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Appendix E

Stage 1 Archaeological Assessment

***If technical reports are required in an alternative format for accessibility needs, please contact:**

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STAGE 1 ARCHAEOLOGICAL ASSESSMENT
REGIONAL ROAD 43 (BRIDGE STREET)
LOTS 92-93
(FORMER TOWNSHIP OF STAMFORD, COUNTY OF WELLAND)
CITY OF NIAGARA FALLS
REGIONAL MUNICIPALITY OF NIAGARA, ONTARIO

ORIGINAL REPORT

Prepared for:

R.J. Burnside & Associates Limited
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Archaeological Licence #P383 (Williams)
Ministry of Heritage, Sport, Tourism and Culture Industries PIF# P383-0235-2020
ASI File: 20EA-040

8 April 2021

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Stage 1 Archaeological Assessment
Regional Road 43 (Bridge Street)
Lots 92-93
(Former Township of Stamford, County of Welland)
City of Niagara Falls
Regional Municipality of Niagara, Ontario

EXECUTIVE SUMMARY

ASI was contracted by R.J. Burnside & Associates Limited to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Regional Road 43 (Bridge Street) and Adjacent Municipal Roadways in the City of Niagara Falls. This project involves proposed transportation improvements to service the Niagara GO Transit Station. The Study Area includes Bridge Street and Park Street between Victoria Avenue and River Road, Erie Avenue and Zimmerman Avenue between Bridge Street and Queen Street, and the old rail trail corridor between Bridge Street and Park Street.

The Stage 1 background study determined that no previously registered archaeological sites are located within one kilometre of the Study Area. The property inspection determined that parts of the Study Area exhibits archaeological potential and will require Stage 2 assessment, prior to any proposed construction activities.

In light of these results, the following recommendations are made:

1. Parts of the Study Area retain deeply buried potential for the remains of nineteenth-century structures associated with the historic Town of Clifton. Stage 2 archaeological assessment by trenching is recommended that will involve heavy machinery to remove the parking lot surface and excavate trenches. The field investigation should be preceded by a detailed land use history of these blocks to determine the extent of nineteenth century settlement in the area and the location of structures of potential heritage value within the Study Area;

2. The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance or having been previously assessed. These lands do not require further archaeological assessment; and,

3. Should the proposed work extend beyond the current Study Area, further Stage 1 archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.

ASI

PROJECT PERSONNEL

Senior Project Manager:	Lisa Merritt, MSc. (P094) *Partner / Director* *Environmental Assessment Division*
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Project Director (Licensee):	Blake Williams, MLit (P383) *Lead Archaeologist / Project Manager* *Environmental Assessment Division*
Project Manager:	Eliza Brandy, MA (R1109) *Associate Archaeologist / Project Manager* *Environmental Assessment Division*
Field Director:	Doug Todd (R055) *Associate Archaeologist / Analyst* *Laboratory and Fieldwork Services, Operations Division*
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1.0 PROJECT CONTEXT

Archaeological Services Inc. (ASI) was contracted by R.J. Burnside & Associates Limited to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Regional Road 43 (Bridge Street) and Adjacent Municipal Roadways in the City of Niagara Falls (Figure 1). This project involves proposed transportation improvements to service the Niagara GO Transit Station. The Study Area includes Bridge Street and Park Street between Victoria Avenue and River Road, Erie Avenue and Zimmerman Avenue between Bridge Street and Queen Street, and the old rail trail corridor between Bridge Street and Park Street.

All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* (1990, as amended in 2018) and the 2011 *Standards and Guidelines for Consultant Archaeologists* (S & G), administered by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI 2011).

1.1 Development Context

All work has been undertaken as required by the *Environmental Assessment Act*, RSO (Ministry of the Environment 1990 as amended 2010) and regulations made under the Act, and are therefore subject to all associated legislation. This project is being conducted as a Schedule C Municipal Class Environmental Assessment (MCEA) in accordance with the Municipal Engineers' Association document *Municipal Class Environmental Assessment* (2000 as amended in 2007, 2011 and 2015).

Authorization to carry out the activities necessary for the completion of the Stage 1 archaeological assessment was granted by R.J. Burnside & Associates Limited on October 1, 2020.

1.2 Historical Context

The purpose of this section, according to the S & G, Section 7.5.7, Standard 1, is to describe the past and present land use and the settlement history and any other relevant historical information pertaining to the Study Area. A summary is first presented of the current understanding of the Indigenous land use of the Study Area. This is then followed by a review of the historical Euro-Canadian settlement history.

1.2.1 Indigenous Land Use and Settlement

Southern Ontario has been occupied by human populations since the retreat of the Laurentide glacier approximately 13,000 years before present (BP) (Ferris 2013). Populations at this time would have been highly mobile, inhabiting a boreal-parkland similar to the modern sub-arctic. By approximately 10,000 BP, the environment had progressively warmed (Edwards and Fritz 1988) and populations now occupied less extensive territories (Ellis and Deller 1990).

Between approximately 10,000-5,500 BP, the Great Lakes basins experienced low-water levels, and many sites which would have been located on those former shorelines are now submerged. This period produces the earliest evidence of heavy wood working tools, an indication of greater investment of labour in felling trees for fuel, to build shelter, and watercraft production. These activities suggest prolonged seasonal residency at occupation sites. Polished stone and native copper implements were being produced by

approximately 8,000 BP; the latter was acquired from the north shore of Lake Superior, evidence of extensive exchange networks throughout the Great Lakes region. The earliest evidence for cemeteries dates to approximately 4,500-3,000 BP and is indicative of increased social organization, investment of labour into social infrastructure, and the establishment of socially prescribed territories (Ellis et al. 1990; Ellis et al. 2009; Brown 1995:13).

Between 3,000-2,500 BP, populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. The Woodland period begins around 2,500 BP and exchange and interaction networks broaden at this time (Spence et al. 1990:136, 138) and by approximately 2,000 BP, evidence exists for small community camps, focusing on the seasonal harvesting of resources (Spence et al. 1990:155, 164). By 1,500 BP there is macro botanical evidence for maize in southern Ontario, and it is thought that maize only supplemented people's diet. There is earlier phytolithic evidence for maize in central New York State by 2,300 BP - it is likely that once similar analyses are conducted on Ontario ceramic vessels of the same period, the same evidence will be found (Birch and Williamson 2013:13–15). As is evident in detailed Anishinaabek ethnographies, winter was a period during which some families would depart from the larger group as it was easier to sustain smaller populations (Rogers 1962). It is generally understood that these populations were Algonquian-speakers during these millennia of settlement and land use.

From the beginning of the Late Woodland period at approximately 1,000 BP, lifeways became more similar to that described in early historical documents. Between approximately 1000-1300 Common Era (CE), the communal site is replaced by the village focused on horticulture. Seasonal disintegration of the community for the exploitation of a wider territory and more varied resource base was still practised (Williamson 1990:317). By 1300-1450 CE, this episodic community disintegration was no longer practised and populations now communally occupied sites throughout the year (Dodd et al. 1990:343). From 1450-1649 CE this process continued with the coalescence of these small villages into larger communities (Birch and Williamson 2013). Through this process, the socio-political organization of the First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed.

By 1600 CE, the Huron- Wendat communities within Simcoe County had formed the Confederation of Nations encountered by the first European explorers and missionaries. Samuel de Champlain in 1615 reported that a group of Iroquoian-speaking people situated between the Haudenosaunee and the Huron-Wendat were at peace and remained "la nation neutre". Like the Huron-Wendat, Petun, and Haudenosaunee, the Neutral people were settled village agriculturalists. In the 1640s, the Neutral and the Huron-Wendat (and their Algonquian allies such as the Nippissing and Odawa) were decimated by epidemics and ultimately dispersed by the Haudenosaunee. Shortly afterwards, the Haudenosaunee established a series of settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario. By the 1690s however, the Anishinaabeg were the only communities with a permanent presence in southern Ontario. From the beginning of the eighteenth century to the assertion of British sovereignty in 1763, there was no interruption to Anishinaabeg control and use of southern Ontario.

1.2.2 Treaties

The Study Area is within Treaty 381. The Niagara Purchase was signed in 1781 between the Crown and the Chippewa and Mississaugas for the tract of land which had not been agreed upon in the 1764 Niagara Peace Treaty on the west side of "the Straits" that lead from Lake Erie to Lake Ontario at Niagara Falls (Crown-Indigenous Relations and Northern Affairs 2016).

1.2.3 Euro-Canadian Land Use: Township Survey and Settlement

Historically, the Study Area is located in the Former Stamford Township, County of Welland, in part of Lots 92-93.

The S & G stipulates that areas of early Euro-Canadian settlement (pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches, and early cemeteries are considered to have archaeological potential. Early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed on a municipal register or designated under the Ontario Heritage Act or a federal, provincial, or municipal historic landmark or site are also considered to have archaeological potential.

