



Governance and Priorities Committee Report

Date: April 16, 2014 **From:** Brad Dellebuur, Manager, Transportation
John Sturdy, Assistant Director Engineering

Subject: Project Update for Fire Station #1 and Point Ellice Bridge

Summary

The purpose of this memo is to provide an update to Council on the current status of work related to Fire Station #1 and the Point Ellice Bridge.

Background

On November 14, 2013, GPC received update reports on the status of projects related to Fire Station #1, Point Ellice Bridge, and the Crystal Pool and Fitness Centre. Since this update, staff have been moving ahead with Council's direction regarding these reports.

The Fire Station report identified upgrade or replacement options for further consideration. Council requested staff investigate opportunities for a mixed use development when considering options for replacement of Fire Station #1. Council also requested staff to bring back information on the distinction between the facility requirements for a neighbourhood fire station and the requirements for a station that is more a headquarters facility with an EOC. The report suggested that external consultants would be required to assist with exploration and review of these options. It also stated that an interdepartmental working team would be established.

The Point Ellice Bridge report provided information on recent condition assessments and estimated costs for rehabilitation and repairs. The report also highlighted the need to improve cycling and pedestrian facilities on the bridge and the current cost estimate to include this work with the identified rehabilitation and repairs. A consultant will be retained to further analyze the existing information and to refine the design options and cost estimates for anticipated works. Staff will utilize this information to develop options and recommendations to Council.

Fire Station #1

An interdepartmental steering committee consisting of the City Manager, Acting Fire Chief, Directors of Engineering and Public Works, Planning, Finance, and Communications, Assistant Director of Engineering and Manager of Facilities has been formed to provide overall direction to this project. The steering committee has determined the next step forward in the project will be a study to develop recommendations for location of a replacement Fire Station #1 and the programing most suited to that location. The deliverable of the study will be a Final Report.

The Final Report will consider options for construction of a replacement fire station, either on the existing site, including the potential to expand on to the adjacent site currently occupied by the Boys and Girls Club, or on a new site. The report will identify options for development partnerships and co-location of other facility users in a new fire station. Options for potential locations of a new station will be explored, as will potential temporary locations which will be necessary if the new station were to be built at the existing location. The final report will analyze all the issues and make recommendations for the most suitable location for a replacement station.

It will also provide guidance on service delivery options for functions currently located at Fire Station #1, based on best practice and space available at the proposed locations. Estimated project cost will be identified for potential options to be considered by Council.

A final draft of the Request for Proposal for the Project Planning Services is attached. This RFP will be issued next week. The cost for this study is estimated at \$30,000. A budget of \$172,000 is currently allocated in the Capital Plan for Fire Station Assessment and preliminary design. Completion of the draft report is currently anticipated by August 2014. An update report will be provided to Council when the Project Initiation Report has been received and reviewed.

Point Ellice Bridge


Following the November 21, 2013 Governance and Priorities Committee meeting, Stantec Consulting Ltd. was retained to review and analyze existing information on recommended rehabilitation/repairs and enhancement plans for the Point Ellice Bridge. The consultant was selected using the Engineering Department's Rotational Consultant Program. Used for projects where fees are less than \$30,000, the Rotational Program is a pre-qualified list of engineering consultants with documented experience and competence in performing the scope of work needed in a particular discipline. As part of their review of the previous assessments and preliminary design work done, staff requested that, if the overall project objectives could be achieved in a more efficient or economical way, the consultant was to suggest an alternate design solution to widen the road deck and accommodate bike lanes, as well as sidewalks on both sides of the bridge. In addition, the consultant has been asked to provide recommendations on construction phasing/sequencing, and update cost estimates for the anticipated works. The consulting fees for this scope of work are \$24,000.

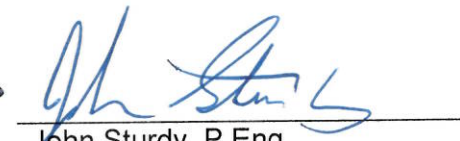
Staff met with the consultant on March 26, 2014. The consultant provided an update on their preliminary findings related to structural assessment work carried out, and also suggested minor changes to the original preliminary design plans to provide marked bike lanes and new sidewalks on the bridge. Staff is currently waiting for a draft report from the consultant – the consultant advised on April 10, 2014 that cost estimates for the proposed works are in process, but will not be completed until June, 2014. An update report will be provided to Council when the report has been received and reviewed.

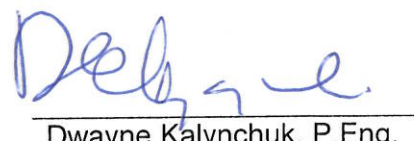
Recommendation:

That this report be received by Council for information.

Respectfully submitted,


Brad Dellebuur, Manager
Transportation


John Sturdy, P.Eng.
Assistant Director of Engineering
and Public Works


Dwayne Kalynchuk, P.Eng.
Director of Engineering
and Public Works

Report accepted and recommended by the City Manager:


Jason Johnson

Date:

April 17, 2014

THE CORPORATION OF THE CITY OF VICTORIA
REQUEST FOR PROPOSAL NO. 14-0XX
PROJECT PLANNING SERVICES – NO. 1 FIRE STATION
TERMS OF REFERENCE

PAGE 1 OF 6

Introduction

The City of Victoria (City) is requesting proposals from experienced Consultant/Consulting firm to assist the City with support management and project planning for the renovation/replacement of No.1 Fire Station, located at 1234 Yates Street, Victoria, BC.

Background

The Victoria Fire Department serves the City of Victoria with three major Fire Stations, strategically located at 1234 Yates Street (No. 1 Fire Station), 650 Michigan Street (No. 2 Fire Station) and 740 Bay Street (No. 3 Fire Station). Fire Stations 1, 2 & 3 maintain staff and equipment suitable for responding to various emergency, fire and medical situations. Operational readiness includes a fire boat serving the Inner Harbour. The Bay Street location provides a supporting function as a training facility for Victoria Fire Department personnel.

The headquarters for the City's Fire Department is located at No. 1 Fire Station. In addition to the being the administrative centre of the department, No. 1 Fire Station provides the following supporting functions:

- Fuel Station
- Apparatus and Fire Equipment Maintenance Division
- Emergency Communications and Dispatch Centre
- Fire Prevention, Investigation and Community Education Division
- Victoria Emergency Management Agency

The existing No. 1 Fire Station was constructed in 1958 and has undergone numerous renovation and expansion projects over the years as a result of the changing nature of emergency services, a growing community and advances in fire prevention and technology. In 2007, an extensive facility audit identified a considerable backlog maintenance work, including significant issues related to compliance with current building code. Existing building plans are attached as Appendix A and the facility audit and supporting documents are attached as Appendix B.

In late 2007 senior management of the department conducted an internal review of operations and identified a number of issues requiring further development and discussion relative to their existing space and the department's future needs. These reports are included as Appendix C.

In 2010, the City conducted a needs analysis and facility assessment which outlined future development options. This report is included as Appendix D.

The City of Victoria's Emergency Operations Centre (EOC) is currently housed at the Victoria Police Department Headquarters located at 850 Caledonia Avenue. As part of the facility programming work being undertaken for the Fire Department headquarters, the City is interested in including consideration of relocating the EOC at the No.1 Fire Station.

The Boys and Girls Club of Victoria has recently indicated to the City that it will not renew its lease on City owned property at 1240 Yates St. This property is directly east of No. 1 Fire Station, across Camosun Street. This property may provide opportunities that have not been fully explored for either temporary or permanent use by the Department.

Purpose

The purpose of this Request for Proposal is for the development of a Project Initiation Report for the renovation/reconstruction of the City's No.1 Fire Station using Triple Bottom Line analysis that will be presented to City Council, to assist them in their decision making process.

Scope of Work

There are a number of planning items related to this project which have not been fully explored and finalized:

1. Project Planning Workshop

With the Project Steering Committee, review the project by discussing the available data, response times and priorities, OCP development etc., gaps and level of effort to fill the gaps, milestones, tasks and communications. Allow 3 days for Workshop Planning, Delivery & Follow-up.

2. Operational Analysis

Work to date has identified that facility programming for all function proposed to be housed at No. 1 Fire Station cannot be reasonably accommodated on the existing site due to size and zoning restrictions.

With the City, review operational requirements including but not limited to Fire, EOC, and IT, to determine which functions are best suited to remain at the fire department headquarters and which (if any) functions can be relocated to alternate locations which could include 1240 Yates, No 2 or No 3 Fire Station or Public Works.

3. Co-Location/Development Partnership Investigation

Investigate potential for co-location/development partnerships or other facility uses by reviewing recent Fire Station projects in Canada and in the United States. Identify and rank potential alternate locations, including land swaps or other creative measures. Develop list of potential partners that may be possible. Work with the City to determine which, if any, may be suitable for the Fire Department's operational needs. Work with the City to contact potentially suitable partners to determine their level of interest.

4. Location Options

Work with City staff to determine the criteria requirements and preferences for characteristics of a site for a new No. 1 Fire Station, including mass studies. Compare potential alternate sites with an option to construct a new Station on existing site including identifying potential alternate location for temporary/permanent relocation of each function currently existing at No. 1 Fire Station.

5. Explore Development Potential of 1234 Yates and Adjoining Road Right-of-Way

Work with City staff to explore potential redevelopment option(s) for 1234 and 1240 Yates if the Fire Hall is relocated. Consider options for expanding the site if portions of Camosun Street are considered surplus. The options should respect the existing regulations, land use policies and design guidelines that apply to the site. Provide an analysis of the potential land value that could be derived from a realistic redevelopment scenario.

6. Analysis

Analyze all issues which pertain to the various options which include operation requirements, best practices, financial analysis and risk analysis to determine preferred options, deliverables and schedule.

7. Final Report

Develop a final report summarizing all pertinent information. The report will include but will not be limited to:

- 1 An Executive Summary
- 2 Summary of Program Planning Workshop
- 3 Summary of Operational Analysis that include:
 - Space listings by function and size
 - Relationship diagrams
- 4 Summarize all options and provide analysis of each that include:
 - Data analysis conclusions
 - Relevant facts and context
 - Define the scope of each option
 - Develop option budget and schedule
 - Develop risk analysis

Deliverables

The Consultant will present the draft report to the project team for review and comments. Based on the comments, prepare a final report within 5 business days of receiving comments from the City.

The Consultant will be expected to present the final report to the project team, the City of Victoria's senior management group and City of Victoria Council.

