

City of London

Cultural Heritage Evaluation Report Kensington Bridge (1-BR-06) London, Ontario

Prepared by:

AECOM

410 – 250 York Street, Citi Plaza
London, ON, Canada N6A 6K2
www.aecom.com

519 673 0510 tel
519 673 5975 fax

Statement of Qualifications and Limitations

The attached Report (the "Report") has been prepared by AECOM Canada Ltd. ("AECOM") for the benefit of the Client ("Client") in accordance with the agreement between AECOM and Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations and conclusions contained in the Report (collectively, the "Information"):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations");
- represents AECOM's professional judgement in light of the Limitations and industry standards for the preparation of similar reports;
- may be based on information provided to AECOM which has not been independently verified;
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued;
- must be read as a whole and sections thereof should not be read out of such context;
- was prepared for the specific purposes described in the Report and the Agreement; and
- in the case of subsurface, environmental or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

AECOM shall be entitled to rely upon the accuracy and completeness of information that was provided to it and has no obligation to update such information. AECOM accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

AECOM agrees that the Report represents its professional judgement as described above and that the Information has been prepared for the specific purpose and use described in the Report and the Agreement, but AECOM makes no other representations, or any guarantees or warranties whatsoever, whether express or implied, with respect to the Report, the Information or any part thereof.

Without in any way limiting the generality of the foregoing, any estimates or opinions regarding probable construction costs or construction schedule provided by AECOM represent AECOM's professional judgement in light of its experience and the knowledge and information available to it at the time of preparation. Since AECOM has no control over market or economic conditions, prices for construction labour, equipment or materials or bidding procedures, AECOM, its directors, officers and employees are not able to, nor do they, make any representations, warranties or guarantees whatsoever, whether express or implied, with respect to such estimates or opinions, or their variance from actual construction costs or schedules, and accept no responsibility for any loss or damage arising therefrom or in any way related thereto. Persons relying on such estimates or opinions do so at their own risk.

Except (1) as agreed to in writing by AECOM and Client; (2) as required by-law; or (3) to the extent used by governmental reviewing agencies for the purpose of obtaining permits or approvals, the Report and the Information may be used and relied upon only by Client.

AECOM accepts no responsibility, and denies any liability whatsoever, to parties other than Client who may obtain access to the Report or the Information for any injury, loss or damage suffered by such parties arising from their use of, reliance upon, or decisions or actions based on the Report or any of the Information ("improper use of the Report"), except to the extent those parties have obtained the prior written consent of AECOM to use and rely upon the Report and the Information. Any injury, loss or damages arising from improper use of the Report shall be borne by the party making such use.

This Statement of Qualifications and Limitations is attached to and forms part of the Report and any use of the Report is subject to the terms hereof.

AECOM: 2015-04-13
© 2009-2015 AECOM Canada Ltd. All Rights Reserved.

Signatures



Report Prepared By:

Michael Greguol, M.A.
Cultural Heritage Specialist



Report Reviewed By:

Fern Mackenzie, M.A., CAHP
Senior Architectural Historian

Distribution List

# Hard Copies	PDF Required	Association / Company Name
2	1	City of London
0	1	AECOM Canada Ltd.

Revision History

Revision #	Date	Revised By:	Revision Description
0	January, 2018	M. Greguol	Draft Cultural Heritage Evaluation Report
1	March, 2018	M. Greguol	Revised Draft Cultural Heritage Evaluation Report
2	March 2018	M. Greguol	Final Cultural Heritage Evaluation Report

Executive Summary

AECOM Canada Ltd. (AECOM) was retained by the City of London to conduct a Cultural Heritage Evaluation Report (CHER) as a part of a series of studies including a Preliminary Structural Design Report and Structural Evaluation for the Kensington Bridge (Structure No. 1-BR-06) on Riverside Drive over the North Branch of the Thames River. At the time of the preparation of this report, there is no specific proposed undertaking; however, the design report being undertaken concurrently is anticipated to provide recommendations for rehabilitation activities for the bridge.

This CHER was prepared according to the guidelines set out in the Ontario Ministry of Tourism, Culture, and Sports' (MTCS) *Heritage Resources in the Land Use Planning Process* document included as a part of the *Ontario Heritage Toolkit*. For the purposes of this report, AECOM undertook the following tasks:

- 1) Preparation of a land use history of the Study Area based on a review of:
 - a) Primary and secondary resources;
 - b) Historic mapping.
- 2) A review of the City of London's *Inventory of Heritage Resources*, as well as the Ontario Heritage Trust's online inventory of buildings, museums, and easement properties, the Canadian Register of Historic Places, and the Directory of Federal Heritage Designations.
- 3) A site investigation, undertaken on August 28, 2017 to document the existing conditions of the bridge structure and its associated landscape.
- 4) Evaluation of the bridge structure and its landscape using *Ontario Regulation 9/06, Criteria for Determining Cultural Heritage Value or Interest* in order to identify the resource-specific heritage attributes associated with the structure in anticipation of potential future works on the bridge.

The Kensington Bridge is located in an area of London of significant cultural heritage value or interest. The bridge itself is located within the Blackfriars/Petersville Heritage Conservation District (HCD). In addition, it acts as a gateway structure between the HCD and the Downtown London HCD to the east. Individually designated properties are also located within the area including Labatt Park located on the north side of Queens Avenue (25 Wilson Avenue), and the Middlesex County Courthouse and Gaol located at 399 Ridout Street North/50 King Street). In addition, the bridge crosses the Thames River, a Canadian Heritage River.

Based on the *Ontario Regulation 9/06* evaluation, the Kensington Bridge was determined to have design/physical, historic/associative, and contextual value. In addition, the structure is designated under Part V of the Ontario Heritage Act.

The following Statement of Cultural Heritage Value was prepared for the bridge:

The Kensington Bridge is a three-span, modified Warren steel pony-truss bridge that carries Riverside Drive over the North Branch of the Thames River. The structure was built in 1930, as the third crossing of the Thames River at this location. It was designed by municipal engineer John R. Rostron, known also for his role in designing the nearby Victoria Bridge. The structure acts as a gateway structure between the Blackfriars/Petersville HCD and the Downtown London HCD.

The Heritage Attributes for the Kensington Bridge include:

- Location and setting of the bridge at the Forks of the Thames;
- Riveted, modified Warren pony truss structure including:
 - Three spans of 32m (104 feet) each and overall length of 96m (315 feet);
 - Steel top and bottom chords;

- Riveted lattice details on underside of steel chords;
- Steel gusset plates
- Remnants of decorative concrete and limestone end posts at west end of the bridge;
- Decorative lamp posts in centre of the bridge spans;
- Hand railings original to the design of the bridge.

Table of Contents

	page
1. Introduction	1
1.1 Study Purpose	1
1.2 Study Method.....	1
1.3 Metric Measurements	1
2. Policy and Planning Framework.....	4
2.1 Environmental Assessment Act.....	4
2.2 Additional Guidelines	4
2.3 City of London Official Plan.....	4
3. Historical Overview.....	6
3.1 Natural Environment and Physical Setting	6
3.2 Historic Context	7
3.2.1 Indigenous History.....	7
3.2.2 Local Historic Context	8
3.2.3 Bridge Building Context.....	17
3.2.4 Kensington Bridge	17
3.2.5 Hamilton Bridge Works Company Ltd.....	21
3.2.6 John R. Rostron	22
4. Site Description.....	23
4.1 Context	23
4.2 Landscape Context.....	23
4.3 Approaches	24
4.4 Abutments and Piers.....	24
4.5 Truss	24
4.6 Deck/Railings.....	24
5. Evaluation.....	39
5.1 Ontario Regulation 9/06.....	39
5.2 Statement of Cultural Heritage Value.....	41
5.2.1 Heritage Attributes.....	41
5.3 Review of Heritage Registers and Additional Information.....	41
6. Recommendations	43
6.1 Cultural Heritage Value or Interest.....	43
6.2 Permitting/Approval Process.....	43
7. Bibliography	44

List of Figures

Figure 1: Location of Study Area	2
Figure 2: Study Area in Detail	3
Figure 3: Study Area, 1878	13
Figure 4: Study Area, 1913	14
Figure 5: Study Area, 1942	15
Figure 6: Study Area, 1965	15

List of Tables

Table 1: Ontario Regulation 9/06 Evaluation for the Kensington Bridge	39
---	----

Appendices

Appendix A. Plan No. 2 and Plan No. 3. City of London. Kensington Bridge (Dundas Street) London, Ontario, December 1929
--

1. Introduction

1.1 Study Purpose

AECOM Canada Ltd. (AECOM) was retained by the City of London to conduct a Cultural Heritage Evaluation Report (CHER) as a part of a series of studies including a Preliminary Structural Design Report and Structural Evaluation for the Kensington Bridge (Structure No. 1-BR-06) on Riverside Drive over the North Branch of the Thames River (Figure 1 and Figure 2). At the time of the preparation of this report, there is no specific proposed undertaking; however, the design report being undertaken concurrently is anticipated to provide recommendations for rehabilitation activities for the bridge.

