

Report on the Assessment of Requirements for and Feasibility of a St. John's Community Market

Prepared for:
Project Steering Committee

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Conseillers en gestion

Table of Contents

EXECUTIVE SUMMARY	I
1.0 INTRODUCTION	VII
2.0 CONTEXT AND PURPOSE OF THE STUDY	1
3.0 STUDY APPROACH	2
4.0 COMMUNITY MARKET CONCEPT	3
4.1 THE CONCEPT	3
4.2 ST. JOHN'S FARMERS' MARKET PROFILE	5
4.3 SUMMARY ANALYSIS	14
4.4 PROFILE OF OTHER MARKETS	15
5.0 POTENTIAL FOR A COMMUNITY MARKET	18
5.1 EXPANDED PRODUCTS AND ACTIVITIES	18
5.2 INCREASE IN CONSUMER BASE	22
5.3 LOCATION AND FREQUENCY OF OPENING OF A COMMUNITY MARKET	22
5.4 PROMISING COMMUNITY MARKET PRACTICES	24
6.0 PROPOSED COMMUNITY MARKET MODEL	25
6.1 FUNCTIONS AND SCHEDULE	25
6.2 VENDORS AND CONSUMERS	27
6.3 FUNCTIONS AND SPACE REQUIREMENTS	28
6.4 MANAGEMENT STRUCTURE	29
6.5 OPERATING BUDGET ESTIMATES	31
6.6 COMMUNICATIONS AND MARKETING	32
6.7 POTENTIAL CHALLENGES	34
6.8 CONCLUSIONS	35
7.0 FUNCTIONAL ASSESSMENT, CONCEPT PLAN AND INFRASTRUCTURE ASSESSMENT	35
7.1 FUNCTIONAL ASSESSMENT AND CONCEPT PLAN	35
7.2 INFRASTRUCTURE ASSESSMENT	36
7.3 CONSTRUCTION COST ESTIMATE	38
APPENDIX A: PROMISING PRACTICES FROM FARMERS'/COMMUNITY MARKETS	39
APPENDIX B: DETAILED DESIGN REQUIREMENTS AND CONSIDERATIONS	47
APPENDIX C: COMMUNITY MARKET ANNUAL BUDGET ESTIMATES	54
APPENDIX D: MARKET SITE CONCEPT PLAN	57
APPENDIX E: INFRASTRUCTURE ASSESSMENT REPORTS	61
APPENDIX F: ORGANIZATIONS CONSULTED	104

Executive Summary

This report sets out the findings from an assessment of the requirements for and feasibility of a community market in St. John's.

Study Purpose

The City of St. John's, as part of *RoadMap 2021 – A Strategic Economic Plan for St. John's*, is assessing the potential to develop an enhanced community market. The City is undertaking this assessment in collaboration with the St. John's Farmers' Market (SJFM), the Atlantic Canada Opportunities Agency and the Department of Innovation, Business and Rural Development. The community market would potentially utilize a portion the former Metrobus depot on Freshwater Road. The community market would build on the success of the SJFM by offering improved space and amenities for vendors and consumers and for community engagement activities.

The study included consultations with steering committee members, research on community markets, a survey of consumers, a survey of vendors at the SJFM, and interviews with community organizations with complementary mandates. It also included an architectural and engineering assessment of the space in the former Metrobus depot.

Community Market Concept

The research shows that community markets offer significant benefits for small businesses (farm, food, crafts) and local economies. Community building is also a significant function of these markets, as well as a significant contributor to their growth and success. Cities in Canada are increasingly citing the important role of farmers' or community markets in their economic and community development plans – for example, in creating dynamic communities and business development opportunities.

A community market for the City of St. John's is envisioned as being a gathering place for: local vendors to sell their produce and products direct to consumers and to grow their businesses; citizens and visitors to the community to have access to local produce and products that reflect the cultural diversity of the community; and for community engagement and interaction – both informal and through organized entertainment and educational activities.

The study concluded that the SJFM is a solid foundation for an expanded community market. The organization, led by diverse volunteers, has demonstrated its capacity to organize weekly market days, build its membership, and partner with community organizations. Vendors fill the current market space on a weekly basis and value their market business. Most consumers are regular patrons from across the city and region who appreciate what the market offers the

community. Both vendor and consumer feedback indicate significant opportunities to grow the market and attract more consumers. The study also found strong consumer and vendor support for locating a community market at the former Metrobus building.

Proposed Community Market Model

The study proposes the following community market functions:

- *Core market (vending and activities):* Expanded markets would be held each Saturday and Wednesday in the summer and fall, and periodically in winter.
- *Café:* This would be operated by one of the community market food vendors as the next step in their business development.
- *Kitchen:* This would have multiple uses as a facility for food vendors to operate in a convenient licensed kitchen, for the café operator, and for cooking classes for the wider community.
- *Community engagement activities:* A range of entertainment and educational activities would be offered on market days – both indoors and outdoors.
- *Workshop and event rental spaces:* Spaces would set up for a wide range of community users.
- *Business development supports:* Vendors would be provided enhanced development opportunities, through partnerships with business and sector organizations.

The vendors on a market day are estimated to grow to around 86 in total. Consumers are expected to peak at 3,500 a day.

The site plan has been developed to maximize the use of the building space and grounds to support these functions and create a vibrant and dynamic market atmosphere.

Management Structure

Two options are proposed for management of the community market.

Under Model One, the City of St. John's would manage the facility and the rentals to community groups. The SJFM would be the primary tenant (at a rental fee of \$1.00 a year) and operate the community market including bookings of vendors. This is proposed as a transitional partnership model (for a one- to two-year period) through which the City and the SJFM would collaborate in

developing an innovative community market that meets their respective mandates and visions – capitalizing on their respective expertise and resources.

Under Model Two, the SJFM would rent the space from the City (for \$1.00 a year) and manage the facility including the community market functions and rentals to community groups.

Annual operating budget estimates have been developed for each of these models for SJFM revenues and expenses only. In both cases, a small surplus is estimated.

Potential Challenges

The consultations and other research highlighted a few potential challenges to establishing a community market and locating it at the former Metrobus depot building.

In regard to the community market, key challenges include adapting to the expanded scope of operations in a sustainable manner. Another key challenge is attracting and retaining qualified market management staff (a common concern of community markets operated by non-profit entities). The report includes related recommendations.

In regard to the former Metrobus building, the parking lot (107 spaces) will likely be adequate for market traffic during week-days but not on Saturdays at the peak of the season. The City will need to develop arrangements for the use of nearby parking lots. There is limited green space on the grounds and this has been considered in the design to maximize its use.

Infrastructure Assessment

The existing Metrobus depot building appears to be in sufficient physical condition to facilitate renovations to accommodate a new market. Review of architectural aspects provided in the concept design, as well as a cursory review of the existing civil, structural, mechanical, and electrical engineering aspects of the building indicate several items to be addressed in any potential reconstruction to accommodate a community market. Given that the site was a former landfill, it is also recommended that an assessment be carried out to determine the extent of any risks associated with redevelopment.

Site Concept Plan

A site concept plan for a community market located at the former Metrobus depot has been developed (see following pages). The total gross floor area of the proposed community market is 1,296 m² (13,948 s.f.).

A probable construction cost budget would be in the range of \$2,929,000, exclusive of HST, consultant costs, fees, owner-supplied furniture and equipment, project management fees, and other costs not directly associated with the construction value of the work.

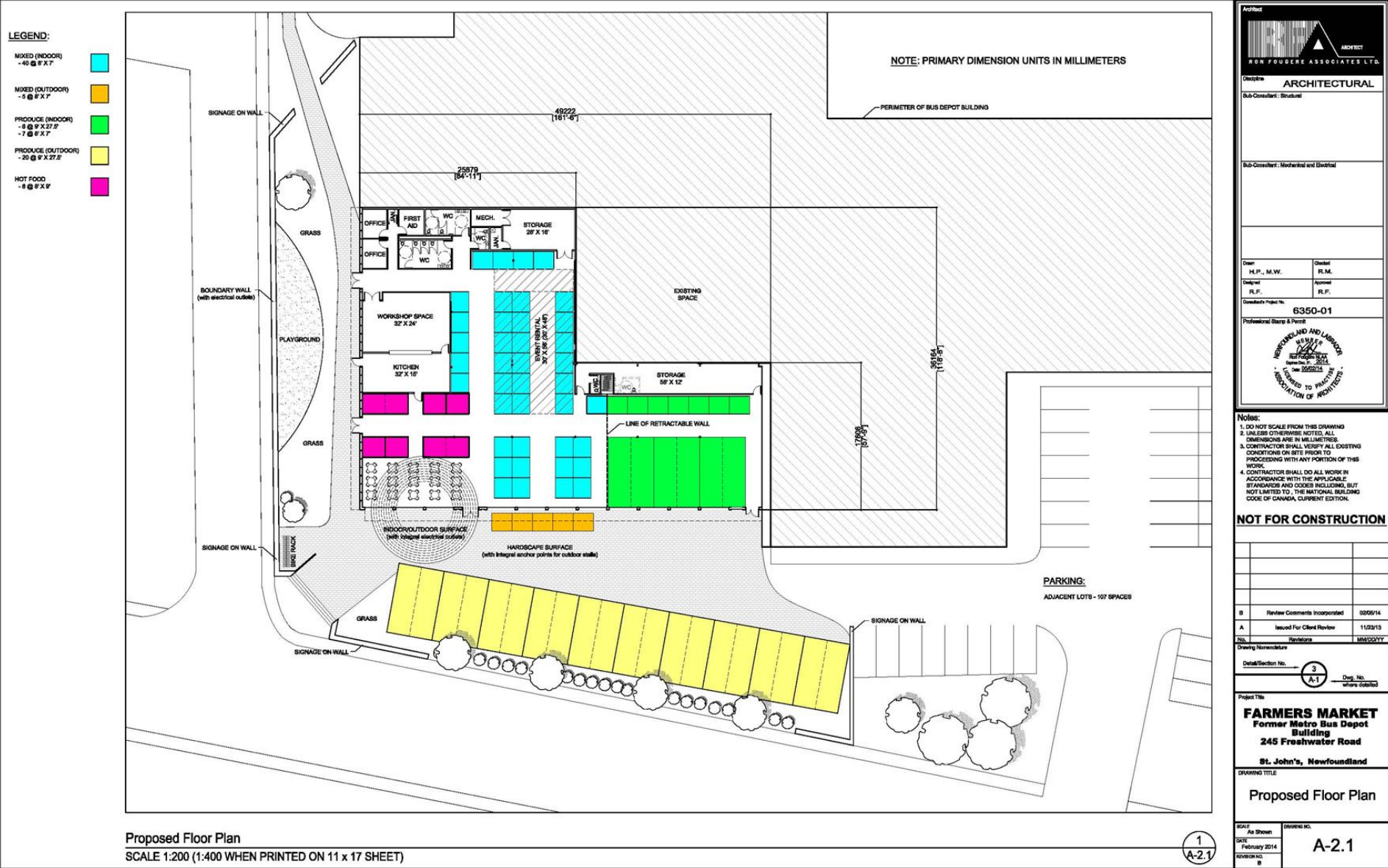
Conclusions

There is wide support for the development of a community market in St. John's and for locating it at the former Metrobus depot building. A community market would be feasible and sustainable through a partnership of the City of St. John's and the SJFM, using an appropriate management model that capitalizes on their respective expertise and resources. The existing Metrobus depot building appears to be in sufficient physical condition to facilitate renovations to accommodate a new market. The proposed site concept plan aims to accommodate the proposed functions while creating a vibrant and dynamic community gathering place.



DECEMBER 2013





1.0 Introduction

This document sets out the findings from an assessment of the requirements for and feasibility of a community market in St. John's. The study was conducted for the City of St. John's by Goss Gilroy Inc., in partnership with Fougere Menchenton Architecture Inc. and Upstream.

The report is organized as follows:

- Section 2 includes the context and purpose of the study
- Section 3 describes the study approach
- Section 4 discusses the community market concept
- Section 5 presents findings on the potential for a community market in St. John's
- Section 6 presents a proposed community market model
- Section 7 presents the functional/infrastructure assessment and site concept plan
- Appendices include research on promising practices from community/farm markets, estimated annual budgets for a community market, a proposed site concept plan, infrastructure assessment reports, and the list of organizations consulted.

2.0 Context and Purpose of the Study

The City of St. John's *RoadMap 2021 – A Strategic Economic Plan for St. John's*¹ recognized that, in many communities, markets are a focal point, encouraging social interaction and engagement, supporting cultural diversity and local production. *RoadMap 2021* included a plan to seek opportunities to enhance the presence of a community marketplace in St. John's.

The St. John's Farmers' Market (SJFM) has experienced great success since it began six years ago. Its governing cooperative has been actively seeking space to accommodate growing demand from both vendors and customers and to diversify and expand its offerings.

With the move of the City's Metrobus organization to new premises, the former depot building at 245 Freshwater Road was seen as offering a potential site for a community market to meet the objectives of both the City and the SJFM.

¹ City of St. John's. Accessed at <http://www.stjohns.ca/publications/roadmap-2021>

The City, in collaboration with partners, is undertaking this study. The study steering committee includes representatives from the City of St. John's, the SJFM, the Atlantic Canada Opportunities Agency and the Department of Innovation, Business and Rural Development.

The study includes two components:

- Development of a model for a community market that best serves the interests and needs of the city. The model is to describe the physical space required to accommodate this model. The model is to build on the experience and success of the SJFM, effective practices of community markets in other Canadian cities, the needs of vendors and the interests of the public.
- Architectural and engineering assessment of a portion of the vehicle storage area of the former Metrobus depot building.

The building is comprised of a two-storey office block, a repair facility and a 35,000 ft² vehicle storage area. The office block, repair facility and 21,000 ft² of the storage area will continue to be used for other City operations. This will leave approximately 14,000 ft² in the storage area for a community market.

The report will be used by the stakeholder organizations to inform their future consideration of this initiative.

3.0 Study Approach

The study gathered input from a number of sources in the city and from markets elsewhere. Sources included:

- *Stakeholder consultations:* Meetings were held with the Steering Committee, SJFM Location Committee, City staff responsible for property management, the SJFM market manager, and Service NL.² The SJFM also provided documents and data relating to its operations.
- *Research on promising practices at community markets:* Consultations were held with the managers of three markets (Fredericton Boyce Farmers' Market, Kitchener Market, Saskatoon Farmers' Market) to learn from their experiences. Each of these involves different operating models and the Saskatoon and Kitchener markets have recently moved into renovated facilities. Farm/community market research documents and the websites of other markets were also reviewed for effective practices and considerations.

² Service NL was consulted regarding food handling regulations and requirements

- *Consumer survey:* An online survey was conducted to gather the views of members of the community including visitors to the SJFM and the general public. This survey was advertised via social media and promotion through the websites and listservs of diverse community organizations. A similar survey was conducted on two Saturdays (in August and September 2013) at the SJFM. There were 675 responses in total: 561 online (including 40 who had never visited the SJFM) and 114 in-person at the SJFM.
- *Vendor survey:* An online survey of current SJFM vendors was conducted, complemented by a mail-in survey for vendors who preferred this method. A total of 139 survey invitations were sent and 88 responses received (64% response rate).
- *Interviews with community organizations:* 17 interviews were conducted with varied community and government organizations (arts, craft, multicultural, food security, community development, agrifoods) regarding the potential for their presence at or partnerships with a community market. The list of organizations is included in Appendix F.
- Infrastructure assessments of the portion of the vehicle storage area at the former Metrobus depot were conducted.

4.0 Community Market Concept

This section discusses the concept of a community market. It also includes an overview of the current SJFM organization and market activities and how these reflect this concept.

4.1 The Concept

In the broadest sense, a community market is a location where buyers and sellers of food, crafts and other products meet regularly for trade and community members come to engage with others. Community markets are as diverse as the products they offer, having many shapes and settings. These markets are owned and operated by various types of organizations. As a place where people mix, a market can become the heart and soul of a community, its common ground, a place where people interact easily, and a setting where other community activities take place. These markets go by varied names – farmers’ markets, community markets or (simply) markets. This study primarily uses the term “community market” unless referring to terms used for other specific markets or in research we reviewed.

Community markets have a significant economic impact. A study conducted in 2008 for Farm Markets Canada³ is the most recent national assessment of these impacts. The study found there were 508 known farmers' markets in Canada. An estimated 28 million shopper-visits were made to these markets in 2008, resulting in total direct sales of around \$1.03 billion. The study concluded that the combined national economic impact of farmers' markets in Canada was in a range between \$1.55 billion and \$ 3.09 billion, based on a multiplier range of 1.5 to 3.0. The study also found that farmers' markets created an average of one to five jobs per market vendor.

Beyond economic impacts, community markets hold vast potential for positive social and community impacts. Community building is a significant function of markets, as well as a significant contributor to their growth and success.

The recent growth in community/farm markets in Newfoundland and Labrador and elsewhere coincides with a growing interest in place-making. This concept, the recognition that "great" places (i.e. attractive, dynamic, functional) serve as drivers of economic/cultural development, has been on the radar of architects and urban planners for a number of decades. They have come to observe how designing/managing public living spaces may contribute to citizens' well-being and connectivity. Community markets have an important role in place-making. As well, cities in Canada are increasingly citing the important role of farmers' or community markets in their economic and community development plans – for example, in creating dynamic communities and business development opportunities. Currently, there are farmers' or community markets located in permanent indoor venues in all Canadian capital cities, with the exception of Manitoba, which has a well-established outdoor market.

A community market for the City of St. John's is envisioned as being a place for:

- local vendors to sell their produce and products and interact with their customers and other vendors – as well as a place to develop and grow their businesses
- citizens and visitors to the community to have access to fresh and locally-produced farm produce, food products, art and crafts that reflect the cultural diversity of the community
- community engagement and interaction – both informal and through entertainment and educational activities organized by the City and other entities

The SJFM currently functions as a community market as described above. However the limitations of the current location constrain the organization from fully performing this role.

³ Experience Renewal Solutions.(2009). *National Farmers' Market Impact Study, 2009 Report*. Study contracted for Farmers' Markets Canada.

4.2 St. John's Farmers' Market Profile

As the SJFM is the 'starting point' for the development of a community market concept for the city, the study gathered information on its current operations, vendors and consumers. This section sets out the findings.

The SJFM has developed considerable organizational capacity since its formation six years ago.

The SJFM began with a pilot in the fall of 2007 when a local organic farmer rented a hall in the city and invited other vendors to attend. This event proved to be a huge success, with well over 500 people in attendance. The main drive behind the market since then has come from individuals with a variety of backgrounds who see the diverse social and economic benefits of this initiative.

The SJFM completed its first season in 2008, and incorporated as a multi-stakeholder co-operative in 2010. It currently has over 50 members representing consumers and vendors. The organization is self-sustaining.

The mission of the SJFM Co-operative is to promote and create local food systems and build community through the operation of a co-operatively owned farmer's market.⁴ Its basic tenet that vendors must "make it, bake it, or grow it" in order to sell it is similar to that of other 'producer only'⁵ markets.

