Appendix D.9 Construction Vibration Control Study

Environmental Review Report

East Windsor Generation Facility Expansion

Capital Power Corporation

SLR Project No.: 241.030524.00024

July 2024

Construction Vibration Control Study

East Windsor Generation Facility Expansion Project

Capital Power Corporation

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SLR Project No.: 241.V30524.00024

July 2024

Revision: 1

Revision Record

Revision	Date	Revision Description
0	April 11, 2024	Draft report issued for external review
1	July 2024	Report issued for public review

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Executive Summary

Capital Power Corporation (Capital Power), through its affiliate East Windsor (Expansion) L.P., is proposing the East Windsor Generation Facility Expansion (the Project) in the City of Windsor, Ontario. The Project is responsive to the Independent Electricity System Operator's (IESO's) call for additional natural gas generation capacity and will provide up to approximately 107 megawatts (MW) of additional gross generation capacity to the Windsor-Essex area and provincial electricity grid. The proposed Project is being designed to provide dependable capacity at peak times when Ontario's other generation sources are not capable of meeting demand.

Given the proximity of the Project to nearby land uses and the nature of the Project's construction activities, there exists the potential for these activities to generate ground vibrations that could impact adjacent structures owned or occupied by others. The anticipated impacts from these activities have been quantified as part of this vibration control study.
This construction vibration control study has evaluated a zone of influence (ZOI), and potential construction vibration impacts due to planned construction of the Project.

In the absence of construction detail, this analysis presents a conservative scenario based on the assumption that all equipment will be used within the Project Site boundary (the Capital Power property line). This conservative assessment scenario has been assessed to inform the Environmental Review Report (ERR) to meet the requirements of the Environmental Screening Process for Electricity Projects (ESP).

The results of the conservative analysis found that the 2 mm/s ZOI encroaches upon the southeastern third of the heritage property (known as 229 Cadillac Street), although not the 2-storey addition building itself. Despite 229 Cadillac Street not being a designated heritage attribute of the 2879 Riverside Drive East building, there is a potential for construction vibration to transmit into the heritage building, due to the buildings being structurally connected. To ensure a conservative assessment, the more stringent vibration criteria were applied to both the buildings.

Unless a future detailed assessment based on detailed construction information demonstrates that the ZOI will not encroach on the heritage property, a monitoring program is recommended .

Table of Contents

Tables in Text

Figures in Text

Appendices

Acronyms and Abbreviations

γ	ground vibration decay factor
BHR	Built Heritage Resource
CHL	Cultural Heritage Landscapes
ERR	Environmental Review Report
ESP	Environmental Screening Process
EWCC	East Windsor Cogeneration Centre
ft	feet
FTA	Federal Transit Administration
Hz	Hertz
IESO	Independent Electricity System Operator
m	meters
mm/s	millimetres per second
MW	megawatt
PPV	Peak Particle Velocity
ZOI	Zone of Influence

1.0 Introduction

1.1 Project Overview

Capital Power Corporation (Capital Power), through its affiliate East Windsor (Expansion) L.P., is proposing the East Windsor Generation Facility Expansion (the Project) in the City of Windsor, Ontario. The Project is responsive to the Independent Electricity System Operator's (IESO's) call for additional natural gas generation capacity and will provide up to approximately 107 megawatts (MW) of additional gross generation capacity to the Windsor-Essex area and provincial electricity grid. The proposed Project is being designed to provide dependable capacity at peak times when Ontario's other generation sources are not capable of meeting demand.

The Project consists of the construction and operation of a new simple cycle natural gas generation facility located adjacent to the existing East Windsor Cogeneration Centre (EWCC)[1]. The Project will make use of some existing infrastructure, including tying into the existing EWCC high-voltage interconnection line to avoid the need for a new connection to the provincial electricity grid. Ancillary project components include an equipment building, storage building, stormwater management system and site servicing. Additional areas for temporary staging and laydown will be required during the construction phase.

The Project will be located within the existing EWCC fenceline, primarily on lands owned by Capital Power. These lands represent a series of parcels, municipally known as 228 to 276 Cadillac Street (hereby referred to as the Project Site). These parcels, along with others on the west side of Cadillac Street, were formerly residential properties that were acquired, and residences removed, as part of the original development of the EWCC. The Project Site is approximately 0.61 hectares (ha; 1.49 acres) in size and is currently used for site access, parking, mowed and landscaped areas, and formerly storage (removed at the City's request) (**Figure 2-1**).

1.2 Objective

Given the proximity of the Project to nearby land uses and the nature of the Project's construction activities, there exists the potential for these activities to generate ground vibrations that could impact adjacent structures owned or occupied by others. The anticipated impacts from these activities have been quantified as part of this vibration control study.
This construction vibration control study has evaluated a zone of influence (ZOI), and potential construction vibration impacts due to planned construction of the Project.

Based on the currently available construction details, this analysis presents a conservative scenario based on the assumption that all construction activities and ground impacting construction equipment that may generate significant vibration will be used only within the Project Site boundary (the Capital Power property line).

[1] The EWCC is located on the land leased from Ford Motor Company of Canada Ltd. In addition to generating electricity, the facility used to provide steam to the neighbouring Ford Motor company for their Ford Windsor engine plant. Since the closure of the engine plant in 2018, Ford has terminated the Steam Supply Agreement with EWCC, and EWCC now operates in simple cycle mode as a peaking plant.

