Welcome

to the

Traffic Bridge Study

Public Meeting

Open House 2

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Traffic Bridge History

- The Traffic Bridge came into being when residents of Nutana agreed to merge with the Town of Saskatoon and the Village of Riversdale to form the City of Saskatoon. Prior attempts to join the east and west bank settlements had failed because the river was such a significant barrier.

- Funding for the bridge was approved at the first session of provincial legislature in 1905 when Saskatchewan became a province.

- The Traffic Bridge officially opened on October 10, 1907. The bridge connects Victoria Avenue in Nutana to 3rd Avenue in the Central Business District.

- The Traffic Bridge was Saskatoon's first to carry vehicular traffic. It was originally built for horses and carriages and later modified for cars. Prior to construction, the only way to cross the river was on an unreliable ferry or a difficult walk across the QLLS (later CNR) railway bridge.

- In 1908, the pedestrian walkway was added to the upstream side of the bridge.

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Traffic Bridge History

- On June 7, 1908, a steamboat named the S.S. City of Medicine Hat crashed into the piers of the Traffic Bridge. The boat sank (no fatalities) and marked the end of steamboat traffic on the river. In August of 2006, divers training downstream from the bridge located what is believed to be the anchor from the S.S. City of Medicine Hat. The anchor is currently on display at the River Landing Development.

- The Saskatoon Municipal Railway operated streetcars on the bridge from 1913 to 1933. The streetcar was directed up the long hill (towards Broadway) because the short hill (Victoria Ave) was too steep.

- The Traffic Bridge was the only road bridge in Saskatoon until 1916 when the University Bridge was constructed.

- In 1961, the southern side (Nutana side) was raised to reduce slope on Victoria Avenue and to improve traffic flow, allowing Saskatchewan Crescent to pass underneath the bridge.

- The bridge was officially named the “Traffic Bridge” in April 2007. Prior to this, the structure had acquired several names including Victoria Bridge, 19th Street Bridge, Black Bridge, Iron Bridge, and Short Hill Bridge.

- The Traffic Bridge is the oldest surviving steel Parker through-truss bridge in Saskatchewan.

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City of Saskatoon Initiatives

Community Visioning Initiative

- The Community Visioning Initiative will put a growth strategy and plan in place to grow Saskatoon to 500,000 people.
- The intent is to adopt a vision of Saskatoon's future that is clear, forward thinking, sustainable, inclusive, and desirable to residents.
- The vision is one current and future residents will be able to embrace and collectively aspire to achieve over the next 50 to 70 years as Saskatoon grows.
- An important aspect of the Community Visioning initiative is to integrate projects currently under way and approved for 2010, including the City Centre Plan.

City Centre Plan

- There is an increasing desire from Saskatoon residents for improved pedestrian and bicycle amenities to potentially new developments in River Landing, city centre housing, public spaces, transit and library facilities.
- The City Centre Plan will revisit existing planning policies, introduce, describe and illustrate how planning and design policies and principles should be implemented.
- Broad civic goals for economic and environmental sustainability will be asserted, while maintaining and promoting the area's special character and identity as communicated by neighbourhood buildings and spaces.
- The City Centre Plan will be shaped by the conditions and relationships between the civic core, key heritage assets, and adjacent commercial areas.
- A new plan for the City Centre will reinforce and strengthen Saskatoon's core and ensure that it becomes a stronger magnet to attract people to live, work and enjoy downtown.

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City of Saskatoon Initiatives

How does the Traffic Bridge relate to these municipal initiatives?

- The Traffic Bridge is substantially valued by residents of Saskatoon as a key heritage asset. It also provides 'special character' to its adjacent neighbourhoods as well as the entire city.

In order to incorporate the Traffic Bridge in the Visioning Process, we must accommodate a vision that entails forward thinking, sustainability, inclusiveness, and is desirable to residents.

Project Scope

The City of Saskatoon has commissioned Stantec Consulting Ltd. and Fast Consulting to undertake the Traffic Bridge study which will look at options for the future of the Traffic Bridge and its potential to accommodate a variety of pedestrian / bicycle, transit, vehicular, and community functions.

The project scope includes the following:

- A detailed Traffic Analysis to determine the need for the Bridge to remain an active part of the existing road system and the impact of modifying it to pedestrian / cyclist use only.

- A Structural Assessment of the existing Bridge to help define the rehabilitation requirements.

- Development of various concepts to maintain or modify the current Bridge usage. These may include rehabilitation of the existing structure or replacement.

- Cost estimates for each concept.

- An extensive Public Consultation program to ensure the public has an opportunity to express their views and help guide the development of potential alternatives.

- The purpose of today's second open house is to review proposed concepts and options on the future of the Traffic Bridge and to provide input.

- Representatives of the City of Saskatoon, Stantec Consulting Ltd., and Fast Consulting are in attendance to answer questions related to the scope of the current study.

- Thank you for attending today's public meeting. Your interest and participation helps to shape the future of the City of Saskatoon.

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Project Schedule

The next steps in the project include:

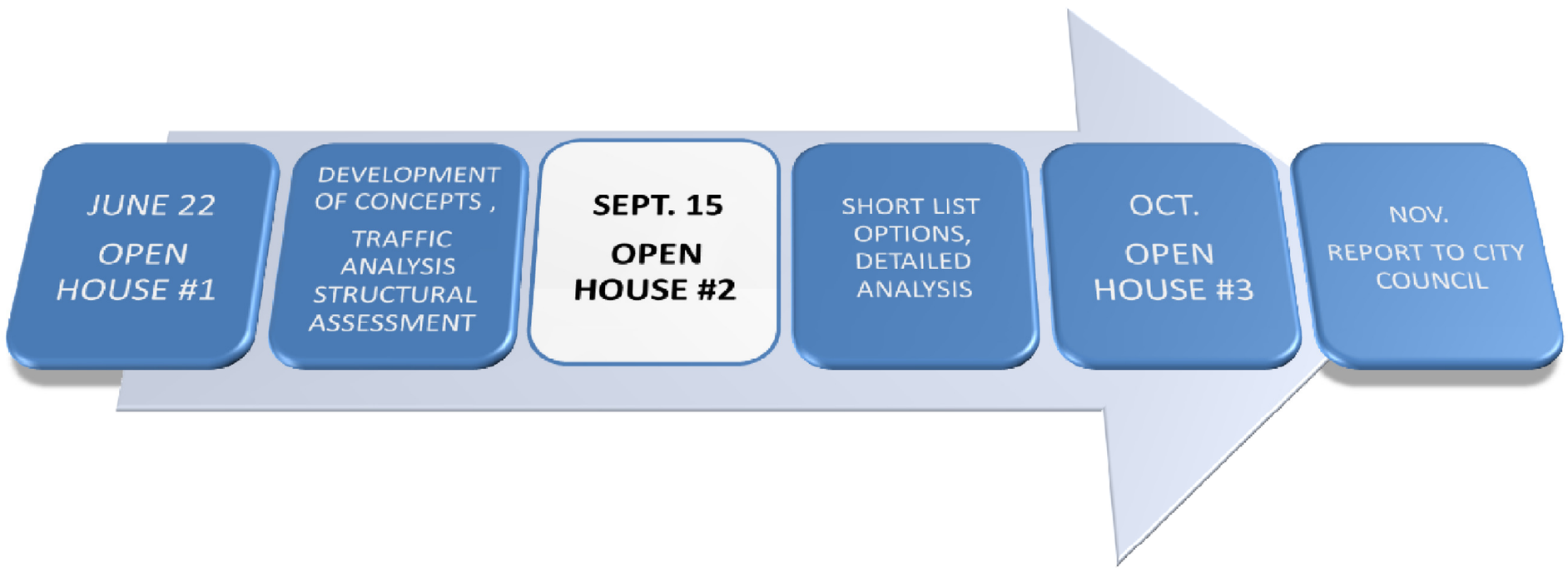
- Today's second open house presents the concepts developed from input from the first open house.

- The information received from the public at this open house and the online forum will be reviewed in order to refine the preliminary options and confirm key issues regarding the Traffic Bridge and the community's vision of its role.

- A third open house will be scheduled for October where the preferred option(s) will be presented with an additional opportunity for public input.

- A final report will be prepared and the recommended option(s) will be presented to City Council in November.

