

# Compatibility/Mitigation Study-Air Quality, Noise and Vibration

**9304 McLeod Road, Niagara Falls, ON**

**800460 Ontario Ltd.**

1701 Thorold Townline Road,  
Niagara Falls, ON L2E 6S5

Prepared by:

**SLR Consulting (Canada) Ltd.**

100 Stone Road West, Suite 201,  
Guelph, ON N1G 5L3

SLR Project No:

241.30612.00000

March 23, 2022

## Executive Summary

SLR Consulting (Canada) Ltd. (SLR), was retained by 800460 Ontario Ltd., to conduct a Compatibility / Mitigation Study focusing on air quality, odour, dust, noise, and vibration in support of a Draft Plan of Subdivision and Zoning By-Law Amendment Application for the Vacant Land located at 9304 McLeod Road in Niagara Falls, Ontario. (“the Project site”).

This assessment is intended to address land use compatibility in accordance with the Ontario Ministry of Environment, Conservation and Parks (“MECP”) D-Series Guidelines in particular guideline D-6.

This assessment has considered:

- Industrial air quality, odour, and dust emissions;
- Industrial/ commercial noise and vibration; and
- Transportation-related noise and vibration.

Based on the review completed, and with the restriction of height to 10 m for the portion of the lands located within the 2 km radius of phosphine storage on Cytec Industries lands, the Project Site is anticipated to be compatible with the surrounding land uses from an air quality perspective.

Noise and vibration emissions from surrounding industries have been reviewed. Noise and vibration emissions from the surrounding industries are predicted to meet the MECP Class 1 guidelines.

The potential for transportation noise on the development has also been reviewed and road traffic noise impact was evaluated. Upgraded glazing is not required. Forced air heating and various warning clauses are required to address road traffic noise, as outlined in **Section 6.2.8**.

The potential for vibration emissions on the proposed development has been assessed. Based on the results of our studies adverse vibration emissions from industrial and transportation sources are not anticipated.

Based on the above, and with the restriction of height to 10 m for the portion of the lands located within the 2 km radius of phosphine storage on Cytec Industries lands, the Project site is anticipated to be compatible with surrounding land uses and will not affect the ability for industrial facilities to obtain or maintain compliance with applicable Provincial environmental policies, regulations, approvals, authorizations, and guidelines.

The requirements of MECP Guideline D-6, Regulation 419/05, and Publication NPC-300 are met. As the applicable policies and guidelines are met, the Project site is:

- Unlikely to result in increased risk of complaint and nuisance claims;
- Unlikely to result in operational constraints for the major facilities; and
- Unlikely to result in constraints on major facilities to reasonably expand, intensify or introduce changes to their operations.

## Table of Contents

<b>1.0</b>	<b>Introduction.....</b>	<b>1</b>
<b>2.0</b>	<b>Description of Development and Surroundings.....</b>	<b>2</b>
2.1	Project Site .....	2
2.2	Surroundings .....	2
2.3	City of Niagara Falls Official Plan .....	2
2.4	City of Niagara Falls Zoning By Law 79-200 (1).....	2
2.5	Proposed Development.....	2
<b>3.0</b>	<b>Assessment Framework.....</b>	<b>3</b>
3.1	Ontario Planning Act .....	3
3.2	Provincial Policy Statement .....	4
3.3	D-Series of Guidelines .....	5
3.3.1	Guideline D-6 Requirements .....	5
3.3.2	Requirements for Assessments .....	6
3.3.3	Recommended Minimum Separation Distances .....	7
3.4	City of Niagara Falls .....	7
<b>4.0</b>	<b>Nearby Industries.....</b>	<b>7</b>
4.1	Class III Heavy Industries .....	8
4.1.1	Cytec Canada Inc. ....	8
4.2	Class II Medium Industries.....	9
4.2.1	Dan’s Produce.....	9
4.3	Future Uses .....	9
4.4	Summary .....	9
<b>5.0</b>	<b>Air Quality, Dust and Odour Assessment.....</b>	<b>10</b>
5.1	Industrial Sources.....	10
5.1.1	Guidelines and Regulations .....	10
5.1.2	Air Quality.....	10
5.1.3	Site Visits and Odour and Dust Observations .....	14
5.1.4	Assessment of Potential Air Emissions .....	14
5.2	Summary of Air Quality, Dust and Odour Conclusions and Recommendations .....	17

---

<b>6.0</b>	<b>Noise Assessment .....</b>	<b>18</b>
6.1	Industrial (Stationary) Sources .....	18
6.1.1	Guidelines.....	18
6.1.2	Application of the NPC-300 Guidelines.....	18
6.1.3	Sources of Interest.....	19
6.1.4	Noise Modelling and Results .....	20
6.1.5	Outdoor Living Areas .....	21
6.2	Transportation Sources .....	22
6.2.1	Transportation Noise Sources .....	22
6.2.2	MECP Publication NPC-300 Guidelines for Transportation Sources .....	22
6.2.3	Traffic Data and Future Projections.....	24
6.2.4	Projected Sound Levels.....	24
6.2.5	Façade Sound Levels.....	25
6.2.6	Outdoor Amenity Area Sound Levels.....	25
6.2.7	Ventilation and Warning Clause Requirements.....	26
6.3	Summary of Noise Conclusions and Recommendations .....	26
<b>7.0</b>	<b>Vibration Assessment.....</b>	<b>27</b>
7.1	Industrial (Stationary) Sources .....	27
7.2	Transportation Sources .....	27
7.3	Summary of Vibration Conclusions and Recommendations.....	27
<b>8.0</b>	<b>Conclusions.....</b>	<b>28</b>
<b>9.0</b>	<b>Statement of Limitations .....</b>	<b>29</b>
<b>10.0</b>	<b>Closure .....</b>	<b>30</b>
<b>11.0</b>	<b>References.....</b>	<b>31</b>

## TABLES

Table 1: Guideline D-6 - Potential Areas of Influence and Recommended Minimum Separation Distances for Industrial Land Uses .....	5
Table 2: Guideline D-6 - Industrial Categorization Criteria .....	5
Table 3: Identified Industries Within the Potential Area of Influence of the Project Site.....	8
Table 4: Proposed Clarification of Human Receptors (MECP 2016) .....	11
Table 5: Industrial Tiers for Odourous Activities and Processes .....	12
Table 6: D-6 Classification of City of Niagara Falls Zoning By-law No. 79-200 Light Industrial LI - Permitted Uses .....	16
Table 7: NPC-300 Exclusion Limits for Non-Impulsive Sounds ( $L_{eq}$ (1-hr), dBA) .....	19
Table 8: NPC-300 Exclusion Limits for Impulsive Sounds ( $L_{LLM}$ , dBAI) .....	19
Table 9: Modelled Stationary Noise Sources .....	20
Table 10: Predicted Overall Façade Sound Levels – Normal Operations .....	21
Table 11: Predicted Overall OLA Sound Levels – Normal Operations.....	21
Table 12: NPC-300 Sound Level Criteria for Road and Rail Noise .....	22
Table 13: NPC-300 Ventilation and Warning Clause Requirements .....	23
Table 14: NPC-300 Building Component Requirements .....	23
Table 15: NPC-300 Outdoor Sound Level Criteria for Road and Rail Noise .....	23
Table 16: NPC-300 Outdoor Living Area Mitigation & Warning Clause Requirements.....	24
Table 17: Summary of Road Traffic Data Used in the Analysis .....	24
Table 18: Predicted Transportation Sound Levels at Facades .....	25
Table 19: Predicted Outdoor Amenity Area Sound Levels – Transportation Noise .....	25

## FIGURES

- Figure 1: Site and Context Plan
- Figure 2a: Excerpt from Niagara Region Official Plan Map
- Figure 2b: Excerpt from Town of Niagara Falls Zoning Map
- Figure 3a: Guideline D-6 separation distances to 300 m
- Figure 3b: Guideline d-6 separation distances to 1000 m
- Figure 4: Wind Frequency distribution Diagram (Wind Rose) Welland, Ontario 1989 - 2018
- Figure 5: Modelled Stationary Noise Sources
- Figure 6: Modelled Stationary Façade Noise Impacts – Daytime/Evening
- Figure 7: Modelled Stationary OLA Noise Impacts – Daytime/Evening
- Figure 8: Modelled Façade Transportation Noise Impacts – Daytime
- Figure 9: Modelled Façade Transportation Noise Impacts – Nighttime
- Figure 10: Modelled OLA Transportation Noise Impacts – Daytime

## APPENDICES

- Appendix A Concept Plans
- Appendix B Industrial Information
- Appendix C Cytec Canada Inc. MECP Permit
- Appendix D Stationary Noise Modelling Inputs
- Appendix E Mitigation and Warning Clauses
- Appendix F Traffic Data and Calculations
- Appendix G Official Plan Amendment #147

This page intentionally left blank  
for 2-sided printing purposes

## 1.0 Introduction

SLR Consulting (Canada) Ltd. (SLR), was retained by 800460 Ontario Ltd., to conduct a Compatibility / Mitigation Study focusing on air quality, odour, dust, noise, and vibration in support of a Draft Plan of Subdivision and Zoning By-Law Amendment Application for the Vacant Land located at 9304 McLeod Road in Niagara Falls, Ontario.

This assessment is required by the City of Niagara Falls in support of planning approvals for the development of the Project site. The addition of “sensitive” land uses within the Project site, including residential, requires an assessment of land use compatibility with the surrounding proposed, and existing, employment land uses.

This assessment has considered:

- Industrial air quality, odour, and dust emissions;
- Industrial/ commercial noise and vibration; and
- Transportation-related noise and vibration.

The assessment has included a review of air quality and noise emissions from industrial facilities in the area.

In this assessment, SLR has reviewed the surrounding land uses and major facilities in the area with respect to the following guidelines:

- The Provincial Policy Statement;
- Ministry of the Environment, Conservation and Parks (“MECP”) Guidelines D-1 and D-6;
- Ontario Regulation 419/05: *Air Pollution – Local Air Quality* and its associated air quality standards and assessment requirements;
- The MECP draft policies on odour impacts and assessment;
- MECP Publication NPC-300 noise guidelines for industrial and transportation; and
- City of Niagara Falls Noise Control By-law 053-2009 as amended.

This report evaluates existing and potential land use compatibility and evaluates options to achieve appropriate design, buffering and/or separation distances between the proposed sensitive land uses, including residential uses, and nearby Employment Areas and/or Major Facilities.



## 2.0 Description of Development and Surroundings

### 2.1 Project Site

The proposed Project site is located at 9304 McLeod Road in Niagara Falls. The Project site is currently vacant of any buildings or operations. The Project site is illustrated in **Figure 1**.

### 2.2 Surroundings

The Project site is bounded by McLeod Road to the north and Beechwood Road to the west. The area surrounding the Project site is currently a mix of industrial and agricultural land uses. The lands to the east are currently being developed into a residential subdivision.

### 2.3 City of Niagara Falls Official Plan

The Project site and lands to the south and west are designated Industrials. The City recently approved Official Plan Amendment #147 (OPA #147) which changed the designation of the lands to Special Policy Area 87, permitting residential land uses with a height restriction of 10 m within 2 km of the Phosphine Storage facility on the Cytex lands. A copy of OPA #147 is provided in **Appendix G**.

To the east, the lands are designated a mix of Residential and Environmental Protection Area. To the north, across McLeod Road, the lands are designated the Good General Agricultural Area. These lands to the north were recently brought into the urban area for residential purposes. An excerpt from the City of Niagara Falls Official Plan Map for the area is provided in **Figure 2a**.

### 2.4 City of Niagara Falls Zoning By Law 79-200 (1)

The Project site is comprised of a mix of zoning destinations including Light Industrial (“LI”), Development Holding (“DH”), and Hazard Land (“HL”). The lands to the west are zoned LI. To the east, some of the lands are zoned Residential Mixed (“R3”) and some remain zoned under the Environmental Protection Area (“EPA”). To the north, the lands are zoned Agricultural (“A”). The City recently approved a recommendation to rezone the project lands to a residential zoning to bring them into compliance with the Official Plan designation. An excerpt from the City of Niagara Falls area zoning map is provided in **Figure 2b**.

### 2.5 Proposed Development

The proposed Project site is planned to include single detached residential, low rise apartments/stacked townhouses, and Parkland.

A copy of the concept Project site plan is provided in **Appendix A**.

## 3.0 Assessment Framework

The intent of this report is to undertake an assessment of land use compatibility between the Project site and surrounding proposed, and existing land uses. This report identifies and evaluates options to support compatibility between the sensitive, employment and/or major facility land uses through design, buffering and/or creation of separation distances.

The requirements of the Ontario planning regime are organized such that generic policy is informed by specific policy, guidance, and legislation, as follows:

- The Ontario Planning Act, Section 2.1 – sets the ground rules for land use planning in Ontario, whereby planning decisions have regard to matters of provincial interest including orderly development, public health, and safety; then
- The Provincial Policy Statement (“PPS”) sets out goals – making sure adjacent land uses are compatible from a health and safety perspective and are appropriately buffered; then
- The Provincial Growth Plan, Section 2.2.5 – builds on the PPS to establish a unique land use planning framework for the Greater Golden Horseshoe, where the development of sensitive land uses will avoid, or where avoidance is not possible, minimize and mitigate adverse impacts on industrial, manufacturing, or other uses that are particularly vulnerable to encroachment; then
- The MECP D-series of guidelines set out methods to determine if assessments are required (Areas of Influence, Recommended Minimum Separation Distances, and the need for additional studies); then
- MECP and Municipal regulations, policies, standards, and guidelines then set out the requirements of additional air quality studies and the applicable policies, standards, guidelines, and objectives to ensure that adverse effects do not occur.

### 3.1 Ontario Planning Act

The Ontario Planning Act is provincial legislation that sets out the ground rules for land use planning in Ontario. It describes how land uses may be controlled, and who may control them. “The purpose of the Act is to:

- provide for planning processes that are fair by making them open, accessible, timely and efficient;
- promote sustainable economic development in a healthy natural environment within a provincial policy framework;
- provide for a land use planning system led by provincial policy;
- integrate matters of provincial interest into provincial and municipal planning decisions by requiring that all decisions be consistent with the Provincial Policy Statement and conform/not conflict with provincial plans;
- encourage co-operation and coordination among various interests;

- recognize the decision-making authority and accountability of municipal councils in planning”<sup>1</sup>

Section 2.1 of the Ontario Planning Act describes how approval authorities and Tribunals must have regard to matters of provincial interest including orderly development, public health, and safety.

### 3.2 Provincial Policy Statement

The PPS “provides policy direction on matters of provincial interest related to land use planning and development. As a key part of the Ontario policy-led planning system, the Provincial Policy Statement sets the policy foundation for regulating the development and use of land. It also supports the provincial goal to enhance the quality of life for all Ontarians.”

The PPS is a generic document, providing a consolidated statement of the government policies on land use planning and is issued under section 3 of the Planning Act. Municipalities are the primary implementers of the PPS through policies in their local official plans, zoning by-laws and other planning related decisions. The current 2020 PPS came into effect on May 1, 2020. Policy direction concerning land use compatibility is provided in Section 1.2.6 of the PPS.

From the current 2020 version:

#### “1.2.6 Land Use Compatibility

1.2.6.1 Major facilities and sensitive land uses shall be planned and developed to avoid, or if avoidance is not possible, minimize and mitigate any potential adverse effects from odour, noise, and other contaminants, minimize risk to public health and safety, and to ensure the long-term operational and economic viability of major facilities in accordance with provincial guidelines, standards, and procedures.

1.2.6.2 Where avoidance is not possible in accordance with policy 1.2.6.1, planning authorities shall protect the long-term viability of existing or planned industrial, manufacturing, or other uses that are vulnerable to encroachment by ensuring that the planning and development of proposed adjacent sensitive land uses are only permitted if the following are demonstrated in accordance with provincial guidelines, standards, and procedures:

- a) there is an identified need for the proposed use;
- b) alternative locations for the proposed use have been evaluated and there are no reasonable alternative locations;
- c) adverse effects to the proposed sensitive land use are minimized and mitigated; and
- d) potential impacts to industrial, manufacturing, or other uses are minimized and mitigated.”

The goals of the PPS are implemented through Municipal and Provincial policies, as discussed below. Provided the Municipal and Provincial policies, guidelines, standards, and procedures are met, the requirements of the PPS will be met.

---

<sup>1</sup> <https://www.ontario.ca/document/citizens-guide-land-use-planning/planning-act>

### 3.3 D-Series of Guidelines

The D-series of guidelines were developed by the MECP in 1995 as a means to assess Recommended Minimum Separation Distances and other control measures for land use planning proposals in an effort to prevent or minimize ‘adverse effects’ from the encroachment of incompatible land uses where a facility either exists or is proposed. D-series guidelines address sources including sewage treatment (Guideline D-2), gas and oil pipelines (Guideline D-3), landfills (Guideline D-4), water services (Guideline D-5) and industries (Guideline D-6).

For this assessment, the applicable guideline is Guideline D-6 - *Compatibility between Industrial Facilities and Sensitive Land Uses*.

Adverse effect is a term defined in the Environmental Protection Act and “means one or more of

- impairment of the quality of the natural environment for any use that can be made of it,
- injury or damage to property or to plant or animal life,
- harm or material discomfort to any person,
- an adverse effect on the health of any person,
- impairment of the safety of any person,
- rendering any property or plant or animal life unfit for human use,
- loss of enjoyment of normal use of property, and
- interference with the normal conduct of business”.

#### 3.3.1 Guideline D-6 Requirements

The guideline specifically addresses issues of air quality, odour, dust, noise, and litter. To minimize the potential to cause an adverse effect, Areas of Influence and Recommended Minimum Separation Distances are included within the guidelines. The Areas of Influence and Recommended Minimum Separation Distances from the guidelines are provided in the table below.

**Table 1: Guideline D-6 - Potential Areas of Influence and Recommended Minimum Separation Distances for Industrial Land Uses**

Industry Classification	Area of Influence	Recommended Minimum Separation Distance
Class I – Light Industrial	70 m	20 m
Class II – Medium Industrial	300 m	70 m
Class III – Heavy Industrial	1000 m	300 m

Industrial categorization criteria are supplied in Guideline D-6, and are shown in the following table:

**Table 2: Guideline D-6 - Industrial Categorization Criteria**

Category	Outputs	Scale	Process	Operations / Intensity	Possible Examples

Class I Light Industry	<ul style="list-style-type: none"> <li>Noise: Sound not audible off-property</li> <li>Dust: Infrequent and not intense</li> <li>Odour: Infrequent and not intense</li> <li>Vibration: No ground-borne vibration on plant property</li> </ul>	<ul style="list-style-type: none"> <li>No outside storage</li> <li>Small-scale plant or scale is irrelevant in relation to all other criteria for this Class</li> </ul>	<ul style="list-style-type: none"> <li>Self-contained plant or building which produces/ stores a packaged product</li> <li>Low probability of fugitive emissions</li> </ul>	<ul style="list-style-type: none"> <li>Daytime operations only</li> <li>Infrequent movement of products and/ or heavy trucks</li> </ul>	<ul style="list-style-type: none"> <li>Electronics manufacturing and repair</li> <li>Furniture repair and refinishing</li> <li>Beverage bottling</li> <li>Auto parts supply</li> <li>Packaging and crafting services</li> <li>Distribution of dairy products</li> <li>Laundry and linen supply</li> </ul>
Class II Medium Industry	<ul style="list-style-type: none"> <li>Noise: Sound occasionally heard off-property</li> <li>Dust: Frequent and occasionally intense</li> <li>Odour: Frequent and occasionally intense</li> <li>Vibration: Possible ground-borne vibration, but cannot be perceived off-property</li> </ul>	<ul style="list-style-type: none"> <li>Outside storage permitted</li> <li>Medium level of production allowed</li> </ul>	<ul style="list-style-type: none"> <li>Open process</li> <li>Periodic outputs of minor annoyance</li> <li>Low probability of fugitive emissions</li> </ul>	<ul style="list-style-type: none"> <li>Shift operations permitted</li> <li>Frequent movements of products and/ or heavy trucks with the majority of movements during daytime hours</li> </ul>	<ul style="list-style-type: none"> <li>Magazine printing</li> <li>Paint spray booths</li> <li>Metal command</li> <li>Electrical production</li> <li>Manufacturing of dairy products</li> <li>Dry cleaning services</li> <li>Feed packing plants</li> </ul>
Class III Heavy Industry	<ul style="list-style-type: none"> <li>Noise: Sound frequently audible off property</li> <li>Dust: Persistent and/ or intense</li> <li>Odour: Persistent and/ or intense</li> <li>Vibration: Ground-borne vibration can frequently be perceived off-property</li> </ul>	<ul style="list-style-type: none"> <li>Outside storage of raw and finished products</li> <li>Large production levels</li> </ul>	<ul style="list-style-type: none"> <li>Open process</li> <li>Frequent outputs of major annoyances</li> <li>High probability of fugitive emissions</li> </ul>	<ul style="list-style-type: none"> <li>Continuous movement of products and employees</li> <li>Daily shift operations permitted</li> </ul>	<ul style="list-style-type: none"> <li>Paint and varnish manufacturing</li> <li>Organic chemical manufacturing</li> <li>Breweries</li> <li>Solvent recovery plants</li> <li>Soaps and detergent manufacturing</li> <li>Metal refining and manufacturing</li> </ul>

### 3.3.2 Requirements for Assessments

Guideline D-6 requires that studies be conducted to assess impacts where sensitive land uses are proposed within the Potential Area of Influence of an industrial facility. This report is intended to fulfill this requirement.

The D-series guidelines reference previous versions of the air quality regulation (Regulation 346). However, the D-Series of guidelines are still active, still represent current MECP policy and are specifically referenced in numerous other current MECP policies. In applying the D-series guidelines, the current policies, regulations, standards, and guidelines have been used (e.g., Regulation 419).

### 3.3.3 Recommended Minimum Separation Distances

Guideline D-6 also *recommends* that no sensitive land use be placed within the Recommended Minimum Separation Distance. However, it should be noted that this is a recommendation only. Section 4.10 of the Guideline allows for development within the Recommended Minimum Separation Distance, in cases of redevelopment, infilling, and transitions to mixed use, provided that the appropriate studies are conducted and that the relevant air quality and noise guidelines are met.

## 3.4 City of Niagara Falls

In addition to the D-6 Potential Area of Influence, the City Initiated Amendments to the Official Plan and Zoning By-laws 395 and 79-200 for new employment policies (PBD-2022-61) recommends a policy for the lands at 9304 McLeod Road that will create a special provision restricting residential development heights to 10m within a 2 km radius of Cytec Canada Inc. (“Cytec”). The following is an excerpt from PBD-2022-61 which was approved by City Council on August 9, 2022.

### *“9304 McLeod Road*

*The lands are currently vacant and are west of a residential subdivision (currently under construction) limiting its potential industrial use. The Official Plan amendment would change the designation from Industrial to a residential designation with a special provision applied to the lands outside of the current floodplain mapping area on the eastern portion of the lands. The residential designation will come into effect upon approval by the Niagara Region. The Special Provision will apply a 10m height restriction within a 2km radius of Phosphine storage on Cytec Industries lands as shown on Appendix A to the 2016 Cytec Canada Inc. Emergency Response Plan, which is the most recent information on setback requirements that the City has been able to attain. A Development Holding (DH) Zone is proposed in conjunction with the Special Policy provision of the Official Plan.”*

## 4.0 Nearby Industries

The Guideline D-6 Separation distances from the Project site are shown in **Figure 3a, Figure 3b**. SLR personnel conducted site visits to the area on September 14, and 30, 2022. Local industries within 1 km of the Project site were inventoried. The lands surrounding the Project site are generally comprised of commercial, residential and employment uses.

In Ontario, facilities that emit significant amounts of contaminants to the environment are required to obtain and maintain an Environmental Compliance Approval (“ECA”) from the MECP or submit an Environmental Activity and Sector Registry (“EASR”). ECAs/ EASRs within 1 km of the site were obtained from the MECP *Access Environment* website<sup>2</sup>.

**Table 3** lists the identified industries within 1000 m of the Project site and within their applicable Area of Influence. A more detailed table of all industries within 1000 m is provided in **Appendix B**. Industries which lie within their applicable Area of Influence in respect to the Project are discussed further below.

**Table 3: Identified Industries Within the Potential Area of Influence of the Project Site**

Facility	Type of Operation	Environmental Compliance Approval No.	Industry Class	Area of Influence Dist (m)	Actual Distance to Site (m)	Additional Assessment Required?
Cytec Canada Inc.	Phosphine & phosphine derivatives manufacturing facility	9547-C5ULRS	Class III	1000	850	Yes
Dan's Produce	Produce Wholesaler	N/A	Class II	300	75	Yes

The industries listed above are identified inside the Potential Area of Influence and, therefore, require additional assessment. All other industries, detailed in **Appendix B**, are outside of their respective Guideline D-6 Area of Influence and, therefore, are anticipated to be compatible with the proposed Project site development.

## 4.1 Class III Heavy Industries

The area within 1 km of the Project site was reviewed. As shown in **Figure 3b**, there is one class III Heavy industries within 1 km of the Project site.

### 4.1.1 Cytec Canada Inc.

<b>ADDRESS:</b>	9061 GARNER ROAD
<b>CONTACTS:</b>	N/A
<b>DISTANCE TO PROJECT SITE:</b>	850 M
<b>D-6 CLASSIFICATION:</b>	III

Cytec is a chemical manufacturing facility located approximately 850 m south of the Project site. Cytec is a phosphine and phosphine derivatives facility, consisting of processes and support units including phosphine plant including derivatives section, purification, mixing and packaging, and a research and development pilot plant. The Facility is permitted to produce 40,000 tonnes of phosphine based chemicals per year, and operates under MECP ECA Number 9547-C5ULRS, dated February 3, 2022. Copies of the MECP permit are in **Appendix C**.

Cytec is a major chemical manufacturing facility that has been operating in Niagara Falls for over 100 years. The City, through OPA #147 has required that development of the lands will be subject to a 10 m height restriction within a 2 km radius of Phosphine Storage on Cytec Industries lands as shown in Appendix A. to the Cytec Canada Inc. Emergency Response Plan, dated July 23, 2016. The location of the 2 km radius of phosphine storage on Cytec Industries lands relative to the Project site is illustrated on **Figure 3b**.

On September 14, and 30, 2022, SLR personnel conducted site visits to the area. During the site visit no odours, visible dust, or noise was observed at the facility.

Based on the size and nature of the facility operations, Cytec is considered a Class III Heavy Industry under MECP Guideline D-6, with a Recommended Minimum Separation Distance of 300 m and a Potential Area of Influence of 1000 m. The Project site lies outside of the Recommended Minimum Separation Distance, but within the Potential Area of Influence and within the 2 km radius of phosphine storage on

Cytec Industries lands. Therefore, additional assessment is warranted and provided in subsequent sections of this report.

## 4.2 Class II Medium Industries

The area within 300 m of the Project site was reviewed. As shown in **Figure 3b**, there is one class II Medium Industry within 300 m of the Project site.

### 4.2.1 Dan's Produce

<b>ADDRESS:</b>	7201 BEECHWOOD RD
<b>CONTACTS:</b>	N/A
<b>DISTANCE TO PROJECT SITE:</b>	75 M
<b>D-6 CLASSIFICATION:</b>	II

Dan's Produce is a produce wholesaler located 75 m northwest of the Project site. The facility operates refrigeration trucks for the shipping and receiving of produce. A search of the MECP registry did not yield a permit or registration for this site.

On September 14 and 30, 2022, SLR personnel conducted site visits to the area. No odours, visible dust, or noise was observed at the facility at the time of the site visit.

From a noise perspective Dan's Produce is a Class II Medium Industry with a 300 m Potential Area of Influence because of the use of refrigeration trucks on site. From an air quality perspective, the facility is considered a Class I Light Industry with a 70 m Potential Area of Influence. As the Project site is 75 m from the facility, further assessment is only required from a noise perspective. Further assessment is provided in **Section 6** of this report.

## 4.3 Future Uses

The proposed new buildings will include mechanical heating, ventilation, and air conditioning systems.

These systems will be designed to ensure that the applicable MECP air quality and noise regulations, standards and guidelines are met off-site and at the building itself. If required (depending on the type and size of systems used), an MECP ECA or EASR will need to be obtained. This is no different from any other similar development.

Overall, adverse air quality and noise emissions from potential Project site sources on the surroundings and on itself are not anticipated.

## 4.4 Summary

From the list of industries identified in **Section 4**, one class III Heavy Industry and one Class II Medium Industry are identified within the Potential Area of Influence and require further analysis:

- Cytec Canada Inc.; and
- Dan's Produce.

Comments and findings related to the compatibility between the proposed development and the above noted identified industrial facilities are provided below.



## 5.0 Air Quality, Dust and Odour Assessment

### 5.1 Industrial Sources

#### 5.1.1 Guidelines and Regulations

Within Ontario, facilities which emit significant amounts of contaminants to the environment are required to obtain and maintain an ECA from the MECP or submit an EASR. Facilities with an ECA/EASR should already meet the MECP guidelines for air quality contaminants at their property line.