A further conservative assumption is that the portion of Cadillac Street that is proposed to be temporarily closed during construction work will only be used as an access route to the construction site or for use of equipment that generates negligible vibration. This conservative scenario has been assessed to inform the Environmental Review Report (ERR) to meet the requirements of the Environmental Screening Process for Electricity Projects (ESP).

2.0 Project and Site Context

2.1 Site Context

A Cultural Heritage Report completed for the Project has identified known City of Windsor Heritage Sites including Cultural Heritage Features (CHFs), Cultural Heritage Landscapes (CHLs) and Built Heritage Resources (BHRs) within 500 m of the Project Site (ASI 2024) (**Figure 2-1**). Land uses immediately adjacent to the Project Site include one designated BHR and are listed in **Table 2-1**.

Table 2-1: Land Uses and Heritage Sites Adjacent to the Project Site

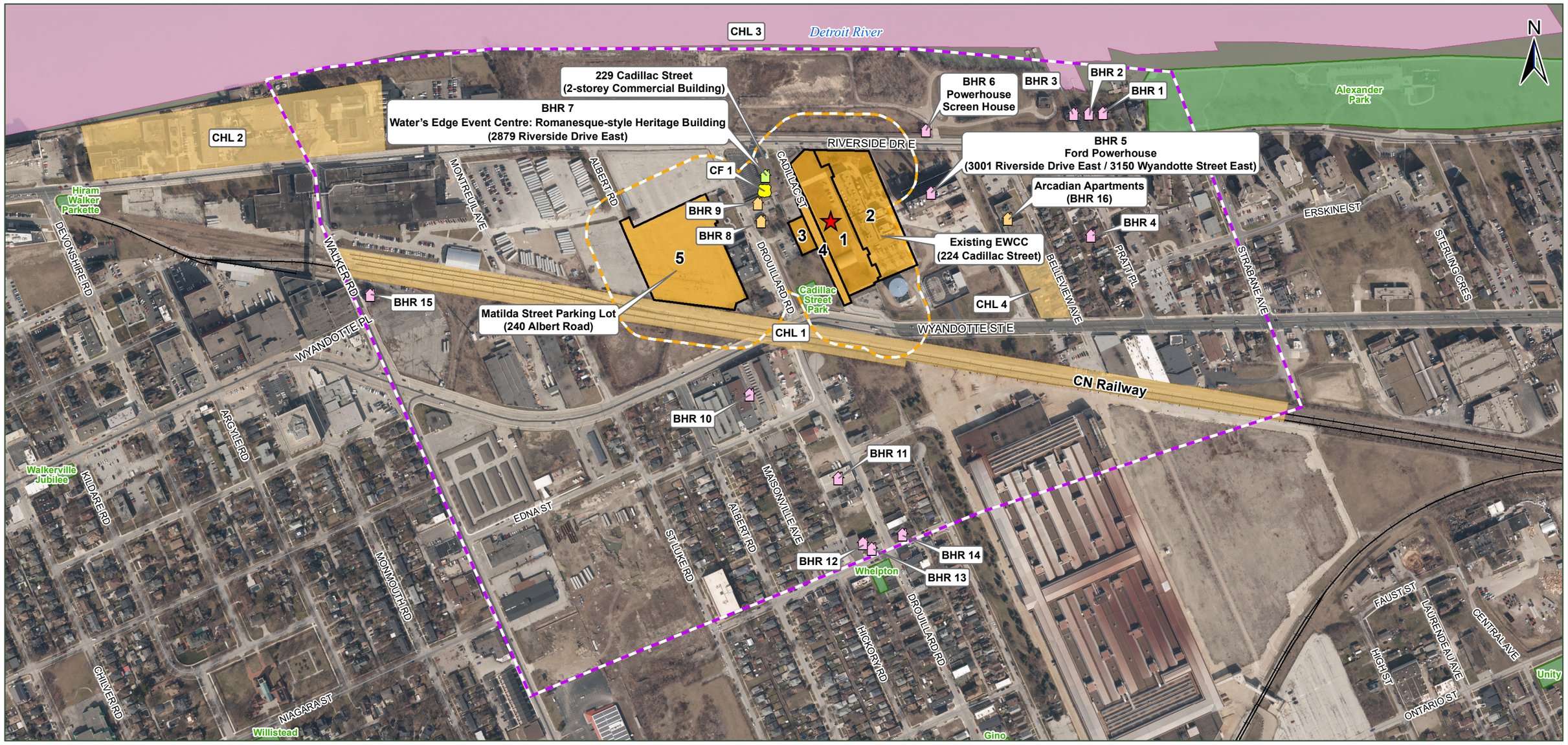
Direction	Address	Use
North	Riverside Drive East	Public Roadway
East	224 Cadillac Street	Existing EWCC
South	Cadillac Street	Public Roadway
	Wyandotte Street East	Public Roadway
West	2879 Riverside Drive East	Water's Edge Event Centre (Renaissance Revival and Classical Revival style Heritage Building, designated under the *Ontario Heritage Act*)
	229 Cadillac Street	2-storey commercial building (twentieth-century addition to 2879 Riverside Drive East)
	290 Drouillard Road	Cadillac Street Park

In addition, the Ford Powerhouse, municipally addressed as 3001 Riverside Drive East/3150 Wyandotte Drive East, is a nearby known BHR constructed in 1923 to provide power for the Ford Motor Company and is located immediately east of the existing EWCC. Although not designated under the *Ontario Heritage Act*, the Ford Powerhouse is listed on the City of Windsor's Municipal Heritage Register.

