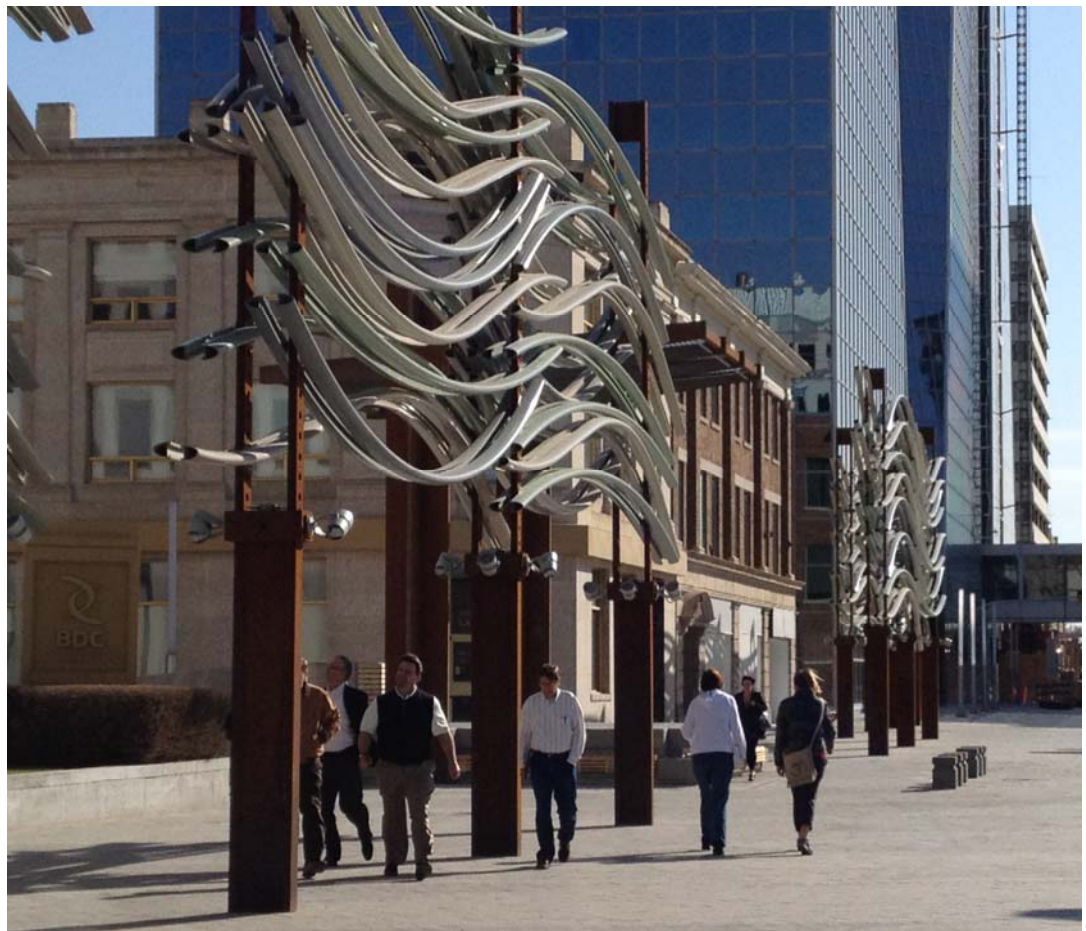




Regina Downtown Transportation Study

Phase One Report



**Submitted to City of Regina
by IBI Group**

May 14, 2012

Document Control

Client: City of Regina

Project Name: Regina Downtown Transportation Study

Report Title: Phase One Report

IBI Reference: 31923

Version: 1.1

Digital Master: 17(1)(b)(i)
17(1)(b)(i)

Originator: 28(1) Personal

Reviewer:

Authorization:

Circulation List: Max Zasada, City of Regina

History: Draft 1.0 – April 30, 2012
Revision 1.1 – May 14, 2012



Table of Contents

1.	Introduction	1
1.1	Study Area	2
1.2	Study Objectives	3
1.3	Report Overview	4
2.	Study Process	5
2.1	Technical Approach.....	6
	VISSIM Model Development.....	6
	Evaluation of Alternatives	7
2.2	Consultation Approach	8
	Public Consultation	8
	Stakeholder Meetings	9
3.	Key Findings.....	10
4.	Existing Conditions.....	13
4.1	Network Overview	13
4.2	Traffic Conditions	15
	Key Issues	16
4.3	Transit	18
	Key Issues	19
4.4	Walking	20
	Key Issues	20
4.5	Cycling	21
	Key Issues	21
4.6	Accessibility	22
	Key Issues	22
4.7	Parking and Loading.....	22
	Key Issues	23
4.8	Programming and Operations	24

Table of Contents (cont'd)

Key Issues	24
4.9 Summary of Key Issues.....	25
5. Stakeholder and Public Input	28
5.1 Public Open Houses	28
Public Open House #1 - March 1, 2012	28
Public Open House #2 - April 5, 2012	29
Public Open House #3 - May 8, 2012.....	30
5.2 Stakeholder Meetings.....	30
5.3 Summary of Public and Stakeholder Input.....	32
6. Evaluation of Operational Approaches	33
6.1 Evaluation Criteria	33
6.2 Option One: City Square Plaza Closed to Traffic	34
Evaluation	34
Implementation considerations	35
6.3 Option Two: City Square Plaza Open One-Way	37
Evaluation	37
Implementation considerations	38
6.4 Option Three: City Square Plaza Open Two-Ways	39
Evaluation	40
Implementation considerations	40
6.5 Summary of Analysis.....	42
7. Preferred Operational Approach	43
7.1 Description	43
7.2 Implementation Guidance	45
Operation of City Square Plaza	45
Other Operational Changes.....	51
7.3 Summary of Initiatives and Input to Phase Two	54
8. Next Steps.....	58

Table of Contents (cont'd)

List of Exhibits

Exhibit 1.1: Study Area	2
Exhibit 2.1: Study Process	5
Exhibit 4.1: Average delay for critical movements in PM peak period, VISSIM Model	15
Exhibit 4.2: Level of Service Analysis - 11th Avenue and 12th Avenue, Synchro Model	16
Exhibit 4.3: Buses queue on 11th Avenue	18
Exhibit 4.4: Secure bicycle parking in Cornwall Street Parkade	21
Exhibit 4.5: Summary Table of Key Issues	25
Exhibit 6.1: Option Three – City Square Plaza Closed to Traffic	34
Exhibit 6.2: This tractor-trailer was observed backing out of alleyway between Cornwall Street and Lorne Street from the south end of the alley onto 11 th Avenue.	36
Exhibit 6.3: Option Two – City Square Plaza Open One-Way	37
Exhibit 6.4: Option Three – City Square Plaza Open Two-Ways	39
Exhibit 6.5: Photo demonstrating the darkening of the surface of the square with vehicular traffic	41
Exhibit 6.6: Summary of Evaluation	42
Exhibit 7.1: Preferred Operational Approach - City Square Plaza	44
Exhibit 7.2: Examples of Shared Space Signage	45
Exhibit 7.3: Examples of surface-mounted tactile navigation surfaces	46
Exhibit 7.4: Example of retractable or removable bollard system	47
Exhibit 7.5: Operational Plan for Partial and Full-Closures of City Square Plaza to Vehicular Traffic	48
Exhibit 7.6: Example of flexible seating and landscaping in New York City	49
Exhibit 7.7: Temporary skating rink on part of City Square Plaza in 2011/12	50
Exhibit 7.8: Diagram of raised crosswalk with tactile warning feature	53
Exhibit 7.9: Summary of Initiatives	54

Appendix A: Downtown Transportation Study Phase 1 Existing Conditions Report, May 2012

Appendix B: Downtown Transportation Study Phase 1 Evaluation of Alternatives Report, May 2012

Appendix C: Consultation Summary



11th Avenue, looking west toward Cornwall Street

1. Introduction

The Downtown Transportation Study was initiated by the City of Regina in November 2011 to analyze and propose alternatives to a number of transportation issues in Regina's downtown. IBI Group was retained to complete phase one and two of this study, which will be completed in three phases:

- **Phase One** (February 2012 to June 2012) focuses on operations of 11th Avenue and 12th Avenue through downtown Regina, including providing a preferred operational plan for City Square Plaza; and,
- **Phase Two** (June 2012 to December 2012) expands the study area north to Saskatchewan Drive, south to 13th Avenue, west to Angus Street, and east to Osler Street, addressing transportation issues for all modes and providing recommendations for transportation policy and operational changes.
- **Phase Three** (2013) expands the study area to the entire downtown, southward to College Avenue.

This report presents the findings and recommendations from Phase One of the Downtown Transportation Study.



Exhibit 1.1: Study Area

1.1 Study Area

The study area for the Downtown Transportation Study is defined as follows:

- The **Phase One** area includes 11th Avenue and 12th Avenue between Angus Street and Osler Street, including the City Square Plaza; and,
- The **Phase Two** area includes most of Downtown Regina, bounded by Saskatchewan Drive to the north, 13th Avenue to the south, Angus Street to the west, and Osler Street to the east.

- The **Phase Three** area will expand the Phase Two area southward to College Avenue.

1.2 Study Objectives

The Downtown Transportation Study is an opportunity to assess Regina's transportation system and improve the way the city travels to, from, and within its downtown. Whether one drives, takes transit, carpools, walks, or cycles, an efficient transportation network is a key to downtown's existing and future vitality and growth.

The key objectives for the Downtown Transportation Study include:

- To decide whether to open City Square Plaza for traffic as originally designed or to make the closure permanent;
- To develop traffic, transit, and active transportation mitigation measures, needs and opportunities for the preferred alternative; and,
- To reach a consensus that will best help achieve the vision laid out in the Downtown Neighbourhood Plan – a seamless, supportive transportation network that benefits all modes.
- Specifically for Phase One, the objectives of this phase are to:
- Assess the 11th Avenue and 12th Avenue corridors for traffic operations, pedestrians, cyclists and other users;
- Develop operational alternatives for 12th Avenue closure at City Square Plaza;
- Engage stakeholders and the public through regular workshops and meetings;
- Develop a modelling toolkit to assess traffic operations and evaluate operational alternatives;
- Evaluate operational alternatives;
- Identify the preferred alternative and possible network improvements;
- Provide guidance for implementation of the preferred alternative; and,
- Provide input into Phase Two of the Downtown Transportation Study.

1.3 Report Overview

This report presents the analysis and findings of Phase One of the Downtown Transportation Study. The body of the report provides the high level findings, analysis, and recommendations for operational improvements to 11th Avenue, 12th Avenue, and City Square Plaza. Detailed and technical analyses are attached as appendices to this report.

- **Section 1: Introduction** – provides an overview of the study and study area;
- **Section 2: Study Process** – presents the decision making process and the technical and consultation approach for the study;
- **Section 3: Key Findings** – summarizes the major conclusions of the study;
- **Section 4: Existing Conditions** – provides a summary of existing conditions in the study area and identifies key issues for various modes and transportation needs;
- **Section 5: Stakeholder and Public Input** – summarizes the input received from stakeholder and public consultation activities throughout the study;
- **Section 6: Evaluation of Operational Approaches** – evaluates the three options for City Square Plaza in the context of existing conditions, key issues, and stakeholder input;
- **Section 7: Preferred Operational Approach** – outlines the preferred approach resulting from the analysis in Section 7 and provides guidance for its implementation; and,
- **Section 8: Input to Phase Two** – summarizes key issues that will be input into Phase Two of the Downtown Transportation Study.

Technical analysis reports are attached to this report as Appendices A and B provides more detailed information, results, and analysis from the transportation modelling completed as part of Phase One. In addition, a stakeholder consultation summary is attached as Appendix C.

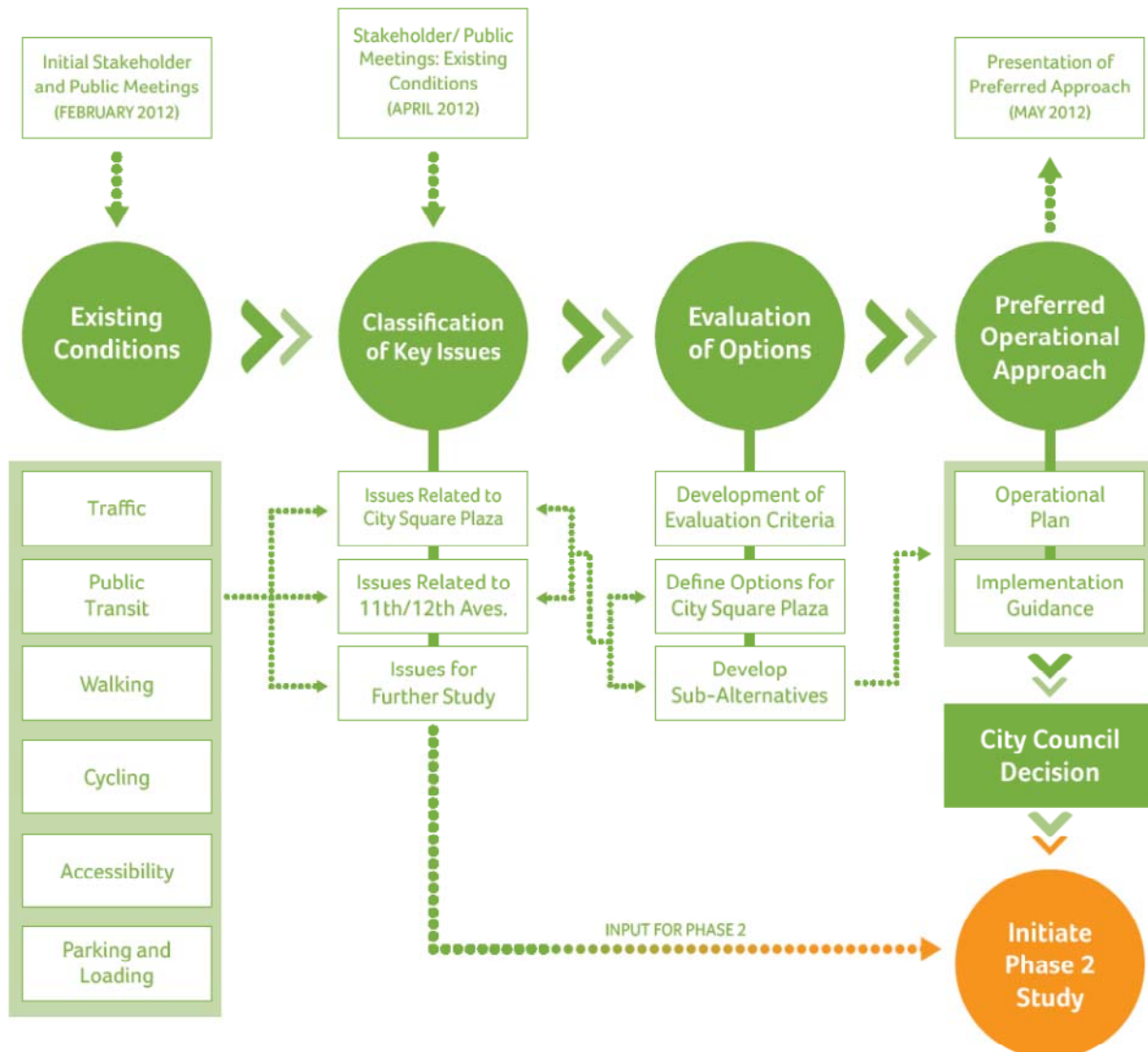
2. Study Process

Exhibit 2.1 illustrates the process for Phase One of the Downtown Transportation Study, which began in February 2012. The study process was developed around four main stages:

- Initiating the study and establishing existing conditions;
- Identifying and classifying key issues;
- Developing and evaluating potential approaches; and
- Identifying a preferred approach and providing implementation guidance.

Following Phase One, the Phase Two study will commence in June to address transportation issues for the entire downtown.

Exhibit 2.1: Study Process



2.1 Technical Approach

The scope of work for Phase 1 of the Downtown Transportation Study includes the assessment of traffic, transit, and active transportation modes on the 11th and 12th Avenue corridors under a variety of network alternatives for City Square Plaza. The network alternatives for the Plaza are for it to remain closed to traffic year round, to open it to traffic one-way or two-way, for certain seasons or for certain times-of-day, days of the week or seasons.

In order to undertake the assessment of traffic and transit operations, a 'model toolkit' was developed consisting of a micro-simulation model, supported by the City's regional travel demand model and a Synchro traffic operations model. The micro-simulation model, in the VISSIM software platform, is the primary tool for evaluation of traffic and transit conditions, and was developed and calibrated to current conditions. VISSIM is a micro-simulation platform that simulates individual vehicles including private vehicles, commercial vehicles, and transit vehicles. VISSIM has advanced routing, priority rules, and signal simulation capabilities that provide great flexibility in modeling complex urban corridors with multiple modes. VISSIM is the primary tool used to analyze the alternatives presented in this report.

VISSIM Model Development

A detailed summary of the model development and calibration process is provided under a separate report, *Downtown Transportation Study Phase 1 Existing Conditions Report, May 2012*. The following provides a brief overview of the approach.