For the Euro-Canadian period, the majority of early nineteenth century farmsteads (i.e., those that are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth century maps) are likely to be located in proximity to water. The development of the network of concession roads and railroads through the course of the nineteenth century frequently influenced the siting of farmsteads and businesses. Accordingly, undisturbed lands within 100 m of an early settlement road are also considered to have potential for the presence of Euro-Canadian archaeological sites.

The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Indigenous pathways and set up trading posts at strategic locations along the well-traveled river routes. All of these occupations occurred at sites that afforded both natural landfalls and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation routes followed existing Indigenous trails, both along the lakeshore and adjacent to various creeks and rivers (ASI 2006).

Township of Stamford

The land which comprises the subject property in the former Township of Stamford formed part of a tract of land which was alienated by the British in 1764, and was one of the earliest land purchases within Ontario made by the Crown.

After the British capture of Fort Niagara in July 1759, the contract for transporting goods along the Portage on the east bank of the Niagara River was awarded to John Stedman. Stedman was named "Master of the Portage" and he was given the task of reorganizing the methods of transporting material along this route including the difficult climb up the Niagara Escarpment at Lewiston. The Seneca Nation named this portion of the trail "Crawl on All Fours," which provides some idea as to the arduous nature of the ascent. One of Stedman's innovations was a device called "The Cradle," which was a rope drawn system for hauling goods up and over the steepest part of the climb. From the top of the escarpment, the portage then followed the east bank of the river to a point above the Horseshoe Falls opposite Navy Island. From there, goods could then be shipped by bateaux on the river to Lake Erie.

In April 1764, a peace treaty was negotiated with the Seneca by Sir William Johnson. Under the terms of this treaty, a four-mile-wide strip of land was ceded to the British. This strip measured two miles in width on either side of the Niagara River, and fourteen miles in depth (i.e., to a point just above the "Great Cataract.") This also included all of the islands within the river. In August 1764, the "Genesee Indians" consented to the terms of this treaty, and further ceded a similar sized tract of land to the Crown which extended from the Falls to the mouth of the Niagara River at Lake Erie (O'Callaghan 1887:562, 621, 647-649, 652-653). The remainder of the land within Stamford Township was acquired by the British from the

Mississauga Nation under the terms of a provisional treaty negotiated at Niagara in May 1784. This surrender was fully ratified at Navy Hall in December 1792 (Anonymous 1891:5-7; Armstrong 1985:147).

The area long known as Stamford Township was, during the 1780s, initially referred to as "Township No. 2," and also as the "Mountain Township." In the late 1780s and early 1790s, it was also known as "Mount Dorchester." The name "Stamford" officially came into common use after Simcoe renamed the townships in the Niagara Region in 1792. This name was selected in honour of a very old town by the same name located in Lincolnshire in England (Gardiner 1899:277).

Stamford comprised part of Lincoln County in the Home District from 1792 until 1800. At that time, the Home District (York) was separated and raised to independent status, and the remainder of the older administrative unit on the south side of Lake Ontario was renamed as the Niagara District. Following the abolition of the Districts in 1849, the Niagara District was succeeded for judicial purposes by the United Counties of Lincoln, Welland and Haldimand. Haldimand was separated from this union in 1850-1851, and the provisional County of Welland was fully separated from the union in 1856. Both Lincoln and Welland counties were abolished in 1969-1970, and replaced by the Regional Municipality of Niagara (Proclamation 24 July 1788; Proclamation 16 July 1792; 32 Geo. III c. 8; 38 Geo. III c. 5; 12 Vic. c. 78; Armstrong 1985:138-140, 147, 186).

In 1799, the Surveyor General, D.W. Smith, only noted that Stamford was a township "in the county of Lincoln, lies on the west side of Niagara river, and south of Newark." In 1805, another writer observed that it was situated "in a very flourishing part of the country" (Smith 1799:140; Boulton 1805:89).

The first township survey was undertaken shortly after the Treaty of 1784, and the first permanent settlers took up their land holdings around that same time (Armstrong 1985:147). By 1846, about one-half of the privately owned land in Stamford was under cultivation. The township was described as being "old and well-settled…containing good land and numerous beautifully situated farms." Despite its proximity to water, Stamford then contained just three grist mills. The population stood at 2,636, which was a mixture of "Canadians, English, Irish, Scotch and Americans." The total property assessment was £46,071 (Smith 1846:176).

Town of Clifton

The Town of Clifton owes its name to Captain Ogden Creighton, British Officer who served in various parts of the world, including the Far East. Around 1830, Captain Creighton came to Niagara Falls and acquired a sizeable tract of land (present day Clifton Hill and Falls Avenue). The land was surveyed and laid out for a town site, which he named Clifton, presumably after Clifton on the gorge of the River Avon in Bristol, England. Few people bought building lots and the town of Clifton did not develop as Captain Creighton had hoped until after his death in 1850. The land was purchased by Samuel Zimmerman and amalgamated with Elgin in 1856. In 1873, Clifton contained three churches, two schools, a museum, hotels, stores, two telegraph offices, a tow hall and market, and carried on an extensive general trade. The town had a estimated population of 1,610 (Crossby 1873; Seibel 1967; Burtniak 1972).

The development of railways by various Canadian and American companies after the 1830's resulted in the creation of new settlements and the expansion of others. Niagara was on the route between the growing regions of southern Ontario and the northeastern United States and by the end of the nineteenth century five major east-west lines and two north-south lines crossed the region (Gayler 1997:246).

Railways

A rail corridor operated by the Great Western Railway (GWR) in the nineteenth century travels in a roughly east-west direction along the northern limits of the Study Area, crossing the Niagara River into the United States of America. The rail line known as the Canadian Air Line (CAL) in the late nineteenth century winds predominantly east-west through the Study Area but is part of a larger corridor that crosses the Study Area between the southeast and northwest corners.

The GWR was originally incorporated in 1834 as the London and Gore Railroad Co. and changed its name to the GWR in 1853. In 1849 Oswald, Zimmerman and Company was given the construction contract, organized by Samuel Zimmerman and James Oswald who were influential in the Welland Canal project (Johnson 1985). It received considerable promotion by Allan Napier MacNab, Isaac and Peter Buchanan, R.W. Harris and John Young. Aided by government guarantees and supported by foreign American and British investment, the GWR opened its mainline (Windsor-London-Hamilton-Niagara Falls) in 1854. The original Niagara Falls station (formerly called Clifton) was constructed in 1879, and the roundhouse remained in operation until it was demolished in the 1960s. By 1882, it was operating throughout southwestern Ontario and even into Michigan (Baskerville 2015).

To increase profitability and create a direct connection between Fort Erie and Windsor through southwestern Ontario, the GWR constructed the CAL in 1872. The CAL took advantage of the flat terrain to the north of Lake Erie that permitted fewer changes in grade and curves in the rail which allowed for greater speeds and larger loads. The CAL was constructed to undermine their competitors, the Canada Southern Railway (CASO, later the Michigan Central Rail, Pennsylvania Railroad, and Conrail), that operated in a similar area, both connecting the two border cities with the United States. In 1882 the GWR amalgamated with the Grand Trunk Railway (GTR), in an attempt to successfully compete with rival American railroads for American through-traffic between Michigan and New York states (Baskerville 2015). The GTR was incorporated by the Canadian National Railways (CNR) in 1923. CNR operated the former CAL as the CN Cayuga Subdivision until its abandonment in 1996-1997 (Cooper 2014; St. Thomas Public Library 2018).

1.2.4 Historical Map Review

The 1854 Bufford Map of the Villages of Niagara Falls and Niagara City (Bufford 1854), the 1862 Map of the Counties of Lincoln and Welland (Tremaine and Tremaine 1862), and the 1876 Illustrated Historical Atlas of the Counties of Lincoln and Welland Township of Stamford page (Page 1876) were examined to determine the presence of historic features within the Study Area during the nineteenth century (Table 1; Figures 2-4).

It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases, given that they were financed by subscription, and subscribers were given preference with regard to the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases.

In addition, the use of historical map sources to reconstruct/predict the location of former features within the modern landscape generally proceeds by using common reference points between the various sources. These sources are then geo-referenced in order to provide the most accurate determination of the location of any property on historic mapping sources. The results of such exercises are often imprecise or even contradictory, as there are numerous potential sources of error inherent in such a process, including the

vagaries of map production (both past and present), the need to resolve differences of scale and resolution, and distortions introduced by reproduction of the sources. To a large degree, the significance of such margins of error is dependent on the size of the feature one is attempting to plot, the constancy of reference points, the distances between them, and the consistency with which both they and the target feature are depicted on the period mapping.

