Notice of Public Hearing – Committee of Adjustment Application

File # A-100/26 - 3733 RIBERDY RD Date Mailed: November 25, 2026

Electronic hearing:

By videoconference on December 10, 2026 at 3:30 PM

Why am I receiving this notice?

As an adjacent property owner you are receiving this courtesy notice of hearing because an application has been submitted for consent and/or minor variance to a property located close to you. Formal notice of the hearing was given by publication of the Committee of Adjustment's Agenda Record in the Windsor Star on November 25, 2026. as required by the Planning Act.

Sections 45(1) & 54(5) of the Planning Act authorize the Committee of Adjustment to consider these requests.

Application details are posted on the City of Windsor website along with the Administrative recommendation(s). For the latest Administrative comments check the City's website page for **Committee of Adjustment-Meeting Agenda** after 12:00 noon on the Friday prior to the hearing date.

APPLICANT AND PROPERTY INFORMATION

LEGAL DESCRIPTION: PLAN 1126; LOT 271

Official Plan Designation	Zoning of Subject Land(s)
Industrial	Residential District 1.1 (RD1.1)

Applicant/Owner(s)	Authorized Agent(s)	Subject Property
Owner Name: PATRYCJA PAULINA SZELEST **Applicant Name:** Patrycja Szelest		3733 RIBERDY RD

PURPOSE OF APPLICATION

Minor Variance - Proposed single unit dwelling requesting relief for reduced minimum lot width and area

The proposal is seeking the following reliefs from Zoning By-law 8600:

	Provision	Provision Description	Required	Proposed
1	10.1.5.1	Minimum Lot Width	15.0m	10.7m
2	10.1.5.2	Minimum Lot Area	450.0m²	325.2m²

Type of Consent Application Transaction: N/A

How do I participate if I have comments or concerns?

Submit written comments

Although neighbours cannot appeal a decision, you are entitled to notice and may make written submissions before the application is considered by the Committee of Adjustment. You can send your written comments regarding the application by email (preferred) or regular mail to the Secretary-Treasurer noted below. Include your name, address and application number or address of the property in which you are providing comments. To allow all Committee members the opportunity to review and consider your comments, please provide your written submissions to be received no later than noon the day before the hearing.

Participate in the hearing by videoconference (Microsoft Teams)

Two ways to register: 1) visit the City of Windsor website to self-register OR 2) call or email the Secretary-Treasurer noted below no later than noon the day before the hearing date. You are encouraged to pre-register as a delegation as soon as possible in order to facilitate an orderly registration process. Once registered you will receive confirmation by email including a link to join the virtual hearing.

Applicant(s) – Attendance is required. If you do not attend or send a representative, the Committee may proceed in your absence without any further notice to you or reschedule the meeting at a cost to you.

Notice of Decision

If you wish to be notified of the decision for this application, you must make a written request by email or regular mail to the Secretary-Treasurer (jwatson@citywindsor.ca). The written request must be received before noon the day before the hearing date. This will entitle you to be notified of any future Ontario Land Tribunal proceedings in the event of an appeal.

Contact Information:
Jessica Watson
Secretary-Treasurer
Committee of Adjustment
Suite 320, 350 City Hall Square West
Windsor, ON N9A6S1
Phone: 519-255-6543 ext. 6450 or 6436
COAdjustment@citywindsor.ca

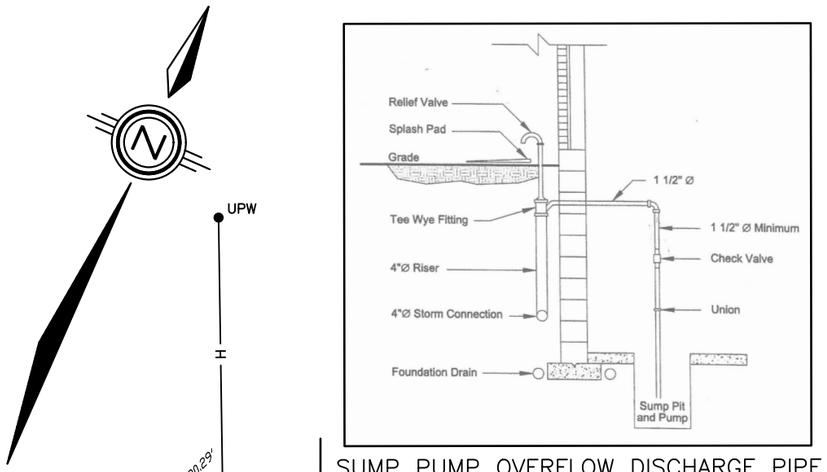
IN FILL LOT GRADING SKETCH

MUN No.
RIBERDY ROAD
IN THE
CITY OF WINDSOR

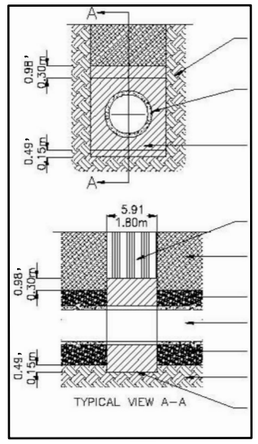
VERHAEGEN LAND SURVEYORS, A DIVISION OF J.D. BARNES LTD.

SCALE : 1"=20'

0 10.0 20.0 40.0 60.0 FEET 100.0



SUMP PUMP OVERFLOW DISCHARGE PIPE
(IMPERIAL DIMENSIONS SHOWN)



ENSURE OUTSIDE EXISTING TRENCH (BOTH SIDES) ARE CLEANED TO ORIGINAL GROUND

STORM SEWER

REMOVE EXISTING STONE BEDDING BACKFILL AND REPLACE WITH LEAN GROUT/BENTONITE 1.0' BELOW EXISTING BEDDING 3.0 FEET IN LENGTH

IMPORTED CLAY (IMPERVIOUS) IF NATIVE BACKFILL IS NOT CLAY

CLAY BACKFILL (COMPACTED TO SPECIFICATION)

1.0' GRANULAR BEDDING

MUST BE INSTALLED BETWEEN JOINTS

6" SEWER STONE (Min.)

UNDISTURBED SOIL

EXCAVATE 6" BELOW PIPE BEDDING (FOR EXISTING PIPE ONLY)

GROUT/BENTONITE PLUG DETAIL

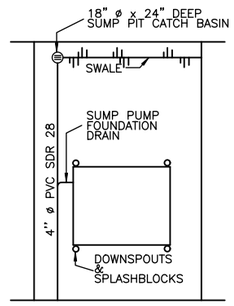
REAR LOT LINE
5.0' MIN.
℄ OF SWALE
2% MIN. 4% MAX.
S.P.C.B. AND REAR YARD SWALE SHOWN THUS
2% MIN.–5% MAX.
3% MIN.
STREET LINE
18" MIN.
1% MIN.
TO STORM SEWER
TO SANITARY SEWER
SUMP PIT CATCH BASIN
0.25" 0.50" SEWER STONE
4"ø WEEPING TILE BASEMENT SUMP

TYPICAL LOT DRAINAGE

NOT TO SCALE

NOTE

1. STORM CONNECTIONS TO PROVIDE REAR YARD DRAINAGE AND WEEPING TILE FROM BASEMENT SUMP.
2. SANITARY CONNECTIONS TO CARRY DOMESTIC SEWAGE ONLY.
3. LOT GRADING TO DIRECT WATER AWAY FROM HOUSE TO EITHER ROAD OR REAR YARD DRAIN.
4. SOLID STORM DRAIN TO 10 FEET BEYOND HOUSE AS SHOWN.
5. PERFORATED PIPE FOR REAR YARD DRAINAGE AS SHOWN.
6. CONNECT 4"ø WEEPING TILE TO BASEMENT SUMP AND DISCHARGE TO STORM SEWER.
7. CLEAN–OUTS TO BE LOCATED EVERY 50 FEET MAXIMUM.



PLAN VIEW
NOT TO SCALE

619.17' DENOTES EXISTING ELEVATION

619.2' DENOTES PROPOSED ELEVATION

Existing Elevations have been derived on the following Date : September 02, 2026

ELEVATIONS
GEODETIC ☒
ASSUMED ☐

DATE OCTOBER 07, 2026

SHAFIC HABEBUR RAHMAN
ONTARIO LAND SURVEYOR

ELEVATIONS

ELEVATIONS SHOWN ON THIS PLAN ARE IN FEET TO CANADIAN GEODETIC DATUM

BENCH MARK

BENCH MARK 515 ELEVATION 622.54'
AIRPORT MOTEL. 3775 WALKER ROAD: THE PLATE IS LOCATED ON THE EAST WALL. 1.5 FEET SOUTH OF THE NORTH WALL AND 1.1 FEET ABOVE GROUND.