The Consultant will provide:

- Ten (10) hard copies (8 1/2 " x 11") of the draft report, including all conceptual diagrams;
- Ten (10) hard copies (8 1/2 " x 11") of the final report, including all conceptual diagrams;
- One (1) unbound copy of the final report suitable for reproduction purposes;
- One (1) PowerPoint presentation
- One (1) CD of the final report and PowerPoint presentation.

Reporting Structure

The project lead will report to the City's Manager – Facilities.

Project Time Line

Completion twelve (12) weeks after award.

Future Work

The City reserves the right to engage the Consultant chosen from this RFP for future work related to this project.

Appendices:

- Appendix A - Fire Station No 1 As Built Drawings
- Appendix B - Fire Department Operational Report, 2007
- Appendix C - Fire Station No 1 Needs Analysis & Facility Assessment Study, 2010

Information available for Consultant

- Feasibility Study – Johnston Davidson Study (2013)

SUSTAINABILITY

The City is committed to working towards a community that is environmentally, socially, and economically sustainable.

The Victoria Sustainability Framework (VSF) was developed in partnership with the community and sets the tone for sustainability in the City of Victoria. The VSF was adopted by Victoria City Council in 2010. It is the overarching framework for the City's highest level strategic plans, including the Official Community Plan (OCP) and the Corporate Strategic Plan (CSP).

The Victoria Sustainability Framework can be viewed on the City's website: <http://www.victoria.ca/EN/main/community/sustainability/sustainability-framework.html>

This Request for Proposal asks the Proponent to consider and provide information about their efforts that align with the City's Sustainability Commitment.

PROPOSAL SUBMISSION AND EVALUATION CRITERIA

The following items should be included in your proposal submissions and will be the basis for evaluation. Information should be provided sequentially as shown:

No assumptions should be made that information regarding the Proposer or its participants, their experience, expertise and performance on other projects is known, other than the documentation and responses submitted by the Proposer.

Cover Letter

0 Points

Your proposal should include a Cover Letter containing the following information:

- Company name, address, website address, telephone number, fax number, e-mail address and primary contact person.
- Signed by the person or persons authorized to sign on behalf of the company.
- Acknowledgment of any addendums issued for this Request for Proposal.

DRAFT

Qualifications

10 points

- Provide qualifications and resume for the Project Manager who has the overall responsibility for the project. The Project Manager should designate the backup person to act on their behalf during any absences.
- Identify the project team, including their expertise and qualifications as applied to this project; a description of their experience with similar projects; their roles and the percent of their time devoted to such a project.

Knowledge and Experience

20 points

- The proposal shall demonstrate the knowledge and experience of the team that is necessary to complete the work. Teams must demonstrate they have expertise and experience in projects of similar scope, size and complexity and are familiar with challenges of the project including working with Municipal Government.
- Provide examples of similar projects that demonstrate the project team's skill and abilities to complete the project objectives.
- Provide a minimum of three (3) references from clients that the team has served, highlighting **similar** previous experience.

Project Understanding and Innovation

20 points

- Proponents shall outline an approach to the undertaking of the project reflecting a clear understanding of the Scope of Work.
- Demonstrate your understanding of the project by describing key issues and potential resolutions.
- Outline your abilities to use creative solutions, innovations, methodology or other traits that will allow your firm to successfully complete this project.

Methodology and Work Plan

25 points

- Proponents should provide their methodology and work plan to achieve the program objectives and timelines.
- Provide cost control procedures and the Proponent's method for monitoring the project timeframe, quality of workmanship and budget.

Sustainability

5 Points

- Provide information on your company's internal environmental and social programs, policies, procedures and accreditation.
- Suggest innovative ideas and/or programs that are aligned with the City's Sustainability Commitment, in performing the proposed Project Methodology.

Fee Proposal

20 points

Proponents should provide a fee proposal, preferably in an Excel styled spreadsheet, including a detailed explanation of the makeup of the total cost for this project including:

- breakdown of project tasks, personnel responsible, number of hours, total number of staff hours, hourly rates and total proposal costs;
- submit a schedule of hourly rates should additional services be required;
- list of expected expenses, disbursements and any other probable costs; and
- all applicable taxes.

The Evaluation Committee may apply the evaluation criteria on a comparative basis, evaluating the proposals by comparing one proponent's proposal to another proponent's proposal. The Evaluation Committee will not be obligated to select the proposal that offers the lowest price or cost or any proposal at all.

The weighting listed above with the evaluation criteria indicate the relative weighting anticipated by the City and is shown to give general guidance to proponents in the preparation of proposals. The evaluation criteria will be applied to all proposals fairly and without bias to any proponent or Proposal and the same criteria and weightings will be applied to all proposals. However, the Evaluation Committee is not obligated to apply the weightings strictly and is not obligated to select the proposal that receives the highest score.

The Evaluation Committee reserves the right to not complete a detailed evaluation of a proposal if the Evaluation Committee concludes, having undertaken a preliminary review of the proposal, that the proponent or proposal as compared to all the proposals is not in contention to be the selected proposal.

MINUTES OF THE
SPECIAL GOVERNANCE & PRIORITIES COMMITTEE MEETING
HELD THURSDAY, NOVEMBER 14, 2013, 9:00 A.M.

1. THE CHAIR CALLED THE MEETING TO ORDER AT 9:03 A.M.

Committee Members Present: Acting Mayor Coleman in the Chair;
Councillors Gudgeon, Helps, Isitt, Madoff,
Thornton-Joe and Young.

Absent: Mayor Fortin, Councillor Alto

Staff Present: J. Jenkyns – Acting City Manager; R.
Woodland – Director of Legislative &
Regulatory Services; J. Appleby – Recording
Secretary.

**Staff Present for a Portion
of the Meeting:** P. Bruce – Acting Fire Chief; K. Friars –
Director of Parks, Recreation & Culture; K.
Hamilton – Director of Communications and
Civic Engagement; D. Kalynchuk – Director of
Engineering and Public Works; B. Warner –
Director of Finance; D. Day - Director of
Sustainable Planning and Community
Development

2. APPROVAL OF THE AGENDA

Action: Councillor Helps moved that the Agenda of the November 14, 2013, Special
Governance and Priorities Committee meeting be approved.

CARRIED UNANIMOUSLY 13/GPC585

3. WORKSHOP

Capital Plan Funding

Committee received a report dated October 31, 2013, from the Acting City Manager that provided context on Capital Priorities. Each year the City of Victoria invests \$30-35 million in capital projects to maintain and upgrade City infrastructure. Regular assessment of all City assets, including facilities, roads, underground utilities and bridges, is completed to identify where future investment is needed and funding strategies are developed.

On October 3, 2013, City Council was provided a comprehensive update on the 2012 - 2032 Capital Plan. On October 10, 2013, Council endorsed the following motions:

That Council:

1. Endorse the following funding strategies for the future option for the Crystal Pool and Fitness Centre and the future option for Fire Hall # 1 (amounts to be determined once decisions on options have been made):
 - a. Internal borrowing from the debt Reduction Reserve
 - b. Grants and partnerships that are consistent with the public ownership and operation of a pool and fitness centre in Victoria and consistent with the Council resolution of October 27, 2011.
2. Endorse the following funding strategies for the Bay Street Bridge Rehabilitation (amounts to be determined once decision on option has been made):
 - a. 2013-2032 Capital Plan existing funding in years 2015 and 2016
 - b. Reallocate funding from existing capital budgets
 - c. Grants

The workshop was scheduled to provide the context for capital investment for these projects based on additional information and staff recommendations.

The City is currently awaiting information on the Build Canada Grants which provides opportunities for these capital projects. There are three projects that require funding outside of the approved capital plan:

- Fire Hall #1
- Point Ellice Bridge (Bay Street Bridge)
- Crystal Pool and Fitness Centre

To foster a greater understanding around the linkages between Capital Projects, a workshop on the 20 Year Capital Plan is scheduled to be held in December to highlight the investments planned for 2014-2015 in the Capital Budget and any impacts of reallocating capital budget funding resources for future options. A detailed report on funding Capital Projects will be prepared in anticipation of that Council Workshop.

The report outlined all funding sources including those that are restricted and less restricted. As options move forward it will be critical that Council understand where reallocation is possible and what the impact of reallocation or reducing the Capital Budget is. Staff recommend that the priority for investment be placed on the Point Ellice Bridge and Fire Hall #1 and that the Crystal Pool be maintained to continue operations.

1. Point Ellice Bridge – Condition Assessment Highlights / Rehabilitation / Enhancement

Committee received a report dated October 31, 2013 from Engineering and Public Works regarding the Point Ellice Bridge – Condition Assessment Highlights / Rehabilitation / Enhancement. The most recent condition assessment determined that the Point Ellice Bridge is in poor to fair condition. The estimated cost of repairs, deck replacement and repainting of the existing structure would be +/- \$11 million. The estimated cost to address the maintenance-related repairs, widen the road deck to accommodate bike lanes, and provide sidewalks on both sides of the structure is +/- \$12.2 million. Both estimates require further analysis and are not

considered complete project costs. Actual project costs could be significantly higher. Staff anticipate updated estimates will be available in early 2014.

The existing Capital Budget has \$8 million allocated to the Point Ellice Bridge project - \$3 million in 2015, and \$5 million in 2016. Additional capital funding could be re-allocated to the Bridge Project, and grant opportunities would also be pursued to assist with funding this project, including the next allocation of Gas Tax Funding for the Capital Regional District.

Staff will be retaining a consulting team to further analyze the existing information on recommended rehabilitation/repairs and enhancement plans for the Point Ellice Bridge. The consultant will refine the existing estimates for the anticipated works, which will allow staff to develop options and recommendations for Council in conjunction with the other Capital priorities. Grant programs will be pursued to assist with this project. Staff will report back to Council once the refined estimates are developed.

Committee discussed:

- Immediate condition concerns and how they have been addressed.
- How the cycling and pedestrian walkways will fit into the Cycling Master Plan.
- The bridge being a critical link to Victoria West and if it has been seismically upgraded.

2. Developing Options for Fire Hall # 1 Upgrade / Replacement

Committee received a report dated November 4, 2013 from Engineering and Public Works regarding Developing Options for Fire Hall # 1 Upgrade / Replacement. The report outlined plans to develop options for the upgrade or replacement of Fire Hall # 1 and to position the City to apply for senior level grant programs expected in 2014.

