City of Greater Sudbury

STRATEGIC PARKING PLAN FOR THE CITY OF GREATER SUDBURY

FINAL DRAFT

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1. INTRODUCTION

1.1 Study Overview and Objectives

In September 2009, the City of Greater Sudbury initiated the Strategic Parking Plan for Central Business District. A key objective of this Strategic Parking Plan is to assess existing and future parking needs and develop a forward-looking and sustainable parking plan for the next 15-20 years. The Strategic Parking Plan will assess existing parking needs and policies, develop future forecasts of parking demand, and identify alternative methods of providing and managing parking.

The proposed direction for the Strategic Parking Plan is based on the principle that a balanced approach must be adopted for all facets of parking. It reflects a new paradigm shift in North American parking management, away from the notion that a parking problem is automatically associated with inadequate supply. Rather, a parking problem can mean a multitude of issues including inadequate supply, the extent to which alternatives to driving are used, and possibly inefficient management of facilities and inadequate information.

1.2 Outline of Report

Following this introduction, this report contains seven chapters:

- Chapter 2 provides a summary of the stakeholder consultation activities conducted throughout the study and the key findings;
- Chapter 3 describes the existing environment for parking in the Downtown, including current management and operations practices, existing parking demand and supply, and the financial performance of the existing system;
- Chapter 4 provides an overview of potential future development in Downtown Sudbury, and estimates future changes in parking demands;
- Chapter 5 provides a review of parking infrastructure;
- Chapter 6 provides a review of parking policies;
- Chapter 7 includes a discussion of the current and future issues and opportunities for the parking system; and
- Chapter 8 summarizes the recommended Strategic Parking Plan.

1.3 Study Area and Scope

The study area for the Strategic Parking Plan is the Downtown area that is bordered by Ste. Anne Road to the north, Elgin Street to the south, Paris Street to the east and the Canadian Pacific Railway to the west. A map of the study area and parking areas surveyed is shown in **Exhibit 3-3**. The study area includes a total of approximately 3,490 off-street parking spaces, of which approximately 1,570 are municipally controlled, and approximately 1,920 are privately controlled.

The study is intended to primarily address public on-street and off-street parking in Downtown Sudbury.

2. STAKEHOLDER CONSULTATION

At the outset of the study, key stakeholders were identified through discussion with City staff, and initial meetings were held in November 2009 to discuss key parking issues with stakeholders and identify key issues to be considered and addressed throughout the study.

Key stakeholders included in the November meetings were:

- Downtown Sudbury BIA and Downtown Village Development Corporation (DVDC);
- Greater Sudbury Police Services;
- Sudbury YMCA;
- Private Parking Operators;
- Faith Community/Christ the King Centre;
- Market Square management; and
- City of Greater Sudbury staff.

Issues raised by the different groups are detailed in meeting minutes appended to this report, with a selection of key items summarized below.

- Short-stay parking needs to be available for customers;
- Long-stay parking should be affordable for employees;
- Two hour free program not functioning as intended;
- A lack of parking can be a barrier to development, particularly residential redevelopment in existing buildings;
- Changes to operation of the Tom Davies Square and Centre for Life lots are desired by some of the main users of those lots;
- Several potential developments in the Downtown area including the Northern Ontario School of Architecture, changes to market Square etc. – all of which will increase activity and paring demands; and
- Some support for additional parking, but general consensus that demolition of buildings for additional at-grade parking is detrimental to the health of the downtown.

In May 2010, further meetings were held with the Accessibility Committee and the Royal Canadian Legion to discuss parking issues with those two groups.

A second round of meetings was held after completion of the final draft report to gain feedback from stakeholders on the proposed changes arising from the strategic parking plan. Meetings were held on September 23, 2010 to present the report and obtain preliminary feedback. A brief presentation of the plan was given and attendees were referred to the City's website to access copies of the final draft report of September 2010. Issues raised by the different groups are detailed in meeting minutes appended to this report, with a selection of key items discussed summarized below.

- Overnight parking for residents of the downtown is still a critical issue, opinion that additional supply should be sought off-street (preferably) and on-street;
- Suggestion of partnerships with other developers to provide parking with new developments or redevelopments
- Consideration of increased use of more peripheral lots for long-stay parking;
- Support for replacing 1 hour duration meters with 2 hour duration to avoid confusion between the 1 hour and 2 hour time limit areas; and
- School of Architecture being planned for a September 2012 start date, likely on a site in the downtown.

As of January 2011, no further comments from stakeholders had been received in relation to their review of the final draft report.

3. EXISTING CONDITIONS

3.1 Policy Context

3.1.1 OFFICIAL PLAN

The City of Greater Sudbury Official Plan was prepared in September 2008. Although the Official Plan does not contain estimates in population or employment growth recognizing the diversity in urban, rural and wilderness environments, the Plan notes the former City of Sudbury, which includes Downtown Sudbury, has been the location of most growth and is the main employment centre.

The Official Plan supports policies and programs to encourage higher intensity and residential development in Downtown Sudbury. Specific to parking, Section 4.2.1 of the Official Plan states that the City may reduce parking standards and development-related charges, allow other communal parking areas to satisfy parking requirements, or accept payment-in-lieu, to encourage development throughout the Downtown Sudbury area. In addition, the Plan contains a policy to waive parking provisions for residential developments that have been converted from office or retail spaces.

3.1.2 ZONING BY-LAW

There are currently 8 distinct Zoning By-laws governing the City of Greater Sudbury. Parking regulations for new development in Downtown Sudbury are governed by Zoning By-law 95-500Z, as amended, for the City of Sudbury. Section 10 of Zoning By-law 95-500Z regulates the amount of parking to be supplied, the requirements for parking spaces (e.g. dimensions, location, access, etc.), and requirements for the provision of accessible, barrier-free parking spaces based on the total number of spaces provided.

The Zoning By-law lists the number of parking spaces required for various land-use purposes for all zones and for C8 Zone – Metro Centre (Downtown Sudbury). Parking requirements for Zone C8 only note spaces required for 4 different residential developments (boarding house, dwelling unit, hotel and rooming house). Thus, other land-use developments in downtown beyond the residential ones listed (e.g. commercial, retail, etc.) are not required to provide off-street parking or loading.

The parking requirements for the 3 dwelling-unit uses are the same as those applicable to all other zones: 1 space per dwelling unit, plus 0.25 per accessory guest of a Boarding House; 1 per

dwelling unit for Dwelling Units, and 1 plus 0.25 per guest room for a Rooming House. Parking requirements for hotels in C8 Zone are reduced to 0.5 per guest room (compared to 1 per guest room for all other zones).

A new comprehensive Zoning By-law that will replace the 8 existing Zoning By-laws is currently being prepared. The Comprehensive Zoning By-law is currently in draft form and undergoing public consultation.

The current draft of the Comprehensive Zoning By-law reflects similar parking spaces requirements for new development in the Downtown Sudbury area as the current Zoning By-law 95-500Z. Residential parking requirements are listed for 2 dwelling-unit uses (boarding / rooming houses and dwelling unit) and hotels, while other non-residential land uses are not required to provide parking. The current draft includes a provision in Section 5.2.8 of the By-law for cash-in-lieu of parking.

3.1.3 TRAFFIC AND PARKING BY-LAW

By-law 2010-1, dated October 14, 2009, describes the parking and stopping restrictions in the City of Greater Sudbury and includes provisions where parking is prohibited and restricted. In general, paid parking is applicable on weekdays between 8:00 a.m. and 6:00 p.m. and during special events, and vehicles cannot park on any street between 12:00 a.m. and 7:00 a.m. from November 1 to March 31 except for emergencies.

By-law 2010-1 allows for parking meters and/or machines in the prescribed "parking meter zones", and sets out the maximum allowable parking times. These vary by location, with on-street parking on Cedar St., Durham St., Lisgar St. and a few other locations having a maximum time of 1 hour, while the remaining locations allow up to 2 hours.

The by-law provides for vehicles exempt from parking meters and for on-street loading zones for commercial vehicles. It also includes regulations for disabled parking spaces on City streets, municipal parking lots and private parking facilities.

The by-law also allows for the regulation of parking on private property, municipal property, and private and municipal parking lots.

By-law 2010-1 describes the minimum and maximum amount of fines for parking meter violations, which range from $25 to $5,000, and violations to other provisions in the by-law, which range from $16 to $5,000. The by-law does not include a set fine schedule for each violation.

3.1.4 DOWNTOWN REVITALIZATION PLANS AND OBJECTIVES

In recent years, a number of plans have been developed to establish and drive the vision to transform the downtown core into a more vibrant and diverse community, promote the arts and heritage nature of the region, and encourages sustainable living.

The Greater Sudbury Development Corporation (GSDC) developed in 2003 the "Coming of Age in the 21st Century: An Economic Development Strategic Plan for Greater Sudbury" aimed to guide economic development in Greater Sudbury. The plan was updated in 2009, "Coming of Age in the 21st Century - *Digging Deeper*", to continue GSDC's work to "*foster civic engagement, cultivate entrepreneurship and stimulate the continuous development of a dynamic and healthy city*". The Plan identifies five economic engines of growth that promote Greater Sudbury as a leader in services (mining, health, education and research) and as a top destination in Ontario, and strengthen the art and cultural heritage of its community.

The 2003 Economic Development Plan was followed by the development of "A New Vision Downtown Sudbury" in 2005 to assist in achieving the goal to promote "a City for the creative,

curious and adventuresome". This common vision for the downtown area was developed by three organizations: the GSDC, Downtown Sudbury (the downtown's Business Improvement Area, BIA) and the Downtown Village Development Corporation (DVDC) and looks to "*develop and sustain the Downtown as the vibrant hub of a dynamic city by preserving its historical built form, promoting arts and culture, improving linkages to neighbourhoods and amenities, integrating natural features, developing residential uses, and creating unique urban spaces through innovative design*". The new vision is supported by five guiding principles and contains suggested strategies, projects and programs to implement these principles. It highlights Arts & Culture and Heritage Preservation as important elements in the development of downtown, and revitalization through sustainable urban design and support of residential developments in the downtown area.

In conjunction with the Official Plan, these plans have several common themes:

- Encourage the development of arts & culture programs, including support for public art and new facilities such as the Art Gallery and a new School of Architecture.
- Preserve and promote the natural and historical character to attract residents and visitors.
- Attract new residential developments in Downtown and support pedestrian-friendly, mixed-use and sustainable growth policies.

3.1.5 OTHER TDM STRATEGIES

Transportation demand management (TDM) is the use of policies, programs, services and products to influence whether, why, when, where and how people travel. Its goal is to make personal travel decisions more sustainable, and to make more efficient use of the existing transportation system. Potential TDM initiatives range from incentive programs that encourage people to carpool or take transit, to regulatory and pricing measures.

The City has developed a carpooling network for the citizens of Greater Sudbury, using the Smart Commute Carpool Zone service. Registering is free and provides a simple and user-friendly way of finding people to share a ride with.

3.2 Parking Management and Operations

Municipal parking in the Downtown Sudbury area is managed and operated by the City of Greater Sudbury. The City of Greater Sudbury operates 12 municipal parking lots within the Downtown Sudbury area. Two of the parking lots are leased by the City from private land owners, while the remaining 10 parking lots are owned by the City. In addition, the City manages 425 on-street meters and 97 off-street meters throughout the Downtown area.

All municipal lots are paid parking from Monday through Friday, 8:00 a.m. to 6:00 p.m. Parking is available for free on weekday evenings from 6:00 p.m. and midnight, and weekend days except during special events at the Sudbury Arena, when a $2.00 parking fee is applicable. In addition, the Beech and Market Square lot offers free parking up to two hours.

Parking fees for off-street and on-street parking are summarized in **Exhibit 3-1**.

Exhibit 3-1: Downtown Sudbury Parking Rates

Parking Lot	Parking Fees
Beech & Market Square	First Daily Visit Free up to 2 hours After 2 hours, $0.50 per half hour $5.00 daily maximum (8:00 a.m. to 6:00 p.m. daily) $65.00 per month (8:00 a.m. to 6:00 p.m. daily)
Tom Davies Square	$0.50 per half hour, first 2 hours $0.65 per half hour, after first 2 hours $12.40 daily maximum (8:00 a.m. to 6:00 p.m. daily) $100.00 per month (8:00 a.m. to 6:00 p.m. daily)
Elgin Street (CP Rail)	Monthly parking, $30 month/daily
Centre for Life Lot	$0.50 per half hour $10.00 daily maximum (8:00 a.m. to 6:00 p.m. daily)
All other municipal lots	$0.50 per half hour $5.00 daily maximum (8:00 a.m. to 6:00 p.m. daily) $50 monthly (8:00 a.m. to 6:00 p.m. daily)
On-street parking meters	$0.50 per half hour (8:00 a.m. to 6:00 p.m. daily)

3.3 Parking Inventory

Based on site observations, the off-street and on-street public parking supply in Sudbury's Downtown area was inventoried. For off-street parking, the parking supply inventory included all municipal and major private parking facilities/areas within Downtown Sudbury. For on-street parking, the parking supply inventory included all municipal streets within Downtown Sudbury that permit on-street parking. A team of field staff recorded the number and type of parking spaces in each parking facility/area and the number of spaces on a block-by-block basis.

The survey methodology and details are included in the Parking Survey Report included in Appendix A of this report.

3.4 Parking Supply and Utilization

Parking occupancy studies were carried out for all off-street public and private parking facilities and for all on-street parking in Downtown Sudbury. Utilization surveys (vehicular counts) were conducted every two to three hours on one weekday from 1:00 pm to 8:00 pm, and on a second weekday from 7:30 am to 6:30 pm.

The off-street (parking lots) and on-street parking supply inventories were conducted over two consecutive days – Tuesday November 3 and Wednesday November 4, 2009. A summary of the data collection dates and times is shown in **Exhibit 3-2**.