- A report from the City of Saskatoon's development branch regarding heritage designation will be brought to council in November along side the Traffic Bridge Study.



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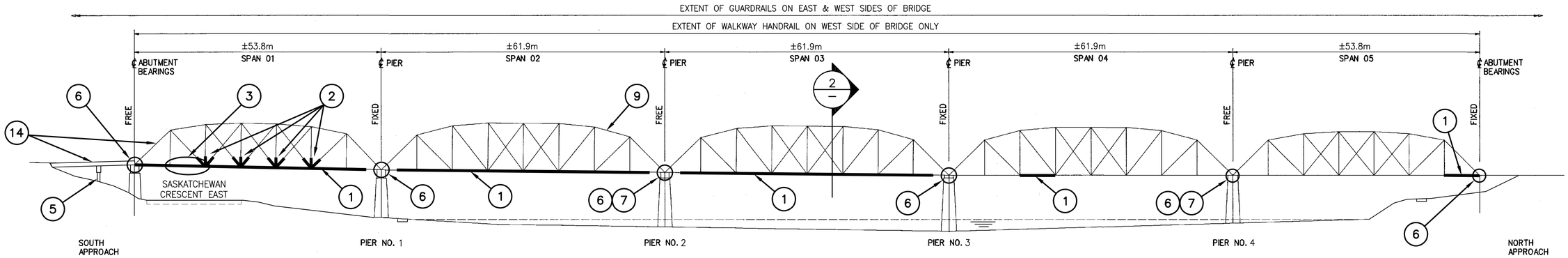
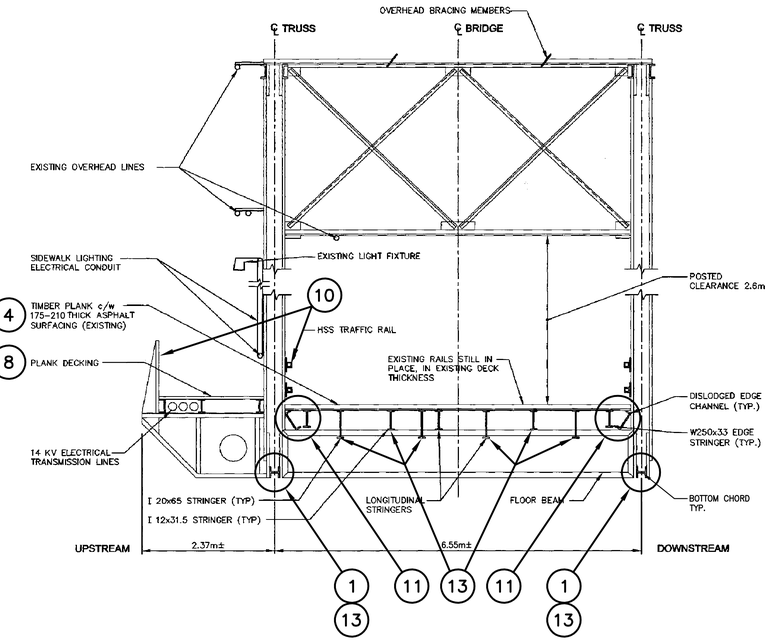
MAINTENANCE HISTORY



1 / – DOWNSTREAM (EAST) ELEVATION
N.T.S.

KEYNOTES:

1. 2006 – BOTTOM CHORD STRENGTHENING
2. 2006 – PANEL POINT STRENGTHENING
3. 2003 – OVER HEIGHT COLLISION REPAIR
4. 2001 – ASPHALT WEARING SURFACE REPLACED
5. 1996 – PILE UPGRADE IN TIMBER APPROACHES
6. 1996/1995 – EXPANSION JOINT REPLACEMENT
7. 1995 – BEARING AND BEARING PEDESTAL REPLACEMENT
8. 1995 – NEW TIMBER SIDEWALK DECKING
9. 1995 – REPAIRS TO DAMAGED TRUSS MEMBERS
10. 1992 – NEW STEEL TRAFFIC GUARDRAILS AND PEDESTRIAN HANDRAIL ON WALKWAY
11. 1985 – NEW EXTERIOR LONGITUDINAL STRINGERS
12. 1985 – TIMBER DECK REPAIRS IN ISOLATED LOCATIONS
13. 1979/1978 – NEW COATINGS ON BOTTOM TRUSS CHORD AND STEEL DECK FRAMING MEMBERS
14. 1960 – RAISED SOUTH SPANS, REPLACED ORIGINAL ABUTMENTS AND INSTALLED TIMBER APPROACH SPAN



2 / – BRIDGE CROSS SECTION
N.T.S.

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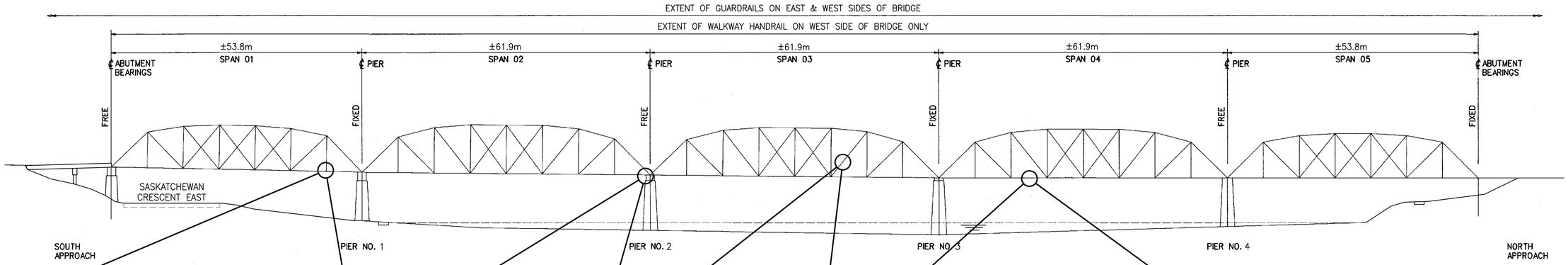
2010 DETAILED INSPECTION



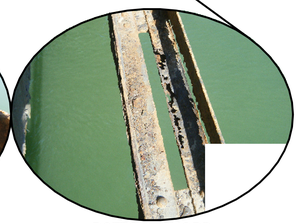

VERTICAL MEMBER

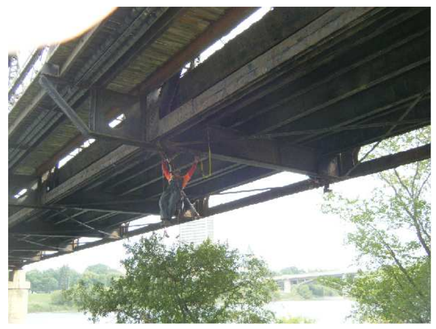

VERTICAL MEMBER

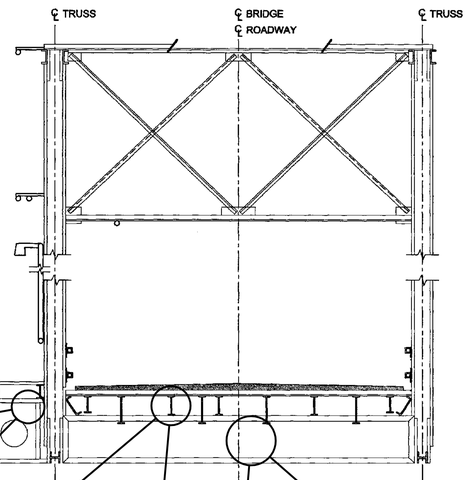

BOTTOM CHORD


DIAGONAL MEMBER


BOTTOM CHORD


BOTTOM CHORD






SIDEWALK STRINGER

SIDEWALK FLOOR BEAM (OUTRIGGER)