Fire Hall # 1 was built in 1959 and serves as the headquarters for the Victoria Fire Department administration, the Victoria Emergency Management Agency and Emergency Social Services, fire suppression, mechanical division, fire prevention and dispatch.

There are known issues with the physical condition of the building and major building systems, and issues of significance have been documented in a number of reports over recent years. There are several examples of where the building itself and major building systems do not appear to be in compliance with current Building Code, including seismic resilience, health and safety and fire separation. In addition, the building is not designed to accommodate modern day fire apparatus, and both the building and the current apparatus have been modified to accommodate the current equipment. This will not be an option for new, larger equipment purchased in the future.

Looking to the future, decisions will need to be made on whether to upgrade or replace the facility to withstand seismic activity, address building code issues,

accommodate future fire apparatus and meet both the current and future operational needs of the department, including consideration of the Emergency Operations Centre.

Any upgrade or replacement will require several million dollars in capital investment. Council has endorsed a funding allocation that future options be funded from internal borrowing, grants and/or partnerships.

In anticipation of pursuing infrastructure grants expected to be announced by the federal and provincial governments in the coming months, work will be completed to develop options for Council consideration and subsequent application for grants. At this stage no options are being precluded. It is felt that due to the essential service the fire department provides in the event of an emergency the status quo is not a viable option for the long term.

Based on current information, there are four options for further consideration and the status quo would remain an option.

The four options are:

- Seismic upgrade of the existing building to post disaster and current Building Code Standards
- Replacement of the existing building on the existing site, keeping a small component that is designed to post disaster seismic standards
- Construction of a new building on the existing site; and
- Construction of a new building on a new site.

Applications for senior level grant programs require submittal of preliminary designs and full project costs, whether it is for upgrading or replacement. Depending on the grant program criteria and the grants that might be available for various options, it is advisable at this time to complete further work to inform all options for Council consideration.

Further work will commence immediately to confirm departmental operational needs and options, determine the feasibility of options for Fire Hall #1, and an inter-departmental working team will prepare recommendations on all options for Council consideration. Assistance from external consultants will be required and funding is available within the 2014 Facilities Capital Budget for this work. Staff expect to report back in January 2014 on progress to date.

Committee discussed:

- The building no longer meets current operational needs in terms of space and function
- The building could fail in an earthquake and requires upgrades to meet Building Code and health and safety standards.
- The vehicle bays are undersized.
- The Emergency Operations Centre should be considered in future options.
- If a new space could accommodate a mixed use such as a library, housing or the Emergency Operations Centre and should be contingent on the siting of the fire hall.

Action: Councillor Madoff moved that Committee recommends that Council in considering the replacement of Fire Hall #1 look at opportunities for a mixed use development.

CARRIED UNANIMOUSLY 13/GPC586

Action: Councillor Isitt moved that staff bring back information on the distinction between the facility requirements for a neighbourhood fire hall and the requirements for a hall that is more a headquarters facility with Emergency Operation Centre (EOC) functions.

CARRIED UNANIMOUSLY 13/GPC587

Action: Councillor Helps moved that Committee receive the following reports:

- Point Ellice Bridge – Condition Assessment Highlights / Rehabilitation / Enhancement
- Developing Options for Fire Hall # 1 Upgrade / Replacement

CARRIED UNANIMOUSLY 13/GPC588

3. Revised Strategy for the future of Crystal Pool and Fitness Centre

Committee received a report dated November 7, 2013 from Parks, Recreation and Culture regarding a revised strategy for the future of Crystal Pool and Fitness Centre.

The report sought Council's approval for a revised approach of investing into Crystal Pool and Fitness Centre. In June 2013, a Project Charter was approved for "Developing Options for the Future of Crystal Pool and Fitness Centre". The intent of the Charter, through gathering technical and public input, was to develop a variety of options for Council to consider for the future of the facility.

Since the Project Charter was approved, Council has had further discussion regarding capital priorities in the City. Additional detail was requested about the specific projects and further work indicates that it is premature to explore major expansion or new facility options for the Crystal Pool and Fitness Centre, until estimates are refined for the Point Ellice Bridge and Fire Hall # 1 and grant opportunities are known.

As any major expansion or replacement of the facility will require City funding, such as internal borrowing, it is essential that the other two project funding strategies be confirmed to determine what funding sources might remain. At that time further exploration about future options could be completed.

Annual capital investment will continue to be made in the facility to address the items of highest priority in the assessment of the pool. There is an on-going risk that the failure of a major system at Crystal Pool and Fitness Centre could result in the need for unscheduled repairs, shutdowns, or closure. Risks of closure can be

further reduced through planned shutdowns and investment into the systems or structures that are most at risk. Shutdowns could be longer than have been experienced in the past.

The capital funds identified for the Crystal Pool and Fitness Centre will be realigned to allow for the repair/replacement of the major systems and other components of the facility that are at most risk of failure. The realignment of funding is dependent on the implementation of the planned funding increases already incorporated into the 2013-2032 Capital Plan.

The revised approach to investment in the Crystal Pool is aimed at keeping the existing facility open and operating until the City is in a position to explore future options. It is not designed to enhance or expand the services available at the facility or eliminate the risk of a major system failure. It does take into account the existing financial pressures and work will continue to complete the situational assessment that was commenced as part of the project charter.

Action: Councillor Helps moved that Committee recommends that Council set aside the Project Charter for developing options for the future of the Crystal Pool and Fitness Centre until detailed information on Fire Hall #1 and the Point Ellice Bridge can be provided to the public as part of the engagement process.

Committee discussed:

- The Crystal Pool is an important asset to the community. If we are going to ask the public what we are going to do with it we need to provide the community information about all of capital infrastructure requirements.
- At this time Council does not have enough detailed information on how much the fire hall and bridge will cost. In 2014 Council will be receiving detailed information and it would be appropriate to consider the options for the pool at that time.

Councillor Isitt proposed the following amendment:

Amendment: Councillor Isitt moved that Committee recommends that Council set aside the Project Charter for developing options for the future of Crystal Pool and Fitness Centre until ~~detailed~~ **financial** information on Fire Hall #1 and the Point Ellice Bridge can be provided to the public as part of the engagement process.

Committee discussed the amendment as follows:

- The risk would be that there would be a delay in the decision making for a year or more. The prudent way to manage this asset is to plan for something, being proactive instead of being reactive and risk losing the facility. The public does not need to know the details such as who the potential contractor of the bridge would be, but a ball park figure of what the financial implications are to refurbish or rebuild. Committees need more financial information.
- The public needs to be informed of the financial implications and a positive dialogue is important.

- It would be helpful to have a list of all the maintenance that has been done to the pool on our website for the public to understand that a significant amount of money has been invested into the existing facility.
- Should the pool be closed for an extended period of time, facilities in the surrounding municipalities have typically been cooperative in honouring passes.

On the amendment:
FAILED 13/GPC589

For: Councillor Gudgeon and Isitt
Against: Councillor Coleman, Helps, Madoff, Thornton-Joe and Young

On the main motion
CARRIED 13/GPC590

For: Councillor Coleman, Gudgeon, Helps, Madoff, Thornton-Joe and Young
Against: Councillor Isitt

Summary of next steps:

- Complete the necessary work to pursue grant opportunities for Fire Hall #1 and the Point Ellice Bridge.
- Staff review of the capital investment strategy for Crystal Pool and Fitness Centre to minimize risks and keep the facility open and operational.
- Schedule a capital workshop for December to outline 2014 capital program details.
- It is recommended that Council tour Fire Hall #1 and Point Ellice Bridge to better understand their condition and needs.
- Prepare communications to raise awareness and understanding of the City's capital priorities and funding strategies and the 2014 operating and capital investments.
- Report back to Council in January 2014 on a needs analysis for Fire Hall #1 and full project estimates for the Point Ellice Bridge options.

Action: Councillor Isitt moved that Committee recommends that Council be provided with a tour of the Crystal Pool, Fire Hall #1, and the Point Ellice Bridge to further understand their condition and needs.
CARRIED UNANIMOUSLY 13/GPC591

4. ADJOURNMENT

Action: Councillor Helps moved that Committee adjourn the Special meeting of November 14, 2013 at 10:15 a.m.

CARRIED UNANIMOUSLY 13/GPC592

Acting Mayor Coleman, Chair



Governance and Priorities Committee Report

Date: November 4, 2013 **From:** Paul Bruce, Acting Fire Chief
John Sturdy, Assistant Director Engineering

Subject: Developing Options for Fire Hall #1 Upgrade/Replacement

Executive Summary

This report is to update Council on plans to develop options for the upgrade or replacement of Fire Hall #1 and to position City to apply for senior level grant programs expected in 2014.

Fire Hall #1, located at 1234 Yates Street, was built in 1959 and serves as the headquarters for the Victoria Fire Department administration, the Victoria Emergency Management Agency and Emergency Social Services, fire suppression, mechanical division, fire prevention and dispatch.

There are known issues with the physical condition of the building and major building systems, and issues of significance have been documented in a number of reports over recent years. There are several examples of where the building itself and major building systems do not appear to be in compliance with current Building Code, including seismic resilience, health and safety and fire separation. In addition, the building is not designed to accommodate modern day fire apparatus, and both the building and the current apparatus have been modified to accommodate the current equipment. This will not be an option for future equipment.

Looking to the future, decisions will need to be made on whether to upgrade or replace the facility to withstand seismic activity, address building code issues, accommodate future fire apparatus and meet both the current and future operational needs of the department, including consideration of the Emergency Operations Centre.

Any upgrade or replacement of the facility will require several million dollars in capital investment. Council has endorsed a funding allocation that future options be funded from internal borrowing, grants and/or partnerships.

In anticipation of pursuing infrastructure grants expected to be announced by the federal and provincial governments in the coming months, work will be completed to develop options for Council consideration and subsequent application for grants. At this stage no options are being precluded, however, it is felt that due to the essential service the fire department provides in the event of an emergency the status quo is not a viable option for the long term.

Based on current information, there are four options for further consideration and the status quo would remain an option. The four options are:

- 1) seismic upgrade of the existing building to post disaster and current Building Code standards;
- 2) replacement of the existing building on the existing site, keeping a small component that is designed to post disaster seismic standards;
- 3) construction of a new building on the existing site; and
- 4) construction of a new building on a new site.

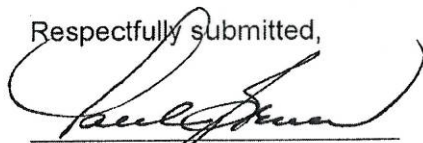
Applications for senior level grant programs require submittal of preliminary designs and full project costs, whether it is for upgrading or replacement. Depending on the grant program criteria and the grants that might be available for various options, it is advisable at this time to complete further work to inform all options for Council consideration.