2.1.1 Buildings Designated Under the *Ontario Heritage Act*

The *Ontario Heritage Act* makes provisions to designate property as architecturally and/or historically significant. The property municipally known as 2879 Riverside Drive East, Windsor, Ontario, currently the Water's Edge Event Centre (previously Our Lady of the Rosary Church) is designated under Part IV of the *Ontario Heritage Act* and is located across Cadillac Street to the northwest of the Project Site.

The property on which the heritage building is situated also extends south along Cadillac Street and includes a later twentieth-century two-storey addition and associated parking lot that occupies approximately the southeastern third of the property (known as 229 Cadillac Street). Heritage attributes on the property are restricted to the former church building located at 2879 Riverside Drive (ASI 2024). For the purposes of this study, the 229 Cadillac Street building has been assessed as a heritage building, as it is structurally connected to the designated 2879 Riverside Drive building.



LEGEND:

- Cultural Heritage Specific Study Area (construction area plus 50 m buffer)
- Land Use Study Area (approx. 500 m buffer)
- Project Site
- Construction Footprint
- Parks (City of Windsor)
- Railway

Heritage Features (Identified by ASI)

- Designated under Part IV of the *Ontario Heritage Act*
- Identified during background research and field review
- Listed on the City of Windsor's Municipal Heritage Register
- Identified during background research and field review
- Listed on the City of Windsor's Municipal Heritage Register
- Commemorative Feature

NOTES:
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EAST WINDSOR GENERATION FACILITY EXPANSION

CONSTRUCTION VIBRATION CONTROL STUDY

PROJECT SITE

SLR

FIGURE NO:
2-1

DATE: July 2024

PROJECT NO: 241.30524.00024

2.2 Project Context

The key Project components have been located within the Project Site boundary on lands owned by Capital Power and accessed via the existing EWCC driveway to/from Cadillac Street. The Project Site is approximately 0.61 ha (1.49 acres) in size, with some of that area representing the footprint of Project components, and the remainder to be landscaped.

Project components extending beyond the Project Site boundary are associated with shared infrastructure with the existing EWCC. Interconnections with existing facilities on the EWCC site are expected to include electrical interconnection with the existing EWCC switchyard, stormwater management infrastructure, fire water servicing, and use of an access laneway along the western edge of the EWCC building. Features currently located within the Project Site will continue to service the EWCC including site access and parking. The site plan for the Project is provided in **Appendix A**.

2.2.1 Project Activities

Temporary construction areas will be required for standard construction related activities such as material storage and equipment laydown, staging, placement of construction trailers, and contractor parking. Throughout the construction phase, a portion of Cadillac Street will be temporarily closed, with the main Project site access gate located at the north end of the closure area. The portion of Cadillac Street temporarily closed, and the three empty lots owned by Capital Power on the western side of Cadillac Street will comprise the main temporary construction area, in addition to the Project Site and EWCC Site. A portion of the nearby Matilda Street parking lot will also be leased for use for contractor parking, material storage, and equipment laydown.

It is assumed that the temporarily closed portion of Cadillac Street will only be used as an access route for the Project Site, and that no ground impacting construction equipment or activities will be carried out in this area. For the purposes of this assessment, vehicular traffic movement along Cadillac Street to access the Project Site during construction is not considered a construction vibration activity, hence this portion of Cadillac Street is excluded from the ZOI analysis.

The primary driving route for worker traffic connecting the Matilda Street parking lot to the Project Site will be via Riverside Drive. The primary delivery routes will be via Riverside Drive from the west to access the main gate, or from Wyandotte Street for access to the southern portion of the Project site on Cadillac Street. To reduce disruption to adjacent residents and businesses, Drouillard Street will not be used as a primary route for Project traffic.

Construction planning includes a commitment to avoid ground disturbance on temporary construction areas, with particular attention to avoiding impacts to paved areas within leased areas.

The construction phase is currently expected to be approximately 12 to 18 months in duration and will include foundation installation, equipment and storage building construction, facility component delivery, installation, and commissioning, and post-construction site restoration and landscaping.

The focus of the current study is the vibration impacts associated with civil earthworks such compaction and bulk excavation at the Project site during the construction phase.

The activities anticipated to cause the highest ground vibration levels during excavation include the following:

- Vibratory Rolling;
- Compaction; and
- Piling.

Planned equipment to be used for these works includes:

- Rollers;
- Rammers;
- Piling Rigs (Caisson Drilling);
- Heavy Loaded Truck and Trailers;
- Backhoes;
- Crawler Cranes;
- Loaders;
- Skit-steers;
- Hydrovacs.

The anticipated impacts from construction equipment and associated activities have been quantified as part of this vibration control study. In the absence of construction detail, this analysis presents a conservative scenario based on the assumption that all equipment will be used at the Project Site boundary (the Capital Power property line).