1.2 Study Method

This CHER was prepared according to the guidelines set out in the Ontario Ministry of Tourism, Culture, and Sports' (MTCS) *Heritage Resources in the Land Use Planning Process* document included as a part of the *Ontario Heritage Toolkit*. For the purposes of this report, AECOM undertook the following tasks:

- 1) Preparation of a land use history of the Study Area based on a review of:
 - a) Primary and secondary resources;
 - b) Historic mapping.
- 2) A review of the City of London's *Inventory of Heritage Resources*, as well as the Ontario Heritage Trust's (OHT) online inventory of buildings, museums, and easement properties, the Canadian Register of Historic Places, and the Directory of Federal Heritage Designations.
- 3) A site investigation, undertaken on August 28, 2017 to document the existing conditions of the bridge structure and its associated landscape.
- 4) Evaluation of the bridge structure and its landscape using *Ontario Regulation 9/06, Criteria for Determining Cultural Heritage Value or Interest* in order to identify the resource-specific heritage attributes associated with the structure in anticipation of potential future works on the bridge.

1.3 Metric Measurements

Between 1971 and 1984 Canada adopted the metric system. All structural dimensions in this text are given in Imperial units. In general, the use of Imperial rather than Metric is preferred for describing historic structures. Engineered structures were often built to standard Imperial dimensions and distinctive patterns within such structures can be obscured by converting the original Imperial to Metric units. Unless there are historical issues (i.e. contract specifications), distances and other common measurements are given in Metric units.

