Heritage Impact Statement: West London Dyke Master Repair Plan

Part of Lot 16, Concession 1 and
Part of Lot 16, Concession 2
former Township of London,
Middlesex County,
now City of London, Ontario

Prepared for:
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June 24, 2016

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Stantec Consulting Ltd. (Stantec) was retained by the Upper Thames River Conservation Authority (UTRCA), in partnership with the City of London (the City), to produce a Master Repair Plan for the West London Dyke (the Dyke) situated in the City of London, Ontario. As part of this repair plan, a Schedule B Municipal Class Environmental Assessment (Class EA) was initiated to develop and refine an approach to Dyke repairs along the north branch of the Thames River between approximately Oxford Street and Queens Avenue (the Project). As part of the Class EA, a Cultural Heritage Evaluation Report (CHER) was completed by Stantec to identify cultural heritage resources, including built heritage and cultural heritage landscapes, present within the study area as well as protected properties adjacent to the study area (Stantec 2016).

The CHER identified several properties demonstrating Cultural Heritage Value or Interest (CHVI) as well as numerous properties protected under Part IV and Part V of the *Ontario Heritage Act*. Given the identification of cultural heritage resources and protected heritage properties, a Heritage Impact Statement (HIS) is required to identify potential and anticipated impacts of the proposed undertaking on identified cultural heritage resources and recommend mitigation measures to facilitate the conservation of significant cultural heritage resources. At this time, replacement of the Dyke is proposed to occur along a 300 metre section between Rogers Avenue and Carrothers Avenue. This scope of work represents Phase 3 of a ten phase process; Phase 1 was completed in 2007, Phase 2 was completed in 2009 and Phase 3 will take place during summer/fall 2016. It is expected that repair and replacement of remaining sections of the Dyke will occur sometime in the future and a separate HIS will be completed as part of that undertaking.

The proposed removal and replacement of the 300 metre section of the Dyke is recognized as a necessary undertaking to maintain the flood protection safety of the surrounding area. The replacement of the feature removes older sections of the Dyke that have been modified over time. The proposed new structure is distinct from the historic concrete construction of the older sections of the Dyke, and does not attempt to re-create the older feature. Impacts to attributes of the Blackfriars/Petersville Heritage Conservation District (HCD) require mitigation consistent with the HCD policies and guidelines.

The proposed replacement of the Dyke will result in some adverse impacts to cultural heritage resources, primarily attributes of the Blackfriars/Petersville HCD, which identifies the greenway system along the top of the Dyke and views along residential streets that terminate at the Dyke as cultural heritage resources. Based on the level of adverse impacts identified to these cultural heritage resources, it is recommended that the following mitigation measures be implemented after reconstruction of the Dyke:

- It is recommended that an arborist report be prepared to identify the existing tree species of trees to be removed from the greenway and make recommendations for appropriate plantings. Vegetation to be removed for construction and replacement activities should be replaced with the same species, in accordance with the Blackfriars/Petersville HCD Plan, wherever possible.

- It is recommended that new vegetation to be added to the greenway conform to the Blackfriars/Petersville HCD policies and guidelines, notably those for public spaces that suggest native and non-invasive plant species.

- It is recommended that prior to reconstruction, the existing Dyke be documented with photographs of its existing condition (including railings, concrete sloped wall, and surrounding environment) and measured drawings or 3D digital modeling be prepared to maintain a record of the historic structure. Documentation should be kept on file at the City of London and archival sources such as the London Room.

- It is recommended that salvage of the current Dyke structure and existing railings be undertaken prior to construction activities for community re-use of any railing materials.

- It is recommended that opportunities for interpretive signage along the greenway be explored to commemorate the history of the West London Dyke, historic floods and flood control measures, and the Blackfriars/Petersville neighbourhood.

1.0 INTRODUCTION

1.1 STUDY PURPOSE

Stantec Consulting Ltd. (Stantec) was retained by the Upper Thames River Conservation Authority (UTRCA), in partnership with the City of London (the City), to produce a Master Repair Plan for the West London Dyke (the Dyke) situated in the City of London, Ontario. As part of this repair plan, a Schedule B Municipal Class Environmental Assessment (Class EA) was initiated to develop and refine an approach to Dyke repairs along the north branch of the Thames River between approximately Oxford Street and Queens Avenue (the Project). The Thames River is the boundary between Oxford Street East and Oxford Street West. The focus of the Class EA is the Dyke which forms the western boundary of the Thames River between Oxford Street West and Queens Avenue. Situated adjacent to the downtown core of the City, the Class EA study area forms a linear boundary along the Thames River and includes properties immediately adjacent to the river (Figure 1).

As part of the Class EA, a Cultural Heritage Evaluation Report (CHER) was completed by Stantec to identify cultural heritage resources, including built heritage and cultural heritage landscapes, present within the study area as well as protected properties adjacent to the study area (Stantec 2016). Potential cultural heritage resources were identified through consultation and a pedestrian survey and then evaluated according to *Ontario Regulation* (O. Reg.) *9/06*, the criteria for determining cultural heritage value or interest (CHVI). A land use history was completed to provide a cultural context for the study area and to provide a background upon which to base the historic portion of the property evaluations. Where CHVI was identified, the resource was mapped and identified for further assessment following the preliminary planning and design process, where alternatives for repairs were identified. The CHER identified several properties demonstrating CHVI as well as numerous properties protected under Part IV and Part V of the *Ontario Heritage Act*.

Given the identification of cultural heritage resources and protected heritage properties, a Heritage Impact Statement (HIS) is required to identify potential and anticipated impacts of the proposed undertaking on identified cultural heritage resources and recommend mitigation measures to facilitate the conservation of significant cultural heritage resources. At this time, replacement of the Dyke is proposed to occur along a 300 metre section between Rogers Avenue and Carrothers Avenue. This scope of work represents Phase 3 of a ten phase process; Phase 1 was completed in 2007, Phase 2 was completed in 2009 and Phase 3 will take place during summer/fall 2016. It is expected that repair and replacement of remaining sections of the Dyke will occur sometime in the future and a separate HIS will be completed as part of that undertaking.

In order to assess the potential and anticipated impacts of the Phase 2 undertaking, a HIS study area was recommended to delineate the portion of the Class EA study area where impacts to

cultural heritage resources may occur. The HIS study area includes this section of the Dyke, part of Labatt Park proposed to be used as a construction staging area, and a 50 metre buffer around the proposed construction activities (Figure 2). It is expected that repair and replacement of remaining sections of the Dyke will occur sometime in the future and a separate HIS will be completed as part of that undertaking.

The objectives of this HIS are to:

- summarize information of the CHER including background history and CHVI of the features within a 50 metre area of the current proposed undertakings to the West London Dyke;
- provide a description of the proposed development/alterations to be made to the West London Dyke;
- identify the potential impacts of the proposed undertaking to cultural heritage resources; and
- identify mitigation measures to avoid or reduce adverse impacts, recommend a schedule for implementing mitigation measures, and advise on any monitoring required.

Alongside this HIS is a Heritage Alteration Permit (HAP) which addresses the modifications proposed. For both the HIS and HAP, strategies to mitigate the adverse effects of the project have been prepared in order to lessen the impact of the project on the cultural heritage resources.

1.2 PUBLIC CONSULTATION

The West London Dyke Master Plan process held three Public Information Centre (PIC) meetings between 2010 and 2016 and invited members of the public and agencies to provide comment on the project. Over the course of the PIC meetings, several comments or concerns were raised by members of the community including concerns regarding removal of mature trees along the greenway that relate to the content of this HIS. Members of the public also expressed a desire to see native species included in replanting schemes. A summary of additional comments received from the public is provided below for information purposes. Further information, including the comments in their entirety can be found in the Environmental Assessment available on the City's website **www.london.ca/residents/ Environment/EAs/Pages/West-London-Dyke-Master-Repair-Plan.aspx**.

Table 1 Summary of Community Comments

Project Component	Summary Community Comments
Aesthetics	• phase 1 structure is aesthetically pleasing
Railing	• new railing along Phase 1 increases safety • old railings easily vandalized
Pathway	• inclusion of bike path should be in future plans

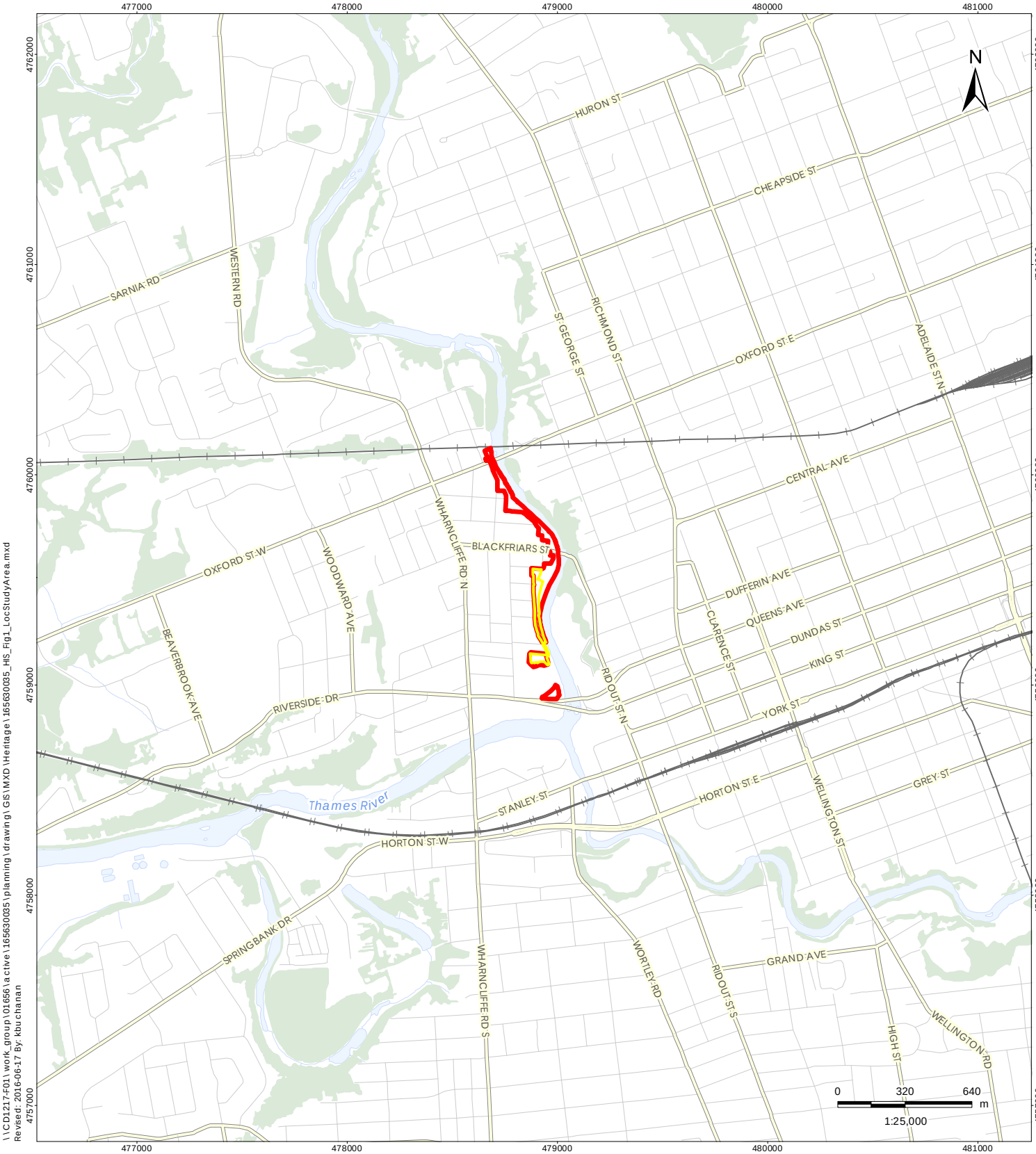
Project Component	Summary Community Comments
	• pedestrian underpasses are outstanding in design • widened pathway along Phase 1 is beneficial • widened pathway to City Standards is not supported
Lighting	• reduce intensity of overhead lighting, consider direction of lighting • future lighting plans? (i.e., what is the intent for lighting)
Vegetation	• what are the plans for mature trees along Dyke • planting of native species along rivers edge • phase 1 plantings are nice • residents concerned over the removal of mature trees and trees planted on the embankments (around 2 Carrothers Avenue and east end of Cherry Street)
Flood Prevention	• importance of Dyke to prevent basement/residential flooding
Construction	• removal of old material during reconstruction work • further construction should only proceed after entire river corridor study has been completed

1.3 METHODOLOGY

The City does not currently have a Terms of Reference for preparing Heritage Impact Statements. As such, the preparation of this report is guided by the Ministry of Tourism, Culture and Sport's (MTCS) *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* in *Heritage Resources in the Land Use Planning Process Cultural Heritage and Archaeology Policies of the Ontario Provincial Policy Statement, 2005* (Government of Ontario 2006A) (Info Sheet #5) as advised by the City's Heritage Planner.