3.0 Methods

3.1 Vibration Criteria

The City of Windsor has no published ordinances or by-laws that specifically address vibrations from construction. In lieu of this information, the methodology specified in Chapter 363 of the Toronto Municipal Code was applied and is accepted by several other municipalities within Ontario. This report addresses the requirements specified in the City of Toronto's By-Law 514-2008, which indicates that potential vibration impacts from construction activity must be reviewed by a professional engineer to establish requirements for controls where impacts on neighboring structures (owned or occupied by others) are anticipated.

3.1.1 Vibration Threshold Limits

The criteria used for this assessment, the City of Toronto By-Law 514-2008, specifies Do-Not-Exceed threshold limits for the peak particle velocity (PPV), measured in millimetres per second (mm/s) for a specified range of vibrations frequency measured in Hertz (Hz). The threshold limits are listed in **Table 3-1.**

Table 3-1: Vibration Threshold Limits for Adjacent Land Use

Frequency of Vibration (Hz)	Peak Particle Velocity (mm/s)
Less than 4	8
Between 4 and 10	15
Greater than 10	25
Note: City of Toronto By-Law 514-2008 peak particle velocity criteria threshold limits have been applied.	

While the threshold limit is 8 mm/s for frequencies below 4 Hz, 62.5 % of the threshold limit (i.e., 5 mm/s) is given as an appropriate cautionary threshold for most structures and typically serves as the basis for defining the ZOI.

3.1.2 Heritage Designated or Listed

Special consideration is required for heritage properties due to the potential sensitivity of the built heritage structure and foundation to vibration. The values in **Table 3-1** are appropriate for modern construction; however, they do not reflect the higher sensitivity often associated with common features characteristic of structures with a heritage designation. From a review of standards applicable to historic/heritage structures, the requirements cited in German Standard DIN4150-3 were selected for use in this study and are listed in **Table 3-2**. German DIN4150-3 is a widely accepted standard, and is considered an appropriate criterion within Canada, as well as many other parts of the world.

Table 3-2: Vibration Threshold Limits for Heritage Designated Use

Frequency of Vibration (Hz)	Peak Particle Velocity (mm/s)
Less than 10	3
Between 10 and 50	3 to 8
Greater than 50	8
Note: German Standard DIN4150-3 peak particle velocity criteria threshold limits have been applied	

3.1.3 Underground Utilities

While no underground utilities were identified within the Project Site in the topographic or geotechnical investigation reports, there are, however, known underground utilities located beneath Cadillac Street and the adjacent sidewalk. Combined sewer lines (i.e., sanitary and storm sewer) are located underneath the sidewalk that runs parallel to the Project Site, along the northeast side of Cadillac Street. A natural gas line runs between the Cadillac Street sidewalk and the Project Site. These underground utilities are associated with the former residential properties that were once present within the Project Site. All of the underground utilities are assumed to have been made inactive when the residential properties were removed between 2007 and 2009. Capital Power is working with the City of Windsor to confirm the known status of the underground utilities in addition to daylighting potential underground utilities as part of construction planning. If required, a vibration assessment of these underground utilities can be conducted in the future when a more detailed construction scope is available.

3.2 Zone of Influence (ZOI) of Construction Vibration

The City of Toronto's By-Law 514-2008 requires determination of the vibration ZOI associated with construction activities. Chapter 363 of the City of Toronto Municipal Code defines the ZOI as follows:

> *"The area of land within or adjacent to a construction site, including any buildings or structures, that potentially may be impacted by vibrations emanating from a construction activity where the peak particle velocity measured at the point of reception is equal to or greater than five (5) mm/sec at any frequency or such greater area where specific site conditions are identified by the professional engineer in a preliminary vibration study."*

There are no Canadian standards for the prediction of construction vibration impacts. The model recommended by the Federal Transit Administration (FTA) of the United States is widely accepted in North America, and as such was applied to predict vibration impacts during construction and to establish the extent of the ZOI. The source vibration levels associated with the equipment planned for shoring/excavation were based on FTA data, as well as SLR's own measurement data from similar projects. All construction activities/equipment were assumed to be located at the property limit to assess the conservative scenario.

The ZOI was determined based on the following numerical model shown in equation (1):

$$PPV_{equip} = PPV_{ref} * \left(\frac{25}{D}\right)^{\gamma} \quad (1)$$

Where:

- PPV_{equip} is the estimated peak particle (ground) velocity at distance *D* from the equipment;
- PPV_{ref} is the peak particle (ground) velocity due to operation of the source equipment at an offset distance of 25 feet (ft) or 7.6 metres (m); and,
- γ is the ground vibration decay factor ($\gamma = 1.1$ for rock excavation, $\gamma = 1.25$ for sandy soils, and $\gamma = 1.5$ for clayey soils).

A ground vibration decay factor of 1.5 was selected for this site based on information from the geotechnical investigation prepared for the project (WSP 2023) and published values. The existing site subsurface soil conditions within the Project Site consists consists of a thin layer of topsoil above a sand and gravel fill. Below the topsoil and fill materials, silty clay starts around 1.5 m below the existing ground surface and extends beyond the construction activities (WSP 2023).