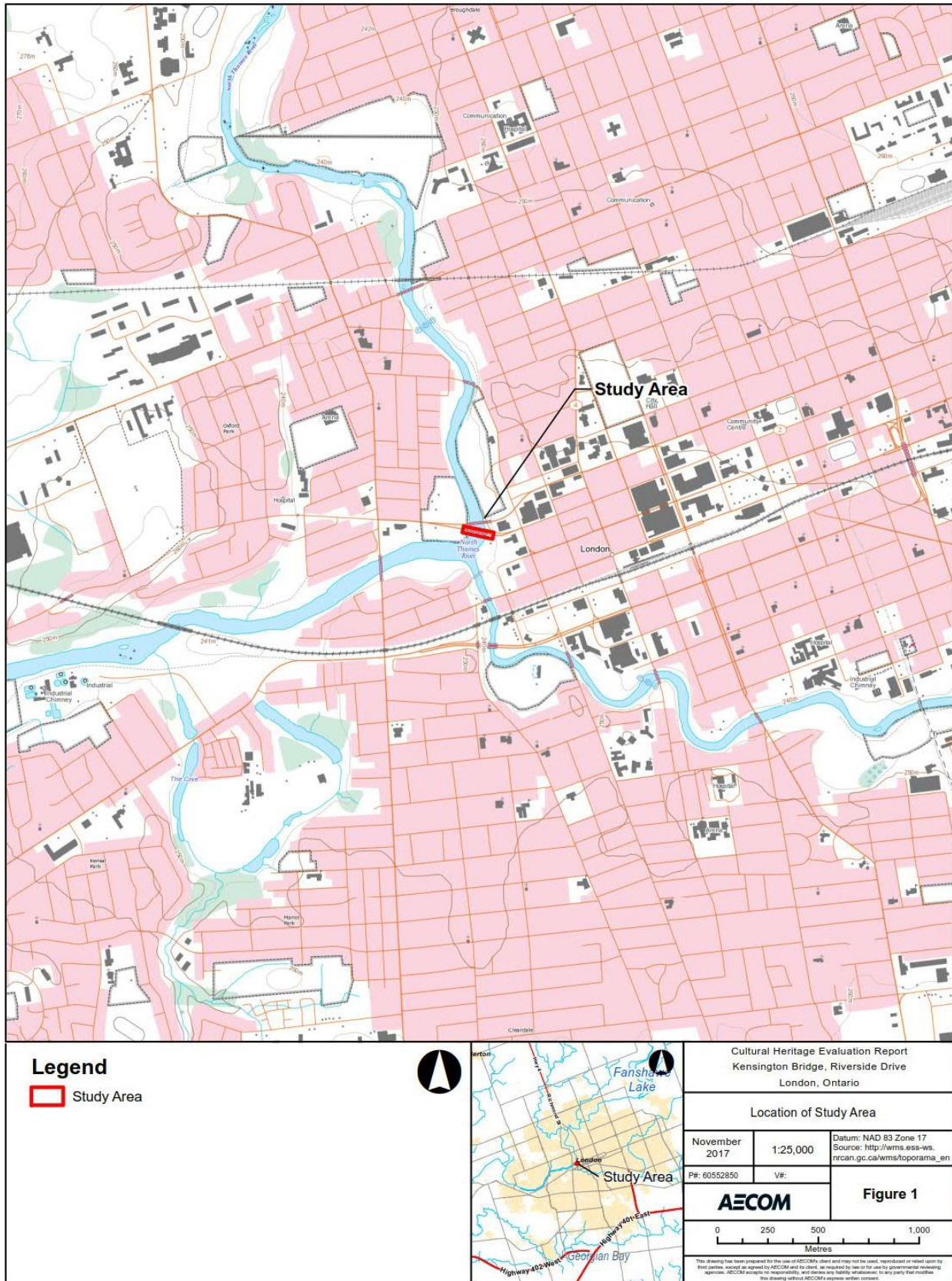


Figure 1: Location of Study Area

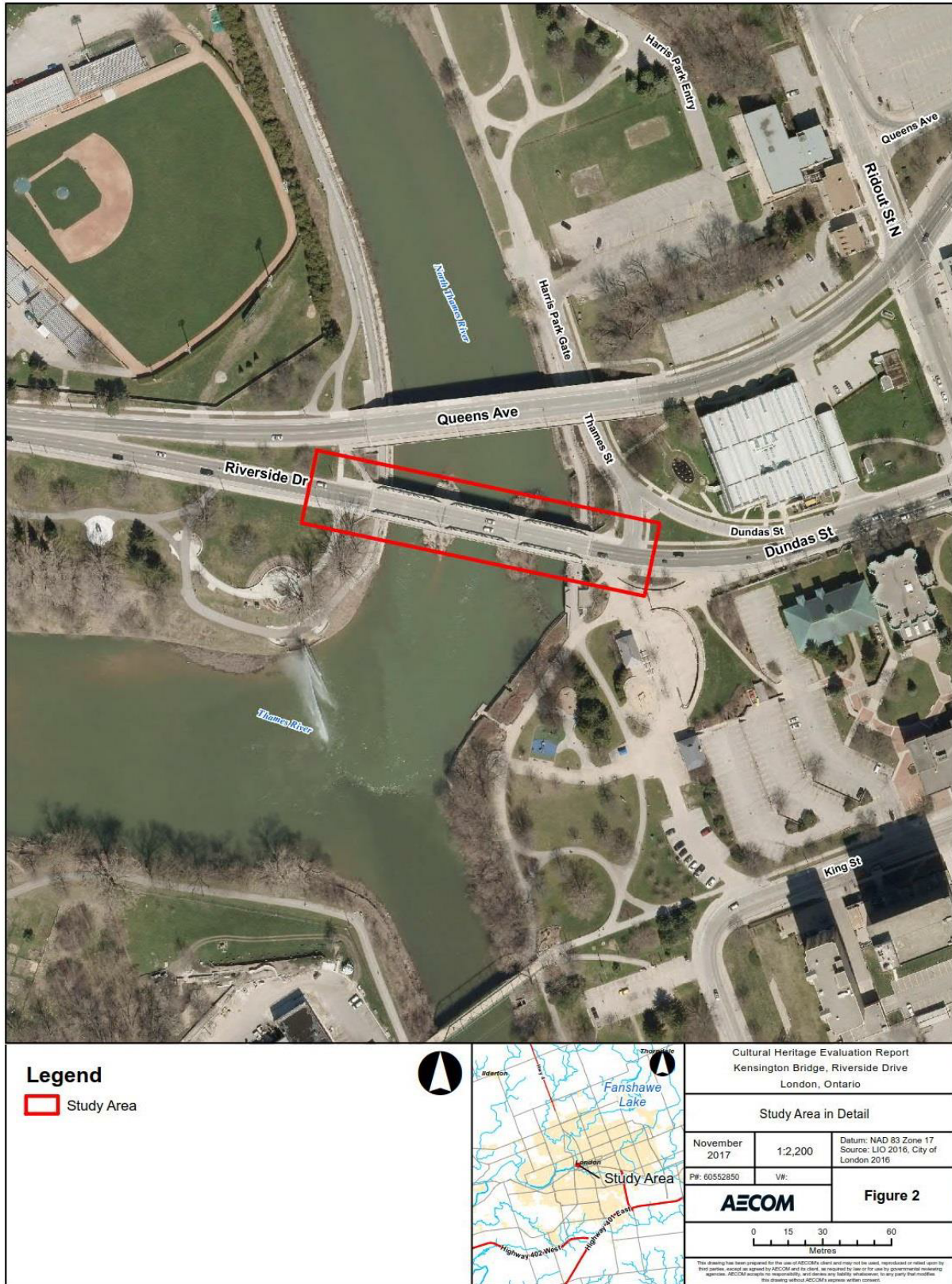


Figure 2: Study Area in Detail

2. Policy and Planning Framework

2.1 Environmental Assessment Act

This report has been produced to satisfy cultural heritage reporting requirements typically undertaken as part of the Ontario Environmental Assessment (EA) process. Pursuant to the *Environmental Assessment Act* (R.S.O. 1990, Chapter E.18), applicable infrastructure improvements and development projects are subject to appropriate studies to evaluate and assess the potential related impacts of a project on the social, economic, or cultural environment, i.e. the cultural heritage of an area. Infrastructure improvement projects have the potential to impact cultural heritage resources in various ways including, but not limited to:

- Loss or displacement of resources through removal or demolition;
- Disruption of resources by introducing physical, visual, audible, or atmospheric elements that are not in keeping with the resources and their contextual surroundings.

It is understood that at this stage, an EA for the bridge project has not been initiated; however, this report utilizes the methods and practice typically undertaken for cultural heritage reporting as required by the EA process. For EA, or EA-related activities, structures over 40 years old are typically evaluated for their cultural heritage value in order to determine the potential for a proposed project to result in impacts to heritage resources.

2.2 Additional Guidelines

The methods of analysis used in the cultural heritage resource assessment process addresses cultural heritage resources under various pieces of legislation and their supporting documentation:

- *Environmental Assessment Act* (R.S.O. 1990, Chapter E.18)
 - *Guidelines for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (MCC-MOE 1992)
 - *Guidelines on the Man-Made Heritage Component of Environmental Assessments* (MCR-MOE 1981)
- *Planning Act* (R.S.O. 1990, Chapter P.13)
 - *Heritage Resources in the Land Use Planning Process*, 2005 Provincial Policy Statement
- *Ontario Heritage Act* (R.S.O. 1990, Chapter O.18)
 - MTCS's *Ontario Heritage Toolkit* (MCL 2006)

2.3 City of London Official Plan

The City of London Official Plan (OP) outlines a policy context for land use planning, amongst other items, within the City of London. Chapter 13 of the OP identifies planning policies, goals, and objectives associated with the identification, evaluation, and management of cultural heritage resources (built heritage, cultural heritage landscapes, and archaeological resources) within the City. Specifically, the objectives of the OP as they relate to heritage conservation include:

- Protect in accordance with Provincial policy those heritage resources which contribute to the identity and character of the City;
- Encourage the protection, enhancement, restoration, maintenance, and utilization of buildings, structures, areas, or sites within London which are considered to be of cultural heritage value or interest to the community;
- Encourage new development, redevelopment, and public works to be sensitive to, and in harmony with, the City's heritage resources; and
- Increase public awareness and appreciation of the City's heritage resources, and encourage participation by the public, corporations, and other levels of government in the protection, restoration, and utilization of these resources.

In addition, the City maintains a descriptive inventory of properties of cultural heritage value or interest. The City of London's *Inventory of Heritage Resources (2006)* includes information related to the listing of properties in London. The inventory includes a priority level system for identifying properties of greater priority and/or significance for heritage recognition. In addition, properties designated under the *Ontario Heritage Act* are maintained in the City's inventory. The inventory is a living document subject to changes and approvals by City Council, advised by the London Advisory Committee on Heritage.

Lastly, the City of London's Strategic Plan sets out a broad direction for the future of London. It identifies London City Council's vision, mission, values, strategic areas for focus and the specific strategies that define how Council and Administration will respond to the needs and aspirations of Londoners. As part of the City's initiative for "Building a Sustainable City," the Strategic Plan identifies the management of upgrading of transportation infrastructure such as heritage bridges, and more specifically, the Heritage Bridge Preservation Strategy as a part of its focus on robust infrastructure.

3. Historical Overview

3.1 Natural Environment and Physical Setting

The Kensington Bridge is located within the Caradoc Sand Plains and London Annex physiographic region, which are characterized by small sand plains typically located west and east of London. At the site of the bridge, the landscape consists of a wide valley with relatively steep valley walls located in downtown London. The Thames Valley Parkway, a recreational trail extends along both the east and west sides of the Thames River at the Kensington Bridge. Both portions of the trail pass under the bridge (Images 1 – 2).

The bridge structure carries two lanes of eastbound Riverside Drive over the North Branch of the Thames River. The Thames River runs through London, flows southwest towards Chatham and eventually drains into Lake St. Clair. The South Branch of the Thames River meanders from Woodstock through south London before joining the North Branch at the Forks of the Thames immediately south of the Kensington Bridge. At the site of the existing Kensington Bridge, the Thames River flows through a wide channel with shallow sloped banks on the east side of the river. The west side of the Thames River is defined by the West London Dyke, which has recently undergone significant repairs and reconstruction. Two concrete piers, located within the river support the Kensington Bridge.



Image 1: View looking south from the Kensington Bridge showing Forks of the Thames River



Image 2: View looking north showing the North Branch of the Thames River, as well as The Queen's Bridge located immediately to the north

3.2 Historic Context

3.2.1 *Indigenous History*

The Thames River and modern-day London is situated within an area of Ontario that exhibits evidence of an extended period of human settlement dating back at least 11,000 years. These earliest well-documented groups are referred to as Paleo, non-agriculturalist groups who depended on hunting and gathering of wild food stuffs. The understanding of Paleo cultures that has emerged is of groups at low population densities who were residentially mobile and made use of large territories during annual cycles of resources.¹

In a much later and more site-specific context, the land surrounding the Forks of the Thames was used by the Neutrals and Chippewa groups who tended cornfields within the area. The Neutral peoples were defeated by the Iroquois around 1651 but their indigenous name for the Thames River, Askunessipi, or the antler river, refers to its configuration at the Forks.²

This part of Ontario was purchased by the Crown as part of Treaty No. 6 on September 7, 1796. Treaty No. 6 was made between the principal Chiefs, Warriors and People of the Chippewa Nation and Alexander McKee, Esquire,

¹ Chris J. Ellis and Brian Deller, "Paleo-Indians" in *The Archaeology of Southern Ontario to AD 1650*, eds. Chris J. Ellis and Neal Ferris. Occasional Publication of the London Chapter, OAS Number 5, 1990.

² *Blackfriars-Petersville Heritage Conservation District Study*, January 2014.

