

- 2. Application to alter to the Booth Street Bridge, 9 Fleet Street, a property designated under Part IV of the *Ontario Heritage Act***
- Demande visant la modification du pont de la rue Booth, au 9, rue Fleet, une propriété désignée aux termes de la partie IV de la *Loi sur le patrimoine de l'Ontario***

Committee Recommendations

That Council:

- 1. Approve the application to alter the Booth Street Bridge according to plans submitted by Parsons, dated June 9, 2020; conditional upon:**
 - Implementation of the conservation measures outlined in the Heritage Brief attached as Document 9 and detailed in the Rehabilitation Approach in Document 10;**
- 2. Delegate authority for minor design changes to the General Manager, Planning, Infrastructure and Economic Development Department; and**
- 3. Approve the issuance of the heritage permit with a five-year expiry date from the date of issuance unless otherwise extended by Council.**

Recommandations du Comité

Que le Conseil :

- 1. approuve la demande visant la modification du pont de la rue Booth, selon les plans soumis par Parsons et datés du 9 juin 2020, à la condition que :**

- **soient mises en place les mesures de conservation décrites dans les documents 9 et 10 joints en annexe, qui portent respectivement sur le patrimoine et la réfection;**
- 2. délègue les pouvoirs au directeur général de Planification, Infrastructure et Développement économique en ce qui concerne les changements mineurs de conception;**
- 3. approuve la délivrance d'un permis patrimonial qui sera valide pendant cinq ans à partir de sa date de délivrance, à moins d'une prolongation par le Conseil.**

Documentation/Documentation

1. Manager's report, Right of Way, Heritage and Urban Design Services, Planning, Infrastructure and Economic Development Department, dated July 27, 2020 (ACS2020-PIE-RHU-0016)

Rapport du Gestionnaire, Services des emprises, du patrimoine et du design urbain, Direction générale de la planification, de l'infrastructure et du développement économique, daté le 27 juillet 2020 (ACS2020-PIE-RHU-0016)
2. Extract of draft Minutes, Built Heritage Sub-Committee, August 11, 2020.

Extrait de l'ébauche du procès-verbal, Sous-comité du patrimoine bâti, le 11 août 2020.

**Built Heritage Sub-Committee
Report 14
August 26, 2020**

29

**Sous-comité du patrimoine bâti
Rapport 14
Le 26 août 2020**

**Report to
Rapport au:**

**Built Heritage Sub-Committee / Sous-comité du patrimoine bâti
August 11, 2020 / 11 août 2020**

and / et

**and Council / et au Conseil
August 26, 2020 / 26 août 2020**

**Submitted on July 27, 2020
Soumis le 27 juillet 2020**

Submitted by

Soumis par:

Court Curry,

Manager / Gestionnaire,

**Right of Way, Heritage and Urban Design Services / Services des emprises, du
patrimoine et du design urbain**

**Planning, Infrastructure and Economic Development Department / Direction
générale de la planification, de l'Infrastructure et du développement économique**

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Ward: SOMERSET (14)

File Number: ACS2020-PIE-RHU-0016

**SUBJECT: Application to alter to the Booth Street Bridge, 9 Fleet Street, a
property designated under Part IV of the *Ontario Heritage Act***

OBJET: Demande visant la modification du pont de la rue Booth, au 9, rue Fleet, une propriété désignée aux termes de la partie IV de la *Loi sur le patrimoine de l'Ontario*

REPORT RECOMMENDATIONS

That the Built Heritage Sub-Committee recommend that Council:

1. Approve the application to alter the Booth Street Bridge according to plans submitted by Parsons, dated June 9, 2020; conditional upon:
 - Implementation of the conservation measures outlined in the Heritage Brief attached as Document 9 and detailed in the Rehabilitation Approach in Document 10;
2. Delegate authority for minor design changes to the General Manager, Planning, Infrastructure and Economic Development Department; and
3. Approve the issuance of the heritage permit with a five-year expiry date from the date of issuance unless otherwise extended by Council.

RECOMMANDATIONS DU RAPPORT

Que le Sous-comité du patrimoine bâti recommande au Conseil :

1. d'approuver la demande visant la modification du pont de la rue Booth, selon les plans soumis par Parsons et datés du 9 juin 2020, à la condition que :
 - soient mises en place les mesures de conservation décrites dans les documents 9 et 10 joints en annexe, qui portent respectivement sur le patrimoine et la réfection;
2. de déléguer les pouvoirs au directeur général de Planification, Infrastructure et Développement économique en ce qui concerne les changements mineurs de conception;
3. d'approuver la délivrance d'un permis patrimonial qui sera valide pendant cinq ans à partir de sa date de délivrance, à moins d'une prolongation par le Conseil.

BACKGROUND

The historic Booth Street Bridge is a closed-spandrel, stone arch bridge with stone parapets. It was constructed c. 1873-1874 and crosses the open aqueduct that brings water from the Ottawa River to the Fleet Street Pumping Station in LeBreton Flats. The bridge is located beneath the new Booth Street Bridge that crosses the Confederation Line Light Rail Transit (LRT) tracks and aqueduct (see Location Map and Photos, Documents 1 and 2).

The bridge is owned by the City of Ottawa and the alterations are proposed by Infrastructure Services. A 2018 structural review identified structural deficiencies in the bridge. The proposal is to restore the bridge to its original width and design, based on the 1873 drawing. The project is also subject to a Municipal Class Environmental Assessment.

The historic Booth Street Bridge is designated under Part IV of the *Ontario Heritage Act* through By-law 22-82 as part of the designation of the City Waterworks Building at 10 Fleet Street (also known as the Fleet Street Pumping Station) and Aqueduct. This report has been prepared because applications to alter under the *Ontario Heritage Act* require City Council approval after consultation with the Built Heritage Sub-Committee.

DISCUSSION

Recommendation 1

Project Description

The historic Booth Street Bridge is no longer used or needed for vehicular traffic as it has been replaced by a new bridge that crosses the Confederation Line LRT tracks and aqueduct. The proposal is to remove the east and west extensions to the bridge and rehabilitate the original centre portion of the bridge as a pedestrian/cycling transportation link for future multi use pathways (see Site Plan and Elevations Documents 3 and 4). The extension to the east was added in 1889 and the extension to the west was added pre-1910. Both extensions are approximately 5.5 metres. While the overall width of the bridge will be reduced, the length of the bridge will remain the same and the road will be resurfaced with asphalt with granite curbs along the face of the stone parapets.

It is unknown whether the original centre arch and its elements (stone faces of the voussoir arches, spandrel walls and wing walls) are intact or if the arch was removed when the east and west extensions were constructed. Following the sensitive removal of the east and west extensions, the condition of the centre arch can be evaluated in more detail. The existing stonework will be repaired and repointed whenever possible and reconstructed using reclaimed stone from the dismantled extensions when necessary. If the reclaimed stone is unusable, it will be replaced in-kind with St. Mark's limestone.

The rehabilitation will be based on the original Thomas C. Keefer, 1873 plans for the bridge (see Plan for Bridge over Aqueduct 1873, Documents 5). The new stone parapet walls will be reconstructed to the height of the 1873 walls, which is approximately 0.99 metres with a contemporary metal pipe railing installed on top to meet the minimum height of 1.37 metres required by municipal cycling standards (see Parapet Wall Detail, Document 6). The parapet cap stones, and projecting band courses will be new stone elements made of St. Mark's limestone similar in profile/detailing to the original Booth Street Bridge as illustrated in the 1873 drawing. The mortar types and mixtures will match the existing. Landscaping improvements for the area surrounding the bridge are also proposed.