The 1854 map depicts Bridge Street as a road traveling east-west between an unlabeled north-south road to the west (now Victoria Avenue) and Front Street South to the east (now River Road). Ontario Avenue, Erie Avenue, Clifton Avenue (now Zimmerman Avenue), and Cataract Street run north-south from Bridge Street. Park Street and Queen Street travel east-west between Ontario Avenue and Front Street South. The Great Western Railway (GWR) is shown crossing north of the Study Area from the bridge over the Niagara River to the United States of America. Two rail lines branch from the railway south into the Study Area. North of Bridge Street is marked 'Depot Grounds', with two structures at the corner of Bridge Street and Victoria Avenue. One structure fronts Bridge Street to the south on land labeled Bender and Others. A watercourse enters the Study Area from the southeast and stops at Ontario Avenue. A structure labeled farm house and a second structure are beside the watercourse on land belonging to Samuel Zimmerman. A third structure is north of the watercourse.

Mapping from 1862 illustrates the Study Area at the core of the Village of Clifton, with a grid-like pattern of streets already in place and dense areas of development indicated by dark shading. One rail corridor is illustrated snaking through the Study Area in a roughly north-south orientation, unlabeled as to ownership. GWR is labelled as the property owner of Lot 92. The watercourse is now labelled "Muddy Run", and is shown extending from the Niagara River in a northeast-southwest direction through the Study Area.

The urban core of the Town of Clifton continues to develop rapidly during the late nineteenth century. Mapping from 1876 shows further spread of the urban grid road network to the south and west of the Study Area. GWR continues to own the land to the north of the Study Area and operate the rail corridor extending east-west along the northern border of the study area through their property. The second corridor, weaving through the Study Area is labelled as the "Canada Southern" railroad.

1.2.5 Twentieth-Century Mapping Review

The 1920 and 1973 National Topographic System (NTS) Niagara Sheets (Department of Militia and Defence 1920; Department of Energy, Mines and Resources 1973) and the 1954 and 2018 aerial photographs (Brock University 2018) were examined to determine the extent and nature of development and land uses within the Study Area (Figures 5-7).

Early twentieth century mapping shows the Study Area functioned as an urban core into the twentieth century. More detail than earlier mapping is shown on the 1920 topographic map. Amongst the dense urban development, a number of wood structures are illustrated and at least two stone or brick structures are illustrated: one at the southeast corner of Bridge Street West and Crysler Avenue and one along the north side of Queen Street between Crysler Avenue and St. Clair Avenue. The rail corridor extending in an east-west orientation along the north boundary of the study area is again labelled as being owned by 'G.W.Ry' (GWR). A train station is illustrated on this corridor, on the north side of Bridge Street, at the

intersection of Bridge Street and Erie Avenue. Bridge Street and Victoria Avenue are depicted as metalled roads[1].

Aerial photography taken in 1954 shows the dense settlement of the Study Area. Commercial buildings are seen lining Queen Street and are visible in the eastern portion of the Study Area. Residential properties can be seen along the south side of Bridge Street. The railways are seen in the same alignment as indicated on previous mapping. The train station is visible as a prominent structure at the intersection of Bridge Street and Erie Avenue.

The 1973 topographic mapping shows dense settlement both within and surrounding the Study Area. Few properties are individually labelled. City Hall is indicated in its present location, at 4310 Queen Street. The individual buildings that make up St. Patrick's Church are visible on the property at 4673 Victoria Avenue, including a school.

1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the Study Area, its environmental characteristics (including drainage, soils or surficial geology and topography, etc.), and current land use and field conditions. Three sources of information were consulted to provide information about previous archaeological research: the site record forms for registered sites available online from the MHSTCI through "Ontario's Past Portal"; published and unpublished documentary sources; and the files of ASI.

1.3.1 Current Land Use and Field Conditions

A review of available Google satellite imagery since 2002 shows earth moving activities related to the demolition of a building and replacement with a parking lot west of Erie Avenue between Bridge Street and Park Street in 2016.

A Stage 1 property inspection was conducted on November 20, 2020 that noted the Study Area is located along Bridge Street and Park Street between Victoria Avenue and River Road, and Erie Avenue and Zimmerman Avenue between Bridge Street and Queen Street.

Bridge Street is a two-lane road set in a mixed residential, commercial, and industrial environment. At the west end, Bridge Street has residences along the south side and large open spaces including a parking lot and fields to the north. A recreational path is extant along the former railway line towards the intersection of Bridge Street and Victoria Avenue. Industrial buildings are clustered on the north side of the street at the foot of Crysler Avenue. Large parking lots are found on both sides of Bridge Street west of Erie Avenue. A stretch of late nineteenth century brick and stone buildings are found between Erie and Zimmerman Avenues, followed by a slight slope down to River Road.

Zimmerman Avenue is a two-lane road that includes a mix of occupied and vacant buildings as well as open spaces. Between Bridge Street and Park Street is the Niagara Falls Ryerson Innovation Hub on the west side and mostly unoccupied commercial and public buildings on the east side. South of Park Street,

[1] Metalled roads were constructed from crushed stone bound by tar which was then compressed with a steam roller, also known as "tarmac" (Neill 2016).

Zimmerman Avenue dips below a railway bridge and includes a mix of trees and deserted open spaces on the west side and a tree-lined buffer between the road and the Edgecliff Inn and adjacent parking lot on the east side.

Erie Avenue is a two-lane road that includes a mix of occupied and vacant buildings as well as open spaces. Between Bridge Street and Park Street, Erie Avenue is dominated on the west side by the Transit Terminal and associated parking lot and transitways and on the east side by the vacant former Europa Hotel. Between Park and Queen Streets, an abandoned railway line and a municipal parking lot are found on the west side, a former strip of commercial buildings and an open field line the east side.

On the southeast corner of Queen Street and Erie Street is the Rosberg Family Park and Downtown Park. These parks include small trees and flower beds, benches, walkways, sculptures, and a playground. Running through the parks is the Olympic Torch Run Legacy Trail, formerly part of the Michigan Central Railway line.

Park Street is a two-lane road set in a mixed residential and commercial environment. At the west end of the Study Area, Park Street has several large buildings. The trail along the former railway line runs mostly along a parallel line north of the street, with the only visible section being found between Buckley and St. Lawrence Avenues where it runs on a northwest-southeast axis toward the intersection of Bridge Street and Victoria Avenue. Moving east, between St. Lawrence Avenue and Erie Avenue, the south side of the street is a series of parking lots, dotted by a few houses and commercial shops. The north side of the street is primarily residential. Further east, between Erie Avenue and Zimmerman Avenue, the south side of the street is a mix of trees and an abandoned lot while the north side has three buildings spaced apart. At the eastern end of Park Street, between Zimmerman Avenue and River Road, the north side is largely wooded while the south side is a mix of trees, residences, and the parking lot of the Parkway Motel.

1.3.2 Geography

In addition to the known archaeological sites, the state of the natural environment is a helpful indicator of archaeological potential. Accordingly, a description of the physiography and soils are briefly discussed for the Study Area.

The S & G stipulates that primary water sources (lakes, rivers, streams, creeks, etc.), secondary water sources (intermittent streams and creeks, springs, marshes, swamps, etc.), ancient water sources (glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches, etc.), as well as accessible or inaccessible shorelines (high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.) are characteristics that indicate archaeological potential.

Water has been identified as the major determinant of site selection and the presence of potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in Ontario since 5,000 BP (Karrow and Warner 1990:Figure 2.16), proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modeling of site location.

Other geographic characteristics that can indicate archaeological potential include: elevated topography (eskers, drumlins, large knolls, and plateaux), pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground, distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings. Resource areas, including; food or medicinal plants (migratory routes, spawning areas) are also considered characteristics that indicate archaeological potential (S & G, Section 1.3.1).

The Study Area is located within the sand plains and clay plains of the Haldimand Clay Plain physiographic region of southern Ontario. The Haldimand Clay Plain (Chapman and Putnam 1984:156-159) is among the largest of the 53 defined physiographic regions in southern Ontario, comprising approximately 3,500 square km (MacDonald 1980:3). Generally, this region is flat and poorly drained, although it includes several distinctive landforms including dunes, cobble, clay, and sand beaches, limestone pavements, and back-shore wetland basins. Within this part of the Niagara peninsula, a number of environmental sub-regions have been described, including the Niagara Slough Clay Plain, the Fort Erie Clay Plain, the Calcareous Rock Plain (Onondaga Escarpment), the Buried Moraines, the Lake Erie Coast, and the Niagara River Valley (MacDonald 1980). The distribution and nature of these sub-regions, and the specific environmental features they contain, have influenced land use in the region throughout history and pre-history.

The surficial geology the Study Area (Figure 8) is underlain by consists of coarse-textured glaciolacustrine deposits of sand, gravel, minor silt and clay; man-made deposits of fill, sewage lagoon, landfill, urban development; and Paleozoic bedrock (Ontario Geological Survey 2010). Natural soils in the Study Area could not be identified due to the extent of urban expansion within the City of Niagara Falls (Ontario Institute of Pedology 1989).

The Study Area is within 100 metres of the Niagara River and Niagara Falls. The river flows for 51 kilometres, from Lake Erie north into Lake Ontario over Niagara Falls.