Deputy Superintendent General and Deputy Inspector General of Indians and of their affairs on behalf of His Britannic Majesty King George the Third His heirs and successors.³ The tract of land lying on the north side of the River Thames, or River La Tranche, and known to First Nations by the name Escunniesepe (Askunessippi):

...beginning at a certain station on the north bank of the said river about nineteen miles above the Delaware Village following the windings of the said river and about twelve miles distant from the said village in a direct northerly course, being about two miles above a lime stone rock and spring on the said river which station will be more perfectly found by a line run from the main or lower fork at London six miles on a course south, sixty-eight degrees thirty miles; thence north sixty-eight degrees thirty minutes east twelve miles' thence south twenty-one degrees thirty minutes east till it intersects a right line running from the upper forks of the said river at Oxford to the main or lower forks of the said river at London; thence along the said line to the said upper forks on a course north sixty-eight degrees thirty minutes east; thence down the said River Thames following the several winding and courses with the stream to the place of beginning.

The land was purchased for the sum of twelve hundred pounds of goods at the Quebec currency value of the day. The closest First Nations communities to the Kensington Bridge study area today are the Oneida of the Thames, Chippewa of the Thames and the Munsee-Delaware Nation.

3.2.2 Local Historic Context

The Kensington Bridge is located in what was historically London Township, in Middlesex County. In a European context, Joshua Applegarth was the first European settler in the township and was granted land on the floodplain west of the Thames River for growing hemp for the British navy for the production of cordage and sails. Applegarth did not remain in the area long however, and he moved his family away without returning until after the War of 1812. He later served as a clerk for the township. European settlement continued slowly in the area after Applegarth's departure, including the arrival of early settlement families such as the Beverlys, Kents, Nixons, and Stiles, all of which settled in the surrounding area in the first few decades of the 19th century.

The Township of London was first surveyed by Colonel Mahlon Burwell in 1810. The lots were laid out using the double front survey system which was commonly used by the Crown between 1815 and 1829. The survey was put on hold during the War of 1812 but resumed once peace had been re-established and a total of 3,850 acres of land was reserved by Lieutenant Governor Simcoe for the future town of London. In 1826, the town plot was surveyed by Mahlon Burwell with settlement beginning shortly after around the Forks of the Thames along Ridout Street and the Talbot Block. Settlement in London began to expand rapidly after the construction of the London District Courthouse (Middlesex County Courthouse) in 1827 with the population reaching 1,000 by 1835.

The Thames River had a profound impact on the growth of London. Historically, the City developed at the confluence of the North and South Branches of the Thames River, and as a result bridge construction has been important in connecting London to the Thames River.

London underwent a number of population booms throughout its history beginning when the 32nd Regiment was stationed in London in 1838. Development of saw, cording, and grist industry powered by the Thames River and Medway Creek assisted the City's growth in the mid 1800's, bolstered by the arrival of the railways in the 1850s with the Great Western Railway in 1853, the London Port Stanley Railway in 1856, and the Grand Trunk Railway in

³ *Aboriginal Affairs and Northern Development Canada, Treaty Texts – Upper Canada Land Surrenders*, <https://www.aadnc-aandc.gc.ca/eng/1370372152585/1370372222012#ucls9> (accessed March 2018), 2013.

1858. Steady growth in London continued as the City was established as a financial centre for the surrounding regions with large manufacturing industries taking root, including the Carling Brewery and Labatt's Brewery and the London cigar industry. London was incorporated as a Town in 1840 and by 1855 the population had leapt to 10,000 at which time it officially became a City.

The former London Township survey system laid out by Burwell created a grid pattern, with blocks of eight 100-acre lot allowances bounded by concession and line roads.⁴ The resulting survey created much of the modern farm landscape that is still visible in the rural areas north of London. The survey pattern also created a portion of the road pattern that is still visible today. Historically, the Kensington Bridge carried Dundas Street West over the Thames River, prior to the reconfiguration of the road network in and out of downtown in the 1960s and 1970s. As part of the extension of Queens Avenue from Talbot Street to Ridout Street, and then further west across the Thames River in the late-20th century, Riverside Drive was formed resulting in the modern road network.

By the mid-19th century, the areas surrounding the Kensington Bridge crossing were developing as the City's grew westwards across the Thames River. Indeed, the late-19th century was a period of political and geographic expansion for the City of London, most of which focussed on the area surrounding the Kensington Bridge. For almost all of the nineteenth century, the Thames River acted as a natural geographic boundary for the developing City located east of the river. However, beginning in the mid-19th century Samuel Peters – a surveyor, businessman, and later politician – and John Kent, both landowners west of the Thames River subdivided their lands between what would become Wharncliffe Road and the Thames River. Petersville, the results of Samuel Peter's survey located north of Blackfriars Street, developed as a village on the outskirts of London. Meanwhile, Kent's land between Blackfriars Street and the confluence of the North Branch and the main branch of the Thames River was divided into larger lots and the area became popularly known as Kensington. The Blackfriars Bridge was the only bridge connecting lands on the east and west sides of the North Branches of the Thames River for a time.

Plans to develop the Kensington area were delayed, most notably by flooding in 1873, and by 1874, the area was amalgamated with Petersville to be incorporated as the Village of Petersville, later renamed to London West 1881. By the end of the century bridge two crossings connecting London West to the City has been constructed. The Blackfriars Bridge, first constructed in 1831, connected London West to the City at Blackfriar's Street/Ridout Street North. The second crossing was at Dundas Street West, where an earlier version of the Kensington Bridge, constructed in 1871 crossed the Thames River. In 1897, the London Street Railway (LSR) constructed a bridge immediately adjacent to the Kensington Bridge. The LSR bridge was in place south of the Kensington Bridge until it was removed in 1929 (Images 3 and 4). Additional bridge crossings of Thames River within the vicinity included the Westminster Bridge (first built in 1826), the King Street Bridge (first built in 1897), and the Wharncliffe Highway (later Wharncliffe Road) Bridge (first built in 1914).

⁴ Typically the double front survey system was designed to lay out ten 100-acre lots, however, the system used in London Township laid out eight 100-acre lots.

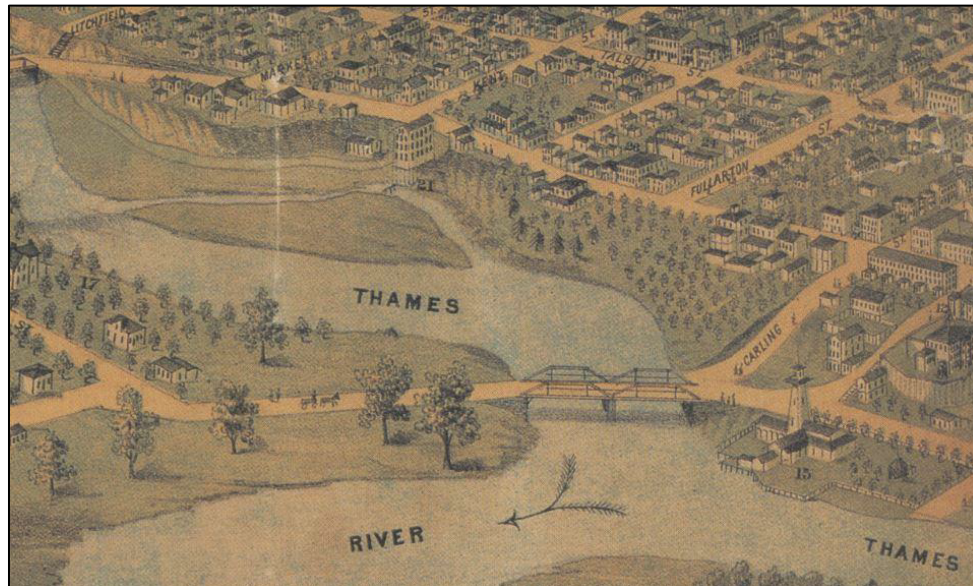


Image 3: Detail of the 1872 Bird's Eye View of London, Ontario showing the 1871 timber truss Kensington Bridge in the foreground