As per the guidance contained in *Infosheet #5*, this report contains the following components:

- historical research, site analysis and evaluation;
- identification of the significant and heritage attributes of the cultural heritage resource;
- description of the proposed development or site alteration;
- measurement of development or site alteration impact;
- consideration of alternative, mitigation and conservation methods;
- implementation and monitoring; and
- summary statement and conservation recommendations.



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Revised: 2016-06-17 By: kbuchanan

June 2016
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Stantec

Legend

- CHER Study Area
- HIS Study Area

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Imagery and base features used under license with the City of London, © 2014.

Client/Project

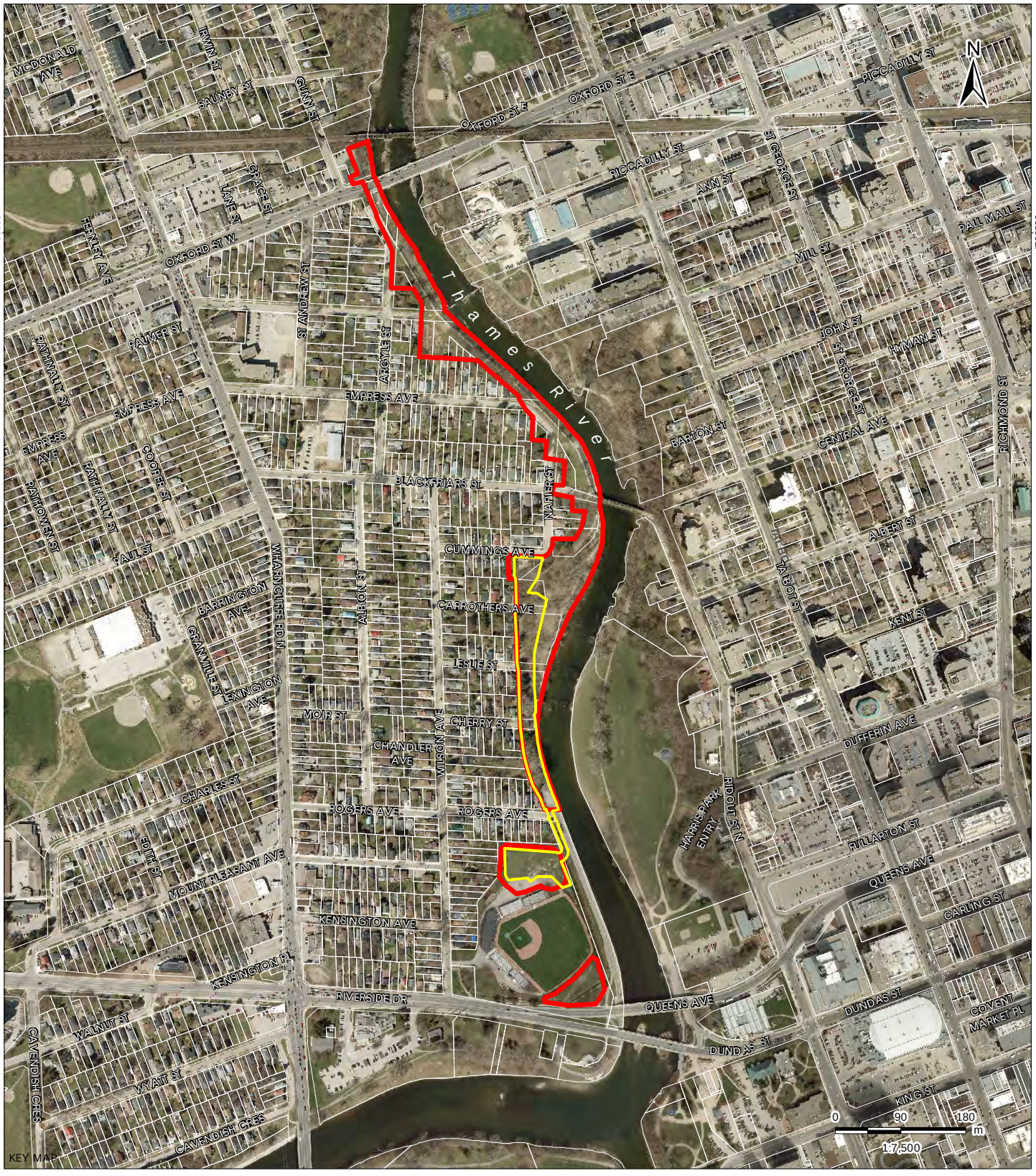
Upper Thames River Conservation Authority - West London Dyke Heritage Impact Statement

Figure No.

1

Title

Location of Study Area



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June 2016
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Stantec

Legend

- CHER Study Area
- HIS Study Area
- Parcel

Client/Project

Upper Thames River Conservation Authority - West London Dyke Heritage Impact Statement

Figure No.

2

Title

Study Area

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Imagery and base features used under license with the City of London, © 2014.

2.0 HISTORICAL DEVELOPMENT

2.1 INTRODUCTION

The study area is historically linked to Middlesex County and the former London Township in an area once known as Petersville, located presently in the City of London, Ontario. The HIS study area is comprised of a 300 metre section of the approximately two kilometre West London Dyke and adjacent area. The West London Dyke begins near the intersection of Oxford Street West and Gunn Street, runs to Queens Avenue and Riverside Drive, and continues along to past Wharncliffe Road North. The HIS Study area focuses on the area between Rogers Avenue and Carrothers Avenue, the adjacent lands and Labatt Park. The following sections outline the historical development of the study area and surroundings from the time of settlement to the 20th century.

2.2 PHYSIOGRAPHY

The northern half of the study area is located within the physiographic region known as the Stratford Till Plain. The region is surrounded by the Dundalk Till Plain to the north, the Waterloo Hills to the east, the London Annex of the Caradoc Sand Plain to the south and the Horseshoe Moraines to the west. The region is comprised of 2,200 square kilometres in the centre of southwestern Ontario. The region is characterized by brown calcareous silty clay with the soil having a Grey Brown Luvisolic profile resulting in surface soils either of silt or clay loam. The soils of the region are naturally fertile and are considered fit for agricultural purposes (Chapman and Putnam 1984:133-134).

The physiographic and soil characteristics of the study area have influenced subsequent land use throughout its history. In the southern half of the study area in the London Annex physiographic region, the gravelly terraces along the Thames River from Delaware to London were characterized by orchards and market gardens in the 19th century (Chapman and Putnam 1984:146). In the northern half of the study area in the Stratford Till Plain physiographic region, 81% of the land was used for crop growing with an output focus on grain, corn, hay and wheat also in the 19th century (Chapman and Putnam 1984:135).

The closest water source to the study area is the Thames River, located on its eastern border. The Thames River is a natural divide between the historic City of London and the old neighbourhoods west of the river including those of the study area. Use of the Thames River has evolved over time from being a transportation route used by early settlers, to an industrial power source to support the early mills of the area, and finally to becoming used for recreational purposes throughout the 20th and 21st centuries.

2.3 SURVEY AND EARLY SETTLEMENT

The administrative history of London began in 1793, when Lieutenant-Governor John Graves Simcoe selected the site at the forks of the Thames River as the location for the new capital of Upper Canada (Lutman 1978: 6). Simcoe, in wanting to create a model British society in Upper Canada, named the area "New London" (Tausky and Distefano 1986: 5). Middlesex County was initially comprised of ten townships: Aldborough, Dunwich, Southwold, Yarmouth, Malahide, Bayham, Delaware, Westminster, Dorchester, and London. The study area is located in the former Township of London.

Provincial Land Surveyor Mahlon Burwell began the survey of London Township in 1810. The survey progressed slowly and was put on hold due to the War of 1812. The survey resumed in 1818 and concluded in the spring of 1819. London Township was surveyed based on the double front survey system, popular between 1815 and 1829 (Dean 1969). Lots were divided into 200 acre parcels and arranged in 16 concessions and three additional concessions that are broken due to the Thames River.

In 1818, Colonel Thomas Talbot began assigning lots to settlers in the township. Often, settlers were given 100-acres, half of a surveyed lot. Colonel Talbot knew it was difficult for these first settlers in the township to obtain money. Therefore, it was often 10 to 15 years after they settled on land that Colonel Talbot collected fees and obtained a deed. In 1819 the assessment returns shows the population of London Township as 170 people, mainly of British descent, jumping in 1820 to 464 people, and 6,735 by 1851, with over half having been born in the township (Rosser 1975).

With its strategic location at the forks of the Thames River, the township saw an influx of immigrants around the settlement area known as London, which was located on the township's southern boundary, east of the Thames River. With London being the administrative centre of Middlesex County, a Court House was built between 1827-1829 on Ridout Street North at the east of the Thames River. The Court House brought many officials and officers to take up residence in the area (Page and Co. 1878:8), resulting in the building of many 19th century homes, including the Eldon House, which still stands today at 481 Ridout Street North along the eastern bank of the Thames River. Harris Park was the former Eldon House farm property, owned by the Harris family.

2.4 19TH CENTURY LAND USE

Land use of the study area underwent a significant change throughout the 19th century from largely agriculture in nature to a developed residential neighbourhood by the end of the century. At the time of settlement in the 1820s to mid-century, land in the study area was used primarily for agriculture purposes. The presence of the Thames River enriched the soil of the study area, making it one of the most nutrient rich alluvial soils found in London Township. In particular, along the western bank of the Thames River, the land was optimal for fruit growing as evidenced by the market garden that was once located at 81 Wilson Avenue (Grainger 2002:321). As a whole, 70% of the land in the former London Township was considered first class for agricultural purposes with an output focus of wheat and oats (Ontario Agricultural Commission 1880:353).

Land use of the study area began to change in 1848 when John Kent had his land between the fork of the Thames River and the road to Blackfriars Bridge subdivided into 'Park Lots.' To provide accessibility to these lots, Kent placed a north-south road that he named Centre Street (now Wilson Avenue) down the middle of his survey (Golder 2014b: 18). In 1854, Samuel Peters, who owned the land north of Blackfriars Bridge subdivided his land into small lots. The area was first known as "Bridge Town" after the steel truss bridge (now Blackfriars Bridge) over the Thames River; it would later be re-named to Petersville, after its founder (Grainger 2002:319). Peters owned a distillery and several mills, including one in what is now Harris Park just north of Blackfriars Bridge. Development of the area occurred quickly, and by 1857 50 lots had been purchased and 30 people settled in the community. Residential homes appeared in and around the study area and east of Wharncliffe Road North between the late 1850s and 1870s.

The development of industries led to an increased population in the community with the establishment of grist and clothing mills to the north of Peters' distillery and Blackfriars Bridge. By the early1870s, Petersville had grown into a bustling hamlet with residential neighbourhoods and a commercial area located northwest of the study area that included 26 businesses, a hotel, two grocery stores, a school, a post office, and the North Branch Flour Mills of Hilliard and Saunby (Grainger 2002:319). In 1875, Petersville became an incorporated village. In 1881, Petersville annexed the small village of Kensington to the west to form the Village of London West. London West and its residential dwellings became working class neighbourhoods with residents working in nearby cement, broom, shoe and steel factories as well as at the nearby brewery, mill and courthouse (Grainger 2002:320). The majority of these places of businesses were located east of London West across the Thames River in the City of London (Figure 3).

The Blackfriars Bridge was originally the only bridge linking the east and west sides of the Thames River. The original wooden bridge was constructed in the early 1830s and is illustrated on an 1840-41 Plan of London (Bremner 1900:12). The bridge was washed out in 1850, as the approaches to the bridge were much lower in the river valley, allowing for high water levels to damage the footings and structure. A new wooden bridge was constructed the following year through funds raised by local residents and neighbouring municipal bodies. During the construction of the bridge, work was also undertaken on Blackfriars hill located on Ridout Street, which included reducing the hill slope, improving the bridge approach and turfing. As well, a

gravel embankment was built on the west side of the river using earth excavated from Ridout Street, and a fence was installed for public safety (Golder 2014b: 17). By 1870, the wooden bridge was in danger of collapse and an iron bridge was constructed in 1875, under the supervision of Isaac Crouse. The 1875 version of Blackfriars Bridge still stands today and was designated by the City in 1992 for its heritage value and is recognized as a provincially significant structure on the Ontario Heritage Bridge list (Heritage Resource Centre 2005). Due to its prominent location spanning the Thames River and its once essential connection route between the downtown core of London and its adjacent settlements, the bridge is considered a heritage attribute of the Blackfriars/Petersville Heritage Conservation District (HCD) as it contributes to the cultural heritage value of the area (Golder 2014b).