1.3.3 Previous Archaeological Research

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MHSTCI. This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The Study Area under review is located in Borden block AgGs.

According to the OASD, no previously registered archaeological sites are located within one kilometre of the Study Area (MHSTCI 2020).

According to the background research, five previous reports detail fieldwork within 50 m of the Study Area:

- ASI (2007: P057-317-2006) conducted a Stage 1 Archaeological Assessment of the Downtown Eastern Gateway, overlapping with the eastern portion of the Study Area. Background research and property inspection determined that parts of the project area held archaeological potential, including deeply buried potential, and would require Stage 2 archaeological assessment.

- ASI (2008: P264-001-2008) conducted a Stage 1 Archaeological Assessment of the Thorold Stone Road Extension, overlapping the current Study Area at Bridge Street and Victoria Avenue. Background research and property inspection determined the project area was disturbed and could be cleared of further archaeological concern.

- ASI (2010: P057-585-2009 and P057-596-2010) conducted a Stage 1 Archaeological Assessment of the GO Service Extension to the Niagara Peninsula, within 50 metres of the northern limit of the current Study Area. Background research and property inspection determined the area not to retain archaeological potential and recommended the area be cleared of further archaeological concern.

- ASI (2021: P383-0185-2019) conducted a Stage 1 Archaeological Assessment of the Metrolinx OnCorr Non-Priority Works Lakeshore West Corridor, overlapping the current Study Area along Bridge Street. The background research and property inspection determined that the Study Area retained archaeological potential, including deeply buried potential for the remains of nineteenth-century structures associated with the historic town of Clifton. Stage 2 archaeological assessment was recommended.

- WSP Canada (2020: P1105-0006-2020) Stage 1-2 Archaeological Assessment Thorold Stone Road Extension Niagara Region Part of Lots 74, 76, 91, 92, 93 and 94, Stamford Township, Former Welland County, City of Niagara Falls, Regional Municipality of Niagara. Areas were visually determined to be disturbed due to its use as a rail and roadway corridors and associated industrial facilities. The remainder was subject to judgemental test pit survey which was met with disturbance. No further archaeological assessment was recommended.

2.0 FIELD METHODS: PROPERTY INSPECTION

A Stage 1 property inspection must adhere to the S & G, Section 1.2, Standards 1-6, which are discussed below. The entire property and its periphery must be inspected. The inspection may be either systematic or random. Coverage must be sufficient to identify the presence or absence of any features of archaeological potential. The inspection must be conducted when weather conditions permit good visibility of land features. Natural landforms and watercourses are to be confirmed if previously identified. Additional features such as elevated topography, relic water channels, glacial shorelines, well-drained soils within heavy soils and slightly elevated areas within low and wet areas should be identified and documented, if present. Features affecting assessment strategies should be identified and documented such as woodlots, bogs or other permanently wet areas, areas of steeper grade than indicated on topographic mapping, areas of overgrown vegetation, areas of heavy soil, and recent land disturbance such as grading, fill deposits and vegetation clearing. The inspection should also identify and document structures and built features that will affect assessment strategies, such as heritage structures or landscapes, cairns, monuments or plaques, and cemeteries.

The Stage 1 property inspection was conducted under the field direction of Doug Todd (R055) of ASI, on November 20, 2020, in order to gain first-hand knowledge of the geography, topography, and current conditions and to evaluate and map archaeological potential of the Study Area. It was a systematic visual inspection from publicly accessible lands/public right-of-ways only and did not include excavation or collection of archaeological resources.

Fieldwork was conducted when weather conditions were deemed clear with good visibility (partly cloudy and temperature of 15ºc), as per S & G Section 1.2., Standard 2. Field observations are compiled onto the existing conditions of the Study Area in Section 7.0 (Figure 9) and associated photographic plates are presented in Section 8.0 (Plates 1-8).

3.0 ANALYSIS AND CONCLUSIONS

The historical and archaeological contexts have been analyzed to help determine the archaeological potential of the Study Area. Results of the analysis of the Study Area property inspection and background research are presented in Section 3.1.

3.1 Analysis of Archaeological Potential

The S & G, Section 1.3.1, lists criteria that are indicative of archaeological potential. The Study Area meets the following criteria indicative of archaeological potential:

- Water sources: primary, secondary, or past water source (Niagara River);
- Proximity to early settlements (Town of Clifton); and
- Early historic transportation routes (Bridge Street, Victoria Avenue, Great Western Railway).

According to the S & G, Section 1.4 Standard 1e, no areas within a property containing locations listed or designated by a municipality can be recommended for exemption from further assessment unless the area can be documented as disturbed. The Municipal Heritage Register was consulted and the following properties within the Study Area are Listed or Designated under the Ontario Heritage Act:

- 4267 Bridge Street (Train Station), Designated, frontages have no potential
- 4238-4240 Bridge Street West (Residential), Listed, deeply buried potential along Bridge Street.
- 4190 Bridge Street (Commercial), Designated, deeply buried potential along Bridge Street.
- 4177 Park Street (Commercial), Designated, frontages have no potential
- 4600-4610 Erie Avenue (Commercial), Listed, frontages have no potential
- 4624 Erie Avenue (Commercial), Listed, frontages have no potential

These criteria are indicative of potential for the identification of Indigenous and Euro-Canadian archaeological resources, depending on soil conditions and the degree to which soils have been subject to deep disturbance.

Part of the Study Area was previously assessed by ASI and was determined to retain archaeological potential for deeply buried features (2007: P057-317-2006). In parts of the Study Area that are currently open lots or parking areas, the report states that these lots may have deeply buried potential for the remains of nineteenth-century structures associated with the historic Town of Clifton. Stage 2 archaeological assessment is recommended that will involve heavy machinery to remove the parking lot surface and excavate trenches as per Section 2.1.7 of the S & Gs. The field investigation should be preceded by a detailed land use history of these blocks to determine the extent of nineteenth century settlement in the area and the location of structures of potential heritage value within the Study Area (Plates 5-6, 8; Figure 9: areas highlighted in purple).

Part of the Study Area has been previously assessed and does not require further archaeological assessments (Figure 9: areas highlighted in red).

The remainder of the Study Area has been subjected to deep soil disturbance events, including construction of the road right-of-ways (ROWs), sidewalk placement, and placement of underground services. According to the S & G Section 1.3.2 these areas do not retain archaeological potential or require further survey (Plates 1-8; Figure 8: areas highlighted in yellow).

3.2 Conclusions

The Stage 1 background study determined that no previously registered archaeological sites are located within one kilometre of the Study Area. The property inspection determined that parts of the Study Area exhibit deeply buried archaeological potential and will require Stage 2 assessment, prior to any proposed construction activities.

4.0 RECOMMENDATIONS

In light of these results, the following recommendations are made:

1. Parts of the Study Area retain deeply buried potential for the remains of nineteenth-century structures associated with the historic Town of Clifton. Stage 2 archaeological assessment by trenching is recommended that will involve heavy machinery to remove the parking lot surface and excavate trenches. The field investigation should be preceded by a detailed land use history of these blocks to determine the extent of nineteenth century settlement in the area and the location of structures of potential heritage value within the Study Area;

2. The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance or having been previously assessed. These lands do not require further archaeological assessment; and,

3. Should the proposed work extend beyond the current Study Area, further Stage 1 archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.

NOTWITHSTANDING the results and recommendations presented in this study, ASI notes that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or identify every form of isolated or deeply buried archaeological deposit. In the event that archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Cultural Programs Unit of the MHSTCI should be immediately notified.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

- ASI also advises compliance with the following legislation:

- This report is submitted to the Ministry of Heritage, Sport, Tourism and Culture Industries as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, RSO 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological field work and report recommendations ensure the conservation, preservation and protection of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Heritage, Sport, Tourism and Culture Industries, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

- It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological field work on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the Ontario Heritage Act.

- Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the Ontario Heritage Act.

