

## **OPERATIONS COMMITTEE AGENDA**

Operations Committee Meeting Monday, September 16, 2013 Tom Davies Square

## **COUNCILLOR JACQUES BARBEAU, CHAIR**

**Claude Berthiaume, Vice-Chair** 

6:30 p.m. or 30 minutes after the conclusion of the Community Services Meeting, whichever is earlier. OPERATIONS COMMITTEE MEETING COMMITTEE ROOM C-11

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## DECLARATIONS OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

### **PRESENTATIONS**

1.	Report dated September 5, 2013 from the General Manager of Infrastructure Services regarding Handi Transit Recommendations. (ELECTRONIC PRESENTATION) (RECOMMENDATION PREPARED)	7 - 42
	<ul> <li>Robert Gauthier, Manager of Transit Operations</li> </ul>	
	(This report provides recommendations for several issues regarding Handi Transit.)	
2.	Report dated September 10, 2013 from the General Manager of Infrastructure Services regarding Infrastructure Services 2014 Capital Budget - Water Wastewater Services.	43 - 56
	(ELECTRONIC PRESENTATION) (FOR INFORMATION ONLY)	
	<ul> <li>Nick Benkovich, Director of Water Wastewater Services</li> </ul>	
	(This presentation and report provides information regarding the 2014 Capital Budget and the 2015-2018 forecast for Water Wastewater Services.)	
3.	Report dated September 11, 2013 from the General Manager of Infrastructure Services regarding Infrastructure Services 2014 Capital Budget - Roads and Drainage.	57 - 67
	(ELECTRONIC PRESENTATION) (FOR INFORMATION ONLY)	
	<ul> <li>David Shelsted, Director of Roads and Transportation Services</li> </ul>	
	(This presentation and report provides information regarding the 2014 Capital Budget and the 2015-2018 forecast for Roads and Drainage.)	
	<b>REGULAR AGENDA</b>	

#### **REFERRED & DEFERRED MATTERS**

R-1. Report dated August 1, 2013 from the General Manager of Infrastructure 68 - 102 Services regarding All-Way Stop Control - One Year Review (1) Bouchard Street at Marcel Street, Sudbury (2) Lansing Avenue at Melbourne Street, Sudbury (3) Hawthorne Drive at Westmount Avenue, Sudbury (4) Madeleine Avenue at Main Street, Sudbury (5) Madeleine Avenue at Alexander Street, Sudbury.

#### (RECOMMENDATION PREPARED)

(This matter was deferred at the August 12, 2013 meeting of the Operations Committee. - This report provides the findings of the one-year review and the recommendation for traffic control at each of the intersections. This matter was deferred )

R-2. Report dated August 1, 2013 from the General Manager of Infrastructure 103 - 106 Services regarding Tender for Winter Operations Snow Plowing Services Specifying New Equipment. (FOR INFORMATION ONLY) (This matter was deferred at the August 12, 2013 meeting of the Operations Committee. - The report outlines the items considered when staff specified new snow plowing equipment in contract ISD12-18 Tender for Winter Operations Snow Plowing Services.) MANAGERS' REPORTS R-3. Report dated September 5, 2013 from the Acting General Manager of 107 - 111 Growth & Development/Planning Director regarding Recommendations from the Solid Waste Advisory Panel. (RECOMMENDATION PREPARED) (This report includes an update and user fee recommendations from the Solid Waste Advisory Panel.) 112 - 113 R-4. Report dated September 10, 2013 from the General Manager of Infrastructure Services regarding Stroller Policy. (RECOMMENDATION PREPARED) (This report provides recommendations regarding the current stroller policy.)

## **MOTIONS**

#### R-5. Speed Limit Reduction on Residential Streets to 40 km/hr

As presented by Councillors Belli and Cimino:

WHEREAS at its May 23rd, 2007 meeting, Greater Sudbury City Council unanimously passed the following resolution: "AND BE IT FURTHER RESOLVED that the City of Greater Sudbury accept the challenge to become the most pedestrian friendly City in Ontario by 2015";

AND WHEREAS The City of Greater Sudbury cannot afford to provide the pedestrian and cycling infrastructure necessary to encourage more people to use active transportation to get safely to their destinations;

AND WHEREAS there is clear evidence that physical activity from active transportation generates important health benefits;

AND WHEREAS the City of Greater Sudbury has already designated roadways under its jurisdiction in its Traffic and Parking By-law 2010-1, which are not school or hospital zones, as 40 kilometers per hour zones.

AND WHEREAS at page 37 of the Ontario Chief Coroner's Report into Pedestrian Deaths, it is recommended that the Ministry of Transportation amend "the Highway Traffic Act, to allow local municipalities to set the unsigned default speed limit at 40 kilometers an hour on residential streets, a decrease from the current 50 kilometers an hour; AND WHEREAS slower streets make for more livable and safer neighbourhoods;

AND WHEREAS an increase in speed is directly related both to the likelihood of a crash occurring and to the severity of the crash consequences;

AND WHEREAS the Sustainable Mobility Panel recommended that the City of Greater Sudbury be bold and modify its Traffic and Parking by-law 2010-1 to reduce speed limits on all residential streets to 40 kilometers per hour unless otherwise posted, rather than the current 50 kilometers per hour;

AND WHEREAS the city of North Bay has instituted a by-law establishing 40 kilometer per hour speed limits on residential streets and the City of Ottawa has established a method where by means of petition, residents can request a reduction in the speed limit to 40 kilometers per hour on local residential streets provided there is a consensus of 66 percent of the residents on the entire street;

THEREFORE BE IT RESOLVED that City of Greater Sudbury direct staff to investigate options to amend the Traffic and Parking by-law 2010-1 to reduce speed limits on residential streets to 40 kilometers per hour unless otherwise posted, rather than the current 50 kilometers per hour and that those options be presented to the Operations Committee at its October 22st, 2013 meeting.

#### R-6. Intersection of Bancroft Drive/Shelbourne Street/Brentwood Court

As presented by Councillor Kett:

WHEREAS the intersection of Bancroft Drive/Shelbourne Street/Brentwood Court is becoming a very busy intersection;

AND WHEREAS traffic on Bancroft Drive is travelling too fast to be able to stop for young children attempting to cross Bancroft Drive to access the nearby playground;

THEREFORE BE IT RESOLVED that the City of Greater Sudbury direct staff to bring forth a report on the appropriateness of a four way stop at this intersection.

#### R-7. Speed Hump on Jeanine Street near Redwood Drive

As presented by Councillor Kett:

WHEREAS a speed hump is a raised area of a roadway that is intended to slow traffic;

AND WHEREAS the intent of speed humps is to allow the driver to travel the entire roadway at a rate of speed that is at or slightly below the posted speed, i.e. a safe constant travelling speed;

AND WHEREAS speed humps are very effective in reducing overall speeds including the number of drivers exceeding the limit. (On local roads, most

motorists slow to approximately 30 - 35 km/h to traverse a speed hump.);

AND WHEREAS their cost efficiency allows for incorporation into most projects; AND WHEREAS they can be safely navigated by bikes; AND WHEREAS they do not affect on-street parking;

THEREFORE BE IT RESOLVED THAT a speed hump be placed on Jeanine Street near Redwood Drive for a one year trial period and that staff report back to the Operations Committee in a year's time as to the efficacy of the measure.

#### R-8. Clearing of Fallen Trees and Debris in Creeks and Other Waterways

As presented by Councillor Cimino:

WHEREAS fallen trees and other debris in creeks and waterways continue to clutter and cause safety and environmental concerns across the City of Greater Sudbury;

AND WHEREAS specific concerns have been raised about fallen trees and debris in Lilly Creek, particularly in the area between Southview Drive and Marcel Street at the Martindale bridge;

AND WHEREAS the clearing of many of the fallen trees and debris in Lilly Creek and other waterways across the City of Greater Sudbury remains outstanding;

THEREFORE BE IT RESOLVED THAT City of Greater Sudbury staff be directed to investigate options for dealing with the clearing of fallen trees and debris in Greater Sudbury creeks and other waterways, and that those options, together with the associated costs, be presented to the Operations Committee at its November 18th, 2013 meeting;

AND BE IT FURTHER RESOLVED THAT the clearing of fallen trees and debris in Lilly Creek at the Martindale bridge be identified as a priority in the report.

#### R-9. Request for Transit Service to the Lionel E. Lalonde Centre

As presented by Councillor Dutrisac:

WHEREAS public use of the Lionel E. Lalonde Centre and the adjoining facilities such as the outdoor rink, and the soccer fields has increased;

AND WHEREAS transit service to this location would provide a convenient, safe and green option for transportation for the users of this facility;

AND WHEREAS development of residential properties are also on the rise in this area;

THEREFORE BE IT RESOLVED THAT the City of Greater Sudbury direct staff to investigate options to provide transit service to the Lionel E. Lalonde Centre and bring forward a budget option during the 2014 budget deliberations. **ADDENDUM** 

## **CIVIC PETITIONS**

## **QUESTION PERIOD AND ANNOUNCEMENTS**

## **NOTICES OF MOTION**

**ADJOURNMENT** 

**BRIGITTE SOBUSH, DEPUTY CITY CLERK** 



Presentations

# Presented To:Operations CommitteePresented:Monday, Sep 16, 2013Report DateThursday, Sep 05, 2013

Type:

## **Recommendation**

**Request for Decision** 

Handi Transit Recommendations

That the City of Greater Sudbury approve a new Handi Transit application process for eligibility to assist City staff in ensuring that the Handi Transit Service is available to be used by persons who have physical disabilities and are unable to use the conventional transit system; and

That the application form in the report dated September 5, 2013 from the General Manager of Infrastructure Services regarding Handi Transit Recommendations be approved and used for all new applicants and existing users for re-assessment; and

That existing users be reassessed using the new application process; and

That fare parity is implemented as per the AODA mandate; and

That the hours to accept booking requests be extended to meet the AODA mandate which includes weeknights, weekends and statutory holidays; and

That all of the above be in effect for January 1, 2014.

## **Finance Implications**

If revised eligibility criteria and fare parity are approved by Council, there could be a cost saving estimated at \$47,000 for 2014 based on current net expenditure leves and \$133,000 for 2015 and beyond. However, due to historical deficits facing Handi Transit it is recommended that should these initiatives be approved that there would be no reduction of the 2014 budget relating to these initiatives. The inputs, assumptions and statistical information used to calculate the financial impacts have come from internal sources and Leuschen Transportation, the City's Handi-Transit provider, and would be reviewed in future operating budgets.

## Background

Many municipalities in Ontario are faced with the same challenges as the City of Greater Sudbury with respect to providing transportation for persons with physical disabilities. A general aging population has

## Signed By

Report Prepared By Robert Gauthier Manager of Transit Operations Digitally Signed Sep 5, 13

Division Review Roger Sauvé Director of Transit & Fleet Services Digitally Signed Sep 5, 13

Recommended by the Department Tony Cecutti General Manager of Infrastructure Services Digitally Signed Sep 9, 13

Recommended by the C.A.O. Doug Nadorozny Chief Administrative Officer Digitally Signed Sep 9, 13 placed greater demand and cost on a system that is already, by its very nature, expensive to operate. Although the need and the importance of the Handi Transit service has never been questioned, the ability of municipalities to finance the operation is a dilemma faced by all communities. Specialized vehicles, relatively low passenger counts per revenue kilometer in comparison to conventional transit and door to door service have placed additional financial strain on municipalities. In April 2013, staff presented a report indicating the need to implement changes in the way Handi Transit service is provided.

### **Eligibility Criteria**

With the many operational changes being mandated by the Accessibility for Ontarians with Disabilities Act 2005, pressures on the system have become more apparent and have started to negatively impact the quality of the service. Of the multiple options available to help alleviate some of the pressure on the system, the need to review the eligibility criteria will have the most impact on the service. The conventional transit system offers mobility options that did not exist at the time when many current specialized transit riders were registered. For example, under our current criteria, applicants are approved if they cannot walk a distance of 175 meters, cannot climb three steps into a bus or if they are legally blind and registered with the C.N.I.B.. This does not reflect the intent and purpose of the Handi Transit service which is to provide transportation to persons who have physical disabilities and are unable to use the regular transit system.

By continuing to use an inaccurate eligibility assessment, or failing to recertify current registrants under a more accurate program, Greater Sudbury Handi Transit is missing out on the opportunity to fully realize a return on our investment and restricts travel options for those who need the system. Proper eligibility criteria will ensure that those people who need the system will have the freedom to travel more freely with more travel options. The current criteria inevitably results in many registrants using the specialized transit system when in fact they could travel on our fully accessible conventional system.

In early 2013, the Canadian Urban Transit Association sponsored a research study of the specialized transit eligibility certification programs to document the Canadian experience and draw on the best practices from the U.S. and Canada. This document, Canadian Code of Practice for Determining Eligibility for Specialized Transit, is included in this report in appendix A and was instrumental in developing our recommendation as well as other successful municipal specialized transit providers such as GoBus from St. John's, Newfoundland, Grand River Transit and Thunder Bay Transit. An application form and assessment tool is included in this report in appendix C.

In the Auditor General's report which was released in august of 2011, it was recommended that staff and the Accessible Advisory Committee review the eligibility form and make appropriate recommended changes for council's approval.

The Accessibility Advisory Panel has endorsed the recommended changes to the eligibility and approval process as follows:

• A new approval process: Applicants would complete the application form attached as appendix B.

Once the application is received, city staff would determine if an in-person interview and a mobility assessment is required. The assessment would be booked and the applicant would be responsible for his/her travel arrangements to attend the assessment which would be at an accessible location. Upon arrival at the assessment location, applicants would be required to sign a waiver allowing the assessor to release the report to Sudbury Transit employees for the purpose of processing the application for eligibility. If a decision is not made within 14 days of receipt of the application, temporary access to the specialized transit system would be granted until a decision is made.

The eligibility outcomes can be one of the following:

1. Full Eligibility

2. Conditional Eligibility: depending of distance to travel, winter conditions, distance from bus stops, etc...

- 3. Temporary Eligibility: Illness is only temporary.
- 4. Does not qualify for Specialized Transit

An independent appeal process involving the City's Hearing Committee will be put into place where a decision will be made within 30 days of receiving the appeal. Access to specialized transportation would not be made available during the appeal process. This would require a change in by-law 2011-235. The decision made at the appeal process is final (i.e. applicants cannot appeal an appeal decision for a period of one year).

Once the process has been in place for a few months, all existing registered users will be notified that they need to re-apply within 9 months or they will automatically be removed from the registered users list and have to re-apply. Registered users who unquestionably qualify as unconditional users would also need to re-apply but would likely not need to go for a functional assessment.

Visitors to Greater Sudbury would be eligible providing they have proof of eligibility in their home system.

• **Independent assessment:** The City will be conducting assessments with a mobility specialist either in-house or contracted out. The group conducting the assessments would be well informed of the mobility requirements to ride both conventional and specialized transit. Transit currently receives approximately 80 applications per month. Approximately 64 of the applicants require an assessment by a mobility specialist. The annual cost of these assessments will be approximately \$46,000.

• **A new application form:** A new application form which gathers more detailed information from the applicants is required to accurately determine what the applicant's physical restrictions/needs are. This application form is attached as appendix B.

• **Renewal process:** Applicants with a temporary physical impairment or with a disease which could change enabling the applicant to use the conventional transit system at a later time would be approved temporarily.

• **Assessment of existing users:** With the entire conventional transit fleet being wheelchair accessible since 2011, many of the current users were approved due to barriers which no longer exist. A re-assessment of all existing users will ensure that only those who are physically unable to use the conventional transit system will be eligible. The cost of assessing existing users is estimated to be approximately \$86,000.(one time cost)

• **Potential Reduction in Ridership:** By implementing a proper eligibility criteria and assessment policy, there would be an estimated 10% decrease in the number of currently eligible riders who would move to the conventional transit system. This reduction in demand would eliminate a high percentage of the taxi usageand as a result could reduce the budget by approximately \$241,000 per year.

The Accessibility for Ontarians with Disabilities Act, Integrated Accessibility Standards, Ontario Regulation 191/11 has a series of requirements within it specific to both conventional transit and Handi-Transit which the City is working towards using the Ontario Professional Transit Association's "Public Transit Industry

Compliance Workbook". The City is already compliant on many elements, as varied as training for drivers, emergency preparedness, courtesy seating and stop announcement systems. The City is currently working on coming into compliance on elements related to fare parity, revised eligibility applications and trip restrictions in accordance with the regulation. There will be further service level adjustments such as pre-boarding announcements for which compliance requirements are still a few years away.

## Fare Parity (AODA)

Non-eligibility related requirements in the AODA, such as fare parity for conventional and specialized transit systems, could have a significant impact on specialized transit demand, highlighting even further the need for an accurate eligibility program. The AODA requires that where a transportation service provides both conventional and specialized transportation services, the transportation service provider shall ensure that there is fare parity between conventional transportation services and specialized transportation services. The current fare option for Handi Transit users is \$2.20 per trip with the option to purchase 10 ride books for \$22.00. Implementing fare parity on this system will automatically reduce the ridership revenue by an estimated \$42,000 annually due to the high percentage of registered users being over the age of 55. The introduction of a 31 day pass will also be an incentive for some users to ride more frequently, and could potentially result in an additional \$14,000 per year of lost revenue.

## **Booking Requests (AODA)**

Another cost influencing mandate from the AODA is the requirement to accept booking requests up to three hours before the published end of the service period on the day before the intended day of travel. The annual cost to provide this service is estimated to be \$6,000.

## Financial Summary – Budgetary Impacts (2014 and beyond)

Historically, the handi-transit service has experienced a trend of historical net over expenditures throughout the past few years. Since '10 and including the '13 year-end projection, the handi-transit service has been overspent by an average annual amount of approximately \$125,000.

The below table is a brief summary of the financial implications if both the fare parity and proposed new eligibility criteria on the Handi-Transit System were implemented for January 1, 2014. Primary assumptions and other statistical data have been provided by Leuschen Transportation, the current provider of Handi-Transit service to the City of Greater Sudbury. All prices used are per the proposed 2014 User Fee Bylaw.

Items	Estimated Financial Impact
Accept booking requests for increased number of hours	\$6,000, annually
Assessment of new users (based on 64 applications/month requiring an assessment)	\$46,080, annually
Assessment of existing users (based on 1,440 riders requiring re-assessment)	\$86,400, one time (2014)
Fare Parity (Monthly Passes & Rider Cards)	\$56,060, annually
Savings due to revised eligibility criteria and assessment	\$241,380 savings, annually
(10% reduction in number of rides provided (11,400 rides)	

Estimated Cost/(Savings) - 2014	(\$46,840)
Estimated Cost/(Savings) – 2015 and beyond	(\$133,240)

#### **Subject**

Canadian Code of Practice for Determining Eligibility for Specialized Transit

#### <u>Background</u>

In the Fall of 2012, the Accessible Transit Sub-Committee sponsored a research project designed to identify best practices related to the determination of eligibility for Specialized Transit. The purpose for the research was in response to a need in the Canadian Transit industry, to ensure that persons with disabilities have a fair and appropriate process to access the public transit services that best match their abilities, while supporting the twin goals of universal access and reduced need for specialized services.

From the onset, the intention of this research was to develop a voluntary Code of Practice to be used by specialized transit providers across Canada, to offer consistent and appropriate process to determine which individuals require specialized transit service. This position resonated with Canadian Transit industry and sixteen transit system members. Two business members contributed funds to support this initiative, including representation from 5 provinces and 1 territory and formed the Steering Committee. Over forty Canadian transit organizations contributed organizational practices, case study information and processes to this research.

#### <u>Status</u>

Research and the contributions of numerous stakeholders resulted in two complementary reports in April 2013. This work will be disseminated with CUTA members.

#### Canadian Code of Practice for Determining Eligibility for Specialized Transit

The Code of Practice offers small, medium and large transit systems a 'how to' manual to implement eligibility programs, based on a body of empirical research to offer accurate, equitable and sustainable approaches to ensure citizens with disabilities are able to access the transit services commensurate with their needs and reflects increasing accessible conventional transit.

#### Specialized Transit Eligibility Certification Programs: Overview of Canadian and U.S. Experience

In addition to the Code of Practice, this project has completed a report (Specialized Transit Eligibility Certification Programs: Overview of U.S. and Canadian Experience), describing current practices and challenges.

This work reflects the value of CUTA and in the Code of Practice, offers members a document that demonstrates the power of colleagues working together to advance best practices across the Canadian Transit industry.

#### **Recommendation**

That the Board of Directors endorse the report called '*Canadian Code of Practice for Determining Specialized Transit*' as a Voluntary Code of Practice.'

Philippe Bellon Chair, Technical Services Committee

10 May 2013

#### For Reference: Terms in Use

Code of Practice (COP) can be defined as a set of recommended or best practices that are:

- Defined by one or more individuals or corporations;
- Designed to influence, shape or benchmark behaviour; and
- Applied consistently by participants and/or reach a consistent outcome.

**Standard:** A standard is a particularly formal type of voluntary code (in terms of development procedures and implementation techniques). It can be developed through the National Standards System by standards development organizations. The Standards Council of Canada defines a standard as "a document, established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at achievement of the optimum degree of order in a given context."

**Best Practice:** A method or technique that has consistently shown results superior to those achieved with other means and that is used as a benchmark. Also referred to as best in class and leading practice.

**Consensus**: is defined by the Standards Council of Canada as "general agreement, characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments."



Canadian Urban Transit Association

## Canadian Code of Practice for Determining Eligibility for Specialized Transit



## ACKNOWLEDGEMENTS

This research was coordinated and managed through the CUTA Strategic Research Program. This project has been made possible through the financial contributions of the following organizations:

**Calgary Transit Edmonton Transit System - DATS** Fredericton Transit Grand River Transit HSR (Hamilton) OC Transpo (Ottawa) Q-Straint **Red Deer Transit Regina Transit Rocky View Regional Handy Bus** Sarnia Transit Saskatoon Transit St. Albert Transit TransHelp (Peel Region) TransLink **Trapeze Group** Whitehorse Transit York Region Transit

The following individuals generously volunteered their time and wisdom as part of the project steering committee:

AJ Ryland (Ottawa), Dave Smith (Grand River Transit), Karim Rayani (Calgary), Lorna Stewart (Edmonton), Lynette Griffin (Regina), Mark Castro (Peel Region), Meaghan Wilkinson (Trapeze), Owen Quinn (Hamilton), Peter Hill/Sarah Chung and Merrilee Ashworth (Translink), Renaud Drolet (STM), Sharon Doyle (York Region).

Thank you to the following Transit Systems who were interviewed for this report:

TTC Wheel Trans (Toronto), TransLink HandyDART (Vancouver), Montréal STM Transport adpaté, TransHelp (Peel Region), Access Calgary, Para Transpo (Ottawa), Handi-Transit (Winnipeg), Accessible Transportation Services (Hamilton), CIT Laurentides, Société de transport de Laval, Access-a-Bus (Halifax), London Transit Commission, handyDART (Victoria), Regina Paratransit Service, Independence Plus/Handi-Bus (St. John's), Milton Transit, Red Deer Transit / Transit Action Bus, MRC Les Maskoutains, Peterborough Transit, and Whitehorse Transit

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## **Code of Practice Administration**

Code of Practice (COP) can be defined as a set of recommended or best practices that are:

- Defined by one or more individuals or corporations;
- Designed to influence, shape, or benchmark behaviour; and
- Applied consistently by participants and/or reach a consistent outcome.

The Canadian Code of Practice for Determining Eligibility for Specialized Transit (the "Code") was completed <and endorsed > by the Canadian Urban Transit Association (CUTA) on <XXXXX date>.

## Introduction

The Canadian Urban Transit Association (CUTA) has sponsored a member funded research study of the specialized transit eligibility certification programs in Canada, with the goal of developing this voluntary Code of Practice, based upon industry best practices, that can be customized and adopted by transit systems throughout Canada. CUTA retained Nelson/Nygaard Consulting Associates, a U.S.-based transportation consulting firm with extensive experience in the field of specialized transit eligibility programs, including work specifically in a number of Canadian cities, to document the Canadian experience and draw on best practices from the U.S. and Canada. Nelson/Nygaard was assisted in this effort by the Western Canada-based firm Urban Systems, and Jacques Lussier of Québec.

This Code of Practice is part of a body of research that also contains a best practices report entitled "Specialized Transit Eligibility Certification Programs: Overview of Canadian and U.S. Experience", which provides groundbreaking research on eligibility practices in Canada, followed by lessons learned from over two decades of experience in the U.S. following the implementation of the Americans with Disabilities Act (ADA) in 1990. The final piece of research consists of implementation strategies to encourage implementation of the Code of Practice in a wide variety of geographic and organizational contexts.

## The Purpose of Accurate Eligibility Certification Programs

There are a number of compelling reasons why specialized transit systems should consider implementing more accurate eligibility certification programs. They can be briefly summarized as follows:

## Accessibility Improvements in Conventional Transit

In response to legislative requirements and technological improvements, most transit agencies throughout Canada have enhanced the accessibility of their fleets through the purchase of low-floor or lift-equipped buses and improved securement systems. In addition, enhanced training of conventional transit operators in the service they provide to riders with disabilities has become much more commonplace, and many agencies provide travel training for people who wish to learn how to ride conventional transit. Furthermore, many jurisdictions have invested heavily in the improved accessibility of bus stop amenities and removal of path-oftravel barriers. As a result, conventional transit systems offer mobility options that did not exist at the time when many current specialized transit riders were registered. By continuing to use inaccurate eligibility programs, or failing to recertify current registrants under more accurate programs, transit agencies are missing out on the opportunity to fully realize a return on their investments, and many people with disabilities are not fully aware of the expanded options that are available to them.

## Equity

In many specialized transit systems which currently have "open" eligibility programs, where most applicants are found fully eligible with unconditional system use, there are also significant service capacity constraints. Riders are denied trips, many report long wait times to get through on the telephone to reserve trips, some have given up requesting rides because they know none are available at the times that they need them, and a majority of trips are assigned to subscription riders, leaving limited availability for spontaneous trips. Many of these constraints are not readily apparent in operational reports due to discouraged demand, but have been identified in discussions with transit agencies throughout Canada.