#### 5.1.2 Air Quality

Under O.Reg. 419/05, a facility is required to meet prescribed standards for air emissions at their property boundary line and any location off-site. The MECP does not require industries to assess their emissions at elevated points off-site if a receptor does not exist at that location. While the introduction of mid-rise or high-rise residential buildings could trigger a facility to re-assess compliance at new receptor locations, the introduction of new low-rise receptors does not introduce any new receptors, as the facility is already required to comply at grade-level at their property line.

##### 5.1.2.1 Odour

There are a select few compounds that are provincially regulated from an odour perspective; however, there is no formal regulation with respect to mixed odours. Impacts from mixed odours produced by industrial facilities are generally only considered and regulated by the MECP in the presence of persistent complaints (ECO 2010).

The MECP released an updated Draft Guideline to address odour mixtures in Ontario May 4, 2021. At the time of preparation of this report, the Draft Guideline has not been finalized.<sup>3</sup>

The MECP assesses mixed odours, in Odour Units, following draft guidelines. One odour unit (1 OU) has been used as a default threshold. This is the concentration at which 50 % of the population will just detect an odour (but not necessarily identify/recognize or object to it). Recognition of an odour will typically occur between 3 and 5 odour units. The following factors may be considered:

- **Frequency** – How often the odour occurs. The MECP typically allows odours to exceed 1 OU with a 0.5 % frequency.
- **Intensity** – The strength of the odour, in odour units. 1 OU is often used in odour assessments in Ontario.
- **Duration** – How long the odour occurs.
- **Offensiveness** – How objectionable the odour is.
- **Location** – Where the odour occurs. The MECP assesses at odours where human activity is likely to occur.

---

<sup>3</sup> <https://prod-environmental-registry.s3.amazonaws.com/2021-03/Draft%20Odour%20Guidance.pdf>

The MECP has decided to apply odour-based standards to locations “where human activities regularly occur at a time when those activities regularly occur,” which is generally accepted to be places that would be considered sensitive such as residences and public meeting places. As a guide, the MECP May 2021 document provides clarification of point of Odour Receptors as follows:

*“Each of the following locations is a Point of Odour Reception if the location is not on the same property as the facility from which the odour is or will be discharged:*

1. *A building or structure that contains one or more dwellings.*
2. *A building used for a commercial purpose that includes one or more habitable rooms used as sleeping facilities, such as a hotel or motel.*
3. *A building used for an institutional purpose, including an educational facility, a childcare centre, a health care facility, a community centre.*
4. *A building used for a place of worship, other than a place of worship located on land that is zoned for commercial or industrial use.*
5. *A location on a vacant lot, other than an inaccessible vacant lot, that has been zoned to permit a building mentioned in paragraph 1, 2, 3 or 4.*
6. *A portion of a property used for recreational purposes, not including a portion used for a recreational trail.*
7. *A portion of a property that is used for as a campsite or campground at which overnight accommodation is provided by or on behalf of a public agency or as part of a commercial operation.*

*The MECP notes that the above definition of a “Point of Odour Reception” is for screening purposes only. When assessing odour, the facility should consider additional points of odour reception such as commercial buildings, office buildings or outdoor areas where there is human activity.”*

In addition, the MECP provided proposed clarification of human odour receptors, as shown in the following table:

**Table 4: Proposed Clarification of Human Receptors (MECP 2016)**

<b>Receptor Category</b>	<b>Examples</b>	<b>Exposure Type</b>	<b>Type of Assessment</b>
Permanent potential 24-hour sensitivity	Anywhere someone could sleep including any residence or house, motels, hospitals, senior citizen homes, campgrounds, farmhouse, etc.	Individual likely to receive multiple exposures	Considered sensitive 24 hours per day
Permanent daily hours but with definite periods of shutdown/closure	Schools, day cares, community centres, soccer fields, farmland, churches, bicycle paths, hiking areas, lakes, commercial or institutional facilities (with consideration of hours of operation such as night clubs, restaurants, etc.)	Individual could receive multiple exposures	Night-time or daytime exclusion only (consider all other hours)

Receptor Category	Examples	Exposure Type	Type of Assessment
Seasonal variations with clear restrictions on accessibility during the off season	Golf courses, amusement parks, ski hills, other clearly seasonal private property	Short term potential for exposure	Exclusions allowed for non-seasonal use
Transient	Open fields, roadways, easements, driveways, parking lots, pump houses	Very short-term potential for exposure, may not be a single resident exposed to multiple events	Generally, would not be included as human receptors unless otherwise specified.

Under the May 2021 Guideline, MECP recommends that Land use compatibility assessments of potential odour sources identify facilities with the potential to emit mixed odours under the following industrial tiers:

**Table 5: Industrial Tiers for Odourous Activities and Processes**

MECP Tier	Activities/Processes Requiring Assessment	MECP Industry Requirements
Not Applicable	<ul style="list-style-type: none"> <li>Foundries, Forest Products, Pulp and paper, Petroleum Refining, Petrochemical and Asphalt Mix</li> </ul>	<ul style="list-style-type: none"> <li>Screen out of Odour Assessment requirements if registered to MECP Industry Specific Technical Standard</li> </ul>
Tier 1	<ul style="list-style-type: none"> <li>Wastewater facilities with design capacity &lt;25,0000 m<sup>3</sup>/day</li> <li>Paint and Coating Manufacturing</li> <li>Portable Asphalt paving mixture and block manufacturing</li> <li>Adhesive manufacturing</li> <li>Printing ink manufacturing</li> <li>Blowing or expanding foam products</li> <li>Crematory</li> <li>Meat and poultry processing</li> <li>Landfills</li> <li>Thermal treatment of waste (non-biomass)</li> <li>Plastic extrusion or melting</li> <li>Printing &lt;100 kg/hour and &lt;400 kg/hour</li> <li>Process using resins</li> <li>Scented products manufacturing &lt;10 million kg/year</li> <li>Spraying operations &lt;10 litres/hour</li> <li>Indoor waste transfer and/or processing station (residential or IC&amp;I)</li> </ul>	<ul style="list-style-type: none"> <li>Regulated industry</li> <li>Require an up to date Best Management Practice Plan (BMPP) to ensure odours are minimized</li> </ul>

MECP Tier	Activities/Processes Requiring Assessment	MECP Industry Requirements
Tier 2	<ul style="list-style-type: none"> <li>Wastewater facilities with design capacity &gt;25,0000 m<sup>3</sup>/day and &lt;100,000 m<sup>3</sup>/day</li> <li>Paper, newsprint, and Paperboard mills</li> <li>Asphalt paving mixture and block manufacturing</li> <li>Asphalt shingle and coating material manufacturing</li> <li>Cooking or drying animal products</li> <li>Leaf and yard waste composting</li> <li>Food frying</li> <li>Printing &gt;400 kg/hour</li> <li>Scented products manufacturing &gt;10 million kg/year</li> <li>Wastewater sludge pelletization</li> <li>Spraying operations &gt;10 litres/hour</li> <li>Vulcanized rubber product manufacturing</li> <li>Outdoor waste transfer and/or processing station (residential or IC&amp;I)</li> </ul>	<ul style="list-style-type: none"> <li>Regulated industry</li> <li>Require an up to date Best Management Practice Plan (BMPP) to ensure odours are minimized</li> <li>If in compliance with MECP Industry Standard required to implement Odour controls</li> <li>Potentially require an up to date Odour Technology Benchmarking Report</li> </ul>
Tier 3	<ul style="list-style-type: none"> <li>Wastewater facilities with design capacity &lt;100,000 m<sup>3</sup>/day</li> <li>Wet corn milling</li> <li>Oilseed processing</li> <li>Fat and oil refining and blending</li> <li>Anaerobic digestion</li> <li>Animal or poultry slaughtering</li> <li>Biofuel production</li> <li>Rendering or tallow production</li> <li>Thermal Treatment of biomass, other than wood waste</li> <li>Waste transfer and/or processing of putrescible waste</li> </ul>	<ul style="list-style-type: none"> <li>Regulated industry</li> <li>Require an up to date Best Management Practice Plan (BMPP) to ensure odours are minimized</li> <li>If in compliance with MECP Industry Standard required to implement Odour controls</li> <li>Potentially require an up to date Odour Technology Benchmarking Report</li> </ul>

The May 2021 Guideline further recommends that the Recommended Minimum Separation Distance for assessment of odour be measured from the point of reception to the nearest source of odour, not property boundary to property boundary.

### 5.1.2.2 Dust

Ontario Regulation 419/05 also provides limits for dust, including limits for suspended particulates and dust fall. Under Reg. 419/05, these air quality limits must be met at the property line and all points beyond. This is not changed by the addition of the Project site. That is to say, the existing mutual property line is already a point of reception for dust, and the limits must already be met at that location.

### 5.1.2.3 Cumulative Assessments

Cumulative impact assessments, examining the combined effects of individual industries, or the combined effects of industry and roadway emissions, are generally not required. Neither the PPS, the D-

Series of guidelines, Regulation 419/05, or the current MECP odour assessment protocols require an assessment of cumulative impacts.

Which is not to say that such assessments are never warranted; rather, the need to do so is considered on a case-by-case basis, depending on the nature and intensity of the industrial operation(s), and the nature of the pollutants released. Based on the types of pollutants released by the industries in this area, cumulative effects assessments are not warranted.

#### **5.1.2.4 Local Meteorology**

Pre-processed Regional Meteorological data was obtained from the MECP website to generate a wind rose. The surface wind data collected for Welland, Ontario, is from 1989 through 2018. The wind rose, as shown in Figure 4, represents the frequency of winds blowing from a certain wind direction. As can be seen in the wind rose, predominant winds are from the western and southwest quadrants, while winds from the north and southeast quadrants may be the least frequent.

#### **5.1.3 Site Visits and Odour and Dust Observations**

A site visit was conducted to the area on September 14, 2022, by SLR personnel to identify significant sources of air quality emissions and to identify any significant sources of odour, or dust in the area surrounding the Project site. During the site visit, the staff members observed existing industries from the sidewalks and other publicly accessible areas. Wind conditions during the site visit were noted as:

- September 14, 2022 Westerly winds, 15 km/h, 21 °C, 73 %RH

No odours or fugitive dust emissions were detected at the Project site during the site visit. Additional site visits were completed on September 30, 2022, to assess potential emissions of noise and vibration.

#### **5.1.4 Assessment of Potential Air Emissions**

The following facility was identified as being within the Potential Area of Influence for their industrial classification and were identified to require additional review from an air quality perspective:

- Cytec Canada Inc.

Further discussion regarding the facility and potential air emissions is provided below.

All the other industries surrounding the Project site were outside of the Potential Area of Influence. Therefore, the development of the Project site is anticipated to be compatible with these facilities from an air quality perspective. In addition, emissions of dust, and/or odour at the Project are not anticipated. Further the Project site is not anticipated to limit the ability of these industries to obtain or maintain required MECP permits and approvals.

##### **5.1.4.1 Cytec Canada Inc.**

As discussed in Section 4.1.1, Cytec is a chemical manufacturing facility located approximately 850 m south of the Project site. Cytec is a phosphine and phosphine derivatives facility, consisting of processes and support units including phosphine plant including derivatives section, purification, mixing and packaging, and a research and development pilot plant. The Facility is permitted to produce 40,000 tonnes of phosphine based chemicals per year, and operates under MECP ECA Number 9547-C5ULRS, dated February 3, 2022. Copies of the MECP permit are in **Appendix C**.

On September 14 and 30 2022, SLR personnel conducted site visits to the area. No odours, visible dust, or noise was observed at the facility at the time of the site visit.

Cytec is a major chemical manufacturing facility that has been operating in Niagara Falls for over 100 years. The City, through OPA #147 has required that development of the lands will be subject to a 10 m height restriction within a 2 km radius of Phosphine Storage on Cytec Industries lands as shown in Appendix A. to the Cytec Canada Inc. Emergency Response Plan, dated July 23, 2016. The location of the 2 km radius of phosphine storage on Cytec Industries lands relative to the Project site is illustrated on **Figure 3b**.

Based on the size and nature of the facility operations, Cytec Canada Inc. is considered a Class III Heavy Industry under MECP Guideline D-6, with a Recommended Minimum Separation Distance of 300 m and a Potential Area of Influence of 1000 m. The Project site lies outside of the Recommended Minimum Separation Distance, but within the Potential Area of Influence and within the 2 km radius of phosphine storage on Cytec Industries lands.

The facility is required to operate and maintain in compliance with the requirements of their MECP permit. The MECP determines compliance at the property boundary, and any elevated receptor locations.

Based on a review of the facility ECA, The facility operates a number of pieces of air emission control equipment to prevent and manage air emissions in accordance with the MECP requirements. The equipment includes:

- Emergency flares; and
- Thermal oxidizers.

In addition to permitting the operation of the above equipment, the MECP has included a number of requirements for operating and maintaining equipment in order to minimize all fugitive emissions including potential emissions of odour and noise.

The permit also requires Cytec to develop a Best Management Practices Plan (BMPP) related to the operation of the emergency flares, and to undertake a Complaints Recording and Reporting program.

A wind frequency distribution diagram (a wind rose) is provided in Figure 4. Winds with the potential to direct air emissions from the Cytec Canada facility towards the Project site include winds from the south quadrants. Winds from this direction are predicted to occur less than 12% of the time.

Given the size and nature of Cytec, SLR agrees with the City of Niagara Falls recommendation to create some development constraints within the 2 km radius of phosphine storage on Cytec Industries lands. The application of a 10 m height restriction within the 2 km radius of phosphine storage on Cytec Industries lands will prevent the addition of elevated sensitive receptors, which could result in a new test for environmental compliance for Cytec operations.

Based on the above discussion and with the restriction of height to 10 m for the portion of the lands located within 2 km radius of phosphine storage on Cytec Industries lands, the Project site development is anticipated to be compatible with the Cytec facility from an air quality perspective. Emissions of dust, and odour at the Project site are not anticipated. Further, the Project site is not anticipated to limit the ability of Cytec to obtain or maintain required MECP permits and/or approvals.

### 5.1.4.2 Future Uses

The potential exists for industries to turn over, therefore SLR completed a review of City of Niagara Falls Zoning By-law No. 79-200 Chapter applicable to Permitted Uses of Light Industrial (LI) and have classified the uses in accordance with the MECP D-6 Guidelines.

**Table 6: D-6 Classification of City of Niagara Falls Zoning By-law No. 79-200  
 Light Industrial LI - Permitted Uses**

Land Use	Type of Operation	Industry Class	Area of Influence Distance (m)	Recommended Minimum Separation Distance (m)
Manufacturing	Classification depends on intensity. Given prohibitions listed, expected to be a Class I or Class II industry. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Car rental	N/A	N/A	N/A	N/A
Car wash	Typically, a Class I industry. MECP Permits required for emissions to atmosphere	I	70	20
Carpenter shop	Classification depends on intensity. Given surrounding land uses expected to be a Class I industry. MECP Permits required for emissions to atmosphere	I or II	70	20
Cold Storage plant	Classification depends on intensity. Given surrounding land uses expected to be a Class I industry. MECP Permits required for emissions to atmosphere	I or II	70	20
Commercial bakery	Classification depends on intensity. Given surrounding land uses expected to be a Class I or Class II industry. MECP Permits required for emissions to atmosphere	I or II	70	20
Commercial printing and associated services establishment	Classification depends on intensity. Given surrounding land uses expected to be a Class I industry. MECP Permits required for emissions to atmosphere	I or II	70	20
Contractor's or tradesman's shop, Contractor's or construction equipment rental shop	Classification depends on intensity. Given surrounding land uses expected to be a Class II industry. MECP Permits required for emissions to atmosphere	II	300	70
Consulting engineering office	Self-contained minimal air/noise emissions	I	70	20
Grain and feed mill and storage	Classification depends on intensity. Given surrounding land uses expected to be a Class I or Class II industry. MECP Permits required for emissions to atmosphere	I or II	70	20
Ice manufacturing plant	Classification depends on intensity. Given surrounding land uses expected to be a Class I industry. MECP Permits required for emissions to atmosphere	I or II	70	20
Laboratory - experimenting, commercial or testing	Classification depends on intensity. Given surrounding land uses expected to be a Class I industry. MECP Permits required for emissions to atmosphere	I or II	70	20
Laundry plant	Classification depends on intensity. Given surrounding land uses expected to be a Class I industry. MECP Permits required for emissions to atmosphere	I or II	70	20
Machine shop	N/A	N/A	N/A	N/A

Land Use	Type of Operation	Industry Class	Area of Influence Distance (m)	Recommended Minimum Separation Distance (m)
Monument, stone, clay or glass manufacturing plant	Classification depends on intensity. Given surrounding land uses expected to be a Class I industry. MECP Permits required for emissions to atmosphere	I or II	70	20
New Car Agency	N/A	N/A	N/A	N/A
Nursery for trees, shrubs, plants	Self-contained minimal air/noise emissions	I	70	20
Public garage, auto body	Typically, a Class I industry. MECP Permits required for emissions to atmosphere	I	70	20
Public garage, mechanical	Typically, a Class I industry. MECP Permits required for emissions to atmosphere	I	70	20
Shop for the repair and servicing of goods, machinery and equipment	Typically, a Class I industry. MECP Permits required for emissions to atmosphere	I	70	20
Silver plating and cutlery plant	Classification depends on intensity. Given surrounding land uses expected to be a Class I or Class II industry. MECP Permits required for emissions to atmosphere	I or II	70	20
Trucking or shipping terminal	Typically, a Class I industry. MECP Permits required for emissions to atmosphere	I	70	20
Used car lot	N/A	N/A	N/A	N/A
Warehouse	Self-contained minimal air/noise emissions	I	70	20
Wholesale establishment	Self-contained minimal air/noise emissions	I	70	20
Winery	Self-contained minimal air/noise emissions	I	70	20
Adult entertainment parlour	N/A	N/A	N/A	N/A
Body-rub parlour	N/A	N/A	N/A	N/A
An office which is an accessory use to one of the foregoing permitted uses	N/A	N/A	N/A	N/A

### 5.1.4.3 Vacant Lot(s)

Under Guideline D-6, the use of vacant buildings must be considered in land use compatibility studies. There are some vacant parcels of land surrounding the Project site.

If a new industrial operation were to relocate or construct a new facility, these new facilities would be required to obtain an approval from the MECP (either EASR or ECA). In accordance with the MECP permit, the facility would be required to meet the applicable guidelines of O. Reg 419/05 at the facility property line and to meet the applicable requirements of MECP NPC 300. As part of the permitting process, the facility would be required to meet applicable guidelines at existing and approved residential locations.

## 5.2 Summary of Air Quality, Dust and Odour Conclusions and Recommendations

The potential for air quality emissions at the Project site, including dust and odour, have been assessed.

Based on the review completed, and with the restriction of height to 10 m for the portion of the lands located within the 2 km radius of phosphine storage on Cytec Industries lands, the Project site



development is anticipated to be compatible with the surrounding land uses from an air quality perspective. Emissions of dust and odour at the Project site are not anticipated. The Project site is not anticipated to limit surrounding existing or future industries and the ability to obtain or maintain required MECP permits or approvals.

## **6.0 Noise Assessment**

### **6.1 Industrial (Stationary) Sources**

#### **6.1.1 Guidelines**

##### **6.1.1.1 MECP Publication NPC-300 Guidelines for Stationary Noise**

The applicable MECP noise guidelines for new sensitive land uses adjacent to existing industrial commercial uses are provided in MECP Publication NPC-300. NPC-300 revokes and replaces the previous noise assessment guideline Publications LU-131 and NPC-205, which were previously used for evaluating noise impacts as part of Certificates of Approval / Environmental Compliance Approvals for industries granted by the MECP.

The new guideline sets out noise limits for two main types of noise sources:

- Non-impulsive, “continuous” noise sources such as ventilation fans, mechanical equipment, and vehicles while moving within the property boundary of an industry. Continuous noise is measured using 1-hour average sound exposures ( $L_{eq}$  (1-hr) values), in dBA; and
- Impulsive noise, which is a “banging” type noise characterized by rapid rise time and decay. Impulsive noise is measured using a logarithmic mean (average) level ( $L_{LM}$ ) of the impulses in a one-hour period, in dBA.

Furthermore, the guideline requires an assessment at, and provides separate guideline limits for:

- Outdoor points of reception (e.g., back yards, communal outdoor amenity areas); and
- Façade points of reception such as the plane of windows on the outdoor façade which connect onto noise sensitive spaces, such as living rooms, dens, eat-in kitchens, dining rooms and bedrooms.

The applicable noise limits at a point of reception are the higher of:

- The existing ambient sound level due to road traffic, or
- The exclusion limits set out in the guideline.

#### **6.1.2 Application of the NPC-300 Guidelines**

The stationary noise guidelines apply only to residential land uses and to noise-sensitive commercial and institutional uses, as defined in NPC-300 (e.g., schools, daycares, hotels). For the Project, the stationary noise guidelines only apply to the residential portions of the development, including:

- Individual residences; and
- outdoor amenity areas.

All of the above have been considered noise-sensitive points of reception in the analysis.

### 6.1.2.1 Guideline Interpretation & Limit Summary

The following presents a summary of the guidelines and settlements presented above.

- The applicable Ministry of the Environment noise guideline for assessing new residential development applications is Publication NPC-300.
- The Class 1 limits have been considered in this study as a conservative assessment.

The following tables set out the exclusion limits from the guideline.

**Table 7: NPC-300 Exclusion Limits for Non-Impulsive Sounds ( $L_{eq}$  (1-hr), dBA)**

Time of Day	Class 1 Area	
	Plane of Windows of Noise Sensitive Spaces	Outdoor Points of Reception
7 am to 7 pm	50	50
7 pm to 11 pm	50	50
11 pm to 7 am	45	n/a

**Table 8: NPC-300 Exclusion Limits for Impulsive Sounds ( $L_{LLM}$ , dBAI)**

Time of Day	No. of Impulses in a 1-hour Period	Class 1 Area	
		Plane of Windows of Noise Sensitive Spaces	Outdoor Points of Reception
7 am to 11 pm	9 or more	50	50
	7 to 8	55	55
	5 to 6	60	60
	4	65	65
	3	70	70
	2	75	75
	1	80	80
11 pm to 7 am	9 or more	45	n/a
	7 to 8	50	n/a
	5 to 6	55	n/a
	4	60	n/a
	3	65	n/a
	2	70	n/a
	1	75	n/a

Notes:

n/a Not Applicable. Outdoor points of reception are not considered to be noise sensitive during the overnight period.  
 - Area classifications are: Class 1 – Urban environment

The applicable guideline limits for infrequent events such as emergency generator set testing are +5 dB higher than the values above.

### 6.1.3 Sources of Interest

Based on the information obtained from the site visits conducted on September 14 and 30, 2022, and the review of the aerial imagery, the significant sources of noise in the area of the Project site have been identified.

### Dan's Produce

Dan’s Produce operations include the loading and unloading of refrigeration trucks. No activity was observed during the time of the site visit. Loading and unloading activity is assumed to occur during daytime and evening hours. Nighttime loading and unloading activity is prohibited per the City of Niagara noise By-law 2014-155.

A screening level noise model was prepared for each of the facilities identified above as follows:

**Table 9: Modelled Stationary Noise Sources**

Facility	Modelled Noise Sources
<b>Dan’s Produce</b> 7201 Beechwood Rd	<ul style="list-style-type: none"> <li>• Idling Refrigeration Trucks.</li> </ul>

Figure 5 shows the location of the above sources. Noise emission data used in the assessment can be found in Appendix D.

**Cytec Canada Inc.**

Cytec operates under MECP ECA Number 9547-C5ULRS and is required to comply with applicable noise criteria at existing noise sensitive receptors. There are intervening residential uses located in closer proximity to the Cytec lands than the proposed development. As per Cytec’s existing regulatory requirements to comply at the existing residential lands, a detailed assessment is not required from a noise perspective.

**6.1.4 Noise Modelling and Results**

Noise impacts from the adjacent industry were predicted to the Project site using Cadna/A, a computerized version of the internationally recognized ISO 9613-2 noise propagation algorithms. This is the preferred noise modelling methodology of the MECP. The ISO 9613 equations account for:

- Source to receiver geometry
- Distance attenuation
- Atmospheric absorption
- Reflections off of the ground and ground absorption
- Reflections off of vertical walls
- Screening effects of buildings, terrain, and purpose-built noise barriers (noise walls, berms, etc.).

The following additional parameters were used in the modelling, which are consistent with providing a conservative (worst-case) assessment of noise levels:

- Temperature: 10°C
- Relative Humidity: 70%
- Ground Absorption G: G = 0.3 as default global parameter.
- Reflection: An order of reflection of 1 was used (accounts for noise reflecting from walls)
- Wall Absorption Coefficients: Set to 0.37 (37 % of energy is absorbed, 63% reflected)
- Terrain: Assumed to be flat

Predicted façade sound levels for stationary noise are shown on **Figure 6**. Predicted Worst-case OLA sound levels are shown on **Figure 7**. Overall predicted sound levels are provided in the following tables:

**Table 10: Predicted Overall Façade Sound Levels – Normal Operations**

Location <sup>[1]</sup>	Normal Operations				Meets Class 1 Guidelines?
	Predicted Sound Level (dBA)		Class 1 Guideline Limit (dBA)		
	Day/Eve	Night	Day/Eve	Night	
North Property Line Residences (Along McLeod Rd.)	48	N/A	50	45	Yes
East Property Line Residences	24	N/A			Yes
South Property Line Residences	39	N/A			Yes
West Property Line Residences (Along Beechwood Rd.)	49	N/A			Yes

**Notes:** [1] Representative worst-case façades were selected to simplify the result summary. **Figure 6** shows all of the predicted façade sound levels for the development.

Based on the sound levels presented in **Table 7**, no excesses of the NPC-300 Class 1 guideline limits are expected at worst-case façades. Warning clauses and physical mitigation measures are not required.

### 6.1.5 Outdoor Living Areas

Backyard OLAs are planned for majority of the lots in the development, and there is a park located on the southeast corner of the Project site. For the townhouse blocks along McLeod Road, designated outdoor amenity areas will be located on the side of the building opposite McLeod Road. Representative worst-case OLAs were selected for assessment.

Any private terraces and balconies included in the townhouse blocks are expected to be less than 4 m in depth, and do not meet the minimum requirements for inclusion under the definitions in NPC-300.

The locations of the assessed OLAs are shown on **Figure 7**, OLA sound levels for each block are summarized in the table below.

**Table 11: Predicted Overall OLA Sound Levels – Normal Operations**

Amenity Area	Predicted Unmitigated Sound Level (dBA)	Class 1 Guideline Limit <sup>[1]</sup> (dBA)	Meets Class 1 Guideline?	Warning Clause / Noise Mitigation Measure
Worst-Case OLAs	8 - 47	50	Yes	None

**Notes:** [1] Representative worst-case OLAs were selected to simplify the result summary. **Figure 7** shows all of the predicted worst-case OLA sound levels for the Project site.

Based on the sound levels presented in **Table 8**, no excesses of the NPC-300 Class 1 guideline limits are expected at worst-case OLAs. Warning clauses and physical mitigation measures are not required.

## 6.2 Transportation Sources

### 6.2.1 Transportation Noise Sources

Roadway noise sources with the potential to produce noise at the proposed development include McLeod Road. The traffic volumes for Beechwood are insignificant.

Sound exposure levels at the proposed development due to road traffic have been predicted and this information has been used to identify façade, ventilation and warning clause requirements.

### 6.2.2 MECP Publication NPC-300 Guidelines for Transportation Sources

#### Indoor Criteria

The following table summarizes the criteria in terms of energy equivalent sound exposure ( $L_{eq}$ ) levels for specific indoor noise-sensitive locations. These indoor criteria vary with sensitivity of the space. As a result, sleeping areas have more stringent criteria than Living / Dining room space.

**Table 12: NPC-300 Sound Level Criteria for Road and Rail Noise**

Type of Space	Time Period	Energy Equivalent Sound Exposure Level Leq (dBA) <sup>[1]</sup>		Assessment Location
		Road	Rail <sup>[2]</sup>	
<b>Criteria for Residential Units</b>				
Living / Dining Room	Daytime (7 am to 11 pm)	45	40	Indoors
	Night-time (11 pm to 7 am)	45	40	Indoors
Sleeping Quarters	Daytime (7 am to 11 pm)	45	40	Indoors
	Night-time (11 pm to 7 am)	40	35	Indoors
General offices, reception areas, retail stores, etc.	Daytime (7 am to 11 pm)	50	45	Indoors
Living/dining areas of residences, hospitals, schools, nursing/retirement homes, day-care centres, theatres, places of worship, libraries, individual or semi-private offices, conference rooms, reading rooms, etc.	Daytime (7 am to 11 pm))	45	40	Indoors
Sleeping quarters of hotels/motels	Night-time (11 pm to 7 am)	45	40	Indoors
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	Night-time (11 pm to 7 am)	40	35	Indoors

Notes: [1] Road and Rail noise impacts are to be combined for assessment of impacts.