SITE BENCH MARK

1. NAIL IN UTILITY POLE – 620.76'
2. TOP OF FIRE HYDRANT INFRONT OF MUN No. 3763 – 623.00'

"IMPERIAL"
Distances and coordinates shown on this plan are in feet and can be converted to metres by multiplying by 0.3048

CAUTION
UNDERGROUND UTILITIES AND SERVICES SHOWN ON THIS PLAN ARE APPROXIMATE AND MUST BE VERIFIED BEFORE CONSTRUCTION

VERHAEGEN LAND SURVEYORS
A DIVISION OF J.D. BARNES LTD.
SURVEYING MAPPING GIS
944 OTTAWA STREET, WINDSOR, ON, N8X 2E1
T: (519) 258-1772 F: (519) 258-1791 www.jdbarnes.com

DRAWN BY:	CHECKED BY:	REFERENCE NO.:
SP	OLS	26-47-423-00

CAD File: 26-47-423-00.dwg
CAD Date: September 15, 2026 2:07 PM

File: E-1126-27

GENERAL NOTES

1. ALL CONSTRUCTION TO COMPLY WITH THE GENERAL NOTES AND/OR THE CURRENT ONTARIO BUILDING CODE, FIRE CODE, PLUMBING CODE, ELECTRICAL CODE AND/OR LOCAL BY-LAWS. IN THE EVENT OF A CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
2. WINDOW AND DOOR SIZES ARE SHOWN FOR REFERENCE ONLY. GENERAL CONTRACTOR SHALL CONSULT MANUFACTURER SPECIFICATIONS FOR ALL EXACT ROUGH OPENING SIZES AND GLAZING DIMENSIONS PRIOR TO CONSTRUCTION. LOCATION, HEAD HEIGHTS AND SILL HEIGHTS TO BE CONFIRMED ON SITE BY GENERAL CONTRACTOR PRIOR TO CONSTRUCTION.
3. WOOD WALL AND FLOOR FRAMING SHALL COMPLY WITH OBC PART 9 EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE NOTED ON DRAWINGS
4. WOOD ROOF FRAMING SHALL COMPLY WITH OBC SECTION 9.23.13 EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE NOTED ON DRAWINGS
5. MINIMUM FOOTING DEPTH SHALL BE 4'-0" BELOW FINISHED GRADE. UNDER-FLOOR SPACE SHALL COMPLY WITH OBC 9.18.
6. PERMIT APPLICANT TO SUBMIT EITHER A TRUSS DESIGN DATA SHEET OR THE COMPLETE TRUSS DESIGN DRAWINGS FOR ANY PRE-ENGINEERED ROOF TRUSSES OR GIRDERS
7. ALL ATTICS ARE DESIGNED AS NON-STORAGE UNLESS OTHERWISE NOTED
8. PROVIDE INSULATION TO MEET OBC 9.25.2. AND SB-12, ALL EXTERIOR WALLS TO BE MINIMUM R24.
9. PROVIDE RIGID INSULATION AT ALL PERIMETER SLAB ON GRADE CONDITIONS
10. DAMPPROOFING AND WATERPROOFING SHALL COMPLY WITH OBC SECTION 9.13.
11. ALL BRICK OR MASONRY LEDGES SHALL BE A MINIMUM OF 6" ABOVE FINISHED GRADE.
12. GRADING SHALL SLOPE A MINIMUM OF 2% AWAY FROM THE BUILDING AT EVERY POINT WHERE THE BUILDING MEETS FINISHED GRADE.
13. VENTILATION OF CONCEALED ROOF SPACES SHALL BE MAINTAINED
14. ELECTRICAL SYSTEM DESIGN IS BY OTHERS.
15. MECH & HVAC SYSTEM DESIGN IS BY OTHERS
16. PLUMBING DESIGN IS BY OTHERS
17. DO NOT SCALE DRAWINGS.
18. GC TO CONFIRM REQUIREMENTS FOR ZONING, SETBACK, AND ENVIRONMENTAL RESTRICTIONS PRIOR TO CONSTRUCTION.
19. THESE DWG'S ARE FOR MIN. BUILDING PERMIT ONLY AND DO NOT GIVE ALL DETAILS FOR COMPLETE BUILDING PROCESS. G.C. IS RESPONSIBLE FOR ALL OTHER DETAILS ,INFO , ENG. STAMPS FOR CONC. REINF PORCHES OR POINT LOADING DIAGRAMS , LINTEL DESIGNS ,BEAM REINFORCEMENT NEEDED FOR BUILDING PERMIT PROCESS IF REQUESTED BY LOCAL MUNICIPAL AUTHORITIES
20. THIS CONSULTANT IS UNAWARE OF ANY SOIL BEARING CAPACITY PROBLEMS. THIS CONSULTANT HAS ADVISED OWNER TO INVOLVE A GEOTECHNICAL CONSULTANT THROUGHOUT CONSTRUCTION TO ADVISE CONSULTANT OF ALL SUBSURFACE CAPACITIES. IF ANY SOIL PROBLEMS EXIST. THE OWNER MUST HIRE A ENG. TO SOLVE THESE PROBLEMS AND PAY FOR ALL FEES AND EXTRA MATERIALS DURING THIS TIME.
21. G.C. MUST HIRE ONT. LAND SURVEYOR TO PLACE HOME ON SITE AND SET ELEVATIONS FOR EXCAVATIONS AND PRODUCE A COMPLETE GRADING PLANS FOR OWNERS AND LOCAL AUTHORITIES APPROVAL
22. DESIGNER IS NOT HIRED NOR RESPONSIBLE FOR CONSTRUCTION REVIEW DURING CONSTRUCTION. ANY INTERIOR OR EXTERIOR MODIFICATIONS MADE BY G.C. DURING CONSTRUCTION MUST BE REPORTED TO THIS CONSULT . IF NOT THE DESIGNER WILL NOT TAKE ANY RESPONSIBILITY FOR ERRORS MADE DURING CONSTRUCTION INCURRING COST TO THE DESIGNER .
23. G.C. MUST CHECK ALL DIMENSION OF PLANS AND FIELD DIM. PRIOR TO ORDERING PRE. ENG TRUSSES AND REPORT AND DIFFERENCES TO THIS DESIGNER IN WRITING IMMEDIATELY PRIOR TO ERECTION AND FABRICATION OF TRUSSES
24. ALL DIMENSIONS ON PLANS ARE SHOWN IN NOMINAL DIMENSIONS FOR EASE OF CONSTRUCTION AND ADDING OF FRACTIONS
25. G.C. IS RESPONSIBLE FOR DEVELOPER APPROVAL OF ALL DESIGNS . PRIOR TO WORKING DWG'S STARTED.
26. G.C. IS RESPONSIBLE TO ALSO REVIEW TRUSS SHOP DWG'S AND APPROVE AND UNDERSTAND ALL CONSTRUCTION METHODS AND DETAILS OF PRELIM. ROOF SHOP DWG'S AND APPROVE PRIOR TO SUBMITTING PERMIT DWG'S BY THIS DESIGNER.
27. G.C. IS RESPONSIBLE TO KEEP ALL DESIGN COMPONENTS AND LAYOUT THE SAME AS PER THESE DWG'S .FAILURE TO DO SO VOIDS THESE DWG'S AND FIELD MEASUREMENTS AND MUST BE DONE TO SIT ON SITE CONDITIONS . THIS CONTRACTOR MUST PAY FOR THESE REVISIONS.
28. EXTERIOR FINISHES AND FINISHING SYSTEMS ARE FOR DEMONSTRATION. G.C. MAY USE APPROVED FINISHES AND FINISHING SYSTEMS THAT MEET MINIMUM CODE DESIGNER MUST BE INFORMED AND APPROVE CHANGES FROM DEMONSTRATED FINISHES AND FINISHING SYSTEMS.
29. EXTERIOR FINISHES, WINDOWS, DOORS SIZES AND STYLES, KITCHEN LAYOUTS, BATH LAYOUTS, AND BASEMENT DESIGNS ARE THIS DESIGNERS RENDERING OF WHAT THE HOUSE CAN INCLUDE. GENERAL CONTRACTORS CONTACT SHALL SUPERCEDE IN ALL ABOVE MENTIONED CATEGORIES AS LONG AS THEY MEET O.B.C. G.C. TO INFORM DESIGNER OF ANY DIFFERENCES TO THIS PLAN.

GENERAL NOTES

FOOTINGS AND SLABS
- FOOTINGS AND FOUNDATIONS TO COMPLY WITH O.B.C. SECTION 9.15
- SLABS TO COMPLY WITH O.B.C. SECTION 9.16

CONCRETE FOUNDATION WALLS
- CONCRETE FOUNDATION WALLS TO COMPLY WITH O.B.C. SECTION 9.15

ATTACHED GARAGES
- ATTACHED GARAGES SHALL COMPLY WITH O.B.C. SECTION 9.35

MASONRY VENEER WALLS
- MASONRY VENEER WALLS SHALL COMPLY WITH O.B.C. SECTION 9.20

WOOD FRAMING
- WOOD FRAMING SHALL COMPLY WITH O.B.C. SECTION 9.23

ROOF CONSTRUCTION
- ROOF CONSTRUCTION SHALL COMPLY WITH O.B.C. SECTION 9.26

BASEMENT
- PROVIDE 0.2% MINIMUM OF UNFINISHED BASEMENT FLOOR AREA, UNOBSTRUCTED VENTILATION AREA TO THE OUTDOORS

DOORS AND WINDOWS
- DOORS AND WINDOWS SHALL COMPLY WITH O.B.C. SECTION 9.5

FLASHING
- FLASHING SHALL COMPLY WITH O.B.C. SECTIONS 9.26, 9.27

INSULATION AND VAPOUR BARRIERS
- INSULATION SHALL COMPLY WITH O.B.C. SECTION 9.7.6
- VAPOUR BARRIERS SHALL COMPLY WITH O.B.C. SECTION 9.25

FIRE SEPARATION
- FIRE SEPARATION SHALL COMPLY WITH O.B.C. SECTION 9.10

CHIMNEY AND FLUES
- CHIMNEY AND FLUES SHALL COMPLY WITH O.B.C. SECTION 9.21

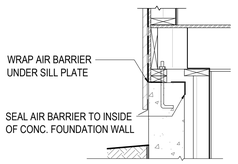
NATURAL AND MECHANICAL VENTILATION
- NATURAL AND MECHANICAL VENTILATION SHALL COMPLY WITH O.B.C. SECTION 9.32