The Phase 1 Base Model was developed to represent fall 2011 conditions and features 12th Avenue closed between Lorne Street and Scarth Street. After consultation with the City, the PM peak hour was deemed critical for traffic and transit operations on the study corridors. Model development therefore focused on the PM peak hour. Network configurations, traffic volumes, signal timings, transit routes, and other relevant information were collected and used to construct the base VISSIM model. Specific effort in model development focused on the following areas:

- **Traffic volumes** – base model volumes are based on 2011 turning movement counts (where provided) and 2011 approach volumes to fill any gaps. Traffic volumes were adjusted for balancing. Vehicle routing was coded in VISSIM based on traffic counts and on routing information derived from the City's regional EMME model. Following the route coding, a series of re-adjustments were made to volumes to meet logic checks and for balancing.
- **Parking** – following a field review of operational problems, on-street parking was observed to interfere with intersection operations at a few key locations in the downtown network. Therefore, on-street parking was coded in the VISSIM model at several locations including Broad Street near 11th Avenue, at select locations on 11th Avenue such as at Cornwall Street (to model transit lane violators or pick-up and drop-off activity), along

12th Avenue east of Albert Street, and on some north-south links west of City Square Plaza in the model. Overall, the coding resulted in better observational calibration at those problem locations in the model. Parking lots were also modelled in select locations, mainly for the purposes of balancing traffic volumes.

- **Transit vehicle behaviour** – transit vehicle behaviour was modelled as accurately as possible using available route and schedule data, stop data, and field observations. At bus stops within the study area, dwell times were coded to approximate observed dwell times. This task resulted in buses on 11th Avenue with behaviour similar to observed conditions. Transit routes and schedule times were also coded to the extent possible, and adjustments were made to lane choice and other transit behaviours to best match observed conditions.
- **Pedestrian flows and pedestrian-vehicle interactions.** For the base model, pedestrian-vehicle interactions are limited to normal crossings at signalized and unsignalized intersections in the study area. Standard coding practice was used where pedestrians obey signal controls. Further effort on the coding of pedestrian-vehicle interactions was undertaken for the evaluation of alternatives with 12th Avenue open to traffic as detailed below.

The result of the model development was a calibrated model of 11th Avenue and 12th Avenue, with all traffic volumes within 10% of target volumes and the vast majority within 5%.

Evaluation of Alternatives

Evaluation of alternatives is detailed in Section 7 of this report. Also, a technical report describing the quantitative evaluation of alternatives in the VISSIM model is provided under separate cover from this report, in the *Downtown Transportation Study, Phase 1 Evaluation of Alternatives Report, 2012*.

The base VISSIM model was used to create models of the three additional alternatives: open one-way eastbound, open one-way westbound, and open two-way. For each alternative model, travel demand on 12th Avenue through the plaza was estimated. Forecasts were based on a traffic routing analysis, which involved model runs in the City's EMME model, examination of traffic counts, and adjustments to account for volume balancing and vehicle routing. Resulting forecasts for each alternative are provided in the detailed technical analysis attached to this report.

The VISSIM models of each alternative were developed to assess two key questions: 1) what effect does each alternative have on congestion on 11th Avenue (i.e. how diversion to 12th Avenue improves 11th Avenue), and 2) how does 12th Avenue operate under each alternative. The evaluation of alternatives led to the development of the preferred approach. The evaluation of the preferred approach is also included in the performance indicators presented in the separate evaluation report.



The Downtown Transportation Study was introduced to the public at a well attended open house at Cornwall Centre on March 1, 2012. The unique venue provided an opportunity to speak to a range of individuals who otherwise would not attend a traditional open house.



2.2 Consultation Approach

Stakeholder and public consultation were a key component of this first phase of the Downtown Transportation Study. Three main public consultation events were held in addition to numerous meetings and consultations with key stakeholders, city staff, and city council. These events and meetings are summarized below and key messages from public and stakeholder consultation can be found in Section 6.

Public Consultation

- **March 1, 2012 Open House** – Held at Cornwall Centre in Downtown Regina, provided an opportunity to introduce the study to the public and solicit feedback and opinions regarding travel within and to/from downtown Regina as well as whether City Square Plaza should be opened to traffic.
- **April 5, 2012 Open House** – Held in the lobby of City Hall to present preliminary findings of the traffic analysis and identified key issues and considerations for the three main alternatives for the operation of City Square Plaza.
- **May 8-9, 2012 Open Houses** – Held at the Royal Canadian Legion and at the Farmers' Market at City Square Plaza to present the preferred operational alternative for City Square Plaza as well as overarching issues that will be forwarded to Phase Two of the Downtown Transportation Study.

Stakeholder Meetings

Numerous stakeholder meetings were conducted over the course of Phase One of the Downtown Transportation Study. These stakeholders represented a wide range of community and business interests and provided valuable input, insight, and feedback to the key issues and proposed operational alternatives. During Phase One, the study team met and consulted with:

- Regina Downtown Business Improvement District (RDBID);
- Regina Transit;
- Emergency Services;
- Blind/Low-Vision Community;
- Downtown Property Owners and Tenants;
- Regina Chamber of Commerce; and
- Accessibility Advisory Committee.

The study team consulted with City Council during an informal drop-in session at the end of February, attended by some city councillors.

In addition, the study's Steering Committee, composed of various city staff and key stakeholders, had three formal meetings during Phase One and additional informal discussions throughout the process. These were supplemented with meetings with the City's Project Team, including representatives from transit, community services, planning, roadway operations, signals, traffic control, and parking, transportation and the TMP.



The view of Downtown Regina from City Hall, toward City Square Plaza

3. Key Findings

The transportation system in downtown Regina is not broken – increasing the flexibility of the network and operational changes could yield significant benefit.

Over the past decade, Regina has returned to a period of economic and urban growth and expansion with a significant proportion of this growth occurring within the downtown. Existing businesses are expanding while companies seek to relocate or establish themselves in the largest employment hub in the region. More people are choosing to live downtown and in its surrounding communities.

Unsurprisingly, the growth in the city and the downtown has created conditions previously rare – increased difficulty in finding downtown parking, greater delays in peak travel periods, and fewer free seats on transit buses. However, these

conditions are not a sign that the downtown and its transportation system are broken – instead, they are strong indications that the downtown is becoming a more attractive place to live, work and play. In addition, downtown Regina remains highly accessible – the majority of the city is within a 20-minute drive of the downtown, even during peak periods. Therefore, increasing the flexibility in the transportation network, providing attractive mode choices, encouraging changes to travel behaviour, and implementing targeted operational improvements – all minor and realizable solutions – could significantly relieve some identified issues and improve the way we get to, from, and around downtown.

11th Avenue is trying to be all things to everyone. The challenge is to balance the needs of all users of the street while ensuring the street works efficiently.

The problems on 11th Avenue result from the attempt to meet every need within a constrained corridor. The street needs to accommodate peak period bus lanes, on-street parking, loading zones, and heavy pedestrian traffic all while allowing all vehicular movements through the corridor. The result is a street that attempts to serve every need but no needs are well served.

Tough decisions will need to be made on how to balance the needs on 11th Avenue and compromises may be necessary to achieve a balanced approach. Will the priority on 11th Avenue be to move cars through the downtown faster? Or will it be to move the most *people* more efficiently?

The closure of 12th Avenue at City Square Plaza has impacted traffic flow and local access in its vicinity, but reduced traffic volumes provide an opportunity to accommodate new functions.

The closure of 12th Avenue changed travel patterns throughout downtown Regina as through vehicular traffic was shifted to 11th Avenue, Saskatchewan Drive, or Victoria Avenue. Traffic volumes have been reduced significantly on 12th Avenue. With the exception of transit, which continues to serve the western section of the corridor, vehicular traffic on the street is largely for local access and loading.

A calmed 12th Avenue presents an opportunity for the street to play a new role in a revitalizing downtown. The street provides connections to neighbourhoods to the east and west of downtown and, with the integration of City Square Plaza, presents an opportunity to create a pedestrian and cycling spine through downtown Regina, while accommodating localized vehicle access and circulation.

No clear direction based on consultations with stakeholders and the public whether to open or close City Square Plaza.

Over the course of Phase One, the study team met with numerous stakeholder groups and spoke with hundreds of members of the public, gathering a wide range of opinions, suggestions, and comments about City Square Plaza and downtown transportation in general. The high level of engagement and passion from the public and stakeholders on the issue left a strong impression on the study team; however, it also made the task of forming a consensus much more difficult.

There are strong opinions between people who wish to have City Square Plaza remain closed to traffic and those who wish to see the Square partially or fully open to traffic. Most of these opinions reflect valid concerns and issues against which the study team evaluated the study alternatives. These concerns and issues are summarized in Section 6.

Decisions should be based upon the long-term goal to reduce traffic growth to the downtown, promote sustainable modes, and an active and vibrant downtown.

The decision regarding City Square Plaza must not be made in a vacuum without considering the overarching needs and opportunities for transportation in the downtown. Most importantly, decisions must be made in the context of Regina's goals and objectives for the downtown. The City's downtown vision, laid out in the *Downtown Neighbourhood Plan*, should play a large role in the decisions made in the Downtown Transportation Study.

It is therefore important to balance the needs of all users in and around City Square Plaza with the desire to promote a sustainable, active, and vibrant downtown. This means ensuring businesses and employees have efficient access, by all modes, to ensure downtown continues to be an attractive place to invest and do business. It also means creating safe and comfortable walking environments that are universally accessible and barrier-free. Most importantly, it means creating exciting public spaces that encourage spontaneous activity and reinforce downtown's role as the city's economic, social, and cultural heart.



11th Avenue looking east from Scarth Street

4. Existing Conditions

4.1 Network Overview

A review of the transportation network in the Phase 1 study area was undertaken using field observations and consultation with the city. The current layout is reflected in the following notes, with operational problems below in Section 4.2.

Since the construction of City Square Plaza, the role and function of 12th Avenue has changed. Previously the road acted as an eastbound collector, providing an alternative to Saskatchewan Drive and Victoria Avenue. Today 12th Avenue serves the function of accessibility to parking and to north-south streets in the downtown, and the closure at the Plaza prohibits any functionality as a through road. Due to the closure, congestion is not a severe problem along 12th Avenue with only some busy movements at the intersection of Albert Street noted. West of the Plaza, 12th Avenue does experience high transit volumes as most downtown routes use 12th Avenue as the eastbound access to Lorne Street to turn north.

11th Avenue has experienced a significant change in role and function since the closure of the Plaza. Between Broad Street and Lorne Streets, 11th Avenue is the primary east-west transit route in downtown Regina. Approximately 30 buses use the road in the PM peak hour alone. Operational problems were observed at Broad Street, Hamilton Street, and Cornwall Street in the PM peak hour. The outside lane is used as a bus-only lane for select stretches on 11th Avenue. Roadside parking and stopovers are allowed for select stretches for the outside lane only. The road-side parking has a recurring issue with violators and pick-up and drop-off activity in front of the Cornwall Centre.



Albert Street at 11th Avenue, looking north

Albert Street and Broad Street are six-lane, two-way (3 lanes each direction) roads. During the PM peak hour the outside lanes (southbound on Albert Street, northbound on Broad Street) are designated for transit vehicles only, although occasionally parking violators block the outside lane. Both roads consistently provide storage lanes for left turn movements per the major arterial classification. Albert Street and Broad Street suffer from congestion during the PM peak hour at bottlenecks in the system. The intersections at Saskatchewan Drive and the number of lanes provided in the rail underpasses act as bottlenecks, with southbound queues reaching occasionally reaching several hundred metres.

North-south streets between 11th Avenue and 12th Avenue mainly serve the purpose of accessibility to parking and nearby businesses rather than through traffic. Generally congestion is not a problem, although high volumes of transit vehicles on Lorne Street and Smith Street between 11th and 12th Avenues were noted to cause some operational issues.

Cornwall Street operates as a two-lane, two-way (1 lane each direction) road, and it connects 11th Avenue to the parkade east of Cornwall Street. Cornwall Street is closed at 12th Avenue Plaza, requiring vehicles to perform an awkward u-turn or to use private property to turn around.

Alleys parallel to Cornwall Street, between Scarth Street and Lorne Street, provide maintenance and delivery access to numerous buildings. The alleys were closed for construction of the Plaza and currently dead-end, requiring awkward turn-around or the use of private property to exit onto Cornwall Street.

Transit, walking, cycling, accessibility, and parking and loading conditions are detailed in Sections 4.3 through 4.7 of this report.

4.2 Traffic Conditions

Current traffic conditions were extracted from the base VISSIM and Synchro model. The following table provides the level of delay for key movements in the 11th Avenue and 12th Avenue corridors during the PM peak period.

Exhibit 4.1: Average delay for critical movements in PM peak period, VISSIM Model

Location			Delay (in seconds)
East-West Street	North-South Street	Movement	
11th Avenue	Cornwall Street	NBL	67
		NBR	59
	Hamilton Street	SBR	70
	Broad Street	EBL	83
		EBT	77
		WBL	61
		WBT	60
12th Avenue	Albert Street	WBL	69
		WBT	64
	Broad Street	SBL	58

A detailed assessment of intersection operations for each movement was undertaken as part of the study. Detailed evaluation of movements is provided in the Appendix and in the separate reports:

- *Downtown Transportation Study Phase 1 Existing Conditions Report, May 2012;*
- *Downtown Transportation Study Phase 1 Evaluation of Alternatives Report, May 2012.*

Based on the analysis, the following critical locations were observed:

- At Broad Street and 11th Avenue, traffic is at or exceeding capacity in the eastbound approach (through and left turn movements), westbound approach (through and left turn movements) and southbound approach (left turn movement).
- At 11th Avenue and Hamilton Street, the westbound approach operates poorly. Operations are constrained by left-turning vehicles blocking through movements (while they wait for a gap to turn left) which greatly decreases the throughput of the intersection. Buses may stop at the near-side stop and limit other buses from continuing through. The southbound right turn experiences LOS E due to downstream queues in the VISSIM model, but is not

identified as critical in the Synchro analysis, as shown in Exhibit 4.2 below.

What is LOS?

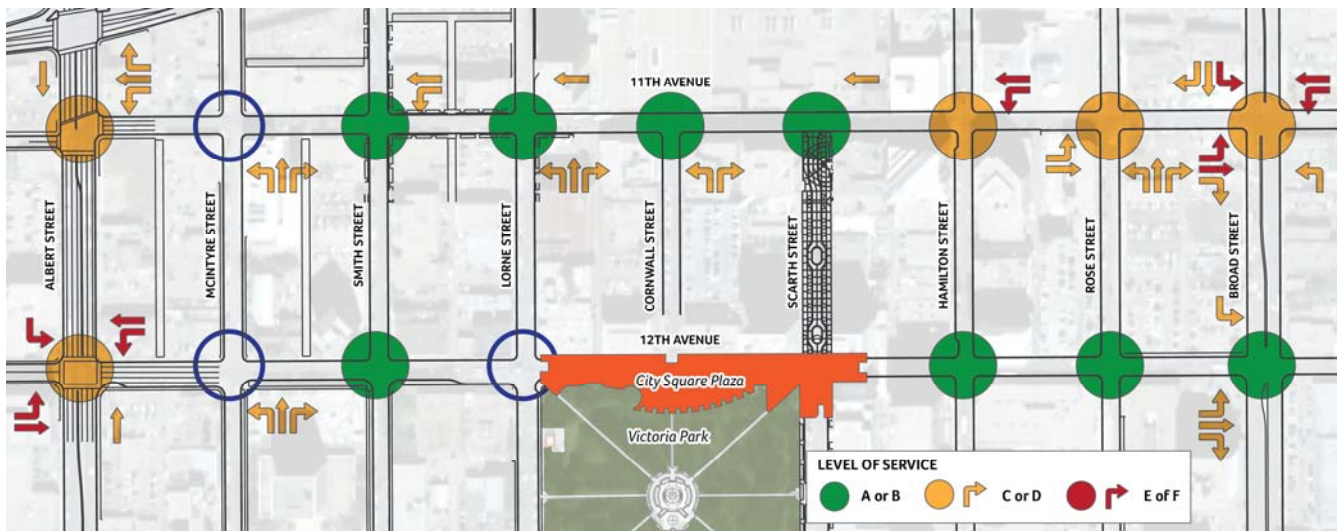
Level of service, or LOS, is a measure to assess how well an intersection or roadway is operating on a scale from A to F, based on delay. Intersections with few delays would be assessed more favourably (A or B) compared to those with significant delay, which would be assessed with lower grades (D to F). Generally, LOS between A and C are acceptable, while D to F may require improvements.

- At Albert Street and 12th Avenue, the eastbound, westbound, and southbound approaches include left turning movements operating at or near capacity. 12th Avenue is a key entry route for southbound traffic along Albert Street as the intersection at 11th Avenue does not allow the movement. A number of buses also are funneled through the intersection.
- A number of movements along 11th and 12th Avenue, indicated yellow in Exhibit 2-10, operate near capacity. Although these movements tend to clear during most signal cycles, any short term events such as pedestrian blockages, no-parking violators, or pick-up and drop-off activity can aggravate delays.

Exhibit 4.2 provides the 'hotspot' analysis of movements over capacity and a graphical review of key issues, using Synchro to supplement the VISSIM analysis above.

Green indicates low levels of congestion, yellow indicates LOS C/D, or movements approach capacity, and red indicates LOS E/F or movements at or over capacity in the PM peak hour. Detailed level-of-service output is provided in Appendix A-2 for Synchro results, and Appendix A-3 for VISSIM results.

Exhibit 4.2: Level of Service Analysis - 11th Avenue and 12th Avenue, Synchro Model



Key Issues

The 11th Avenue and 12th Avenue corridors have experienced a notable change in role and function since the construction of the City Square Plaza. The following summarize key issues:

- The 12th Avenue closure has negatively impacted vehicular accessibility to businesses fronting 12th Avenue between Lorne

Street and Scarth Street. Delivery vehicles are forced to navigate alleys and to make u-turns at the south end of Cornwall Street.