[2] Whistle/warning bell noise is excluded for OLA noise assessments and included for indoor assessments, where applicable.

#### Ventilation and Warning Clauses

The following table summarizes requirements for ventilation where windows potentially would have to remain closed as a means of noise control. Despite the implementation of ventilation measures where required, some occupants may choose not to use the ventilation means provided, and as such, warning clauses advising future occupants of the potential excess over the indoor guideline limits are required.

**Table 13: NPC-300 Ventilation and Warning Clause Requirements**

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - Leq (dBA)		Ventilation and Warning Clause Requirements <sup>[2]</sup>
		Road	Rail <sup>[1]</sup>	
Plane of Window	Daytime (7am to 11 pm)	≤ 55		None
		56 to 65 incl.		Forced Air Heating with provision to add AC + Applicable Warning Clause(s)
		> 65		Central AC + Applicable Warning Clause(s)
	Night-time (11 pm to 7 am)	51 to 60 incl.		Forced Air Heating with provision to add AC+ Applicable Warning Clause(s)
		> 60		Central AC + Applicable Warning Clause(s)

Notes: [1] Whistle/warning bell noise is excluded.

[2] Road and Rail noise is combined for determining Ventilation and Warning Clause requirements.

### Building Shell Requirements

The following table provides sound exposure (Leq) thresholds which, if exceeded, require the building shell and components (i.e., wall, windows) to be designed and selected accordingly to ensure that the indoor location criteria are met.

**Table 14: NPC-300 Building Component Requirements**

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - Leq (dBA)		Component Requirements
		Road	Rail <sup>[1]</sup>	
Facade	Daytime (7am to 11 pm)	> 65	> 60	Designed/ Selected to Meet Indoor Requirements <sup>[2]</sup>
	Night-time (11 pm to 7 am)	> 60	> 55	

Notes: [1] Including whistle/warning bell noise.

[2] The resultant sound isolation parameter from Road and Rail are to be combined for determining the overall acoustic parameter.

### Outdoor Sound Level Criteria

The following table summarizes criteria in terms of energy equivalent sound exposure (Leq) levels for the outdoor noise-sensitive locations, with a focus of outdoor areas being amenity spaces (called Outdoor Living Areas (OLAs) per NPC-300).

**Table 15: NPC-300 Outdoor Sound Level Criteria for Road and Rail Noise**

Type of Space	Time Period	Energy Equivalent Sound Exposure Level Leq (dBA) <sup>[1, 2]</sup>	Assessment Location
OLA	Daytime (0700-2300h)	60	Outdoors

Notes: [1] Excluding whistle/warning bell noise for OLA noise assessments

[2] Road and Rail noise impacts are to be combined for assessment of OLA impacts.

### Mitigation and Warning Clauses

The following table summarizes mitigation and warning clause requirements for outdoor amenity spaces.

**Table 16: NPC-300 Outdoor Living Area Mitigation & Warning Clause Requirements**

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - $L_{eq}^{[1,2]}$ (dBA)	Mitigation and Warning Clause Requirements
OLA	Daytime (0700-2300h)	≤ 55	None
		56 to 60 incl.	Noise Control Measures may be applied, <b>and/or</b> Applicable Warning Clause(s)
		> 60	Noise barrier to reduce noise to 55 dBA, <b>or</b> Noise barrier to reduce noise to 60 dBA and Applicable Warning Clause(s)

Notes: [1] Whistle/warning bell noise is excluded.

[2] Road and Rail noise is combined for determining Ventilation and Warning Clause requirements.

As indicated in NPC-300, noise control measures may be applied to reduce sound levels to 55 dBA. If measures are not provided, potential purchasers/tenants are required to be informed of potential noise problems with the applicable Warning Clause(s).

If noise impacts are predicted to be greater than 60 dBA, noise control measures are required to reduce noise levels to 55 dBA. If noise control measures are not technically feasible for meeting 55 dBA, an excess of up to 5 dBA is allowed, with the inclusion of the applicable Warning Clause(s).

### 6.2.3 Traffic Data and Future Projections

Existing AADT counts for McLeod Road were obtained from the project’s traffic consultant, R.V. Anderson Associates Ltd.. The future 2044 AADT traffic volumes were predicted based on an annual growth rate of 1.0%, as provided by the traffic consultant for the project. Commercial vehicle percentages were also obtained from the traffic consultant. Day/night splits of 90%/10% were applied based on MECF default distributions.

Copies of applicable traffic data and calculations can be found in **Appendix F**. The following **Table 17** summarizes the road traffic volumes used in the analysis.

**Table 17: Summary of Road Traffic Data Used in the Analysis**

Roadway Link	2044 Traffic Volume (AADT)	% Day / Night Volume Split <sup>[1]</sup>		% Commercial Traffic Breakdown <sup>[1]</sup>		Vehicle Speed (km/h)
		Daytime	Night-time	Medium Trucks	Heavy Trucks	
McLeod Road	7157	90	10	7.0	4.0	50

Notes: [1] The Day/Night splits determined from historic data at SLRs for urban areas and commercial vehicle breakdowns were supplied by traffic consultant.

### 6.2.4 Projected Sound Levels

Future road traffic sound levels at the proposed development were predicted using Cadna/A, a commercially available noise propagation modelling software. Roadways were modelled as line sources of

sound, with sound emission rates calculated using ORNAMENT algorithms, the road traffic noise model of the MECP.

These predictions were validated and are equivalent to those made using the MECP’s ORNAMENT or STAMSON v5.04 road traffic noise models. Validation files are included in **Appendix F**.

Sound levels were predicted along the façades of the proposed development using the “building evaluation” feature of Cadna/A. This feature allows for noise levels to be predicted across the entire façade of a structure.

Ground absorption for the surrounding area was considered reflective ( $G = 0$ ), and the terrain is flat.

### 6.2.5 Façade Sound Levels

Total façade sound levels are shown on **Figure 8** and **Figure 9**, for daytime and night-time sounds levels, respectively. Overall worst-case predicted sound levels are provided in the following tables:

**Table 18: Predicted Transportation Sound Levels at Facades**

Location	Roadway Sound Levels	
	Leq Day (dBA)	Leq Night (dBA)
North Property Line Residences (Along McLeod Rd.)	64	57
East Property Line Residences	59	52
South Property Line Residences	48	42
West Property Line Residences (Along Beechwood Rd.)	59	52

Notes: [1] Façade locations are shown on **Figure 8** (daytime) and **Figure 9** (night-time), representative worst-case facades have been selected for this table.

[2] The sound levels presented are the highest value predicted for the entire building.

As the roadway induced sound levels are not predicted to exceed 65 dBA and 60 dBA during the daytime and night-time, respectively, an assessment of indoor sound levels is not required.

### 6.2.6 Outdoor Amenity Area Sound Levels

There are a number of communal outdoor amenity areas in the development. Worst case OLAs were selected for assessment, as shown on **Figure 10**. Predicted overall sound levels are provided in the following table for daytime impacts.

**Table 19: Predicted Outdoor Amenity Area Sound Levels – Transportation Noise**

Amenity Area	Predicted Unmitigated Sound Level (dBA)	Guideline Limit <sup>[1]</sup> (dBA)	Meets Guideline?	Warning Clause / Noise Mitigation Measure
Worst-case backyards	43-60	60	Yes <sup>[1]</sup>	Type A/ None

Notes: [1] Sound levels up to 60 dBA are allowed with the use of a Type A Warning Clause.



### 6.2.7 Ventilation and Warning Clause Requirements

The triggers for requiring warning clauses are summarized in **Table 10**. Where required, the warning clauses should be included in agreements registered on Title for the residential units and included in all agreements of purchase and sale or lease, and all rental agreements. Warning clauses for the proposed development are summarized in **Appendix E**.

Based on the predicted façade noise levels, forced air heating with provisions for future installation of central air conditioning, and an MECP **Type C** warning clause, is recommended for all affected units with façade sound levels from road traffic between 56 and 65 dBA (inclusive) during the daytime, or between 51 and 60 dBA during night-time hours. This includes **units in all multi-Family residential blocks, townhouse blocks, and any single-family detached homes on the northern property line, directly exposed to McLeod Road.**

Façade sound levels for **all units not listed above** of the building are below 56 dBA during the daytime and 51 dBA during the night-time; therefore, there are no ventilation or warning clause requirements.

An MECP **Type A** warning clause is recommended for units in **single-family detached homes that are on the northeastern corner of the property, directly exposed to McLeod Road as predicted OLA sound levels range from 56 to 60 dBA.**

## 6.3 Summary of Noise Conclusions and Recommendations

The potential for noise impacts on the Project site have been evaluated. Based on the results of our studies:

- Stationary noise impacts from the surrounding commercial and industrial facilities are predicted to meet NPC-300 Class 1 guideline limits on all façades as outlined in **Section 6.1**.
- No physical mitigation or warning clauses are required to address noise impacts from surrounding stationary noise sources.
- An assessment of transportation noise impacts from the surrounding roadways was completed. Upgraded glazing is not required within the development, as outlined in **Section 6.2.5**.
- Noise barriers are not required to mitigate transportation noise impacts at OLAs. However, An MECP Type A warning clause is recommended for units in single-family detached homes that are on the northeastern corner of the property, directly exposed to McLeod Road. Warning clause text is included in **Appendix E**.
- Forced air heating and the provision for air conditioning and a **Type C** Warning Clause are recommended for **units in all multi-Family residential blocks, townhouse blocks, and any single-family detached homes on the northern property line, directly exposed to McLeod Road**, as outlined in **Section 6.2.8**. Warning clauses are included in **Appendix E**.

## **7.0 Vibration Assessment**

### **7.1 Industrial (Stationary) Sources**

There are no existing or proposed industrial vibration sources such as large stamping presses or forges within 75 m of the Project site. Any future industries which may use significant vibration sources will be able to incorporate vibration isolation into their design. Under applicable MECP guidelines, a detailed vibration assessment is not required. Adverse impacts from industrial vibration are not anticipated.

### **7.2 Transportation Sources**

As the closest railway corridor is located approximately 1500 m from the proposed development, a detailed vibration assessment is not required. Adverse impacts from transportation-related vibration are not anticipated, and a detailed assessment was not completed.

### **7.3 Summary of Vibration Conclusions and Recommendations**

The potential for vibration impacts on and the proposed development have been considered. Based on the results of our studies adverse vibration impacts from industrial and transportation sources are not anticipated.

## 8.0 Conclusions

A compatibility/mitigation assessment has been completed, examining the potential for air quality, dust, odour, and noise and vibration impacts from surrounding roadways and nearby industrial land uses to affect the Project site.

The assessment has included a review of air quality and noise emissions from industrial facilities in the area.

Based on the review completed, and with the restriction of height to 10 m for the portion of the lands located within the 2 km radius of phosphine storage on Cytec Industries lands, the Project Site is anticipated to be compatible with the surrounding land uses from an air quality perspective.

Noise and vibration emissions from surrounding industries have been reviewed. Noise and vibration emissions from the surrounding industries are predicted to meet the MECP Class 1 guidelines.

The potential for transportation noise on the development has also been reviewed. Upgraded glazing is not predicted to be required. Forced air heating and various warning clauses are required to address transportation noise, as outlined in **Section 6.2.8**.

The potential for vibration emissions on the proposed development have been assessed. Based on the results of our studies adverse vibration emissions from industrial and transportation sources are not anticipated.

Based on the above, and with the restriction of height to 10 m for the portion of the lands located within the 2 km radius of phosphine storage on Cytec Industries lands, the Project site is anticipated to be compatible with surrounding land uses and will not affect the ability for industrial facilities to obtain or maintain compliance with applicable Provincial environmental policies, regulations, approvals, authorizations, and guidelines.

The requirements of MECP Guideline D-6, Regulation 419/05, and Publication NPC-300 are met. As the applicable policies and guidelines are met, the Project site is:

- Unlikely to result in increased risk of complaint and nuisance claims;
- Unlikely to result in operational constraints for the major facilities; and
- Unlikely to result in constraints on major facilities to reasonably expand, intensify or introduce changes to their operations.

## 9.0 Statement of Limitations

This report has been prepared and the work referred to in this report has been undertaken by SLR Consulting (Canada) Ltd. (SLR) for 800460 Ontario Ltd., hereafter referred to as the “Client”. It is intended for the sole and exclusive use of the Client. The report has been prepared in accordance with the Scope of Work and agreement between SLR and the Client. Other than by the Client and the City of Niagara Falls in their role as a land use planning approval authority, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted unless payment for the work has been made in full and express written permission has been obtained from SLR.

This report has been prepared in a manner generally accepted by professional consulting principles and practices for the same locality and under similar conditions. No other representations or warranties, expressed or implied, are made.

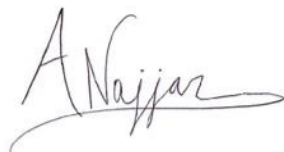
Opinions and recommendations contained in this report are based on conditions that existed at the time the services were performed and are intended only for the client, purposes, locations, time frames and project parameters as outlined in the Scope of Work and agreement between SLR and the Client. The data reported, findings, observations and conclusions expressed are limited by the Scope of Work. SLR is not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. SLR does not warranty the accuracy of information provided by third party sources.

## 10.0 Closure

Should you have questions on the above report, please contact the undersigned.

Sincerely,

**SLR Consulting (Canada) Ltd.**



**Alice Najjar, B.A.**  
Air Quality Scientist  
(Air Quality Only)

**Diane Freeman, P.Eng., FEC, FCAE**  
Principal, Air Quality  
(Air Quality Only)



**Dylan Diebolt, B.Sc.**  
Acoustics Consultant  
(Noise and Vibration Only)



**Tim Wiens, BES**  
Principal Acoustics Consultant  
(Noise and Vibration Only)

**Scott Penton, P.Eng.**  
Principal Acoustics Consultant  
(Noise and Vibration Only)

Distribution:        1 electronic copy –Upper Canada Planning & Engineering Ltd.  
                             1 electronic copy – 800460 Ontario Ltd.  
                             1 electronic copy – SLR Consulting (Canada) Ltd.

## 11.0 References

Environmental Commissioner of Ontario (ECO, 2010), *Review of Posted Decision: Developing an Odour Policy Framework*, April 2010.

City of Toronto Noise By-law, Municipal Code Chapter 591

International Organization for Standardization, (ISO, 1989), ISO 2631-2: 2003 (1989) *Evaluation of human exposure to whole-body vibration — Part 2: Continuous and shock-induced vibrations in buildings (1 to 80 Hz)*

National Research Council Canada (NRCC, 1985), Building Practice Note BPN 56: *Controlling Sound Transmission Into Buildings*

Ontario Ministry of the Environment, Conservation & Parks (MECP), 1989, *ORNAMENT Ontario Road Noise Analysis Method for Environment and Transportation – Technical Document*.

Ontario Ministry of the Environment, Conservation & Parks (MECP), 1993, Publication NPC-207: *Impulse Vibration in Residential Buildings (Draft)*

Ontario Ministry of the Environment, Conservation & Parks (MECP), 1993, Publication NPC-216: *Residential Air Conditioning Devices*

Ontario Ministry of the Environment, Conservation & Parks (MECP), 1994, *Environmental Noise Guidelines for Installation of Residential Air Conditioning Devices*

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1995), Guideline D-1: *Land Use Compatibility*

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1995), Guideline D-6: *Compatibility Between Industrial Facilities and Sensitive Land Uses*

Ontario Ministry of the Environment, Conservation & Parks (MECP, 2021), *Guideline to Address Odour Mixtures in Ontario*, July 2021

Ontario Ministry of the Environment, Conservation & Parks (MECP, 2008), *Technical Bulletin, Standards Development Branch, Methodology For Modelling Assessments Of Contaminants With 10-Minute Average Standards And Guidelines Under O. Reg. 419/05*, September 2016

Ontario Ministry of the Environment, Conservation & Parks (MECP), 2013, Publication NPC-300: *Environmental Noise Guideline: Stationery and Transportation Sources – Approval and Planning*

Ontario Ministry of Municipal Affairs and Housing (MMAH, 2020). *Provincial Policy Statement*

Ontario Ministry of the Environment, Conservation & Parks (MECP, 2008), *Technical Bulletin, Standards Development Branch, Methodology For Modelling Assessments Of Contaminants With 10-Minute Average Standards And Guidelines Under O. Reg. 419/05*, April 2008.

Ontario Regulation 419/05 – *Local Air Quality*.

# Figures

## Compatibility/Mitigation Study-Air Quality, Noise and Vibration

9304 McLeod Road, Niagara Falls, ON

800460 Ontario Ltd.

SLR Project No. 241.30612.00000

March 23, 2022





Aerial Photography from Google Earth

**800460 ONTARIO LTD.**

9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO

SITE AND CONTEXT PLAN

True North



Scale: 1:2,500

Date: Mar 10, 2023

Rev 0.0

Project No. 241.30612.00000

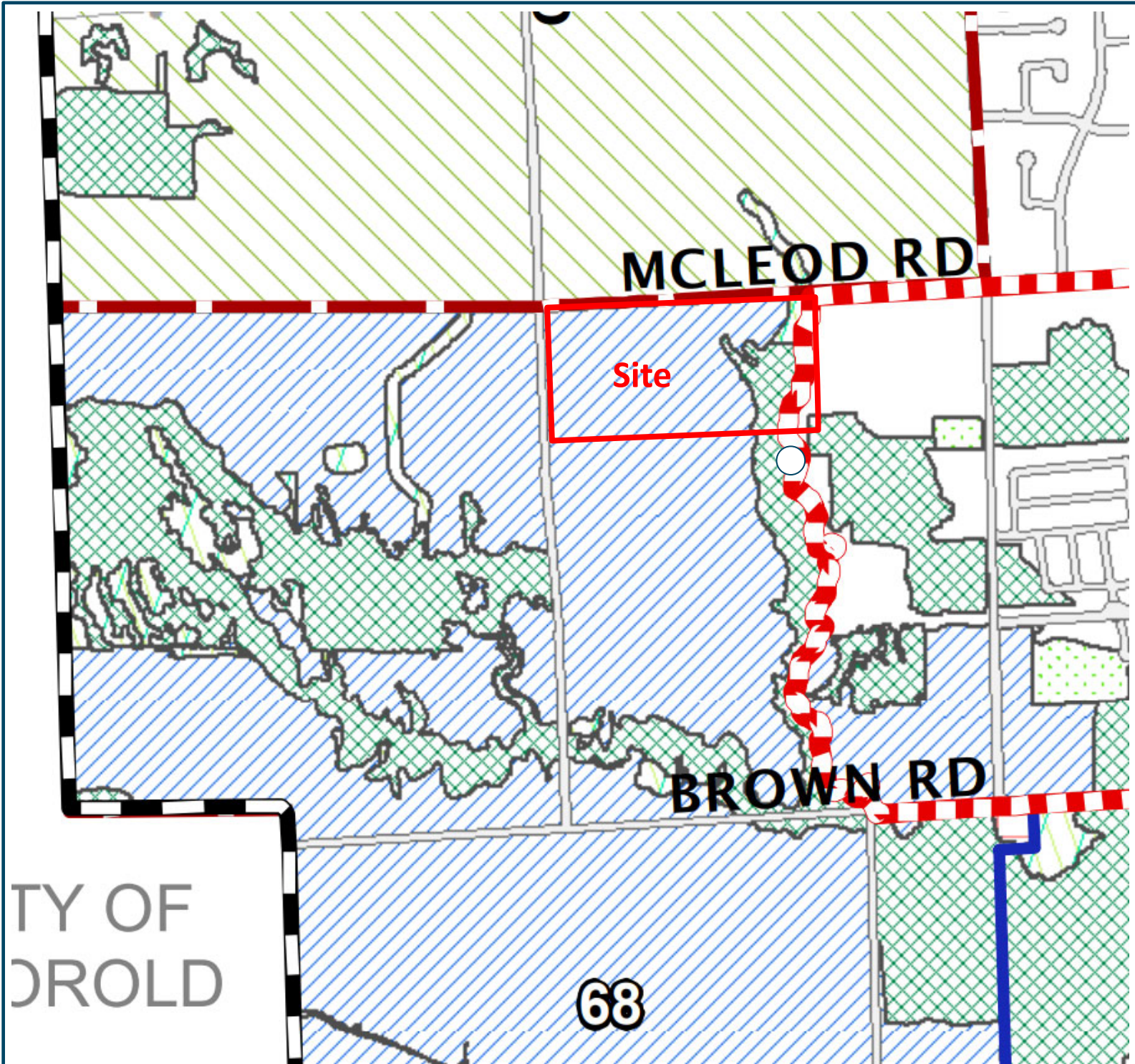
METRES

Figure No.

**1**



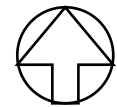




**Legend**

-  Environmental Conservation Area
-  Environmental Protection Area
-  Extractive Industrial
-  Good General Agriculture
-  Industrial
-  Major Commercial
-  Minor Commercial
-  Niagara Escarpment Plan Area
-  Open Space
-  Parkway Residential
-  Residential
-  Resort Commercial
-  Theme Park Marineland
-  Tourist Commercial
-  Intake Protection Zone IPZ-1
-  Secondary Plan Area
-  Special Policy Area
-  Urban Area Boundary

True North



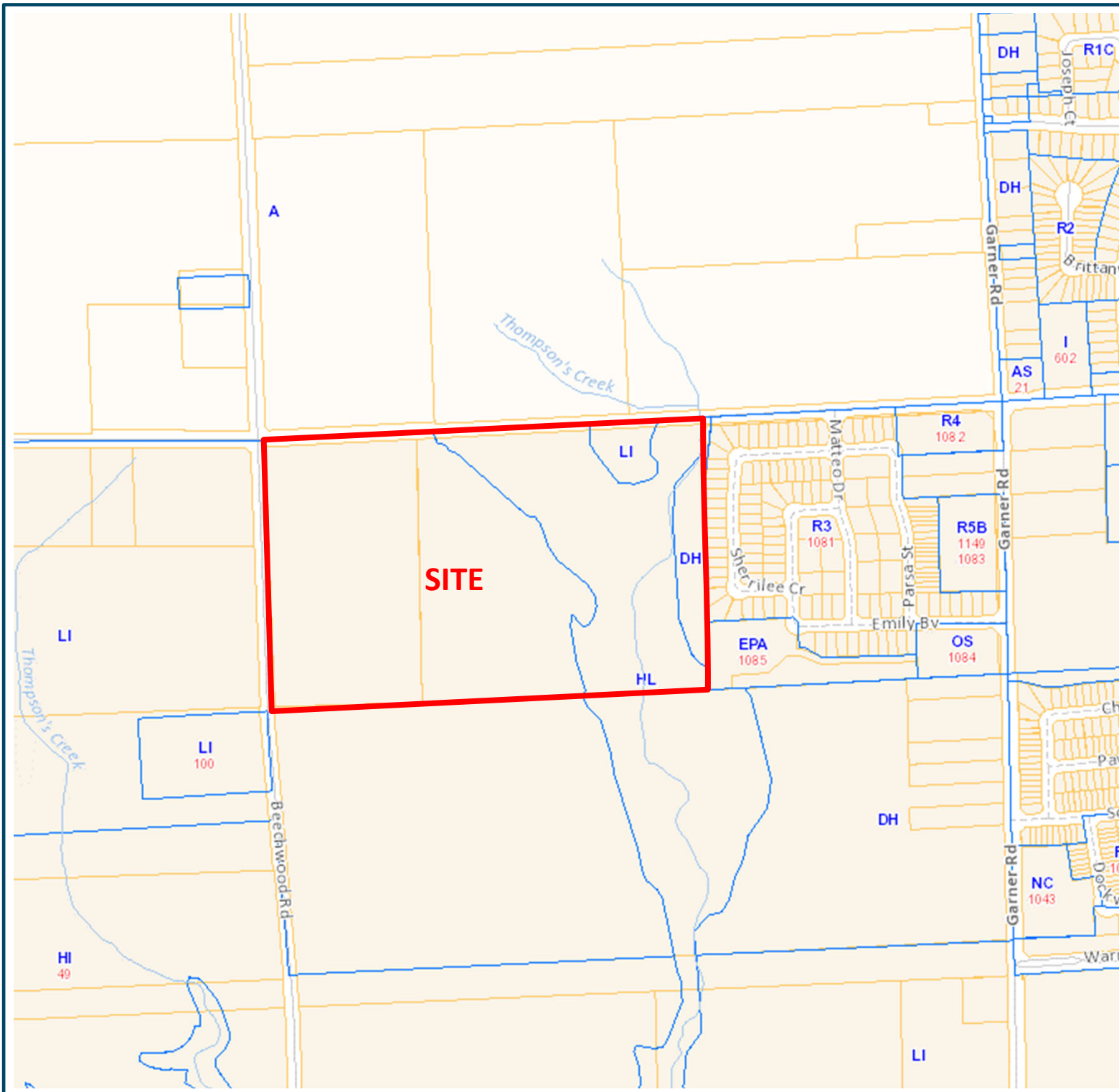
800460 ONTARIO LTD.

9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO

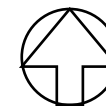
EXCERPT FROM SCHEDULE A TO THE OFFICIAL PLAN  
<https://niagarafalls.ca/pdf/planning/official-plan/schedule-a-future-land-use-plan.pdf>

Scale:	n/a	METRES
Date: Mar 10, 2023	Rev 0.0	Figure No.
Project No. 241.30612.00000		<b>2a</b>





True North



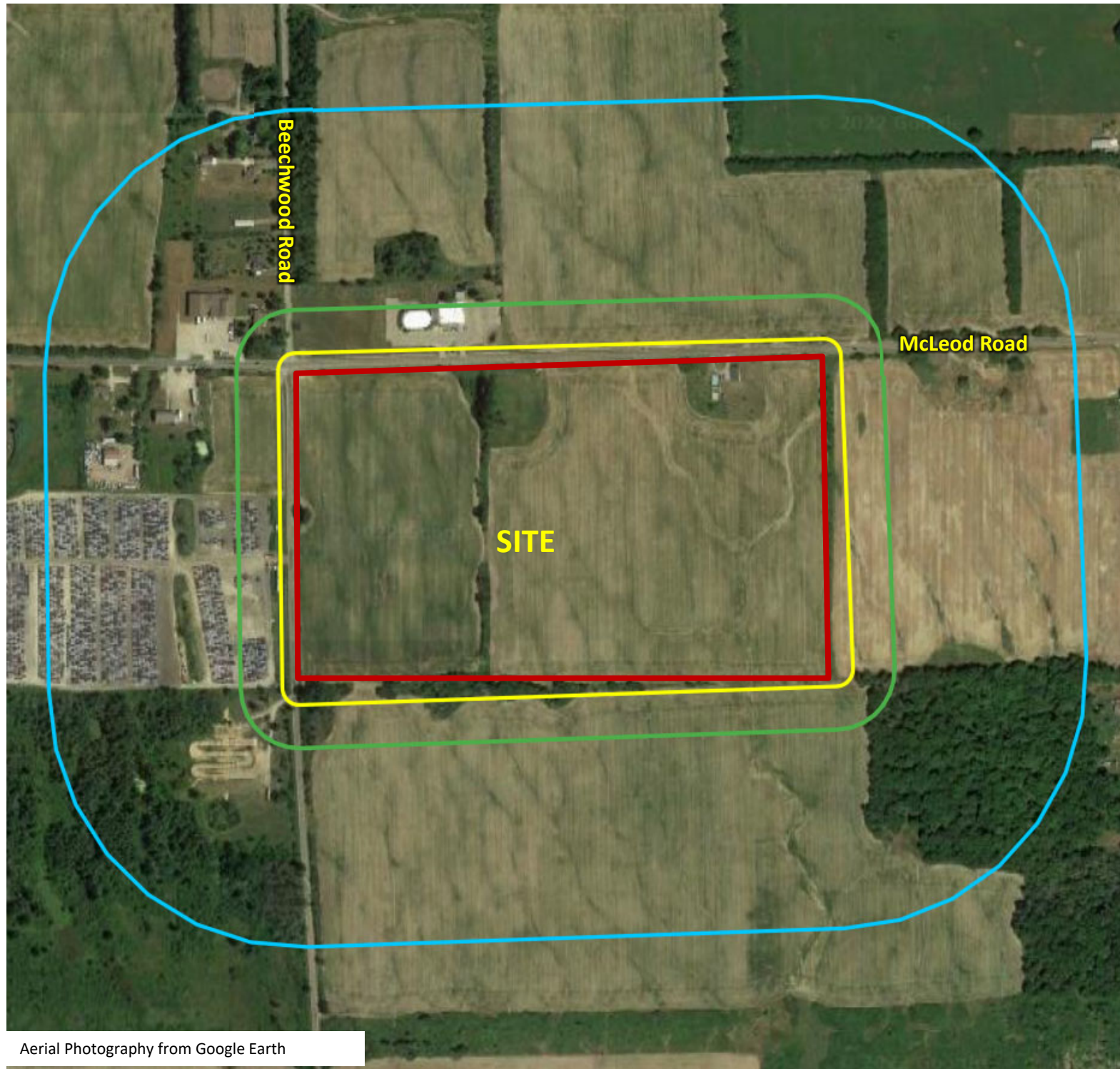
800460 ONTARIO LTD.