Since formation, the SJFM has developed a Vendor Handbook which sets out policies and procedures for market operations. The SJFM has also established standards for its vendors. Food vendors are required to obtain SJFM approval as well as a Seasonal Food Establishment License from the Province of Newfoundland and Labrador. Craft vendors are required to have their products reviewed by the SJFM Craft Jury. Selection criteria were developed with guidance from the Craft Council of Newfoundland and Labrador.

The SJFM is currently staffed by a seasonal market manager, a part-time seasonal assistant manager, and a team of volunteers, including a number of international students.

⁴ Food Systems' is here defined as "... all processes involved in feeding a population: growing, harvesting, processing, packaging, transporting, marketing, consumption, and disposal of food and food-related items. It also includes the inputs needed and outputs generated at each of these steps." (The St. John's Farmers' Market Cooperative Ltd. Bylaws. October 2010)

⁵ In general, vendors produce the good they sell at the market, versus markets where vendors can resell products produced by others.

The SJFM is a regular Saturday gathering place through the summer and fall.

The SJFM operates on Saturdays (9:00 am to 2:00 pm) from June through December in space it has rented at the Lion's Club Chalet on Bonaventure Avenue in the city centre since its first season in 2008.

On a peak day in 2013, there were 30 vendors selling inside. With a St. John's population of 197,000⁶, the SJFM serves upwards of 2,000 consumers at the peak of the season.

The interior space is approximately 2,500 ft². There is a seating area with two tables, two small kitchen areas and a storage area in the basement. Outside, there is green space where farmers and other vendors sell from tables and buskers perform. On a peak day in 2013 there were 25 outdoor vendors. Several tables are set up as an eating area. The green space also includes children's playground equipment.

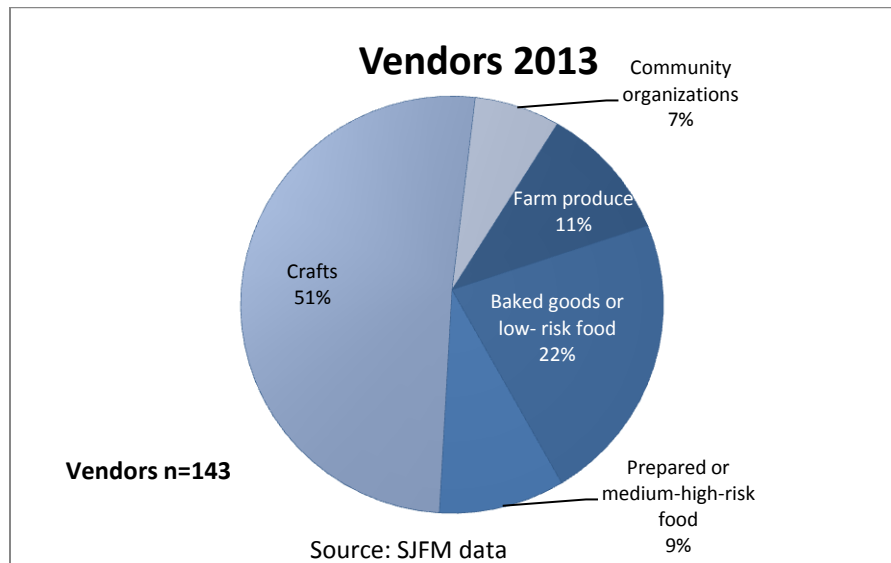
There is parking adjacent to the building and in two nearby lots.

Despite the space limitations of the facility, the SJFM is a vibrant buzz of activity, especially at the height of the harvest on a sunny day when farm vendors have tables laden with produce, there is music in the air from entertainers and visitors of all ages mingle, enjoying the atmosphere.

⁶ Statistics Canada. (2011). *Census 2011. St. John's Census Metropolitan Area*. <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/hltfst/pd-pl/Table-Tableau.cfm?T=205&S=3&RPP=50>

The SJFM has seen steady growth in vendors and customers since its formation six years ago.

In 2013, the SJFM had 143 approved vendors with the following profile:



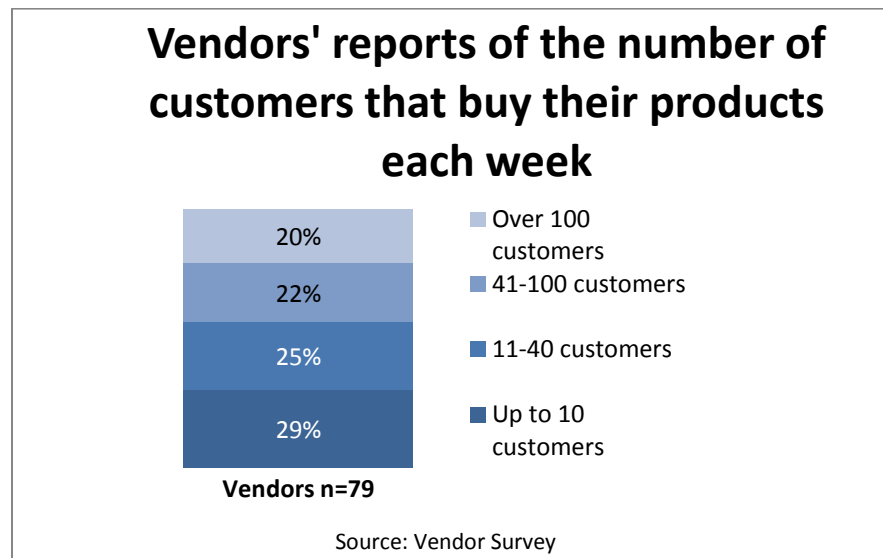
The market accommodates all farm vendors who want to sell. In 2013, farm vendors on a market day ranged from seven in the early months to 14 at the peak harvest period.

The current indoor space limits the number of other (non-farm) vendors that can be accommodated each market day. In 2013, there were an average of 45 other vendors present each market day throughout the season –with all approved vendors selling at least once.

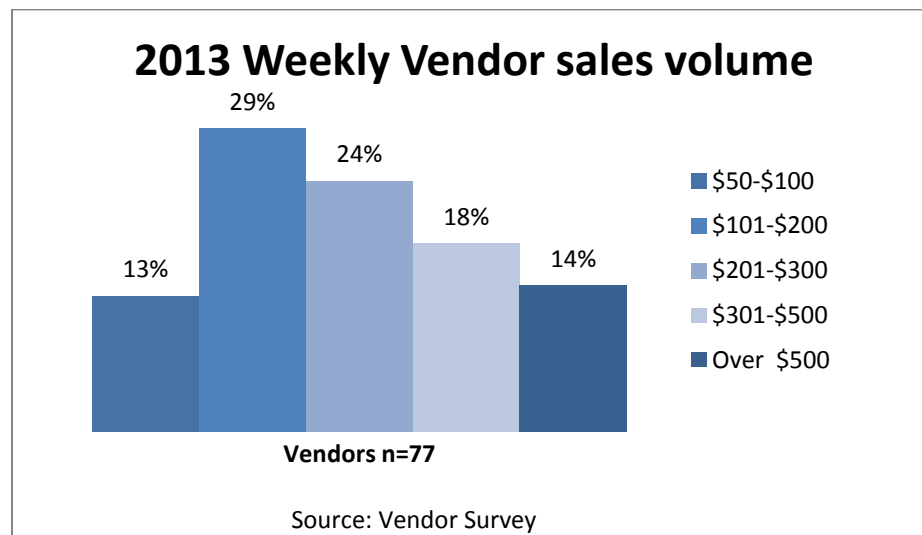
In 2013, an average of 1,700 consumers visited each market day. This ranged from 1,400 to a peak of around 2,000.

Consumer and sales volumes vary, with farm and hot food vendors being the busiest.

Vendors who responded to the survey⁷ reported a wide range in terms of the number of customers who buy their products each week:



Vendors also reported a wide range of average sales on a market day. Hot food vendors and some farm vendors tended to report higher average sales:



⁷ For all charts based on the vendor and consumer survey questions, the number of responses (n=) reflects the number who responded to each question.

The majority of vendors view the SJFM as important to their income.

A majority of vendors indicated that the sales at the SJFM were very important (37%) or somewhat important (34%) to their income. Just over a quarter (29%) felt the market was not that important to their income.

Two-thirds of the vendors sell at other locations - most at fairs and craft shows. A few reported selling from home or direct to consumers/restaurants.

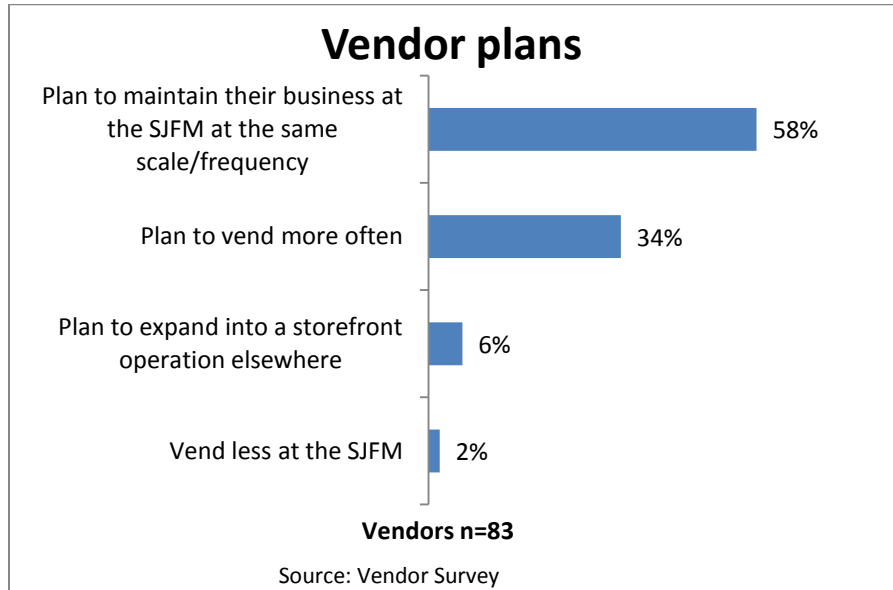
The market helps with business incubation.

The SJFM provides a regular venue for emerging entrepreneurs to grow their businesses. Of note, several of the craft vendors at the SJFM are also participants in the Quidi Vidi Village Plantation incubator studios for emerging craftpersons. As well, vendors valued the contact with other vendors at the market in developing their businesses.

A few vendor survey respondents suggested the SJFM, could further assist in their business development by collaborating with other business and sector organizations (e.g. Craft Council of Newfoundland and Labrador, NLOWE, Agrifoods Division of the Department of Natural Resources). The consultations identified that a community market offers considerable potential to help vendors with their business development. This would occur through both structured programming and assistance and through the informal contacts with more consumers and vendors.

The majority of vendors plan to maintain or expand their market operations.

Vendor survey respondents indicated the following business plans:



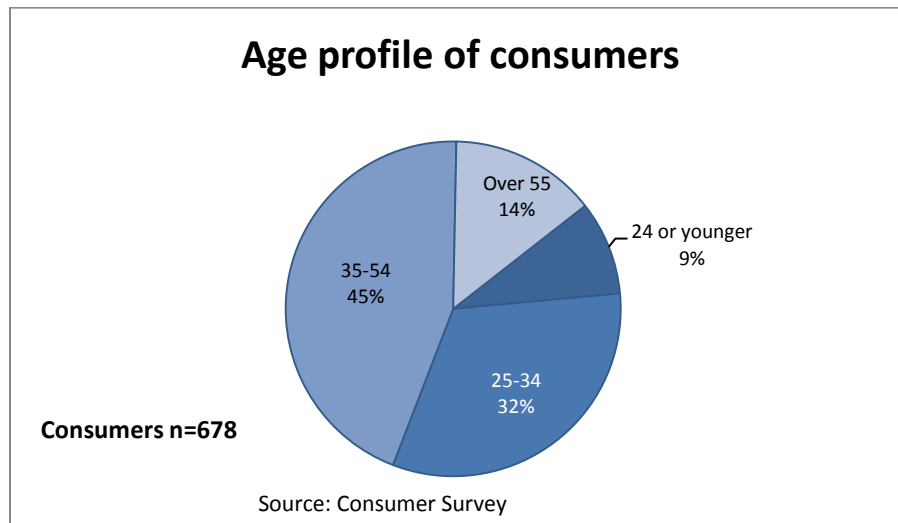
Vendors value the sense of community with customers and other vendors at the market.

Vendors most frequently said they like the contact with customers and sense of community at the SJFM (66%). Some vendors liked that the market was good for their business (14%) and also valued the contact with other vendors (13%).

Vendors like least the crowded space (68%), parking (15%), and not being able to vend as often as they would like due to space restrictions at the market (8%).

Visitors to the SJFM are a diverse group from across the community.

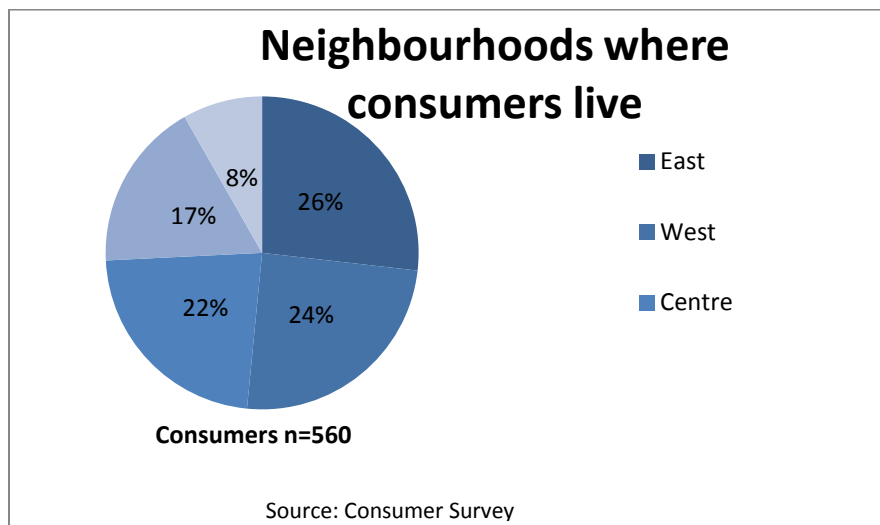
Respondents to the consumer survey spanned age groups, with the majority (59%) being over age 35, and 41% being under age 35.



Of note, the ratio of female to male consumer respondents was 4:1.

The majority of consumer respondents (85%) were from St. John's, 14% from other communities in province, and 1% were visitors to the province.

The St. John's respondents were spread fairly evenly across neighbourhoods as delineated by the City of St. John's⁸:

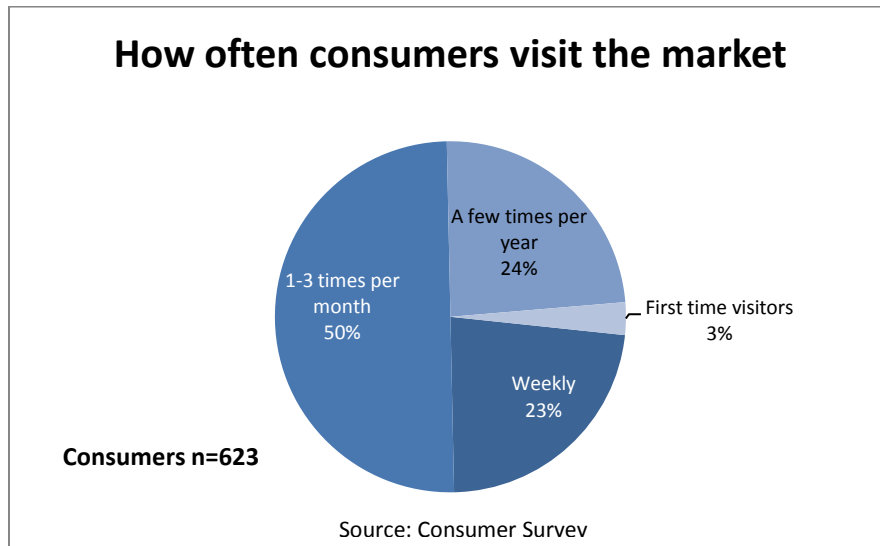


⁸ <http://www.stjohns.ca/living-st-johns/newcomers/about-st-john%E2%80%99s/neighbourhoods>

The majority of respondents drove to the market (83%), while 14% walked and 2% biked or took the bus.

The majority of visitors to the market are regulars (one to four times a month).

Three-quarters of the consumer survey respondents indicated they visit the market one to four times a month:

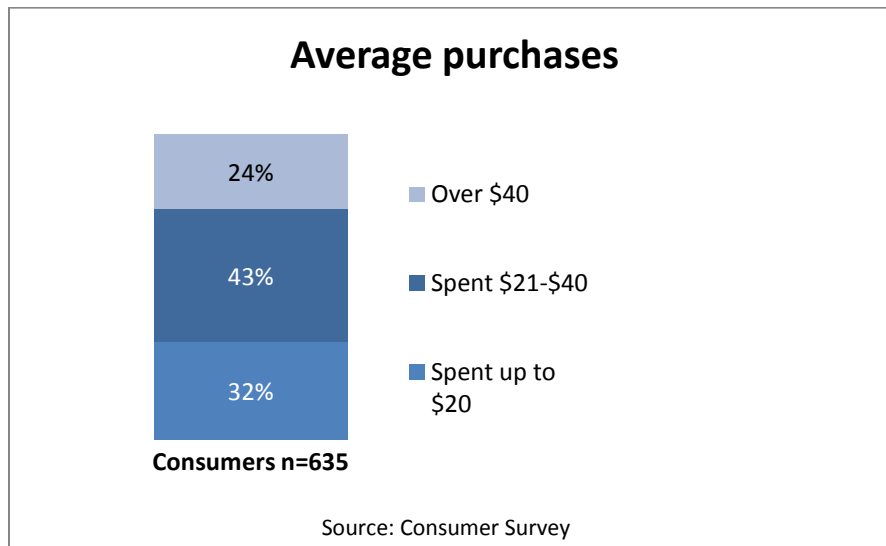


Of those that visited less often, 40% said this was due to being too busy on Saturdays or this time was inconvenient (e.g. they are out of town on weekends), the market was too crowded (39%), or it was an inconvenient location (16%).

Consumer time and spending at the market varies.

