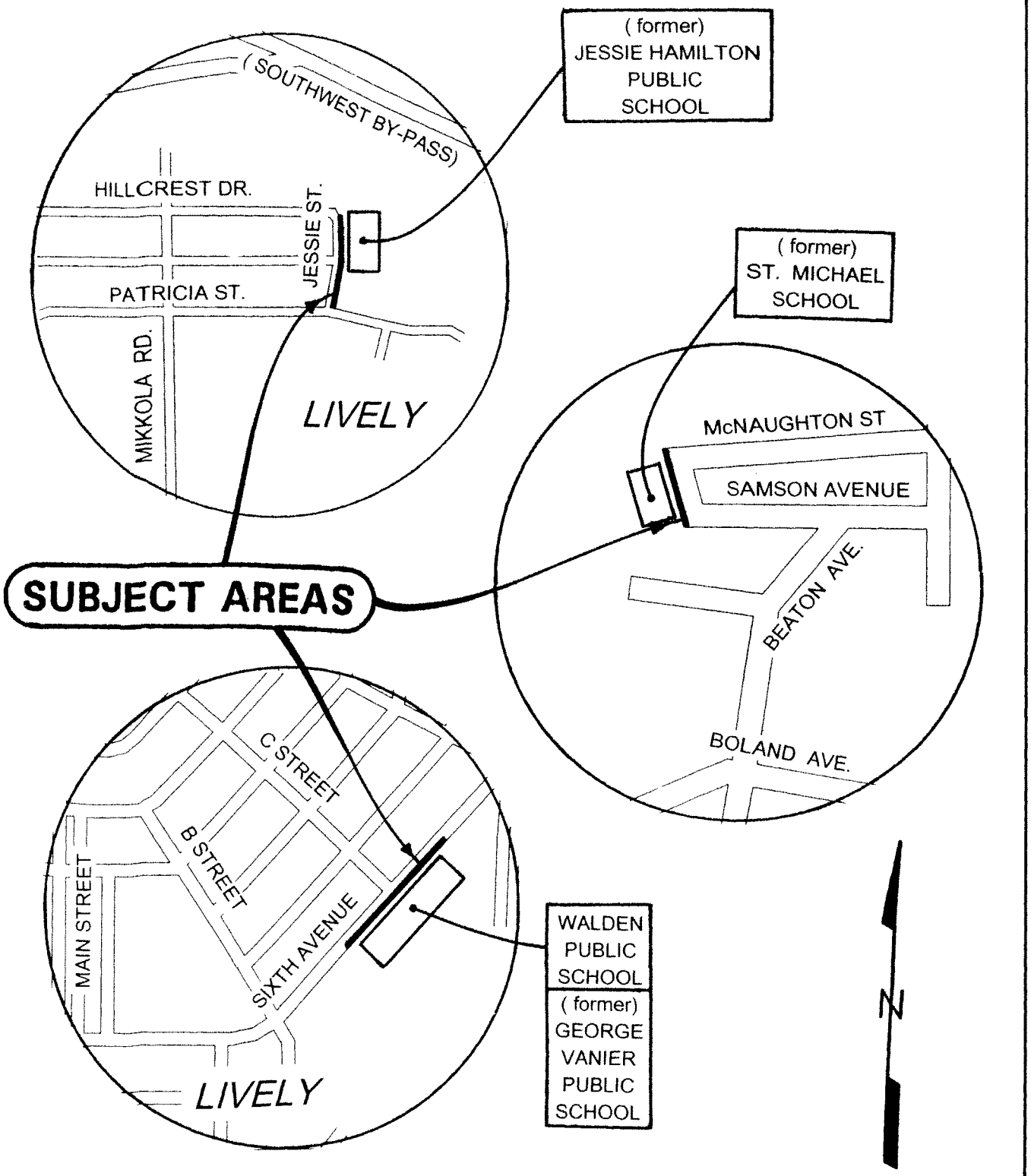
Staff recommends the removal of the above school bus loading zones and the associated parking restrictions.