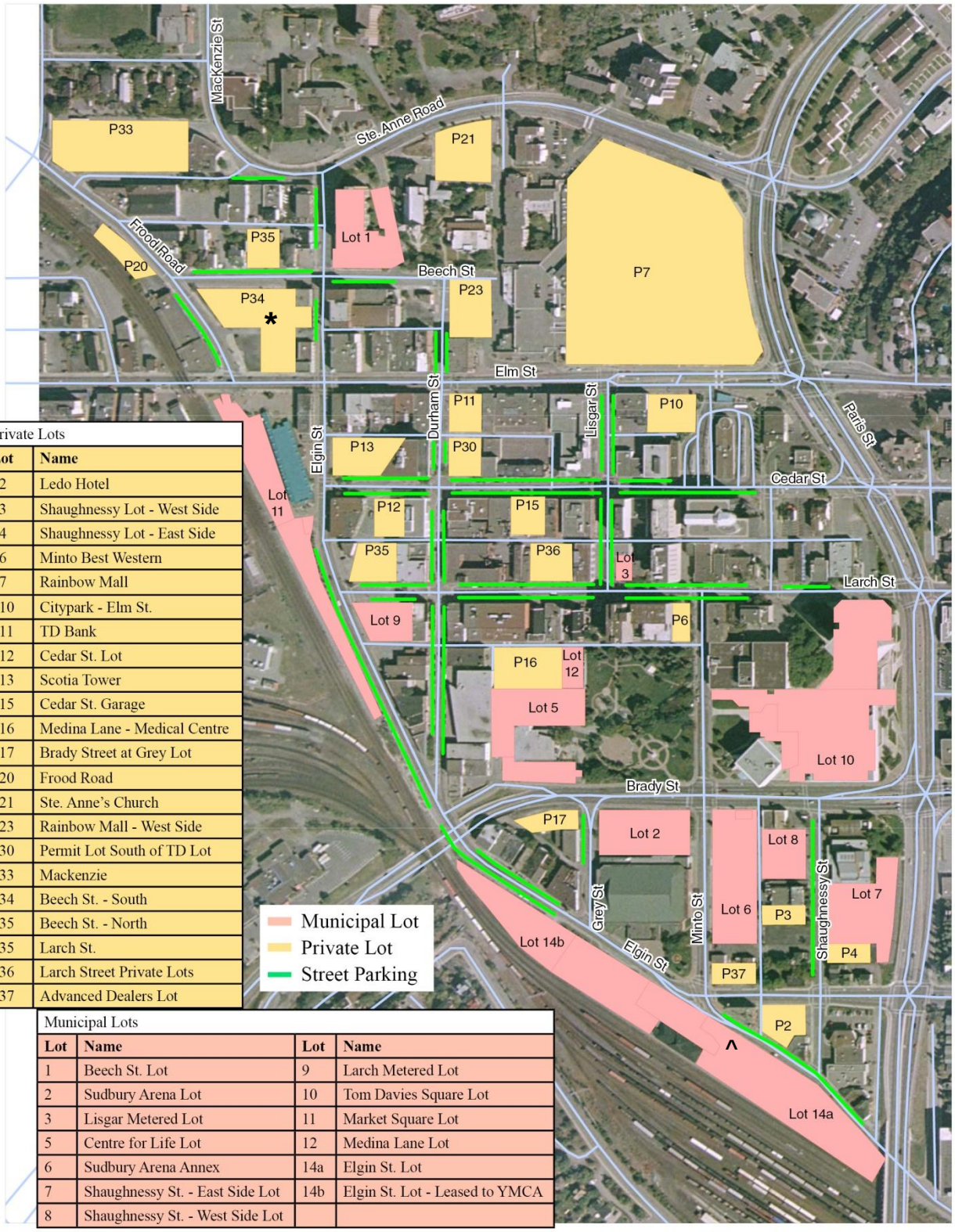
Exhibit 3-2: Downtown Sudbury Parking Study – Occupancy Survey Dates

Survey	
Date(s)	**Times (s)**
Nov. 3, 2009	1:00 pm-8:00 pm
Nov. 4, 2009	7:30 am-6:30 pm

The survey on November 3, 2009 was intended to record conditions around the Arena when a Sudbury Wolves game was scheduled (versus Kingston Frontenacs with the start time listed as 7:30 p.m. – attendance listed as 3070 people), and did not include parking facilities north of Elm Street.

The study area for the parking survey was bordered by Ste. Anne Road to the north, Elgin Street to the south, Paris Street to the east and the Canadian Pacific Railway to the west. A map of the study area and parking areas surveyed is shown in **Exhibit 3-3**. Nearly 3,800 off-street and on-street parking spaces were surveyed for this study. There are a total of approximately 3,490 off-street parking spaces in Downtown Sudbury including approximately 1,574 municipal and approximately 1,921 private parking spaces.

Exhibit 3-3: Downtown Sudbury Parking Study Area



Private Lots	
Lot	**Name**
P2	Ledo Hotel
P3	Shaughnessy Lot - West Side
P4	Shaughnessy Lot - East Side
P6	Minto Best Western
P7	Rainbow Mall
P10	Citypark - Elm St.
P11	TD Bank
P12	Cedar St. Lot
P13	Scotia Tower
P15	Cedar St. Garage
P16	Medina Lane - Medical Centre
P17	Brady Street at Grey Lot
P20	Frood Road
P21	Ste. Anne's Church
P23	Rainbow Mall - West Side
P30	Permit Lot South of TD Lot
P33	Mackenzie
P34	Beech St. - South
P35	Beech St. - North
P35	Larch St.
P36	Larch Street Private Lots
P37	Advanced Dealers Lot

Municipal Lots			
Lot	**Name**	**Lot**	**Name**
1	Beech St. Lot	9	Larch Metered Lot
2	Sudbury Arena Lot	10	Tom Davies Square Lot
3	Lisgar Metered Lot	11	Market Square Lot
5	Centre for Life Lot	12	Medina Lane Lot
6	Sudbury Arena Annex	14a	Elgin St. Lot
7	Shaughnessy St. - East Side Lot	14b	Elgin St. Lot - Leased to YMCA
8	Shaughnessy St. - West Side Lot		

* Lot P34 was surveyed in November 2009, but has since been redeveloped and is no longer available for monthly parking.

Based on the parking occupancy surveys, key findings are:

- Off-street parking lot capacity issues appear to be more prevalent among the municipal lots more than the private lots, although some private lots not requiring a parking permit are also experiencing near capacity issues;
- During the surveyed peak periods, the overall parking system (all municipal and private parking spaces) appeared to have sufficient capacity to meet parking demands in Downtown Sudbury;
- On-street parking spaces on Cedar Street were found to be well used throughout the day, and at or near capacity on several occasions; and
- The use of parking permits appears to be the primary payment method at municipal lots in Downtown Sudbury.

The full findings of the parking utilization survey are included in the Parking Survey Report (Appendix A of this report).

3.5 Parking System Revenues and Expenses

Based on data supplied by the City, total parking revenue from October 2008 to September 2009 was $1,383,520. This includes all on-street meters, monthly pass sales and off-street municipal lots. Parking expenditures for the same time period amounted to $1,193,351, resulting in net revenue of about $190,169 for the City. Parking revenues and expenses are shown in Exhibit 3-4 below.

Exhibit 3-4: Parking System Revenue and Expenses

Revenues	**Revenue Source**	**Oct 2008 - Sept 2009**
	Pay and Display	$168,075
	Special Events	$61,851
	Monthly Pass	$527,619
	Meter Parking	$406,975
	TDS Lot - Attendant	$150,309
	CFL Lot - Attendant	$68,691
	Subtotal	**$1,383,520**
Expenses	**Expense Type**	**Oct 2008 - Sept 2009**
	Materials Expense	$100,159
	Equipment Expense	$0
	Energy Costs	$5,332
	Purchased / Contract Services	$218,724
	Debenture & Insurance Cost	$279,604
	Internal Recoveries	$174,231
	Salaries and Benefits	$415,302
	Subtotal	**$1,193,351**
	Materials Expense include building maintenance, supplies and leases Internal Recoveries include snowplowing and administrative costs	
	Net Revenue	**$190,169**

4. FUTURE SUPPLY AND DEMAND

4.1 Population and Employment

The City provided population and employment data for both the City of Greater Sudbury and the Downtown area. Current demographics are based on the 2006 Census for place of work, population, households and dwellings, and downtown boundaries.

The 2026 projections are based on an in-migration scenario which uses a 2026 population target of 169,580 – a historic population high observed in 1971 – as the upper limit to assess the adequacy of infrastructure for planning purposes, and maintaining the same percentage of demographics (Downtown Sudbury ratio to City of Greater Sudbury).

Population and employment data is summarized in Exhibit 4-1.

Exhibit 4-1: Population and Employment Projections

	Current 2006			In-Migration Scenario 2026		Projected Growth 2006-2026	
	CGS	**Downtown**	**Downtown % of CGS**	**CGS**	**Downtown**	**CGS**	**Growth Percent**
Population	157,857	609	0.39%	169,586	654	11,729	7.4%
Households	64,940	538	0.83%	74,883	620	9,943	15.3%
Total Labour Force	73,885	6,055	8.20%	79,394	6,506	5,509	7.5%
Avg. Household Size	2.4	1.1	-	2.3	1.05	-	-

The Downtown projections are based on maintaining the same percentage of the City's population, household and employment located in the downtown area. This scenario, along with other growth scenarios based on residential intensification targets set out in the City's Official Plan, are evaluated to estimate future parking demand in Section 4.3.

4.2 Future Development

Art Gallery

The Art Gallery of Sudbury is currently located at 251 St. John Street. The gallery is housed in a turn of the century mansion in a residential area just south of Downtown Sudbury. Facilities include two exhibition spaces, administration offices, a reception area with a small display space, a studio, and a small library. In addition to exhibitions, the gallery offers educational programs, such as lecture series, workshops, and art classes, and its space is available for special events.

Issues with the current location, expressed during the stakeholder meetings of this study, include its visibility and parking. On-site parking is not enough to accommodate the influx of visitors from the 8-week educational programs throughout the year, school field trips and special events, and the gallery relies heavily on on-street parking. The current facility also does not have room for on-site loading and unloading, especially for school buses.

Plans to move to a new, larger facility in the next 3 to 5 years were discussed at the stakeholder meeting. The new facility would be planned with up to 27,000-30,000 ft^2 of total space, with larger exhibit spaces, storage and a gift shop. One potential location discussed at the meeting was the site near York Street and Paris Street, which could accommodate on-site parking and is close to other parking facilities.

It is likely parking supply will be integrated with the new Art Gallery facility to meet its parking and loading needs on-site. Although, from a downtown parking perspective, additional parking demand may be generated from more visitors and students to the area as more educational programs and special events are held at the larger facility, or from the gallery potentially planning for a downtown venue for educational programming purposes.

School of Architecture

Plans are currently underway for a new school of architecture in Sudbury. The proposed school would be linked to Laurentian University and has a planned opening date of 2011 for the undergraduate program and 2014 for the Masters program.

The required building area is estimated at approximately 75,000 square feet, which could be made up of several buildings and could be staggered through the first three years of operations[1], to accommodate a variety of spaces such as studios, lecture rooms, presentation theatres, galleries, and offices. The proposed school is estimated to attract more than 400 students in a year-round operations (including students on co-operative program) and approximately 25-30 faculty and staff.

The location of the proposed school has not yet been determined. The feasibility study report, published in June 2008, as well as comments from the stakeholder meetings, have highlighted a preference for a downtown location, noting that "*a downtown location for the school will provide the greatest benefit for the city culturally and economically*"[1]. Potential sites discussed during the stakeholder meeting include the unused health unit site and the old hospital site, both on Paris Street. Parking provisions were noted to not be a major consideration in determining the school's site location, with potential of providing off-site parking coupled with shuttle service and/or using city-owned lots for overflow parking.

The proposed school will increase the area's population, with an estimated 400 students annually plus 20 faculty members and staff by 2016 when in full operation. The 2008 feasibility study report assumes housing will be required for a minimum of 480 new people – including students and their families – and, assuming residents living five-to-a-house or 2 to an apartment, it estimates that at least 100 additional houses or 240 additional suites are required[1]. It is understood that development plans do not include student residences and assume that students will live in other housing near the school.

Parking demand estimates are explored in the next section. Regardless of location, the new facility should encourage downtown redevelopment, especially residential, and opportunities for transit-oriented and transportation demand management programs, and may offer UPass transit programs to students, to offset increases in trips.

Market Square

Market Square is a community facility located on the west side of the downtown area, operated by the City of Greater Sudbury. The Market Square building is a retrofitted 100-year old facility, and it is home to the Downtown Sudbury's Farmers' Market on weekends during the summer and fall seasons. Its facilities are available for special events year round, such as trade-shows; however,

[1] The Northern Ontario School of Architecture Feasibility Study. June 2008. Retrieved February 16, 2010: http://communities.mysudbury.ca/Sites/3419/Feasibility%20Study%20%20tude%20de%20faisabilit/FS%20English%20R.pdf

the current building cannot accommodate assembly-type events due to the facility's amenities and infrastructure.

Current parking operation is almost exclusively on the weekends, which works well with adjacent parking supply. During weekday events, the parking lot is sometimes used for staging.

Future developments that would have an impact on the current parking supply and demand include:

- upgrading the facility's amenities and infrastructure (exits, sprinkler systems, etc.) to allow assembly-type of events;
- provision of a temporary expansion structure such as an outdoor tent during the regular season, which would displace approximately 45 parking spaces; and,
- the relocation of the downtown visitor/information centre by Sudbury Tourism in partnership with the Market Square from its current location at the VIA station to the Market Square building is under way and the relocated facility is set to open in June 2010. Five parking spaces have been designated specifically for visitors to the information centre.

In addition, it can be expected that use of the Farmers' Market will intensify over time with the redevelopment of the downtown area.

Parking demand for the Market Square pay-and-display lot is high, with peak utilization close to 100%, so it is important that parking supply options are identified to accommodate any of the future developments and growth in demand. Potential opportunities include:

- Converting a number of permit-only spaces on the south side of the lot to public-access.
- Encouraging use of parking meters along Elgin St.
- Encouraging use of the Larch Metered Lot.