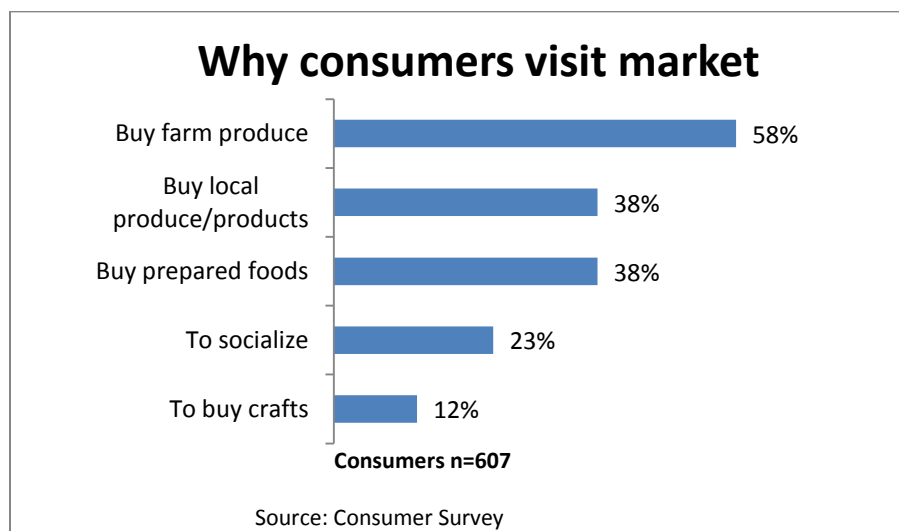
Most respondents indicated they spend up to an hour in each visit: 28% usually spend less than half an hour at the market, 50% spend from a half to one hour, 22% spend one hour or more.

The majority of consumers (67%) indicated they spend more than \$20 during each market visit:



Consumers visit the market for local farm produce and products and to socialize.

Consumer survey respondents were asked to give the reason(s) they visit the market. The majority mentioned the local produce and products, while socializing was important for around one-quarter of the respondents.



Consumer survey respondents were also asked what they like most and least about the market:

- *Like most:* the food (22%), produce (21%), atmosphere (20%), supporting local vendors (16%), and the variety (11%).
- *Like least:* The crowded space (72%) and parking (15%), followed by the limited hours (5%).

Non-visitors to the market provide insights into the opportunities to attract more consumers.

The online consumer survey received 40 responses from people who had never visited the SJFM. Their reasons for not visiting were as follows:



Current consumers were asked why they felt others do not come to the market. They cited lack of awareness of the market and what it offers, crowded space and parking as possible reasons.

4.3 Summary Analysis

The SJFM is a solid foundation for an expanded community market as:

- The organization, led by diverse volunteers, has demonstrated its capacity to organize weekly market days, build its membership, and partner with community organizations
- Vendors fill the current market space on a weekly basis and value their market business
- Most consumers are regular patrons who appreciate what the market offers the community

The feedback from both vendors and consumers indicates the opportunities to grow the market and attract more consumers through improved space and amenities, increased market days and improved promotion.

4.4 Profile of Other Markets

The following are brief profiles of the three markets that were consulted for this study. The profiles provide some comparative information on the organization, activities and infrastructure of other markets. This information was used to in developing the proposed model for a St. John's community market.

- **Fredericton Boyce Farmers' Market**

Operating since 1951, this Market is revered in the Fredericton region as a place to gather and as a destination for local produce, foods and crafts. It is located downtown in a building that is owned by the Province of New Brunswick and leased to the City of Fredericton. The City manages the Market through a not-for-profit corporation.

The building is 13,000 ft² in size and a large adjacent parking lot is also used by vendors. The Market is available for rent throughout the week for concerts, wedding receptions and other social/community events. The market manager considers the space to be sufficient for vendors. However more storage space for stall tables and renovations are needed to make the building more functional for rentals by community groups when the market is not operating.

The Market operates on Saturdays throughout the year 6am-1pm. Up to 190 vendors are present each market day, of which 20 percent are farm vendors. The majority are producers, but there are a few resellers who help keep farm produce available in the winter months. A small kitchen is leased by one vendor to serve breakfasts on market day. Non-profit organizations are provided free space on a rotational basis for activities or promotions.

With a population of 94,268 in the Fredericton region,⁹ upwards of 8,000 to 10,000 consumers visit the Market each Saturday.

The Market is staffed by a full-time manager, as well as part-time maintenance, cleaning and bookkeeping staff. The building is provided rent-free by the City. Annual operating expenses are approximately \$275,000.

⁹ Statistics Canada. (2011). *Census 2011. Fredericton Census Agglomeration*. <http://www12.statcan.gc.ca/census-recensement/2011/as-sa/fogs-spg/Facts-cma-eng.cfm?LANG=Eng&GC=320>

- **Kitchener Market**

The Kitchener Market has been in operation for more than 140 years. It is currently housed in a former shopping centre that was renovated in 2007 as part of a redevelopment of the area. The Kitchener Market is owned and operated by the City of Kitchener. It is one of a number of farm markets in the Southern Ontario region, the largest and most well known being the St. Jacob's Farmers' Market.

The Market building is 25,000 ft² over two floors. It includes three distinct functions: farmer's market, international food vending and a community facility. The Farmers' Market operates year-round on the ground floor on Saturdays 7am-2pm. There are a total of 72 vendors, 28 of which are farmers (both producers and resellers). The upper level houses international food vendors and is open year-round from Tuesday to Saturday. The upper level also has a 2,000 ft² multi-use community facility with a licensed kitchen. Non-profit organizations are provided free space in the Market on a rotational basis for activities or promotions.

With a population of 477,600 in the Kitchener area¹⁰, the Market serves up to 10,000 customers a day.

The Market has a full-time market manager and four full-time staff plus a pool of part-time staff. The operating budget was not available for this study.

- **Saskatoon Farmers' Market**

The Saskatoon Farmers' Market has many similarities to the St. John's context for a community market. Like the SJFM, Saskatoon's Market operates as a member-owned non-profit co-operative. Similar to the SJFM, members of the Saskatoon Farmers' Market "make it – bake it – grow it – sell it", offering only what they produce. This approach helps to ensure high quality products, and allows consumers direct, personal contact with producers.

Established in 1975, the Market moved in 2007 to a permanent indoor venue as part of a major River Landing development funded by all three levels of government. This development was designed to create a vibrant social, cultural and commercial focus in the city. The Market is housed in the City's former electrical garage (13,500 ft²) renovated for the Market's needs. An adjacent market square provides space in the summer for outdoor

¹⁰ Statistics Canada. (2011). *Census 2011. Kitchener-Cambridge-Waterloo Census Metropolitan Area*. <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/hlt-fst/pd-pl/Table-Tableau.cfm?T=205&S=3&RPP=50>

vendors and special events. The market manager indicated they initially felt the space was huge, but now they see it is far too small for the number of vendors who want to sell at this site.

The Market is held year-round on Saturdays 8am-2pm and Sundays 10am-3pm; from May to October it is also open on Wednesdays from 10am-3pm. Total vendors range from 55 in winter to 90 in summer, with approximately half of these being farm vendors. The facility also houses four merchants (food and specialty groceries) that are open six days a week. A section of the Market space can be set up for rentals for events. With corporate support, the Market recently added a licensed kitchen for the use of vendors and for cooking classes by local chefs. Non-profit organizations are provided free space on a rotational basis for activities or promotions.

Saskatoon has a population of 260,600.¹¹ At peak season, the Market serves upwards of 10,000 consumers daily.

The Market is staffed by a full-time manager, four part-time staff, plus janitorial and bookkeeper services. The City of Saskatoon leases the building and outdoor space rent-free to the co-operative. The co-operative's annual operating expenses are approximately \$400,000.

5.0 Potential for a Community Market

This section discusses the potential to develop a community market in St. John's from the perspective of the products sold, consumers, schedule and location.

5.1 Expanded Products and Activities

The study gathered input on the potential to expand each of the main types of products sold and the activities at a community market.

Consumers are very interested in more farm products being available at the market. There is some potential to increase the number of farmers selling at the market, and the length of the market season, to meet this demand.

Overall, local farm products are the main reason consumers come to the market. The consumers surveyed were interested in having more vendors and more diversity in the farm products that are

¹¹ Statistics Canada. (2011). *Census 2011. Saskatoon Census Metropolitan Area*. <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/hlt-fst/pd-pl/Table-Tableau.cfm?T=205&S=3&RPP=50>

now being sold – vegetables, meats, eggs, berries and organic produce. They also expressed an interest in fish and seafood products.

Consumers would also like to see more farm products being available throughout the summer-fall market season and an extension into the winter season. While they understand the limitations from our short season and small number of farmers in the region, they would like to see this aspect of the market developed.

The SJFM has made considerable effort to engage farmers in the Avalon Peninsula region as vendors. Currently 16 farmers are members of the SJFM Co-operative and sell at the market (up from 13 in 2012). They represent 11 of the 24 farms in the listed in the 2013 *Buy Local! Buy Fresh! Avalon Food Map*¹² plus five other farms.

The other farm markets we consulted stressed the importance of a strong presence of farmers at the market on a continuing basis. This is one of the challenges for a St. John's market, as we lack the critical mass of farmers found in other provinces and have a short growing season.

The majority of farm vendors who responded to the survey for this study had limited interest in and/or capacity for selling more than once a week at the market or in extending their season. Selling once a week is sufficient for their current production levels.

However, the local consultations indicate that there is some potential to increase the number of farmers selling at a community market in the longer-term. This would be influenced by efforts within the agrifoods sector – including government support – to encourage new farmers, new products and production methods. Young farmers are seen as the best fit with the community market concept as they are considered to be more open to collaboration with other farmers and vendors and focused on innovation.

The expansion of hydroponic farming and increased use of cold storage facilities for root crops were also cited as potential ways of increasing the number of farmers, range of products and the market season.

The SJFM as a producer-only market, requires that all products must be grown, handmade or produced in the province by the vendors. Vendors were asked in the survey for their views on allowing the sale of farm produce that is not generally grown and sold in the province (e.g. in-season apples). The survey was used to gauge support for this means of expanding the variety of produce sold at the market.

¹² Northeast Avalon Regional Economic Development Board. Accessed at <http://www.northeastavalonredb.ca/>

Responses were mixed: just under half of the vendors (48%) disagreed with a change in policy, 28% agreed, and 24% were unsure. A few commented that non-local farm products should be limited to the Atlantic provinces to those that cannot be produced here. The responses indicate this option could be explored – but with care.

Our consultations also highlighted the potential for a community market to offer free tables for non-profit community gardens to sell periodically and for a youth vendor table (e.g. Junior Achievement, 4-H Newfoundland and Labrador). This would be a good fit with the community engagement mandate of the market.

There is a market for expanded offerings of hot and prepared foods.

Consumer survey respondents were interested in more hot food vendors and more diverse offerings at the market. Similarly they would like to see more prepared foods sold (e.g. cheeses, breads) as well as local beer and wines.

There are many examples of innovative food offerings at other markets to learn from. One common example is food vendors selling and promoting items prepared from produce sold at the market. The SJFM did something similar last fall when they offered free soup samples made from produce sold at the market. There is potential to learn from other markets on this ‘cross marketing’ and to mentor current and potential vendors on this business approach.

A segment of consumers come to the market for craft products and they want diversity and quality in the offerings.

Craft items were not the main draw for consumers who responded to the survey (only 12% cited this as a reason for their visits). However, respondents appreciated the vibrancy that craft items bring to the market atmosphere. Some suggested increasing the number and diversity of craft being sold. There is also a need to ensure the quality of craft offerings. While the SJFM juries all new craft items, the consumer survey responses and consultations reinforced the need to ensure that standards are maintained, including a regular review of previously approved craft vendors and products.

The other markets consulted stressed the need for a balance in the sales of farm and craft products to avoid the misperception of it being a craft-only market. Some try to achieve a target of 60% farmers and 40% other vendors.

A few of the individuals we consulted locally suggested that, if the aim of a community market is to engage newcomers to Canada, consideration should be given to allowing a few vendors to import quality international crafts from their homelands. Similar to the issue of bringing in farm

produce from outside the province, this kind of change in policy could be considered, but with care.

There is an interest in more community engagement activities.

The SJFM actively partners with a number of community-based organizations that offer a variety of free entertainment for children and adults, short information/education sessions and demonstrations. Each week, one such organization is given a free table or space for its activity.

Most notably, the Shakespeare by the Sea organization uses the SJFM green space as the venue for its free family show during the summer months, with good turnouts and appreciative audiences. The market also provides opportunities for buskers to entertain and for other organizations to promote their upcoming events. Examples include a lantern-making workshop held in advance of the Victoria Park Lantern Festival, and a storytelling circle held during the St. John's Storytelling Festival. Also local yoga teachers-in-training have offered sessions, which is a win-win for them and the consumers who participate.

Most respondents to the consumer and vendor surveys had suggestions for activities that would build on those now being offered by the SJFM. These included entertainment for children and adults; workshops on various food, cultural, health and physical activity topics; and demonstrations of cooking, art and crafts. They also wanted to see the playground equipment and area being maintained in a new location. Some consumers and vendors recommended that these activities be short sessions that do not detract from shopping.

The consumer survey responses and the consultations with other markets reinforced that these activities, if well organized, add vibrancy to the market experience. A community market would ideally provide the opportunity for both indoor and outdoor activities.

The other community-based organizations in the city that were consulted indicate an interest in continuing or starting a partnership with the SJFM to expand on the entertainment, demonstrations and workshops now offered. Some felt that workshop space for rentals would be well-used as there is a significant demand for this in the city. Some suggested rental space suited to rehearsals by arts groups would also be welcome (they noted that this would not be substitution for dedicated rehearsal space which is also needed in the city).

Some of the local organizations we consulted have a policy of charging fees to pay the presenters (e.g. cooking demonstrations by chefs, readings by authors, craft demonstrations, transportation for their members) and these fees would have to be paid by the market or individual consumers.

5.2 Increase in Consumer Base

There is potential to increase the number of market consumers in an expanded market space.

We project a considerable increase in the number of visitors to a community market in an improved and larger space. The consumer survey responses indicate that an improved space, more frequent market days and better promotion would attract more consumers. The growing population of St. John's and the broader Northeast Avalon region creates opportunities to promote the market to newcomers who, in many cases, are coming from regions of Canada or other countries where markets are a part of the community fabric.

The data from the three other markets we consulted (Fredericton, Saskatoon, Kitchener) is an indication of the 'untapped' market in St. John's. These markets are located in fairly similar size cities but have considerably larger market operations. They attract up to 10,000 consumers on peak market days.

We conservatively project that peak visitors to a community market in St. John's would reach 3,500 on Saturdays and 1,000 on week days.

5.3 Location and Frequency of Opening of a Community Market

Consumers are interested in more frequent market days and an extended season.

Consumer survey respondents were asked if they would visit the market at alternate times. The majority of respondents to this question (75%) said they would visit the market more often if it was open more often. The majority of respondents to this question said they would visit the market if it was open during week days (65%), week evenings (76%), and the winter and spring period (94%).

There is some interest among vendors in selling more frequently and during an extended season at the market.

Thirty percent of farm vendors and 51% of other vendors said they would like to sell more frequently at the market. As indicated earlier, those who were not interested said they were at their maximum capacity or were happy with the current frequency of their presence at the market.

Vendors were also asked if they would like to sell at the market if it was open some additional times. Table 1 below shows the responses for farm and other vendors who responded to the question.

TABLE 1: VENDOR INTEREST IN SELLING AT ADDITIONAL TIMES (MULTIPLE RESPONSES)

Time	Frequency	
	Farm Vendors	Other vendors
Winter and Spring	1 (20%)	61 (92%)
Sunday	2 (40%)	36 (54%)
Evenings during the work week	0	22 (33%)
One or more days during the work week	3 (60%)	15 (22%)
Weekend evenings	0	10 (15%)
Total Respondents	5	66

The responses indicate that the other vendors are more interested than farm vendors in being present at most additional market times. A greater proportion of farm vendors (albeit a small number) indicated more interest than other vendors in selling during week days.

In the consultations, the idea of holding a full scale market on Sundays in addition to Saturdays was explored. However, the feedback was that many of the vendors do not have the capacity (in terms of produce and products) to do two market days in succession. This is taken into consideration in the proposed model.

Most consumers would continue to visit the market if it moved to the former Metrobus building and most vendors would continue to sell at that location.

Almost all consumer survey respondents (94%) indicated they would visit the market if it was located in the former Metrobus depot. A few respondents cited the location and lack of character of the building as reasons why they would not visit a market there – concerns that would need to be considered in developing and promoting the market at that site.

A majority of vendors (86%) indicated they would continue to sell if the market moved to the former Metrobus building. Those who were not sure or not interested cited concerns with the large size and type of space, the potential higher operating costs, limited outdoor/green space, and the availability of parking – concerns to be considered in planning a community market.

The individuals who were consulted for the study felt that, overall, the former Metrobus depot on Freshwater Road is a suitable location for the market. It is only a kilometre from the current

SJFM site. While the site is further away from the downtown area, the majority of consumers currently drive to the SJFM, and the site is on a bus route. The depot location is close to Memorial University and established neighbourhoods. There are also a few commercial offices, including the Canada Revenue Agency (CRA) office next door – potential patrons for a week-day market or café.

In summary:

- There is strong consumer and vendor support for locating a community market at the former Metrobus building.
- There is potential for 'smaller scale' market days on additional days and during an extended season.
- The location is central and near potential consumers.

5.4 Promising Community Market Practices

The research and consultations with other markets (in Fredericton, Kitchener and Saskatoon) identified an array of practices that contribute to successful operations. Many of these are found in the *Farmers' Market Best Practices Toolkit* (2011) that was developed by the Newfoundland and Labrador Food Security Network. From our consultations, it is evident that the SJFM has developed and operates its organization to reflect many of these effective practices.

The following is a summary of the practices that are relevant to consider in developing a community market in St. John's. A full list is included in Appendix A.

Foundational principles: Aim to become a neighbourhood anchor and key community center – market atmosphere is key. Celebrate the market-site history. Signal the importance of the market by including it in the City's economic development plan.

Governance and staffing: Focus on developing a multi-stakeholder governing board with an innovative business plan, hiring and retaining an effective market manager, and engaging volunteers. Be prepared to be flexible in responding to stakeholder interests and opportunities to develop.

Target clientele/promotion/marketing: Expand market promotion to young families, youth, seniors and tourists, and forge strategic partnerships with local businesses and community groups. Encourage vendors to maintain social media and other means of electronic presence.

Design of the space and amenities: When designing a market space, consider all options for maximizing the functionality of the space within the resources available, while planning for

growth. Ensure that the market feels 'full' to consumers, with bountiful vendor offerings and minimal 'dead space.' Prevent potential bottlenecks, ensuring easy flow of consumers, vendors and other patrons. Enhance market appeal and functionality through roadside signage, enticing inside and outside spaces, ample parking spaces, dedicated stalls for regular vendors, a balance of fixed and movable areas, a purpose-built kitchen, and mobile payment options.

Activities: Regularly schedule special events which contribute to a lively, fun and educational market environment, focusing on local products (e.g. food, gardens, arts and crafts). Regularly monitor the impacts of these activities on vendor sales. Encourage consumers to relax, linger and connect with others at the market.

Vendors and products: Select vendors carefully, ensuring an appropriate balance between food and non-food products/services. Establish, communicate and enforce product-quality standards. Support vendors in presenting products and stall displays in an attractive and informative way and in meeting a high standard of consumer service, including friendliness and engagement with consumers.

Challenges: Be aware of common challenges that community markets face, including: inexperienced and/or overworked market manager, low compensation for the market manager leading to turnover, limited nearby parking, insufficient vendor numbers, shortage of products, lack of product diversity.

