

## PROJECT BACKGROUND

In 2015, the City of Greater Sudbury conducted a Facility Rationalization Study, the first to take a detailed review of the depots since amalgamation. The municipal amalgamation process resulted in the retention and continued use of many service locations that were part of the various cities and townships in which they were located. Some of these locations were redundant and many were close to the end of their useful service life. The study recommended closing several public works depots and renovating, expanding, or modifying numerous other existing facilities. This recommendation was based on the cost of maintaining the status quo being higher than rebuilding many of the depots over a ten year planning horizon.

This Depot Master Plan carries forward on the recommendations of the Facility Rationalization Study completed in 2015, including related building condition reviews that identified significant deficiencies in existing infrastructure, programming analysis, and opportunities to improve operations.

On January 26, 2016 Council approved the following recommendations related with the various public works facilities located throughout the City (CC2016-16 to 22).

1. Declare the following depots surplus:
  - Levack Municipal Building (55 Levack Drive, Levack)
  - Dowling Public Works Garage (61 Main Street, Dowling)
  - Rayside Balfour Old MTO (3098 Highway 144, Chelmsford)
  - Valley East Public Works Building (4614 Desmarais Rd, Hanmer)
  - Skead PWD Depot (1921 Skead Rd, Garson)
  - Moonlight Beach Forestry Facility
  - Nickel Centre Garage (3610 Falconbridge Rd, Garson)
2. Negotiate alternate depot arrangements in Levack.
3. Consolidate the Lively Parks Depot (251-261 First Ave, Lively) into the Walden Public Works Garage (25 Black Lake Rd, Lively), and review the lively Parks Depot for alternate use and/or decommissioning.
4. Initiate a detailed site study of the Walden Public Works Garage with the goal to include the consolidation of the salt dome at the Naughton Depot to the Walden Public Works Depot.
5. St. Clair, Frobisher, Suez, and Black Lake Depots will remain and operations will be centralized at these locations.
6. Whitefish Depot will remain as a materials depot only.
7. A new administration facility is required and should be constructed at either St. Clair or Frobisher Depot.
8. Perform a detailed site study of the St. Clair Public Works Office / Depot, Frobisher Depot, and Suez Depot for best fit of operational use, with the report to include details as outlined below:

- Property Requirements
- Best use of existing buildings (reuse or demolition)
- Supplemental building requirements
- Financial Strategies / Funding Models”

Since the January 26, 2016 resolution the above recommendations have been completed and surplus depot facilities have been sold, with the exception of the following:

1. Valley East Public Works Building – Offer of purchase and sale has been accepted and closure is pending.
2. Moonlight Beach Forestry Facility – property will not be sold as it is part of Moonlight Beach Park and the building has been repurposed for cold storage, and hydro disconnected.
3. Nickel Centre Garage – Leased to Sudbury Trail Plan.
4. Alternate Levack Depot – A new site to suit the depot requirements in this area has been determined and is under negotiation.

This report presents the key findings of the Depot Master Plan that satisfy recommendations 5, 6, 7 and 8.

## **KEY FINDINGS**

A detailed needs assessment and programming analysis was undertaken to identify opportunities to develop efficient and long-term site planning and building infrastructure solutions to support Linear Infrastructure Services, Water / Wastewater Services, Infrastructure Capital Planning Services and Engineering Services at the following existing Public Works depots; Frobisher, St. Clair, Suez, Black Lake, and Whitefish.

Key concerns identified and addressed throughout this project are as follows:

1. The depots have reached or are reaching the end of their life cycle, and repairs are becoming costly without extending the life cycle of the asset.
2. The Provincial Source Water Protection Plan requirements and best practices require the storage and loading of salt and sand to be reconsidered.
3. Aging facilities have been repurposed but do not support the functional requirements adequately.
4. Existing spaces do not support best practices.
5. Facilities are inadequately sized and at times not present.
6. Employees are located across the City in various depots creating a barrier to collaboration and impacting the efficiency and production of the administration staff.
7. Vehicular circulation routes are hazardous and unsecured.
8. The lack of covered and heated vehicle storage is reducing the life expectancy of the equipment and materials stored in the vehicle, as well as creating inefficiencies with preparing the vehicle at the

start and end of each shift.

The Depot Master Plan is divided into three phases. Phase 1 and 2 will address the key concerns listed above, while phase 3 addresses vehicle storage.

### Salt/sand Domes (Phase 1)

Lake water quality is of great importance to Sudbury and the management of road salt is important to minimizing impact to lake water quality. Currently salt at the depot sites is stored in covered domes, and pickled sand stockpiles are not covered. Trucks are loaded outside which contributes to infiltration of salt into the underlying soils and runoff to nearby water bodies.