Existing Conditions

A 2018 condition assessment by WSP Inc. reported that the historic Booth Street Bridge had "serious structural and material issues" and that the "centre arch is in better condition than the extensions, with the east extension in better condition than the west extension". The voussoir stones on the underside of the arches were found to be in fair condition, with the exception of the east side of the centre arch, where the stones have been removed/damaged from the installation of a watermain. The stone faces of the east and west extensions were reported to be in fair to poor condition due to cracking, spalling and mortar loss. The existing parapet walls vary in height across the bridge from 1.2 to 1.6 metres. The southern portion of the east parapet wall was dismantled and stored in 2016 due to structural issues.

Cultural Heritage Value of the Bridge

The historic Booth Street Bridge is a closed-spandrel stone arch bridge with stone parapets, constructed c. 1873-74. The bridge was widened on two occasions in the early 20th century, between 1889-1910 to include four-traffic lanes and sidewalks.

The Booth Street Bridge is part of a significant cultural heritage landscape in Lebreton Flats, known as the Ottawa Waterworks. The Ottawa Waterworks includes the Fleet Street Pumping Station, the open aqueduct, the tailrace to the north of the pumping station, the single span, stone bridges that cross the aqueduct including the Canada Central Railway, Broad Street, Booth Street, Lloyd/Lett/Grand Trunk Railway Bridge and the triple span Pooley's Bridge (see Document 7 Aerial Photo and Map of Ottawa Waterworks). The waterworks system, including the bridges, was designed by one of Canada's leading early civil engineers, Thomas C. Keefer in 1872-74. The area is a unique industrial landscape in the city with significant historical associations.

The 1982 designation for the Fleet Street Pumping Station and Aqueduct does not include a detailed Statement of Cultural Heritage Value. However, as part of the Heritage Impact Assessment (see Document 8) prepared by Contentworks, a draft Statement of Cultural Heritage Value for the bridge was prepared, which identified the key physical attributes of the bridge as:

- Its crossing of the Ottawa aqueduct;
- Stone construction, including its three arches comprised of the 1873-74 arch and two arches added later;
- Stone parapets;
- Limestone construction and detailing that connect it to the primary materials used on all the Ottawa Water Works structures;
- Width; and
- Its closed spandrels, coursed limestone masonry, string course above the arch, large cut-stone voussoirs and thick wing walls that create the appearance of pilasters at either end of the arch.

Standards and Guidelines for the Conservation of Historic Places in Canada

The "Standards and Guidelines for the Conservation of Historic Places in Canada" were adopted by City Council in 2008 and are used to evaluate all applications under the *Ontario Heritage Act*.

Conservation Approach

The “Standards and Guidelines for the Conservation of Historic Places in Canada” includes three conservation approaches: preservation, restoration and rehabilitation. The proposed alterations to the historic Booth Street Bridge use the rehabilitation and restoration approaches.

The primary conservation approach for the historic Booth Street Bridge is rehabilitation, which involves the sensitive adaptation of an historic place for a continuing or compatible contemporary use, while protecting its heritage value. Following the construction of the new Booth Street Bridge that crosses the aqueduct, the historic bridge is no longer required for vehicular traffic. As such, the bridge is being rehabilitated for use as a pedestrian and cyclist’s bridge that will connect to a multi-use pathway.

The proposed alterations will also use the conservation approach of restoration, which involves accurately revealing, recovering or representing the state of an historic place or individual component as it appeared at a particular period in its history, while protecting its heritage value. The restoration is based on the original 1873 drawings. The bridge is part of the larger Ottawa Waterworks complex, which was constructed 1872-74 and as such, returning the bridge to the original 1873 dimensions, which is the period of historical significance, is appropriate. Physical evidence, such as visual inspections of the arches, and analysis of differing stone types was undertaken to confirm the original bridge size and design. Restoration was determined to be an appropriate conservation approach for the rehabilitation project.

Standards

The following Standards are applicable to this application:

Standard 1: Conserve the heritage value of an historic place. Do not remove, replace or substantially alter its intact or repairable character defining elements. Do not move a part of an historic place if its current location is a character defining element.

The proposal will conserve the heritage value of the bridge. The proposal includes the restoration, reconstruction and protection of heritage attributes including the stone construction, parapet walls and voussoirs above the arches. The location of the crossing is maintained, as are the views to and from the bridge along the aqueduct.

Standard 7: Evaluate the existing condition of character-defining elements to determine the appropriate intervention needed. Use the gentlest means possible for any intervention. Respect heritage value when undertaking an intervention.

Standard 10: Repair rather than replace character defining elements.

The existing condition of the bridge has been documented and areas of concern have been identified. The early bridge extensions which will be removed, are in poor condition. The removal of the extensions will return the bridge to its original 1873 width and represent the period of significance for the larger Ottawa Waterworks landscape. The rehabilitation approach calls for repair wherever possible and use of reclaimed or appropriate new material as necessary.

Standard 11: Conserve the heritage value and character defining elements when creating any new additions to an historic place or any related new construction. Make the new work physically and visually compatible with, subordinate to and distinguishable from the historic place.

The new parapet walls are being reconstructed to the height of the 1873 walls, which is approximately 0.99 metres high. A contemporary metal pipe railing will be installed on top of the parapet walls to meet the minimum height of 1.37 metres required by municipal cycling standards. The black, metal railing is simple in design and will be physically and visually compatible with and distinguishable from and subordinate to the stone parapet walls.

Heritage Impact Assessment

Section 4.6.1 of the Official Plan provides direction related to the preparation of Cultural Heritage Impact Statements (CHIS) for properties designated under Part IV of the *Ontario Heritage Act*. A CHIS is required where an application has the, “potential to adversely affect the designated resource”. A Heritage Impact Assessment (HIA) was prepared for this proposal by Contentworks as part of the Environmental Assessment and is attached as Document 8. This HIA fulfills the requirements of a CHIS for the purposes of the Official Plan and concluded that reconstruction is the most appropriate option.

The HIA includes several mitigative measures associated with this approach. The first is to undertake a preparation of a heritage conservation strategy (Heritage Brief), which is attached as Document 9. The HIA also has several mitigative measures related to the

conservation of the central arch. These measures focus on determining the condition of the centre arch, by documenting existing conditions, testing and protecting the central arch throughout construction and sensitive phasing of the work.

City of Ottawa Official Plan

Section 2.5.5 (22) of the City of Ottawa Official Plan states that the City will:

....Protect, improve and manage its cultural heritage resources in a manner which furthers the heritage objectives of this Plan and sets an example of leadership for the community in the conservation of heritage resources....

The Booth Street Bridge is a City-owned cultural heritage resource. The sensitive rehabilitation and restoration that is being undertaken meets this policy.

Conclusion

The proposed rehabilitation and restoration of the historic Booth Street Bridge will ensure the long-term conservation of an important cultural heritage resource. The proposal is in conformity with the Standards and Guidelines and protects the identified heritage value and attributes of the bridge. Staff have included a condition that the work be undertaken in accordance with the detailed rehabilitation approach outlined in the Heritage Brief and detailed in the Rehabilitation Approach in Document 10. The proposed condition will ensure that the work is undertaken in a manner that conserves the heritage value of the bridge. For these reasons, the department recommends approval of this application.