- Access to Cornwall Street Parkade is provided by eastbound and westbound approaches on 11th Avenue.
- On 11th Avenue, two-way operation plus the diversion of all downtown bus routes leads to congestion at several key locations:
 - Intersection of Broad Street and 11th Avenue, traffic volume exceeds available capacity for eastbound and westbound through movements and left turns.
 - At 11th Avenue and Hamilton Street, westbound through movements can be blocked by left turning vehicles that yield to opposing traffic. In the westbound direction, right-turning vehicles can be delayed by pedestrians crossing Hamilton Street, delaying through traffic and exacerbating the issue with the westbound left turn.
 - Illegally stopped or parked vehicles during peak periods in bus lanes.
- At Lorne Street and Smith Street, high volumes of turning buses can block traffic and cause delays.
- On 12th Avenue, aside from accessibility to businesses at the Plaza, the following was noted:
 - Congestion is mostly limited to the intersection of 12th Avenue and Albert Street, which has eastbound and westbound through movements and left turns operating at or over capacity.
 - Westbound buses and vehicular traffic use 12th Avenue for access to adjacent businesses and to north-south streets, but not as a through route as the road is closed at the plaza.
 - At Scarth Street, the section of the Plaza that is currently open to traffic, the northbound right for access to 12th Avenue eastbound operates well. Low traffic volumes and speeds allow the segment to operate safely despite the unusual geometry and use of planters to guide traffic.
 - The short two-way section between Hamilton Street and Scarth Street, which provides westbound access to the parking entrance at Tower 2, can be confusing to drivers. Some westbound drivers on 12th Avenue continue through Hamilton Street, unaware of the closure of the westbound direction, and are forced to make an awkward u-turn or to use the alley between Hamilton and Scarth Street.

Smith Street, Lorne Street, and 11th Avenue experience a very high volume of bus traffic, which is good for transit service but causes operational and noise issues.



Exhibit 4.3: Buses queue on 11th Avenue

4.3 Transit

Prior to the conversion of 11th Avenue and 12th Avenue to two-way traffic, Regina Transit service was highly focused on these two streets, with all routes serving both corridors in their respective directions. After two-way conversion and the subsequent closure of 12th Avenue at City Square Plaza, the majority of bus routes now provide two-way service on 11th Avenue, with major transfer points between routes at 11th Avenue/Cornwall Street and at City Hall on 12th Avenue.

Due to the scheduling of buses around a timed-transfer system, bus activity through the downtown is characterized by highly volume “pulses” around timed-transfer times. This pattern creates short, but significant periods of congestion as buses move into and through downtown, serving bus stops and idling to facilitate transfers.

Peak period bus lanes are provided on 11th Avenue between Albert Street and Broad Street, which theoretically provide greater priority to transit in the corridor. However, there is limited enforcement of the bus lanes and vehicles were observed on several occasions illegally stopped or parked. This creates significant delays for transit and for other traffic on 11th Avenue as buses are forced to merge out of, and back in to, the bus lanes. These delays are aggravated when a pulse of buses go through the corridor.

Buses travelling in mixed traffic experience the same level of service as general traffic, as reported in Section 4.2. The delays on transit-only movements are similar to those of mixed traffic. Generally, with delays less than 30 seconds,

buses are able to proceed through the intersections within one signal cycle and this is the condition at most downtown intersections. Locations of significant delay in the PM peak period include:

- 11th Avenue and Lorne Street: westbound through movement;
- 11th Avenue and Cornwall Street: westbound through movement;
- 11th Avenue and Broad Street: eastbound left turn to northbound Broad Street;
- 12th Avenue and Albert Street: southbound left turn to eastbound 12th Avenue; and
- 12th Avenue and Broad Street: westbound right turn to northbound Broad Street.

Key Issues

- Buses are often delayed by illegally stopped and parked vehicles in bus lanes during the peak period. This results from a lack of enforcement of no-stopping restrictions and reluctance to tow offending vehicles.
- In off-peak periods, vehicle parking and stopping is permitted in the curb lanes. However, this creates delays and difficult manoeuvres for buses that are forced to merge in and out of the curb lanes in order to service bus stops.
- Transit vehicles are often delayed, along with general traffic, at Broad Street and Albert Street.
- Due to timed-transfer system, buses travel through the 11th Avenue corridor in high-volume “pulses”, which generate periods of congestion. 11th Avenue may lack sufficient capacity to accommodate all bus movements in the future.
- There is no clear central hub for transit in downtown Regina. However, there are suggestions of utilizing Lorne Street, converted to two-way operation, as an on-street transit hub. The previous traffic study (2009) found that there was insufficient roadway width and sidewalk space on the 1800 block of Lorne Street to accommodate a transit hub. In addition, SaskTel had serious concerns about transit conflicts with, and access to, their undergrounds on that block and the presence of idling buses below their fresh air intakes for their buildings.
- Victoria Avenue underutilized as a potential transit corridor
- Bus stops lack amenity and visibility. There is seating and shelter at some bus stops, but it is mostly inadequate for passenger volumes and the importance of transit in the downtown.

4.4 Walking

11th Avenue and 12th Avenue are major pedestrian corridors through the downtown, largely a result of the concentration of uses and activity in the area. In addition, as the main route for transit through downtown, 11th Avenue has a high number of pedestrians walking to and from, and waiting at, bus stops. Most pedestrian activity occurs on 11th Avenue between Lorne Street and Broad Street. West of Lorne Street, pedestrian activity drops considerably relative to the density of development, with the exception of the transit stops at City Hall on 12th Avenue, which are used heavily for transfers between bus routes.

The F. W. Hill (Scarth Street) Mall was converted into a pedestrian-only street in 1975 and during busy periods – lunch period is busiest – is a major hub of pedestrian activity. The mall is anchored on its north end by the main entrance to Cornwall Centre and on the south end by Regina's largest office complex, the McCallum Hill Centre. The two anchors create strong pedestrian demand through the mall, which serves as the central spine. The pedestrian-only area was extended onto 12th Avenue from Scarth Street to Lorne Street with the completion of City Square Plaza in 2011.

Pedestrian service levels in the downtown are generally good, due to the provision of short, 60 second cycles at signalized intersections between Broad Street and Albert Street. The short cycle length provides snappy operations and quick phase turnovers. At Albert Street and Broad Street intersections, the longer 120 second cycles can result in long pedestrian wait times. At these locations, the high traffic volumes require long green times for queue clearance. Overall, the current signal timing setup in the downtown is effective at balancing traffic operations while minimizing wait times for pedestrians at signals. Even shorter cycle lengths such as 40s will be difficult to implement to further benefit pedestrians, as walk clearance times may exceed this duration for some locations. Further review of pedestrian service levels in the downtown will be undertaken in Phase 2.

Key Issues

In general, the pedestrian infrastructure on 11th Avenue and 12th Avenue is acceptable; however, the pedestrian *environment* could be improved:

- Sidewalks on both sides of the street that offer generous width and a well defined clearway (pedestrian space free of obstacles)
- Pedestrian environments in some areas lack visual interest and/or the existing streetscape is dated
- Lack of street furniture, such as garbage/recycling receptacles and benches
- There is no system of pedestrian wayfinding in the downtown
- Buildings on both sides of 11th Avenue create a significant canyon effect, which coupled with high bus and vehicular volumes creates an unpleasant walking environment

- Increasing the number of street trees and replacing dead trees with mature trees could reduce the canyon effect while improving the micro climate and softening the streetscape
- City Square Plaza has created a large pedestrian space in downtown Regina which is attractive during peak pedestrian periods; however, when pedestrian volumes are low, the space is devoid of activity

4.5 Cycling

There is great potential for increasing the number of cyclists and cycling trips to, from, and within Downtown Regina, provided that cyclists have a safe environment in which to ride. The recent addition of bike lanes on Lorne and Smith Streets, connecting Wascana Park to Victoria Avenue on the downtown's south edge, is an indication the city is willing to explore opportunities to encourage more cycling.



Exhibit 4.4: Secure bicycle parking in Cornwall Street Parkade

Cyclists are not currently accommodated on 11th Avenue and several cyclists were observed riding on the sidewalk during a recent site visit. As a heavy pedestrian area, bicycles should not be on sidewalks; however, given heavy traffic volumes and the large number of bus movements, it would be difficult to accommodate cyclists on street. However, the closure of 12th Avenue at City Square Plaza presents an opportunity to create an east-west cycling route through downtown Regina. 12th Avenue has lower traffic volumes which are more comfortable for on-street cycling and the bikeways on Lorne and Smith can easily be extended to create a strong connection. The 12th Avenue corridor also extends beyond downtown to the east and west, creating opportunities for future connections to surrounding communities.

In addition to providing safe routes, cycling can be encouraged by providing more amenities for cyclists at destinations, including safe and secure long-term bike parking, convenient short-term on-street parking, and facilities for changing in workplaces.

Key Issues

- While there are a number of off-street, secure bicycle parking locations, such as inside the Cornwall Street Parkade, there is an overall lack of short-term, on-street bike parking on 11th and 12th Avenues. Short-term bike parking, much like on-street vehicular parking, is important to support retail and business activity in the downtown.
- The on-street bike lanes on Lorne Street (northbound) and Smith Street (southbound) that connect downtown to Wascana Park currently end at Victoria Avenue, creating a gap for cyclists wanting to travel to downtown.
- There is no east-west bike route to/from and through downtown Regina despite high cycling potential in neighbourhoods to the east and west of downtown Regina.

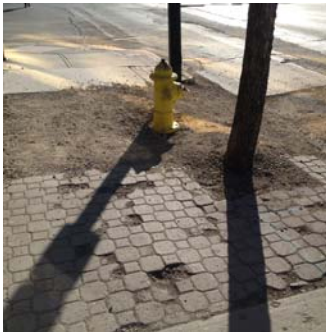
- Due to the lack of cycling infrastructure in downtown, cyclists are observed using sidewalks, which creates hazardous conditions on heavily used sidewalks on 11th Avenue.

4.6 Accessibility

Accessibility for persons with disabilities around downtown Regina can be challenging, especially for the blind/low-vision community and persons requiring the use of mobility devices such as wheelchairs or scooters. Designing streets and sidewalks for universal access in downtown is particularly challenging in constrained right-of-ways and retrofitting existing infrastructure. However, it should be made clear that removing barriers and increasing accessibility of the built environment in downtown benefits everyone, and not just persons with disabilities. Creating a barrier-free downtown should be a high priority in the Downtown Transportation Study.

Key Issues

- Vehicular access onto City Square Plaza creates challenges for persons with disabilities due to the lack of physical separation between vehicles and pedestrians. In addition, there are a number of obstacles in the square that create hazards for the blind/low sighted. Creating a safe, clearly marked barrier-free access route through the plaza will be a key requirement if it is opened to traffic.
- Regina has increased the number of audible pedestrian signals in downtown; however, many intersections are still not equipped. There are also concerns that some signals are being installed with push-buttons in locations difficult to access by persons with disabilities.
- The installation and design of curb ramps throughout downtown is inconsistent. Most ramps have been built following standards that are outdated. In addition, maintenance of existing ramps is inadequate with many ramps falling into disrepair, creating hazards for all sidewalk users.
- There are areas throughout downtown where sidewalks and pavement conditions create uneven surfaces that have a much greater negative impact for persons with disabilities.



4.7 Parking and Loading

Parking is an important issue for the travelling public as it can affect the desirability of travelling to a destination and the choice of travel mode. There are a number of parking lots in the 11th Avenue and 12th Avenue corridors that provide daytime parking for employees of downtown businesses and visitors. The parkade at Cornwall Street, south of 11th Avenue is a key facility for businesses fronting the 12th Avenue Plaza, and the parkade can become fully occupied during the day. This and other issues have resulted in public concerns about the parking supply in the downtown.

On-street parking is generally serviced by coin-operated pay machines on most roads in the downtown. On certain roads such as Broad Street, Albert Street, and 11th Avenue, on-street parking is restricted by time-of-day.

Business deliveries and loading/unloading can occur in designated loading areas in front of or behind businesses. Some delivery companies park illegally while loading and unloading, though drivers generally limit this behaviour on major roads such as 11th Avenue. Closure of 12th Avenue has resulted in difficulties to reach loading/unloading areas for businesses fronting the Plaza.

Key Issues

- Perceived lack of parking in downtown Regina; however, the relative low cost of parking is evidence of sufficient supply.
- Lack of awareness of parking choices, particularly in the fringe of the downtown where lots are within a 5-minute walk of most downtown destinations. Increasing awareness of the potential benefits of parking in these locations – lower rates in the fringe area, avoiding congestion within downtown – could create behavioural change.
- On-street parking on 11th Avenue between Lorne and Rose Streets are important for adjacent businesses; however, it creates delays and congestion, especially for buses and when vehicles are illegally stopped or parked during peak periods.
- Low cost of on-street parking encourages long-term stays that should be utilizing off-street parking. Inadequate enforcement and low cost of parking fines do not serve as a deterrent.
- The closure of City Square Plaza restricts access to the Cornwall Street Parkade to eastbound and westbound approaches along 11th Avenue, adding to traffic volumes and congestion.
- On-street parking spaces are currently individually metered, which may be an inefficient use of space given newer parking technologies such as pay-and-display.
- Closure of alleyways between Scarth Street and Lorne Street that normally exit onto City Square Plaza has led to challenges for loading and access for businesses.
- Closure of City Square Plaza has increased service times for specialized transit drop-offs and loading due to distance to loading zone on Scarth Street.



Crowds gather at City Square Plaza for the Rick Hansen Relay event in February 2012

4.8 Programming and Operations

City Square plaza was developed to create a cultural hub for activity, events and celebrations in Regina. The plaza bowl was designed to provide space to play this role for smaller events / activities while the remainder of the plaza could accommodate vehicular access and network connections. During larger events, or events involving the stage, the plaza was envisioned to be closed to all vehicular traffic. The City of Regina intends to make the City Square plaza available for festivals and events 365 days a year, with the possibility of partial or full closure all days. Concerns from stakeholders have been raised around permanently closing the plaza to vehicular access when its design specifically included accommodating vehicular traffic. Conversely, some stakeholders expressed concern that allowing vehicular traffic on the City Square Plaza would limit the ability for the square to hold informal or impromptu programming and negatively impact the pedestrian environment. There are also concerns with potential damage to structures and accelerated deterioration of the square if vehicles were allowed on the space.

Key Issues

- Ensuring adequate utilization of City Square Plaza for programming, particularly if the square remained closed to traffic in order to encourage activity.
- Concern for potential damage to structures and deterioration of visual appearance if traffic was allowed on City Square Plaza.

4.9 Summary of Key Issues

Exhibit 4.5: Summary Table of Key Issues

Key Issue	Related to City Square Plaza	Related to 11 th Avenue	Forward to Phase Two of DTS
Traffic			
Lack of accessibility to businesses fronting 12 th Avenue between Lorne Street and Scarth Street	•		
Vehicles using Cornwall Street or alleys to access and service nearby businesses forced to make awkward u-turns or use private property to exit	•	•	
Driver confusion in navigating 12 th Avenue westbound west of Hamilton Street	•		
Congestion and delay at intersection of 11 th Avenue and Broad Street		•	•
Congestion and delay at 12 th Avenue and Albert Street		•	•
At 11 th Avenue and Hamilton Street, through movements blocked by turning vehicles		•	
At 11 th Avenue and Scarth Street, operations hindered by no-parking violators and pick-up/drop-off activity		•	
At 11 th Avenue and Cornwall Street, high pedestrian and traffic volumes and poor operations	•	•	
At 11 th Avenue and Lorne Street, and 11 th Avenue and Smith Street, high bus volumes and turning buses can block through movements		•	
Transit			
Buses delayed by illegally stopped vehicles in bus lanes in peak periods		•	•
Buses delayed/slowed by movements around on-street parking and loading in off-peak periods		•	•
Delayed turning movements at Broad Street and Albert Street		•	•
Transit capacity limitations on 11 th Avenue		•	•
No central hub for transit in downtown			•
Saskatchewan Drive and Victoria Avenue underutilized as transit corridor			•
Lack of amenity and visibility of bus stops			•

Key Issue	Related to City Square Plaza	Related to 11 th Avenue	Forward to Phase Two of DTS
Walking			
Low pedestrian volumes on City Square Plaza in non-peak periods and winter	•		
Canyon effect on 11 th Avenue not ideal for pedestrians – noise, wind tunnel, lack of light		•	•
Streetscape lacks visual interest/dated		•	•
Inadequate tree canopy on 11 th Avenue		•	
Lack of street furniture			•
Lack of wayfinding system			•
Cycling			
Lack of on-street, short-term bike parking		•	•
Cyclists using sidewalks on 11 th Avenue		•	•
Gap in north-south bikeway linkages from Lorne and Smith Streets			•
Lack of east-west bikeway facility			•
Accessibility			
No physical or visual separation between vehicles and pedestrians on City Square Plaza	•		
Pathway not clearly delineated	•		
Inadequate number of audible pedestrian signals		•	•
Inconsistent/outdated design of curb ramps throughout downtown Regina			•
Poor condition of sidewalks and road surfaces with negative impact on accessibility			•
Parking and Loading			
Perceived lack of parking in downtown Regina		•	•
Low awareness of parking choices and options throughout downtown area			•
On-street parking seen as important for local businesses		•	•
Low cost of on-street parking encouraging long term stays		•	•
Inadequate enforcement and low fines relating to on-street parking abuse		•	•
Closure of City Square Plaza negatively	•	•	

Key Issue	Related to City Square Plaza	Related to 11 th Avenue	Forward to Phase Two of DTS
impacted access to Cornwall Street Parkade			
More efficient use of right-of-way		•	•
Loading and access issues related to closure of alleyways exiting onto City Square Plaza	•		
Increased service times for specialized transit due to distance caused by closure of City Square Plaza	•		
Programming and Operations			
Ensuring adequate utilization of City Square Plaza for programming	•		
Concern for damage and deterioration of visual appearance of City Square Plaza	•		

5. Stakeholder and Public Input

Public and stakeholder consultation was a critical component of Phase 1 of the Regina Downtown Transportation Study (DTP). At the outset of the study, a consultation program was designed to maximize opportunities for input from a broad cross-section of stakeholders. This program included:

- Three Public Open Houses held in on March 1st, April 5th and May 8th, 2012.
- Meetings with 6 stakeholder groups and organizations
- Opportunities for input via a project specific e-mail
- Regular study updates via the City of Regina website

This section summarizes the key input received from each consultation event. A detailed summary of each event and the comments received is provided in Appendix C.