9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO

EXCERPT FROM AREA ZONING MAP  
[Niagara Falls Zoning Maps](#)

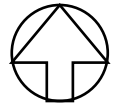
Scale:	n/a	METRES
Date: Mar 10, 2023	Rev 0.0	Figure No.
Project No. 241.30612.00000		<b>2b</b>





-  20 m Separation
-  70 m Separation
-  300 m Separation

True North



**800460 ONTARIO LTD.**

9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO

GUIDELINE D-6 SEPARATION DISTANCES TO 300 M

Scale: 1: 4,500 METRES

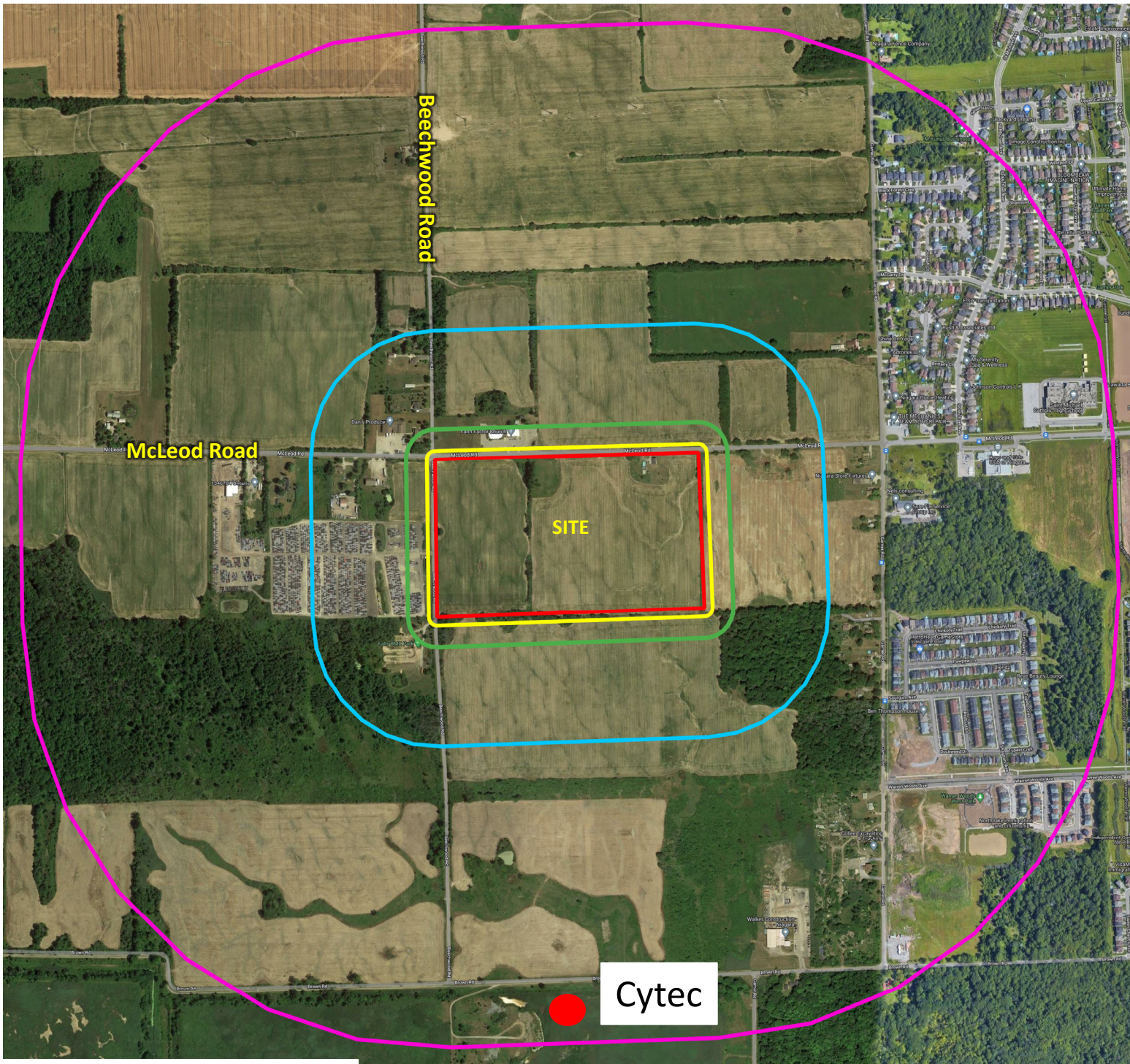
Date: Mar 10, 2023 Rev 0.0 Figure No.

Project No. 241.30612.00000

**3a**



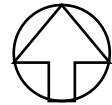
Aerial Photography from Google Earth



Aerial Photography from Google Earth

-  20 m Separation
-  70 m Separation
-  300 m Separation
-  1000 m Separation

True North



**800460 ONTARIO LTD.**

9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO

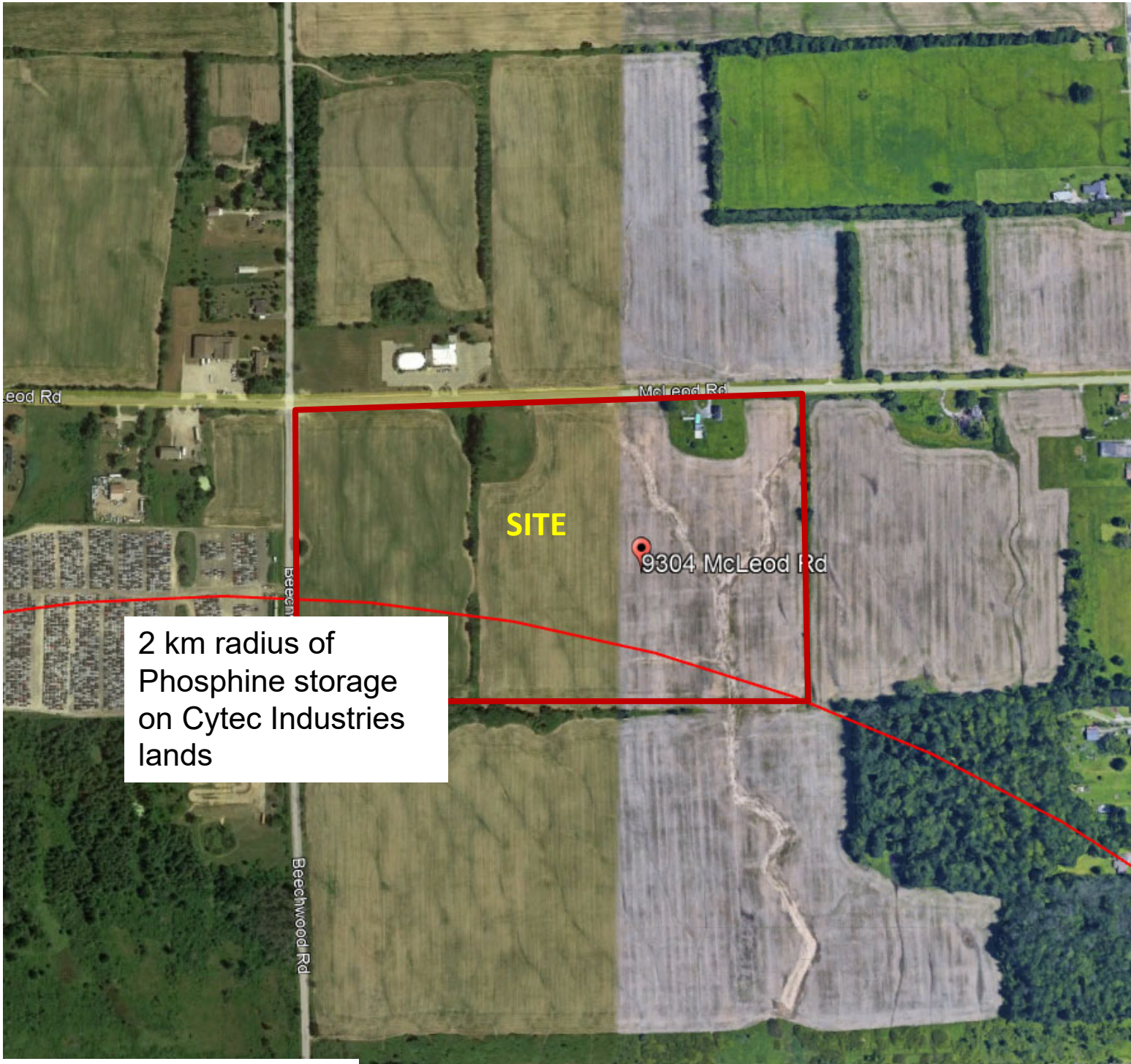
GUIDELINE D-6 SEPARATION DISTANCES TO 1000 M

Scale: 1: 10,500 METRES

Date: Mar 10, 2023 Rev 0.0 Figure No.

Project No. 241.30612.00000 **3b**

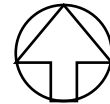




2 km radius of Phosphine storage on Cytec Industries lands

Aerial Photography from Google Earth

True North



800460 ONTARIO LTD.

9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO

2 KM RADIUS OF PHOSPHINE STORAGE ON CYTEC INDUSTRIES LANDS

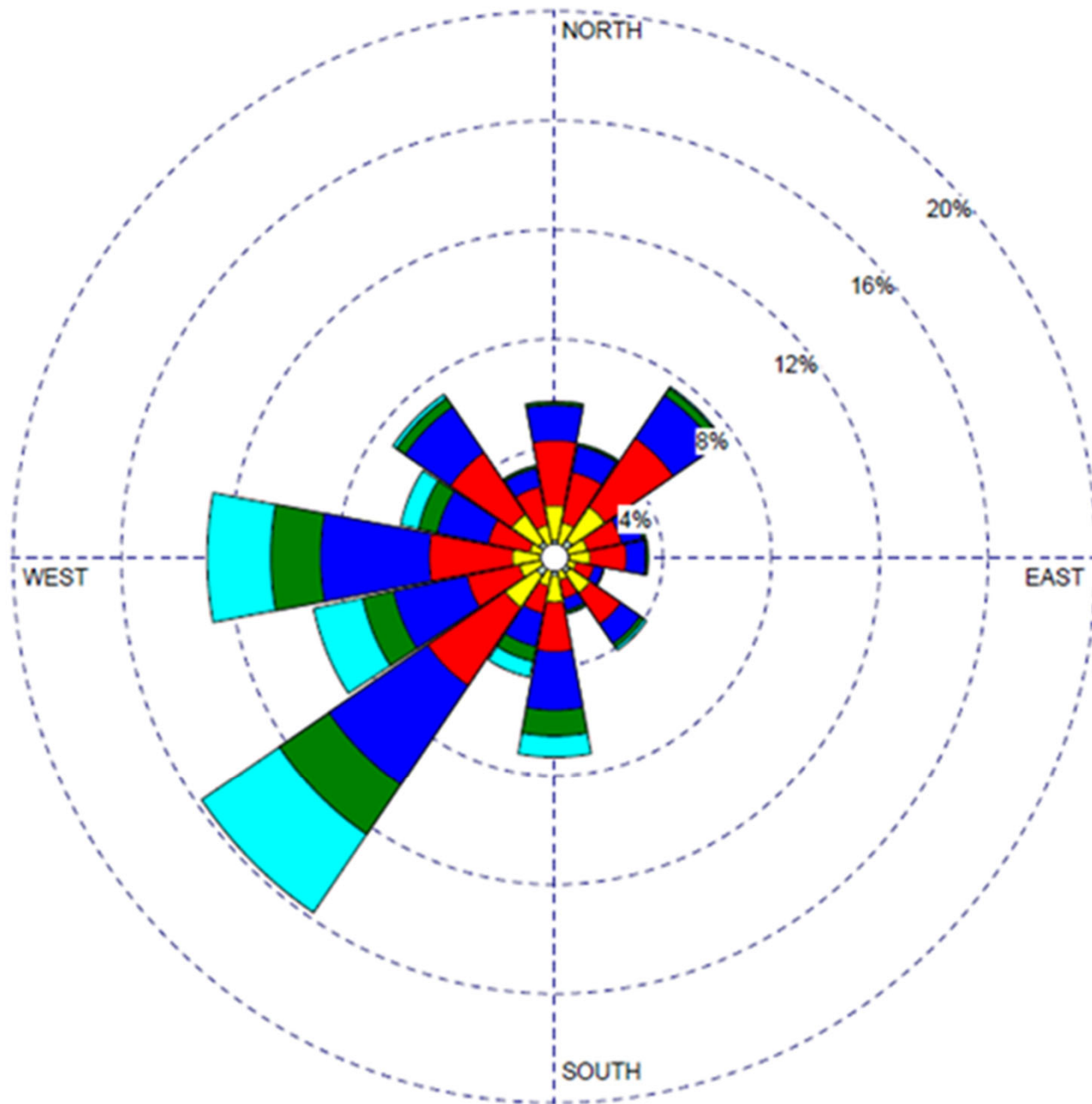
Scale: 1: 10,500 METRES

Date: Mar 10, 2023 Rev 0.0 Figure No.

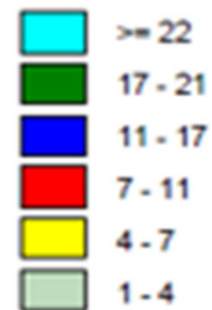
Project No. 241.30612.00000

**3b**





(Knots)



True North





800460 ONTARIO LTD.

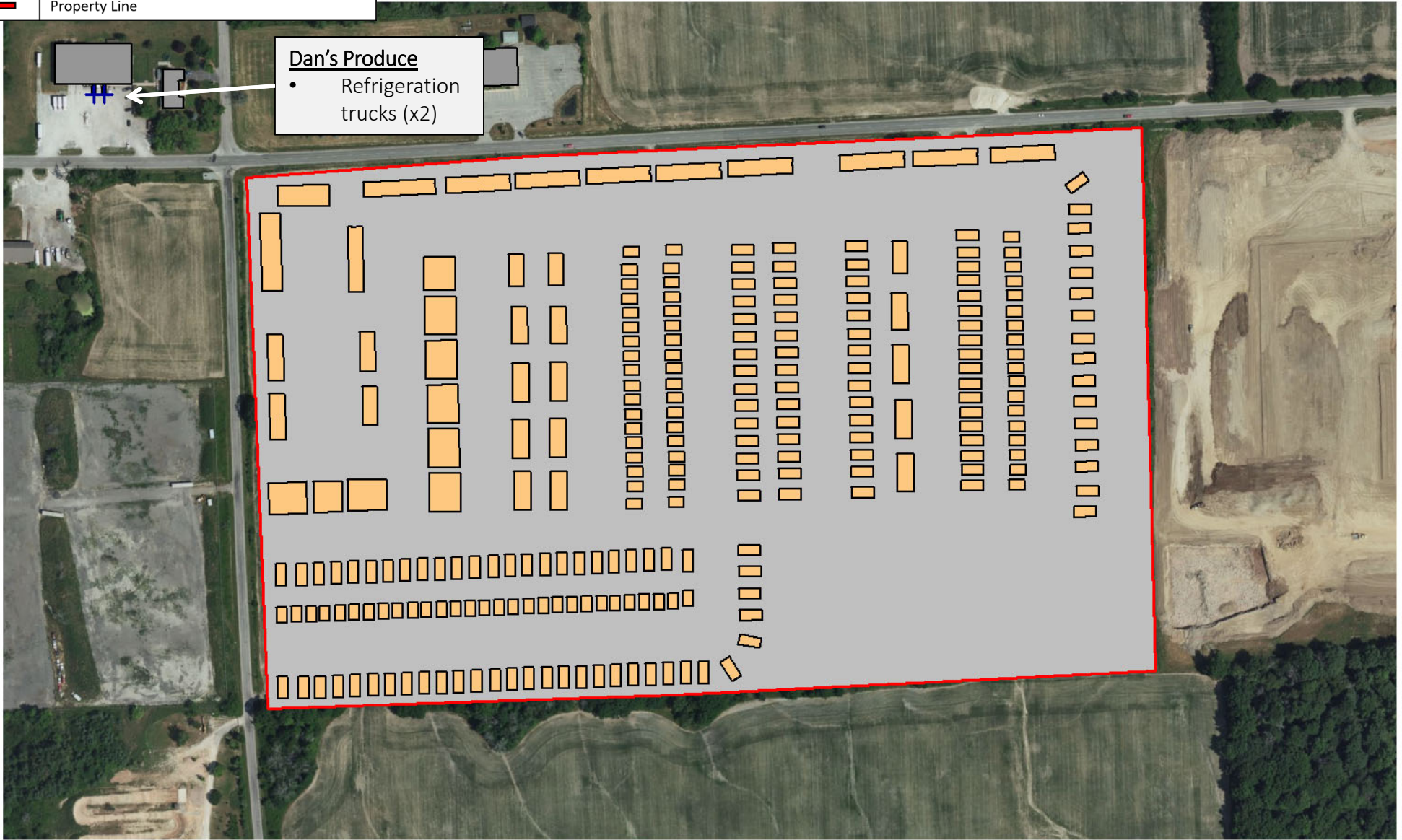
9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO

WIND FREQUENCY DISTRIBUTION DIAGRAM (WIND ROSE)  
WELLAND, ONTARIO  
1989-2018



Scale:	n/a	METRES
Date: Mar 10, 2023	Rev 0.0	Figure No.
Project No. 241.30612.00000		<b>4</b>






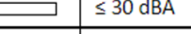

Legend	
	Proposed Development
	Property Line



Aerial Photography from Google Earth



<p align="center"><b>800460 ONTARIO LTD.</b></p>	<p>True North</p>	<p>Scale: 1:3,750</p>	<p>METRES</p>	
<p align="center">9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO</p>		<p>Date: Mar 10, 2023</p>	<p>Rev 0.0</p>	
<p align="center">MODELLED STATIONARY NOISE SOURCES</p>		<p>Project No. 241.30612.00000</p>	<p>Figure No. <b>5</b></p>	

Legend	
	Proposed Development
	Property Line
	Façade Sound Level (dBA) (see right Legend)




Legend (Sound Levels)	
	≤ 30 dBA
	≤ 40 dBA
	≤ 45 dBA
	≤ 50 dBA
	≤ 55 dBA
	≤ 60 dBA
	≤ 65 dBA
	≤ 70 dBA
	≤ 75 dBA
	> 75 dBA

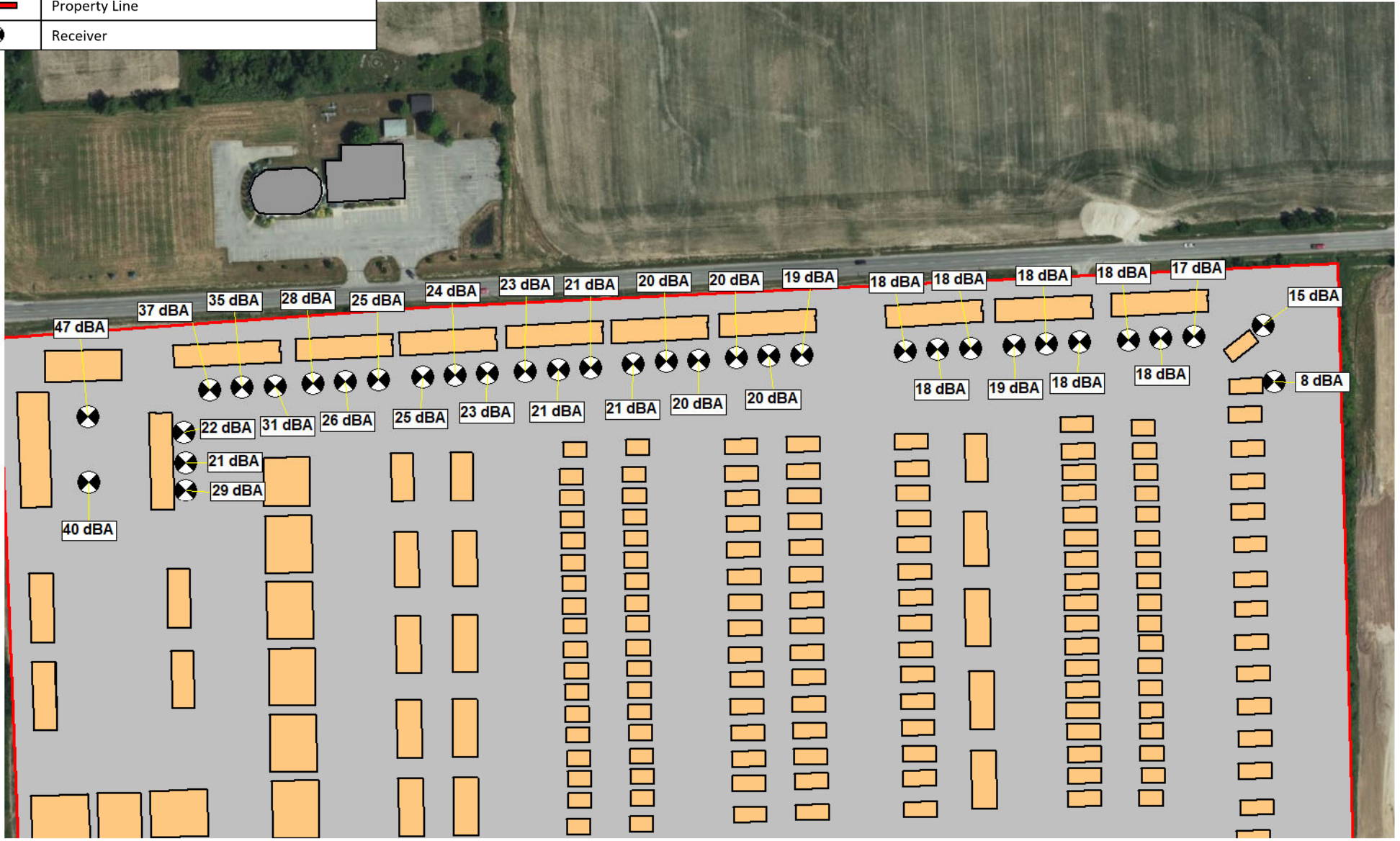


Aerial Photography from Google Earth



<b>800460 ONTARIO LTD.</b>  9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO  MODELLED STATIONARY FAÇADE NOISE IMPACTS – DAYTIME/EVENING	True North	Scale:	1:2,550	METRES	 <b>SLR</b> global environmental solutions
		Date: Mar 10, 2023	Rev 0.0	Figure No.	
	Project No. 241.30612.00000		<b>6</b>		






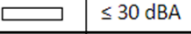
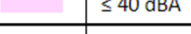
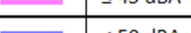
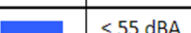
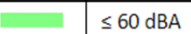
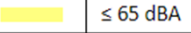
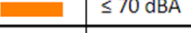
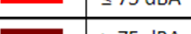

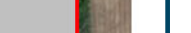
	Proposed Development
	Property Line
	Receiver



Aerial Photography from Google Earth

<p align="center"><b>800460 ONTARIO LTD.</b></p>	<p>True North</p> 	<p>Scale: 1:2,500</p>	<p>METRES</p>		
<p align="center">9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO</p>		<p>Date: Mar 10, 2023</p>	<p>Rev 0.0</p>		<p>Figure No.</p>
<p align="center">MODELLED STATIONARY OLA NOISE IMPACTS – DAYTIME/EVENING</p>		<p>Project No. 241.30612.00000</p>	<p align="center"><b>7</b></p>		

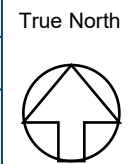
	Proposed Development
	Property Line
	Façade Sound Level (dBA) (see right Legend)

	≤ 30 dBA
	≤ 40 dBA
	≤ 45 dBA
	≤ 50 dBA
	≤ 55 dBA
	≤ 60 dBA
	≤ 65 dBA
	≤ 70 dBA
	≤ 75 dBA
	> 75 dBA






Aerial Photography from Google Earth

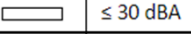
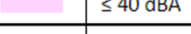
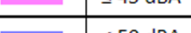
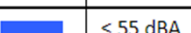
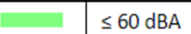
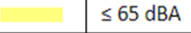
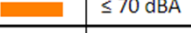
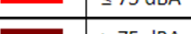

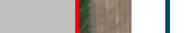
**800460 ONTARIO LTD.**  
 9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO  
 MODELLED FAÇADE TRANSPORTATION NOISE IMPACTS – DAYTIME



True North	Scale:	1:2,550	METRES
	Date: Mar 10, 2023	Rev 0.0	Figure No.
	Project No. 241.30612.00000		<b>8</b>



	Proposed Development
	Property Line
	Façade Sound Level (dBA) (see right Legend)

	≤ 30 dBA
	≤ 40 dBA
	≤ 45 dBA
	≤ 50 dBA
	≤ 55 dBA
	≤ 60 dBA
	≤ 65 dBA
	≤ 70 dBA
	≤ 75 dBA
	> 75 dBA



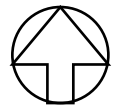
Aerial Photography from Google Earth

**800460 ONTARIO LTD.**

9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO

MODELLED FAÇADE TRANSPORTATION NOISE IMPACTS – NIGHTTIME

True North



Scale: 1:2,550

Date: Mar 10, 2023 Rev 0.0




Project No. 241.30612.00000

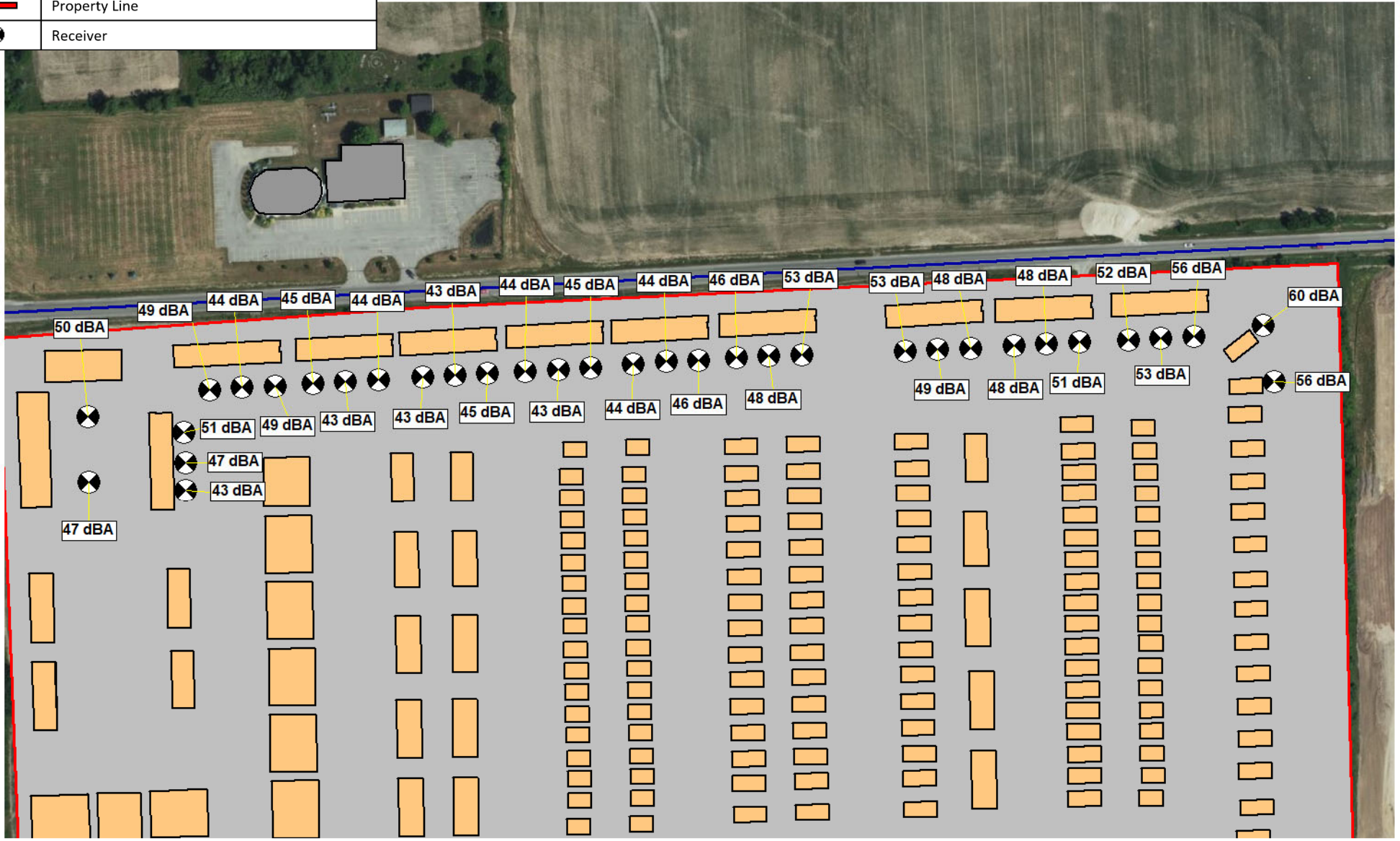
METRES

Figure No.