Greater Sudbury Synergy Project

Recently, the Community Adjustment Committee provided funding to conduct a prefeasibility analysis for the development of a large meeting space in Downtown Sudbury that would serve a diverse set of community needs. The project is referred to as the Greater Sudbury Synergy Project, and is exploring the process to develop a facility for trade shows, conventions, and arts and cultural performances, as well as shared space for not-for-profit organizations, art galleries, cultural organizations, and other multiple users in the community.

The Synergy Project is in its early stages, with details about potential sites, size or capacity and demand not yet developed.

It is expected that any type of large development or centre will generate significant parking demand. Parking supply will need to be coordinated and integrated into the development of the new centre and future developments of the downtown area.

4.3 Future Parking Demand Estimates

Population Increase

A number of population growth scenarios for the Downtown area are evaluated based on the projections for the City of Greater Sudbury and residential intensification targets:

a) Same Percent of Population Living in Downtown: the percent of the City of Greater Sudbury population living in the downtown area that was observed in 2006 is projected to remain the same in 2026. Thus, the downtown population is projected to grow from 609 to **654**, a 7.4% growth rate.

b) 15% Growth in the Downtown: the current downtown population grows by 15% by 2026, increasing to about **700** residents.

c) 10% of Intensification Target Growth: this scenario projects that 10% of residential growth in the City will occur through intensification, of which 10% will occur in the downtown area. As a result, 1% of the 11,792 projected growth, or 117 new residents, will settle in the downtown area, increasing the downtown population to **726**.

d) 20% of Intensification Target Growth: similar to scenario c), it projects that of the 10% of residential growth through intensification, 20% will occur in downtown. The downtown would see an increase of 234 new residents, increasing the population to **844**.

Exhibit 4-2 shows the results of the parking demand analyses based on the population scenarios described above and the following key assumptions:

- The average household size in Downtown is estimated at 1.2; and,
- Three different parking requirement scenarios are reviewed:
    - Current parking requirement of 1 parking space per dwelling unit;
    - Reduce parking standards to 0.7 spaces per dwelling unit; and
    - Encourage downtown redevelopment and exempt parking requirements for converted vacant offices or retail spaces (policy noted in Official Plan) – estimate half of the residential units are redevelopment with no parking requirement, resulting in 0.5 spaces per total dwelling units.

Exhibit 4-2: Parking Demand Analyses from Population Projections

	Population	Growth	Households / Units	Parking @ 1 per unit	Parking @ 0.7 per unit	Parking @ 0.5 per unit
a) Same Percent of Population Living in Downtown	654	45	38	38	26	19
b) 15% Growth in the Downtown	699	90	75	75	53	38
c) 10% of Intensification Target Growth	726	117	98	98	68	49
d) 20% of Intensification Target Growth	844	235	195	195	137	98

Northern Ontario School of Architecture

As previously discussed, the planned Northern Ontario School of Architecture (NOSOA) will increase the need for housing in the vicinity of the school, especially if the campus is located in or near the Downtown area. Similar to the parking demand analyses based on population projections, Exhibit 4-3 shows various scenarios to estimate parking demand as a result of the planned NOSOA, with the following key assumptions:

- The area will see an estimated 480 new residents. One scenario estimates all residents are accommodated in the downtown area; the second scenario estimates 80% of these new residents will settle in downtown.
- Estimate two residents per suite or apartment dwelling; and,
- Three different parking standards: 1, 0.7 and 0.5 parking spaces per dwelling unit.

Exhibit 4-3: Parking Demand Analyses from NOSOA Population Estimates

	NOSOA New Residents	Households / Units	Parking @ 1 per unit	Parking @ 0.7 per unit	Parking @ 0.5 per unit
e) All new residents in downtown	480	240	240	168	120
f) 80% in downtown	384	192	192	134	96

Employment Parking Demand Increases

In addition to projected increases in the downtown residential population, future parking demand will arise from increases in the downtown labour force and increases in commercial and institutional activities. As noted earlier, planning stakeholders and development plans are focusing on promoting and revitalizing the downtown area to attract residents and visitors. Downtown redevelopment will draw more people to the area and create additional jobs in retail and other commercial sectors to support the downtown.

The parking survey conducted as part of the study showed a peak utilization hour on Wednesday at 10:00 a.m., when about 2,445 of the 3,585 parking spaces surveyed (on-street and off-street) were occupied, with an allowance for the removal of the Shoppers Drug Mart site. Using this snapshot of current maximum demand, future parking demands are estimated for various scenarios and projected growth rates:

- Same rate as the projected increase in total labour force, or 7.5%, provided by the City (see Exhibit 4-1);
- Double the projected growth in total labour force – 15%; and,
- 10% projected increase in demand.

Exhibit 4-4 shows the results of three different growth rates applied to the current maximum demand of 2,215.

Exhibit 4-4: Downtown Employment Parking Demand Increase Estimates

Growth Scenario	Percent Increase	Parking Space Demand Increase	Total Forecasted Demand
g) Demand increase same as Projected Labour Force	7.5%	183	2,629
h) Demand increases by 15% (double projected labour force growth rate)	15.0%	367	2,813
i) Demand increases by 10%	10.0%	245	2,691

The above analysis of various parking demand scenarios considers the 'natural growth' in demand from redevelopment of the area and attracting residents and visitors to current businesses and local attractions, such as the Farmers' Market. It does not, however, include the demand in parking from future larger developments such as a Conference Centre. Parking demand generated from these developments would be largely centralized and likely to be addressed on-site or near its final location.

4.4 Future Parking Supply Needs

Considering all of the parking demand scenarios analysed in the previous section, future parking demand for 2026 is estimated to range between 2,750 and 3,250 – a 12 to 35% increase from the existing observed peak utilization, or an increase in the range of 300 to 800 parked vehicles. There are about 3,250 parking spaces available to the general public, including on-street and off-street spaces, but excluding lots that are restricted (e.g. YMCA members, VIA reserved, TD Bank, etc.) or are being redeveloped[2]. It is understood that parking supply at the CP Elgin Street Lot will be reduced by approximately 100 spaces as a result of the proposed development of a Greyhound bus terminal. The preliminary proposal for this development makes use of the VIA Rail Station building with an impact of approximately 80 spaces for bus loading/unloading, employee and customer parking, and an additional loss of 20 spaces to accommodate a new vehicle entrance needed to access the southern public parking area.

These estimates suggest that total future parking demand will be below though close to the overall current supply of parking spaces. Considered on a system-wide basis, the supply of both municipal and private parking spaces appear to have sufficient capacity to meet the lower-end estimates of future parking demands, however the current supply of parking in the downtown area is exhausted when considering the higher range of future parking demand estimates.

However, this is strictly based on the total number of spaces and does not consider a number of localized limitations to the current supply. A significant portion of the available capacity to meet future demand is concentrated in private parking lots, which are disproportionately located in parking lots north of Larch Street. It can be expected that future parking demand will not gravitate towards these less-utilized lots but instead be localised around new developments, especially the expected demand from the School of Architecture, and other key employment locations. It is also understood that an increased number of office uses in the Rainbow Centre Mall has increased parking demands at that location to the point where capacity for public parking is becoming an issue.

Exhibit 4-5 shows an estimate of the remaining capacity at parking lots, based on increasing the existing observed weekday 10am occupancy by 25% to account for increases in parking demand to

[2] The lot at Elm St. between Frood and Elgin streets has been redeveloped as the future site of a Shopper's Drug Mart. (source: The Sudbury Star newspaper - http://www.thesudburystar.com/ArticleDisplay.aspx?e=2489017 (retrieved April 1, 2010)

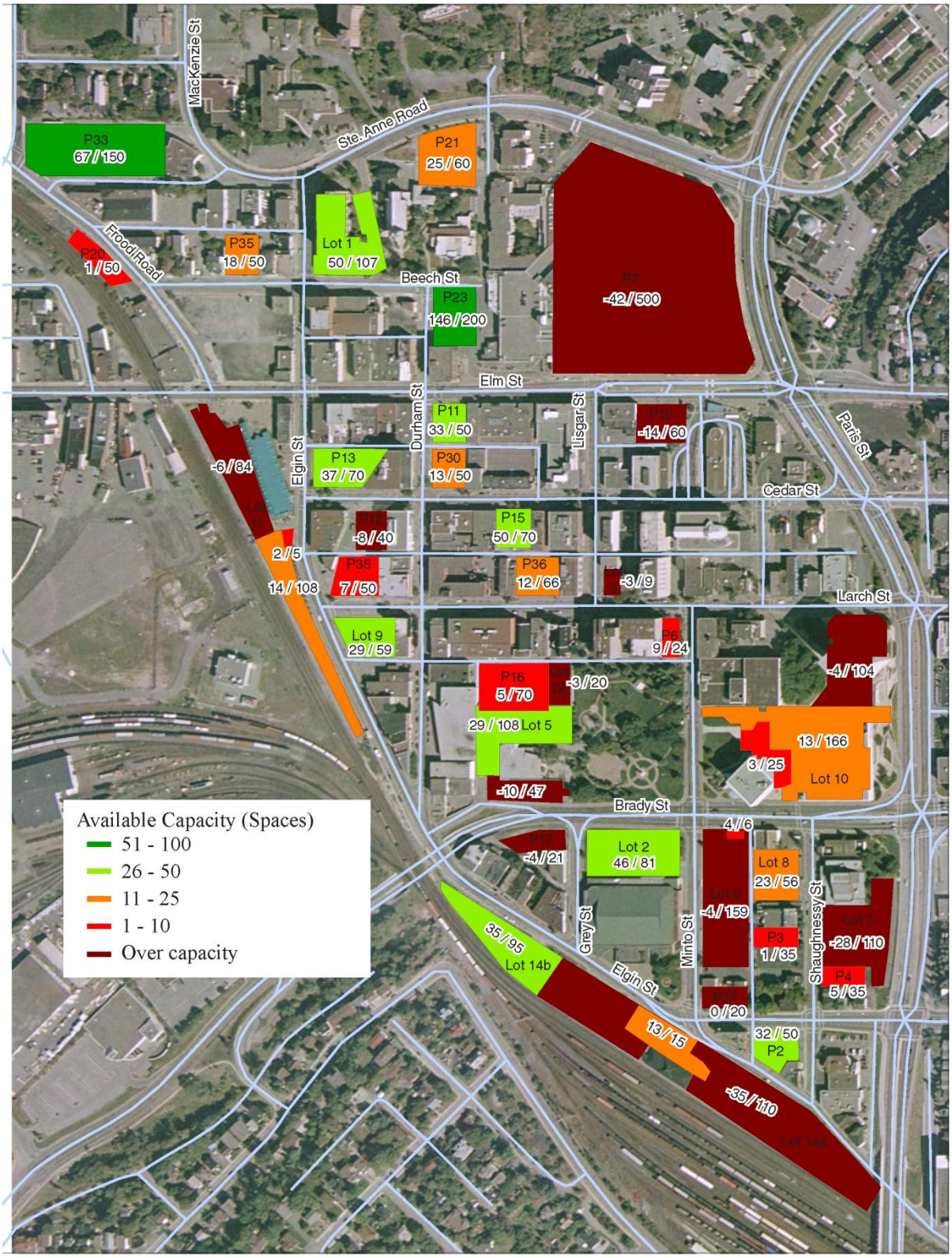
2026. The analysis was not refined to relocate excess demand to adjacent lots and instead provides a visualization of where future parking demands would gravitate based on existing parking occupancy. The analysis shows that the majority of lots will be over capacity or have very little supply available. The largest parking lot, the Rainbow Centre Mall parking garage, is already experiencing near-capacity demand today, and is unable to meet forecasted future growth.

In addition, parking capacity issues may become an issue for lots south of Larch Street. Many parking lots in this area of Downtown are already in high demand – Lots 6 (Arena Annex), 7 and 8 (Shaughnessy St., both sides), and 14a (Elgin St.) – and may be subject to additional demands arising from development of an Arts and Entertainment District, and if operational changes are made to the Tom Davies Square underground parking lot.

Based on these considerations, redevelopment of parking lots in the southeast downtown area should be considered and planned for to support future growth and development proposals, potentially consolidating at-grade surface lots into a parking structure. Provision of a structure to consolidate parking supply could free up other parking lots for development, and could be designed to meet both current and future increases in demand. The design of a parking structure should also contribute to the urban fabric and integrate the City's vision to support high quality urban design and increased pedestrian activity.

In addition, the currently unused Energy Court lot southeast of Elm Street and Lorne Street lot may again be required for parking given the growth in parking demands at the Rainbow Centre Mall, and the loss of a parking lot due to redevelopment at the site now occupied by the Shoppers Drug Mart on Elm Street.