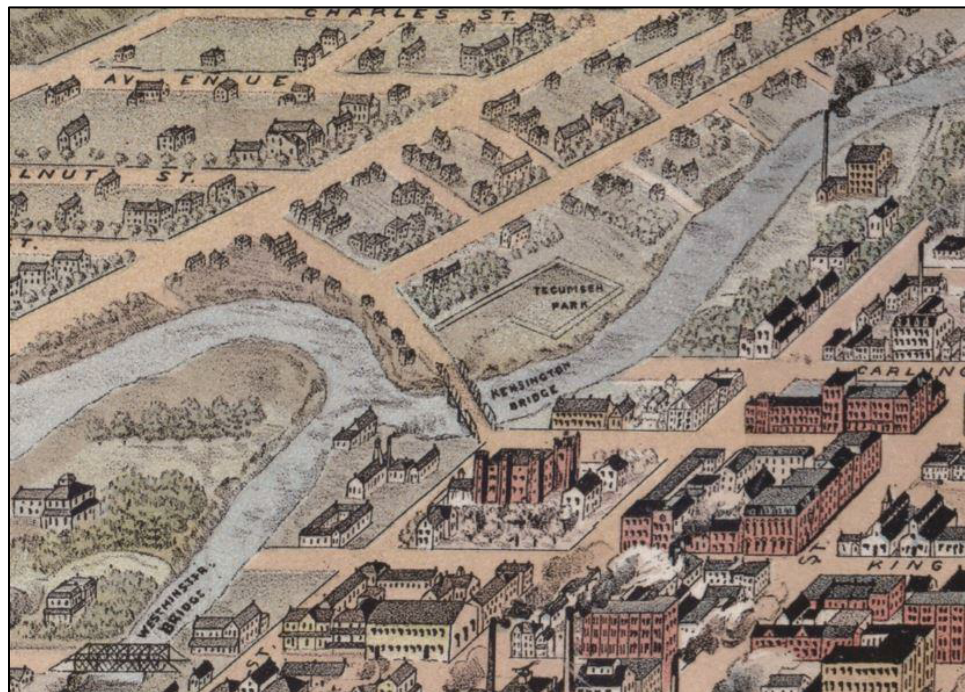


Image 4: Detail of the 1893 Bird's Eye View of London, Ontario showing the development of Petersville/West London on the west side of the river and the 1883 Kensington Bridge

By the beginning of the 20th century a handful of residential dwellings are depicted on the north and south sides of Dundas Street/Riverside Drive within the vicinity of the future Queen's Bridge. In addition, sketches of the area from as early as 1890 and into the early 20th century depict the Tecumseh Park, now known as Labatt Park, the oldest continually operated ballpark in the world. Historic topographic mapping indicates that by the early and mid-20th century, that was once Petersville, later London West, had become a well-developed area just outside of downtown London (Images 5 and 6, Figures 3 – 5).

By the mid-20th century the areas on both sides of the bridge crossing were completely developed with commercial and institutional properties on the east side of the Thames River, and residential properties located on the west side of the river. In 1965, three houses are shown on the north side of Dundas Street within the trajectory of the eventual merging of the Queens Avenue extension and Riverside Drive (Figure 6). The houses were evidently demolished to accommodate the new road extension. Likewise, the Riverside Hotel, a large inn built at the corner of the forks in 1880, was eventually demolished. The hotel was located just southwest of the Queen's Bridge and Kensington Bridge within the vicinity of what is now Mitchell A. Baran Park. The construction of the Queen's Bridge, immediately north of the Kensington Bridge and the realigning of Queens Avenue with Dundas Street West have had a lasting visual and functional impact on the road networks and landscape in this area of London that remains in the 21st century.

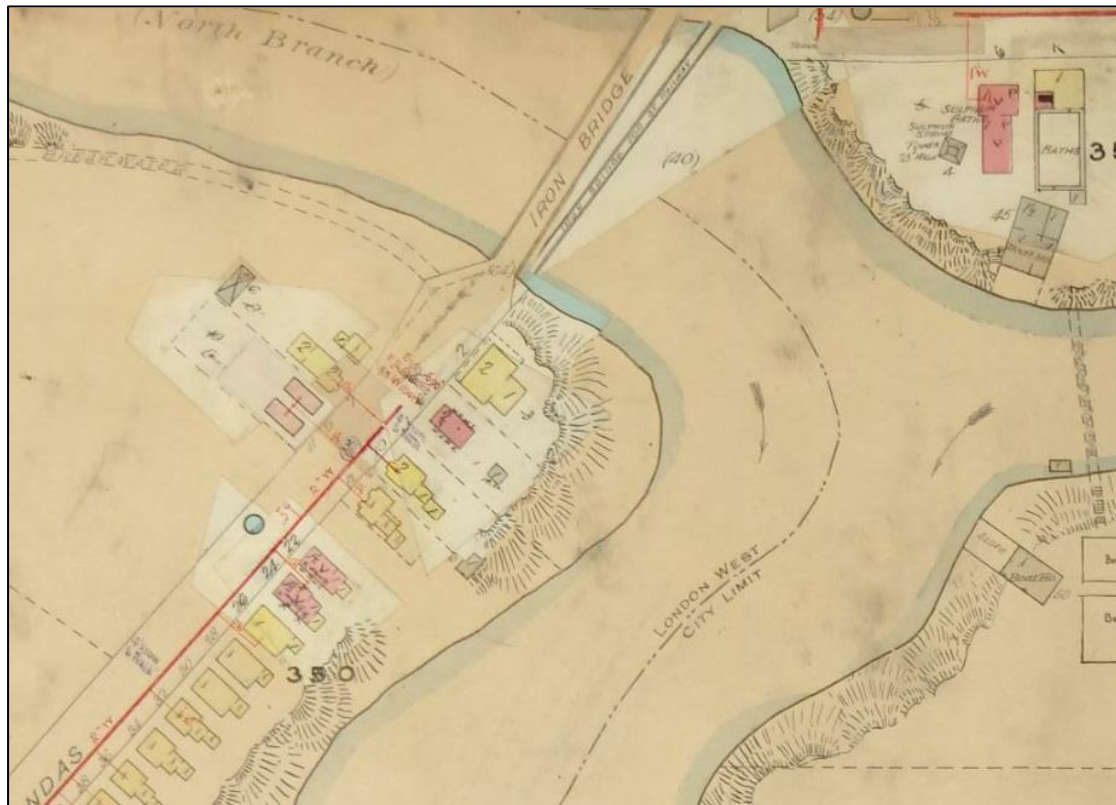


Image 5: Detail of the 1892 revised 1907 Fire Insurance Plan showing the 1883 Kensington Bridge and adjacent LSR Bridge