Recommendation 2 – Minor Design Changes

Minor design changes may emerge through the detailed design and construction phase of the project. As is common practice for heritage applications, this recommendation is included to delegate the authority to the General Manager, Planning, Infrastructure and Economic Development Department to undertake these changes.

Recommendation 3 – Heritage Permit Expiry

The *Ontario Heritage Act* does not provide any timelines for the expiry of heritage permits but it is the City's practice to include an expiry date to ensure that projects are completed within a timely fashion under the current legislative and policy framework. A

five-year expiry date is recommended for this project to allow flexibility for budget and coordination considerations.

Provincial Policy Statement

Staff have reviewed this proposal and have determined that it is consistent with the Provincial Policy Statement of 2014 and 2020.

RURAL IMPLICATIONS

There are no rural implications associated with this report.

CONSULTATION

This project underwent a Schedule B - Municipal Class Environmental Assessment process which included a public open house on from 6 to 8 PM, October 1, 2019 at the Good Companions Centre, 670 Albert Street, where the project was described, and alternatives were presented. The Environmental Assessment report was completed in December 2019 and presented to the public for review and comments starting January 24, 2020, for 30 days. No comments were received, and the report was finalized.

Heritage Ottawa was notified of the application on July 3, 2020.

The Dalhousie Community Association was notified of the application on July 3, 2020.

The plans were posted on the City's DevApps website on July 3, 2020.

The National Capital Commission (NCC) was notified of the application.

COMMENTS BY THE WARD COUNCILLOR

Councillor McKenney, Somerset Ward, is aware of the application.

LEGAL IMPLICATIONS

There are no legal implications associated with implementing the recommendations contained within this report.

RISK MANAGEMENT IMPLICATIONS

There are no risk management implications associated with the recommendations of this report.

ASSET MANAGEMENT IMPLICATIONS

The recommendations documented in this report are consistent with the City's [Comprehensive Asset Management \(CAM\) Program](#) objectives. The implementation of the Comprehensive Asset Management program enables the City to effectively manage existing and new infrastructure to maximize benefits, reduce risk, and provide safe and reliable levels of service to community users. This is done in a socially, culturally, environmentally, and economically conscious manner. The outlined project supports federal and provincial heritage guidance while adapting the bridge to support active transportation.

FINANCIAL IMPLICATIONS

There are no direct financial implications.

ACCESSIBILITY IMPACTS

There are no accessibility impacts associated with the recommendations of this report.

TERM OF COUNCIL PRIORITIES

This project addresses the following Term of Council Priority:

- Thriving Communities: Promote safety, culture, social and physical well-being for our residents.

APPLICATION PROCESS TIMELINE STATUS

The statutory 90-day timeline for consideration of this application under the *Ontario Heritage Act* will expire on September 28, 2020.

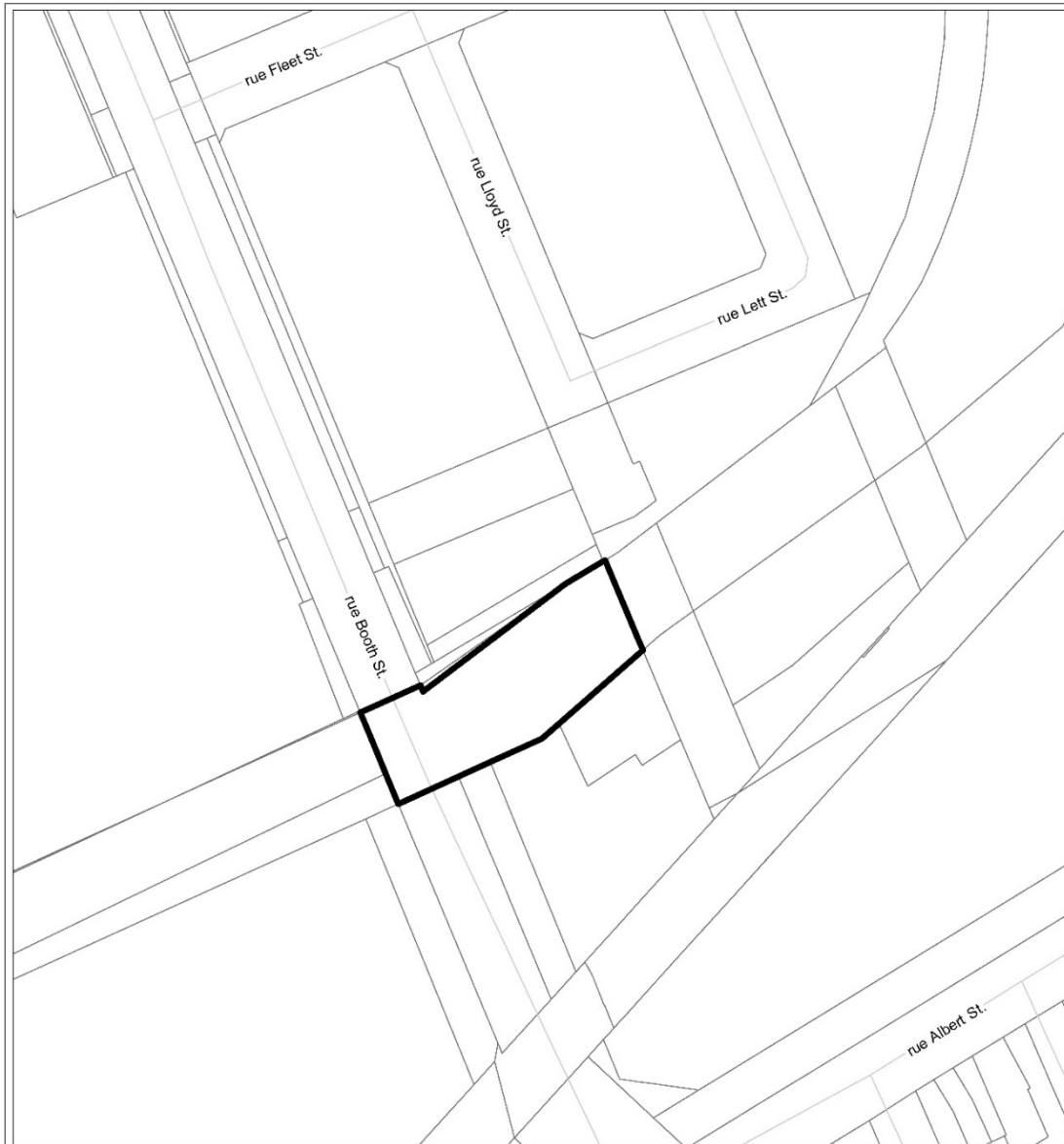
SUPPORTING DOCUMENTATION




- Document 1 Location Map
- Document 2 Current Conditions
- Document 3 Site Plan - Existing and Proposed
- Document 4 Elevations - Existing and Proposed
- Document 5 Plan for Bridge over Aqueduct, January 27, 1873
- Document 6 Parapet Wall Details
- Document 7 Aerial Photo and Map of City Waterworks
- Document 8 Heritage Impact Assessment
- Document 9 Heritage Brief
- Document 10 Rehabilitation Approach

DISPOSITION

City Clerk's Office, Council and Committee Services, to notify the property owner and the Ontario Heritage Trust (10 Adelaide Street East, 3rd Floor, Toronto, Ontario, M5C 1J3) of Council's decision.