SMOKE ALARMS
- SMOKE ALARMS SHALL COMPLY WITH O.B.C. SECTION 9.10

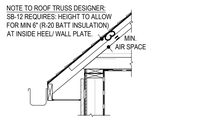
GENERAL NOTES

1. THESE GENERAL NOTES REFER TO ALL ARCHITECTURAL DRAWINGS
2. THE ONTARIO BUILDING CODE LATEST EDITION SHALL BE THE BASIS FOR THE DESIGN AND CONSTRUCTION FOR THIS PROJECT
3. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
4. GENERAL CONTRACTOR TO VERIFY ALL SITE CONDITIONS PRIOR TO HOME CONSTRUCTION.
5. CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THE CONSULTANTS MUST BE NOTIFIED IN WRITING OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS.
6. CONTRACTOR SHALL PROMPTLY NOTIFY THE CONSULTANT IN WRITING OF THE EXISTENCE OF ANY OBSERVED VARIANCES BETWEEN THE DOCUMENTS AND APPLICABLE CODES OR ORDINANCES OR REGULATORY AGENCIES.
7. CONSULTANT WILL NOT BE HELD RESPONSIBLE FOR ANY OMISSIONS TO, ERRORS PERTAINING TO, OR DEVIATIONS FROM THIS SET OF DRAWINGS DURING THE CONSTRUCTION PROCESS.
8. SPECIFIC NOTES AND SPECIFIC DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTE AND TYPICAL DETAILS.
9. THE CONTRACTOR SHALL OBTAIN ANY ALL NECESSARY PERMITS AND ARRANGE FOR ALL REQUIRED INSPECTIONS AS REQUIRED BY GOVERNING LAWS.
10. ALL COLOURS FOR MATERIAL SPECIFIED WITHIN THESE DRAWINGS SHALL BE CHOSEN BY CLIENT FROM SAMPLES PROVIDED BY CONTRACTOR.
11. THESE PRINTS ARE THE PROPERTY AND DESIGN THIS DESIGNER. THE DESIGNER RESERVES THE RIGHT TO REPRODUCE THE SAME HOUSE AT NO BENEFIT TO THE PURCHASER OF THIS HOME.

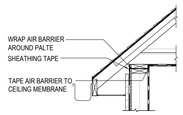
ENERGY EFFICIENCY	
SUPPLEMENTARY STANDARD SB-12 TABLE 3.1.1.2 (IP) - ZONE 1	COMPLIANCE PACKAGE **A1**
THERMAL INSULATION	
CEILING WITH ATTIC SPACE	**R60**
CEILING WITHOUT ATTIC SPACE	**R31**
EXPOSED FLOOR	**R31**
WALLS ABOVE GRADE	**R22**
BASEMENT WALLS	**R10ci + R12**
SLAB (ALL >600mm BELOW GRADE)	**R10**
SLAB (EDGE ONLY </= 600mm BELOW GRADE)	**R10**
SLAB (ALL ONLY </= 600mm BELOW GRADE OR HEATED)	**R10**
WINDOWS & DOORS 'U' value or ER rating	
WINDOWS AND SLIDING GLASS DOORS (Maximum 'U' Value)	**.28**
SKYLIGHTS MAXIMUM 'U' VALUE	**.49**
MECHANICALS	
SPACE HEATING EQUIPMENT MINIMUM AFUE	**96%**
HRV MINIMUM EFFICIENCY	**75%**
DOMESTIC HOT WATER HEATER MINIMUM EF	**.08**
NUMBER OF SHOWERS	**2**



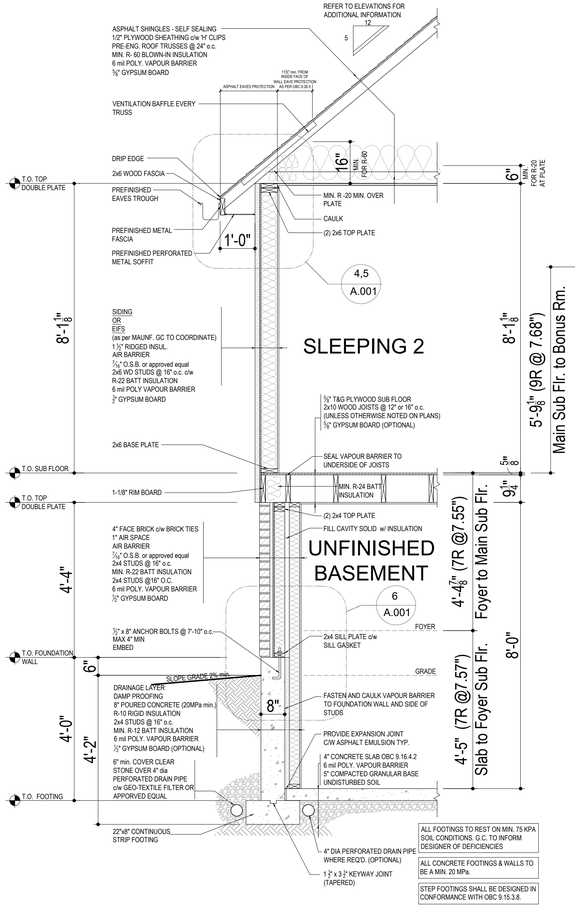
6 / A00.1 Typical Air Barrier Foundation Detail 1"= 1'



5 / A00.1 Typical Heel Detail 1"= 1'

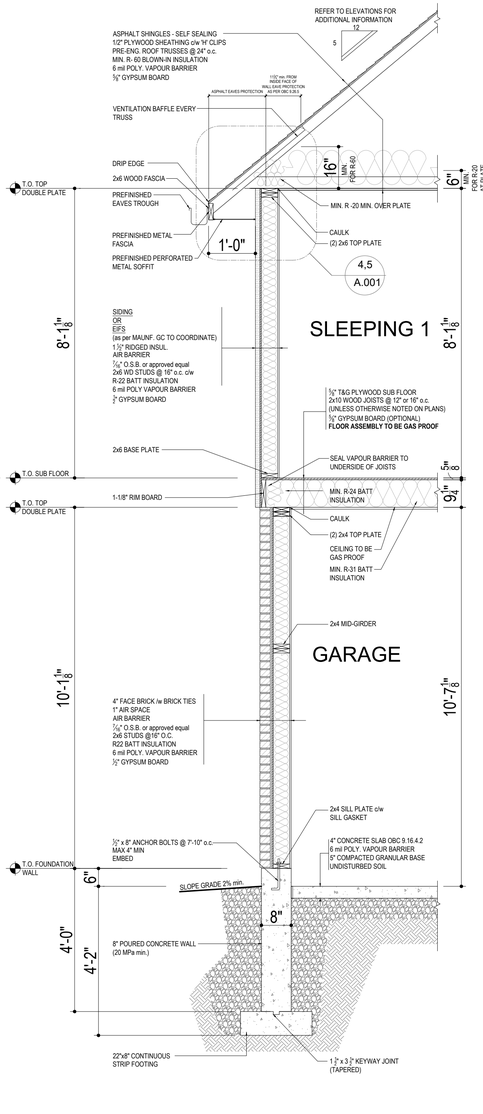


4 / A00.1 Typical Air Barrier Ceiling Detail 1"= 1'



3 / A00.1 TYP. WALL SECTION - HOUSE ½" = 1'

50" DIG DEPTH w/ 8" B.L.



2 / A00.1 TYP. WALL SECTION - GARAGE ½" = 1'

SITE INFO		
ADDRESS	LOT NUMBER	LOT AREA
O RIBERDY WINDSOR, ON	**LOT 271**	**3500 SF**
	ZONING	ALLOWABLE COVERAGE
	RD 1.1	**1575 SF (45%)**
		PROPOSED COVERAGE
		1397 SF (40%)

LOT COVERAGE	
MAIN FLOOR	**1100 SF**
GARAGE	**343 SF**
FRONT PORCH	**54 SF**
TOTAL LOT COVERAGE	**1397 SF**

BUILDING AREAS	
MAIN FLOOR	**1100 SF**
GARAGE	**343 SF**
FRONT PORCH	**54 SF**
UPPER FLOOR	**415 SF**

INDEX OF DRAWINGS

A00.1 SITE PLAN, WALL SECTIONS, NOTES & DETAILS
A01.1 FOUNDATION, MAIN, UPPER AND ROOF PLANS
A02.1 ELEVATIONS

SITE PLAN NOTES

1. THIS DESIGNER IS NOT RESPONSIBLE FOR ERCA, EASEMENTS, SITE PLAN CONTROL, APPROVALS AND DEVELOPMENTAL SITE CONDITIONS, AND LOT RESTRICTIONS.
2. THIS PLAN IS NOT A LEGAL SURVEY. ALL DIMENSIONS SHOULD BE VERIFIED BY AN O.L.S. THIS SITE PLAN IS PROVIDED AS A GUIDE TO LOCATE THE BUILDING