5.1 Public Open Houses

Public Open House #1 - March 1, 2012

The first public open house was held on March 1, 2012 at the Cornwall Centre. The purpose of the open house was to introduce the study to the public and get input on key issues, opportunities and potential criteria for evaluating alternatives for 11th Avenue and 12th Avenue.

The Cornwall Centre location was selected to capture the widest possible audience ranging from car drivers to pedestrians. By all accounts the open house served to achieve this as it is estimated that over 300 people stopped to look at the displays. Over 150 comment forms were completed on-site and approximately 20 were received by e-mail or fax afterward.

High Level Messages

Key messages we took from this meeting:

- Downtown Regina has many great features, most notably is its walkability
- City Square plaza looks great, but presents some challenges; challenges that might have been better anticipated
- 11th Avenue needs to work better for both cars and transit
- More people could be walking, cycling or taking transit to Downtown, but improvements are needed at the city-wide level

Comments on 12th Avenue and City Square Plaza

At the Open House, one of the questions on the comment form was whether or not City Square Plaza should be open to traffic. Based on the 150 comment forms submitted, 57% of the respondents felt the plaza should be kept closed while 43% felt it should be opened to traffic. Of those 43% who said open it, about one-third would like it opened both ways and two-thirds said open it one-way only. Although this sample was not meant to be statistically significant, the results do suggest that there is obviously no clear consensus among the general public on whether the square should be open or closed.

People were also asked why they felt it should be open or closed.

Reasons people cited for **opening it to traffic**:

- Plaza was designed for cars
- Better access to parking and buildings; including access for deliveries
- Extra capacity would help offload 11th Ave
- Increases number of “eyes” on park
- Not enough pedestrians to justify closing all the time

Reasons people cited for **keeping the plaza closed** to pedestrians

- Plaza looks too nice to open to cars
- Enhances the park, adds public space
- People are getting used to it being closed
- Pedestrian safety, accessibility for blind and low vision community
- No predictability for drivers if opened some of the time, closed for events at other times
- Maximizes economic development, city-building
- Maximize life of plaza and city’s investment

Public Open House #2 - April 5, 2012

The second public open house was held on April 5th, 2012 at City Hall. The purpose of the open house was to summarize the input from the first round of consultations and to present alternatives for 11th Avenue and 12th Avenue. A preliminary assessment of the advantages and disadvantages of each alternative was provided, but no recommendations were made on a preferred alternative.

As part of the open house, a presentation was made by IBI Group in the Darlene Hincks Room at City Hall which was attended by approximately 25 people. The presentation was followed by an open discussion.

High Level Messages

Key messages we took from this meeting were as follows:

- There is a balance between maintaining full access for cars and creating a pedestrian only downtown. The current scenario on 12th Avenue may be too extreme.
- Regardless of how City Square operates, there are still improvements that can be made to the downtown transportation system ranging from improving conditions for cycling to improving accessibility.
- Participants in the meeting were respectful of the different opinions on whether or not to open City Square Plaza.
- It is obvious that some drivers are more affected than others by the closure.
- Concerns about traffic are not about overall congestion, but rather very localized circulation issues.
- There is growing excitement around events in the square in the summer.
- Opening the square to traffic in one-direction has a lot of advantages in that it allows access to the parkade and businesses, but does not allow for full traffic flow.

Public Open House #3 - May 8-9, 2012

The third public open house was held in the evening of May 8, 2012 at the Royal Canadian Legion on Cornwall Street and was attended by approximately 15 people. The open house presented the preferred operational approach for City Square Plaza in addition to summarizing the findings of the first phase of the Downtown Transportation Study.

In addition, the study team also was present at the Regina Downtown Farmers' Market on May 9, 2012. Over 200 people stopped to view the presentation boards and many provided comment and feedback to study team staff. In general, feedback was constructive and many members of the public understood the need for a balanced approach.

High Level Messages

Key messages we took from the meetings are as follows:

- Solving the issues of local circulation and access were the most important consideration, particularly to the Cornwall parkade.

- There were multiple requests to review the preferred approach for eastbound operation instead of westbound. However, much of this was a result of personal need to travel eastbound and those who travel westbound appeared to be satisfied.
- The flexibility of City Square Plaza was seen as the greatest advantage of the preferred approach.
- There was more feedback on transportation issues beyond City Square Plaza than opinions about plaza itself. Many appreciated that these issues will be considered in Phase 2.
- Many suggestions regarding the routing of transit through downtown were provided.
- Many people expressed satisfaction that the City Square Plaza would not be opened fully to traffic and respected the idea of allowing essential movements. However, there were still many people who insisted the Square either be fully opened, or fully closed, depending on their perspective.

5.2 Stakeholder Meetings

In addition to the formal public consultation events, meetings were held with a number of stakeholder groups to gather specific input. These meetings occurred over March and April and were tailored to the needs of each stakeholder group. Generally, meetings consisted of a brief presentation by IBI Group on the study followed by an open discussion of issues and opportunities for the Downtown. For the majority of the meetings, City staff was not present so as to ensure that IBI Group received frank and honest feedback.

Stakeholder meetings consisted of the following:

- Regina Downtown BID (2 meetings)
- Emergency Services (Police, Fire ambulance)
- Blind/Low Vision Community (including walkabout)
- Property owners Fronting Plaza
- Accessibility Advisory Committee
- Chamber of Commerce

A summary of the input received from these meetings is provided in Appendix C.

5.3 Summary of Public and Stakeholder Input

Based on the public and stakeholder events, the following high level conclusions can be made:

- People's perspective on the Downtown transportation system varies widely. Some individual's expressed extreme dissatisfaction with various aspects while others pointed out how well the transportation system functions. The greatest dissatisfaction stemmed from the lack of circulation for vehicles, the delays that arise from this lack of circulation. Conversely, most positive comments related to how compact and easy the downtown is to get around by foot.
- Regardless of how 12th Avenue and the City Square plaza operates there is a lot that can be done to improve transportation in the downtown. Areas for improvement include, but are not limited to:
 - improving accessibility for persons with mobility of vision challenges
 - improving traffic flow on 11th Avenue
 - building more cycling facilities
 - making on-street parking more accessible by promoting turn-over and implementing new technologies
 - making transit more viable at the city-level, in order to ensure more people use transit for trips to and from downtown
- There are widely opposing opinions on how City Square Plaza should operate. Some people feel that it should be opened to traffic immediately, without question. Just as many expressed a desire to keep the square closed to traffic.

Despite differing opinions on the square with respect to its use by traffic, the majority of the public and key stakeholders did state that the square is visually attractive.

6. Evaluation of Operational Approaches

6.1 Evaluation Criteria

Evaluation criteria were developed with input from public and stakeholder consultation and through discussion with the City to determine the preferred operational approach for City Square Plaza. Each of the options will be evaluated against these criteria and not other options. These criteria include:

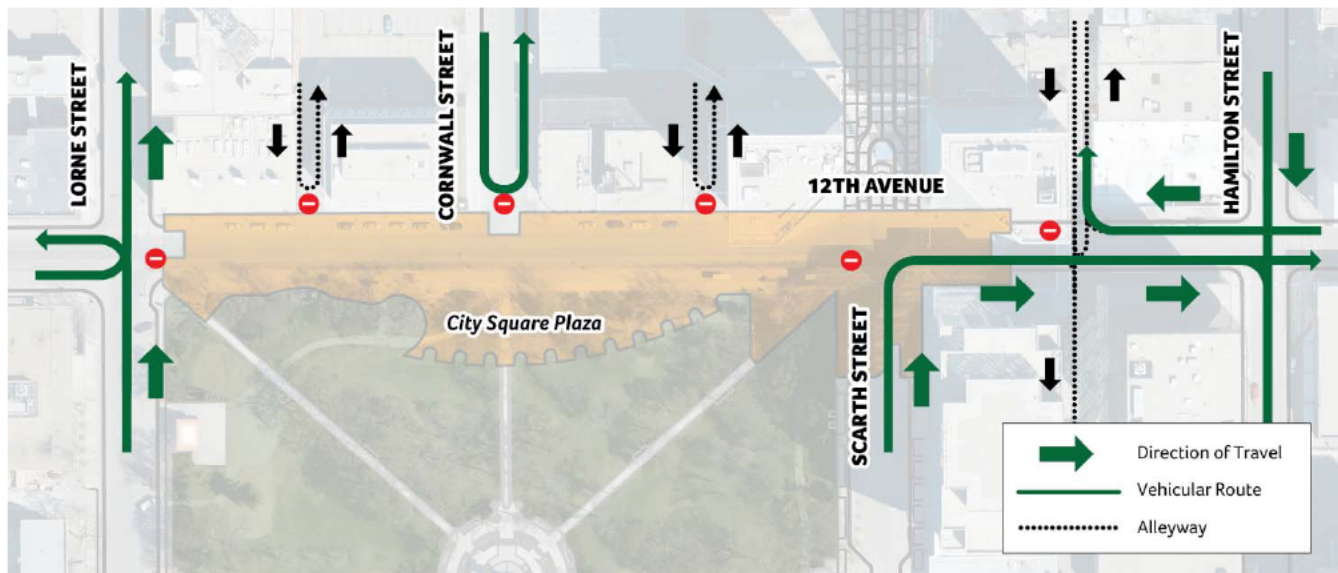
- **Traffic operations**, including traffic delay, queues, and travel times in the 11th Avenue and 12th Avenue corridors;
- **Circulation and access**, including network connectivity, access to businesses and destinations;
- **Parking and loading**, including on-street parking impacts, access to adjacent parkades and loading for passengers and goods;
- **Pedestrian safety**, which includes reduced injury risk and separation from motorized traffic;
- **Accessibility**, which includes degree of universal access and minimization of barriers for persons with disabilities;
- **Pedestrian environment**, which includes walking comfort and attractiveness;
- **Maintenance**, which includes cost and level of effort for ongoing operational activities, snow clearance, and risk of damage to property; and,
- **Programming**, including the availability of City Square Plaza for formal and informal activity and the flexibility of the space to accommodate a wide range of activity.

A quantitative evaluation included network wide delay and travel time distributions, to illustrate the overall impact of each alternative on the network. Individual intersections, and individual movements at each intersection, were also evaluated for delays and queues. The results of this evaluation is summarized according to the above criteria and presented in further detail in the attached technical analysis documents.

6.2 Option One: City Square Plaza Closed to Traffic

The first option for the operation of City Square Plaza would be to maintain the status-quo and keep the square closed to general traffic. Vehicles would be forced to detour around the square area, including forced u-turns on Cornwall Street and the alleys immediately east and west. Northbound traffic on Scarth Street will continue to be required to turn right onto eastbound 12th Avenue. Westbound access west of Hamilton Street would be maintained to the parkade entrance between Hamilton and Scarth Street.

Exhibit 6.1: Option Three – City Square Plaza Closed to Traffic



Evaluation

Criteria	Evaluation	Meeting Goals
Traffic operations	<ul style="list-style-type: none"> Does not address congestion issues on 11th Avenue 	○
Circulation and access	<ul style="list-style-type: none"> Forced u-turns along north edge of square at Cornwall Street/alleys No vehicular access to properties fronting on 12th Avenue Limits movements from Scarth Street 	○
Parking and loading	<ul style="list-style-type: none"> Continued limited access to Cornwall Street parkade Limited access to alleys between Lorne and Scarth Streets for servicing and loading Vehicles unable to complete u-turn at south end would not be able to access alleyways No impact on on-street parking 	○

Criteria	Evaluation	Meeting Goals
Pedestrian safety	<ul style="list-style-type: none"> No motorized vehicles on City Square Plaza, increasing safety Low pedestrian volumes in off-peak periods result in reduced passive surveillance 	●
Accessibility	<ul style="list-style-type: none"> Key issue is safety of crossings at Scarth Street and Lorne Street No conflicts with motorized vehicles in City Square Plaza 	●
Pedestrian environment	<ul style="list-style-type: none"> Maximizes pedestrian priority and space Reduced noise and emissions from vehicles 	●
Maintenance	<ul style="list-style-type: none"> Reduced maintenance requirements due to less wear and tear from no vehicular traffic 	●
Programming	<ul style="list-style-type: none"> Maximizes availability of City Square Plaza for programming and events Added pressure to program square aggressively to maintain a minimum level of activity 	◐

Implementation considerations

Implementation of Option One is relatively straightforward as the square remains closed to traffic. Key changes would focus on clean-up of the entry points to the Plaza and implementing more permanent barriers to the Plaza. The following provides a high-level review of the implementation requirements for permanent closure of the Plaza to traffic:

- At 12th Avenue and Lorne Street, entry to the Plaza will need to be revised such that a semi-permanent barrier to traffic is installed. The temporary barrier must allow emergency vehicles access to the Plaza if necessary. A gate with a padlock may be appropriate (fire crews would cut the padlock in event of emergency), or planters which emergency staff could move.
- Currently, northbound traffic from Scarth Street is required to stop before proceeding with a right turn onto 12th Avenue. The stop sign is essential due to crossing persons with accessibility needs. However, the temporary stop sign is not properly placed to maximize driver visibility. Proper placement of the stop sign will be important to ensure drivers come to a stop prior to turning. A flashing red light with the stop sign could increase visibility and compliance. The Lorne Street and 12th Avenue to provide a signalized intersection and audible pedestrian crossing.
- Temporary barriers placed at the south end of Cornwall Street will need to be replaced with bollards or a more permanent gate. A proper u-turn should be implemented. Currently, the temporary barricades are often moved, which allows motorists to access the square.



Exhibit 6.2: This tractor-trailer was observed backing out of alleyway between Cornwall Street and Lorne Street from the south end of the alley onto 11th Avenue.

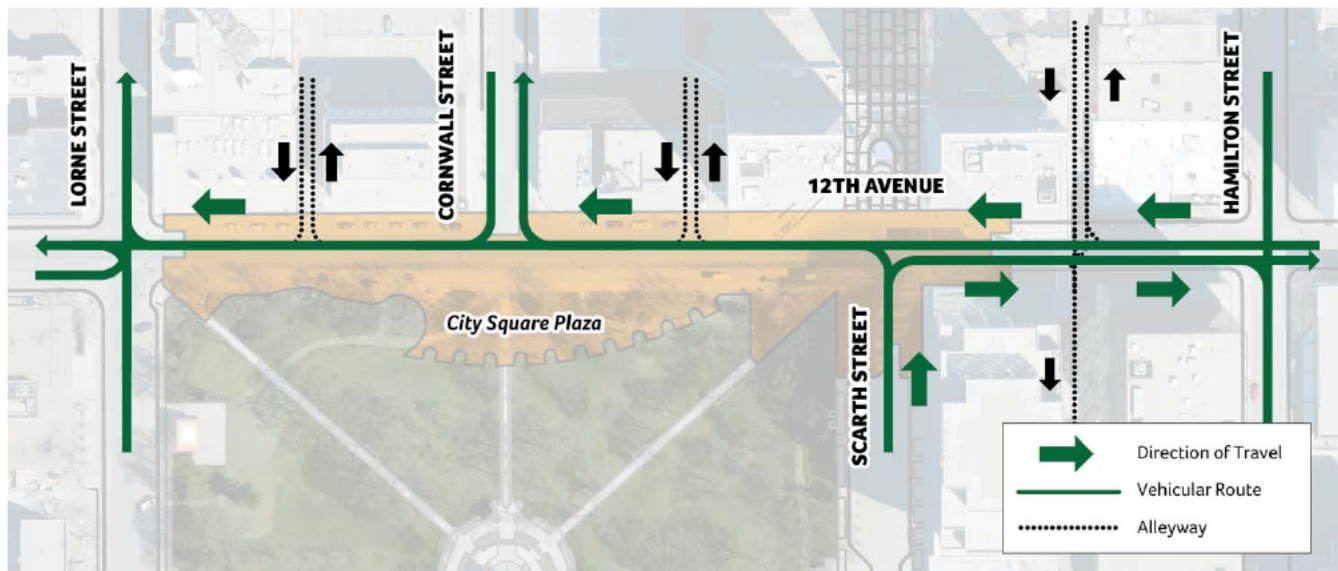
- Signage at entrances to the two alleys between Scarth, Cornwall, and Lorne Streets will be needed to prevent large vehicles unable to complete a u-turn at the south end of the alley from entering. The city will need to work with affected businesses to establish alternate delivery strategies. The only egress from the west alley (between Cornwall Street and Lorne Street) is a private parking lot. The City will have to install signs and or/barriers preventing non-lot traffic from using the lot to access Cornwall Street.
- There will be continued delay for westbound traffic in the PM peak period on 11th Avenue unless operational improvements are implemented. This could include the removal of on-street parking and enhancement of signalized intersections.
- A pedestrian priority phase (“scramble”) at Cornwall Street and 11th Avenue could reduce turning delays from Cornwall Street. It would also enhance the pedestrian crossing at this intersection, which sees heavy use resulting from transfers between transit services on both sides of the street.
- The restricted access of westbound traffic to the Plaza (westbound through at Hamilton Street) requires enhanced signing and/or alignment to better guide and inform drivers.
- Cyclists would still be allowed to access and ride through City Square Plaza. Provide, at minimum, a signed, shared bike route (“sharrows”) on 12th Avenue east and west of the plaza.
- Closing City Square Plaza to traffic would maximize time available for programming and activity. An organization to manage City Square Plaza, self-funded through rental fees, could maximize programming on the space. This would increase foot traffic on the square and encourage more pedestrian activity in the downtown.