In other words, the net effect of open eligibility programs is a situation in which specialized transit services are ostensibly available to a large pool of people, but in reality provide service that does not meet the mobility needs of many of these registrants. Since open certification programs inevitably result in many registrants who can in fact take some of their trips on conventional transit, this has a particularly severe impact on those for whom this is not an option. Inaccurate processes therefore are very inequitable in their impact on those for whom these services are intended.

#### **Increased** Demand

A number of factors are leading to increased demand for specialized transit in Canada. The primary reasons are changing demographics, aging in place, accessible work environment, increased engagement of people with disabilities in public life, and legislative changes. Since none of these changes will – or should – be expected to be reversed, unconstrained specialized transit systems can anticipate significant increases in demand in the coming years. As indicated previously, this demand is currently not fully apparent as individuals have given up trying to use specialized transit because they understand that their system is too constrained to meet their needs. However, the experience in the U.S., where legislative changes prohibit placing limits on the provision of service, suggest that Canadian systems can expect very significant increases in demand when artificial constraints are removed by legislation (such as the AODA), or individuals come to rely more heavily on specialized transit as they become increasingly integrated into mainstream employment and other activities.

In short, enhancing the accuracy of eligibility processes is the most equitable and cost-effective way of serving the mobility needs of individuals who have no other mobility choice than to rely on specialized transit.

## **Applicable Provincial Legislation**

Many Canadian provinces have adopted general human rights legislation for people with disabilities that can be applied to specialized transit. However, Ontario and Quebec have adopted legislation that specifically pertains to specialized transit eligibility. While an earlier form of legislation has been in effect in Quebec since the early 1980's, the eligibility requirements of the Accessibility for Ontarians with Disabilities Act (AODA) do not come into effect until January 2014. Many of the legal requirements in the AODA have been adapted from the Americans with Disabilities Act (ADA), and in some instances the AODA is more stringent than the ADA. For example, non-eligibility related requirements in the AODA, such as fare parity for conventional and specialized transit systems, could have a significant impact on specialized transit demand, highlighting even further the need for accurate eligibility programs in Ontario. While other provinces have not yet adopted similar forms of legislation, transit systems would be well-positioned to address potential demand increases if they proactively adopted more accurate eligibility assessments before being required to comply with new provincial legislation.

## **Escalating Operating Costs**

Specialized transit system operating costs have grown dramatically in recent years throughout Canada due to key factors such as increased labour and capital costs and increased demand. In a fiscal environment in which financial resources grow at a pace consistent with demand increases, a focus on accurate eligibility may not be needed. However, since this is rarely the case, agencies need to identify effective cost saving methods that also minimize the impact on the mobility of people with disabilities. Enhancing the accuracy of eligibility certifications, rather than increasing fares or cutting back on service is a more equitable approach to managing demand in order to contain cost increases.

## Factors to Consider in Selection of Eligibility Certification Model

When selecting the most suitable eligibility model for local needs, transit agencies need to weigh a number of factors. The Codes described below are intended to be flexible enough for policy makers to take these various factors into account as they attempt to balance short-term costs versus long-term savings, the availability of professional resources in their communities, the financial and operational capacity of the agency to meet increased demand, and the level of trust between the transit system and representatives of the disability community. In addition, there may be geographic constraints that will shape the eligibility model selected by each transit system, such as the isolation of certain communities where specialized transit service is the only transit mode available. Engaging community members and educating policy makers about these different tradeoffs will be critical to the success of the selected model.

## THE CODE

## Section 1: Transit Systems Covered by this Code

This Code deals with specialized transit service provided by public, private and non-profit transit agencies throughout the provinces and territories of Canada. In some instances local legislation my override the codes stipulated in this document, although in general legislation appears to be lagging behind rapidly changing trends in the field of specialized transit. This is particularly true in the application of eligibility certification programs for specialized transit.

## **Section 2: Definitions**

<u>Capacity Constraints</u>: This is a limit on the amount of specialized transit service that is provided, such as waiting lists, trip limits, and service denials.

<u>Conditional Eligibility</u>: In this category of eligibility, the individual can be reasonably expected to make some trips on the conventional service under certain conditions.

Eligibility: Refers to the standards which qualify an individual for service.

<u>FACTS</u>: Functional Assessments of Cognitive Transit Skills is a validated test that is used to determine the abilities of applicants with cognitive disabilities. Details can be found in Section 12.1

<u>Mobility Coordinators</u>: These are the professionals tasked with assessing the abilities of an applicant to use transit, and knowledgeable about alternative transportation options available in a community. Also known as "evaluators" or "assessors."

<u>Mobility Assessments</u>: These are also known as "functional assessments" or "transit skills assessments", and involve a process in which an applicant participates in an interview followed by a guided walk or roll through a course that simulates the various tasks involved in using transit.

<u>Recertification</u>: This is a process whereby individuals who have been determined eligible to use specialized transit for a reasonable term, such as three years, are required to request recertification, often through a more abbreviated process (Section 64 (3) of the AODA allows for recertification "at reasonable intervals.")

<u>Orientation and Mobility Specialists</u>: These are professionals who have received specialized training to help people with visual impairments to travel independently in the community.

<u>Specialized Transit</u>: Also known as "paratransit", "door-to-door", or "demand-response" service. In this report refers to service that is limited to people with disabilities.

<u>Subscription Service</u>: Providing specialized transit or demand-response transportation over an extended period of time for repetitive trips for purposes including but not limited to employment, education, or ongoing medical treatment.

Visitor: A visitor is anyone with a disability who does not reside in the jurisdiction served by the transit system.

<u>Travel Training</u>: Also known as mobility training, this alternative provides potential riders with the skills and information needed to use the conventional transit system independently.

## **Section 3: Community Involvement in Development of Process**

It is critical that the disability community be involved in the development of an enhanced eligibility process. Early involvement ensures that community members understand the rationale behind improving the process, and view this as an expansion of mobility options for those who need the service the most, rather than a "take-back" of services.

## Section 4: Time Limit for Completion of Eligibility Process/ Eligibility Term

## 4.1 Range of time limits depending on eligibility process used

Many systems that rely on paper-based applications can process these applications in a week or less, as they are largely a "rubber stamp" process that does not require significant follow-up. This is evident in the extremely high eligibility approval rates reported by systems that use this model. However, when a more effective element is introduced through the form of individual contact with the applicant, either via a telephone or in-person interview, or in-person mobility assessment, this necessitates a longer period of review. The AODA allows 14 days for this process to be completed (Section 65 (1)), the Quebec Eligibility Policy allows 45 days, and in the U.S. the allowable limit is 21 days. Systems may choose one of these three options in order to ensure that the process is implemented in a reliable manner.

## 4.2 Recertification

Since most Canadian systems have used a paper-based process since the inception of their service, there are likely substantial proportions of their current registrants who would be found conditionally eligible under a more accurate process, or would choose not to reapply because they realize that they would be found ineligible under a new and more accurate process. For this reason, recertification of existing riders can be the most controversial

aspect of implementation of a new process, as some individuals who have relied on the service will no longer be allowed to do so. Recertification of current registrants is, however, the most critical factor in terms of realizing the cost savings from a more accurate process, as it addresses the problem of current frequent riders who have lifelong certification but actually could be riding the conventional service. Even if a small proportion of current subscription riders who are on the service due to an inaccurate screening process, shifted to conventional service, significant funds would be freed up for provision of service to those who are eligible. Alternately, these funds could be used to enhance the accessibility of the conventional transit system. If this is the case, explicitly stating this use of the funds can go a long way towards building community support for a more accurate process.

For those systems that have eligibility terms, three years is considered an optimal length of time. One year is too frequent and results in unnecessary administrative costs, while longer than three years is considered to be too lengthy to maintain an updated database and determine if there have been any changes in the registrants' profile. Once individuals have participated in a more accurate assessment (any model that exceeds a paper-based process), there is no need for them to participate in a similar process once their eligibility term has expired. Many systems that adopt in-person assessments simply require that registrants submit a postcard confirming their current address and updating any changes in their abilities and mobility aids used. As noted in the Definitions section, the AODA states that systems "may require a reassessment of the eligibility of temporarily eligible registrants at reasonable intervals."

## Section 5: Steps in the Application Process

## 5.1 Calling to apply for eligibility certification

Transit agencies should require that individuals or their caregivers call the agency to initiate the application process. There are a number of benefits to this approach, rather than making the applications available on the web. Web-based applications artificially drive up the volume of applications due to the ease with which these can be downloaded. Social service agencies are more likely to print large quantities of these forms to make available to their clients. As a result, if there are any changes made to the form, applicants submit outdated forms, thus slowing down the process for both the applicants who have to resubmit and the administrative staff who have handle the additional workload.

In addition, the telephone contact provides a valuable opportunity for a conversation between the transit system staff person (or contractor) and the applicant to discuss the purpose of the specialized transit system, and who it is intended to serve. If it becomes apparent that the caller is unlikely to be found eligible and chooses not to apply, the staff person can explore alternative mobility options that would be better suited to the caller given his or her abilities.

## 5.2 Use of paper application forms

Paper applications can provide useful baseline information in making an eligibility determination. However, they are very limited in their ability to make accurate determinations. For this reason, the industry trend in the past decade has been towards relying less heavily on the paper application, and moreso on face-to-face contact with the applicant. In fact, as systems rely more heavily on the in-person assessment, they have been able to shorten the application form, and even eliminate the requirement that applicants submit the application ahead of time. While this may be used as a strategy for gaining community support, it does have its limitations. The effectiveness of eligibility interviews can be diminished by the lack of information available to the Mobility Coordinator prior to the interview.

## 5.3 Requirement for professional (medical) waiver versus medical verification

Most systems require that applicants provide a waiver that allows the Mobility Coordinator to contact the applicants' healthcare provider in order to clarify information about their functional abilities. However, some agencies find that submission of a medical verification form providing information about the applicant's abilities can be very helpful. It is important that these forms do not directly ask the professional whether the applicant should be eligible or not, as this can create a problem when there is a difference of opinion between the Mobility Coordinator and the healthcare provider. Rather, requested information should focus on the diagnosis and onset of disability, and how this disability or health condition affects the applicant's ability to ride transit.

## Section 6: Decision Whether to Refer to In-Person Assessment

## 6.1 Should all applicants be referred to an in-person assessment or only a sub-set of applicants?

This is a complex issue that can be addressed in a number of ways. The key considerations are whether a system has the financial resources to conduct universal in-person assessments; equity issues that can arise when determining the threshold for who should be required to come in for the assessment; diminishing returns on the investment in the in-person process for those who could be found eligible without appearing in-person.

Many systems in North America that have adopted in-person assessments have chosen to apply this to all applicants. There are a number of benefits to this approach – it treats everyone equally and consistently, it allows for dialog with all applicants about the range of mobility options in a community, and it is the most accurate process based on the quality of the eligibility outcomes. However, these benefits need to be weighed against the cost of applying this requirement to all applicants, and the public response to assessing individuals whose disabilities would appear to most people to unequivocally prevent them from using conventional transit.

## 6.2 Use of Contractors versus In-House Staff

Most systems that conduct in-person assessments contract out this function. This is largely due to the lack of a rehabilitation therapy background of existing transit staff, and, in smaller systems, the absence of a need for a full-time professional with this background to be in the employment of the transit system. However, the City of Winnipeg provides an excellent example of a transit system that has incorporated these professionals into its existing staff. For those agencies that are able to adopt this approach, it does allow for increased quality control and accurate eligibility determinations.

Contracting with entities to conduct these assessments does present challenges. Firstly, there are very few that have direct experience with making assessments specifically on individuals' ability to ride transit. In addition, the per unit costs can appear to be exorbitant before taking into account the cost benefits of more accurate assessments. However, there are very valuable resources that can be used to educate professionals with a rehabilitation background, or those who have worked in the disability field, to conduct mobility assessments. These may be found in the Appendix to this report.

## **Section 7: Transportation to Assessment Locations**

## 7.1 Offering transportation or making it available upon request

If a transit system requires an individual to come in for an assessment, it is important that transportation to the assessment not present a barrier to being granted eligibility. In the U.S. all transit agencies are required to provide this service to the assessment at no cost to the applicant. However, no such requirement is specifically called out in Canadian legislation. As a result, those systems that do have an in-person requirement either expect individuals to make their own way to the assessment, or they respond to specific requests for transportation, but do not explicitly offer this service.

In order to ensure that those who do not have the resources to independently travel to an assessment, transit agencies should make transportation available, or at least explore alternative transportation options with the applicant before making a decision of whether to provide this service.

## **Section 8: In-Person Interviews**

## 8.1 Selection of facility location

Prevailing lease costs often determine the location of interview facilities. However, to the extent possible, it is desirable that facilities be located in a central location, a neighborhood which feels safe, that has easy access to transit and private vehicles, and is fully accessible. There should also be sufficient parking for those who are driving applicants to their interviews.

## 8.2 Facility size and layout

The facility size reflects the anticipated volume of applications, so this would need to be carefully calculated based on previous application trends, and anticipated responses to the eligibility requirements. However, it is preferable for interview rooms to be private in order to ensure the confidentiality of the interviewees. Some agencies install windows between the interview rooms and the rest of the office for safety reasons. The assessment center should be welcoming in its layout, with a water fountain, comfortable seats, and possibly television in the waiting room. These amenities all contribute to the applicants' sense of ease prior to the interview, which is intended to be a supportive process, rather than a "test." Applicants who participate in an effective in-person process often describe it as a respectful and empowering experience, as they leave with more of a sense of the range of mobility options available to them.

## 8.3 Staff professional background

Professionals with a variety of backgrounds can conduct eligibility interviews, although social workers are often trained specifically in the skill of assessment interviews. There are a variety of interview techniques that can help enhance the effectiveness of the interview process, by creating an atmosphere in which the applicant feels comfortable to honestly discuss their functional abilities in the use of transit. These are contained in the document to "Determining ADA Paratransit Eligibility: An Approach, Guidance and Training Materials," which can be obtained from the Easter Seals Project ACTION office at (800) 659-6428.

In addition, a disability rights organization in the U.S. has published a document that is intended to support applicants who participate in an interview and functional assessment process. This document can easily be adapted to a Canadian environment, and may be found in the Appendix.

### 8.4 Format of interview

The purpose of an interview is to receive, give and clarify information about the applicant's functional abilities. Interviewers must be willing to listen, not jump to conclusions, and ask for clarification when the applicant's statements are unclear. Interviewers need to anticipate that some applicants will be skeptical of the process, of the interviewers background/skills, and of her ability to "put herself in my shoes." It can be helpful to use a checklist for the interview in order to ensure that information gathered is consistent from one interview to the next. However, a common pitfall of interviews occurs when the interviewer asks questions that are not relevant to the specific applicant. For example, if an applicant has displayed no signs of cognitive impairments, it can be perceived as condescending if the interviewer asks "do you know your telephone number and street address?"

Interviews have the advantage of being less costly than mobility assessments (discussed in the next section) due to the reduced time per assessment and the lower skill qualification required. However, they may not be as effective as a mobility assessment as there is very limited opportunity to observe the applicants ambulate through a variety of tasks required to ride transit.

## Section 9: Mobility Assessment

### 9.1 Format of mobility assessment

Mobility assessments for people whose application is based on a physical disability are intended to evaluate strength, balance, coordination, endurance, range of motion, and distance, and may include simulated trips to and from a bus or train stop, boarding a bus/train, negotiating a curb or curb cut, and crossing a street.

A mobility assessment can involve passage through a series of steps in a specially designed interior course that can include ramps, stairs, curbs, seats and a farebox arranged in a similar fashion to a bus. In fact, some agencies incorporate either an out-of-service bus or a part of a bus as part of their assessment course. The assessment might include an evaluation of the applicant's ability to:

- 1. Understand and remember transit system information
- 2. Get to and from a transit stop/station over a variety of surfaces
- 3. Wait at a stop/station
- 4. Identify the appropriate bus/train
- 5. Board and alight the bus/train and pay the fare
- 6. Recognize the destination and signal for the bus to stop

For a full description of the elements involved in a physical mobility assessment, the reader is referred to Project ACTION document cited above.

## 9.2 Universal or partial mobility assessments

A key question facing transit agencies is not only whether all participants should be required to appear for inperson assessments (as discussed in Section 6.1), but also whether all of those should participate in a mobility assessment. For those persons who do appear for in-person assessments, participating in a mobility assessment should not be universal, but rather limited to those for whom information gathered in an interview is insufficient to make a determination. Contractors may also charge less for an interview than a full mobility assessment.

## 9.3 Selection of facility location

The facility used for mobility assessment can be similar to that described previously for interviews, with the following additional considerations:

The facility should allow for an optional outdoor route that can incorporate many of the environmental elements that could be encountered by individuals who ride a bus, such as sidewalks in various states of repair, passing traffic, controlled and uncontrolled intersections, and a street crossing that is typical of the community where the facility is located (such as multiple lanes in larger communities). Finding the optimal location that can meet all these criteria is less important than initiating an in-person assessment, so this should not be allowed to delay implementation of the in-person process.

## 9.4 Facility size and layout

The facility size will likely be larger than the facility used for interview-based assessments. The extra space will be required to accommodate an internal course which can be used for the mobility assessment. In addition, if the FACTS test (described in 12.1) is administered by the agency for applicants with cognitive disabilities, this will require an additional room. In order to illustrate the general size requirements, transit agencies serving large communities (with over 50 daily applicants) will likely require a facility in the 5,000 to 8,000 square foot range. For those with 10 to 50 daily applications, a facility half the size should suffice. Smaller systems are more likely to depend on interviews due to lack of local resources.

## 9.5 Facility amenities

Facility amenities vary greatly depending on available resources and the priorities of the transit system. Some North American agencies that have implemented mobility assessments have renovated buildings at a cost of hundreds of thousands of dollars, while others have used existing offices with a small number of props that cost a few thousand dollars. Optimally, the facility should incorporate basic elements of a simulated bus trip necessary to conduct the interview and basic physical assessments, such as a Tinetti (balance) Test and the FACTS test.

Some of the elements of the assessment could include a ramp, a curb, a curb cut, a bus seating arrangement, a farebox, different walking surfaces and potential obstructions routinely found in the environment.

Other equipment needs that might be considered include a projector and phone for the FACTS test, equipment necessary to produce basic photo ID cards, and the ability to produce correspondence in alternative formats. Many assessment centers also have a television and DVD player in the office waiting area for the purpose of playing informational DVDs or other DVDs that create a welcoming environment for the applicants.

## 9.6 Staff professional background

The staff person performing mobility assessments should have appropriate certification and/or a degree and at least one year of experience performing evaluations of a person with a disability's functional abilities. Common backgrounds for individuals performing the assessments include those who have experience in the rehabilitation field (such as physical, occupational or recreational therapists), nurses, social workers, and emergency medical technicians. However, individuals from a variety of other professional backgrounds have been successfully trained to perform these assessments.

## 9.7 Staff training

Due to the limited number of transit agencies that have already implemented mobility assessments in Canada, there are very few professionals who can provide on-the-job training to those who are new to this field. However, for professionals with a rehabilitation background, familiarity with the aforementioned Project ACTION manual should be sufficient to conduct an adequate mobility assessment. For those who are able, participation in one of the four annual two day trainings provided by the National Transit Institute (associated with Rutgers University in New Jersey - http://www.ntionline.com/courses/courseinfo.php?id=8) can be an effective means of learning the skills required to conduct the whole range of assessments, including interviewing techniques. Since these classes are usually oversubscribed, a Canadian version of this training would be the most effective means of disseminating these skills to potential Mobility Coordinators throughout Canada.

## Section 10: Eligibility Outcomes

## 10.1 Full, Conditional and Temporary Eligibility

For those who are granted specialized transit eligibility, there are generally three eligibility categories: full; conditional; and temporary eligibility. Different names are used throughout Canada to refer to these terms, so this Code of Practice will attempt to standardize the terms that are most descriptive.

<u>Full Eligibility</u>: When it is not reasonable to use the conventional (fixed-route) service under any circumstance, regardless of weather, distance to the stop, time of day etc. This is also known as unconditional eligibility. Also referred to as unconditional eligibility

<u>Conditional Eligibility</u>: In this category of eligibility, the individual can be reasonably expected to make some trips on the conventional service. For example, a person may be able to reach bus stops that are no more than three blocks away, and where there is a safe, accessible path of travel, but she may require paratransit if distances are greater than three blocks, or if there are path of travel obstacles such as steep hills, deep snow or ice, or other obstacles. Another person may have a variable health condition; on some days conventional transit is possible, and on other days not. In contrast to the former description of conditional eligibility, where the agency makes the determination of whether a particular trip is eligible or not, for those with variable health, the rider himself makes the decision. This category is also known as "good day, bad day" eligibility.

<u>Temporary Eligibility</u>: An individual can be found fully or conditionally eligible, but on a temporary basis. This category applies to individuals whose disabilities prevent them from using specialized transit for a limited period of time.

## Section 11: Conditional Eligibility and Trip Eligibility Screening

## 11.1 Applying conditional eligibility

For riders who have conditional eligibility, for each trip they request, the transit system may assess (or "screen") whether that particular trip's circumstances meet the conditions under which the rider is eligible. This is known as trip-by-trip eligibility, or simply trip screening.

Conditional eligibility and trip screening are based on a two stage process. First, in conditional eligibility, the transit system determines an individual's ability to ride conventional transit. Second, in trip eligibility, the transit system applies the individual's conditions to his or her specific trips.

It is critical that when transit agencies determine that an individual is conditionally eligible, they should identify all conditions that affect travel. Omitting any of the conditions that affect travel will inappropriately limit the rider's eligibility. Some Canadian systems find individuals seasonally eligible, thus limiting their specialized transit trips to cold weather or snow and ice conditions. However, these same individuals may also be unable to use conventional transit due to a lack of curb cuts, thus being unable to travel on a bus even during summer months.

## 11.2 Path-of-travel assessments

In order to implement comprehensive trip-by-trip eligibility, transit agencies can incrementally build a database inventorying the assessment levels of key locations throughout their service area. Many transit agencies view the prospect of building such a database as too labor-intensive and time consuming. However, documentation of even a small number of locations that have heavy usage by specialized transit riders can be critical to effectively screen trips by frequent/subscription riders. A checklist should be used that will enable staff without previous experience to document all the potential barriers in a location, and catalogue this information in ways that will be useful to call takers who receive trip requests. Transit agencies can flag locations that are requested three times by the same subscription rider as candidates for environmental assessments. This allows the agency to prioritize the locations that are most likely to provide the information needed to screen trip requests from the most frequent riders.

## Section 12: Eligibility Assessment Guidelines for People with Different Disabilities

## 12.1 People with Cognitive Disabilities

The physical component of mobility assessments has been described in Section 9.1. However, for those applicants who have a cognitive or psychological disability, the assessment should evaluate orientation, safety awareness, memory, learning skills, problem solving, navigation skills, and motivation. It could include testing an individual's ability to make simple and complex trips; tests of abstract thinking abilities such as memory, judgment, and self-initiation; resistance to distraction; impulse control; and communication. The FACTS test which has specifically been developed to conduct this evaluation has been scientifically validated, and can be conducted by trained staff who have no background in the field of psychology. For more information on the FACTS test, see:

http://projectaction.easterseals.com/site/DocServer/FACTS\_Series.pdf?docID=9823

## 12.2 People with Visual Impairments

A visual ability assessment is used to determine whether an applicant's visual disability prevents her from using the transit system's bus and/or train system. For applicants who are legally blind (based on the visual acuity statement provided by the applicant), it is optimal to use the services of an orientation and mobility specialist (O&M Specialist) to conduct the assessments, rather than relying on a Mobility Coordinator. However, since many jurisdictions may not have an O&M Specialist, agencies should rely on the submission of a medical professional who is familiar with the applicant's visual disability.

## 12.3 People with Seizures

For individuals whose application is based on seizures, agencies should not conduct a mobility assessment unless other disabilities are also indicated, as it is highly unlikely that the applicant will experience an episode during the course of an assessment. However, an interview is still recommended to provide the opportunity to discuss the range of mobility options in a community, if indeed these exist. Determinations in these cases will be based on information provided by the applicant and their medical provider, with possible follow-up via telephone to the medical provider. Since some people with seizures are able to ride transit, in order to make this determination some of the key information that should be requested from the medical provider includes:

- Date of onset
- Type petit mal or grand mal
- Frequency
- Medication

## 12.4 People with Psychiatric Conditions

Making eligibility determinations based on psychiatric disability can be some of the most challenging as the effects of psychiatric conditions on ability to ride transit may not be readily apparent. As with seizure conditions in which the applicant's condition may not be manifest during the course of an assessment, transit agencies should not conduct a mobility assessment unless other disabilities are also indicated. Determinations in these cases will be based on information provided by the applicant and their medical provider, with possible follow-up via telephone to the medical provider. This information should include verification and extent of the disability, the treatment and prognosis, and how the applicant's disability affects her ability to ride transit. It is also important to clarify what is different about specialized transit that makes travel possible when conventional transit is not considered to be an option. The Diagnostic and Statistical Manual (DSM-IV) and Merck Manual are considered useful resources by some transit agencies in making these determinations and helping to understand the specific psychiatric conditions.

## **Section 13: Other Eligibility Certification Models**

13.1 Telephone Interviews

Very few systems rely solely or even primarily on telephone interviews. However, in small and/or rural systems where transportation to in-person assessments would be both impractical and too costly, telephone interviews should be considered as a substantive enhancement over existing paper-based processes. Guided phone interviews at least allow the Mobility Coordinator to engage in a two-way conversation with the applicant (where the individual's disability allows for this), in which the range of individual abilities and mobility resources can be discussed.

Some transit agencies may choose a hybrid of telephone interviews and in-person assessments as a way of containing costs and reserving in-person assessments for those applicants whose functional abilities are most difficult to determine without an observation.

## 13.2 Web-based Process

A new approach that has been adopted by a handful of transit agencies in the U.S. relies primarily on web-based eligibility certification. Under this model, applicants usually need to create an on-line account, complete the application, and then mail or e-mail a healthcare form completed by a professional who is familiar with their abilities. However, applicants who have difficulty using the web do have the option of submitting paper applications. In both cases, the information is then reviewed by the professional on the evaluation team who has specific expertise in the disability that is the basis for the person's application. Team members include medical doctors, physical and occupational therapists, registered nurses, social workers etc. Eligibility outcomes are relatively similar to those from in-person assessments in terms of the breakdown of eligibility categories, but not in terms of level of detail. In a small number of cases, if determinations cannot be easily determined, in-person mobility assessments are conducted.

