



# CONTAINER CAMPUS 2013

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## **Details**

This report has been prepared to fulfill a course requirement for a graduate level planning studio course for the Master of Planning in Urban Development Program at the School of Urban & Regional Planning at Ryerson University in Toronto, Ontario. The content presented in this report is the property of the authors. Unless otherwise specified, permission to reference or to include a URL to reference this information for non-commercial purposes is permitted provided that each reference acknowledges that the information is the property of the authors listed below.

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# EXECUTIVE SUMMARY

This studio investigated the feasibility of animating the Ryerson University campus with shipping containers that have been repurposed for new uses that serve the needs of the Ryerson community. The repurposing of shipping containers, for uses other than the transportation and storage of goods, is known as cargotecture. The constrained urban location of Ryerson's campus and its steadily increasing enrollment rates have fostered a keen interest on the part of the University to find low-cost, flexible, and innovative means to animate the campus, create additional usable space for students, and advance the city-building mandate of Ryerson. The studio determined that cargotecture is a viable means of fulfilling these objectives.

This report contains the studio group's three proposed scalable options as well as general information to inform the pursuit of further cargotecture projects. The first project is the ThemeBox, a single multi-purpose container that physically changes locations to service specific seasonal needs in order to provide students access to services and entertainment as a means of fostering community. The second, named Ry Docks, is a market place inspired by Scadding Court Community Centre's Market 707 with some notable additions. The last, and largest scale project, is the Study Centre, which is comprised of 25 boxes stacked together to create a compelling architectural intervention. These cargotecture projects will demonstrate Ryerson's commitment to sustainability and architectural innovation while providing the campus with much-needed amenities and new destinations in which to gather and foster a greater sense of community.



# TABLE OF CONTENTS

<b>1.0 Rationale</b>	<b>6</b>
<b>1.1 Objective</b>	<b>6</b>
<b>1.2 Project Understanding</b>	<b>6</b>
1.2.1 Rationale for Ryerson	6
1.2.2 Public Realm	7
1.2.3 Interstitial Places	8
1.2.4 Why Shipping Containers?	9
1.2.6 Cargotecture Precedents	10
1.2.7 Toronto Precedents	11
1.2.8 International Case Studies	14
<b>2.0 Container Campus</b>	<b>19</b>
<b>2.1 Overview</b>	<b>19</b>
<b>2.2 ThemeBox</b>	<b>19</b>
2.2.1 Description	19
2.2.2 Governance	20
2.2.3 Programing Schedule	21
2.2.4 Costing	28
<b>2.3 Ry Docks</b>	<b>29</b>
2.3.1 Description	29
2.3.2 Governance	29
2.3.3 Programing	31
<b>2.4 Study Space and Expanded Ry Docks</b>	<b>37</b>
2.4.1 Description	37
2.4.2 Programing	37
2.4.3 Site Design	38
2.4.4 Governance	40
2.4.5 Costing	40
<b>2.6 Areas for Further Research</b>	<b>41</b>
2.6.1 Parklettes on Church	41
2.6.2 Branding and Marketing Strategies	41

2.6.3 Interior Design: ShopBox	41
2.6.4 Digital Media Zone	41
2.6.5 Container Knowledge and Support Network	42

## **3.0 Implementation Information 43**

### **3.1 Costing and Installation Plan 43**

### **3.2 Permits 43**

### **3.3 Purchasing 45**

### **3.4 Modifications 47**

### **3.5 Individual Projects 47**

### **3.6 Delivery 49**

### **3.7 Installation 49**

### **3.8 Removal and relocation 50**

### **3.9 Urban Design Strategies 51**

#### 3.9.1 CPTD 51

#### 3.9.2 WayFinding 52

#### 3.9.3 Green Roofs 53

### **4.1 Appendix A: Method 54**

#### 4.1.1 Terms of Reference and Initial Client Meeting 54

#### 4.1.2 Workplan 54

#### 4.1.3 Background research 54

#### 4.1.4 Cargotecture Case Studies 55

#### 4.1.5 Local Experience 55

#### 4.1.6 Approval and planning requirements 55

#### 4.1.7 Location Criteria 56

#### 4.1.8 Market Research and Void Analysis 57

#### 4.1.9 Iterative Workshop and Design Charrette Process 57

### **4.2 Appendix B: Market Supply & Void Analysis 59**

#### 4.2.1 Ryerson Market Analysis 59

#### 4.2.2 Void Analysis 67

### **4.3 Appendix C: Site Visits 70**

#### 4.3.1 Campus Site Visit 70

#### 4.3.2 Market 707 70

#### 4.3.3 Visit to Storstac 73



# 1.0 RATIONALE

## 1.1 OBJECTIVE

To investigate the feasibility of animating the Ryerson University campus with shipping containers that have been repurposed for new uses that serve the needs of the Ryerson community.

## CARGOTECTURE DEFINITION

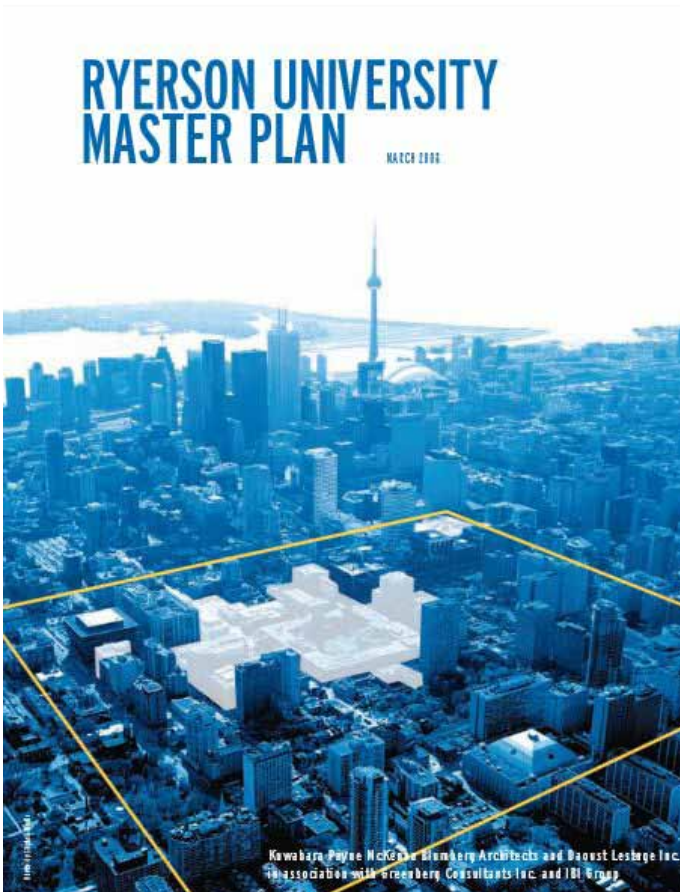
Repurposing shipping containers for uses other than shipping goods.

## 1.2 PROJECT UNDERSTANDING

### 1.2.1 RATIONALE FOR RYERSON

In 2008, Ryerson University completed an award-winning Campus Master Plan to guide its physical expansion during a sustained period of substantial enrolment growth. It articulates a clear vision to transform the University into a city-building institution that fulfills its educational mandate while simultaneously contributing to the culture, economy, and architecture of Toronto. Central to achieving this city-building ambition are initiatives that will further animate the streets, sidewalks, plazas, and interstitial – in-between spaces such as laneways and parking lots- that collectively make up the public realm of the Ryerson University campus.

The downtown location of the Ryerson campus in the heart of Canada's largest city presents a variety of opportunities and challenges. The compact nature of the urban campus and the significant number of public transit connections encourage active streets with a large number of pedestrians. This creates the required conditions for future improvements to the public realm to have a high likelihood of success. The most salient challenge facing the University is the



limited geographic area and high cost of acquiring and developing land. This puts the school in a position where constructing buildings like the Mattamy Athletic Centre and the renovated Image Arts Building require a major investment. While Ryerson is committed to creating new purpose-built academic buildings and residences, there is a keen interest in finding low-cost, flexible, space-saving, and innovative means to animate public space, create usable space for students, and engage the larger community.

## 1.2.2 PUBLIC REALM

In the context of this project, not all of the spaces that constitute the school's public realm are contained within the campus-proper. The Mattamy Athletic Centre and the Ted Rogers School of Management are both located off site and, as a result of this, the routes that students walk between the heart of the campus and these annexes are effectively part of the school's public realm. In addition, several parking lots relatively close to the campus have been purchased by the University for campus expansion in the future and these will also result in students leaving the main campus to attend classes.

### MATTAMY ATHLETIC CENTRE



In an effort to foster a sense of identity for these routes the City has hung Ryerson University banners, which are found on the streets within the campus, from the light standards along these routes. This innovative, low-cost program is an example of an out-of-the-box solution to visually and mentally knit together the campus' complex public realm. In time, a critical mass of off-campus buildings will create circumstances where the idea of the Ryerson Campus in the mind of students and the broader public will extend outwards from the main campus to include these off-site annexes. This will blur the distinction between school and city and represent the fulfillment of Ryerson's city-building mandate.

### 1.2.3 INTERSTITIAL PLACES

To successfully support the Master Plan's public realm objectives and city-building ideals, identifying key gaps in services on campus relating to the growing and increasingly diverse student body is critical to maximizing the value of investments in the public realm. Of particular interest are the interstitial spaces between buildings that are found throughout the campus. These spaces may be functional pieces of infrastructure intended for pedestrians, such as courtyards and sidewalks, or they may be utilitarian places like laneways and parking lots that are primarily intended for vehicles. These spaces may be able to accommodate additional uses through

**VICTORY ST LANEWAY INTERSTITIAL PLACE**





the introduction of some form of intervention, or they may benefit from a nearby intervention that generates greater activity and use. Interstitial spaces also offer the potential for the quick implementation of pilot projects that test out new ideas and generate interest in a more permanent version of the intervention. An innovative new approach to creating interventions in the public realm is to use repurposed shipping containers.

## 1.2.4 WHY SHIPPING CONTAINERS

Standard steel shipping containers have become some of the most ubiquitous components of global trade. An existing global trade imbalance between export and import-driven economies has resulted in the accumulation of surplus shipping containers in North America and other parts of the developed world. It is not cost efficient to ship empty containers back to their countries of origin, so there is a growing interest and movement towards finding new uses for them. Repurposing containers allows them to escape the scrap heap and potentially provide an elegant and cost-effective solution to issues wholly unrelated to logistics or freight.

Shipping containers found around the world are all built to identical international standards covering dimensions, weight, internal volumes, strength, and their ability to stack and bear weight. The defining characteristic of these containers is their ability to be placed atop one another by crane and then lock into place. They are engineered to withstand significant weight and physical forces. Because they are exposed to the elements while being transported by ship, train, and truck, they are built to be extremely weather resistant. Additional properties include their relatively low cost, their durability, ease of transport, and modularity; ten, twenty, and forty foot-long units exist and may interconnect. They are made of steel, and as a result the containers can be reconfigured using hand-held cutting tools by metal fabricators. Their standardized sizes simplify the fabrication process.

The tremendous versatility and potential uses for repurposed shipping containers has inspired incredible innovation in design and created a new form of architecture known as cargotecture. Given

### SHIPPING CONTAINER ATTRIBUTES



**INEXPENSIVE**



**ABUNDANT**



**DURABLE**



**MODULAR**



**PORTABLE**



**SUSTAINABLE**

Ryerson's interest in finding low cost, flexible, space saving, and innovative means to animate the public realm on campus, repurposed shipping containers present an interesting opportunity.

### **1.2.5 METHOD**

A rigorous analysis was performed on existing cargotecture projects, the student needs that are currently not being adequately meet, the existing services and amenities located around the Ryerson campus and the potential spaces on campus where shipping containers could be located. A detailed description of the method can be found in Appendix A. An in-depth discussion on the Market Analysis and Void Analysis can be found in Appendix B. The total number of sites assessed and the criteria matrix used to choose the most suitable locations for cargotecture around campus can be seen in Appendix C.

### **1.2.6 CARGOTECTURE PRECEDENTS**

The repurposing of shipping containers for various new uses is an innovative and uncommon practice in Toronto. Currently, there is no set regulatory process for locating shipping containers in the City; however, there are a few Toronto-based examples that can provide some insight as to how shipping containers have been used throughout the city to enhance the public realm and provide services.

#### **270 CHURCH ST POTENTIAL SITE**



## 1.2.7 TORONTO PRECEDENTS

### Market 707

#### Dundas Street West and Bathurst Street, Toronto

Market 707 is a project initiated by the Scadding Court Community Centre (SCCC) to help revitalize a stretch of sidewalk along Dundas St West that lacked vitality and animation. Through the refurbishment and use of shipping containers, SCCC provided the opportunity for eleven local entrepreneurs to start micro-enterprises without high initial investment costs or significant financial risk. Today, these micro-enterprises consist of a bike repair shop and a number of grab-and-go food vendors. Market 707 has been relatively successful in animating the space and attracting pedestrian traffic to support these new businesses. SCCC was able to lease the container spaces fairly easily and as of April 2013, there is a waiting list of 40 businesses interested in becoming tenants at the market.





**Marché Restaurant**  
**333 Bay Street, Toronto**

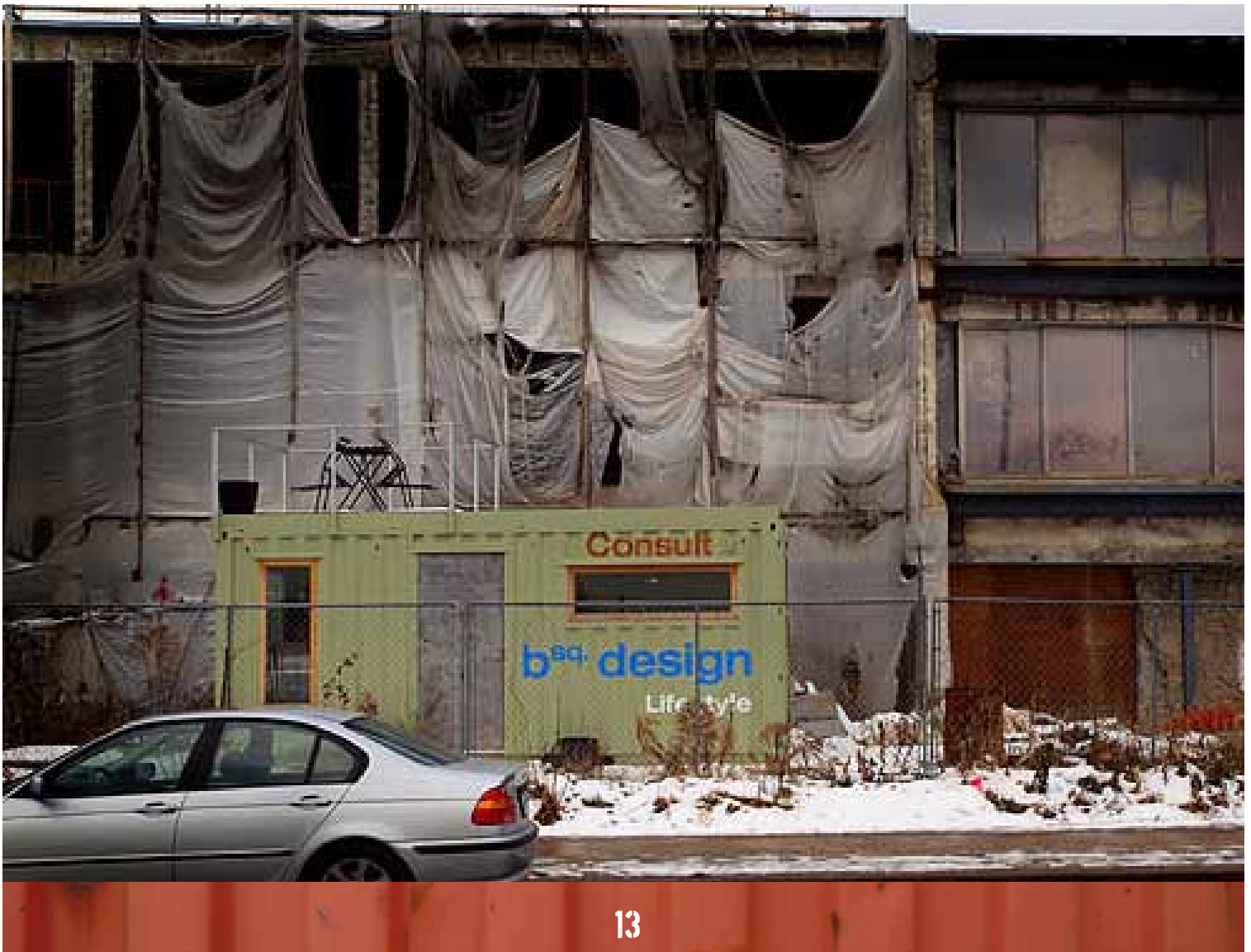
A successful international restaurant chain, Marché, operates a seasonal food establishment out of a refurbished shipping container during summer months in the courtyard of BCE Place, in the heart of Toronto's financial district. They have a permanent restaurant that is located at the concourse level, however they have taken advantage of the temporary and mobile nature of shipping container architecture by establishing a seasonal bakery at grade and in a high pedestrian-traffic area. The temporary shipping container provides a grab-and-go food service for the high volume of office employees in the area. Many of the affordable food services located in the financial district are relegated to underground food courts and those located at grade are often overpriced and crowded sit-down establishments. The Marché bakery adds a seasonal food service while at the same time animating the public realm.





**bsq. Landscape Design Studio**  
**St. Clair Avenue West and Spadina Road, Toronto**

The bsq. Landscape Design Studio is an award winning architecture and landscape design firm located in downtown Toronto. In 2010, the firm located a shipping container near St. Clair and Spadina to provide additional off-site office space to service their midtown clientele. This shipping container was located in front of a derelict building that had recently been purchased and was awaiting redevelopment. The container provided a temporary use that helped mitigate the unattractiveness of the condemned building, provide extra office space for employees and show potential bsq. clientele the versatility of container architecture. The container has since moved but this example demonstrates how containers can be used to address limited space issues in a mobile and temporary way.



## 1.2.8 INTERNATIONAL CASE STUDIES

Shipping containers have been used around the globe to fill programming gaps, animate underutilized space and provide temporary uses in places that would otherwise be unserved. The versatility of cargo containers is demonstrated through the following international, North American and university based case studies. These studies show how shipping containers can be used for various purposes including office space, shipping centres, residences, clinics, hotels, restaurants and grocery stores. Not all of the case study examples will be appropriate on the Ryerson Campus but they demonstrate the diverse nature of uses that can be considered in programming shipping container spaces.