6.3 Option Two: City Square Plaza Open One-Way

Option Two would open City Square Plaza to one-way traffic. This would provide improved access to Cornwall Street in addition to the two alleyways between Scarth, Cornwall, and Lorne Streets.

The westbound direction is preferred for one-way operation as congestion during the afternoon peak period is more significant in this direction. Westbound operation also provides more flexibility to limit traffic movements on the square by forcing right-in, right-out movements at the alleyways and at Cornwall Street. This could allow for partial closures of the square while maintaining minimal vehicular access.

Exhibit 6.3: Option Two – City Square Plaza Open One-Way



Evaluation

Criteria	Evaluation	Meeting Goals
Traffic operations	<ul style="list-style-type: none"> Provides limited off-loading of westbound traffic from 11th Avenue to 12th Avenue Improves operation along 11th Avenue including Cornwall Street at 11th Avenue 	●
Circulation and access	<ul style="list-style-type: none"> Provides exit routes at south end of Cornwall Street and the alleyways immediately to its east and west Provides vehicular access to buildings fronting on 12th Avenue/City Square Plaza Eliminates need for u-turns 	●
Parking and loading	<ul style="list-style-type: none"> Improves access to Cornwall Street parkade Facilitates loading and servicing of businesses in alleys 	●

Criteria	Evaluation	Meeting Goals
	<ul style="list-style-type: none"> Does not impact on-street parking 	
Pedestrian safety	<ul style="list-style-type: none"> Motorized vehicle movements limited to one direction and on one side of City Square Plaza Minimizes conflict points between pedestrians and motorists Allowing through traffic may increase vehicular speeds (could be reduced by limiting through traffic) Slow moving vehicular traffic could serve as passive surveillance 	◐
Accessibility	<ul style="list-style-type: none"> Large zone on south side of City Square Plaza remains free of motorized vehicles, allowing for barrier-free route Signalized intersections with audible signals required at Scarth and Lorne Improves access for specialized transit by allowing direct access to buildings on 12th Avenue 	●
Pedestrian environment	<ul style="list-style-type: none"> Increases animation of City Square Plaza by adding visual element Vehicles may create negative impacts due to exhaust, emissions, and noise 	◐
Maintenance	<ul style="list-style-type: none"> Increased risk of damage, higher rate of wear and tear Higher snow clearing standard for vehicular operation (without using plows) 	○
Programming	<ul style="list-style-type: none"> Maintains a large section of City Square Plaza free of vehicular traffic for programming Traffic in front of permanent stage area may limit usability 	◐

Implementation considerations

- The traffic signal at Scarth Street and 12th Avenue would need to be activated to accommodate northbound to westbound turning movements from Scarth Street. An additional traffic signal at Lorne Street and 12th Avenue will be needed to accommodate pedestrian and transit movements.
- Operational improvements on 11th Avenue will still be required. The operational analysis indicates that opening 12th Avenue does not fully relieve congestion on 11th Avenue. Potential improvements include turning restrictions or protected left turns to southbound Hamilton Street from westbound 11th Avenue.
- A barrier-free route for persons with disabilities will need to be identified and clearly marked (visually and through tactile

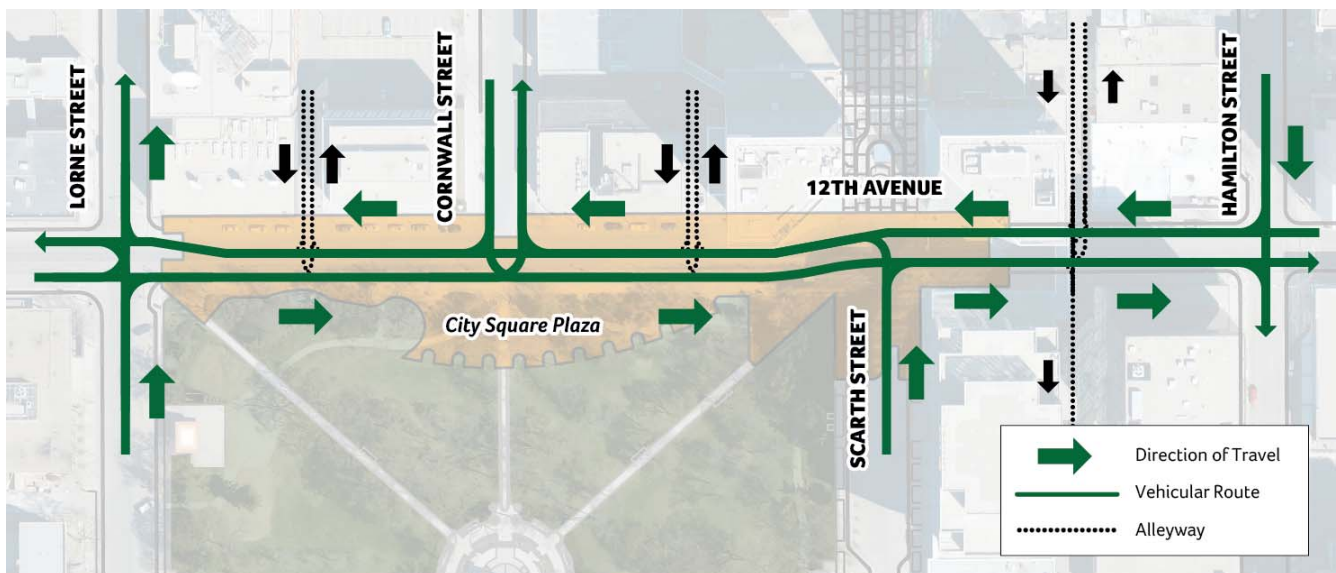
treatments) on the south side of City Square Plaza, which would be free of conflicts from turning vehicular traffic.

- There will be no parking or stopping allowed on City Square Plaza. Additional loading zones should be provided northbound and southbound on Cornwall Street at the entrance to City Square Plaza.
- Large vehicles, such as tractor-trailers, would be prohibited from entering the square.
- The current posted speed at the entrances of City Square Plaza is 30 kilometres per hour. Reducing this maximum speed to 20 kilometres per hour is recommended.
- Two-way cycling access will be maintained through City Square Plaza.

6.4 Option Three: City Square Plaza Open Two-Ways

The third option would see two-way traffic on City Square Plaza with all turning movements allowed at Cornwall Street and the alleys between Scarth, Cornwall, and Lorne Streets. Opening the square to two-way traffic would maximize network flexibility in the downtown; however, given the shared-space approach to the design of City Square Plaza, it is not anticipated that volumes will be sufficient to relieve traffic volume and congestion on 11th Avenue and other adjacent streets. Scarth Street and Lorne Street will continue to operate northbound.

Exhibit 6.4: Option Three – City Square Plaza Open Two-Ways



Evaluation

Criteria	Evaluation	Meeting Goals
Traffic operations	<ul style="list-style-type: none"> Shifts traffic from 11th Avenue to City Square Plaza even if not essential (i.e. eastbound movements that are less congested) Amount of vehicular traffic still limited by design and speed of shared space Closing of square for events would create greater impacts on traffic 	●
Circulation and access	<ul style="list-style-type: none"> Maximizes vehicular circulation by allowing for full two-way traffic and all turning movements through the square Provides vehicular access to buildings fronting on 12th Avenue/City Square Plaza Eliminates need for u-turns 	●
Parking and loading	<ul style="list-style-type: none"> Maximizes access to Cornwall Street parkade from both 11th Avenue and 12th Avenue Allows for full access to alleyways to provide additional loading capacity 	●
Pedestrian safety	<ul style="list-style-type: none"> Two-way vehicular traffic with full access to intersecting streets significantly increases potential conflicts between pedestrians and automobiles Through traffic increases the risk of higher travel speeds through City Square Plaza 	○
Accessibility	<ul style="list-style-type: none"> Two-way traffic reduces potential area for barrier-free routes; increases in potential turning movements increases safety risk No physical separation from two-way traffic Signalized intersections with audible signals required at Scarth and Lorne 	○
Pedestrian environment	<ul style="list-style-type: none"> Vehicles may create negative impacts due to exhaust, emissions, and noise Area dedicated for pedestrians reduced 	○
Maintenance	<ul style="list-style-type: none"> Increased risk of damage, higher rate of wear and tear Higher snow clearing standard for vehicular operation (without using plows) 	○
Programming	<ul style="list-style-type: none"> Potential conflicts and less flexibility for use of City Square Plaza for events due to need to close roadway on regular basis 	○

Implementation considerations

- The traffic signal at Scarth Street and 12th Avenue would need to be activated to accommodate northbound to westbound turning movements from Scarth Street.

- An additional traffic signal at Lorne Street and 12th Avenue will be required to facilitate transit movements and provide a signalized pedestrian crossing.
- Operational improvements on 11th Avenue may still be required, including turning restrictions or protected left-turns from 11th Avenue westbound to southbound Hamilton Street.



Exhibit 6.5: Photo demonstrating the darkening of the surface of the square with vehicular traffic

- Reflective markers delineating the street's centerline, which were installed when the square was complete but subsequently removed by snow clearing equipment, will need to be reinstalled to provide guidance to vehicles until the stones darken from vehicular traffic along the running way (See Exhibit 6.5). The darkened areas of the roadway would eventually serve as de-facto delineation between vehicular space and pedestrian space on the square.
- A barrier-free route for persons with disabilities will need to be identified in this option on the south side of the square, as it would remain free of left turning conflicts. This route will need to be well marked with the use of visual and tactile treatments. The route would provide guidance to the signalized intersections equipped with audible pedestrian signals, at Lorne and Scarth Streets.

- There will be no parking or stopping allowed on City Square Plaza. Additional loading zones should be provided northbound and southbound on Cornwall Street at the entrance to City Square Plaza.
- Large vehicles, such as tractor-trailers, will be prohibited from entering the square.
- The current posted speed at the entrances of City Square Plaza is 30 kilometres per hour. Reducing this maximum speed to 20 kilometres per hour is recommended.

6.5 Summary of Analysis

In summary, the three main options for City Square Plaza present varying degrees of impact for traffic operations, the pedestrian environment, and maintenance and operations. Maintaining the full closure would result in continued impacts on traffic operations, access, and loading, which are important to support local businesses and overall access within the downtown. Conversely, fully opening City Square Plaza to two-way traffic would negatively impact the pedestrian environment, create safety and accessibility concerns, and limit the flexibility of the square for formalized and informal programming.

Based on the evaluation of the three alternatives, detailed in the preceding sections and summarized in Exhibit 6.6, a preferred operational alternative was developed based on providing one-way, westbound vehicular access to City Square Plaza, but on a limited basis. The intent of the preferred alternative is to refine the one-way option to address concerns regarding traffic volume, pedestrian safety, and accessibility while maximizing the programming flexibility of City Square Plaza. The preferred operational approach is outlined in Section 7.

Exhibit 6.6: Summary of Evaluation

Criteria	Closed to Traffic	One-Way Westbound	Two-way
Traffic operations	○	●	●
Circulation and access	○	●	●
Parking and loading	○	●	●
Pedestrian safety	●	◐	○
Accessibility	●	●	○
Pedestrian environment	●	◐	○
Maintenance	●	○	○

Criteria	Closed to Traffic	One-Way Westbound	Two-way
Programming			

7. Preferred Operational Approach

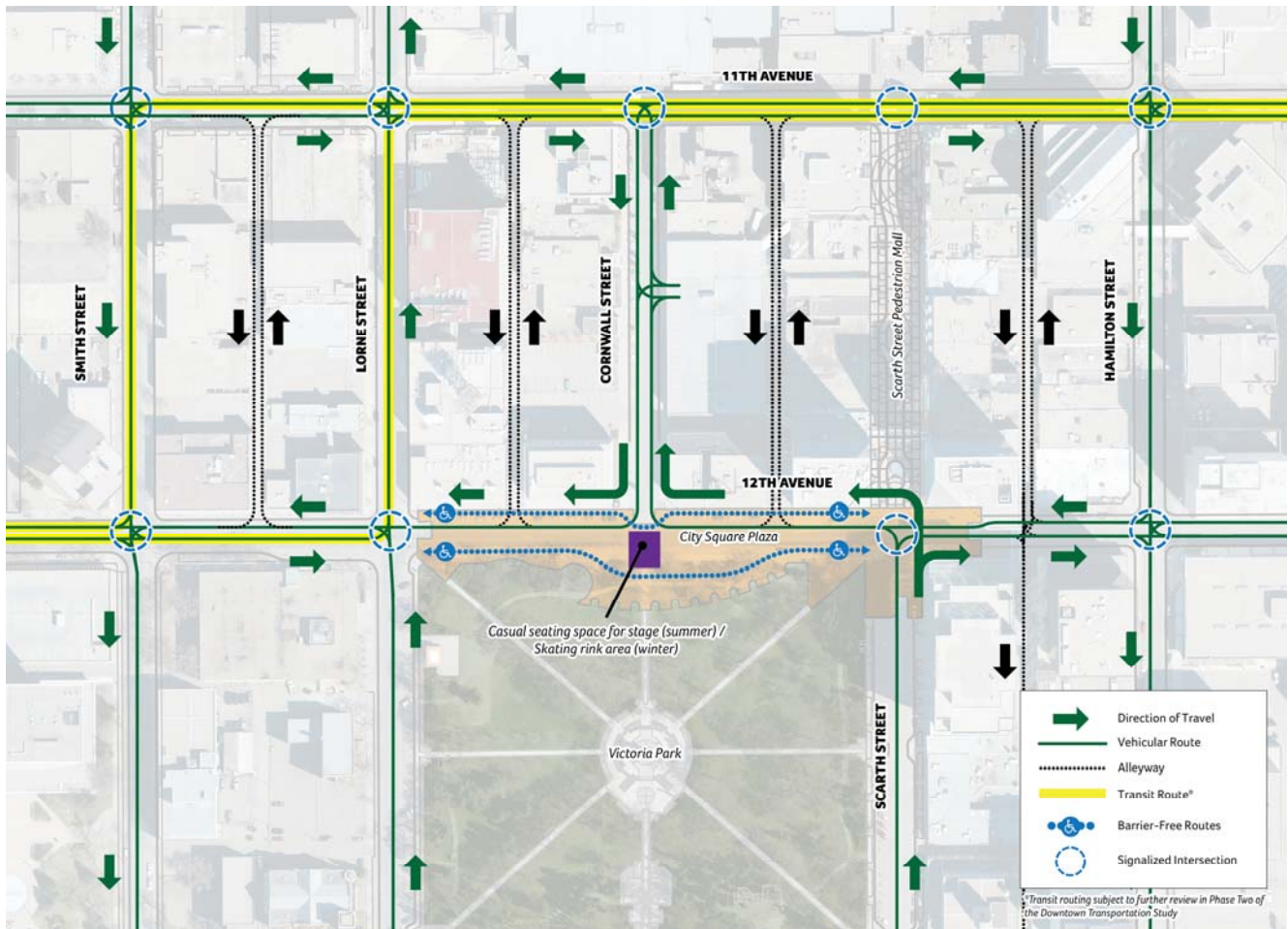
7.1 Description

Exhibit 7.1 illustrates the preferred operational approach for City Square Plaza and surrounding streets, which provides modified one-way westbound vehicular traffic on the square. **No through traffic** will be allowed on City Square Plaza and the intersection of Cornwall Street at City Square Plaza will be a right-in, right-out intersection. Vehicles can only access the square from Scarth Street, Cornwall Street, or the alleys between Lorne, Cornwall, and Scarth Streets.

The preferred operational approach represents a balance between competing needs of all users in and around City Square Plaza. It improves vehicular access, particularly to and from the Cornwall Street Parkade and to the alleys that provide servicing to businesses in the vicinity of the square. More importantly, it accomplishes these goals while minimizing vehicular volumes and maintaining pedestrian priority in City Square Plaza. The preferred approach also maximizes flexibility to how the square can be opened or closed for various events and programming by allowing partial or full closures while maintaining local access.

The intersection of Scarth Street and 12th Avenue is recommended to remain signalized so that an audible crossing can be provided to meet accessibility needs. A unique phasing operation is recommended where the signal operates in flashing red mode for all movements, at all times of day. If a pedestrian activation occurs, the signal will revert to solid red, so that drivers are stopped while the pedestrian crosses. The signal head arm can be shortened from the existing arm and/or replaced with a more aesthetic version.

Exhibit 7.1: Preferred Operational Approach - City Square Plaza



*transit routing subject to further study in Phase Two

7.2 Implementation Guidance

The opening of City Square Plaza to limited one-way westbound traffic will require operational changes as well as adjustment in travel behaviour by all road users. The following sections provide guiding advice for the implementation of the preferred operational alternative presented in Section 8.1.

Operation of City Square Plaza

Signage, Education, and Awareness

As the first “shared space” in Regina and one of few in North America, all road users will need to be made more aware of how a shared space functions. Improving signage at the entrance to the space and public awareness campaigns will be important prior to introducing vehicular traffic on City Square Plaza.



The existing sign at the entrances to City Square Plaza do not clearly indicate that motorists are entering a shared space. It does, however, use familiar signage for maximum speed, pedestrian crossing warning, and no stopping. Changes to entrance signage to explicitly state that City Square Plaza is a shared space or shared zone is needed to differentiate the square from a typical street, such as in the examples shown in Exhibit 7.2.