EXHIBIT: A



Sudbury	DAVIDSON STREET and COLLEGE STREET DOUGLAS STREET and HOROBIN STREET HYLAND DRIVE
	REMOVAL of SCHOOL BUS LOADING ZONES
	NOT TO SCALE — 2012 - 05 - 16

EXHIBIT: B



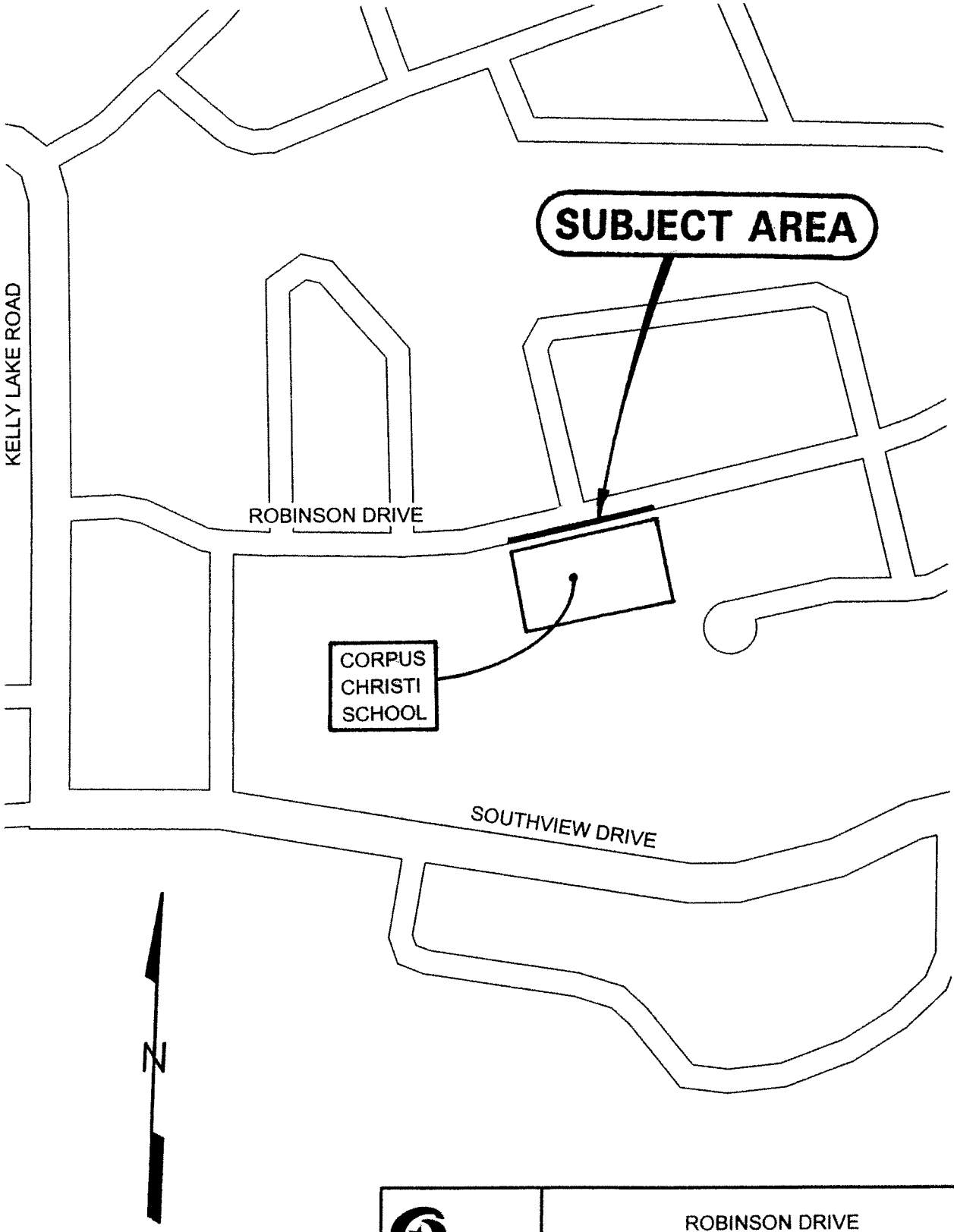
Sudbury

JESSIE STREET
SAMSON STREET
SIXTH AVENUE

REMOVAL of SCHOOL BUS LOADING ZONES

NOT TO SCALE | | 2012 - 05 - 16

EXHIBIT: C



Sudbury

ROBINSON DRIVE

REMOVAL of SCHOOL BUS LOADING ZONES

NOT TO SCALE | 2012 - 06 - 12

Request for Decision

New Traffic Signal Installations - Kelly Lake Road and Copper Street

Presented To:	Operations Committee
Presented:	Monday, Jul 09, 2012
Report Date	Wednesday, May 30, 2012
Type:	Managers' Reports

Recommendation

That traffic signals be installed at the intersection of Kelly Lake Road and Copper Street as previously approved as part of the 2012 Budget, 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 in accordance with the report from the General Manager of Infrastructure Services dated May 30, 2012.