Further work will commence immediately to confirm departmental operational needs and options, determine the feasibility of options for a Fire Hall #1, and an inter-departmental working team will prepare recommendations on all options for Council consideration. Assistance from external consultants will be required and funding is available within the 2014 Facilities Capital budget for this work. Staff expect to report back in January 2014 on progress to date.

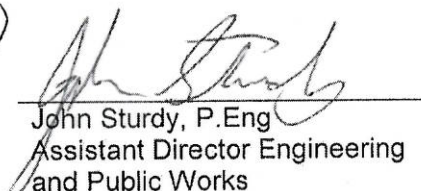
Recommendations

That Council receive this report for information.

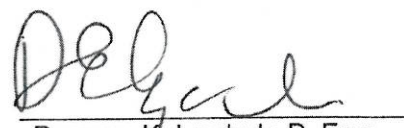
Respectfully submitted,



Paul Bruce
Acting Fire Chief




John Sturdy, P.Eng
Assistant Director Engineering
and Public Works



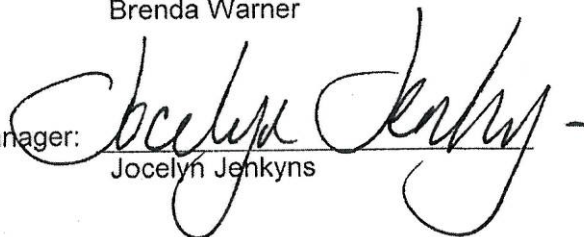
Dwayne Kalynchuk, P. Eng.
Director of Engineering and
Public Works

Report endorsed by the Director of Finance:



Brenda Warner

Report accepted and recommended by the Acting City Manager:



Jocelyn Jenkyns

Purpose

This report is to update Council on plans to develop options for the upgrade or replacement of Fire Hall #1 and to position the City to apply for senior level grant programs expected in 2014.

Background

Fire Hall #1 has known issues with the physical condition of the building and major building systems, and issues of significance have been documented in a number of reports over recent years. There are several noted examples of where the building and major building systems do not appear to be in compliance with current Building Code, including health and safety, seismic and fire separation. In addition, there are significant operational limitations to the current facility that must be deliberated in consideration of any major capital investment.

- There is on-going risk with regard to the seismic capacity of the building. The configuration of the building is such that the upper floor and roof are not connected suitably to the exterior walls and could deform in a seismic event. This places the building at risk operationally should a seismic event occur, as apparatus and emergency responders would likely be prevented from exiting the building.
- The existing apparatus bays are far below current design standards for width, height and door size to a point where the efficiency and response ability are compromised. Standard apparatus will not fit into the bays. Recent purchases have required modifications to both the building and the apparatus to allow them to fit. No further modifications can be made to the building, and apparatus can no longer be purchased that can be modified to fit, therefore, future apparatus will not fit into the building.
- The 1959 building is much smaller than what is needed for optimal operations. The Fire Department continues to adapt operations to work within the space available.
- Should any consideration of a new building or expansion of building occur, it is necessary to consider the needs of the Victoria Emergency Operations Centre (EOC). The existing EOC is currently housed in the Police Station and is significantly undersized for a functional EOC and does not meet typical standards to be effective in an emergency. Any new EOC must be operational after a significant seismic event and therefore should be considered in development of options.

Options:

Based on analysis and study to date, four viable alternatives for upgrade or replacement of the Fire Hall exist:

1. seismic upgrade of the existing building to post disaster and current Building Code standards;
2. replacement of the existing building on the existing site, keeping a small component that was designed to post disaster seismic standards when built;
3. construction of a new building on the existing site; and
4. construction of a new building on a new site.

This does not preclude looking at options that includes the use of other facilities for meeting some operational needs.

Status Quo (not recommended)

In addition to the four options noted above, there is also the alternative to neither upgrade nor replace the existing building at this time. The significant risk to this approach is the potential for an earthquake which could render the building unusable and impact the ability of the fire apparatus and firefighters to exit the building. This approach would also limit the ability to address some of the existing Building Code compliance and health and safety risks including fire separation, exiting and use of space.

It will also mean that in future when time to replace the fire apparatus it will not fit within the building.

Under this alternative, existing Facilities funding would be used to continue to maintain the building. Capital funding of potential projects at Fire Hall #1 would follow standard Facilities practice of allocating funding based on prioritization of projects when compared to all other City buildings. Projects that mitigate existing Building Code compliance issues or that address other health and safety concerns would be given the highest priority at this facility.

Financial Context

Capital funding is not available within the current Capital Plan, to fully fund seismic upgrade or replacement of the existing fire hall. The resolution passed by Council at a recent meeting, with respect to the fire hall was:

That Council endorse the following funding strategies for the future option for Fire Hall #1 (amounts to be determined once decisions on options have been made):

- a. Internal borrowing from the Debt Reduction Reserve
- b. Grants and partnerships

The Federal Government has announced a New Build Canada Fund that will provide grant opportunities in 2014. Details of the grants are still being finalized by the Federal and Provincial Governments. It is anticipated that in 2014 an announcement will be made regarding the Communities Component of the Fund. The Communities Component has in the past provided projects with 1/3 funding from the Provincial Government and 1/3 funding from the Federal Government. New fire halls or major retrofits may be included in this program, as they have been included in past Building Canada grant programs.

Next Steps:

Further work will commence immediately to confirm departmental operational needs and options, determine the feasibility of options for Fire Hall #1, and an inter-departmental working team will prepare recommendations on all options for Council consideration. Assistance from external consultants will be required and funding is available within the 2014 Facilities Capital budget for this work. Staff expect to report back in January 2014 on progress to date.

Recommendations

That Council receive this report for information.



Governance and Priorities Committee Report

Date: October 31, 2013 **From:** Brad Dellebuur, Manager of Transportation
Subject: Point Ellice Bridge – Condition Assessment Highlights/Rehabilitation/Enhancement

Executive Summary

The Point Ellice Bridge crosses Victoria's Upper Harbour, connecting downtown Victoria with the Victoria West neighbourhood and the adjacent Township of Esquimalt.

The most recent condition assessment, carried out in late 2012/early 2013, determined the bridge to be in poor to fair condition. The estimated cost of repairs, deck replacement and repainting of the existing structure would be +/- \$11M. There is also an identified need to improve cycling and pedestrian facilities on the bridge. The estimated cost to address the maintenance-related repairs, widen the road deck to accommodate bike lanes, and provide sidewalks on both sides of the structure is +/- \$12.2M. Both estimates require further analysis, and are not considered complete project costs – actual project costs could be significantly higher. Staff anticipates updated estimates will be available in early 2014.

The existing Capital Budget has \$8M allocated to the Point Ellice Bridge project - \$3M in 2015, and \$5M in 2016. Additional capital funding could be re-allocated to the Point Ellice Bridge project, and grant opportunities would also be pursued to assist with funding this project, including the next allocation of Gas Tax Funding for the Capital Regional District.

Staff will be retaining a consulting team to further analyze the existing information on recommended rehabilitation/repairs and enhancement plans for the Point Ellice Bridge. The consultant will refine the existing estimates for the anticipated works, which will allow staff to develop options and recommendations for Council in conjunction with the other Capital priorities. Grant programs will be pursued to assist with this project. Staff will report back to Council, once the refined estimates are developed.

Recommendation:

That Council receive this report for information.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brad Dellebuur".

Brad Dellebuur
Manager, Transportation

A handwritten signature in black ink, appearing to read "Dwayne Kalynchuk".

Dwayne Kalynchuk, P. Eng
Director of Engineering

Report accepted and recommended by the Acting City Manager:

A handwritten signature in black ink, appearing to read "Jocelyn Jenkyns".

Jocelyn Jenkyns

Purpose

The purpose of this report is to update Council on the condition status of the Point Ellice Bridge, the extent and timing of planned maintenance and upgrade work, existing internal and potential external funding sources for the project, and next steps.

Background

The Point Ellice Bridge crosses Victoria's Upper Harbour, connecting downtown Victoria with the Victoria West neighbourhood and the adjacent Township of Esquimalt. The bridge is a two-lane steel structure, constructed in 1956. Aside from 2001 seismic retro-fitting work carried out to strengthen the structure, and ongoing maintenance work/repairs, no other significant work has been done to the bridge.

Issues & Analysis

City staff routinely has the Point Ellice Bridge inspected by a third party, to determine the condition of the steel structure and the concrete deck. The most recent condition assessment (Appendix A), carried out in late 2012/early 2013, determined the bridge to be in poor to fair condition, with the structural capacity of a few elements being affected by deterioration, section loss, spalling, cracking, or other deficiencies. These deteriorations have taken place over the years, despite repairs being undertaken as part of the City's routine bridge maintenance to substantially reduce water leaks on most of the joints. The most recent condition assessment estimated repair, deck replacement and repainting of the existing structure would be \$11M (Class D estimate).

In addition to ongoing upkeep of the existing structure, there is an identified need to improve cycling and pedestrian facilities on the Point Ellice Bridge. The existing road deck has insufficient width to accommodate marked bike lanes, and there is no pedestrian sidewalk on the north side of the structure. The estimated cost to address the maintenance-related repairs, widen the road deck to accommodate bike lanes, and provide sidewalks on both sides of the structure is \$12.2M (Class D estimate).

Both estimates require further analysis, and are not considered complete project costs (as an example, potentially required approach road improvements have not been included) – actual project costs could be significantly higher. Staff anticipates updated estimates will be available in early 2014.

Options & Impacts

The existing Capital Budget has \$8M allocated to the Point Ellice Bridge project - \$3M in 2015, and \$5M in 2016 (\$2M of the \$5M identified is subject to provincial or federal grant availability).

Additional capital funding could be re-allocated to the Point Ellice Bridge project, and grant opportunities would also be pursued to assist with funding this project, including the next allocation of Gas Tax Funding for the Capital Regional District. The 2011-2015 allocation of Gas Tax Funding (Regionally Significant Projects) directed \$10M to the replacement of the Craigflower Bridge in Saanich/View Royal – the rationale used to support Gas Tax funding for that project could also apply to proposed improvements for the Point Ellice Bridge.

While funding is currently identified for 2015 and 2016, work on the bridge would not begin to the completion of the Johnson Street Bridge project. Given the extent of work being proposed, it is likely the bridge would have to be closed for an extended period of time.