Exhibit 7.2: Examples of Shared Space Signage



In addition to signage at entrances to City Square Plaza, awareness campaigns and education for motorists, pedestrians, cyclists, and persons with disabilities are needed in advance of opening the space to vehicular traffic. This could include public service announcements and advertisements that explain how to use the space, media outreach, and on-site assistance and guides. City staff will also need to work with groups serving members of the disabled community to create educational materials or provide training advice and assistance.

Barrier-Free Route

Introducing vehicular traffic onto City Square Plaza presents a significant challenge for persons with disabilities, particularly the blind and low-vision communities who use the space. The lack of traditional curbs between the vehicular space and pedestrian space means that different approaches must be taken to ensure the safety of persons with disabilities.

At City Square Plaza, an opportunity exists to create a full-time, barrier-free accessible route on both sides of the square. The primary barrier-free route is along the north side of the square, adjacent to the buildings, as shown in Exhibit 7.1. The route is generally clear of hazards and an accessible route through the

square is possible to assist persons with disability in navigating through the space. At Scarth Street and at Lorne Street, signals will provide an audible crossing queue when needed. At Cornwall Street, signage will likely be needed along with the measures identified below. The city will need to work with the disabled community in establishing the final route alignment to ensure adequate clearance and safety for persons using mobility aids, guide dogs, and canes.

Implementation and marking of the barrier-free route will be an important consideration. The use of tactile navigation is the most appropriate way to create the route through City Square Plaza and is used in many applications around the world on streets, sidewalks, and in buildings. There are two main types of tactile surfaces:

- **Hazard and warning surface**, which is marked with a grid of raised domes to indicate an edge, decision point, or hazard; and,
- **Guidance path surface**, which is marked with four raised strips to indicate the barrier-free path.

It is recommended that the city install tactile navigation surfaces indicating the barrier-free accessible routes through City Square Plaza. There are several approaches to installation in terms of materials and installation, including surface mount plates or individual domes and strips, as pictured in Exhibit 7.3. There are also applications that stamp the patterns into the material; however, this may not be appropriate or compatible with existing materials in City Square Plaza.

Exhibit 7.3: Examples of surface-mounted tactile navigation surfaces



Maintenance of the tactile navigation surfaces will be important to ensure that they are in good repair and clear of snow and ice in the winter. The planned use of sweepers for snow clearance in City Square Plaza is well suited for, and will maximize the life of, the tactile surfaces.

Opening/Closing of Square

The preferred operational approach maximizes the flexibility of City Square Plaza by making it easy to close open or close the square to vehicular traffic fully or partially depending on programming needs. Exhibit 7.5 illustrates the operational plans for partial or full closures of the square to traffic. Key elements of the closure plans are listed below.

- During partial closures, vehicular access to the side of City Square Plaza not closed will be maintained.
- Regardless of operating state (open or closed to traffic), the barrier-free route remains on the north side of the square and is not impacted by the opening or closure of vehicular routes.

Exhibit 7.4: Example of retractable or removable bollard system

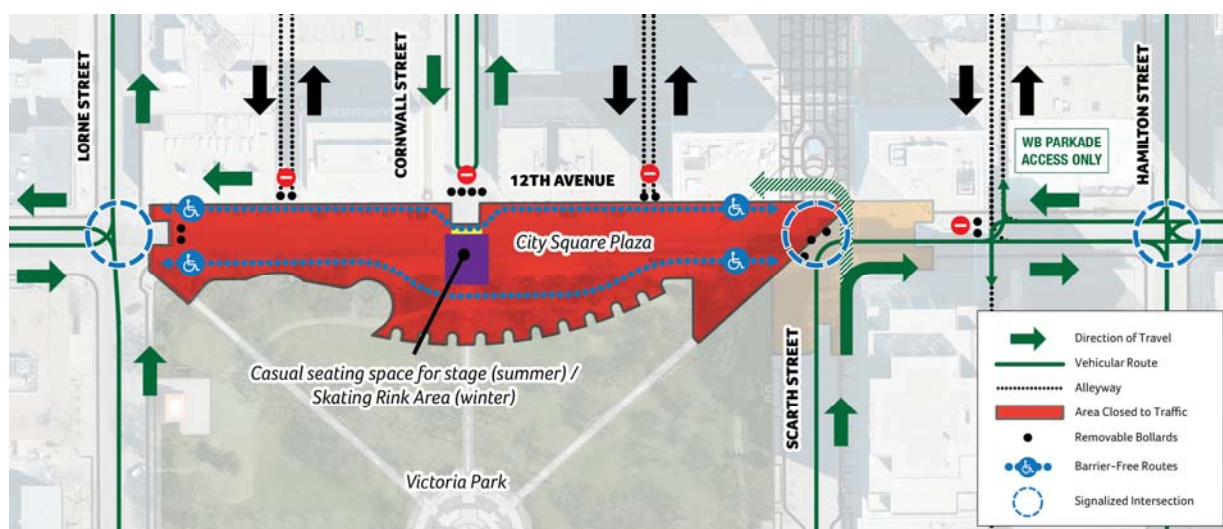
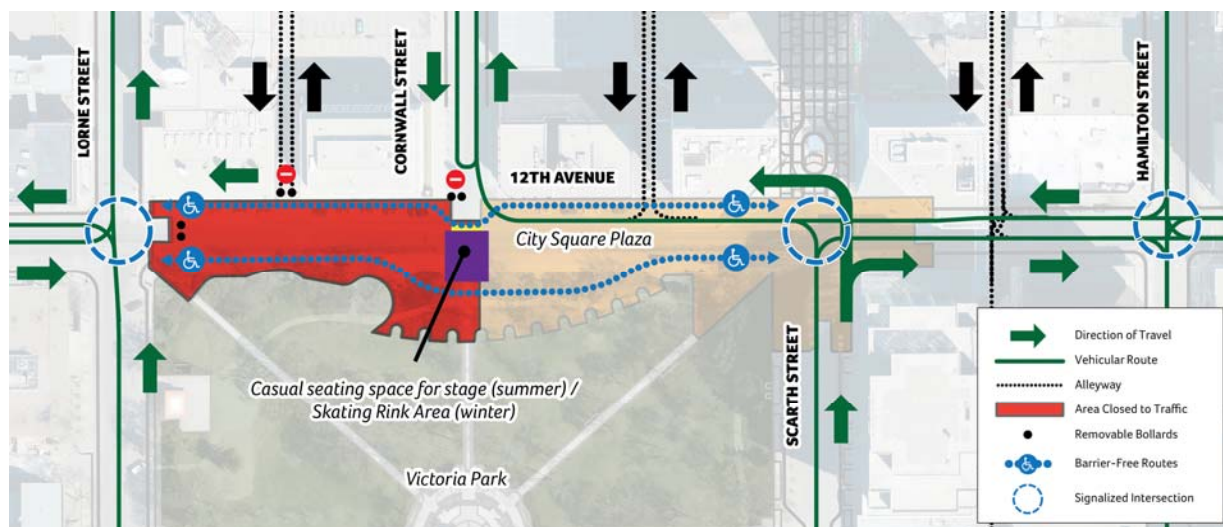
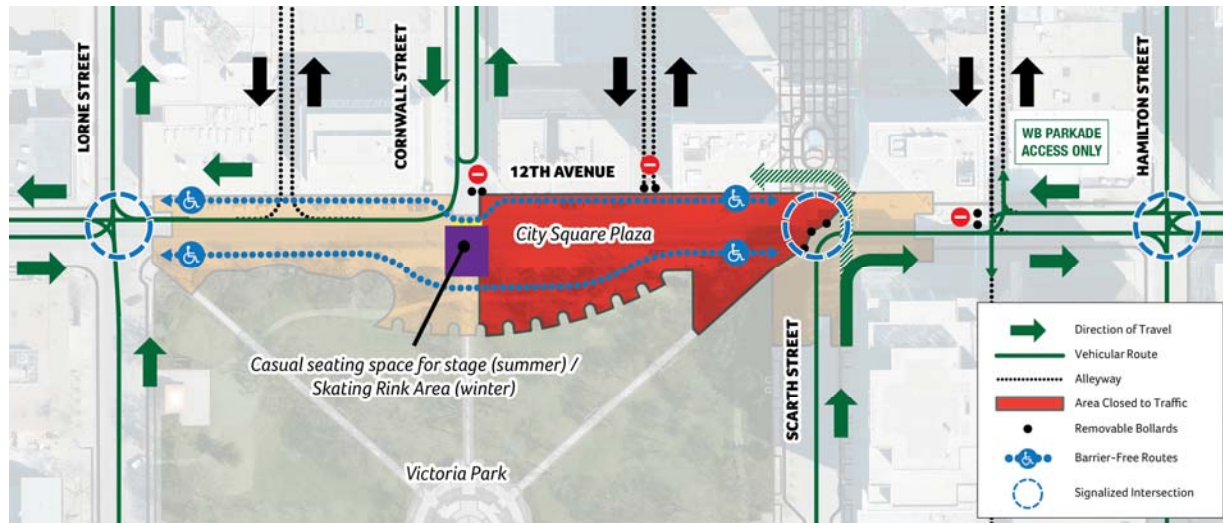


- Installation of removable or retractable decorative bollards is recommended at closure points to facilitate easy and quick closure while maintaining a high quality visual appearance. Location of bollards include:
 - North end of Scarth Street to prevent a northbound-to-westbound turning movement onto 12th Avenue;
 - South end of Cornwall Street at both access points on the east and west side of the stage;
 - South end of the alleys located between Lorne and Cornwall Street and Cornwall Street and Scarth Street; and,
 - West end of City Square Plaza at Lorne Street.

The installation of retractable/removable bollards will lead to staffing, operations and maintenance requirements, to be reviewed in detail during procurement.

- Signage to inform motorists of City Square Plaza closures will need to be posted at the northern ends of Cornwall Street, Hamilton Street, and the alleyways and the south end of Scarth Street, where applicable. Installation of variable message signage at these locations could make it easier to provide notice to motorists.

Exhibit 7.5: Operational Plan for Partial and Full-Closures of City Square Plaza to Vehicular Traffic



Snow Clearing

To preserve the appearance and maximize the life of the materials at City Square Plaza, the city will need to continue its practice of sweeping snow from the square instead of traditional snow plowing, which may damage surfaces and materials. Special attention is required to ensure barrier-free routes and tactile navigational surfaces are clear of snow and ice.

Speed Limits

The posted maximum speed at the entrances to City Square Plaza will be 20 km/h.

Exhibit 7.6: Example of flexible seating and landscaping in New York City



Central Seating and Activity Area

As a means to mark the right-in, right-out intersection in City Square Plaza at Cornwall Street, a central seating and activity area (marked in purple in Exhibit 7.1) can be created in front of the stage area. In the summer, this space could be furnished with flexible seating, tables, patio umbrellas, planters, and other elements that would block through traffic while encouraging increased use and activity on City Square Plaza. The area would also maximize the potential of the permanent stage by providing seating for formal and informal performances. During the winter, this space could be occupied by a temporary skating rink. If this space is not occupied by seating or other activities, the city will need a means to physically force right turns at Cornwall Street with planters or other furniture elements. The public was observed to relocate the planters currently being used to block traffic, therefore a more permanent or larger barrier may be needed to force traffic on to Cornwall Street.



Exhibit 7.7: Temporary skating rink on part of City Square Plaza in 2011/12

Programming of Square

Maximizing use of City Square Plaza will be important to maintain support for limited vehicular access to the square. The City intends to make the City Square Plaza available for festivals and events 365 days a year, with the largest events requiring full closure to traffic. The plaza will provide a strong foundation for encouraging activity and pedestrian traffic. In addition to formal events, impromptu and day-to-day use of the square will need to be encouraged. The creation of a central seating and activity area as outlined in the previous section to occupy the otherwise open area of City Square Plaza could increase the level of activity.



The preferred operational approach maximizes opportunities for impromptu and informal events while allowing for limited vehicular access.

To maximize City Square Plaza programming, the city will need to develop a clear procedure for organizing events on the space to ensure effective use of the public space as open space and as a venue for community events that support the city's civic and downtown objectives. A potential model for operations of City Square Plaza is to assign these responsibilities to a self-funding Board of Management, comprised of local representatives and staff, whose role would be to actively program and manage the space on behalf of the city. This approach is successfully used in many public spaces around the world, including in Toronto at Yonge-Dundas Square, which is run as an agency of the City of Toronto under the direction of a Board of Management. The Board of Management includes community members, business area members, the local councillor, and representatives from other city departments. With its own staff, the agency maximizes programming on the square while collecting event permit fees to fund maintenance, operations, and marketing. In recent years, the operations of Yonge-Dundas Square have significantly increased attendance, programming days, and resulted in operating surpluses.

Other Operational Changes

In addition to the preferred operational for City Square Plaza, there are also preliminary recommendations for other operational changes on 11th and 12th Avenues to improve operations for all road users. Some of the following preliminary recommendations can be implemented in the immediate or short-term while others will be forwarded to Phase Two of the Downtown Transportation Study for further analysis.

Intersection Improvements

As shown in Exhibit 4.2, several critical traffic movements were identified in the 11th Avenue and 12th Avenue corridors. At these locations, volume may exceed available road capacity due to geometric or operational constraints. A review of these locations was undertaken using the VISSIM model developed. Potential improvements were identified through the modeling and in consultation with the City. The following provides a brief overview of the operational improvements identified:

- At 11th Avenue and Broad Street, a review of the intersection suggests that roadway widening in the east-west direction may fit within the available public right-of-way and improve the intersection operations. Widening would allow east-west left turn bays to be installed and geometric improvements made for turning radius.
- At 11th Avenue and Hamilton Street a number of potential operational changes were reviewed. One option reviewed would be to allow traffic to use the bus-only lane, or to eliminate the bus-only lane until after Hamilton Street. Given the trade-offs for transit, a better option is to simply restrict left turns during the peak hours. Left turns should be prohibited at times corresponding to the parking restrictions on 11th Avenue.
- At 12th Avenue and Albert Street, northbound parking on the curb-lane between 12th Avenue and 11th Avenue should be removed.

Other problem locations in the network can be improved through increased enforcement of no-stopping and no-parking zones as detailed below.

Delays at the intersections of 11th/12th Avenues at Broad Street and Albert Street are generally a result of congestion on the north-south corridors. Recommendations for improvements at these intersections, especially for transit movements, will be developed as part of Phase Two of the study.

Increased Enforcement of No Stopping/Parking Zones

One of the main causes of delay to vehicular traffic, and transit in particular, is illegally parked and stopped vehicles in the peak period bus lanes on 11th Avenue. Although vehicles are often ticketed, city enforcement is reluctant to tow vehicles. The result is vehicles remaining in the bus lane, blocking transit movements and forcing buses to merge into traffic lanes.

Increasing enforcement of the no stopping and parking provisions on 11th Avenue is recommended in the near-term, supplemented by towing. Creating clear signage on 11th Avenue outlining times (in AM/PM) and penalties could

also serve as a deterrent. Towing of vehicles in the downtown to nearby surface lots could reduce the inconvenience to motorists, although, as in most cities, the cost of towing would be borne by the offender.

Enforcement of On-Street Parking/Adopting Pay-and-Display Parking

A key operational problem along 11th Avenue is parking violations. Parked vehicles often remain in the curb lane during peak periods when no-parking is in effect. Furthermore, drivers frequently use the curb lane for pickup and drop-off activity, sometimes occupying the lane for several minutes.

Enhanced enforcement of no-parking along 11th Avenue is recommended to reduce violations. In particular, both eastbound and westbound curb lanes between Rose Street and Cornwall Street should remain clear during peak hours. Enhanced enforcement should include:

- Towing of unoccupied vehicles;
- Enforcement staff should be directed to immediately ticket violators without verbal warning;
- Ticket prices should be reviewed and raised if necessary.

If enhanced enforcement fails, removal of on-street parking may be the best approach, so that curb lanes become bus-only throughout the day. The total number of spaces removed includes:

- 11 on-street parking spaces on the south side of 11th Avenue between Lorne Street and Broad Street;
- 9 on-street parking spaces on the north side of 11th Avenue, located immediately west of Hamilton Street; and,
- 4 on-street metered loading spaces on the south side of 11th Avenue, located between Cornwall Street and Hamilton Street.

On-street parking rates will also need to be reviewed to discourage long-term parking in these spaces. In some cases, it is less expensive to pay the hourly rate at an on-street parking space than to pay a daily rate in an off-street lot. Parking rates will be reviewed as part of Phase Two of the Downtown Transportation Study.

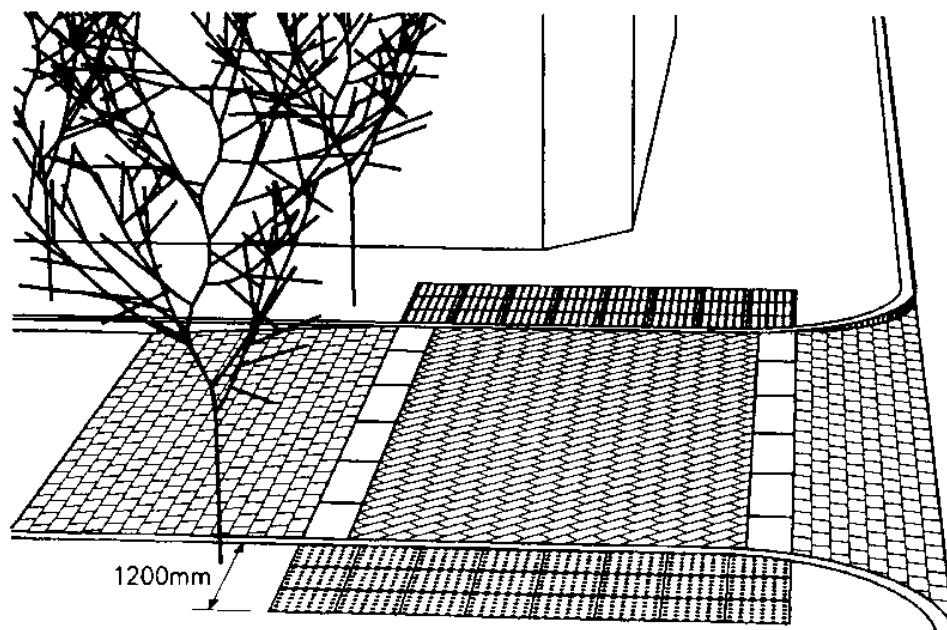
Raised Crosswalks and Pedestrian Priority Phases

Increasing pedestrian safety through improved pedestrian crossings on 11th Avenue is recommended. This includes improving accessible features for persons with disabilities. Raised crosswalks are a recommended approach for two of the busiest pedestrian crossings on 11th Avenue at Scarth Street and Cornwall Street, which would maximize visibility of the pedestrian crossing while improving accessibility by removing the need for curb ramps. Tactile warning strips would need to be installed at the edge of the sidewalk for blind/low-vision persons. A raised crosswalk also provides an opportunity to improve the streetscape with decorative paving or asphalt. Alternatively, the full intersections of 11th Avenue at Cornwall Street and at Scarth Street could be raised (i.e. tabled) to benefit pedestrians and slow down traffic.