## Section 14: Eligibility for Visitors

## 14.1 Proof of eligibility in home system

A visitor is anyone with a disability who does not reside in the jurisdiction served by the transit system. Visitors presenting documentation that they are eligible for specialized transit in their home jurisdiction should be treated by the transit system as eligible, with no further documentation required. If the visitor does not have documentation and does not have an apparent disability, he can be required to submit documentation before being granted eligibility.

The problem with this approach is that there are many Canadian systems that provide eligibility to almost every applicant, and if a system is already over-constrained and has a "stricter" eligibility program, there could be repercussions in granting temporary eligibility to those certified under a less rigorous process. By limiting visitor eligibility to 21 days, transit agencies can limit their exposure under these circumstances. And ultimately the percentage of specialized system riders who are visitors is always very small, except during extraordinary events such as the Winter Olympics or other international events.

## **Section 15: Appeals Process**

### 15.1 Different Appeals Models

Individuals who are denied eligibility (or are granted eligibility that is less than they believe is appropriate such as conditional instead of full eligibility), should be provided an opportunity to appeal the decision. Some systems also allow registrants to appeal service suspensions due to no-shows.

There are two main appeals models. The first, and more traditional approach, consists of a panel which is often made up of individuals who represent different constituencies, such as the disability community, the transit system, and a social service/medical agency. This model has the advantage of appearing to be well-balanced in terms of a variety of different perspectives being represented, and therefore is often the most politically acceptable approach. In addition, if the representatives participate on a voluntary basis or as part of their job description, this can be an inexpensive approach.

However, this model has some significant disadvantages. It is quite common for appeals panel members to be appointed based on their political affiliation rather than their knowledge of the transit skills of people with a variety of disabilities. A person who uses a wheelchair may have very limited knowledge of the skills required for an individual with a cognitive disability to ride transit. Similarly, a transit staff person or board member may not be familiar with different barriers in the environment if they don't have a disability themselves. Another disadvantage of the appeal panel model is that the administrative costs are often underestimated. For example, unless the system is large and the panel meets on a routine basis, it can be challenging to schedule appeal hearings that everyone can attend, and if an individual cancels in the last minute and a majority vote is required, this can disrupt the procedures. Recruiting reliable and skilled volunteers can also be a time-consuming process.

A more effective model is one in which the transit system has on retainer a variety of professionals with expertise in different disabilities, such as physical therapists for appellants with physical disabilities, psychiatrists for those with psychiatric conditions, or O&M Specialists for those with visual disabilities, and these are called upon on a case by case basis. Since the number of appeals is usually very small, the costs of using these professionals' services can be contained.

Since smaller transit agencies may operate in jurisdictions that do not have access to these professionals, the appeals panel may be their model of choice, and can be designed to be as effective as possible. For example, if at least one of the panelists is a professional with a rehabilitation background, she can provide the necessary medical background to inform the others of how a particular disability could affect an individual's functional ability to ride transit. In addition, establishing an informal level of review by internal staff can often resolve issues before they rise to the level of a full-fledged appeal.

Whichever model is adopted, it is important that the individual(s) conducting the appeal be well-versed in the:

- skills required to ride transit
- level of accessibility and scope of services of the conventional transit system
- ability of people with different disabilities to perform different tasks
- service policies of the specialized transit system

## 15.2 Appeals Procedures

Applicants should be given 60 days to appeal their eligibility determination, and the process should not be onerous or overly judicial (note: Section 64 (6) of the AODA allows 30 days from the time a complete application form has been received). It is critical that the person or persons reviewing the appeal have had no role in the original determination, although that individual may be called in to provide an explanation for the determination. Appeal decisions must be in writing, and in clear language that is readily understood by the appellant.

Other considerations are that the decision be based on the exact same eligibility criteria as used by the specialized transit system, that preceding similar determinations be taken into account, and that the appellant be allowed to bring an advocate with them in order to make their case.

Generally an appeals process in which 20 to 30 percent of the original determinations are overturned may reflect both a healthy appeals process and an effective eligibility process. If 100 percent of decisions were overturned, then this could indicate that either the Mobility Coordinator is not effective in her role or that the eligibility process is overly politically driven. If none of the decisions are overturned, this could reflect inability of the appeals panelists to override the Mobility Coordinator due to lack of confidence in their knowledge of disabilities and the skills required to ride transit.

## **Section 16: Eligibility Determination Letters**

When communicating with applicants, it is important that the eligibility determination letter provide sufficient information for the applicant to have a clear understanding of what level of service they are entitled to, and if denied eligibility, the reasons for the denial

## 16.1 Letter Content for Eligible Applicants

All communications with applicants who are found permanently or temporarily eligible should contain the following contents:

- Name of transit system
- Eligibility determination (more detail below)
- Expiration date
- Identification card (if the agency uses one)
- A Riders' Guide explaining how to use the program
- Contact information if the registrant has questions

In addition to these elements, for those who are found conditionally eligible, the letter should contain the following statement:

"Based upon a review of your application for eligibility certification, the (name of transit system) has determined that you are eligible to use specialized transit service when one or more of the following conditions exist:"

Some examples:

- Cannot ambulate more than three blocks
- Conventional transit trip requires a transfer

- Temperature (below 10 degrees or above 26 degrees Celsius)
- Snow and/or ice
- Fatigue following treatment
- Hills, uneven terrain
- Not trained to the destination
- Stop not accessible
- No seat at stop
- Dusk to dawn (give times, can vary by season)
- Manual wheelchair/service animal not available
- Curb cuts
- Parking lots

As mentioned previously, providing clear descriptions of the conditions is important not only for the reservationist/call taker, but also for the rider who needs to be well-informed about which trip requests are likely to be eligible.

## 16.2 Eligibility Denial Letter Content

For applicants who have been determined ineligible, the letter should provide detailed information about the reasons for the decision, with a reminder of who the specialized system is intended to serve. The letter should encourage the applicant to ride the conventional service, and provide instructions on how to appeal the decision.

The applicant should also be reminded that if there is any change in her ability to ride conventional transit in the future, she may submit a new application. Many transit systems attach a guide on how to ride conventional transit to this letter, and a description of the travel training program if one exists in their jurisdiction.

#### <u>Subject</u>

Report from Integrated Mobility Task Force

#### <u>Background</u>

In support of CUTA's emerging new mandate, the 2013-2015 strategic plan calls for the development of a Canadian definition of "mobility management" and "integrated urban mobility," which will frame the positioning of CUTA activities and define the scope of CUTA's role in the future.

The Integrated Mobility Task Force was formed in March 2013 with a two-part mandate. The first part is to develop these two definitions and the second part, to examine the impact on CUTA's products and services. With a desire to build on Canadian experience and perspective, the task force was formed from fourteen member transit systems and one government agency across Canada with recent experience integrating mobility strategies within their own operations.

#### <u>Status</u>

In preparation for these definitions, the Integrated Mobility Task Force has invested considerable thought and review into the most current International and local thinking on these topics. Initial work began with review of *Integrated Urban Mobility* and *Mobility Management* definitions from around the world, as well as a review of input from CUTA's Executive Committee regarding the core elements of Integrated Mobility developed at its February 2013 meeting. The Task Force further examined the role of these concepts in Canada through the exchange of relevant literature from their own organizations' recent work in these areas. A collaborative portal was set up to support the ongoing exchange of the definitions in development.

The Integrated Mobility Task Force also engaged in considerable care as to how narrowly, or broadly, to develop these definitions. The following *Guiding Principles* were developed by the Task Force to help shape their work.

- "Integrated Urban Mobility" is a goal and is what we want to achieve. It is people focused.
- "Mobility Management" is a way to achieve integrated urban mobility. It is process and resource focused.
- Definitions to be limited to one to two sentences and must be in plain language.
- Further context, goals or outcomes would be included in two to four Qualitative Statements.
- Concurrent development of French and English definitions.
- Seek precision, as there are implications to CUTA's products and services.

Draft definitions have been developed, which, along with supporting Qualitative Statements, will be distributed at the Board Meeting.

The next phase of the Task Force's work will examine how these definitions shape the role of CUTA and specifically how these definitions will provide direction in the review of membership, advocacy, events, training and statistical services. Member input will be sought shortly after the Annual General Meeting for the definitions and during review of CUTA products and services.

#### **Recommendation**

For information.

Daniel Bergeron Chair, Integrated Mobility Task Force

17 May 2013

Appendix **B** 

Greater Sudbury Handi Transit Eligibility Assessment Process

## **Application Form**

## **Greater Sudbury Handi Transit Application**

#### Please answer all the following questions.

To be completed by applicants or on behalf of the applicant

#### PLEASE PRINT

#### Part 1: GENERAL INFORMATION

Applicant:	Male:	Female
------------	-------	--------

Last Name:	
First Name:	Middle Initial:

Residence Address:			
Apartment Number:			
City:			
Postal Code:			
Mailing Address: (if different)			

Please provide additional details regarding your address that will assist us in locating you. (Road name and/or directions, colour of house, landmarks, name of long-term care facility or apartment complex, ect...)

Home Phone:		
Cell Phone:		
Work Phone: ( )	Ext.	
TTY: ( )	•	
E-mail Address:		
Date of Birth:		

## Part 2: EMERGENCY CONTACTS (Required)

### **Primary Contact:**

Name:			
Relationship:			
Home Phone:	( )		
Work Phone:	( )		Extension:
Cell Phone:	( )		
TTY:		····	
E-mail Address:		with the company of t	
Address:			domination with our set.

## Secondary Contact:

Name:		
Relationship:		
Home Phone:	( )	
Work Phone:	( )	Extension:
Cell Phone:	( )	
TTY:		
E-mail Address:		
Address:		
## Part 3: APPLICANT INFORMATION

		Yes	No
1. Are you a:	Current user of Handi Transit		
	New Applicant		
· · · · · · · · · · · · · · · · · · ·	A Visitor temporarily living in the Greater Sudbury		
	area		
	User of another accessible transit system		

2.	(a) Do you need information given to you in an	Yes	No
	alternate format?		

2.	(b) If yes, pleas	se che	eck your prefe	rred fo	ormat				
0	Large Print	0	Audio/CD	0	Braille	0	Another Language	0	Other

3. (a) Which of the	. (a) Which of the following condition(s), if any, prevent you from using the Sudbury Transit				
system? Check	all that apply:				
None	Physical	Vision Loss			
Mental Illness Cognitive Deaf/Hard of Hearing					
Other (explain):					

3. (b) In your own words, please briefly explain why this prevents you from using the Sudbury
Transit system.

4. (a) Please check the type(s) of transportation modes you are able to use with some support:				
Accessible Passenger Bus (i.e. Sudbury Transit				
Handi Transit)				
Ramped Sudbury Transit bus	Standard Taxi Cab (with support)			
Adapted Taxi Cab with Ramp	Other (explain):			
(when available)				

4	(b) In your own words, please briefly describe the support you would require. (i.e. directions, lifting or walker into vehicle, audible or visual bus stop announcements, etc)

5. Is your disability or health condition:		
Permanent	Varies daily	
Temporary – expected to last until:		

6. Please indicate the pri	mary mobility aids you use when	traveling in the community:	
Support Cane(s)	Leg Brace	Picture Board	
Long White Cane	Crutches	Alphabet Board	
Service Animal	Walker	Hearing Aid(s)	
Powered Wheelchair	Manual Wheelchair	Scooter	
Oxygen Tank	None	Other	

**NOTE:** Handi Transit may not be able to accommodate you if your wheelchair or scooter is longer than 48" or wider than 32" or if your total weight with your wheelchair is more than 800 pounds.

7. Can you climb three	Can you climb three (11 to 15-inch) steps with a handrail, without assistance from another			
person?				
Yes	No	Sometimes		

8.	. Do you require a support person while travelling? A support person is a person specifically				
	employed or designated by you to assist with your daily living needs including travel.				
Yes No Sometimes					

## Part 4: APPLICANT VERIFICATION

## **Applicant Signature**

I understand that the purpose of this application form is to determine if there are times when I cannot use Sudbury Transit and will require Handi Transit. I understand that the information on this application will be kept confidential and shared only with employees of Sudbury Transit for the purpose of processing my application for eligibility. I certify that to the best of my knowledge, the information on this application is true and correct. I understand that providing false or misleading information could result in my eligibility status being terminated.

I give permission for the member of the Sudbury Handi Transit assessment group in the City of Greater Sudbury to contact myself or the professional who has completed this application or given supplemental verification required for determining eligibility.

Applicant Signature:	
Print Name:	
Date:	

Person completing this form if other than Applicant (check one):	
I certify that the information in this application is true and correct based upon the	
information given to me by the applicant.	
I certify that the information provided in the application is true and correct based upon	
my own knowledge of the applicant's health condition or disability or I have legal	
authority to complete this application	

Print Name:	
Day Phone:	
Address:	
Relationship to Applicant:	
Signature:	
Date:	
Agency Name (if applicable):	

## PLEASE RETURN YOUR COMPLETED APPLICATION TO:

## **Greater Sudbury Transit By Mail:**

## 

## By Fax:

## (705) 560-4571

Appendix B - Application Form 5/5 By E-mail: ???????@greatersudbury.ca

## Appendix C

## **Assessment Tool**

Greater Sudbury Transit Physical Mobility Assessment Tool

Applicant's na	me:		Phone	e number:	
Date of asses	sment:				
How did applie	cant arrive at as	ssessment?			
Optional: Is t	he physical mol	bility issue caus	sed by: □ Dise	ase: if so is it D	Stable or □ Degenerative
	ther				
Please check brought to the	(√) all mobility a assessment.	aids currently u	sed at home o	r in the commu	nity. Please circle the one
Cane	Crutches	□ Walker	□ Rollator	Oxygen	Guide/Therapy Dog
□ Scooter	□ Prosthesis;	Lower Limb(s)	□ Manual Wh	neelchair	Power Wheelchair
Brace:	□ Neck	□ Back	□ Leg/Knee		□ No Aids Used
Other:		How long I	nave you been	using this mot	ility device?
Did you use a	nything else be	fore that?			

Scale: 0 = No difficulty

- 1 = Minimal difficulty, no observable physical impairment
- 2 = Visible physical impairment; mildly altered gait, minor SOB, slight limp, physical ability may minimally decrease within task
- 3 = Visible physical impairment; able to complete task with evident exertion, moderately impaired balance, physical ability may moderately decrease within task
- 4 = Visible physical impairment; significantly difficult to complete; physical ability may significantly decrease within task

## 5 = Unable to complete due to physical limitations

	Mobility Aid Used	Difficulty	Difficulty	Difficulty	Describe	Time to	# of
	(identify)	vvaiking	Dreatning	Standing	issues	Complete	Stops
Walk to							
assessment							
Return to							
waiting area							
Walk							
175 m							
Notes:	<u> </u>	<u> </u>					
Applicant's name	Ż,						
Time d Un and O	- ) 6/11	, , ,,,, .					
Timed Up and G	<u>o</u> : L vvitnou	t mobility ald	(preferred)		oility aid		
$\Box \leq 19$ seconds	🗆 20 - 29 s	econds 🗆	≥ 30 second	s 🗆 did not	complete		
Applicant able to	transfer from	wheelchair	/scooter to se	eat in a Hand	li Transit vehi	icle:	
□ Yes □	No	Unable to	Confirm	N/A			
Comments:	entrovelar a v		· · · · · · · · · · · · · · · · · · ·			·····	
Applicant able to	transfer to se	edan vehicle	without phys	ical assistan	ce?		
□ Yes □	No	□ Unable to	Confirm				
Comments:	······				t <del>m</del> daaaaaa		
<u>Stairs</u>							
Ascend 3 steps.	Lev	el of Difficul	ty (as per sca	ale on previou	us page)0 to	5	_
Used Hand Rail:	(please chec	k all that app	oly)				
□ Not at All □	One Side On	ly 🗆 Two S	Sides				
□ As light suppo	rt 🛛 As nee	ded assist	□ As balanc	e assist 🗆 A	s weight bea	ring assist	

.....

Descend 3 steps.	Level of Difficult	y (as per scale on previous page) 0 to 5
Used Hand Rail: (plea	ase check all that app	bly)
□ Not at All	One Side Only	□ Two Sides

□ As light support □ As needed assist □ As balance assist □ As weight bearing assist

□ Did not use mobility aid

□ Required mobility aid: □ Wanted for personal comfort □ Needed for personal safety/stability Comments: \_\_\_\_\_

### Duration

For what time period will the applicant's physical ability to access conventional transit be impaired?

- does not appear to meet the eligibility criteria at this time
- □ during winter months when snow and ice would impact balance and gait
- □ should receive service then be reassessed at 3 months
- □ should receive service then be reassessed at 6 months
- □ should receive service then be reassessed at 1 year
- □ will not likely improve
- □ will continue to deteriorate

### Reviewed with Applicant:

Overview of Assessment Process	□ EAA's role □ Release of Information Form signed
Additional Information:	
Assessor Name:	Assessor Signature:



Presented To:	Operations Committee
Presented:	Monday, Sep 16, 2013
Report Date	Tuesday, Sep 10, 2013
Туре:	Presentations

## **Request for Decision**

Infrastructure Services 2014 Capital Budget -Water Wastewater Services

## **Recommendation**

That the Operations Committee accept the report dated September 5, 2013, from the General Manager of Infrastructure Services regarding the draft Water & Wastewater Services 2014 Capital Budget and the 2015 to 2018 Capital Forecast.

## Background

The total base capital budget for Water and Wastewater Services for 2014 is \$32.7 million. The proposed funding is the base capital envelopes calculated in accordance with the Capital Budget Policy for 2014 of \$12.0 million for water and \$15.7 million for wastewater for a combined total of \$27.7 million as well as funding from Federal Gas Tax (\$1.96 million), and future capital envelopes (\$3.0 million).

During the 2013 budget deliberations Council approved the phase in of \$1.3 million in additional annual funding over the 2013 to 2015 period

required to fund the annual debt repayments and operating and maintenance costs related to the Biosolids Project. This amount has been added to the 2014 wastewater base capital envelope.

## Wastewater

The 2014 Wastewater Facilities program reflects the City's commitment to the environment through major initiatives such as the Biosolids treatment facility and Sudbury WWTP Head House Upgrades. Other important priorities include energy reduction improvements to contain operating costs.

In the Collection System (linear) envelope we continue to align our program as closely as possible with the Roads priority projects to coordinate efforts. We have emphasized a significant condition assessment component to target future sewer lining and other remedial efforts in specific areas of concern in the systems where they will yield the greatest return.

We plan to continue to use trenchless technologies where it is appropriate to do so to take advantage of the lower costs as well as the lower socio-economic impacts of trenchless projects such as less disruption to traffic and customers.

## Signed By

Report Prepared By Nick Benkovich Director of Water/Wastewater Services Digitally Signed Sep 10, 13

Recommended by the Department Tony Cecutti General Manager of Infrastructure Services Digitally Signed Sep 10, 13

Recommended by the C.A.O. Doug Nadorozny Chief Administrative Officer Digitally Signed Sep 10, 13

### Water

The 2014 Water Facilities program highlights several key initiatives including Phase II of the Upgrades to the Wanapitei Water Treatment Plant and also upgrades to the Well facilities.

The Distribution System (linear) priority projects also reflect a high degree of integration with the roads priority projects as we attempt to coordinate renewal efforts to the most practical extent.

### Strategic Initiatives

An important strategic capital initiative that is currently underway is the Water & Wastewater Services Master Plan. This project has been underway since 2012 and will continue through 2014. It is reviewing current and future infrastructure needs to ensure that Greater Sudbury's Water and Wastewater infrastructure will be in place to provide sustainable services to the community for the next 25 years. When complete it will influence future capital planning efforts significantly ensuring that capital funds are allocated in a coordinated and tactical manner.

Improvements and renewal of components of the Supervisory Control and Data Acquisition (SCADA) system project and the SCADA Master Plan will commence in 2014 to ensure that CGS operators can utilize production data and other operational information necessary for effective monitoring and control of the water supply and distribution facilities and wastewater treatment and conveyance facilities essential for the public health of our community.

We are also investigating use of the Roads Dayton software asset management software to improve the coordination of Water & Wastewater projects with roads based on asset condition. The proposed Asset Management Plan will be the tool used by Water and Wastewater Services for making the best possible decisions regarding building, operating, maintaining, renewing, replacing and disposing of infrastructure assets. The objective is to maximize benefits, manage risk, and provide satisfactory levels of service to the public in a sustainable manner.

## SUSTAINABLE CAPITAL ASSET MANAGEMENT POLICY:

During the 2012 budget deliberations, Council adopted the following revised Sustainable Capital Asset Management Policy (SCAMP) for Water and Wastewater Services.

"The City's sustainable capital asset management program shall be continued, for the purpose of financing the renewal of water and wastewater infrastructure systems. The Water and Wastewater capital allocation for this purpose shall be increased in accordance with the City's "Financial Plan for Water and Wastewater Services" (dated March 1, 2011and updated and approved by Council as required but no less than every five years) until such time as capital contributions for Water and Wastewater equal 2% of the Water and Wastewater infrastructure replacement value."

Although the recommended policy sets out that the annual budget allocation required in order to achieve financial sustainability be prepared in accordance with the Financial Plan dated March 3, 2011, Council has the opportunity through the annual budget process to review, change and approve the budget.

The WWW Financial Plan recommended that a smoothed annual rate increase of 7.4% over 10 years would provide for financial sustainability of the water and wastewater services. Staff will prepare an option that would provide for additional capital funding should Council wish to consider an overall rate increase of 7.4% for 2014. This option will be presented as part of the overall water and wastewater budget and rate setting process scheduled for November.

A detailed summary of the 2014 Capital Budget as well as the 2015 – 2018 capital forecast has been appended to this report in support of the following recommendation:

That the Operations Committee accept the report dated September 5, 2013, from the General Manager of Infrastructure Services regarding the draft Water & Wastewater Services 2014 Capital Budget and the 2015 to 2018 Capital Forecast.



Water Summary

CATEGORY DESCRIPTION										
(For detailed project listing see attached)	20	14 REQUEST	201	5 OUTLOOK	201	6 OUTLOOK	201	7 OUTLOOK	201	<b>B OUTLOOK</b>
Previous Council Approvais	Ŷ	1,840,520	ŝ	1,004,618	w	670,000	ŝ	542,615	G	•
Water Distribution										
Condition Assessment - Watermains	69	•	Ф	•	Ø	100,000	Ś	100,000	ŝ	100,000
Watermain Replacement / Rehabilitation	\$	1,000,000	⇔	200,000	ى	800,000	69	700,000	69	700,000
Watermain Priority Projects	\$	2,464,402	Ø	5,096,508	ŝ	5,342,143	Ф	4,323,692	в	3,894,185
Network Looping	\$	325,000	Ø	325,000	69	1,250,000	ф	1.050,000	÷	1,450,000
Distribution System - Other	\$	340,000	s	400,000	÷	350,000	ŝ	450,000	÷	250,000
Water Plants										
Plants - Water Treatment Plants	\$	6,580,000	ю	1,250,000	69	2,200,000	ŝ	175,000	ى	10,125,000
Plants - Weils	\$	000'006	в	922,691	Ś	1,087,135	69	1,412,135	Ю	1,104,635
Plants - Reservoirs / Tanks / Booster Stations	\$	155,000	Ś	75,000	в	5,575,000	ю	75,000	<del>6</del> 9	75,000
Plants - System Wide	S	780,000	69	800,000	÷	385,000	€	500,000	ŝ	375,000
Water Works - Strategic Initiatives	÷	2,607,500	€9	1,382,500	÷	1,242,500	\$	1,122,500	<del>()</del>	1,132,500
PROJECT COSTS	S	16,992,422	ა	11,456,317	Ś	19,001,778	s	10,450,942	ۍ ا	19,206,320

PROJECT FINANCING										
Reserves: Capital	€	•	Ø	·	в	ı	ŝ	•	ю	·
Reserves: Gas Tax	Ś	(1,960,000)	\$	•	ŝ	•	€	•	ф	·
Capital Envelopes: Future Years or Debt Financing	\$	(3,000,000)	69	816,753	ŝ	(6,483,247)	69	2,317,960	ŝ	(6,182,040)
CAPITAL ENVELOPE (W/W/ User Fees)	υ.	12 032 422	U	12,273,070	÷	12.518.531	ŝ	12.768.902	v,	13.024.280

## Priority Setting:

Watermain priority projects are determined based on a review of:

B) Capacity /Security of Supply: Fire flows and pressures are analysed for anticipated future developments, as well as opportunities for looping or upsizing the watermains, to A) Condition: The database of watermain breaks is ranked according to number and frequency of breaks per section of pipe. This ranking is combined with the pipe age. material and diameter to determine priority sections for replacement, either as a watermain priority project or in conjunction with a roads priority project. improve the security of supply.