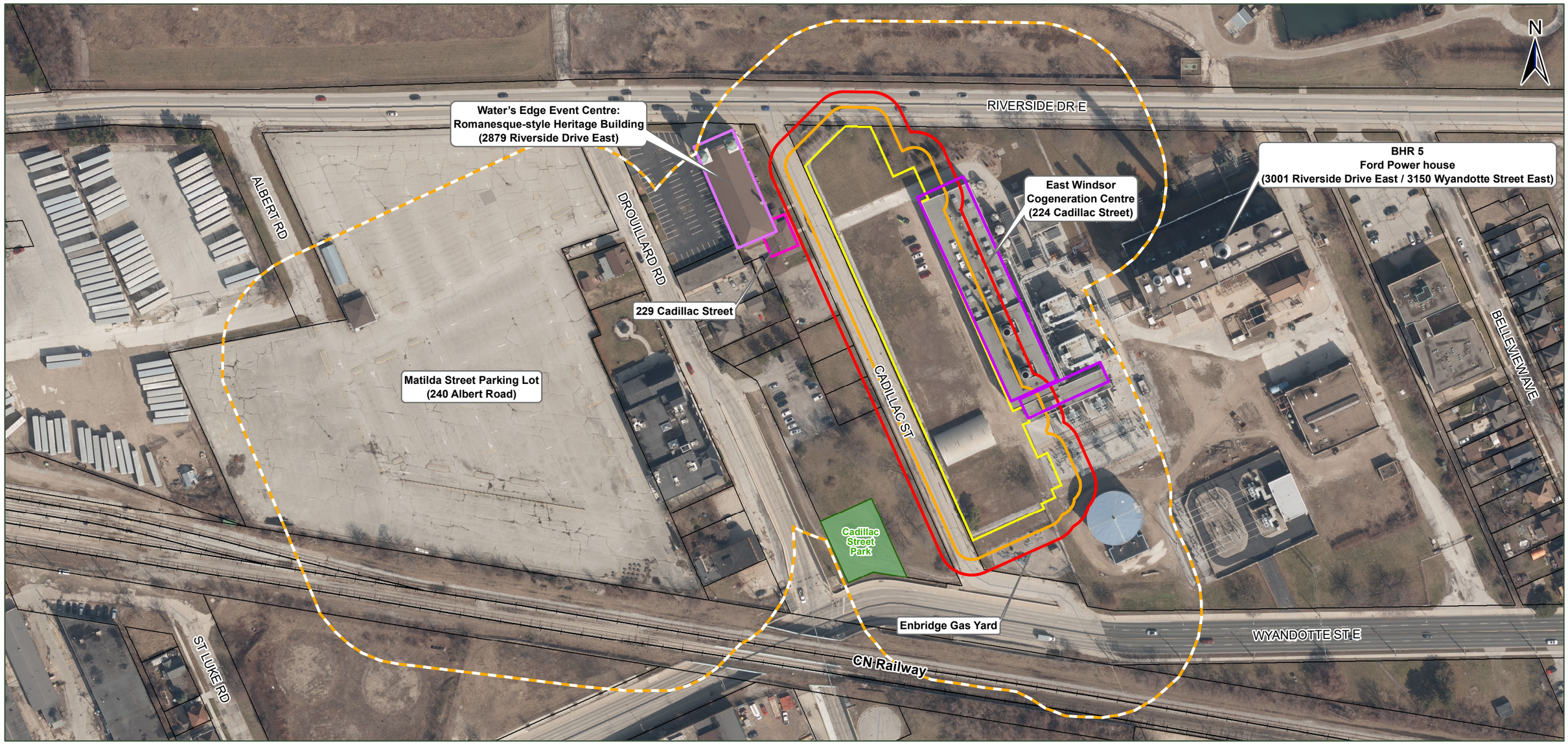
Estimation of the ZOI requires solving equation (1) for D when PPV_{equip} equals $5\ \mathrm{mm/s}$. This calculation is completed for each anticipated equipment type to establish the maximum offset of the ZOI from the location of the equipment (i.e. from the property line).

The source level for the equipment used in this study (PPV_{ref}) and associated ZOI offset distances are summarized in **Table 3-3.** The crawler crane, skid-steers, hydrovac, and loader are not expected to generate a significant impact compared to the other equipment being used and are thus not included in **Table 3-3.**

The extent of the Project ZOI, assuming the planned equipment is used at the property boundary during construction groundwork activities, is shown in **Figure 3-1**.

Table 3-3: Summary of ZOI Offset Associated with Project Site Related Construction Activities

Equipment/Activity	PPV_{ref} (mm/s)	Heritage Building ZOI Setback Distance (m)	ZOI Setback Distance (m)
Rollers	5.3	15	8
Rammers	2.3	8	4
Piling Rig (Caisson Drilling)	2.3	8	4
Heavy Loaded Truck and Trailers	1.9	7	4
Backhoe	0.3	2	1



LEGEND:

- Project Site
- Cultural Heritage Specific Study Area (construction area plus 50 m buffer)
- Heritage Building
- Commercial Building
- Existing EWCC
- 5 mm/s ZOI (8 m Offset)
- 2 mm/s ZOI (15 m Offset)
- Parcel Fabric (City of Windsor)
- Parks (City of Windsor)
- Railway

NOTES:
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EAST WINDSOR GENERATION FACILITY EXPANSION

CONSTRUCTION VIBRATION CONTROL STUDY

ZOI DURING GROUNDWORK ACTIVITIES

SLR

FIGURE NO:
3-1

DATE: July 2024

PROJECT NO: 241.30524.00024

4.0 Results

The results of the conservative analysis found that the 2 mm/s ZOI encroaches upon the southeastern third of the heritage property (known as 229 Cadillac Street), although not the two-storey addition building itself (**Figure 3-1**). Despite 229 Cadillac Street not being a designated heritage attribute of the 2879 Riverside Drive East building, there is a potential for construction vibration to transmit into the heritage building, due to the buildings being structurally connected. To ensure a conservative assessment, the more stringent vibration criteria was applied to both the buildings.