In addition, a pedestrian priority, or “scramble”, phase may be an approach at 11th Avenue and Cornwall Street, where there is a high volume of pedestrians and delay caused to turning vehicles from Cornwall Street. Providing a dedicated phase for pedestrians to cross the street in all directions would allow for a phase dedicated for vehicles turning out of Cornwall Street, benefiting both motorists and pedestrians.

For the intersection of 11th Avenue and Scarth Street, digital acoustic pedestrian (DAP) signals should be considered in the middle of the crossing area.

Exhibit 7.8: Diagram of raised crosswalk with tactile warning feature



Wayfinding and Signage

Improving wayfinding and signage for all road users is recommended throughout downtown Regina. For motorists, directional signage could provide routes to major destinations and parking, while for pedestrians, it could direct to walking destinations indicate walking times. Providing signage to parking destinations could also help spread out parking demand to less popular or obvious parkades and surface lots. Some cities have implemented real-time parking information into signage to indicate the number of spaces available in nearby parkades.

The immediate priority should be to provide directional signage to major parking destinations to downtown. A more detailed wayfinding and signage strategy in downtown Regina will be subject to further study in Phase Two of the study.

Transit Operations

Transit operations will significantly benefit from recommendations to increase enforcement of bus lanes in peak periods and reduce on-street parking in congested locations on 11th Avenue. A more detailed review of transit operations and routing will be conducted as part of Phase Two of the Downtown Transportation Study.

Preliminary recommendations for other improvements to transit operations in downtown Regina include shifting some bus routes, particularly express routes, to Victoria Avenue to reduce bus volumes on 11th Avenue. There is also the possibility of establishing a transit hub, potentially on Lorne Street, to accommodate transfers between routes. Phase Two will also evaluate the need for transit priority measures, such as queue-jump lanes, transit signal priority, and bus lanes. It will also identify approaches to improve the transit experience including improved and enhanced bus stops, customer service, and information initiatives.

7.3 Summary of Initiatives and Input to Phase Two

The following table details the preliminary suggested changes to the downtown transportation system based on Phase 1 of the DTP. Changes are identified according to their timing (i.e. required as part of the preferred operational plan for City Square Plaza, short term, or medium-long term). Medium to long term changes should be considered preliminary for discussion and will be studied in more detail in Phase 2 of the DTP.

Exhibit 7.9: Summary of Initiatives

Category	Immediate or in-conjunction with Changes to City Square Plaza	Short Term	Medium-Long Term (to be detailed in Phase 2)
Traffic Movement			
Continue to restrict traffic movements on City Square Plaza except for: a) Westbound local traffic from Scarth Street to Cornwall Street b) Westbound traffic from Cornwall Street to Lorne Street c) Special vehicles for events	•		
Address blockages on 11 th avenue due to left turns by: a) Restricting left turns at Hamilton Street from 3:30 PM – 6:00 PM Or b) Eliminate on-street parking from Lorne Street to Broad Street and use transit lane as by-pass lane (selected segments)		•	
Address congestion at 11 th Avenue and Broad Street by: a) Adding left turn phase Or b) Widening intersection to provide additional turn lanes			•

Category	Immediate or in-conjunction with Changes to City Square Plaza	Short Term	Medium-Long Term (to be detailed in Phase 2)
<i>Consider extending Lorne Street to Dewdney Avenue to create new north-south street. (Note: feasibility/cost benefit to be determined)</i>			•
<i>Remove parking on south side of 11th Avenue to provide for transit only lane</i>			•
Operation of Plaza			
Add signage to inform all users of shared street concept, minimal but well places signage	•		
Implement media outreach prior to opening square to traffic	•		
Install tactile navigation surface indicating barrier-free accessible route	•		
Install attractive retractable barriers at entrances to plaza to manage	•		
Install variable message signs at gateways to plaza to inform of closures	•		
Continue practice of sweeping plaza rather than using snow plough	•		
Reduce posted speed on plaza to 20 km/hr	•		
Install central seating in front of stage at Cornwall Street, to reinforce no through traffic	•		
Transit			
Extend parking restrictions in selected locations on 11 th Avenue to expedite bus movements (see above) and to provide additional space for bus stops and access to existing stops		•	
Enforce parking restrictions on 11 th Avenue and support with towing program		•	
Investigate potential for transit queue jump lanes at Broad/11 th (EB left turn lane) and Albert/11 (SB left turn lane)			•
Consider enhanced shelters at high demand locations, including heated shelters		•	•
<i>Evaluate feasibility of centralized transit hub. Possible locations include</i>			•

Category	Immediate or in-conjunction with Changes to City Square Plaza	Short Term	Medium-Long Term (to be detailed in Phase 2)
<i>Saskatchewan Drive or Lorne Street</i>			
<i>As part of comprehensive transit route review, consider shifting some express routes to Victoria Avenue to reduce number of buses on 11th Avenue</i>			
Walking			
Re-configure traffic control at Scarth Street/12 th Avenue to address real and perceived pedestrian safety issues by: <ul style="list-style-type: none"> a) Converting all movements to stop control and locating stop signs close to intersection b) Maintain traffic signal but with added visual cues for drivers and re-located audible signal posts 	•		
Develop and implement pedestrian-oriented signage plan		•	•
Increase education and awareness of closeness of downtown activities (social marketing campaign)			•
Proactively improve deficient sidewalks			•
Address snow clearing of sidewalks, particularly in residential areas on periphery of downtown			•
Cycling			
Provide additional on-street bike parking throughout downtown (locations to be determined)		•	•
Host bike specific events on City Square Plaza			
Upgrade cycling lanes on Lorne Street and Smith Street (potentially switch location of parking and bike lanes with bike next to sidewalk)			•
Develop recommendations on east-west bike corridors, including 12 th Avenue			•
Accessibility			
Ensure accessible and barrier free route on Plaza from Lorne Street to Scarth Street	•		

Category	Immediate or in-conjunction with Changes to City Square Plaza	Short Term	Medium-Long Term (to be detailed in Phase 2)
Install Audible signal at Lorne Street and 12 th Avenue	•		
Increase number of audible signals throughout downtown			•
Define new standard for curb ramps incorporating best practices from other jurisdictions		•	
Consider raised intersection at Scarth Street/11 th Avenue to create continuous level crossing for wheelchairs			•
Parking and Loading			
Upgrade parking meter equipment to accommodate pay and display or pay-by-licence plate (goal is to maximize available space for on-street parking)		•	•
Increase enforcement of no parking zones on 11 th Avenue			
Develop parking signage and wayfinding system to improve awareness of parking options; potential for real-time information on availability			•
<i>Examine opportunities to increase supply of public parking (in conjunction with growth and at rate that does not encourage more auto use)</i>			•
Increase cost of on-street parking in high demand areas to encourage turn-over and use by commuters			•
Programming and Operations			
Look for opportunities to hold activities on City Square Plaza that generate interest in sustainable transportation issues	•	•	

8. Next Steps

Phase One of the Downtown Transportation Study involved a comprehensive review of the 11th Avenue and 12th Avenue corridors. The review included an assessment of corridor needs and opportunities for all travel modes, stakeholders, and user groups, and that assessment was undertaken in the context of different alternatives for operating the City Square Plaza. By engaging the public and stakeholders at three separate sessions, a great deal of input was gathered on how to operate these corridors.

A long list of recommendations was developed for 11th Avenue and 12th Avenue, including potential enhancements to the public, cycling, and pedestrian realm, and a number of measures to improve traffic conditions and transit operations on 11th Avenue and at key 'hot-spots' in the city. City Square plaza is recommended to be opened to traffic one-way westbound, but at a reduced traffic volume, limited by slow travel speeds and no through-movements from Hamilton to Lorne Streets.

The next steps of this study will be undertaken in Phase Two. Phase Two will expand the study area to Saskatchewan Drive to 13th Avenue in the north-south direction, and Angus Street to Osler Street east-west. The Phase Two study will develop recommendations for the expanded area that are compatible with and complementary to the improvements identified in Phase 1. Phase 2 will address or expand upon:

- Traffic conditions throughout the downtown and congestion at key locations on Albert Street and Broad Street;
- Transit routing and operations;
- Bicycle facilities;
- Accessibility facilities;
- Parking;
- Taxis, and service and delivery

The Phase Two work plan includes expanding the VISSIM micro-simulation model to assess traffic and transit conditions and develop potential improvements to key major hot-spots: the intersections of Albert Street and Broad Street with Saskatchewan Drive and Victoria Avenue have not yet been assessed.

Phase Two will involve further public and stakeholder consultation. Three stakeholder workshops and two public information centres are anticipated for Phase Two. The first public engagement session is tentatively scheduled for the summer period of late July or early August, with the second scheduled for early November. The stakeholder engagement will coincide with the public information sessions, with a third meeting to discuss study progress in mid-September.

The Phase 2 draft report is scheduled for November 23, 2012 with final report and study completion by December 21, 2012.



Regina Downtown Transportation Study

Appendix C: Consultation Summary

**Submitted to City of Regina
by IBI Group**

May 14, 2012



Table of Contents

1.	Introduction	1
2.	Public Open Houses	2
2.1	Public Open House #1 - March 1, 2012	2
	High Level Messages	2
	Comments on 12 th Avenue and City Square Plaza	2
	Detailed Comments	3
2.2	Public Open House #2 - April 5, 2012.....	9
	High Level Messages	9
	Detailed Comments	10
2.3	Public Open House #3 - May 8-9, 2012.....	11
	High Level Messages	11
	Detailed Comments	11
3.	Stakeholder Meetings	13
3.1	Council Drop-in	13
3.2	Emergency Services	13
3.3	Regina Downtown BID.....	14
3.4	Property Owners Adjacent to Plaza	15
3.5	Blind/Low Vision Community	15
3.6	Accessibility Advisory Committee	16
3.7	Chamber of Commerce.....	17
4.	Summary	17



Public Open House #1 at the Cornwall Centre

1. Introduction

Public and stakeholder consultation was a critical component of Phase 1 of the Regina Downtown Transportation Study (DTP). At the outset of the study, a consultation program was designed to maximize opportunities for input from a broad cross-section of stakeholders. This program included:

- Three Public Open Houses held in on March 1st, April 5th and May 8th/9th, 2012.
- Meetings with 6 stakeholder groups and organizations
- Opportunities for input via a project specific e-mail
- Regular study updates via the City of Regina website

The remainder of this report summarizes the key input received from each consultation event.

2. Public Open Houses

2.1 Public Open House #1 - March 1, 2012

The first public open house was held on March 1, 2012 at the Cornwall Centre. The purpose of the open house was to introduce the study to the public and get input on key issues, opportunities and potential criteria for evaluating alternatives for 11th Avenue and 12th Avenue.

The Cornwall Centre location was selected to capture the widest possible audience ranging from car drivers to pedestrians. By all accounts the open house served to achieve this as it is estimated that over 300 people stopped to look at the displays. Over 150 comment forms were completed on-site and approximately 20 were received by e-mail or fax afterward.

High Level Messages

Key messages we took from this meeting:

- Downtown Regina has many great features, most notably is its walkability
- City Square plaza looks great, but presents some challenges; challenges that might have been better anticipated
- 11th Avenue needs to work better for both cars and transit
- More people could be walking, cycling or taking transit to Downtown, but improvements are needed at the city-wide level

Comments on 12th Avenue and City Square Plaza

At the Open House, one of the questions on the comment form was whether or not City Square Plaza should be open to traffic. Based on the 150 comment forms submitted, 57% of the respondents felt the plaza should be kept close while 43% felt it should be opened to traffic. Of those 63% who said open it, about one-third would like it opened both ways and two-thirds said open it one-way only. Although this sample was not meant to be statistically significant, the results do suggest that there is obviously no clear consensus among the general public on whether the square should be open or closed.

People were also asked why they felt it should be open or closed.

Reasons people cited for **opening it to traffic**:

- Plaza was designed for cars
- Better access to parking and buildings; including access for deliveries
- Extra capacity would help offload 11th Ave

- Increases number of “eyes” on park
- Not enough pedestrians to justify closing all the time

Reasons people cited for **keeping the plaza closed** to pedestrians

- Plaza looks too nice to open to cars
- Enhances the park, adds public space
- People are getting used to it being closed
- Pedestrian safety, accessibility for blind and low vision community
- No predictability for drivers if opened some of the time, closed for events at other times
- Maximizes economic development, city-building
- Maximize life of plaza and city's investment

Detailed Comments

During the open house and on the comment forms, suggestions on downtown transportation were collected. The detailed comments are provided below.

Note: Comments are summarized were required, but no edits to content were made.

- Open the plaza to buses only (note: plaza is not designed for buses)
- Allow delivery vehicles to enter the plaza area
- Move the plaza into the park and revert 12th Ave back to a normal road
- Revert 11th Ave and 12th Ave to the original configuration (i.e. one-way WB on 11th and one-way EB on 12th)
- Need awareness campaign to promote public transit use and respect for pedestrians
- Need a more comprehensive strategy to manage traffic and parking to, from, and within downtown
- Build a flyover or an underpass for pedestrians to cross the plaza
- Instead of closing the City Square Plaza, close Scarth St between 12th and Victoria and keep the traffic flowing on 12th

- If City Square Plaza stays pedestrian-only, the City should open the Scarth Street Pedestrian Mall for one-way, northbound traffic and install angle parking along the mall. This will make up for the reduced street parking on the Plaza.
- Street parking on Lorne Street between Victoria Avenue and 12th Avenue, coupled with laneway access, is an accident waiting to happen
- Do not like the name "City Square Plaza"
- Continuing to allow vehicles onto Scarth Street and 12th Avenue, along with turning movements is hazardous
- Lorne street between Victoria Avenue is not a safe street with traffic
- Bad design of street parking on Lorne Street between Victoria Avenue and 12th Avenue
- Encourage activities on the new plaza to encourage foot traffic; supply on-location vendors (e.g. food trucks) during the day
- Design changes need to be made if the plaza is to allow two-way traffic
- The City promised the street would reopen to vehicular traffic. Reopen it!
- Bring back the road, keep half the existing plaza and pave a bit of the park to extend the plaza
- Scarth Street pedestrian mall idea has already failed
- Improve the retail mix of downtown shops to increase foot traffic
- Launch awareness campaign to promote public transit use and respect for pedestrians
- Do not feel guilty for promoting public transit and efforts to reduce residents' dependence on cars
- Make sure new Hill Centre Tower III has adequate parking
- Dealing with the plaza in isolation makes it harder to come up with solutions. A more comprehensive strategy that looks at travel patterns and parking is needed. It should aim at reducing traffic in downtown through better transit schemes, bike routes and public parking options.
- The plaza could have been built on Lorne or Scarth Street, then keep 11th and 12th avenues as the two main E-W corridors

- Remove the concrete platform from the corner of 12th and Cornwall
- There is no such thing as shared space between vehicular traffic and pedestrians. It is one or the other, not both.
- Encourage people to walk even in cold weather
- The green phase on 11th and Broad going E-W need to be lengthened
- Victoria Park could be reconfigured to suit travel patterns
- With the existing infrastructure in place, vehicular traffic will make it unsafe. The City has failed us all in this project.
- The two-way traffic with exclusive bus lanes on 11th Ave is not good. The bus lane makes it difficult to pick-up/drop-off people. It also makes it difficult for people to hop into Cornwall Centre to do some shopping on their way home from work.
- Alleyway between 11th Ave and 12th Ave, Rose St and Broad St should be made two-way
- Use Victoria Ave as the regular bus route and remove buses from 11th and 12th. This will allow for easier vehicle movement. Keeping 11th and 12th as two-way with buses increases vehicle-pedestrian conflict.
- Would like to see bike lanes and sidewalks installed all over town. Also, there should be more enforcement on illegal parking.
- Lane access behind Lorne and off of Scarth cannot turn around in the lane to use the loading docks or back up to the loading docks
- I live and work within minutes of City Square and I am very excited about it. Regina is a unique place at the moment in that it is small enough to really inspire the community to get behind this square as a meeting place for Reginans. But it is, at the same time, big enough (and growing) to attract the kind of activities and events that will make the space worthwhile. I would really love to see some of the commercial space in and around the square be used as cafes and pubs to encourage the downtown working population to stay past 5 and come back on the weekends. There isn't a lot of competition for gathering places elsewhere in the city, so the plaza as a meeting place could be quite a community builder.
- Drivers are not following the no-parking signs during peak period on 11th Ave.
- Open all streets in downtown to two-way traffic. One-way streets have destroyed retail businesses throughout downtown for more

than 30 years. Any thriving downtown in a small city has two-way traffic.