### BOXPARK SHOREDITCH EAST LONDON UK





## ContainerSpace

### George Mason University's School of Art in Fairfax, Virginia

The School of Art at George Mason University uses a repurposed shipping container as a student managed mobile gallery and exhibition space. The total cost of purchase, installation and refurbishment was \$3,500 and much of the fabrication and design work was completed by graduate art students. They designed and installed custom skylights, replaced flooring, and stripped and repainted both the interior and exterior of the container. The open-minded sustainable philosophy behind ContainerSpace will allow for each new generation of students to determine how the container is used, which ensures that the project is continually evolving.



Ryerson University is well known for its artistic programs in fashion, film, photography, digital arts, interior design, and architecture. Utilizing the skills and expertise of these departments and students will considerably lower costs while engaging students and creating a sense of project ownership and school pride. There is also the possibility of incorporating the repurposing and programming of the shipping container spaces into practice based course work.



## Freitag Flagship Store Zurich, Switzerland



The Swiss fashion accessory company Freitag manufactures and distributes eco-friendly totes and bags throughout the world. With the idea of sustainability and environmental stewardship in mind, Freitag has constructed its flagship store out of 19 repurposed shipping containers. The structure uses only shipping container materials and is currently the tallest structure in Zurich at 26 meters tall. This case study provides a great example of how modular and stackable shipping containers can be.

Although this type of shipping container configuration may not be feasible or appropriate for Ryerson, it demonstrates the creativity and versatility of cargotecture. It should be noted, that because the stacking of shipping containers requires anchoring or a foundation, this would trigger a permanent classification for the structure and as such increase the regulatory process and requirements. If Ryerson is interested in using shipping containers to construct more long-term and permanent structures, this case study could provide an interesting architectural example of design possibilities.





## Cashel Mall Christchurch, New Zealand

After a series of earthquakes in 2010, the people in Christchurch felt that it was important to rebuild their downtown's shopping mall as quickly as possible. As a solution, a temporary mall was constructed out of 60 repurposed shipping containers. The project costs were reduced through the donations of time and money. Although intended as a temporary use, the Cashel Mall now serves as an attraction for the City and has garnered support for making it a permanent structure.



This project demonstrates the possibility of using shipping containers to animate large empty spaces such as parking lots. The recent acquisition of three vacant properties in the vicinity of campus means Ryerson may want to consider ways to utilize this space in the years before construction begins. As these properties may not be developed for some time, it is possible to use cargotecture to provide a temporary use in the short term that will animate these underutilized spaces and provide much needed community and campus services.



## **The Box Office Rhode Island**

The Box Office was created in four days using 35 shipping containers. It provides office space to a number of different businesses.

The project is relevant to Ryerson as something similar could provide a solution to the challenges that the school is currently facing with available study space. There are a few new locations around campus that could host a project of this scale, and it would provide an opportunity for phasing development while other buildings, such as the student centre are being constructed.





# 2.0 CONTAINER CAMPUS

## 2.1 OVERVIEW

This section outlines the recommendations for implementing carchitecture on Ryerson University Campus. These projects represent a set of scalable options in terms of both length of time for implementation and amount of financial commitment required. The three options are:

### 1) ThemeBox

The most manageable option in terms of time and financial commitment is the ThemeBox. This multi-purpose container will seasonally change programming and physical location to animate the campus by providing students access to services and the opportunity to engage in new activities.

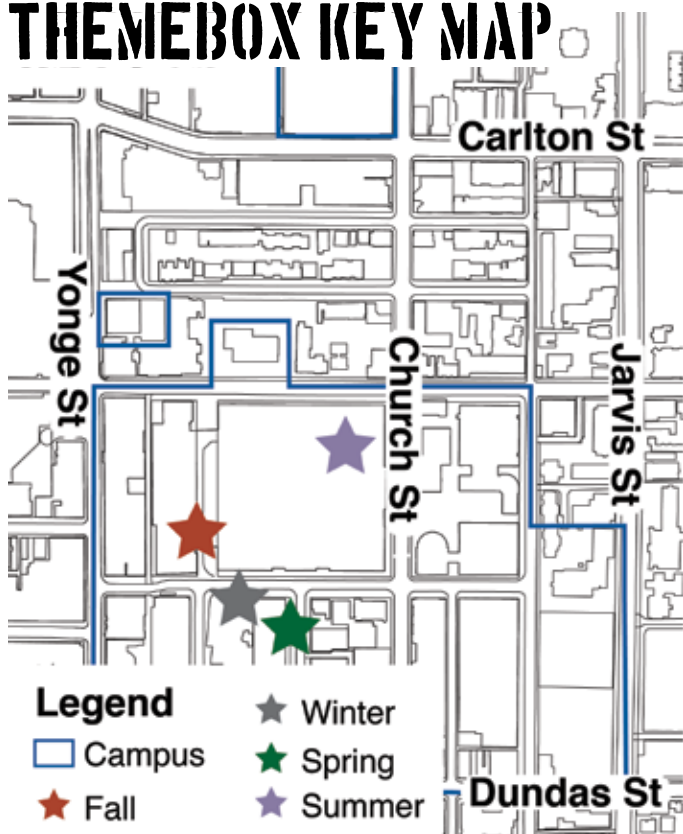
### 2) Ry Docks

This is a market place inspired by Scadding Court's Market 707 with some notable additions. This market will animate parking lots around campus by providing community members with access to grab-and-go food options, local retail services and a place for relaxation, entertainment, and engagement.

### 3) Study Space with Ry Docks Expansion

Our third and most detailed option is the Study Centre which is comprised of 25 boxes stacked together which demonstrates Ryerson's commitment to sustainability and innovation while providing students with much needed study space. A Ry Docks Market expansion would also accompany this space.

## THEMEBOX KEY MAP

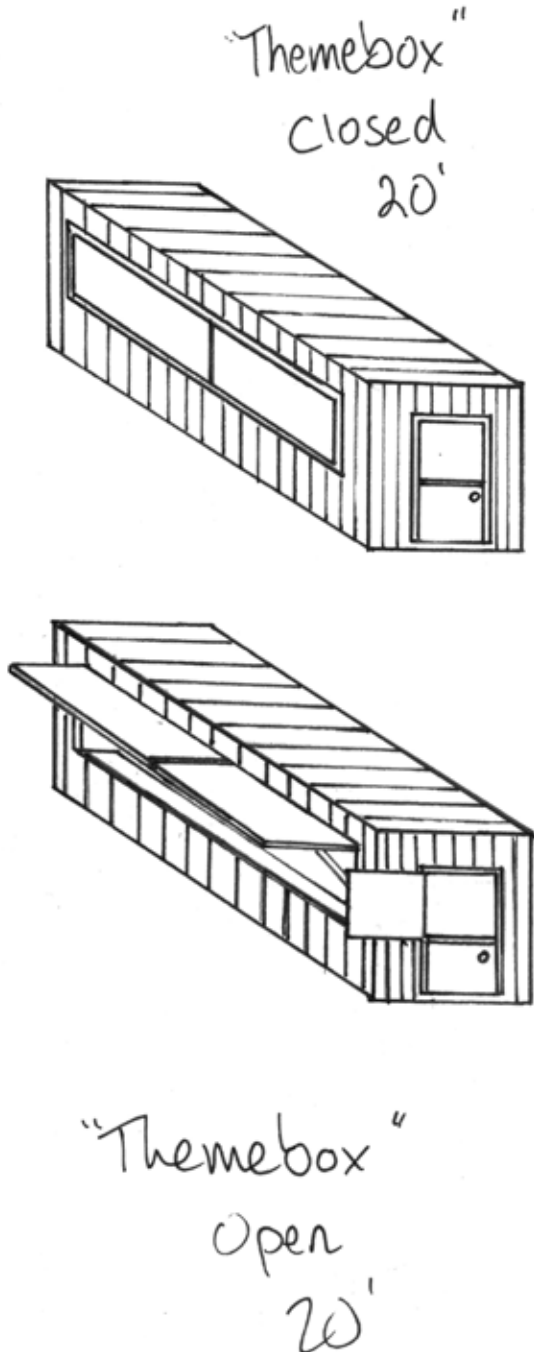


## 2.2 THEMEBOX

### 2.2.1 DESCRIPTION

The concept for the ThemeBox flowed from the analysis of student needs, the objective of strengthening Ryerson's contribution to the public realm, and animating the interstitial spaces around campus. The

**FIGURE 1. THEMEBOX ILLUSTRATION**



ThemeBox is a single container that moves throughout campus according to a predetermined schedule that is highly flexible. This container is a multi-use space that can be programmed to accommodate various activities throughout the year. The ThemeBox can be moved to various locations on and off campus, as often as necessary to meet the changing needs of students, the administration, campus groups, and academic departments.

As shown in Figure 1, the ThemeBox is a 20' shipping container that has been outfitted with step-up windows for grab-and-go service, and interior shelving for storage and basic electrical servicing. Like all shipping containers, which are built to international standards, the interior has a width of 8' and a height of 8.6'. Retractable window coverings will be used for added security when the ThemeBox is closed and as awnings when open to provide protection from the elements.

### **2.2.2 GOVERNANCE**

#### **Oversight:**

Tone Conte, Director of Office of Vice Provost Students

#### **Insurance:**

Ryerson

Under the direction of Tone Conte, the equivalent of one full-time student job position will be required to manage the programming and operations of the ThemeBox. This will give the student (or three students, hired per semester) the opportunity to learn management skills for event planning, public outreach, and coordinating various student groups' participation in programming the ThemeBox.

Student groups on campus, with the support of the student manager, will have the opportunity to program activities involving the ThemeBox. The main purpose of the programming is to generate activity, giving community members a reason to stay on campus, rather than to distribute information or promote events.

The success of the ThemeBox can be measured by how many people use the services and programming



it provides as well as whether the area in which it is located has changed in nature from a pedestrian thoroughfare to a destination in itself.

### 2.2.3 PROGRAMING SCHEDULE

The following is a suggested programing timeline, however; one of the most appealing aspects of the ThemeBox is that its programing and location are highly flexible. As the needs of Ryerson's student base and the University administration change, the ThemeBox can be reprogramed accordingly. This highly flexible programing option suits the progressive and innovative nature of Ryerson University.

#### PRECEDENT - WELCOMEBOX AT EVERGREEN BRICK WORKS



#### 1) Library Corridor

##### Fall Programing (September to December)

##### Programing

In the fall, the ThemeBox will be used to animate the corridor along 350 Victoria Street as a free Game Library, where students can borrow board games to play with friends using their student OneCard as a deposit. Seats, tables, and colourful umbrellas will visually tie the ThemeBox area to the street furniture on the pedestrianized areas of Gould Street and

#### FIGURE 2. THEMEBOX LIBRARY CORRIDOR RENDERING



Victoria Street. The proposed street furniture will provide amenities for students to enjoy while playing their borrowed board games, or while playing cards, reading, or simply relaxing with their friends. This will transform the library corridor from a pedestrian thoroughfare into a European-style destination where students come to spend time, catch up with friends, enjoy the pleasant weather, and people watch. The Association of Ryerson Role-Players and Gamers (ARRG!), has expressed interest in being involved in the programming of this space.

### Site Design

As shown in Figure 3, the ThemeBox is located on the western side of the corridor and will have electrical access from the Podium Building. Transporting the box in and out of this location will be fairly easy as the location is accessible to larger vehicles. The seating provided will be unfixed to ensure flexibility and so that the users can alter the seating arrangements to suit various size groups. The seating around the container will need to be strategically located to limit interference with pedestrian mobility. The space currently acts as a pedestrian thoroughfare with foot traffic flowing along Victoria to and from Gerrard Street East to the north. The addition of the ThemeBox Game Library will transform this space into a campus destination.

### Security

The Victoria Street Library Corridor has clearly defined borders that control the space and creates a sense of ownership. There is also natural access control through distinct entrances and exits to the space at the northern and southern points of the corridor. Lighting, frequent pedestrian foot traffic and ongoing maintenance of the space create a safe environment for those who use it.

### Installation

To access this location (and other ThemeBox locations), a tilt-bed truck will be required. This truck should access the corridor via Gould Street, as there can potentially be height issues at the Gerrard Street East entrance located to the north.

FIGURE 3. THEMEBOX LIBRARY CORRIDOR SITE DESIGN



## 2) Devonian Pond Winter Programing (December to March)

### Programing

During the winter months the Themebox will move south to Devonian Pond, as a rink-side skate and hockey equipment library. This will provide students with the opportunity to rent skates, or borrow them using their OneCard as collateral, so they may take advantage of the rink when it is frozen. Ball hockey equipment will be available for rent or loan. This can be used on the frozen pond, or while the it is empty and dry, which may become more frequent as winters get milder and snow arrives later in the season. The opportunity to engage in one of Canada's cherished winter pastimes will become available to all students and serve to further animate the heart of campus. Hot drinks could also be sold through from the Themebox to meet student demand and help defray costs.

### Site Design

Figure 5 on the following page shows the location of the ThemeBox Equipment Library at the northeast corner of the Devonian Rink. The box intentionally faces Gould Street rather than the rink in order to take advantage of the high visibility from the pedestrian corridor and further animate this popular campus thoroughfare. Some seating exists on Gould Street during the warmer months but is often put into

**FIGURE 4. THEMEBOX DEVONIAN POND RENDERING**





storage, as the weather turns colder. For that reason, it may be useful to set up wooden benches and some other forms of non-metal seating so users of the rink have a place to put their skates on or rest. It may be beneficial to consider petitioning the city to re-open the locker room to meet some of these needs.

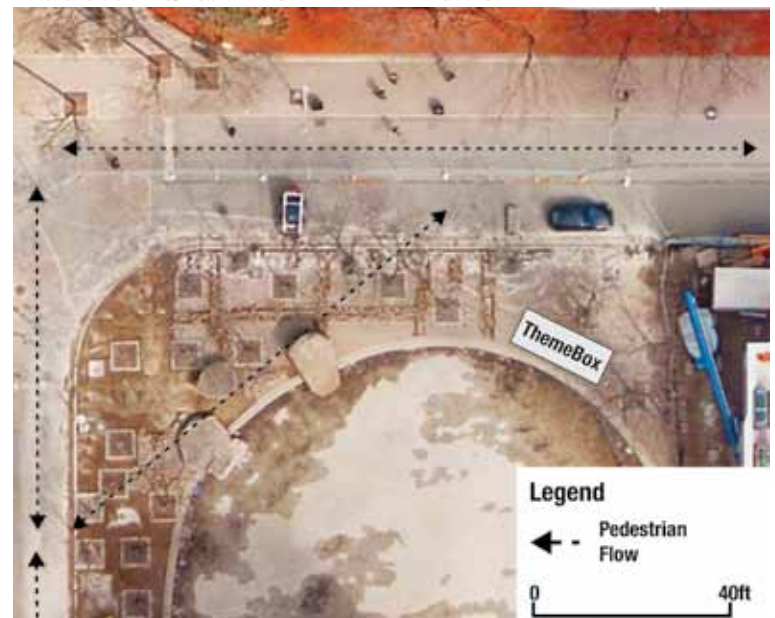
### **Security**

The Devonian Pond space incorporates all four main concepts of Crime Prevention through Environmental Design (CPTED), making it one of the safer spaces on the Ryerson campus. Natural surveillance comes from the high amount of pedestrian activity during most hours of the day, and observation also comes from the glass windows of the Image Arts building to the east. The existence of lighting and the use of various surface materials and ongoing maintenance reduces the chance that crime will occur.

### **Installation**

Due to the presence of the trees along the sidewalk on Gould Street, installing the container at this location will most likely require careful manoeuvring by the tilt-bed truck to successfully navigate between trees without causing damage. A wooden foundation will be required underneath the container to avoid the container freezing onto the bricks of the curb.

**FIGURE 5. THEMEBOX DEVONIAN POND SITE PLAN**



### 3) Victoria Lane Spring Programing (March to May)

#### Programing

For the spring season, the ThemeBox will move to the Victoria St laneway where Ryerson Bikes, Ryerson's cyclist group, will be responsible for delivering cyclist programming including bike repair workshops. The ThemeBox will be located beside the Ryerson Bike Room, where students already safely store their bicycles. By locating here, there is a built-in consumer base for Ryerson Bikes' services. This seasonal use is timed to coincide with the warming weather when students, faculty, and staff begin to cycle to school again. The ThemeBox will transform the laneway from a pedestrian short cut into a destination for Ryerson cyclists as well as those from the surrounding community. Existing uses will not be hindered by the placement of the ThemeBox, although some servicing may have to be relegated to certain hours.

#### Site Design

This site is located in the Victoria Street Laneway and it is one of the key interstitial spaces on campus that is in serious need of further animation. It is composed of adjoining laneways from Bond, Dundas and Victoria and the area does see some foot traffic due to its use as a shortcut to Bond Street. Locating a container at this location would significantly increase the use of the space as more than a simple thoroughfare. Electricity can be sourced from the Victoria Building

FIGURE 6. THEMEBOX VICTORIA LANEWAY RENDERING



and currently 60 amp 120/208 volt service is available. Furthermore, the gritty and urban setting of this site mirrors the industrial nature of the cargotecture style. Because of its location in an alleyway, minimal landscaping and furniture will be provided, and it will be important to coordinate with the Campus Facilities Department to ensure there are minimal conflicts with trucks moving in and out of the site.

### Security

Ryerson implemented CPTED initiatives in the Victoria Street Laneway such as lighting, Closed Circuit Television (CCTV), and colourful bicycle-themed murals in 2008 & 2009. These initiatives have been employed to reduce the fear of crime in the laneway and make it a more inviting space for students and the local community. Since the laneway does not have natural surveillance due to a lack of windows from adjoining buildings, the installation of a CCTV camera assists in making it a safer space. The largest challenge is maintenance, as the laneway's paving is currently in disrepair which indicates less control of the space.

### Installation

Depending on the exact location of installation, there may be a need to provide wooden foundation underneath the container to ensure level placement, as the cement within the laneway is in poor condition and unlevelled in certain spots.

**FIGURE 7. THEMEBOX VICTORIA LANEWAY SITE DESIGN**





#### 4) Kerr Hall Quad Summer Programing (June to August)

##### Programing

In the summer the Themebox will move to the Kerr Hall courtyard to be used as an athletic equipment library. Facilitating the use of the quad with equipment such as Frisbees and soccer balls will animate Ryerson's largest green space. It will also improve accessibility to athletic equipment for students with mobility issues who cannot descend to the Ryerson Athletic Centre (RAC) front desk via the front entrance stairs to borrow equipment.

##### Site Design

The Quad is the location of some of the only real open space on Ryerson Campus and locating the container within this area during the summer months will help to enliven this campus asset. The programing of this area as an Equipment Library means that very little furniture will be needed. There are plenty of seating options currently in the quad and the remainder of the open space should be used for activity and sports purposes. The box is located in the north eastern corner of the quad and the existing trees will provide much needed shade for the container during the summer months.

FIGURE 8. THEMEBOX KERR HALL QUAD RENDERING



## Security

Although there are clearly defined borders to the Quad, along with landscaping and the use of various surface materials, there is not a high amount of natural surveillance. During daylight hours, the Quad is used quite extensively as a thoroughfare by students and faculty, as well as those in the local community for its large grassy area. At night, the northern portion of the Quad is fairly quiet, with low foot traffic and no natural observation from the empty classrooms. Since the ThemeBox will be in this space during the summer, longer daylight hours mitigate most concerns, however improved lighting would assist in making this area a safer space.