When a roads or sanitary sewer priority project is identified, all of the above criteria are reviewed to determine if associated watermain replacement / upgrades are required. The following is the criteria considered for Prioritizing Water and Wastewater Facilities :

- Legislation / Compliance

- Health & Safety
- Protecting Public Health
- Maintenance / Renewal / Replacement of Existing Capital Assets
  - Enhancing Productivity
- Protection of the Environment



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## Water Detail

PROJECT DESCRIPTION	PROJECT TYPE R (Renewal) E (Expansion) N (New)	2014	REQUEST	2015	ουτιοοκ	2016	ουτιοοκ	2017 OU	ИГООК	2018 0	ИТГООК
PREVIOUS COUNCIL APPROVALS Repayment: Levack Water Supply Loan Repayment over 5 years (2010 - 2015) New Valley Wells (2 Wells) (Internal Financing - \$3,500,000 from 2013 to 2018) Computerized Maintenance Management Systems (CMMS) Contribution - Corporate Initiative	N L L L L L L L L L L L L L L L L L L L	<b>~~</b> ~	1.145.520 670,000 25,000	<b>~~~</b>	309,618 670,000 25,000	ŝ	670,000	Ś	542,615		
SUBTOTAL PREVIOUS COUNCIL APPROVALS		•	1,840,520	\$	1,004,618	~ ~	670,000	\$	542,615	•	.
Condition Assessment - Watermains Condition Assessment (Leak Detection and Analysis)	æ	÷	•	s		ŝ	100,000	\$	100,000	\$	100,000
SUBTOTAL - Condition Assessment - Watermains		\$	•	\$	•	\$	100,000	\$	100,000	•	100,000
Watermain Replacement / Rehabilitation Watermain Rehabilitation (Lining)	£	Ś	1.000,000			Ś	500,000	Ś	500,000	Ś	500,000
Water Service Replacement	œ			Ś	100,000	S	100,000	S	100,000	S	100,000
Watermain Valve Replacernent Watermain Air Refease Valve Installation & Replacement	ዱ ሌ			s	100,000	s s	100,000 100,000	s	100,000	s	100,000
SUBTOTAL - Watermain Replacement / Rehabilitation		••	1,000,000	\$	200,000	•	800,000	\$	700,000	*	700,000
Watermain Priority Projects											
Dollard Avenue - Madison Avenue to End	æ	Ś	550,000								
Eigin Street - Ste. Anne Road to Larch Street	æ	s	550,000								
Ellen Street - St. Agnes Street to Laurier Street	œ	ы	450,000								
Afton Avenue - Hawthome Drive to Gemmell Street	œ	θ	300,000								
System improvements (Development Projects)	ĸ	ŝ	200,000	ŝ	200,000	\$	200,000	69	200,000	s	200,000
MR15 / MR80 Intersection Improvements	œ	€	75,000								
Charette Avenue Sewermain Project	æ	ю	50,000								
Breitminary Design for Subsequent Year Projects (Geotech, Surveys, Consultant Fees)	N,R	Ś	50,000	69	50,000	в	50,000	ŝ	50,000	Ś	50,000
Aconlight Avenue - Bancroft Drive to Kingsway	œ			ŝ	2,400,000						
Kale Street - Marcel Street to Regent Street	Ľ			ŝ	550,000						
Second Avenue (Coniston) - Hwy 17 to Balsam Street	œ			s	350,000						
Home Street • Martindale Road to Logan Avenue	R,N			S	300,000	s	1,000,000				
Barry Downe Road - Westmount Avenue to Kingsway	æ			S	250,000						
Coavidson Street - College Street to MacKenzie Street	œ			s	250,000						
MR15 from 1.6km West of Martin Road to 4.6 km West of Martin Road (Valve Installation)	z			S	200,000						
Barbara Street - Yale Street to Amold Street	œ			ŝ	175,000						
Kelly Lake Road - Watermain with Culvert Replacement	œ			S	100,000						



## Water Detail

PROJECT DESCRIPTION	PROJECT TYPE				ļ					
	R (Rénewal) E (Expansion) N (New)	2014 6	tequest	2015 0UTLO	X		2017 0	MUTLOOK	2018 C	JUTLOOK
Various Watermain with Roads Priority Projects	ĸ				S	1,050,000	s	3,125,000	s	2.670,000
MR 35 Widening - Notre Dame Avenue to Hwy 144	٣				S	300,002	_			
Relocation of Backyard Watermains (Various Locations)	æ				S	500,000	S	500,000	s	500,000
Gutcher Avenue - Mary Street to Irving Street	ĸ				S	450,000				
Fairburn Street - Barry Downe Road to East End	ĸ				Ś	450,000				
Replacement of 2 " Watermains (Various Locations)	œ				ŝ	250,000	ŝ	250,000	s	250,000
Kingslea Court - Rinfret Street to Redfern Street	R				Ś	100,000				
Dundas Street - Hargreaves Avenue to 75 m South West	œ				Ś	100,000				
Contingency - Watermain Priority Projects	œ	s	239,402	\$ 271,5	08 S	292,143	s	198,692	s	224,185
SUBTOTAL - Watermain Priority Projects		\$	2,464,402	\$ 5,096,5	<b>0</b> 8	5,342,143	*	4,323,692	\$	3,894,185
Network Looping										
Whitefish Looping & Rechlorination Facilities - Rechlorination Project	z	ю	325,000	\$ 325,0	8					
Frood Road - Burton Avenue to Shevchenko Avenue	z				ω	750,000	_			
Vallev Water System Looping - Construction (Four Contracts)	Z				6	500.000	67	800.000	¢7	1.200.000
Water System Looping (Various Areas)	: Z						6	250,000	• ••	250,000
SUBTOTAL - Network Looping		\$	325,000	\$ 325,0	\$ 00	1,250,000	\$	1,050,000	*	1,450,000
Distribution System - Other										
Distribution Support - Contract Support	Ľ	ŝ	200,000	\$ 200,0	80	150,000	ю -	200,000	s	100,000
Water Meter Replacement	œ	в	100,000	\$ 100,0	00 S	100,000	ŝ	100,000	s	100,000
Distribution Health & Safety Equipment (Lock Out / Tag Out / Trench Box / Confined Space Entry / Denot Improvements)	Z	Ś	40,000							
Distribution System Monitoring	ĸ			\$ 100,0	00 S	100,000	S	150,000	S	50,000
SUBTOTAL - Distribution System - Other		•>	340,000	\$ 400,0	\$ 00	350,00(	\$	450,000	\$	250,000
Plants - Water Treatment Plants										
Wanapitei WTP - Phase 2 Construction	æ	S	4,750,000							
G Funding from Future Year Envelopes (Debt Financing from 2015 to 2018)		S	(3,000,000)	\$ 816.7	53 \$	816,753	S	816,753	s	816,753
Wanapitei WTP - Phase 2 - Financing in Budget Year		S	1,750,000	\$ 816,7	53 53	816,753	s	816,753	s	816,753
酸 anapitei WTP • Various Ptant Repairs / Equipment Replacement	œ	s	85,000	\$ 75,0	8	75,000	s	75,000	s	75,000
Wanapitei WTP - Phase 3 Design & Contract Administration / Inspection	œ				S	1,800,000	_			
L Funding from Future Year Envelopes					S	(1,800,000	) S	900'006	S	900,000
Wanapitei WTP - Phase 3 - Financing in Budget Year					Ś	•	s	900'006	s	900'006
Wanapitei WTP - Phase 3 Construction	æ								Ś	10,000,000
Funding from Future Year Envelopes (Debt Financing from 2018 to 2032)								-	s S	(8,500,000)
Wanapitei WTP - Phase 3 - Financing in Budget Year									ŝ	1,500,000



## Water Detail

PROJECT DESCRIPTION	PROJECT TYPE R (Renewal) E (Expansion) N (New)	2014	REQUEST	2015 (	ΝΟΟΤΙΟΟΚ	2016	ουτροκ	2017 C	υτιοοκ	2018	ουτιοοκ
Ramsev Lake Outfall Structure Upgrades	æ	S	300,000			ļ					
David Street WTP Upgrades (Membrane Replacement)	æ	ŝ	850,000	Ś	850,000						
David Street WTP Upgrades (HVAC)	æ	S	250,000								
David Street WTP Upgrades (Containment Tank Coating Replacements - 2 Annually)	æ	ŝ	250,000	Ś	250,000	ю	250,000				
David Street WTP - Various Plant Repairs / Equipment Replacement	ĸ	φ	95,000	S	75,000	ŝ	75,000	ŝ	100,000	s	50,000
SUBTOTAL - Plants - Water Treatment Plants		\$	6,580,000	••	1,250,000	••	2,200,000	\$	175,000	\$	10,125,000
Plants - Wells											
Building Repairs / Upgrades - Design & Construction	œ	Ø	500,000	69	622,691	s	887,135	s	1,062,135	s	954,635
Inspection / Rehabilitation	œ	s	300,000	\$	300,000	ы	200,000	s	350,000	ŝ	150,000
Onaping Wells - Install a Permanent Caustic Soda System	Z	s	100,000								
SUBTOTAL - Plants - Wells		\$	000'006	••	922,691	\$	1,087,135	\$	1,412,135	\$	1,104,635
Plants - Reservoirs / Tanks / Booster Stations											
Storage Tank Inspection / Cathodic Protection - Various Tanks	æ	s	75,000	ю	75,000	Ś	75,000	S	75,000	Ś	75,000
Azilda Storage Tank - Mixing System	æ	s	50,000								
Kingsway Booster Station - Demolition	æ	ŝ	30,000								
Hanmer Water Storage Tank and Piping (Construction)	N, E					ю	5,500,000				
Funding from Future Year Envelopes (Debt Financing from 2015 to 2024)						ъ	(5,500,000)	Ś	601,207	ŝ	601,207
Hanmer Water Storage Tank and Piping (Construction) - Financed in Budget Year						s	•	S	601,207	s	601,207
SUBTOTAL - Plants - Reservoirs / Tanks / Booster Stations		\$	155,000	••	75,000	\$	5,575,000	•	75,000	•	75,000
Plants - System Wide											
SCADA, Controls & Instrumentation Systems Master Plan (50% W & WW)	æ	69	250,000	ю	250,000						
Annual SCADA / Communications Upgrades, All Facilities	œ	Ŵ	200,000	Ø	200,000	69	200,000	ŝ	200,000	ŝ	200,000
Operating Manuals & As-Builts	œ	Ś	80,000	ŝ	75,000	Ø	60,000	ŝ	75,000	s	50,000
Health and Safety Inspections and Upgrades (Prestart Health & Safety Reviews)	2	s	75,000	ŝ	50,000						
Security Improvements (Surveillance, Fencing, Alarms, Keys)	Z	S	50,000	Ś	25,000	S	25,000	ŝ	25,000	S	25,000
Qarious Plant Repairs / Equipment Upgrades	œ	69	50,000	ŝ	200,000	S	100,000	s	200,000	S	100,000
ළිonsultant's Procedural Manual For W & WW Facilities (50% W & WW)	æ	ŝ	40,000								
Gacilities Design Manual (50% W & WW)	ĸ	Ś	35,000								
SUBTOTAL - Plants - System Wide		••	780,000	•>	800,000	••	385,000	\$	500,000	•	375,000
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Water 5/6

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## Water Detail

PROJECT DESCRIPTION	PROJECT TYPE										
	R (Renewal)	2014	REQUEST	2015 C	UTLOOK	2016	OUTLOOK	2017	OUTLOOK	2018	OUTLOOK
	E (Expansion) N (New)										
Water Works - Strategic Initiatives											
AMR (Automatic Meter Reading) Water Meters	R,N	Ś	1,000,000	ŝ	1,000,000	ф	1,000,000	ŝ	1,000,000	S	1,000,000
Bulk & Residential Water Filling Station Upgrades (5)	æ	S	400,000								
AVL (Automatic Vehicle Locator) Software & Capital Equipment (W / WW - 40% / 60%)	Z	ŝ	300,000	ŝ	20,000	Ś	20,000				
Plant Process / Energy Optimization Studies (Wanapitei WTP & David Street WTP)	œ	в	200,000								
Operational Optimization Implementation Plan - Hydraulics	z	ŝ	150,000	s	150.000						
Frobisher Depot Upgrades	œ	Ø	150,000								
Asset Management Plan (Detailed) (50% W & WW)	Z	S	100,000								
Asset Management Software (for Capital Project Planning)	Z	S	75,000								
Source Protection Plan	Z	ŝ	50,000	ŝ	30,000	S	40,000	69	40,000	θ	50,000
GIS - Various Equipment & Software	z	S	50,000	s	50,000	s	50,000	s	50,000	S	50,000
Trench Rescue Training	Z	ŝ	50,000								
Locates	z	Ś	50,000								
National W & WW Benchmarking Initiative (Collection & Distribution and Plants)	z	s	25,000	ŝ	25,000	S	25,000	Ś	25,000	S	25,000
Annuat Contribution - Children's Water Festival	ĸ	69	7,500	ŝ	7,500	S	7,500	Ś	7,500	<u>ر</u> ،	7,500
Energy Saving Irititatives (Collection & Distribution and Plants)	œ			G	100,000	ы	100,000				
SUBTOTAL Waterworks - Stratectic Initiatives		*	2,607,500	\$	1,382,500	\$	1,242,500	\$	1,122,500	s	1,132,500
TOTAL - Water		ഗ	16.992,422	ۍ ۱	1,456,317	S	19,001,778	S	10,450,942	S	19,206,320
Federal Gas Tax											
Watemain Rehabilitation (1 ining)		69	680.000								
		• •									

Federal Gas Tax			
Watermain Rehabilitation (Lining)	\$	680,000	
Dollard Avenue - Madison Avenue to End	S	350,000	
Eigin Street - Ste. Anne Road to Larch Street	Ś	350,000	
Ellen Street - St. Agnes Street to Laurier Street	Ś	300,000	
Afton Avenue - Hawthome Drive to Gemmell Street	S	200,000	
bit 15 / MR80 Intersection Improvements	S	50,000	
Charette Avenue Sewermain Project	S	30,000	
ə 50	S	1,960,000	
INCREMENTAL OPERATING BUDGET IMPACT:	S	16,000	

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Water 6/6



## **Unfunded Capital Projects**

## Water

PROJECT DESCRIPTION

COST

РКОЈЕСТ ТҮРЕ

	R (Renewal) F (Exnansion)		
	N (New)		
Wanapitei WTP Alternate Trunk Watermain - Multiple Phases	Z	θ	37,000,000
Well Building Repairs/Upgrades - Construction	œ	θ	10,600,000
Fielding Road Watermain Servicing	ш	θ	13,280,000
Maley Drive Extension - Watermain	ш	θ	4,800,000
Boland, Lancaster, Windsor Booster (Construction - will include Watermain Upgrades)	R, N	θ	2,500,000
Ramsey Lake South Shore Servicing (Construction)	ш	ŝ	2,000,000
Valley Water Looping	Z	θ	2,000,000
Automated Meter Reading (AMR) Conversion Program	Z	Ь	1,000,000
Kingsway Realignment	ĸ	÷	800,000
Falconbridge Water Tower Replacement Design / Contract Administration and Inspection	ĸ	ŝ	550,000
Implementation of Booster Station Evaluation	R	Ф	300,000
Depot Upgrades (Note 1)	R		TBD
TOTAL UNFUNDED		S	74,830,000

Note 1 - Depot Needs Study that is planned to be completed will identify future needs with estimated costs for upgrades to various depots. 19 10 11 11 11 11

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## Wastewater Summary

CATEGORY DESCRIPTION	:									
(For detailed project listing see attached)	2014	REQUEST	201	5 OUTLOOK	2010	6 OUTLOOK	201	7 OUTLOOK	201	8 OUTLOOK
Previous Council Approvals	69	6,811,965	G	10,344,485	69	6,789,055	\$	6,820,217	\$	6,903,002
Wastewater Collection										
Condition Assessment - Sewer System	\$	700,000	ю	725,000	Ś	925,000	Ś	725,000	Ś	925,000
Sewer System Rehabilitation	Ś	200,000	<del>(</del> )	625,000	ь	625,000	ю	625,000	θ	625,000
Sewer Priority Projects	ю	3,256,325	Ю	11,206,234	ю	3,811,207	Ø	1,623,711	Ø	1.586,416
Collection System - Other	\$	288,816	69	210,829	ω	210,000	θ	210,000	Ф	250,000
Wastewater Plants										
Wastewater Treatment Plants - North	ф	400,000	÷	450,000	÷	200,000	в	2,000,000	Ø	1,000,000
Wastewater Treatment Plants - South	ф	1,100,000	69	625,000	⇔	5,020,000	\$	18,650,000	Ø	100,000
Plants - Lift Stations	\$	730,000	69	9,230,000	⇔	3,230,000	в	1,230,000	s	720,000
Plants - System Wide	ф	1,190,000	ю	1,600,000	¢	870,000	в	595,000	\$	555,000
Wastewater General										
Wastewater - Strategic Initiatives	Ф	1,045,000	÷	455,000	ŝ	185,000	↔	65,000	↔	25,000
PROJECT COSTS	S	15,722,106	ŝ	35,471,548	S	21,865,262	S	32,543,928	ŝ	12,689,418
PROJECT FINANCING										
Reserves: Capital	ŝ	•	69	(400,000)	G	•	Ø	•	ю	•
Reserves: Gas Tax	Ś	•	Ś	(1,960,000)	ь	(1,960,000)	Ь	(1,960,000)	Ś	(1,960,000)
Capital Envelopes: Future Years or Debt Financing	Ś	1	\$	(15,775,000)	Ф	(2,221,983)	69	(12,546,983)	G	7,668,266
CAPITAL ENVELOPE (W/WW User Fees)	ф	15,722,106	ŝ	17,336,548	ф	17,683,279	Ś	18,036,945	69	18,397,684

**Priority Setting:** 

Sanitary sewer priority projects are determined based on a review of:

A) Condition: Camera inspections of the sanitary sewers are conducted to determine pipes that are in need of repair / replacement.

B) Operational Issues: Groundwater Infiltration into aging infrastructure and sagged systems of sewer that require frequent maintenance are prioritized for repair / replacement.

C) Capacity: Flow capacity is analysed for new and future growth conditions and upsizing is completed as required. When a roads or watermain priority project is identified, all of the above criteria are reviewed to determine if associated sanitary sewer replacement / upgrades are

required.

The following is the basis for prioritizing Water and Wastewater Facility Projects:

- Legislation / Compliance

- Health & Safety

- Maintenance / Renewal / Replacement of Existing Capital Assets - Protecting Public Health

- Protection of the Environment - Enhancing Productivity

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## Wastewater Detail

PROJECT DESCRIPTION	PROJECT TYPE									
	R (Renewal) 20	14 REQUEST	2015 0	UTLOOK	2016 0	UTLOOK	2017 OU	TLOOK	018 OU	TLOOK
	E (Expansion) N (New)									
REVIOUS COUNCIL APPROVALS										
Biosolids Management (Annual Debt Payment)	N N	2,200,000	s	,200,000	s	2,200,000	\$ 2,2	\$000.000	2	200,000
Bio Selids Phase - In (Construction)	20	2,626,000	<b>v</b> (	1,978,520	• •	1,058,090	5 4,1	139,252	4	222,037
walden www.r/Expansion upgrades (uesign & Contract Administration / inspection) Suthing WWTD Hindradas - Hoodfruste Prostinction & Strandhu Dourse Desirn (S4 MM MM Hammi Einsneine 2014 hr	X	1,040,000	<b>^</b>	000'099'						
טטטטש וווווור טאוומעני - רופטוואטאי טעומעטע נייזע אוועט רטאקו עאינעט וועניוואו רוואווגנואַ געויד גע 2023)	N.R.E S	480.965	5	480,965	¢1	480.965	s	180.965 3		180.965
Sudbury WWTP Upgrades - Standby Power (Design & Contract Administration / Inspection)	R.N S	340,000	•							
Kingsway - Levesque Lift Station	Ч	100,000								
Computerized Maintenance Management System (CMMS) Contribution - Corporate Initiative	s∌ Z	25,000	s	25,000	s	50.000				
SUBTOTAL PREVIOUS COUNCIL APPROVALS	s	6,811,965	\$	,344,485	\$	6,789,055	\$ 6,1	320,217	6,9	303,002
Sondition Assessment - Sewer System										
Sewer Inspection Program (Closed-Circuit Television, Zoom Camera, Cleaning)	а 8	500,000	s	500,000	\$	500,000	5	500,000		500,000
Sartitary Rock Turmel Inspections (Contribution to Reserve Fund)	с С	200,000	5	200,000	s	200,000	5	200,000		200,000
Sewer Assessment in Proximity to Waterways	æ		50	25,000	ŝ	25,000	5	25,000		25,000
Inflow / Infiltration Assessment (Reduction)	œ				\$	200.000				200,000
SUBTOTAL - Condition Assessment - Sewer System	~	700,000	••	725,000	•	925,000	5	725,000		925,000
iewer System Rehabilitation										
Sewer System Annuat Repairs (Flushing Program Reduction)	я \$	200,000	s	125,000	Ś	125,000	\$	125,000		125,000
Sewer Rehabilitation (Lining)	æ		s	500,000	Ś	500,000	5	500.000		500,000
sUBTOTAL - Sewer System Rehabilitation	s	200,000	s	625,000	•	625,000	*	625,000		825,000
Sewer Priority Projects										
Gatchell Outfall Sewer - (Design, Contract Administration & Inspection)	л 8	1,000,000								
Gatchell Outfall Sewer - (Construction)	ĸ		\$	000,000,0						
Funding from Future Year Envelopes (2016 - 2025)			5	1,500,000)	\$	541,086		541,086		541.086
Garcheil Curiail Sewert Financing in Buoger Tear	•		<i>n</i>	200,000	•	241,080	 n	041,050		041,086
Dollard Avenue • madison Avenue to End Avenue Source	× 0	400,000								
	~ (									
Eilen Street - St. Agnes Street to Laturer Street System Improvements (Development Related)	× 22 10 10	325,000 300,625	S	300.000	5	300.000	~	300.000		300.000
Second Avenue (Sudbury) - Donna Drive to 200 m North of Kerwood	R	200,000								
Combined Sewer Investigation	<del>к</del> «	150,000	\$	50,000	5	50,000	\$	50,000		
Eigin Street - Ste. Anne Road to Eim Street	с (	150,000								
Lanton Avenue - Hawthome Unverto Germmen Street	~ ·	125,000	•	000 02	ŧ	000	•			
	<i>»</i> X 1	20,000	<del>л</del> (	2000	<b>A</b>	ດກດ <b>'</b> ດຊ	\$	20,000		50,000
Lively Sanitary Sewar Upgrades - Construction	R		ю.	4,200,000	•					
CJ-unding from Future Year Envelopes (2016 - 2017)			5	3,275,000)	2	1,775,000	2	500,000		
Lively Sanitary Sewer - Financing in Budget Year			69	925,000	Ś	1,775,000	с, Т	500,000		
Development Projects (Valleyview) (Design, Contract Administration & Inspection)	Z :		Ś	500,000	,					
Development Projects (Valleyview) (Construction)	Z				Ś	2,000,000				;
Currenting from Future Year Envelopes (2017 - 2018)					5	2.000.000)	S .	000,000		000,000
Valleyvlew - Financing in Budget Year					\$	•	~	000,000	÷	000,000

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Wastewater Detail

PROJECT DESCRIPTION	PROJECT TYPE									
	R (Renewal) 20	114 REQUE	ST 201	IS OUTLOOK	2016	OUTLOOK	2017 OUTLO	OK 201	8 OUTLOOI	¥
	E (Expansion) N (New)									
Moonlight Avenue - Bancroft Orive to Kingsway	æ		60	200,000						L
Yale Street - Marcel Street to Regent Street	2		\$	175,000						
Second Avenue (Coniston) - Hwy 17 to Balsam Street	¥		ŝ	100,000						
Barbara Street - Yale Street to Arnoid Street	œ		Ś	50,000						
Davidson Street - College Street to MacKenzie Street	æ		ы	50,000						
Barry Downe Road - Westmount Avenue to Kingsway	æ		67	50,000						
Rehabilitation of Backyard Sewermains (Various Locations)	æ				s	500,000	\$ 500.	\$ 000	500,00	¢
Lorne Street - Martindale Road to Logan Avenue	R,N				ŝ	300,000				
Gutcher Avenue - Mary Street to Inving Street	œ				S	225,000				
Fairburn Street - Barry Downe Road to East End	æ				s	150,000				
Various Sewer with Roads Priority Projects	~						\$ 500.	800 800	200'00	g
Contingency - Sewer and Sewer with Watermain Priority Projects	R	206.	325 S	181,234	s	236,207	\$ 223.	711 \$	236,41	9
SUBTOTAL - Sewer Priority Projects	~	3,256,	325 \$	11,206,234	\$	3,811,207	\$ 1,623,	\$ 112	1,586,41	9
Collection System • Other										
Callection Support - Contract Support	Z	243,	816 S	210,829	s	210,000	S 210,	\$ 000	250,00	8
Collection Health & Safety Equipment (Trench Box / Confined Space Entry / Depot Improvements)	Z	35.	8							
Depot Remediation (W & WW Design Share)	R	10.1	000							1
SIIRTOTAL - Collection Sustem - Other	•	288.	816 \$	210.829		210.000	s 210.	2 000	250.00	
	•		•		•		•	•		!
		Ş	ş							
valley East WW IP Upgrades - Capital Needs Study (including standby Power)	× ;		8							
Valley East WWTP Upgrades - Concrete Rehabilitation (3 Phases)	R,N S	8	8							
Chelmsford Lagoon Upgrades - Cleaning / Brush Cleaning	ж У	ğ	8							
valley East WWTP Upgrades - Capital Needs Design, Contract Administration and Inspection	œ		S	450,000			\$ 2,000	800	1,000,00	8
Cheimsford WWTP - UV Disinfection System Replacement	ا «				~	200,000				1
SUBTOTAL - Wastewater Treatment Plants - North	•	400,	\$ 000	450,000	•	200,000	\$ 2,000,	\$ 000	1,000,00	8
Wastewater Treatment Plants - South										
Sudbury WWTP Equipment Upgrades (Blowers and unplanned Repairs)	с с	08	88	100,000	s	100,000	<b>S</b> 100	8	100.00	8
Vaterin WATP Liamer rendomation - Engineering a Consultation Conferent WATP Liveradas	~ ~ ~	Š	3	500.000						
versioning in the operation of the opera	: 02		• v	25,000	ŝ	150.000				
Sudbury WWTP Upgrades - Standby Power (Construction)	R, N		•		5	4,700,000				
Funding from Future Year Erivetopes (Internal or Debt Financing - \$3,500,000 from 2017 to 2018)					s	(3,500,000)	\$ 750,	\$ 000	2,750,00	g
Sudbury WWTP Upgrades -Standby Power Construction - Financing in Budget Yoar	I				\$	1,200,000	\$ 750	\$ 000	2,750,00	8
Sotteury WWTP - Parking Lot and Entrance Upgrades	2				¢9	70,000	\$ 220	88		
Adden WWTP Expansion - Construction	N,K,E						000,81 6	3		5
OPrunding from Future Envelopes							s (1,000)	s (000)	1,000,00	g :
OF unding from Future Year Envelopes (Debt Financing - \$16,300,000 from 2018 to 2032 - \$1,415,249 Annually)							5 (16,300		1,415,24	el :
Walden WWTP Expansion Construction - Financing in Budget Year	1						200	2000	2,415,24	밁
SUBTOTAL - Wastewater Treatment Plants - South	••	1,100	\$ 000	625,000	\$	5,020,000	\$ 18,650	<b>\$</b>	100,00	8