DECK STRINGER

FLOOR BEAM

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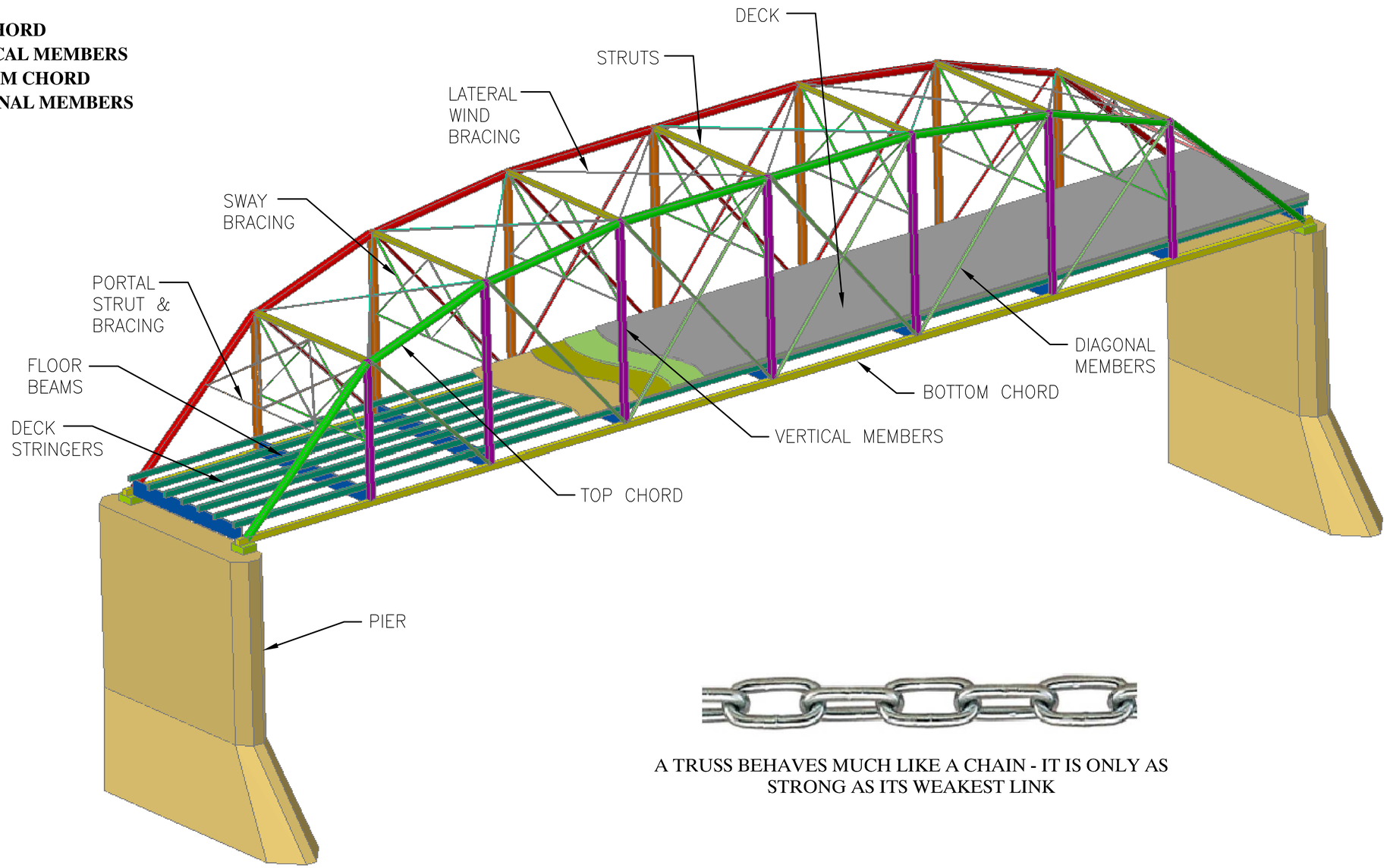
TRUSS BRIDGE COMPONENTS

COMPONENTS CRITICAL TO BRIDGE FUNCTION

(ie. THE LINKS IN THE CHAIN)

- **TOP CHORD**
- **VERTICAL MEMBERS**
- **BOTTOM CHORD**
- **DIAGONAL MEMBERS**



A TRUSS BEHAVES MUCH LIKE A CHAIN - IT IS ONLY AS STRONG AS ITS WEAKEST LINK

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Traffic Analysis Information

- An analysis of traffic conditions on the Buckwold, Traffic and Broadway Bridges was completed for the 2012 and 2029 time periods with and without the Traffic Bridge.

- The 2012 analysis represents conditions after the completion of the Circle Drive South Bridge. The 2029 analysis represents conditions at the time Saskatoon reaches a population of 300,000.

- The City of Saskatoon's transportation planning computer model was used to predict weekday peak hour traffic volumes for the 2012 and 2029 time periods.

- A traffic capacity analysis was completed to determine level of service (LOS). Indications used to describe traffic operating conditions level of service is derived from vehicle delays and vehicle density on a section of roadway.

- Level of service ranges from 'A' to 'F' as described in the following table.

Table 1.0
Level of Service Criteria for Roadway Segments

Level of Service	Interpretation
A	Low volumes; primarily free-flow operations. Density is low, and vehicles can freely maneuver within the traffic stream. Drivers can maintain their desired speeds with little or no delay.
B	Stable flow with potential for some restriction of operating speeds due to traffic conditions. Maneuvering is only slightly restricted. The stopped delays are not bothersome, and drives are not subject to appreciable tension.
C	Stable operations; however, the ability to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail, but adverse signal coordination or longer queues cause delays.
D	Approaching unstable traffic flow, where small increases in volume could cause substantial delays. Most drivers are restricted in their ability to maneuver and in their selection of travel speeds. Comfort and convenience are low but tolerable.
E	Operations characterized by significant approach delays and average travel speeds of one-half to one-third the free-flow speed. Flow is unstable and potential for stoppages of brief duration. High signal density, extensive queuing, or progression/timing are the typical causes of the delays.
F	Forced-flow operations with high approach delays at critical signalized intersections. Speeds are reduced substantially, and stoppages may occur for short or long periods of time because of downstream congestion.

- In an urban environment level of service 'C' or 'D' is considered acceptable during peak hours.