Exhibit 4-5: Future (2026) Parking: Estimated Spare Capacity

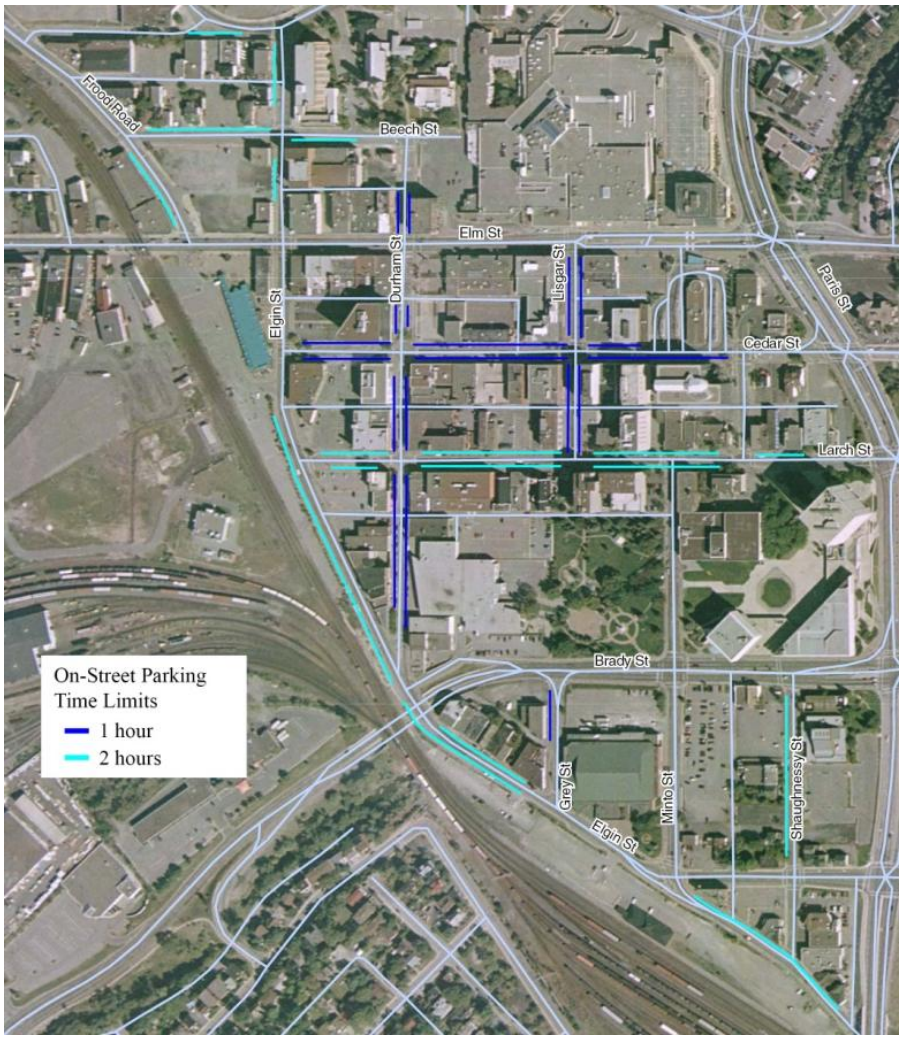


5. INFRASTRUCTURE REVIEW

5.1 On-street Parking

On-street parking spaces in Downtown Sudbury are operated through single-space parking meters. The meters accept coins and current rates are $0.50 per half hour. The majority of meters allow a maximum parking time of 2 hours, with the exception of those on Cedar St., Durham St., and Lisgar St. which have a maximum allowable time of 1 hour (see Exhibit 5-1).

Exhibit 5-1: On-Street Parking Time Limits



Although the parking meters are generally in good repair, revenue collection alternatives for on-street parking are reviewed with regards to user-friendliness, potential revenue comparison, and operations and management by the City.

Single-space meters have the advantage that they are very familiar to every parker and relatively easy to operate and maintain. However, parking meters are more labour intensive due to coin collection requirements, and cannot cope with high-frequency parking without having coins collected regularly. In addition, traditional meters do not have remote access with centralized

computers to allow for remote monitoring or certain forms of payment (e.g. credit card or smartcards).

Alternatives to meters for on-street parking include **pay-and-display machines**. Although not as traditional and simple as single-space meters, pay-and-display systems have an advantage of reduced system requirements (amalgamate many single-space meters into one piece of equipment), increased revenue (require each parker to start at zero minutes), more forms of payments allowed, and less frequent service. Pay-and-display machines are currently in use at many of the municipal off-street parking lots which eases the issues of familiarity with these systems. A variation of pay-and-display systems is pay-by-space, where parkers pay for parking at a pay station by entering a unique ID for their parking space. Display of a ticket may or may not be involved. The benefits are similar to pay-and-display systems.

Exhibit 5-2 summarizes the assessment of these on-street technologies. Replacement of existing single-space meters is not required in the short-term, and users and service personnel are familiar with the existing equipment. In addition, meters may represent a 'heritage' to the City as the first in Canada to install parking meters. The main advantages offered by pay-and-display and pay-by-space systems are the flexibility in payment options, as well as the ability for the pay stations to be connected through a wireless network.

The recommended strategy at this time is to maintain, but actively enhance existing on-street meters. Newer technologies to parking meters include pay-by-phone and the inclusion of parking space sensors:

- Pay-by-phone involves the ability to accept meter payment by cell phone in addition to paying by coin. Parkers can pay for parking by calling the local number posted on the meter and providing the meter number and time required. The system would require enforcement officers to carry handheld wireless devices to confirm payment and time remaining for customers who have paid by cell phone. The system can also remind users by text message when the time is about to expire, and can allow users to purchase additional time without having to walk back to the meter. Pay-by-phone meters have been implemented in several Canadian locations including Vancouver, Saskatoon and Winnipeg.

- Sensors can detect when a parking space is occupied or has been vacated. This type of technology allows the meter time to reset to zero minutes when the space is vacated, as well as enforcing the maximum allowable parking time by prohibiting users to "feed the meter" without moving the vehicle out of the space.

This strategy is the most cost-effective in terms of equipment costs by adopting an alternative technology in the future when existing equipment needs to be replaced, and will result in improved customer service and increased revenue.

Exhibit 5-2: Review of On-Street Parking Revenue Collection Systems

Criterion	Single-Space Meter	Pay and Display
Minimize Equipment Cost	● Existing equipment can be maintained with minimal upkeep	○ New equipment required and added costs for removal of existing poles and installation of new equipment.
Revenue Maximization	◑ Allows unused time to carry over from one parker to the next. Regular coin collection required and full meters result in lost revenue.	● Increased revenue by requiring each parker to start at zero minutes and allowing multiple payment options. Can indicate to maintenance staff when servicing is required, reducing lost revenue from malfunctioning equipment.
User Convenience	◑ Familiar to parker. Limited payment options (e.g., typically coins). Meter beside parking space.	◑ Greatest flexibility in payment options and technologies (e.g., typically coins and credit card). Pay station may be short walk from space.
Minimize Labour Requirements	○ Regular coin collection required. Collection and auditing of revenues is labour intensive.	● Reduced need for manual coin collection. More cost effective if managed effectively.
Minimize Enforcement Requirements	◑ Simple enforcement. Visual inspection of each vehicle required.	○ Windshield may be covered by snow or other material Visual inspection of each vehicle required
Remote Monitoring/ Usage Tracking	○ Typically infeasible	● Feasible – typically provide wireless online communications, which allows for data to be relayed to a central processing centre (e.g., usage and equipment performance) or to be sent to the meter (e.g., dynamic pricing changes)
Aesthetic	◑ Presence of many meters clutters streetscape. Can be dressed with decorative poles and bases.	● Creates less clutter than single-space meters. Target for graffiti and postering.

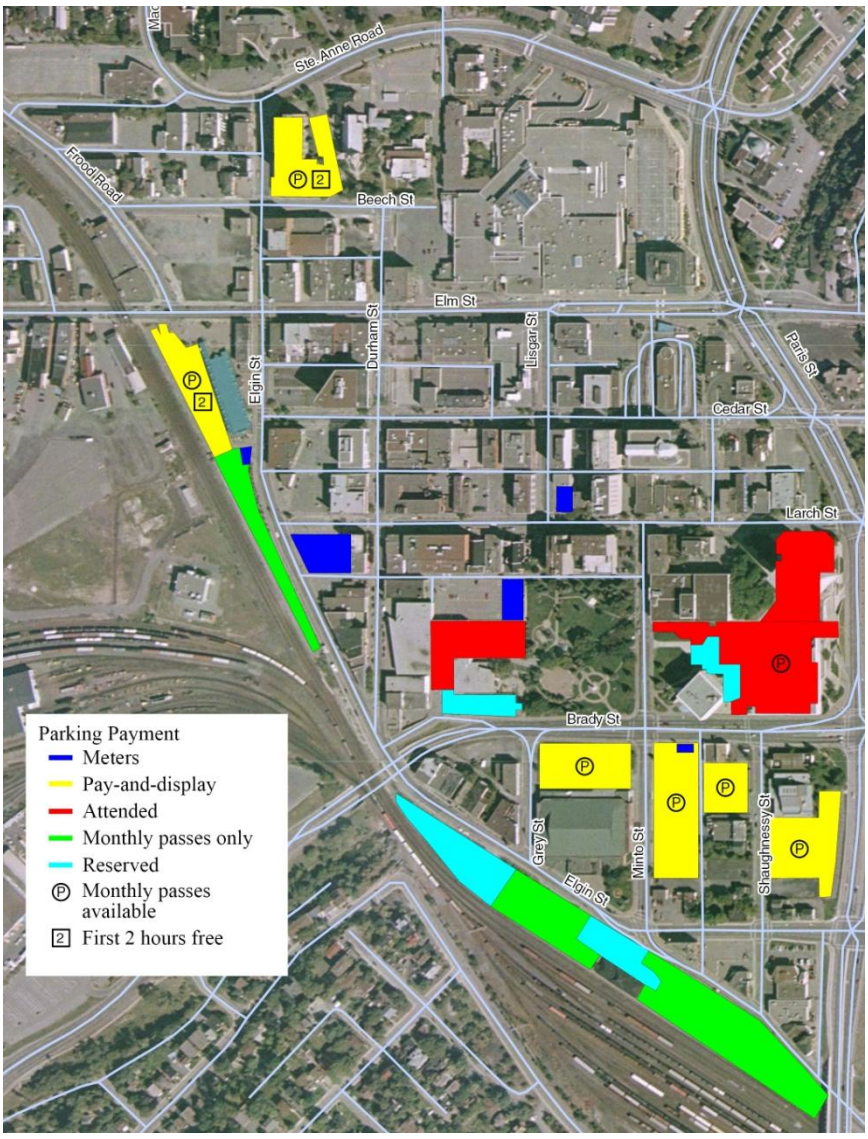
This study also found there is a lack of parking information beyond that posted at each individual meter and the City's parking website does not include information about maximum time limits. The on-street parking system could benefit from improvements to signage and posted information. Improving wayfinding, signage and information materials for on-street parking, especially if maximum limits or parking rates are different, is recommended and described in Section 8.1.1.

5.2 Off-street Parking

Payment systems on municipal and private lots across Downtown Sudbury vary by lot and range between pay-and-display machines, parking meters, tokens, monthly permits and attended lots. The parking type and payment option for all municipal lots are shown in Exhibit 5-3. Given the

potential savings in labour costs and increases in revenues from different alternatives, payment technologies for municipal off-street parking lots are reviewed in this section.

Exhibit 5-3: Municipal Parking Lot Payment Option



There are 6 off-street lots with single-space meters. These are primarily smaller lots, although the Larch St. metered lot has a capacity of 57 spaces. As previously noted, meters are familiar and easy to operate for every parker but collection requirements are more labour intensive and the meters in service do not provide additional payment options beyond coins.

The Elgin St. CP Rail and south part of Market Square parking lots are restricted to monthly passes only. There are no entry/exit gates or automated control equipment at these lots to restrict access and restricted parking is noted by signs. The CP Rail lots are leased by the City on a month to month basis, and if the lease was terminated a significant number of parking spaces could be removed from the municipal parking supply.

Market Square Permit-Only Parking

Elgin St. CP Rail Permit-Only Parking

Revenue collection system for the Tom Davies Square and Centre for Life lots, which operate with an attendant and key cards and an attendant and tokens respectively, are discussed in Sections 5.3 and 5.4.

Other municipal lots are operated with pay-and-display machines. These lots require parkers to pay and obtain a proof-of-payment ticket from the pay station and display it on the vehicle's dashboard. As previously discussed, pay-and-display systems consolidate multiple single-space meters into one pay station, increase revenue requiring each parker to start at zero minutes, typically allow for more forms of payment, and require less servicing than traditional meters.

Two other common types of systems that are alternatives to pay-and-display set ups are:

- Pay-in-lane (PIL); and
- Pay-on-foot (POF).

A pay-in-lane (PIL) system has the driver pay from inside the vehicle upon entering the garage or lot, and uses the ticket to exit the garage, or pay from the vehicle on the way out (usually by credit card on exit). The pay-on-foot (POF) method has the driver take a ticket on entry, and pay at a machine prior to returning to the vehicle to exit the lot. Exhibit 5-4 summarizes the assessment of these off-street technologies. All three parking payment systems can operate 24 hours a day and can be tied back to revenue tracking systems, reducing the labour requirements from manual coin collection and tracking of individual parking meters.

Exhibit 5-4: Assessment of Off-Street Parking Revenue Collection Options

Criterion	Pay-in-Lane (PIL)	Pay-on-Foot (POF)	Pay-and-Display (P&D)
Minimize Equipment Cost	○ New equipment required to control access and accept payment.	○ New equipment required to control access and accept payment.	● Existing equipment can be maintained.
Revenue Maximization	● Payment is made at end of use – fee calculated for time used.	● Payment is made at end of use – fee calculated for time used.	◑ Payment is made at beginning – without enforcement, users go over time paid.
User Convenience	● Do not have to walk back to vehicle. Pay in vehicle.	◑ Do not have to walk back to vehicle. Must remember to pay before exiting.	◑ Most familiar – system in place right now. Have to walk back to vehicle.
Minimize Enforcement Requirements	● Enforcement not required – gated control with payment upon entry or exit.	● Enforcement not required – gated control with payment upon exit.	○ Enforcement required by visual inspection of each vehicle. Windshield may be covered by snow or other material.
Remote Monitoring/ Usage Tracking	●	●	●

Overall, P&D machines work well for off-street surface lots, do not require additional capital costs for equipment since the system is already in place, and parkers are already familiar with this system.

However, POF systems could provide several advantages. For instance, POF would eliminate the confusion around the 2-hour free parking, because payment is calculated by the machine at the end of use. Requirements for access control can increase complexity at lots, such as where separate areas are desirable for permit and casual parking, and require additional capital expenditure for parking control equipment. Furthermore, for consistency and ease of understanding, it is recommended that the same system be employed at all of the City's surface parking lots.

The recommended strategy at this time is to:

- Move to pay-on-foot/pay-in-lane at the Tom Davies Square and Centre for Life lots, as discussed in subsequent sections;
- Move to pay-and-display systems at Larch St, Medina Lane and Lisgar St. metered lots;
- Maintain the existing meters at the Arena Annex for short-term visits; and
- Maintain the pay-and-display systems at all other lots.