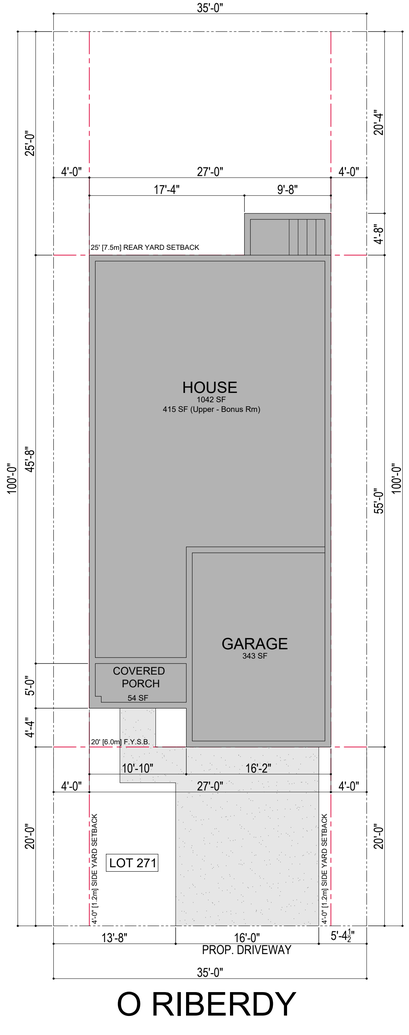
SITE PLAN LEGEND

SETBACKS
PROPERTY LINES
Proposed Build
Hard Surfaces

FRONTAGE SQ FT = 700 SF
HARD SURFACES = 350 SF
(DRIVEWAY AND WALK TO FRONT DOOR)

SITE PLAN NOTES

SITE PLAN TAKEN FROM SURVEY PROVIDED BY VERHAGEN



1 / A00.1 PROPERTY PLAN 3/32" = 1'

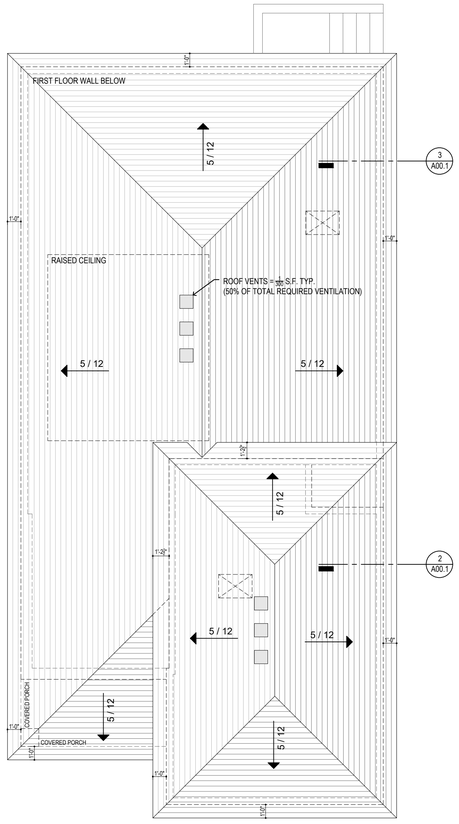
AUG 20, 2026	ISSUED FOR BUILDING PERMIT
SEP 04, 2026	SITE PLAN REVISIONS
OCT 05, 2026	REVISIONS
July 23, 2026	

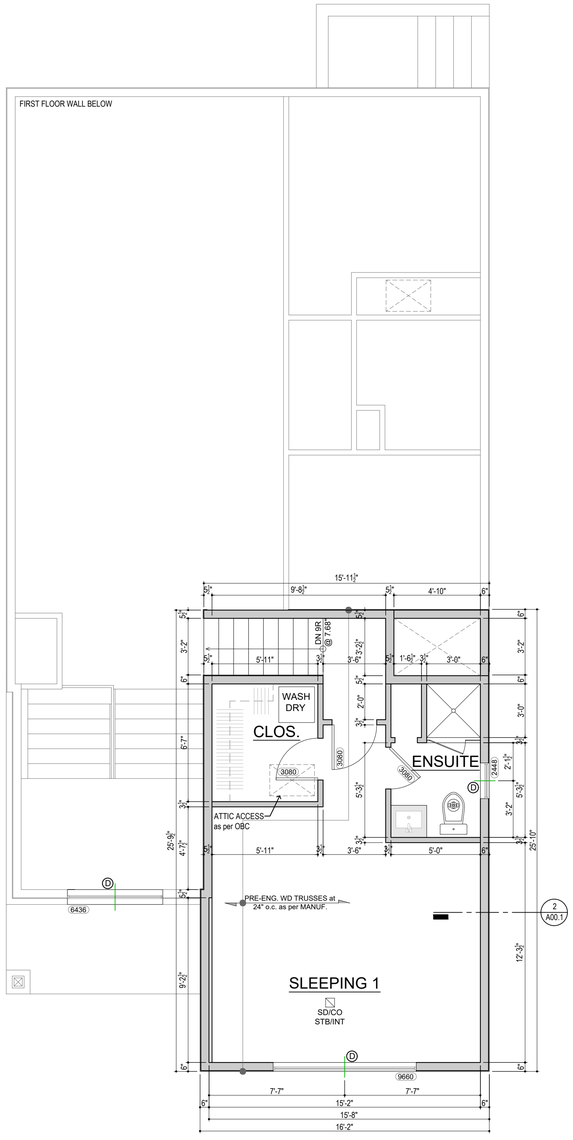
PROPERTY PLAN
26028 - 0 (Lot 271) Riberdy
0 Riberdy, Windsor ON
Lot 271

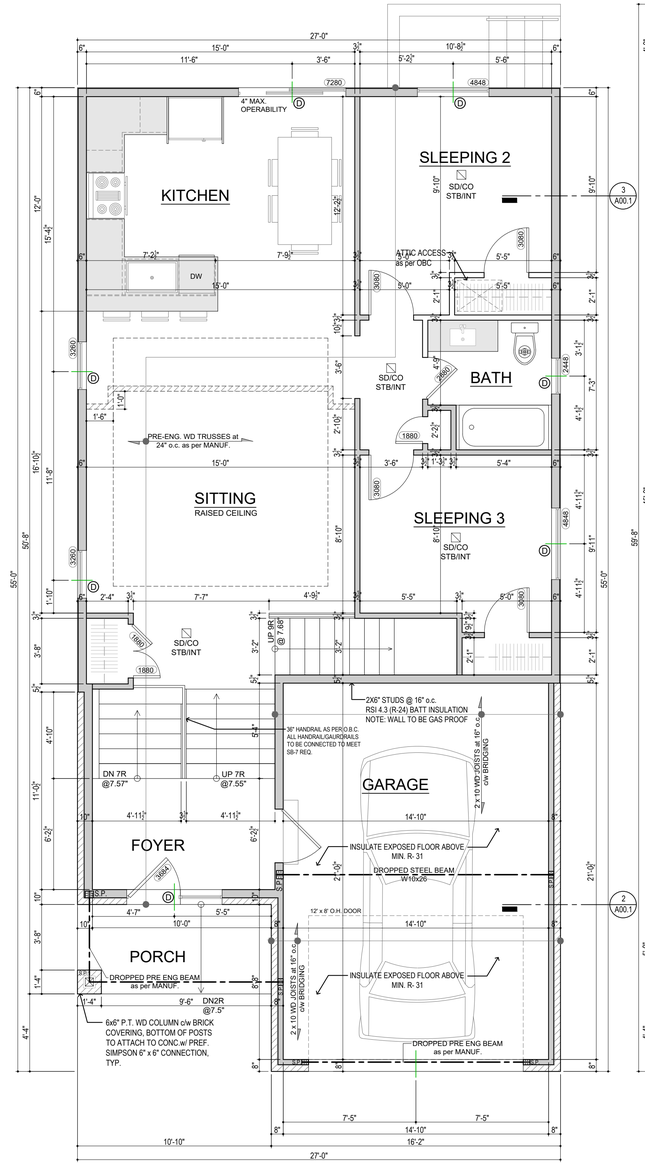
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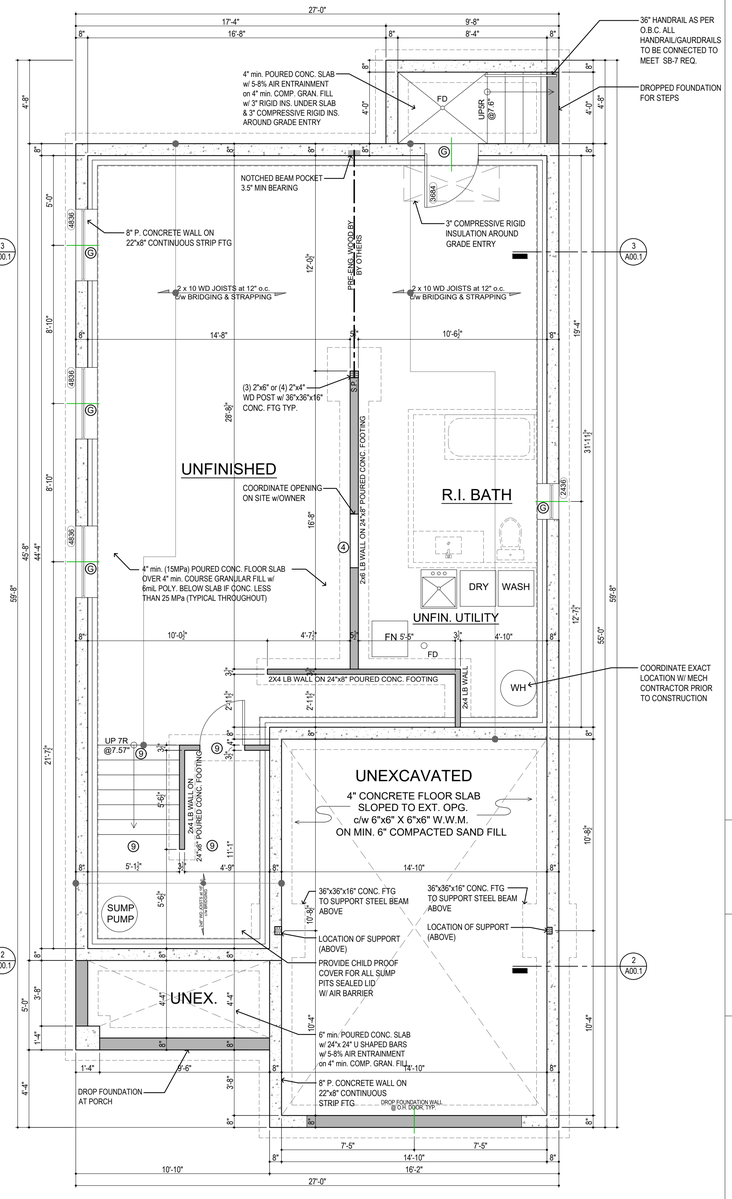
KEEN DESIGN STUDIO
1500 Alma, Amherstburg, ON 226.221.8895

FINAL DRAWING - USE FOR CONSTRUCTION. FINAL DRAWING - USE FOR CONSTRUCTION. FINAL DRAWING - USE FOR CONSTRUCTION..