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G Wastewater Detail										
PROJECT DESCRIPTION	PROJECT TYPE									
	R (Renewal) E (Expansion) N (New)	2014	REQUEST	201	SOUTLOOK	2016 C	UTLOOK	201	7 OUTLOOK	201
Plants - Lift Stations										
Lift Station Upgrades / Standby Power - Various Locations	Z	s	500,000	Ś	1,000,000	w	1,000,000	s	1,000,000	Ś
Lift Station Upgrades - Pump Replacements	œ	ю	210,000	₽	210,000	s	210,000	*	210,000	s
Lift Station Upgrades - Inflow Protection	z	в	20,000	ю 4	20,000	ю	20,000	ю	20,000	φ
oi. Criaries cuix orazioni upgrades (Consumidion) Fundino from Future Year Envelopes (Internal Debt Financino - \$8,000,000 from 2016 to 2030)	2			<b>л</b> и	(8.000.000)	ы	961.931	ы	961.931	ы
St. Chartes Lift Station Upgrades (Construction) - Financing in Budget Year Main Street Lift Station (Chalmsford) - Constanction	u			Ś		<b>~</b> ~	961,931 2000,000	s	961,931	S
		.	000 002		0 120 000		000 000 0		000 010 1	•
oud I o I AL - Frants - Lin Stations Plants - System Wilde		•	000'067	•	000'057'8	*	000'067's	^	0,00,06,2,1	•
Various Plant Repairs / Equipment Upgrades / Operational Support	œ	s	350,000	w	350,000	s	350,000	ю	250,000	5
Annual SCADA/Communication Upgrades	R,N	\$	250,000	69	250,000	5	275,000	Ś	275,000	Ś
SCADA, Controls & Instrumentation Systems Master Plan (50% W & WW)	R,N	ы	250,000	ы	250,000					
Upgrading Primary Systems (Lagoons) to Secondary Treatment	Z	<del>s</del>	100,000	\$	100,000	60	100,000			
Health and Safety Inspections and Upgrades (PSH & S Reviews)	œ	s	75,000	ŝ	50,000	s	50,000			
Consultants Procedural Manual for W&WW Facilities (50% W & WW)	z	\$	50,000							
Operating Manuals & As-Builts	R,N	5	40,000	5	60,000	5	40,000	<b>~</b>	40,000	
Roofing and Fencing	œ 3	ю t	40,000	b)	40,000	5	30,000	3	30,000	\$
r adnites Design Manual (20% W & YYV) Maathim Transfer Station - Decommissioning	2 22	ĥ	nnniee	U.	400 000					
Security Improvements (Card Access, Surveillance etc.)	: Z			• •	100.000	s	25,000			
SUBTOTAL • Plants • System Wide		••	1,190,000	••	1,600,000	s	870,000	\$	595,000	••
Wastewater - Strategic Initiatives										
AVL (Automatic Vetricte Locator) Software and Capital Equipment (W & WW – 40% / 60%)	z	Ś	440,000	\$	20,000	ы	20,000			
Frobisher Depot Upgrades	<b>62</b> (	<b>6</b> 9 (	150,000	•						
Energy Saving Initiatives (Collection & Distribution and Plants)	¥ :		100,000	A	ດດກຳດຄຸ					
Asset management Plan (Detalleo) (30% W & WW) Plant Process / Energy Optimization Studies	2 02	<b>л</b> и	60.000	ы	75.000					
Trench Rescue Training	: 2		50.000	,						
Asset Management Software (for Capital Project Planning)	Z	\$	50,000							
GIS - Various Equipment & Software	z	s	25,000	\$	35,000	S	40.000	69	40,000	
National W & WW Benchmarking Initiative (Distribution & Collection and Plants)	z	\$	25,000	s	25,000	ŝ	25,000	ŝ	25,000	••
Eduvironmental Management System Implementation	Z 2	<b>د</b> ې و	25,000							
Covaries Demand - Side Management (Wet Weather Flow Reduction)	: Z	9	~~~	\$	100,000	ŝ	100.000			
SUBTOTAL - Wastewater - Strategic Initialives		-	1,045,000	•	455,000	•	185,000	•	65,000	•

<u>961,931</u> 961,931

720,000

250,000 275,000

30,000

555,000

500,000 210,000 10,000

2018 OUTLOOK

## TOTAL - Wastewater

INGREMENTAL OPERATING BUDGET IMPACT:

24,000

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25,000

25,000

32,543,928 S 12,689,418

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21.865.262

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35,471,548

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# Unfunded Capital Projects

Wastewater

			1000
	R (Renewal)		
	E (Expansion	<del>ک</del>	
	N (New)		
Fielding Road Sewer Servicing and Walden WWTP Upgrades	ш	ŝ	18,020,000
Ramsey Lake South Shore Servicing (Construction)	ш	ଡ଼	3,000,000
Maley Drive Extension - Sanitary Sewer	R	θ	1,500,000
Jacob Street Lift Station	ш	ω	1,200,000
Boland, Lancaster, Windsor Booster (Construction - Will Include Sanitary Sewer Upgrades)	ĸ	Ь	500,000
Lift Station Electrical Drawings	R	Ś	300,000
Manhole Rehabilitation	8	Ь	250,000
Copper Cliff Forcemain	Z		TBD
Depot Upgrades (Note 1)	Ľ		TBD
TOTAL UNFUNDED PROJECTS		G	24.770.000

TBD - To be determined



## **Request for Decision**

Infrastructure Services 2014 Capital Budget - Roads and Drainage

Presented To:	Operations Committee
Presented:	Monday, Sep 16, 2013
Report Date	Wednesday, Sep 11, 2013
Туре:	Presentations

## **Recommendation**

That the City of Greater Sudbury accept the report dated September 11, 2013 from the General Manager of Infrastructure Services regarding the draft Roads and Transportation Services Division 2014 Capital Budget and the 2015 to 2018 Capital Forecast.

## Background

The Roads and Transportation Services requests are in the amount of \$38,251,749 and have been allocated as follows:

Previous Council Approvals (AVL, and CMMS)	\$950,000
Arterials – New Construction /Widening / Intersection Improvements	\$10,434,697
Arterial – Collector Roads	\$12,500,000
Local Roads	\$4,525,000
Bridges/Culverts	\$2,100,000
Street Lighting	\$795,000
Traffic Signal Improvements	\$150,000
Sidewalk/Curb	\$745,000
Surface Treatment	\$1,200,000
Drainage	\$2,219,000
Other Road Programs/Projects	\$2,632,352

## Signed By

### **Report Prepared By**

David Shelsted Director of Roads & Transportation Services Digitally Signed Sep 11, 13

## **Division Review**

David Shelsted Director of Roads & Transportation Services Digitally Signed Sep 11, 13

### Recommended by the Department Tony Cecutti General Manager of Infrastructure Services Digitally Signed Sep 11, 13

Recommended by the C.A.O. Doug Nadorozny Chief Administrative Officer Digitally Signed Sep 11, 13 The attached table indicates the specific projects and allocations for the 2014 Capital Budget and the 2015-2018 Capital Forecast.

The 2014 Capital Budget has been funded by the capital envelope (\$26,987,222), Federal Gas Tax (\$7,724,527), Roads Capital Reserves (\$3,400,000) which includes Development Charge revenue, and Obligatory Reserves (\$140,000). After this withdrawal, there will be a \$2.7 Million balance in the Capital Financing Reserve Fund - Roads.

The projects identified include an annual contribution to reserves for Maley Drive, and the previous Council approvals for the Automatic Vehicle Locators (AVL) and the Computerized Maintenance Management System (CMMS).

Larger projects of note include the widening of Second Avenue in Minnow Lake from Donna Drive to 100 metres north of Kenwood Street, improvements to the MR 80 and MR 15 intersection in Val Caron, rehabilitation of Big Nickel Road and the Paquette Whitson and Horizon Stormwater Management Facilities.

(For detailed project listing see attached)	2014	REQUEST	2015	OUTLOOK	201	6 OUTLOOK	2017		201	8 OUTLOOK
Roads										
Previous Council Approvals	ŝ	950,000	s	٠	S	•	s		Ś	•
Arterials - New Construction/Widening/Intersection Improvements	s	10,434,697	S	11,184,697	ŝ	8,484,697	s	9,284,697	S	8,284,697
Arterial - Collector Roads	S	12,500,000	S	7,050,000	S	9,980,000	s	9,535,000	ŝ	10,605,000
Local Roads	Ś	4,525,000	s	4,860,000	s	5,035,000	S	4,820,000	S	5,175,000
Bridges/Culverts	s	2,100,000	Ŵ	4,500,000	S	4,600,000	s	4,900,000	s	5,000,000
Streetlighting	s	795,000	s	300,000	S	330,000	s	330,000	S	350,000
Traffic - New Lights	S	150,000	S	315,000	S	325,000	S	335,000	S	350,000
Sidewalk/Curb	S	745,000	Ś	760,000	S	775,000	s	790,000	S	810,000
Surface Treatment	69	1,200,000	ŝ	975,000	s	1,000,000	ŝ	1,025,000	S	1,050,000
Other Road Programs/Projects	ŝ	2,632,352	69	3,212,382	s	2,984,193	မ	3,015,000	S	2,933,023
Total Roads	s	36,032,049	ŝ	33,157,079	\$	33,513,890	\$	34,034,697	s	34,557,720
Drainaoe										
Previous Council Approvals	G	700,000	ю	500,000	S	150,000	\$		Ś	•
Municipal Drainage & Stormwater Management	\$	1,519,700	\$	1,754,414	S	2,138,142	\$	2,328,885	S	2,378,643
Total Municipal Drainage & Stormwater Management	\$	2,219,700	\$	2,254,414	s	2,288,142	\$	2,328,885	\$	2,378,643
PROJECT COSTS	ŝ	38,251,749	ŝ	35,411,493	Ś	35,802,032	s	36,363,582	S	36,936,363
PROJECT FINANCING										
Reserves: Capital	s	(3.400,000)	S	•	S	•	s	•	s	•
Reserves: Obligatory	s	(140,000)	ŝ	(160,000)	S	•	s	•	s	٠
Reserves: Federal Gas Tax	S	(7,724,527)	S	(7,724,527)	\$	(7.724,527)	s	(7,724,527)	s	(7,724,527)
CAPITAL ENVELOPE (Tax Levy)	<b>G</b>	26,987,222	Ŵ	27,526,966	ŝ	28,077,505	ŝ	28,639,055	ŝ	29,211,836
Priority Sotting:										
To determine projects in the first four (4) Product Categories (Major Roads, Minor Road are used to develop the OCI:	ds, New I	Roads, and Bric	lge Reh	abilitation), an O	verall C	condition Index (C	)CI) crite	eria is utilized. 7	The foll	owing criteria
a) Condition Rating/Cost Benefit: Roads are physically examined for structural condition (Deighton), which generates recommended rehabilitation strategies and costs by road c	on, ride si classifica	moothness, true tion and at pre-	ck traffic establis	, traffic volumes hed budget scen	and dri arios is	ainage. A compute one of the tools	Iterized used to	Pavement Mana develop the OC	agemer 1.	it System
th Codets. And there are active account that a sector will active										

b) Safety: Are there any safety concerns that a project will solve.

c) Associated with Water/Wastewater Projects: Where water/wastewater construction or rehabilitation is required, the road will be restored/upgraded if warranted.

d) Economic Development Opportunity: Site specific in conjunction with proposed development (commercial and/or residential).

e) Environment and Traffic Congestion Issues: It has been demonstrated that reducing bottlenecks and resulting idling can reduce carbon monoxide and carbon dioxide between 50% and 80%.

Sudbury

Roads / Drainage Summary

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PROJECT DESCRIPTION	PROJECT TYPE R (Renewal)	201	4 REQUEST	201		2016	ουτροοκ	2017	OUTLOOK	2018	ουτιοοκ
	E (Expansion) N (New)										
PREVIOUS COUNCIL APPROVALS	z	•	200.007								
Computerized Maintenance Management Systems (CMMS) Contribution - Corporate Initiative	Z	- 40	250,000								
SUBTOTAL PREVIOUS COUNCIL APPROVALS		5	950,000	n	•	s	•	s	•	•	•
Arterials - Now ConstructionWidoning/Intersection Improvements											
Second Avenue (Sudbury) - Widening from Donna Drive to 100 Metres North of Kenwood Street	w	Ś	4,900,000	12							
Matey Drive (Contribution to Reserve Fund)	ш	\$	2,284,697	ŝ	2,284,697	w	2,284,697	w	2,284,697	ŝ	2,284,697
MR 15 MR 80 Intersection Improvements	ш	s	2,000,000	•							
Crean Hill Road from MR 4 to Victoria Mine	Ψ	ы	1,250,000	•						I	
Various Artental Roads	ш			ŝ	3,000,000			s	7,000,000	0	6,000,000
Moonlight Avenue from Kingsway to Bancroft Drive	ш			\$	3,000,000						
Barry Downe Road from Westmourt Road to Kingsway	u ı			\$	2,900,000	4	000 000 0				
MR 35 from Notre Dame West to Highway 144	ш	ļ				•	6,200,000	•	0.004.007		0 404 607
SUBTOTAL Arterials - New Construction/Midening/Intersection Improvements		•	10,434,697	•	11,184,697	•	8,484,697	•	9,284,697	•	149,455,6
Artorial - Collector Roads											
Big Nickel Mine Road from Lorne Street to Elm Street	ĸ	ŝ	6.000,000	n ,							
MR 89 from Skead Road (MR 86) to Rix Street	æ	s	2,500,000	¢							
MR 80 0.2 km North of Mackerzie Street to Whitson River	æ	s	1,500,000	~							
MR 80 from Main Street to 0.2 km North of Mackenzle Street	æ	\$	1,400,000	•							
Dominion Drive from 1.5 km West of Notre Dame Avenue to Elmview Street	æ	S	1,100,000	•							
MR 15 from 1.6 km West of Martin Road to 4.6 km West of Martin Road	œ			69	2,900,000						
Old Hwy 17 (MR 55) from Bridge at Eve Street to Gorman Avenue	œ			ŝ	2,500,000						
MR 84 from Capreol Lake Road to Meehan Street	æ			<b>s</b> (	1,250,000						
Second Avenue (Coniston) Hwy 17 to Amanda Street	æ			\$	400,000	•					
Skead Road (MR 86) from MR 89 to Old Skead Road North	œ 1					1 <del>9</del> (	2,750,000				
Lorne Street from Martindale Road to Logan Avenue	Ľ					0	7, ruu, uu				
Cld Hwy 17 (MR 55) from 1.4 km East of McCharles Lake Road to McCharles Lake Road	æ					69 (	1,250,000				
Long Lake Road from 0.65 km North of Suraryside Road to Hwy 17	~					69 (	1,150,000				
Frood Road from Kathleen Street to Schevchenko Avenue	œ					<i>w</i> (	855,000 555,000				
Brady Street from Minto Street to Shaugnessy Street	œ					6	200,000				
Frood Road from Schevchenko Avenue to Burton Avenue	œ					<b>0</b>	500,000				
Elm Street from Frood Road to Elgin Street	œ					s	275,000	•			
MR 84 from Capreol Lake Road to Suez Drive	æ							es (	2,125,000		
MR 15 from Belisto Drive to 2.2km West	۲							ю (	1,650,000		
Old Hwy 17 (MR 55) from McCharles Lake Road to 1.75km West	œ							n (	1,325,000		
Beatty Street from Frood Road to Eim Street	2							<b>n</b> (	1,120,000		
Walford Road from Regent Street to Paris Street	د :							0	1,040,000		
Elm Stroet from Ethelbert Street to Big Nickel Mine Road	æ							0	850,000		
Kelly Lake Road from Ceasar Road to Copper Street	œ							6	580,00U		
Power Street from MR 55 to Collins Drive	æ							\$	500,000		

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Roads 3/9

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ROJECT DESCRIPTION	PROJECT TYPE	100	DECLICET	2046		2046		2017.0		2018	
	K (Kenowal)										
	E (Expansion)										
	N (New)										
Merier Sireet from MR 35 to Notre Dame Street	æ							ю	345,000		
Kinowav from Ram Downe Road to Falconbridge Histowav	œ									\$	1,950,000
Ruganaj nom danj domo nom na kilo 20 Dominin Drim fam Elminin: Drim ja kilo 20	œ									69	1,275,000
	: 0									s	1.100.000
Bancroft Drive from Bellevue Avenue to First Avenue	¢ ۱									•	
Hill Street from Hwy 17 to 0.9 km South	R									9 t	000,000
Attlee Avenue from Gemmeil Street to LaSatte Boulevard	œ									<b>"</b>	900,008
Notre Dame Avenue from Witma Avenue to 0.6 km North of Cambrian Heights Drive	œ									~	805,000
Vot Strout from Barent Street in Darie Street	¢									¢	730,000
tun aneen num nagen aneen of en are aneen Arrees Arrees for therebones Princip Calconduides History	œ									Ś	730,000
	: 0									ş	590.000
Main Stroot East from MR 15 to Railway Tracks	2 (										
Second Avenue from Highway 17 to Amanda Street (includes Amanda Street)	£									•	
Brookside Road from Errington Avenue to St. Onge Street	œ									<b>n</b> (	
Dell Street from Morin Avenue to Snowden Avenue	æ									2	355,000
Melvin Avenue from Kathleen Street to Mabel Street	2									w	330,000
SUBTOTAL Arterial - Collector Roads		•	12,500,000	••	7,050,000	*	9,980,000	•	9,535,000	•	10,605,000
l ornal Roarte											
	•	A	RDF MM								
Dollard Avenue from Madison Avenue to End	נו	<b>9</b> (	000'020								
Ellen Street from St. Agnes Street to Laurier Street	ĸ		000,678								
Ester Street from Long Lake Road to 0.9 km West	ĸ	6	400,000								
Maple Stroot from Larch Street to Durham Avenue	æ	ŝ	390,000								
Fermision Avenue from Crescent Avenue to 0.4 km East	ĸ	S	365,000								
Fergueser restance within a second restance of the second second with	Ľ	47	305,000								
	: 0		255 000								
Eva Street from Laura Street to Chener Street	2 (		000'000								
Edna Street from Buchanan Street to Lorne Street	X I	n (	230,000								
Elgin Street from Ste. Anne Road to Elm Street	Ľ	<u>م</u>	000'917								
Afton Avenue from Hawthorne Drive to Gemmell Stroet	œ	S	165,000							•	
Traffic Calming	Z	Ś	155,000	••	160,000	\$	165,000	0	170,000	'n	000'9/1
Medora Street from Worthington Cresent to Edmund Street	œ	\$	160,000								
Montpetiter Road from Railway Tracks to Main Street West	œ	s	155,000								
Laval Street from Recent Street to End	٣	69	150,000								
Field Street from Brian Street to Timothy Avenue	æ	Ð	115,000								
Belanner Street from Main Street West to Bridge	£	s	105,000								
Clauda Croot from Moodinth Avenue in Ridnemmunt Avenue	æ	\$	60,000								
	œ	e1	50.000								
Gieroale Avenuo Irom Lonsoale Avenue lo Creativew Avenue	: 0	• •									
GIII Street from Beaton Avenue to End	23	7	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~								
Subdivision Asphalting (including Developer's Contributions)	Z				110 000						
EIm Street from Main Street to Larch Street	ĸ			•	450,000						
Vaughan Avenue from Cresent Avenue to Shaw Street	œ			<b>H</b>	325,000						
Ronald Crescent from Blacklake Road to Thomas Street	Ľ			6	310,000						
David Street from Bridge Street West to End	æ			N ·	310,000						
Hines Street from Moonlight Avenue to Equinox Cresent (includes Developer Contribution)	œ			S	310,000						
Prevost Street from St. Agnes Street to Laurier Street	æ			÷	305,000						
kinim Count from Westmount Avenue North to Westmount Avenue South	œ			Ś	305,000						

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PROJECT DESCRIPTION	PROJECT TYPE R (Ronowal)	2014 RECUEST	2016		2016		2017 01		2018.0	
	E (Eveneion)									
	N (Now)									
Paul Street from Graham Road to Caroline Street			s	290,000						
Navanod Road from Fourth Avenue to 0.6km East	ĸ		\$	275,000						
Lamothe Street from Barry Downe Road to Leon Avenue	æ		\$	265,000						
Louisa Drive from Muriel Crescent North to Muriel Crescent South	æ		\$	250,000						
Laura Street from MR 80 to Carmen Street	æ		S	240,000						
Leslie Street from Mykes Street to Bridge	~		69	210,000						
Maureen Crescent from Gemmeil Street to Downland Avenue	œ		Ś	135,000						
Carr Street from Falcontoridge Highway to 0.4km North	æ		Ю	130,000						
Patrick Street from Hawthorne Drive to Canterbury Street	œ		s	130,000						
Yale Street from Marcel Street to Regent Street	æ		69	115,000						
South Lane North from Highway 69 South to Pioneer Road	œ		Ś	100,000						
Martilla Drive from Regent Street to End	œ		Ś	95,000						
Barbara Street from Yale Street to Arnold Street	œ		Ś	80,000						
Morris Street from Howey Drive to Anne Street	œ		\$	70,000						
First Avenue from Balsam Street to 0.5 km South	œ				w	435,000				
Creighton Road from School Street to Godfroy Drive	œ				ю	420,000				
Minto Street from Larch Street to Eigin Street	æ				5	415,000				
Gutcher Avenue from Mary Street to Lane	ĸ				S	275,000				
Crescent Avenue from Young Street to Demie Street	œ				••	255,000				
St. Nicholas Street from Edinburgh Street to Wembley Drive	ĸ				ŝ	235,000				
Arvo Street from Sparks Street to 0.4 km North	æ				s	220,000				
Hesta Street from Artington Drive to Riverside Drive	٣				69	220,000				
Normand Avenue from Leonard Avenue North to Arlington Drive	æ				*	215,000				
Second Avenue from Torbay Road to Bayside Crescent	٣				49	200,000				
Many Street from Desmorest Street to Gutcher Avenue	æ				Ś	200,000				
Takon Street from Will Street to Josephine Street	œ				\$	170,000				
Cerci Street from MR 80 to Suzanne Street	æ				\$	160,000				
Chenier Street from Oscar Street to MR 80	۲				ф	160,000				
Carmen Street from LaSalte Boutevard to 0.4 km South	œ				69	155,000				
Trembley Street from Laval Street to Takon Street	œ				\$	145,000				
Clifford Cresent from Percy Avenue to Flake Street	œ				\$	140,000				
Barrington Street from Falcontridge Highway to End	œ				ы	110,000				
Nicole Street from Artington Drive to Riverside Drive	æ				69	105,000				
Gregg Lane from Martindate Road to Gino Street	æ				¢	105,000				
Northway Avenue from LaSalle Boulevard to Palisade Place	œ				ŝ	105,000				
Mary Court from Oreil Street to Oreil Street	ĸ				₩	105,000				
Rene Street from Addy Cresent to Mederic Street	œ				ŝ	85,000				
Aurore Street from Monique Street to 0.1 km East	æ				\$	75,000				
Noble Street from Granite Street to Huron Street	Ľ				ŝ	65,000				
Hope Street from Huron Street to Grantie Street	œ				ŝ	60,000				
Parkwood Street from Maple Street to North End	œ				s	35,000				
Various Local Roads	œ						5	1,650,000	\$	5,000,000
SUBTOTAL Local Roads		\$ 4,525,000	•	4,860,000	••	5,035,000	•	1,820,000	•	5,175,000



PROJECT DESCRIPTION	PROJECT TYPE R (Ronewal)	2014	REQUEST	2015	OUTLOOK	2016	οητιοοκ	2017 0		2018	DUTLOOK
	E (Expansion) N (New)										
Bridges/Culvorts											
Various Bridge / Culvert Repairs	æ	\$	1,000,000	69	1,750,000	ŝ	2,900,000	\$	4,900,000	\$	4,800,000
Garson Coniston Road	۳.	ŝ	500,000								
Ironside Lake Road	œ .	5	200'000								
Bridge Inspections / Evaluations	æ	S	100,000			ŝ	200,000			2	200,000
Keity Lake Road	œ			~	1.750,000						
MR 55 (CPR Overhead)	œ			Ø	1,000,000						
Kaimo Road	œ					5	1,500,000				
SUBTOTAL Bridgos/Culvarts		•	2,100,000	•	4,500,000	••	4,600,000	•	4,900,000	•	5,000,000
Streetlighting											
Miscellaneous Streetlight Upgrades	œ	ы	750,000	5	250,000	ŝ	275,000	ŝ	275,000	\$	290,000
New Streetlights	z	s	45,000	5	50,000	s	55,000	Ś	55,000	\$	60,000
SUBTOTAL Streetlighting		•	795,000	•	300,000	s	330,000	•	330,000	•	350,000
Traffic - Now Liahts											
Traffic System Improvements	RN	ŝ	150,000	~	315,000	Ś	325,000	5	335,000	5	350,000
SUBTOTAL Traffic - Now Lights		•	150,000	-	315,000	\$	325,000	•	335,000	•	350,000
Sidewalk/Curb											
Various Projects	RN	s	745,000	Ś	760,000	υŻ	775,000	ø	790,000	ŝ	810,000
SUBTOTAL Sidewalk/Curb			745,000	•	760,000	Ś	775,000	u	790,000	•	810,000
Surface Troatment											
Single Surface Treatment Various Locations (25 km)	ĸ	w	478,000								
New Cobden Road (1.1 km)	æ	s	84,000								
Moxam's Landing (1.0 km)	œ	\$	76,000								
St. Pothtier Road (1.0 km)	œ	ŝ	76,000								
Titton Lake Road (1.0 km)	æ	\$	76,000								
Kaimo Road (0.9 km)	æ	s	68,000								
O'Neil Drive West (0.75 km)	Ľ	\$	57,000								
Makada Drive (0.75 km)	æ	ŝ	57,000								
Park Road (0.75 km)	œ	w	57,000								
Mortpetiter Road (0.7 km)	œ	ŝ	53,000								
Mackenzie Road (0.5 km)	œ	s	38,000								
Dryden Road (0.45 km)	œ	Ś	34,000								
Joudry Road (0.35 km)	œ	ŝ	27,000								
Norvic Road (0.25 km)	æ	S	19,000								
Various Locations	œ			\$	975,000	•	1,000,000	~	1,025,000	5	1.050.000
SUBTOTAL Surface Troatmont		*	1,200,000	•	975,000	*	1,000,000	•	1,025,000	••	1.050,000