Signed By

Report Prepared By
Dave Kivi
Co-ordinator of Transportation & Traffic Engineering Services
Digitally Signed May 30, 12

Division Review
David Shelsted, MBA, P.Eng.
Director of Roads & Transportation Services
Digitally Signed May 30, 12

Recommended by the Department
Greg Clausen, P.Eng.
General Manager of Infrastructure Services
Digitally Signed May 30, 12

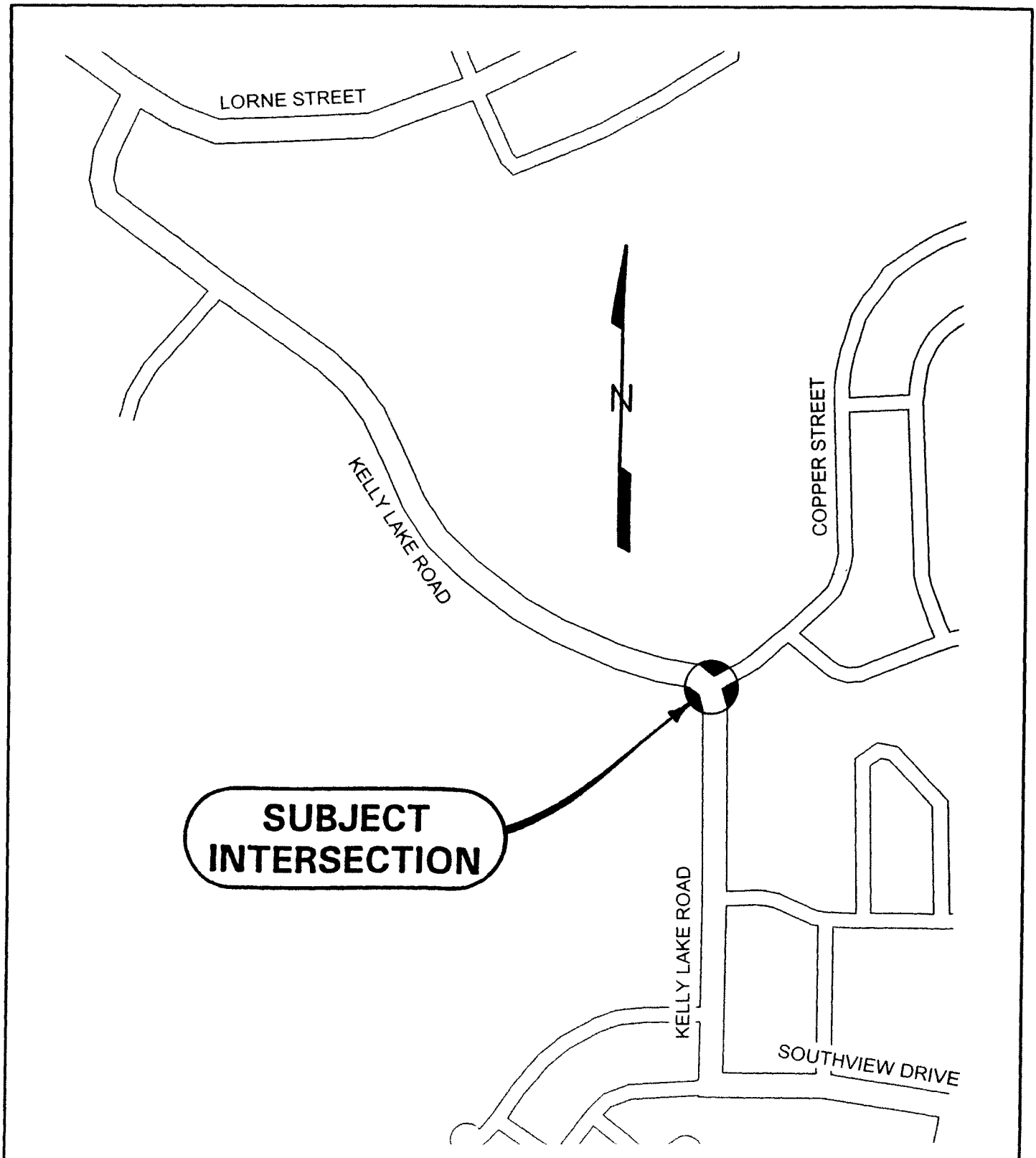
Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed May 30, 12

Background

As part of the City's 2012 Capital Construction Program new traffic signals are being constructed at the intersection of Kelly Lake Road and Copper Street (see **Exhibit 'A'**). The contract for this project will be tendered by the City and it is expected that the traffic signals will be completed later this summer.