Document 1 – Location Map



		LOCATION MAP / PLAN DE LOCALISATION HERITAGE / PATRIMOINE	
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<small>©Parcel data is owned by Teranet Enterprises Inc. and its suppliers All rights reserved. May not be produced without permission. THIS IS NOT A PLAN OF SURVEY</small>			
<small>©Les données de parcelles appartiennent à Teranet Enterprises Inc. et à ses fournisseurs. Tous droits réservés. Ne peut être reproduit sans autorisation. CECI N'EST PAS UN PLAN D'ARPENTAGE</small>			
REVISION / RÉVISION - 2020 / 07 / 07		 <small>1:0710 SCALE</small>	

Document 2 – Current Conditions

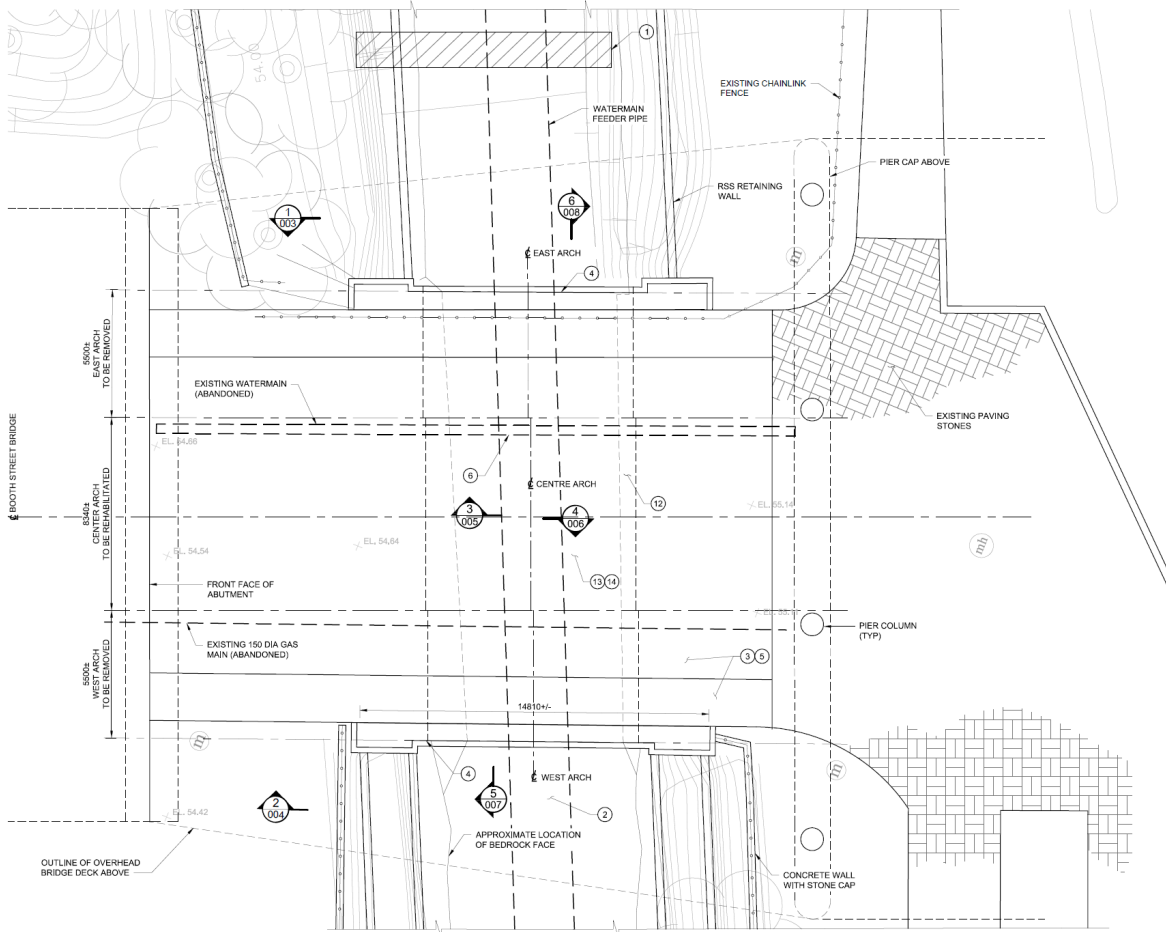
East façade, Booth Street Bridge



West façade, Booth Street Bridge

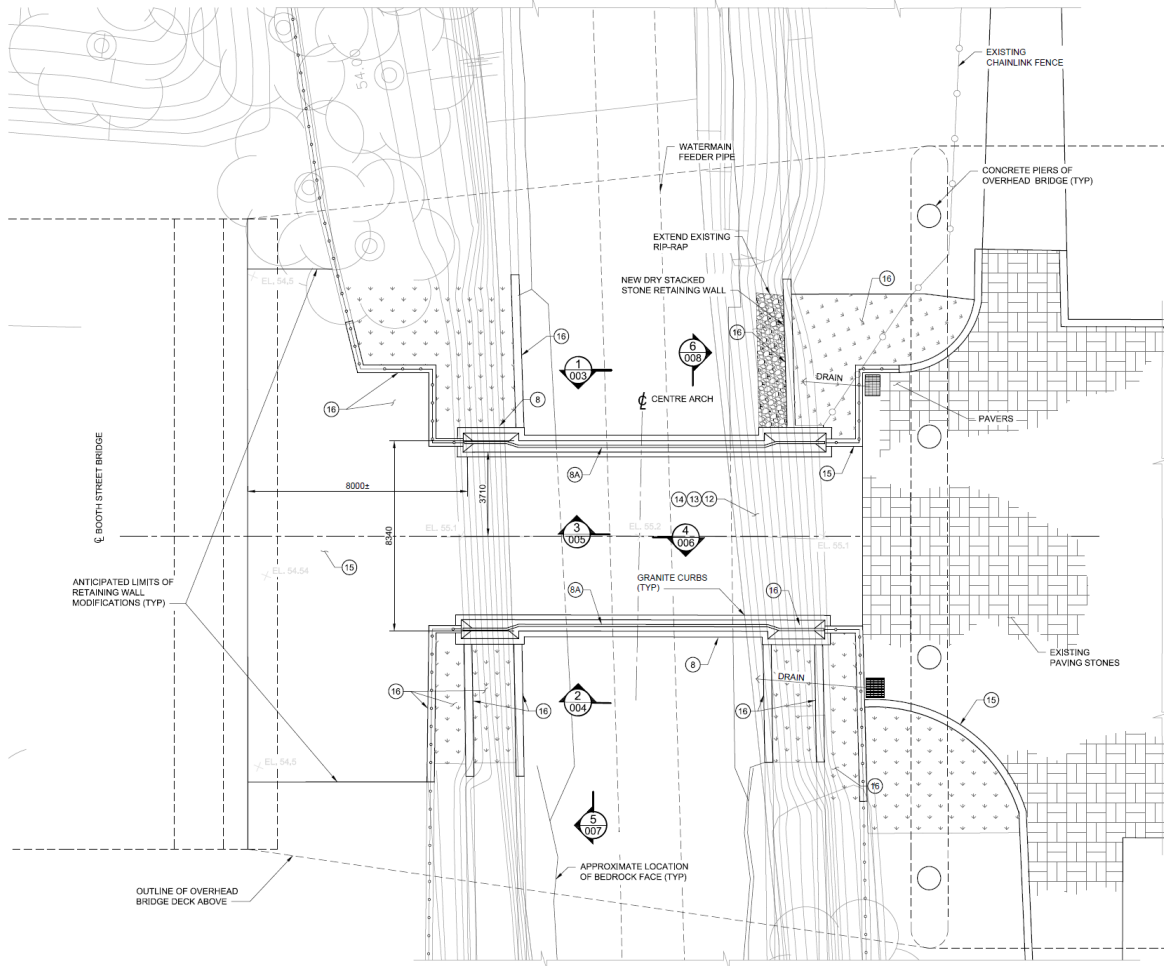


Document 3 – Site Plan – Existing and Proposed



PLAN - EXISTING CONDITIONS

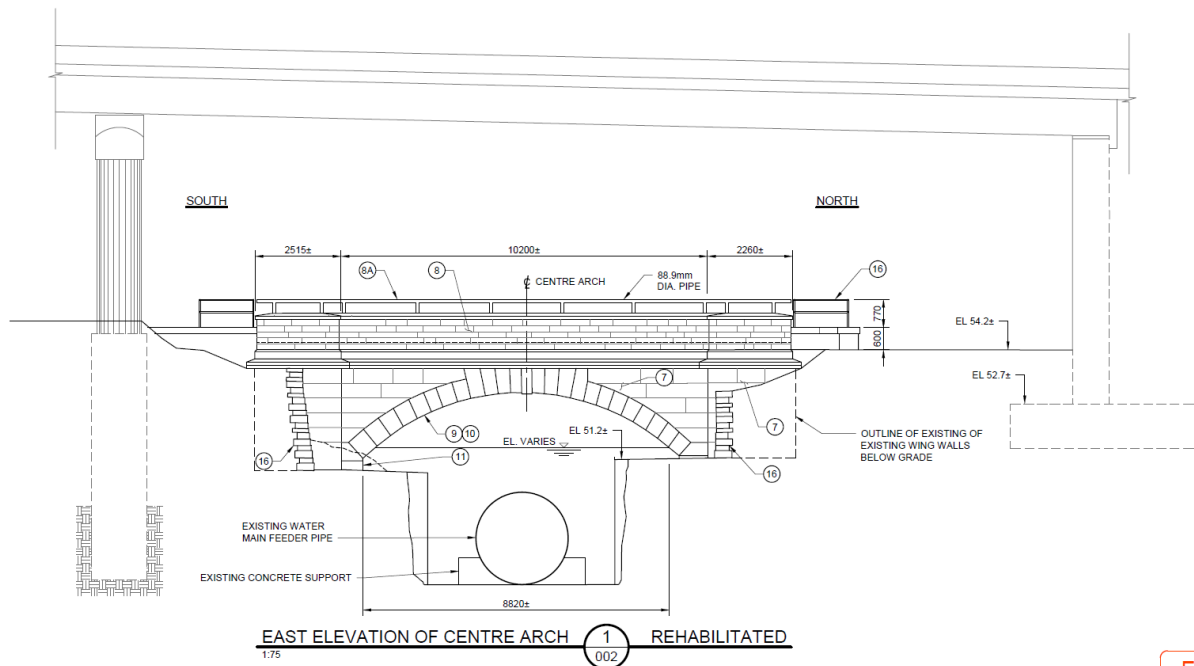
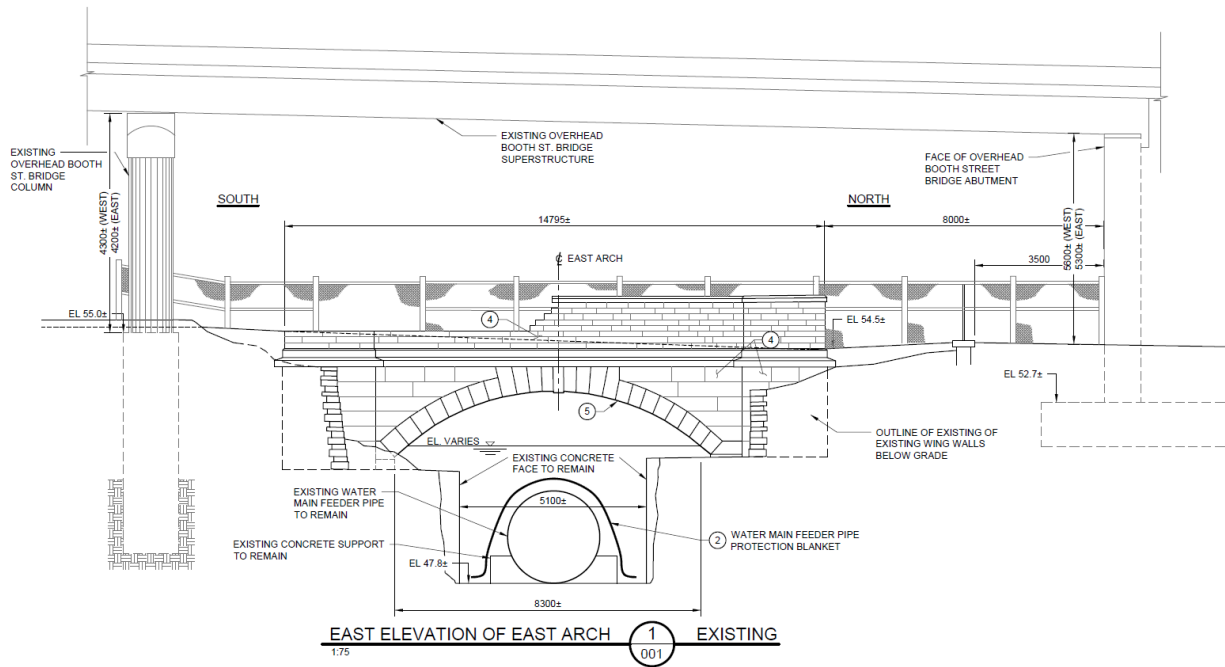
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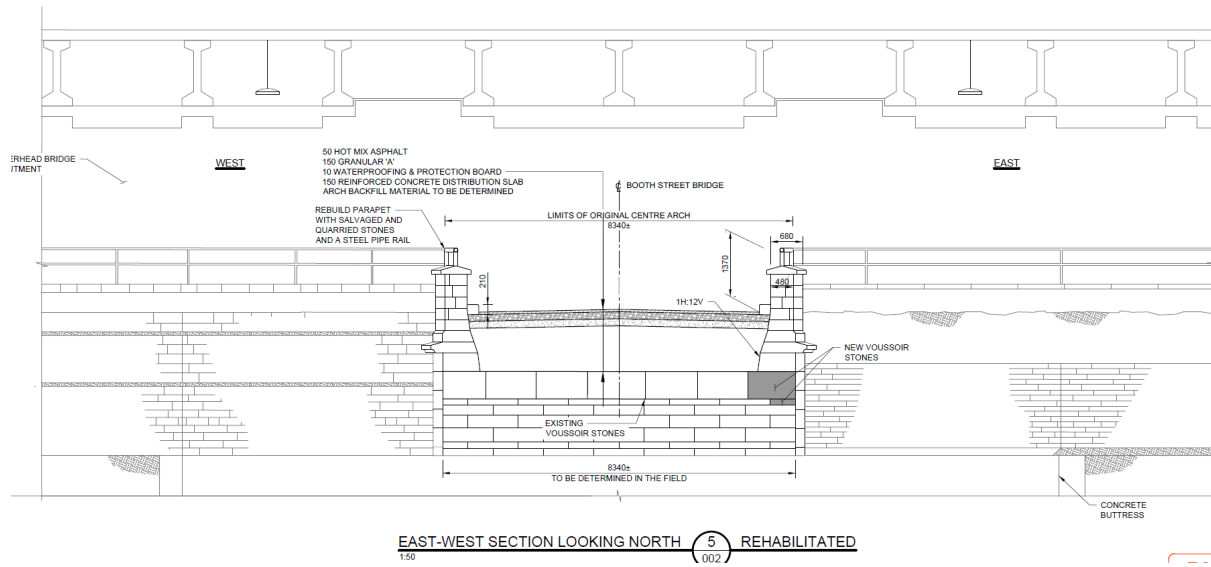
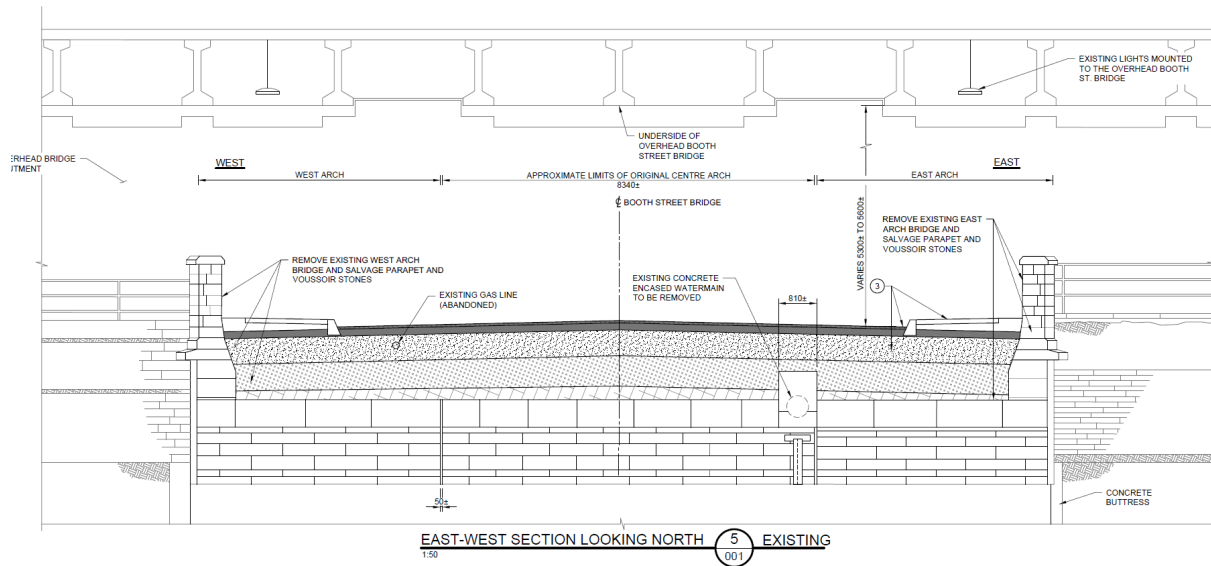