**9**






Legend	
	Proposed Development
	Property Line
	Receiver

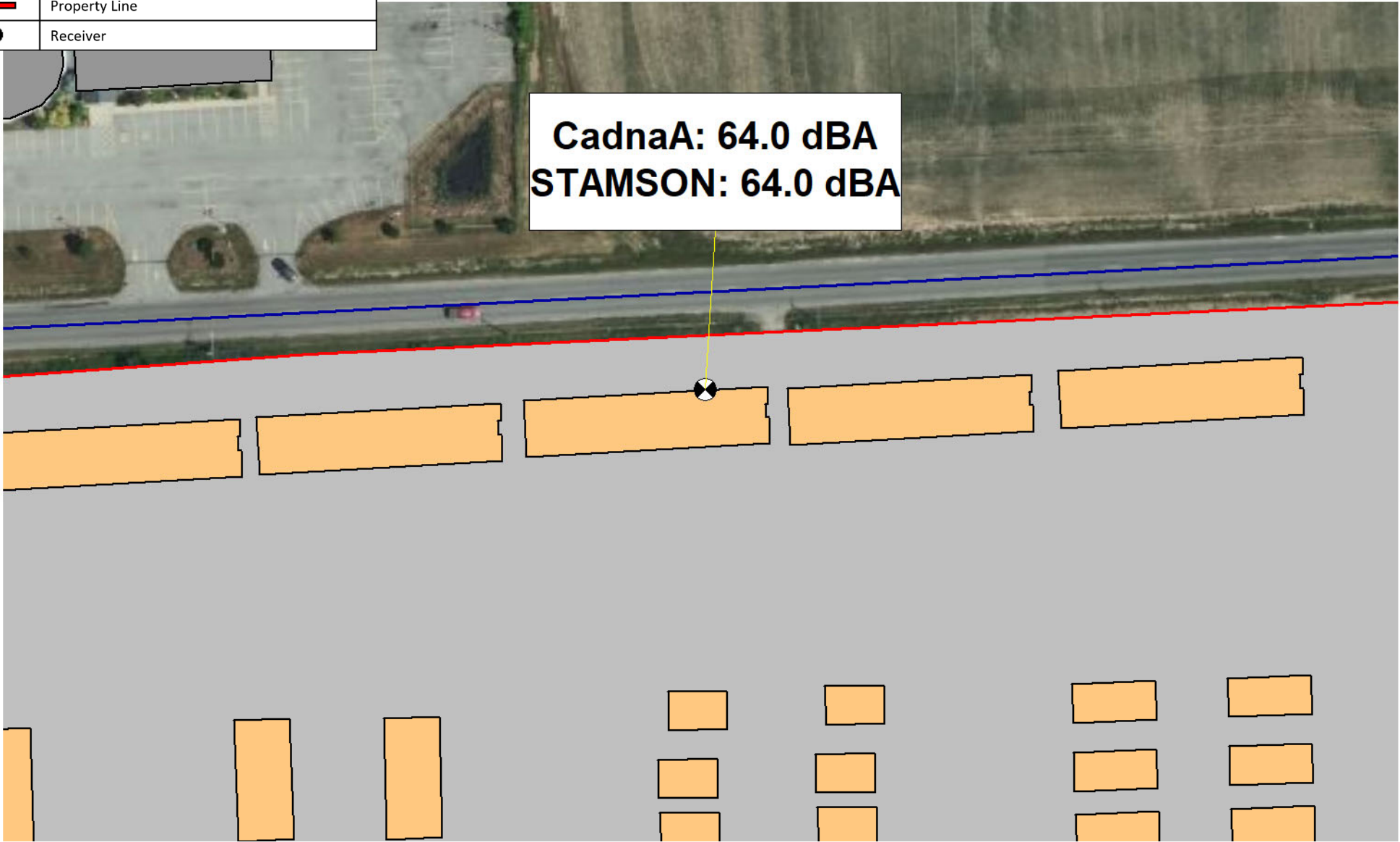


Aerial Photography from Google Earth



<p align="center"><b>800460 ONTARIO LTD.</b></p>	<p>True North</p>	<p>Scale: 1:2,500</p>	<p>METRES</p>		
<p align="center">9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO</p>		<p>Date: Mar 10, 2023</p>	<p>Rev 0.0</p>		<p>Figure No.</p>
<p align="center">MODELLED OLA TRANSPORTATION NOISE IMPACTS – DAYTIME</p>		<p>Project No. 241.30612.00000</p>	<p align="center"><b>10</b></p>		

Legend	
	Proposed Development
	Property Line
	Receiver

**CadnaA: 64.0 dBA**  
**STAMSON: 64.0 dBA**



Aerial Photography from Google Earth

<p align="center"><b>800460 ONTARIO LTD.</b></p>	<p>True North</p>	<p>Scale: 1:1,000</p>	<p>METRES</p>	
<p align="center">9304 MCLEOD ROAD – NIAGARA FALLS, ONTARIO</p>		<p>Date: Mar 10, 2023</p>	<p>Rev 0.0</p>	
<p align="center">STAMSON VS. CADNAA VALIDATION</p>		<p>Project No. 241.30612.00000</p>	<p>Figure No. <b>E.1</b></p>	

# Appendix A Concept Plans

## Compatibility/Mitigation Study-Air Quality, Noise and Vibration

9304 McLeod Road, Niagara Falls, ON

800460 Ontario Ltd.

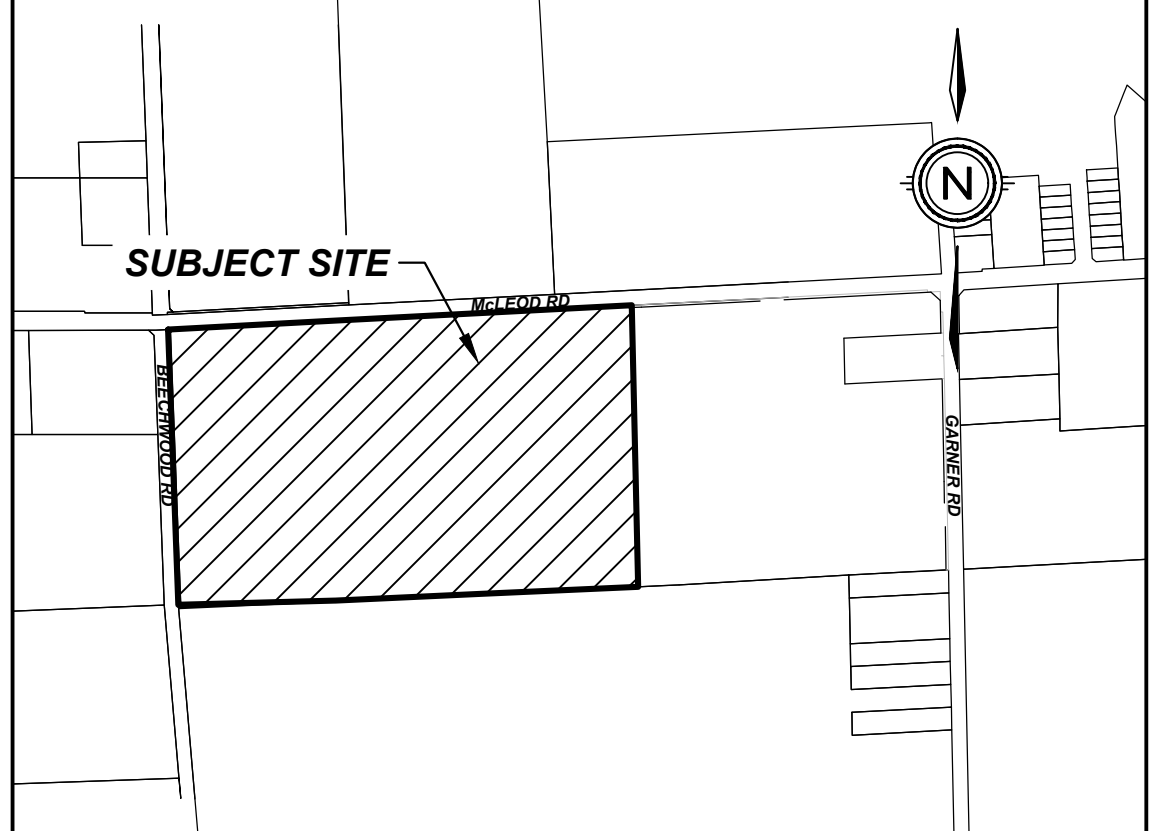
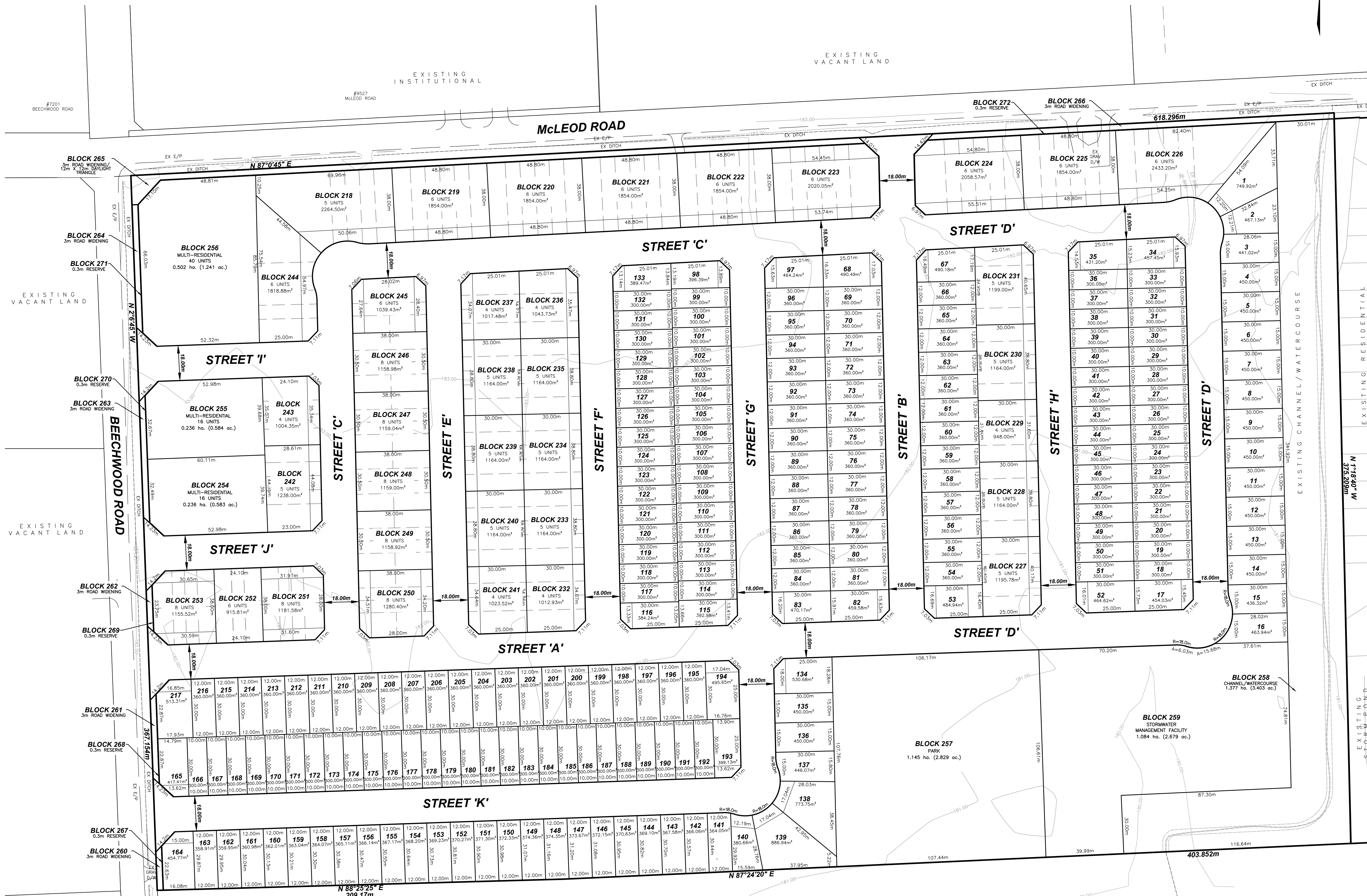
SLR Project No. 241.30612.00000

March 23, 2022



# McLEOD MEADOWS

## CITY OF NIAGARA FALLS



### KEY PLAN

N.T.S.

### DRAFT PLAN OF SUBDIVISION

### LEGAL DESCRIPTION

PART 1 & PART 2, PLAN 59R-16846; PART OF LOT 181  
GEOGRAPHIC TOWNSHIP OF STANFORD  
NOW IN THE  
CITY OF NIAGARA FALLS  
REGIONAL MUNICIPALITY OF NIAGARA

### OWNER'S CERTIFICATE

BEING THE REGISTERED OWNER, I HEREBY AUTHORIZE UPPER CANADA CONSULTANTS TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE CITY OF NIAGARA FALLS FOR APPROVAL.

DECEMBER 16, 2022  
DATE

800460 ONTARIO LIMITED

### SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED ARE CORRECTLY SHOWN.

*Allan J. Heywood*  
ALLAN J. HEYWOOD  
J.D. BARNES LTD.  
20-16-176  
DATE

### REQUIREMENTS OF SECTION 51(17) OF THE PLANNING ACT

a) SEE PLAN	e) SEE PLAN	i) SILTY SAND
b) SEE PLAN	f) SEE PLAN	j) SEE PLAN
c) SEE PLAN	g) SEE PLAN	k) FULL SERVICE
d) SEE PLAN	h) MUNICIPAL WATER	l) SEE PLAN

### LAND USE SCHEDULE

LAND USE	LOT/BLOCK	# OF UNITS	AREA(ha)	AREA(%)
SINGLE FAMILY RESIDENTIAL	LOT 1-217	217	7.764	33.87
REVERSE FRGT STREET TOWN	BLOCK 218-226	53	1.805	7.87
STREET TOWNS RESIDENTIAL	BLOCK 227-244	85	2.081	9.08
B2B TOWNS RESIDENTIAL	BLOCK 245-253	68	1.021	4.45
MULTIPLE FAMILY RESIDENTIAL	BLOCK 254-256	72	0.975	4.25
PARKLAND	BLOCK 257		1.145	5.00
CHANNEL/WATERCOURSE	BLOCK 258		1.377	6.01
STORMWATER MGMT FACILITY	BLOCK 259		1.084	4.73
3.0m ROAD WIDENING/DAYLIGHT	BLOCK 260-266		0.253	1.10
0.3m RESERVE	BLOCK 267-272		0.029	0.13
ROADWAY			5.389	23.51
<b>TOTAL</b>		<b>495</b>	<b>22.923</b>	<b>100.00</b>

DEVELOPABLE AREA: 22.923ha - 1.377ha = 21.546ha  
DEVELOPABLE DENSITY = 22.97 units/ha

#	ISSUED FOR APPROVAL	2023-03-01	M.K
0	ISSUED FOR APPROVAL	2023-03-01	M.K
#	REVISION	DATE	INIT

**UPPER CANADA CONSULTANTS**  
ENGINEERS / PLANNERS

DRAWING TITLE: **DRAFT PLAN OF SUBDIVISION**

DRAFTING: MK

DATE: DECEMBER 14, 2022

PRINTED: MARCH 8, 2023

SCALE: 1:1000

DWG No. **2054-DP** REV **0**

### DENSITY CALCULATIONS:

TARGET DENSITY: MINIMUM 53 PEOPLE AND JOBS PER GROSS HECTARE

UNITS: 2.45 PEOPLE (2026) TOTAL AREA IN Ha: 22.923 Ha - 1.377 Ha. = 21.546  
TOTAL NUMBER OF PEOPLE REQUIRED = 1077.30 PEOPLE

PROPOSED:

UNITS: 2.45 PEOPLE X 495 UNITS = 1212.75 PEOPLE

LIVE/WORK/EMPLOYMENT: 495 UNITS X 5% = 24.75 JOBS

TOTAL = 1237.50 PERSONS AND JOBS

NO. OF PEOPLE/TOTAL AREA (ha): 1237.50/21.55 ha = 57.43 PERSONS & JOBS PER HECTARE

# **Appendix B Industrial Information**

## **Compatibility/Mitigation Study-Air Quality, Noise and Vibration**

**9304 McLeod Road, Niagara Falls, ON**

**800460 Ontario Ltd.**

SLR Project No. 241.30612.00000

March 23, 2022





## Industry Listing - 9304 McLeod Road, Niagara Falls

Name	Address	Description	MECP ECA or EASR No. (Date)	MECP Guideline D-6					
				Class	A of I	R M S	Actual Dist.	Within A of I?	Within R M S?
Dan's Produce	7201 Beechwood Road	Produce Wholesaler	-	I	300	70	85	Yes	-
Cytec Canada Inc.	9061 Garner Road	Chemical Manufacturing	9547-C5ULRS (2022)	III	1000	300	800	Yes	-
McLeod Auctions Inc. (no longer existing)	9946 McLeod Road	Car Auction	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Niagara Store Fixtures	7317 Garner Road	Custom Store Fixtures Manufacturing and Commercial Millwork	-	I	70	20	330	-	-
Sure-Fix Service Group Inc.	7334 Garner Road	HVAC Contractor	-	I	70	20	425	-	-
The Mechanic's Team Auto Repair Inc.	8943 McLeod Road	Auto Repair Shop	-	I	70	20	425	-	-
Walker Construction Niagara	9101 Brown Road	Construction Company	-	I	70	20	680	-	-
BVGlazing Systems	9946 McLeod Road	Warehousing Storage	-	I	70	20	400	-	-
Boys' & Girls' Club of Niagara	8800 McLeod Road		8357-8L8Q8B (2011)	I	70	20	600	-	-
Bruce Mark Reaman	9788 McLeod Road	Waste management	R-004-4423838228 (2014) A920442 (2008)	I	70	20	180	-	-
Terratec Environmental	185 Midwest Road	Composting Facility	3203-5JBHQF (2003)	II	300	70	1700	-	-

### Notes:

A of I = Areas of Influence: Class I = 70m, Class II = 300m, Class III = 1,000m

R M S = Recommended Minimum Separation Distances: Class I = 20m, Class II = 70m, Class III = 300m.

# **Appendix C Cytec Canada Inc. MECP Permit**

## **Compatibility/Mitigation Study-Air Quality, Noise and Vibration**

**9304 McLeod Road, Niagara Falls, ON**

**800460 Ontario Ltd.**

SLR Project No. 241.30612.00000

March 23, 2022



**AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL**

NUMBER 9547-C5ULRS

Issue Date: February 3, 2022

Cytec Canada Inc.  
9061 Garner Rd  
Niagara Falls, Ontario  
L2H 0Y2

**Site Location:** Cytec Canada Inc.  
9061 Garner Rd  
Niagara Falls City, Regional Municipality of Niagara  
L2E 6S5

*You have applied under section 20.2 of Part II.1 of the Environmental Protection Act , R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:*

**Description Section**

A phosphine and phosphine derivatives facility, consisting of the following processes and support units:

- Phosphine Plant including derivatives section;
- Purification, mixing and packaging; and;
- Research and development pilot plant;

**and the following *Equipment with Specific Operational Limits* :**

- one (1) emergency flare located in the phosphine building equipped with a natural gas fired continuous pilot burner system having a maximum thermal input of 142,290 kilojoules per hour combined for the three burner units, used to burn spills, releases from safety valves, rupture disk type vents and vapour headspace in reaction vessels from Train 1 operations. Under the worst case upset, the flare combusts pyrophoric waste gas originating from a safety valve of an autoclave, having a maximum volumetric flow rate of 1,262 standard cubic metres per minute;
- one (1) emergency flare located in the flare and thermal oxidizer building equipped with a natural gas fired continuous pilot burner system having a maximum thermal input of 1,106,700 kilojoules per hour combined for the three burner units, used to burn spills, releases from safety valves, rupture disk type vents and vapour headspace in reaction vessels from Train 2 operations. Under the worst case

upset, the flare combusts pyrophoric waste gas originating from a safety valve of an autoclave, having a maximum volumetric flow rate of 1,262 standard cubic metres per minute;

- one (1) natural gas fired thermal oxidizer serving Train 1, designed for a maximum heat input of 7,157,000 kilojoules per hour equipped with a natural gas fired burner used to incinerate the following streams:
  - waste gas comprising of phosphine, nitrogen, isobutylene, butene, low levels of all raw materials and phosphine compounds from the vessel vapour headspaces, having a maximum volumetric flow rate of 4.39 standard cubic metres per minute;
  - waste organic liquid, a mixture of organic solvents and phosphine derivatives, consisting of toluene, isopropyl alcohol mixture, octene, organophosphines, diisobutylene, tri-isobutyl phosphine, methyl tosylate, cyclooctadiene, hexene and isopar-M, having a maximum flow rate of 2.5 litres per minute; and
  - waste aqueous having a volumetric flow rate of 7.57 litres per minute.

The thermal oxidizer operates at a temperature of 871 degrees Celsius with a minimum gas residence time of 2 seconds and is equipped with a continuous monitoring and recording system, a quench section, a venturi scrubber and a mist eliminator comprising of polyester fiber filters, having a dust removal efficiency of not less than 90 percent. The thermal oxidizer temperature will drop to 843 degrees Celsius during swings in operation before the waste organic liquid is shut off;

- one (1) natural gas fired thermal oxidizer serving Train 2, designed for a maximum heat input of 10,736,000 kilojoules per hour equipped with a natural gas fired burner, used to incinerate the following streams:
  - waste gas comprising of phosphine, nitrogen, isobutylene, butene, low levels of all raw materials and phosphine compounds from the vessel vapour headspaces, having a maximum volumetric flow rate of 4.39 standard cubic metres per minute;
  - waste organic liquid, a mixture of organic solvents and phosphine derivatives, consisting of toluene, isopropyl alcohol mixture, octene, organophosphines, diisobutylene, tri-isobutyl phosphine, methyl tosylate, cyclooctadiene, hexene and isopar-M, having a maximum flow rate of 3.75 litres per minute; and
  - waste aqueous having a volumetric flow rate of 11.4 litres per minute.

The thermal oxidizer operates at a temperature of 871 degrees Celsius and a minimum gas residence time of 2 seconds, and is equipped with a continuous monitoring and recording system, a quench section, a venturi scrubber and a mist eliminator comprising of polyester fiber filters, having a dust removal efficiency of

not less than 90 percent. The thermal oxidizer will drop to 843 degrees Celsius during swings in operation before the waste organic liquid is shut off;

- two (2) natural gas fired boilers located in the steam plant, each having a total maximum heat input of 13,900,000 kilojoules per hour;
- two (2) natural gas fired boilers located in the utilities building, each having a total maximum heat input of 22,051,788 kilojoules per hour;

including the Equipment and any other ancillary and support processes and activities, operating at a Facility Production Limit of up to **40,000 tonnes of phosphine based chemicals per year** discharging to the air as described in the Original ESDM Report.

*For the purpose of this environmental compliance approval, the following definitions apply:*

1. "ACB list" means the document entitled "Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants", as amended from time to time and published by the Ministry and available on a Government website;
2. "Acceptable Point of Impingement Concentration" means a concentration accepted by the Ministry as not likely to cause an adverse effect for a Compound of Concern that,
  - a. is not identified in the ACB list, or
  - b. is identified in the ACB list as belonging to the category "Benchmark 2" and has a concentration at a Point of Impingement that exceeds the concentration set out for the contaminant in that document.With respect to the Original ESDM Report, the Acceptable Point of Impingement Concentration for a Compound of Concern mentioned above is the concentration set out in the Original ESDM Report;
3. "Acoustic Assessment Report" means the report, prepared in accordance with Publication NPC-233 and Appendix A of the Basic Comprehensive User Guide, by Slavi Grozev, P.Eng. / RWDI AIR Inc. and dated October 7, 2021 submitted in support of the application, that documents all sources of noise emissions and Noise Control Measures present at the Facility, as updated in accordance with Condition 5 of this Approval;
4. "Acoustic Assessment Summary Table" means a table prepared in accordance with the Basic Comprehensive User Guide summarising the results of the Acoustic Assessment Report, as updated in accordance with Condition 5 of this Approval;

5. "Approval" means this entire Environmental Compliance Approval and any Schedules to it;
6. "Basic Comprehensive User Guide" means the Ministry document titled "Basic Comprehensive Certificates of Approval (Air) User Guide" dated March 2011, as amended;
7. "Best Management Practices Plan for Facility Flares" means a document or a set of documents which describe record keeping and notification processes for Flaring Events at the Facility;
8. "Company" means **Cytec Canada Inc.** that is responsible for the construction or operation of the Facility and includes any successors and assigns in accordance with section 19 of the EPA;
9. "Compound of Concern" means a contaminant described in paragraph 4 subsection 26 (1) of O. Reg. 419/05, namely, a contaminant that is discharged from the Facility in an amount that is not negligible;
10. "Description Section" means the section on page one of this Approval describing the Company's operations and the Equipment located at the Facility and specifying the Facility Production Limit for the Facility;
11. "Director" means a person appointed for the purpose of section 20.3 of the EPA by the Minister pursuant to section 5 of the EPA;
12. "District Manager" means the District Manager of the appropriate local district office of the Ministry, where the Facility is geographically located;
13. "Emission Summary Table" means a table described in paragraph 14 of subsection 26 (1) of O. Reg. 419/05;
14. "Environmental Assessment Act" means the *Environmental Assessment Act*, R.S.O. 1990, c.E.18;
15. "EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19;
16. "Equipment" means equipment or processes described in the ESDM Report, this Approval and in the Schedules referred to herein and any other equipment or processes;
17. "Equipment with Specific Operational Limits" means emergency flares, natural gas fired thermal oxidizers, natural gas fired boilers each with a heat input greater than 10.5 gigajoules per hour and any Equipment related to the thermal oxidation of waste or waste derived fuels, fume incinerators or any other Equipment that is specifically referenced in any published Ministry document that outlines specific operational guidance that must be considered by the Director in issuing an Approval;
18. "ESDM Report" means the most current Emission Summary and Dispersion

Modelling Report that describes the Facility. The ESDM Report is based on the Original ESDM Report and is updated after the issuance of this Approval in accordance with section 26 of O. Reg. 419/05 and the Procedure Document;

19. "Facility" means the entire operation located on the property where the Equipment is located;
20. "Facility Production Limit" means the production limit placed by the Director on the main product(s) or raw materials used by the Facility;
21. "Flaring Event" means the operation of an emergency flare that was reported to the Ministry's Spills Action Centre and/or the discharge of greater than 10 kilograms of phosphine (CAS no.7803-51-2) to an emergency flare;
22. "Log" means a document that contains a record of each change that is required to be made to the ESDM Report and Acoustic Assessment Report, including the date on which the change occurred. For example, a record would have to be made of a more accurate emission rate for a source of contaminant, more accurate meteorological data, a more accurate value of a parameter that is related to a source of contaminant, a change to a Point of Impingement and all changes to information associated with a Modification to the Facility that satisfies Condition 2;
23. "Low Flow Event" means a discharge of phosphine (CAS no.7803-51-2) to flare other than a Flaring Event and includes low flow and/or low volume discharges to flare;
24. "Minister" means the Minister of the Environment, Conservation and Parks or such other member of the Executive Council as may be assigned the administration of the EPA under the Executive Council Act;
25. "Ministry" means the ministry of the Minister;
26. "Modification" means any construction, alteration, extension or replacement of any plant, structure, equipment, apparatus, mechanism or thing, or alteration of a process or rate of production at the Facility that may discharge or alter the rate or manner of discharge of a Compound of Concern to the air or discharge or alter noise or vibration emissions from the Facility;
27. "Noise Control Measures" means measures to reduce the noise emissions from the Facility and/or Equipment including, but not limited to, silencers, acoustic louvres, enclosures, absorptive treatment, plenums and barriers;
28. "O. Reg. 419/05" means Ontario Regulation 419/05: Air Pollution – Local Air Quality, made under the EPA;
29. "Original ESDM Report" means the Emission Summary and Dispersion Modelling Report which was prepared in accordance with section 26 of O. Reg. 419/05 and the Procedure Document by RWDI AIR Inc. and dated September 30, 2020

submitted in support of the application, and includes any changes to the report made up to the date of issuance of this Approval;

30. "Point of Impingement" has the same meaning as in section 2 of O. Reg. 419/05;
31. "Point of Reception" means Point of Reception as defined by Publication NPC-300;
32. "Procedure Document" means Ministry guidance document titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated March 2018, as amended;
33. "Processes with Significant Environmental Aspects" means the Equipment which, during regular operation, would discharge one or more contaminants into the air in an amount which is not considered as negligible in accordance with section 26 (1) 4 of O. Reg. 419/05 and the Procedure Document;
34. "Publication NPC-207" means the Ministry draft technical publication "Impulse Vibration in Residential Buildings", November 1983, supplementing the Model Municipal Noise Control By-Law, Final Report, published by the Ministry, August 1978, as amended;
35. "Publication NPC-233" means the Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995, as amended;
36. "Publication NPC-300" means the Ministry Publication NPC-300, "Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300", August 2013, as amended;
37. "*Report EPS 1/PG/7*" means the report titled "Protocols and Performance Specifications for Continuous Monitoring of Gaseous Emissions from Thermal Power Generation" dated December 2005 and published by Environment Canada, as amended.
38. "Schedules" means the following schedules attached to this Approval and forming part of this Approval namely:
  - Schedule A - Supporting Documentation
  - Schedule B - Continuous Temperature Monitor and Recorder;
  - Schedule C - Carbon Monoxide Monitor and Recorder;
  - Schedule D - Continuous Oxygen Monitor and Recorder; and
  - Schedule E - Flaring Event Emission Summary and Dispersion Modelling Report.
39. "Thermal Oxidizers" means the two (2) thermal oxidizers (referenced in the Original ESDM Report as sources 74 and AH) each equipped with a quenched



section, venturi scrubber and mist eliminator, described in the Company's application, this Approval and in the supporting documentation submitted with the application, to the extent approved by this Approval;

40. "Toxicologist" means a qualified professional currently active in the field of risk assessment and toxicology that has a combination of formal university education, training and experience necessary to assess contaminants; and
41. "Written Summary Form" means the electronic questionnaire form, available on the Ministry website, and supporting documentation, that documents the activities undertaken at the Facility in the previous calendar year.