## Installation

It would be beneficial to place the container strategically in a location that will provide the most shade, as to keep the interior as cool as possible in the warmer summer months while still being visible from multiple sight lines. A tilt-bed truck would be required for transportation and placement.

## 2.2.4 COSTING

The cost of the ThemeBox is estimated to be \$7,995. This is assuming that Ryerson is paying full cost for the container. However, there is the opportunity to receive the container at no cost if the University decides to negotiate a mutually beneficial agreement with a distributor, such as exchanging the container for publicity. Transporting the container around campus will cost approximately \$145 per move. The modifications involved with this design include:

- Steel trim for openings
- Dual function man door
- Corrugated steel awning replaced with flat steel pressed to blend in (due to the torsion of the corrugated steel previously under tension)
- Support struts

These modifications are estimated to cost between \$2,700 and \$3,900. Due to the year round use of the Theme Box, insulation would be required to and would cost approximately \$2,450. These modifications total to a cost of \$5,895.

**FIGURE 9. THEMEBOX KERR HALL QUAD SITE DESIGN**



## 2.3 RY DOCKS

### 2.3.1 DESCRIPTION

Ry Docks is a multi-use market located at 270 Church Street. This site is currently being used as a commercial parking lot and has been designated as the site of the future Health Sciences building.

### 2.3.2 GOVERNANCE

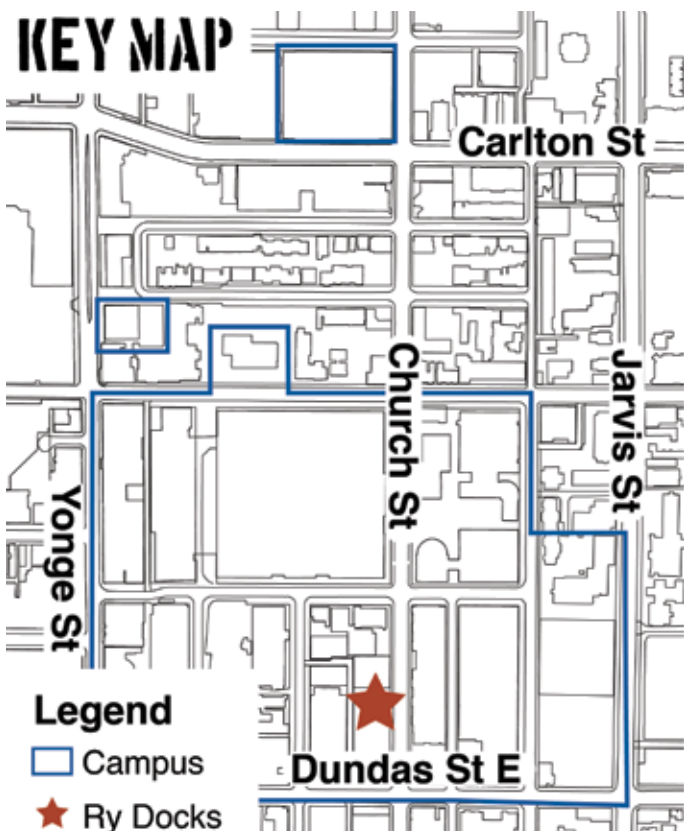
The overall objective of Ry Docks is to be a community hub that supports micro enterprises run by local entrepreneurs, members of the Ryerson community, and other academic institutions. John Carallo, Director of Business Services at Ryerson, will oversee the contracts with food and retail vendors while Tone Conte, Director of Office of Vice Provost, Students, will oversee the organization of student studio groups in retail and food, as well as the programming for the JamBox and the ShowBox. The split of users – Ryerson students versus local entrepreneurs – should be weighted to ensure that the Ry Docks is sustainable in terms of attracting the necessary numbers of people to keep the vendors in the market financially viable. Student-run stalls must adhere to the same, or similar, contracts regarding days and hours of operation.

#### Objective 1: Increasing Activity on Campus

The main objective of Ry Docks is to continue the transformation of Ryerson's campus from a set of disparate buildings to a distinctive urban campus that welcomes all community members. Ry Docks will act as an anchor of activity, animating the laneways between the surrounding streets and beginning to build a vibrant pedestrian corridor up Church Street from Dundas Street East to Carlton Street. It will help to transform the image of the University campus from a semi-private institutional space into a public space.

#### Objective 2: Strengthening Community-Building with Local Stakeholders

Ry Docks presents an opportunity to support local community stakeholders – such as Aboriginal groups, newcomers to Canada, and other vulnerable populations – by providing them with affordable





space for starting a business or selling their creations. Scadding Court Community Centre's Market 707 has launched food vendor businesses, the success of which could be recreated at Ry Docks. Similarly, the Arts Market in Leslieville provides an example of how grouping local artisans' micro-stores within a single storefront on a main street create a critical mass of consumer choice that functions as a compelling destination retail space. Supporting local community members is equally important as supporting the Ryerson community because one of the objectives of this project to strengthen Ryerson's role in the urban fabric through community building.

### **Objective 3: Support Student Hands-On Learning**

Studio groups – from retail management, the Digital Media Zone, interior design, architecture, urban planning, engineering, and more – have the opportunity to share some of the spaces and learn by doing. There are opportunities to have other schools or community members participate in the market: culinary students from the George Brown Culinary School could run a business; while locale artists could paint murals on blank shipping container surfaces.

#### **RY DOCKS PRECEDENT**



## 2.3.3 PROGRAMING

As shown in Figure 10, Ry Docks is comprised of three 40' FoodBoxes, three 20' ShopBoxes, a ShowBox , a JamBox, a Storage container and an empty container used for signage. The size and mixed-use nature of the market will make Ry Docks a popular destination around campus. It will be integral to the year-round success of the market to take deliberate steps toward animating the space through the winter months. The outdoor public space will not be comfortable in cold temperatures and erecting a temporary cover for the market may be an option. Also, students from the Ryerson Digital Media Zone could create an app that can be used to order food for pick up from the market. The following is a more detailed list of the programing for Ry Docks containers.

### FoodBox Programming

**Academic Oversight:** Tone Conte, Director of Office of Vice Provost Students

**Academic Insurance:** Ryerson University

**Non Academic Oversight:** John Carallo, Director of Business Services at Ryerson

**Non Academic Insurance:** Required, purchased by vendors

The three FoodBoxes will be used to provide the Ryerson Campus with a diverse and affordable selection of food options. Each will be modified to contain three different food vendors for a total of nine potential food vendor spaces. It is recommended that

FIGURE 10. RY DOCKS RENDERING



Ry Docks follow a similar vendor selection process as that used by the Scadding Court Community Center's Market 707, with a focus on affordability and differentiation of offerings. It is also recommended that a couple of stalls be dedicated to studio project space. For example, this would be an ideal opportunity for students from Ted Rogers School of Management or George Brown Culinary School to have a space where they can learn the ins-and-outs of running their own business.

## FoodBox Costing

There will be three 40 foot containers outfitted as FoodBoxes. Required modifications will include:

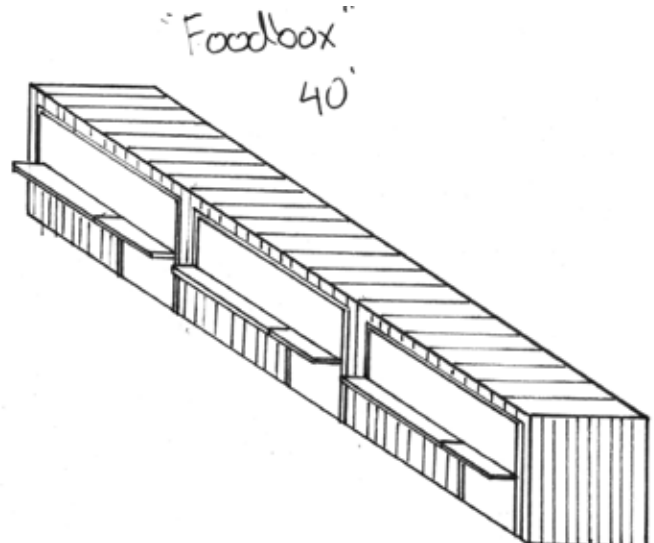
- Steel trim for openings
- Flat Steel or Aluminum shelves
- Hinged door to access interior x 3
- Support struts
- Steel Reinforcement where hinged door meets rest of shelf

These modifications would cost between \$2,700 and \$3,800. FoodBoxes would be running year round and would need insulation. The cost for the supply and installation of spray foam with studs finished, would be approximately \$9,900. The remaining costs associated with a single FoodBox would be \$13,150. In total, there would be three FoodBoxes, which would add up to \$39,450. The possibility of a bulk rate for the modifications could potentially reduce this cost even further.

### FOODBOX PRECEDENT



### FIGURE 11. FOODBOX DESIGN ILLUSTRATION





## ShopBox Programming

**Academic Oversight:** Tone Conte, Director of Office of Vice Provost Students

**Academic Insurance:** Ryerson University

**Non Academic Oversight:** John Carallo, Director of Business Services at Ryerson

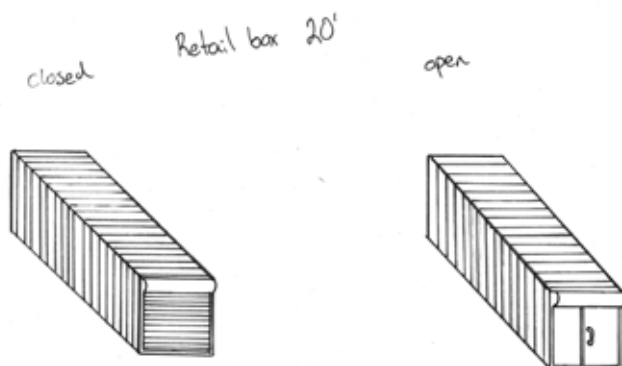
**Non Academic Insurance:** Required, purchased by vendors

Ry Docks will also have three retail boxes with a configuration based on Boxpark in the UK. These will be affordable retail spaces for current students, Ryerson alumni, and local entrepreneurs. Inspiration is drawn from Toronto's successful ArtsMarket in Leslieville, where artists and craftspeople sell their wares in unique retail displays within a larger shared store. This store-within-a-store business model allows these vendors to have a presence in a high-traffic location for only a small amount of rent, and the large and ever-changing variety of products in the ArtsMarket creates attract customers. ShopBox will display the wealth of amazing talent at Ryerson, especially in the fashion program, and give students a boutique space to sell their creations.

### SHOPBOX PRECEDENT



FIGURE 12. SHOPBOX DESIGN ILLUSTRATION



## ShopBox Costing

The cost of purchasing each unit at a bulk rate each means that each of the 20' containers will cost \$2,245, including transportation costs. The modifications for this specific container are:

- Steel trim for openings
- Recessed man door (2') to accommodate roll of un-deployed garage door.

The average cost of the modifications is \$2,250. The cost of spray foam insulation for a 20' container would be approximately \$2,450. The final cost per unit including modifications of a single ShopBox is estimated to be \$6,720 per ShopBox. For the three Ry Docks ShopBoxes, the total cost will be \$20,160.

## JamBox Programming

**Oversight:** Tone Conte, Director of Office of Vice Provost Students

**Insurance:** Ryerson

JamBox is an entertainment space that can be used to enliven Ry Docks both day and night. This space can be used for activities such as live and recorded music, theatrical performances, poetry slams and other performance based entertainment activities.

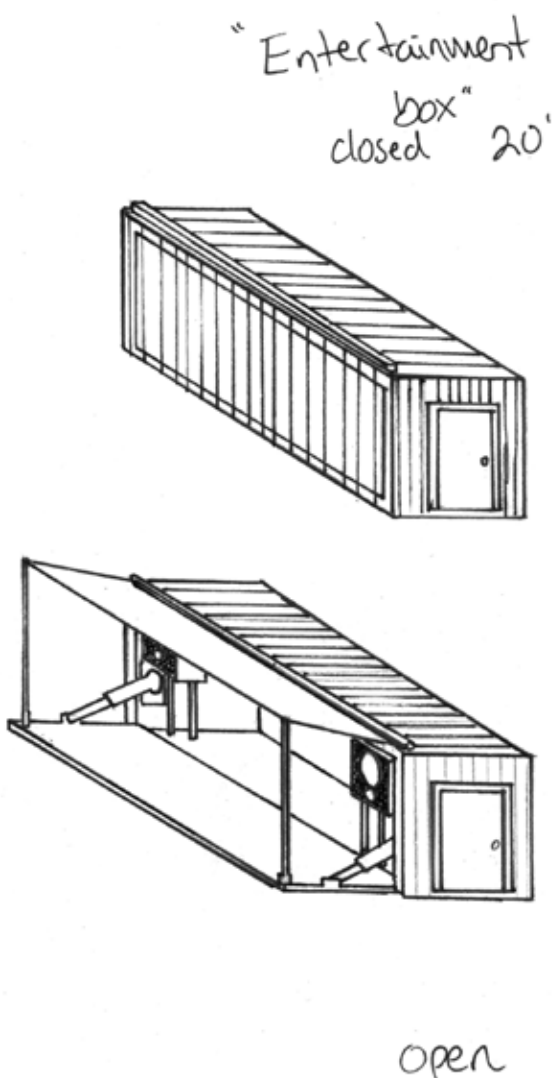
## JamBox Costing

There will be a single 20' JamBox. The modifications associated with this type of container include:

- Steel trim for openings
- Lightweight solid material awning (manually set up with support struts)
- Hydraulics (Costly and can be replaced by a crank mechanism or electric winch.)
- Support struts x 2

These types of modifications to the container would cost an average of \$4,600. There could be potentially costs associated with the need for speakers and a PA system to accompany the container, but the using university owned equipment would be an ideal way of keeping costs down.

FIGURE 13. JAMBOX DESIGN ILLUSTRATION



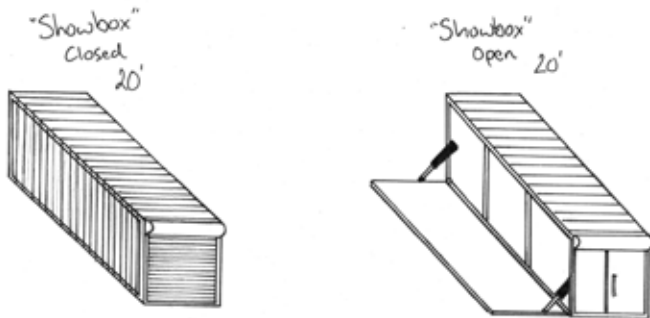
## JAMBOX PRECEDENT



## SHOWBOX PRECEDENT



FIGURE 14. SHOWBOX DESIGN ILLUSTRATION



## ShowBox Programming

**Oversight:** Tone Conte, Director of Office of Vice Provost Students

**Insurance:** Ryerson

There will also be a ShowBox at Ry Docks, oriented to Church Street for maximum exposure. This will act as a display case for student work. The end facing the street and the side facing the market courtyard will be floor to ceiling windows for further visibility.

## ShowBox Costing

The modification types for a single 20' ShowBox are:

- Steel trim for openings
- Man door would need to be recessed approx. 2' to accommodate roll of un-deployed garage door. It may be possible to have roll on exterior.
- A crank mechanism or electric winch (reduces cost greatly, improved reliability & ease of use compared to hydraulics)
- Support struts x 2
- Plexiglas panes

The average cost for these modifications are approximately \$4,300. The total cost of the single ShowBox will be approximately \$6,700 (inclusive of purchase and transport costs).

## Additional Box Costs: Storage and Signage

### StorageBox Costing

There will only be the need for a single StorageBox. The container will require minimal to no modifications and thus will only require the purchase of the container (and transportation) and thus cost, as outlined in the Individual Containers & Associated Costs (estimates) section, \$2,020.

### SignBox

Ry Docs will have a 40' container that will be stacked on two containers beneath it and function as a signage (and also function as a gateway in the 270 Church St. proposal). Similar to the StorageBox, there will be little to no modifications associated with this container. As far as the signage itself, Ryerson can run an open design competition for its students to design signage and offer a much cheaper method of installing the signage on the face of the container. The cost for this container will vary slightly more than the StorageBox as it will require a crane for placement. A cost estimate from 'GIANT container Sales' suggests that a crane can be rented for a fee of \$300 and an additional \$100/ hour fee for every additional hour required.

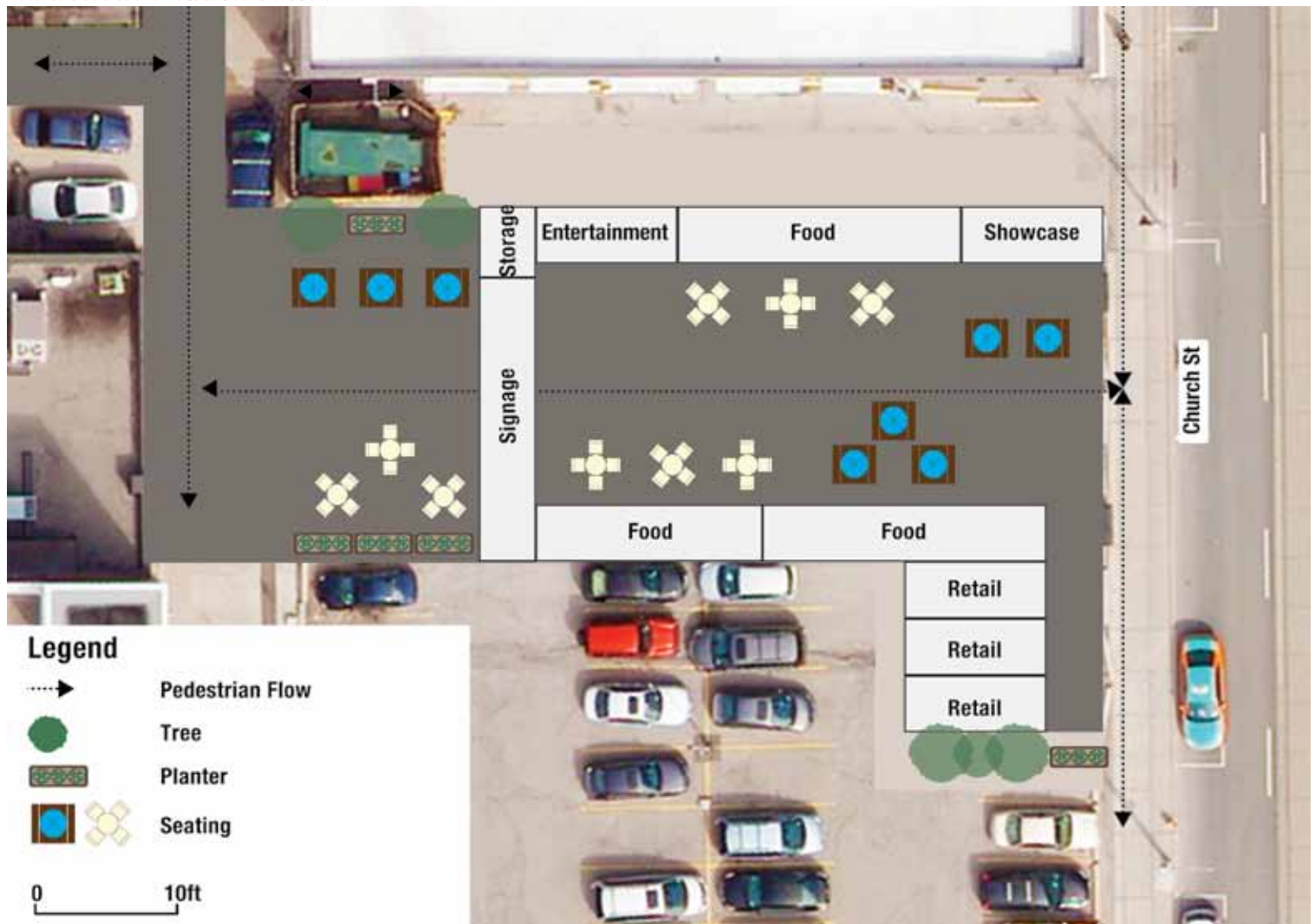


## Site Design

Ry Docks is based on the Market 707 model at the Scadding Court Community Center. This approach was chosen due to its ability to offer an extensive variety of much needed campus amenities and services while simultaneously engaging in place making. The strategic location of this market at 270 Church Street was selected for a number of reasons.