- The Cemeteries Act, R.S.O. 1990 c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

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7.0 MAPS

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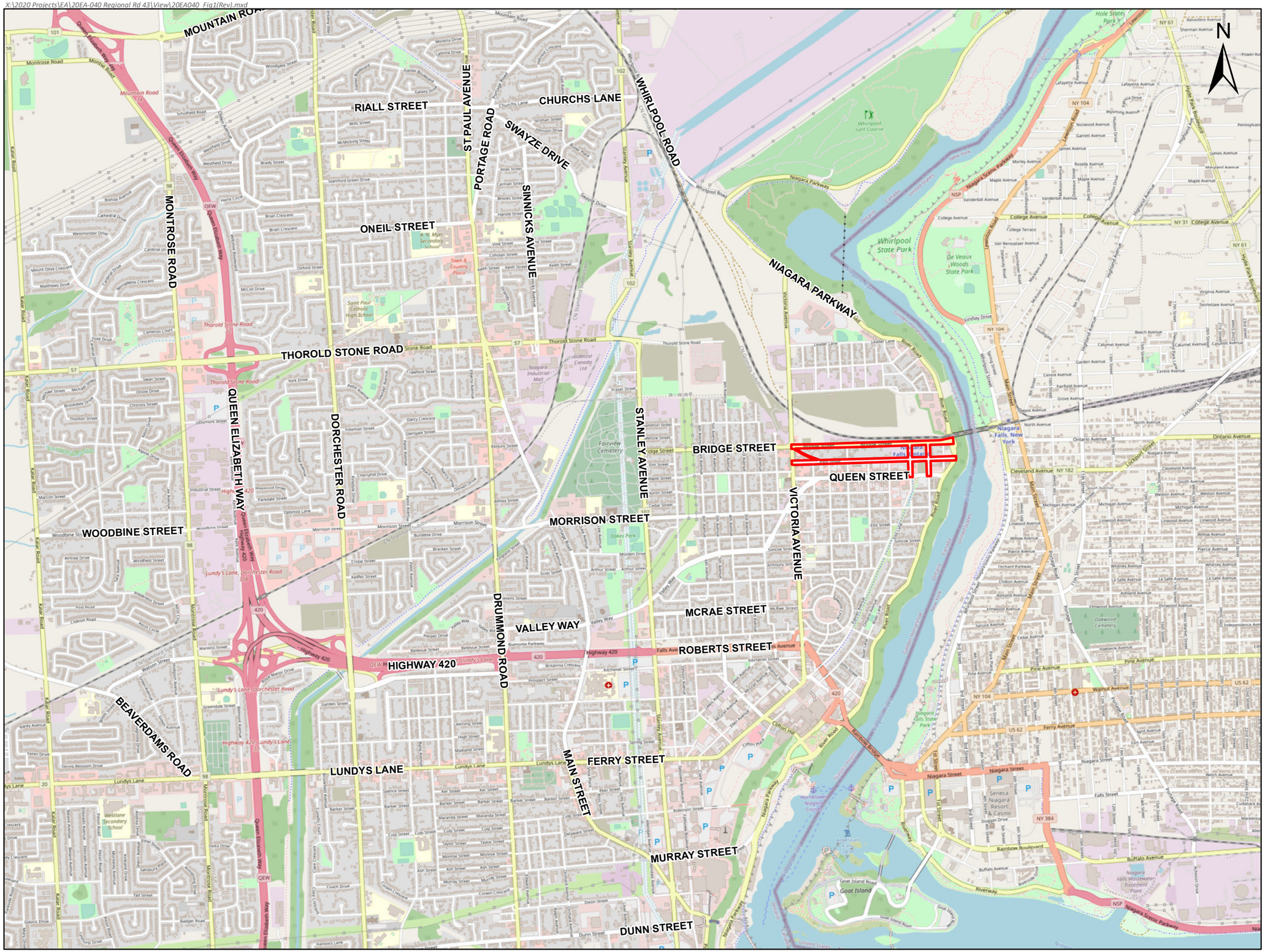

STUDY AREA

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Providing Archaeological & Cultural Heritage Services
528 Bathurst Street Toronto, ONTARIO M5S 2P9
T 416-966-1069 F 416-966-9723 asiheritage.ca

Figure 1: Regional Road 43 Study Area

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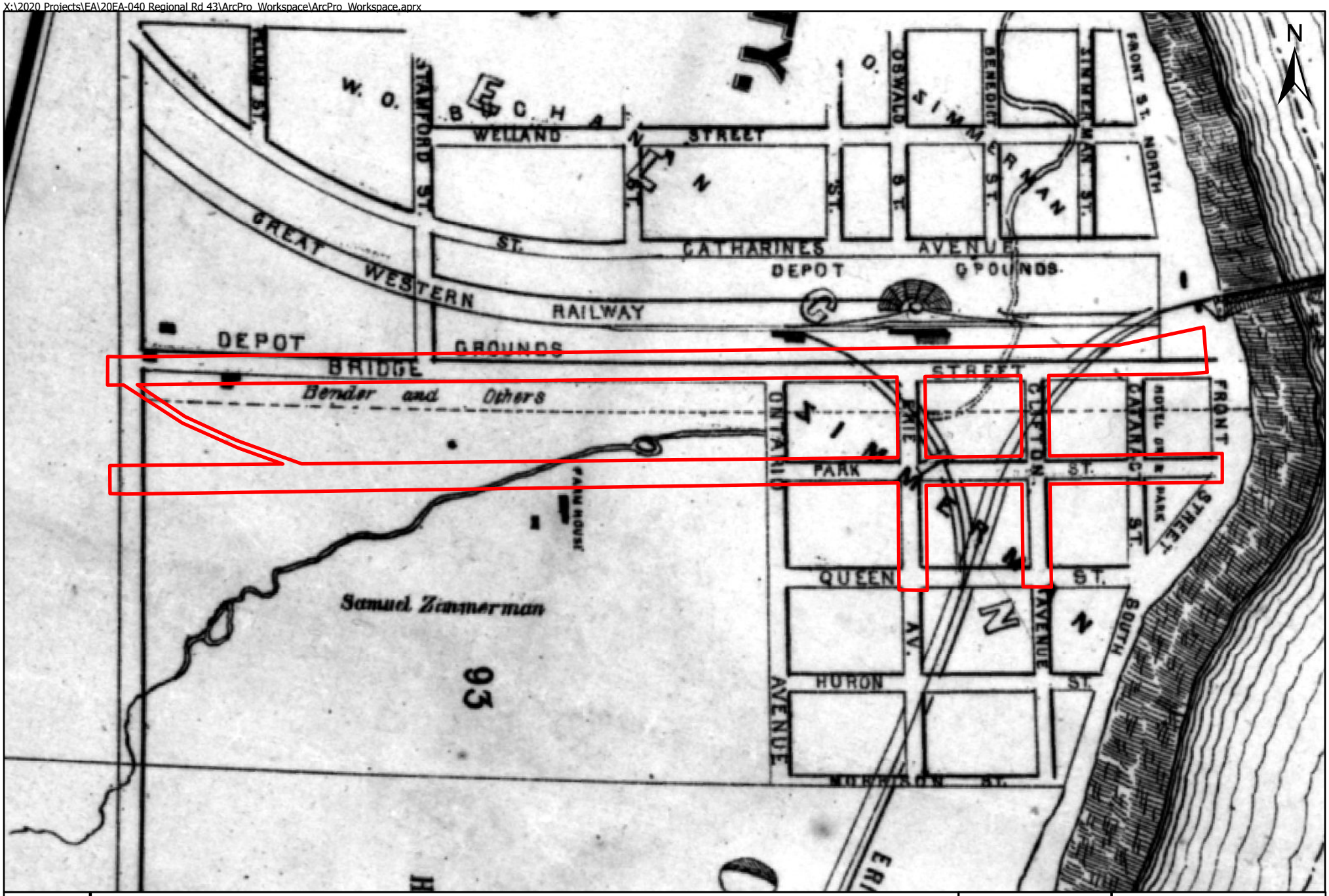

Figure 2: Study Area overlaid on the 1854 Bufford Map of Villages of Niagara Falls and Niagara City