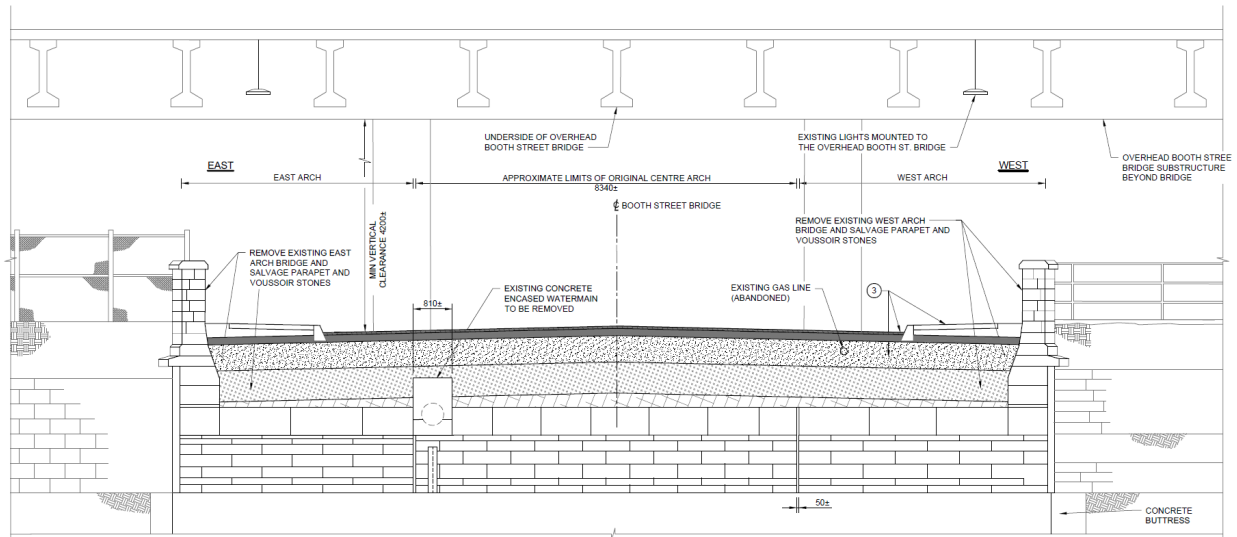
PLAN - PROPOSED CONDITIONS

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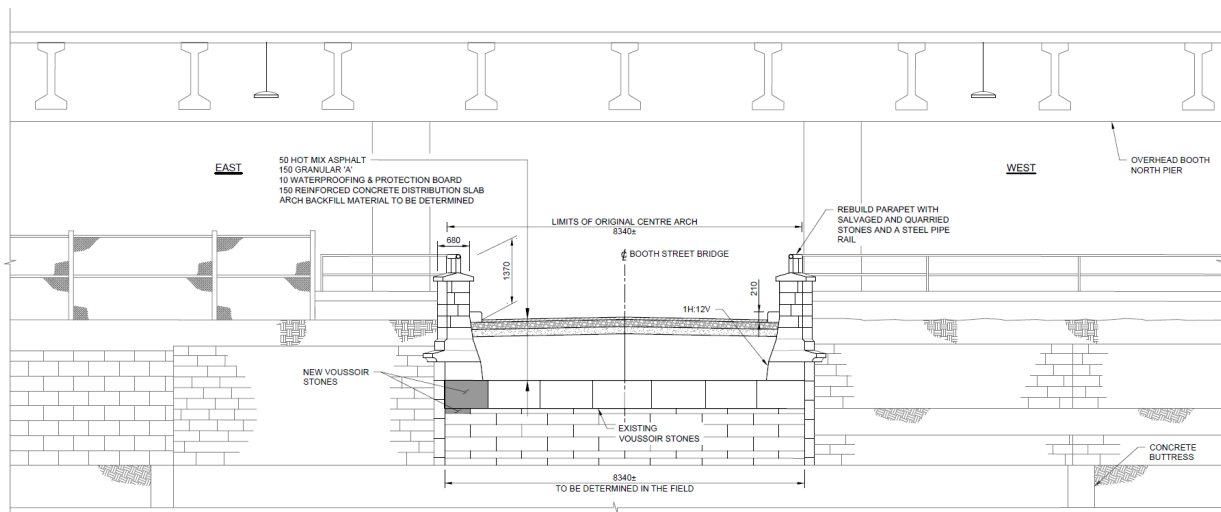
Document 4 – Elevations - Existing and Proposed