ROOF AREA = 1637 SF = 6 VENTS MIN.

4 A01.1 ROOF PLAN N.T.S.

3 A01.1 MAIN FLOOR PLAN 1/4" = 1'

2 A01.1 MAIN FLOOR PLAN 1/4" = 1'

1 A01.1 FOUNDATION PLAN 1/4" = 1'

FINAL DRAWING - USE FOR CONSTRUCTION. FINAL DRAWING - USE FOR CONSTRUCTION. FINAL DRAWING - USE FOR CONSTRUCTION..

LINTEL SCHEDULE (EXTERIOR)

	MAX. SPAN					
LINTEL SIZE	ROOF + CEILING	ROOF + CEILING AND 1 STOREY	ROOF + CEILING AND 2 STOREY			
2- 2"x4"	4'-1"	A	3'-0"	J	3'-0"	O
2- 2"x6"	6'-4"	B	4'-10"	K	4'-8"	P
2- 2"x8"	7'-8"	C	5'-11"	L	5'-4"	Q
2- 2"x10"	9'-5"	D	7'-3"	M	6'-6"	R
2- 2"x12"	10'-11"	E	8'-5"	N	7'-6"	S

NOTE THIS SCHEDULE APPLIES UNLESS NOTED OTHERWISE ON THE PLANS OR ELEVATIONS

LINTEL SCHEDULE (INTERIOR)

	MAX. SPAN					
LINTEL SIZE	ROOF + CEILING	ROOF + CEILING AND 1 STOREY	ROOF + CEILING AND 2 STOREY			
2- 2"x4"	3'-0"	I	2'-5"	S	2'-1"	X
2- 2"x6"	4'-6"	J	3'-5"	T	2'-10"	Y
2- 2"x8"	5'-4"	K	3'-11"	U	3'-5"	Z
2- 2"x10"	6'-7"	L	4'-9"	V	4'-2"	AA
2- 2"x12"	7'-7"	M	5'-0"	W	4'-9"	BB

NOTE THIS SCHEDULE APPLIES UNLESS NOTED OTHERWISE ON THE PLANS OR ELEVATIONS

EXTERIOR WALL STUDS w/BRICK

STUD LENGTH	SUPPORTING 9.64 OF ROOF	SUPPORTING 19.68 OF ROOF
12.46'	2x6" at 16"	2x6" at 16"
13.77'	2x6" at 12"	2x6" at 12"
15.09'	2-2x6" at 16"	2-2x6" at 16"
16.4'	2-2x6" at 16"	2-2x6" at 16"
17.39'	2-2x6" at 12"	2-2x6" at 12"
18.37'	2-2x6" at 12"	2-2x6" at 12"

ASSUMES 0.3 kPa HOURLY WIND PRESSURE AND 1.0 kPa SNOW LOAD, BASED ON A-30 & A-31 O.B.C.

EXTERIOR WALL STUDS w/SIDING

STUD LENGTH	SUPPORTING 9.64 OF ROOF	SUPPORTING 19.68 OF ROOF
12.46'	2x6" at 16"	2x6" at 16"
13.77'	2x6" at 12"	2x6" at 12"
15.09'	2-2x6" at 16"	2-2x6" at 16"
16.4'	2-2x6" at 16"	2-2x6" at 16"
17.39'	2-2x6" at 12"	2-2x6" at 12"
18.37'	2-2x6" at 12"	2-2x6" at 12"

ASSUMES 0.3 kPa HOURLY WIND PRESSURE AND 1.0 kPa SNOW LOAD, BASED ON A-30 & A-31 O.B.C.

STEEL LINTEL SCHEDULE

LOOSE STEEL LINTELS FOR MASONRY - EXTERIOR ANGLES FOR BRICK VENEER (DEAD LOAD + LIVE LOAD)

MAX CLEAR SPAN	LINTEL SIZE
5'-0" OR LESS	3 1/2" x 3 1/2" x 5/16"
7'-0" OR LESS	4" x 3½" x ⅜"
8'-0" OR LESS	5" x 3½" x ⅜"
9'-0" OR LESS	5" x 3½" x ½"
10'-0" OR LESS	6" x 3½" x ½"

NOTE THIS SCHEDULE APPLIES UNLESS NOTED OTHERWISE ON THE PLANS OR ELEVATIONS

LEGEND

S.P. ST'L	3 1/2" x 3 1/2" HSS STEEL POST
S.P.	SUPPORT REQUIRED (3) 2x6 OR (4) 2x4
	GRAB BAR SUPPORT REQ'D
E.F.	EXHAUST FAN w/ NON-COMBUSTABLE DUCTWORK

FLOOR PLAN NOTES

1. VERIFY IN FIELD FOR ALL MECHANICAL, PLUMBING AND ELECTRICAL WORK.
2. ALL STAIRS, RAMPS , HANDRAILS AND GUARDS SHALL CONFORM TO THE CURRENT VERSION OF PART 9 ONTARIO BUILDING CODE.
3. ALL INTERIOR WALL TYPES TO BE 'P1' UNLESS OTHERWISE NOTED
4. VERIFY ALL MEP WORK ON SITE

KEY NOTES

1. VERIFY IN FIELD FOR ALL MECHANICAL, PLUMBING AND ELECTRICAL WORK.
2. ALL STAIRS, RAMPS , HANDRAILS AND GUARDS SHALL CONFORM TO THE CURRENT VERSION OF PART 9 ONTARIO BUILDING CODE.
3. ALL OPENINGS TO HAVE (2) 2x8 LINTEL UNLESS OTHERWISE NOTED.

AUG 20, 2026	ISSUED FOR BUILDING PERMIT
SEP 04, 2026	SITE PLAN REVISIONS
OCT 05, 2026	REVISIONS
July 23, 2026	

PLANS
26028 - 0 (Lot 271) Riberdy
0 Riberdy, Windsor ON
Lot 271

KEEN DESIGN STUDIO
1500 Alma, Amherstburg, ON 226.221.8895

GLAZING OPENINGS IN BUILDING FACE			
ELEVATION	**BUILDING FACE (SF)**	**GLAZING (SF)**	**GLAZING %**
NORTHEAST	**445 SF**	**93 SF**	
NORTHWEST	**879 SF**	**38 SF**	
SOUTHWEST	**380 SF**	**79 SF**	
SOUTHEAST	**774SF**	**50 SF**	
TOTAL	**2478 SF**	**260 SF**	**10.5%**

EXTERIOR ELEVATION NOTES

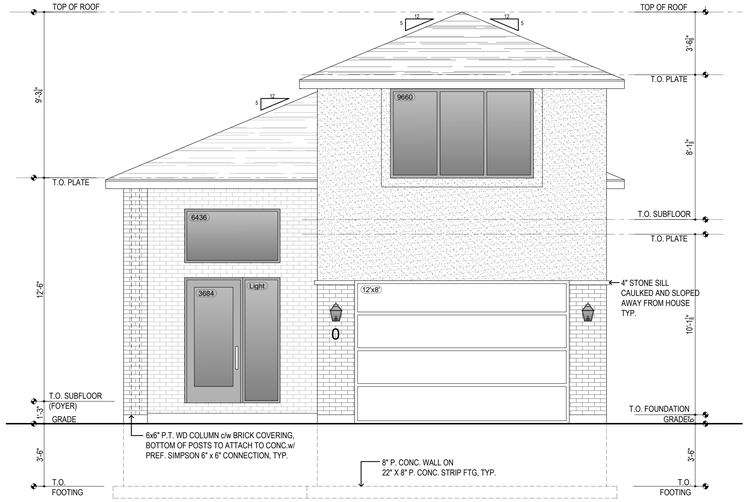
1. ALL EXTERIOR FINISHES AS PER EXTERIOR MATERIAL FINISHES SCHEDULE OR EQUAL APPROVED.
2. ALL EXTERIOR FINISHES INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS
3. ALL EXTERIOR TRIMS, SILLS AND FLASHING TO BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
4. EXISTING GRADING TO BE COORDINATED w/OWNER/G.C.
5. NEW OPENING ELEVATION TO BE SET BY TOWNSHIP