As outlined in the 2017, CGS commissioned Risk Management Plan for the Frobisher Depot, and the 2018 Salt Optimization Plan; the preferred solution to manage road salt storage within the Ramsey Lake intake protection zone is to redevelop the existing site using best management practices (i.e. build a dome for the pickled sand and salt storage, and provide indoor loading)

This Master Plan proposes to build new types of salt /sand domes that will capture salt runoff and divert it from returning to surrounding water bodies and create a more efficient operational environment for handling materials and loading plows.

The following is a summary table of existing and proposed salt and sand dome areas.

	Existing Areas				Proposed Areas			
Site	Outdoor Sand Storage (sf)	Indoor Salt storage (sf)	Outdoor loading (sf)	Indoor loading (sf)	Indoor Sand Storage (sf)	Indoor Salt storage (sf)	Outdoor loading (sf)	Indoor loading (sf)
Frobisher	20,000	10,900	18,000	NA	7,400	3,700		11,100
St. Clair	13,000	9,500	11,000	NA	9,100	4,600		13,700
Suez	18,000	2,000	15,000	NA	6,700	3,400		10,100
Blake Lake Road	13,000	-	12,000		6,700	3,400		10,100
Whitefish	10,000	-	7,000	NA	900	400		1,300
Rayside Old MTO	10,000	800	7,000					
Rayside N/W	19,000	2,400	19,000		19,000	2,400	19,000	-
Valley East		1,200						
Skead	7,000	1,000	6,000					
Capreol Garage		1,600						
Naughton	6,000	2,100	5,000	NA				
Sub-Total	116,000	31,500	100,000	0	49,800	17,900	19,000	46,300
<b>Total</b>	<b>247,500</b>				<b>133,000</b>			

Furthermore; the City has changed its material handling strategy to reduce the size of the proposed sand / salt domes. Instead of ordering and receiving the full winter order of sand and salt in the fall, the City will spread the delivery over several months to reduce the total quantity on-hand at any one time. This significantly reduces the amount of indoor storage required, reducing capital costs. This is highlighted by the reduction in storage space required for sand from 116,000 sq. ft. to 49,800 sq. ft. and the reduction of storage space required for salt from 31,500 sq. ft. to 17,900 sq. ft. This has almost cut the overall storage space required in half to a total of 133,000 sq. ft.

In addition to the short comings of the dome at Frobisher, there are ongoing structural issues with the domes at St Clair and Suez as they have reached the end of their life cycle. In fact, the Naughton dome had to be demolished as it was beyond repair and the City has made alternate short term arrangements with MTO for the supply of salt until a new dome can be constructed at the Black Lake Depot.

Also recently outlined in a report titled "[Use of Road Deicer](#)" to Operations Committee; CGS commissioned a Risk Management Plan (RMP) for the Frobisher Facility and a Salt Optimization Plan (SOP). The RMP for the Frobisher Facility suggested that there were two measures available to the CGS to manage the risks associated with road salt storage within the Ramsey Lake intake protection zone. They include;

- "Maintain Site operations and implement Best Management Practices (BMPs) with monitoring to evaluate the effectiveness of BMPs;
- Maintain Site operations and implement Best Management Practices (BMPs) with monitoring to evaluate the effectiveness of BMPs. Relocate the winter maintenance material storage to a new site, located outside of any area where road salt storage and handling is deemed a significant threat, preferably within an area of low salt vulnerability as identified in the CGS Salt Optimization Plan."

The [RMP](#) for the Frobisher Facility concluded "that considering the additional costs associated with relocating the depot, in association with the benefits provided by the low-lying down gradient swamp which provides salt attenuation and a buffer from salt travel, redeveloping the existing Site using BMPs (i.e., build a dome for the pickled sand, install a monitoring network) would be the most economical and practical option."

### Office/Administration (Phase 2)

At present administration and professional staff are located at Frobisher, St. Clair, and Tom Davies Square. The proposed Office/Administration Facility creates a central, collaborative and consolidated office environment for staff of Engineering, Linear Infrastructure, Water/Wastewater and Infrastructure Capital Planning Services. Business can place a focus on collaboration through culture and governance, workplace design, and technology. A well-designed workplace can help facilitate collaboration through lowering the barrier to employee interactions and providing readily available collaboration spaces. These spaces include small offices, outdoor areas, meeting rooms, break-out space, and an open concept design. The recent reorganization of Growth & Infrastructure has placed a focus on collaboration through culture and governance. The City is also progressing with technology innovation through the adoption of new software, such as CityWorks, and updating how field data is collected as a few examples.