5.3 Tom Davies Square Lot

The City of Greater Sudbury identified the Tom Davies Square underground parking lot for additional consideration and review of options to improve its operations and management. An evaluation of current operations, identified issues and assessment of alternatives was completed as part of this study and is attached in Appendix B of this report.

The Tom Davies Square parking lot is currently separated into three different zones: Zone A - Provincial building (104 spaces); Zone B – Tom Davies Square public parking (166 spaces); and Zone C – Regional Police (25 spaces). General public parking and permit holders are allowed to park in Zones A and B, while Zone C is reserved for the Greater Sudbury Police Service (GSPS). Parking rates are $0.50 per half hour for the first two hours, $0.65 per half hour after the first two hours, up to a daily maximum of $12.40, and payment is made to a parking attendant upon exit. Monthly passes are available at a cost of $100 per month.

The primary issues identified by the City and the GSPS are:

- Parking supply for the GSPS is limited and does not meet current needs;
- Beyond the underground lot spaces, parking options for visitors to the Police building, Provincial building and Tom Davies Square is limited;
- The current open nature of the majority of the parking garage allows operation of the facility in a flexible manner where parking spaces vacated by fleet vehicles are used for public paid parking between 10am and 3pm;
- Public access and parking below the police building poses a security risk; and,
- Parking control equipment needs to be updated.

The report includes the evaluation of 4 potential alternatives to the configuration of parking zones and accessibility by the various key stakeholders. The alternatives ranged from an “As-Is” scenario to a No Public Access option and were evaluated based on current demand, parking requirements of stakeholders and other parking supply in the area.

The report found any reconfiguration of the parking spaces of this lot would have a significant impact to staff and visitors of the Provincial and Tom Davies Square buildings, and the overall supply of public parking in this area. In particular, creation of more dedicated parking spaces for any of the Police, City or Provincial users would result in the parking garage being unable to function effectively as a visitor parking facility.

A Pay-in-Lane or Pay-on-Foot payment system should be considered for this lot to improve operations in the short term. For the long term, if additional parking supply is added in the vicinity of Tom Davies Square, the City should take into consideration the option of shifting fleet parking requirements for the GSPS, City and Provincial vehicles or further restricting public access to this lot as part of the planning and redevelopment of parking supply in the southeast area of downtown to support future growth.

5.4 Centre for Life Lot

The City of Greater Sudbury also identified the Centre for Life parking lot for additional consideration and potential benefits from changes to operations and management. Current operations, identified issues and assessment of alternatives were evaluated as part of this study and detailed findings are attached in Appendix C of this report.

The Centre for Life (CfL) parking lot is separated into two areas: 108 spaces available for general public paid parking and 47 spaces that are reserved for YMCA members. The paid parking area is operated by an attendant who is on duty from 7:00 a.m. to 6:00 p.m. and parking rates are $0.50 per half hour with a daily maximum of $10. The YMCA currently leases the 47 spaces from the City at a cost of $50 per space per month. In addition, the YMCA also leases 95 spaces from the City at the north side of the Elgin St. parking lot. Both YMCA members-only parking areas are controlled by a gate and token machine, for which members obtain tokens from the YMCA service desk.

In addition to the YMCA users, there is a parking agreement between the City and the Older Adult Centre, whereby members can park at the CfL lot for no charge, based on the presentation of a chit to the parking attendant. The agreement between the City and the Older Adult Centre includes a payment of $100 per month.

The primary issue identified at the stakeholder meeting is that parking supply appears to be inconvenient to current and potential YMCA users – the 47 spaces are in high demand, the Elgin St. Lot is far and undesirable, and access to paid parking in unavailable to early morning users. The YMCA has expressed willingness to operate and manage the CfL parking lot. In addition, parking control equipment needs to be updated.

Four potential alternatives were evaluated based on current operations and management (cost and revenue), parking issues identified by stakeholders and overall parking demand. The alternatives looked at both the CfL lot and the Elgin St. Lot.

The report found that leasing out operations and maintenance of the CfL lot to a private operator (YMCA or other) with provisions to provide public parking at regulated rates, in conjunction with reducing the number of spaces leased to YMCA at the Elgin St. Lot, would yield the highest benefits at this time to stakeholders and the general public.

5.5 Security Review

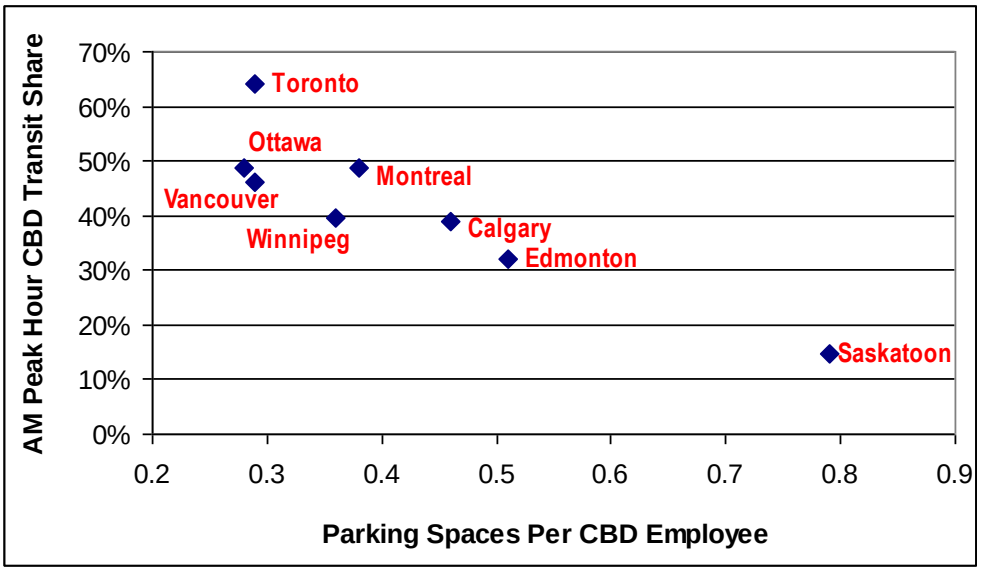
A report on the security and safety of the public and staff in the City's off-street parking lots was completed, and is attached as Appendix D to this report. The report includes a high-level review of lighting, safety and the need for security measures such as surveillance cameras and emergency duress alarms (panic stations). Parking lot panic stations typically include an emergency phone set on a tall distinctively-coloured pole, which also includes a strobe light that can be activated at the touch of a button in an emergency. To be effective, panic stations are directly connected to a security office, and are typically set up in tandem with a security camera that security staff can use to assess the situation once a panic alarm has been activated.

The review found that most lots should have security cameras to monitor areas in structured parking that are out of the general public's view, and in other locations to monitor pay and display machines. The review also found that for some lots where portions of lots are out of public view or not close to other pedestrian traffic, panic stations should be installed to enhance public safety. Improvements to lighting are also recommended at several locations. The security and safety review arrived at a capital cost estimate of approximately $195,000 for security cameras and panic stations.

6. POLICY REVIEW

There is a relationship between the amount of parking provided in a downtown area and the transit mode split, as documented in the study by Morral and Bolger in 1996. Exhibit 6-1 below summarizes the relationships found in that study. It can be inferred that controlling the amount of parking spaces in a downtown area has an impact on the extent to which people will use other transportation modes, including transit and active transportation.

Exhibit 6-1: Relationship between Parking Supply and Transit Use



Based on that relationship, and the City's goals and objectives for the revitalization and continued economic strength of the downtown, the City's policies surrounding the provision and management of parking will play a key role in supporting downtown redevelopment.

6.1 Role of Public and Private Parking

The City currently provides and operates approximately 1,570 off-street parking spaces in the Downtown study area. When approximately 1,920 private parking spaces are considered, the total parking supply of off-street parking spaces in Downtown Sudbury is approximately 3,490 spaces. The City operates approximately 45% of the total off-street parking supply.

The amount of parking provided by various cities across Canada varies widely, with Halifax at the lower end of the range operating only about 10% of a supply of 7,000 spaces. The City of Peterborough has a similar total downtown parking supply to Sudbury (approximately 3,400 spaces), but operates approximately 60% of the total supply. The City of Kingston also operates approximately 60% of the public off-street parking supply in the core part of the downtown.

There are several reasons why the City should retain its interest in publicly owned, collective parking facilities:

- Development of such facilities can be used in concert with parking supply regulations (e.g., lower parking minimums requirements, maximum parking requirements, etc.) to promote collective and priced parking over free, private parking. This will support more efficient use of the parking supply and support TDM objectives.

- Shared facilities can be targeted to support economic development and more compact urban form.

- By maintaining the municipally owned land in high-demand areas, the City will have control over how these parking lots are eventually redeveloped to ensure that they support urban visions for the area.

- Maintaining the municipally owned parking will give the City control over signage and wayfinding and the design of parking facilities.

- The City will maintain the ability to promote TDM objectives through parking initiatives.

- By providing paid on-street parking, the City is able to grant convenient access to retail that engages the street, thus encouraging a vibrant street environment. By pricing this parking supply, the city creates a higher turnover rate and therefore prioritizes shoppers by helping to ensure parking vacancies. Parking revenue can also available to devote investments in the community it comes from.

- Municipally owned parking lots have the potential to generate significant funds through parking fees and increasing land values. For many cities, including Calgary and Toronto, cases, roughly 1/3 of net parking authority revenues contributed to city budgets. In addition, there is revenue potential (among other benefits) from strategic real estate development as areas with public parking develop over time.

6.2 Parking Management and Operation

6.2.1 PARKING FOR SPECIAL GROUPS

From time to time, City staff receive request for special treatment by groups and organizations. In general, the management and operation of the City's parking resource should be designed around having one set of rules for all people to aid in public understanding, and ease of enforcement. In order to make special arrangements for certain groups, for policy reasons, those groups must prepare a report and request a presentation to the City of Greater Sudbury.

Recommendations for future treatment of special groups are contained in Section 8.1.7.

6.2.2 2-HOUR FREE PARKING IN OFF-STREET LOTS

The City has implemented a system that provides 2 hours free parking in the Market Square and Beech lots. It is noted that the Rainbow Mall currently provides three hours of free parking at its parking facility on Ste. Anne Road. The City's system was intended to support businesses by providing free short term parking spaces for customers; however, the results have been mixed. Based on discussions with City staff, there appears to be some confusion about the 2-hr free parking operates, despite the instructions posted on the pay and display machines at each lot.

Users wishing to take advantage of the 2 hours of free parking must still take a ticket from the machine as they would if paying for parking. With this type of hybrid system, a challenge is that out of necessity, signage at the lots where pay and display parking is provided needs to convey the logic of the 2 hour free parking, which can lead to a misunderstanding of the parking system. Another challenge is preventing abuse of the free parking by commuters trying to find all day free parking. In order to discourage commuters from making use of the free parking, the system is designed to only allow 2 hours of free parking to each vehicle once per day, which requires enforcement personnel to record vehicle license plates at these locations.

Instructions for 2 hour free parking

Additional complexity and potential for confusion occurs in the case where someone returns to the lot to park for a second time. In this case, the machine cannot take into account the City's policy that the two hours of free parking only applies on one visit to the lot per day. While it is stated on the machines that on the second visit to the lot only the paid time applies, the customer must calculate how much time they actually have, since the printed ticket will include two hours of additional time that does not apply on the second visit to the lot.

The existing system has significant potential for confusion and should be altered or removed. Other potential options for free or reduced rate parking for downtown visitors include parking token programs where downtown businesses would buy tokens at a discounted rate, then give tokens to customers as they see fit. A parking token program could be effective at encouraging return visits to the downtown. Several municipalities in Ontario offer parking token programs, including Oshawa and Oakville.

An additional option would be to install a pay-on-foot or pay-in-lane system that would calculate the fees upon exit. Requiring the customer to exit the lot would be a disincentive to people who may try to abuse the two hour free parking by obtaining multiple tickets throughout the day. This type of system would remove the need for enforcement in the lot, and in particular remove the existing requirement to record license plates. However, the installation of pay-on-foot technology requires additional capital expenditure for parking fee equipment and access control equipment, and installing such a system is not practicable at all of the City's existing pay and display lots. For consistency and ease of understanding, the City's surface parking lots should ideally all use the same parking payment technology.

6.2.3 PARKING TIME LIMITS

The majority of meters allow a maximum parking time of 2 hours, with the exception of those on Cedar St., Durham St., and Lisgar St. which have a maximum allowable time of 1 hour. Based on comments from stakeholders, the different maximum time limits for on-street parking are a cause of concern to business owners since some downtown customers have received tickets due to being confused about the maximum time limits. Stakeholders also expressed that one-hour parking is typically not enough for visitors/customers.

If parking time limits were set at a uniform duration for all on-street meters, this would help establish a more consistent and clear on-street parking system and reduce confusion.

To provide the desired higher turnover at the more central locations (where the time limit is currently 1 hour), the parking time limit could be set at two hours to be in line with all other downtown metered parking, but parking rates could be tied to utilization so that high demand areas are priced at a higher rate.

6.2.4 PARKING ENFORCEMENT

Handheld ticket writers can be used in order to track ticket issuance, identify repeat offenders, identify shuffling activity and track revenue. Handheld technology can also allow for varying fine amounts to help discourage repeat offenders, assuming that the handheld units have a live connection to a central database. By increasing the fine for individuals that accumulate unpaid parking fines, the rate of collection should also be increased. Additionally, improper parking activity is reduced.

Handheld ticket writers can also allow for the issuance of a courtesy ticket to first time offenders, if the handheld units are able to communicate with a central database to determine if the vehicle has a previous parking infraction. The courtesy ticket informs someone that they have parked improperly, directs them to alternate parking locations and thanks them for visiting Sudbury. Not only is it informative, but it can provide an excellent marketing opportunity for the City and BIA.

6.2.5 ACCESSIBLE PARKING

From consultation with the City's Accessibility Committee, it is understood that the availability of accessible parking is a major issue for a number of Sudbury residents, and that the availability of accessible parking can directly affect the ability of some residents to fully participate in society.