It will draw pedestrian traffic along Church Street and connect the campus with the newly constructed Mattamy Athletic Center. This will transform this section of Church into a vibrant pedestrian corridor. The site has high visibility and is in close proximity to central campus. Lastly, it will animate the alleyways between Bond Street, Gould Street and Church Street as students take short-cuts to access the market. This will have the added bonus of decreased perceived safety issues that are often associated with laneways.

FIGURE 15. RY DOCKS SITE DESIGN



## 2.4 STUDY SPACE AND EXPANDED RY DOCKS

### 2.4.1 DESCRIPTION

The parking lot at 270 Church Street will ultimately be the home of the new Health Sciences building and it is important to note that Ry Docks will be an interim use on the site. Given the modularity of cargotecture, the plan is to dismantle and relocate Ry Docks to the new Dundas and Jarvis campus property, following an anticipated successful first run at the 270 Church location. By developing its popularity and an established customer base, relocating to the perimeter of campus will be more feasible. This will help to draw the Ryerson community to the University's newly purchased property, thus expanding the University's presence.

Accompanying this move to Dundas and Jarvis is the final proposed cargotecture project: a new study centre built from 25 stacked containers. The study centre will be incorporated into an expanded Ry Docks Market to ensure a critical mass of activity is present to draw students to the eastern edge of campus.

### 2.4.2 PROGRAMING

The Ry Docks programing will remain the same between the various locations. However, at the Dundas and Jarvis location the retail component will be expanded as shown in Figure 16.

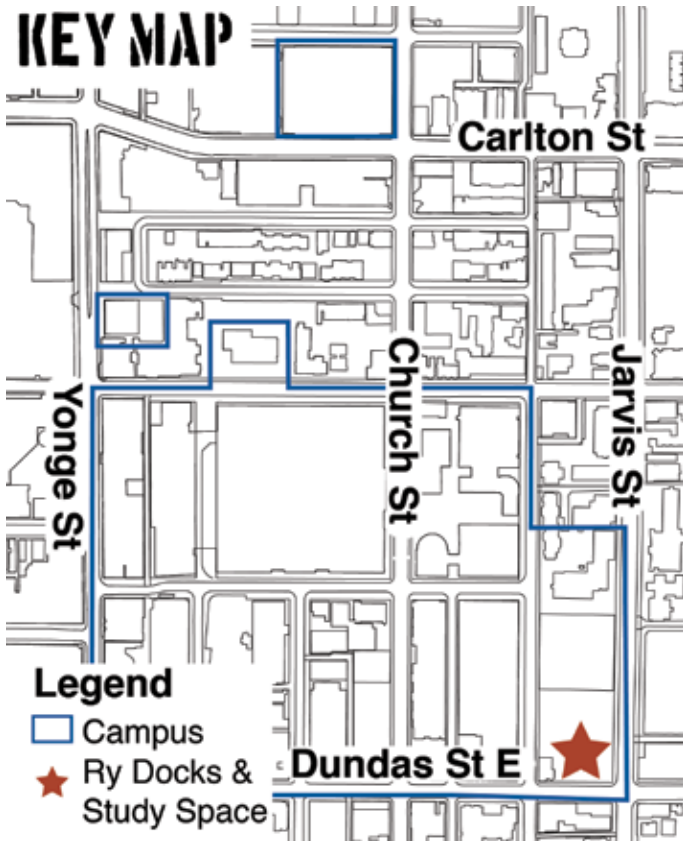


FIGURE 16. SITE RENDERING NORTH VIEW FROM DUNDAS





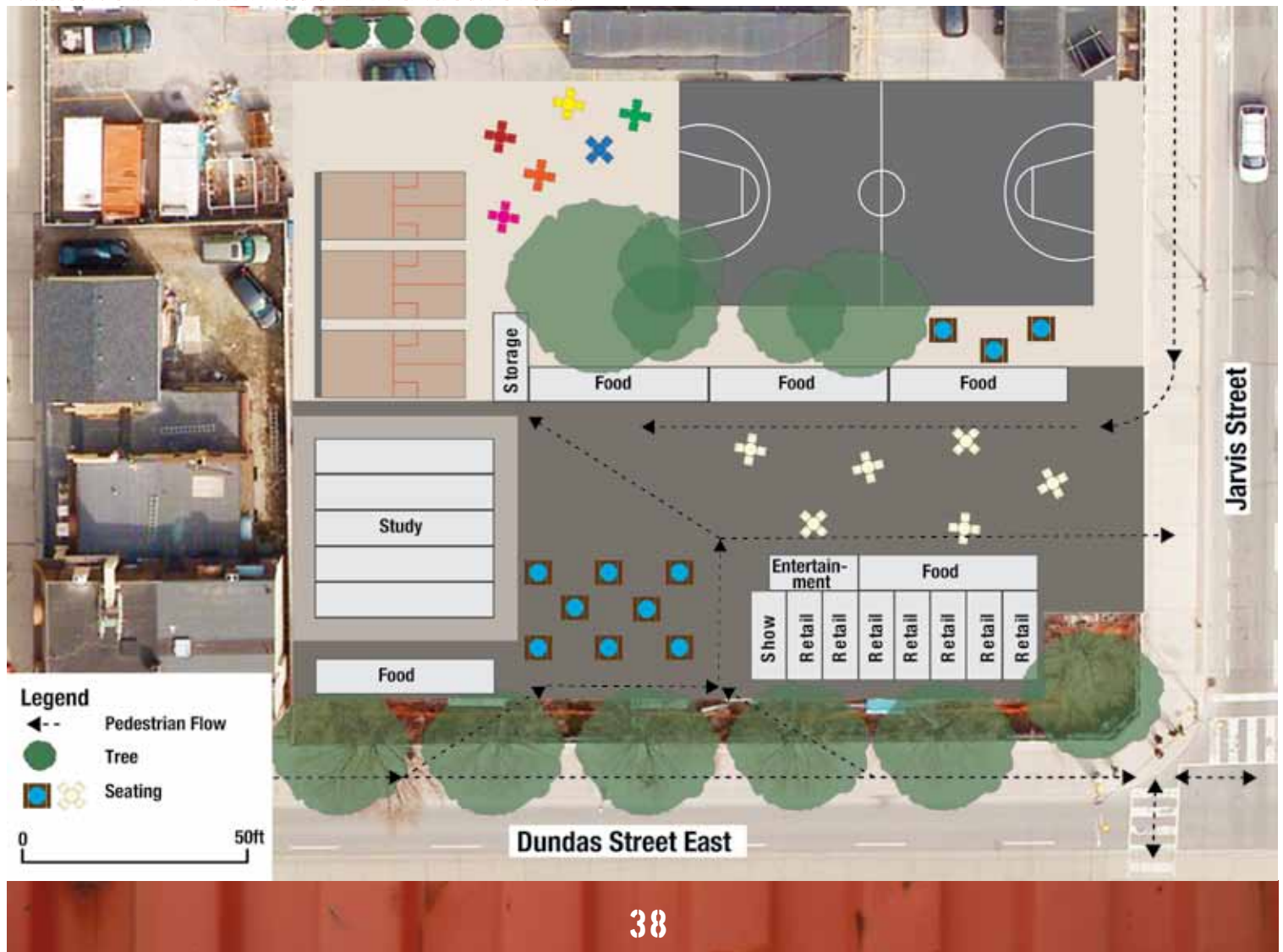
The lack of study space on Ryerson campus is an important and pressing issue and the proposed study space will be used to fill that need. However, it is important to note that this space is highly flexible and could potentially be used for other services if the programming needs change.

### 2.4.3 SITE DESIGN

The market itself is oriented to both Dundas Street West and Jarvis Street to take advantage of any pedestrian flows around the site. The study center is integrated into the market to ensure that uses of the study space feel connected to the vibrant market atmosphere while also having easy access to the amenities it provides such as food and social space.

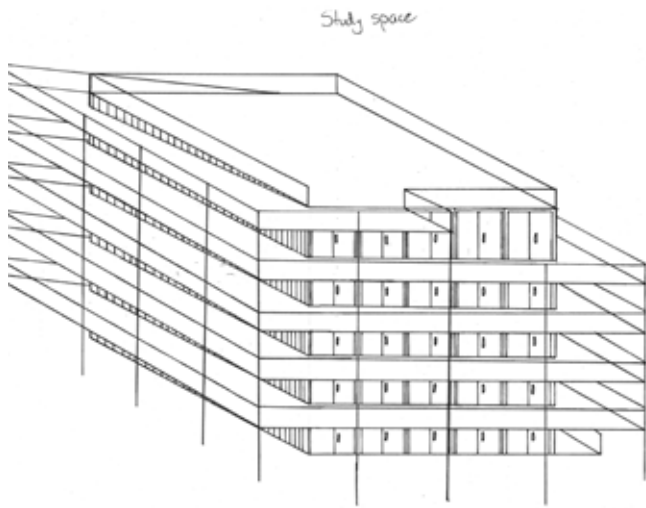
Given the size of the Dundas and Jarvis site, additional recreational uses have been programmed into the site design, specifically a basketball court and outdoor squash courts as shown in Figure 17.

FIGURE 17. EXPANDED BY DOCKS STUDY CENTRE SITE DESIGN





**FIGURE 18. STUDY CENTRE DESIGN ILLUSTRATION**

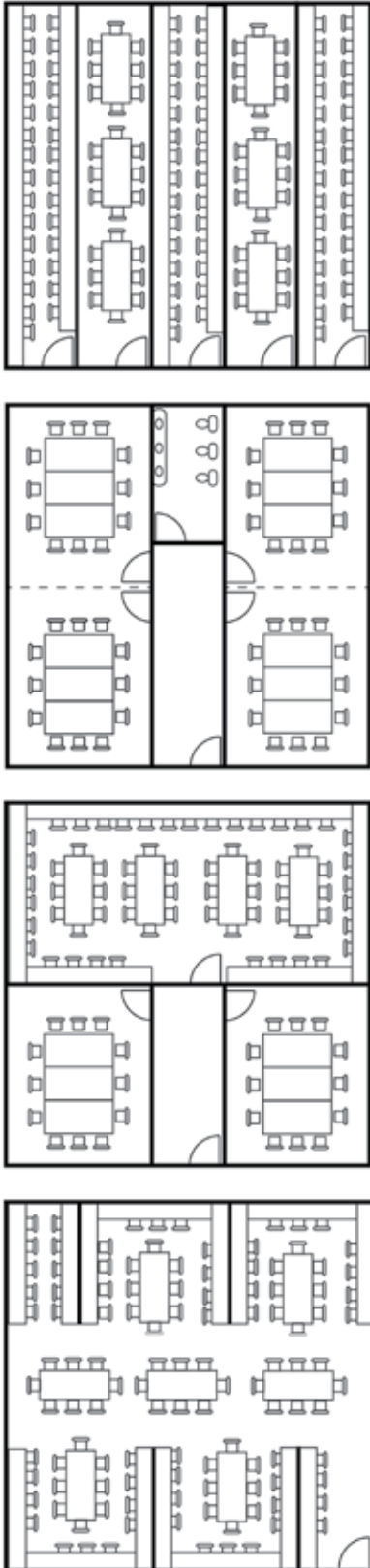


One of the major concerns with a stacked cargotecture building was accessibility. While the inclusion of an elevator or lift would be possible, this would add significant costs to the project and that is less appropriate given the nature of the study centre as an interim land use. The proposed solution involves a ramp system wrapped around the building to achieve the necessary gradual incline as shown in Figure 18. Given the weight-bearing capacity of the stacked containers, the interior edges of the ramp can be attached to the study centre, with additional support posts along the outer edge of the ramp, thus minimizing costs for a fully accessible building. This ramp forms a key aesthetic architectural feature, as well as creating significant outdoor space for students to step outside for some fresh air when they need a break from studying. The ramp could also be extended to the roof, to create additional informal study and public space, overlooking the new Rye Docks market.

**FIGURE 19. SITE RENDERING WEST VIEW FROM JARVIS**



**FIGURE 20. STUDY CENTRE CONCEPTUAL FLOOR PLANS**



Potential floor plans for the study centre have also been proposed and these highlight the flexibility of containers. In its most simple form, the study centre could be built from minimally modified 40-foot containers, as these are large enough to provide significant study space without modification as shown in Figure 20. If the budget exists to remove walls and combine containers to create larger spaces, the other floor plans shown in provide additional options to create larger enclosed meeting spaces, bathrooms, and an open-concept floor with study nooks and larger spaces.

#### **2.4.4 GOVERNANCE**

Governance for the Study Centre is as follows:

**Academic Oversight:** Tone Conte, Director of Office of Vice Provost Students

**Academic Insurance:** Ryerson University

The governance organization for the respective components of Ry Docks will remain the same (see pages 30-32).

#### **2.4.5 COSTING**

A cost estimate for this conceptual design is premature, given the number of uncertainties surrounding floor plans, accessibility options, bathrooms, and the rooftop patio. Costing for this scale of shipping container project could only be done once the major design details are decided on.

#### **STUDY CENTRE PRECEDENT**





## 2.6 AREAS FOR FURTHER RESEARCH

### 2.6.1 PARKLETTES ON CHURCH

#### VANCOUVER PARKLETTE PRECEDENT



One of our client's objectives is to extend the University's presence along Church Street, and in doing so, connect the heart of campus to the new Mattamy Athletic Centre. The use of pop-up-parklettes – small temporary parks built in the curb lane of a street in lieu of on-street parking - along Church Street is one way to achieve this goal, and should be further investigated. This would involve a temporary conversion of street parking into public space for passive or active uses. Shipping containers could be used as the anchors in creating these pop-up parks. While the planning and regulatory process involved in creating pop-up-parklettes is quite involved, there are already many precedents for this concept in the City of Toronto and beyond.

#### INTERIOR DESIGN PRECEDENT



### 2.6.2 BRANDING AND MARKETING STRATEGIES

The launch of ShopBox will necessitate a business plan and marketing strategy. This opportunity should be extended to Ryerson's talented business and marketing students, providing valuable learning and entrepreneurial experiences. Specific areas of consideration should include: social media campaigns, advertising opportunities, business feasibility plans, and further market analyses.

### 2.6.3 INTERIOR DESIGN SHOPBOX

While the purchase and construction of the ShopBox from a container fabricator will include a basic interior 'fit-out,' an opportunity exists for Ryerson's interior design students to aesthetically and functionally tailor the container for the types of goods being offered. Some areas of specific consideration include: interior layout, interior and exterior design characteristics, furniture, shelving, and lighting.

#### RYERSON DIGITAL MEDIA ZONE



### 2.6.4 DIGITAL MEDIA ZONE

Ryerson's Digital Media Zone (DMZ) is an on-campus incubator for digital media start-ups. The DMZ provides mentorship, education, and support to student entrepreneurs. This organization can be



contribute to cargotecture on campus through the development of media tools that will help ensure the project's success at Ryerson. Through the creation of social media campaigns and phone-apps students will be able to interact and engage with the containers. This might include tracking the seasonally mobile Themebox containers, pre-ordering and viewing menu options for FoodBoxes, and keeping up-to-date on events at Ry Docks.

## 2.6.5 CONTAINER KNOWLEDGE AND SUPPORT NETWORK

The success of Market 707 has prompted a great deal of interest in Scadding Court's use of shipping containers as entrepreneurial incubation spaces in the City of Toronto. As other community organizations look to adapt Scadding Court's model for their own purposes, the 'cross-pollination' of ideas and extension of support can help ensure success.

One strategy to help ensure the success of other community-based cargotecture projects is the establishment of an inter-organizational container knowledge and support network. Here, representatives of organizations utilizing (or considering utilizing) shipping containers for entrepreneurial and community-based activities could share best practices and tips for success. This network could also help to promote this model of entrepreneurial incubation and give a voice to the cargotecture movement.

### SCADDING COURT COMMUNITY CENTRE



# 3.0 IMPLEMENTATION INFORMATION

## 3.1 COSTING AND INSTALLATION PLAN

The implementation for the installing, transporting and removing shipping containers varies according to the scale of a particular project. The following four sections will discuss each step in more detail.

## 3.2 PERMITS

There are a number of considerations that must be accounted for when obtaining a permit for a business. Different permits and requirements would be needed based on the type of business. If the business is selling alcohol or food they would need different permits than a clothing store. Since the types of businesses that will be located within the shipping container is still unknown, it is important to take into consideration as many of the known potential permits along with their associated costs. The following charts outline what potential permits and costs might be relevant when placing businesses in a repurposed shipping container based on the type of use that it will have.

### Scadding Court Community Centre's Market 707

Using Section 37 funds, Scadding Court purchased and placed the shipping containers on the sidewalk outside of the community centre. After installation, approvals by Fire Services and Public Health were granted. For the next two years, City staff turned a blind eye to the businesses operating in the containers because they could not decide on a proper classification. Cargotecture is an extremely new form of development in Toronto, which City staff is still grappling with.