An amendment to the City's Traffic and Parking By-Law 2010-1 is required to implement the new traffic signals.

EXHIBIT: A



Sudbury	NEW TRAFFIC SIGNAL INSTALLATIONS	
	KELLY LAKE ROAD at COPPER STREET	
	NOT TO SCALE	2012 - 05 - 03

Request for Decision

Kingsway at Third Avenue - Traffic Signals

Presented To:	Operations Committee
Presented:	Monday, Jul 09, 2012
Report Date	Wednesday, May 30, 2012
Type:	Managers' Reports

Recommendation

That the median islands on the Kingsway at Third Avenue be removed and repainted as a two-way centre left turn lane, and;

That the cost to undertake the work be included in the 2012 capital roads budget, and;

That Staff continue to monitor traffic operations and safety at that intersection.

Signed By

Report Prepared By
Dave Kivi
Co-ordinator of Transportation & Traffic Engineering Services
Digitally Signed May 30, 12

Division Review
David Shelsted, MBA, P.Eng.
Director of Roads & Transportation Services
Digitally Signed May 30, 12

Recommended by the Department
Greg Clausen, P.Eng.
General Manager of Infrastructure Services
Digitally Signed May 30, 12

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed May 30, 12

Background

At the Operations Committee meeting heard on April 16, 2012, Staff was directed to prepare a report regarding the need for traffic signals or other measures to improve safety at the intersection of the Kingsway and Third Avenue.

The intersection of Kingsway and Third Avenue is located near the east end of the former City of Sudbury (see exhibit “A”). In this area, the Kingsway is constructed with two (2) through lanes in each direction with east and westbound left turn lanes and an eastbound right turn lane. This section of the Kingsway carries an Annual Average Daily Traffic volume (AADT) of 19,000 and has a posted speed limit of 80 km/hr.

As part of the project to widen the Kingsway to four lanes in 2007, median islands, pole bases and other underground plant was constructed to facilitate the future installation of traffic signals when they were required.

Third Avenue is designated as a collector road that carries an AADT of 1,300 south of the Kingsway. Third Avenue intersects with the Kingsway at approximately 90 degrees forming a four legged intersection with an entrance to an industrial property on the north side.

Safety

A review of the City’s collision information from 2009 to 2011 inclusive revealed that there were a total of 13 collisions at the subject intersection during the three year period. Two (2) of these collisions resulted in injuries. A more detailed analysis of the collision experience is contained below in the section dealing with

traffic signals. Due to concerns expressed about safety at the intersection, staff has undertaken an analysis of the collision history at that intersection, and reviewed a number of measures to improve safety. These measures include the installation of traffic signals; removal of the median islands; and prohibition of left turns.

1) Traffic Signals

While traffic signals are not considered to be safety devices, they can reduce certain types of collisions, such as right angle and turning movement collisions. However, they can increase other types of collisions such as rear end collisions.

Staff conducted a seven hour turning movement count at the Kingsway at Third Avenue intersection on May 11, 2011 and applied the traffic count data to the traffic signal warrants set out in Book 12 of the Ontario Traffic Manual. The results show that the intersection meets 57% of the Minimum Vehicle Volume justification. The Minimum Vehicle Volume justification compares the total intersection volume with the total volume from Third Avenue and the private driveway on the north side of the intersection. The justification requires a combined minimum of 120 vehicles per hour exiting Third Avenue and the private driveway for the eight busiest hours of the day. During the May 11, 2011 turning movement count, we recorded an average of 68 vehicles per hour. It has been suggested that should traffic signals be installed additional vehicles would use this intersection to turn left from Third Avenue onto the Kingsway. A review of the turning movement count shows that an average of 15 more vehicles per hour turn right from the Kingsway onto Third Avenue than turn left from Third Avenue onto the Kingsway. If you were to add these additional vehicles to traffic signal warrant, the intersection would meet 69% of the Minimum Vehicle Volume justification.