Next Steps

Staff will be retaining a consulting team to further analyze the existing information on recommended rehabilitation/repairs and enhancement plans for the Point Ellice Bridge. The consultant will refine the existing estimates for the anticipated works, which will allow staff to develop options and recommendations for Council in conjunction with the other Capital priorities. Grant programs will be pursued to assist with this project.

City of Victoria

Inspection & Repair Options Report

For

Point Ellice Bridge

By

Hindi Engineering Ltd.

April 2013

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1.0 Introduction

Hindi Engineering Ltd. was retained by the City of Victoria to carry out a condition visual inspection of the structural steel superstructure and the concrete deck of Point Ellice Bridge. The structure is located in Victoria, BC.

The inspection program carried out by Hindi Engineering Ltd. on February 1 to March 20, 2013, and reported herein, comprised the following actions:

- Limited Visual Inspection of the concrete deck and overlay.
- Inspection of the structural steel and bearings.

The bridge was found to be in a poor to fair condition because structural capacity of few element is affected by deterioration, section loss, spalling, cracking, or other deficiency. (see Conclusions).

No testing of the concrete deck or the steel corrosion was carried out as the objective of this inspection was to determine if the concrete deck is leaking and what impact of the leaks will have on the structure within a short period (next five years).

2.0 Bridge Description

An overview of the bridge structure is shown in Photos #1. The Point Ellice (Bay Street) Bridge is a two-lane steel structure over the Gorge in the City of Victoria. The bridge is 187m long and 10.7m wide. The total bridge width out-to-out of the concrete slab is 11.775m. The three granite masonry faced piers and abutments were built in 1902-3 to support a low span truss bridge. In 1956, the present bridge was erected on the old piers and concrete erosion at the base of the piers was repaired. Additional concrete bents were installed in the West span.

In 2001, seismic retrofitting work was carried out to strengthen the bridge.

The concrete deck, which has a 50 mm thick wearing surface, has constant thickness of 165 mm. The deck has two expansion joints located at the abutments. The deck incorporates a lateral construction (cold) joint at each floor beam with 4" rubber water-stop.

The structural steel superstructure consists of two main steel and floor beams. Each span has four stringers supported by the floor beams which are supported by the two main girders. The steel girders are supported by steel bearings on each of the concrete supports.

If the bridge is maintained properly it will have a remaining life span of about 50 years.



Photos 1

3.0 Inspection Procedure

3.1 Inspection Personnel

The field inspection was carried out by one professional engineer and one technician.

3.2 Inspection Sequence

In general, the bridge was inspected in the same sequence as the load path. The inspection started with the deck (Joints), followed by the steel superstructure components, Girders, Stringers, Floor Beams, and Bearings, and ended with the concrete substructure components.

3.3 Inspection Tools

The inspection tools used included measuring tapes, hammers, screwdrivers, scrapers and wire brushes, markers, crack comparators, flashlights, a thermometer, digital cameras, and others.

3.4 Inspection Method

The plan layout of the superstructure is shown in Sketch #1. The field investigation included the following:

3.4.1 Concrete Deck

- A limited visual inspection was made of the top and bottom deck surface.

3.4.2 Superstructure

- A limited visual inspection was carried out, including photographing of the bridge joints.
- A limited visual inspection and photographic survey of superstructure structural steel components including stringers, floor beams, girders and steel bearings. The steel members were visually inspected for local buckling, corrosion and out-of-plane distortion. For areas exhibiting significant rust scaling, scrapers were used to remove the rust from the surface to estimate the extent of corrosion.

4.0 Inspection Results

The element condition ratings used in this report are "good", "fair", "poor" and "very poor". The following guidelines are used in establishing the element's condition rating:

"Good": Normal wear or deterioration not requiring repair.

"Fair": Minor defects requiring repair.

"Poor": Structural capacity of element is affected by deterioration, section loss, spalling, cracking, or other deficiency.

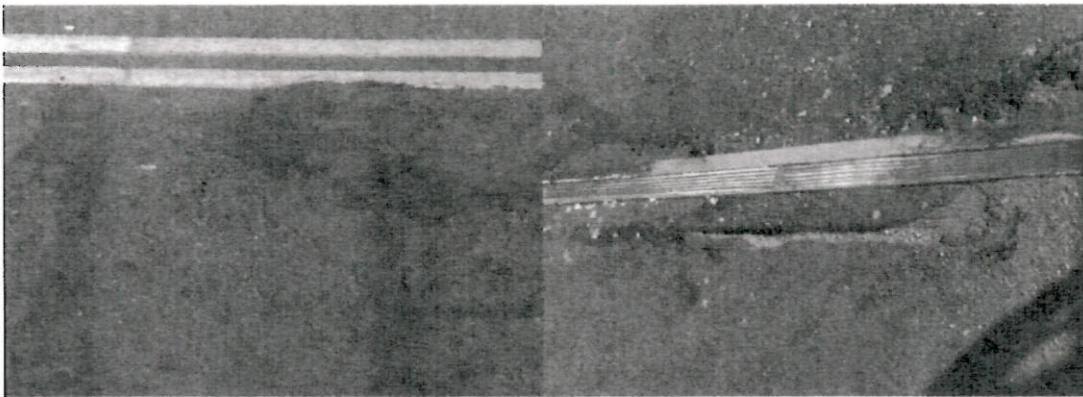
"Very Poor": Structural capacity of element is seriously affected or jeopardized by advanced deterioration, section loss, spalling, cracking, or other deficiency.

These rating are in accordance with the Bridge Inspection Manual published by the

British Columbia Ministry of Transportation. The field inspection results are as follows:

4.1 Deck & Joints

The concrete deck is covered by a 50 mm thick asphalt wearing surface that is in fair condition. The wearing surface over the concrete deck joints were recently repaired by the City staff and mostly performing well. There are some areas that need special attention, as shown.

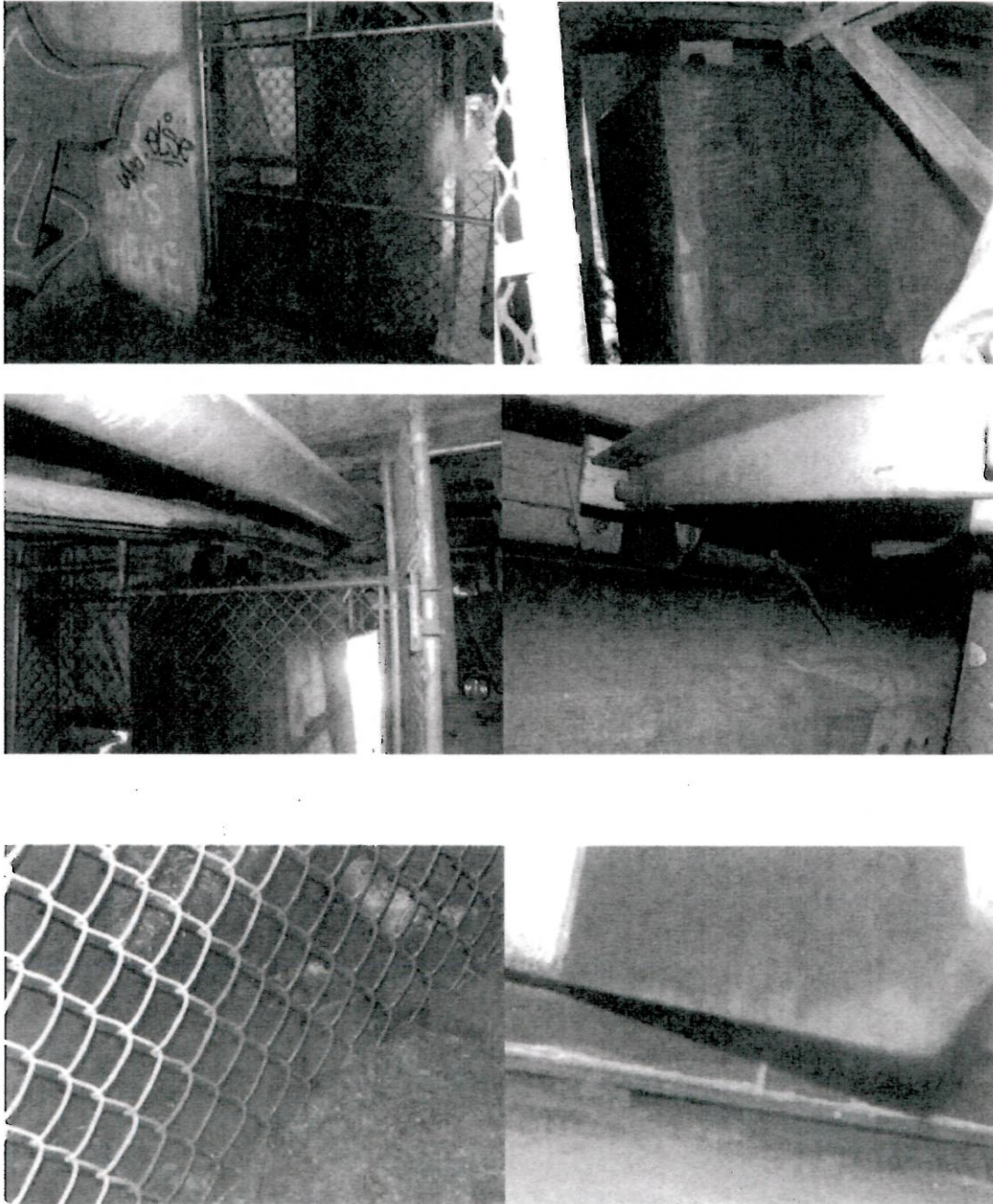


The deck drains are clogged and they need to be cleaned regularly. There were only few deck drains that are working, see below. The drain at the abutments needs to be redirected or extended to stop the water of being dumped on the concrete abutment.