### Potential Permits Required for ThemeBox

Application intake, plan review, inspection activities - energy efficiency devices/equipment	\$104.48/installation
Temporary Structures: Temporary Buildings; OR Accessory Structures	\$13.06; OR \$104.48
Fire Alarms	\$65.29/storey
Repairs or Re-cladding of Walls, Re-roofing (non-structural)	\$0.64
Emergency Lighting	\$45.71/storey, max \$457
Demising Walls (no other construction)	\$5.23/linear m
Ceilings (added or replacements)	\$0.52
Satellite Dish, Solar Collector	\$359.15/structure
Application for a variance to Chapter 694 with respect to a third party sign	\$1,594.17/application
Roof Signs	\$37.41/m <sup>2</sup> ; min \$218.25
Sign Structure	\$104.48/installation

## Potential Permits Required for FoodBox

Application intake, plan review, inspection activities - energy efficiency devices/equipment	\$104.48/installation
Business License (Regional)	\$210.00/application
Preliminary Project Review	\$125.00
Registering a Business (Provincial)	\$60.00
Name Search (Provincial)	\$8.00
Plumbing - Fixtures/Equipment/Roof Drains	\$26.12 each
Special Ventilation Systems - Commercial Kitchen Exhaust, Spray Booth, Dust Collect, etc	\$391.80 flat fee
Heating, Ventilating and Air Conditioning (HVAC)	\$1.61/m <sup>2</sup>
Temporary Structures: Temporary Buildings; OR Accessory Structures	\$13.06; OR \$104.48
Fire Alarms	\$65.29/storey
Repairs or Re-cladding of Walls, Re-roofing (non-structural)	\$0.64
Emergency Lighting	\$45.71/storey, max \$457
Demising Walls (no other construction)	\$5.23/linear m
Ceilings (added or replacements)	\$0.52
Satellite Dish, Solar Collector	\$359.15/structure
Application for a variance to Chapter 694 with respect to a third party sign	\$1,594.17/application
Roof Signs	\$37.41/m <sup>2</sup> ; min \$218.25
Sign Structure	\$104.48/installation

## Potential Permits Required for Non-Food Container

Application intake, plan review, inspection activities - energy efficiency devices/equipment	\$104.48/installation
Business License (Regional)	\$210.00/application
Preliminary Project Review	\$125.00
Registering a Business (Provincial)	\$60.00
Name Search (Provincial)	\$8.00
Heating, Ventilating and Air Conditioning (HVAC)	\$1.61/m <sup>2</sup>
Temporary Structures: Temporary Buildings; OR Accessory Structures	\$13.06; OR \$104.48
Fire Alarms	\$65.29/storey
Repairs or Re-cladding of Walls, Re-roofing (non-structural)	\$0.64
Emergency Lighting	\$45.71/storey, max \$457
Demising Walls (no other construction)	\$5.23/linear m
Ceilings (added or replacements)	\$0.52
Satellite Dish, Solar Collector	\$359.15/structure
Application for a variance to Chapter 694 with respect to a third party sign	\$1,594.17/application
Roof Signs	\$37.41/m <sup>2</sup> ; min \$218.25
Sign Structure	\$104.48/installation



## Potential Permits Required for Study Space

Application intake, plan review, inspection activities - energy efficiency devices/equipment	\$104.48/installation
Preliminary Project Review	\$125.00
Plumbing - Fixtures/Equipment/Roof Drains	\$26.12 each
Registering a Business (Provincial)	\$60.00
Heating, Ventilating and Air Conditioning (HVAC)	\$1.61/m <sup>2</sup>
Fire Alarms	\$65.29/storey
Repairs or Re-cladding of Walls, Re-roofing (non-structural)	\$0.64
Emergency Lighting	\$45.71/storey, max \$457
Demising Walls (no other construction)	\$5.23/linear m
Ceilings (added or replacements)	\$0.52
Satellite Dish, Solar Collector	\$359.15/structure
Application for a variance to Chapter 694 with respect to a third party sign	\$1,594.17/application
Roof Signs	\$37.41/m <sup>2</sup> ; min \$218.25
Sign Structure	\$104.48/installation

### 3.3 PURCHASING

The purchasing cost of a shipping container varies depending on its condition and size. A container is considered 'used' if it has been in continual use for transportation or outdoor storage, while a 'new' container is one that has made a limited number of trips - such as a single oceanic crossing. Used containers are less expensive and more plentiful than new, but their exterior appearance and worn door seals may require attention before they can be used for cargotecture.

The standard unit of measurement for a container is Twenty-foot Equivalent Units (TEUs). A single 20' container is 1 TEU and it strikes a good balance between availability, choice of condition, and its internal revenue-generating volume. Large 40' (2 TEU) containers are common and offer better per-square-foot cost than the smaller 20' and 10' units, resulting in the best overall purchase value. 10' (0.5 TEU) units are less common and the costly floor, corners, and door make up a proportionally greater amount of the unit. As a result these containers are proportionately more costly than the larger units and their availability is generally poor.

Additional costs must be factored into the budget when modifying a container. Typical modifications include doors, windows, resurfacing of interior walls, and potentially additional structural support. For the Themebox, interior flexibility and accommodating multiple uses will be critical to the success of the project. For the Foodbox and retail box, the uses will remain static, so specialized modifications should be pursued. Due to the diversity of needs, purchasing used shipping containers would serve as the most cost efficient method of obtaining containers.

Based on multiple quotes from Toronto-area container vendors, the average price for a 10' was \$2,400, \$2,100 for a 20' container, and \$2,900 for a 40' container. Several distributors provide a bulk-rate discount for orders of 5 containers or more. This would bring the average price down to \$2,125 for a 10' container, \$1,875 for a 20' container, and \$2,675 for a 40' container. An attractive option proposed by several vendors, including GIANT Container Sales, was for containers to be given to Ryerson in kind for a negotiated marketing agreement that could see the company's logo on the containers, acknowledgment in press releases, and involvement in an unveiling event.

The Ry Docks marketplace requires 10 shipping containers and the 11th container is the ThemeBox. As it can be seen from the site plan of these spaces of animation, there are 6 different types of proposed "boxes". More specifically, the FoodBox, the ShopBox, the JamBox, the SignBox, the ShowBox and the conventional StorageBox. A total of 12 containers (20' and 40') are proposed for the first two projects (Ry Docks + ThemeBox) in the Container Campus initiative. If these were obtained through a bulk-rate discount, the cost of acquiring the containers would be \$23,825, as opposed to an initial quote of \$26,300.

#### GIANT Container Sales: Purchase Cost Per Unit

Size (ft.)	Unit Price (Regular)	Unit Price (Discounted*)	Savings
20	\$2,100.00	\$1,875.00	\$225.00
40	\$2,900.00	\$2,675.00	\$225.00

\*Discounted price for orders of 5 or more containers

### 3.4 MODIFICATIONS

Modifications must be factored into the capital cost of the project. The modification quotes below were obtained from Secure Store and they do not include labour or taxes.

Item	Cost
Blast & Paint 20' Container	\$575.00
Blast & Paint 40' Container	\$875.00
Spray insulation based on R value required	\$2.75/sqft (+/-)
Standard window 42"x36"	\$700.00 installed
Basic hydro panel, HVAC, lights, switches and receptacle (subjective and dependent on wire runs and complexity)	Start at \$1,400.00
Washroom amenities (subjective)	\$1,000.00 (+/-)

#### Prefabricated Business-in-a-Box

It should be noted that there are fabricators which specialize in expensive, high-end, 'turn-key' container-based products. These vendors, including Muvbox in Montreal, allow purchases to simply order a pre-designed container-based business (café, bakery, etc.) from an online catalogue and have it arrive in a ready-to-use state. These containers feature the same quality finishing, signage, and materials one finds in a restaurant or cafe, a complete set of appliances and foodservice and point of sale equipment, and even napkins and cups. While these are an attractive option for Ryerson, their substantial cost and the loss of design control over the containers' interior exclude them from serious consideration.



### 3.5 INDIVIDUAL PROJECTS

Each of the proposed containers varies in cost based on the function that they serve and the modifications that are required. The following estimates were based on preliminary drawings and were given an estimated price range by the local shipping container distributor Giant Container Sales.

While most of the container modifications are routine work for cargotecture fabricators, several of the proposed alterations would require significant design work and structural alteration of the container at substantial cost, for which only a vague 'ballpark' estimate could be offered. As a result, further research and design development is required, along with architectural and engineering working drawings, before an accurate per-container project budget can be calculated. What is provided is primarily for illustrative purposes.



Name	Size	Container Price	Modificaionts	Modification Cost Estimate
ThemeBox	20'	\$1,875	Stripping/cleaning Insulation/interior walls Electricity, lighting, baseboard heaters Side window cut-outs and hinged shutters. Door at end	\$5,895
ShopBox	20'	\$1,875	Stripping/cleaning Insulation/interior walls Electricity, lighting, baseboard heaters Glass end-door Roll-down metal shutters for glass end-door Signage	\$6,720
FoodBox	40'	\$2,675	Stripping/cleaning Insulation/interior dividing walls Electricity, lighting, baseboard heaters Air conditioning Plumbing Food-service appliance fit-out Window and door cut-outs along side Roll-down metal shutters for service windows Signage	\$9,900 - \$13,150
JamBox	20'	\$1,875	Stripping/cleaning Insulation/interior walls Electricity, lighting, baseboard heaters Side wall cut-out and reinforcing Side-wall with hydraulic system to descend and become a stage Entertainment sound system with external speakers signage	\$4,600+
ShowBox	20'	\$1,875	Stripping/cleaning Insulation/interior walls Electricity, lighting, baseboard heaters Side wall cut-out and reinforcing Glass side-wall (possibly with hydraulically opening panels) Glass end-door Roll-down metal shutters for glass side-wall and glass end-door Signage	\$6,700+
StorageBox	20'	\$1,875	Exterior Painting Interior electricity and lighting	<\$500
SignBox	40'	\$2,675	Exterior Painting	<\$500

**FIGURE 21. CRANE AND TRUCK**



**FIGURE 22. TILT-BED TRUCK**



## **3.6 DELIVERY**

The delivery of shipping containers to the desired site would be done either via flat-bed truck and crane or a tilt-bed truck as seen in figures 21 and 22 respectively. The cost associated with this step can range from \$145 for a 20' container to \$215 for a 40' container. These cost estimates are 'all inclusive' so there should be no surprises of extra fees on the day of delivery. Specifically for the ThemeBox, which will be moved only four times throughout the year, the cost would run at most \$580 annually.

## **3.7 INSTALLATION**

The installation of the shipping container(s) is a relatively simple process, depending on the configuration of the project. For the delivery of a single unit, the installation process would consist of the following steps. The first step is to identify the desired spot so that the driver can effectively manoeuvre its positioning for sliding the container off. The second step is to create a foundation for the containers if the ground is not level. The prospective locations for containers on campus are on surfaces with concrete sidewalks, asphalt lanes or parking lots, or brick sidewalk pavers. These provide a solid foundation for the containers and all that would be required is the use of wooden shims at the corners for leveling. The wooden shims also reduce the possibility of the container freezing to the cement in the colder weather during the winter time. If the container(s) were to be a more permanent

structure, a more solid foundation would have to be used. In this case, asphalt or a cement foundation would be a more appropriate option. This route would cost around an average of \$1,500 for an area required for a single container and would vary according to the size and scale of a larger project. Additionally, for a larger scaled project that involved multiple levels of shipping containers, supplemental machinery would be required. Cranes would be needed to lift the containers and place them one on top of another to reach the specified formation. A briefly touched on in the previous section, the running rate to rent a crane is in the area of \$300 for the first hour (cost of fuel included) and then an additional \$100 for every additional hour thereafter. The third and final step would consist of sliding the shipping container off of the tilt-truck and onto the wooden planks used as foundation.

### **3.8 REMOVAL AND RELOCATION**

The removal of the shipping container is similar in process to the installation. The use of a tilt-bed truck would pick up the empty shipping container and relocate it to its next desired destination. Due to the compact nature of the Ryerson University campus, and as the ThemeBox will be moved only four times annually and the containers at Ry Docks would only be moved every few years, there is the possibility of working out a reduction in fees for the relocation of the containers. It is highly recommended that a solid relationship be nurtured out with the container supplier to achieve the best transportation cost possible. An initial estimate of just under \$100 is a solid benchmark. It is also recommended that the transportation of the ThemeBox in particular could be a project for the Engineering students, which would be a fun and engaging student activity. This would also reduce any costs associated with the transportation of the containers.

A list of potential suppliers in the GTA is included on the following page.

**STORETAC CRANE**





## Potential Shipping Container Suppliers

Name of Supplier	Website	Address	Telephone Number
GIANT Container Sales	<a href="http://www.giantcontainersales.com/">http://www.giantcontainersales.com/</a>	12 Stoffel Dr Etobicoke, ON M9W 1A8	1-888-974-4268
Storstack	<a href="http://www.storstac.com/">http://www.storstac.com/</a>	90 N Queen St Etobicoke, ON M8Z 2C9	1-866-474-8044
Secure Store	<a href="http://www.securestore.ca/">http://www.securestore.ca/</a>	8179 Essa Road, Innisfil, ON L9S 3J6	1-877-988-6488
Alrange Container Services	<a href="http://www.alrange.com/">http://www.alrange.com/</a>	44 Medulla Ave, Etobicoke, ON, M8Z 5L9	1-866-455-7455
MobileMini	<a href="http://mobilemini.com">http://mobilemini.com</a>	73 Browns Line, Toronto, ON M8W 3S2	1-866-404-1246

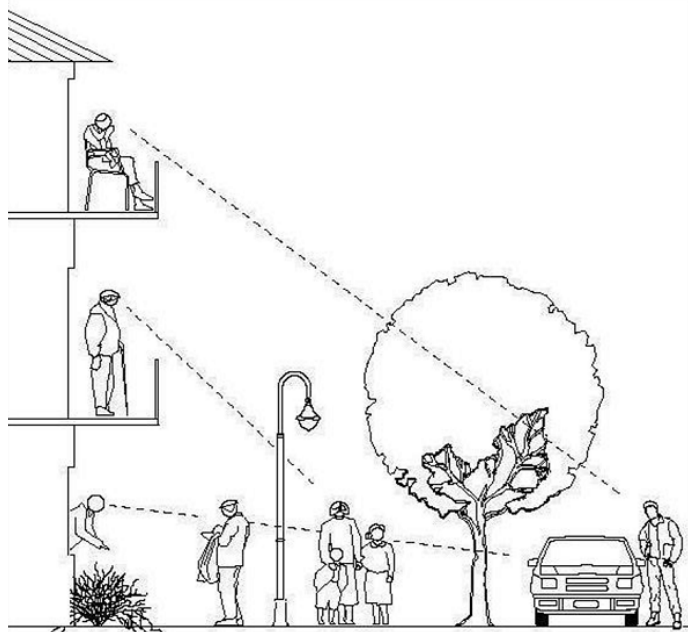
## 3.9 URBAN DESIGN STRATEGIES

### 3.9.1 CPTD

Crime prevention through environmental design (CPTED) places an emphasis on the physical environment, productive use of space, and human behavior to create places where the environmental cues that create opportunities for crime to occur are absent. Although it will be beneficial to animate campus laneways, pocket spaces, and underutilized areas with cargotecture, these areas can sometimes be perceived as unsafe or uncomfortable at various times throughout the day or year. It will be important to coordinate with campus security to ensure the safety of students and community members. In conjunction with law enforcement, CPTED is an effective way to create a built environment that leads to a reduction in the frequency and fear of crime and improves the quality of life for those that use the space. There are four main concepts for CPTED:

1) Natural Surveillance: The placement of physical features and/or activities, and people that maximizes natural visibility or observation. CCTV cameras can be used in areas where natural surveillance is unavailable.

#### CPTD NATURAL SURVEILLANCE



## CPTD NATURAL ACCESS CONTROL



2) Natural Access Control: Reduces the risk of potential crime from offenders by selectively placing entrances and exits, fencing, lighting and landscaping that will limit access or control flow. The best example is to use a clearly identifiable point of entry.

3) Territorial Enforcement: Defines clear borders of controlled space from public to private, so that users develop a sense of ownership of an area. Examples include different surface materials or bollards.

4) Maintenance: Continued maintenance displays an ownership of property and the continued use of a space for its intended purpose. Allowing a space to fall into disrepair or deteriorate indicates less control of the space and welcomes crime.

## 3.9.2 WAYFINDING

### WAYFINDING SIGNAGE



Several of the sites chosen for the cargo containers are not visible from high traffic areas of campus, so it is important that wayfinding signage is put in place. Using various techniques such as signage or pavement treatments could help people find their way to any of the selected locations. Ryerson currently has a number of wayfinding signs that could be added upon, but they could also create additional ways to distinguish the cargotecture uses from the rest of campus.

As the Themebox changes locations, it is important that people know where it is. A key map at the centre of campus and various other strategic locations could provide a colour-coded legend that would highlight where the theme box is located based on the season.

### WAYFINDING PAVEMENT TREATMENT



The recommended location for the Ry Docks is highly visible from the engineering building located on Church Street, but is otherwise tucked away. Signage and other created techniques for different routes to the Ry Docks could draw people from outside of that general area in.

The final site at Dundas and Jarvis is among the most challenging of the sites due to its proximity to the rest of campus. In order for people to discover the market and study space on this site wayfinding is critical. Creating wayfinding for this site should involve a variety of key maps, signage and creative techniques

in order for people to find their way to the market/ study space.

### 3.9.3 GREEN ROOFS

One of the opportunities that the shipping containers could have is a green roof. A green roof can initially be expensive however the overall benefit they can provide will usually outweigh the initial installation cost. As shipping containers can become very warm in the summer months, green roofs can help to keep them cool as they would absorb heat and also reduce the heat island effect that is so prominent in the City. Further, some of the container operators could take advantage of the green roof by growing fresh herbs and other vegetables that could be used in the food options. The following chart outlines a range of what the cost would be for placing a green roof on top of a shipping container.

#### CARGOTECTURE GREEN ROOF



Green Roofs for Cargotecture	Cost	Size of Container		
		10 ft (80 sq ft)	20 ft (160 sq ft)	40 ft (320 sq ft)
Design & Specifications	5%-10% of total roofing project cost	\$89-\$336	\$178-\$672	\$356-\$1344
Project Admin & Site Review	2.5%-5% of total roofing project cost	\$45-\$168	\$89-\$336	\$178-\$672
Re-roofing with membrane	\$10-\$15.00/sf.	\$800-\$1200	\$1600-\$2400	\$3200-\$4800
Green Roof System (curbing, drainage layer, filter cloth, & growing medium)	\$5-\$10.00/sf.	\$400-\$800	\$800-\$1600	\$1600-\$3200
Plants	\$1-\$3.00/sf	\$80-\$240	\$160-\$480	\$360-\$960
Installation/Labour	\$3-\$8.00/sf	\$240-\$640	\$480-\$1280	\$960-\$2560
Maintenance	\$1.25-\$2.00/sf.	\$100-\$160	\$200-\$320	\$400-\$640
Irrigation System	\$2-\$4.00/ sf.	\$160-\$320	\$320-\$640	\$640-\$1280
	Total before %	\$1780-\$3,360	\$3560-\$6720	\$7120-\$13440
	Total with %	\$1914-\$3864	\$3828-\$7728	\$7656-\$15456



# 4.0 APPENDIXES

## 4.1 APPENDIX A METHOD

### 4.1.1 TERMS OF REFERENCE AND INITIAL CLIENT MEETING

The terms of reference document articulated the purpose of the project for the studio project team. An initial Client meeting was convened for the project team to meet the Client, project Mentor, and key stakeholders. The meeting reinforced the Terms of Reference, including the context for the project, its key goals, the scope of inquiry, and required deliverables. Following the meeting, the project team reviewed the Terms of Reference in greater depth and identified points where further clarification would be required, along with several points of potential flexibility. These were addressed in a subsequent meeting with the Client.