London became an incorporated village in 1840, with a population of 1,816 residents. In 1847, London became a town and later an incorporated city in 1855 with a population over 10,000 (Page and Co. 1878:8). By 1878, the city core was roughly bounded by the Thames River to the west and south, Huron Street to the north, and Adelaide Street North to the east.

London became one of the largest administrative and industrial centres of southwestern Ontario. This is evident by the presence of distilleries and manufacturing shops and plants in and around London. To help support the industries of the city to ship goods, railways were constructed in 1854 and 1858 by the Great Western Railway Company and the Port Sarnia Railway Company, respectively. The two railways greatly stimulated London's growth by providing the city rail access to markets in Sarnia, Toronto and Niagara Falls while also giving the city its industrial character. Another railway was constructed in 1889 by the Ontario and Quebec Railway Company. This railway was built north of the city and provided rail access to Chatham and Windsor (ArcGIS 2014:online).

In July 1883, London West was hit by a major flood that washed out numerous houses in the study area. Construction of the West London Dyke began in the late 1880s, and was the first of several other Dykes that were built in London for flood protection. By the early 1900s, the Dyke had been reinforced, extended and raised at least twice.

As the population of the city grew and spread outward, the boundaries of the City of London extended as it began to annex surrounding neighbourhoods. London East, located in the former London Township and primarily an industrial centre, was annexed to the city in 1885. London South was annexed to the city in 1890 and London West, in the former Township of London was annexed in 1897 (Grainger 2002:281). The communities of London South and London West consisted of small commercial cores and residential neighbourhoods, the first of the kind in the township. The annexation of these communities initiated a shift of land use and character of the city as a whole as the City of London changed to low-density residential neighbourhoods, a stark contrast to the administrative buildings and large manufacturing plants already established around the city.

2.5 20TH CENTURY LAND USE

Land use in the study area throughout the 20th century remained largely unchanged as it remained urban in nature. Urban development, both residential and commercial, continued to grow in the former London West area in the first half of the 20th century.

Between 1890 and 1915, many residential houses were built by local builders in the old London West area. This coincided with construction of the West London Dyke. The original 1880s dyke was constructed using timber and earth fill. By 1898, after flooding, it was determined that a stronger concrete dyke was needed. In 1905, the city began to purchase small pieces of land from residents north of Blackfriars Street, in order to widen the river channel and bring in more fill for the dyke. It would be 10 years before work commenced on the new dyke in 1915(Golder 2014b: 57). Ongoing maintenance saw the Dyke wall increase in height (Plate 1). At present, the West London Dyke is 2,374 metres long, running along the west bank of the North Thames River from Oxford Street to the Forks of the Thames, and then along the west bank of the main branch of the Thames River to the west side of the Wharncliffe Road Bridge (UTRCA 2015).

Plate 1: Concrete facing of the West London Dyke c.1930s

In 1937, disaster struck the district in a record breaking flood. The Thames River overflowed the West London Dyke, and poured into the London West communities (Plate 2). In all, 545 acres of the city were flooded, and 1,075 buildings were affected (Golder 2014b: 53). An act was passed in April 1946 to establish conservation authorities that work for the prevention of floods and the conservation of the river. The UTRCA was formed in September 1947 for this purpose (Upper Thames River Conservation Authority; online). After the establishment of the UTRCA, three large flood control dams were constructed on the Thames River and its tributaries between 1950 and 1967. These dams include the Fanshawe Dam, on the north end of the City of London, Wildwood Dam near St. Mary's, and the Pittock Dam, near Woodstock (UTRCA; online).

Plate 2: 1937 Flood, West London Dyke. Photo courtesy of the UTRCA

Following the flood, west of the study area Victory Houses were built for returning soldiers and their families in the late 1940s and early 1950s (Heritage Resources Centre 2009:25). By 1957, much of the study area and immediate surroundings were developed with residential units. In the early 1960s, London witnessed its greatest period of growth, which was set in motion by the 1960 official plan, "Urban Renewal London Ontario: A Plan for Development and Redevelopment" (Miller 1992: 211). The following year annexation was approved by the Ontario Municipal Board, which granted the city more land with the annexation of London Township and Westminster Township. This resulted in a population increase from 63,369 to 165,815.

Industries were also expanding, schools were full and thriving, and new hospital building campaigns were launched.

With urban growth in the 1960s, the study area also saw an increase in commercial land use. The existing commercial corridor northwest of the study area established in the latter half of the 19th century had continued to grow and develop into the 20th century, making the area along Oxford Street West and Wharncliffe Road North a more defined commercial corridor. Other commercial land use is concentrated at the intersection of Wharncliffe Road North and Riverside Drive where a range of services are located (City of London 1993:41).

Throughout the late 20th century, land use in the City evolved with more land devoted to residential uses in the form of high-rise apartments and condominiums to accommodate a growing population and need for institutional uses such as post-secondary schools. In 1993, another annexation took place, including Town of Westminister, Town of Lambeth, and small portions of the Townships of Delaware, London, North Dorchester and West Nissouri, and the geographic area of the City doubled in size as it became one of the largest urban municipalities in the province, at the time (City of London 2013). This is in stark contrast to London West where a stable population and minimal changes in land use is evident, allowing for the retention of the heritage character of a late 19th and early 20th neighbourhood.

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June 2016
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Stantec

Legend

- Approximate CHER Study Area
- Approximate HIS Study Area

Client/Project

Upper Thames River Conservation Authority - West London Dyke Heritage Impact Statement

Figure No.

3

Title

Study Area, 1878

Notes

1. Historical information not to scale.
2. London Township map from Page, H.R. and Co. 1878. *Illustrated Historical Atlas of the County of Middlesex, Ont.* Toronto.

3.0 SITE DESCRIPTION

The West London Dyke is located along the west bank of the North Branch of the Thames River. The Dyke stretches from Oxford Street to the forks of the Thames River along the west bank of the Main Branch to the west side of the Wharncliffe Road Bridge. In total, the Dyke is 2,374 metres long. The HIS study area consists of an approximately 300 metre section of the Dyke between Rogers Avenue and Carrothers Avenue, as well as part of Labatt Park, south of Rogers Avenue, which may be used as a construction staging area. A 50 metre buffer around the Dyke is included in the study area to delineate a buffer where impacts may be experienced.

The Dyke is owned by the City, but major maintenance is performed by the UTRCA through an agreement with the City.

At the study area, the Dyke consists of a tall, sloped concrete retaining wall and earth fill located along the west bank of the Thames River. The top of the dyke features an iron railing system composed of two round horizontal bars intersecting with evenly spaced round vertical bars at rounded joints.

On the west side of the Dyke, there is a public greenway along the top of the Dyke feature, Labatt Park and the residential neighbourhood of Blackfriars-Petersville. The greenway contains asphalt pathways, trees and vegetation and an open metal railing system at the top of the Dyke. The Dyke, greenway, Labatt Park and adjacent residential neighbourhood are part of the Blackfriars/Petersville HCD (Plate 3).

The Thames River runs along the bottom of the Dyke feature. Much of the land on the east side of the Thames River is public park land, including Harris Park, the Thames Valley Parkway System, and the Anne Street Park. Harris Park is located within the Downtown HCD, the eastern boundary of which is located mid-way through the Thames River and adjacent to the HIS study area.

A 300 metre section of the Dyke from the Quees Avenue Bridge to Rogers Avenue was replaced in 2007 with a precast modular block wall with aluminum railing (Plate 4). This work was undertaken as part of Phase 1 of the project.

Plate 3: View of the West London Dyke and greenway looking north

Plate 4: View looking north of the section of the Dyke rebuilt in 2007 (adjacent to Labatt Park)

4.0 SUMMARY OF CULTURAL HERITAGE VALUE IDENTIFIED

In order to identify protected properties the Ontario Heritage Trust (OHT), MTCS, and City were consulted during preparation of the CHER. Both the OHT and MTCS reported that there were no heritage properties under the purview of their respective organizations situated within the study area. The City identified numerous protected properties within and adjacent to the study area (Figure 4). These include:

- the Blackfriars/Petersville HCD (designated under Part V of the *Ontario Heritage Act*);
- the Downtown HCD (designated under Part V of the *Ontario Heritage Act*);
- individual properties within the HCDs also designated under Part IV of the *Ontario Heritage Act*; and
- Thames River cultural heritage resource (not protected).

4.1 BLACKFRIARS/PETERSVILLE HERITAGE CONSERVATION DISTRICT

The Blackfriars/Petersville HCD was designated under Part V of the *Ontario Heritage Act* in 2015. The HCD is situated within and adjacent to the HIS study area. The *Blackfriars/Petersville Heritage Conservation District Plan and Guidelines* (Golder 2014a) provides policies and guidelines for managing change within the HCD boundary. The Plan identifies heritage attributes of the HCD that contribute to its character and are to be protected through HCD designation and the review of Heritage Alteration Permits. These attributes include:

- various renditions of Ontario Cottage dwellings and similar styles;
- dwellings that have survived the 1883 and 1937 floods;
- modest, economical home building styles and techniques that are representative of the area's early working-class settlers;
- building characteristics common to the district including form, massing, type, scale, roof pitches, and setbacks;
- architectural details including buff brick materials, keyhole windows and historic fenestration, coloured and stained glass transoms, fanlights, London doors, porches, and bargeboard and gable detailing;
- early historic suburban development patterns represented by the narrow internal streets, grids, walkable nature of the area, and survey types;

- proximity and historical relationship with the Thames River;
- long viewsheds along the narrow streets that terminate with views of the Thames River Dyke system;
- associated greenways along the Thames River Dyke system;
- enclosure provided by street trees and mature trees within the front and back yards of residential properties;
- public greenspaces and parks;
- Blackfriars Bridge;
- Labatt Park;
- Jeanne-Sauvé Public School (former Empress Avenue School); and
- St. Georges Anglican Church (Golder 2014a).

In addition to heritage attributes associated with the HCD, individual properties within the HCD were also reviewed during preparation of the CHER. The CHER evaluated the properties using Regulation (O.Reg) 9/06 of the *Ontario Heritage Act* to confirm cultural heritage value and identify heritage attributes. The properties identified in Table 2 are located within or adjacent to the HIS study area:.

Table 2 Protected Cultural Heritage Resources within or adjacent to the HIS Study Area

Location	Level of Recognition	Heritage Attributes
2 Cummings Avenue	Designated under Part V of the *Ontario Heritage Act*	Landscape elements noted as a contributing resources in HCD Plan: open recreational space.
10 Cummings Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: contextually linked to the road and its surroundings. Relationship of residence to road and surrounding residences.
1 Carrothers Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one storey, side gable. Relationship of residence to road and surrounding residences.
2 Carrothers Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey massing, high-pitched side gable roof, centre high-pitched gable peak, brick exterior, lancet window, stone sills. Relationship of residence to road and surrounding residences.
3 Leslie Street	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, front gable, pyramidal roof, fish scaling shingles, decorative gable. Relationship of residence to road and surrounding residences.

Summary of Cultural Heritage Value Identified
June 24, 2016

Location	Level of Recognition	Heritage Attributes
2 Leslie Street	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, side gable, London buff brick, projecting centre bay, front door with arched sidelights and half circled transom light. Relationship of residence to road and surrounding residences.
3 Cherry Street	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, London buff brick exterior, decorative woodwork on front gable. Relationship of residence to road and surrounding residences.
2 Cherry Street	Designated under Part V of the *Ontario Heritage Act*	Landscape elements noted as a contributing resources in HCD Plan: open green space.
6 Cherry Street	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, London buff brick, two gables, steep pitched roof. Relationship of residence to road and surrounding residences.
81 Wilson Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, side gable, brick structure, centre gable window, stone foundation.
79 Wilson Avenue	Designated under Part V of the *Ontario Heritage Act*	CHVI was not identified; therefore heritage attributes were not identified.
5 Rogers Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, multiple front gables, gabled dormer window. Relationship of residence to road and surrounding residences.
1 Rogers Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, front gable, brick structure, steep pitched roof. Relationship of residence to road and surrounding residences.
2 Rogers Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: One and one half storey, brick structure, pyramidal roof. Relationship of residence to road and surrounding residences.
4 Rogers Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, front gable, hipped roof, London buff brick exterior, decorative wood shingles, gable detailing. Relationship of residence to road and surrounding residences.
6 Rogers Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: Relationship of residence to road and surrounding residences.
8 Rogers Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one storey, brick exterior, gable window. Relationship of residence to road and surrounding residences.
10 Rogers Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one storey, hipped roof, front gable with detail, brick exterior. Relationship of residence to road and surrounding residences.
12 Rogers Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: Relationship of residence to road and surrounding residences.