*You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:*

## TERMS AND CONDITIONS

### 1. GENERAL

1. Except as otherwise provided by this Approval, the Facility shall be designed, developed, built, operated and maintained in accordance with the terms and conditions of this Approval and in accordance with the following Schedules attached hereto:
  - Schedule A - Supporting Documentation
  - Schedule B - Continuous Temperature Monitor and Recorder;
  - Schedule C - Carbon Monoxide Monitor and Recorder;
  - Schedule D - Continuous Oxygen Monitor and Recorder; and
  - Schedule E - Flaring Event Emission Summary and Dispersion Modelling Report.

### 2. LIMITED OPERATIONAL FLEXIBILITY

1. Pursuant to section 20.6 (1) of the EPA and subject to Conditions 2.2 and 2.3 of this Approval, future construction, alterations, extensions or replacements are approved in this Approval if the future construction, alterations, extensions or replacements are Modifications to the Facility that:
  - a. are within the scope of the operations of the Facility as described in the Description Section of this Approval;
  - b. do not result in an increase of the Facility Production Limit above the level specified in the Description Section of this Approval; and

c. result in compliance with the performance limits as specified in Condition 4.

2. Condition 2.1 does not apply to,

a. the addition of any new Equipment with Specific Operational Limits or to the Modification of any existing Equipment with Specific Operational Limits at the Facility; and

b. Modifications to the Facility that would be subject to the Environmental Assessment Act.

3. Condition 2.1 of this Approval shall expire December 19, 2027, unless this Approval is revoked prior to the expiry date. The Company may apply for renewal of Condition 2.1 of this Approval by including an ESDM Report and an Acoustic Assessment Report that describes the Facility as of the date of the renewal application.

### **3. REQUIREMENT TO REQUEST AN ACCEPTABLE POINT OF IMPINGEMENT CONCENTRATION**

1. Prior to making a Modification to the Facility that satisfies Condition 2.1.a. and 2.1.b., the Company shall prepare a proposed update to the ESDM Report to reflect the proposed Modification.

2. The Company shall request approval of an Acceptable Point of Impingement Concentration for a Compound of Concern if the Compound of Concern is not identified in the ACB list as belonging to the category “Benchmark 1” and a proposed update to an ESDM Report indicates that one of the following changes with respect to the concentration of the Compound of Concern may occur:

a. The Compound of Concern was not a Compound of Concern in the previous version of the ESDM Report and

i. the concentration of the Compound of Concern exceeds the concentration set out for the contaminant in the ACB list; or

ii. the Compound of Concern is not identified in the ACB list; or

b. The concentration of the Compound of Concern in the updated ESDM Report exceeds the higher of,

i. the most recent Acceptable Point of Impingement Concentration, and

ii. the concentration set out for the contaminant in the ACB list, if the contaminant is identified in that document.

3. The request required by Condition 3.2 shall propose a concentration for the

Compound of Concern and shall contain an assessment, performed by a Toxicologist, of the likelihood of the proposed concentration causing an adverse effect at Points of Impingement.

4. If the request required by Condition 3.2 is a result of a proposed Modification described in Condition 3.1, the Company shall submit the request, in writing, to the Director at least 30 days prior to commencing to make the Modification. The Director shall provide written confirmation of receipt of this request to the Company.
5. If a request is required to be made under Condition 3.2 in respect of a proposed Modification described in Condition 3.1, the Company shall not make the Modification mentioned in Condition 3.1 unless the request is approved in writing by the Director.
6. If the Director notifies the Company in writing that the Director does not approve the request, the Company shall,
  - a. revise and resubmit the request; or
  - b. notify the Director that it will not be making the Modification.
7. The re-submission mentioned in Condition 3.6 shall be deemed a new submission under Condition 3.2.
8. If the Director approves the request, the Company shall update the ESDM Report to reflect the Modification.
9. Condition 3 does not apply if Condition 2.1 has expired.

#### **4. PERFORMANCE LIMITS**

1. Subject to Condition 4.2, the Company shall not discharge or cause or permit the discharge of a Compound of Concern into the air if,
  - a. the Compound of Concern is identified in the ACB list as belonging to the category "Benchmark 1" and the discharge results in the concentration at a Point of Impingement exceeding the Benchmark 1 concentration; or
  - b. the Compound of Concern is not identified in the ACB list as belonging to the category "Benchmark 1" and the discharge results in the concentration at a Point of Impingement exceeding the higher of,
    - i. if an Acceptable Point of Impingement Concentration exists, the most recent Acceptable Point of Impingement Concentration, and
    - ii. the concentration set out for the contaminant in the ACB list, if the contaminant is identified in that document.
2. Condition 4.1 does not apply if the benchmark set out in the ACB list has a

10-minute averaging period and no ambient monitor indicates an exceedance at a Point of Impingement where human activities regularly occur at a time when those activities regularly occur.

3. The Company shall, at all times, ensure that the noise emissions from the Facility comply with the limits set out in Ministry Publication NPC-300.
4. The Company shall, at all times, ensure that the vibration emissions from the Facility comply with the limits set out in Ministry Publication NPC-207.
5. The Company shall operate any Equipment with Specific Operational Limits approved by this Approval in accordance with the Original ESDM Report and Conditions 7, 8, 10, 11 and 12 in this Approval.

## **5. DOCUMENTATION REQUIREMENTS**

1. The Company shall maintain an up-to-date Log.
2. No later than March 31 in each year, the Company shall update the Acoustic Assessment Report and shall update the ESDM Report in accordance with section 26 of O. Reg. 419/05 so that the information in the reports is accurate as of December 31 in the previous year.
3. The Company shall make the Emission Summary Table (see section 27 of O. Reg. 419/05) and Acoustic Assessment Summary Table available for examination by any person, without charge, by posting it on the Internet or by making it available during regular business hours at the Facility.
4. The Company shall, within three (3) months after the expiry of Condition 2.1 of this Approval, update the ESDM Report and the Acoustic Assessment Report such that the information in the reports is accurate as of the date that Condition 2.1 of this Approval expired.
5. Conditions 5.1 and 5.2 do not apply if Condition 2.1 has expired.

## **6. REPORTING REQUIREMENTS**

1. Subject to Condition 6.2, the Company shall provide the Director no later than June 30 of each year, a Written Summary Form to be submitted through the Ministry's website and by email to [Environment.Niagara@ontario.ca](mailto:Environment.Niagara@ontario.ca) that shall include the following:
  - a. a declaration of whether the Facility was in compliance with section 9 of the EPA, O. Reg. 419/05 and the conditions of this Approval;
  - b. a summary of each Modification satisfying Condition 2.1.a. and 2.1.b. that took place in the previous calendar year that resulted in a change in the previously calculated concentration at a Point of Impingement for any Compound of Concern or resulted in a change in the sound levels reported in the Acoustic Assessment Summary Table at any Point of

Reception.

2. Condition 6.1 does not apply if Condition 2.1 has expired.

## **7. OPERATION AND MAINTENANCE**

1. The Company shall prepare and implement, not later than three (3) months from the date of this Approval, operating procedures and maintenance programs for all Processes with Significant Environmental Aspects, which shall specify as a minimum:
  - a. frequency of inspections and scheduled preventative maintenance;
  - b. procedures to prevent upset conditions;
  - c. procedures to minimize all fugitive emissions;
  - d. procedures to prevent and/or minimize odorous emissions;
  - e. procedures to prevent and/or minimize noise emissions;
  - f. procedures for record keeping activities relating to the operation and maintenance program;
  - g. routine and emergency operating and maintenance procedures recommended by Thermal Oxidizers, the continuous monitoring and recording systems and emergency flares suppliers;
  - h. calibration procedures of the continuous monitoring and recording systems;
  - i. operator training which is to be provided by an individual experienced with Thermal Oxidizer Systems and emergency flares;
  - j. procedures for optimizing the operation of the Thermal Oxidizers to minimize the emissions from the Thermal Oxidizers;
  - k. periodic inspection of the Thermal Oxidizers which are to be conducted by individuals experienced with the Thermal Oxidizers;
  - l. procedures for recording and responding to complaints regarding the operation of the Thermal Oxidizers;
  - m. procedures to record the usage rate of chemicals in fume hoods; and
  - n. The Company shall ensure that any Equipment subject to Guideline A-9 is operated in compliance with the requirements of Guideline A-9, and that the emissions of nitrogen oxides, expressed collectively as nitrogen dioxide equivalent, from the natural gas fired boilers having a maximum heat input greater than 10.5 gigajoules per hour, shall not exceed the nitrogen oxides emission limit of 26 grams per gigajoule of input fuel energy.

2. The Company shall ensure that the combustion chambers of each of the thermal oxidizers are not loaded unless the continuous temperature monitoring system is fully operational.
3. The Company shall ensure that no substances containing chlorinated and/or fluorinated and/or brominated compounds, including polyvinyl chloride and Teflon are combusted in the Thermal Oxidizers.
4. The Company shall ensure that all Processes with Significant Environmental Aspects are operated and maintained in accordance with this Approval, the operating procedures and maintenance programs.

## **8. FLARE OPERATIONS**

1. The Company shall immediately implement the Best Management Practices Plan for Facility Flares entitled "Best Management Practices Plan (BMPP) for Facility Flares", dated January 27, 2022, as amended.
  - a. The Company shall:
    - i. review and evaluate on a yearly basis, the Best Management Practices Plan for Facility Flares;
    - ii. record the results of each yearly review and update the Best Management Practices Plan for Facility Flares within two (2) months of the completion of the yearly review;
    - iii. maintain the updated Best Management Practices Plan for Facility Flares at the Facility;
    - iv. implement, at all times, the most recent version of the Best Management Practices Plan for Facility Flares.
2. The Company shall notify the District Manager as soon as reasonably possible of each Flaring Event, and provide the following information following each Flaring Event as soon as reasonable possible:
  - a. the start and end times of the Flaring Event;
  - b. the type of gas sent to flare;
  - c. estimated total volume and mass of gas sent to flare;
  - d. the contaminants and the mass of each contaminant discharged during the Flaring Event;
  - e. a summary of investigations conducted including an assessment of root causes and failure analyses linked to the Flaring Event;
  - f. a summary of findings from investigations conducted;
  - g. corrective actions taken to prevent future Flaring Events;

- h. any remaining actions and their proposed completion dates;
  - i. wind direction/weather details at time of Flaring Event;
  - j. available photos/video during the Flaring Event; and
  - k. details regarding if, when and how neighbours were notified of the Flaring Event.
3. The Company shall notify the District Manager as soon as reasonably possible of each Low Flow Event, and provide the following information following each Low Flow Event:
- a. the start and end times of the Low Flow Event;
  - b. estimated total volume and mass of phosphine (CAS no.7803-51-2) sent to flare;
  - c. the contaminants and the mass of each contaminant discharged during the Low Flow Event;
  - d. a summary of investigations conducted including an assessment of root causes and failure analyses linked to the Low Flow Event;
  - e. a summary of findings from investigations conducted;
  - f. corrective actions taken to prevent future Low Flow Events;
  - g. any remaining actions and their proposed completion dates;
  - h. wind direction/weather details at time of Low Flow Event;
  - i. available photos/video during the Low Flow Event; and
  - j. details regarding if, when and how neighbours were notified of the Low Flow Event.
4. The Company shall prepare, at the end of each calendar quarter, and retain on-site for inspection by the Ministry, upon request, a report for the previous calendar quarter that includes at a minimum:
- a. a list of Flaring Events and Low Flow Events, provided in table format, including start and end times, type and total volume and mass of gas sent to flare, and the contaminants discharged during the events;
  - b. a summary of the assessment of root cause and failure analyses;
  - c. a summary of actions taken to prevent future Flaring Events and Low Flow Events;
  - d. a summary of pending actions to be taken to prevent future Flaring Events and Low Flow Events; and
  - e. as established within the Best Management Practices Plan for Facility

Flares, a summary of efforts taken to notify local communities and other interested parties of Flaring Events and Low Flow Events.

5. The Company shall prepare, at the end of each calendar quarter, and provide to the District Manager a Flaring Event Emission Summary and Dispersion Modelling Report in accordance with section 26 of O.Reg. 419/05 and prepared in accordance with the requirements outlined in Schedule E. The Flaring Event Emission Summary and Dispersion Modelling Report shall assess each Flaring Event during the previous calendar quarter, and shall be provided within 4 weeks of the receipt of, from the Ministry, local meteorological data reflective of meteorological and local land use conditions for each of the Flaring Events during the calendar quarter.
  - a. Despite subsection 5, the Director may waive in writing the requirement to assess a specific Flaring Event.

## **9. COMPLAINTS RECORDING AND REPORTING**

1. If at any time, the Company receives an environmental complaint from the public regarding the operation of the Equipment approved by this Approval, the Company shall take the following steps:
  - a. Record and number each complaint, either electronically or in a log book. The record shall include the following information: the time and date of the complaint and incident to which the complaint relates, the nature of the complaint, wind direction at the time and date of the incident to which the complaint relates and, if known, the address of the complainant.
  - b. Notify the District Manager of the complaint within two (2) business days after the complaint is received, or in a manner acceptable to the District Manager.
  - c. Initiate appropriate steps to determine all possible causes of the complaint, and take the necessary actions to appropriately deal with the cause of the subject matter of the complaint.
  - d. Complete and retain on-site a report written within five (5) business days of the complaint date. The report shall list the actions taken to appropriately deal with the cause of the complaint and set out steps to be taken to avoid the recurrence of similar incidents.

## **10. RECORD KEEPING REQUIREMENTS**

1. Any information requested by any employee in or agent of the Ministry concerning the Facility and its operation under this Approval, including, but not limited to, any records required to be kept by this Approval, shall be



provided to the employee in or agent of the Ministry, upon request, in a timely manner.

2. Unless otherwise specified in this Approval, the Company shall retain, for a minimum of five (5) years from the date of their creation all reports, records and information described in this Approval, including,
  - a. a copy of the Original ESDM Report and each updated version;
  - b. a copy of each version of the Acoustic Assessment Report;
  - c. supporting information used in the emission rate calculations performed in the ESDM Reports and Acoustic Assessment Reports;
  - d. the records in the Log;
  - e. copies of each Written Summary Form provided to the Ministry under Condition 6.1 of this Approval;
  - f. records of maintenance, repair and inspection of Equipment related to all Processes with Significant Environmental Aspects;
  - g. all records on maintenance, repair and inspection of the continuous monitoring and recording system, and original date that work was recommended;
  - h. all records produced by the continuous monitoring and recording system;
  - i. all records on operators training;
  - j. all records of the usage rate of chemicals in fumehoods;
  - k. description of all upset conditions associated with the operation of the Thermal Oxidizers and remedial action taken; and
  - l. all records related to environmental complaints made by the public as required by Condition 9 of this Approval.

## **11. EQUIPMENT WITH SPECIFIC OPERATIONAL LIMITS**

1. The Company shall ensure that the Thermal Oxidizers, used to incinerate waste gas, waste organic liquid and water containing organic are designed and operated to comply, at all times, with the following performance requirements:
  - a. the temperature in the combustion chamber, as recorded by the continuous monitoring and recording system, shall be at least 871 degrees Celsius throughout the combustion cycle but may drop to 843 degrees Celsius during swings in operation before the waste organic liquid is shut off; and

- b. the minimum residence time of the combustion gases in the combustion chamber shall be 2.0 seconds, operating at a temperature of not less than 843 degrees Celsius.

## **12. CONTINUOUS MONITORING**

1. The Company shall install, conduct and maintain a program to continuously monitor:
  - a. the temperature at the location in the combustion chamber of the Train 1 Thermal Oxidizer where the minimum retention time of the combustion gases at a minimum temperature of 843 degrees Celsius at 2 seconds is achieved. The continuous monitoring and recording system shall be equipped with continuous recording devices, and shall comply with the requirements outlined in the attached Schedule B1. The continuous monitoring and recording system shall comply with the requirements outlined in the attached Schedule B2 by January 31, 2023.
  - b. the temperature at the location in the combustion chamber of the Train 2 Thermal Oxidizer where the minimum retention time of the combustion gases at a minimum temperature of 843 degrees Celsius at 2 seconds is achieved. The continuous monitoring and recording system shall be equipped with continuous recording devices, and shall comply with the requirements outlined in the attached Schedule B2.
  - c. carbon monoxide at an accessible location where the measurements are representative of the actual concentrations of carbon monoxide in the gases leaving each of the Thermal Oxidizers. The continuous monitoring and recording system shall be equipped with continuous recording devices, and shall comply with the requirements outlined in the attached Schedule C.
  - d. oxygen at an accessible location where the measurements are representative of the actual concentrations of oxygen in the gases leaving each of the Thermal Oxidizers. The continuous monitoring and recording system shall be equipped with continuous recording devices, and shall comply with the requirements outlined in the attached Schedule D.

## **13. REVOCATION OF PREVIOUS APPROVALS**

1. This Approval replaces and revokes all Certificates of Approval (Air) issued under section 9 EPA and Environmental Compliance Approvals issued under Part II.1 EPA to the Facility in regards to the activities mentioned in subsection 9(1) of the EPA and dated prior to the date of this Approval.

# **SCHEDULE A**

## Supporting Documentation

1. Environmental Compliance Approval Application, dated October 29, 2020, signed by Heidi Kelly and submitted by the *Company*;
2. Acoustic Assessment Report, prepared by Slavi Grozev, P.Eng., RWDI AIR Inc. and dated October 7, 2021;
3. Emission Summary and Dispersion Modelling Report, prepared by RWDI AIR Inc. and dated September 30, 2020;
4. The emails from Sharon Schajnoha, RWDI Air Inc. dated July 10, 11 and 24, 2017.
5. The letter dated March 10, 2017 and signed by Hedi Kelly, Health, Safety and Environmental Engineer, Cytec Canada Inc.; and
6. The letters (e-mails) dated March 10 and 13, 2017 and provided by Katie Allen and Sharon Schajnoha, RWDI AIR Inc.

## SCHEDULE B1

### Continuous Temperature Monitoring and Recording System Requirements

#### PARAMETER:

Temperature

#### LOCATION:

The sample point for the Continuous Temperature Monitoring and Recording system shall be located at a location where the measurements are representative of the minimum temperature of the gases leaving the combustion chamber of the Thermal Oxidizer.

#### PERFORMANCE:

The Continuous Temperature Monitoring system shall meet the following minimum performance specifications for the following parameters.

PARAMETERS	SPECIFICATION
Type	shielded "K" type thermocouple, or equivalent
Accuracy	± 1.5 percent of the minimum gas

	temperature
--	-------------

**RECORDER:**

The recorder must be capable of registering continuously the measurement of the monitoring system without a significant loss of accuracy and with a time resolution of 1 minute or better.

**RELIABILITY:**

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 95 percent of the time for each calendar quarter.

**SCHEDULE B2**

**Continuous Temperature Monitoring and Recording System Requirements**

**PARAMETER:**

Temperature

**LOCATION:**

The sample point for the Continuous Temperature Monitoring and Recording system shall be located at a location where the measurements are representative of the minimum temperature of the gases leaving the combustion chamber of the Thermal Oxidizer.

**PERFORMANCE:**

The Continuous Temperature Monitoring system shall meet the following minimum performance specifications for the following parameters.

PARAMETERS	SPECIFICATION
Type	shielded "K" type thermocouple, or equivalent
Accuracy	± 1.5 percent of the minimum gas temperature
Response Time (95%)	60 sec. (max)
Operating Range (Full Scale)	1.5 times approval limit
Standard Tolerance	± 2.2 °C or ± 0.75%
Resolution	0.1 °C

Calibration	Per manufacturer's recommendations
-------------	------------------------------------

**RECORDER:**

The recorder must be capable of registering continuously the measurement of the monitoring system without a significant loss of accuracy and with a time resolution of 1 minute or better.

**RELIABILITY:**

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

**SCHEDULE C**

**Carbon Monoxide Monitor and Recorder**

**PARAMETER:**

Carbon Monoxide

**INSTALLATION:**

The continuous carbon monoxide monitor shall be installed at an accessible location where the measurements are representative of the actual concentrations of carbon monoxide in the gases leaving each of the Thermal Oxidizers and shall meet the following installation specifications:

PARAMETERS	SPECIFICATION
Range (parts per million, ppm)	0 to highest concentration anticipated from the source
Calibration Gas Ports	close to the sample point

**PERFORMANCE:**

The continuous carbon monoxide monitor shall meet the following minimum performance specifications for the following parameters:

PARAMETERS	SPECIFICATION
Span Value (nearest ppm equivalent)	2 times the average normal concentration of the source
Relative Accuracy	< 10 percent of the mean value of the reference method test
Calibration Error	< 2 percent of actual concentration
System Bias	< 4 percent of the mean value of the reference method test

Procedure for Zero and Span Calibration Check	all system components check
Zero Calibration Drift (24-hour)	< 5 percent of span value
Span Calibration Drift (24-hour)	< 5 percent of span value
Response Time (90 percent response to step change)	< 90 seconds
Operational Test Period	> 168 hours without corrective maintenance

**CALIBRATION:**

Daily calibration drift checks on the monitor shall be performed and recorded when each of the Thermal Oxidizers are operating and in accordance with the requirements of Report EPS 1/PG/7.

**DATA RECORDER:**

The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

**RELIABILITY:**

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter when each of the Thermal Oxidizers is operating.

**SCHEDULE D**

**Continuous Oxygen Monitor and Recorder**

**INSTALLATION:**

The continuous oxygen monitor shall be installed at an accessible location where the measurements are representative of the actual concentrations of oxygen in the gases leaving each of the Thermal Oxidizers and shall meet the following installation specifications:

PARAMETERS	SPECIFICATION
Range (percentage)	0 to highest concentration anticipated from the source
Calibration Gas Ports	close to the sample point

**PERFORMANCE:**

The continuous oxygen monitor shall meet the following minimum performance specifications for the following parameters:

<b>PARAMETERS</b>	<b>SPECIFICATION</b>
Span Value (percentage)	2 times the average normal concentration of the source
Relative Accuracy	< 10 percent of the mean value of the reference method test
Calibration Error	0.25 percent O2
System Bias	< 4 percent of the mean value of the reference method test
Procedure for Zero and Span Calibration Check	all system components checked
Zero Calibration Drift (24-hour)	< 0.5 percent O2
Span Calibration Drift (24-hour)	< 0.5 percent O2
Response Time (90 percent of full scale)	< 90 seconds
Operational Test Period	> 168 hours without corrective maintenance

**CALIBRATION:**

Daily calibration drift checks on the monitor shall be performed and recorded when each of the Thermal Oxidizers is operating and in accordance with the requirements of Report EPS 1/PG/7.

**DATA RECORDER:**

The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

**RELIABILITY:**

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter when each of the Thermal Oxidizers is operating.

**SCHEDULE E**

**Flaring Event Emission Summary and Dispersion Modelling Report**

1. A Flaring Event Emission Summary and Dispersion Modelling Report required by condition 8.5. shall be prepared in accordance with the following requirements:
2. The Flaring Event Emission Summary and Dispersion Modelling Report need only be prepared with respect to discharges of Phosphine, Phosphorous Pentoxide and

Phosphoric Acid during each Flaring Event and need not list all contaminants that are discharged from the Facility, despite anything to the contrary in section 26 of O.Reg. 419/05; the Flaring Event Emission Summary and Dispersion Modelling Report must include all discharges of these contaminants from all sources of these contaminants at the Facility in accordance with section 3 and 26 of O.Reg. 419/05;

3. The Flaring Event Emission Summary and Dispersion Modelling Report shall be prepared with respect to each discharge of Phosphine, Phosphorous Pentoxide and Phosphoric Acid for 1-hour and 24-hour averaging periods for each Flaring Event;

4. Despite Section 10 of O.Reg. 419/05, an approved dispersion model shall be used in accordance with a scenario that uses actual operating data for the Facility during each Flaring Event;

5. Despite Section 11 of O.Reg. 419/05, an approved dispersion model shall be used with an emission rate that is an accurate reflection of the emission rate of each contaminant during each Flaring Event, reflected through the use and input of variable emissions by hour;

6. Where the Flaring Event Emission Summary and Dispersion Modelling Report is being prepared with respect to a 1-hour averaging period, the rolling hour during each Flaring Event that would result in the highest concentration of the contaminant at a Point of Impingement must be used; and

7. The approved dispersion model shall be used with local meteorological data approved under paragraph 3 of subsection 13 (1) of O.Reg. 419/05 as an accurate reflection of meteorological and local land use conditions during the period of each Flaring Event.

*The reasons for the imposition of these terms and conditions are as follows:*

**1. GENERAL**

Condition No. 1 is included to require the Approval holder to build, operate and maintain the Facility in accordance with the Supporting Documentation in Schedule A considered by the Director in issuing this Approval.

**2. LIMITED OPERATIONAL FLEXIBILITY, REQUIREMENT TO REQUEST AN ACCEPTABLE POINT OF IMPINGEMENT CONCENTRATION AND PERFORMANCE LIMITS**

Conditions No. 2, 3 and 4 are included to limit and define the Modifications permitted by this Approval, and to set out the circumstances in which the Company shall request approval of an Acceptable Point of Impingement



Concentration prior to making Modifications. The holder of the Approval is approved for operational flexibility for the Facility that is consistent with the description of the operations included with the application up to the Facility Production Limit. In return for the operational flexibility, the Approval places performance based limits that cannot be exceeded under the terms of this Approval. Approval holders will still have to obtain other relevant approvals required to operate the Facility, including requirements under other environmental legislation such as the Environmental Assessment Act.

### **3. DOCUMENTATION REQUIREMENTS**

Condition No. 5 is included to require the Company to maintain ongoing documentation that demonstrates compliance with the performance limits as specified in Condition 4 of this Approval and allows the Ministry to monitor ongoing compliance with these performance limits. The Company is required to have an up to date ESDM Report and Acoustic Assessment Report that describe the Facility at all times and make the Emission Summary Table and Acoustic Assessment Summary Table from these reports available to the public on an ongoing basis in order to maintain public communication with regard to the emissions from the Facility.

### **4. REPORTING REQUIREMENTS**

Condition No. 6 is included to require the Company to provide a yearly Written Summary Form to the Ministry, to assist the Ministry with the review of the site's compliance with the EPA, the regulations and this Approval.

### **5. OPERATION AND MAINTENANCE**

Condition No. 7 is included to require the Company to properly operate and maintain the Processes with Significant Environmental Aspects to minimize the impact to the environment from these processes.

### **6. FLARE OPERATIONS**

Condition No. 8 is included to require the Company to develop documentation and maintain records that require best management practices to reduce the potential for Flaring Events.

### **7. COMPLAINTS RECORDING AND REPORTING PROCEDURE**

Condition No. 9 is included to require the Company to respond to any environmental complaints regarding the operation of the Equipment, according to a procedure that includes methods for preventing recurrence of similar incidents and a requirement to prepare and retain a written report.

### **8. RECORD KEEPING REQUIREMENTS**

Condition No. 10 is included to require the Company to retain all documentation related to this Approval and provide access to employees in or agents of the Ministry, upon request, so that the Ministry can determine if a more detailed review of compliance with the performance limits as specified in Condition 4 of this

Approval is necessary.

**9. EQUIPMENT WITH SPECIFIC OPERATIONAL LIMITS**

Condition No. 11 is included to outline the specific operational limits considered necessary to prevent an adverse effect resulting from the operation of each of the Thermal Oxidizers. This condition is also included to emphasize that the Thermal Oxidizers must be operated according to a procedure that will result in compliance with the EPA, the regulations and this Approval.

**10. CONTINUOUS MONITORING**

Condition No. 12 is included to require the Company to gather accurate information on a continuous basis so that compliance with the EPA, the regulations and this Approval can be verified.