The following provisions of The City of Toronto's By-Law 514-2008 are recommended:

1 Pre-construction survey consultation;

2 Pre-construction measurement of background vibrations;

3 Pre-construction inspection of adjacent buildings and structures within the ZOI;

4 Identification of mitigation measures; and

5 A vibration monitoring program during construction.

Capital Power may additionally complete a more detailed assessment to validate results as additional construction details (specifically heavy equipment use) are developed.

With regards to the nearby Ford Powerhouse (3001 Riverside Drive East/3150 Wyandotte Street East), the results of the conservative vibration analysis found that the 2 mm/s ZOI will not encroach onto this BHR. As such, no effects to the Ford Powerhouse are anticipated as a result of the Project construction.

4.1 Vibration Mitigation Measures and Monitoring Program

A more detailed vibration assessment is recommended to validate the results of the preliminary assessment as additional construction details (specifically heavy equipment use) are developed. In the absence of a future detailed assessment demonstrating that the Vibration ZOI will not encroach on the heritage property, a detailed vibration monitoring program is recommended.

The vibration monitoring program serves several purposes:

1 It provides Capital Power with real-time alerts if vibration levels at the foundations approach damage thresholds;

2 It provides assurance to stakeholders that measures are being implemented to protect from potential damage to their property; and

3 It provides assurance to the City of Windsor that appropriate controls are in place to protect the properties identified.

The use of real-time alerts is intended to instigate corrective actions, such as the use of alternate equipment, to reduce vibration impacts. Fewer vibration complaints are likely to arise, and there is a reduced likelihood of damage claims, when vibration monitoring is conducted.

4.1.1 Monitoring Equipment

Seismographs should be installed at ground or underground level of the building at 2879 Riverside Drive East and 224 Cadillac Street (existing EWCC), at, at the closest possible setback to the groundwork activity.

If permission is not granted to install equipment at 2879 Riverside Drive East, the equipment should be installed at the closest point to the heritage property on lands under Capital Power control.

The monitor shall be capable of recording continuous time traces of PPV using a minimum sample frequency of 1,000 Hz. Histograms of the maximum PPV value in 15-minute intervals (or less) so that a continuous record of levels is generated. A minimum 5-second duration time trace of vibrations shall be recorded for further review/analysis for any events triggering the specified alarm levels.

The seismographs shall be armed with alarms that provide notification to all relevant stakeholders in the event the thresholds limits specified in German Standard DIN4150-3 or in The City of Toronto's By-Law 514-2008 are exceeded at 2879 Riverside Drive East or 224 Cadillac Street, respectively. The seismographs shall be configured to have continuous power throughout the monitoring period. A detailed description of the monitoring protocol is provided below.

4.1.2 Monitoring Protocol

Vibration levels are reviewed and monitored following the thresholds limits published in German Standard DIN4150-3 or in The City of Toronto's By-Law 514-2008.

Cautionary limits of approximately 62.5 % of the threshold limits, that is 2 mm/s as per German Standard DIN4150-3 thresholds provided in **Table 3-2** and 5 mm/s as per The City of Toronto's By-Law 514-2008 thresholds provided in **Table 3-1** are specified as the trigger levels for downloading and reviewing the data. Should any vibration triggers exceed the limits, onsite staff shall be notified to review and adjust their construction operational parameters or to cease operations. **Table 4-1** is a summary of the required Vibration Exceedance Protocol.

Table 4-1: Vibration Monitoring Protocol for in Project ZOI

Measured PPV	Notification	Capital Power Action	Required or Recommended Action for Contractor
< 62.5% of Threshold Limits	None [1]	No action required	No action required
65.2 % – 100% of Threshold Limits	Vibration Specialist	Vibration Specialist to review vibration event to determine if it has exceeded the **Table 3-1 or Table 3-2** limits considering frequency content. If appropriate, Vibration Specialist will contact selected stakeholders and site supervisor to advise whether limits are exceeded and if construction activities need to be stopped / changed. A summary of all events exceeding 62.5% of the threshold limits will be included in the monthly monitoring report.	Communication from Vibration Specialist will be provided to alert stakeholders and site that 62.5% of the threshold limits have been exceeded. If levels exceed the limits specified in **Table 3-1 or Table 3-2**, the associated activity must cease until changes to work methodology to reduce vibration levels to those below the **Table 3-1 or Table 3-2** values are implemented. If levels do not exceed limits construction activity may continue but changes may be recommended to limit disruptions and potential complaints.