Based on data from Statistics Canada, and the demographics of Greater Sudbury, it is estimated that there are over 21,000 adults as well as 1,000 teenagers and young adults and 1,000 children under the age of 15, who have disabilities.

Greater Sudbury has seen a significant shift in the percentage of the population who are seniors. In the 30 year period between 1976 and 2006 the population of persons over the age of 65 has increased 184% from 8,275 to 23,475 people. According to Statistics Canada, 33% of persons between the ages of 65 and 74 have a disability and 56.3% of persons over the age of 75 have a disability. Of the adults in Greater Sudbury with disabilities, approximately half are over the age of 65. All of the above translates into a significant number of Sudbury residents who need provision of accessible parking.

The built environment section requirements of the Accessibility for Ontarians with Disabilities Act (AODA) will contain regulatory requirements for the provision of accessible parking spaces in Ontario, but is not yet finalized. Once finalized, the AODA requirements will apply to all parking facilities, including City and private facilities.

The City's draft new Zoning By-law contains a requirement for the provision of accessible parking spaces based on the total number of required parking spaces for a proposed development. Until the AODA requirements are finalized, the Zoning By-law standards should provide a suitable guideline for accessible parking in City parking lots.

6.3 Parking Fees and Payment

6.3.1 PARKING PRICING

Setting the price of parking involves much more than just revenue generation because it can address a number of transportation objectives. It can be implemented as a Transportation Demand Management (TDM) strategy to reduce vehicle traffic in an area by encouraging use of alternative modes of travel. The price of parking also forms part of a parking management strategy to reduce parking problems in a particular location such as a downtown. Parking pricing is also typically used by municipalities and private developers to recover some of the capital and maintenance costs of their parking facility costs.

Given a choice, motorists typically prefer free parking, as is provided by large suburban retail centres. However, parking is never really free, and consumers ultimately bear parking costs for example through higher taxes and retail prices. Also, any underpricing of parking results in inefficient use of parking facilities and excessive parking demand that is counter to a municipality's TDM objectives. For example, the most convenient parking spaces in a downtown, such as on-street spaces on main retail streets such as Cedar Street in downtown Sudbury, are often close to capacity, while less convenient spaces on the downtown fringe and in parking lots behind buildings are often unoccupied. This reduces motorist convenience and increases traffic problems that can be reduced with more efficient parking pricing. Industry studies find that depending on the time of day and location, up to 75% of traffic in a downtown area involves vehicles cruising to find on-street parking.

In most cities today, the emphasis is no longer on minimizing the cost of parking, Instead, a number of basic factors are commonly being used to set responsive, effective parking prices and meet related transportation objectives, including:

- Manage and price the most convenient parking spaces to favour priority users. Charge higher rates and use shorter pricing periods at more convenient parking spaces (such as on-street spaces, and parking near building entrances) to increase turnover and favour higher-priority uses.

- Improve pricing methods to make parking pricing more cost effective, convenient and fair. For example, use electronic pricing systems that accommodate various payment methods and rates, and allow motorists to pay for just the amount of time they will be parked. For short-term parking charge by the minute rather than by the hour, and for long-term parking charge by the hour rather than by the day or month.

- Avoid discounts for long-term parking leases (i.e., cheap monthly rates).

- Set parking prices to equal or exceed transit fares. For example, set daily rates at least equal to two single transit fares, and monthly rates at least equal to a monthly transit pass.

The cost of on and off-street parking in Downtown Sudbury is compared with rates in other Canadian cities in the following table.

Exhibit 6-2: Comparison of Parking Rates

CITY (Population)	Sudbury (157,857)	Windsor (216,473)	Kitchener (204,668)	Guelph (115,635)	Kingston (117,207)
Public on-street	$1.00/hr	$1.25/hr	$1.25-$1.95/hr	$1.50/hr 30 min courtesy time Min. $0.50 cost	$1.00-$1.50/hr 10 min courtesy time 1-3 hr max
On-street restrictions	Pay 8AM-6PM Free after 6 PM, free Saturdays and Sundays No on-street parking 12 AM-7AM Nov 1 to March 31	Pay 9AM-6PM Free after 6 PM and Sundays No Parking Downtown 4 AM-6AM	Pay 8 AM-6PM Mon-Sat Free after 6PM and Sundays No parking downtown 2:30AM-6AM Dec 1–March 31	Pay 9AM-6PM Monday-Sat Free Sunday No on-street parking 2 AM-6AM	Pay 8AM-5:30 PM Free after 5:30 PM and Sundays No on-street parking 1AM-7AM Dec 1 to March 31
Public off-street	$30-65 Monthly ($100/month covered) $1/hr 8AM-6PM Mon-Fri ($5 maximum) All municipal lots free Sat and Sun	$22.60-67.80 Monthly $1/hr 9AM-6PM Mon-Sat $2 Flat rate after 6PM all days	Automated: $112-$125 Monthly $10.00/day max Non-Automated: $82-$115 Monthly $1.95/hr	$30-$105 Monthly All municipal lots free Sun	$42-$87 Monthly $1/hr
Private off-street	Varies between $40-65 (up to $125/month covered)	n.a.	n.a	n.a	Varies between $73-$125 Hourly $2-$2.50

The above exhibit indicates that Sudbury has a lower hourly on-street parking rate than the other municipalities, and that the monthly parking rates are generally in the lower part of the range of rates from the other cities.

6.3.2 PARKING FINES

The cost of parking fines in Downtown Sudbury is compared with rates in other Canadian cities in the following table.

Exhibit 6-3: Comparison of Parking Fines

Infraction	Sudbury	Windsor	Kitchener	Guelph	Kingston
Expired meter	$20 ($10)*	$30	$20	$20	$25
Accessible parking	$300	$350	$300	$300	$300
Parking in loading zone or bus stop	$21 ($16)*	$40	$45	$40	$35

*set fine if paid within 7 days

Based on the above comparison, it appears that the set fines for parking infractions in Sudbury are low compared to other jurisdictions. In particular, it is noted that the set fine (with early payment) of $20 for an expired meter is 2.5 times the cost of paying for 8 hours of metered parking at $1.00 an hour.

If fines are too low, some motorists may not follow regulations and simply treat the fine as a parking fee. However, fines must not be so high to be considered excessive or unfair. Fines are typically 2-5 times the downtown daily parking rate. Generally, the greater the difference between the parking rate and price of a fine, the less the chance of the parker deciding to take a risk and let a meter expire, or risk other violations.

6.3.3 PARKING PRICING VERSUS TRANSIT FARES

One factor in people's consideration of which transportation modes to use to access downtown Sudbury is the relative cost of using each mode. The price of monthly and daily parking (for surface lots) is compared to transit fares in Exhibit 6-4 below.

Exhibit 6-4: Comparison of Parking Fees and Adult Transit Fares

Infraction	Parking	Transit
Daily	$5.00 max at P&D lots	$5.00 cash return $3.90 on 10-ride ticket
Monthly permit/pass	$30-60	$72

Based on the monthly costs (excluding gas, insurance and other costs of owning an automobile), parking in Downtown Sudbury can be significantly cheaper than buying a monthly transit pass, which may play a part in people's decision to drive rather than take transit.

6.3.4 PARKING PRICING CONCLUSIONS

What is of concern in terms of comprehensive transportation planning is that in Downtown Sudbury, the City's rate for monthly parking in most of the off-street lots ($30-60) is not only lower than the cost in comparable cities, but is also lower than a monthly transit pass ($72 for adults). This means

that the City is not providing any financial incentive to support transit use by charging the low monthly parking rate.

The private off-street parking lot operators in Downtown Sudbury are charging rates that are comparable with the other cities. The main conclusions reached from this comparison of parking pricing is that consideration should be given to reviewing the cost of public on and off-street parking in the downtown to bring them into line with comparable cities, and have these costs better reflect the value and utilization of public parking in Downtown Sudbury.

7. SUMMARY OF ISSUES AND OPPORTUNITIES

As with any downtown, parking issues in Downtown Sudbury vary by specific location, time of day and the particular user of the parking system. The remainder of this chapter provides a summary of the key parking issues and opportunities that will need to be addressed over the short, medium and longer term. Additional issues including 2 hour free parking, parking pricing and payment technology, time limits and the provision of parking for specific groups are also addressed by the recommended strategy, but are not listed in the discussion of key issues below.

7.1 Utilization and Distribution of Off-Street Public Parking

While some members of the general public may perceive that there is a shortage of parking in Downtown Sudbury, there is a considerable amount of off-street surface parking that goes underutilized on a regular basis. Parking surveys found that, while the municipal lots close to Brady Street were generally occupied to a high degree, approximately 25% of the overall municipal supply of public off-street parking spaces was vacant at peak times. Part of the problem is that parking utilization varies by location, with spaces towards the edges of the Downtown being less desirable, especially for short-stay parking.

Irrespective of the location of underutilized parking, issues that result include environmental impacts (e.g. surface water run-off), urban design and walkability issues, and security issues. .

There are some opportunities to better allocate public parking to ensure more optimal utilization. One of the challenges is that the cost of permit parking at the edge of the Downtown is already low (approximately $30/month), and there is a premium for lots closer to the Downtown, so there is already a financial incentive for people to use more peripheral parking. Another challenge is that pedestrian connections between some of the outlying lots and the centre of the Downtown are perceived by some people as inconvenient, and walking alone at night between some lots and the centre of the core may be seen as a safety concern for some people.

There appears to be an opportunity to sell additional parking permits at the Elgin and Market Square lots and to increase pricing incentives by increasing permit costs at high-demand locations.

Exhibit 7-1 summarizes the issues and opportunities related to off-street parking.

Exhibit 7-1: Issues and Opportunities Related to Off-Street Parking Utilization

Issue	Opportunity
People are unwilling to park further from their destination and walk.	Promote more active lifestyle. Improve lighting and security to make people more comfortable walking to peripheral lots.
Increased surface runoff and water quality issues from paved parking areas.	Opportunity to consolidate surface parking and gain best and highest use for lands.
Large parking areas detract from pedestrian environment.	Use excess parking for peripheral long stay parking.
Costs may outweigh benefits for some leased parking lots.	Potential for City to reduce leasing and maintenance costs by reducing parking areas.
Demand for permit parking is high at the more central lots.	Implement pricing by location to shift demands.

7.2 Isolated Shortages of On-Street Parking

The parking surveys carried out showed that on-street parking was almost fully occupied in the core part of the Downtown. While most of this effect can be attributed to the location of the on-street spaces, the effect may also be partially due to pricing.

Most experts suggest that the best practice for parking pricing is to establish price differentiation between areas of high demand and limited supply and areas of low demand but greater supply. Specifically, parking pricing should help encourage an individual to choose to park away from high demand areas for less money (or free) than would be required to park in the highest demand areas. Currently, the off-street parking lots are priced at the same rate as on-street parking (with the exception of the maximum $5.00 daily rate and the two hour free parking at the Beech and Market Square lots), so there are limited financial incentives for people wishing to park for two hours to use off-street parking.

As noted earlier, the City has installed meters with a maximum time of 1 hour on the core business streets of Cedar Street, Durham Street, and Lisgar Street in an effort to promote increased parking turnover on those streets. Given the reported confusion from stakeholders and desire for a longer parking time limit, there is an opportunity to revisit the length of time that can be purchased at the parking meters in the downtown core.

There is also some very limited potential for adding to the City's on-street parking supply in the downtown, as discussed in Section 8.2.1.

Some of the key issues related to on-street parking are summarized below.

Exhibit 7-2: Issues and Opportunities Related to Isolated Shortages of On-Street Parking

Issue	Opportunity
Perceived parking shortages.	Parking shortages can be a sign of a successful business area.
Limited differences between fees for on and off-street parking may contribute to high on-street parking occupancy.	There may be an opportunity to eliminate "non-essential" on-street parkers by increasing on-street parking price.
Different time limits for meters in downtown core	Reduce confusion by implementing one common time limit for meters.
Limited ability to add new on-street parking.	If parking is priced, generated revenues can go back into the system to fund other projects.
On-street parking can conflict with cycling and transit objectives.	Some situations may be addressed through signage.

7.3 Capacity for Intensification

Based on population and employment growth estimates, downtown parking demands are expected to grow to a point where the existing surplus capacity is used up. As mentioned previously, some of the existing surface parking lots will come under pressure to be developed in the medium term and public parking on these lots will need to be accommodated elsewhere, or in more efficient forms. Other constraints on where and how development can occur include the location of bedrock, which makes it difficult to construct below grade parking in a cost-efficient manner.

All of these issues point to the need to plan for structured parking. In addition to being more efficient in terms of land consumption, structured parking has many advantages from an urban development perspective over surface parking, provided that it is designed to minimize impacts on the pedestrian environment.

In addition to consolidating parking to make way for planned development, there are many other opportunities to make better use of the existing parking supply to allow for future growth as discussed in the following chapters.

Exhibit 7-3: Issues and Opportunities Related to Capacity for Intensification

Issue	Opportunity
Lack of land for surface parking to support redevelopment and intensification of surface parking.	Opportunity to plan central parking facility shared by all users.
Increased surface parking areas detrimental to pedestrian environment and connected retail frontages.	Central parking facility can simplify wayfinding.
Redevelopment of existing parking lots may decrease public parking supply.	Redeveloped lots could provide for some parking needs.

8. RECOMMENDED STRATEGY

Based on the issues and opportunities identified above, the recommended Strategic Parking Plan is discussed in the following sections. The elements of the recommended plan are grouped under the following categories:

- Parking Management and Operations;
- Parking Supply;
- Supporting Strategies; and
- Funding and Financial Strategy.

8.1 Parking Management and Operations

8.1.1 IMPROVE WAYFINDING AND SIGNAGE

A comprehensive and uniform wayfinding and signage program for the City's parking system can help guide drivers of parking options and reduce confusion about payment and restrictions.

Municipal lots are signed with a green "P" symbol, indicating drivers to the lot, and many have signage to describe parking rates and policies (e.g. daily maximum or free 2-hour parking). On-street parking information is limited to that posted on each individual meter.