6.0 Proposed Community Market Model

The proposed model set out below was developed from a synthesis of the information gathered from all sources. It sets out a proposed market schedule, projected numbers of vendors and consumers, functions and related space requirements. The model also includes options for management of the community market space and projected annual operating costs and revenues.

6.1 Functions and Schedule

Table 2 sets out the proposed functions and schedule for the community market, followed by a narrative description. This is envisioned as a starting point for the community market, with potential to increase the market days as the number of vendors and consumers grows.

TABLE 2: COMMUNITY MARKET PROPOSED FUNCTIONS AND SCHEDULE

Function	Season
Core Market (Vending)	
Saturday Market	May to December
Mid-week Market (Wednesday or Thursday)	July to December
Winter Market	One Saturday per month (January to April)
Café (vendor-operated), potentially with a small number of other vendors	Year-round
Kitchen	Year-round
Community engagement activities	Year-round
Workshop and event rental spaces	Year-round
Business development supports	Year-round

The proposed market functions are as follows:

- *Core market (vending):*
 - Continue with the Saturday market from 9:00 am to 2:00 pm.
 - Extend the summer-fall market season by one month (opening in May) and continue to the Saturday before Christmas.
 - Hold one additional market day during the summer-fall season with a smaller number of farm, food and craft vendors. We suggest Wednesday or Thursday from 4:00 pm to 8:00 pm. This would help reach consumers who cannot come to the market on Saturdays and avoid undue pressure on available parking in the area during office hours. This additional day might be offered as a pilot in 2014.
 - Hold a winter market one Saturday per month during January to April, with at least a few farm vendors, along with food and craft vendors.
- *Café:* House a café to be operated by one of the community market food vendors as the next step in their business development. This service might cater to the weekday coffee and lunch trade from businesses in the neighbourhood, supper takeaways and/or Sunday brunch. It would operate year-round.
 - A small number of prepared food or craft vendors may want to sell during the weekdays adjacent to the café operation. Again this would be part of their business development process.
- *Kitchen:* Make available a licensed kitchen for use by:
 - Food vendors during market day (up to two at a time)

- Food vendors as a prep kitchen before market day (on a rental basis). This was identified as an important feature in the market to allow food vendors to prepare their food in a licensed and convenient space as part of their business development
 - Those giving food demonstrations or delivering/hosting cooking classes (on market and non-market days). Kitchens are increasingly a key feature in community markets for these purposes.
 - Vendor to operate a café.
 - Community groups (e.g. cooking classes)
 - Groups renting the community-event areas (see below)
- *Community engagement activities*: Offer these activities on market days – both indoors and outdoors.
- *Workshop and community-event rental spaces*: Rent out workshop and event spaces for community engagement throughout the year. The *workshop space* would be used on market days, and rented to community groups, and public and private organizations on non-market days and evenings. Two *community-event rental spaces* are proposed. One would be in a finished area of the market suitable for events, receptions, conferences; the other would be in a less finished area, suitable for recreation activities and arts rehearsals.
- *Business development supports* would be offered to vendors, in partnership with business and sector organizations (e.g. agrifoods, crafts, chefs' association).

6.2 Vendors and Consumers

Number of vendors

We project that the number of vendors selling at each Saturday market would grow up to 86 in total:

- 20 farm vendors (at peak of summer-fall season)
- 6 hot food vendors (throughout the summer-fall season)
- 50 other vendors (throughout the summer-fall season).

Number of consumers

We project the number of consumers at the market would grow to:

- An average of 2,000 consumers visiting a Saturday market, with a peak of 3,500 consumers

- An average of 750 consumers visiting a Wednesday and winter market, with a peak of 1,000 consumers.

6.3 Functions and Space Requirements

The proposed community market functions and the key space requirements to support each function are set out in Table 3. Appendix B includes a more detailed list of requirements that were developed to inform the infrastructure site concept plan.

TABLE 3: SPACE REQUIREMENTS FOR PROPOSED COMMUNITY MARKET FUNCTIONS

Function	Space Requirements
Core market (vending)	<p>Exterior space for 10 farm vendors and 5 other vendors, with fixed or movable canopies over the stalls</p> <p>Interior space for 10 farm vendors, 6 hot food vendors and 45 other vendors</p> <p>Space designed for easy flow from the indoors to the outdoors and through each area</p> <p>An interior space with two areas, with a seamless flow between them:</p> <ul style="list-style-type: none"> • a finished area for food and other vendors • a less developed area where farm vendors can back-in to sell from their trucks <p>A mix of fixed stalls with counters/equipment (e.g. coolers) and non-fixed stalls with tables as counters</p> <p>As much as possible, the same stall would be assigned each week for regular vendors (allowing for fixed wall signs)</p>
Kitchen	<p>Sufficient space to support the proposed functions</p> <p>Meet food premises and preparation standards as set out in the</p> <ul style="list-style-type: none"> • <i>Food Premises Regulations</i> under the <i>Food and Drug Act</i> • Public Market Guidelines (September 2011) – which are informed by the <i>Regulations</i> <p>Further decisions are required on the types of food to be prepared and the related equipment requirements (see Appendix B for discussion).</p>
Café	<p>The existing fixed stall(s) for hot food vendors, the kitchen and a portion of the seating area</p>
Community engagement activities	<p>Indoors: sufficient indoor seating (for 75 to 100 people) located near the kitchen and food vendors, used for eating and socializing and for viewing entertainment and demonstrations</p> <p>Outdoors: benches/tables for 50 people, an entertainment area, and a children's playground area</p>

Function	Space Requirements
Workshop and community-event rental spaces:	
Workshop space	A walled workshop space that would accommodate 40 people theatre-style and 15 to 20 boardroom-style
Community-event rental spaces	Capability to 'wall off' the two areas of the interior space on non-market days for purpose of rentals: <ul style="list-style-type: none">• A removable pipe-and-drape type partition is recommended to 'wall off' the seating area and a section of the non-fixed vendor stalls – for rentals for community events or meetings• A sliding partition is recommended to separate the farm vendor area – for rental to groups such as theatre groups for rehearsals and sports groups
Business development supports for vendors	The workshop and event spaces would be used for these activities.

6.4 Management Structure

Should the decision be made to locate a community market in space in the former Metrobus depot, and should the City of St. John's and the St. John's Farmers' Market Co-operative decide to partner in this initiative, a structure for managing the space will be required.

Based on the consultations and research, two options are proposed for consideration by both these entities.

Model One: Community market space is managed by the City of St. John's

Under this model, the City would retain responsibility for managing the space allocated for the community market. This would include rental of the facilities to other organizations on non-market days. The City also would be responsible for overall maintenance and operating costs (e.g. utilities). The City would receive all revenues from rentals of the community space but not the fees from community market vendors.

The SJFM would be the primary tenant (at a rental fee of \$1.00 a year). The SJFM would be responsible for operating the community market and related expenses, and the general maintenance of the space when it is used for market activities (e.g. janitorial services). The SJFM would book market vendors and receive their fees.

This is proposed as a transitional partnership model (for a one- to two-year period) through which the City and the SJFM would collaborate in developing an innovative community market that meets their respective mandates and visions – capitalizing on their respective expertise and resources.

Considerations: This model would require that the City and the SJFM develop a clear understanding of their respective and shared roles and responsibilities for the management of the community market space, and effectively coordinate their work on an ongoing basis.

The City would have a significant investment in the community market infrastructure and an interest in seeing that it fulfills the vision set out in its strategic economic plan *RoadMap 2021*.

The City, as part of its focus on community engagement, now makes space in its buildings available to community groups on a rental basis. This model would be an efficient and effective way of using existing City resources dedicated to these rentals to maximize the use of the market space for community engagement.

The scope of the proposed community market and infrastructure is a substantial increase from the current scale of SJFM operations. There are likely to be initial challenges for the SJFM as a volunteer-led organization in undertaking the transition to managing a larger operation and infrastructure.

This model would allow the SJFM to focus on developing its business plan and capacity to manage the community market in line with its mission without the additional responsibility of managing the space rentals and overall maintenance of the space in the short term.

Model Two: Community market space is managed by the SJFM Co-operative

Under this model, the SJFM would rent the community market space (at a rental fee of \$1.00 a year). The SJFM would manage the space, including the community market and rentals to community groups on non-market days, obtain revenues, and undertake general maintenance. The City would be responsible for the maintenance of major infrastructure in the building.

This is proposed as the model to be adopted after a one- to two-year period under model one.

Considerations: This model would give the SJFM the responsibility and authority to develop and manage the community market and the space in line with its vision, mandate and business plan. The model would require less coordination of effort with the City on an ongoing basis.

The City's interests in ensuring that its investment in the community market infrastructure achieves its vision for the community market and the intended results could be addressed by having representation from the City (Council member and/or staff person) on the SJFM Co-operative Board.

6.5 Operating Budget Estimates

Table 4 below sets out summaries of the estimated annual operating budget for the community market for each of the above management models. These estimates cover the SJFM revenues and costs only – not those of the City of St. John's. Appendix C includes the detailed estimates.

TABLE 4: ESTIMATED COMMUNITY MARKET ANNUAL OPERATING BUDGET – ST. JOHN'S FARMERS' MARKET REVENUES AND EXPENSES ONLY

	Model One (City manages space and rentals)	Model Two (SJFM manages space and rentals)
Revenues	\$149,800	\$209,800
Expenses	\$134,224	\$177,014
Surplus	\$15,576	\$32,786

Budget Assumptions:

Currently the SJFM has an annual operating budget of \$46,500, which includes a small surplus.

The primary increased cost items for both models include:

- Extended employment and increased salaries for the SJFM market manager and assistant manager
- Additional casual staff, janitorial services and parking attendants
- Maintenance of the additional space
- Marketing /promotion
- Utilities.

The primary new revenue sources include:

- Fees from an increased number of vendors and modest increase in fees (both Models)
- Rental of spaces at the market to community groups (Model Two).

The budget estimates do not include any government funding. However, the assumption is that the space will be rented to the SJFM for an annual fee of \$1.00, and the City would cover the

cost of major infrastructure maintenance. The budget estimates do not include municipal taxes which would be based on the assessed market value of the facility.

6.6 Communications and Marketing

The community market will require a marketing strategy to inform the citizens of the city of this new initiative and what it offers in terms of an enhanced space, amenities, opportunities for 'buying local' and engaging with others. This section sets out some preliminary considerations for this marketing, bearing in mind that the proposed SJFM budget for marketing is modest (\$10,000/year).

Key Messaging

Wide Selection of Fresh, Local Produce and Foods: The core competitive advantage of the community market is its inventory of fresh produce and foods and clear connection to local farmers and other vendors.

Convenient Hours: The operation of the community market throughout the year and during weekdays makes it possible to position the market as a primary and dependable source of produce and other products, not just an occasional one.

Festive, Family Atmosphere: The local roots of the community market and its more intimate, festive atmosphere are important distinctions it holds over grocery stores.

Place for Gathering and Learning: The activities during market days and the workshop and events spaces offer diverse opportunities for learning and engaging with others from across the city and region.

Brand Identity

Depending on how the community market is managed and named, there will be a need for revamped brand identity to ensure that the public is aware of the new market, its expanded focus, its roots in the SJFM, and its role as a major venue for the SJFM, the City and partner organizations in carrying out community engagement activities.

A revamped brand identity, specifically the SJFM logo and website, is recommended for the following reasons:

- Rebranding (and repositioning) will keep the SJFM brand current and relevant
- An updated, modernized brand identity will highlight the SJFM's advancement as an organization

- Appealing to SJFM's primary target audience as it transition to the community market is essential and an ongoing task that is largely achieved through the organization's visual identity
- An effective rebrand will energize members, signal SJFM's push to raise the bar and create an expectation of growth

Market Aesthetics

Using point of sale aesthetics to create a community market-branded experience in the market environment will be an important aspect to consider before opening at the Freshwater Rd location. Items like colourful ceiling banners, floor clings and décor in keeping with the community gathering objective will help create a warm and dynamic atmosphere.

Market Launch Campaign

Generating media attention around the opening of a new community market in a new location will be an important tool in getting the message out to current and prospective users of the market.

Leveraging the SJFM's and the City's existing Facebook communities to help share the news is also recommended, as well as the use of promoted Facebook posts – a cost effective tool that will help the community market reach its ideal audience.

Finally, providing vendors with simple marketing materials communicating the move will allow them to share the news with their audience, either digitally or through printed signage.

Annual Awareness Campaign

Ongoing awareness marketing will help the community market acquire new customers and raise the profile of the market itself.

In terms of marketing tactics, due to its limited marketing budget, it is recommended that the campaign rely primarily on Facebook advertising, guerilla marketing tactics, social media content publishing (e.g. online videos, photos, blogging) and ongoing public relations efforts. Partnering with other community-minded organizations and events will help generate regular marketing opportunities and ensure the community market deepens its reputation as a contributor to the local community.

6.7 Potential Challenges

The consultations and other research highlighted a few potential challenges to establishing a community market and locating it at the former Metrobus depot building. These are discussed below with proposed actions to mitigate these challenges.

Scope of the Community Market

The proposed community market model is a significant increase from current operations of the SJFM in terms of space, operating costs and activity levels. It will also involve some form of new partnership arrangement with the City. This requires a comprehensive business plan that will support the management of this growth, and the adoption of an appropriate management structure for the community market (as discussed in Section 6.4).

Currently the SJFM is self-sustaining and the aim of this study was to develop a community market model that would also not be dependent on government funding. The budget projections indicate that this should be the case provided the City covers the operational costs related to the building.

Market Management

One of the key challenges faced by community markets is attracting and retaining qualified market managers. As community-based organizations, markets are not always in the position to pay adequate compensation and provide the needed supports to avoid turnover.

The proposed model and operating budget addresses this by including a full-time, year-round market manager with increased compensation, along with extended hours for the assistant manager and additional casual staff to support the manager.

Parking

In our research on farmers'/community markets generally, and our consultations with the three markets elsewhere in Canada, parking was cited as a key concern. As one market manager commented, "It does not matter how much parking is available in the general area, consumers and vendors alike want to park next to the building." It is anticipated that the parking lot at the former Metrobus building (107 spaces) will be adequate for vendors and patrons on market days held on week days/evenings and for the proposed café patrons. The parking lot will likely not be adequate for market traffic on Saturdays at the peak of the season. The City will need to develop arrangements for the use of a nearby parking lot on Saturdays. If this is arranged, there will also be a need for good signage and consumer education on the use of this lot.

Limited Green Space

The former Metrobus building has much more limited adjacent green space than the current location. The conceptual site plan includes features to maximize this space to the extent possible.

6.8 Conclusions

There is wide support for the development of a community market in St. John's to build on the success of the St. John's Farmers' Market. The community market would be a venue for an expanded number of vendors, products and activities for community engagement.

There is also wide support for locating a community market in the former Metrobus Depot building.

A community market would be feasible and sustainable through a partnership of the City of St. John's and the SJFM, using an appropriate management model that capitalizes on their respective expertise and resources.

7.0 Functional Assessment, Concept Plan and Infrastructure Assessment

7.1 Functional Assessment and Concept Plan

In addressing the Community Market Model presented in Section 6.0 as a physical space, the functional space requirements were summarized and interpreted into a schematic concept plan diagram that outlines the critical additional aspects of circulation, arrangement, adjacencies and quality of space.

While the functional requirements are a product of the surveys, committee reviews and recommendations within this report, the concept plan provides a physical vision for the market, taking into account outdoor spaces, visibility from the street, adjacency to neighbouring properties, parking areas, and operational aspects.

In developing the concept plan, the available building area was considered, along with the arrangement of the existing building structure and exterior accesses. This informed the placement of circulation routes and groupings of vendor spaces. Where possible, existing features such as overhead garage doors, doorways and exterior walls were maintained to help minimize construction costs, but also provide opportunities (e.g. the existing overhead doors

provide a natural 'open-air' option for a community market, and provide access for vendor vehicles).

The building's location and exterior circulation routes around it were also considered, including approaches from surrounding properties and trails. Options for site access, parking and street presence were reviewed for potential availability in the event that overflow is required and available. This informed the placement of related aspects in the proposed concept plan.

Appendix D includes the concept plan for a community market at the former Metrobus depot facility. This plan includes conceptual perspective renderings and an interior/exterior site plan.

The total gross floor area (not including perimeter exterior walls and interior partitions) of the proposed market in the concept design is 1,296 m² (13,948 s.f.).

This recommendation for the overall size of the interior space is informed by what we learned from the other markets we consulted in terms of their space, number of vendors and functions for which their respective markets are used. Importantly, the recommendation is also based on the intention to develop the St. John's Community Market as a multi-purpose facility to support a wide range of community engagement activities beyond the market vending.

7.2 Infrastructure Assessment

Based on the architectural concept plan for the proposed community market, the engineering team (structural, mechanical and electrical) completed a cursory, visual site review of the existing building, including a preliminary review of available previous building construction drawings and assessment reports. This review focused on identifying key physical aspects of the building's existing infrastructure as they relate to the proposed concept design. In particular, any identifiable aspects that would likely require potential upgrade, or otherwise require modifications to suit the new design and modern construction Codes, or to address physical deficiencies, were reported.

It is important to note that while the team attempted to outline key aspects for consideration within this report, the findings and recommendations are based only on a cursory visual review within the context of the attached basic concept plan for the proposed market. The report may not consider all aspects that potentially require modifications once any detailed design for the market is undertaken, and the report represents only a general overview of the scope of the concept provided here.

Key items presented in the infrastructure assessment include:

- There appears to be an existing water supply service, but it does not include a required back-flow prevention system.
- There appear to be existing storm and sanitary services from/to the building.
- Parking areas are already available.
- Existing structural systems appear to have been modified over time, but appear to be in fair condition and do not appear to show obvious signs of overstress. However, required minimum design loads have also changed over time and detailed assessment of the structure is recommended.
- The area proposed for the new community market is recommended to be provided with a new ventilation system, and stand-alone gas detection and exhaust systems.
- The heating system would require modifications or replacement with an alternate system.
- The existing electrical service would likely require upgrading, or a new service provided to the proposed community market area.
- The existing lighting system is near end of life and would require upgrading or replacement.

The list above is a summary of the key items from the infrastructure assessment reports prepared by the engineering team. The original infrastructure assessment reports (structural, mechanical and electrical) provide further detail regarding the above items and are included in Appendix E.

Other observations

It was noted during the site visit that the existing building may be situated on what was originally an old landfill site. It is recommended that, prior to any new construction for this location, an assessment be carried out to determine the extent of any risks associated with redevelopment of the site.

If this concept plan were to advance into detailed design, a list of recommended future investigations would include, but not be limited to:

1. Phase 1 Environmental Assessment (the existing site is of a previous use that would normally be suspect to have been exposed to hydrocarbons, and is of a vintage where fixtures and equipment commonly contained PCB, mercury, asbestos, etc.)
2. Structural Analysis of relevant existing structural components and systems to include determination of existing load limitations and capacities.
3. Geotechnical analysis of the site's subsurface conditions through bore holes and/or test pits.