EXTERIOR MATERIAL FINISHES SCHEDULE

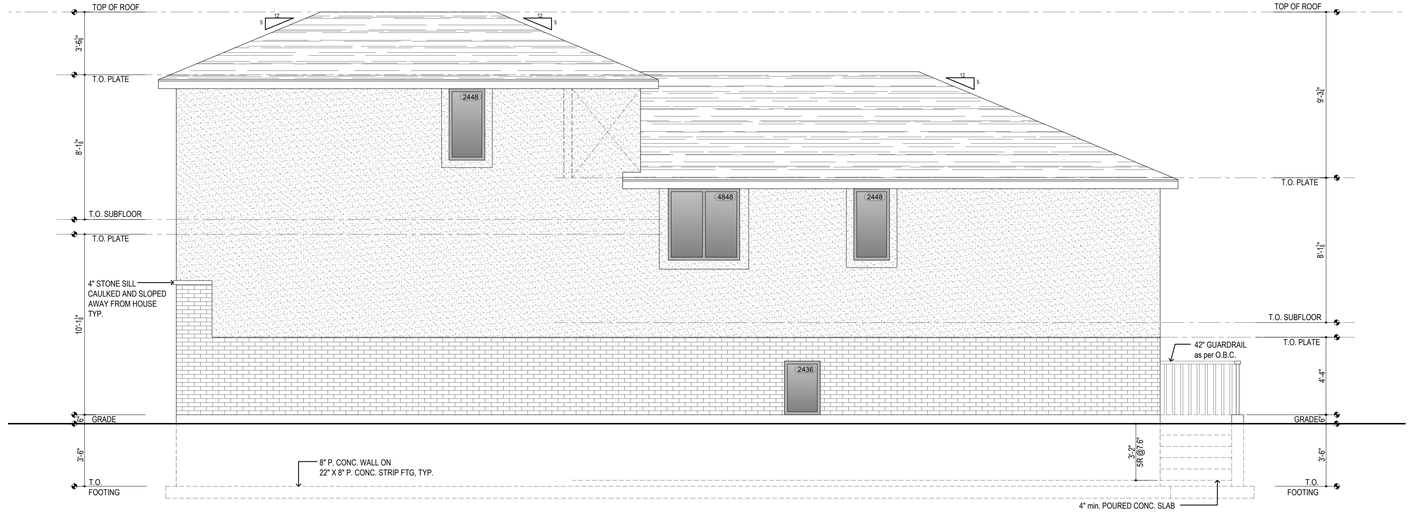
Shingles

Stucco

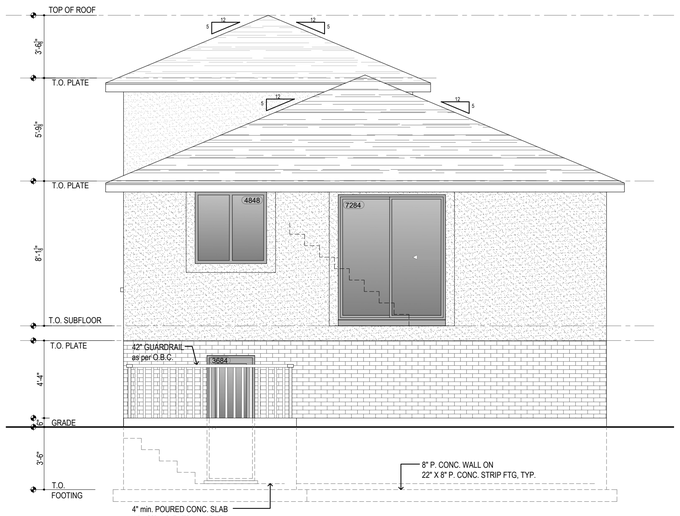
Brick



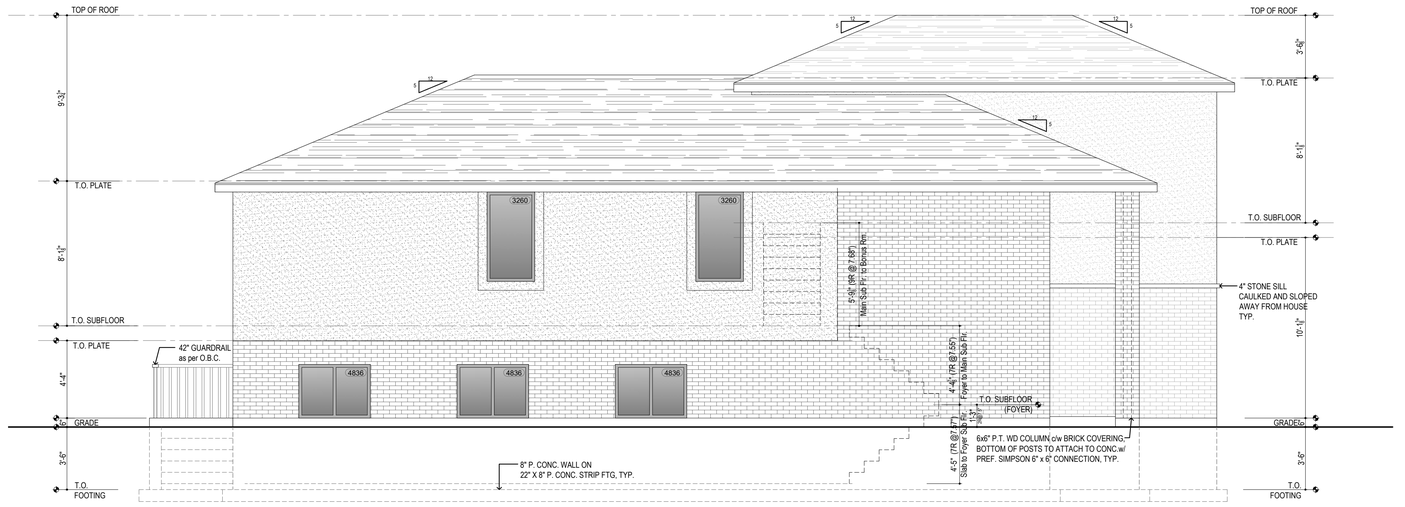
1 A02.1 NORTH EAST ELEVATION
1/4" = 1'



2 A02.1 NORTH WEST ELEVATION
1/4" = 1'



3 A02.1 SOUTH WEST ELEVATION
1/4" = 1'



4 A02.1 SOUTH EAST ELEVATION
1/4" = 1'

AUG 20, 2026	ISSUED FOR BUILDING PERMIT
SEP 04, 2026	SITE PLAN REVISIONS
OCT 05, 2026	REVISIONS

North & South Elev. Window/Door
26028 - 0 (Lot 271) Riberdy
0 Riberdy, Windsor ON
Lot 271
July 23, 2026

KEEN DESIGN STUDIO
1500 Alma, Amherstburg, ON 226.221.8895

A02.1

FINAL DRAWING - USE FOR CONSTRUCTION. FINAL DRAWING - USE FOR CONSTRUCTION. FINAL DRAWING - USE FOR CONSTRUCTION..

akoustik engineering limited

138 Angstrom Cres.
Amherstburg, ON N9V 3S3
Phone: (519)903-7193
Fax: (800) 241-9149

October 30, 2026

Patrycja Szelest
C: 226-260-0286
E: szelestp@live.ca

Re: Environmental Noise Assessment Report for the Proposed Residential Development – 3733 Riberdy Road, City of Windsor, Ontario

Dear Ms. Szelest:

Please find attached a noise assessment report for the proposed residential development located at 3733 Riberdy Road in the City of Windsor, Ontario. This assessment considers the potential impacts from road, rail and air traffic noise as well as sources of nearby stationary noise.

I trust that the enclosed information meets your requirements. Please do not hesitate to contact me if you have any questions.

Sincerely,

Colin Novak PhD, PEng.

Environmental Noise Assessment Report for Proposed Residential Development at 3733 Riberdy Road, City of Windsor



akoustik
engineering limited

October 30, 2026

138 Angstrom Cres., Amherstburg, ON, N9V 3S3
Phone: (519) 903-7193 Fax: (800) 241-9149

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Statement of Liability

Akoustik Engineering Limited prepared this acoustical assessment report for Patrycja Szelest. The material in it reflects Dr. Helen Ule's and Dr. Colin Novak's judgement in light of the information available to them and Akoustik Engineering Limited at the time of the study, including all acoustical measurements, under the stated test conditions. Any use that a Third Party makes of this report (other than Patrycja Szelest), or any reliance on decisions made based on it, is the responsibility of such Third Parties. Akoustik Engineering Limited accepts no responsibility for damages, if any, suffered by any Third Party resulting from decisions made or actions based on this report.

Introduction

This report is a noise assessment prepared for Ms. Patrycja Szelest in accordance with the procedures for noise assessment outlined by the applicable Ministry of the Environment, Conservation and Parks (MECP) Noise Pollution Control Guidelines (NPC-300). This assessment is in support of an application to construct a raised ranch single dwelling home at 3733 Riberdy Road, in the City of Windsor, Ontario. The assessment pertains to the potential environmental noise impacts on the development from the nearby sources of stationary, aircraft, rail and roadway noise. A map illustrating the surrounding area and development plan is given in Appendix A: Site Location.

The road and rail noise impacts have been predicted using the MECP prediction software STAMSON and are based on available traffic volumes, which have been projected 10 years forward. Aircraft noise impacts were evaluated with reference to the Windsor International Airport's noise exposure forecast/projection (NEF/NEP) contours. Also taken into consideration are the guidelines given by CN and the Federation of Canadian Municipalities (FCM) and Railway Association of Canada (RAC). Given that the road traffic occurs during all periods of a 24-hour day, as defined by the applicable MECP's Noise Pollution Control document NPC-300, the assessment has been carried out for the entire 24-hour period. A description for any recommended abatement (if required) to control the noise is included in this report.