Also, as part of the traffic signal warrant, Staff reviewed the collision history at this intersection from 2009 to 2011 to determine the number of collisions per year that may be susceptible to correction through the installation of traffic signals. These would predominantly include vehicles turning left from the Kingsway onto Third Avenue and vehicles from Third Avenue turning left onto or crossing the Kingsway. The non-reducible collisions include rear ends, sideswipes and vehicles striking wild animals. A summary of the collision history is indicated below:

	2009	**2010**	**2011**
Total Number of Collisions	4	3	6
Reducible Number of Collisions	1	2	4

The Collision Experience justification requires an average of five or more reducible collisions per year over a three year period to warrant traffic signals. As indicated above, there were a total of seven collisions at the Kingsway and Third Avenue which meets only 47% of Collision Experience justification. A review of the available 2012 collision reports also reveals an additional two collisions have occurred at this intersection this year. Both collisions are considered to be reducible and one involved personal injuries.

As part of the most recent update to Book 12 of the Ontario Traffic Manual, a new collision experience justification was proposed to help traffic engineers estimate the expected safety of installing traffic signals. The new collision experience justification takes into consideration the potential increase in some types of collisions and decrease in others when traffic signals are installed.

The proposed approach uses collision experience, intersection configuration and traffic volume data from the MTO to generate safety indices for similar types of intersections. The collision experience and AADT of the intersection being studied are then applied to an advanced statistical method to predict the number of expected collisions at the intersection should it become signalized or remain unsignalized. By applying the safety indices to the expected collision numbers and comparing the signalized vs unsignalized values, a net safety change can be derived. The net safety change is expressed in collisions per year, with a positive value indicating that the number of collisions will increase after signalization and a negative value indicating that the number of collisions will decrease after signalization.

In terms of the Kingsway and Third Avenue intersection, the method was applied and the results are summarized below.

	Weighted Reducible Collision (collisions/year)	Weighted Non-Reducible Collisions (collisions/year)	Total Weighted Collision (collisions/year)
Expected Collision with Signalization	0.637	0.631	1.268
Expected Collisions without Signalization	0.450	0.262	0.712
Net Safety Change*			0.556

*Net Safety Change = Total Weighted Collisions with Signalization – Total Weighted Collisions without Signalization

Based on the new collision experience justification, it is expected that there will be an increase of 0.556 collisions per year if the intersection is signalized.

As previously indicated, the underground plant needed for the installation of traffic signals was previously installed as a part of the Kingsway widening project. A review of the existing infrastructure revealed that many of the existing pole bases have been damaged by snow plows or other vehicles, and require repair or replacement. The estimated cost to install traffic signals at this intersection is $150,000.

Some of the advantages of installing traffic signals include:

- A potential reduction in angle and turning type collisions which can be more severe.
- Turning left or crossing the Kingsway will also be made easier with signals.

The disadvantages of traffic signals include:

- Potential for an increase in the total number of collisions at the intersection.
- An increase delay to the major movements of traffic.
- Cost to install and maintain signals.

2) Removal of Median Islands

Removal of the existing median islands on the Kingsway has been reviewed as a way to improve safety at the intersection. As previously discussed, median islands were installed on the Kingsway to facilitate the future installation of traffic signals. However, at an unsignalized intersection the median islands can inhibit left turn movements from Third Avenue and represent a potential hazard to traffic. Removal of the median islands will allow left turning vehicles from Third Avenue and the private entrance to access the centre lane rather than having to wait for a break in traffic in both directions to enter the appropriate through lane directly.

The estimated cost to remove the median island and pole bases is $20,000. If and when traffic signals are warranted, the islands and pole bases will have to be reinstated.

The advantages of removing the median islands include:

- Increased safety and reduced delay for left turn movements from Third Avenue and the private entrance.

- Lower cost than traffic signals.

Some of the disadvantages include:

- Increased cost of future signals.
- Concern over the legality of using the centre left turn lane when turning onto an arterial road.
- Will not reduce turning movement collisions from the Kingsway onto Third Avenue or the private entrance.

3) Left Turn Prohibition

The implementation of a left turn prohibition from Third Avenue onto the Kingsway was also reviewed. Under this scenario left turns would be prohibited by by-law and signs would be installed. This option would be the least costly to implement at approximately $500. The advantages of this alternative are:

- Low cost and easy to implement.
- Improved safety.