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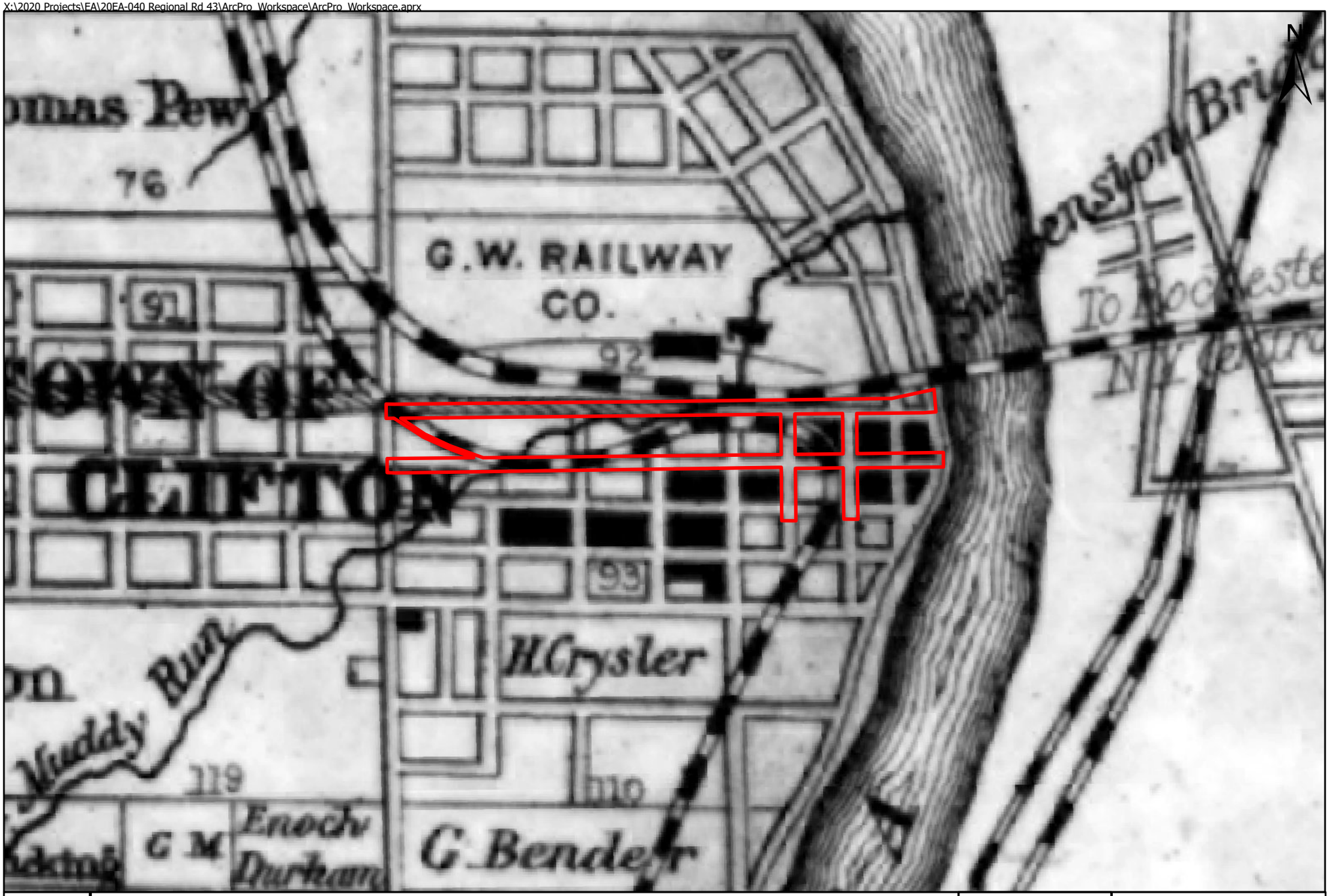

Figure 3: Study Area overlaid on the 1862 Tremaine Map of Niagara

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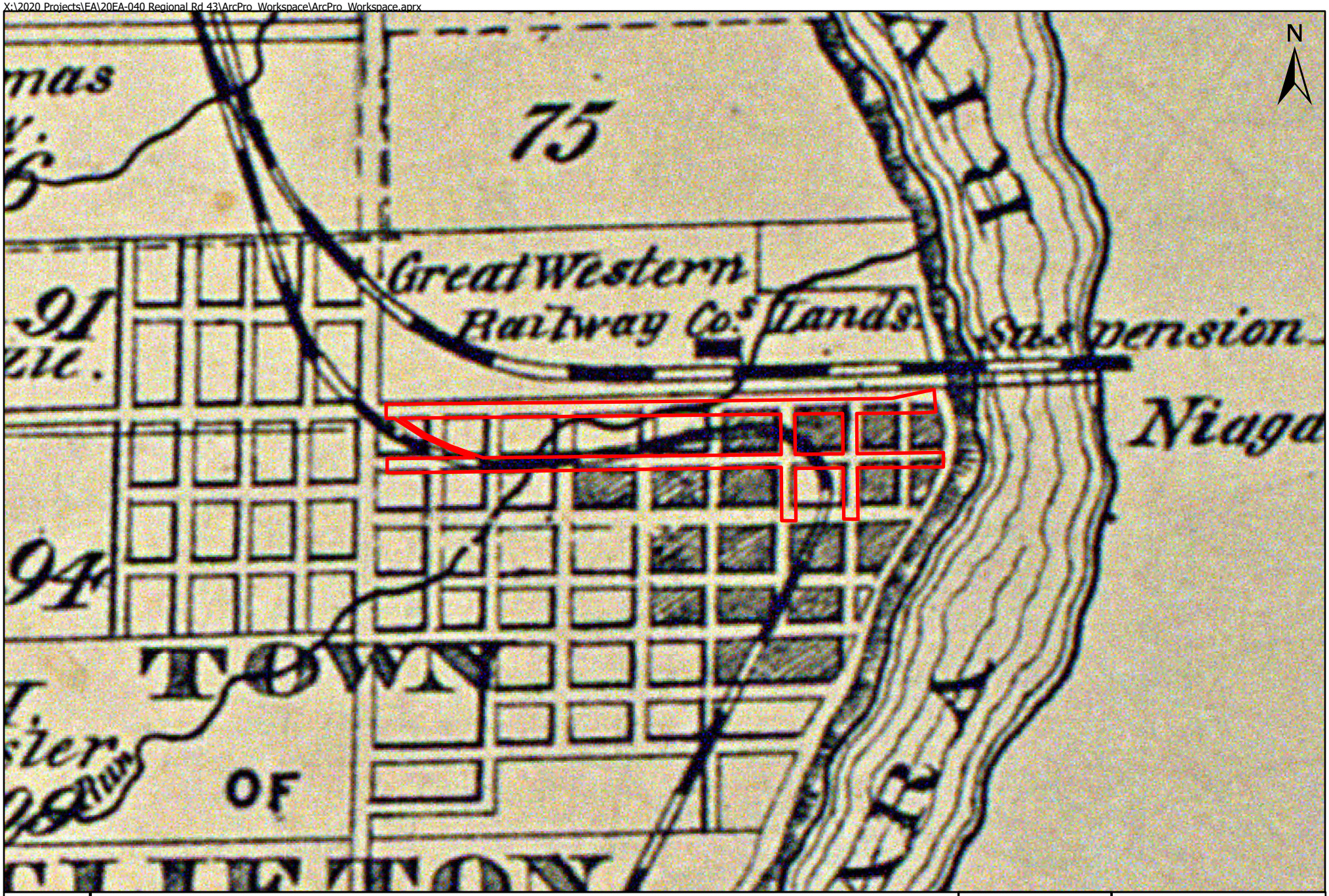

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Figure 4: Study Area overlaid on the 1876 Illustrated Historical Atlas of Stamford Township

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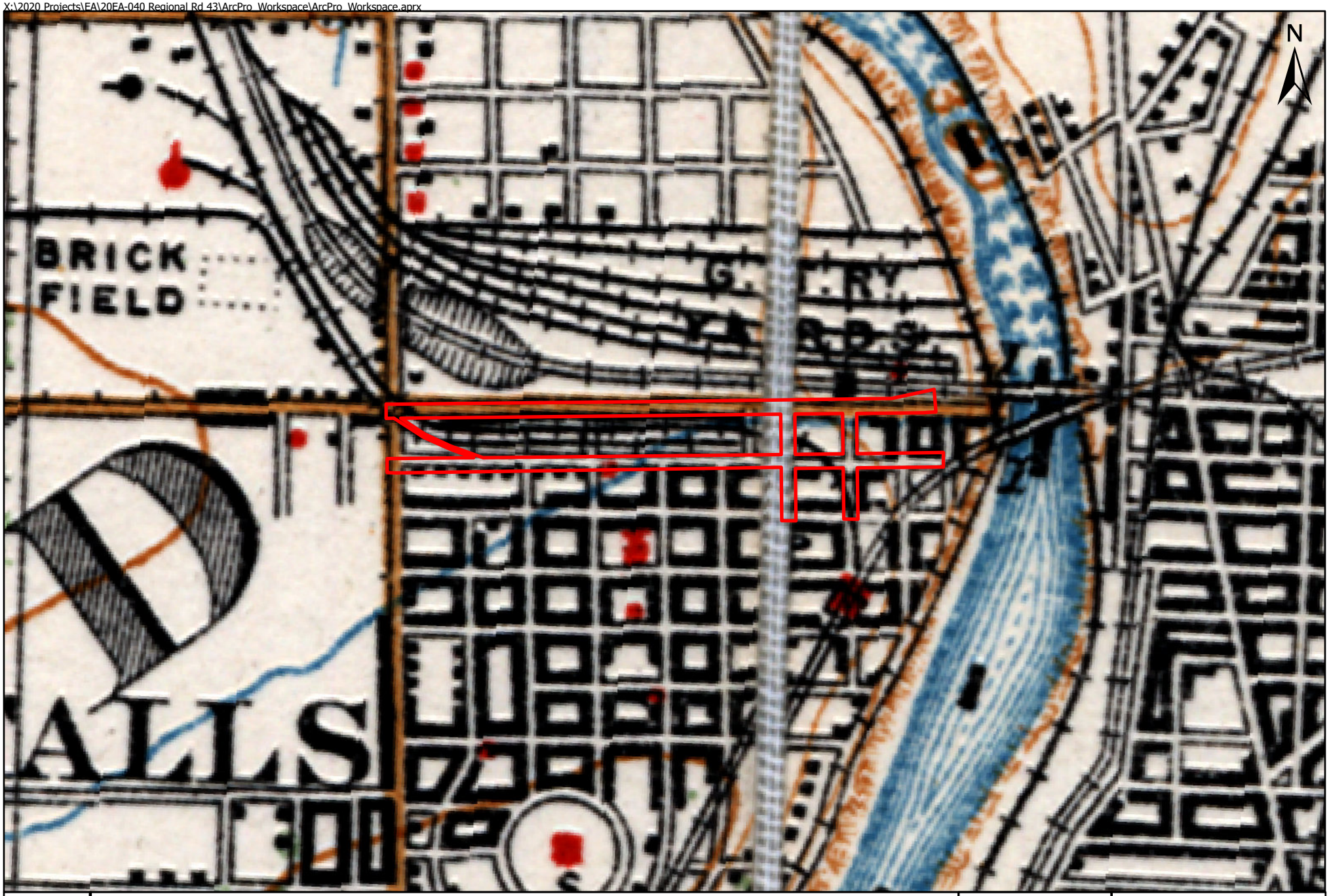