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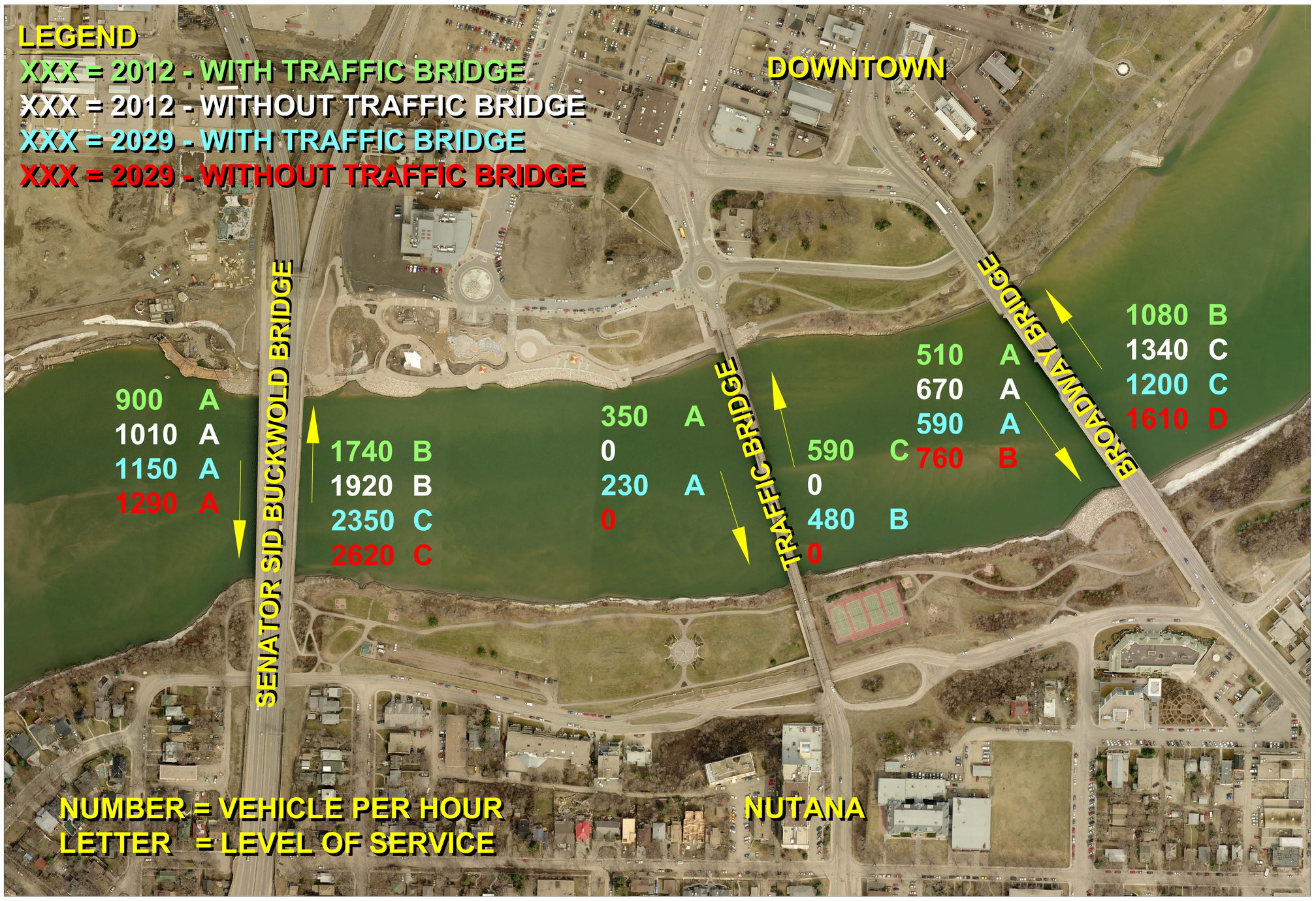
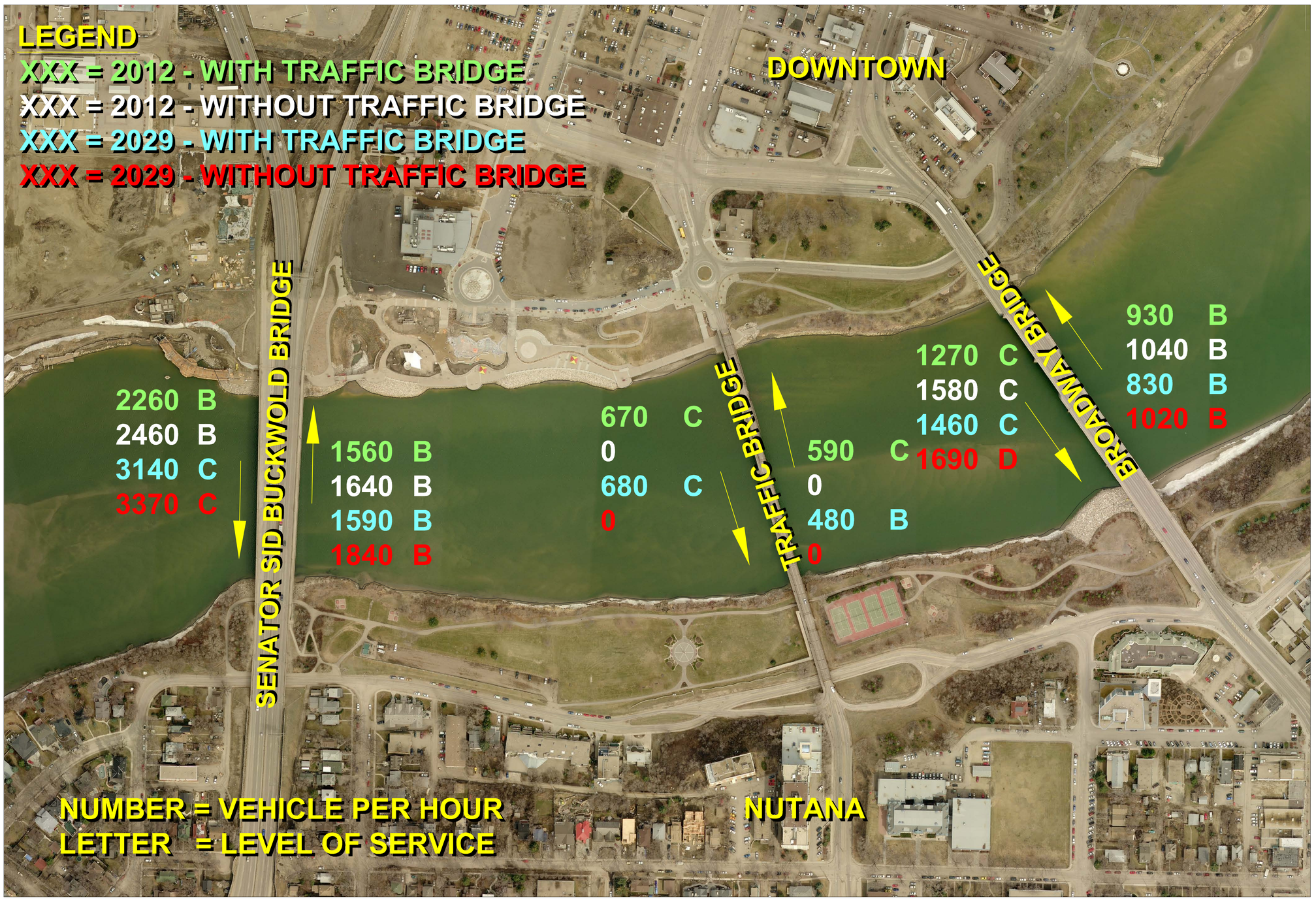
Comparison of Traffic Volumes - Weekday Morning Peak Hour



Comparison of Traffic Volumes - Weekday Afternoon Peak Hour



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Traffic Analysis Summary

- The completion of the Circle Drive South Bridge is predicted to reduce volumes on the Buckwold, Traffic and Broadway Bridges by 19%, 4% and 5% in the weekday morning peak hour and by 21%, 6% and 10% in the weekday afternoon peak hour respectively.

- The closure of the Traffic Bridge would increase weekday peak hour volumes on the Buckwold Bridge in the order of 10% with no reduction in level of service for both the 2012 and 2029 time periods.

- The closure of the Traffic Bridge would increase weekday peak hour volumes on the Broadway Bridge. Level of service will decrease in the peak direction for the 2012 and 2029 time periods. A level of service 'D' is predicted for the 2029 time period for the peak direction for the morning and afternoon peak hours without the Traffic Bridge. Unstable traffic flow as demonstrated by substantial delays may occur.

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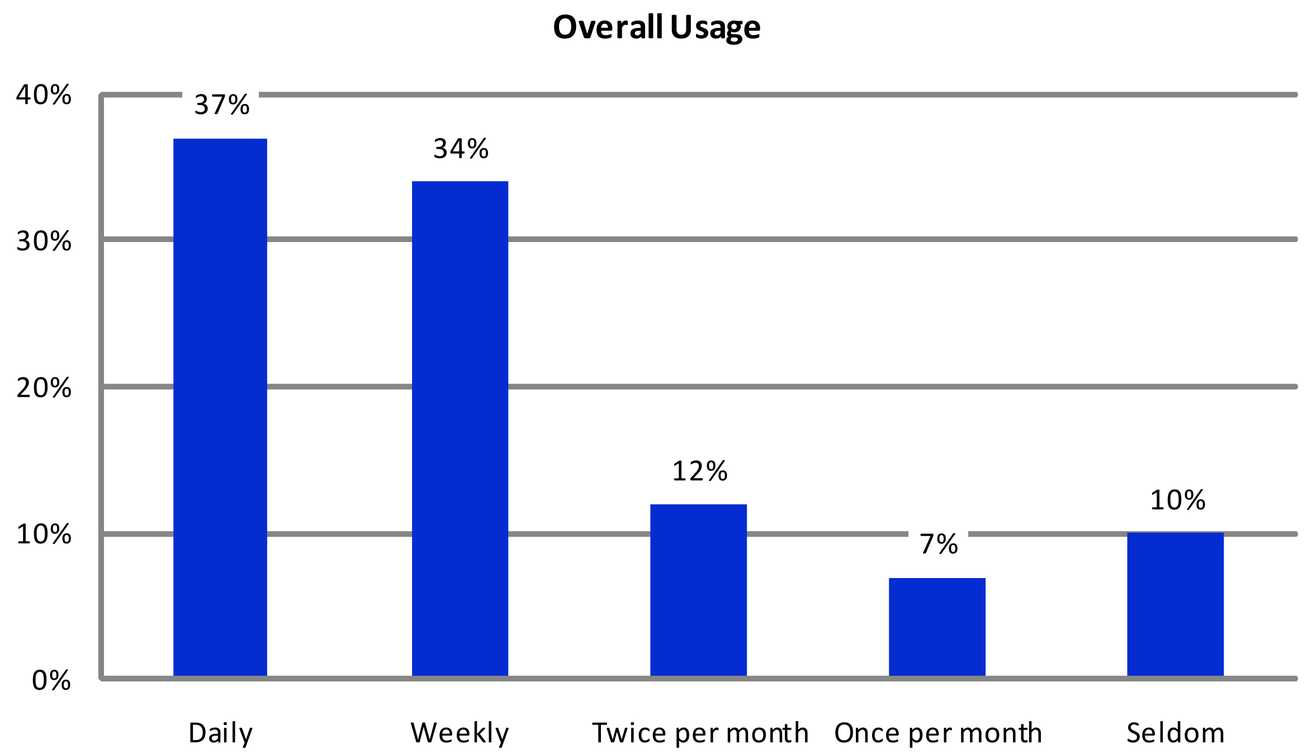
Results from Open House Comment Form and Online Forum Survey