Measured PPV	Notification	Capital Power Action	Required or Recommended Action for Contractor
> 100% of Threshold Limits	Vibration Specialist Site Supervisor Selected Stakeholders	Vibration Specialist will contact selected stakeholders and site supervisor to advise on required changes to construction activities. A summary of all events exceeding 62.5% of the threshold limits will be included in the monthly monitoring report.	Contractor is to stop all construction operation immediately at boundary of site adjacent to residences. Contact Vibration Specialist directly via number provided in notification to confirm vibration level and discuss required changes to work methodology to reduce impacts at adjacent site.
Note: [1] Although vibration may be below the applicable compliance thresholds, they may be perceptible to building occupants.			

4.1.3 Reporting

Reports summarizing monitored vibration levels should be submitted monthly and distributed to relevant stakeholders. The reports shall include maximum measured vibrations in each monitoring interval, and a discussion on compliance with the identified threshold limits and recommended heritage building threshold limits. A summary discussion of events that exceed the City of Toronto's By-Law 514-2008 and/or the German Standard DIN4150-3 threshold limits shall be included with a description of corrective measures taken to reduce vibrations to compliant levels.

5.0 Summary of Findings

The results of the conservative analysis found that the 2 mm/s ZOI encroaches upon the 229 Cadillac 2-storey building as well as the property associated with the Heritage Building located within the municipal land parcel at 2879 Riverside Drive East. The ZOI does not encroach upon the heritage designated building, however, there is a potential for construction vibration to transmit into the heritage building through the structure of the 229 Cadillac Street building, due to the buildings being structurally connected.

Despite 229 Cadillac Street not being a designated heritage attribute of the 2879 Riverside Drive East building, and unless a future detailed assessment based on detailed construction information demonstrates that the ZOI will not encroach upon the 229 Cadillac Street or the 2879 Riverside Drive East property, a monitoring program is recommended at 2879 Riverside Drive East.

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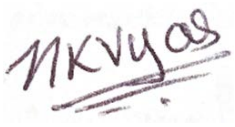

Neil Vyas, M. Arch. Sci.
Acoustics Consultant

Mariana Paloscia, P. Eng.
Senior Acoustics Engineer

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German Institute for Standardisation (Deutsches Institut für Normung [DIN]) 4150-3. 2016 Vibrations in buildings – Part 3: Effects on Structures.