Identification of Noise Sources

A zoning map of the area is provided in Appendix B: Land-use Zoning Map of Area. The proposed development is located on Residential District (RD) zoned lands and is surrounded by Manufacturing District (MD) land to the northeast, Commercial Distract (CD) to the southwest and Residential District to the northwest and southeast.

The roadway noise source(s) which have been identified to possibly produce an impact on the proposed development is Walker Road to the southwest of the development. The posted speed for this road is 60 km/h.

Potential sources of stationary noise include the Wolverine Freight System facility located to the southeast (2500 Airport Road) and The NARMCO Group (2575 Airport Road) to the southeast. It should be said that observations made during a recent site visit showed that the noise from The NARMCO Group was not audible and are expected to not have an adverse impact on the proposed development area.

The proposed development has the potential to be influenced by aircraft operations associated with the Windsor International Airport (YQG), which is the nearest airport with scheduled commercial and general aviation activity. In accordance with section C3.4.1 of the MECP's Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning (NPC-300), the assessment of aircraft noise is based on Noise Exposure Forecast (NEF) or Noise Exposure Projection (NEP) contours determined using methods approved by Transport Canada. Accordingly, the current published NEF/NEP contour mapping for Windsor International Airport has been reviewed to determine whether the subject lands are located

within an area where aircraft noise mitigation or warning clauses are required under NPC-300. The City of Windsor Constraint Areas map provided in Appendix C outlines the NEF contours for the YQG airport.

There are no other significant sources (transportation or stationary) of noise which are expected to have an impact on the proposed development. There are also no sources of vibration.

Ministry of the Environment, Conservation and Parks Noise Criteria

In accordance with the MECP Noise Pollution Control (NPC) Guideline, NPC-300, the following sound level limits from transportation noise have been set and are shown in Table 1 below. The NPC-300 reference pages are given in Appendix D: NPC-300 Reference Pages. It is worth noting that where the sound level limits presented in Table 1 are exceeded, noise control abatement is required.

Table 1: Ministry of the Environment and Climate Change Noise Criteria– Transportation Noise

Point of Reception Location	Daytime LA_{eq} [dBA]	Nighttime LA_{eq} [dBA]
Outdoor Living Area (OLA)	55	--
Plane of Window (POW) [Indoor]	55 (45)	50 (40)

From Table 1, daytime refers to the period from 07:00 to 23:00 and nighttime refers to the period from 23:00 to 07:00 hours. An outdoor living area (OLA) generally refers to a location such as a patio, yard, or barbeque area. The backyard of the proposed development is considered an OLA.

The limits presented in Table 1 are the limits before noise control measures are required. The noise level limit in an OLA may be exceeded by up to 5 dBA if proper warning clauses are inserted in the titles, deeds, and any tenancy agreements relating to the property and only after barriers or other noise control measures have been found to be impractical or unfeasible. A noise attenuation barrier is required to protect and bring the sound level down to 55 dBA in the OLA if the noise level exceeds 60 dBA. Only in cases where the required noise control measures are not feasible for technical, economic or administrative reasons would an excess above the limit (55 dBA) be acceptable with the appropriate warning clause; in this situation, any excess above the noise limit will not be deemed acceptable if it exceeds 5 dB.

The guideline also recommends the provision for the installation of central air conditioning when the noise level outside the plane of a window exceeds 55 dBA for the daytime or 50 dBA for the nighttime. If the noise level exceeds 65 dBA for the daytime or 60 dBA for the nighttime, the installation of central air conditioning should be implemented. Further, building components including exterior walls, windows and doors should be designed to have sufficient Sound Transmission Class (STC) ratings to meet the indoor noise guidelines given in Table 1.

The proposed development is classified as a Class 2 area, given that the region exhibits features of both a Class 1 and a Class 3 area, based on the environmental noise characteristics. The noise limit for stationary noise is the higher of the existing ambient noise level without contribution from the stationary source of

noise or the MECP exclusion sound level limits which are given in Table 2 below for stationary sources of sounds in a Class 2 area.

Table 2: Ministry of the Environment and Climate Change Noise Criteria for a Class 2 Area – Stationary Noise

Point of Reception Location	Daytime LA_{eq} [dBA]	Evening LA_{eq} [dBA]	Nighttime LA_{eq} [dBA]
Outdoor (OLA)	50	45	--
Plane of Window	50	50	45

From Table 2, daytime refers to the period from 07:00 to 19:00, evening refers to the period from 19:00 to 23:00 and nighttime refers to the period from 23:00 to 07:00 hours.

In accordance with the MECP Noise Pollution Control (NPC) Guideline, NPC-300, aircraft noise is assessed using Noise Exposure Forecast/Noise Exposure Projection (NEF/NEP) contours over the entire 24-hour period. For outdoor amenity areas (OLAs), the applicable aircraft noise criterion is NEF/NEP 30. For indoor spaces, NPC-300 establishes maximum indoor criteria of NEF/NEP 5 for living, dining and den areas of residences, hospitals, schools, nursing and retirement homes, daycare centres and similar noise-sensitive spaces, and NEF/NEP 0 for sleeping quarters. These indoor criteria are intended to establish the required acoustical insulation performance of building components, including exterior walls, windows, doors and roof assemblies, where development is proposed within applicable aircraft noise contours. Where the outdoor aircraft noise exposure is less than NEF/NEP 25, NPC-300 does not require further aircraft noise assessment or mitigation measures.

Federation of Canadian Municipalities (FCM) and Railway Association of Canada (RAC)

In accordance with the FCM and RAC "Guideline for New Development in Proximity to Railway Operations", the following figure 1 illustrates the minimum setback requirement for all dwellings. FCM and RAC suggest the use of multiple mitigation measures to minimize the potential impact of an existing railway on new development as seen in Figure 1 below. This includes the use of a minimum setback distance, earthen berm, acoustical and/or chain link security fence, as well as additional building material attenuation techniques. The minimum set back distance contributes to mitigation against the potential impact of a railway in terms of noise and vibration through distance separation.

The Pelton Spur is a freight railway spur located in Windsor, Ontario, serving local industrial railway operations. The railway corridor is situated approximately 200 m from the subject property at 3733 Riberdy Road. Based on its identification as a spur line, the applicable noise influence area is 75 m. The subject property is therefore located well beyond this screening distance, and railway noise from the Pelton Spur is not anticipated to be a significant influence at the site.

Identification of the Representative Receptor Locations

The proposed development consists of a raised ranch single family dwelling. The MECP defines a sensitive point of reception (POR) as an existing, or zoned for future use, residence, hotel, nursing or retirement home, hospital, campground or other sensitive building/area. An aerial view of the facility and surrounding location is included in Appendix A: Facility Location and Noise Sources, which illustrates the land surrounding the property and the identified PORs. For this study, two representative sensitive PORs are identified to have a potential impact from the noise produced by the nearby sources of transportation and stationary noise. The PORs were selected due to their proximity and exposure to the road and industry, as well as for their orientation. The location details are as follows:

- POR1 northeast façade, upper level, 4.5 m; exposure to stationary noise sources
- POR2 on southwest façade, lower level, 2.8 m; exposure to transportation noise source
- OLA in rear yard, 1.5 m; exposure to transportation noise source

Assessment Approach for Transportation Noise

The predicted sound levels from nearby road traffic were determined using the MECP prediction noise modelling software STAMSON 5.0. All input data pertaining to the development was based on the site plan provided at the time of the study as shown in Appendix A: Site Location. The input data used to calculate the predicted sound level exposures for the selected receptors impacted by the road traffic noise, and the resulting outputs, is given in Appendix E: Noise Model Printout. The output from the model was used to predict the noise levels at the representative PORs to determine compliance to the MECP limits and extent of any required noise control measures. The MECP requires the calculation of the noise impacts at the plane of window of the dwelling and OLA locations.

Aircraft noise is evaluated using the applicable Noise Exposure Forecast (NEF) contours developed for the airport in accordance with Transport Canada approved prediction methodologies. The evaluation was done based on the published contour mapping provided by the City of Windsor and included in Appendix C. As the development is situated in an area having an aircraft noise exposure of NEF 30, the site is subject to the aircraft noise assessment, warning clause, or noise attenuation requirements of NPC-300. Accordingly, aircraft noise is anticipated to represent a constraint to the proposed development, further aircraft noise assessment or mitigation measures are warranted.

Transportation Noise Source Data - Road

The road traffic volumes were determined using the Average Daily Traffic Volume Report obtained from the City of Windsor. The projected road traffic volumes along with the breakdown of vehicle types is given in Appendix F: Road Traffic Volume Data. Also given in Appendix F are the distances between the representative receptor location and the roadway.

Future traffic volumes are based on an assumed 2% growth rate for all roadways. Day and night traffic volumes were calculated having an assumed 90%-day and 10%-night split as per the MECP protocol. The

percent of commercial truck traffic was taken as 5% for all roadways with 50% of this being associated heavy trucks and the remaining with medium trucks.

Transportation Noise Source Summary - Road

The predicted noise impacts for the daytime OLA location and daytime and nighttime periods at the plane of window for the representative receptor with no control measures are given in Table 3. From this table, it is shown that the MECP noise limits for transportation noise identified in Table 1 are not exceeded at receptor locations during the daytime and nighttime periods.

Table 3: Predicted Road Noise Levels – with No Abatement

POR ID	Height (m)	Daytime Period LAeq (dBA)	Nighttime Period LAeq (dBA)
POR2	2.8	55	48
OLA	1.5	55	N/A

*red text denotes exceedance

Given that the receptor sound levels do not exceed the MECP noise limits given in Table 1, no warning clauses for roadway noise impacts are required.