PROJECT DESCRIPTION	PROJECT TYPE										
	R (Renewal)	2014	REQUEST	2015	OUTLOOK	2016	OUTLOOK	2017	OUTLOOK	2018	OUTLOOK
	E (Expansion)										
	(MOW) N										
Other Road Programs/Projects											
Contingency	æ	S	1,267,352	ŝ	2,162,382	69	2,134,193	\$	1,915,000	\$	2,083,023
Frobisher Yard Upgrades	RN	v	S00,000								
Consulting Services - Future Projects	ĸ	ŝ	500,000	s	300,000	Ś	300,000	~	300,000	\$	300,000
Guide Roth Installations	z	ŝ	250,000	Ю	250,000	s	250,000	673	250.000	69	250,000
Computerized Maintenance Management Systems (CMMS)	z	ŝ	75,000								
Automatic Vehicle Locator Software	z	Ś	40,000								
Crack Seating	ĸ			ŝ	300,000	\$	300,000	ŝ	350,000	60	300,000
Pavement Management Updates	æ			ю	200,000			ŝ	200,000		
SUBTOTAL Other Road Programs/Projects		•	2,632,352	s	3,212,382	s.	2,984,193	•	3,015,000	•	2,933,023
PROJECT COSTS		ŝ	36,032,049	\$	33,157,079	\$	33,513,890	\$	34,034,697	\$	34,557,720
Notes: 1 Develorer Contribution - Road Dernsite Reserve Frind		er.	000								
1. Corrector Contribution - New Separation - 1999		) et	48,000								

	Fund \$ 92,000	rve Fund 5 48,000	\$ 1,000,000		\$ 500,000	treet \$ 3,974,527	\$ 1,000,000	son River \$ 750,000	enzie Street \$ 750,000
NOTES:	1. Developer Contribution - Road Deposits Reserv	2. Developer Contribution - Site Plan Deposits Res	<ol><li>Capital Financing Reserve Fund - Roads</li></ol>	deral Gas Tax Funding	4. Crean Hill Road from MR 4 to Victoria Mine	5. Big Nickel Mine Road from Lorne Street to Elm	6. MR 89 from Skead Road (MR 86) to Rix Street	7. MR 80 0.2 km North of Mackenzie Street to Wh	8. MR 80 from Main Street to 0.2 km North of Mac

Incremental Operating Costs:

Drainage Detail

PROJECT DESCRIPTION	PROJECT TYPE										
	N (New)	2014	REQUEST	2015	OUTLOOK	2016	OUTLOOK	2017	OUTLOOK	2018	DUTLOOK
	E (Expansion)										
PREVIOUS COUNCIL APPROVALS											
Paquette Whitson Stormwater Facility	z	S	500,000	ŝ	350,000	S	150,000				
Horizon Stormwater Management Facility	z	ŝ	150,000	¢	50,000						
Countryside Stormwater Pond	z	ŝ	50,000	ഗ	100,000						
SUBTOTAL PREVIOUS COUNCIL APPROVALS		s	700,000	\$	500,000	s	150,000				.
Municipal Drainage & Stormwater Management											
East Branch Junction Creek Stormwater Management	Z	S	630,000	S	400,000	s	400,000	ŝ	350,000	ŝ	350,000
Capreol Storm Drainage Improvements - Phase 1	z	ю	363,000	в	340,000	Ø	200,000	s	200,000	S	150,000
Miscellaneous Storm Sewer Improvements	z	÷	75,000	ю	75,000	69	75,000	в	50,000	ŝ	50,000
Miscellaneous Consulting Fees	z	s	50,000	ŝ	50,000	Ś	50,000	Ś	50,000	Ś	50,000
Jacobsen - Cavarzan Storm Sewer	z	ŝ	36,000	s	28,000	S	17,700	Ś	33,500	S	15,000
Minnow Lake Stormwater Treatment Station	z	s	200,000	Ś	700,000	ŝ	100,000			S	290,000
Upper Whitson River Flood Control	z	ю	80,000			Ś	125,000	69	330,000	\$	175,000
Still Lake Stormwater Management Improvement	z	ŝ	50,000	Ś	50,000	S	100,000	\$	50,000	69	50,000
Subwatershed Planning (Contribution to Reserve Fund)	Z	69	35,700	ŝ	36,414	ŝ	37,142	S	37,885	Ś	38,643
Whitson Lake Dam Renewal	R			Ś	75,000	Ś	50,000	S	175,000	Ś	50,000
Mountain Street Storm Outlet	Z					S	548,300	в	650,000	Ś	400.000
Bancroft Stormwater Management Facility	z					s	285,000	S	215,000	s	75,000
Rheal Stormwater Management Facility	z					ю	50,000	w	150,000	ŝ	50,000
Rodgers Road Storm Water Management	z					s	50,000	Ø	37,500	63	40,000
David Street Storm Outlet Treatment Station	z					s	50,000			s	250,000
Trillium Municipal Drain Stormwater Management (Azilda)	z									s	95,000
Whitson River Tributary 3 Stormwater Management (Chelmsford)	z									ŝ	95,000
Josephine Street Outlet Stormsewer Oversizing (Val Caron)	z									ŝ	65,000
Paul Street Stormsewer Outlet (Azilda)	z									ŝ	50,000
Dominion Drive/Concorde Stormsewer Outlet	z									69	40,000
SUBTOTAL Municipal Drainage & Stormwater Management		\$	1,519,700	•	1,754,414	s	2,138,142	•	2,328,885	~	2,378,643
PROJECT COSTS			2,219,700		2,254,414		2,288,142		2,328,885		2,378,643

Incremental Operating Costs



## Roads

Unfunded Capital Projects

COST

ΡΡΟΙΓΟΤ ΤΥΡΕ

PROJECT DESCRIPTION	PROJECT TYPE		COST
	R (Renewal)		
	E (Expansion)		
	N (New)		
Maley Drive (Note 1)	NE	Ь	105,150,000
MR 35 Widening from Azilda to Chelmsford	ш	Ь	29,150,000
Kingsway Realignment	z	θ	24,600,000
New University Link	z	Ś	15,800,000
Notre Dame Widening - Lasalle to Kathleen	ш	ଡ଼	15,450,000
Lasalle Barry Downe Intersection Improvements	ш	θ	5,100,000
Depot Upgrades (Note 2)	R		TBD
TOTAL UNFUNDED PROJECTS		S	195,250,000

## **TOTAL UNFUNDED PROJECTS**

TBD - To be determined

Note 1 - Unfunded portion above represents additional costs beyond the funding approved by Council in prior years and as well as funding within this Capital Budget.

Note 2 - Depot Needs study will identify future needs with estimated costs for upgrades to various depots.

# Municipal Roads, Structures and Related Infrastructure - 10 Year Financial Plan

of approximately \$117M to be sustainable. Currently, the combined funding for operating and capital is approx \$75M with a funding gap of \$42M. The funding gap for Capital is \$38M and for Operating is \$4M. Roads will require an additional \$6.2M Based on the Municipal Roads, Structures and Related Infrastructure 10 Year Financial Plan as presented to Council on July 10, 2012, there is an overall infrastructure deficit of \$700M with an annual investment requirement in operating and capital inflation. As Roads Infrastructure has been identified as a key priority, the 2013 Budget will include options for operating in capital funding each year for the next 10 years to close the identified capital funding gap and address the impacts of and capital infrastructure needs based on the 10 year financial plan.



Drainage

Unfunded Capital Projects

PROJECT DESCRIPTION	PROJECT TYPE		COST
	R (Renewal) E (Expansion) N (New)		
Lake Ramsey West Watershed Stormwater Management	z	ю	25,000,000
East Branch Junction Creek Stormwater Management Study& Improvements	z	ŝ	10,000,000
Whitson River Tributary 3 Stormwater Management Control	z	ŝ	6,000,000
Whitewater Lake Stormwater Management	z	÷	5,500,000
Rodgers Road Storm Water Management	z	\$	5,000,000
Upper Whitson River Flood Control Radar Hill Site	z	ŝ	5,000,000
Upper Whitson River Flood Control Tributary 10 Site	z	↔	2,300,000
Capreol Storm Drainage Improvements - Phase 1	z	69	2,200,000
Upper Whitson River Flood Control Falconbridge Branch Site	z	÷	2,000,000
Mountain Street Storm Outlet	z	θ	1,800,000
Ida Street Algonquin Watershed Stormwater Pond	z	Ś	1,800,000
Still Lake Stormwater Management Improvement	z	€9	1,600,000
Regent Street Loach's Road Storm Sewer Outlet	z	Ф	1,500,000
Bancroft Road Stormwater Management Facility	z	₩	1,400,000
Rheaf Street Stormwater Management Facility	z	Ś	1,400,000
Green Avenue Stormwater Treatment Centre	z	ю	1,000,000
Lake Nepahwin Stormwater Treatment Tank # 10	z	69	800,000
Minnow Lake Stormwater Treatment Station	z	\$	710,000
Jack Nicholas Stormwater Management	z	ŝ	500,000
Madison Nickeldale Stormwater Pond	z	\$	500,000
Mallard's Pond Reft/Rehabilitation	œ	Ф	500,000
Valleystream Stormwater Management	z	\$	500,000
TOTAL UNFUNDED PROJECTS		ŝ	77,010,000

Municipal Roads, Structures and Related Infrastructure - 10 Year Financial Plan

approximately \$117M to be sustainable. Currently, the combined funding for operating and capital is approx \$75M with a funding funding each year for the next 10 years to close the identified capital funding gap and address the impacts of inflation. As Roads Infrastructure has been identified as a key priority, the 2013 Budget will include options for operating and capital infrastructure Based on the Municipal Roads, Structures and Related Infrastructure 10 Year Financial Plan as presented to Council on July 10, gap of \$42M. The funding gap for Capital is \$38M and for Operating is \$4M. Roads will require an additional \$6.2M in capital 2012, there is an overall infrastructure deficit of \$700M with an annual investment requirement in operating and capital of needs based on the 10 year financial plan.



Sudbury

Request for Decision	Req	uest	for	Dec	isior
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Report dated August 1, 2013 from the General Manager of Infrastructure Services regarding All-Way Stop Control - One Year Review (1) Bouchard Street at Marcel Street, Sudbury (2) Lansing Avenue at Melbourne Street, Sudbury (3) Hawthorne Drive at Westmount Avenue, Sudbury (4) Madeleine Avenue at Main Street, Sudbury (5) Madeleine Avenue at Alexander Street, Sudbury.

## **Recommendation**

THAT the City of Greater Sudbury approve the removal of all-way stops at the following locations:

1. Bouchard Street at Marcel Street, 2. Lansing Avenue at Melbourne Street, 3. Hawthorne Drive at Westmount Avenue, 4. Madeleine Avenue at Main Street, 5. Madeleine Avenue at Alexander Street;

AND THAT the procedure to remove the all-way stop signs as outlined in the report dated August 1, 2013 from the General Manager of Infrastructure Services regarding All-Way Stop Control – One Year Review be followed with a communications plan.

## Background

This matter was deferred at the August 12, 2013 meeting of the Operations Committee. Original Report attached.

## Signed By

Presented:

No signatures or approvals were recorded for this report.

Report Date	Tuesday, Sep 03, 2013
Туре:	Referred & Deferred Matters

Monday, Sep 16, 2013



Presented To:	Operations Committee
Presented:	Monday, Aug 12, 2013
Report Date	Thursday, Aug 01, 2013
Туре:	Managers' Reports

## **Request for Decision**

All-Way Stop Control - One Year Review (1) Bouchard Street at Marcel Street, Sudbury (2) Lansing Avenue at Melbourne Street, Sudbury (3) Hawthorne Drive at Westmount Avenue, Sudbury (4) Madeleine Avenue at Main Street, Sudbury (5) Madeleine Avenue at Alexander Street, Sudbury

## **Recommendation**

THAT all-way stops be removed at the following locations:

- 1. Bouchard Street at Marcel Street
- 2. Lansing Avenue at Melbourne Street
- 3. Hawthorne Drive at Westmount Avenue
- 4. Madeleine Avenue at Main Street
- 5. Madeleine Avenue at Alexander Street, and;

THAT the procedure to remove the all-way stop signs as outlined in the report be followed with a communications plan.

## Background

At the Operations Committee meeting held on January 9, 2012, the Committee approved the installation of all-way stops at the following intersections:

- 1. Bouchard Street at Marcel Street
- 2. Lansing Avenue at Melbourne Street
- 3. Hawthorne Drive at Westmount Avenue
- 4. Madeleine Avenue at Main Street
- 5. Madeleine Avenue at Alexander Street

## Signed By

## **Report Prepared By**

Dave Kivi Co-ordinator of Transportation & Traffic Engineering Services Digitally Signed Aug 1, 13

## **Division Review**

David Shelsted Director of Roads & Transportation Services Digitally Signed Aug 1, 13

### Recommended by the Department Tony Cecutti General Manager of Infrastructure Services Digitally Signed Aug 1, 13

Recommended by the C.A.O. Doug Nadorozny Chief Administrative Officer Digitally Signed Aug 2, 13

The Committee also requested "that the controls be reviewed after a period of one year after installation".

Exhibit 'I' contains the staff report dated December 23, 2011 that presents the all-way stop analysis for each of the above intersections. None of the intersections reviewed satisfied the minimum vehicle volumes, pedestrian volumes and collision experience required to warrant the installation of an all-way stop under the City's All-Way Stop Control Policy.

The signs and pavement markings required to implement all-way stops at the subject intersections were installed in May and June last year. As directed by City Council, staff has conducted a number of follow-up studies to determine the impact the installation of unwarranted all-way stops has had on traffic operations in the area. Information related to delay, compliance, fuel consumption, environmental impacts, speed, traffic volume, safety and public feedback are presented below.

## **Delay and Queue Length Studies**

One way to measure the impact of installing an all-way stop is to undertake delay and queue length studies on the approaches where the new stop signs were installed. A concern with the installation of all-way stops at intersections where the traffic volume split heavily favors the main street, is the delay that may be introduced to residents who legitimately use the roadway.

A review of the all-way stop warrants shows that less than 10 percent of vehicles entering the intersections of Bouchard Street at Marcel Street and Lansing Avenue at Melbourne Street are coming from the side street. Both Bouchard Street and Lansing Avenue serve as major collector roadways for their areas and are used by residents to access their residential neigbourhoods.

City staff conducted site visits at the intersections of Bouchard Street at Marcel Street and Lansing Avenue at Melbourne Street to record the time it took to clear the intersection from the end of the queue. At the intersection of Bouchard Street and Marcel Street, a total of 23 vehicle runs were completed between 4:00 P.M. and 5:30 P.M., while at the intersection of Lansing Avenue and Melbourne Street, a total of 13 runs were completed between 4:30 P.M. and 5:45 P.M. A summary of the results can be found in the following table:

Intersection	Approach	Average Delay (seconds)	Maximum Observed Delay (seconds)
Bouchard Street at	Eastbound	96	225
Marcel Street	Westbound	23	44
Lansing Avenue at	Northbound	20	27
Melbourne Street	Southbound	13	17

The results from the runs were as expected. On Bouchard Street, where traffic volumes during the afternoon peak hours exceed 1,000 vehicles per hour, significant delays were introduced, particularly in the eastbound direction. On Lansing Avenue, where volume exceeds 500 vehicles per hour, the delay introduced was much less. The increased delay to drivers can also be represented as an annual dollar value by using the following formula:

## Total Annual Cost = OCC\*W\*D\*SV\*AVD/3600 \* Average Canadian Wage

OCC = average person occupancy rate = 1.2 W = weeks in a year = 52 D = number of weekdays in a week = 5 SV = study volume = varies per intersection and approach AVD = average delay= varies per intersection and approach Average Canadian Wage (June 2013 - from Statistics Canada) = \$24.01 The total annual costs for the study times observed are summarized in the following table:

Intersection	Approach	Average Delay (seconds)	Study Volume	Total Annual Cost
Bouchard Street at	Eastbound	96	814	\$162,607.24
Marcel Street	Westbound	23	776	\$37,139.81
Lansing Avenue at	Northbound	20	299	\$12,443.58
Melbourne Street	Southbound	13	533	\$14,418.33

The above dollar figures represent only the annual cost associated with the delay introduced during the period of times studied (4 PM to 5:30 PM on Bouchard Street and 4:30 P.M. to 5:45 P.M. on Lansing Avenue). All delay experienced outside of the study times would add additional dollars to those figures.

While staff was on site at each intersection, the length of the queue of vehicles they observed was also recorded. The observed results are summarized in the table below:

Intersection	Approach	Average Queue Length (metres)	Maximum Observed Queue Length (metres)
Bouchard Street at	Eastbound	174	345
Marcel Street	Westbound	23	66
Lansing Avenue at	Northbound	31	42
Melbourne Street	Southbound	15	21

From the table it is apparent that a significant number of vehicles were queued at the intersection of Bouchard Street and Marcel Street. Within a typical queue, each car takes approximately seven metres of space. For eastbound vehicles on Bouchard Street, the average queue length represents almost 25 vehicles while the maximum observed queue was approximately 50 vehicles long. Additionally, the observed eastbound queue lengths on Bouchard Street were often extended beyond the Bouchard Street at Southview Drive intersection, which in turn created additional delays while left turning vehicles waited for vehicles in the queue to allow them to turn in front of them.

## Stop Sign Compliance

One of the ways to measure the effectiveness of a stop sign is to measure the number of drivers that actually come to a complete stop as required by the Highway Traffic Act. Staff conducted compliance studies at all of the five newly created all-way stop intersections as well as two control intersections where all-way stops are warranted. The results are presented below.

Intersection	Stop	Rolling Stop	No Stop	Total Hourly Volume
Bouchard Street at Marcel Street	23%	74%	3%	930
Lansing Avenue at Melbourne Street	31%	66%	3%	509
Westmount Avenue at Hawthorne Drive	35%	64%	1%	411
Madeleine Avenue at Main Street	28%	65%	7%	90
Madeleine Avenue at Alexander Street	20%	50%	30%	53
Average	27.4%	63.8%	8.8%	

Intersection	Stop	Rolling Stop	No Stop	Total Hourly Volume
Regent Street at Douglas Street	71%	28%	1%	1,004
Mackenzie Street at Baker Street	50%	48%	2%	391
Average	60.5%	38%	1.5%	

The compliance studies were completed by setting up a video camera system at the intersection that records all movements of traffic over the four to seven peak hours of the day, depending if the intersection is on a major or minor collector roadway. The videos were then reviewed by staff who recorded whether each vehicle came to a full stop, a rolling stop or did not attempt to stop.

As shown in the chart below, only about 27 percent of drivers came to a full stop at the unwarranted all-way stop intersections compared to 60 percent at the warranted intersections. Approximately 73 percent of drivers at the unwarranted intersections either made a rolling stop or made no attempt to stop at all. At the intersection of Madeleine Avenue and Alexander Street, a full 30 percent of drivers did not attempt to stop. This intersection has the lowest total traffic volume with only 53 vehicles per hour. With such low conflicting traffic, some drivers see no reason to stop.

The high incidence of non-compliance at the unwarranted stop locations is not unexpected. Drivers and pedestrians become less vigilant when there is onus on the other drivers to stop. This behavior can decrease safety at the intersections, especially for young children who expect adults to obey the law. This bad behavior can also spread to other locations where an all-way stop is warranted.

## **Fuel Consumption**

It is estimated that the additional gasoline that is consumed by the installation of an all-way stop on a typical
collector roadway is 125 litres per day or 45,600 litres per year. Expanding this figure for the five intersections, results in a total of 228,000 litres of gas. At a cost of \$1.30 per litre, the subject intersections consume an extra **\$296,000** worth of fuel each year.

#### Environmental Impacts

As reported by the Ministry of Municipal Affairs and Housing, at a typical all-way stop location, the following vehicle emissions are released each year:

- 657 kg of hydro carbons
- 8,760 kg of carbon monoxide
- · 675 kg of nitrogen oxide
- · 65,700 kg of carbon dioxide

Expanding these figures for the five all-way stop locations under review results in the following harmful gas emissions:

- · 3,300 kg of hydro carbons
- · 43,800 kg of carbon monoxide
- · 3,300 kg of nitrogen oxide
- · 328,500 kg of carbon dioxide

Besides increasing harmful greenhouse gas emissions, all-way stops also increase the level of noise pollution near the intersections due to the constant braking and acceleration that occurs.

#### Speed

Often times, all-way stops are requested by residents to try and slow traffic down. Unfortunately, all-way stops are not effective as speed control devices except within close proximity to the sign. To determine if the all-way stops were effective in reducing speed, staff conducted 24 hour speed studies on Southview Drive, Lansing Avenue and Hawthorne Drive. Southview Drive and Hawthorne Drive had speed studies that were taken before the all-way stops were installed that can be used for comparison purposes. The results are indicated below.

		Before		After		Difference	
Location	Direction	Average Speed (km/h)	85th Percentile Speed (km/h)	Average Speed (km/h)	85th Percentile Speed (km/h)	Average Speed (km/h)	85th Percentile Speed (km/h)
Southview Drive – 125 Metres	Eastbound	52.1	56.3	47.8	53.1	-4.3	-3.2
West of Bouchard Street	Westbound	53.9	59.5	51.9	56.3	-2.0	-3.2
Lansing Avenue – North of	Northbound	n/a	n/a	48.7	56.3	n/a	n/a
Lamothe Street	Southbound	n/a	n/a	43.4	56.3	n/a	n/a
Lansing Avenue – South of	Northbound	n/a	n/a	47.3	54.7	n/a	n/a
Kelvin Street	Southbound	n/a	n/a	50.9	57.9	n/a	n/a
Hawthorne Drive – East of	Eastbound	52.9	59.5	51.0	57.9	-1.9	-1.6
Sharon Avenue	Westbound	53.2	61.2	58.6	67.6	5.4	6.4

#### **Speed Study Results**

The results of the speed studies show that speeding is still a problem in close proximity to the stop signs. While speeds are lower on Southview Drive, west of Bouchard Street, the difference may be attributed to vehicles slowing as they approach the back of the long queue of vehicles. The studies show that speeding is still a problem on Lansing Avenue, north of Lamothe Street despite there being all-way stops at the adjacent intersections to the north and south.

The largest change in speed occurred on Hawthorne Drive, where the 85<sup>th</sup> percentile speed for westbound traffic has increased by more than 6 km/h. This may be due to drivers increasing their speed to make up for lost time which is commonly reported at all-way stops.

#### Traffic Volumes

A common misconception about all-way stops is they will help lower traffic volumes on adjacent roadways by discouraging cut-through traffic. As part of the follow-up review, staff completed new turning movement counts at all five subject intersections. A review of traffic volumes at the intersections before and after the all-way stops were installed revealed that overall traffic volumes did not change significantly. A review of the all-way stop warrants indicates that none of the five intersections currently warrants the installation of an all-way stop.

A closer review of the turning movement count at Bouchard Street and Marcel Street indicates that traffic patterns are changing during the peak hours of the day. The number of left turning vehicles from Marcel Street has increased by 23 percent from the south leg of the intersection and 17 percent from the north leg of the intersection. As previously discussed, a significant delay has been introduced at this intersection since the installation of the all-way stop and queue lengths in the eastbound direction often block the intersection of Bouchard Street and Southview Drive. It is suspected that the increase in traffic on Marcel Street is a result of these vehicles attempting to avoid the long queues and delays on Bouchard Street. The counts show that traffic volumes on Bouchard Street have increased by 6% from the count taken in 2011. It should also be noted that the number of pedestrians that crossed Bouchard Street at Marcel Street has not changed from 2011 to 2013.

#### <u>Safety</u>

It is difficult to assess the impact that the all-way stops had on safety during the year they have been installed. When reviewing safety at an intersection, it is recommended that a minimum of three years of collision history be reviewed. This wider range of view helps identify if there is a correctable pattern to the collisions or if a rash of collisions may be due to seasonal factors (ie. icy roads).

Typically, the installation of an all-way stop will help reduce the number of angle type collisions at an intersection if they are prevalent. However, the installation of an all-way stop may also increase the frequency of rear end collisions.

The collision history from 2008 to 2012 (pre all-way stop installed) and from 2012 (post all-way stop installed) to June 30, 2013 has been summarized in the table below:

Intersection	Average Numbe per Y	Difference	
	Before	After	
Bouchard Street at Marcel Street	0.75	1	+0.25
Lansing Avenue at Melbourne Street	0.5	1	+0.5
Hawthorne Drive at Westmount Avenue	2.25	1	-1.25
Madeleine Avenue at Main Street	0	0	0
Madeleine Avenue at Alexander Street	0	0	0

While Hawthorne Drive at Westmount Avenue has the highest average number of collisions before the all-way stop was installed, a large number of the collisions occurred in 2010. In 2010, three angle type collisions and two rear end collisions were reported. All three angle type collisions involved a northbound vehicle on Westmount Avenue failing to stop and striking a vehicle within the intersection. In 2011, a crosswalk and stop bar were painted on the south leg of Westmount Avenue and a stop bar was painted on the north leg of Westmount Avenue. No additional angle type collisions have occurred since these measures were implemented.

The table shows that none of the intersections were collision prone before the installation of the all-way stops and the collision data does not show a significant change in the past year. In total, three collisions were reported for all five intersections since the all-way stops were installed and all three collisions were rear end type collisions. Additionally, no collisions involving pedestrians have been reported since 2008 at any of the five intersections.

#### Public Feedback

One of the ways to measure the impact of a change to traffic control is by tracking positive and negative comments that come into the City via email or through 3-1-1. Overall, the City did not receive a significant volume of public feedback. The intersection of Bouchard Street and Marcel Street received the most attention with a total of six complaints and no positive feedback. However, the Ward Councillor has indicated that he has received positive comments from area residents.

The all-way stop at Lansing Avenue and Melbourne Street received one negative comment and the all-way stop at Hawthorne Drive and Westmount Avenue received a single positive comment.