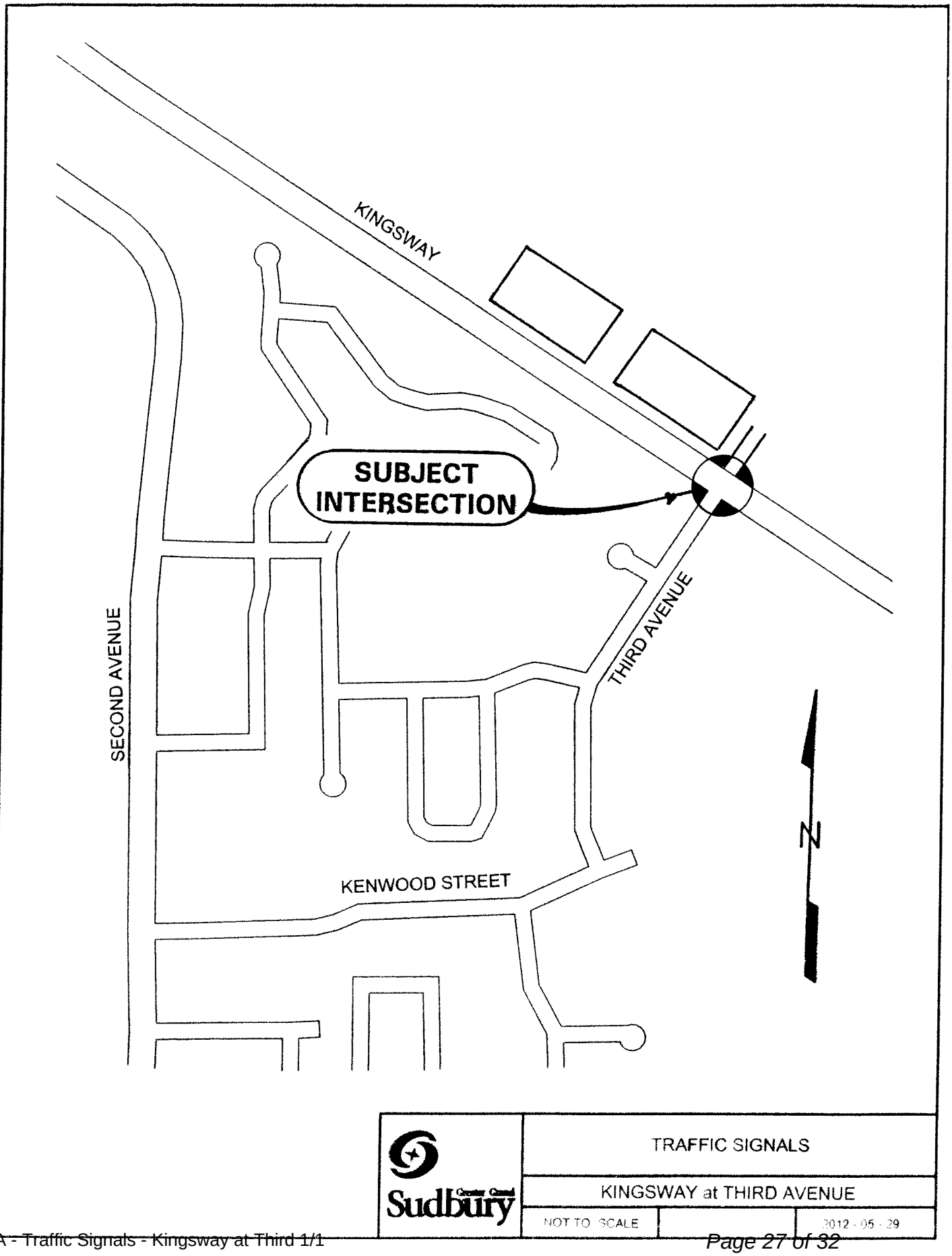
Some of the disadvantages include:

- Frequent disobeyance of the signs.
- Increased travel time and distance.
- Driver confusion.
- Left turns still permitted from private driveway on the north side.

Based on the above information, Staff recommends that the median islands on the Kingsway be removed. The provision of a two-way centre left turn lane has improved safety at other locations in the City. The estimated cost of $20,000 to remove the islands can be covered under the 2012 capital roads budget.

Staff will continue to monitor traffic operations and safety at the intersection to ensure that the changes are effective.