The charts on the next 3 panels summarize the quantified feedback from the comment forms filled out by 125 of the almost 300 people who attended the Traffic Bridge Study public open-house on June 22nd, as well as 420 respondents who completed the survey hosted on the Traffic Bridge online community forum between June 23rd and July 15th (2010).

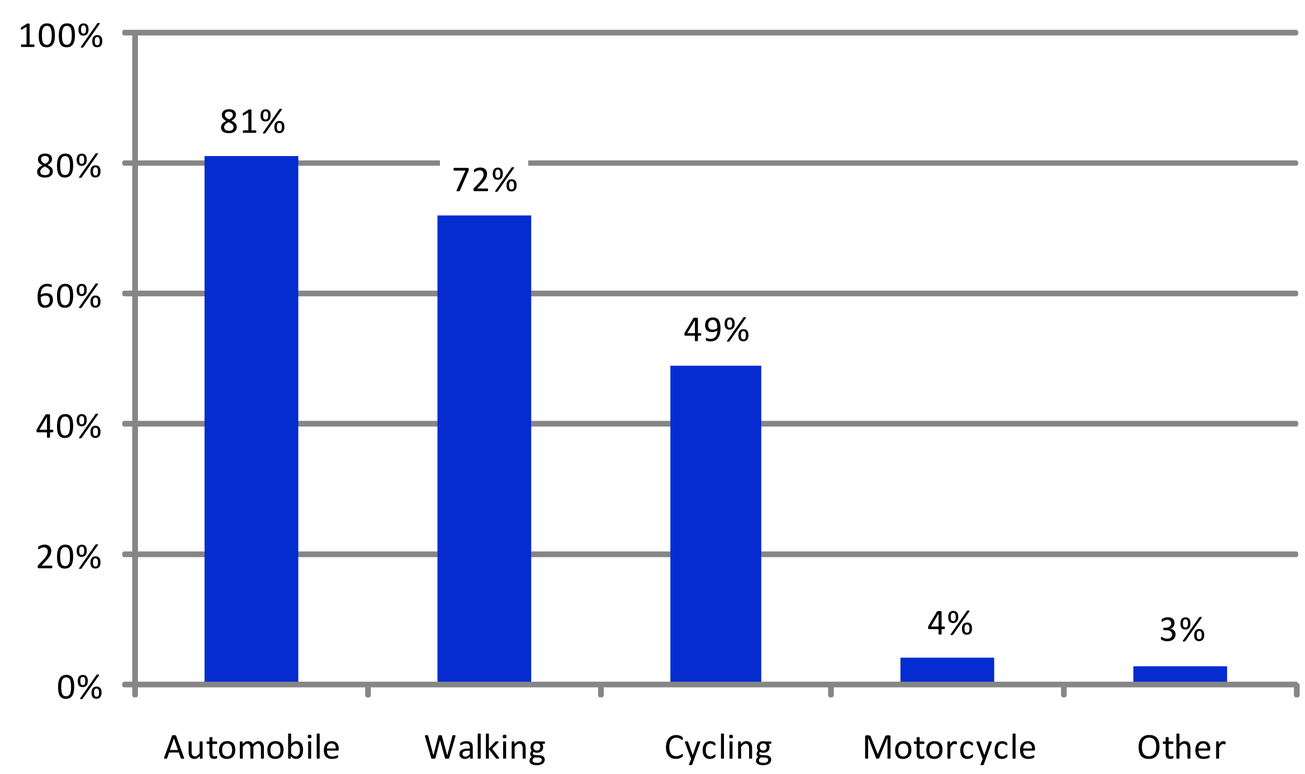
In addition to the hundreds of written comments people provided us from the public open house and the comments section of the online survey, almost 200 comments and opinions were posted to the online community forum. The online community forum comments are not summarized in the survey charts, although many of the questions they responded to are the same as the survey questions. The online forum discussion was also reviewed by the design team as part of their consideration of design options for the Traffic Bridge. Discussions can be read by visitors in their entirety at www.saskatoontrafficbridgeforum.ca

Usage

Q. How often do you use the Traffic Bridge?



Q. What do you use the Traffic Bridge for?



Note: Chart total is more than 100% due to multiple responses.

Results from Open House Comment Form and Online Forum Survey

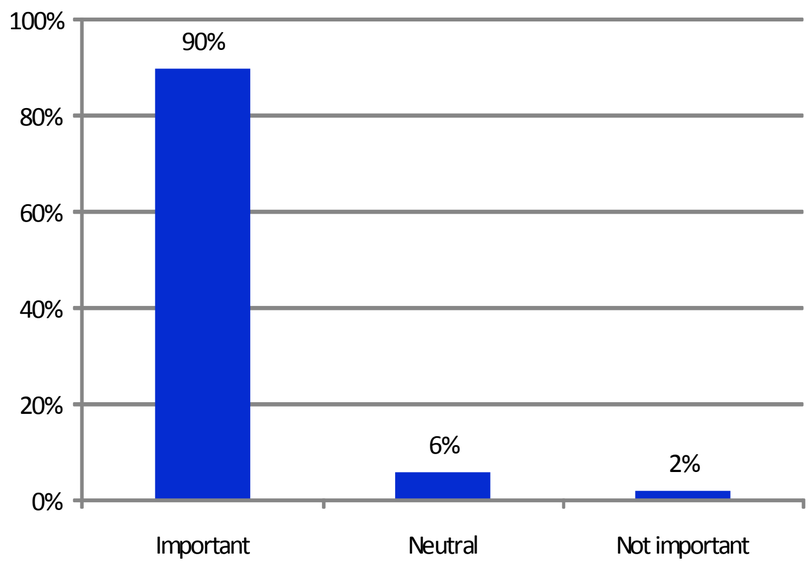
Importance

Q. How important is it that...?

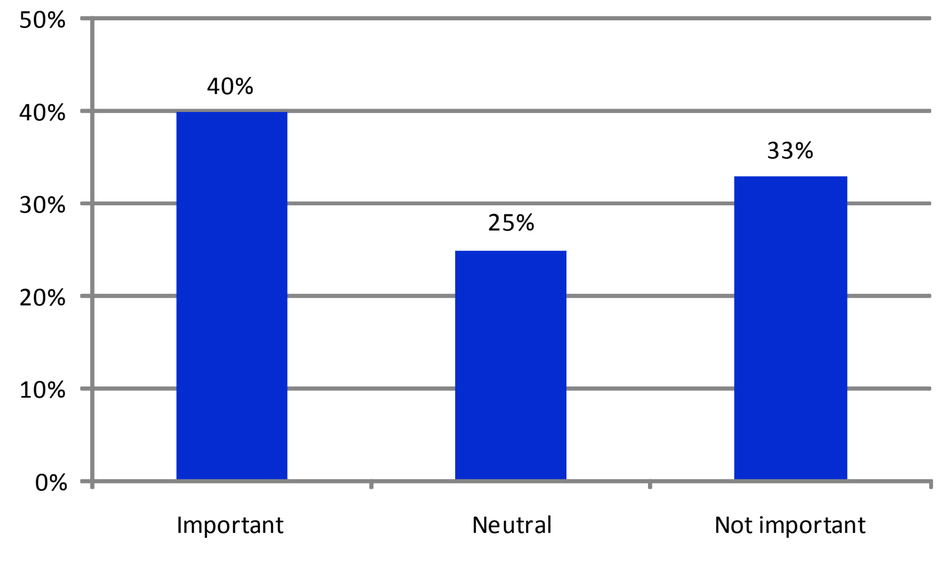
- Motorists continue to use the Traffic Bridge;
- The Traffic Bridge serves as a linkage for pedestrians and cyclists to River Landing and the riverbank walkway systems; and
- Transit is able to use the Traffic Bridge.