Summary of Cultural Heritage Value Identified
June 24, 2016

Location	Level of Recognition	Heritage Attributes
57 Wilson Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, brick exterior, front gable, hipped roof, fish scaling shingles, decorative gable. Relationship of residence to road and surrounding residences.
51 Wilson Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, front gable, decorative gable and roof trim. Relationship of residence to road and surrounding residences.
49 Wilson Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, hipped roof, front gable window. Relationship of residence to road and surrounding residences.
47 Wilson Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, side gable, centre gable window, yellow brick exterior, symmetrical design.
45 Wilson Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, London buffbrick exterior, front gable, hipped roof, fish scaling shingles, decorative gable. Relationship of residence to road and surrounding residences.
43 Wilson Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: one and one half storey, front gable, gambrel roof. Relationship of residence to road and surrounding residences.
41 Wilson Avenue	Designated under Part V of the *Ontario Heritage Act*	Residence: two storey, brick exterior, low pitched hipped roof, shed dormer. Relationship of residence to road and surrounding residences.
25 Wilson Avenue (Labatt Park and Roy McKay Clubhouse)	Designated under Part IV and V of the *Ontario Heritage Act*	Park: Placement of the field and clubhouse in relation to each other. Historical value in the continual use of the diamond in current position. Landmark along the Thames River corridor.
West London Dyke	Designated under Part V of the *Ontario Heritage Act*	Concrete construction, tall sloping concrete wall, public walkway system along the top west side, low open railing system that allows for views of the river. Connection the Dyke offers between the Thames River and the neighbouring London West community.

4.2 DOWNTOWN HERITAGE CONSERVATION DISTRICT

The Downtown HCD came into effect in 2013 with designation under Part V of the *Ontario Heritage Act*. The District Study and Plan identify character statements for the historic, architectural and landscape components of the HCD (Stantec et. al. 2012). The HCD Plan does not identify a specific list of heritage attributes. As such, the following items are drawn from the heritage character statements and identified in the HCD Study as contributing to the cultural heritage value of the HCD:

- lots originally laid out to accommodate residential and associated buildings with setbacks from the front and side lot lines, creating a landscape prominence to the street;
- original building composition of independent structures of typically two or three storeys on generous lots;
- development of four to twenty storey mostly nonresidential buildings that have been redeveloped but done so in a manner that respects the historic residential pattern of streetscape (e.g. Bell building, London Life, 200 Queens, the London Club);
- rhythm of lawns, walks, tree plantings, landscaping and entrances to create interest at street level
- streetscapes of curb, grassed and treed boulevards, walks, lawns and landscaping to building;
- in commercial areas, development lots are built out to the front and side lot lines, creating a continuous street wall;
- the tightness of the street is an integral part of the character;
- buildings of varying heights between two and six storey create a varied street wall profile;
- rhythm of recessed entrances and storefronts create interest at street level;
- landscape and building materials are predominantly masonry - brick, stone, and concrete - with a variety of ornamentation;
- walkways that are tight to the buildings, level and continuous, defined along road edge by services and signage creating a tight, busy corridor for pedestrian movement;
- in the industrial/warehouse area, original building lots were built out to the front and to one of the side lot lines, creating a street wall that is interrupted by lanes and drives;
- street characterized by vehicular traffic rather than pedestrian; and
- open space along the Thames River and Eldon House park land given to the City in the 1960s.

The HCD Plan also identifies several views protected within the HCD. The significant views identified are of landmark buildings and their settings. These views include:

- views to the London Armories building (325 Dundas Street);
- views to the Middlesex County Courthouse (399 Ridout Street North);
- views to the London Life building (255 Dufferin Avenue);
- views to Eldon House (481 Ridout Street);
- broader scenic views of the forks of the Thames from the Middlesex Courthouse promontory; and
- views from Eldon House Gardens west towards the Mount Pleasant Cemetery.

\\ CD1217-F01\ work_group \01656 \ active \ 165630035\ planning \ drawing \ GIS \ MXD \ Heritage \ 165630035_HIS_Fig4_Identified.mxd
Revised: 2016-06-20 By: kbuchanan

June 2016
165630035

Stantec

Legend

- CHER Study Area
- HIS Study Area
- Parcel
- Identified View
- Cultural Heritage Resource

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Imagery and base features used under license with the City of London, 2014.

Client/Project

Upper Thames River Conservation Authority
West London Dyke
Heritage Impact Statement

Figure No.

4

Title

Identified **Cultural** Heritage Resources

5.0 DESCRIPTION OF PROPOSED DEVELOPMENT

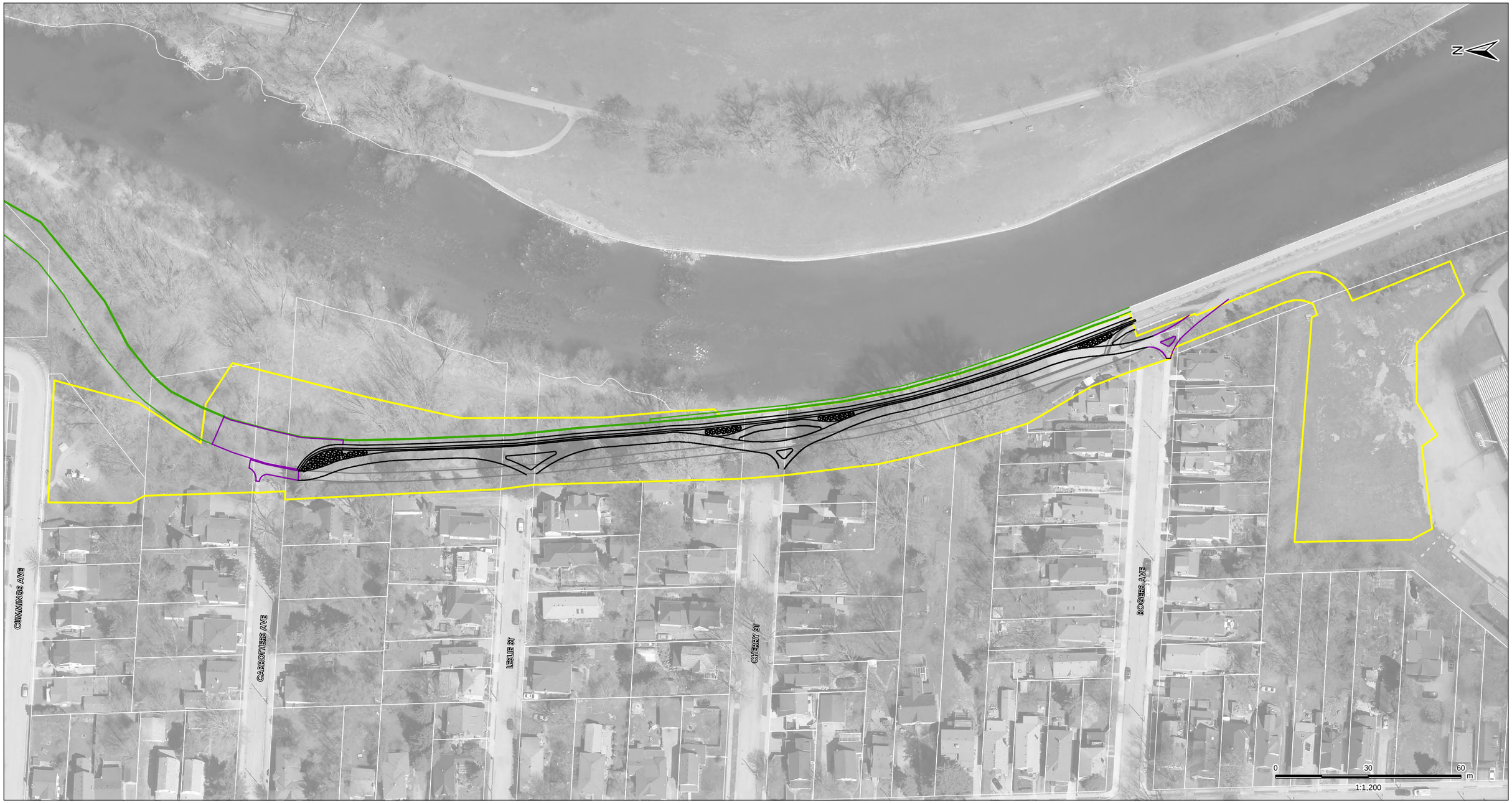
In 2006, during routine concrete repairs, structural deficiencies were evident in the section of the Dyke between the Queens Avenue Bridge and Rogers Avenue. In 2007, the City replaced this 300 metre section with a near vertical modular block wall with geogrid reinforcement. This work is considered Phase 1.

Through the completion of the West London Dyke Master Repair Plan (March 2016), it was determined that other aging segments of the Dyke require replacement to meet current safety and flood standards. The current phase of Dyke replacement, Phase 2, consists of Dyke wall and railing replacement between Rogers Avenue and Carrothers Avenue (Figures 5 and 6). The scope of work includes:

- temporary closure of the greenway and pedestrian paths;
- tree and vegetation removal;
- introduction of new elements including a near vertical modular block wall with geogrid reinforcement, aluminum railing system, new asphalt greenway paths and landscape features at Cherry Street, Leslie Street and Carrothers Street terminuses; and
- construction staging in the open area north of the Labatt Park diamond and bleachers.

It is anticipated that no in-water works will be required, as construction will occur behind the existing concrete Dyke toe. Construction activities will extend from approximately the property line (behind the Dyke) to the existing concrete Dyke toe. Construction staging areas may occur within Labatt Park as well as in the "Natural Bank" area, but will remain outside of the river boundaries. The existing concrete Dyke will be removed and replaced with a new structure to meet current flood levels. No buildings or standing structures outside of the existing Dyke will be removed as a result of this project and no land will be expropriated as part of the undertaking nor will modifications to private property including trees.

Construction is anticipated to begin in summer 2016. See Appendix A for detailed plans and cross section.



\\CD1217-F01\work_group\01656\active\165630035\planning\drawing\GIS\MXD\Heritage\165630035_HIS_Fig5_ProposedAlterations.mxd
Revised: 2016-06-20 By: kbuchanan

June 2016
165630035

Stantec

Legend

- HIS Study Area
- Proposed Dyke Alterations
  - New
  - Remove
  - Replace
  - Retain

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Imagery and base features used under license with the City of London, 2014.

Client/Project

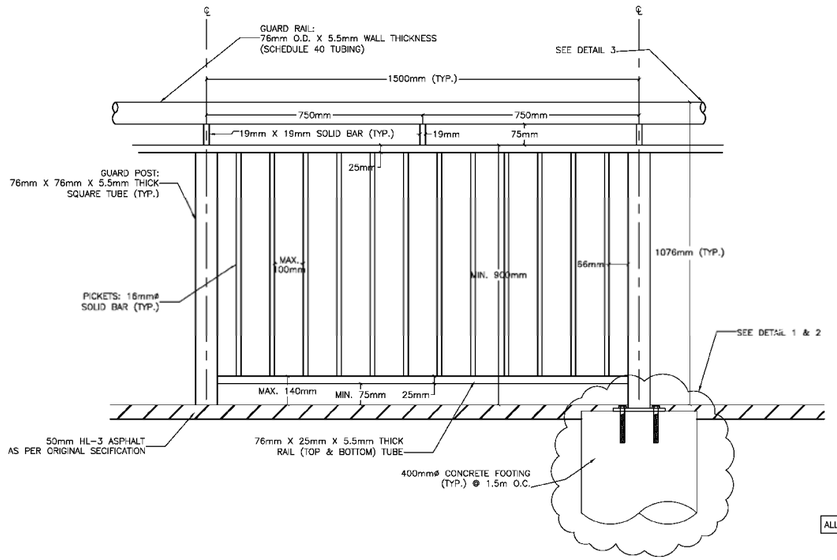
Upper Thames River Conservation Authority
West London Dyke
Heritage Impact Statement

Figure No.

5

Title

Aerial View of Proposed Dyke Alterations

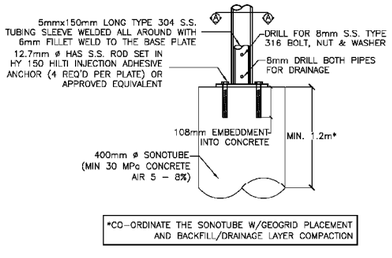


GUARD RAIL – TYPICAL PANEL

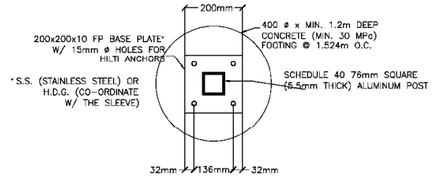
STEEL GRADE
MIN. 250 MPa

TALBOT ST

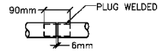
RIVERSIDE DR



DETAIL 1: GUARD RAIL MOUNTING



DETAIL 2 – SECTION A–A
(400ø X 1.2m DEEP FOOTING – FOR
300ø SEE DWG. 12 OF TENDER SET)



DETAIL 3 – HAND RAIL SPLICE

Notes
1. Not to scale.