Recent studies have indicated that the benefits of collaboration for general businesses for time saving and productivity of employees can be worth around \$1,600 per year per employee, the quality of work output improvements can be worth around \$2,500 per year per employee. For example, the travel time for one

employee to attend a meeting at a separate site can be 30 to 45 minutes per meeting, and there can be several meetings scheduled for different locations throughout the day. Centralizing at one location will minimize the need for travel. This is approximately a 10% - 15% productivity improvement, excluding additional benefits that included innovation, employee engagement and reduced turnover.

This will also free up space at Tom Davies Square (TDS) for other purposes. The potential reuse of this space will be reviewed under a separate report.

In addition, the existing buildings (excluding TDS) cannot be retrofit economically in order to comply with AODA requirements and meet the accessibility needs of city staff and the public.

The intent of the 2016 rationalization study was to accommodate the centralized office/administration building at the St. Clair site. However, upon further review it was determined that given the space constraints on the St. Clair site and the impact that intensification of the site would have on the surrounding residential uses, the Frobisher site is the better choice for the centralized facility.

Improved access from the Frobisher site to Falconbridge will be facilitated by extending Frobisher Street through the adjacent commercial development to outlet at the existing Auger traffic signals. Arrangements for this connection have been made with the adjacent landowners.

The following is a summary table of existing and proposed Engineering and Administration Office areas, and number of employees.

Site	Existing Areas			Proposed Areas		
	Admin Office (sf)	# of employees	floor area/ employee (sf)	Admin Office (sf)	# of employees	floor area/ employee (sf)
Frobisher	11,000	60	183	26,370	148	178
St. Clair	5,950	40	149			
TDS Engineering	9,400	48	196	700		
Total	26,350	148	178	27,070	148	183

### Depot Facilities (Phase 2)

The health and safety of depot staff is paramount to running an effective operations and maintenance program. Current facilities are inadequately sized and at times not present. Locker rooms for field staff are too small and cannot accommodate all required users.

The improved centralized depots for each service zone address these concerns by providing adequate dry facilities, and creating muster rooms for daily staff deployment/training on site.

The following is a summary table of existing and proposed depot office / shops / amenity areas, and number of employees.

	Existing					Proposed				
Site	Shop/ Office (sf)	Shop Amenities (sf)	Storage (sf)	# of employees	floor area/ employee (sf)	Shop/ Office (sf)	Shop Amenities (sf)	Storage (sf)	# of employees	floor area/ employee (sf)
Frobisher	23,100	3,000	1,500	149	175	17,550	13,500	9,500	162	192
St. Clair	13,490	1,640		46	329	1,900	4,790		43	156
Suez	1,950	720	2,980	21	127	2,110	3,580		34	167
Blake Lake Road	7,020	2,500		31	307	9,520	2,500		31	388
Whitefish	300	100		-						
Levack	800	290		-						
Dowling			1,800	-						
Rayside Old MTO	1,000	350		-						
Rayside N/W	2,960	1,300	3,560	30	142	2,960	1,300	3,550	30	142
Valley East	3,000	1,000	2,960	10	400					
Skead	500	-	960	-						
Moonlight Beach			650	-				650		
Nickel Centre	1,000	330	4,100	-						
Capreol Garage	1,200	400	3,560							
Total	56,320	11,630	22,070	287	196	34,040	25,670	13,700	300	199

## PROPOSED WORK

A summary of the proposed works at the five depots is noted below with further details included in a separate summary report from 3<sup>rd</sup> Line Studios entitled, City of Greater Sudbury Depot Master Plan Summary dated, June 20, 2018.

### Frobisher

- Consolidate the Linear Infrastructure Operations, Infrastructure Capital Planning, Engineering Services, and Water/Wastewater Staff currently spread throughout the City from St. Clair Depot, Frobisher Depot, and Tom Davies Square, to a new centralized facility at Frobisher adjacent to each other. (Phase 2)
- Replace and improve the salt/sand storage facilities. (Phase 1)
- Renovate and expand the works building to consolidate Linear Infrastructure Operations Staff and warehousing, currently spread throughout the City at St. Clair Depot, Rayside Belfour Depot, and Frobisher Depot. (Phase 2)

- Renovate the former Transit Building to make more efficient use of the Linear Infrastructure vehicle storage requirements along with existing Leisure Services and Conservation Sudbury storage requirements. (Phase 2)
- Provide a new Waste Management vehicle storage facility separate from vehicle storage for Linear Infrastructure vehicles. (Phase 2)
- Extend Frobisher Street to the signalized intersection at Auger. (Phase 1)
- Improve vehicular circulation patterns, exterior material storage, employee/works vehicle parking, fuelling stations, water refilling station, weigh scales, storm water management systems and landscape buffers. (Phase 1 and 2)