### 4.1.2 WORKPLAN

The team held a full-day workshop to transform the Terms of Reference into a work plan. The project deliverables were plotted on a timeline and the supporting work was backfilled with a series of milestones. Workings groups were struck and given responsibility for deliverables and the constituent work required to achieve the project milestones. The workplan was then submitted to the Client.

### 4.1.3 BACKGROUND RESEARCH

Background research was undertaken to further inform the team about converted shipping containers, precedent of their use, and the regulatory environment that would apply in the Toronto context. The background research was divided into three main categories: cargotecture case studies, local experience, and regulations.

## 4.1.4 CARGOTECTURE CASE STUDIES

The working group researching cargotecture began with a basic review of the concept: equipment dimensions and characteristics' existing and potential uses; and general cost. They continued with research into cargotecture case studies from around the world and presented their findings to the full project team. Key case studies were selected for further research with the intention of them informing the project. The selection criteria for the case studies prioritized those undertaken by universities, those based around retail and services, display spaces and galleries, portable/mobile projects, office space, live performance spaces, and generally those projects which were practical and had a purpose, as opposed to experiments that pushed the boundaries of what is feasible.

## 4.1.5 LOCAL EXPERIENCE

Market 707 at Scadding Court Community Centre is a prominent local example of cargotecture. Market 707 is the impetus for the studio project and the project team made a concerted effort to learn from this proof-of-concept exercise of cargotecture in Toronto. The project team visited the Market and spoke with Nikki Totten, Market 707 coordinator and the studio project Mentor. A follow-up visit was used to speak directly to Market 707 merchants.

In addition to Market 707, the working group identified several more local examples of cargotecture. One was a temporary office space for an architecture firm, while another was a seasonal bakery-café in the financial district. A further application is the extensive use of converted shipping containers by the construction industry for on-site office space.

## 4.1.6 APPROVAL AND PLANNING REQUIREMENTS

The working group focusing on the regulatory and planning framework for Cargotecture learned that this is still emerging in the City of Toronto. Staff at the planning desk was consulted, along with a manager from the transportation division. A planner from the City's Beautiful Streets program was interviewed. What was learned is that while there are currently no by-laws written specifically to address the use of

**MARKET 707 AND SCADDING COURT VISIT**



cargotecture containers, there are numerous existing by-laws that govern the use of sidewalks, streets, alleyways, and buildings. Cargotecture containers would have to abide by these requirements and ensure emergency access, minimum clear-ways for pedestrians and vehicles, and respect for existing site-servicing by commercial haulers and maintenance vehicles. Temporary versus permanent structures is an additional consideration that was identified. When cargotecture containers are stacked they are likely to require a foundation or more stable footings, depending on the surface upon which they are located. The use of a foundation and an occupied second level of containers result in the structure being considered 'permanent'. This triggers a variety of legal and tax considerations that would require investigation and consideration. A single cargotecture container located on a site that complies with the applicable by-laws would be considered 'temporary' and an advisable for a pilot project.

The most salient lesson that the working group learned was that selecting a site on Ryerson University property would be the 'path of least resistance' for the project, when compared to negotiating use and liability for an installation of cargotecture containers on public sidewalks, streets, or municipally-owned property.

#### 4.1.7 LOCATION CRITERIA

A number of potential locations on campus were identified based on the criteria that the cargotecture containers should be on University-owned property. Further criteria included where the containers could physically fit, where they would not interfere with building access or services, where they would not interfere with pedestrian areas, and where the working group felt the addition of cargotecture containers would be an acceptable and welcome addition to the public realm of the university.

High-resolution aerial photography of the campus was obtained and the working group first created a list of potential places on campus where it was felt that cargotecture could make a positive addition to the public realm. The photograph was imported to Adobe Illustrator and the exact dimensions of 40' and 20' containers were used to create a template. These

POTENTIAL SITES MAP





templates were applied to the locations that had been identified earlier. Candidate sites where space and building interactions appeared problematic would be flagged for on-site follow up. The working group then toured the university and visited the candidate sites. Measurements and photos were taken. The working group then brought the full project team on a curated walking tour of the sites and led in-situ workshops to discuss the strengths and weaknesses of the sites, as well as potential uses for the cargotecture containers.

#### 4.1.8 MARKET RESEARCH AND VOID ANALYSIS

A thorough evaluation of the current supply of commercial services and amenities was undertaken by a working group to help inform the project on what sort of new uses would be valued. A market area extending approximately half a block from the perimeter of the university was identified and all of the commercial services and amenities were catalogued and mapped. This market analysis was conducted for: art, recreation, and entertainment; coffee shops and cafes; food stores; restaurants; retail stores; and study spaces. For each of these categories a second map was generated illustrating the voids where there was an absence of the service or amenity within a short (3-5 minute) walking distance. The void maps were also stacked to see where service and amenity voids were present for multiple categories. For further explanation, see Appendix B.

#### 4.1.9 ITERATIVE WORKSHOP AND DESIGN CHARRETTE PROCESS

Workshop	<p><b>Description:</b> A first group workshop was held to create an annual calendar of student-focused events and activities on campus and in the general vicinity, as well as an inventory of large participatory public events in the city (Pride Week, Nuit Blanche, etc.).</p> <p><b>Purpose:</b> To determine how Cargotecture programming could support campus and city-wide events.</p> <p><b>Outcome:</b> A list of campus activities – and periods of activity – that would have relevance for Cargotecture interventions.</p>
Workshop	<p><b>Description:</b> A workshop to inventory campus student groups, academic programs, temporary academic and administrative campus activities (OneCard pick-up, textbook purchases, etc.), and non-academic temporary campus activities (Week of Welcome, Farmers’ Market, etc.).</p> <p><b>Purpose:</b> To imagine how existing groups and administrative activities could be supported through cargotecture interventions.</p> <p><b>Outcome:</b> Outreach to campus groups to inquire about their activities and space needs.</p>

Workshop	<p><b>Description:</b> A workshop to review the Ryerson University Campus Master Plan and previous Ryerson public realm studio projects.</p> <p><b>Purpose:</b> To determine the University's public realm priorities and further understand its city-building mandate, as well as learn from work that has been completed to date by students about the public realm and opportunities for improvement.</p> <p><b>Outcome:</b> Further understanding about the severity of the University's space constraint. This prompted research into the rate of university enrolment growth and an informational interview with University staff. The lack of winter activities on campus was also identified from previous student work.</p>
Workshop	<p><b>Description:</b> A presentation by the research sub-group of cargotecture case studies and a workshop to connect these with identified campus activities and groups.</p> <p><b>Purpose:</b> To match container uses and ideas with existing precedent and to create supporting rationale for cargotecture on campus.</p> <p><b>Outcome:</b> A database of precedents and container programming.</p>
Design Charrette	<p><b>Description:</b> The group created hand-drawn illustrations over top of printed photos of potential cargotecture interventions for the six candidate sites.</p> <p><b>Purpose:</b> To begin the process of developing a graphic language for cargotecture on campus and to put potential container uses into context.</p> <p><b>Outcome:</b></p>
Design Charrette	<p><b>Description:</b> The group created hand-drawn illustrations of basic site plans for the cargotecture intervention proposed for the 270 Church site.</p> <p><b>Purpose:</b> To explore configurations of containers and uses within the site.</p> <p><b>Outcome:</b> A consensus was reached for the basic configuration of containers and uses.</p>
Design Charrette	<p><b>Description:</b> The group tested the consensus site plan design for 270 Church site by designing it to scale in Adobe Illustrator.</p> <p><b>Purpose:</b> To determine accurate scale of containers for the site plan and adjust as required.</p> <p><b>Outcome:</b> A revised master site plan was developed that was to scale and accommodated continued garbage truck access to the garbage compactor.</p>
Design Charrette	<p><b>Description:</b> A consensus was reached for the design of the different types of containers (Foodbox, Jambox, Shopbox, Showbox). Further design development work took place to revise the site plan for 270 Church to reflect the final box designs and this took place on a blackboard while the working master site plan was projected over top.</p> <p><b>Purpose:</b> To finalize design on the containers and the site plan.</p> <p><b>Outcome:</b> A finalized design for the containers that were then illustrated in pen and ink and modelled in SketchUp. A finalized site plan for 270 Church.</p>
Design Charrette	<p><b>Description:</b> Rapid hand-drawn iterations of the design for the study space.</p> <p><b>Purpose:</b> To conceive and finalize the design of the study space and incorporate the requirement for the universal-accessibility of the stacked containers.</p> <p><b>Outcome:</b> A consensus was reached for the final design of the study space.</p>
Design Charrette	<p><b>Description:</b> The group created hand-drawn illustrations of basic site plans for the cargotecture intervention proposed for the Dundas and Jarvis site.</p> <p><b>Purpose:</b> To explore configurations of containers and uses within the site, including the re-use of those from the Dundas and Jarvis site, additional Foodbox and Shopbox containers, and the new study space.</p> <p><b>Outcome:</b> A consensus was reached for the basic configuration of containers and uses.</p>
Design Charrette	<p>The group tested the consensus site plan design for the Dundas and Jarvis site by designing it to scale in Adobe Illustrator.</p>

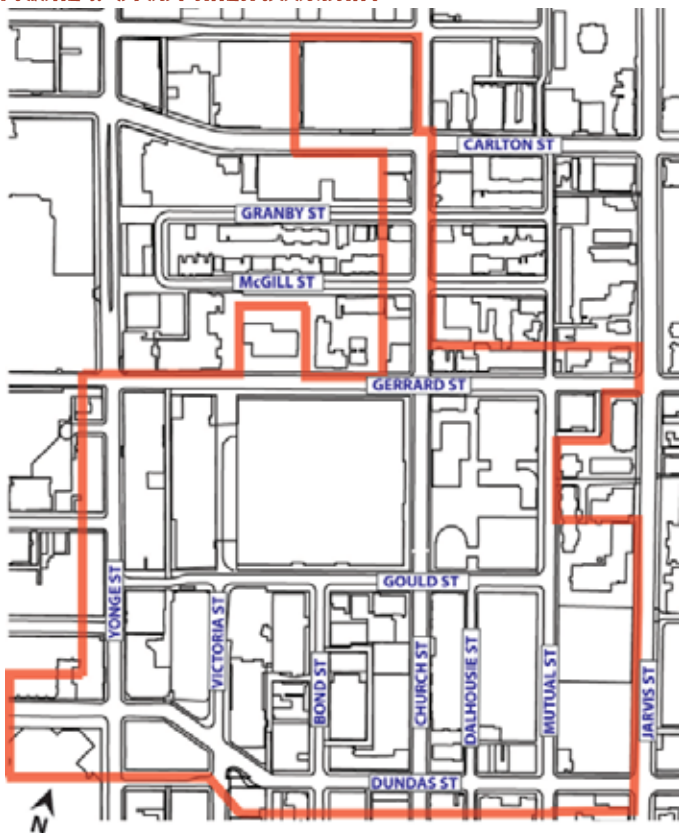
## 4.2 APPENDIX B MARKET SUPPLY AND VOID ANALYSIS

### 4.2.1 RYERSON MARKET ANALYSIS

A market analysis of Ryerson University and its adjacent areas was conducted to understand the uses that form the university campus aside from classroom space. In turn, the market analysis has assisted in the formation of a void analysis that allows us to understand the potential uses that are not currently represented in the area.

Prior to the commencement of the market analysis, a study area was delineated. The study area comprises of the entire Ryerson University campus between Yonge Street and Jarvis Street in an east-west fashion, and Dundas Street East and Gerrard Street East in a north-south fashion. It also includes the connection along Church Street to the recently completed Mattamy Athletic Centre at the Gardens, and the connection along Dundas Street West to the Ted Rogers School of Management (TRSM). The study area was purposely kept primarily to the boundaries of the university, since the focus of this project is on spaces within the campus itself. The final study area boundary, as approved by the client is displayed in Figure 1.

**FIGURE 1. STUDY AREA BOUNDARY**



The market analysis was divided into five separate categories:

1. Food & Beverage;
2. Coffee Establishments / Cafes;
3. Retail & Services;
4. Art, Entertainment & Recreation; and
5. Organized Study Spaces

### Food and Beverage

The study area has forty-seven establishments that offer food or beverage service. Figure 2 displays that a majority of these businesses are located along Yonge Street and Dundas Street East. Within the Ryerson campus itself, there are less options, forcing students to the neighboring streets for food or beverage options. Although these places are very close in proximity due to the downtown nature of the campus, food options should also be viable among the classrooms and various campus buildings. Out of



the eight food establishments that can be considered 'on campus' to serve students, three are campus food services that is run by Aramark Food Services. The others; hot dog stands, Metro pre-made food, Michi Japanese, Tim Hortons (displayed under the coffee tab to avoid duplication) along with Oakham House and Ram in the Rye leave much to be desired, with options limited.

Looking at the study area in total, there is a variety of food options on the periphery, however there are not many 'grab and go' type eateries that provide students the ability to purchase food and take it on the go aside from pizza, pitas/shawarmas and sandwiches. Additionally, there are three Subways and two Pizza Pizza's that capitalize on the need for quick food options. All Asian food offerings primarily cater to a sit-down clientele.

Two food courts are also in close proximity to Ryerson. The food court at 10 Dundas East (formerly Toronto Life Square) consists of chain restaurants such as Subway, Harvey's and Teriyaki Experience. Urban Eatery at Eaton Centre opened in September 2011 is a more upscale food court with real cutlery and a large variety of dining options. It ranges from chains such as McDonalds, KFC & A&W to more local Toronto brands such as Amaya, Big Smoke Burger and Urban Herbivore. Urban Eatery caters to the large shopping crowd at Eaton Centre as well as local office workers, creating a very busy dining environment during the lunchtime rush, leaving little room for Ryerson students much of the time.

In Fall 2012, a Task Force on Campus Food Services conducted by the Ryerson Students Union surveyed students to gain their opinions on food options on campus. Over 2,200 students were surveyed, including a wide range of programs, years of study, as well as those living on and off campus. The survey focused on the food services provided by Aramark and at Oakham House / Ram in the Rye. Aramark's contract with Ryerson University expires in Spring 2013. The results stated:

**Affordability**

- That 60% disagreed that the price of an item compared to the portions offered in campus cafeterias is fair.

- 59% disagreed that the price of an item compared to the food quality in campus cafeterias is fair.
- 63% disagreed that the food served in campus cafeterias is affordable.
- 46% agreed that food served at alternative campus food retailers is affordable.

### **Dietary Needs**

- 40% agreed that the food options offered on campus adequately met their dietary needs.
- 46% stated that they required vegetarian options.
- 28% stated that they required lactose free options.
- 25% stated that they required gluten free options.
- 24% stated that they required halal options.

### **Food Options on Campus**

- The majority of student meals came from (students could select more than one option):
  - Purchasing food off campus – 56%
  - Oakham Cafe / Ram in the Rye - 53%
  - I Bring Meals from Home – 47%
  - Hub Cafateria – 27%
  - Pitman Hall Cafateria – 15%
  - Maggie’s Eatery – 10%
- The majority of students listed Oakham Cafe & Ram in the Rye as Best Variety, Most Affordable, Best Quality, Most Fresh Produce and Best Nutritional Value.
- The highest responses to the question of “Living on Campus, my main concerns about food options are”, were affordability (72%) and quality of food (71%).

### **Quality**

- 91% agreed that the quality of food is important to them.
- 76% agreed that products served should be sourced in manners that are fair and sustainable.
- 37% disagreed that food in the cafaterias is prepared with nutritional value in mind.
- 48% disagreed that food served in campus cafaterias is high quality.

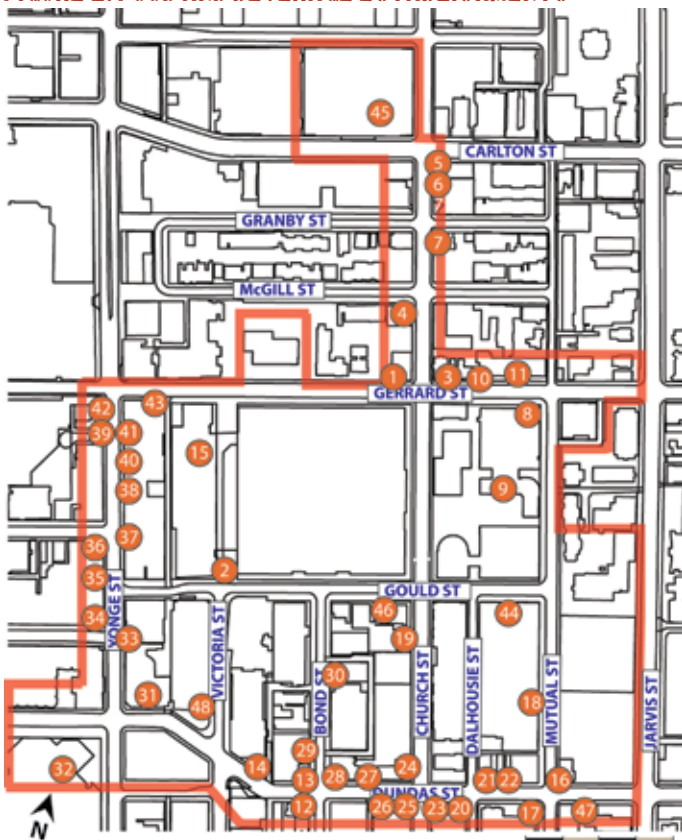
### **Variety**

- 59% disagreed that there is sufficient variety of food options offered in campus cafaterias.
- 83% agreed they would choose nutritious and healthy food over fast and fried food.
- 83% agreed that eating a healthy meal helps

learning and studying efforts.

- 83% agreed that there should be greater access to fresh, affordable produce.
- 48% disagreed that there are a sufficient amount of microwaves on campus.
- The highest responses to the question of “As a student, my main concerns about food options are”, were affordability (85%) and quality of food (76%).