June 2016
165630035

Client/Project
Upper Thames River Conservation Authority - West London Dyke Heritage Impact Statement

Figure No.
6

Title
Railing Detail

6.0 ASSESSMENT OF IMPACTS

The assessment of impacts on cultural heritage resources is based on the impacts defined in the MTCS *Infosheet #5*. Impacts to cultural heritage resources may be direct, or indirect. Direct impacts include:

- **Destruction** of any, or part of any, *significant heritage attributes* or features.
- **Alteration** that is not sympathetic, or is incompatible, with the historic fabric and appearance.

Indirect impacts to cultural heritage resources do not result in the direct destruction or alteration of the feature or its heritage attributes, but may indirectly affect the cultural heritage value of a property by causing:

- **Shadows** created that alter the appearance of a *heritage attribute* or change the viability of a natural feature or plantings, such as a garden.
- **Isolation** of a *heritage attribute* from its surrounding environment, context or a *significant* relationship.
- **Direct or indirect obstruction** of *significant* views or vistas within, from, or of built and natural features.
- **A change in land use** such as rezoning a battlefield from open space to residential use, allowing new *development* or *site alteration* to fill in the formerly open spaces.
- **Land disturbances** such as a change in grade that alters soil, and drainage patterns that adversely affect an *archaeological resource.*

The following sections outline the potential impacts on all cultural heritage resources described in Section 4.0. Many of the impact categories are not be applicable given the proposed undertaking and the heritage attributes identified, where this is the case, “N/A” is entered in the table. Where the potential for impacts is anticipated, “Yes” is entered in the table.

6.1 BLACKFRIARS/PETERSVILLE HERITAGE CONSERVATION DISTRICT

Table 3 Assessment of Potential Impacts to Blackfriars/Petersville Heritage Conservation District

Attribute or Property	Potential for Direct Impact		Potential for Indirect Impact					Discussion
	Destruction	Alteration	Shadows	Isolation	Obstruction	Change in Land Use	Land Disturbances	
Various renditions of Ontario Cottage dwellings and similar styles	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The proposed replacement of the West London Dyke will not impact the buildings within the Blackfriars/Petersville HCD
Dwellings that have survived the 1883 and 1937 floods	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The proposed replacement of the West London Dyke will not impact the buildings within the Blackfriars/Petersville HCD
Modest, economical home building styles and techniques that are representative of the area's early working-class settlers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The proposed replacement of the West London Dyke will not impact the buildings within the Blackfriars/Petersville HCD
Building characteristics common to the district including form, massing, type, scale, roof pitches, and setbacks	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The proposed replacement of the West London Dyke will not impact the buildings within the Blackfriars/Petersville HCD
Architectural details including buff brick materials, keyhole windows and historic fenestration, coloured and stained glass transoms, fanlights, London doors, porches, and bargeboard and gable detailing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The proposed replacement of the West London Dyke will not impact the buildings within the Blackfriars/Petersville HCD
Early historic suburban development patterns represented by the narrow internal streets, grids, walkable nature of the area, and survey types	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The proposed replacement of the West London Dyke will not impact the street grid within the Blackfriars/Petersville HCD

Attribute or Property	Potential for Direct Impact		Potential for Indirect Impact					Discussion
	Destruction	Alteration	Shadows	Isolation	Obstruction	Change in Land Use	Land Disturbances	
Proximity and historical relationship with the Thames River	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The proposed replacement of the West London Dyke will not impact the proximity and historical relationship of the Blackfriars/Petersville HCD to the Thames River. Blackfriars HCD will maintain its historical relationship to the Thames River as the replacement structure serves the same purpose, specifically flood control, as the existing structure and will be placed in the same proximity. The Dyke feature itself may change, but the relationship between the community and Thames River does not and may in fact be enhanced through improved community trails and access..
Long viewsheds along the narrow streets that terminate with views of the Thames River Dyke system (along Cummings Avenue, Carrothers Avenue, Leslie Street, Cherry Street and Rogers Avenue)	N/A	Yes	N/A	N/A	N/A	N/A	N/A	Viewsheds along the street will still terminate at the Dyke feature. New railing types may partially screen views beyond the railing. Removal of vegetation will result in a change of the existing viewshed. Views beyond the Dyke system of the vegetation are not identified in the HCD Plan as attributes.
Associated greenways along the Thames River Dyke system	N/A	Yes	N/A	N/A	N/A	N/A	Yes	Removal of trees during construction activities has the potential to alter the existing character of the greenway system with sections that include dense vegetation. New landscape features and replacement tree plantings will re-establish the character following completion of construction activities.
Enclosure provided by street trees and mature	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Street trees will not be impacted by the proposed

Attribute or Property	Potential for Direct Impact		Potential for Indirect Impact					Discussion
	Destruction	Alteration	Shadows	Isolation	Obstruction	Change in Land Use	Land Disturbances	
trees within the front and back yards of residential properties								activities in the front and rear yards of residential properties. However, trees in the side yards of residential properties along the Greenway may be impacted as some are proposed to be removed.
Public greenspaces and parks	N/A	Yes	N/A	N/A	N/A	N/A	N/A	Removal of trees along the path system at the top of the Dyke has the potential to alter the existing character of sections of the public walkway. Trees and other vegetation have grown along sections of the Dyke over time, even if they were not intentionally planted.
Blackfriars Bridge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	This phase of the proposed Dyke replacement will not impact the Blackfriars Bridge
Labatt Park	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Temporary construction staging to occur adjacent to the baseball diamond (behind bleacher area); it is anticipated that operation will continue during construction
Jeanne-Sauvé Public School (former Empress Avenue School	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The school will not be impacted by the proposed Dyke replacement
St. Georges Anglican Church	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The church will not be impacted by the proposed Dyke replacement
2 Cummings Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
10 Cummings Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
1 Carrothers Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted

Attribute or Property	Potential for Direct Impact		Potential for Indirect Impact					Discussion
	Destruction	Alteration	Shadows	Isolation	Obstruction	Change in Land Use	Land Disturbances	
								by the proposed Dyke replacement
2 Carrothers Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
3 Leslie Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
2 Leslie Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
3 Cherry Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
2 Cherry Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
6 Cherry Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
81 Wilson Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
79 Wilson Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
5 Rogers Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
1 Rogers Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke

Attribute or Property	Potential for Direct Impact		Potential for Indirect Impact					Discussion
	Destruction	Alteration	Shadows	Isolation	Obstruction	Change in Land Use	Land Disturbances	
								replacement
2 Rogers Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
4 Rogers Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
6 Rogers Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
8 Rogers Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
10 Rogers Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
12 Rogers Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
57 Wilson Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
51 Wilson Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
49 Wilson Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
47 Wilson Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement

Attribute or Property	Potential for Direct Impact		Potential for Indirect Impact					Discussion
	Destruction	Alteration	Shadows	Isolation	Obstruction	Change in Land Use	Land Disturbances	
45 Wilson Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
43 Wilson Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
41 Wilson Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The heritage attributes of the property will not be impacted by the proposed Dyke replacement
West London Dyke	Yes	Yes	N/A	N/A	N/A	N/A	Yes	All components of the current Dyke wall will be removed. The heritage attributes of the Dyke as outlined in Table 2, including concrete construction, tall sloping concrete wall, public walkway system along the top west side, low open railing system that allows for views of the river and the connection between the Dyke and Thames River, will be replaced in their entirety with modern infrastructure. The existing Dyke has been subject to numerous alterations over time.

6.2 DOWNTOWN LONDON HERITAGE CONSERVATION DISTRICT

Table 4 Assessment of Potential Impacts to Downtown London Heritage Conservation District

Attribute	Potential for Direct Impact		Potential for Indirect Impact					Discussion
	Destruction	Alteration	Shadows	Isolation	Obstruction	Change in Land Use	Land Disturbances	
Lots originally laid out to accommodate residential and associated buildings with setbacks from the front and side lot lines, creating a landscape prominence to the street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The lot pattern of the HCD will not be impacted by the proposed Dyke replacement
Original building composition of independent structures of typically two or three storeys on generous lots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The building composition of the HCD will not be impacted by the proposed Dyke replacement
Development of four to twenty storey mostly nonresidential buildings that have been redeveloped but done so in a manner that respects the historic residential pattern of streetscape (e.g. Bell building, London Life, 200 Queens, the London Club)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The building stock and streetscape pattern of the HCD will not be impacted by the proposed Dyke replacement
Rhythm of lawns, walks, tree plantings, landscaping and entrances to create interest at street level	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The rhythm of lawns, walks, tree plantings and landscaping at street level of the HCD will not be impacted by the proposed Dyke replacement
Streetscapes of curb, grassed and treed boulevards, walks, lawns and landscaping to building	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The streetscape elements of the HCD will not be impacted by the proposed Dyke replacement
In commercial areas, development lots are built	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The streetwall of the HCD will not be impacted by the

Attribute	Potential for Direct Impact		Potential for Indirect Impact					Discussion
	Destruction	Alteration	Shadows	Isolation	Obstruction	Change in Land Use	Land Disturbances	
out to the front and side lot lines, creating a continuous street wall								proposed Dyke replacement.
The tightness of the street is an integral part the character	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The tightness of the streets in the HCD will not be impacted by the proposed Dyke replacement
Buildings of varying heights between two and six storey, create a varied street wall profile	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The varied streetwall height of the HCD will not be impacted by the proposed Dyke replacement
Rhythm of recessed entrances and storefronts create interest at street level	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The storefront rhythm of the HCD will not be impacted by the proposed Dyke replacement
Landscape and building materials are predominantly masonry - brick, stone, and concrete - with a variety of ornamentation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The masonry landscape and building materials of the HCD will not be impacted by the proposed Dyke alteration
Walkways that are tight to the buildings, level and continuous, defined along road edge by services and signage creating a tight, busy corridor for pedestrian movement	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The walkways in the HCD will not be impacted by the proposed Dyke replacement
In the industrial/warehouse areas, original building lots were built out to the front and to one of the side lot lines, creating a street wall that is interrupted by lanes and drives	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The streetwall and lane composition of the HCD will not be impacted by the proposed Dyke replacement
Street characterized by vehicular traffic rather than pedestrian	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The street characterization of the HCD will not be impacted by the proposed Dyke replacement
Open space along the river	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The open space along the river

Attribute	Potential for Direct Impact		Potential for Indirect Impact					Discussion
	Destruction	Alteration	Shadows	Isolation	Obstruction	Change in Land Use	Land Disturbances	
and Eldon House park land given to the City in the 1960s								and Eldon House within the HCD will not be impacted by the proposed Dyke replacement
Views to the London Armories building (325 Dundas Street)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Views to the Armories will not be impacted by the proposed Dyke replacement
Views to the Middlesex County Courthouse (399 Ridout Street North)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Views to the courthouse will not be impacted by the proposed Dyke replacement
Views to the London Life building (255 Dufferin Avenue)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Views to the London Life building will not be impacted by the proposed Dyke replacement
Views to St. Paul's Cathedral (472 Richmond Street)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Views to the Cathedral will not be impacted by the proposed Dyke replacement
Views to Eldon House (481 Ridout Street)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Views to Eldon House from within the Downtown HCD will not be impacted by the proposed Dyke replacement
Broader scenic views of the forks of the Thames from the Middlesex Courthouse promontory	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Views to the forks of the Thames will not be impacted by the proposed Dyke replacement
Views from Eldon House Gardens west towards the Mount Pleasant Cemetery	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The replacement of the Dyke will not impact views west from Eldon House to the Mount Pleasant Cemetery. Views west to the cemetery include the section of the Dyke that has already been replaced.

6.3 SUMMARY OF IMPACTS

The replacement of the West London Dyke will result in the removal of a 300 metre section of the existing wall. The proposed replacement will result in a loss of the heritage attributes at this section of the Dyke, including:

- concrete construction;
- tall sloping concrete wall;
- public walkway system along the top west side; and
- low open railing system that allows for views of the river.

The heritage attributes relate to the Dyke's historical association as a flood control structure and the features that contribute to the Blackfriars/Petersville Heritage Conservation District, as the structure does not have significant design/physical value. The removal of the concrete sections of the Dyke is acceptable given that it will serve the same role in flood control for which it was historically valued. Impacts to the public walkway system and railing system can be mitigated as the new railing system still allows for views of the river and the walkway system will be replaced.

The replacement of the West London Dyke also affects attributes of the Blackfriars/Petersville HCD, most notably the path and vegetation along the public greenway at the top of the Dyke. Removal of any vegetation will have an impact on the existing character of the greenway that is an attribute of the Blackfriars/Petersville HCD. The greenway contains an asphalt path and a variety of vegetation on both sides of the pathway and along the Dyke itself. The asphalt pathway is to be removed and replaced with new pathway in a similar layout, with additional path entrances at the termination of Cherry Street, Leslie Street and Carrothers Street as requested by the community during the Class EA process.