7.3 Construction Cost Estimate

Based on the proposed community market model, the concept design and infrastructure assessment reports, a probable construction cost budget would be in the range of \$2,929,000, exclusive of HST, consultant costs, fees, owner-supplied furniture and equipment, project management fees, and other costs not directly associated with the construction value of the work.

The total gross floor area (not including perimeter exterior walls and interior partitions) of the proposed market in the concept design is 1,296 m² (13,948 s.f.).

Appendix A: Promising Practices from Farmers'/Community Markets

Promising Practices from Farmers'/ Community Markets

1. Foundational principles:

- conceptualize a community market as *neighbourhood anchor* (vs. as stand-alone entity)
 - aim to become one of the city's key community centers
- Signal the importance of the market by including it in the economic development plan of the City/community.
- market's *atmosphere* is a key component
 - put planning and effort into the *dynamics* of the physical location, i.e. maximize appeal, accessibility, face-to-face contact with vendors, etc.
 - think: focus on enhancing the activity at the market (vs. enhancing the look of the market)
 - conceptualize a community market as an 'event' (vs. simply a place to buy food)

2. Governance and staffing

- establish a multi-stakeholder board. They are more likely to result in new products, processes, norms, and behaviors, and are attractive to “newcomers” from different backgrounds
- establish a "Friends of the [...] Market" organization for volunteer, promotional and financial support
 - market manager is key to success – ensure good policies and compensation to attract and retain individual with the right skill set and personal attributes to handle the diverse responsibilities of site management; staff/volunteer management; effective relationships with the board, vendor, partners; marketing
 - vast majority of markets are managed via written rules. These incorporate mechanisms for dealing with violations and disputes, including a process of appeal
- volunteers are a key asset
 - worth the effort to keep volunteers informed, active and happy, and get their feedback regularly
 - make use of written documents and email lists to streamline the process of defining duties, assigning roles, scheduling, etc

- maintain list of past volunteers as these folks are likely to assist in the future and/or help spread word of future developments/offerings
- prepare to adapt/grow
 - have appropriate administrative structures/tools/policies in place so as to be ready to transition, for example, from small to large
 - adopt/integrate an attitude of innovation, i.e. incorporate structures/frameworks/practices re: continuing to value and support innovation
 - moving to a new space creates expectations from all stakeholders. Need to be alert to this, flexible and willing to adapt as needed
- gather data on performance, e.g. hourly customer counts, weekly vendor sales
 - regularly report these to vendors/stakeholders
 - allows a market to document economic/community impact, evaluate promotional efforts, and adjust plan/fees/budgets

3. Target clientele/promotion/networking

- reach out to:
 - young families
 - youth
 - seniors
- promote the market to tourists
 - serve as a showcase for local products and culture
 - Caution: consider tourists as a bonus; primary mission is to serve the local community (vs. becoming an entertainment/festival market). En masse visits by cruise-ship passengers, for example, would likely be a turnoff to local consumers/residents.
- forge strategic partnerships with local businesses and community groups

4. Design of the space

- keep it simple and grassroots but vibrant
- *embrace/celebrate history* of the market site
 - via posters, displays, thematically fashioned stalls or seating, etc.

- install/provide sufficient roadside signage
 - outside and inside the site
 - ensure provision of sufficient *advance* notice for turning onto the site
- maximize outdoors time, while permitting operation during cold/inclement weather, i.e. recognize that consumers and vendors enjoy being outside
- parking is key to a market's success
 - aim to provide 2-3 parking spaces per vendor
 - vendors also require access, e.g. for loading/unloading produce, equipment, staff, etc.
- market should look/feel 'full'
 - stalls should appear tightly packed, with no gaps
 - vendor offerings should appear bountiful/plenty, i.e. attractive and appealing
 - situate flowers vendors on aisle corners to draw people in
 - aim to create a herding effect; consumers tend to flock to well-attended stall
 - Caution: avoid U-shaped stalls or alcoves, which can make consumers feel trapped
- locate high-volume/big-draw vendors in the interior of the space, so that consumers will be drawn through all other offerings
- situate vendors in the same location each week
 - post/distribute the weekly floorplan – including via social media as a marketing tool
- build *flexibility* into infrastructure for seating/table areas
 - balance the amount of fixed seating with other potential uses of that space
- provision of a dedicated *kitchen space* is advantageous
 - food-preparation facilities will increase opportunities for event rentals and food workshops/demonstrations
- provide bins for garbage, recyclables and compostable matter
 - consider partnering with businesses or community groups on provision of bins
 - consider partnering with a community garden on the pickup of compostable matter (or require vegetable/fruit farmer vendors to compost if they do not already)
- consider consumer 'security', i.e. people in buying mode should not have to watch out for bikes, skateboards or an impromptu dogfight

- explore installation of technologies to make the process of paying for goods more convenient for the consumer
 - establish mobile payment options; consumers spend more when vendors are not "cash only"
 - "LocallyGrown" (<http://locallygrown.net>) is an example of a mechanism/network that creates an online market, allowing consumers to buy online, then pick up purchase
 - on-site ATM machines reduce the risk of losing customers without cash
- take advantage of cyberspace
 - encourage/support vendors in maintaining web presence and social-media usage, e.g. vendors Tweet, text, Facebook or blog re: their offerings, harvest dates, market appearances, etc.
 - consider posting recipes, serving suggestions, storage tips, product information, vendor profiles, etc.

5. Activities

- host/schedule 'special events', thereby raising interest and attracting new consumers
 - contribute to an atmosphere that is lively, fun and educational
 - Caution: focus of most of these events best placed on food, gardens and local products, the arts (e.g. cooking classes for kids)
- outreach activities are key to community building and to market success. For instance, consider:
 - transporting seniors to the market (particularly when the market is otherwise slow)
 - promoting to young professionals via professional organizations
 - inviting participation by members of ethnic communities (e.g. associations and students)
 - promoting the community market through 'tourism' channels
- Caution: when market's offerings/activities are too disparate, vendors may complain of crowding and low sales
 - monitor that ancillary activities do not override consumer purchasing

6. Vendors and products

- need *critical mass* of vendors, i.e. market should look/feel 'full'
- recruiting '*preferred*' vendors is key

- be selective over accepting vendors
 - enforce quality standards
 - vendors should offer fresh, high-quality produce and display ample/sufficient quantities
 - select an appropriate proportion of vendors of premium, *non-food* products/services
- appearances by *Guest vendors* (of craft/specialty products) can create a buzz without steering a market outside of its primary mission, or without requiring a season-long commitment on the part of a (preferred/desired) vendor
- re: *presentation*, vendors should emphasize consumer 'appeal'
 - integral to a successful product is attractive/inventive presentation and packaging (being conscious of being green if this is prioritized by consumers)
 - clear, high-visibility labelling and signage will contribute to vendor success
 - labels/signs should be informative, and even entertaining/humorous
 - assist vendors to develop clear/attractive signage and stall displays
- support young/future vendors, perhaps via a 'kids' market' area
- 'niche' offerings tend to be particularly successful at markets
 - cultivate produce that may be considered unusual, heirloom, specialty, etc.
- consumer service is key
 - offering product guarantees will boost consumer confidence and sales
- TREND: increased participation of young farmers
 - while (U.S.) farmers are, on average, aging, farming involvement by younger people is in evidence at many farmers' markets
 - it is younger farmers/vendors who are frequently leading the way with innovative offerings (e.g. gourmet/niche/value-added products, pasture-raised animals, heirloom seedlings, artisanal/handcrafted products)
- TREND: increased health consciousness and environmental consciousness
 - demand exists for products that are organic, gluten-free, etc.
 - efforts to reduce waste and packaging will appeal to many consumers

7. Ongoing educational and marketing efforts

- devote effort/planning to fostering (new) consumer habits, i.e. with respect to community building, encourage people to linger, relax, chat, meet friends, etc.
- inform/reinforce to (prospective) consumers how community market differs from grocery stores
- toward community building, administrators/managers should feel free to coach/motivate vendors about friendliness, interactivity with consumers, high standard of consumer service, etc.
- explore/support/educate about *vendor certifications*, e.g. organic, local, no-spray, etc.)
 - liaise with government and agricultural organizations
- provision/placement of bins for garbage, recyclables or compostable matter represents an opportunity for education (both vendors and consumers)

8. Challenges

- space for parking is one of the chief factors limiting a market's growth
- factors associated with markets that fail:
 - manager is volunteer or low-salaried
 - manager capacity - high turnover rate, inexperienced, overworked
 - small size (too few vendors)
 - shortage of products or lack of product diversity

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Appendix B: Detailed Design Requirements and Considerations

Detailed Design Requirements and Considerations

The tables below set out the detailed design requirements and considerations for the interior and exterior space based on the functions set out in Section 6.3.

1. Vendor stalls

A. EXTERIOR SPACE		
Type of Vendor	Proposed Size and Number of Stalls	Other Considerations
Farmer vendors outside (10)	<p>Each outside stall to accommodate:</p> <ul style="list-style-type: none"> - farm truck (9 ft [w] x 22 ft [d]) - space for vendor to stand/work (3 ft) - table depth (2.5 ft) in front of the truck x 8 ft long <p>Dimensions of each stall: 9 ft (w) x 27.5 ft (d)</p> <p>All farmers are expected to need two stalls. These will accommodate a truck and up to three tables positioned in front of and alongside the truck.</p> <p>Total farm vendor stalls: 20</p>	<p>Appropriate secure canopies are needed (top and side panels).</p> <p>There is a need to further consider the pros and cons of a fixed or semi-fixed canopy over the farm vendor area, given the need for secure canopies but recognizing the challenges of driving and snow clearing around fixed canopies.</p>
Other vendors outside (5)	<p>Each stall to accommodate an 8 ft table and space behind for working/storage: 8 ft (w) x 7 ft (d)</p> <p>Total other vendor stalls: 5</p>	

B. INTERIOR SPACE		
Type of Vendor	Proposed Size and Number of Stalls	Other Considerations
Farm vendors inside (10)	<p>Set up 6 stalls 9 ft x 27.5 ft to accommodate 3 farm vendors with trucks at front of building and inside the garage doors. (Each farmer to use two stalls.)</p> <p>Set up 7 stalls size 8 ft (w) x 7 ft (d) to accommodate 7 farm vendors with 1 table, and standing and storage area behind table.</p>	

B. INTERIOR SPACE		
Type of Vendor	Proposed Size and Number of Stalls	Other Considerations
	Total farm vendor stalls: 13	
Food vendors: 6 hot food vendors	<p>Fixed stalls to accommodate 2 ft counter on wall and shelving, 4 ft standing space, 3 ft (d) counter or display cooler, 8 ft (w) counter or table</p> <p>Dimensions of each stall: 8 ft (w) and 9 ft (d)</p> <p>Estimate 4 vendors (prepared foods, hot foods, SJFM coffee stall) requiring 1 stall each</p> <p>Estimate 2 vendors requiring 2 stalls each (4 total)</p> <p>Total fixed stalls: 8</p> <p>Need to have 2 of these fixed stalls near the entrance to form one larger stall (16 ft [w] x 9 ft [d]) so it can be used by (a) vendor(s) to operate a counter/café during the week days.</p>	<p>These are busiest vendors with long line ups at times. Split these fixed stalls up into two clusters to avoid traffic congestion.</p> <p>Each fixed stall should have a sink (or a shared sink between two vendors) and electrical outlet(s) and be set up on a wall.</p> <p>Some of the hot/prepared food vendors will have refrigerated display cases /coolers. This is taken into consideration in calculating the fixed stall size. Vendors would be required to provide their own cases/coolers.</p>
Other vendors inside in non-fixed stalls (45)	<p>Each stall to accommodate 4 ft standing /storage space, 3 ft x 8 ft table</p> <p>Dimensions of each stall: 8 ft (w) and 7ft (d)</p> <p>Estimated 35 vendors require one stall each and 10 vendors will share a stall</p> <p>Total non-fixed stalls: 40</p>	

2. Other space requirements and considerations

A. EXTERIOR SPACE	
Area	Considerations
Exterior green space and paved area	<p>Visible pedestrian "gateway" to the site</p> <p>Green space adjacent to building with an appropriate landscaped or structural barrier between Freshwater Road and the public area out front</p> <p>Area for entertainment and children's play equipment</p> <p>Area for entertainers with electrical outlets</p> <p>Benches/tables for 50 people</p> <p>Landscaped to extent possible</p> <p>Hedge or fence to serve as safety barrier for children along the front of building</p>
Parking	<p>Need at least 2 to 3 spaces per vendor for consumers plus parking for vendors (cited in research)</p> <p>Estimate 300 spaces maximum needed (based on 75 vendors at peak)</p> <p>Bicycle rack</p> <p>Good signage will be needed to direct visitors coming from each street direction and the parking lots.</p>

B. INTERIOR SPACE	
Function	Requirements and Considerations
Interior space	<p>Fully accessible throughout</p> <p>Swinging doors with automatic activation buttons in addition to the garage doors</p> <p>Good climate control and ventilation throughout to avoid fumes from garage and to keep food odours out of crafts area</p> <p>Good natural light (e.g. skylights)</p> <p>Aisles 10 ft to 11 ft wide</p>

B. INTERIOR SPACE	
Function	Requirements and Considerations
	<p>Ideally there will be flexible partitions to make the space being used larger or smaller as needed and for rentals. Specifically:</p> <ul style="list-style-type: none"> • The space for non-fixed vendor stalls and seating area could be partitioned with pipe and drapes into an area for community rentals on non-market days. • The farm vendor area could be separated with a movable partition so it is suitable for rental to groups such as theatre groups for rehearsals or sports groups. <p>Vendor Access:</p> <ul style="list-style-type: none"> • The set-up of outside stalls and should not block the access for trucks during the market hours. • An access aisle (for vendors only) to the right of the drive-in indoor spots would help vendor flow during setup and takedown.
Interior – Market Kitchen	<p>The kitchen needs to provide the essentials required to support licensing by the Province of Newfoundland and Labrador and the proposed functions set out in section 6.3.</p> <p>It should have enough preparation counter space for two vendors to prepare food at the same time.</p> <p>Two access doors to allow for flow of vendors</p> <p>The kitchen should be adjacent to the eating area and near the area that could be partitioned for community-event rentals.</p> <p>Equipment:</p> <p>Note that it will be difficult to be certain on all applicable Service NL requirements until design development and other details of equipment quantities, sizes, types are realized at a later stage. It is also important to add that the size and construction cost of this kitchen is also dependent on the food being prepared in the kitchen. For example, if cooking involves “grease-laden vapours”, then a commercial-grade exhaust hood over the cooking equipment, complete with fire-suppression system will be required.</p>

B. INTERIOR SPACE	
Function	Requirements and Considerations
	<p>This type of system tends to be very costly. Also a consideration for any vendor stalls that involves cooking resulting in “grease-laden vapours”.</p> <p>If it is decided that the type of food to be prepared will not require the exhaust hood and fire suppression system, the following list of equipment is proposed to meet the functions in section 6.3:</p> <p>Two refrigerators (1 commercial, 1 regular with freezer), commercial dishwasher, ceramic-top stove, two ovens, one microwave, three compartment sink for dishes, hand sink, warming unit to store chafing dishes, shelving, drawers.</p>
Other interior spaces	<p>Seating area for 75-100 people near food vendors</p> <p>Area for entertainers and play area for children adjacent to the seating area</p> <p>Workshop with fixed wall near the kitchen to accommodate 40 people theatre-style and 15 to 20 boardroom-style</p> <p>Two office cubicles / offices</p> <p>Washrooms: unisex or more female than male, one with baby change space</p> <p>Storage: tables, canopies, supplies, lockers for rental by vendors for secure storage (est. total 30 ft x30 ft)</p> <p>Janitor storage room</p> <p>Mechanical room</p> <p>Other optional spaces (if space permits)</p> <ul style="list-style-type: none"> • Family washroom with change table • Washroom in produce stall area • First aid / rest room • Janitor room <p>Other equipment</p> <p>Sound system for workshop space, buskers, announcements</p>

B. INTERIOR SPACE	
Function	Requirements and Considerations
	<p>TV screen for announcements (note: this also supports access for people with hearing impairments)</p> <p>Bins for recyclables/compostables</p> <p>Covered storage bin for each food vendor and dumpster</p> <p>ATM. Other markets use the ATM as a revenue generator. Any safety concerns with having this on-site could be mitigated by making arrangements for the money to be loaded into the ATM on market days only</p> <p>Defibulator</p> <p>Carts or other devices for vendors with relatively heavy products to move into their stalls</p> <p>Carts and/or pick-up area at front of building for customers who do bulk purchases to drive up to building</p>

Appendix C: Community Market Annual Budget Estimates

**COMMUNITY MARKET – ESTIMATED ANNUAL OPERATING BUDGET
(ST. JOHN'S FARMERS' MARKET BUDGET ONLY)**

Item	Model One - City as Manager, SJFM as Tenant \$	Model Two - SJFM as Manager \$
Revenue		
Vendor fees	124,410	124,410
Coffee sales	16,065	16,065
Merchandise sales	3,000	3,000
fund raising	3,700	3,700
ATM fees	2,625	2,625
Rental market kitchen	0	18,000
Rental workshop space (with kitchen usage)	0	24,000
Rental truck vendor area	0	18,000
TOTAL REVENUE	149,800	209,800
Expenses		
<i>Salaries /contracts</i>		
Manager	50,000	50,000
Asst manager	7,875	15,600
Janitorial	10,500	24,000
Casual workers	2,000	4,000
Parking lot attendants (traffic/snow shovelling around canopy)	5,040	5,040
Total salary	75,415	98,640
MERC	10558	12,823
Total salary and MERC	85,973	111,463
<i>Operating expenses</i>		
Coffee supplies	3,850	3,850
Fees for facilitators for CM workshop/demonstrations (e.g. chefs)	4,000	4,000
Rent	1	1
Municipal taxes (TBD)		
Utilities	9,000	18,000
Marketing (creative and advertising)	10,000	10,000
Insurance	2,500	3,500
Accounting/legal	6,000	8,000
WHSCC	950	1,250

Item	Model One - City as Manager, SJFM as Tenant \$	Model Two - SJFM as Manager \$
Staff /board development /memberships	1,500	1,000
Business fees/licenses	150	150
Telephone, website, internet	1,500	1,500
Office supplies	600	600
Cleaning supplies	1,000	2,000
Board Meetings	600	600
Merchandise	1,500	1,500
Volunteer appreciation	600	600
Garbage removal	0	0
Pest control	1500	3,000
Repair and maintenance	3,000	6,000
Total operating expenses	48,251	65,551
TOTAL EXPENSES	134,224	177,014
SURPLUS/DEFICIT	15,576	32,786