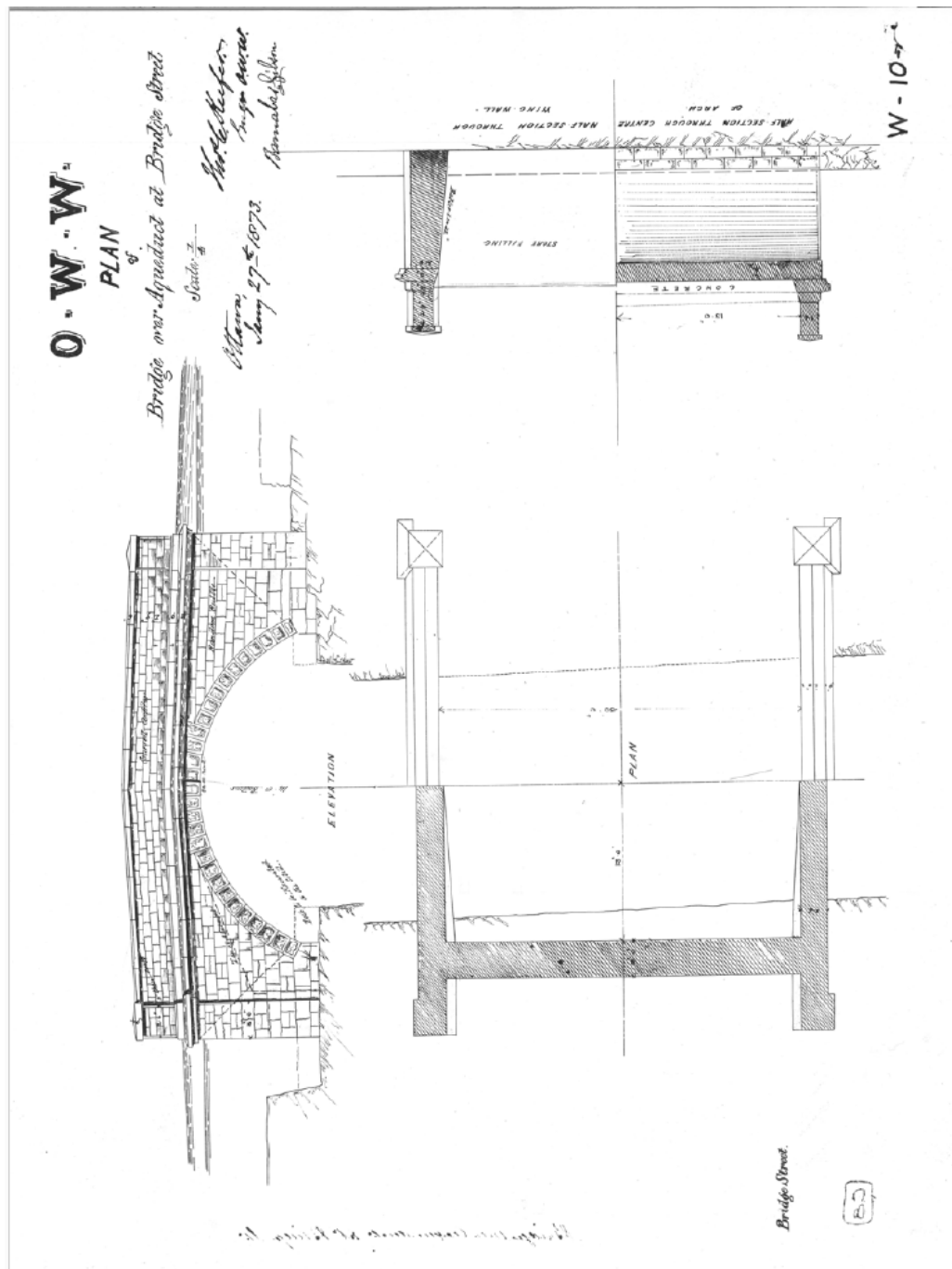
EAST-WEST SECTION LOOKING SOUTH (6) 001 EXISTING
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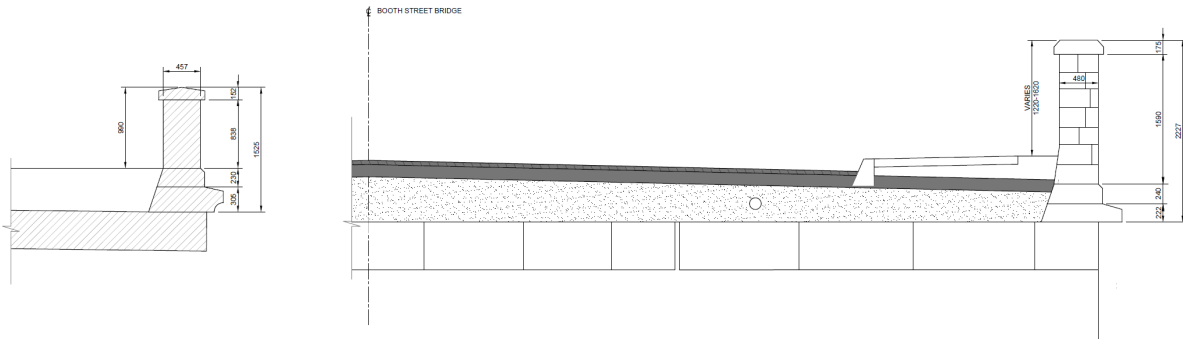
EAST-WEST SECTION LOOKING SOUTH (6) 002 REHABILITATED
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Document 5 – Plan for Bridge over Aqueduct, January 27, 1873