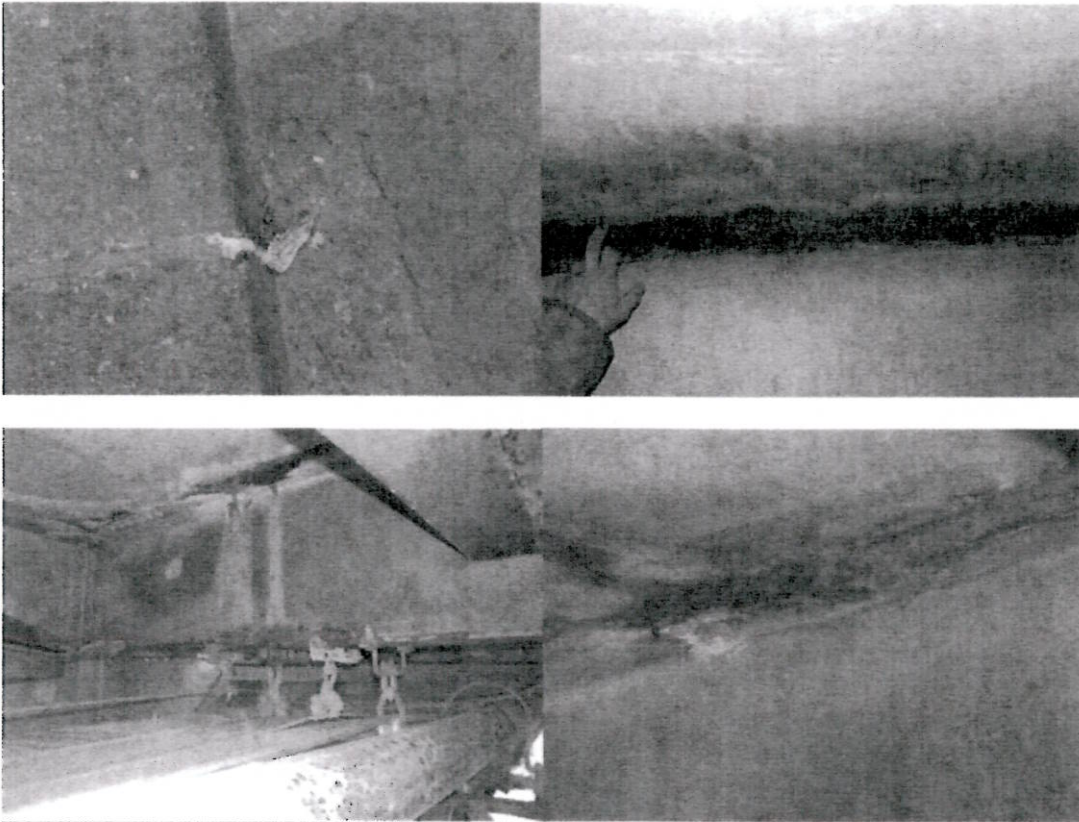
Expansion rubber joints were used in the two expansion joints at the abutments. These joints were recently replaced but they are performing poorly. Although, these types of joints are

designed as watertight, much leak is taking place, as shown.



Hindi Engineering Ltd.

The deck has a lateral construction (cold) joint at each floor beam with 4" rubber water-stop. Most of the joints are performing well but few of these joints are failing, especially the joints above Pier 1, and causing the water to leak to the steel superstructure as shown. This is causing deterioration to the concrete deck and the steel superstructure. There is concrete cracking and spalling at the leaky joints.



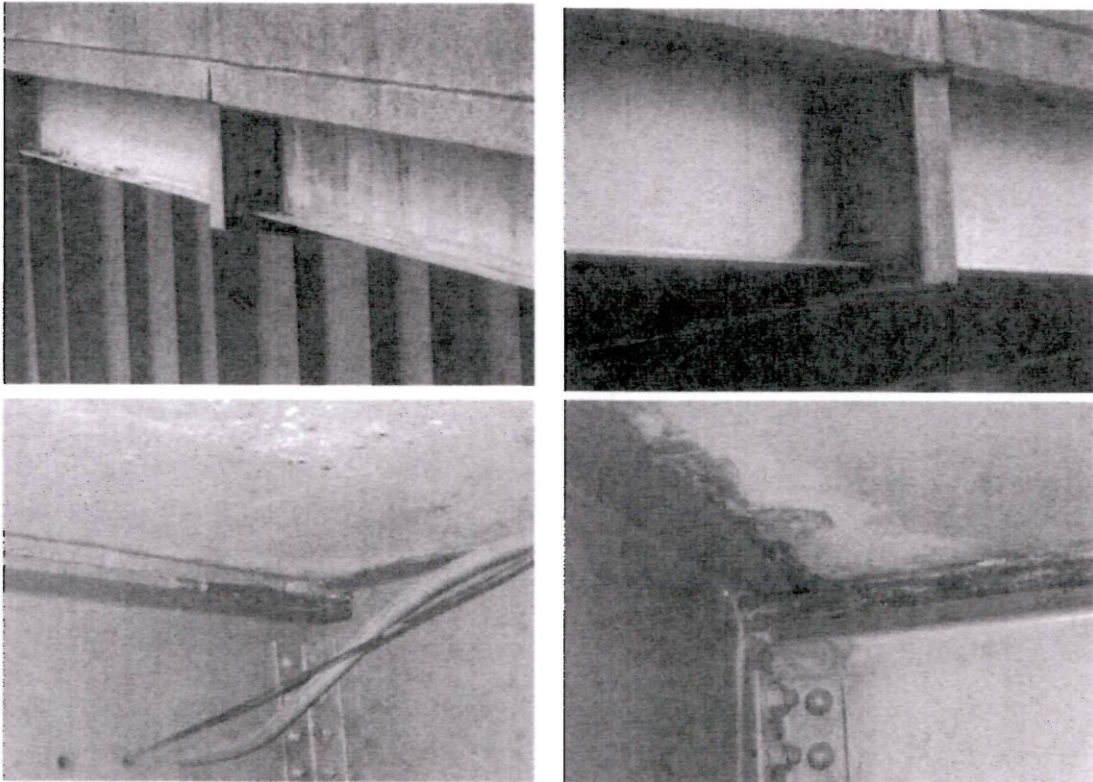
4.2 Superstructure

4.2.1 *Steel Stringers*

The steel stringers are in fair to poor condition. They have no signs of local buckling or noticeable out-of-plane distortion. Most of the outside surfaces of the exterior stringers have corrosion spots along web and bottom flanges as shown in Photos 2. Most of the stringer ends are corroded at locations close to the deck joints and at supports, as shown in Photos #2.

No fatigue cracks were found on either the steel stringers or the connections between the steel stringers and the diaphragms. However, it is usually difficult to visually detect fatigue cracks on corroded or painted steel surfaces without removing the corrosion rust or the paint. Due to the extent of the girder corrosion at the deck joint locations, it was not feasible to remove all rust or paint needed to properly inspect for fatigue cracks.

The protective system (paint) has failed at areas of corrosion.

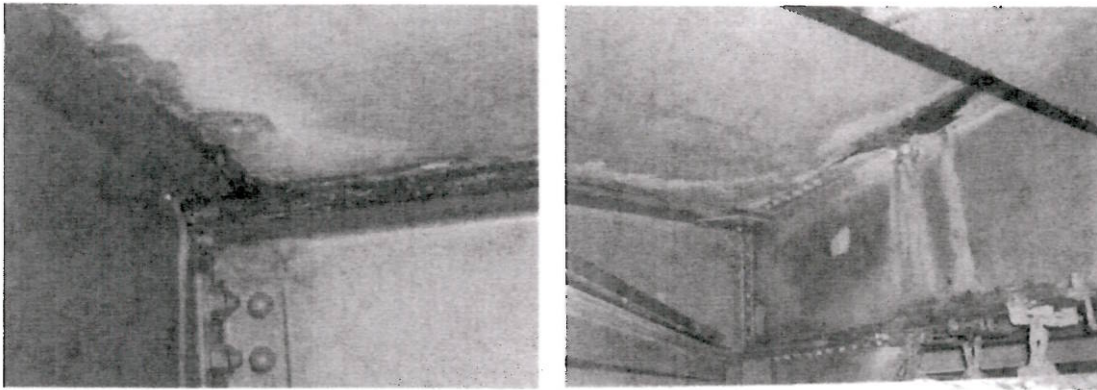


Photos 2

4.2.2 Floor Beams

Most of the floor beams are in fair condition but a few are in poor condition. They display no signs of either local buckling or noticeable out-of-plane distortion. Limited areas of surfaces of the floor beams have corrosion as shown in Photos 3. Intermediate floor beams are generally corroded under the deck cold joints. No fatigue cracks were found on the steel floor beams, either in the span or at the connections. However, as stated previously, it is usually difficult to visually detect fatigue cracks on corroded or painted steel surfaces without removing the corrosion or paint.

The protective system (paint) has failed at areas of corrosion.

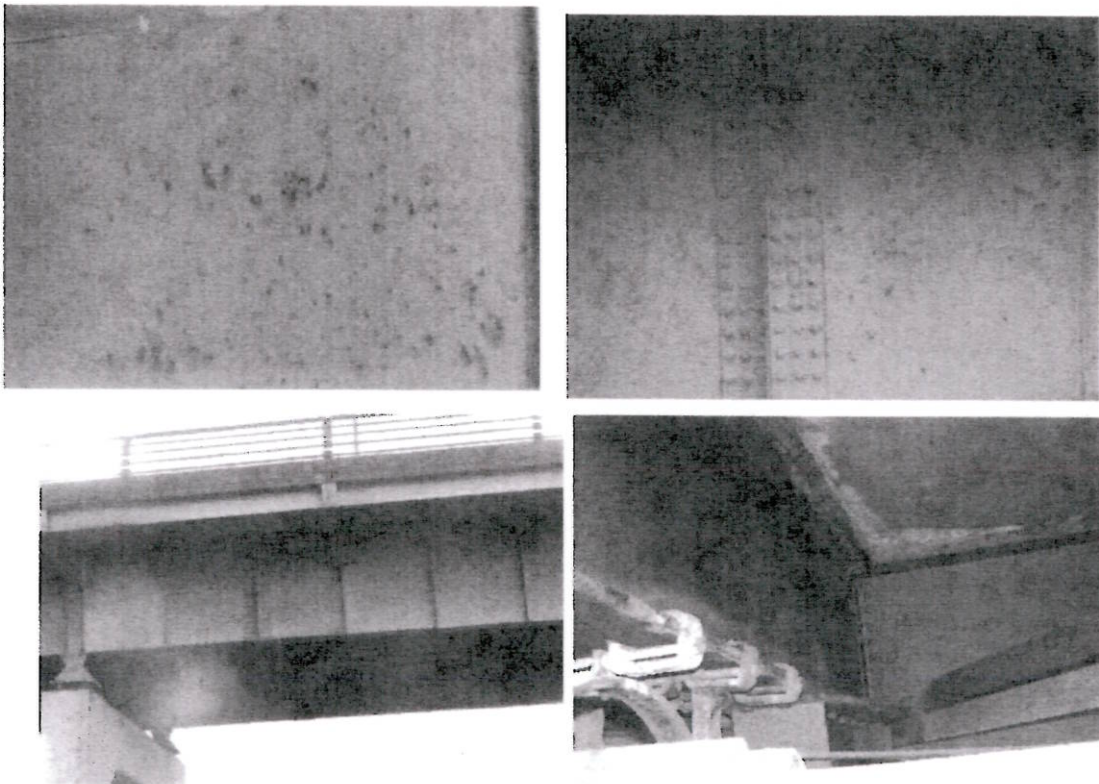


Photos 3

4.2.3 Girders

Most of the girders are in fair condition but limited areas are in poor condition. They display no signs of either local buckling or noticeable out-of-plane distortion. Some areas of surfaces of the girders have corrosion such as the top flanges at the deck cold joints and the south faces of the girders that have pitting corrosion as shown in Photos 4. No fatigue cracks were found on the steel girders, either in the span or at the connections. However, as stated previously, it is usually difficult to visually detect fatigue cracks on corroded or painted steel surfaces without removing the corrosion or paint.