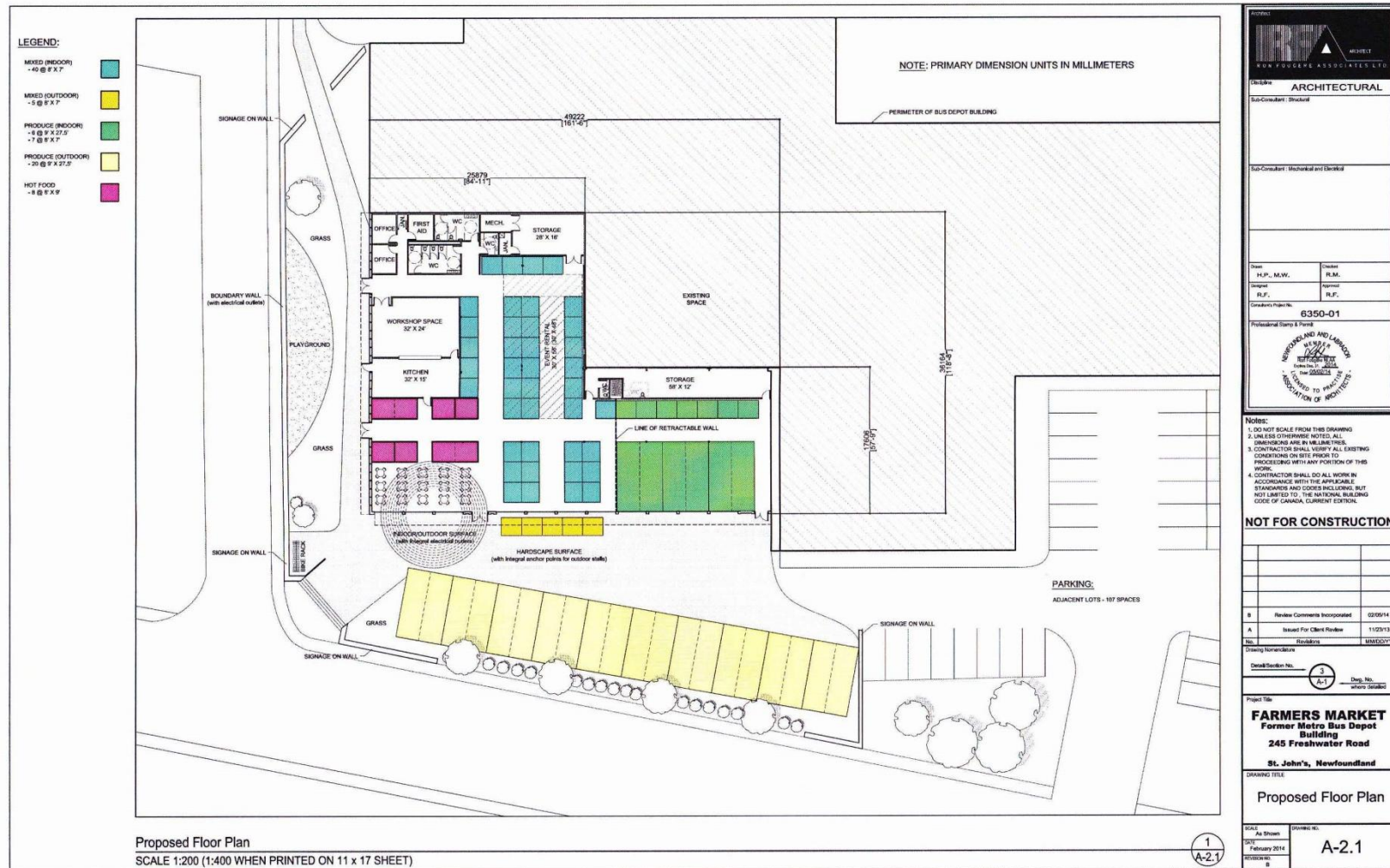
Appendix D: Market Site Concept Plan



DECEMBER 2013



DECEMBER 2013



Appendix E: Infrastructure Assessment Reports

MECHANICAL AND ELECTRICAL ASSESSMENT

February 13, 2014

Rowsell Appleby Newton Engineering Inc. was retained by Fougere Menchenton Architects to perform a building systems analysis of the former Metrobus Depot in St. John's, Newfoundland and Labrador. This analysis took place on February 13, 2014 and was carried out by Craig Rowsell, P.Eng, P.Tech, director of mechanical engineering, and Matt Appleby, P.Eng, electrical engineer. This analysis was performed as part of a feasibility study investigating the work required to renovate part of the former depot into a farmer's market.

It must be noted that the level of investigation is limited to that which can be visually observed during a walk-through tour of the building in question. Unless specifically noted otherwise within this report, no testing or material samples were collected, no quantitative measurements of space parameters (ex. space temperature, lighting levels) were taken, and no finishes or coverings were removed.

For the most part, existing buildings are not required to comply with the latest editions of the various building codes and standards. Although it is assumed that a given building met the "code of the day" at the time of its design and construction, such codes are constantly being changed, created, and withdrawn. Consequently, the systems and components of a building designed 50 years, 20 years, or even 5 years ago may not necessarily match those of the same building designed today. Therefore, a formal code review was not performed as part of this energy control study. Nonetheless, this report may contain references to code violations or deficiencies where deemed appropriate by the authors.

The following is a summary of our observations:

Mechanical

1. The water entry does not have a reduced pressure type main backflow prevention system as now required by the city of St. John's.
2. The sanitary, vent and domestic water piping, where exposed, appears to be in good condition.
3. The existing hot water heating piping header shows sign of corrosion.

4. The existing hot water heating boiler appears to be of the same age as the original building.
5. The building is sprinklered.
6. The area to be renovated is heated with ceiling mounted hydronic unit heaters.
7. The existing vehicle exhaust system serves the area to be renovated as well as the rest of the vehicle bay.
8. There is no mechanical ventilation for the area to be renovated.
9. The invert of the existing sanitary system is unknown; meeting it with a new sanitary pipe may or not be possible.

Based on our observations we recommend the following:

1. Provide a new ventilation system for renovated area. This system could be expanded to carry part or all of the heating load for the new space. Given the large, open nature of the area we recommend a heat pump as an economical heating solution.
2. The building may require a new sanitary line entrance if the existing invert cannot be met.
3. Given the age of the building, we would recommend an upgrade to the existing building control system.
4. Given the suspected age of the hot water heating boiler, we recommend investigating its existing condition.
5. The space would require a stand-alone gas detection and exhaust system, separate from the system presently installed in the vehicle bays.
6. The new space will require modifications to the existing heating piping and the installation of new ceiling mounted unit heaters. As an alternative, electric heating fixtures could be used. Refer to the electrical section below for further comments.
7. The water entrance must be upgraded to current St. John's standards if any significant work takes place in the building. This would require the installation of a new main backflow preventer. Alternatively, a new water entrance with backflow prevention could be installed.

8. If the existing water service is to be reused, it must be extended to meet the proposed new services with recirculation pipe and pumps.
9. The sprinkler system shall be modified as required by the new layout.

Electrical

Observations on the existing systems:

1. The main service entrance is a 120/208V, 3 phase, 4 wire, 800A distribution board, giving the building a maximum electrical capacity of 230 kVA. This board has ample room for additional circuit breakers, however we anticipate that there is very little capacity remaining on the service.
2. Lighting throughout the area in question is provided by fluorescent strip fixtures. The fixtures are supplied from branch circuit panels throughout the area.
3. Fire alarm detection is provided in the space by flow switches on the sprinkler pipes and fire alarm devices.
4. The space is mostly open with very few electrical services already available for reuse.

Based on our observations we note that the following actions would be required for the proposed renovation:

1. If the new usage for the space requires a substantial increase in electrical load, either the existing building electrical service should be upgraded or else a new service installed for the exclusive use of the market space. A second service would only be allowed by the power utility if the market were completely isolated from the rest of the building, with fire rated walls separating the different tenancies.
2. New branch circuit panels will be required in the market space to serve the new loads. These will be fed from either an upgraded service in the far end of the building, or else a new service exclusive to the market area.
3. If power will be required at vendor stalls away from walls, power drops will have to be installed either overhead or in floor boxes. Overhead drops are recommended being cheaper and more flexible.
4. The existing light fixtures in the space are approaching the end of their useful life and should be replaced with new, energy efficient models. New light fixtures could also incorporate bodine ballasts for emergency lighting to remove the need for wall mounted battery packs.

5. New fire alarm devices shall be installed for the market. These devices shall be run back to the existing fire alarm panel in the depot and connected to spare initiating and signaling circuits.
6. The existing space is heated via oil fired hot water. If the market space is separated from the depot a new heating system will be required. Electric heat is likely the most economic option, but would require either a stand-alone electrical service or an upgrade to the existing building electrical system.

If you have any questions regarding our findings, please do not hesitate to contact us.

Regards,
RAN Engineering Inc.

A handwritten signature in black ink, appearing to read 'M Appleby', with a stylized, cursive script.

Matt Appleby, P. Eng
Director - Electrical Engineering

A handwritten signature in black ink, appearing to read 'Craig Rowsell', with a stylized, cursive script.

Craig Rowsell, P.Eng, P.Tech
Director - Mechanical Engineering

STRUCTURAL ASSESSMENT

1.0 TERMS OF REFERENCE

DBA Consulting Engineers Ltd (DBA) was retained by **Fougere Menchenton Architects (FMA)**, on behalf of the **City of St. John's** to carry out a brief structural review based on a cursory site visit and review of existing drawings of the former Metro Bus Complex located at Freshwater Road, St. John's. Specifically, as it relates to the creation of a Farmers Market within a portion of the existing structure.

2.0 SITE REVIEW

The site review was carried out by Art Singleton, P. Eng. and Bert Ings, C.E.T. of **DBA** on February 13, 2014, accompanied by Todd Fitzgerald on behalf of the owner and other members of the consultant team.

3.0 AVAILABLE DRAWINGS

There are no structural drawings available for review prior to the meeting, however structural drawings and technical reports were collected from the complex during the site visit and used to create this summary report.

A copy of the structural drawings for the original building dated 1956 has been retained.

Additionally, a copy of the structural drawings for the 1972 building extension has been retained.

In addition to the drawings, copies of the following reports have been retained;

- 'Roof Structural Investigation - Metro Bus Transit Centre' by Sheppard Hedges Green dated December 1992
- 'St. John's Transportation Commission - Metro Bus Transit Centre - Open Web Steel Joist Inspection' by SGE Group Inc. dated July 1997

The above reports have been scanned and included with this report as an Appendix; the structural drawings remain with **DBA**.

4.0 BUILDING DESCRIPTION

4.1 General

It is my understanding; the complex was initially constructed in 1957/1958 with expansions carried out in 1972, 1979 and 1983. Furthermore structural upgrades were carried out in 1995 and 1996.

The complex generally consists of a single story conventional steel framed structure with a two story conventional steel framed office section during a renovation.

4.2 Structural Systems

.1 Original Building

From the structural drawings the original building was constructed in 1957/58 and generally consists consist of 1 ¾" Eastern Spruce sheathing on open webbed steel joists (OWSJ). The OWSJ are supported by steel beams and columns.

Additionally the foundation system generally consists of a poured in place concrete foundation wall supported by a continuous strip footing with interior piers and footings at interior column locations.

It should be noted rob Joists were used and remedial measures were taken, a copy of the Rob Joists investigation report and remedial measures is available for consideration upon request.

.2 1972 Extension

From the structural drawings collected and extension to the original building was constructed in 1971 and generally consists consist of 38mm metal deck on OWSJs. The OWSJ's are in turn supported by steel beams and columns.

The foundation system generally consists of a poured in place concrete foundation wall supported by a continuous strip footing with interior piers and footings at interior column locations.

.3 1979 and 1983 Extension

No structural drawings have been found for the two storey office extension.

5.0 BUILDING CONDITION

.1 Original Building

The structure of the original building is in fair condition based on the cursory review. A structural review carried out in 1992 by SGE identified concerns with the type of wood fibre roof decking in certain areas of the complex as well as the joists capacity in a high/low roof area of the complex.

The OWSJ were subsequently reinforced by adding an additional beam line and the wood fibre roof decking was replaced with metal decking during a roofing replacement project.

There was some minor damage observed to the exposed interior columns within the bus storage area. Remedial details have been requested by the Owner and repairs will be completed on these columns.

Other than noted above there were no obvious signs of overstress based on the brief review of the existing structure.

.2 1971 Extension

The structure of the original building is in fair condition. No finishes were removed from these areas; the brief walk through of this portion of the building presented no obvious signs of overstress or structural concern.

.3 1979 and 1983 Extensions

No finishes were removed for this area, the brief walk through of this portion of the building presented no obvious signs of overstress or structural concern.

6.0 CONCLUSIONS AND RECOMMENDATIONS

In general, based on cursory review and discussions with owner the building structure appears in reasonable condition without any significant structural concern.

Although no analysis of the existing roof structure was completed, a few comments with respect to current National Building Code of Canada (NBC) Snow Load requirements may be of importance.

The 2010 NBC requirements for Design Snow Load have changed significantly from editions of the NBC prior to the year 2000. The latest NBC Ground Snow Load is based on a 1 in 50 year snow; were earlier versions of NBC were based on a 1 in 30 year snow. Additionally, NBC has defined Importance Categories (Normal, High and Post Disaster) for all buildings. Importance Factors are assigned to Climatic Loads based on Building Importance Category which vary due to occupancy for different buildings, for example a school is now classified as 'High Importance' and the Climatic Design Loads are increased by the Importance Factor accordingly.

The design Snow Load for a roof based on current NBCC is 63psf (3.02kPa), this assumes a normal occupancy with an Importance Factor ($I_s = 1.00$). From the structural drawings, the design Snow Load for the roof structure of the Original Building is 40psf (1.90kPa). Additionally, from the structural drawings, the design Snow Load for the roof structure of the 1971 Building Extension of is 58psf (2.78kPa).

It is my understanding from information collected that various areas of the complex have been reviewed and/or upgraded throughout the years to meet the requirements of NBC that were prominent at the time.

Additionally, the structure has demonstrated satisfactory performance for more than 30 years and shows no obvious signs of overstress or deterioration as required by NBC 2010 User's Guide - Structural Commentary 'L' clause 18, "Evaluation based on Past Performance".

It is recommended that a thorough review of the structure be completed during any future renovation work as finishes are removed and structure exposed to reaffirm above statements.

7.0 LIMITS OF LIABILITY

The intent of the building review was to determine in a general way the condition of the building structure and collect and review all available information. The review was of a visual nature from a single walk through the building without any removal of finishes or dismantling of building components.

Our comments are not a guarantee of the building condition but rather a general overview based on the limited site review and existing Structural Drawings.

This report is confidential and may not be copied or distributed without permission. The material in said report reflects the best judgment in light of information available to **DBA** at the time of preparation. Any use which a third party makes of this report are the responsibility of the third party, **DBA** accepts no responsibility for damages as a result of decisions made based on this report

February 21, 2014

DBA Consulting Engineers Ltd.

A handwritten signature in black ink, appearing to read 'J. Art Singleton'.

J. Art Singleton, P. Eng.
President – Structural Engineer

**ROOF STRUCTURAL INVESTIGATION
METROBUS TRANSIT CENTRE
FRESHWATER ROAD
ST. JOHN'S, NEWFOUNDLAND**

Prepared For:

St. John's Transportation Commission
245 Freshwater Road
St. John's, NF
A1B 1B3

Prepared By:

Sheppard Hedges and Green
Consulting Engineers and Project Managers
P.O. Box 13144
St. John's, NF
A1B 4A4

Project No. S-1605

December 1992

TABLE OF CONTENTS

	<u>Page</u>
1.0 Introduction	1
2.0 Background	3
3.0 Existing Roof	4
4.0 NBCC 1990 Requirements	12
5.0 Structural Considerations	15
6.0 Recommendations	17

DRAWING S-1 ROOF FRAMING PLAN

1.0 INTRODUCTION

In October 1992, Sheppard Hedges and Green Limited (SHG) was retained by the St. John's Transportation Commission to carry out an inspection and structural assessment of the roof at the Metrobus facility on Freshwater Road in St. John's, Newfoundland.

Site visits were conducted by SHG to carry out a visual inspection, and to take necessary field measurements of the roof structural framing members. The field work included:

- an assessment of the structural members supporting the roof including size and spacing.
- measurement of height differentials between roof sections.
- investigation of the condition of decking materials, including steel deck, wood fibre deck and wood planks which have been used to upgrade in areas of severe damage due to leaks.
- determination of extent of deterioration of structural members due to rusting.

The ensuing structural analysis included the following tasks:

- preparation of an as-built drawing for the roof structural framing members.

- evaluation and calculation of roof snow loads as per National Building Code of Canada (NBCC) 1990.
- calculation of roof dead loads based on the weight of construction materials.
- determination of the load carrying capacity of the roof structural members to evaluate their adequacy in relation to current codes and standards.
- assessment of the loss of strength of structural steel members due to corrosion.
- determination of the suitability and adequacy of roof decking materials.

The recommendations made in this report are based on the capacity and adequacy of the roof elements, as specified by the National Building Code of Canada, and applicable CSA standards.

2.0 BACKGROUND

A roof inspection was completed in June 1992 by Tremco Roofing Division of St. John's. At that time, a roof composition and condition summary was carried out. The information found in the inspection report was verified in the field by SHG staff in order to produce drawings for the structural evaluation. Discussions with personnel from Tremco revealed that the wood fibre deck described in the roofing report could not be definitely classified as Tectum. However, it has been assumed for the purpose of this study that the wood fibre decking is Tectum. SHG has obtained applicable manufacturer's data to aid in its assessment.

3.0 EXISTING ROOF

Figure 1 shows a plan of the roof of the St. John's Transportation Commission Facility. On this figure, individual portions of the roof are separately labelled to distinguish differing construction and conditions. Figure 2 is an isometric sketch of the building indicating the height differentials of the roof sections.

General comments regarding the construction and condition of the roof sections are based on visual inspections and on information found in the inspection report completed by Tremco Roofing Systems.

Table 1 summarizes the construction of the various roof sections. Figures 3, 4 and 5 provide sections indicating the various types of construction.

Roof sections B, E and G consist of a 4 ply built up roof over a wood fibre deck. These sections have been recapped with an additional 4 ply built up roof over 12 mm fibreboard. In addition, a further similar recap has been applied to Section G. Several areas of the roof have experienced leaking problems in the past few years resulting in severe deterioration of the wood fibre deck. At these locations, the wood fibre has been removed and replaced with 38 mm x 235 mm wood decking.