Replacement of the existing railing systems has the potential to alter the views as they currently exist. The replacement railings may partially obstruct views beyond the Dyke to the Thames River as the proposed railing system has less open area than the existing railing system. These alterations are appropriate as views of the Thames River will not be entirely obstructed and will still continue to exist.

The other attributes of the Blackfriars/Petersville HCD that have the potential to be impacted are the views along residential streets that terminate at the West London Dyke. The Blackfriars/Petersville HCD Plan policies state that "views to the Thames River and associated Dyke should be preserved" (Section 7.9.1.a). Views are available from the top of the greenway, above and through the railings. The proposed new railings are less open than the existing railing system and will alter but not fully obstruct views. The railing system will still be low profile to allow for views above the top of the railing.

The replacement of the Dyke will not obstruct the views along the street corridor. Views along the street corridors presently terminate in the embankment leading up to the greenway and railings of the Dyke.. Proposed activities will maintain the Dyke railings as the terminating feature of the viewshed, though the view will be altered with the introduction of new railings and additional landscape features and vegetation that may screen or partially obstruct the view of the Dyke railings as has occurred at the Rogers Avenue terminus and the 2007 replacements. Vegetation along the Dyke and river has grown over time and become part of the character of the area. While removal of vegetation during construction activities will impact the existing character of the greenway, it also has the potential to open up views to the river, another attribute identified in the HCD Plan.

The Dyke replacement and construction activities do not require property expropriation and will be contained exclusively within City property. As such, no impacts are anticipated for adjacent properties within the Blackfriars/Petersville HCD and the Downtown HCD.

7.0 MITIGATION

The removal and replacement of the 300 metre section of the Dyke proposed is recognized as a necessary undertaking to maintain the flood protection safety of the surrounding area. The replacement of the feature removes older sections of the Dyke that have been modified over time. The proposed new structure is distinct from the historic concrete construction of the older sections of the Dyke, and does not attempt to re-create the older feature. Impacts to attributes of the Blackfriars/Petersville HCD require mitigation consistent with the HCD policies and guidelines.

To mitigate the removal of the older sections of the Dyke, documentation of the existing sections should be undertaken. This should include photographic documentation, at a minimum, which shall be amended to this report and deposited at the local repository for historic information. Other methods, such as laser scans or measured drawings, would be useful to demonstrate the scale and dimensions of the one of the City's most prominent 19th and early 20th century engineering feature.

In addition to photography, portions of the original metal railings should be salvaged and offered to the Blackfriars/Petersville community for re-use in public open space areas, if the community desires. This mitigation measure is appropriate to mitigate for the loss of the structure and express historical and contextual values.

The West London Dyke replacement will impact the existing greenway, through the removal of vegetation and the replacement of existing pathways to facilitate construction and replacement of the Dyke. The Blackfriars Peterville HCD Plan guidelines for landscape include the following with reference to vegetation along the greenway:

> *The original layout and design of the greenway and associated features on the Dyke and the green nodes along the Dyke should be respected, and in the event of a loss of vegetation, the feature should be replaced with a specimen of the same species.* (Golder 2014a)

To mitigate the removal of existing vegetation, replacement *in situ* of the same species should be undertaken. Where new vegetation is to be added, guidelines of the Blackfriars/Petersville HCD Plan should be followed, including but not limited to the selection of native, non-invasive species. This approach should be contained within an arborist report recommending appropriate plantings. These mititagtion measures are appropriate as the character contribution of the vegetation will be reinstated over time.

In addition to the above mitigation options, interpretive panels to reflect the history of the Dyke, local flood control, and the Blackfriars/Petersville neighbourhood should be explored when re-establishing the greenway. Commemoration can be a means to commemorate the original features.

8.0 IMPLEMENTATION AND MONITORING

This section of the report identifies the need for future studies, timelines for implementing mitigation measures, and any specific monitoring practices that are required to assist with mitigation.

Prior to removal of trees along the greenway, it is recommended that an arborist report be prepared, identifying the species of the trees to be removed so that replacement of the same kind can occur where possible.

Prior to construction activities or vegetation removal, documentation of the existing Dyke feature and salvage of any railing materials to be re-used by the community should be undertaken. Documentation, including photographic and textual describing salvage activities, should be placed on file with the City of London and the London Public Library.

Commemorative opportunities should be explored by URTCA in conjunction with the City and their advisory committee on heritage. This should occur prior to permanent railing installation.

9.0 RECOMMENDATIONS

The proposed replacement of the West London Dyke will result in some adverse impacts to cultural heritage resources, primarily attributes of the Blackfriars/Petersville HCD, which identify the greenway system along the top of the Dyke and views along residential streets that terminate at the Dyke. Based on the adverse impacts identified to these cultural heritage resources, it is recommended that the following mitigation measures be implemented after reconstruction of the Dyke:

- It is recommended that an arborist report be prepared to identify the existing tree species of trees to be removed from the greenway and make recommendations for appropriate plantings. Vegetation to be removed for construction and replacement activities should be replaced with the same species, in accordance with the Blackfriars/Petersville HCD Plan, wherever possible.

- It is recommended that new vegetation to be added to the greenway conform to the Blackfriars/Petersville HCD policies and guidelines, notably those for public spaces that suggest native and non-invasive plant species.

- It is recommended that prior to reconstruction, the existing Dyke be documented with photographs of its existing condition (including railings, concrete sloped wall, and surrounding environment) and measured drawings or 3D digital modeling be prepared to maintain a record of the historic structure. Documentation should be kept on file at the City of London and archival sources such as the London Room.

- It is recommended that salvage of the current Dyke structure and existing railings be undertaken prior to construction activities for community re-use of any railing materials.

- It is recommended that opportunities for interpretive signage along the greenway be explored to commemorate the history of the West London Dyke, historic floods and flood control measures, and the Blackfriars/Petersville neighbourhood.

10.0 CLOSURE

This report has been prepared for the sole benefit of the Upper Thames River Conservation Authority and the City of London, and may not be used by any third party without the express written consent of Stantec Consulting Ltd. Any use which a third party makes of this report is the responsibility of such third party.

We trust this report meets your current requirements. Please do not hesitate to contact us should you require further information or have additional questions about any facet of this report.

Yours truly,

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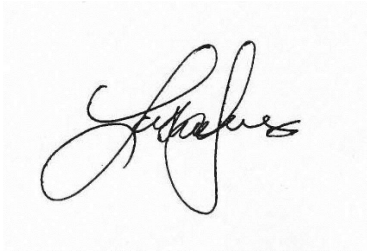

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June 24, 2016

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APPENDIX A
DETAILED PLANS AND CROSS SECTIONS

EXISTING SERVICES	DRAWING #, SOURCE	DATE	CONSTRUCTED SERVICES	COMPLETION	DETAILS	No.	REVISIONS	DATE	CONSULTANT
					DESIGN DB	1.			STANTEC
					DRAWN BY DB	2.			STANTEC
					CHECKED				
					APPROVED				
					DATE				
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London CANADA

CORPORATION OF THE CITY OF LONDON

SCALE

TITLE

WEST LONDON DYKE REPLACEMENT

PHASE 3

PROJECT LIMITS

PROJECT No. 165630035

SHEET No. X

PLAN FILE No.

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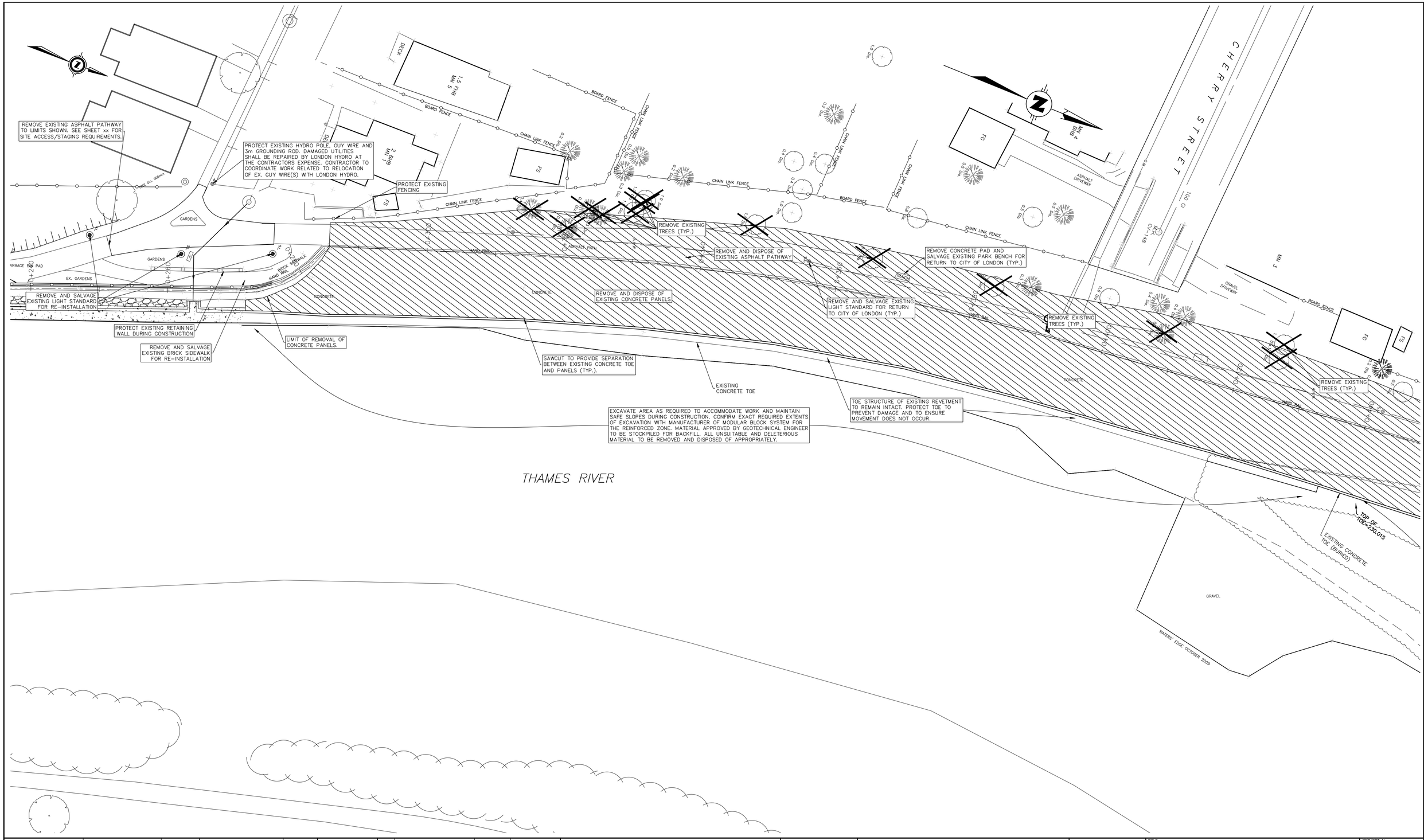
Friday, February 26, 2016 dwbrown



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London CANADA

SCALE

TITLE
WEST LONDON DYKE REPLACEMENT
PHASE 3
STA. 0+250 – STA. 0+450
REMOVALS

PROJECT No. 165630035
SHEET No. X
PLAN FILE No.


LESLIE STREET
CARROTHERS AVENUE
CUMMINGS AVENUE
THAMES RIVER
PROTECT EXISTING HYDRO POLE, GUY WIRE AND 3m GROUNDING ROD. DAMAGED UTILITIES SHALL BE REPAIRED BY LONDON HYDRO AT THE CONTRACTORS EXPENSE. CONTRACTOR TO COORDINATE WORK RELATED TO RELOCATION OF EX. GUY WIRE(S) WITH LONDON HYDRO.
REMOVE CONCRETE PAD AND SALVAGE EXISTING PARK BENCH FOR RETURN TO CITY OF LONDON (TYP.)
REMOVE AND DISPOSE OF EXISTING ASPHALT PATHWAY
REMOVE EXISTING TREES (TYP.)
LIMIT OF BURIED PORTION OF EXISTING DYKE
REMOVE AND SALVAGE EXISTING LIGHT STANDARD FOR RETURN TO THE CITY. (TYP.)
TOP OF TOE=230.460
TOP OF TOE=230.325
SAWCUT TO PROVIDE SEPARATION BETWEEN EXISTING CONCRETE TOE AND PANELS (TYP.).
REMOVE TO NEAREST PANEL JOINT OR SAWCUT AS REQUIRED TO ACCOMMODATE THE LOCATION OF THE NEW REVETMENT. PROVIDE ADEQUATE SUPPORT OF THE EXISTING REVETMENT STRUCTURE TO PREVENT UNDERMINING. MINIMIZE DAMAGE TO REMAINING STRUCTURE DURING CONSTRUCTION.
EXISTING CONCRETE TOE (BURIED)
EXISTING WOODED AREA
TOP OF TOE=230.085
EXCAVATE AREA AS REQUIRED TO ACCOMMODATE WORK AND MAINTAIN SAFE SLOPES DURING CONSTRUCTION. CONFIRM EXACT REQUIRED EXTENTS OF EXCAVATION WITH MANUFACTURER OF MODULAR BLOCK SYSTEM FOR THE REINFORCED ZONE. MATERIAL APPROVED BY GEOTECHNICAL ENGINEER TO BE STOCKPILED FOR BACKFILL. ALL UNSUITABLE AND DELETERIOUS MATERIAL TO BE REMOVED AND DISPOSED OF APPROPRIATELY.
TOE STRUCTURE OF EXISTING REVETMENT TO REMAIN INTACT. PROTECT TOE TO PREVENT DAMAGE AND TO ENSURE MOVEMENT DOES NOT OCCUR.
TOP OF TOE=230.155
TOP OF TOE=230.015
EXISTING CONCRETE TOE (BURIED)
TOP OF TOE=230.570
14 TREES
PLAY GROUND
CONCRETE SIDEWALK
CHAIN LINK FENCE
BOARD FENCE
BOARD FENCE ON LINE
HAND RAIL
CONCRETE
EDGE OF GRAVEL
GRAVEL
MN 3
MN 2 2 BH
FS
R 2009

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					APPROVED				
					DATE				
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WEST LONDON DYKE REPLACEMENT

PHASE 3

STA. 0+450 – STA. 0+620 REMOVALS

PROJECT No. 165630035

SHEET No. X

PLAN FILE No.