Figure 5: Study Area overlaid on the 1920 NTS Sheet of Niagara

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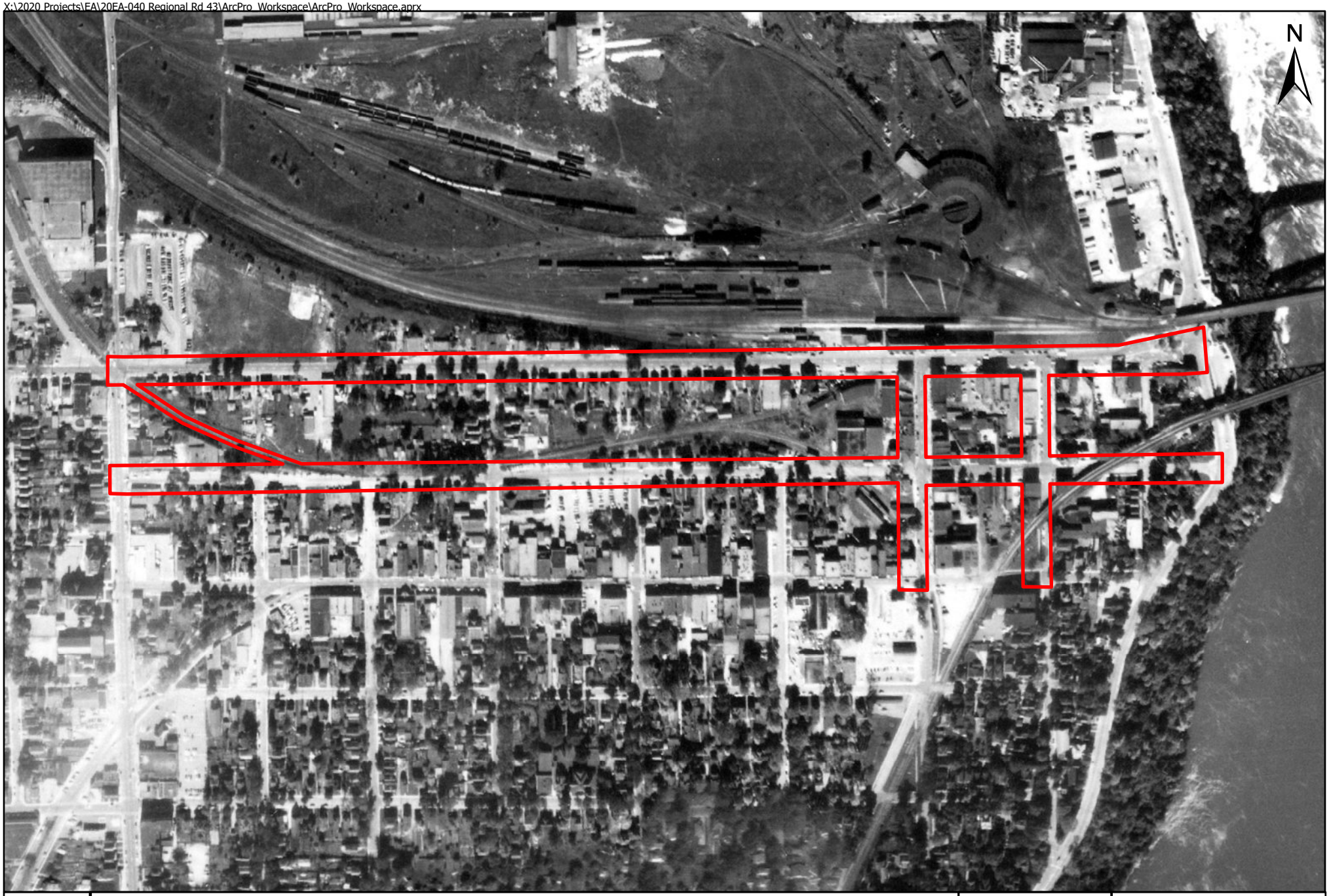

Figure 6: Study Area overlaid on 1954 Aerial Photograph of Niagara

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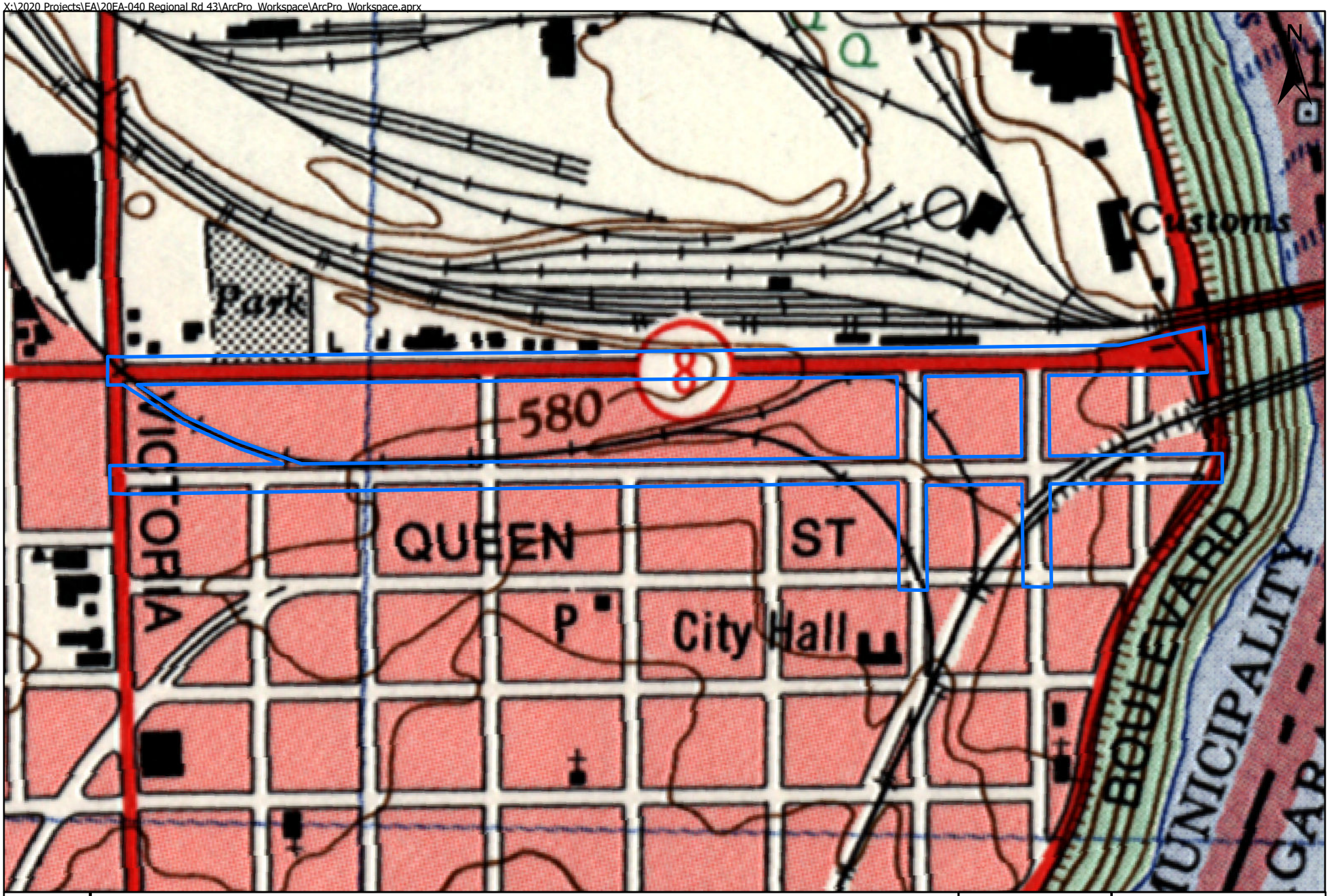

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Figure 7: Study Area overlaid on the 1973 NTS Sheet of Niagara