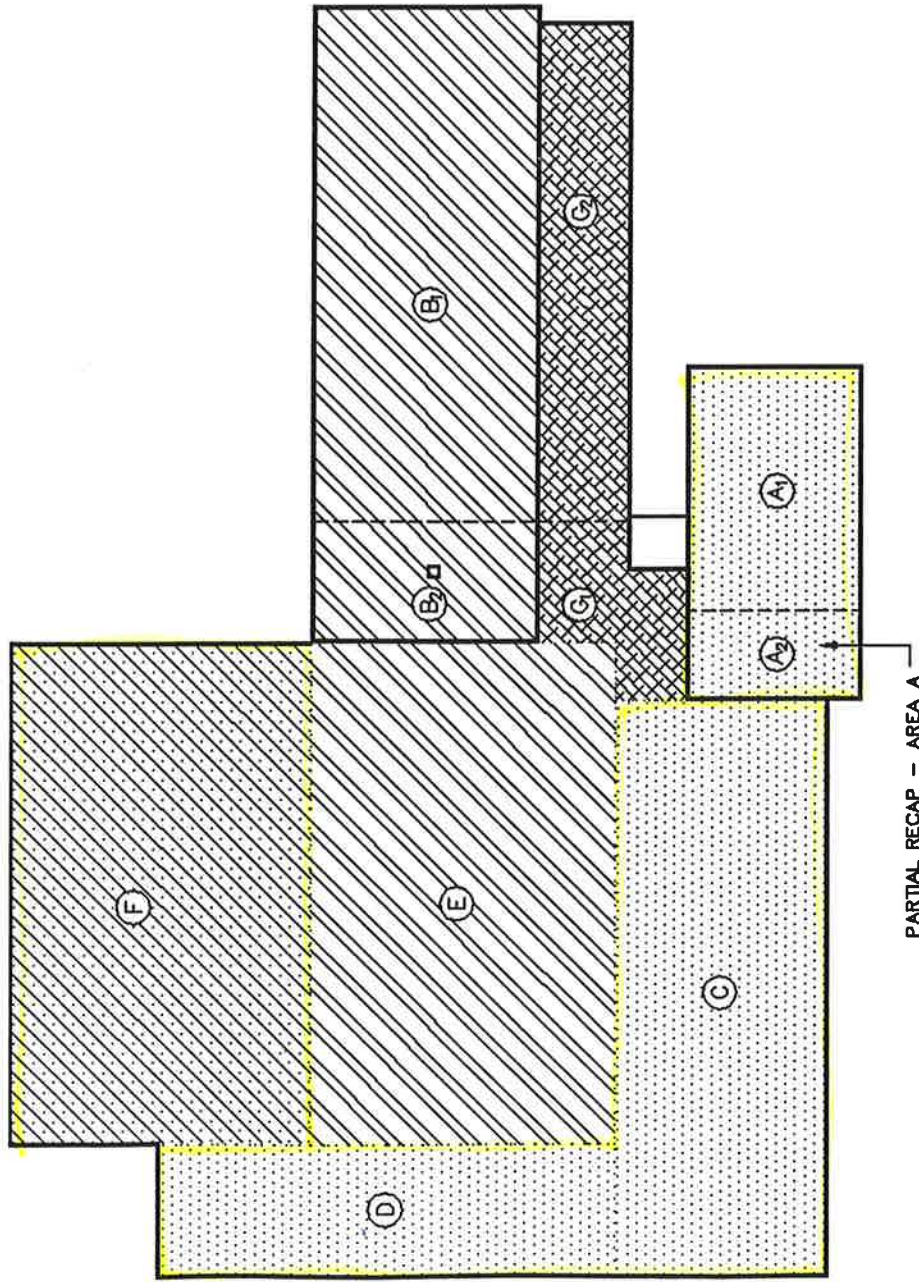
Roof sections A, C, D and F are of more recent construction. These sections have a 4 ply built up roof over a steel deck with a vapour retarder and rigid insulation. A recap consisting of 4 plies of #15 felt and 12 mm fibreboard has been applied to Section F and a portion of A which is contiguous with Section C.

Drawing S-1 is the roof framing plan for the Metrobus facility, produced from the field measurements taken during site visits. The drawing was used in the structural analysis and is provided for information only.

Table 1

ROOF CONSTRUCTION							
Section	A	B	C	D	E	F	G
AREA (M ²)	360	953	797	382	1035	1035	437
DECK	Steel	50 mm wood fibre	Steel	Steel	50 mm wood fibre	Steel	50 mm wood fibre
VAPOUR RETARDER	Yes	None	Yes	Yes	None	Yes	None
INSULATION	75-100 mm tapered fibreglass	None	75-100 mm tapered fibreglass	75-100 mm tapered fibreglass	None	50 mm rigid insulation (assumed)	None
MEMBRANE	Four ply built-up roof with four ply recap roof at one end	Four ply felt built-up roof and recap roof	Four ply felt built-up roof and gravel	Four ply felt built-up roof and gravel	Four ply built-up roof with recap roof	Four ply felt built-up roof and recap roof	Four ply felt built-up roof and two recap roofs

Note: Recap roof is 12 mm fibreboard with 4 plies felts and gravel.



STEEL DECK, VAPOR RETARDER,
75-100mm TAPERED INSULATION,
4 PLY BUILT UP ROOFING & GRAVEL



50mm WOOD FIBRE DECK, NO INSULATION,
4 PLY BUILT UP ROOFING PLUS
2 RECAPPED ROOFS



50mm WOOD FIBRE DECK, NO INSULATION,
4 PLY BUILT UP ROOFING PLUS
RECAP ROOF



STEEL DECK, VAPOR RETARDER,
50mm RIGID INSULATION,
4 PLY BUILT UP ROOFING & GRAVEL
PLUS RECAP ROOF



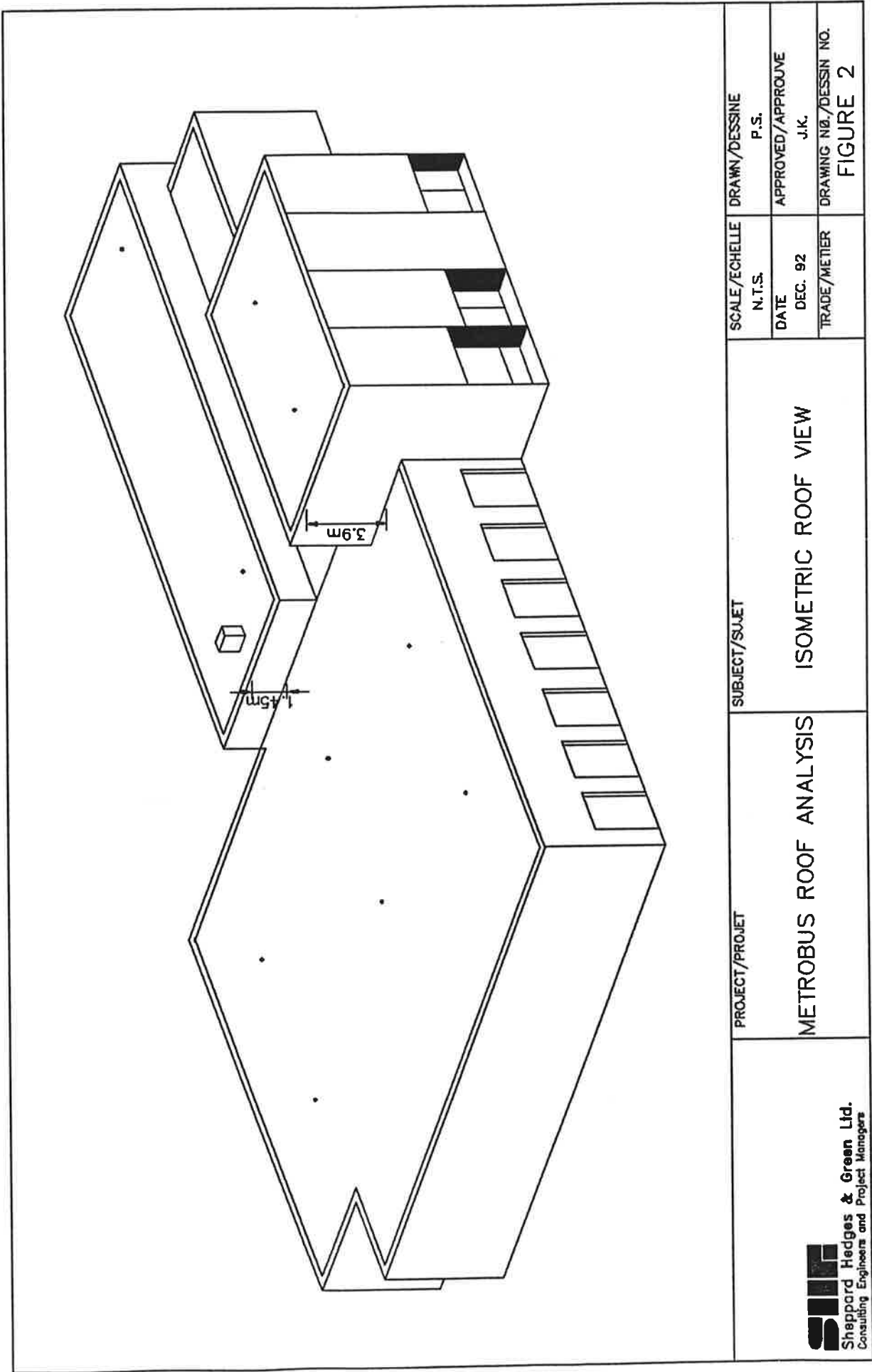
NOTE:
RECAP ROOF IS 12mm FIBREBOARD
PLUS 4 PLY 15# FELTS & GRAVEL


PARTIAL RECAP - AREA A

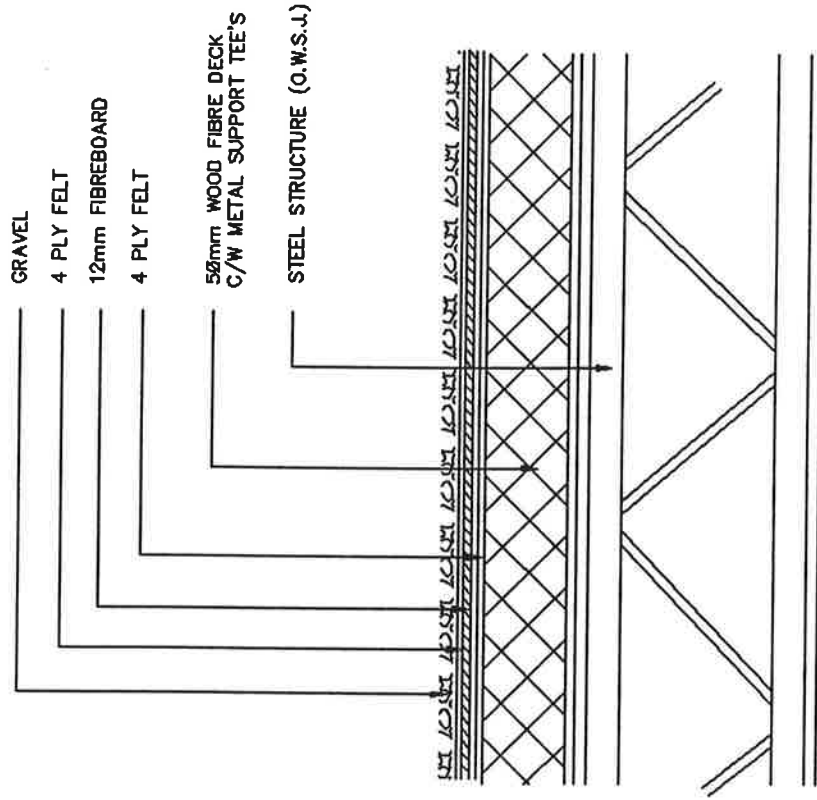
PROJECT/PROJET		SUBJECT/SUJET		SCALE/ECHELLE	DRAWN/DESSINE
METROBUS ROOF ANALYSIS		ROOF PLAN		N.T.S.	P.S.
				DATE	APPROVED/APPROUVE
				DEC. 92	J.K.
TRADE/METIER		DRAWING NO./DESSIN NO.		FIGURE 1	




Sheppard Hedges & Green Ltd.
Consulting Engineers and Project Managers



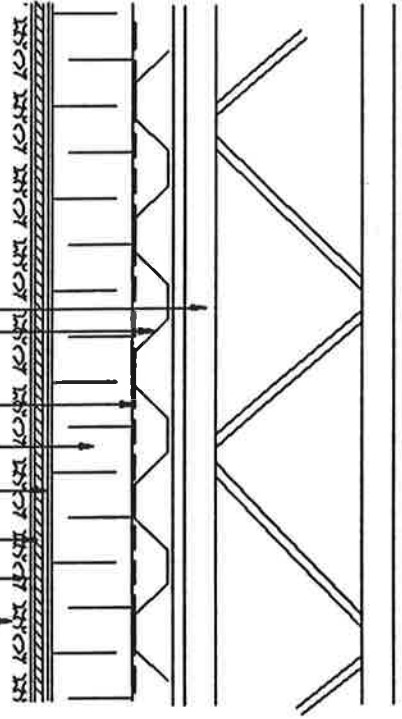
<div><div>Sheppard Hedges & Green Ltd. Consulting Engineers and Project Managers</div></div>	PROJECT/PROJET	METROBUS ROOF ANALYSIS	SUBJECT/SUJET	ISOMETRIC ROOF VIEW	SCALE/ECHELLE N.T.S.	DRAWN/DESSINE P.S.	
						DATE DEC. 92	APPROVED/APPROUVE J.K.
						TRADE/METIER	DRAWING NO./DESSIN NO.
						FIGURE 2	




APPLICABLE TO ROOF AREA'S 'B', 'E', & 'G' *
 (* EXCEPT 'G' HAS ADDITIONAL RECAP ROOF)

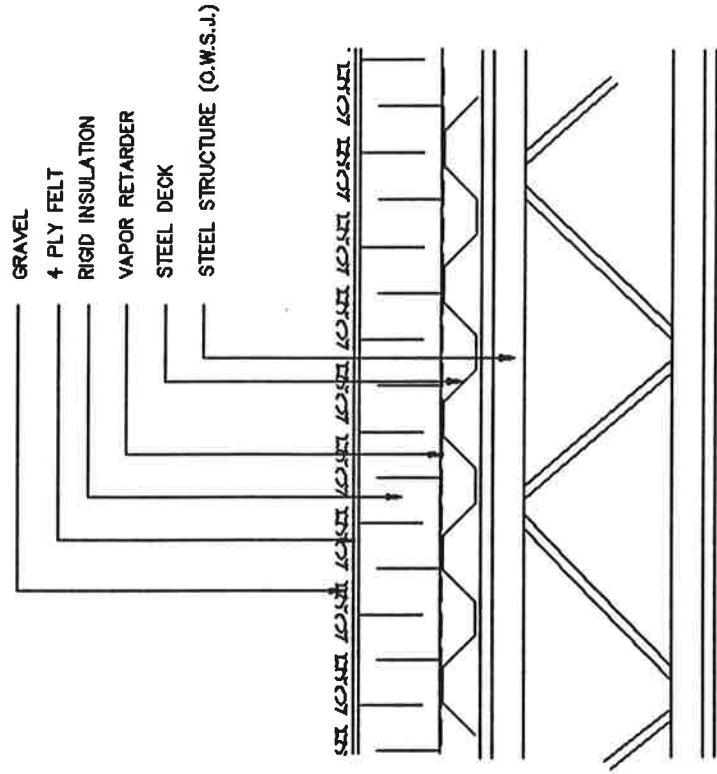
 Sheppard Hedges & Green Ltd. Consulting Engineers and Project Managers	PROJECT/PROJET	SUBJECT/SUJET	SCALE/ECHELLE N.T.S.	DRAWN/DESSINE P.S.
	METROBUS ROOF ANALYSIS	ROOF SECTION TYPE 1	DATE DEC. 92	APPROVED/APPROUVE J.K.
			TRADE/METIER	DRAWING NO./DESSIN NO. FIGURE 3

GRAVEL
 4 PLY FELT
 12mm FIBREBOARD
 4 PLY FELT
 RIGID INSULATION
 VAPOR RETARDER
 STEEL DECK
 STEEL STRUCTURE (O.W.S.J.)




APPLICABLE TO ROOF AREA 'F'

 Sheppard Hedges & Green Ltd. Consulting Engineers and Project Managers	PROJECT/PROJET METROBUS ROOF ANALYSIS	SUBJECT/SUJET ROOF SECTION TYPE 2	SCALE/ECHELLE N.T.S.	DRAWN/DESSINE P.S.
			DATE DEC. 92	APPROVED/APPROUVE J.K.
			TRADE/METIER	DRAWING NO./DESSIN NO. FIGURE 4



APPLICABLE TO ROOF AREA'S 'A', 'C', & 'D'
 (* EXCEPT 'A' HAS RECAP ROOF ONE END)

 Sheppard Hedges & Green Ltd. Consulting Engineers and Project Managers	PROJECT/PROJET	SUBJECT/SUJET	SCALE/ECHELLE	DRAWN/DESSINE
	METROBUS ROOF ANALYSIS	ROOF SECTION TYPE 3	N.T.S.	P.S.
			DATE DEC. 92	APPROVED/APPROUVE J.K.
			TRADE/METIER	DRAWING NO./DESSIN NO. FIGURE 5

4.0 NBCC 1990 REQUIREMENTS

The National Building Code of Canada (NBCC) is essentially a set of minimum provisions for the safety of buildings with reference to public health, fire protection and structural sufficiency. Article 1.1.2.1 of the 1990 NBCC states that the Code applies to the design, construction and occupancy of new buildings, and the alteration, reconstruction, demolition, removal, relocation and occupancy of existing buildings.

The code is most often applied to existing buildings when an owner voluntarily wishes to rehabilitate a building, change its use or build an addition; or when an enforcement authority decrees that the building be altered for reasons of public safety. Whatever the reason, its application to existing buildings requires careful consideration of the level of safety needed for that building, as the increased cost of implementing in an existing building a design solution that would normally be intended for a new building may be prohibitive. The degree to which any particular requirement can be relaxed without affecting the intended level of safety requires careful judgement.

After considerable research and review, however, it was deemed appropriate that the provisions of the 1990 NBCC should apply to the Metrobus Facility, mainly to provide a reasonable level of safety and protection of property. Also, the additions to the original structure over the years have significantly increased the snow loads that may accumulate on the roof, for which the building may not be designed to adequately support.

As a result, the 1990 NBCC was used to calculate the roof loads. Snow loads were calculated based on the provisions and recommendations of the Code, based on historical climatic data, including allowances for increased drift loads due to differing roof elevations. The dead loads were calculated based on the weight of construction materials incorporated in the roof. (Drawing S-1 includes a summary of the roof loads for various roof areas). Using the calculated loads, and the layout and dimensions of the roof structural members, a structural analysis was performed on a representative sample of the roof structural members for each of the different roof loading conditions. The analysis provided structural member forces and deflections due to the imposed loads. The analysis results were then compared to the allowable member forces and deflections, calculated in accordance with CAN/CSA-S16.1-M89, "Limited States Design of Steel Structures", as permitted by the 1990 NBCC. Sections 5.0 and 6.0 of this report are based on the results of the structural analysis, as well as visual inspections. (The structural analysis calculations will be maintained in SHG's files for future use or reference, if required).

The other major provision of the 1990 Code which was reviewed with respect to the roof is related to fire safety, based on the size and occupancy of the building. According to the Code, the Metrobus Facility is classified as an Industrial Occupancy, Group F, Division 2, Medium Hazard. As such, Article 3.2.2.52 requires that roof assemblies shall be of non-combustible construction or if of combustible construction, shall have a fire-resistance rating of not less than 45 minutes. This rating may be achieved by use of heavy timber

construction as permitted by Article 3.1.4.5. Minimum requirements for roof decks of heavy timber construction are:

- wood planks not less than 38 mm thick, splined or tongued and grooved, and
- plywood not less than 28 mm thick, tongued and grooved.