The charts below illustrate the overall responses from both the online and open-house surveys combined (N=548).

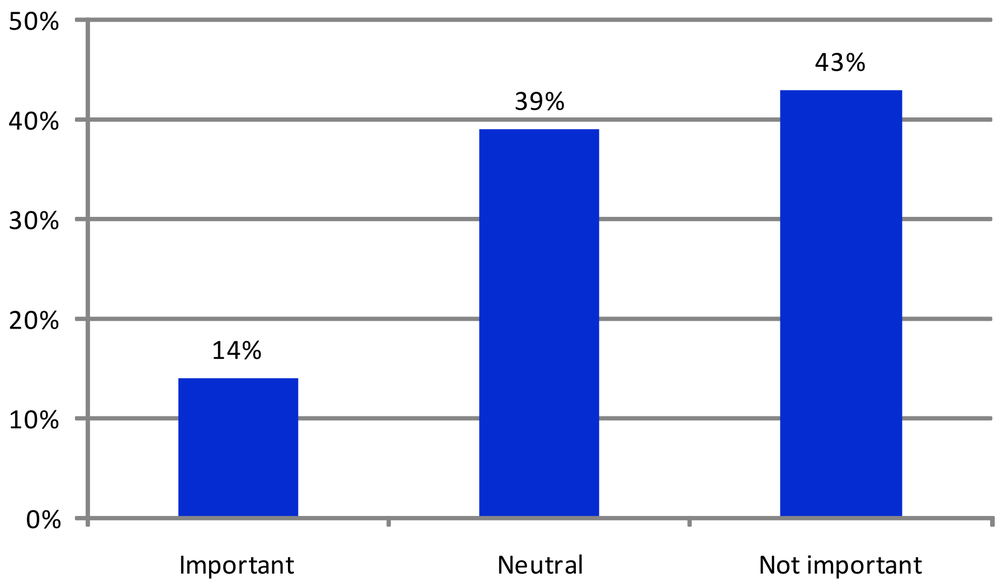
Pedestrian and Cyclist Linkage to River Landing and Walkways