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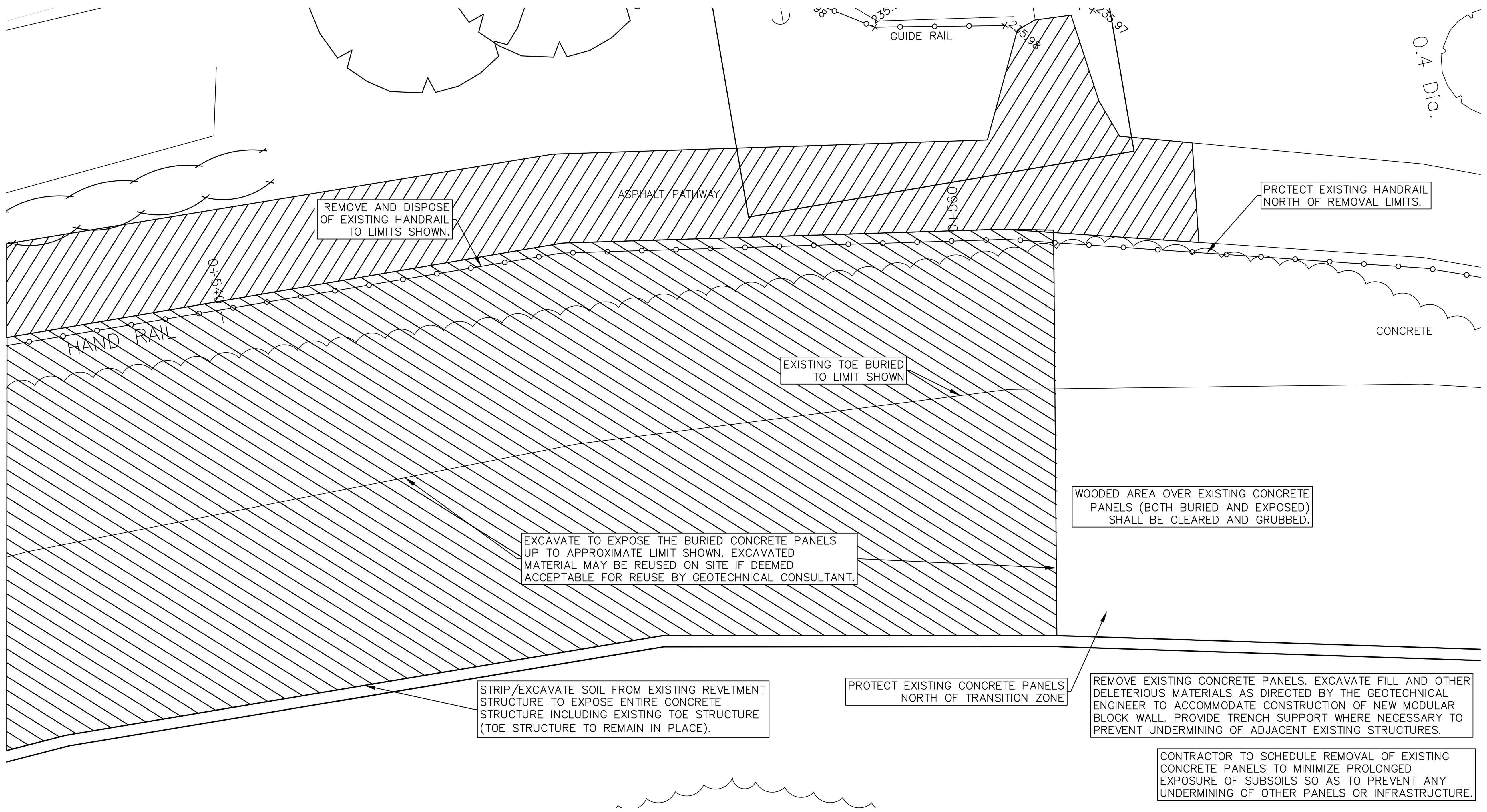

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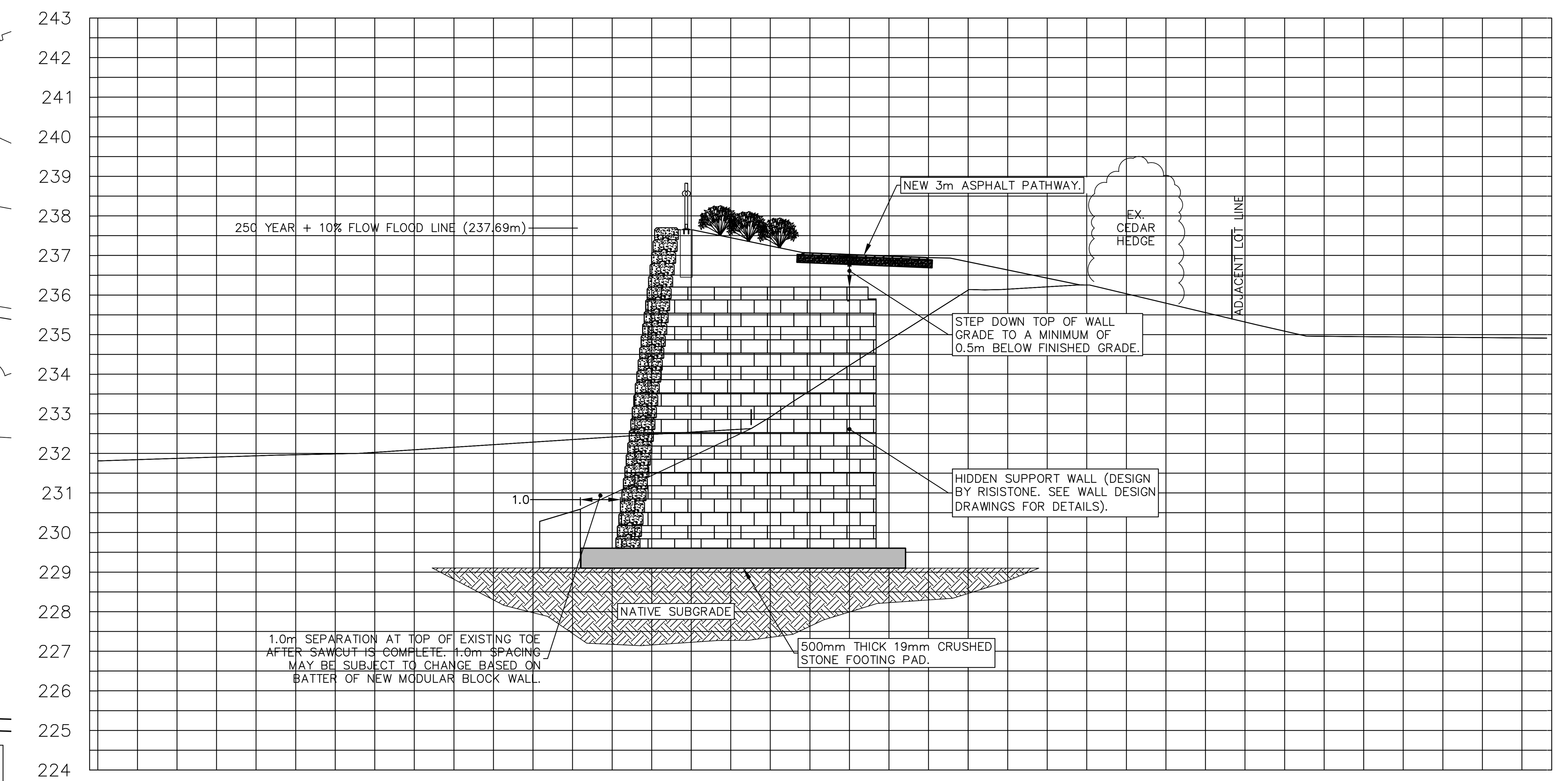

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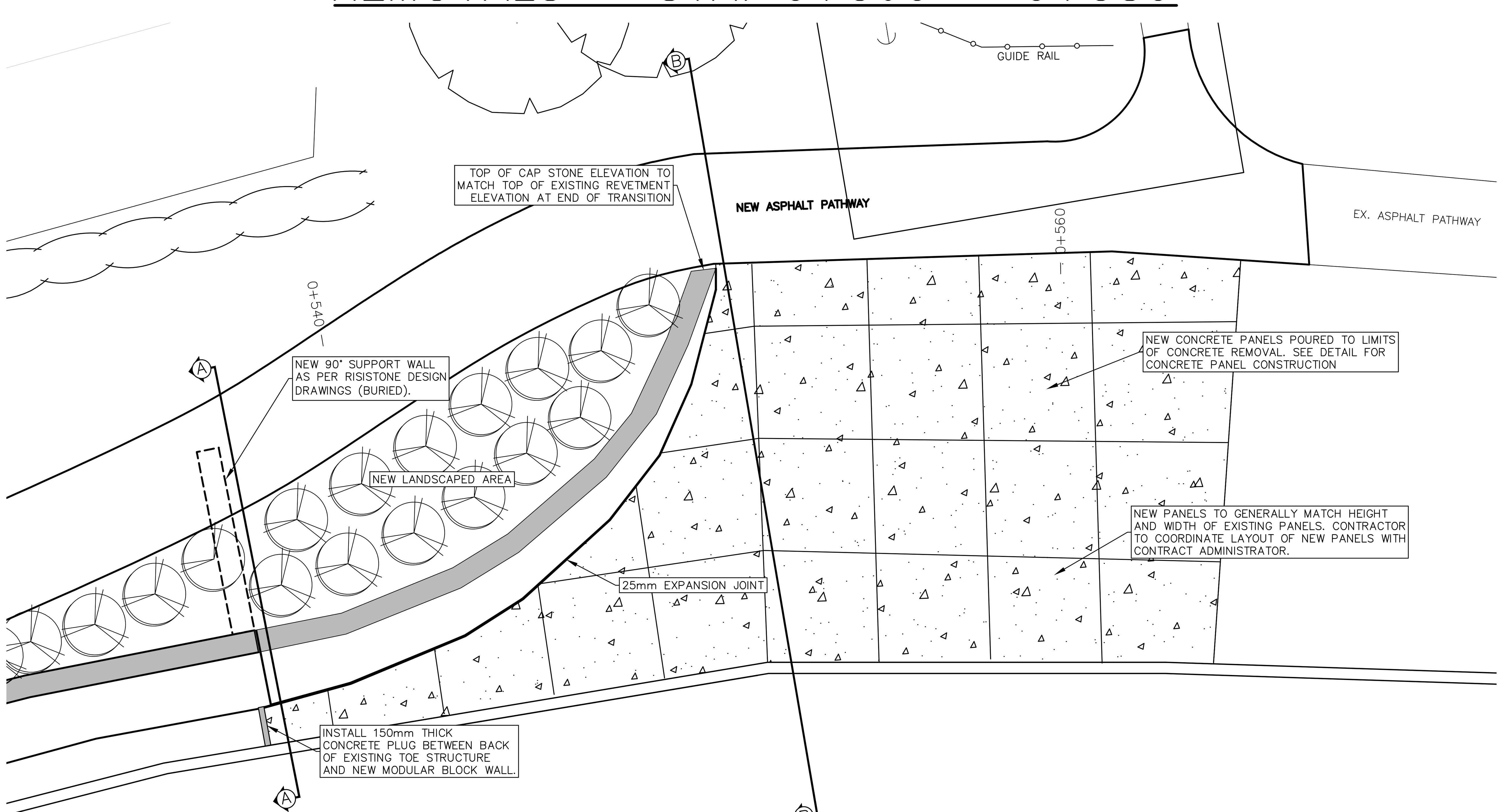