**FIGURE 2. FOOD AND BEVERAGE ESTABLISHMENTS**



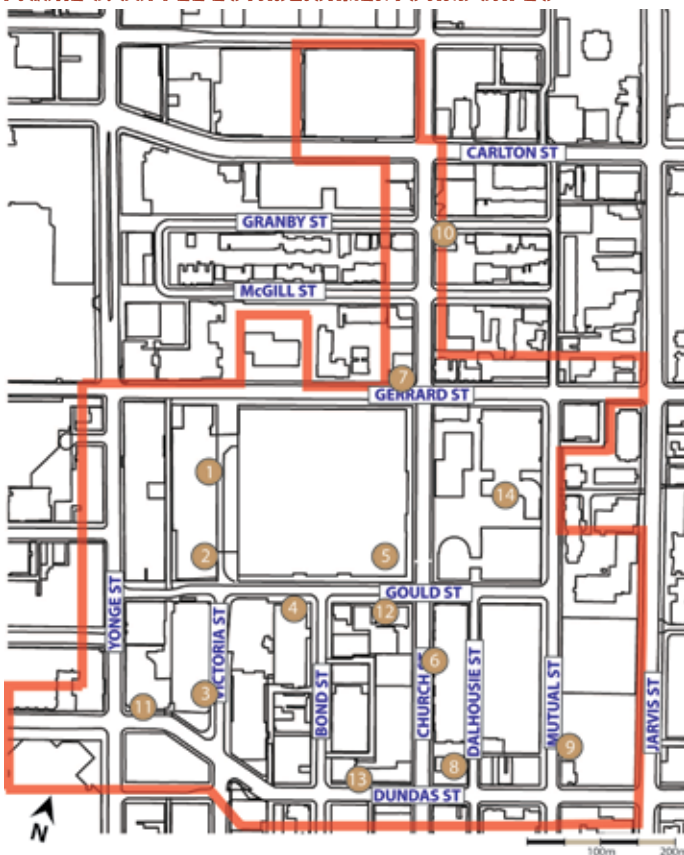
Map #	Name	Category
1	Z-Teca	Mexican
2	Hot dog vendors	Hot Dogs
3	Subway	Sandwiches
4	Tandoori	Indian
5	Day Break	American
6	Wild Ginger Asian Restaurant	Asian
7	Brown Bag Sandwiches	Sandwiches
8	Campus food service	Various
9	Campus food service	Various
10	Lou Dawgs	Sandwiches
11	Phunna Thai	Asian
11	Pizza Palace/Love at First Bite	Pizza
12	PomAnar Grill and Juicery	Mediterranean
13	Raffle's Burgers	Burgers
14	Imperial Pub	Pub
15	Campus food service	Various
16	Mutual St Deli	Sandwiches
16	Pitaland	Middle Eastern
17	Kathy's Corner BBQ	American
18	Subway	Sandwiches
19	Ram in the Rye	Pub
20	Curry: Indian Home Cooking	Indian
21	Kabul Express	Middle Eastern
21	2-for-1 Pizza	Pizza
22	Good View Chinese	Asian
23	Alkabob Burger	Middle Eastern
23	Aida Sandwich	Sandwiches
23	Ali Baba's	Middle Eastern
24	Fit For Life Sandwiches	Sandwiches
25	Pizza Pizza	Pizza
26	Santouka Ramen	Asian
27	The Fat Olive	Mediterranean
28	Subway	Sandwiches
29	Rockwell Café	American
30	Michi Japanese	Asian
31	10 Dundas East	Various
32	Urban Eatery/Eaton Centre Food Court	Various
33	Five Guys Burgers	Burgers
34	Panera Bread	Sandwiches
35	Ma-Ma's Pizza	Pizza
36	Pizza Pizza	Pizza
36	Salad King	Asian
37	Little House of Kebobs	Middle Eastern
38	Korean Grill House	Asian
39	Madina Mediterranean	Mediterranean
39	Thai Express	Asian
40	Doner Kebab House	Middle Eastern
41	The Big Slice Pizza	Pizza
42	Tummy Time Mediterranean	Mediterranean
42	Sushi Tower	Asian
43	Asian Cuisine	Asian
44	Metro Grocery	Various
45	Loblaws	Various
46	Oakham House	Various
47	Mounties Dining Lounge	Pub
48	Tim Hortons	Soup/Sandwiches
49	Time Hortons	Soup/Sandwiches



## Coffee Establishments and Cafes

University students drink considerable amounts of coffee throughout the year, evidenced by the long lineups in the coffee shops and cafes around campus. While there are eleven establishments in the study are, only three are not named Tim Hortons or Starbucks. Bulldog Coffee and Rise Espresso Bar are towards the edges of the Ryerson campus, while Balzac's, which has several locations in Toronto, has a prime storefront in the new Image Arts building after opening in Summer 2012. There are five Tim Hortons and three Starbucks available for students. The Oakham Cafe (listed under Food & Beverage) also provides coffee and teas within the Student Centre.

**FIGURE 3. COFFEE ESTABLISHMENTS AND CAFES**



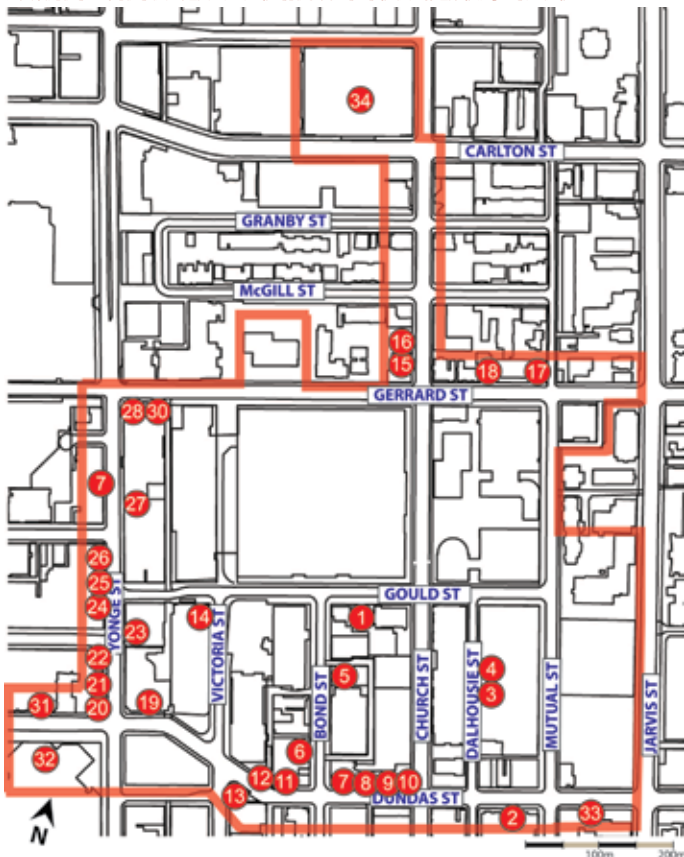
Map #	Name
1	Starbucks
2	Tim Horton's
3	Tim Horton's
4	Balzacs
5	Tim Horton's
6	Tim Horton's
7	Starbucks
8	Tim Horton's
9	Rise Espresso Bar
10	Bull Dog Coffee
11	Starbucks
12	Oakham House
13	The Fat Olive
14	Campus Food Service

## Retail and Services

While there are not many retail and services on Ryerson's campus, due to its locational nature of being downtown, there are a large variety of retail and service options in close proximity to the University. Eaton Centre, which connects to TRSM provides over 1.5 million square feet of gross leasable area for retail, ranging from fashion and jewelry stores to electronics and health & beauty. 10 Dundas East and Yonge Street also provide shopping opportunities with stores such as Adidas, HMV, Forever XXI, among others. Convenience retail such as 7-11 and Macs are also well represented.

Universities will always have a large demand for printing and copying services, and Ryerson is no different. There are currently seven places that offer printing and copying services in the study area, including the Ryerson Printshop in the Student Centre. Other services including hair salons, barbershops, banks and the like do not have a large representation in the study area.

**FIGURE 4. RETAIL AND SERVICE ESTABLISHMENTS**



Map #	Name	Category
1	Travel Cuts	Travel Services
1	Ryerson Printshop	Copying/Printing
1	Multi Faith Chapel	Religious Inst.
2	Ragga Hair Studio	Hair & Beauty
3	Drycleaning and Tailoring	Fashion/Clothing
4	Sherwood Digital Copy + Print	Copying/Printing
5	Ink Port	Copying/Printing
6	Rock Da House Hair Salon & Spa	Hair & Beauty
7	Digital Express	Copying/Printing
8	Classic Nail & Spa	Hair & Beauty
9	Notebook Empire	Tech/Computers
10	Mobilicity	Tech/Computers
11	Paramusic	Music/Movies
11	Victoria Copy & Print	Copying/Printing
12	Remembrance Gifts	Retail
13	Hakim Optical	Retail
14	Ryerson Bookstore	Books
15	Alicos Printing	Copying/Printing
16	Church Street Barbershop	Hair & Beauty
17	Macs	Convenience Retail
18	Grenville Print Centre	Copying/Printing
19	10 Dundas East	General Retail
20	Forever XXI	Fashion/Clothing
21	Guess	Fashion/Clothing
22	Boathouse	Fashion/Clothing
23	HMV	Music/Movies
24	Le Chateau	Fashion/Clothing
25	Aldo	Fashion/Clothing
25	7-11	Convenience Retail
26	Sunrise Records	Music/Movies
26	American Apparel	Fashion/Clothing
26	Foot Locker	Fashion/Clothing
27	Adult Novelty and Independent Clothing Stores	General Retail
28	Sports Memorabilia and Gift Stores	General Retail
29	Rockwell Outlet	Fashion/Clothing
30	International News	Convenience Retail
31	Atrium on Bay	General Retail
32	Eaton Centre	General Retail
33	Crown Mart	Convenience Retail
34	LCBO/Joe Fresh	General Retail

## Art, Entertainment, and Recreation

Recreation is supplied sufficiently through the Ryerson Athletic Centre and the Mattamy Athletic Centre that opened in Fall 2012 at the former Maple Leaf Gardens. Art space is confined primarily to the Image Arts building, while temporary art displays occur in the Quad of Kerr Hall and along Gould Street during various times of the year. There are also small art displays in the Architecture building.

Entertainment options are quite limited on the Ryerson Campus, surprising due to the fact that there are over 30,000 students, the majority of which are in the 18-35 year old age bracket. The AMC Theatres in 10 Dundas East is the largest entertainment function, while the Ram in the Rye and several small pool halls on the edges of the study area offer billiards. The Ryerson also holds various events and functions such as live productions, fashion shows along with screenings for the Toronto International Film Festival every September.

**FIGURE 5. ARTS ENTERTAINMENT AND RECREATION**



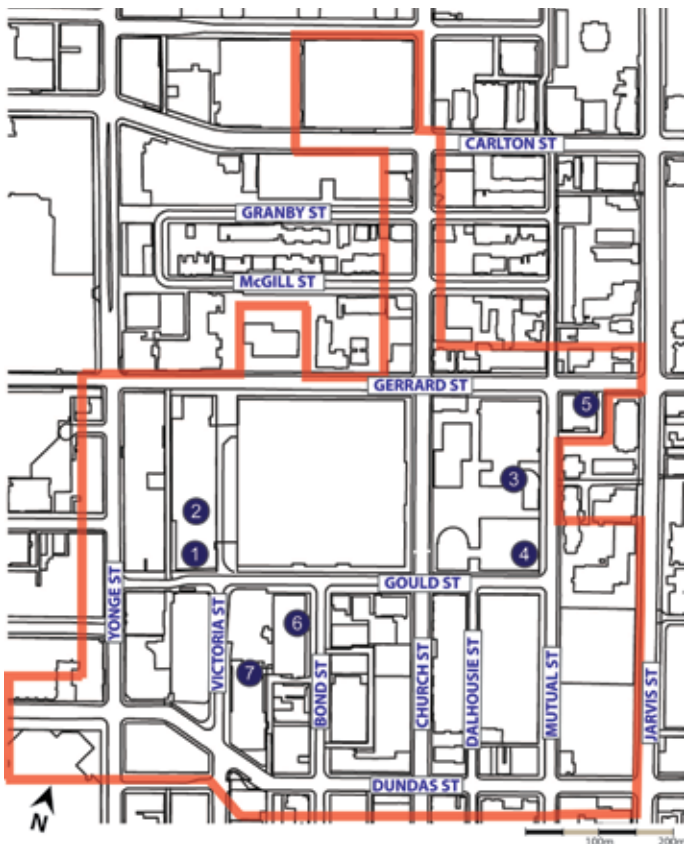
Map #	Name	Category
1	Image Arts	Art Space
2	Architecture Building	Art Space
3	Mattamy Athletic Centre	Recreation
4	Ryerson Athletic Centre	Recreation / Entertainment
5	AMC Theatres	Entertainment
6	Ram in the Rye	Entertainment
7	New Times Square Billiards	Entertainment
8	VIP Lounge and Billiard Club	Entertainment
9	Ryerson Theatre	Entertainment
10	Zanzibar Tavern	Entertainment
11	Remington's	Entertainment

## Organized Study Spaces

The market analysis classified organized study space as areas which provide the necessary fixtures for study such as tables, outlets, and chairs. These are distinguishable from computer labs, classrooms, or informal study spaces because they can be booked as meeting space and are dedicated for study areas. Informal study spaces are most prevalent around the Ryerson Campus, usually in the form of chairs or benches in various university buildings. An organized study space offers places for groups or individuals to study, work on projects or other various school tasks in a setting that is conducive to the tasks at hand.

The Ryerson Library provides the greatest amount of organized study space, especially on the fourth floor. Other buildings that feature smaller amounts of study space include the Victoria Building, Image Arts, the Graduate Studies workspace on Gerrard Street and the cafeterias in the Podium and Student Residences.

**FIGURE 6. ORGANIZED STUDY SPACES**



Map #	Name
1	Ryerson Library
2	Cafeteria Seating in Podium
3	Cafeteria Seating in Student Residences
4	Rogers Communications Centre
5	Graduate Studies
6	Image Arts
7	Victoria Building



## 4.2.2 VOID ANALYSIS

### Art Space

Prominent spaces for public art on the Ryerson campus include the Kerr Hall quad, which features sculptures and the Image Arts Centre, which displays ever-changing exhibits, visible to passer-bys on Gould Street. By-and-large, however, a survey of the campus reveals that spaces for the display of public art are very limited. The major art-space voids are within the western section of the campus, the south-eastern quadrant of campus, and the Church Street corridor.

### Recreation

The presence of the Ryerson Athletic Centre, the Mattamy Athletic Centre along with Extreme Fitness at 10 Dundas East provides ample opportunities for recreation in the study area. There is not currently a void for recreation.

No void map is provided due to lack of voids for recreation in the study area.

FIGURE 7. ART SPACE VOID

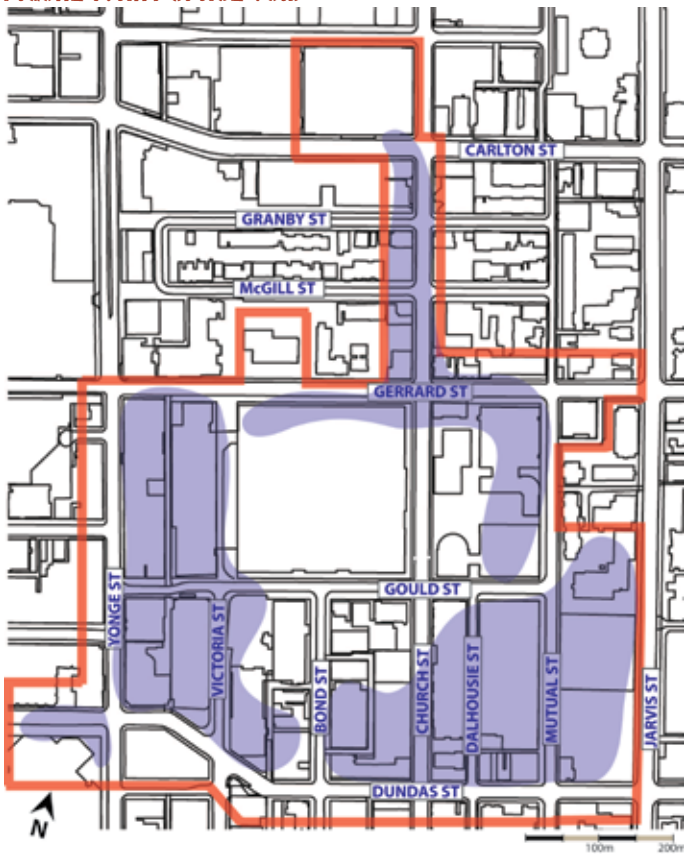
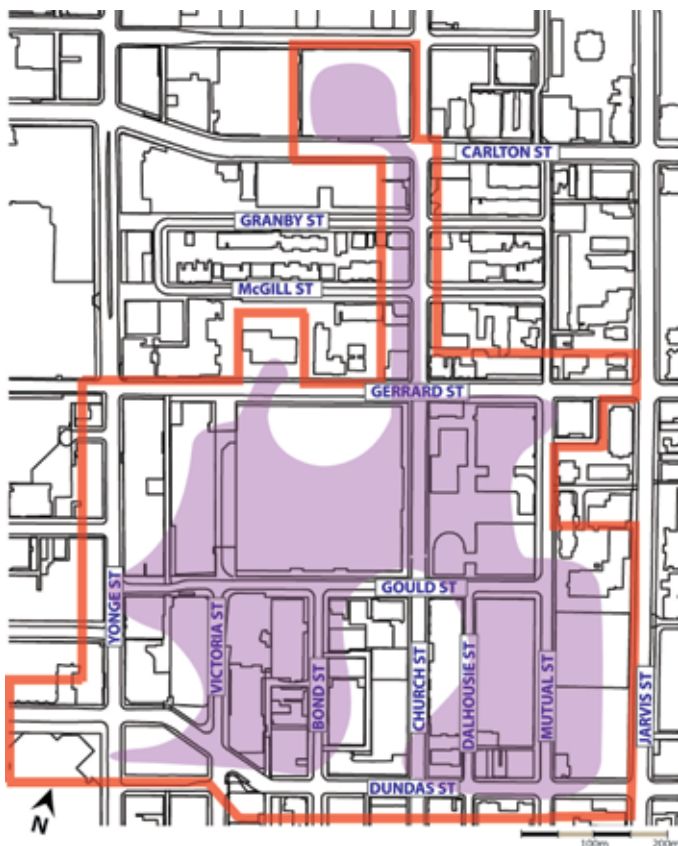


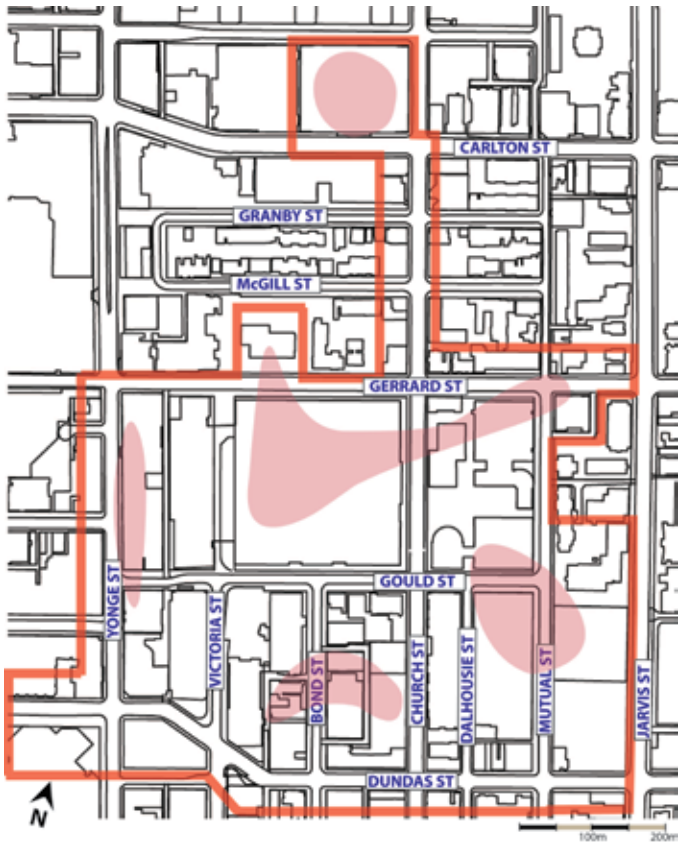
FIGURE 8. ENTERTAINMENT VOID



### Entertainment

Entertainment options are limited at Ryerson University. Aside from Ram in the Rye and the Cinaplex Theatres there no entertainment options for students aside from several small pool halls on the periphery of the study area that are not frequented often by Ryerson students. The Ryerson Theatre is an excellent entertainment venue; however it does not provide consistent entertainment opportunities for students. Due to this, opportunities arise due to this void for viable entertainment options on campus.