#### **Recommendation**

All-way stops are often requested by residents in response to concerns on their street such as vehicle speeding, traffic volume, and safety for pedestrians, children, and cyclists. Road authorities take guidance from the Ontario Traffic Manual when determining when and where to install stop signs. "The purpose of the Ontario Traffic Manual (OTM) is to provide information and guidance for transportation practitioners and to promote uniformity of treatment in the design, application and operation of traffic control devices and systems across Ontario. The objective is safe driving behaviour, achieved by a predictable roadway environment through the consistent, appropriate application of traffic control devices. Further purposes of the OTM are to provide a set of guidelines consistent with the intent of the Highway Traffic Act and to provide a basis for road authorities to generate or update their own guidelines and standards."

The City has adopted a revised warrant for the installation of all-way stop signs, which reduces the thresholds required to meet the requirements for all-way stop approval. The reduced warrant does not change the purpose of a stop sign. "The purpose of the stop sign is to clearly assign right-of-way between vehicles approaching an intersection from different directions when traffic signals are not warranted or not yet installed and it has been determined that a yield sign is inadequate."

In general, "all-way stops should only be considered at the intersection of two relatively equal roadways having similar traffic volume demand and operating characteristics".

As indicated above, the new traffic counts indicate that all-way stops are still not warranted at any of the above intersections. The follow up studies also indicate that there have not been significant changes in any of the concerns that are typically raised by residents, such as speed, volume, and safety. They also result in a significant additional cost to the public in the form of additional delay and fuel consumption. Therefore, Staff recommends that all of the all-way stops be removed.

While Staff are recommending removal of the all-way stop signs, it is recognized that these all-way stop signs were requested for a reason, to address neighbourhood traffic concerns. In May 2010, Council approved the City's Traffic Calming Policy. Traffic calming represents a component of traffic management techniques to reduce the impacts of traffic on neighbourhood communities. Communities throughout North America have experienced significant growth in traffic due to automobile dependence and urban sprawl. These trends in automobile travel have placed considerable strains on the road network and the ability to safely (e.g., perceived or real collision potential) accommodate all road users within the public right-of-way. In many cases, the lack of arterial road capacity has resulted in motorists choosing to use collector and residential roadways to circumvent a congested turning movement, intersection or corridor.

One response to these problems is the self-enforcing option of traffic calming devices. These devices are physical modifications to the road to address the specific issue of concern. Staff recommends that these areas be considered for the Traffic Calming program, if they have not already been considered.

#### All-Way Stop Removal Procedure

The following process should be followed as prescribed by the Ontario Traffic Manual to remove any of the all-way stops:

1) Install large warning signs stating "Crossing Traffic Does Not Stop" on the approaches where the stop control is to remain. The sign is to be installed at least 15 days before the removal of control.

Install a "New" sign above this sign as well as a sign below indicating "After" stating the month and day when the control on the crossing roadway will be removed.

2) On the appointed date, remove the "Stop Ahead" signs and "Stop" signs on the crossing roadway. Crosswalk lines and stop bars must also be removed on these approaches. The "After" sign with the starting date must also be removed at this time.

3) After an additional period of at least 15 days, the "New" sign and "Crossing Traffic Does Not Stop" warning sign can also be removed.

A communication plan should also be developed to advertise the change in traffic control. Police, Fire and EMS are also to be advised of the change.

#### EXHIBIT 'I'



Presented To:	Operations Committee
Presented:	Monday, Jan 09, 2012
Report Date	Friday, Dec 23, 2011
Туре:	Managers' Reports

#### **Request for Decision**

#### All-Way Stop Control - Various Intersections

#### **Recommendation**

That the current traffic control at the intersections of Bouchard Street at Marcel Street, Lansing Avenue at Melbourne Street, Hawthorne Drive at Westmount Avenue, Madeleine Avenue at Main Street and Madeleine Avenue at Alexander Street be maintained.

#### Background

#### 1. Bouchard Street at Marcel Street, Sudbury

At the March 21, 2011 Traffic Committee meeting, Staff presented a report regarding all-way stop control at the intersection of Bouchard Street and Marcel Street (see Exhibit A2). At the time, Staff reported higher than normal traffic volumes may have been a result of the ongoing construction on Regent Street. A decision to install all-way stop at this intersection was deferred until construction on Regent Street was completed and traffic volumes could be recounted. Subsequently, traffic volumes were recounted on October 4 th. 2011.

#### Co-ordinator of Transportation & Traffic Engineering Services Digitally Signed Dec 23, 11

Report Prepared By

Signed By

Dave Kivi

Division Review David Shelsted, MBA, P.Eng. Acting Director of Roads & Transportation Digitally Signed Dec 23, 11

Recommended by the Department Greg Clausen, P.Eng. General Manager of Infrastructure Services Digitally Signed Dec 23, 11

Recommended by the C.A.O. Doug Nadorozny Chief Administrative Officer Digitally Signed Dec 23, 11

Bouchard Street at Marcel Street is a cross intersection located west of Regent Street (see Exhibit B2). Currently this intersection is controlled with "Stop" signs facing northbound and southbound traffic on Marcel Street. This portion of Bouchard Street was also part of the Traffic Calming Pilot Project and had a median island installed on the east leg of this intersection.

Applying the data from the October 4<sup>th</sup>, 2011 turning movement count to the City's new Minimum Volume Warrant indicates that the vehicle and pedestrian volume from the side street meets approximately 43 percent of the volume requirements. The traffic volume split is 91percent on Bouchard Street and 9 percent on Marcel Street. This is outside the ratio of 70/30 warrant for an all-way stop (see Exhibit C2).

Comparing the 2011 turning movement counts to the previous counts from 2010 and 2007, indicates that while volumes on Marcel Street at this intersection have increased from the 2007 volumes, they have

significantly decreased from the 2010 levels. The volumes are summarized below:

	2007	2010	2011
Southbound Trafffic on Marcel Street	222	282	261
Northbound Traffic on Marcel Street	363	738	399

A review of the City's collision information from July 2008 to July 2011 revealed that there were two collisions that may be susceptible to relief through an all-way stop during this three year period. While all collisions are undesirable, the collision experience would not be considered high, and does not show a pattern that could be corrected with an all-way stop. For a major collector roadway, the Collision Warrant requires a minimum of four collisions per year over a three year period.

Councillor Cimino has also expressed concerns about the safety of pedestrians crossing Bouchard Street at this intersection to access Marcel Park. The existing median island on the east leg of this intersection was recommended by IBI Group during the Traffic Calming Pilot Project to "provide a pedestrian refuge that supports a two-stage crossing when traffic volumes make crossing difficult." During the count, we recorded 21 pedestrians crossing Bouchard Street (18 crossing the east leg and 3 crossing the west leg).

Based on the traffic volumes, pedestrian volume and collision history, installing an all-way stop at the intersection of Bouchard Street and Marcel Street is not warranted.

#### 2. Lansing Avenue at Melbourne Street, Sudbury

Councillour Belli requested that a peak hour traffic count be conducted to determine if an all-way stop is warranted at the intersection of Lansing Avenue at Melbourne Street. The Traffic Committee approved the request for a study at its meeting on June 17, 2011.

Lansing Avenue at Melbourne Street is a cross intersection located two blocks north of Lasalle Boulevard in Ward 8 (see Exhibit D2). The east and west approaches of Melbourne Street intersect Lansing Avenue on a skew angle of approximately 60 degrees. Currently this intersection is controlled with "Stop" signs facing eastbound and westbound traffic on Melbourne Street.

Applying the data from the turning movement count that was conducted on September 28<sup>th</sup>, 2011 to the City's new Minimum Volume Warrant indicates that the vehicle and pedestrian volume from Melbourne Street meets only 20 percent of the requirements. The traffic volume split is 92 percent on Lansing Avenue and 8 percent on Melbourne Street. This is also outside the ratio of 70/30 needed to warrant an all-way stop (see Exhibit E2). During the count, we recorded 10 pedestrians crossing Lansing Avenue at Melbourne Street.

A review of collision information showed this intersection has had two reported collisions in the last 3 years that may be susceptible to relief through an all-way stop. The all-way stop warrant for a major collector road (Lansing Avenue) requires there be a minimum of 4 collisions per year over a 3 year period. While the collision history does not warrant an all-way stop, review indicated that both collisions involved vehicles from the east leg of Melbourne Street not yielding to southbound traffic on Lansing Avenue. There is a private large bush in the northeast corner of the intersection which may be restricting visibility at the intersection. Staff have asked the By-law Department to review and have it trimmed if possible. A crosswalk and stop bar will be painted on the east leg of Melbourne Avenue. These measures will help improve safety at the intersection by highlighting the requirement to stop.

Based on the traffic volumes, pedestrian volume and collision history, installing an all-way stop at the intersection of Lansing Avenue and Melbourne Street is not warranted.

#### 3. Hawthorne Drive at Westmount Avenue, Sudbury

Councillour Belli requested that a peak hour traffic count be conducted to determine if an all-way stop is warranted at the intersection of Hawthorne Drive and Westmount Avenue.

Hawthorne Drive at Westmount Avenue is a cross intersection located between Barry Downe Road and Auger Avenue in Ward 8 (see Exhibit F2). Currently this intersection is controlled with "Stop" signs facing northbound and southbound traffic on Westmount Avenue.

Applying the data from the turning movement count that was conducted on June 16<sup>th</sup>, 2011 to the City's new Minimum Volume Warrant indicates that the vehicle and pedestrian volume from Westmount Avenue meets only 25 percent of the requirements. The traffic volume split is 88 percent on Hawthorne Drive and 12 percent on Westmount Avenue. This is also outside the ratio of 70/30 needed to warrant an all-way stop (see Exhibit G2). During the count, we recorded 17 pedestrians crossing Hawthorne Drive at Westmount Avenue.

A review of our collision information showed this intersection has had three collisions in the last three years that may be susceptible to relief through an all-way stop. The all-way stop warrant for a major collector road (Hawthorne Avenue) requires there be a minimum of 4 collisions per year over a 3 year period. While the collision history does not warrant an all-way stop, our review indicated that the collisions involved vehicles from Westmount Avenue not yielding to traffic on Hawthorne Drive. A crosswalk and stop bar has been painted on the south leg of Westmount Avenue and a stop bar was also painted on the north leg of Westmount Avenue. These measures will help improve safety at the intersection by highlighting the requirement to stop.

Based on the traffic volumes, pedestrian volume and collision history, installing an all-way stop at the intersection of Hawthorne Drive at Westmount Avenue is not recommended.

#### 4. Madeleine Avenue at Main Street and Madeleine Avenue at Alexander Street, Sudbury

Councillour Landry-Altmann forwarded a petition dated February 16, 2011 from area residents requesting that All-Way Stops be installed at the intersections of Madeleine Avenue at Main Street and Madeleine Avenue at Alexander Street (see Exhibit H2) to slow traffic down.

These intersections are both T intersections located south of Lasalle Boulevard in Ward 12 (see Exhibit I2). Currently, both intersections are controlled with a stop sign facing eastbound traffic on Main Street and Alexander Street. Also, Ecole Felix-Ricard has a pedestrian access to its school yard on the east side of the Madeleine Avenue at Main Street entrance. Due to the proximity of the school, turning movement counts were conducted during the school year.

Applying the data from the turning movement count conducted at the Madeleine Avenue at Main Street intersection on June 27, 2011, to the City's new Minimum Vehicle Volume warrant indicates that the vehicle and pedestrian volume from the side street meets only 15 percent of the volume requirements. The traffic volume split is 76 percent on Madeleine Avenue and 24% on Main Street. This is outside the ratio of 70/30 needed to warrant an all-way stop (see Exhibit J2). During this count, we recorded 11 pedestrians crossing Madeleine Avenue at Main Street.

Applying the data from the turning movement count conducted at the Madeleine Avenue at Alexander Street intersection on June 28, 2011, to the City's new Minimum Vehicle Volume warrant indicates that the vehicle and pedestrian volume from the side street meets only 12 percent of the volume requirements. The traffic volume split is 68 percent on Madeleine Avenue and 32 percent on Main Street. This is within the ratio of 70/30 needed to warrant an all-way stop (see Exhibit K2). During this count, we recorded 4 pedestrians crossing Madeleine Avenue.

A review of collision information showed that both intersections had no reported collisions in the last three years. The all-way stop warrant for a minor collector road requires there be a minimum of 3 collisions per year over a 3 year period.

Based on the traffic volumes, pedestrian volume and collision history, installing an all-way stop at the intersection of Madeleine Avenue at Main Street or Madeleine Avenue at Alexander Street is not warranted.

## **EXHIBIT: A2**



Presented To:	Traffic Committee
Presented:	Monday, Mar 21, 2011
Report Date	Thursday, Mar 10, 2011
Туре:	Managers' Reports

#### **Request for Decision**

All Way Stop Control - 1) Bouchard Street at Marcel Street, Sudbury and 2) Balsam Street at Garrow Road and Power Street, Copper Cliff

#### **Recommendation**

That the intersection of Balsam Street at Garrow Road at Power 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 March 10, 2011.

#### Background

#### 1) Bouchard Street at Marcel Street

On August 4<sup>th</sup>, 2010, Councillor Cimino requested that a turning movement count be conducted to determine if an all-way stop would be warranted at the intersection of Bouchard Street and Marcel Street.

Bouchard Street at Marcel Street is a cross intersection located west of Regent Street (**see Exhibit "A"**). There is also a playground located in the southeast corner of the intersection. Currently this intersection is controlled with "stop"

#### Signed By

Report Prepared By Dave Kivi Co-ordinator of Transportation & Traffic Engineering Services Digitally Signed Mar 10, 11

**Division Review** Robert Falcioni, P.Eng. Director of Roads and Transportation Services *Digitally Signed Mar 10, 11* 

Recommended by the Department Greg Clausen, P.Eng. General Manager of Infrastructure Services Digitally Signed Mar 10, 11

Recommended by the C.A.O. Doug Nadorozny Chief Administrative Officer Digitally Signed Mar 10, 11

signs facing northbound and southbound traffic on Marcel Street. This portion of Bouchard Street was also part of the Traffic Calming Pilot Project, and had a median island installed on the east leg of this intersection.

Applying the data from the turning movement count that was conducted on August 25<sup>th</sup>, 2010 to the City's new Minimum Volume Warrant indicates that the vehicle and pedestrian volume from the side street meets approximately 75 percent of the volume requirements. The traffic volume split is 80 percent on Bouchard Street and 20 percent on Marcel Street. This is outside the ratio of 70/30 needed to warrant an "all-way" stop ( see Exhibit "B").

Comparing the 2010 turning movement count to a previous count conduct in 2007, indicates that volumes at this intersection may be artificially high due to the ongoing construction on Regent Street. Southbound traffic

from Marcel Street has increased by 27 percent (222 in 2007 vs. 282 in 2010) while northbound traffic from Marcel Street has more than doubled (363 in 2007 vs. 738 in 2010).

A review of the City's collision information from 2008 to 2010 revealed that there were no collisions that may be susceptible to relief through an all-way stop during this three (3) year period. For a Major Collector roadway, the Collision Warrant requires a minimum of four (4) collisions per year over a three (3) year period.

Councillor Cimino also expressed concerns about the safety of pedestrians while crossing Bouchard Street at this intersection. The existing median island on the east leg of this intersection was recommended by the IBI Group as part of the Traffic Calming Pilot Project in order to "provide a pedestrian refuge that supports a two-stage crossing for times when traffic volumes make crossing difficult". During the seven (7) hour count, we recorded a total of five (5) pedestrians crossing Bouchard Street at this intersection (four (4) crossing the east leg and one (1) crossing the west leg).

Based on the traffic volumes, pedestrian volume and collision history, staff does not recommend installing an all-way stop at the intersection of Bouchard Street and Marcel Street. Staff will arrange to recount this intersection once construction is completed on Regent Street to ensure that traffic volumes on Marcel Street do not remain high.

#### 2) Balsam Street at Garrow Road at Power Street

Councillor Barbeau requested that a turning movement count be conducted to determine if an all-way stop is warranted at the intersection of Balsam Street at Garrow Road/Power Street.

Balsam Street at Garrow Road/Power Street is a cross intersection located in Copper Cliff (see Exhibit "C"). The Copper Cliff Library is located on the northwest corner of the intersection and the McClelland Arena and R.G. Dow Pool are located northeast of the intersection. Currently this intersection is controlled with "stop" signs facing northeast bound traffic on Power Street and southwest bound traffic on Garrow Road.

Applying the data from the turning movement count that was conducted on May 25<sup>th</sup>, 2010 to the City's new Minimum Volume Warrant indicates that the traffic volume at this intersection meets the minimum vehicle volume requirements (**see Exhibit "D**"). A review of the City's collision information from 2008 to 2010 revealed that there were three (3) collisions that may be susceptible to relief through an all-way stop during this three (3) year period. For a Minor Collector roadway, the Collision Warrant requires a minimum of three (3) collisions per year over a three (3) year period.

Since the traffic volume meets the minimum vehicle volume warrant, staff recommends installing an all-way stop at the intersection of Balsam Street at Garrow Road/Power Street. Also, staff recommends that physical changes be made to the intersection to better define the approaches and to improve safety for pedestrians. These changes will be funded from the 2011 Capital Roads budget.

### **EXHIBIT: A**



### EXHIBIT: B

#### CITY OF GREATER SUDBURY ALL-WAY STOP WARRANTS

Location:	Bouchard Street at Marcel Street	Date:	March 3, 2011
Date of TM Count:	August 25, 2010	Analyst:	JR
Type of Intersection:	Cross		
Roadway Type	Arterial/Major Collector		
AADT of Main Road:	10500		

All-Way Stop Warrant Summary				
Warrant #1	Minimum Vehicle Volume	63.3	7%	
Warrant #2	Collision History	0.0	7%	
Warrant #3	Traffic Control Signals	No	TY/N	

All-Way Stop Warranted?

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	780	100.0%
Veh + Pedestrian volume from side street is ≥	200/hr	140/hr	N/A	146	73.2%
Traffic Split	70/30	70/30	70/30	81/19	63.3%

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*	0	0.0%
Warrant #3 Traffic Control Signals are warranted and urgently needed,					
	signs to be use	d as interim me	easures.	No	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.

Exhibit B - All-Way Stop Warrants 1/1 Exhibit A2 - Traffic Committee Report Dated March 21, 2011 4/6

EK-MByTStopACleWtayl StopeCoetnoRecipeovt 18/254

Sudbury

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### EXHIBIT: C



EK-MBYTStopADeWtayl StOpeCoetroReejeovt 198/254

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### **EXHIBIT: D**



0	Sud	Burry
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Yes

Y/N

Location:	Balsam Street at Power Street	Date:	March 3, 2011
Date of TM Count:	May 25, 2010	Analyst:	JR
Type of Intersection:	Cross		
Roadway Type	Minor Collector		
AADT of Main Road:	3998		

	All-Way Stop Warrant Summar	Ŷ	
Warrant #1	Minimum Vehicle Volume	100.0	]%
Warrant #2	Collision History	33.3	7%
Warrant #3	Traffic Control Signals	No	]Y/N

#### All-Way Stop Warranted?

Warrant #1 - Minimum V	ehicle 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	461	100.0%
Veh + Pedestrian volume from side street is ≥	200/hr	140/hr	N/A	185	100.0%
Traffic Split	70/30	70/30	70/30	62/38	100.0%

Warrant #2 - Collision	listory				
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*	1	33.3%
Warrant #3	Traffic Control signs to be use	Signals are wa d as interim me	rranted and ur easures.	gently neede No	d, 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.

Exhibit D - All-Way Stop Warrant 1/1 Exhibit A2 - Traffic Committee Report Dated March 21, 2011 6/6

EK-MVBI/TStopACleWtayl StopeCoetanoRRegieovt 1190/325

### **EXHIBIT: B2**



EK-MVBIJTStopADeMtagl StopeCtoetroRecipeovt20/325

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**EXHIBIT: C2** 

#### CITY OF GREATER SUDBURY ALL-WAY STOP WARRANTS

No

Y/N

Sudbury

Location: Date: October 25, 2011 Bouchard Street at Marcel Street JR 10/04/2011 Analyst: Date of TM Count: Type of Intersection: Cross Roadway Type Arterial/Major Collector AADT of Main Road: 10000 All-Way Stop Warrant Summary 30.0 Minimum Vehicle Volume % Warrant #1 % 16.7 Warrant #2 Collision History Warrant #3 Traffic Control Signals No Y/N

All-Way Stop Warranted?

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	930	100.0%
Veh + Pedestrian volume from side street is ≥	200/hr	140/hr	N/A	87	43.4%
Traffic Split	70/30	70/30	70/30	91/9	30.0%

Warrant #2 - Collision I	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	16.7%
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 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.

## EXHIBIT: D2



Exhibit D2 - Lansing Avenue at Melbourne Street 1/1

EX-MVBVTStopACleVitagi StopeCtoetroRecipeovt223/325

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**EXHIBIT: E2** 

#### **CITY OF GREATER SUDBURY** ALL-WAY STOP WARRANTS

19.6

16.7

No

No

Sudbury

Warrant #1

Warrant #2

Warrant#3

Location: Street Date of TM Count: Type of Intersection: Roadway Type AADT of Main Road:

#### Lansing Avenue at Melbourne 09/28/2011 Cross Arterial/Major Collector 7300

Date: Analyst: October 4, 2011 JR

%

%

Y/N

Y/N

All-Way Stop Warranted?

Minimum Vehicle Volume

Traffic Control Signals

Collision History

Warrant #1 - Minimum Ve	ehicle 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	509	100.0%
Veh + Pedestrian volume from side street is ≥	200/hr	140/hr	N/A	39	19.6%
Traffic Split	70/30	70/30	70/30	92/8	26.7%

All-Way Stop Warrant Summary

Warrant #2 - Collision I	listory				
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	16.7%
Warrant #3 Traffic Control Signals are warranted and urgently needed,					
	signs to be used as interim measures. No Y/N			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.

### **EXHIBIT: F2**



EXHIBIT F2 - Hawthome Drive at Westmount Avenue 1 EKM/BI/TStopACIe/Mayl StopeCoeatoRRegion/12/45/325

45

#### Exhibit G2 - All-Way Stop Warrant Summary 1/1 EK-MVBVTStopACloWtayl StopeCtopanoRecipovt256/325

# **EXHIBIT: G2**

#### CITY OF GREATER SUDBURY ALL-WAY STOP WARRANTS

Location: Drive Date of TM Count: Type of Intersection: Roadway Type AADT of Main Road:

#### All-Way Stop Warrant Summary

Warrant #1 Warrant #2 Warrant #3 Minimum Vehicle Volume Collision History Traffic Control Signals

#### All-Way Stop Warranted?

Warrant #1 - Minimum V	ehicle Volume			NAMES OF THE OWNER O	
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	411	82.3%
Veh + Pedestrian volume from side street is ≥	200/hr	140/hr	N/A	50	25.1%
Traffic Split	70/30	70/30	70/30	88/12	40.0%

Warrant #2 - Collision I Roadway Type	listory Arterial/Major Collector	Minor Collector	Local	Number of Collisions per year	Percent Compliance
Collisions per Year over 3 year period	4*	3*	<b>2</b> *:		25.0%
Warrant #3	Traffic Control S	Signals are war d as interim me	ranted and ur asures.	gently needed	1,   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.