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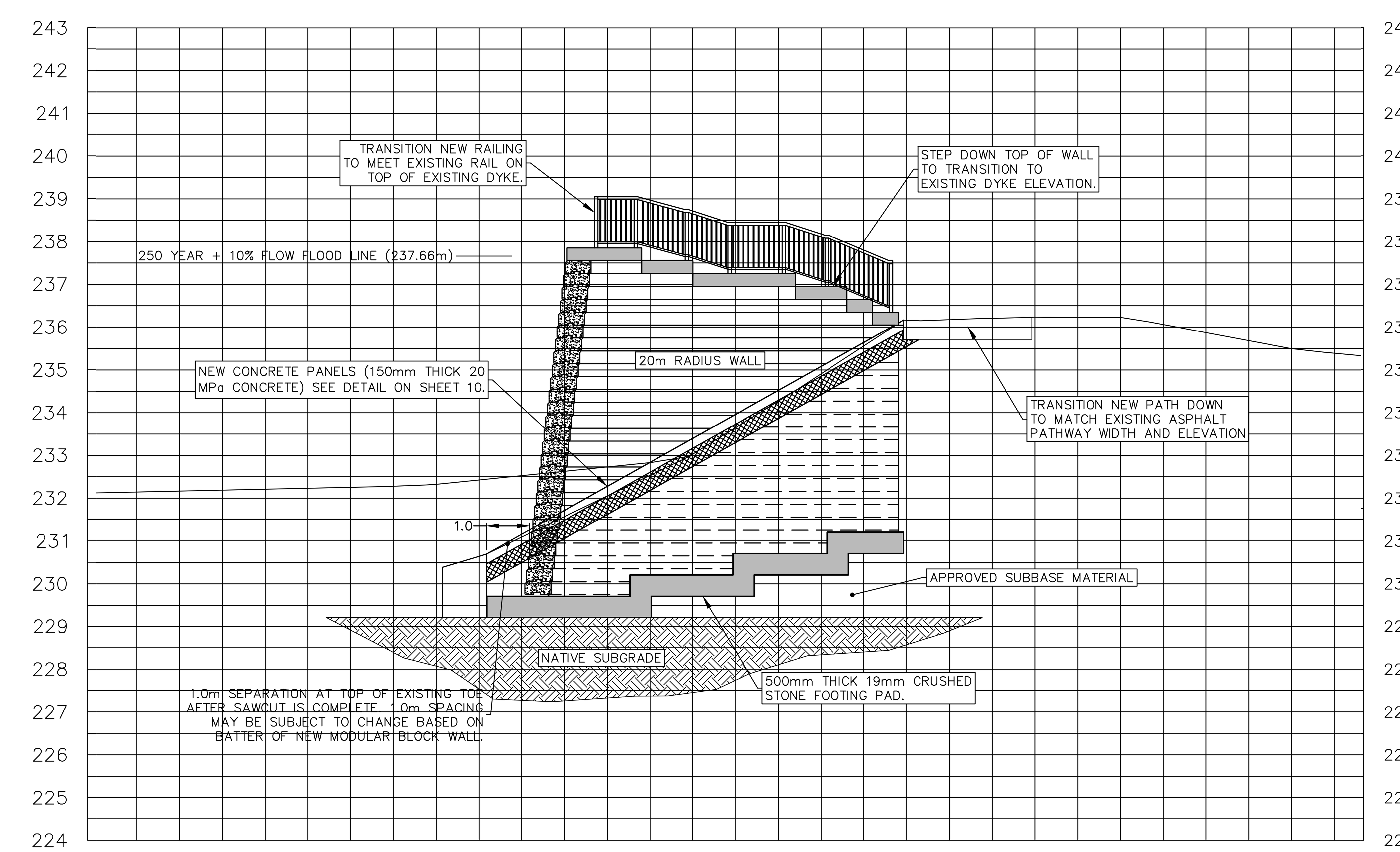

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					DATE APRIL 18, 2016				
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VERT – 1 : 100
HORZ – 1 : 100
1.0 0 2.0m

TITLE
WEST LONDON DYKE REPLACEMENT
PHASE 3
NORTH TRANSITION
STATION 0+530 – 0+560

PROJECT No. 165630035
SHEET No. X
PLAN FILE No.

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					APPROVED				
					DATE				
					1656 30035				

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SCALE

TITLE

WEST LONDON DYKE REPLACEMENT

PHASE 3

GRADING PLAN

PROJECT No. 165630035

SHEET No. X

PLAN FILE No.

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SECTION A–A

SCALE 1 : 50

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					DRAWN BY DB				
					CHECKED				
					APPROVED				
					DATE APRIL 11, 2016				
					1656 30035				

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London CANADA

CORPORATION OF THE CITY OF LONDON

SCALE

TITLE

WEST LONDON DYKE REPLACEMENT

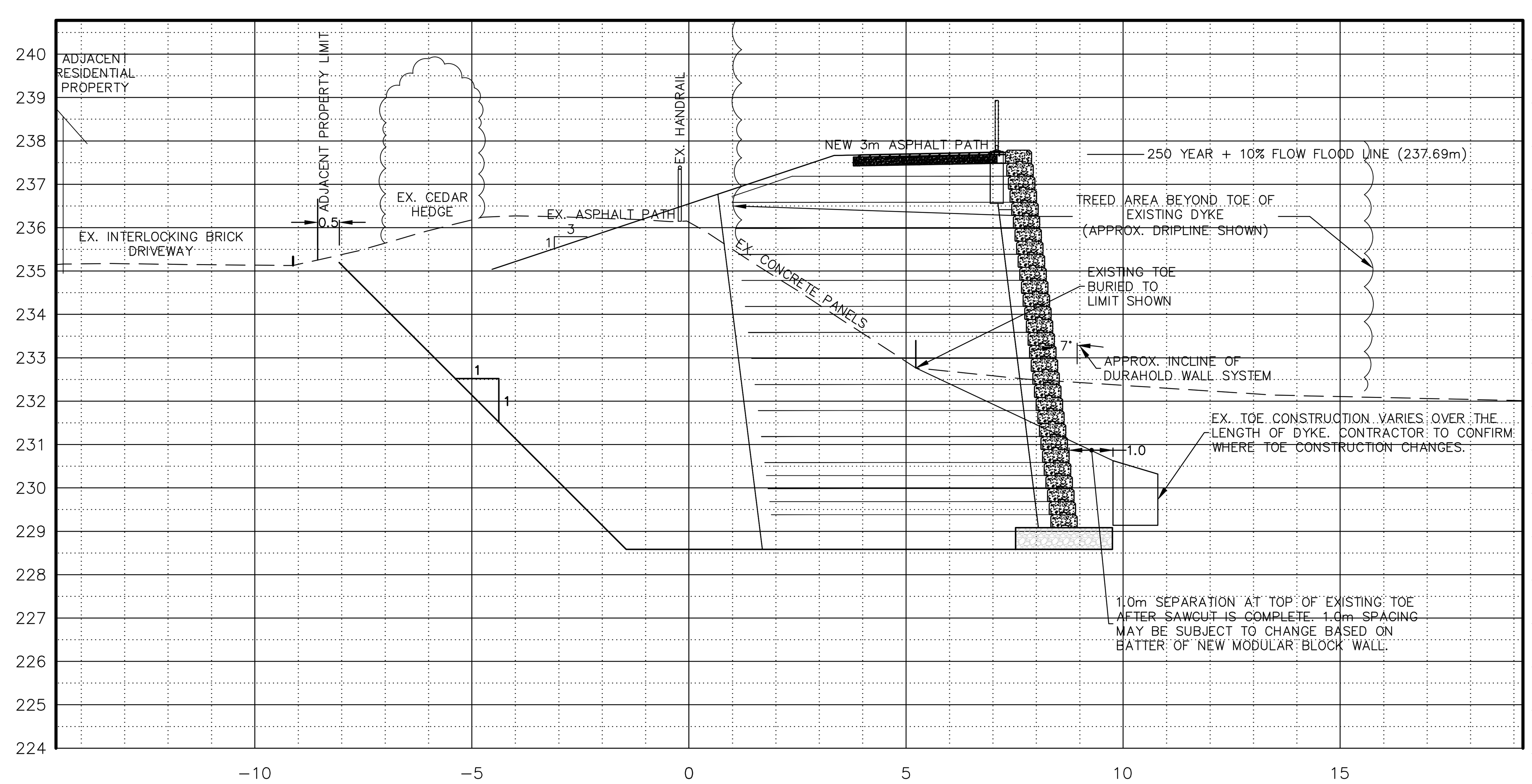
PHASE 3

SITE ACCESS/STAGING/HAUL ROUTES

PROJECT No. 165630035

SHEET No. X

PLAN FILE No.



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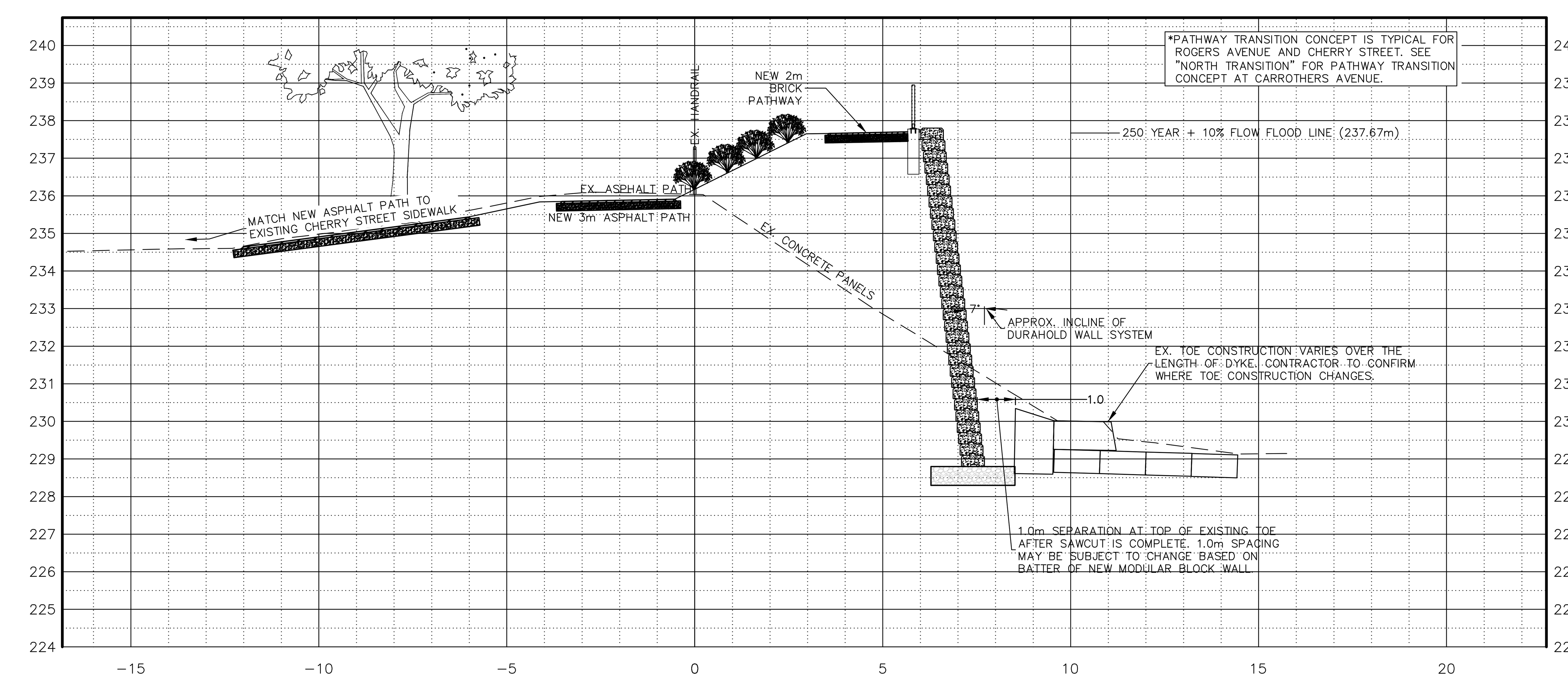

CHERRY STREET PATHWAY TRANSITION CROSS SECTION A–A (STA. 0+395)

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					DATE MARCH 10, 2016				
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HORZ – 1 : 100

TITLE
WEST LONDON DYKE REPLACEMENT
PHASE 3

DYKE CROSS–SECTIONS
TYPICAL SECTIONS

PROJECT No. 165630035
SHEET No. X
PLAN FILE No.

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Wednesday, December 02, 2015 dwbrown