**FIGURE 9. COFFEE ESTABLISHMENTS AND CAFES VOID**



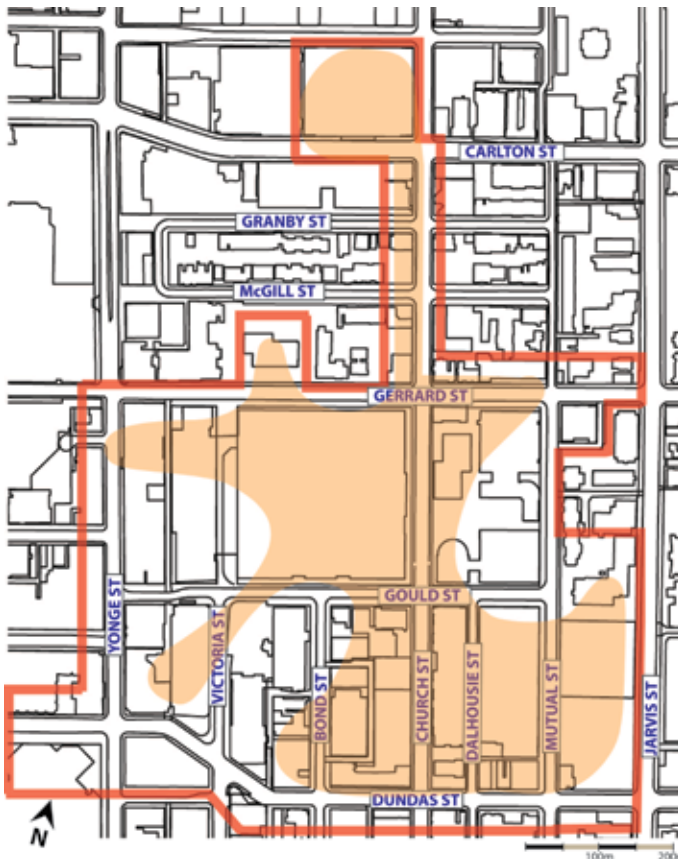
## Coffee Shops and Cafes

Coffee shops and cafes play an important role on campus as amenities and a source of animation. This survey observed both ‘grab-and-go’ style outlets as well as sit-down cafés. The locations of coffee outlets are fairly evenly dispersed over the campus; however, some small voids were identified. These include the Kerr Hall quad area as well as a narrow area along the eastern edge of campus and along Mutual Street. Additionally, a small void was identified in the south-central portion of campus in the vicinity of the South Bond Building. There is a lack of independent locally owned coffee shops on campus aside from Balzac’s, although competing with Tim Hortons and Starbucks can prove difficult.

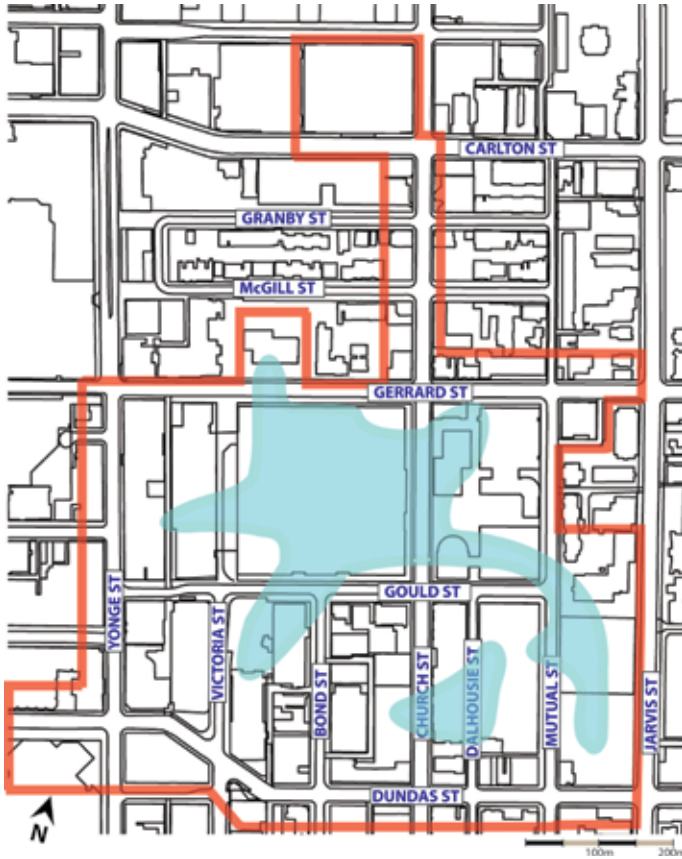
## Organized Study Space

This survey classified organized study space as those areas which provided the necessary fixtures for study such as tables, outlets, and chairs. These are distinguishable from computer labs, classrooms, or informal study spaces. Most of the study space on campus is found in the library as well as a few isolated nooks such as the Image Arts centre, and POD. The lack of study space and meeting-spaces on campus is a common complaint, not entirely surprising given the high premium space holds in downtown Toronto. A 2008 Comprehensive Survey of undergrad students by Ryerson University found that “the aspect with which students appear least satisfied is study space” (Ryerson University, 2008). Only 53% reported being satisfied in this regard, a sharp decline from 62% in the 2005 survey. With increasing student population on an annual basis, the amount of organized study space continues to shrink per capita. The void in study space covers most of the campus including the central Kerr Hall area, north-east, and south-east quadrants.

**FIGURE 10. ORGANIZED STUDY SPACE VOID**



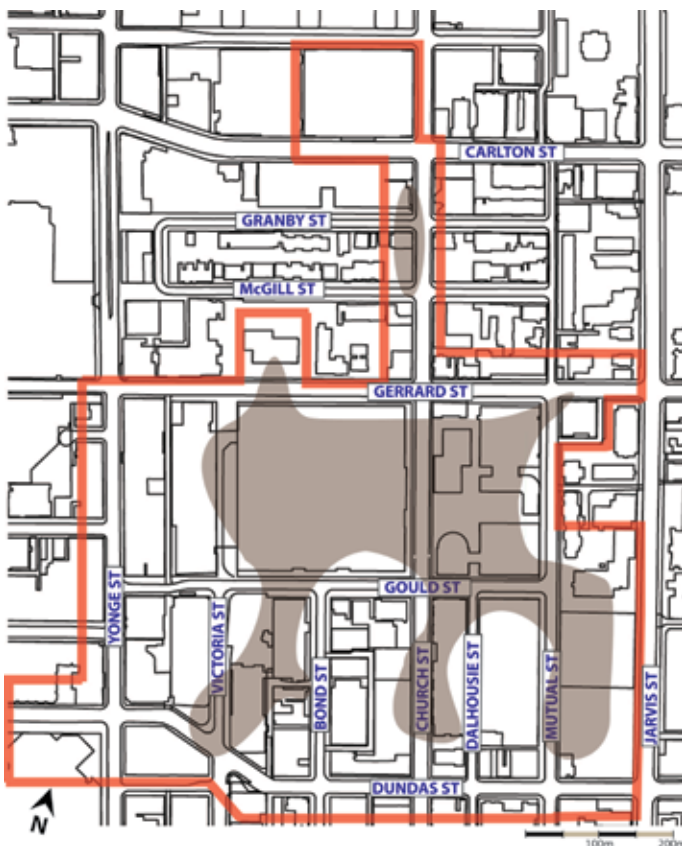
**FIGURE 11. FOOD AND BEVERAGE VOID**



## Food & Beverage

In terms of sheer volume, there is no shortage of food services across Ryerson's campus. This survey found there to be at least 48 food outlets in the study area. These include grocery stores, fast-food outlets, hot dog vendors, sit-down formal restaurants and just about everything in-between. The major concentrations of food outlets tend to be at the periphery of campus, most notably along Yonge Street and Dundas Street. Food courts in the south-west portion of the study area draw large amounts of students. Small voids, however, were noted in the central Kerr Hall area, in the south-west Victoria Street area, and in the south-east quadrant Engineering building area. There is dissatisfaction among the student population with current Campus Food Services that is run through Aramark. Using the market analysis and the Task Force on Campus Food Services Survey displays a strong opportunity for independently owned establishments that offer affordable, high-quality, healthy food options in a grab and go type format. These establishments could possibly feed into the student residence meal plan and the One Card system.

**FIGURE 12. RETAIL AND SERVICES VOID**



## Retail & Services

This category is made up of retail and service amenities which students draw on to fulfill a variety of daily needs. Due to the large amount of retail already established in the area, especially from 10 Dundas East, Yonge Street and Eaton Centre, the viability of retail on Ryerson Campus is not high unless it is within a niche sector that caters to students. Services include print shops, bookstores and barbershops among many others. Like food services and coffee shops, these services can play contribute to the activity-level and liveliness on campus. The lion's share of these services is provided by local business people and is found on the periphery of campus. There is, however, a significant void in these types of services aside from printing and copying, particularly throughout the northern portion of campus, including the central Kerr Hall area. Small voids are also to be found in the Victoria Street area, along Church Street south of Gould, and on the eastern periphery of campus.



## 4.3 APPENDIX C SITE VISITS

### POTENTIAL SITES VISITED



### 4.3.1 CAMPUS SITE VISIT

The Container Campus group took a walking tour throughout the campus to visit the sites that had been identified as strong candidates by the working group. The sites ranged in size from a space that could hold only a 10' container all the way up to the large Dundas and Jarvis parking lot. At each site the group stopped to discuss the site and workshop some top-of-mind ideas of how the site could best accommodate cargotecture. This discussion took the form of an informal SWOT analysis ( strengths, weaknesses, opportunities, and threats).

In the process of discussing the sites, a hierarchy of suitability was identified. Sites were not outright removed from consideration; they were noted as being poorly suited for a cargotecture intervention. Photos were taken of each site from a variety of different perspectives and a catalogue of the sites was created combining these images with aerial photos.

### MARKET 707 FIRST VISIT



### 4.3.2 MARKET 707

#### First Visit

The Ryerson Container Campus group visited Market 707 at Scadding Court Community Centre (SCCC) towards the end of January. The visit was to see first-hand, a successful local example of the re-use of containers with the assistance of the group's mentor Nikki Toten, the Manager of Development and Community Engagement for Scadding Court. The group toured the containers to become familiar with the various interior designs and layouts that the vendors were using, along with the types of appliances that would be required depending on the use.

Nikki Toten provided the group with information regarding the initiation, the tenant selection process, servicing and planning guidelines for Market 707, among other items.

In regards to servicing, all of the units at the market receive their electricity through conduits linked directly to the abutting Scadding Court Community Centre. The units are not hooked up to water or waste-water



services directly; instead they have independent water systems which vendors manually replenish.

There exists a strong support network and sense of community among the tenants who even hold events such as skill-building sessions. According to Nikki Toten, the most important factor in SCCC's selection of tenants is the need for a strong mix of vendors and services, which together contribute to an appealing and complete marketplace. Existing tenants are able to participate in the selection process for new tenants, ensuring there's a 'good-fit.' Demand is high for vendor space at Market 707, and there is currently a waiting list. Tenants commit to a one-year lease and pay approximately \$10-\$15 per day in rent for their space. Furthermore, they incur a cost of approximately \$2,000 each commercial retail unit's interior with their own business-specific appliances, storage, and prep surfaces.

The group was advised to consider permissions from the fire department, transportation department, and public health department moving forward. It was also recommended that when designing a similar market at Ryerson University, opting for larger 40 foot container units is beneficial, as these are preferred by tenants. Lastly, Nikki Toten stressed the need to program for an entire space, and consider incorporating street furniture and street art into a holistic vision.

## MARKET 707 SECOND VISIT



### Second Visit

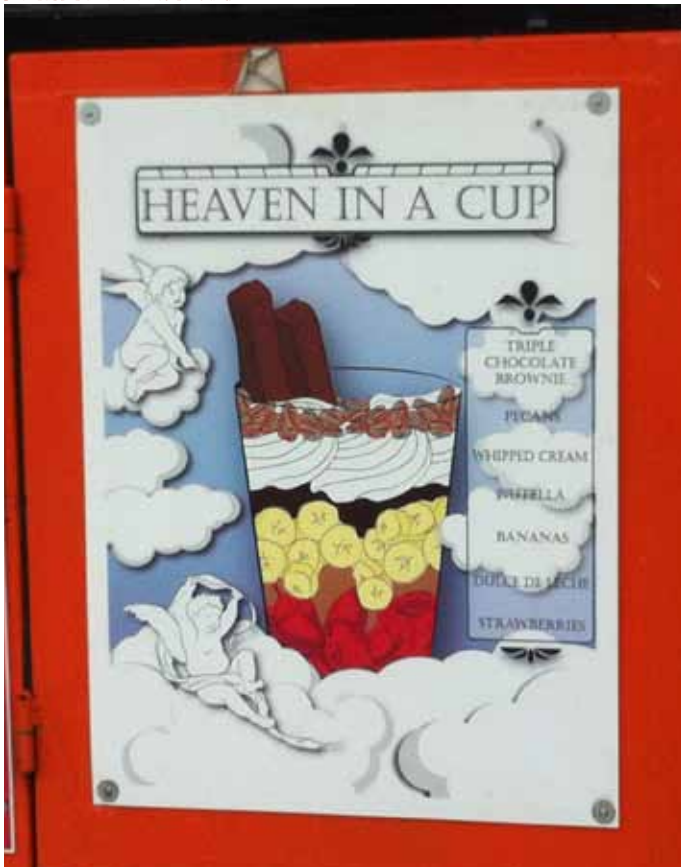
In March, several members of the Container Campus group returned to Market 707 to speak to the vendors on an individual basis, as well as sample many of the food and beverage items that are available. Many of the vendors noted that Market 707 has provided them an opportunity to start their own business and food stand, a venture they may not otherwise have been able to establish in a typical bricks-and-mortar retail environment. It only costs several thousand dollars to get a business started which pales in comparison to the tens or hundreds of thousands of dollars required for a mobile food truck. The health department also favours the cargo containers over mobile food trucks since they are in a stable location and they consistently have access to electricity and water, meaning that their food is properly stored and they can wash their hands regularly.

When asked about the sizes of the units, several vendors stated that they would prefer more space, however they are currently adequate and they have learned to adapt to the available space. One vendor said that even an extra few feet of space can make a big difference in terms of layout.

One vendor discussed how difficult it was to get a business license as the City of Toronto did not know how to classify their form of retail. In the end it took two years to get a proper business license, however Ryerson vendors may not run into the similar problems as these types of containers become more popular and the relationships and experience of University Business Services is brought to bear.

One of the largest challenges that many of the vendors brought up was the seasonality of Market 707. While the summertime is busy and provides excellent business, the wintertime can prove to be difficult. One vendor even remarked that they did not have any customers for two full weeks during one stretch of winter. When asked if they could recommend any possible solutions to this issue, they remarked that it was difficult to come up with a silver bullet. The fact is that their business is outdoor and many people prefer indoor dining.. In the winter it is not comfortable to eat outside, and people are also not 'out and about', reducing foot traffic. There are also seasonal differences being inside the container. During the winter it is actually pleasant because they are insulated and the cooking tools keep the space warm. In the summertime, it gets very warm in the container; however one way around this is to remove the front windows which assist with airflow.

## MARKET 707 GENIUS



From a business standpoint, a few of the vendors that the group spoke to have been around for several years, and they had a quick return on their investment. The hospital across the street has been a great source of customers, especially during lunchtime. Word of mouth has sometimes been more beneficial than other marketing means such as media. It is important to make the market a destination. Having a critical mass of containers is key. However the ability to have good landscaping, signage, along with nice chairs and tables to sit down at will bring back repeat customers who enjoy the experience. Overall, the vendors have been happy with their experience so far

at Market 707, and appreciate the opportunity to run their own business and be an entrepreneur.

### 4.3.3 VISIT TO STORSTAC

On March 20th the Container Campus studio group took a trip to the Storstac facility, located at 90 North Queen Street in Etobicoke, Ontario. The visit was split into two parts. The first half hour was spent discussing the concept and vision of the Container Campus project with Storstac President, Vincent Ruggiero. During this timeframe, Mr. Ruggiero answered many of the questions posed by the group regarding feasibility and types of modifications his company would be able to provide.

The second part of the visit was the more interactive portion and involved a guided tour of the premises. Mr. Ruggiero lead us to the area of the facility where modifications are made to the containers. He explained the process and the approximate length of time each type of modification would take. He also took the liberty of having some of the workers demonstrate the process of installing reinforcing the container once an entire side of the container is removed.

The next stop on the tour was to one of the fully functional and insulated container offices that is in use on site. This was a great opportunity for the group to personally experience what a modified 20' container would look like, from the inside, once complete. To act as a comparison, he then led the group into a bare 20' shipping container to once again, have the group experience what a standard container looks like empty. Mr. Ruggiero was nice enough to take a few group pictures and we then thanked him for his time and attention.

**STORETAC SITE VISIT**





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## **Graphic Credits:**

- Aerial SketchUp Renderings: Kasper
- Ground level SketchUp Renderings: Brahm Levine
- Box illustrations: David Godin
- Site Plans: Melissa Eavis
- Study Centre renderings and floor plans: Josh Kohler

## **Photo Credits:**

- David Godin
- Andrew Fayn
- Kasper Koblauch
- Josh Kohler

## **Photo References:**

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Abundant 9

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Durable 9

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