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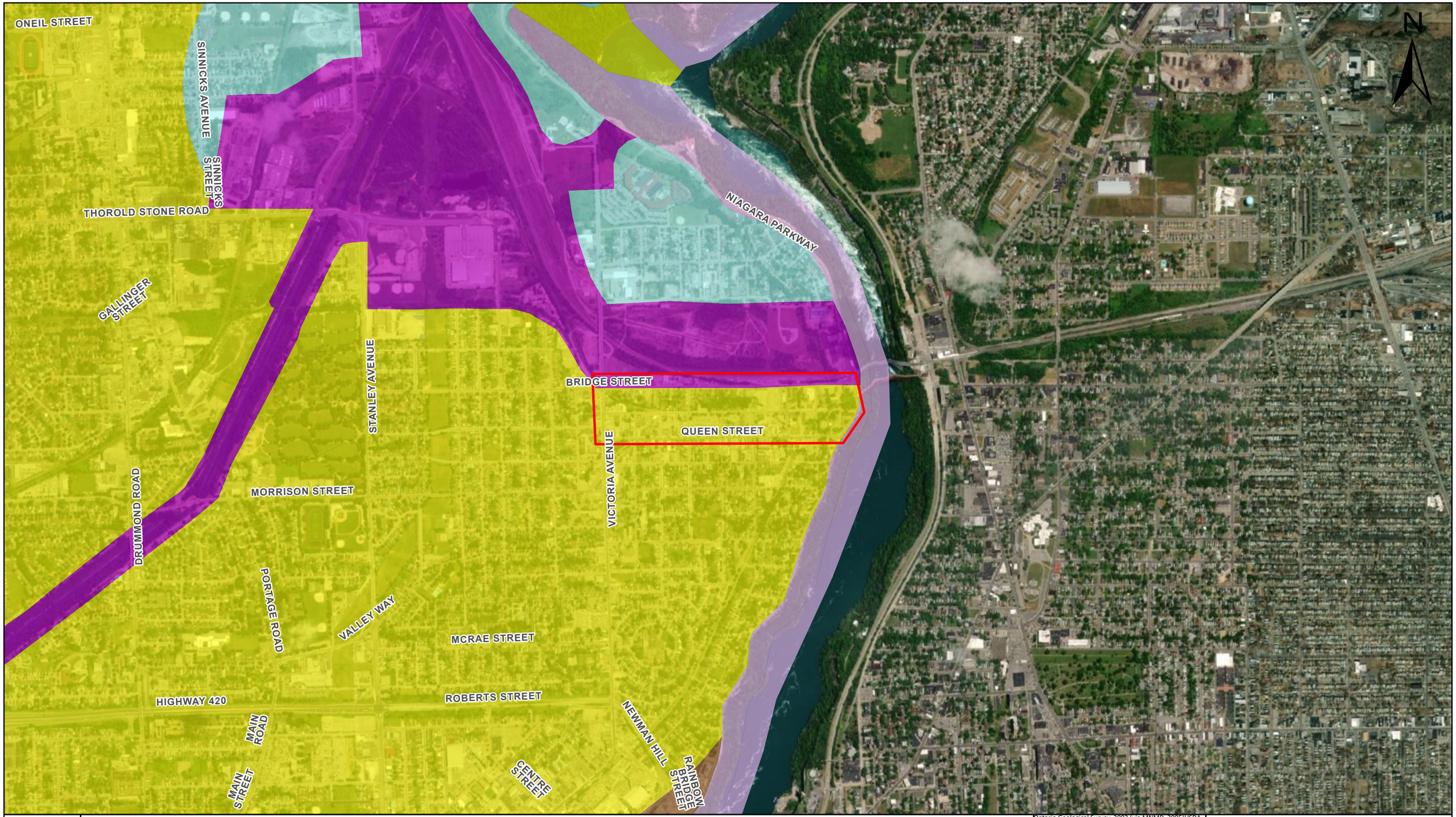

Figure 8: Study Area - Surficial Geology

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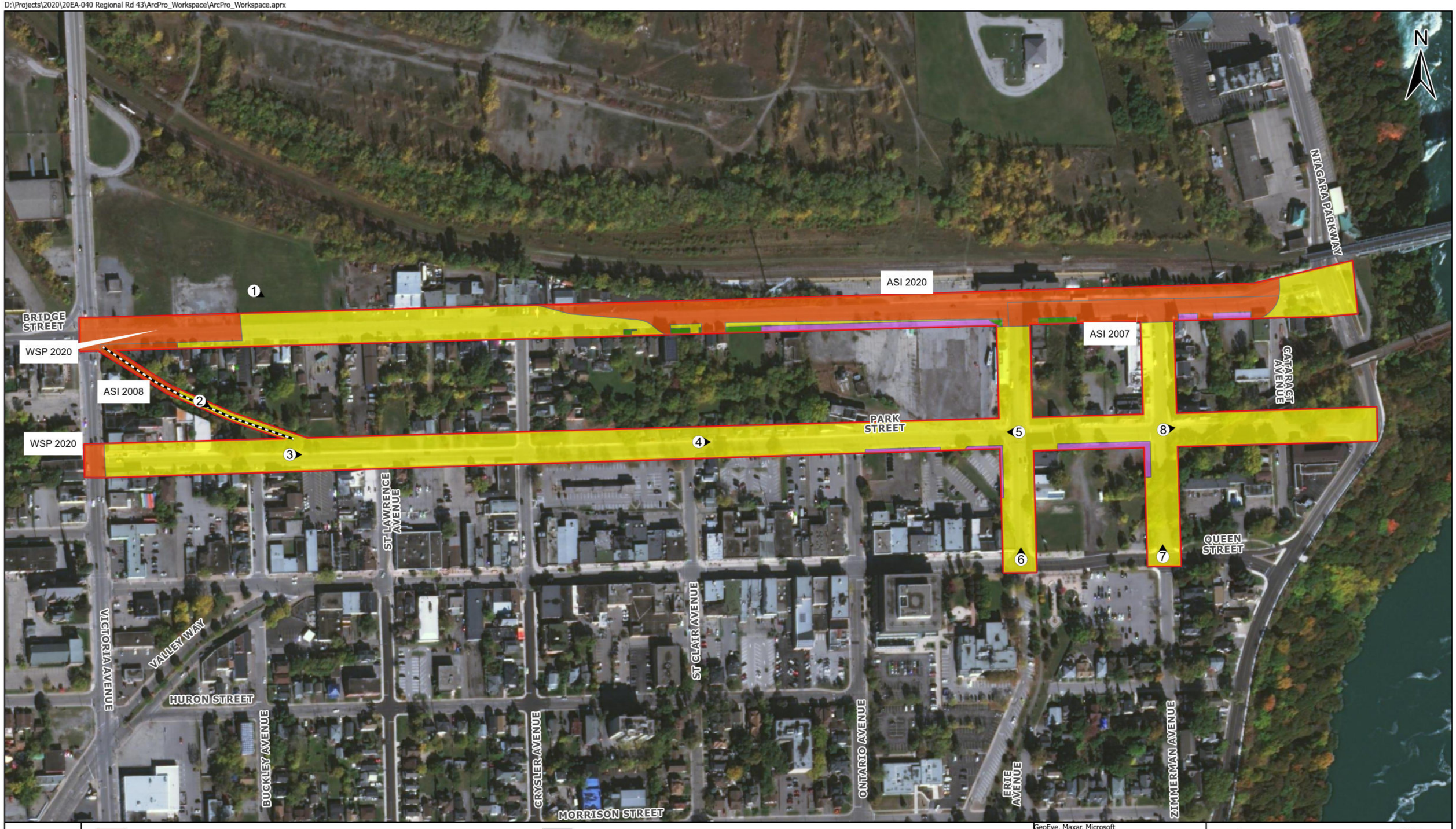

ASI

- STUDY AREA
- PHOTO LOCATIONS
- HISTORIC RAIL SPUR - AS SEEN ON 1862 TREMAINE MAP OF NIAGARA
- DISTURBED - NO POTENTIAL
- PREVIOUSLY ASSESSED - NO POTENTIAL
- STAGE 2 REQUIRED - DEEPLY BURIED POTENTIAL
- TEST PIT SURVEY REQUIRED

GeoEye, Maxar, Microsoft

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Figure 9: Regional Road 43 – Results of Stage 1

8.0 IMAGES

Plate 1: View of Bridge Street; Road ROW, beyond lawn, is disturbed, no potential

Plate 2: View of the old rail trail corridor; Area is disturbed, no potential

Plate 3: View of Park Street; Road ROW is disturbed, no potential

Plate 4: View of Park Street; Road ROW is disturbed, no potential

Plate 5: View of Park Street; Area beyond disturbed ROW has deeply buried potential, Stage 2 required

Plate 6: View of Erie Avenue; Area is disturbed, no potential

Plate 7: View of Zimmerman Avenue; Road ROW is disturbed, no potential

Plate 8: View of Park Street; Area is disturbed, no potential