#### St. Clair

- Replace and reduce the size of the aging works facility to accommodate roads depot staff only. (Phase 2)
- Replace and improve the salt/sand storage facilities. (Phase 1)
- Improve vehicular circulation patterns, exterior material storage, employee/works vehicle parking, fuelling stations, water refilling station, storm water management systems and landscape buffers. (Phase 1 and 2)

#### Suez

- Replace the aging works and vehicle storage facility. (Phase 2)
- Replace and improve the salt/sand storage facilities. (Phase 1)
- Improve vehicular circulation patterns, exterior material storage, employee/works vehicle parking, fuelling stations, water refilling station, storm water management systems and landscape buffers. (Phase 1 and 2)

#### Black Lake

- Replace and improve the salt/sand storage facilities. (Phase 1)
- Improve vehicular circulation patterns, exterior material storage, storm water management systems and landscape buffers. (Phase 1)

#### Whitefish

- Replace and improve the Sand storage facilities. (Phase 1)
- Improve vehicular circulation patterns, vehicle storage facilities, exterior material storage, storm water management systems and landscape buffers. (Phase 1)

## **CONCLUSION**

Detailed analysis of the St. Clair site has confirmed that the site cannot be utilized as a centralized location for the main depot, and administration area.

The Frobisher site has been determined to be a viable location for a Centralized facility to meet the requirements of Linear Infrastructure Services, Water / Wastewater Services, Infrastructure Capital Planning Services and Engineering Services. The St. Clair, Suez, Walden, and Whitefish depots will be

utilized for road maintenance crews and salt /sand storage only.

The upgrades to the depot facilities will provide best practices in order to meet the requirements of our Source Water Protection Plan, improve worker health and safety, and make deployment and management of the operations more efficient.

In addition, relocating engineering services from Tom Davies Square to a centralized administration facility at Frobisher Depot will free up approximately 8,700 square feet of space in TDS for other purposes. A detailed design incorporating best practices for office space design suggests that a new administration facility at Frobisher Depot can be constructed using the same area as the existing administration facilities proposed to be demolished, while improving amenity areas and relocating 5 existing administration areas into 1 administration building.

Renovations of the old transit office within the Frobisher site can be completed within existing budget allocations, and will provide necessary temporary relief of existing Health and Safety Issues, and will provide convenient temporary office space for future City renovation projects.

Preliminary financial analysis has shown that the cost of the proposed new structures and long term maintenance costs will be less expensive than refurbishing existing buildings over similar design life. Final financial analysis will be completed and presented to Council after the detailed design is complete.

## **NEXT STEPS**

To address the most immediate Health and Safety concerns, related to inadequate locker room sizes, office space and storage areas at the Frobisher site, the City is currently undertaking detailed design work to renovate the existing office space at the transit building, and the existing storage areas in the works and Transit buildings.

The next steps are preparing detailed designs for each phase. Next, capital budget proposals will be prepared for consideration as part of the capital prioritization process in 2020 and future capital budgets. Then construction would commence following budget approval. There is currently \$5.0M allocated from 2018 and previous Capital Budgets to complete the Phase 1 and 2 detailed design for this project. The detailed design fee does not include contract administration or site review.

The detailed design will include updating the cost estimate and implementation schedule. Each of the facilities will be prioritized and presented separately to Council.

## References

**City of Greater Sudbury Depot Master Plan Summary 2018 06 20**, 3 RD Line Studio, Polestar CM INC, 2018: <https://agendasonline.greatersudbury.ca/admin/index.cfm?feedFile=24383.pdf>

**Use of Road Deicers**, City of Greater Sudbury, May 2018:  
<http://agendasonline.greatersudbury.ca/index.cfm?pg=feed&action=file&agenda=report&itemid=2&id=1255>

**Risk Management Plan Assessment – Frobisher Depot City of Greater Sudbury**, GHD, January 2018:  
<http://agendasonline.greatersudbury.ca/index.cfm?pg=feed&action=file&attachment=23312.pdf>

**The Collaborative Economy**, Deloitte Access Economics, 2014:  
<https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-economics-collaborative-economy-google-170614.pdf>

## APPENDIX A

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### Site Plan Drawings showing project phasing

- Frobisher - B5 Option
- St. Clair – A4 Option
- Suez – E1 Option
- Black Lake – C1 Option
- Whitefish – D1 Option