# Sudbury

Westmount Avenue at Hawthorne 06/16/2011 Cross Arterial/Major Collector 5600

Date:

August 9, 2011

Analyst:

JR

%

%

Y/N

Y/N

25.1

25.0

No

No

### **EXHIBIT: H2**

FEBRUARY 16, 2011

We the residents of Madeleine, Martin, Main & Alexander Streets are requesting a 3-way Stop Sign at the corner of Madeleine & Main & Madeleine & Alexander Streets. We have serious speeding issues. Local Children access the school entrance off of Modeleine and parents also drop off their children at this entrance to avoid congestion on Starlight Ave and turning challenges onto Lasalle Brod

NAME	ADDRESS	TELEPHONE
Robert Marchi Mysterie La Rose BARB INGRAM	Madeleine Indeleine Madeleine	
Makine Quenneorne	Madeleine Hadeleine Madeleine	
Perhips whiting	Madeleine	
CHRISTOS KINSOS Tina Kitsos Chriscula Kitsos	Madeline Ave Madeline Que Madeleine are	
Kanstanting tot sos Talix Adams Cine Snipal	Madeleine Madeleine Madeleine Ne	
Resident Patition dated February 16	Milliale leahe the	

Exhibit H2 - Resident Petition dated February 16 EKM/BI/TStop/Clentary Stop Coetro Reciport 26/325

Page 94 of 113

We the residents of Madeleine, Martin, Main & Alexander Streets are requesting a. 3-Way Stop Sign at the corner of Madeleine & Main & Madeleine & Alexander Streets. We have serious speeding issues. Local Children access the school entrance off of Madeleine and parents also drop off their children at this entrance to avoid congestion on Starlight Ave and turning challenges onto Lasalle Brud

NAME	ADDRESS	TELEPHONE
Mike LANDRY SUZANNE LANJAY	MARTIN AVE Subary C	
Susatt 6 new	matting Ase	
Julie Valade	Modelaire ane	
Janie Velado R. VALADE	Segebrush PL Madéleitre Alle SAGEBRUSH. Pl	
Norm AUBIN	MADELINE ST	
Dian Asser	Modeleive Ave	
MALENA AUDETTE	MADELEINE AVE	
Richard Aubette Energite Brung	madeleine Ave	
Ruy Cylens Sundy Eighens	Madelenne aut Middelenne aus trindala	
(Vnuditan)acki Noisiy + Jim Howard Exhibit H2 - Resident Petition dated February 16,2	Madekine Hve 011 2/6	

BKMByTStopADeWtayl StOpeCtoetroRecipovt278/325

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We the residents of Madeleine, Martin, Main & Alexander Streets are requesting a 3-Way Stop Sign at the corner of Madeleine & Main & Madeleine & Alexander Streets. We have serious speeding issues. Local Children access the school entrance off of Modeleine and parents also drop off their children at this entrance to avoid congestion on Starlight Ave and turning challenges onto Lasalle. Brud

NAME	ADDRESS	TELEPHONE
Ethiel Campbell Weithy Durchage	Madeleine St. Mailine At	
Revé Desdinge	Madelerne St.	
Louise Lefelre Louise Lefelre Maguelice Pilon	Madeiline Madeline Madeline	
Rouelle Doat Jue Jusine	Madeleine Madeleine Madeleine	
Janlan Lauber I. NIAGANSH Hartis	Madelaine Madelaine Ai Hart	
GAR KUNU La Rnopf C Hayge	Madekeine Are Malekine ane	
S. Manito web L. Main, Huulip Exhibit H2 - Resident Petition dated February 16,	Madelein Are 2011 3/6	

EK-MByTStopADIeMayl StopeCoetroReviewvt289/325

We, the residents of Madeleine, Martin, Main & Alexander Streets are requesting a 3-way Stop Sign at the corner of Madeleine & Main & Madeleine & Alexander Streets. We have serious speeding issues: Local Children access the school entrance off of Modeleine and parents also drop off their children at this entrance to avoid congestion on Starlight Ave and turning challenges onto Lasalle Brod

NAME	ADDRESS	TELEPHONE
Cecile Ductionine Washing Roman Rey Arcind Rights Manufa	Madeleine abe Madeleine doc Mudificitive A amer St	
goe Shields Granice 227 gy	MADELETTE ST Madeleine AU Arwoluline ave	
GARRY HOOGE Kevin Roy	MAPELEINE	
Jomes - Kaney Dominicuy	Alexander. ST. ALEXANDOR ST	
Latthigh Landry	Martin Ave	
El Forg Live		
Detter deted to be on 1		and the second

Exhibit H2 - Resident Petition dated February 16, 2011 4/6

EK-MVBVTStopACleWtayl StOpeCv6etnoRRegierowt 290/325

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We the residents of Madeleine, Martin, Main & Alexander Streets are requesting a 3-way Stop Sign at the corner of Madeleine & Main & Madeleine & Alexander Streets. We have serious speeding issues. Local Children access the School entrance off of Madeleine and parents also drop off their children at this entrance to avoid congestion on Starlight Ave and turning challenges onto Lasalle Blud

NAME	ADDRESS	TELEPHONE
Michel Guerin Carole Guerin Joseph PELLETIEN Doegh Bene Chan magaghin	Martin St Martin St MARTIN AUG MARTIN Martin Ane	
Duck e Scatt. Skiling Aquinos Grand Str	Martin Sr. Mattin Mailin	
Matthew Roach	Alexandrent Alexandrent Martin Aux	
Lindsay Roach Jeannie marke Patro marke	Martin Hye MARTIN AR Martin Ar	
Larand Lander	tlartin Ave	
Part Lamoger	MARTIN AUR. MARTIN AUR.	
Exhibit H2 - Resident Petition dated February 16	2011 5/6	

EK-MBYTStopADeMtagl StopeCtoetnoReviewvt320/325

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We the residents of Madeleine, Martin, Main & Alexander Streets are requesting a 3-way Stop Sign at the corner of Madeleine \* Main & Madeleine + Alexander Streets. We have serious speeding issues. Local Children access the school entrance off of Madeleine and parents also drop off their children at this entrance to avoid congestion on Starlight Ave and turning challenges onto Lasalle Blvd

NAME	2	ADDRESS	TELEPHO	NE
Maxime L Partette Jacques Pièrre G. B.	Bonin Denin	Martin Ace. Martin Martin Martin		
Jusal mi	estitens Constant	Martin Ciu natin Ciu Tractur Co.		
Rill Chur	Susses	うたいしたき		
	North Contraction	Maty ave		
aine Ace Altenti fat Pat Zagan	an a	Martin Are Martin Are Martin Are Martin Are		
Exhibit H2 - Resident Betition de EKMByTStopAtionage StopeCoet	аted February 16, 20 окасторование 20/20/20/20/20/20/20/20/20/20/20/20/20/2	Manst MAIN ST	Pa	age 99 of 113

## EXHIBIT: 12



EK-MBYTStopACleWayl StopeCteanoRecipeovt 323/325

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AADT	2 5000	1000 - 2000	~ 1000	
Count Period	7 hours	4 peak hours	4 peak hours	
Total vehicle volume	500/br	250/br	250/br	an
from all approaches is ≥	500/11	53011	200/10	
Veh + Pedestrian volume	200/br	440%	N/Δ	22
from side street is ≥	200/11		. 1477	f
Traffic Split	70/30	70/30	70/30	76/24

Minor

Collector

1000 0000

Warrant #2 - Collision H	listory			99 <del>97 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010</del>	
Roadway Type	Arterial/Major Collector	Minor Collector	Local	Number of Collisions per year	Percent Compliance
Collisions per Year over 3 year period	4*	<b>3</b> *	Ź*	0	0.0%
Warrant #3	Traffic Control	Signals are war	ranted and un asures.	gently needed	t, I 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.

x 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.

#### **CITY OF GREATER SUDBURY** ALL-WAY STOP WARRANTS



Type of Intersection:

Roadway Type AADT of Main Road:

Warrant #1

Warrant #2

Warrant #3

EXHIBIT: J2

October 3, 2011 JR

Minimum Vehicle Volume Collision History Traffic Control Signals

Madeleine Avenue at Main Street

06/27/2011

Т Minor Collector

1500

All-Way Stop Warrant Summary

Local

- 1000

Date:

Analyst:

15.4 % % 0.0

All-Way Stop Warranted?

Arterial/Major

Collector

. .....

Y/N No No Y/N

Vehicles

per hour

Percent

Compliance

25.6%

15.4%

80.0%

Location: Date of TM Count:

Warrant #1 - Minimum Vehicle Volume

Roadway Type

## EXHIBIT: K2

#### CITY OF GREATER SUDBURY ALL-WAY STOP WARRANTS

Location: Date of TM Count: Type of Intersection: Roadway Type AADT of Main Road:

Sudbury

Madeleine Ave at Alexander St	Date:	October 3, 2011
June 28, 2011	Analyst:	JR
Т		
Local		
500		

### All-Way Stop Warrant Summary

Warrant #1 Warrant #2 Warrant #3 Minimum Vehicle Volume Collision History Traffic Control Signals



Y/N

No

#### All-Way Stop Warranted?

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	53	15.1%
Veh + Pedestrian volume from side street is ≥	200/hr	140/hr	N/A	17	12,1%
Traffic Split	70/30	70/30	70/30	68/32	100.0%

Warrant #2 - Collision H	istory	•			
Roadway Type	Arterial/Major Collector	Minor Collector	Local	Number of Collisions per year	Percent Compliance
Collisions per Year over 3 year period	4*	37	2*	0	0.0%
Warrant #3	Traffic Control signs to be us	Signals are wa ed as interim m	rranted and u easures.	rgently neede	d, 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.

s If the intersection does not meet warrant #1 and does not meet warrant #2, then the all-way stop is not recommended.

r If the intersection does not meet warrant #1 and does meet warrant #2, then the all-way stop is recommended.



#### **For Information Only**

Report dated August 1, 2013 from the General Manager of Infrastructure Services regarding Tender for Winter Operations Snow Plowing Services Specifying New Equipment.

Presented To:	Operations Committee
Presented:	Monday, Sep 16, 2013
Report Date	Tuesday, Sep 03, 2013
Туре:	Referred & Deferred Matters

#### Signed By

No signatures or approvals were recorded for this report.

#### For Information Only

**Recommendation** 

#### Background

This matter was deferred at the August 12, 2013 meeting of the Operations Committee. Original Report attached.



For	Inform	ation	Only
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Tender for Winter Operations Snow Plowing Services Specifying New Equipment

#### **Recommendation**

For Information Only

#### Background

Staff was requested by Council to provide further information on the requirement to provide new plows for tender ISD12-18 Winter Operations Snow Plowing Services. The five-year contract required the successful Contractors to provide pricing for plowing services from November 15, 2013 through March 31, 2018 with option for an additional two single year extensions. The contract was split into two parts, Part A for plowing services in the South and Southwest Sections, and Part B for plowing services in the Northeast, Northwest and Southeast Sections. The specifications required the successful Contractors to purchase twenty-one (21) new plows (ten units for Part A, eleven units for Part B). The tender closed on March 26, 2013 with Pioneer Construction Inc. and R.M. Belanger Limited being the lowest tendered prices for Part A and Part B respectively. On April 23, 2013, Council by resolution CC2013-136 approved award of the contract.

Presented To:	Operations Committee
Presented:	Monday, Aug 12, 2013
Report Date	Thursday, Aug 01, 2013
Туре:	Managers' Reports

#### Signed By

**Report Prepared By** Randy Halverson Manager of Operations *Digitally Signed Aug 2, 13* 

Division Review David Shelsted Director of Roads & Transportation Services Digitally Signed Aug 1, 13

Recommended by the Department Tony Cecutti General Manager of Infrastructure Services Digitally Signed Aug 1, 13

Recommended by the C.A.O. Doug Nadorozny Chief Administrative Officer Digitally Signed Aug 2, 13

In preparing the contract specifications Staff used the lessons learned from past winter control contracts, discussions with other municipalities and current best practices. In specifying new plows consideration was given to the following factors:

- Type of Equipment
- · Availability of Used Equipment
- · Reliability of Equipment
- · Service Delivery Risks
- · Technological Advancements

The previous snow plow contract started in November 2007 and expired in March 2013 was also a five year contract with two option years. This contract also specified the purchase of twenty-one

(21) new plows.

#### Type of Equipment

A plow is a very specialized piece of equipment. While its appearance may be that of a common tandem truck, it is required to have a reinforced front axle, frame and spring system as well as additional hydraulic capacity among other improvements. It is built with specialty attachments, and with a box designed specifically for hauling and spreading material. These vehicles take several months to prepare once they are ordered. It is not economically feasible to convert a common tandem truck to a plow.

The City's service delivery model is to have City plows on the Class 1 to 3 (arterial and collector) roads until there is approximately 8 cm of snow accumulation. At this accumulation, City plows are rerouted to Class 4 to 6 (local) roads, and Contractor plows are deployed on the Class 1 to 3 roads.

Plows similar to those operated by the City for plowing snow were specified for the plowing of Class 1 to 3 roads. These are able to carry more material, which results in less time returning to the depots to refill and more time on the road.

The contract specified the need for brine tanks on the new plows, which allows the City to reduce the amount of material being spread resulting in operational savings. The contract also required end dump capabilities or slide-in sanders to minimize unloading time and providing operational efficiencies. The City's new plows are also equipped with these capabilities.

#### Availability of Used Equipment

Staff had discussions with Contractors, Equipment Vendors and other Municipalities when considering whether to specify new or used equipment for this contract. As plows are made to order, the majority of them are purchased for a specific contract or long-term purpose. There is not a large market of used plows less than five years old, and due to the limited availability the prices typically are not significantly reduced from new plows.

In addition, some of the modifications to the plows that were specified by the City may not be available on the used plows, and the operational efficiencies would not be realized.

#### **Reliability of Equipment**

Even with the specially designed and reinforced plow, the act of plowing is very hard on the equipment. On both City and Contractor plows there is increased maintenance and breakdowns as the plow ages. The increased maintenance and breakdowns result in the plow being unavailable for parts of a storm or for long periods of time, depending on the nature of the mechanical issue. Therefore, the age of the plow is directly related to the availability of the plow.

#### Service Delivery Risks

There are many ways to transfer service delivery risks to a Contractor, with the goal of finding the most cost beneficial approach to the City to share the risk. The current contract allows the City to apply a penalty if the Contractor's plow is not available and it allows the Contractor's driver to use a spare City plow at the driver rate.

The penalty rate could be increase to further encourage the availability of equipment. However due

to the harsh working conditions faced by the plow equipment it was determined that increased penalties would result in higher bid prices. This would not be a cost effective approach.

Alternatively, the contract could have specified that the Contractor carry a fixed number of spare plows for the duration of the contract. Again, this would have resulted in a higher bid price.

By specifying new plows to start the contract the average age of the plows will be 2.5 years for the life of the contract, and 3.5 years if the option years are exercised. At the end of the option years the Contractor's fleet will be seven years old. Contractors would have to replace plows through the life of the contract due to the number of years, and the length of the contract was chosen to provide sufficient time for the plows to be amortized and provide a cost effective rate to the City.

Equipment breakdowns have a direct correlation with the ability to deliver plowing at current service levels. When Contractors experience a breakdown Staff reroute a City plow from the Class 4 to 6 roads to the Contractor's route on a Class 1 to 3 roads. This impacts the service level until another plow can be rerouted to backfill the vacant route.

If the plows are not available, then the City risks not being able to meet the current service level. The City's liability increases when service levels are not met.

#### **Technological Advancements**

Staff specified that the Contractor's fleet be equipped with spreader controllers similar to City plows so that when integrated with the new AVL system, detailed information about application rates will be provided. Standardized technology will lead to effective monitoring of application rates, efficient use of material and ultimately cost savings. The information captured off of the spreader controllers will also help demonstrate due diligence when defending liability claims.

#### **Conclusion**

The provision of snow plowing to the City is a very important service. It affects all residents, it is readily apparent, it is heavily followed by local media, and it creates liability for the City if not done properly.

When staff considered all the factors discussed above in combination with the costs to achieve the service level objectives, it was concluded that the best approach was to specify new plows to provide snow plowing services for the Class 1 to 3 roads. The new contract provides the City with firm pricing plus fuel adjustment for the entire five year contract plus two option years.



#### **Request for Decision**

Recommendations from the Solid Waste Advisory Panel

#### **Recommendation**

That the City of Greater Sudbury receive item #1 and item #2 in the report dated September 4, 2013 from the Acting General Manager of Growth & Development/Planning Director for information only; and

That the tipping fee rate for waste that requires additional consideration or handling be increased to double the tipping fee rate, plus \$200 per load, including a 48 hour notice as detailed in item #3a of the said report and that a budget option be prepared for the estimated additional revenue stream of \$25,000; and

That a budget option be prepared for the tipping fee rate for garbage loads mixed with electronic waste or garbage loads mixed with scrap metal be increased to double the tipping fee rate as detailed in item #3b of the said report; and

That a budget option be prepared for the tipping fee rate for garbage loads mixed with banned Industrial, Commercial and Institutional blue box materials be increased to triple the tipping fee rate as detailed in item #3c of the said report; and

Presented To:	Operations Committee
Presented:	Monday, Sep 16, 2013
Report Date	Thursday, Sep 05, 2013
Туре:	Managers' Reports

#### Signed By

**Report Prepared By** Chantal Mathieu Director of Environmental Services *Digitally Signed Sep 5, 13* 

Division Review Chantal Mathieu Director of Environmental Services Digitally Signed Sep 5, 13

Recommended by the Department Paul Baskcomb Acting General Manager of Growth & Development/Planning Director Digitally Signed Sep 5, 13

Recommended by the C.A.O. Doug Nadorozny Chief Administrative Officer Digitally Signed Sep 10, 13

That the residential weekly disposal exemption be reduced from 100 kg per week to 50 kg per week as detailed in item #3d and that a budget option be prepared for the estimated additional revenue stream of \$75,000; and

That the processing rate for concrete, brick and block be increased from \$20 per tonne to \$40 per tonne and that the processing rate for the two wood waste categories be increased from \$0 per tonne to \$40 per tonne as detailed in item #3e of the said report and that a budget option be prepared for the estimated additional revenue stream of \$400,000; and

That a budget option be prepared for the garbage fee for multi-unit residential properties be increased from \$24 per unit to \$40 per unit effective January 1, 2014 as detailed in item #3f and that a budget option be prepared for the estimated additional revenue stream of \$225,000 ; and

That a budget option be prepared for full cost recovery of the garbage fee for multi-unit residential properties be phased in by 2018 as detailed in item #3f of the said report and that this fee be reviewed annually as part of the User Fee By-law; and

That the Waste Management By-law be amended to reflect the new changes and rates.

#### **Finance Implications**

Approval of any or all of the recommendations would result in the preparation of budget options for consideration during the 2014 budget deliberations.

### Background

The following is a summary update and/or recommendations from the Solid Waste Advisory Panel:

1) 5 Year Solid Waste Strategic Plan - the panel is supportive in the development of a 5 Year Solid Waste Strategic Plan.

The plan will outline the history and achievements since the 2005 plan; update the goals; identify potential opportunities; review how to fund new and existing programs; how to align Greater Sudbury programs to the potential new/updated Provincial initiatives; review service delivery options and facility requirements and plot new or revised program delivery on a timeline (i.e. the expansion of the organic program to other sectors, the construction & demolition material recycling program, etc.).

The plan will take some time to develop since many new opportunities may arise from Provincial initiatives currently under review. The entire face of waste management may change if and when the Province rolls out new waste diversion targets on producers of certain waste categories.

The draft plan will be presented to Council at a later date.

2) Landfill Site Equipment Comparison - a staff report (summary pages attached) on the comparison of landfill site equipment specifications was taken to the Solid Waste Advisory Panel in July. The report was reviewed and panel members had no objection with how the specifications had been developed over time and indicated that they were relying on staff's expertise in the matter. The Director indicated that when changes are made, they're either to take advantage of new technology to reduce landfill space consumption or to deal with new programs. The General Manager indicated that the report was requested by Council and indicated that for the most part the specifications had been reduced over time and not increased. The Director did not receive direction to change the method in which landfill site equipment is specified.

3) Two user fee reports were taken to the Solid Waste Advisory Panel in July:

The first report was a review of landfill (garbage) tipping fees by the Finance Section in consultation with Environmental Services staff. The panel supported the methodology used in the review/development of an updated tipping fee rate. The panel recommended that a separate reserve fund be established for the cost of future disposal requirements and that the increase be phased in over 3 years. The details will be presented by Finance staff at a future Finance Committee meeting.

The second report outlined potential new fees or changes to existing fees. The ultimate goal was to increase waste diversion while transferring the financial cost from the tax levy to the generator of the waste material. Based on the recommendations of the Panel, staff have researched and estimated the revenue stream (where possible).

a) A revised fee for waste that requires additional consideration or handling. This includes asbestos waste and odourous waste (i.e. grit, grease trap solid waste) – Double the regular tipping fee rate + \$200 per load, including a 48 hour notice. The increase in revenue is estimated at \$25,000 per year.

b) Loads of garbage which include electronic waste or scrap metal - Double the regular tipping fee
rate. Electronic waste and scrap metal is exempt from tipping fees if segregated from garbage and placed in the proper recycling area or bin. If the landfill user that deposited the mixed material would rather sort the waste off site than pay the higher fee, then a re-load charge would be assessed to immediately re-load the waste. Landfill site users would not be permitted to sort their mixed waste at the site. No estimate is available for this item at this time. The desired outcome is to divert more waste from landfill sites.

c) Loads of garbage containing banned Industrial, Commercial & Industrial blue box materials – Triple the regular tipping fee rate. Blue box materials are exempt from all tipping fees if segregated from garbage and placed in the proper recycling bin or area. If the landfill user that deposited the mixed material would rather sort the waste off site than pay the higher fee, then a re-load charge would be assessed to immediately re-load the waste. Landfill site users would not be permitted to sort their mixed waste at the site. No estimate is available for this item at this time. The desired outcome is to divert more waste from landfill sites.

d) Reduce the residential weekly disposal exemption from 100 kg (220 lbs) to 50 kg (110 lbs). Based on 2012 data, an additional \$90,000 would have been generated if the exemption would have been 50 kg per week as opposed to 100 kg per week. However, staff believes that the reduction of the exemption fee will encourage residents to separate and divert more waste from landfill and the revenue is expected to decrease over time as residents make a more concerted effort to recycle. For budgeting purposes, staff estimates that if the exemption is reduced, the 2014 revenue will increase by \$75,000 (over a 12 month period).

The panel also suggested that the remaining 50 kg per week be assessed a flat rate fee of \$5. But after considerable discussion, the panel decided to postpone this concept and agreed that it should be reviewed as part of the 5 Year Solid Waste Strategic Plan.

e) Increase the processing fee for concrete, brick and block from \$20 per tonne to \$40 per tonne and the various wood waste categories from \$0 per tonne to \$40 per tonne. The increase in revenue is estimated at \$400,000 per year for 2014.

f) Increase the garbage collection and disposal fee per unit for multi-unit residential properties. These property owners currently contribute a portion of the cost for garbage collection and disposal services. The fee is reviewed annually as part of the User Fee By-law.

The panel recommends that the City moves to full cost recovery for these services over the next five years. Based on the current data, the fee per unit would increase from \$24 to \$40 in 2014. No cost would be assessed on blue box collection and processing services. The 2014 increase in revenue is estimated at \$225,000.

## Report for Solid Waste Advisory Panel



Agenda Item # 3							
Meeting Date	July 15, 2013						
Report Title	Landfill Site Equipment Comparison						
Type of Report	Information Only		Request for Comments	Х	Request for Support		

**Report Authored By Division Review** Bernice Tario Chantal Mathieu Bernice Tario Chantal Mathieu Co-ordinator of Waste Disposal **Director of Environmental Services** 

### Report

At the May 14<sup>th</sup> Council meeting, staff was requested to provide a history on the landfill equipment requirements. The attached pages provide a comparison since the 1996/98 time period.

The text in bold in the attached pages indicates a change from the previous contract. The reasoning for the changes are summarized below:

Changes from the 1996/98 contracts to Contract 2002-42:

- Changed the compactor's trash blade from a straight style to a double semi-u style. This style of trash blade helps make the equipment more efficient by forcing the garbage away from the center of the machine - directly into the path of the tracks where it can be more readily compacted.
- Increased the operating weight of the loader from 20,000 KG to 22,000 KG. Staff recalls reviewing the specifications at the time and the manual indicated a higher operating weight.
- 3) Required additional attachments for the loader...snow plough blade and power sweeping.



- 4) Removed the requirement of grader and dump truck.
- 5) Matched the compactor requirements for the Walden, Azilda and Hanmer site.
- 6) Reduced the requirement for a new compactor to a new or used compactor for the Azilda and Hanmer sites. Specified the used maximum hours for the Walden Site. The used compactor could not have more than 6000 hours and/or certified rebuilt by manufacturer.

#### Report Title: Landfill Site Equipment Comparison

Meeting Date: July 15, 2013

Bernice Tario Co-ordinator of Waste Disposal **Division Review** 

Chantal Mathieu Director of Environmental Services

Changes from Contract 2002-42 to Contract ENG10-52:

- Reduced the requirement for a new compactor to a new or used compactor for the Sudbury Site. The used compactor could not have more than 6000 hours and/or certified rebuilt by manufacturer.
- 2) Upgraded the teeth on the compactor wheels for the Sudbury, Hanmer and Azilda Site.

Changes from Contract ENG10-52 to GDD13-3:

- Added a requirement for another loader at the Sudbury Landfill Site for the future Construction & Demolition Material Recycling Site.
- 2) Increased the operating weight of the existing loaders from 17,000 KG to 22,000 KG and the bucket size from 2.5 m<sup>3</sup> to 3.0 m<sup>3</sup> at the Hanmer and Azilda Site. This is to handle hauling and loading construction and demolition debris to the Sudbury Site.

Staff has for many years, specified the type of equipment to be used for landfill operation. This is the case for the requirement of equipment used to move, push, spread and compact waste that will be buried. These are daily activities and the equipment must always be available. The landfill equipment compliment is reviewed from time to time and is revised, replaced or upgraded as required.

Other major equipment requirements are selected and provided by the contractor. For example, staff would specify that concrete block and brick would have to be ground to the Ministry of Transportation gradation for granular B. How or what type of equipment to handle, grind, move and stockpile the material would not be specified. This would be the decision of the contractor.



Presented To:	Operations Committee			
Presented:	Monday, Sep 16, 2013			
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Туре:	Managers' Reports			

### **Recommendation**

**Stroller Policy** 

**Request for Decision** 

That the City of Greater Sudbury authorize the implementation of the Transit Stroller Policy outlined in the report dated September 5, 2013 from the General Manager of Infrastructure Services for a one year period during which time the working group would reconvene to make adjustment should any issues arise.

## Background

In April 2012, the SMAP group presented a proposed stroller policy to allow children to remain in strollers while travelling on Transit buses.

Following this presentation, Operations Committee requested that transit staff provide information on stroller policies based on research from other transit properties and bring the findings back to the Committee.

By July 2013, having completed extensive research, it became apparent to staff that throughout the Canada and the United

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Division Review Roger Sauvé Director of Transit & Fleet Services Digitally Signed Sep 10, 13

Recommended by the Department Tony Cecutti General Manager of Infrastructure Services Digitally Signed Sep 10, 13

Recommended by the C.A.O. Doug Nadorozny Chief Administrative Officer Digitally Signed Sep 10, 13

States, there was no conclusive evidence to show that a child was safer in or out of the stroller while travelling on buses.

Having presented this information to Operations Committee, it was decided that a group comprised of all areas impacted by this policy would get together and discuss this matter further and provide recommendations for consideration.

The group included one member of the Sustainable Mobility Advisory Panel, two Councilors, two staff from Leisure Services, two Transit Bus Operators and the Manager of Transit Operations. Subsequent to meeting, the consensus is the enclosed amended stroller policy, to be implemented on a one year trial period.

## **Proposed Stroller Policy for Greater Sudbury Transit**

Open strollers measuring no more than 24 inches wide by 48 inches long (61 cm wide by 122 cm long) be permitted to use the priority seating area with priority given as follows:

- 1. People using wheelchairs or scooters
- 2. Persons with disabilities
- 3. Children in strollers

### **Responsibility of the caregiver:**

- The caregiver should lift up the priority seats and place the open stroller in the space made available to allow other passengers to safely navigate the aisle.
- The baby/child should face the rear of the bus
- The baby/child must be buckled-up in the stroller
- The brakes of the stroller must be applied
- The caregiver must hold the stroller securely while the bus is in motion

## Passengers traveling with a stroller must be able to board and disembark without assistance from the bus operator.

Should anyone noted in priority groups (1) or (2) require the priority seating area, the caregiver must move to the regular seating on the bus and fold the stroller. In the event that there are 2 strollers occupying the priority seating areas, the last one to board would need to move to the regular seating.

It is the responsibility of the caregiver to ensure that their stroller does not interfere with the safety or comfort of other passengers. The caregiver must always be in care and control of their stroller. If a stroller is too large to fit safely out of the aisle, or if a passenger has too many items hanging from the stroller, they will not be permitted to keep the stroller open. The caregiver assumes full responsibility for the safety of the child/children who are left in the stroller.

### Stroller restrictions

Single strollers and double length strollers are allowed to remain open in the priority seating area on the bus providing they are within the size restrictions. Strollers must be able to fit through the front doors and down the aisle in order to board the bus.

Oversize strollers, which include double width strollers, will only be allowed on the buses if folded.