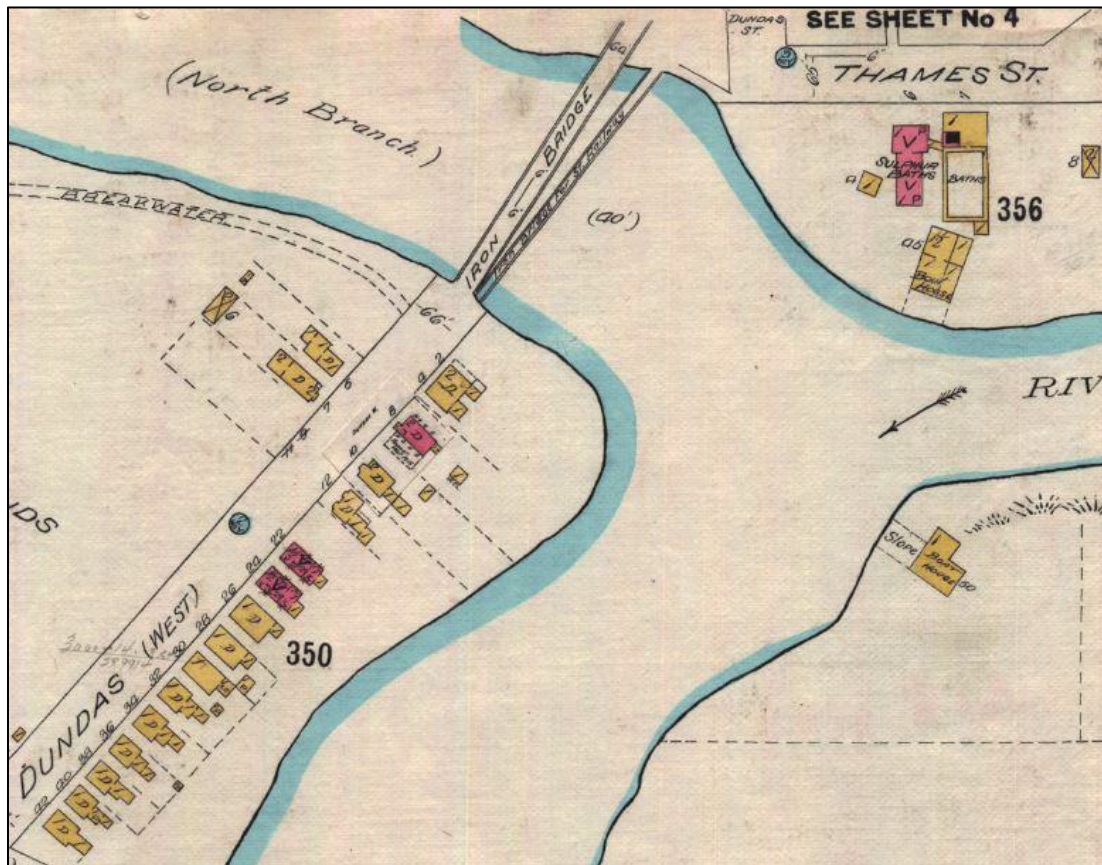
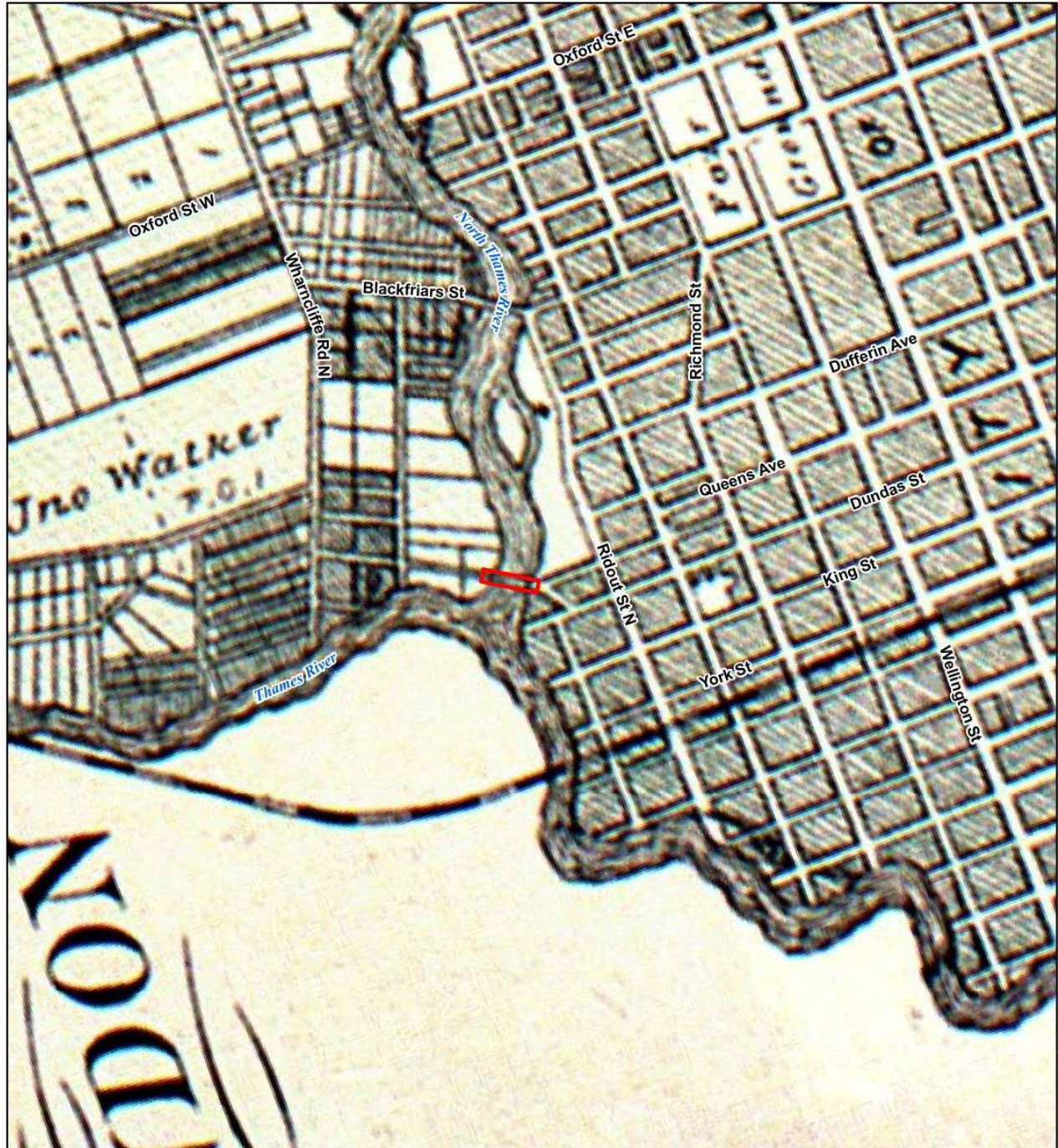


Image 6: Detail of the 1912 revised 1922 Fire Insurance Plan showing the 1883 Kensington Bridge and adjacent LDR Bridge. The plan shows little change in the surrounding landscape between 1907 and 1922



Legend Study Area		Cultural Heritage Evaluation Report Kensington Bridge, Riverside Drive London, Ontario	
		Study Area, 1878	
	November 2017	1:15,000	Datum: NAD 83 Zone 17 Source: Illustrated Historic Atlas of the County of Middlesex, Toronto: H.R. Page and Co., 1877
	P#: 60552850	V#:	Figure 3
AECOM			0 150 300 600 Metres
<small>This drawing has been prepared for the use of AECOM's client and may not be used, reproduced or relied upon by third parties without the written consent of AECOM and its client. We warrant that the information contained herein is accurate and complete as of the date of preparation. AECOM accepts no responsibility, and disclaims any liability whatsoever, to any party that modifies this drawing without AECOM's express written consent.</small>			