Overall, wayfinding and signage could be improved in the Downtown area to:

- Be more attractive and standardized – create an 'identity' that draws attention to municipal parking options;
- Clearly identify lots that are available to the general public and those that are restricted to monthly pass holders or patron-only – signs should be clear and readable prior to entering lots, to avoid confusion and frustration for drivers;
- Provide clear information regarding payment and policies – this is especially important for maximum parking times for on-street spaces and for off-street lots offering free-parking and special events rates.
- Provide directions to nearby destinations and other peripheral lots; and,
- Be designed to improve the urban environment and downtown redevelopment.

Tom Davies Square Underground Lot

Beech Street Lot

Sudbury Arena Annex Lot

The City's parking website includes information about paying parking tickets online, on-street parking, municipal parking lots, and parking for the disabled. The municipal parking lots webpage describes the different types of lots and payments, parking rates for each lot, and restrictions. A map of the parking lots is found via a link to the Downtown Parking Flyer, dated 2009. The on-street parking page only includes regulations.

Another map of municipal parking lot was found on the Downtown Sudbury BIA website, downtownsudbury.com. This map shows all of the municipal lots and the type of lot, and the Rainbow Mall parking garage, but is formatted differently than the one noted on the City's website.

Downtown Parking Flyer Map (from municipal website)

Parking Map from Downtown Sudbury (BIA) website

User information could be improved to help ensure transparency, by outlining who is responsible for different aspects of the parking system. It can also help make it easier for people who are unfamiliar with available parking options to determine which one's best meets their needs – this includes tourists, retail customers, commuters and special-event attendants. For example, some users may find the current Downtown parking flyer overwhelming and "visually busy"

The following are recommended to improve parking user information:

- Update the municipal parking website with the following information:
    - A map of publicly accessible parking in the downtown area, including both on-street and off-street parking options, and display it directly on the webpage (versus link to PDF flyer);
    - On-street parking availability, pricing information and related regulations;
    - Additional information on monthly parking availability;
    - A link to parking by-laws and related policies; and,
    - Direct link to contact information.
- Develop a more user-friendly map that easily displays the lot types and parking prices.
    - Map should be made available to others to promote consistency and a 'branding' of the City's parking system.
- Web-links to sites to alternative transportation options (e.g. transit services, carpool, peripheral parking options, etc.)

8.1.2 PARKING PAYMENT TECHNOLOGY

There is some potential to increase the efficiency of revenue collection through the use of different parking payment technology. Providing more payment options and allowing customers to top up their payment remotely (e.g., by cell phone) has been shown to lead to greater customer (and business) satisfaction and increased revenues. The combination of additional payment options, the fact that no time is "left in the meter" when a car drives away, and reduced outages for maintenance result in approximately 30-40% more revenue from a pay and display system than traditional mechanical parking meters.

Based on the existing average parking meter revenue of approximately $720 per meter in 2008, the additional revenue from changing to pay and display would be approximately $215 per space. Assuming that one pay and display machine would cover approximately 7 on-street parking spaces, the cost to change to pay and display technology (at $10,000 per machine) would be approximately $1,400 per space, and the payback period would be approximately 7 years. Depending on the manufacturer and supplier, there may be options for financing the installation of pay and display units, but based on the Municipality paying the full capital cost, there is no significant benefit in the medium term of changing to on-street pay and display technology.

For off-street parking, one pay and display machine could replace up to 50-60 single meters, and the change could be considered at the existing Larch Street metered parking lot (57 spaces). At the Larch Street lot, the cost of implementing pay and display would be approximately $175 per space, and the payback period from the additional revenue would only be one year. The existing parking meters that would be removed could be used at on-street locations where paid parking is to be added.

Based on current parking fees, the **recommended** option is to maintain existing on-street meters, but replace the existing off-street meters in the Larch Street Lot with pay and display technology.

8.1.3 2-HOUR FREE PARKING

It is recommended that the 2 hour free parking program be changed to address the existing problems due to confusion, and remove the need for parking enforcement personnel to record license plates at the existing two hour free lots.

A parking stamp program used to be provided in the downtown, whereby a downtown business could give a stamp to customers to obtain free parking, but the system relied on parking attendants. The change by the City to pay and display technology at most of the municipal lots means that the parking stamp program has become redundant.

It is recommended that a parking token program be implemented by the City as a replacement to the previous parking stamp program, and to replace the two hour free parking program in place at the Beech and Market Square lots.

8.1.4 PARKING TIME LIMITS

It is recommended that parking time limits be uniform for all on-street meters and be set at 2 hours. This would help establish a more consistent and clear on-street parking system and reduce disputes of parking enforcement tickets.

To encourage a higher turnover at the more central locations (where the time limit is currently 1 hour), parking rates could be tied to utilization so that high demand areas are priced at a higher rate, say $1.50 an hour for the highest demand spaces.

8.1.5 ACCESSIBLE PARKING

It is recommended that the City provide parking at its existing parking lots on accordance with the City's proposed Zoning By-law. A further review of accessible parking will be required once the requirements set out by the AODA are finalized.

8.1.6 OVERNIGHT PARKING AND PARKING FACILITY MAINTENANCE

One of the main seasonal challenges to the maintenance of the downtown's parking supply is the storage and removal of snow. When large snow accumulation has not yet been removed, it can fill parking spaces on one or both sides of downtown streets, or in downtown lots until removed by the City. Similarly, sidewalk clearance by abutting property owners can sometimes spill over into abutting on-street parking spaces, making them unusable until the City removes the snow.

By-law 2010-1 prohibits parking on any City streets or lots overnight from November 1 to March 31, which allows for snow storage and clearing during the winter months. A challenge for the encouragement of residential development in established downtown cores is the ability to accommodate overnight residential parking demands, particularly in winter where snow clearing is a priority. Ideally, provision for residential overnight parking should take place in off-street parking facilities where overnight winter parking can be accommodated without adversely affecting snow clearing operations.

It is recommended that overnight parking permits be made available in the area closest to the core streets with potential for adaptive re-use for residential development; Elgin Street, Elm Street, Cedar Street and Durham Street. This would suggest the need for overnight parking at the Beech Street lot or potentially at the Market Square lot, which would require a change in the traffic and parking by-law to ensure overnight parking could legally take place.

8.1.7 SPECIAL PARKING REQUESTS BY GROUPS

From time to time, City staff receive request for special treatment by groups and organizations. In general, the management and operation of the City's parking resource should be designed around having one set of rules for all people to aid in public understanding, and ease of enforcement. In order to make special arrangements for certain groups, for policy reasons, those groups must prepare a report and request a presentation to the City of Greater Sudbury.

Requests should be reviewed against a number of criteria to determine the impacts:

- **Setup Costs:** Including any costs for special signs, staff time to set up the program and any additional setup costs for enforcement.
- **Staff Time:** Review time requirements for administration of the program and parking enforcement to identify the burden on City staff, or the need to hire additional staff to accommodate any increased work load.
- **Scope:** What is the potential number of people that the program would ultimately provide for?
- **Eligibility:** How will eligibility of the parking program be controlled, what permit or proof of eligibility will be required, and how open is the program to potential abuse?
- **Impact on Parking Revenues:** Review estimated impact of any project loss of hourly and monthly parking revenue at city-owned parking facilities, including off-street and on-street parking.
- **Possible Mitigation:** in the event of unexpected impacts or abuse, are there alternatives available to modify the program to tighten eligibility or otherwise reduce the impact of the program on the City?

If the review against the above criteria indicates that the impacts of granting a special request are minimal, it is recommended that the City proceed with implementation on a trial basis for twelve months to allow the impacts of the program to be measured. If the findings of the twelve month trial are in line with expectations, then the program could be continued, modified if practicable mitigation measures exist, or discontinued.

An example of such a request is the War Pensioners group who petitioned Council to allow for a parking program which allows free parking for a duration of up to four hours if the driver of the vehicle displays a valid permit. Eligibility is the responsibility of the Sudbury Branch, which provides a Members list to the City on a semi-annual basis.

8.2 Parking Supply

8.2.1 MAXIMIZE ON-STREET SUPPLY

The high on-street parking utilization recorded in the parking survey conducted as part of this study indicates that on-street parking is preferred by a majority of short-term parkers in Downtown Sudbury. One question addressed by this study is whether the supply of on-street parking in the downtown can be increased to serve more short-term parking demand. Increased capacity of on-street parking means that parking supply increases without using more land or major construction. The options available to do this, and resulting study recommendations are:

a. If there is adequate street width, a change could be made from parallel to angled on-street parking to increase the number of stalls. A wider right-of-way width is required for angle

parking because while a standard parallel parking aisle extends approximately 2.5 m from the curb out into the street, a 45 or 60 degree angled parking aisle extends out to approximately 6.0 m. As a result, significantly more right-of-way width is required to accommodate angled parking. The existing street and right-of-way widths in Downtown Sudbury are insufficient to accommodate angled parking and still maintain existing two-way traffic flow, so this option is **not recommended**.

b. Eliminate no-parking zones on some downtown streets in off-peak hours and allow on-street parking in these areas of the street. This would restrict traffic capacity in the off-peak hours since the curb lane would be occupied by parking at those times. A potential location for this type of treatment is on Elm Street through the Downtown, where parking is currently prohibited on both sides of the street. However, Elm Street currently functions as a major link for traffic, forming part of Highway 55. In order to ensure that capacity is available for peak traffic conditions, it is likely that a tow-away policy would be required. Ultimately, if an alternative route through the Downtown for Highway 55 is created via College Street and Ste. Anne Road, Elm Street would become a candidate for on-street parking. Until an alternate route for Highway 55 is constructed, provision of off-peak parking on the curb lanes of Elm Street is **not recommended** owing to the traffic congestion that would likely occur with only one lane in each direction.

8.2.2 CONSOLIDATE AND PLAN FOR ADDITIONAL OFF-STREET PARKING SUPPLY

In the short term, with loss of parking due to redevelopment, increasing parking demands at the Rainbow Centre Mall, and the expected loss of approximately 100 parking spaces at the Elgin Street lot, the City may need to reintroduce the Energy Court parking lot into the downtown parking supply, and should maintain the property so it can be used for parking purposes.

In the mid to long-term, since parking demand growth estimates indicate that existing and future demands are likely to be highest south of Brady Street, consideration should be given to planning for structured parking in the vicinity of the Sudbury Arena and Tom Davies Square.

A parking structure in the area south of Brady Street could promote redevelopment of area, subject to strict urban design guidelines, and could be constructed in a phased manner to meet future demand.

8.2.2.1 Joint Development of Structured Parking

Joint-development of public parking within private, mixed-use projects was considered as a strategy for providing for Downtown Sudbury's off-street parking supplies while reducing cost and land-use impact. This would address future needs for more downtown parking supply, especially associated with planned and potential downtown development projects described in Section 4.

Adding any large amount of parking supply to the downtown may be seen by some to be contrary to the City's long-term Transportation Demand Management strategies. That being noted, this is one strategy from which replacement or new public parking facilities could likely to be developed in Downtown Sudbury, and so is **recommended**.

8.2.2.2 City Development of Structured Parking

If additional off-street parking is not provided in the downtown through the development process to meet current and growing parking demand, and the City continues to apply parking exemptions and reduced parking requirements in the downtown, then the City would have only two basic options to address future increases in downtown parking demand:

- Construct a City owned parking garage; or

- Expect that travel patterns to and from the downtown would shift over time to more use of public transit and other alternatives to the private automobile in response to the lack of sufficient parking supply.

TDM measures such as increased transit use offer tools for reducing the amount of parking supply needed to support the downtown. Once these tools have been exhausted, the City must decide whether downtown offers sufficient parking opportunities to support desired levels and forms of accessibility. No TDM tool will bring down the cost of adding new parking. In fact, by making the downtown a more vibrant, accessible destination, successful implementation of many of these tools may increase land and opportunity costs for parking construction. Adding to the off-street supply, therefore, is likely to remain the most challenging parking management tool to implement.

At the same time, accommodating and encouraging continued business success of the downtown will mean that parking demand will continue to grow, and that eventually some of that demand will have to be met with new parking supply. To maintain an equilibrium of parking supply in the downtown, whereby the amount of any existing parking supply lost to development in the downtown is replaced, will require that capacity be maintained for those that are willing to pay for it. This will be especially crucial to accommodating demand from new developments and attracting developers to the public parking system.

If private development does not maintain this equilibrium and provide the needed growth in the parking supply, then it is **recommended** that the City of Sudbury arrange to invest in the off-street parking supply through construction of a City owned parking structure, strategically located in one of the high demand parking areas south of Brady Street.

For conceptual planning purposes only, a basic parking structure with 250 spaces would cost in the area of $6.0 million to construct, based on an assumed basic garage construction cost of $24,000 per space. New parking structure construction in the downtown should also include ground level leasable retail space to increase the revenue generating potential of the structure and achieve urban design objectives. Based on an increased construction cost of approximately $35,000 per space for a parking garage with retail or commercial space at grade, a parking structure with 250 spaces would cost in the order of $8.75 million.

8.3 Supporting Strategies

8.3.1 TRANSIT

One of the key supporting strategies is the promotion of transit as an alternative to driving and parking downtown. Recent initiatives by the City to implement bike racks on buses and to implement the U-Pass have added to transit's ability to serve additional users. The City could investigate the provision of discounted transit passes if purchased in bulk by large employers for purchase by their employees.

There is also potential for provision of a downtown shuttle that could support a "park once" type of Downtown where shoppers and workers could park at one location and have low cost or free transport around the downtown core. Such a service could be operated at a reduced fare that could be supported by a variety of possible sources such as the City, the Downtown BIA, or possibly through revenues from increased parking fees.

8.3.2 PARK AND RIDE LOTS

Express transit service from key communities in Sudbury could attract potential transit ridership among commuters willing to pay for comfortable, speedy service into the downtown. Ridership on such service could decrease long-term parking downtown and monthly permit demand within the parking system, freeing up space for shoppers and other users

This option could help reduce weekday off-street parking demand in the downtown by attracting downtown employees to a cost-saving option of parking closer to home and riding a bus the rest of the way to and from work. Such facilities must be far enough from the downtown to make getting out of the car a practical alternative rather than continuing the drive to downtown and pay for parking. However, the resulting transit trip time should still be short with few stops, perhaps as a type of express service from the Park and Ride locations into the downtown transit routes. .