Appendix A Site Plan

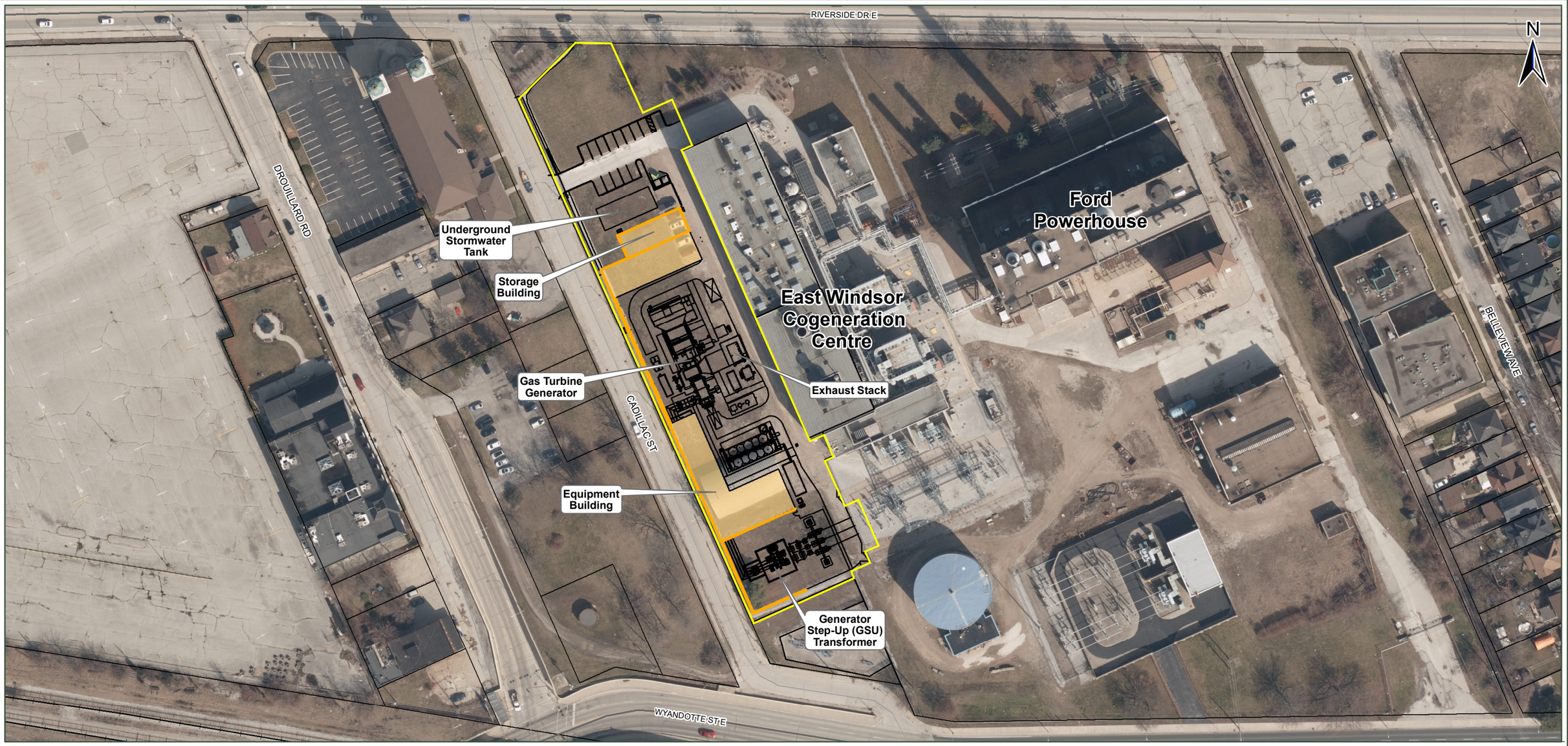
Construction Vibration Control Study

East Windsor Generation Facility Expansion Project

Capital Power Corporation

SLR Project No.: 241.V30524.00024

July 2024



LEGEND:

- Project Site
- New Building (Wall)
- New Building (Roof)
- Equipment Layout
- Parcel Fabric (City of Windsor)
- Railway

NOTES:
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EAST WINDSOR GENERATION FACILITY EXPANSION

CONSTRUCTION VIBRATION CONTROL STUDY

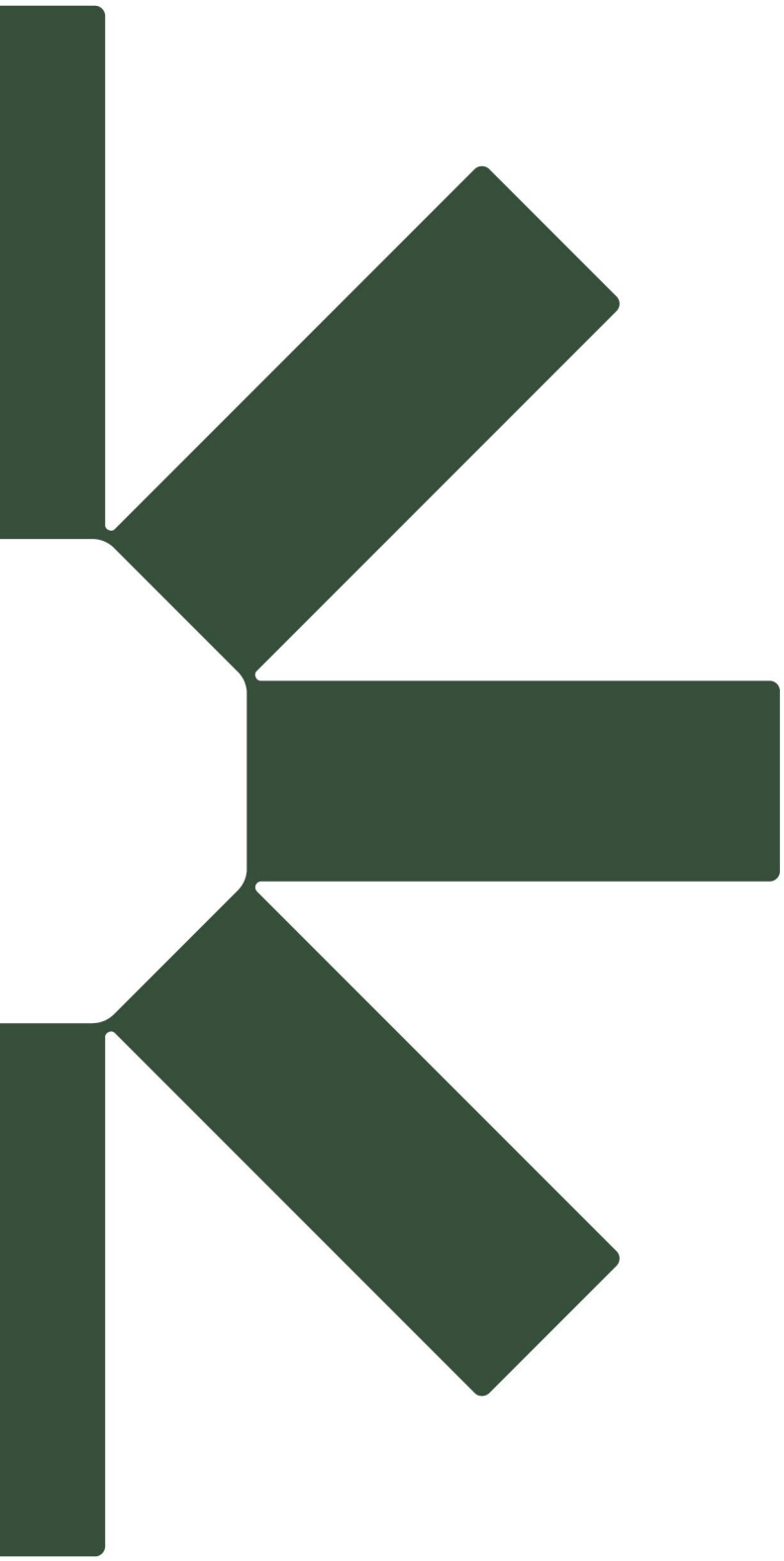
PROJECT SITE PLAN

SLR

FIGURE NO:
A-1

DATE: July 2024

PROJECT NO: 241.30524.00024



Making Sustainability Happen