Figure 3: Study Area, 1878

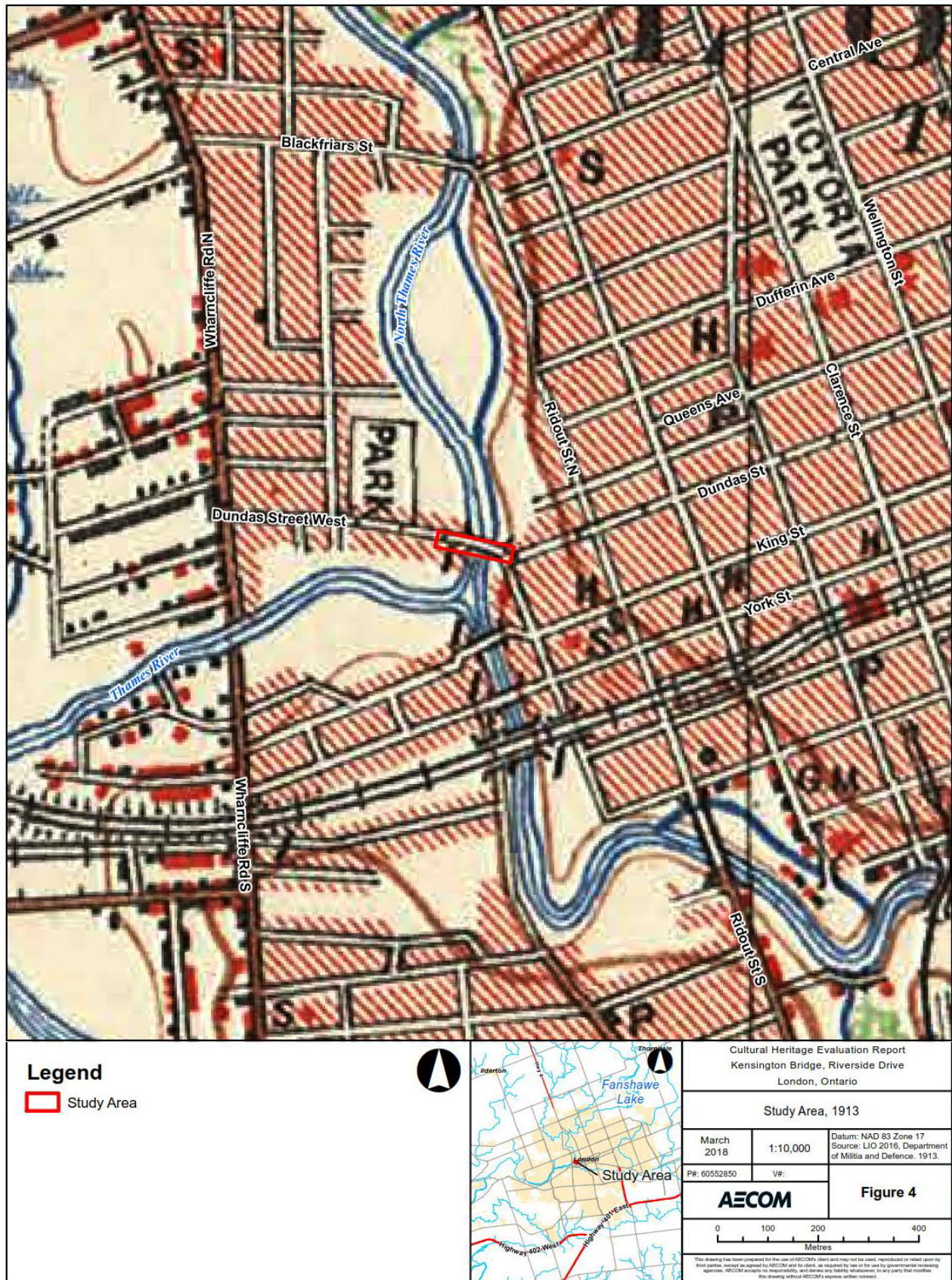


Figure 4: Study Area, 1913

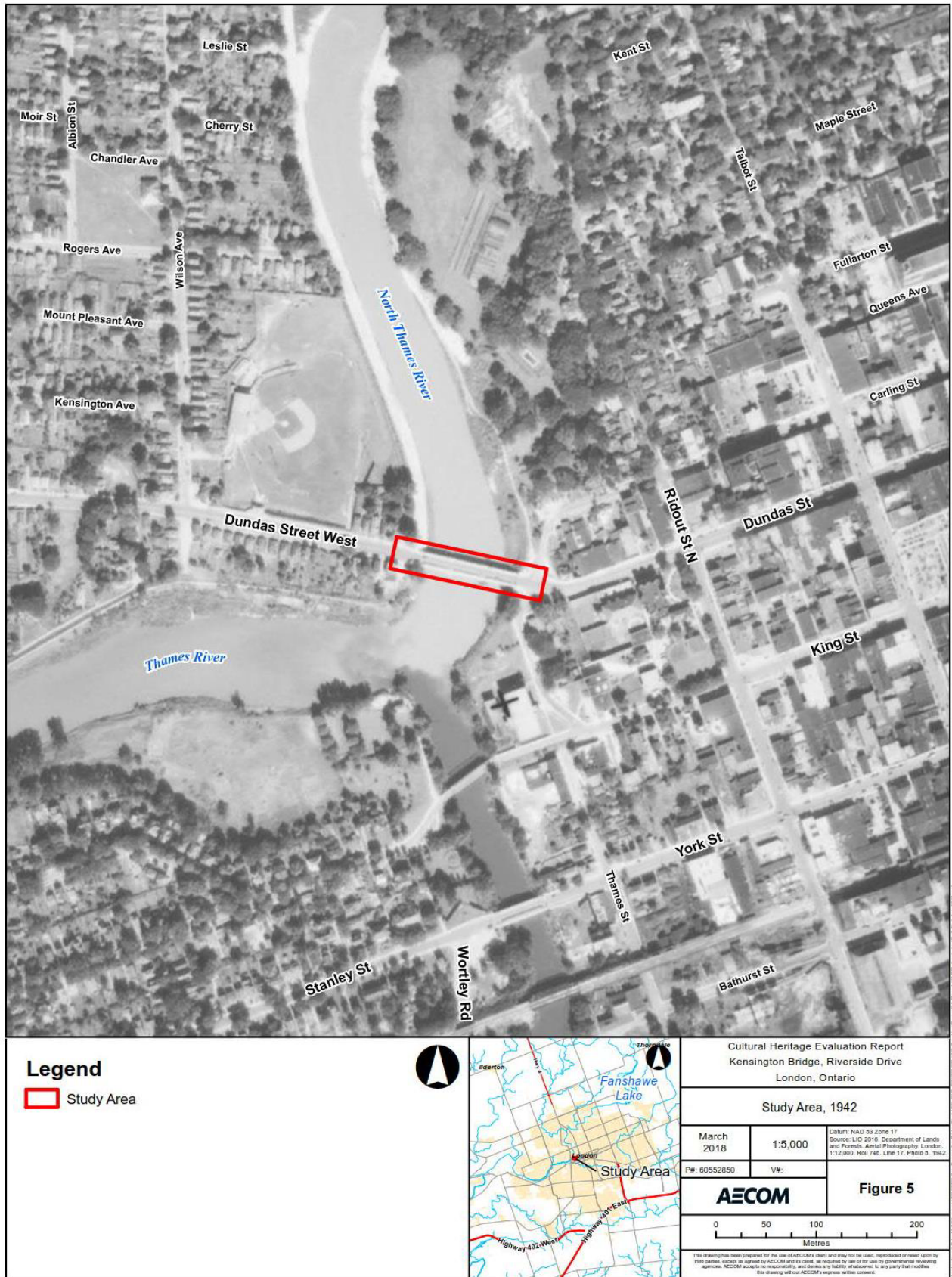


Figure 5: Study Area, 1942



Figure 6: Study Area, 1913

3.2.3 Bridge Building Context

Most original public highway bridges were built and owned by a municipality such as a county, town or a township. Much more rarely, they were owned by the province. Matters pertaining to bridge ownership have been dictated by the *Ontario Municipal Act* since 1867. The construction and operation of bridges over water courses that formed boundaries between townships were always assumed by an upper level of government, such as a County.

Most 19th-century bridges in southern Ontario were built of timber. Short spans were beam structures; longer spans employed simple trusses, such as King and Queen Post trusses. A few iron truss bridges were built in the 1870s-1880s but were generally too costly to be widely used. Various iron bridges were built within London including an earlier version of the current Victoria Bridge, and the well-known Blackfriars Bridge.

The economic value to communities of good roads, and by extension good bridges, was becoming evident. Nineteenth-century wooden bridges could not carry the weight of heavier wagon and street railway equipment coming into use. By the First World War, motor vehicles were becoming increasingly common and the provincial government began to provide grant programs and technical advice on bridge building. At the same time, counties began to create county-wide road networks by assuming the ownership of key township roads and bridges.

Inexpensive steel trusses came into use in the 1890s and the designs were commonly used into the 1930s. The Pratt truss and the Warren truss dominated the early-20th century, and were typically used for spans of up to 400 feet.⁵ The Meadowlily Bridge and the King Street Bridge are both steel truss bridges constructed within London. Both bridges have been rehabilitated recently and are currently being used as footbridges. The existing Kensington Bridge, a steel pony truss, was constructed in 1930.

Concrete became widely used to construct short span bridges. One of the earliest forms was the solid spandrel concrete arch design that was inexpensive to build. This design consisted of solid concrete spandrel walls that held back the stone rubble and earth fill on the interior of the arch. The arch itself was constructed with reinforcing steel bars. By the 1930s, concrete challenged steel as the primary bridge-building material of choice and various concrete bridge types have since been used for road bridge construction. Concrete and steel continue to be used in bridge construction into the 21st century.

3.2.4 Kensington Bridge

The existing Kensington Bridge was not the first crossing over the Thames River at Riverside Drive/Dundas Street. There have been two previous crossings at this location, dating back to 1871. Much like the history of most bridges in London, the biggest threat to the longevity of the Kensington bridge structures has been floods.

The first crossing of the Thames at Riverside Drive/Dundas Street was built in 1871 to connect London with the Kensington/Petersville area. Archival materials indicate that the original bridge was a two-span timber frame structure constructed on stone abutments, with a centre pier, also constructed of stone. Much like its current termination on the east side of the Thames River, the east side of the Kensington Bridge was built into a slight bend on Dundas Street, where it can be seen realigning on a steep grade change leading to Ridout Street (Images 7 and 8). The Kensington Bridge was washed away as a part of the flooding in 1883. The first bridge was apparently named "Kensington Bridge" named after the proposed area in which it was built to service (See Section 3.2.1).⁶

⁵ T. Allan Comp and Donald Jackson, "Bridge Truss Types: A Guide to Dating and Identifying," in *American Association for State and Local History*, 1977; *National Park Services*, "Trusses: A Study by the Historic American Engineering Record", 1976.

⁶ *Blackfriars/Petersville Heritage Conservation District Study Report, January 2014*; "Named in Best of Old English Tradition 'Kensington' Built for Threat of Floods", *London Free Press*, February 14, 1949.