Document 6 – Parapet Wall Details

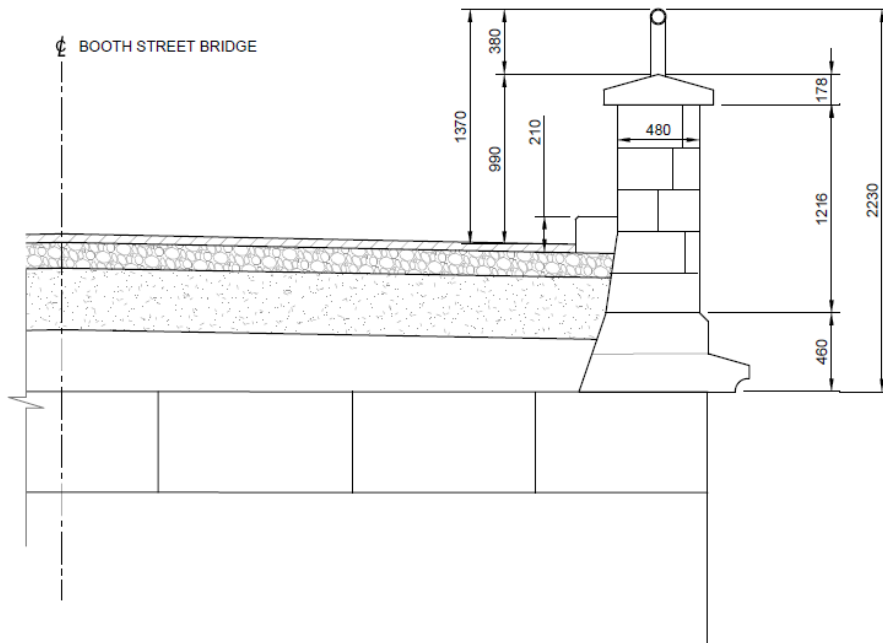


HALF CROSS-SECTION THROUGH
THE ORIGINAL 1873 BOOTH ST. BRIDGE

1:25

HALF CROSS-SECTION THROUGH THE EXISTING BOOTH ST. BRIDGE

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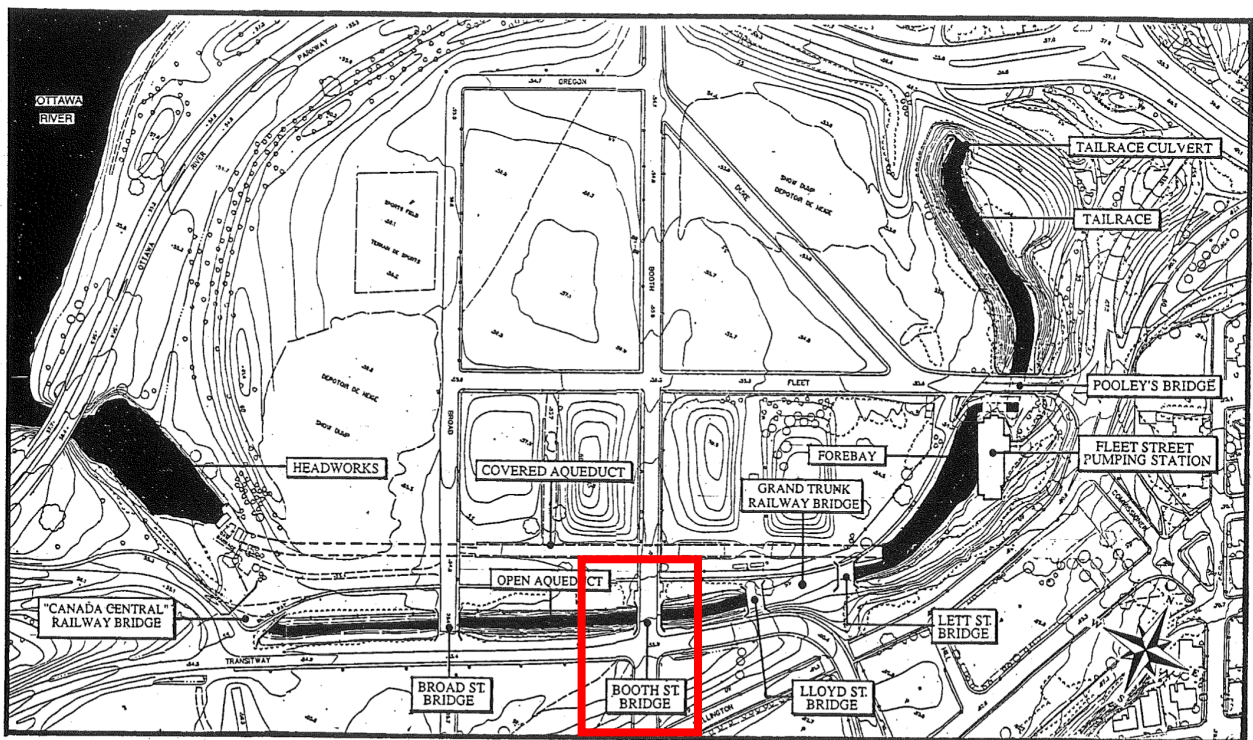
HALF CROSS-SECTION THROUGH
THE REHABILITATED BOOTH ST. BRIDGE

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Document 7 – Aerial Photo and Map of City Waterworks Complex



Source: GeoOttawa



Source: Ottawa Waterworks; The Aqueduct & Bridges at LeBreton Flats; Inventory and Assessment of Heritage Resources, Barry Padolsky Architect Ltd., Commonwealth Historic Resource Management Limited and McNeely Engineering Consultants Ltd.

Document 10 – Rehabilitation Approach

The following is a summary of the proposed rehabilitation approach as illustrated on the Booth Street Bridge Renewal drawings prepared by GRC Architects:

1. Following aqueduct dewatering operations, install protection system upstream and downstream of the bridge structure.
2. Install protection over the water main feeder pipe, and temporary shoring for the Centre Arch and East & West Extensions.
3. Carefully excavate fill on bridge structures down to the existing arch voussoir stones and stone abutments, including removal of sidewalks, asphalt and concrete pavement. (It is noted that stacked stone rubble may be encountered at the ends of the arches. Should the rubble be intact, then it should remain in place undisturbed so as to contribute to the overall structure load distribution system). Remove existing retaining walls/landscaping adjacent to the wing walls of the East & West Extensions.
4. Carefully dismantle, reclaim and store the existing stonework from the parapet walls, spandrel walls and wing walls of the East & West Extensions.
5. Carefully dismantle, reclaim and store the existing voussoir stonework from the arches of the East & West Extensions.
6. Carefully remove abandoned watermain pipe along east face of the Centre Arch. Stabilize the adjacent stonework as required due to removals. Cut pipe off at limits of excavation and grout/seal portion of pipes remaining in situ.
 - a. Scenario 1 (Existing stonework in good condition): Repair/repoint the existing stonework on the arch faces, spandrel walls and wing walls in situ. Anticipated repair methods to include localized stone replacement, dutchman repairs, jahn repairs and epoxy injection repairs. Use existing reclaimed stone from the East & West Extensions where possible for stone repairs. If the reclaimed stone is not suitable or if there are insufficient quantities, provide new replacement stone.
 - b. Scenario 2 (Existing stonework in poor condition, damaged or missing): Reconstruct the existing stonework of the arch faces, spandrel walls and wing walls in situ. Use existing reclaimed stone from the arch faces,

spandrel walls and wing walls of the East & West Extensions where possible for reconstruction work. If the reclaimed stone is not suitable or if there are insufficient quantities, provide new replacement stone. Stonework to match the overall appearance of the existing stonework.

7. Construct the stone parapet walls on the restored/reconstructed spandrel walls and wing walls of the Centre Arch as detailed. Use reclaimed stone from the parapet walls of the existing East & West Extensions where possible. If the reclaimed stone is not suitable or if there are insufficient quantities, provide new replacement stone. Provide new projecting stone band courses and parapet cap stones, similar in profile, dimensions and detailing to the original Booth Street Bridge as illustrated on the 1873 Keefer drawing. Stonework to match the overall appearance of the existing stonework.
8. Provide new metal pipe rails centred on parapet cap stones as detailed.
9. Repair/repoint the existing arch voussoir stones and stone abutments on the top side of the Centre Arch. Anticipated repair methods to include localized stone replacement, dutchman repairs and epoxy injection repairs.
10. Repair/repoint the existing arch voussoir stones on the underside of the Centre Arch. Anticipated repair methods to include localized stone replacement, dutchman repairs, jahn repairs and epoxy injection repairs.
11. Repair/repoint the existing springing stones of the Centre Arch. Anticipated repair methods to include localized stone replacement, dutchman repairs.
12. Install fill material on the topside of the restored Centre Arch.
13. Install new reinforced concrete distribution slab and waterproofing & protection board.
14. Place a layer of Granular A and asphalt over the waterproofing membrane.
15. Grade the approaches and install granite curbs and gutters.
16. Carry out landscaping, construct retaining walls, install railings on approaches and connect to existing railings/fences. Integrate existing reclaimed voussoir stonework from the arches of the East & West Arches where possible in the new landscape elements.

It is recommended that the existing lights mounted to the underside of the overhead bridge structure above be relocated to light the rehabilitated Booth St. bridge as a separate project.