Motorists Continue to Use the Traffic Bridge



Transit Usage

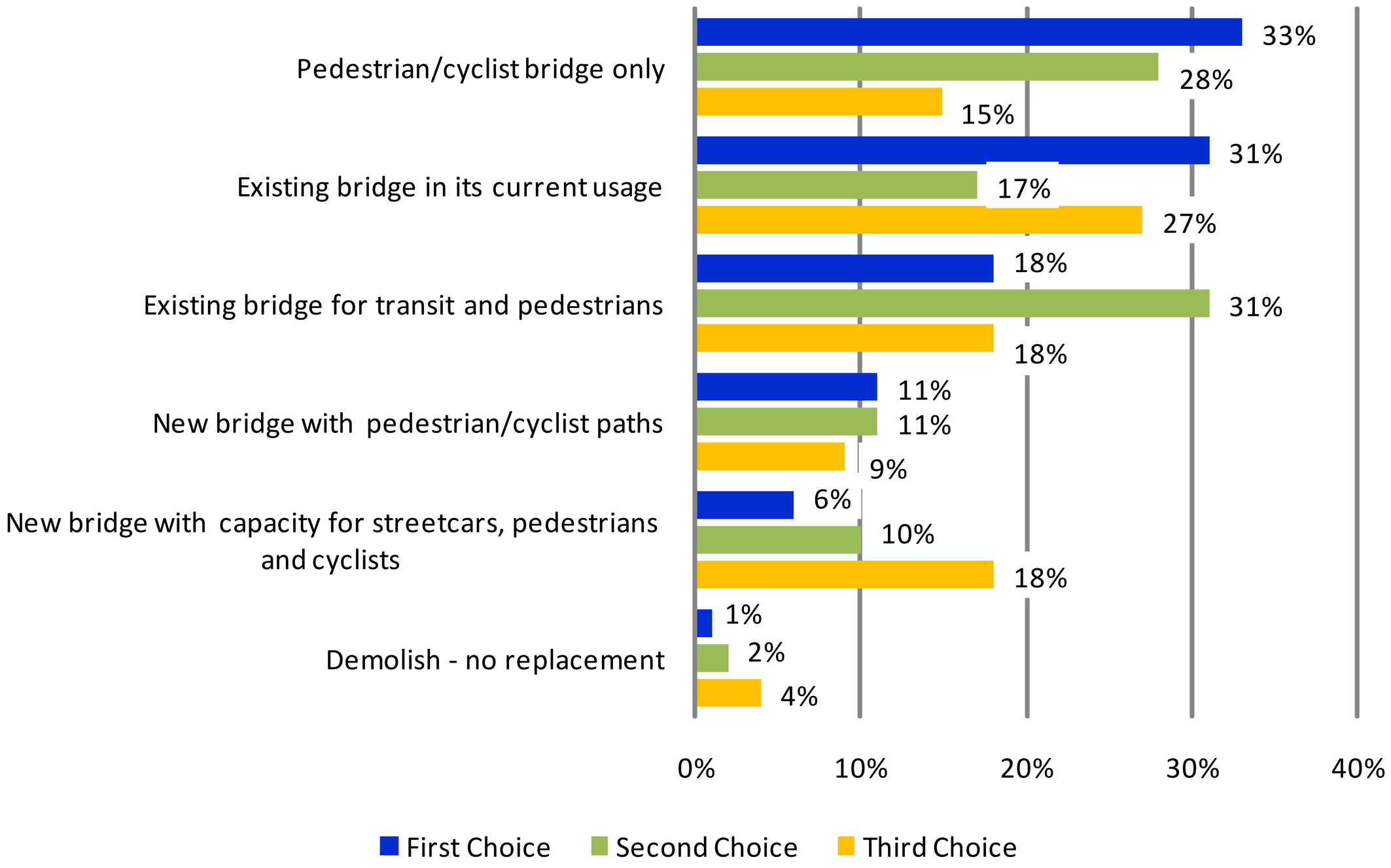


Results from Open House Comment Form and Online Forum Survey

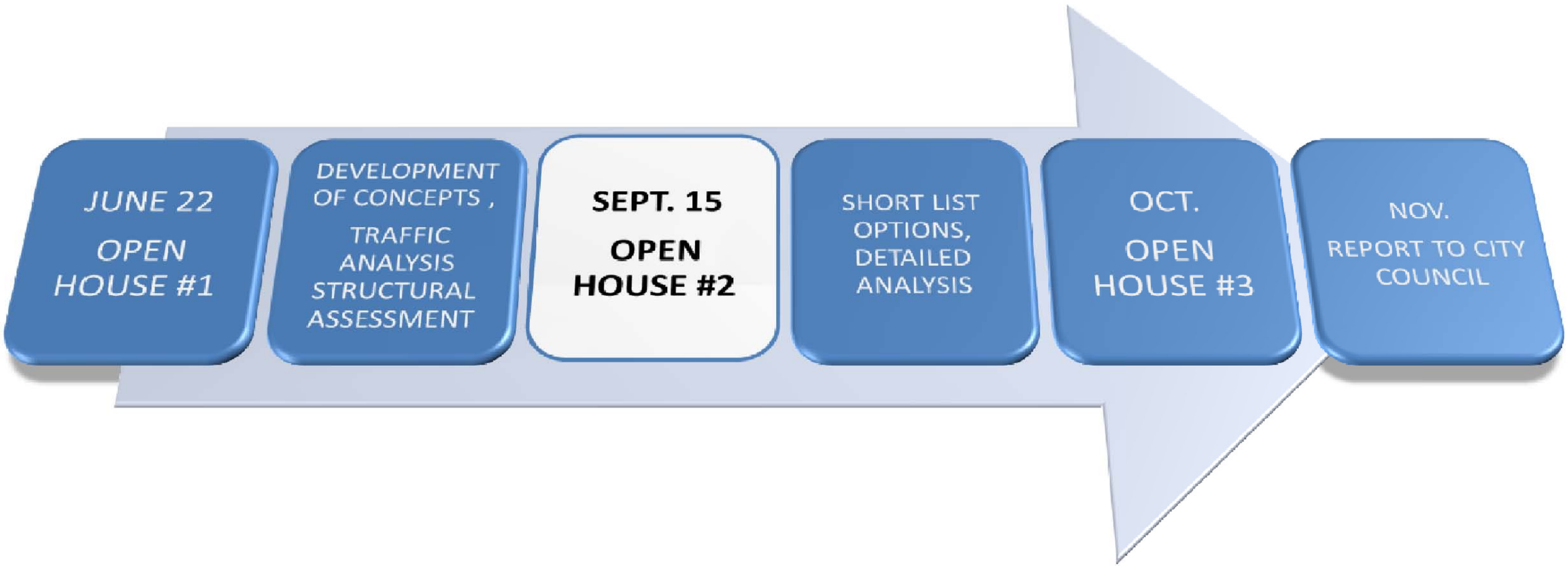
Vision and Goals

Q. Of the different Traffic Bridge options to be investigated, please indicate your 1st, 2nd and 3rd choices. Mark any that you consider unacceptable with an "x"?

The charts below illustrate the overall responses from both the online and open- house surveys combined (N=548).



Traffic Bridge Study Process



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Preliminary Options for the Traffic Bridge

Preliminary options for the Bridge have been determined based on public input from the previous open house, traffic analysis, and the recent structural assessment.

The various options include rehabilitation of the existing bridge or components as part of a complete rehabilitation, construction of a completely new bridge, and construction of a signature structure providing service to vehicular, pedestrian & cyclists modes of transportation.

Bridge opinions of cost reflect capital cost improvements and are approximate in nature. Actual costs will be determined through detailed design, bidding and construction process.

Preliminary options include:

- Option 1 - Complete rehabilitation for vehicle, pedestrian and cyclist use.
- Option 4 - Replace with conventionally designed structure (girder & deck) for vehicle, pedestrian and cyclist use.
- Option 5 - Replace with modern steel truss or similar form to the existing bridge for vehicle, pedestrian and cyclist use.
- Option 6 - Replace with an architecturally significant structure for vehicle, pedestrian and cyclist use, a "modern signature bridge".

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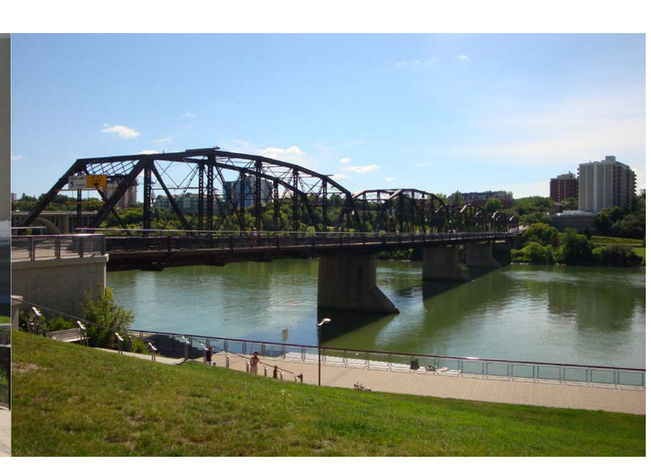
Option 1 - Rehabilitation With Vehicular Bridge

Description

- Complete rehabilitation for vehicle, pedestrian and cyclist use: Maintain the bridge in its existing form and function, providing narrow traffic lanes but replace the existing separate pedestrian walkway on the west side of the bridge with two standard width walkways on both sides.

	PM	AM
Buckwold Bridge:	LOS - C	LOS - C
Broadway Bridge:	LOS - C	LOS - B
Traffic Bridge:	LOS - C	LOS - C

- All heritage aspects of the existing structure are preserved if possible and new elements are constructed in likeness of existing elements.
- Preliminary opinion of probable cost - $27M



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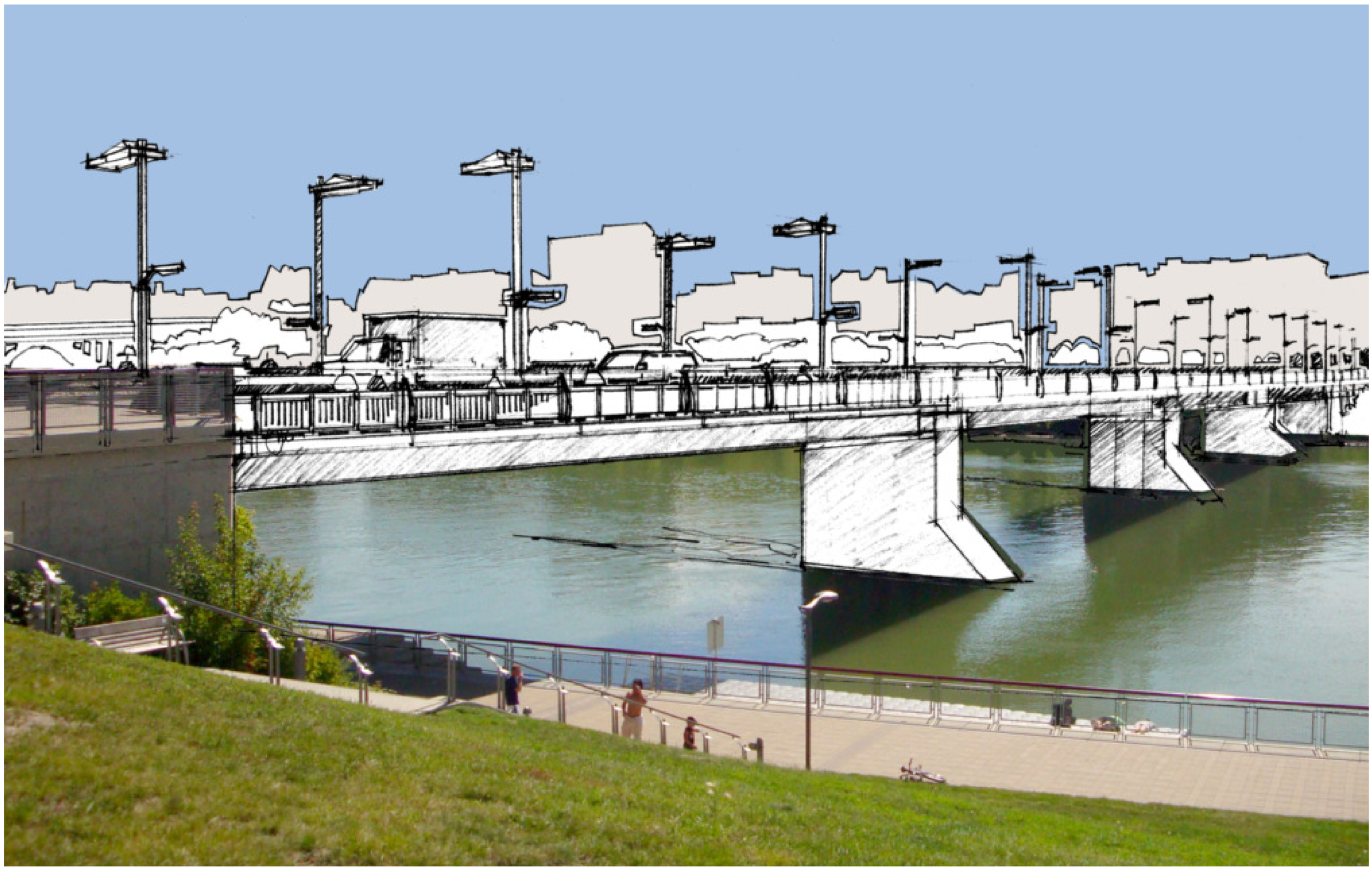
Option 4 - New Conventional Bridge With Vehicular Traffic