Image 7: Historic view showing 1871 Kensington Bridge at right. The bridge was a two-span timber frame structure over the river (Western Archives. Western University. Regional Photograph Collection. RC60186.)



Image 8: Historic view from the west side of the river showing the 1871 Kensington Bridge as well as Dundas Street rising up to Ridout Street at right (Western Archives. Western University. Regional Photograph Collection. RC80296.)

The second Kensington Bridge, was built in 1883 to replace the washed away bridge. The second Kensington Bridge was constructed of iron, and was a two-span Warren truss bridge built by the Dominion Bridge Company, with the assistance of Isaac Crouse, a local 19th-century bridge expert, most notably associated with the nearby Blackfriars Bridge.⁷ The bridge had a total length of 315 feet, with a roadway of 16 feet. Prior to 1895 the City would not allow the London Street Railway to build streetcar tracks on the bridge at the time so the tracks were built along Riverside Drive/Dundas Street, and passengers were required to walk across a sidewalk on the side of the bridge.⁸ In 1895, the LSR built an extension on the south side of the bridge in order to accommodate its street car traffic. Historic photography indicates that the LSR was carried on a three-span bridge built in what looks like identical fashion, although with timber cribs for piers. The vehicular bridge and the LSR bridge were dismantled in 1929 to make room for a newer structure (Images 9 – 10).



Image 9: View looking across the LSR bridge built adjacent (shown on the left) to the Kensington Bridge, c. 1923 (Western Archives. Western University. Regional Photograph Collection. RC60082)

⁷ Jim Gilbert, *Looking Back: The Thames River, Ontario, St Catharines, Ontario: Vanwell Publishing, 2005; Blackfriars/Petersville HCD; London Free Press, February 14, 1949.*

⁸ *Blackfriars/Petersville HCD Plan, p. 33.*



Image 10: Historic view from west side of the Thames River showing second Kensington Bridge, built in 1883. A second structure was built immediately south of the bridge supported on timber cribs to carry the LSR over the river (Western Archives. Western University. Regional Photograph Collection. RC 60221.)

The third – and existing – Kensington Bridge was built in 1930. John R. Rostron, a municipal engineer who designed the Victoria Bridge over Ridout Street, also designed the Kensington Bridge. The design is almost identical with just an additional span on the subject bridge. A disagreement between the City of London and the LSR led to a three year delay in the construction of the bridge. The disagreement was in part due to the laying of tracks on the bridge and ultimately the transition from a street railway system to a bus system that would be privately operated.⁹ The bridge was built as a steel pony truss design, constructed by the Hamilton Bridge Company. The bridge has an overall length of 315 feet (96m), with a deck width of 48 feet (14m) (Images 11 – 12). By comparison, the similar Victoria Bridge had an overall span of approximately 250 feet (76m). The substructures appear to be similar in each structure, and each bridge was characterized by the large decorative end posts and lighting systems that provided gateway-like features at each approach to the bridge.

The Kensington Bridge was officially opened on October 4, 1930. A ceremonial bridge opening event was organized which included the arrival of prominent Londoners and dignitaries from City Hall on a LSR car, as well as public addresses, music by the City of London Regiment band and a ceremonial ribbon cutting by Mayor W.J. Kirkpatrick. The first car to cross the bridge was a street car which included the ceremonial officials as well as guests. The street car crossed the bridge then returned to City Hall.¹⁰

⁹ "Delay in Dundas St. Bridge Caused by Shelving of Bill Rouses the City to Action," *London Free Press*, March 17, 1930.

¹⁰ "New Kensington Bridge is Officially Opened," *London Free Press*, October 6, 1930; "The New Dundas Street Bridge," *London Free Press*, October 3, 1930.

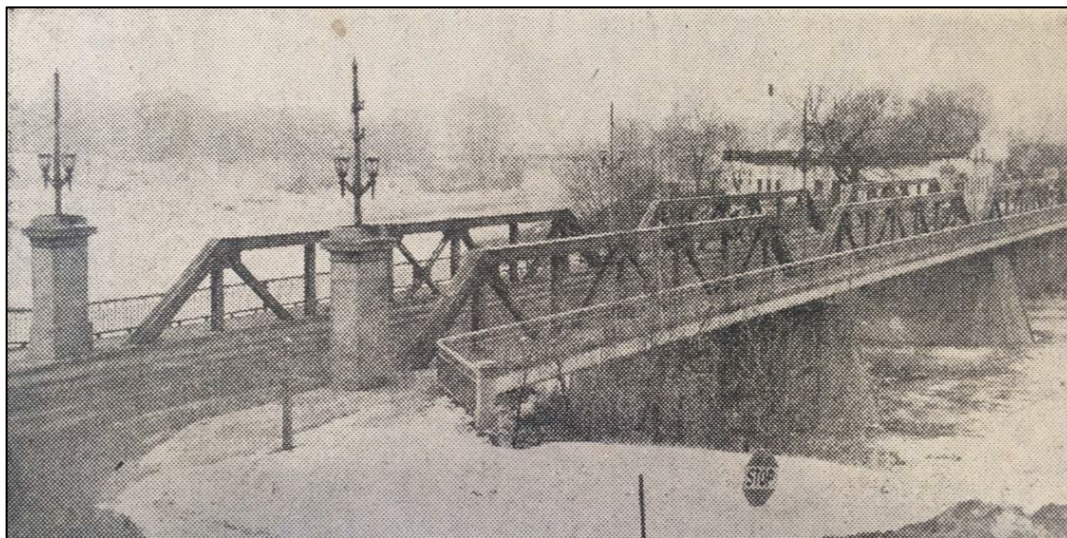


Image 11: Historic view showing the existing Kensington Bridge, as shown in the *London Free Press*, in 1949. The concrete end posts and lighting systems are no longer in place (*London Free Press*, February 14, 1949)

In 1927, the *Canadian Engineer*, a weekly paper published an article written by Rostron in which he outlines the context for the construction of the Victoria Bridge, including the particular challenge of building a bridge that would be elegant but not costly. Although not directly related to the Kensington Bridge, the design challenges may have been similar for the Kensington Bridge, given the identical design that was carried over from Victoria Bridge, just four years later. The concrete and stone end posts that were included on the Victoria Bridge were one of the key aesthetic considerations that were also utilized on the Kensington Bridge. The posts consisted of concrete cores with cut limestone facing and ornamental lighting. Although no longer in place, the end posts are well-documented in historical photography. In addition, an article published in the *London Free Press* in the 1940s noted that Rostron presented City Council with four designs, however, the Warren truss, built in a similar manner to the Victoria Bridge was favoured. Flooding was also identified as one of the chief considerations for the bridge design.¹¹

3.2.5 Hamilton Bridge Works Company Ltd.

The Hamilton Bridge Works Company Limited was a well-known and prolific bridge building company, both provincially and nationally. It flourished in the latter part of the 1890s and well into the 20th century, specializing in steel bridge construction, and making steel for the fabrication of buildings and bridges. Notable bridge projects include: several bridges over the Welland Canal; the Blue Water Bridge, Montreal; the Burlington Canal lift bridge; the Burlington Skyway Bridge on the Beach Strip over the Canal; the Lion's Gate Bridge, Vancouver; and prominent railway bridges in Toronto including the Highland Creek Bridge and the Rouge River Bridge, built for the Grand Trunk Railway. The company ceased operation in 1984. In London, the company was responsible for constructing the Victoria Bridge and the Kensington Bridge.

¹¹ Rostron, "Victoria Bridge, Ridout Street, London, Ont." *Canadian Engineer*, 1927; *London Free Press*, February 14, 1949.



Image 12: View showing City staff posting load limit signs on the bridge end posts in 1960. (London Free Press, January 9, 1960)

3.2.6 John R. Rostron

John Rostron was identified as one of the key individuals for the design and construction of the Kensington Bridge. Little biographical information could be determined for Rostron, however, he was identified in an article as an Assistant Engineer on Structural Works for the City of London, Ontario. The article in the 1927 edition of *The Canadian Engineer*, a weekly paper for civil engineer and contractor was a summary of the engineering design challenges and the construction process for the 1926 Victoria Bridge, a nearby bridge on Ridout Street. Rostron was also noted in a 1949 article in the *London Free Press* about the history of the Kensington Bridge.