EXHIBIT: A


KINGSWAY
SUBJECT INTERSECTION
SECOND AVENUE
THIRD AVENUE
KENWOOD STREET
N
Sudbury
TRAFFIC SIGNALS
KINGSWAY at THIRD AVENUE
NOT TO SCALE
2012 - 05 - 29

Presented To:	Operations Committee
Presented:	Monday, Jul 09, 2012
Report Date	Tuesday, Jun 26, 2012
Type:	Managers' Reports

Request for Decision

Informational Agricultural Equipment Signage

Recommendation

That the Operations Committee approve the installation of Informational Agricultural Equipment Signage in accordance with the report from the General Manager of Infrastructure Services dated June 26, 2012.

Finance Implications

If approved, the initial implementation costs would be provided for within the existing Roads Sign budget.

Signed By

Report Prepared By
Dave Kivi
Co-ordinator of Transportation & Traffic Engineering Services
Digitally Signed Jun 26, 12

Division Review
David Shelsted, MBA, P.Eng.
Director of Roads & Transportation Services
Digitally Signed Jun 26, 12

Recommended by the Department
Greg Clausen, P.Eng.
General Manager of Infrastructure Services
Digitally Signed Jun 26, 12

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed Jun 26, 12

Background

Former Councillor Ron Bradley, on behalf of several local agricultural companies and farmers, has made a request to Councillors Berthiaume, Dupuis and Dutrisac that the City install informational agricultural equipment signage on various rural roads with an agricultural presence.

The signs would provide information to motorists to expect slow moving agricultural farming equipment on these roads making it safer for all users of the roadway.

Staff are investigating what type of policies and information signage other communities have installed on rural roads in several other communities.

If approved by the Operations Committee and Council, it is proposed that our Traffic staff meet with the individual Councillors with agricultural areas within their wards to develop an appropriate policy and to compile a list of roads to be appropriately signed. The recommended policy will be brought back to the Operations Committee for approval.

Warning signs are most effective when they are used sparingly to warn of unexpected conditions on the roadway. In the case of farm tractor warning signs, their use should be on roads with active farms and posted speed limits greater than 50 kilometres/hour.

It is suggested that the initial installation costs be absorbed within the existing 2012 Roads Sign Budget. The 2013 base operating Sign Budget may have to be increased appropriately.

Staff will be in attendance at the meeting to either provide elaboration on any item contained herein/and or provide additional information.

Presented To:	Operations Committee
Presented:	Monday, Jul 09, 2012
Report Date	Tuesday, Jun 26, 2012
Type:	Managers' Reports

Request for Decision

Stoop and Scoop Signage Along Urban Residential Roadways

Recommendation

That the Operations Committee approve the installation of Stoop and Scoop signage along urban residential roadways in accordance with the report from the General Manager of Infrastructure Services dated June 26, 2012.

Finance Implications

If approved, the initial implementation costs will be provided for from the existing Roads Sign budget.

Signed By

Report Prepared By
Greg Clausen, P.Eng.
General Manager of Infrastructure Services
Digitally Signed Jun 26, 12

Recommended by the Department
Greg Clausen, P.Eng.
General Manager of Infrastructure Services
Digitally Signed Jun 26, 12

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed Jun 26, 12

Background

At the Council meeting of June 12, 2012, Councillor Dupuis requested that these signs be installed along residential streets in urban areas. Hopefully, the signs will encourage residents to “stoop and scoop” as necessary when they are walking their dogs. Stooping and scooping and depositing their collections will significantly improve the aesthetics in local neighbourhoods as well as increase the health and safety of all residents.

The unit cost per installed sign similar to that currently used in our parks and as shown in **Appendix 1** is $200.00.

If approved by the Operations Committee and Council, it is proposed that staff meet with interested Councillors to develop a policy for the installation of these signs. The developed policy will be brought back to the Operations Committee for approval.

It is suggested that the initial installation costs be absorbed within the existing 2012 Roads Sign Budget. The 2013 base operating Sign Budget may have to be increased appropriately depending upon the uptake of the program.

Staff will be in attendance at the meeting to either provide elaboration on any item contained herein/and or provide additional information.

Greater | Grand Sudbury

Appendix 1

Dogs must be on a leash. Il faut tenir votre chien en laisse.

Stoop and scoop sulvez, pelle en main

MUNICIPAL LAWS WILL BE STRICTLY ENFORCED APPLICATION STRICTE DES RÉGLEMENTS MUNICIPAUX