The protective system (paint) has failed at areas of corrosion.



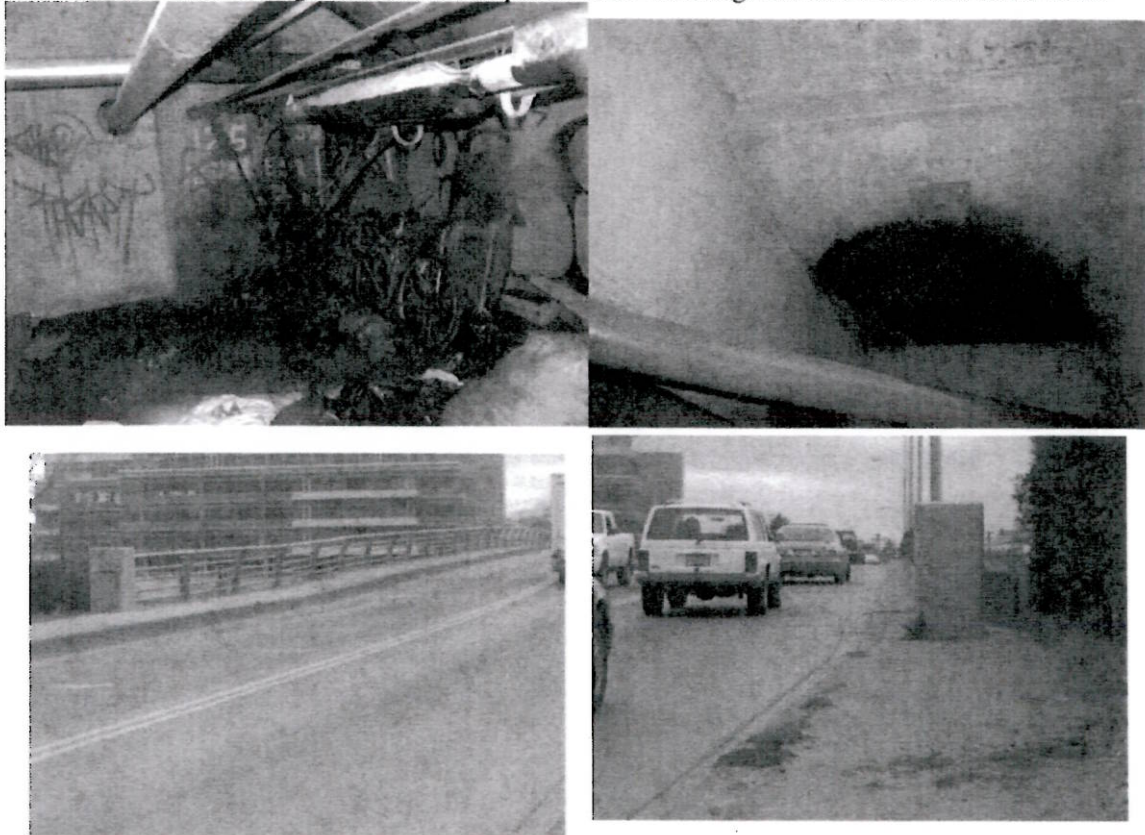
Photos 4

4.4 Substructure

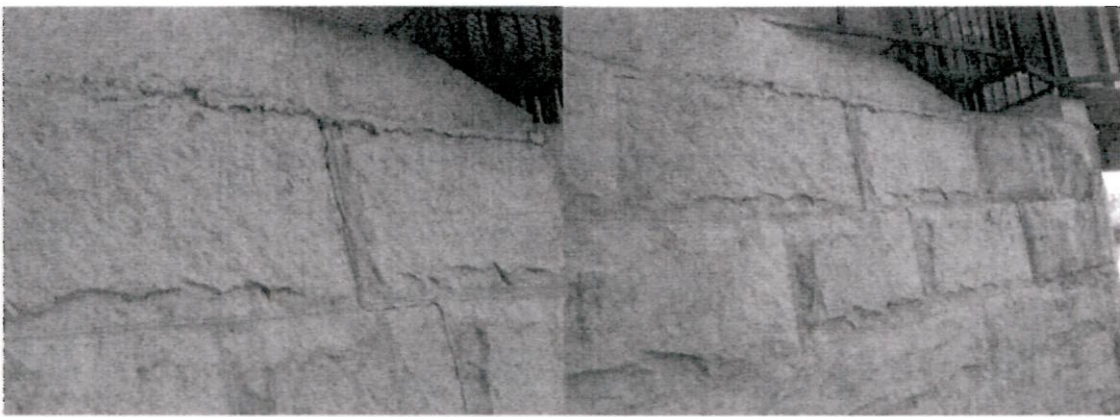
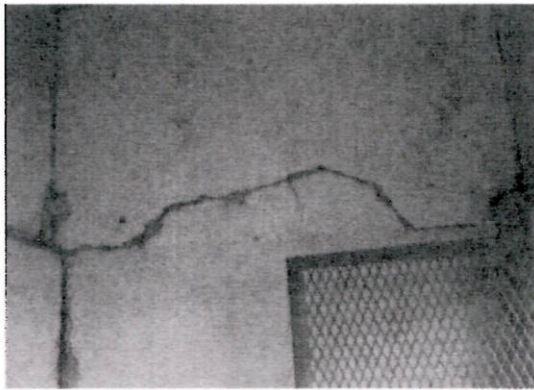
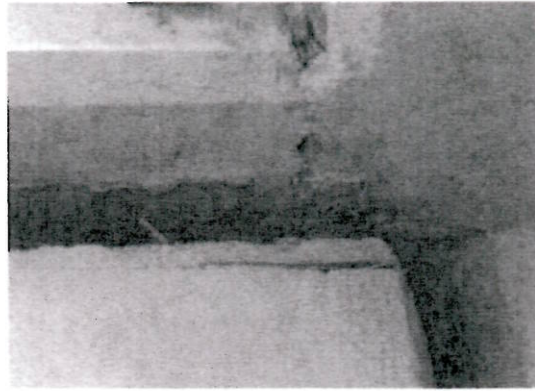
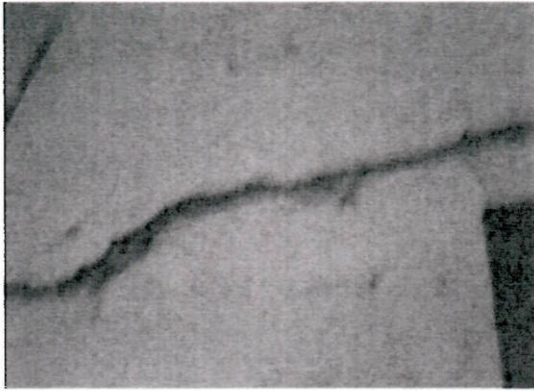
Very limited visual inspection was carried on the substructure. The visual inspection of the piers and bents was carried out from a distant since no easy access to these elements.

4.4.1 East Abutment

The east abutment is in poor condition since the abutment is settling on both south and north sides, as shown in Photos 5. Due to the settlement, the abutments is experiencing cracking and changes to the load path, as shown in Photos 6. Most of the above-noted settlement may have been caused by the water from the road through the unconnected manhole, as shown and/or from the high load of the soil piles beside the bridge on both north and south sides.



Photos 5



Photos 6

5.0 Conclusions

The bridge must be rated as being in poor condition because several components, such as stringers, floor beams and girders are in poor condition. With reference to the Bridge Inspection Manual published by the British Columbia Ministry of Transportation, "poor" is defined as a condition in which the structural capacity of elements is affected by deterioration, section loss, spalling, cracking, or other deficiency. These deteriorations have taken place over the years and the repair of the joints has reduced the water leaks substantially on most of the joints. Few joints, especially on the sidewalk, are still leaking and this problem needs to be addressed urgently. The two expansion joints, after being replaced recently, are showing major water leaks and urgently in need of repairing or replacing.