- Install a giant video screen on one of the abandoned buildings and display city information
- Change bus routes back to near Scarth St
- Put in more angled parking downtown
- 11th Ave is now a dangerous place for pedestrians, with the additional traffic diverted from the 12th Ave closure
- It is awesome having a huge pedestrian-only location in our City
- The lights are unpleasant to look at and cannot function as shades for people
- Snow removal for the plaza needs to be addressed
- Need to install more bicycle parking downtown
- All bus route information need to be posted at each bus stop, eliminating the hassle of carrying paper schedules for the transit users
- You have destroyed downtown. People do not want to come down here anymore.
- Keep heritage buildings around the park
- The plaza was poorly designed and does not add value to downtown
- City Square turned out very well. Would recommend only small service vehicles be allowed access during the early dawn and late night hours
- At parkades, install system that detects the number of parking spaces available. The City should also install electronic signage that conveys real-time traffic information to drivers. These technologies are routinely used in most European centers.
- Bus operations in both directions on 11th Ave causes a lot of traffic congestion. This needs to be analyzed and addressed.
- It is a beautiful space which will remain beautiful and become even more vibrant with vehicle traffic.
- Bring the fountains to the Plaza
- Install a turning signal to SB Hamilton St from WB 11th Ave

- Need a turnaround for parkade users at the end of Cornwall St
- At the Broad St and 11th Ave intersection during rush hours, the City should implement traffic light phases that only allow vehicles in one direction to move at a time, whether it's turning left, right or going straight. Same with Albert St coming downtown during rush hour.
- The plaza is a waste of valuable space downtown for travel, parking and transit. Stores are closing because of no parking and brutal traffic congestion
- Move the bus stop on 11th Ave so that it doesn't block access to the Cornwall Centre parkade
- Every intersection in the downtown core needs left turn signal phases
- Improve traffic flow in the downtown area by implementing scramble crossings and advanced green signals
- Make the Plaza more like in Central/Latin American cities, as a central meeting place, walking accessible
- The bus terminal should not be in the heart of downtown; the City should instead operate a free shuttle that operates from the Plaza to the new bus terminal
- Move the buses of the 11th Ave to area south of downtown to free up parking and traffic on the 11th
- When there is a bus in the right lane and a driver trying to turn left on the left lane, drivers at the back are completely stuck. People are starting to avoid downtown due to this.
- Confusion can cause more accidents
- The bus stop on 12th Ave by the library is ugly, dirty and needs signage and more seating.
- Install cameras that monitor the streets in downtown. There is still the perception that downtown is not safe.
- Opening Hamilton St to two-way traffic would ease traffic congestion
- Allow farmers market and semi-permanent stands on 12th Ave during summer months
- The project should have been better thought out during the planning stage. This traffic issue has become a mess

- Take the long-term view. People are going to be less car-dependent, more transit/pedestrian-oriented as time passes.
- Shut down the existing one-way access from Scarth onto 12th via the Plaza. I have seen many cars going against the one-way.
- Corner at 12th and Scarth is very dangerous - (1) Signage at eye level distracts drivers; (2) no traffic signal at the intersection; (3) many drivers drive opposite to the stated direction on the one-way
- Increase number of bus shelters
- Not enough room for buses at Hamilton St and 11th Ave stop, making it difficult for boarding passengers
- 11th Ave gets really bogged down when cars parked illegally during the afternoon rush or waiting for someone to make a left turn
- You have wasted public money on closing the 12th Ave before conducting public consultation. Now you propose wasting more public money on opening it to traffic.
- I think the City Square is so cool. It gives me the feel of a European city. Keep up the good work
- Take parking off 11th Ave and install turn signal for buses at 11th and Broad
- In general Regina and Saskatchewan are too car-dependent. This space will help change that. The majority of people I speak with (around 30 years old) really like the space and feel it would be compromised by having traffic on it.
- Presently the bus lane that used to be the parking lane is leading to traffic back-ups on Broad St. The Rose St and Saskatchewan Dr. intersection is a nightmare to turn E and make a N on Broad St.
- There is a lack of signage on 11th Ave and 12th Ave. The right turn lanes and stop lines were painted on the street instead of having a sign posted above. Left turn signals at 11th and Broad would also be helpful.
- The City has spent a lot of time and money creating a beautiful space for people to walk around and enjoy. Why ruin it with traffic?
- Having a business in downtown for the past 18 years, I have seen sales drop by 65-70% since construction started and to date the sales have not returned. If there is no improvement by December 2012, I will close my business.
- Traffic signals on the 11th need to be fixed and jaywalking is a problem

- Keep skateboards and graffiti away. Increase security of the area.
- Scarth Street Pedestrian Mall requires more room and should be extended
- Traffic and snowploughs in winter would be hard on the surface of the square
- Develop the new plaza to make it more usable by the public
- Transit centre for downtown should be moved back to Cornwall Centre. The present location is inconvenient for many users and has no services nearby.
- It's too confusing to have 12th Ave open some of the time to vehicle traffic and close during other times
- Returning the one-way street system on the 11th and 12th avenues
- The surface of the plaza is slippery and uneven, already a safety hazard to walking pedestrians.
- Only buses should be allowed on the 11th Ave
- Build a new parkade in close vicinity of plaza. Availability of off-street parking free up streets for short term parking.
- Increase transit service to the plaza

2.2 Public Open House #2 - April 5, 2012

The second public open house was held on April 5th, 2012 at City Hall. The purpose of the open house was to summarize the input from the first round of consultations and to present alternatives for 11th Avenue and 12th Avenue. A preliminary assessment of the advantages and disadvantages of each alternative was provided, but no recommendations were made on a preferred alternative.

As part of the open house, a presentation was made by IBI Group in the Darlene Hincks Room which was attended by approximately 25 people. The presentation was followed by an open discussion.

High Level Messages

Key messages we took from this meeting:

- There is a balance between maintaining full access for cars and creating a pedestrian only downtown. The current scenario on 12th Avenue may be too extreme.
- Regardless of how City Square operates, there are still lot's of improvements that can be made to the downtown transportation

system ranging from improving conditions for cycling to improving accessibility.

- Participants in the meeting were respective of the different opinions on whether or not to open City Square Plaza.
- It is obvious that some drivers are more affected than others by the closure.
- Concerns about traffic are not about overall congestion, but rather very localized circulation issues.
- There is growing excitement around events in the square in the summer.
- Opening the square to traffic in one-direction has a lot of advantages in that it allows access to the parkade and businesses, but does not allow for full traffic flow.

Detailed Comments

Comments were recorded during the open house and on the comment forms submitted at and following the meeting. The detailed comments are provided below.

- Downtown plan should put pedestrians first
- Need to address bicycles riding on sidewalks
- Provide heated bus shelters
- The number of buses using Lorne Street is an issue for residents and businesses on that street
- Two-way traffic provides more routing options
- Consider closing the square on a regular day, e.g. Friday's
- A couple is planning to have their wedding in the square, which demonstrates the potential for it to become a people place.
- Need to improve bicycle access within and around the downtown
- Transit needs to become a more viable mode to reduce auto traffic to downtown
- Move transit office to north side of City Hall so it is more convenient and more accessible
- Traffic flow is needed on 12th Avenue to support businesses, and attract new one's

2.3 Public Open House #3 - May 8-9, 2012

The third public open house was held in the evening of May 8, 2012 at the Royal Canadian Legion on Cornwall Street and was attended by approximately 15 people. The open house presented the preferred operational approach for City Square Plaza in addition to summarizing the findings of the first phase of the Downtown Transportation Study.

In addition, the study team also was present at the Regina Downtown Farmers' Market on May 9, 2012. Over 200 people stopped to view the presentation boards and many provided comment and feedback to study team staff. In general, feedback was constructive and many members of the public understood the need for a balanced approach.

High Level Messages

Key messages we took from the meetings are as follows:

- Solving the issues of local circulation and access were the most important consideration, particularly to the Cornwall parkade.
- There were multiple requests to review the preferred approach for eastbound operation instead of westbound. However, much of this was a result of personal need to travel eastbound and those who travel westbound appeared to be satisfied.
- The flexibility of City Square Plaza was seen as the greatest advantage of the preferred approach.
- There was more feedback on transportation issues beyond City Square Plaza than opinions about plaza itself. Many appreciated that these issues will be considered in Phase 2.
- Many suggestions regarding the routing of transit through downtown were provided.
- Many people expressed satisfaction that the City Square Plaza would not be opened fully to traffic and respected the idea of allowing essential movements. However, there were still many people who insisted the Square either be fully opened, or fully closed, depending on their perspective.

Detailed Comments

Comments were recorded during the open house and on the comment forms submitted at and following the meeting. The detailed comments are provided below.

- Open square to two-way traffic ASAP (multiple comments)
- Keep square closed to traffic all the time (multiple comments)

- Buses do not come to a complete stop at Lorne/11th
- Intersection of Scarth Street and 12th Avenue is a concern. Pedestrians walk all over the place
- Camera's on the City Square Plaza would be a good idea
- Plaza can be desolate in the winter – needs traffic to provide activity
- The biggest traffic issue downtown that I've observed is congestion of traffic trying to go eastbound between 4:00-5:30. To alleviate this issue the city square plaza should be opened up to one way traffic eastbound, not westbound as recommended. And the traffic should be able to drive right through, not forced to turn at Cornwall street. Many of the cars leaving the Cornwall parkade will be heading west so opening up the plaza but only allowing them to go west won't do much to help that issue – they'll still end up on 11th. Even a hybrid option of opening it to one way through-traffic eastbound during the winter months but closing it during the summer would work – traffic isn't as heavy during the summer, and people aren't walking on the plaza during the winter.
- Another way to help traffic flow east is to put a turning signal for vehicles trying to turn left from Smith on to Vic Avenue eastbound. A lot of vehicles use this option to get home going east now that 12th Avenue is blocked off, but there is no turning signal and by the time pedestrians cross Vic Ave only a few cars get through. And then there is a long delay as the green light for Vic Ave is a long one.
- We have also been told that Lorne Street will become the central traffic hub for buses, having 900 buses daily travel down Lorne. This seems like a ridiculous option having 900 buses travel down one small street. Businesses and building on Lorne will be majorly disrupted and property values would likely decrease. Alternatives need to be found to spread the bus traffic over a variety of streets.
- I recently moved to Regina to work in the downtown area. I found the "pedestrian" area in downtown Regina to be a great positive, an advantage I thought that Saskatoon would do well to emulate. I was dumfounded to hear that there was consideration and planning for regular traffic to use the area. It would detract greatly from what I found to be a great idea and advantage.

3. Stakeholder Meetings

3.1 Council Drop-in

An informal drop-in was held on February 29, 2012 to provide the opportunity for members of Council to hear about the study and meet the IBI Group management team. The intent of this session was to gather input on key issues and to make sure that the study would cover issues important to Council.

Issues and topics raised included the following:

- Audible signals
- Disabled parking
- Parking enforcement and parking meter technologies
- Traffic light synchronization and left turn provisions, particularly on 11th Avenue
- Access for deliveries
- Maintenance of the square
- Longer term strategy for transit
- Sidewalk maintenance
- Traffic circulation
- Bicycle facilities to/from downtown
- Signage

3.2 Emergency Services

A meeting was held on February 28th with representatives from Regina Police, Regina Fire and Emergency Medical Services. The purpose of this meeting was to gather input on known issues and to ensure the study addressed criteria specific to emergency services. The key points from this meeting were as follows:

Traffic safety: Overall safety is quite good in the downtown core and accident rates are low. The worst intersection from a collision perspective is Albert Street and Saskatchewan Drive.

Fire Access: There are no issues with access provided fire vehicles can get onto the City Square Plaza

EMS: Core area is the busiest area of the City for EMS. Ideally there should be dedicated spaces for ambulances, particularly on 11th Avenue where stopped/parked cars block access.

Security: Downtown is quite safe in terms of personal security, though there are perceived issues particularly late at night.

Operation of Square: Traffic operations should be clear to public, and predictable.

3.3 Regina Downtown BID

During the first round of consultations, a meeting was held with representatives from downtown Regina. A presentation was provided by IBI Group on the study objectives and this was followed by a round table discussion.

Key comments/suggestions were as follows:

Note: Comments should be considered informal for the purpose of informing the study. Comments should not be taken as the official opinion of Downtown Regina.

- 11th Avenue is not functioning well from a traffic perspective
- Study should provide data on shared streets from other jurisdictions. How are they designed? What is the safety experience?
- Safety and vehicle circulation are paramount
- Time of day closures might be appropriate
- Need to look at the operations of the north-south streets that intersect with 11th and 12th.
- There are many businesses that have challenges with deliveries
- Whatever solution is chosen, it needs to be visually attractive. For example, temporary closures of the square should not look unsightly.
- Programming of the square should be a top priority
- Look at pay and display for parking
- Need to pay attention to unique needs of certain buildings, e.g. those that require disabled parking near entrance
- The number of buses on 11th Avenue is contributing to congestion. Are there alternative routes that could be considered?

- Consider the idea of a transit hub, for example on Saskatchewan Drive.
- Effectively, the whole downtown could become a mobility hub
- Downtown plan had bike lanes on 12th Avenue

3.4 Property Owners Adjacent to Plaza

Through Downtown Regina, a special meeting with property owners adjacent to the plaza was organized. This meeting took place over the lunch hour and included a presentation by IBI Group on the study results to date. Issues and concerns raised during the meeting included:

- Businesses have been expecting the plaza to be open to cars. It would be misleading if the plaza is now not opened to cars.
- Traffic congestion is increasing significantly in the downtown
- Most businesses want the plaza opened
- Current configuration makes loading almost impossible for some businesses
- Need to increase parking supply, particularly on-street parking
- Better transit options are needed if people are to switch to transit.

3.5 Blind/Low Vision Community

Representatives of the blind and low vision community were invited to a special meeting on April 3rd, 2012 to hear about the DTP. A brief verbal presentation was provided by IBI Group followed by roundtable discussion. Afterward, participants went for a walkabout from City Hall to City Square Plaza.

The following comments were received at the meeting and during the walkabout:

- Regina is lagging in the implementation of audible signals (See December 7th Report by AAC)
- Committee feels that City Square Plaza was not designed for the blind and low vision community
- Placement of audible signals on plaza should be better thought out
- Perhaps there is an opportunity to develop a device for the blind for walking tours. Regina could be a leader in this.
- Committee would like to see two things given top priority:
 - 1) tactile treatments at all intersections (adopting the best design possible)

- Audible signals at as many intersections as possible
- When installing new signals, there should be no reason not to install audible signals. Cost should not be a determining criteria.
- In general, there should be better communication on things such as construction projects or transit route changes. Persons with mobility/vision challenges need to be given more warning of changes.
- Should have audible bus stop announcements
- Tactile strips should be at least 2 feet wide
- Overwhelming preference for the square is to have no traffic. Failing that, traffic should be confined to very slow speeds.
- Square should have at least two crossings that are completely accessible
- Don't put the tactile strip along the drainage path since canes can get caught in the grates (See below)



3.6 Accessibility Advisory Committee

A special presentation was arranged as part of the April 4, 2012 Accessibility Advisory Committee to provide an overview of the DTP and the Phase 1 objectives. The following comments were received:

- Key issues for the committee include wheelchair accessibility and snow clearing.
- Committee would like to see more action on accessibility issues
- The City standard for curb ramps was very proactive when it was developed over 15 years ago. However, it does not reflect current best practices (i.e. ADA Standards for Accessible Design from the United States). It may be time to update the current City standard.

- There are lots of locations that are problematic for wheelchairs. The curb ramp on 11th Avenue in front of Cornwall centre is an example.
- Accessible parking in the downtown is hard to find
- 1200 paratransit trips are declined each week
- Intersection of Scarth Street and 12th Avenue at the plaza is problematic as nobody stops.
- Albert Street and 11th Avenue is very challenging from an accessibility perspective. It is also a high pedestrian demand location given the Mental Health Hospital on the west side of Albert.
- In many locations, traffic lights could be better times for both pedestrians and automobiles.

3.7 Chamber of Commerce

An informal meeting was held with the CEO of the Regina and District Chamber of Commerce. This was an informal meeting to get a perspective on key issues and opportunities related to transportation in the downtown. Topics covered included:

- Access and circulation challenges resulting from closure of 12th Avenue
- Impacts on businesses resulting from changes in street patterns
- Parking supply and availability
- Adequacy of bicycle facilities
- Loading
- Parking enforcement
- Long term vision

4. Summary

Based on the public and stakeholder events, the following high level conclusions can be made:

- People's perspective on the Downtown transportation system varies widely. Some individual's expressed extreme dissatisfaction with various aspects while others pointed out how well the transportation system functions. The greatest dissatisfaction stemmed from the lack of circulation for vehicles, the delays that

arise from this lack of circulation. Conversely, most positive comments related to how compact and easy the downtown is to get around by foot.

- Regardless of how 12th Avenue and the City Square plaza operates there is a lot that can be done to improve transportation in the downtown. Areas for improvement include, but are not limited to:
 - improving accessibility for persons with mobility of vision challenges
 - improving traffic flow on 11th Avenue
 - building more cycling facilities
 - making on-street parking more accessible by promoting turn-over and implementing new technologies
 - making transit more viable at the city-level, in order to ensure more people use transit for trips to and from downtown
- There are widely opposing opinions on how City Square Plaza should operate. Some people feel that it should be opened to traffic immediately, without question. Just as many expressed a desire to keep the square closed to traffic.
- Despite differing opinions on the square with respect to its use by traffic, the majority of the public and key stakeholders did state that the square is visually attractive.

17(1)(b)(i)

17(1