The existing 38 mm x 235 mm wood planks that have been used over the years to replace damaged areas of the wood fibre deck do not meet this requirement because they are not tongued and grooved. A further option would be to protect these wood planks with a layer of 16 mm fire-resistant gypsum board.

5.0 STRUCTURAL CONSIDERATIONS

In terms of structural integrity, a number of building components have been evaluated:

- The steel deck is in good condition and structurally sound.
- No information was available to accurately assess the structural capacity of the wood fibre deck. It is assumed that the deck spans are adequate to support the design dead and live loads, as the building has withstood the effects of snow and wind over the years, showing no signs of distress. The structural integrity has been compromised in areas where leaks have occurred and also in the bus wash area where there is excessive moisture from internal sources.
- The portions of the deck which have been replaced with 38 x 235 timber are adequate to support design loads, however, as stated previously, this does not meet the fire rating requirements of the NBCC.
- In the wash bay area of section E, there is some deterioration of the structural steel roof members and some surface scale and rusting of the members directly above the wash bay. This is not deemed to be a

structural concern at the moment since there is no significant decrease in cross-sectional area.

- For sections B, E, F, and G typical joist profiles were obtained and the loading evaluated. The analysis included allowances for snow drifting due to roof height differentials and the deck dead load. With the exception of section G, all areas were found to conform to current codes with respect to maximum deflections and member strength. In area G, the loading is significant over a relatively long span whereas the joist is similar to those used in other areas of the building with smaller loads and shorter spans. The area G_1 is subject to the greatest load as it has two recap roofs and is also subject to increased snow load due to the height differentials of the adjacent roofs. The allowable deflection under the worst case loading condition is exceeded as is the resistance of the joist members. G_2 is subject to the same deck load but smaller drifting loads since it borders on a roof area of smaller height. In this larger area, deflections are within the allowable range but the members are marginally adequate for the loading conditions.



The SGE Group Inc.
Engineers, Planners & Project Managers

January 19, 1998

St. John's Transportation Commission
Metrobus Transit Centre
245 Freshwater Road
St. John's, Newfoundland
A1B 1B3

Attention: Mr. Sean Mooney

Dear Sir:

Re: **Metrobus Transit Centre
Open Web Steel Joist (OWSJ) Inspection**

Further to our correspondence of November 17, 1997, and your subsequent approval to proceed, we have completed the 100% inspection of the "Robb Roof OWSJ" located in the Metrobus Transit Centre 1971 Extension.

A previous inspection of the subject OWSJ had confirmed that these OWSJ were manufactured by Robb Engineering. This 100% inspection was recommended as a result of the report "Open Web Steel Joist Load Testing and Inspection Program", sponsored by the Government of Newfoundland, Department of Works, Services and Transportation (DWST). The purpose of this inspection was to identify any joint failures, as defined by the above noted report, that would require immediate repairs. This was the recommended Level II Remediation based on the span, spacing and loading of the subject OWSJ.

We are pleased to report that the 100% inspection revealed no joint failures, and no joint repairs are required. Therefore, this concludes the suggested minimum remediation program for these joists based on the DWST report.

6.0 RECOMMENDATIONS

Based on the analysis results, Code requirements and visual inspection, the following recommendations are made:

- It is recommended that the open web steel joists be reinforced in the roof area G to meet code requirements for strength and deflection. This area of the roof should be monitored for significant snow accumulations until such time as strength upgrading is carried out.
- The corroded areas in the bus wash bay should be blast cleaned to remove surface rust and scale, and the members covered with a coat of primer and painted. This will mitigate the effects of the corrosion and inhibit future problems in these rust-prone areas.
- Obvious degradation and decomposition of the wood fibre deck has occurred due to leaks in some areas and from internal moisture in the bus wash bay. It is recommended that this material be replaced when the roofing budget permits by galvanized steel deck similar to the construction in the other, newer areas of the building. The practice of replacing damaged wood fibre with timber planks should be discontinued as it does not comply with the necessary fire rating for the given occupancy.

However, timber decking can be used if it meets the requirements previously described in Section 4.0.

**ST. JOHN'S TRANSPORTATION
COMMISSION
METROBUS TRANSIT CENTRE
OPEN WEB STEEL JOIST
INSPECTION
Interim Report**

Submitted To: St. John's Transportation Commission
Metrobus Transit Centre
245 Freshwater Road
St. John's, Newfoundland
A1B 1B3

Submitted By: The SGE Group Inc.
P. O. Box 13144
60 Pippy Place, 2nd Floor
St. John's, Newfoundland
A1B 4A4

In Association With: fga Consulting Engineers
2 Hunt's Lanes
St. John's, Newfoundland
A1B 2L3



July 17, 1997

TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 BACKGROUND.....	1
1.2 PURPOSE.....	1
2.0 SCOPE OF WORK	2
2.1 INSPECTION AREA.....	2
2.2 INSPECTION PROCEDURE	2
2.3 APPLICABLE STANDARDS	2
3.0 INSPECTION RESULTS	3
3.1 GENERAL	3
3.2 WELDING DEFICIENCIES	4
3.2.1 Undercut.....	4
3.2.2 Slag.....	4
3.2.3 Porosity	4
3.2.4 Concavity.....	4
3.2.5 Other Observations.....	4
4.0 CONCLUSIONS	6

Appendix A

Appendix B

1.0 INTRODUCTION

1.1 Background

In 1996, the St. John's Transportation Commission retained The SGE Group Inc. (SGE) to carry out an inspection of the open web steel joists (OWSJ) located in an area of the Metrobus Transit Centre which was constructed in 1971. The inspection was undertaken by Mr. Michael J. Hogan, P. Eng., and Mr. Roger Butt, B. Eng., AET, of The SGE Group Inc. with assistance from Mr. Michael O'Brien, P. Eng., of fga Consulting Engineers, a Canadian Welding Bureau (CWB) certified Welding Inspector.

1.2 Purpose

This inspection was initiated as a result of a letter put forward by the Association of Professional Engineers and Geoscientists of Newfoundland (APEGN) dated September 20, 1996. A copy is included in Appendix A. The letter addressed a potential structural problem with buildings constructed using OWSJ supplied by Robb Engineering during the years of 1970 – 1985. This potential problem was identified as a result of two (2) roof failures in the Province and a subsequent investigation undertaken by APEGN which identified two (2) other buildings with potential structural problems. APEGN subsequently obtained a list of buildings utilizing OWSJ supplied by this firm in Newfoundland and Labrador during the years of concern and subsequently notified the owners. The 1971 extension constructed at the Metrobus Transit Centre, as identified in Appendix B, Sketch Drawing No. SK-1, was identified as one of these buildings. The purpose of our inspection was to determine if the subject OWSJ at the Metrobus Transit Centre had similar characteristics referenced in the letter from APEGN.

2.0 SCOPE OF WORK

2.1 Inspection Area

The area of concern of the Metrobus Transit Centre was identified as the extension to the Bus Parking Garage Constructed in 1971, located on the rear (south) of the Transit Centre, as indicated in Appendix B, Sketch Drawing No. SK-1.

This area consists of 24 bays, each with four (4) equally spaced 360 mm (14") deep OWSJ, for a total of 96 OWSJ. Each of the joists is 6150 mm (20 ft.) in length, and has 27 panel points, as indicated in Appendix B, Sketch Drawing No. SK-2, showing a typical OWSJ profile. The OWSJ consisted of top and bottom chords made up of two (2) steel angles, and a web of round bar.

2.2 Inspection Procedure

Twenty four (24) OWSJ, one (1) from each bay, were randomly selected for a detailed visual inspection of all panel points. See Appendix B, Sketch Drawing No. SK-1, indicating these joists. In addition, all joists were checked for any signs of major distress or misalignment. The visually inspected panel points were checked for weld type, weld quality, continuity and integrity of the connection.

2.3 Applicable Standards

In Canada, OWSJ are presently fabricated in accordance with CAN/CSA-S16.1-M94, "Design of Steel Structures", and CAN/CSA W59-M89, "Welded Steel Construction". For the purposes of this investigation, we have used as references the editions of the applicable standards in use at the time of the OWSJ fabrication, including:

- CSA S16-1969 – "Steel Structures for Buildings"
- CSA W59.1-1970 – "General Specification for Welding of Steel Structures".

3.0 INSPECTION RESULTS

3.1 General

Visual Welding inspection of the OWSJ was performed by a welding inspector with CSA W178.2 Level III Certification.

The inspection concentrated primarily on the bottom chord-to-web welds. The top chord-to-web welds were only partially accessible from the underside due to the presence of the metal roof deck. Consequently, the weld on the top of the web members for upper panel points could not be seen, and only the flare level weld along the sides of the web members could be inspected. Also, the panels points inspected were subjected to a prying force that will typically reveal any welds that have failed.

The inspection revealed the following deficiencies in the panel point weld connections:

- Undercut
- Slag Not Removed
- Porosity
- Concave Weld
- Poor Fit Up

These items are expanded on further in the following sub-section.

The panel points were welded using either partial penetration flare bevel welds, or “puddle welds”. The webs were fabricated from several sections of round steel bar bent basically in W-shapes (See Appendix B, Sketch Drawing No. SK-2). The joists had connections between both continuous and non-continuous web members. The non-continuous panel points occurred at several locations along the top chord, where two (2) web members were spliced together. Puddle welds were primarily used for the welding of the non-continuous web members at the top chord panel points. A puddle weld is a non-structural, non-standard weld, and is not a recognized joint configuration of CSA W59.1-1970. It can be described as the pooling of weld metal between the chord members at the apex of the non-continuous web members. The resulting weld has minimum effective length and effective throat. This type of weld theoretically has no structural capacity, and is therefore noted as a deficiency.

3.2 Welding Deficiencies

As noted previously, besides the use of puddle welds, other deficiencies were found at the OWSJ panel point welds.

3.2.1 Undercut

Measurement of undercut is difficult to determine accurately, however, it was estimated between 1 and 2 mm. CSA W59.1-1970 limits undercut to 0.25 to 0.75 mm.

3.2.2 Slag

Some of the inspected welding did not have slag removed. CSA W59.1-1970 requires all slag to be cleaned off, to allow for proper inspection of the weld, and to allow for protective coatings to be applied directly to the welds. However, there was no evidence of corrosion, and slag was not considered a primary concern.

3.2.3 Porosity

Porosity is a rounded type flaw and is therefore one of the more forgivable defects. While porosity was found present in the inspected welding, it was not in excess of the limits of CSA W59.1-1970.

3.2.4 Concavity

Weld concavity is an indication of a possibly undersized weld due to an insufficient effective throat. Concavity is only a concern when it becomes excessive. Weld concavity can only be quantified through a destructive test of the weld. From this inspection, weld concavity was observed, but not considered excessive.

3.2.5 Other Observations

- Web-to-chord fit up at the bottom chord varied. Webs were found to fall short of the bottom of the bottom chord or to extend past the bottom chord. Though not of primary concern, this is indicative of poor workmanship during fabrication.

- There was no misalignment, buckling, weld cracking or weld failures noted during the inspection. This is indicative of the OWSJ not being distressed due to loads applied, and have thus maintained their structural integrity to date.

4.0 CONCLUSIONS

As a result of our inspection, the subject OWSJ are of the same configuration as the OWSJ referenced in the letter from APEGN. Based on our experience with other subject OWSJ in other buildings, the welding inspected was superior to that encountered in other OWSJ by the same manufacturer, however it was not in total accordance with CSA W59.1-1970. As well, the presence of the puddle welds, as previously explained, at non-continuous top chord joints makes it difficult to verify that these OWSJ conform to the National Building Code.

The Department of Works, Services and Transportation (DWST), Government of Newfoundland, have undertaken an in-depth testing program to quantify the capacity of these joists more definitively. This testing program was carried out to determine the load carrying capacity of the subject OWSJ. From our discussions with DWST personnel, a report on these test results should be released in early August 1997. We recommend that no remedial action be undertaken until such time that this test report is released, and the actual capacity of the OWSJ is known. This can then be compared with the snow loads and dead loads that the subject OWSJ must support. At that time, if required, the minimum repairs can be designed and undertaken to ensure the subject OWSJ are safe.

Until the actual capacity of the subject OWSJ is known, the level of safety required by the National Building Code cannot be verified for these joists. Based on the 1995 National Building Code, the specified design snow load for the subject OWSJ is 2.16 Kpa (or, based on a snow density of 3KN/m^3 , a depth of 720 mm (28")). Based on our experience with the Metrobus Transit Centre, the subject roof is normally wind swept of snow, and accumulations of this depth do not occur. However, in case of snowfall before any necessary repairs are carried out, we recommend snow depth on the roof be monitored, and be limited to 200 mm (8"), to provide a factor of safety greater than 3. If snow accumulations greater than 200 mm occur, a removal program should be implemented. Also, the subject OWSJ should be subject to periodic visual inspection, to look for any signs of obvious distress and misalignment. Failure signs of the OWSJ will include buckling of the chords, and webs that have broken completely free of the chords.

As a further note, if repairs are carried out now to the OWSJ, assuming that all the panel point connections must be reinforced to carry the imposed snow loads, we estimate this work would cost in the range of \$500 per OWSJ, for a total of approximately \$48,000. However, as stated previously, we recommend waiting until the load test results are released, and then minimum required repairs, if any, be completed.

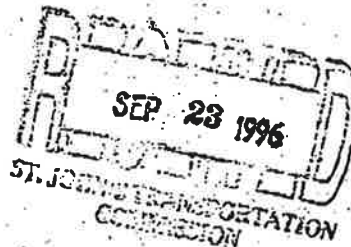
APPENDIX A



Association of
**Professional Engineers
and Geoscientists**
of Newfoundland

September 20, 1996

St. John's Transportation Commission
245 Freshwater Road
St. John's, NF A1B 1B3



Dear Sir or Madam:

RE: Bus Depot addition, 1974
Our reference #: A4884

The Association of Professional Engineers and Geoscientists of Newfoundland (APEGN) is the legislated body charged with regulating the profession of engineering in Newfoundland and Labrador under the Engineers and Geoscientists Act. APEGN wishes to bring to your attention a potential structural problem with buildings constructed using open-web steel joists in roof and floor construction.

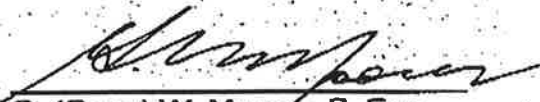
In 1987, a partial roof collapse at the Village Mall, St. John's, caused considerable damage requiring extensive repairs. After another roof collapse at a building in Donovans Industrial Park, Mount Pearl, during the winter of 1994 - 1995, our Association initiated an investigation. Subsequently, two other buildings have been identified to have potential structural problems.

Qualified people have informed us that, in their opinion, the structural problems identified in the above cases relate to open-web steel joists supplied by Robb Engineering from 1970 - 1985. The fabricator takes the position that these roof collapses were caused by other factors. We have, with the co-operation of the fabricator, obtained a list of the buildings utilizing open-web steel joists supplied by this firm in Newfoundland and Labrador during the years of concern.

Since the above-noted building is on this list, and in the public interest, we strongly recommend that a structural engineer be engaged to carry out an inspection of these joists to ensure the safety of occupants and other users. Although we do not wish to create any undue alarm, we believe it would be prudent for all owners of these buildings to have these inspections undertaken as soon as possible.

APEGN would appreciate being informed of any action that you take as a result of this notification. In particular, we are interested in obtaining a copy of the results of any building inspections that are undertaken. If you have any questions or require further information, please contact the undersigned.

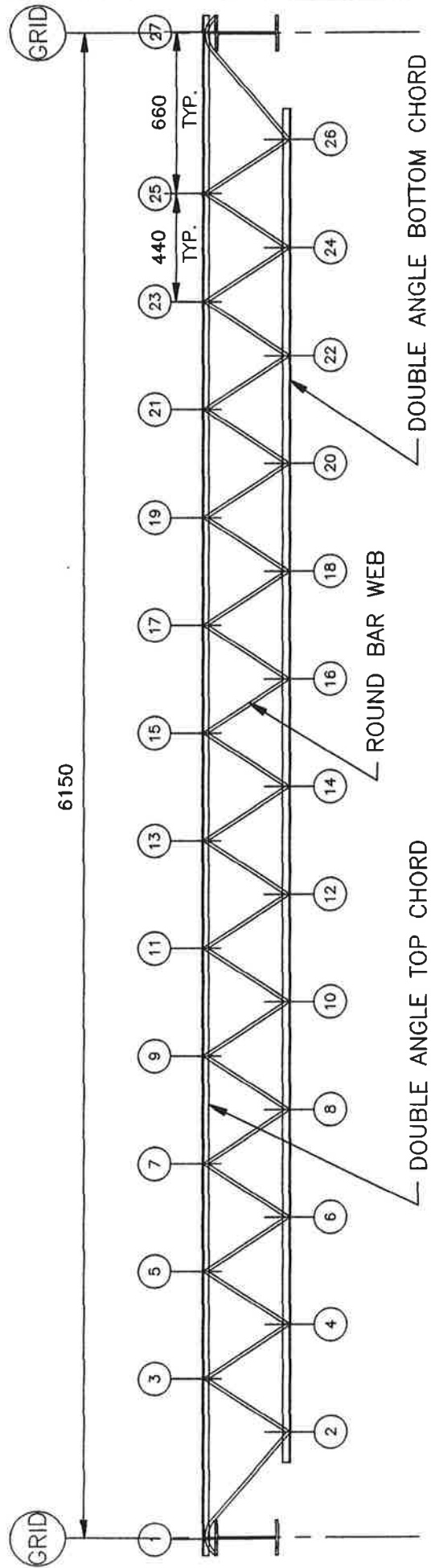
Yours truly,



G. (Gerry) W. Moores, P. Eng.
Professional Standards Director

jef

APPENDIX B



PROJECT

METROBUS OWSJ
INSPECTION

DRAWING TITLE

TYPICAL OWSJ PROFILE

DWN. BY

K. SHARPE

APP. BY

mf.

DWG. NO. SK-2

DATE

97-07-16

REV. NO.

10

SCALE

1:25

Appendix F: Organizations Consulted

Organizations Consulted

- Anna Templeton Centre for Craft, Art and Design
- Community Centre Alliance
- Craft Council of Newfoundland and Labrador
- Department of Innovation, Business and Rural Development
- Department of Natural Resources – Agrifoods Division
- FEASt (Food Education Action) – St. John's
- Food Security Network of Newfoundland and Labrador
- Heritage Foundation of Newfoundland and Labrador
- Memorial University International Student Office
- Newfoundland and Labrador Folk Arts Society
- Northeast Avalon Regional Economic Development Board
- Rabbittown Community Garden
- Restaurant Association of Newfoundland and Labrador
- Service NL
- Some Good Market
- St. John's Tombolo Multicultural Festival
- Writers Alliance of Newfoundland and Labrador
- Fredericton Boyce Farmers' Market
- Kitchener Market
- Saskatoon Farmers' Market