**11. REVOCATION OF PREVIOUS APPROVALS**

Condition No. 13 is included to identify that this Approval replaces all Section 9 Certificate(s) of Approval and Part II.1 Approvals in regards to the activities mentioned in subsection 9(1) of the EPA and dated prior to the date of this Approval.

**Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 1282-AQRMJB issued on December 19, 2017**

*In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993, the Minister of the Environment, Conservation and Parks, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Minister of the Environment, Conservation and Parks will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:*

- a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
- b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

*Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.*

*The Notice should also include:*

1. The name of the appellant;
2. The address of the appellant;

3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

*And the Notice should be signed and dated by the appellant.*

*This Notice must be served upon:*

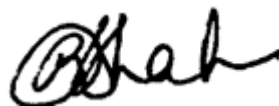
The Secretary* Environmental Review Tribunal 655 Bay Street, Suite 1500 Toronto, Ontario M5G 1E5	AND	The Minister of the Environment, Conservation and Parks 777 Bay Street, 5th Floor Toronto, Ontario M7A 2J3	AND	The Director appointed for the purposes of Part II.1 of the Environmental Protection Act Ministry of the Environment, Conservation and Parks 135 St. Clair Avenue West, 1st Floor Toronto, Ontario M4V 1P5
--	-----	--	-----	--

**\* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or [www.ert.gov.on.ca](http://www.ert.gov.on.ca)**

*This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at <https://ero.ontario.ca/>, you can determine when the leave to appeal period ends.*

*The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.*

DATED AT TORONTO this 3rd day of February,  
2022



Bijal Shah, P.Eng.  
Director  
appointed for the purposes of Part  
II.1 of the *Environmental Protection  
Act*

MS/  
c: District Manager, MECP Niagara  
Heidi Kelly, Cytex Canada Inc.

# Appendix D Stationary Noise Modelling Inputs

**Compatibility/Mitigation Study-Air Quality, Noise and Vibration**

**9304 McLeod Road, Niagara Falls, ON**

**800460 Ontario Ltd.**

SLR Project No. 241.30612.00000

March 23, 2022



**Table D.1: Summary of Noise Source Sound Power Levels**

Source Description	ID	Maximum Sound Power Levels (1/1 Octave Band Levels)									Total PWL (dBA)	Notes
		32 (dB)	63 (dB)	125 (dB)	250 (dB)	500 (dB)	1000 (dB)	2000 (dB)	4000 (dB)	8000 (dB)		
Small Reefer Truck - front	reefer_sml	104	107	98	100	97	91	87	84	78	98	- Based on SLR historical data - Two Refrigeration trucks assumed to operate continuously during the daytime and evening only.

# Appendix E Mitigation and Warning Clauses

**Compatibility/Mitigation Study-Air Quality, Noise and Vibration**

**9304 McLeod Road, Niagara Falls, ON**

**800460 Ontario Ltd.**

SLR Project No. 241.30612.00000

March 23, 2022



---

## Ventilation, Warning Clause and Barrier Summary

The following Warning Clauses are recommended for inclusion in agreements registered on Title for the residential units, and included in all agreements of purchase and sale or lease, and all rental agreements.

**MECP Type A Warning Clause:**

“Purchasers/tenants are advised that sound levels due to increasing road traffic may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment.”

**MECP Type C Warning Clause:**

“This unit has been designed with the provision for adding central air conditioning at the occupant’s discretion. Installation of central air conditioning by the occupant in will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment.”

# Appendix F Traffic Data and Calculations

**Compatibility/Mitigation Study-Air Quality, Noise and Vibration**

**9304 McLeod Road, Niagara Falls, ON**

**800460 Ontario Ltd.**

SLR Project No. 241.30612.00000

March 23, 2022





Filename: McloedRd.te            Time Period: 16 hours  
 Description:

Road data, segment # 1: McLoed Road  
 -----

Car traffic volume : 5733 veh/TimePeriod  
 Medium truck volume : 451 veh/TimePeriod  
 Heavy truck volume : 258 veh/TimePeriod  
 Posted speed limit : 50 km/h  
 Road gradient : 0 %  
 Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: McLoed Road  
 -----

Angle1 Angle2 : -90.00 deg 90.00 deg  
 Wood depth : 0 (No woods.)  
 No of house rows : 0  
 Surface : 2 (Reflective ground surface)  
 Receiver source distance : 23.50 m  
 Receiver height : 1.50 m  
 Topography : 1 (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑  
 Results segment # 1: McLoed Road  
 -----

Source height = 1.41 m

ROAD (0.00 + 62.66 + 0.00) = 62.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	64.61	0.00	-1.95	0.00	0.00	0.00	0.00	62.66

-----

Segment Leq : 62.66 dBA

Total Leq All Segments: 62.66 dBA

↑  
 TOTAL Leq FROM ALL SOURCES:            62.66

↑  
 ↑

## Dylan Diebolt

---

**From:** Rebecca Conrod <RConrod@rvanderson.com>  
**Sent:** November 22, 2022 10:01 AM  
**To:** Dylan Diebolt  
**Cc:** Eric Henry; Diane Freeman; Matt Kernahan  
**Subject:** RE: 9304 McLeod Road, Niagara Falls Compatibility Study Update

Hi Dylan,

Here is the information you requested:

- Existing ADTs (Assumed based on 10x the critical (PM) two-way traffic from intersection counts)
  - McLeod Road (East of Beechwood): 5750
  - McLeod Road (West of Beechwood): 5550
  - Beechwood Road (North of McLeod): 570
  - Beechwood Road (South of McLeod): 370
- We used a 1% annual growth rate. Do you also need any volumes from future planned developments?
- We do not have day/night splits for this data
- Truck Percentages at the intersection of Beechwood Road and McLeod Road (Based on intersection counts)
  - Eastbound (McLeod)
    - AM: 7% heavy, 4% Medium
    - PM: 2% heavy, 2% Medium
  - WB (McLeod):
    - AM: 4% heavy, 4% Medium
    - PM: 1% heavy, 1% Medium
  - NB (Beechwood):
    - AM: 8% heavy, 0% Medium
    - PM: 6% heavy, 0% Medium
  - SB (Beechwood):
    - AM: 9% heavy, 0% Medium
    - PM: 3% heavy, 0% Medium

Thanks!



**Becca Conrod, EIT** (She/Her)

TRANSPORTATION PLANNER

m 613 818 9941

a 1750 Courtwood Crescent, Suite 220 Ottawa, ON K2C 2B5



[rvanderson.com](http://rvanderson.com)



---

**From:** Dylan Diebolt <ddiebolt@slrconsulting.com>

**Sent:** November 21, 2022 10:52 AM

**To:** Rebecca Conrod <RConrod@rvanderson.com>

**Cc:** Eric Henry <awelfa@gmail.com>; Diane Freeman <dfreeman@slrconsulting.com>; Matt Kernahan <matt@ucc.com>

**Subject:** RE: 9304 McLeod Road, Niagara Falls Compatibility Study Update

Road Segment ID	Roadway Name	Link Description	Speed (kph)	Period (h)	Total Traffic Volumes	Auto %	Med %	Hvy %	Auto	Med	Heavy	PWL (dBA)	Source Height, s (m)
McLeod_avg	McLeod Road	Daytime Impacts	50	16	6441	89.0%	7.0%	4.0%	5733	451	258	79.7	1.4
		Nighttime Impacts	50	8	716	89.0%	7.0%	4.0%	637	50	29	73.1	1.4

# **Appendix G Official Plan Amendment #147**

## **Compatibility/Mitigation Study-Air Quality, Noise and Vibration**

**9304 McLeod Road, Niagara Falls, ON**

**800460 Ontario Ltd.**

SLR Project No. 241.30612.00000

March 23, 2022



**CITY OF NIAGARA FALLS**

**By-law No. 2023-023**

A by-law to provide for the adoption of Amendment No. 147 to the City of Niagara Falls Official Plan.

**THE COUNCIL OF THE CORPORATION OF THE CITY OF NIAGARA FALLS, IN ACCORDANCE WITH THE PLANNING ACT, 1990, AND THE REGIONAL MUNICIPALITY OF NIAGARA ACT, HEREBY ENACT AS FOLLOWS:**

1. The attached text constituting Amendment No. 147 to the City of Niagara Falls Official Plan is hereby adopted.
2. This by-law will come into force and effect on the day of the approval of the amendment by the Regional Municipality of Niagara.

Passed this twenty first day of March, 2023.

---

WILLIAM G. MATSON, CITY CLERK

---

JAMES M. DIODATI, MAYOR

First Reading: March 21, 2023

Second Reading: March 21, 2023

Third Reading: March 21, 2023

## OFFICIAL PLAN AMENDMENT NO. 147

### PART 1 – PREAMBLE

#### (i) Purpose of the Amendment

The purpose of the amendment is to update existing policies and introduce new policies within the City of Niagara Falls Official Plan respecting employment lands that implement the recommendations of the City of Niagara Falls Employment Lands Strategy.

#### (ii) Location of the Amendment

The amendment applies to all lands within the City of Niagara Falls currently designated for employment (industrial) uses as well as those lands proposed to be re-designated as part of this amendment, either from a current employment (industrial use) to a new land use or from an existing land use to an employment land use.

#### (iii) Details of the Amendment

##### Map Change

- Schedule A is amended to illustrate the City's designated employment lands. The 'Industrial' land use designation within the legend of Schedule A is amended such that the word 'Industrial' is replaced with the word 'Employment'
- Schedule A-5 is amended to illustrate the recommended conversions within the Transit Station Secondary Plan
- Schedule A-7 is a new schedule depicting the City's employment lands, Employment Areas, and the Gateway Economic Zone.

##### Text Change

- The amendment updates Section 8 - Industrial of the Official Plan to address issues of consistency and conformity with Provincial and upper-tier plans, as well as general reorganization.
- Minor revisions were made throughout the Official Plan, related to the replacement of the word 'Industrial' with the word 'Employment' and other clarifications respecting employment lands and Employment Areas.

#### (iv) Basis of the Amendment

Watson & Associated Economists Ltd (Watson), in partnership with Dillon Consulting Ltd (Dillon), and MDB Insight Inc. (MDB), were retained in the winter of 2020 by the City of Niagara Falls to conduct an Employment Lands Strategy with the intent to provide a long-term vision and planning policy framework for the City to enhance the competitive position for industrial and office employment. The study assessed the City's long-term employment land needs to the 2051 planning horizon, considered the adequacy and marketability of the City's 'shovel-ready'

employment lands in the near-term, and provided a number of policy recommendations for implementation to achieve consistency, conformity and alignment with upper-tier and provincial planning policy.

The Niagara Falls Employment Land Strategy was subject to a number of stakeholder sessions, as well as a public consultation process on the proposed recommendations and implementing amendments to the Official Plan and Zoning By-law. A Statutory Public meeting under the Planning Act was held on July 13, 2021 and on August 9, 2022.

## **PART 2 - BODY OF THE AMENDMENT**

All of this part of the document entitled PART 2 – Body of the Amendment, consisting of the following text and attached maps, constitute Amendment No. 147 to the Official Plan of the City of Niagara Falls.

### **DETAILS OF THE AMENDMENT**

The Official Plan of the City of Niagara Falls is hereby amended as follows:

#### **1. MAP CHANGES**

- a) SCHEDULE A – FUTURE LAND USE PLAN of the Official Plan is amended by:
  - i) revising the legend to replace the word ‘Industrial’ with the word ‘Employment’;
  - ii) redesignating lands currently identified as ‘Resort Commercial’ to ‘Employment’ as shown on the map attached entitled “Map 1 to Amendment No. 147;
  - iii) redesignating lands currently identified as ‘Industrial’ to ‘Minor Commercial’ as shown on the map attached entitled Map 2 to Amendment No. 147;
  - iv) redesignating lands currently identified as ‘Industrial’ to ‘Minor Commercial’ as shown on the map attached entitled Map 3 to Amendment No. 147;
  - v) redesignating lands currently identified as ‘Industrial’ to ‘Residential’ and identified as Special Policy Area 87 as shown on the map attached entitled Map 4 to Amendment No. 147.
- b) SCHEDULE A-5 – TRANSIT STATION SECONDARY PLAN AREA is amended by redesignating a portion of the lands currently identified as ‘Employment’ to ‘Mixed Use 2’ as shown on the map attached entitled Map 5 to Amendment No. 147
- c) A new SCHEDULE A-7 –EMPLOYMENT LANDS is added as shown on the map attached entitled “Map 6 to Amendment No. 147”.

#### **2. TEXT CHANGES**

- a) TABLE OF CONTENTS is amended by replacing the word ‘INDUSTRIAL’ with the word ‘EMPLOYMENT’.
- b) PART 1, SECTION 2 - STRATEGIC POLICY DIRECTION, paragraph 3 is deleted in its entirety and replaced with the following:

“In order to provide for future employment opportunities within the City areas most suited for such uses are to be protected from non-employment uses. The tourism industry is now the major employer with the decline of heavy manufacturing. Lands along the Queen Elizabeth Way are ideal for those employment opportunities dependent on cross-border trade and the movement of goods. It is the intent of this Plan to identify these areas and protect them for future employment.



Schedule A-7 identifies the Gateway Economic Zone, which is comprised of the total geographic area of lands within the Municipalities of Niagara Falls and Fort Erie, which, due to their proximity to major international border crossings, have unique economic importance to the City and Niagara Region. Lands within the Niagara Economic Gateway are preferred for the identification of future Employment Areas and Provincially Significant Employment Zones. “

- c) PART 1, SECTION 2, GROWTH OBJECTIVES is amended by: replacing the word ‘Industrial’ with the word ‘Employment’ within Objective 12; and by renumbering Objective 13 to Objective 14 and adding the following new Objective 13:

“13. To meet the minimum employment density targets established through the Region of Niagara Comprehensive Review.

Table 2. Employment Area Minimum Density Targets to 2051

Employment Area		Minimum Overall Density Target
1 – Highway 405	Core	15 jobs/ha
2 – North Secure Storage Area	Core	15 jobs/ha
3 – QEW/420	Dynamic	25 jobs/ha
4 – QEW Centre	Dynamic	50 jobs/ha
5 – Montrose/Grassy Brook	Dynamic	20 jobs/ha
6 – Dorchester Road	Core	45 jobs/ha
7 – Stanley Avenue Business Park	Dynamic	15 jobs/ha

- d) PART 1, SECTION 2, POLICY 2.7 is deleted in its entirety and replaced with the following:

“2.7 Employment Areas located within the Urban Area along the Queen Elizabeth Way, are identified on Schedule A-7. Lands within these Areas are to be protected for employment uses under the Gateway Economic Zone directive of the Province. The City may identify future employment areas where required, which would become an Employment Area following a settlement area boundary expansion exercise.”

- e) PART 1, SECTION 3, INTENSIFICATION, is amended by:

- i) replacing the word ‘Industrial Areas’ with the word ‘Employment Areas’ in POLICY 3.10.
- ii) replacing the word ‘Industrial’ with the word ‘Employment’ in POLICY 3.16.12.
- iii) adding the word ‘and’ after the word ‘service commercial’ and before the word ‘employment’; and, deleting the words ‘and industrial’ after the word ‘employment’ and before the word ‘uses’ in POLICY 3.20.
- iv) by replacing the word ‘Industrial’ with the word ‘Employment’ in POLICY 3.20

- f) PART 2, SECTION 1, POLICY 1.16.3 (vi) is amended by replacing the word ‘industrial’ with the word ‘employment’.

- g) PART 2, SECTION 4, is amended by:
- i) replacing the word 'PART 2' with the word 'PART 4'; and, replacing the phrase 'Sections 2.9 and 2.10' with 'Section 8' in POLICY 4.1.4.
  - ii) replacing the word 'industrial' with the word 'employment' in POLICY 4.2.7.1 a).
- h) PART 2, SECTION 8 INDUSTRIAL, is amended by replacing the word 'INDUSTRIAL' with the word 'EMPLOYMENT'.
- i) PART 2, SECTION 8, PREAMBLE is deleted in its entirety and replaced with the following:

"Employment lands and Employment Areas within the City will provide a diverse collection of parcels and opportunities for Greenfield development and intensification of existing employment sites in order to allow the City competitively respond to market demands and meet employment needs to 2051. The City's Employment Areas and employment lands are shown together on Schedule A-7- Employment Lands.

#### Objectives

The policies of this Plan promote

- infilling and redevelopment within established Employment Areas in the Built-up Area; as well as
- the progressive development of vacant employment lands within the Built-up area and within the Greenfield Area for new industry and employment uses; and
- In accommodating the changing needs of industry and business growth trends.

Emphasis will be placed on improved aesthetics and environmental quality, including measures which will safeguard the integrity of adjacent land uses. The proximity of employment uses to residential and other uses is critical in the future growth of the City as a complete community.

The contribution of employment to economic growth and diversity is clearly recognized in this Plan. In order to maintain a strong and competitive resource base, programs which provide for the enhancement of Employment Areas and the attraction of new firms will be pursued.

- j) PART 2, SECTION 8, POLICIES is deleted in its entirety and replaced with the following:
- 8.1 The lands designated Employment are shown on Schedule A – Future Land Use Plan. The City's Employment Areas and employment lands are shown together on Schedule A7- Employment Lands.
  - 8.2 The primary uses permitted in Employment Lands as designated on Schedule "A" will be for: manufacturing, assembly, fabricating, processing, reclaiming, recycling, warehousing, distribution, laboratory and research,

and storage. All forms of service industries and utilities are included within this definition. The indoor production of cannabis, adult entertainment parlours and body-rub parlours will also be permitted within the employment designation subject to other policies of this plan.

- 8.3 Employment Areas reflect clusters of specific types of employment uses that exist and are appropriate for that identified area. The City's Employment Areas are shown on Schedule A-7 – Employment Lands and permit the following uses:

Core Employment Area – traditional employment uses such as industrial, manufacturing, construction, transportation and warehousing. Core Employment Areas are to be protected for similar employment uses: major facilities and freight-supportive forms of development and redevelopment. Major institutional uses are prohibited.

Dynamic Employment Area - traditional and lighter industrial uses with a broader mix of office parks and institutional uses that can function without limiting the ability for the expansion or continued use of other permitted uses.

New development within the Employment Areas shall meet the minimum employment density targets of Part 2, Section 2.

- 8.4 In addition to Policy 8.2, the following uses may be permitted on employment lands outside of Employment Areas, subject to the policies of Subsection 8.15:

8.4.1 Uses that are ancillary to an employment use, including offices, retail and wholesale showrooms and outlets for products produced on the premises.

8.4.2 Commercial services such as, but not limited to, banks, restaurants, convenience retail outlets, material suppliers, which are incidental to the Employment Area, servicing industries and their personnel.

8.4.3 Corporate and business offices.

8.4.4 Health and fitness facilities, conference centres and private clubs.

- 8.5 Several categories of employment land uses will be established in the Zoning By-law to accommodate a variety of activities ranging from heavy industrial to prestige employment uses. Moreover, employment zones will be arranged in a gradation with the lighter, more prestige type uses located near residential areas and other sensitive land uses. In the zoning of lands for employment purposes, regard will be had to the following objectives.

8.5.1 To group employment uses with similar characteristics and performance standards.

8.5.2 To provide a suitable environment for employment uses, free from interference and restriction by other uses.

- 8.5.3 To minimize potential land use conflicts caused by the indiscriminate mixing of heavier and light industrial types.
  - 8.5.4 To protect adjacent lands, particularly residential areas from the effects of incompatible uses.
  - 8.5.5 General industrial or heavy industrial uses will be separated from residential areas, wherever possible, in order to protect such areas from the effects of noise, heavy traffic and other offensive characteristics.
- 8.6 Council will consider amendments to the Zoning By-law to permit the establishment of free-standing offices, recreational and commercial services and other complementary land uses within Employment Areas that are not planned for industrial or manufacturing uses in order to progressively accommodate changing market conditions and new development trends. Such uses, however, will be restricted as to their location, size and extent of operations, having regard to the following.
- 8.6.1 Employment Areas are not intended to serve a significant commercial function. In this regard, Council will exercise discretion in considering the use of Employment Areas for non-employment purposes in order to promote employment as the predominant land use.
  - 8.6.2 Frontage lands along controlled access highways and high volume arterial roadways will be preserved for employment and business uses which require visual prominence and which foster a good impression of the community.
  - 8.6.3 Wherever possible, commercial service and office uses shall be grouped in multiple use buildings and shall be discouraged to proliferate along arterial road frontages.
  - 8.6.4 Commercial and office developments generate higher densities of employment and visits by the public. Where such development is proposed, Council will ensure that appropriate provision is made for on-site parking, traffic circulation, transit and pedestrian safety. Where appropriate, the City will encourage a variety of transportation demand management measures for higher density employment uses.
  - 8.6.5 The integration of businesses and other complementary land uses with industrial/employment uses will be encouraged in business park settings where a premium is placed on aesthetic appeal and environmental quality.
- 8.6 The Province may identify Provincially Significant Employment Zones and provide specific direction for planning within an identified Provincially Significant Employment Zone to be implemented through appropriate

Official Plan policies, designations and economic development strategies. The City will work with the Region and the Province to identify, plan for, and protect Provincially Significant Employment Zones.

- 8.7 While the Province has not identified any Provincially Significant Employment Zone within the City of Niagara Falls, the City will integrate any identified Provincially Significant Employment Zone into Schedule A-7 of the Official Plan. Any updates to the Official Plan mapping respecting a PESZ to reflect changes made by the Province can be completed without the need for an Amendment to this Plan.
- 8.8 Council will coordinate with the Region in promoting development of the City's employment lands. Council may pass by-laws, acquire and develop lands or otherwise ensure an adequate supply of serviced land is available for prospective employment developments.
- 8.9 The City will take a co-ordinated approach to planning for large areas with high concentrations of employment that cross municipal boundaries and are major trip generators, including co-ordination on matters such as transportation demand management and economic development.
- 8.10 The development of new employment uses on vacant employment lands within the City's Urban Area is encouraged.
- 8.11 The redevelopment and intensification of existing employment uses within the Built-up Area with uses that are compatible with surrounding land uses is encouraged.
- 8.12 In order to maintain land use compatibility, within Employment Areas planned for industrial or manufacturing uses, residential uses and other sensitive land uses that are not ancillary to the primary employment uses are prohibited from encroaching on Employment Areas and an appropriate transition to employment areas should be provided.
- 8.13 Development proposals for employment uses on designated employment lands shall be planned and developed to avoid and minimize potential adverse effects from odour, noise and other contaminants, minimize the risk to public health and safety, and to ensure the long-term operational and economic viability of major facilities in accordance with Provincial guidelines, standards and procedures.
- 8.14 Where avoidance is not possible in accordance with Policy 8.12, the long-term viability of existing or planned industrial, manufacturing or other uses that are vulnerable to encroachment by ensuring that the planning and development of proposed adjacent sensitive land uses are only permitted where the following are demonstrated:
  - 8.14.1 there is an identified need for the proposed use,
  - 8.14.2 alternative locations for the proposed use have been evaluated and there are no reasonable alternative locations,

- 8.14.3 adverse effects of employment uses on the proposed sensitive land use are minimized and mitigated, and,
- 8.14.4 potential impacts of sensitive uses on industrial, manufacturing or other uses are minimized and mitigated as demonstrated through studies.
- 8.15 Employment uses which are offensive or dangerous to the general health, safety and welfare of community residents shall only be permitted through site specific zoning amendments, where deemed appropriate.
- 8.16 In order to ensure that obsolete industrial buildings and formerly occupied industrial sites are suitable for redevelopment, compliance with Provincial guidelines and Part 3, Section 6 will be sought prior to any new development.
- 8.17 Adequate vehicular access, off-street parking and loading facilities will be required in clearly defined areas for all development and redevelopment within employment lands and areas. Where possible, development plans for new employment uses or the expansion of existing employment uses should seek to minimize surface parking, where possible, and, where necessary, provide a high-quality design of surface parking on the site.
- 8.18 Development proposals on lands adjacent to existing employment uses are encouraged to integrate the design and dimensions of structures, parking areas and access points with those of the adjacent uses.
- 8.19 As far as possible, traffic generated by employment uses will be prohibited from penetrating designated Residential areas.
- 8.20 Signs in Employment Areas will be regulated by appropriate by-laws in order to avoid conflicts with effective traffic control and the general amenity of the area.
- 8.21 In order to enhance the viability of Employment Areas, Council, where feasible and deemed appropriate, will encourage the appropriate authorities to establish, maintain and improve the accessibility of Employment Areas through the provision of highways, interchanges, arterial roads, bridge, rail and public transit services.
- 8.22 Council will encourage and, where feasible, assist in the relocation of uses not permitted in areas designated for employment purposes and in the relocation of existing industries located outside of designated employment lands and Employment Areas into such areas.
- 8.23 Council will encourage and where feasible, assist in programs for the improvement of the appearance and amenity of employment lands and Employment Areas.

#### 8.24 (OPA #45, approved January 2003)

Notwithstanding that adult entertainment parlours have not been historically permitted in any land use designation, a limited number of licensed adult entertainment parlours and body-rub parlours currently exist throughout various geographic areas of the City. It is the intent of this Plan to provide guidance and direction with respect to appropriate areas of any new licensed adult entertainment parlours and body-rub parlours or their relocation.

Generally, adult entertainment parlours and body-rub parlours are not promoted as a land use in any part of the City. In particular, adult entertainment parlours and body-rub parlours shall not be permitted in designations and zones of a predominantly residential, institutional, commercial, rural, agricultural and parks and open space nature. These areas are considered to be incompatible with adult entertainment as they are frequented by families with children, tourists, have high pedestrian traffic volumes or are subject to economic revitalization that could be adversely affected. Rural and agricultural areas are not serviced and would generally not be compatible with these urban uses. In order to minimize adverse effects, adult entertainment parlours and body-rub parlours shall be appropriately separated from sensitive zones including Residential, Development Holding, Institutional and Open Space zones; as well as specific sensitive land uses such as places of worship, residential care facilities, campgrounds, schools, day care centres, children's museums, parks, arenas and other similar community/institutional or public uses regardless of their zone category. An appropriate separation distance shall be a minimum of 300 metres from the property line associated with the sensitive use or zone to the building of the body-rub parlour or adult entertainment parlour. The 300-metre separation distance noted above shall not apply in cases where the QEW, hydro canal and Welland River, which represent effective physical barriers, are present. Furthermore, no exterior wall of any adult entertainment parlour and/or body-rub parlour buildings shall be located closer than 100 metres from the road allowance of a controlled access highway.

Notwithstanding this policy, the property municipally known as 8675 Montrose Road, situated at the southwest corner of Montrose Road and Chippawa Creek Road, is excluded from the 100-metre setback requirement from the QEW.

In addition to the above, neither adult entertainment parlours nor body-rub parlours will be permitted within lands, generally situated south of Brown Road and west of Kalar Road, which are subject to the development of a Christian resort commercial development. These lands are also considered as a sensitive land use and adult entertainment parlour and body-rub parlour buildings shall be separated from these lands by a minimum distance of 300 metres. Further, the employment lands situated along the

north side of Bridge Street, east of Victoria Avenue, are not suitable for an adult entertainment parlour or body-rub parlour.

It is the policy of this Plan to avoid a future concentration of licensed adult entertainment parlours and body-rub parlours within one geographic area of the City. In order to avoid clustering, the City's zoning by-law shall be amended to establish an appropriate distance separation between and among adult entertainment parlours and body-rub parlours.”

8.25 Permitted production of cannabis shall be in accordance with the following:

- (i) The production of cannabis is only permitted to occur within an enclosed building with appropriate air filtration that ensures the use does not emit any odour. Production of cannabis may include the cultivation of cannabis and/or activities related to cannabis cultivation such as processing, packaging, testing, destruction, research and shipping;
- (ii) Outdoor cultivation is not permitted;
- (iii) The production of cannabis shall be in accordance with all applicable Federal Regulations, as amended from time to time;
- (iv) Buildings should be appropriately distanced a minimum of 500 metres away from sensitive land uses or zones where sensitive land uses are permitted, including but not limited to existing day care facilities, hospitals, places of worship, playgrounds and residential uses; and
- (v) Cannabis production shall be subject to site plan control, which may require the submission of studies relating to relevant matters including, but not limited to, air quality control, environment impacts, traffic and lighting, which demonstrate appropriate nuisance mitigation to the City's satisfaction. The Site Plan Control process may require the applicant to enter into a site plan agreement.

k) PART 2, SECTION 8, GREENFIELD AREA is amended by:

- i) renumbering Policy 8.5 to Policy 8.26 and replacing the word 'industrial' with the word 'employment'
- ii) by renumbering Policy 8.6 to Policy 8.27 and subsequently renumbering the sub-policies accordingly
- iii) is amended by replacing the word 'industrial' with the word 'employment' in Policy 8.27.4 (former Policy 8.6.4)
- iv) renumbering Policy 8.7 to Policy 8.27 and subsequently renumbering the sub-policies accordingly

l) PART 2, SECTION 8, QEW EMPLOYMENT CORRIDOR is amended by:

- i) renumbering Policy 8.8 to Policy 8.29 and subsequently renumbering the sub-policies accordingly.
- ii) by deleting and replacing Policy 8.29 (former Policy 8.8) with the following:



“The QEW is the major highway transportation corridor through the Niagara Region. It conveys goods and people within, to and from the Golden Horseshoe area and western New York State. Development of lands adjacent to the QEW has played a significant role in the economy of the Niagara Region and such lands within the City's urban area can be capitalized on for future employment growth.