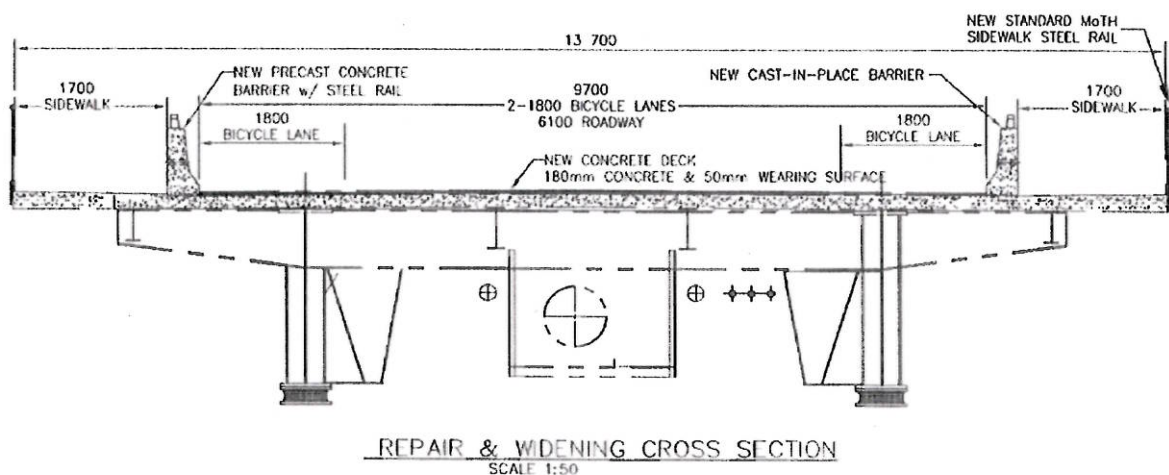
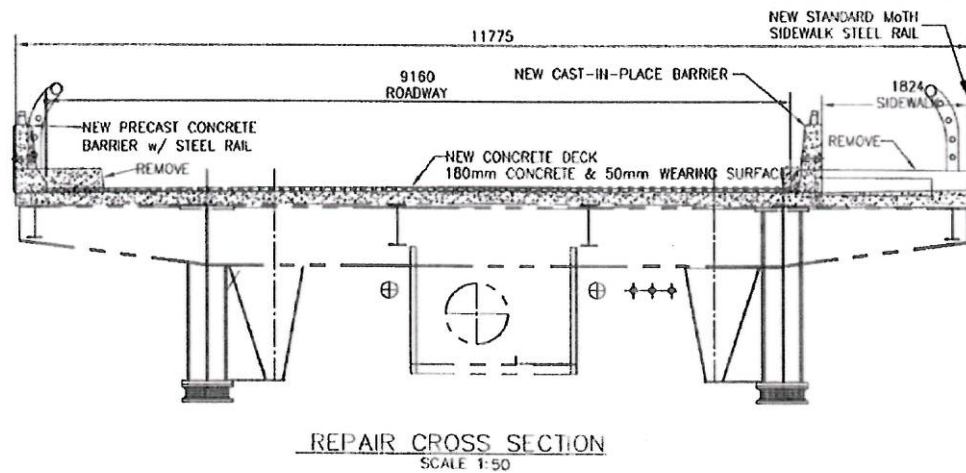
The structural steel and the concrete substructure have both been inspected for signs of deterioration from their original as-built condition. The results of our inspection are discussed in Section 4.

If the concrete deck is not to be replaced in 3 to 5 years, and the joints are leaking, the concrete on top of the cross beams may need to be made continuous and repair the top steel flanges at the same time.

6.0 Next

In light of the condition of the bridge and that the present and past water leaks have caused and is causing deterioration of the steel superstructure and concrete substructure, it is urgent that the City starts the process of repairing and/or repairing and widening the bridge.

We have carried out preliminary design of the Repair option and the Repair & Widening option, see Cross Sections below:



The City needs to secure funding for either repair or repair and widen the bridge. Within this time, the City should start the design process to get the design drawings ready when funding is available for construction. Below are the cost estimates for both the Repair Deck Replacement option and the Repair & Widening option.

REPAIR, DECK REPLACEMENT & REPAINT					
TOTAL TENDER AND ASSOCIATED CITY COST ESTIMATE					
Item#	Description of Work	Unit of Measure	Approx. Quantity	Unit Price	Extended Amount
01	SECTION 1				
01.01	City's Site Office	L.S.	100%	\$0.00	\$0.00
01.02	Mobilization	L.S.	100%	\$200,000.00	\$200,000.00
01.03	Quality Management	L.S.	100%	\$150,000.00	\$150,000.00
01.04	Traffic Management	L.S.	100%	\$300,000.00	\$300,000.00
01.05	Provisional Sum for Site Modifications	P.S.	100%	\$700,000.00	\$700,000.00
	Total Section 1				\$1,350,000.00
02	SECTION 2 - Bridge Deck				
02.01	Existing Structure Field Verification	L.S.	100%	\$50,000.00	\$50,000.00
02.02	Demolition				
	Concrete Deck	Cubic Metre	700	\$1,200.00	\$840,000.00
02.03	Formwork				
	Deck and Parapets	Square Metre	3000	\$200.00	\$600,000.00
02.04	Reinforcing Steel (Uncoated)				
	Deck and Parapets	L.S.	100%	\$200,000.00	\$200,000.00
02.05	Reinforcing Steel (Epoxy coated)				
	Deck and Parapets	L.S.	100%	\$250,000.00	\$250,000.00
02.06	Concrete				
	Deck and Parapets	Cubic Metre	510	\$700.00	\$357,000.00
02.07	Structural Steelwork				
	Supply & Install Steel Plates	L.S.	100%	\$300,000.00	\$300,000.00
	Deck Joints	L.S.	100%	\$225,000.00	\$225,000.00
	Supply & Install Pedestrian Fence	L.S.	100%	\$200,000.00	\$200,000.00
02.08	Pavement				
	50mm Wearing Surface	Square Metre	2200	\$20.00	\$44,000.00
	Total Section 2				\$3,066,000.00
	SECTION 3 - Paint				
03.01	Repaint				
	Remove Existing Paint	L.S.	1	\$1,100,000.00	\$1,100,000.00
	New Paint	L.S.	1	\$2,100,000.00	\$2,100,000.00
	Total Section 3				\$3,200,000.00
	SECTION 4 - East Abutment				
04.01	Piles & Concrete Cap Beam				
	Steel Piles	L.S.	4	\$35,000.00	\$140,000.00
	Concrete Footings	L.S.	2	\$40,000.00	\$80,000.00
	Total Section 4				\$220,000.00
	TOTAL TENDER COST (Tender Cost Estimate plus Site Occupancy(if applicable))				\$7,836,000.00
	Contingencies 3%	L.S.	1		\$ 235,080.00
	Engineering	L.S.			\$ 783,600.00
	Total Miscellaneous				\$ 3,134,400.00
	TOTAL TENDER, SITE OCCUPANCY (if applicable) AND ASSOCIATED CITY COST ESTIMATES				\$10,970,400.00

DECK REPLACEMENT, WIDENING FOR 2 BIKE LANES, 2 SIDEWALKS & REPAINT					
TOTAL TENDER AND ASSOCIATED CITY COST ESTIMATE					
Item#	Description of Work	Unit of Measure	Approx. Quantity	Unit Price	Extended Amount
01	SECTION 1				
01.01	City's Site Office	L.S.	100%	\$0.00	\$0.00
01.02	Mobilization	L.S.	100%	\$200,000.00	\$200,000.00
01.03	Quality Management	L.S.	100%	\$150,000.00	\$150,000.00
01.04	Traffic Management	L.S.	100%	\$300,000.00	\$300,000.00
01.05	Provisional Sum for Site Modifications	P.S.	100%	\$700,000.00	\$700,000.00
	Total Section 1				\$1,350,000.00
02	SECTION 2 - Bridge Deck				
02.01	Existing Structure Field Verification	L.S.	100%	\$50,000.00	\$50,000.00
02.02	Demolition				
	Concrete Deck	Cubic Metre	700	\$1,200.00	\$840,000.00
02.03	Formwork				
	Deck and Parapets	Square Metre	3600	\$250.00	\$900,000.00
02.04	Reinforcing Steel (Uncoated)				
	Deck and Parapets	L.S.	100%	\$250,000.00	\$250,000.00
02.05	Reinforcing Steel (Epoxy coated)				
	Deck and Parapets	L.S.	100%	\$300,000.00	\$300,000.00
02.06	Concrete				
	Deck and Parapets	Cubic Metre	600	\$700.00	\$420,000.00
02.07	Structural Steelwork				
	Supply & Install Steel Plates	L.S.	100%	\$500,000.00	\$500,000.00
	Deck Joints	L.S.	100%	\$250,000.00	\$250,000.00
	Supply & Install Pedestrian Fence	L.S.	100%	\$400,000.00	\$400,000.00
02.08	Pavement				
	50mm Wearing Surface	Square Metre	2200	\$20.00	\$44,000.00
	Total Section 2				\$3,954,000.00
	SECTION 3 - Paint				
03.01	Repaint				
	Remove Existing Paint	L.S.	1	\$1,100,000.00	\$1,100,000.00
	New Paint	L.S.	1	\$2,100,000.00	\$2,100,000.00
	Total Section 3				\$3,200,000.00
	SECTION 4 - East Abutment				
04.01	Piles & Concrete Cap Beam				
	Steel Piles	L.S.	4	\$35,000.00	\$140,000.00
	Concrete Footings	L.S.	2	\$40,000.00	\$80,000.00
	Total Section 4				\$220,000.00
	TOTAL TENDER COST (Tender Cost Estimate plus Site Occupancy(if applicable))				\$8,724,000.00
	Contingency (3%)	L.S.	1		\$ 2,617,200.00
	Engineering	L.S.			\$ 372,400.00
	Total Miscellaneous				\$ 3,489,600.00
	TOTAL TENDER, SITE OCCUPANCY (if applicable) AND ASSOCIATED CITY COST ESTIMATES				\$12,213,600.00

7.0 Recommendations

Given that the bridge is in poor condition, we recommend that it should be repaired, to reduce the risk of either further deterioration or failure. The order-of-magnitude estimate to fully repair the bridge is \$11 million while repairing & widening the bridge is \$12 million, see Section 6.

With specific reference to repair options, the following are our recommendations:

- Urgently repair the failed expansion joints.
- Urgently repair the failed cold joints between the concrete deck elements to waterproof these joints on top of the steel superstructure.
- Extend or redirect the deck drains at the abutments. Clean the deck drains regularly.
- Inspect the bridge every six month period to monitor the leaks, settlement of abutment and superstructure deterioration. The inspection to be done at the beginning of Fall, the beginning of the rainy season and at Spring, the heavy rainy season. After these inspections, repair the joints as needed to prevent or reduced future deterioration.
- The City needs to secure funding for either repair or repair and widen the bridge. Within this time, the City should start the design process to get the design drawings ready when funding is available for construction. The funding is for:
 1. Repair the steel superstructure. This can be done inexpensively if the bridge to be widened and the deck replaced. The repairs should include removing the existing rust, strengthen the heavily corroded areas and coat. If the deck is not to be replaced in 3 to 5 years, and the joints are leaking, the concrete on top of the cross beams may need to be made continuous and repair the top flanges at the same time.
 2. Sandblast and re-paint all deteriorated parts of the steel superstructure. This can be done inexpensively with the bridge widening and deck replacement. It is very important to notice that the bridge needs to be recoated within a maximum span of three to four years to limit the steel section losses due to corrosion, see our Painting Report dated March 2010.
 3. Repair the cracked and settled East Abutment. The settlement needs to be monitored to see if it is stopped or not. The repair procedure will depend on the result of the monitoring process. Monitoring of the settlement should be done every six months at the same time as the inspection.