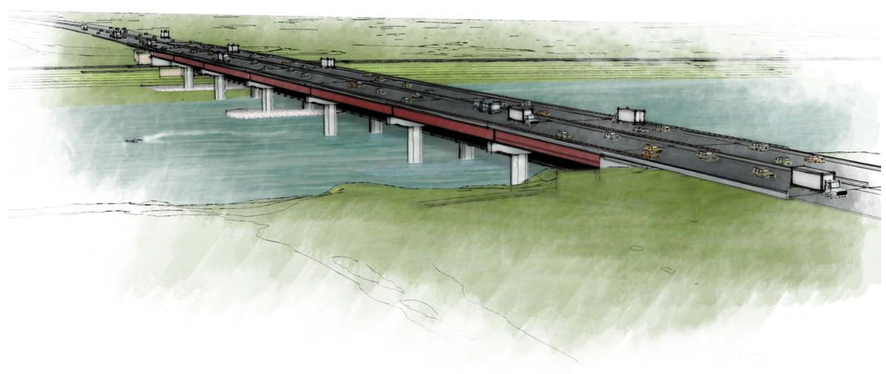


Description

- Replace with a conventionally designed structure (girder & deck) for vehicle, pedestrian and cyclist use: A new structure providing two standard width traffic lanes and separate three metre shared walkways on both sides.
- New bridge with full width lanes at the 300,000 population horizon and with the addition of the Circle Drive South Bridge will affect traffic level of service (LOS) in the peak direction on adjacent bridges as follows:

	PM	AM
Buckwold Bridge:	LOS - C	LOS - C
Broadway Bridge:	LOS - C	LOS - C
Traffic Bridge:	LOS - C	LOS - B

- Preliminary opinion of probable cost - $ 26M



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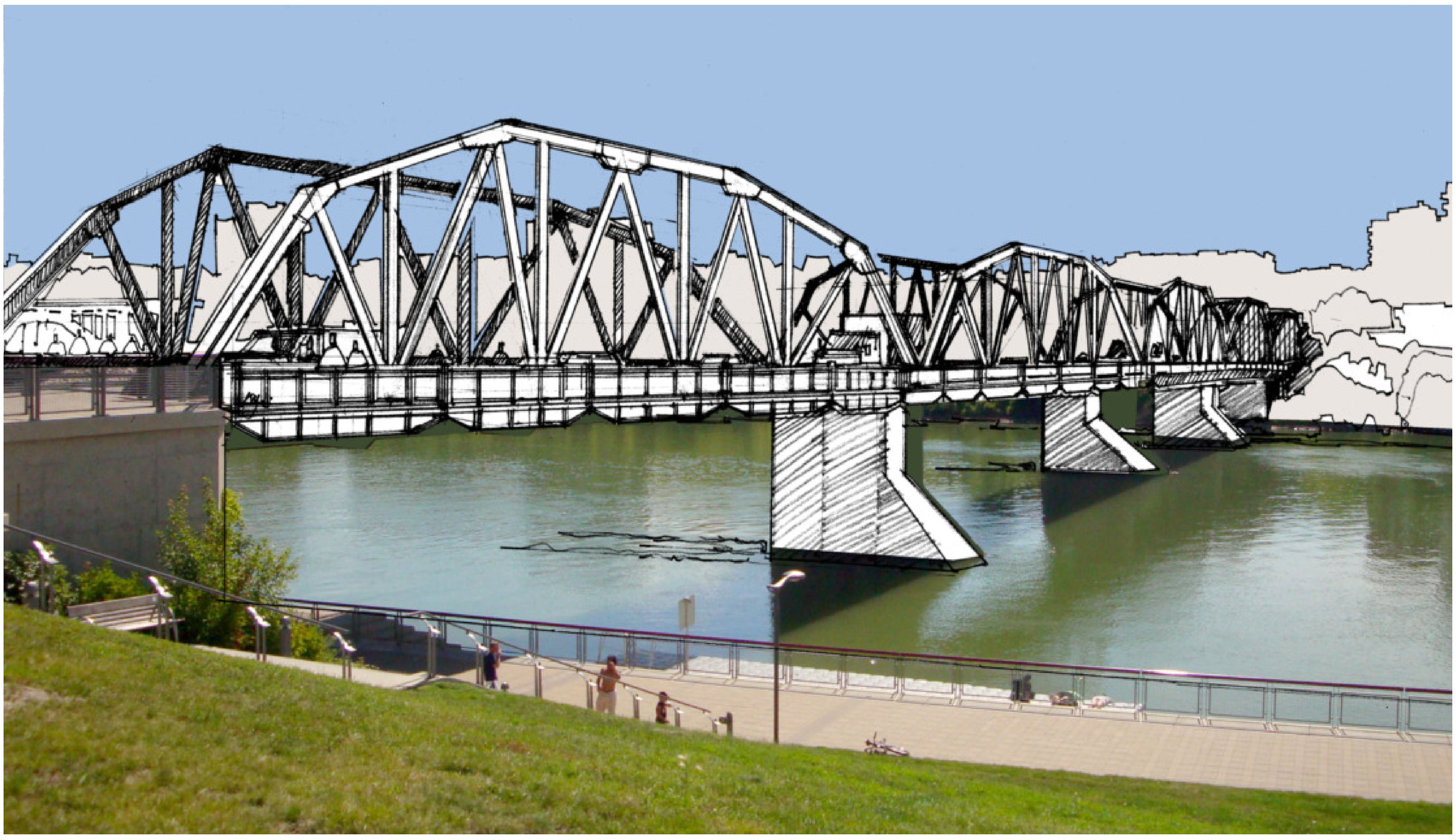
Option 5 - New Truss Bridge With Vehicular Traffic



Description

- Replace with a modern steel truss or similar form to the existing bridge for vehicle, pedestrian and cyclist use: A new structure providing two non-standard width traffic lanes, no shoulders and separate three metre shared walkways on both sides.
- New bridge with full width lanes at the 300,000 population horizon and with the addition of the Circle Drive South Bridge will affect traffic level of service (LOS) in the peak direction on adjacent bridges as follows:

	PM	AM
Buckwold Bridge:	LOS - C	LOS - C
Broadway Bridge:	LOS - C	LOS - C
Traffic Bridge:	LOS - C	LOS - B

- Preliminary opinion of probable cost - $ 25M

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Option 6 - New Signature Bridge With Vehicular Traffic

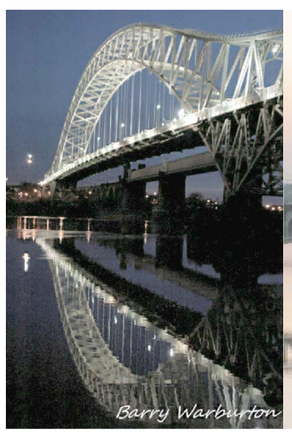
Description

- Replace with an architecturally significant structure for vehicle, pedestrians and cyclist use, "a modern signature bridge": A new design providing two standard width traffic lanes and three metre shared walkways on both sides.

- New bridge with full width lanes at the 300,000 population horizon and with the addition of the Circle Drive South Bridge will affect traffic level of service (LOS) in the peak direction on adjacent bridges as follows:

	PM	AM
Buckwold Bridge:	LOS - C	LOS - C
Broadway Bridge:	LOS - C	LOS - C
Traffic Bridge:	LOS - C	LOS - B

- Preliminary opinion of probable cost - $ 60M

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Instructions for

Comment Boards

This is your opportunity to present your own thoughts and opinions in a manner that will generate open and spontaneous discussions related to the options presented and the goals that are important to the community.

Please take a piece of paper and write your comments or concerns in the available space, then affix paper to the board which relates best to your comment.

Your input is greatly appreciated!

Which option do you like the best and why?

Please leave your comments.

What option do you like the least & why?

Please leave your comments.

Are there any improvements or modifications to any of the options that would better serve the needs of the public?

Please leave your comments.

What elements of the bridge are most important to you?

Please leave your comments.

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Thank You for Coming!

Thank you for attending today's information meeting for The Traffic Bridge Study.

All information provided at this open house can be found on the City of Saskatoon's website at www.saskatoon.ca. A link will be provided to a comment form that can be used by the public to submit comments to the project team, as well as to an online forum related to The Traffic Bridge Study.

If you would like additional information regarding the study please leave your name and contact information and a member of the project team will contact you directly to discuss the project.

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