The corridor, located along the QEW as shown on Schedule A-2 extending from south of Lundy's Lane to the interchange at Lyon's Creek Road, includes a substantial amount of vacant Greenfield land and under-utilized parcels within the Built-up Area. This corridor, given its exposure and accessibility to the QEW, is well suited to the development of employment uses that require highway frontage. The lands that extend south of the Welland River have recently been serviced with municipal water and sanitary facilities, which have opened up these lands for the development of employment uses.

This corridor also marks the southern gateway into the urban area of the City. Given its locational advantages, this corridor can play a major role in implementation of the Gateway Economic Zone as envisaged by the Growth Plan of the Greater Golden Horseshoe. The Gateway Economic Zone is comprised of the total geographic area of the municipalities of Niagara Falls and Fort Erie, including all major goods movement facilities and corridors identified by the Region. The Gateway Economic Zone is to be developed to support economic diversity and the promotion of cross-border trade, the movement of goods and tourism. Due to the proximity to the U.S. border, the Gateway Economic Zone has a unique economic importance to the region and the province. The intent of the QEW Employment Corridor policies is to assist in the capitalization of trade and the movement of goods and to protect these lands from conversion to non-employment uses. Moreover, the overarching goal of the policies is the establishment of employment uses on these lands that add to the overall diversity of employment in the City.”

- m) PART 2, SECTION 8, GENERAL POLICIES is deleted in its entirety as it has been incorporated into PART 2, SECTION 8, POLICIES through Modification “i)” of this document.
- n) PART 2, SECTION 8, amended by adding a new sub-section, EMPLOYMENT CONVERSIONS, as shown below:

**“EMPLOYMENT CONVERSIONS**

8.30 The City may permit the conversion of lands within Employment Areas to non-employment uses but only through a Regional municipal comprehensive review where it has been demonstrated that the conversion meets each of the tests identified in Policy 8.31 and where it meets at least one of the following strategic objectives:

8.30.1 promotes brownfield redevelopment,

- 8.30.2 addresses issues related to land use incompatibility in accordance with Policy 8.14 of this section,
  - 8.30.3 provides affordable housing, or,
  - 8.30.4 meets any of the other strategic direction of this Plan.
- 8.31 The conversion of lands within Employment Areas to non-employment uses may be permitted only through a Regional Municipal Comprehensive Review where it is demonstrated that
- 8.31.1 there is a need for the conversion;
  - 8.31.2 the lands are not required over the horizon of this Plan for the employment purposes for which they are designated;
  - 8.31.3 the City will maintain sufficient employment lands to accommodate the forecasted employment growth to 2051;
  - 8.31.4 the proposed uses would not adversely affect the overall viability of the Employment Area or the achievement of the minimum intensification and density targets of this Plan and the Growth Plan, as well as any other applicable policies of this Plan and the Growth Plan;
  - 8.31.5 there is existing or planned infrastructure in place to accommodate the proposed use; and,
- 8.30.6 cross jurisdictional issues, including but not limited to infrastructure, the environment and land supply have been considered.
- 8.32 Notwithstanding Policy 8.30, until the next Municipal Comprehensive Review, lands within existing Employment Areas may be converted to a designation that permits non-employment uses in consultation with the Region, if applicable, provided the conversion would:
- 8.32.1 Satisfy the requirements of Policy 8.30;
  - 8.32.2 Satisfy the requirements of Policies 8.31.1, 8.31.2 and 8.31.6;
  - 8.32.3 Maintain a significant number of jobs on those lands through the establishment of development criteria; and,
  - 8.32.4 Not include any part of an Employment Area identified as a Provincially Significant Employment Zone unless the part of the Employment Area is located within a Major Transit Station Area as delineated in the Growth Plan.
- 8.33 Conversion of brownfield sites to non-employment uses, where the removal of the employment land is consistent with the Region's Municipal Comprehensive Review with an associated Regional Official Plan Amendment, may be considered through an amendment to this Plan where at least one of the following criteria are met:

- 8.33.1 the reduction or elimination of any long-standing land use compatibility issues with surrounding conforming uses,
  - 8.33.2 provision of affordable housing,
  - 8.33.3 contributing to a mix of housing types and densities in the planning area, or;
  - 8.33.4 the provision of facilities that assist in the development of a complete community.
- 8.34 The City may consider conversion of employment lands located outside of an Employment Area in consultation with Niagara Region, subject to ensuring space is retained for a similar number of jobs to remain accommodated on the site and compliance with the criteria outlined in Policy 8.29.
- 8.35 Notwithstanding policy 8.34, development applications within a two kilometre radius of the Cytex Canada Inc. facility in Niagara Falls shall be subject to Policy 8.30 of this Plan, except for the lands currently designated Neighbourhood Commercial in this Plan.”
- o) PART 2, SECTION 13, SPECIAL POLICY AREAS is amended:
- i) by replacing the word ‘Industrial’ with the word ‘Employment’ in Policy 13.4,
  - ii) by replacing the words ‘employment area’ with the words ‘Employment Area’ in Policy 13.7,
  - iii) by replacing the word ‘Industrial’ with the word ‘Employment’ in both instances within Policy 13.7.1,
  - iv) by replacing the word ‘Industrial’ with the word ‘Employment’ in Policy 13.7.1.1i),
  - v) by replacing the word ‘Industrial’ with the word ‘Employment’ in Policy 13.7.1.4,
  - vi) by replacing the word ‘industrial’ with the word ‘employment’ in Policy 13.15,
  - vii) by replacing the word ‘Industrial’ with the word ‘Employment’ in Policy 13.25,
  - viii) by replacing the word ‘Industrial’ with the word ‘Employment’ in Policy 13.34.6,
  - ix) by replacing the words ‘employment areas’ with the words ‘Employment Areas’ in Policy 13.44.4
  - x) by replacing the word ‘industrial’ with the word ‘employment’ in both instances within Policy 13.44.5,
  - xi) by replacing the word ‘industrial’ with the word ‘employment’ in Policy 13.51.4,

- xii) amended by replacing the word 'industrial' with the word 'employment' in both instances; and replacing the word 'properties' with the word 'property' in Policy 13.56.2.2,
- xiii) by replacing the word 'Industrial' with the word 'Employment' in Policy 13.57,
- xiv) by replacing the word 'Industrial' with the word 'Employment' in Policy 13.57.2.2b),
- xv) by replacing the word 'industrial' with the word 'employment' in Policy 13.57.2.2c),
- xvi) by replacing the word 'Industrial' with the word 'Employment' in Policy 13.62,
- xvii) by replacing the word 'Industrial' with the word 'Employment' in both instances within Policy 13.62.1, and
- xviii) by adding the following new policy:

Policy 13.87 SPECIAL POLICY AREA "87".

Special Policy Area "87" applies to 18.5 hectares of land on the south side of McLeod Road, east of Beechwood Road. The Residential designation of the lands will come into effect upon approval by the Niagara Region. Notwithstanding the policies contained in Part 2, Section 1, development of the lands will be subject to a 10m height restriction within a 2km radius of Phosphine Storage on Cytec Industries lands as shown on Appendix A to the Cytec Canada Inc. Emergency Response Plan, dated July 23, 2016. A risk assessment shall be prepared and peer reviewed to justify residential use within this radius failing which a more appropriate use will be considered. Any mitigation required through further study to address Provincial D6 Guidelines shall be provided on site. Further, the job replacement for conversion justification contained in Part 2, Policy 8.30 shall be provided prior to redevelopment of the site in conjunction with an application under the Planning Act.

- p) PART 3, SECTION 1, Policy 1.5.6 is amended by replacing the word 'employment areas' with the word 'Employment Areas' in both instances
- q) PART 3, SECTION 2, Policy 2.3.3 is amended by replacing the word 'industrial' with the word 'employment'
- r) PART 3, SECTION 6, Policy 6.7.2 is amended by replacing the word 'industrial' with the word 'employment'
- s) PART 3, SECTION 7, is amended:
  - i) by replacing the word 'industrial' with the word 'employment' in Policy 7.3; and

- ii) amended by replacing the word 'industrial' with the word 'employment' in all instances within Policy 7.3ii).
- t) PART 4, SECTION 2 is amended:
  - i) by replacing the word 'industrial' with the word 'employment' in Policy 2.3.11;
  - ii) by deleting Policy 2.6.10 in its entirety and replacing it with the following:

"2.6.10 Compliance with the applicable policies of Section 8, when considering the conversion of Employment Areas."
  - iii) by deleting EMPLOYMENT LAND CONVERSIONS its entirety as it has been incorporated into PART 2, SECTION 8, POLICIES through modification "m" of this document.
- u) PART 4, SECTION 5, Policy 5.3 is amended by replacing the word 'Industrial' with the word 'Employment'
- v) PART 4, SECTION 6, Policy 6.5 is amended by replacing the word 'Industrial' with the word 'Employment'
- w) PART 4, SECTION 10, Policy 10.1 is amended by replacing the word 'Industrial' with the word 'Employment'
- x) PART 4, SECTION 11, Policy 11.3.9 is amended by replacing the word 'industrial' with the word 'employment'
- y) PART 5, SECTION 1 GARNER SOUTH, is amended:
  - i) by replacing the word 'employment areas' with the word 'Employment Areas' in Policy 2.7.6,
  - ii) by replacing the word 'employment areas' with the word 'Employment Areas' in Policy 2.7.7.1,
  - iii) by replacing the word 'industrial' with the word 'employment' in Policy 2.7.7.1(b),
  - iv) by replacing the word 'industrial' with the word 'employment' in Policy 2.7.7.1(c),
  - v) by replacing the word 'areas' with the word 'lands' in Policy 2.8.6,
  - vi) by replacing the word 'industrial' with the word 'employment' in Policy 2.13.3,
- z) PART 5, SECTION 2 TRANSIT STATION SECONDARY PLAN, is amended:
  - i) by replacing the word 'industrial' with the word 'employment' in Policy 1.11,
  - ii) by replacing the word 'industrial' with the word 'employment' in Policy 2.7.2,
  - iii) by replacing the word 'Industrial' with the word 'Employment' in Policy 2.7.3(a),
  - iv) by replacing the word 'industrial' with the word 'employment' in Policy 2.7.4,

- v) by replacing the word 'industrial' with the word 'employment' in Policy 2.7.5,
- vi) by replacing the phrase 'at employment areas' with the phrase 'on employment lands and in Employment Areas.' in Policy 3.13.5.3c); and
- vii) by replacing the word 'industrial' with the word 'employment' in Policy 4.14.

aa)PART 5, SECTION 3 GRAND NIAGARA SECONDARY PLAN, is amended by:

- i) by replacing the word 'areas' with the word 'uses' in Principle 7 – Create Employment Opportunities; Objectives, bullet seven (7),
- ii) by deleting the word 'Area'; and, replacing the phrase 'Employment Areas' with the phrase 'employment lands' in Policy 1.8.3,
- iii) by replacing the word 'industrial' with the word 'employment' in Policy 1.13.8,
- iv) by replacing the term "Employment Areas" with "employment lands" in Policy 2.2,
- v) by replacing the word 'industrial' with the word 'employment' in Policy 2.3,
- vi) by replacing the word 'areas' with the word 'lands' in Policy 3.2.6,
- vii) by replacing the word 'industrial' with the word 'employment' in Policy 3.2.10,
- viii)by replacing the word 'areas' with the word 'lands' in Policy 4.1.11.4,
- ix) by replacing the word 'industrial' with the word 'employment' in Policy 5.6.

bb)PART 5, SECTION 4 RIVERFRONT COMMUNITY PLAN, is amended:

- i) by replacing the word 'industrial' with the word 'employment' in Principle 1: Create a Healthy, Complete Community, Objectives, bullet five (5),
- ii) replacing the word 'industrial' with the word 'employment' in Policy 1.5,
- iii) by replacing the word 'Industrial' with the word 'Employment' in both instances in Policy 2.2.2.4,
- iv) replacing the word 'Industrial' with the word 'Employment' in Policy 2.2.3,
- v) by replacing the word 'Industrial' with the word 'Employment' in Policy 7.3.

cc) APPENDIX I, DEFINITIONS is amended as follows:

- i) "Employment Lands" is deleted and replaced with the following definition:  
"Employment Area"- areas designated in an official plan for clusters of business and economic activities including, but not limited to: manufacturing, warehousing, offices and associated retail and ancillary uses."
- ii) adding the following new defined term "Employment Lands" after the defined term "Employment Area" and before the defined term "Endangered Species":

“Employment Lands”- a broad range of lands designated for employment uses that may be located within or outside of Employment Areas, including light, medium and heavy industrial, business parks and rural employment lands. Employment lands accommodate primarily export-based employment, including a wide range of industrial uses (e.g., manufacturing, distribution/ logistics, transportation services) as well as specific commercial and institutional uses (e.g., office, service commercial, ancillary/ accessory retail) as set out in the Zoning By-law”

- iii) adding the following new defined term “Gateway Economic Zone” after the defined term “Forest Resource Areas” and before the defined term “Greening”:

“Gateway Economic Zone”- settlement areas identified in A Place to Grow: Growth Plan for the Greater Golden Horseshoe and conceptually depicted on Schedules 2, 4 and 6, that, due to their proximity to major international border crossings, have unique economic importance to the region and Ontario. The Gateway Economic Zone is shown on Schedule A-7 of the City of Niagara Falls Official Plan.

- iv) adding the following new defined term “Municipal Comprehensive Review” after the defined term “Mineral Resource Areas” and before the defined term “Natural Heritage Corridor”:

“Municipal Comprehensive Review”- a new official plan, or an official plan amendment, initiated by an upper-or single-tier municipality under Section 26 of the Planning Act that comprehensively applies the policies and schedules of the Growth Plan for the Greater Golden Horseshoe

- v) amended by adding the following new defined term “Provincially Significant Employment Zone” after the defined term “Progressive Rehabilitation” and before the defined term “Portable Asphalt Plants”:

“Provincially Significant Employment Zones”- Areas defined by the Minister in consultation with affected municipalities for the purpose of long-term planning for job creation and economic development. Provincially Significant Employment Zones can consist of Employment Areas as well as mixed-use areas that contain a significant number of jobs.





### Map 1 to Amendment No. 147 to the Official Plan Schedule "A" - Future Land Use Plan

Proposed Change from Resort Commercial to  
Employment

 Area affected by this Amendment

Legend

Land Use

-  Employment
-  Environmental Conservation Area
-  Environmental Protection Area
-  Open Space

\*The extent of the Environmental Conservation Area and Environmental Protection Area Designations do not necessarily include the extent of the Region's NES and the Regional mapping should be consulted. The actual extent of the NES is currently being refined through studies being undertaken as part of the Grassy Brook Secondary Plan and will be implemented through a future Official Plan Amendment.

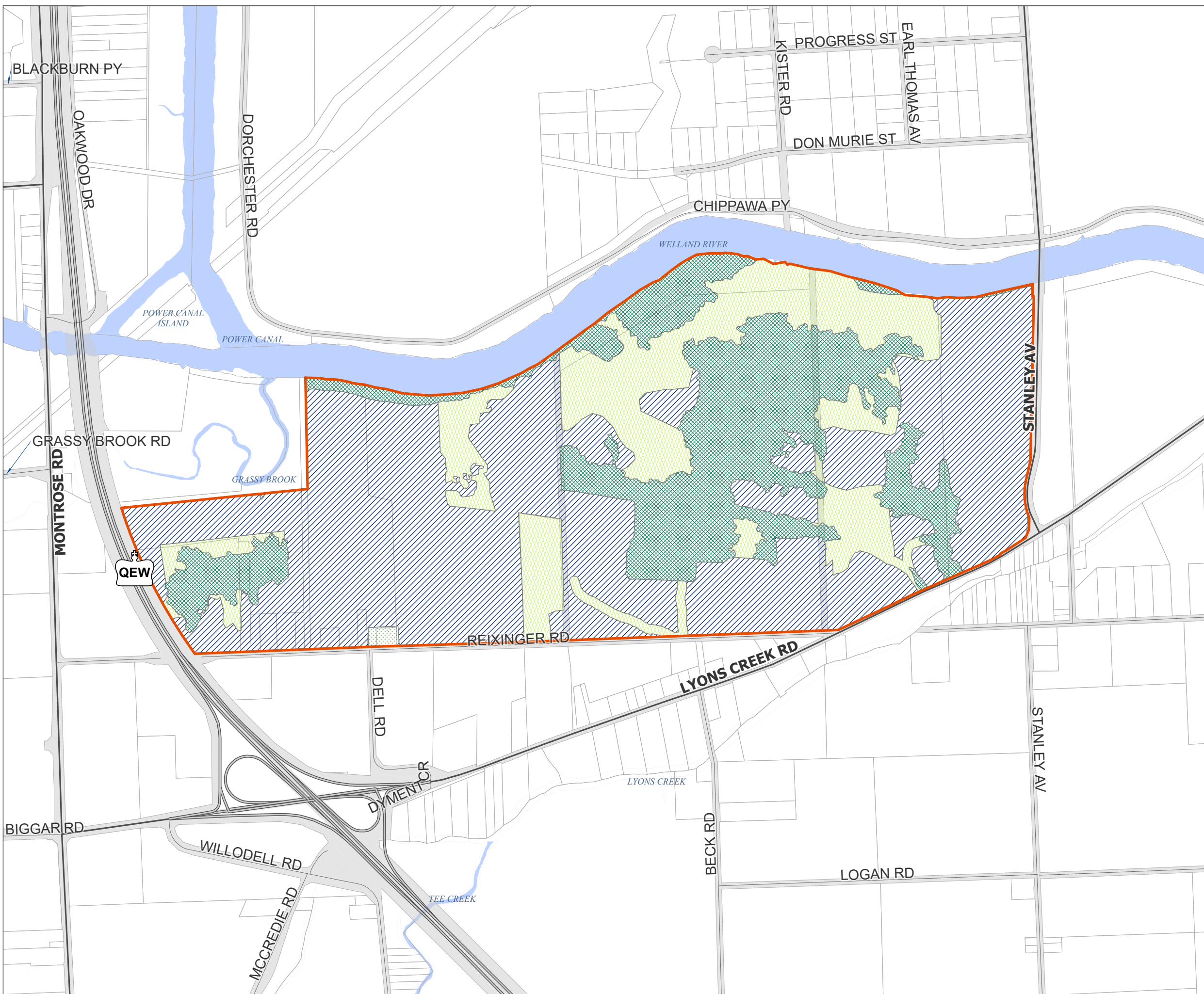
Note: the schedule forms part of Amendment No. 147 to the Official Plan for Niagara Falls and should be read in conjunction with the written text.



Scale 1:12,000



5/26/2022







**Map 2 to Amendment No. 147  
to the Official Plan  
Schedule "A" - Future Land  
Use Plan**

 Area affected by this Amendment

**Legend**

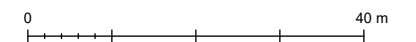
Official Plan

 Minor Commercial

Note: the schedule forms part of Amendment No. 147 to the Official Plan for Niagara Falls and should be read in conjunction with the written text.



Scale 1:900



5/26/2022



### Map 3 to Amendment No. 147 to the Official Plan Schedule "A" - Future Land Use Plan

 Area affected by this Amendment

#### Legend

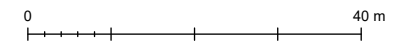
Official Plan

 Minor Commercial

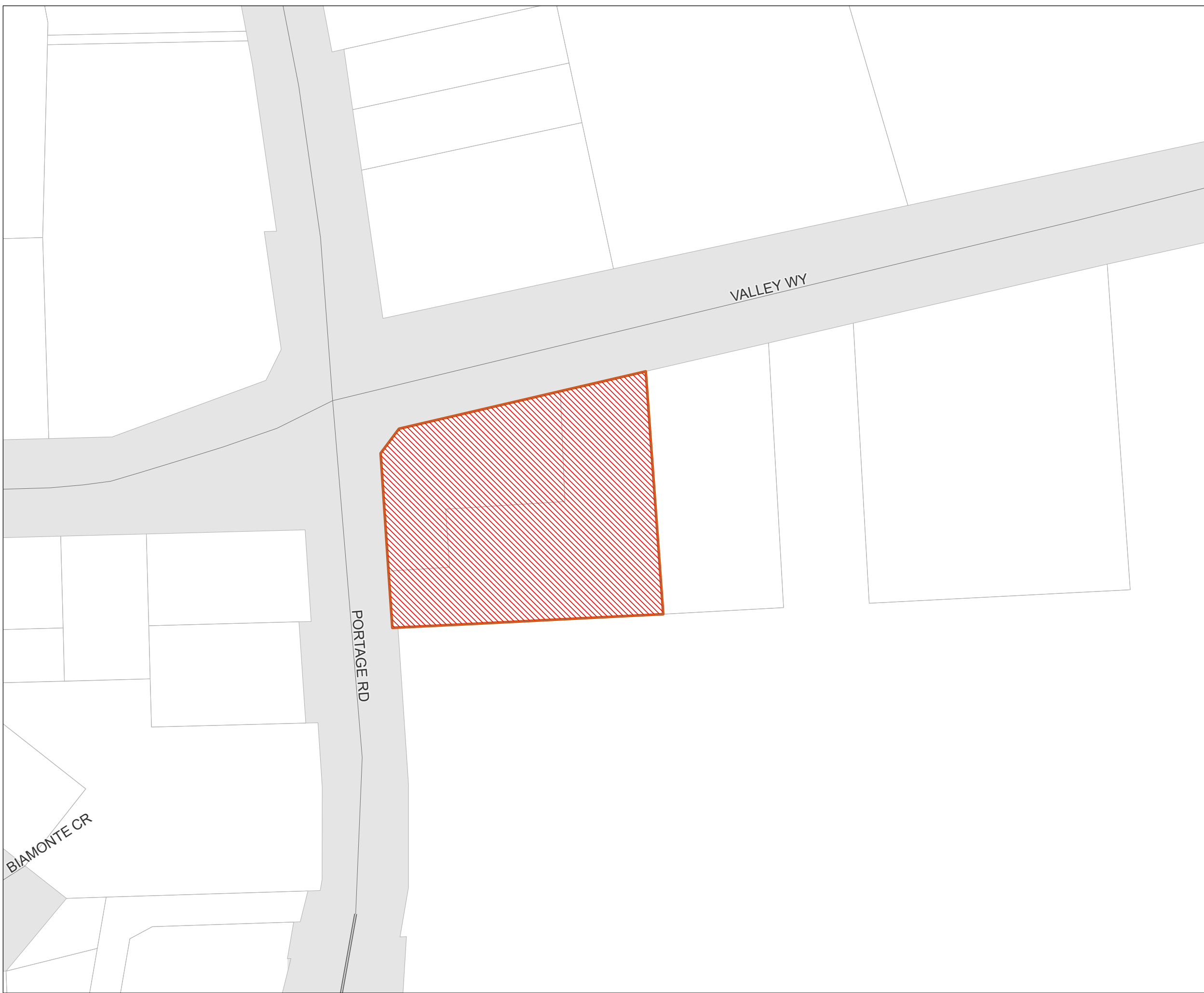
Note: the schedule forms part of Amendment No. 147 to the Official Plan for Niagara Falls and should be read in conjunction with the written text.



Scale 1:907



5/26/2022






# Map 4 to Amendment No. 147 to the Official Plan Schedule "A" - Future Land Use Plan

 Area affected by this Amendment

### Legend

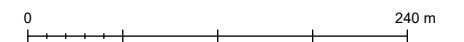
 Residential

 Special Policy Area

Note: the schedule forms part of Amendment No. 147 to the Official Plan for Niagara Falls and should be read in conjunction with the written text.



Scale 1:4,780



WARREN WOODS AV

5/26/2022



### Map 5 to Amendment No. 147 to the Official Plan Schedule "A-5" - Transit Station Secondary Plan Area

 Area affected by this Amendment

#### Legend

Official Plan

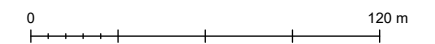
 ECA

 Mixed Use 2

Note: the schedule forms part of Amendment No. 147 to the Official Plan for Niagara Falls and should be read in conjunction with the written text.



Scale 1:2,600



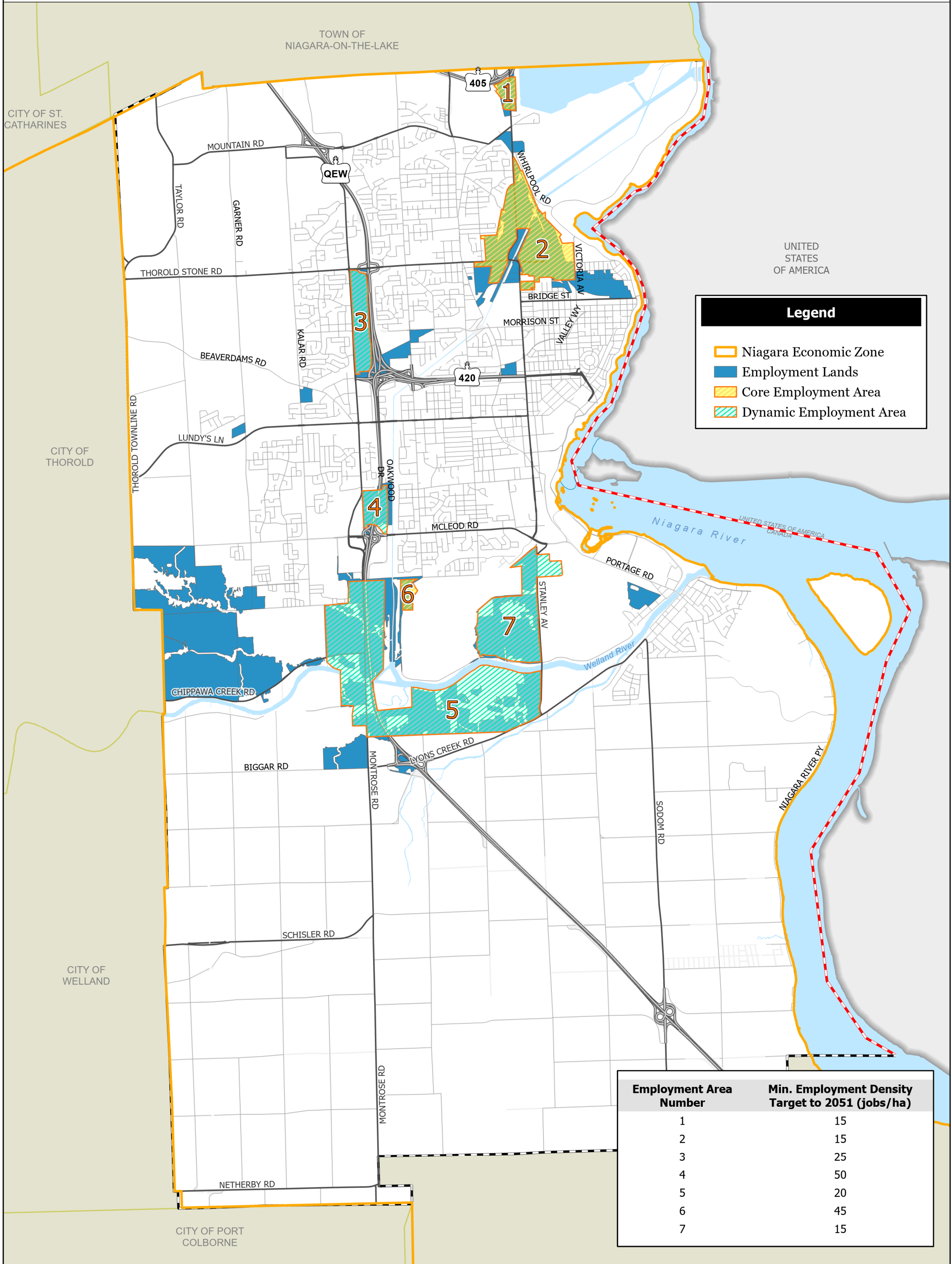
5/26/2022



# Map 6 to Amendment No. xx to the Official Plan

## Schedule A-7

### Employment Lands



**Legend**

- Niagara Economic Zone
- Employment Lands
- Core Employment Area
- Dynamic Employment Area

Employment Area Number	Min. Employment Density Target to 2051 (jobs/ha)
1	15
2	15
3	25
4	50
5	20
6	45
7	15

NOTE: THE SCHEDULE FORMS PART OF AMENDMENT NO. \_ TO THE OFFICIAL PLAN FOR NIAGARA FALLS AND SHOULD BE READ IN CONJUNCTION WITH THE WRITTEN TEXT.



Scale: 1:64,400

Updated to: October 2022

K:\SourceData\Shapes\OP\Schedule A7 - Employment Lands\OP Amendment Maps.aprx

global **environmental** and **advisory** solutions  
[www.slrconsulting.com](http://www.slrconsulting.com)