The option of providing park and ride lots is **recommended** as part of the Downtown Parking Management Plan and the City's TDM initiatives. It is understood that Sudbury Transit is already considering express routes with connections to major activity centres that could provide Park and Ride facilities.

One practical requirement of this recommendation is that park and ride facilities at major activity centres must be able to accommodate the increased parking demands. Some of the activity centres for possible Park and Ride facilities may have high parking utilization, and limited space to accommodate additional parking. In these cases, the City may have to determine how to provide increased parking supply at some centres. This would be part of attracting more transit ridership from outside the downtown.

8.3.3 PARKING PRICING

To date, the City and other downtown land owners have been able to keep the costs of parking relatively affordable with monthly parking costs ranging from about $30 - $60, with the exception of parking in garages. This is primarily due to the fact that most parking is located in surface lots, many of which were created by demolishing vacant or underutilized buildings. Continuation of surface parking expansion is no longer possible, or desirable, in Downtown Sudbury. Downtown redevelopment as envisaged by the City and DVDC will likely result in most surface parking being redeveloped. It is reasonable to expect that most new parking will need to be provided in structured forms, either above grade or below grade.

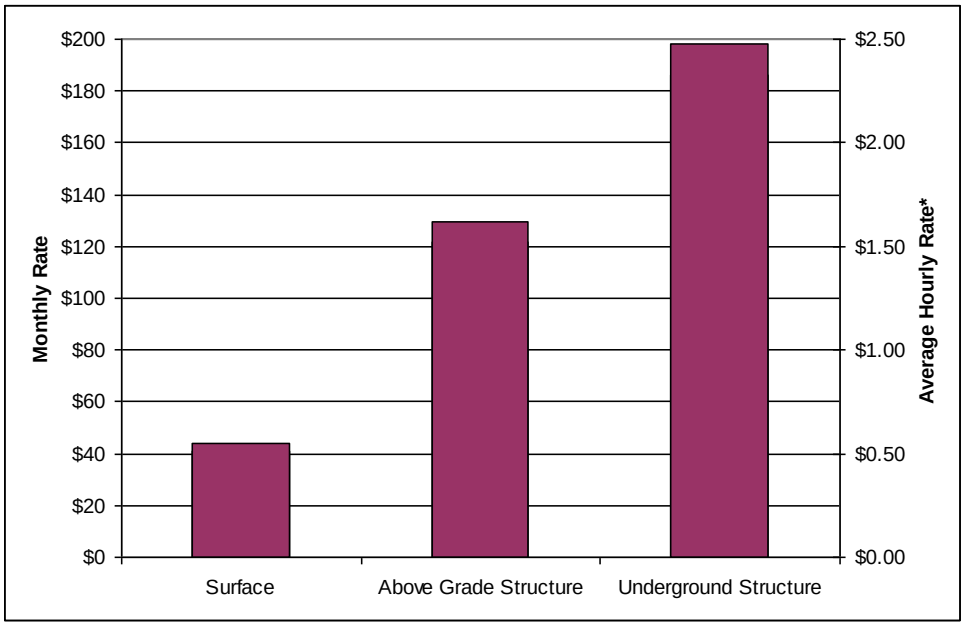
The differences in the cost of providing structured parking vs. surface parking are significant. As shown on Exhibit 8-1, an owner would need to charge at least $40 per month or $0.50/hr to recover the construction costs and on-going maintenance costs for a surface parking space. This increases to a minimum of $120/month or $1.50/hr for above grade structures and up to $200/month or $2.50/hr for below grade parking[3].

As a result of the inevitably higher costs of constructing structured parking, there will be a need for both the City and private developers to increase the cost of parking, particularly monthly parking which generates a lower revenue per space than higher turnover transient parking.

The question for the City of Greater Sudbury, as a parking operator, is whether or not it is willing to subsidize the cost of monthly parking for employees working in the downtown in order to maintain and grow the office development market. As a general policy, if a decision to subsidize parking is made, then the benefits to others should be explicitly be made known.

[3] Costs are based on internal estimates by IBI Group and may vary by location and geotechnical conditions

Exhibit 8-1: Cost of Parking Supply ($/space)



The recommended approach for parking pricing in the downtown is to implement gradual increases in the cost of monthly parking in conjunction with the implementation of other incentives and options discussed in previous sections. These increases should be predictable and made known well in advance of their implementation. The City should also continue its existing practice of pricing the more desirable downtown lots higher, and encouraging commuters and monthly parkers to use the less desirable lots on the periphery of the downtown.

8.3.4 ACTIVE TRANSPORTATION

In order to continue to foster the use of active transportation modes as alternatives to driving downtown, the following initiatives are recommended as part of the parking strategy:

- Amend zoning by-law to include provisions for shower and change facilities for new downtown developments;
- Install secure bike parking facilities in City-owned parking lots and in key areas, starting with a pilot project to demonstrate the potential for fully enclosed bike lockers at a central location such as at City Hall or the Larch Lot;
- Continue to install bike racks throughout the downtown;
- Improve pedestrian connections between the City's recreation trail network and the downtown.

Example of a bike locker in Ottawa

8.3.5 PARKING DESIGN STANDARDS

At the broad scale, parking has a significant impact on urban design. In particular, the need to supply parking can impact the shape of buildings resulting in conditions that are neither transit-supportive nor pedestrian friendly. Similarly, the appearance and scale of large surface parking lots can detract from the pedestrian environment. When functional requirements are the only objectives considered in parking facility design, the result is often undesirable characterized by unattractive streetscapes, lack of safety and comfort for non-motorists, and lack of greenery.

Urban design guidelines provide an opportunity to help new parking facilities be developed with consideration to architectural integration, the needs of pedestrians and cyclists, integration with transit, and support for downtown streetscaping initiatives

There will be a need for one or more new parking structures in the downtown in the future and it is essential that any new structure that is constructed, either by the City or by a private developer, does not detract from the urban character of the downtown. Throughout the 1970's and 1980's many cities constructed large parking structures in their downtowns with little attention to urban design.

Exhibit 8-2 illustrates the range of urban design treatments that could be considered for future parking structures as alternatives to the traditional "concrete block" design illustrated in Photo 1 on Exhibit 8-2.

Exhibit 8-2: Examples of Parking Structure Designs

1. Parking garage with no urban design considerations (poor design)

2. Parking garage with pedestrian amenities (good design)

3. Parking garage with integrated residential development (good design)

4. Parking garage with integrated retail (good design)

The new City Zoning By-law could be updated to include provisions regarding the design of parking lots and structures, including regulations for screening, regulations that restrict parking between buildings and the street line, and a requirement for ground-floor retail or office uses along street lines in parking structures. Alternatively, these principles could be articulated through urban design guidelines for parking facilities.

Although identifying a first-rate parking facility design depends greatly on the subtleties of its local environment, a good design should prioritize the following core principles:

1. Respect the existing or planned context;
2. Enhance the safety and attractiveness of the public realm;
3. Provide safe, comfortable and convenient routes for pedestrians, and parking for cyclists;
4. Create convenient and safe links to public transit;
5. Provide for easy parking access and good internal circulation and manoeuvring;

6. Provide shade and high quality landscaping;

7. Mitigate the urban heat island effect; and

8. Manage stormwater quality and quantity on-site.

Based on the above general principles, it is recommended that key requirements to be achieved in urban design guidelines for downtown parking facilities should include:

- Locate surface lots behind buildings and inside city blocks to avoid large gaps in building and public realm continuity and orient building fronts towards the street;
- Ensure architectural quality of parking structures and provide retail or community space on the ground floor fronting the street to ensure continuity along a main street;
- Provide clearly marked pedestrian aisles in surface parking lots;
- Design parking facilities to provide as much barrier free access as possible in compliance with the Accessibility for Ontarians with Disabilities Act (AODA);
- Use low-impact development practices (e.g., bio-retention cells, rain gardens, permeable pavement) to reduce stormwater runoff from parking lots and remove pollutants and sediments on site.

8.4 Funding and Financial Strategy

Most, if not all of the recommendations outlined above will require additional funding sources. Specifically, if a new parking garage is pursued, it will require significantly greater funding than the current parking system revenues can provide. Accordingly, several options for funding parking system improvements are explored below. These can generally be grouped under four categories i) user pricing, ii) cash in lieu, iii) parking tax reform, and iv) capital funds, as discussed below.

8.4.1 USER FEES

The preferred strategy for the parking system is to maintain a full cost recovery approach whereby the operation and expansion of parking is at least revenue neutral. Adjusting user fees is the most direct way of ensuring the financial sustainability of the parking system.

To illustrate the potential financial impacts of constructing new parking, a simple financial model has been developed for a 250 space above-grade parking structure. The following assumptions were made in developing the financial model based on industry values and a review of costs and revenues for existing facilities:

- Capital cost per space - $24,000
- Operating cost per space - $400/year
- Discount rate – 6%
- Amortization period – 25 years
- Annual Revenue per space – $1,100

Annual revenues are based on actual values for the existing parking garage and therefore assume the same levels of usage, rate structure and mix of monthly vs. transient parking. Operating costs are assumed to be lower than the existing garage due to reduced maintenance requirements for a new facility and potential savings from pay-on-foot technologies.

Based on the above, the financial impacts of a new 250 space parking facility could be as follows:

- Total Capital Cost $6,000,000
- Annual Capital Cost $469,360
- Annual Operating Cost $100,000
- **Total Annual Cost $569,360**
- **Annual Revenue $275,000**
- **Net annual subsidy $294,360**

The above analysis does not take into account potential revenues from development or sale of surface parking lots, or the potential revenue from incorporating retail space on the street frontages of a proposed parking structure.

8.4.2 CASH IN LIEU

One option to fund parking system improvements is to use cash-in-lieu values that provide for the cost of providing new parking within a structure. For example, some municipalities charge as much as $30,000 per space. The challenge with using cash-in-lieu as the sole funding source for new parking is that the uptake of cash-in-lieu may be limited, and it takes very long periods of time to generate sufficient revenues to provide even a modest amount of new parking. One of the restrictions is that cash-in-lieu funds can only be used to fund new parking, as opposed to general parking system improvements.

The City already has a cash-in-lieu policy in the Official Plan, and in the new Draft Zoning-Bylaw, but its ability to generate funds is limited due in part to the current exemption of parking requirements for most uses in the Downtown. Like the existing Zoning By-law for the Downtown, the proposed draft Zoning By-law also does not require parking for non-residential development in the Downtown. Since cash-in-lieu applies to required parking spaces, funds cannot be generated for Downtown parking unless the Zoning By-law requires parking spaces in the Downtown.

Irrespective of the challenges with cash-in-lieu, it is recommended that minimum and maximum parking standards for the Downtown be implemented in the Zoning By-law in order to allow for collection of cash-in-lieu of parking. Exceptions could be included for developments under a certain floor area, or for redevelopment of existing buildings. Provision of minimum and maximum parking standards and exceptions as discussed above would require changes to the proposed Zoning By-law.

8.4.3 PARKING TAXES

The full costs of constructing and maintaining parking are often not passed on to its users. Similarly, the true costs of parking on the environment (e.g., increased stormwater runoff, urban heat island effect, and increased auto use) and need for supporting transportation facilities are seldom quantified. One approach to better 'internalize' these costs is through parking tax reforms. While parking tax reforms are more complex and controversial, funds raised from such reforms could potentially be used to support parking management activities, as well as the development of more strategic and environmentally responsible parking facilities. Potential approaches include:

- **Commercial parking taxes** – taxes on paid parking transactions. Such an approach has been adopted in many cities, including San Francisco, California and Pittsburgh, Pennsylvania.

- **Parking space levies** – generally applied as an annual tax on all non-residential parking spaces. The Greater Vancouver Transportation Authority (TransLink), for example, used

to charge an annual non-residential parking tax of $0.78 per square metre, or approximately $30 per stall, which raises approximately $25 million per year in support of transportation projects across the region. A variation on this approach is to assess the levy on unpriced parking only.

- **Stormwater management fees** – which reflect the large amount of stormwater runoff generated by parking facilities, particularly surface lots, and associated environmental impacts to water resources and costs for treatment of this runoff. Such a fee could be based on parking area or alternatively on the total impermeable land cover on a site. This would favour parking structures over surface parking lots, and more compact downtown sites over sprawling suburban sites. In addition, fees could be reduced if operators adopt measures to capture and treat stormwater runoff onsite (e.g., increased landscaping, bio-swale, permeable pavement, etc.).

None of these approaches are really applicable for Downtown Sudbury since a large portion of parking is already under the control of the City. These approaches would also need to be implemented at a City-wide level so as not to deter development in the Downtown.

8.4.4 CAPITAL (RESERVE) FUND

Many municipalities direct a portion of parking revenues to a dedicated capital reserve fund. A key advantage of a capital reserve fund is that it would allow the City to invest in parking infrastructure (e.g. pay and display machines) without going into deficit. This fund could in turn be used to help finance the capital costs of one or more new parking structures, as recommended in this plan.

A potential variation on this approach would be to enact a directed tax reserve for the Downtown. This approach, similar to Tax Increment Financing (TIF), would use the estimated net increases in property taxes that would result from new development stimulated by a capital investment (e.g. new parking structure) and borrow against this expected future revenue. The funds from the tax uplift could be used to finance a variety of infrastructure projects required to support increased density in the area, including parking structures. Such an approach would require considerably more analysis in conjunction with other City departments.

At a minimum, it is **recommended** that a basic capital fund be established to enable the City to reserve a portion of parking revenues for future parking system improvements.

APPENDIX A

PARKING SURVEYS: METHODOLOGY AND RESULTS

APPENDIX B

TOM DAVIES SQUARE PARKING FACILITY REVIEW

APPENDIX C

CENTRE FOR LIFE PARKING FACILITY REVIEW

APPENDIX D

REVIEW OF LIGHTING, SAFETY, AND SECURITY AT CITY LOTS