Transportation Noise Source Data - Aircraft

Any potential aircraft noise exposure associated with Windsor International Airport has been assessed using the airport's published Noise Exposure Forecast (NEF) contour mapping. The applicable NEF contours are included in Appendix C, together with the location of the proposed development relative to the aircraft noise environment. As illustrated in Appendix C, the subject lands are situated in the NEF 30 contour area, indicating that the site is subject to aircraft noise levels.

Transportation Noise Source Summary - Aircraft

The subject development is in the NEF 30 contour area. Accordingly, the proposed outdoor amenity areas satisfy the applicable aircraft noise criteria established by NPC-300. As the site is located inside the aircraft noise influence area, warning clauses are required.

NPC-300 establishes an outdoor aircraft noise limit of NEF/NEP 30 over a 24-hour period. This criterion applies to outdoor areas, including designated outdoor living areas. The guideline identifies separation from the airport, as reflected by the applicable noise contours, as the means of controlling outdoor aircraft noise exposure. The proposed development meets the stated limit at its location at NEF 30.

The indoor aircraft noise criteria depend on the intended use of the space. Sleeping quarters are subject to a limit of NEF/NEP 0, while living rooms, dining rooms, dens and comparable noise-sensitive spaces are subject to a limit of NEF/NEP 5. These criteria establish the acoustic insulation performance needed for

the building envelope. Compliance is evaluated with windows and exterior doors closed, accounting for sound transmission through the exterior walls, glazing, doors and roof/ceiling assemblies.

Assessment Approach for Stationary Noise

The potential sources of stationary noise which may impact the proposed development is identified as Wolverine Freight System (2500 Airport Road) to the southeast. The operations for this facility is during all periods of the day, and as such, all periods will be considered. To evaluate the noise impacts from these operations, personnel from Akoustik Engineering Limited contacted Wolverine Freight System to determine the amount of activity at the site.

Evaluation of Stationary Noise Sources (Modelled)

As part of the assessment, the noise sources identified in this acoustic assessment report are used as inputs to a noise propagation prediction model to predict the noise impacts at the sensitive receptor. The sources include transport truck movements and the impulsive nature of trucks coupling/decoupling. The raw measured spectral sound pressure level data for the sources of noise, including measurement distances and conversion to spectral sound power level are detailed in Appendix H.

A summary table identifying the noise sources is provided in Table 4. In addition to the raw measurement data, tables which illustrate the calculation of the sound power levels from the measured one third octave sound pressure levels (if applicable), is included in Appendix F. These tables include any necessary corrections for distance, directivity and other factors prior to inputting into the noise propagation model.

Table 4: Noise Source Data Summary

Source ID/Predictor Name	Source Description	Sound Power Level (dBA)	Sound Characteristics	Noise Control Measures
Trucks	Truck movement	92	S	U
TR1	Truck Coupling Location 1	112	Im	U
TR2	Truck Coupling Location 2	112	Im	U
TR3	Truck Coupling Location 3	112	Im	U

Where:

N/N	No noise	C	Cyclic
N/A	Not available	Si	Silencer, acoustic louver, muffler
O	Located/installed outside the building	A	Acoustic lining, plenum
I	Located/installed inside building	Ba	Barrier, berm, screening
S	Steady	L	Lagging
Q	Quasi steady impulsive	E	Acoustic Enclosure
Im	Impulsive	Ot	Other
B	Buzzing	U	Uncontrolled
T	Tonal		

Methodology of Modelling

The software used to model the noise impacts is the Brüel & Kjær Predictor Type 7810 software, which complies with the procedure specified by ISO 9613-2:1996. As such, the prediction model considers the sound level attenuation of the inputted sound power data with distance as well as any attenuation or reflection provided by shielding, absorption etc. as permitted by the ISO 9613-2:1996 standard. Any assumptions used for the development of the noise propagation model, including source heights, operating hours, equipment duty cycles, acoustic ground absorption coefficient, etc. are detailed in Appendix H. A ground attenuation factor was taken to be 0.5, with 1 being absorbent and 0 being reflective. This is to account for the mixed presence of asphalt, loose gravel and sodded ground cover between the facility sources and the points of reception.

For the identified noise sources, the measured source sound pressure is corrected for distance, directional characteristics, and other absorption effects before estimation of sound power and subsequent prediction of the sound level at the points of reception. To accomplish this, the model uses the following general equation:

$$L_w = L_P + 20\log(r) + 11 \pm DI_\theta \pm ground\ \&\ atmospheric\ corrections$$

Using the Brüel & Kjær Predictor software, the impact on the identified POR from the noise sources, in absence of any ambient noise contributors from nearby road and rail traffic or other stationary noise sources was calculated. Appendix I provides the respective inputs for the Predictor models, which includes the identifying labels for the representative point of reception (POR). It is worth noting that every effort was taken in the above analysis to present a worst-case scenario.

Modelled Stationary Noise Results Summary

The acoustic assessment summary tables, given as Table 5 summarizes the predicted worst-case one hour sound levels at the points of reception based on the noise propagation model for the significant sources of noise at the facility. The noise guideline limits presented in Table 5 are based on the MECP Environmental Noise Guideline, NPC-300 for a Class 2 area. It should be noted that effort was taken to represent the worst-case scenario operating conditions and they are evaluated in consideration of the worst-case hour of each period, i.e. the hour for which the most sources, or most impactful duty cycles, which have the potential to operate at the same time within a given one hour, for each period.

Table 5: Acoustic Assessment Summary Table – Stationary Noise

POR ID (Height of Plane of Window)	Predicted Daytime Sound Level at POR (POW Height)	Predicted Evening Sound Level at POR (POW Height)	Predicted Nighttime Sound Level at POR (POW Height)	Performance Limit (LAeq) Day, Evening and Night (Outdoor & Plane of Window) POR	Compliance with Performance Limits (Yes/No)
POR1 (4.5 m)	39.5	31.4	34.1	50 (Day), 45/50 (Evening), & 45 (Night)	Yes

Note: Values shown in red text are exceedances

It is concluded that the sound levels at the proposed development site from the adjacent stationary noise source do not exceed the MECP exclusion sound level limits provided in Table 2.

Impulsive Sources of Noise

In addition to the steady sources of noise used in the above analysis, there is one source of impulsive noise. This being the sound of trucks coupling to a parked trailer.

Truck Coupling Impulsive Noise

A truck coupling to a trailer typically produces a brief metallic clunk or bang as the coupling components engage, followed by a sharp click or clank as the locking mechanism secures. Additional sounds may include a short hiss from the air brakes, engine idling, and minor metallic rattling as the truck and trailer settle into position.

In a worst-case one-hour analysis, there is expected to be no more than 3 impulsive sounds resulting from this activity in a given hour during all periods of the day. Taken from Table C-7 of NPC-300, the exclusion limit for impulsive sound for a Class 2 area is 70 dBAI as given in Table 6, based on the above number of impulsive emissions in an hour.

Table 6: Exclusion Limit Values for Impulsive Sound Level for Outdoor Points of Reception and Plane of Window, Three impulses in the period of one-hour

Point of Reception Location	Daytime LAI_{eq} [dBA]	Evening LAI_{eq} [dBA]	Nighttime LAI_{eq} [dBA]
Outdoor	70	70	--
Plane of Window	70	70	65

The sound level used to represent the impulsive event was obtained from Akoustik Engineering's internal library of sound measurements collected during previous projects. A measurement of a comparable event was selected as representative of the activity assessed at this site.

The acoustic assessment summary tables, given as Table 7 summarizes the predicted worst-case one hour impulsive sound levels at the points of reception based on the noise propagation model of truck coupling noise at the facility.

Table 7: Acoustic Assessment Summary Table – Impulsive Noise

POR ID (Height of Plane of Window)	Predicted Daytime Sound Level at POR (POW Height)	Predicted Evening Sound Level at POR (POW Height)	Predicted Nighttime Sound Level at POR (POW Height)	Performance Limit (LAeq) Day, Evening and Night (Outdoor & Plane of Window) POR for Three Impulses per hour	Compliance with Performance Limits (Yes/No)
POR1 (4.5 m)	64.8	64.8	64.8	70 (Day), 70/70 (Evening), & 65 (Night)	Yes

Note: Values shown in red text are exceedances

It is concluded that the sound levels at the proposed development site from the impulsive noise source do exceed the MECP exclusion sound level limits provided in Table 6.

Results and Noise Control Requirements

The following section is a summary and assessment of the modeled results for the proposed development with respect to transportation sources of noise.

Road Noise

As specified by the MECP Environmental Noise Guideline NPC-300, the outdoor and indoor sound level limits (based on one-hour LA_{eq} values) at a residence for road traffic noise are categorized into three (3) limits, based on the type of space assessed. The document also specifies the recommended noise control measures, if required, that should be followed for the plane of a window (ventilation requirements) and the indoor living area (building components) noise assessments. The select pages from the NPC-300 guideline given in Appendix D includes the stated warning clauses and other requirements based on the predicted noise levels.

The predicted noise level impacts for the daytime and nighttime periods at the plane of window for the representative receptors with no control measures are given in Table 3 in an above section of this report. From this table, it was shown that the MECP noise limits for transportation noise identified in Table 1 are

not exceeded and as such, none of the below warning clauses are required to meet the noise guidelines given in Table 1.

Notes taken from NPC-300 (where applicable):

Note A: Noise control measures may be applied to reduce the sound level to 55 dBA. If measures are not provided, prospective purchasers or tenants should be informed of potential noise problems by a warning clause Type A.

Note B: Noise control measures should be implemented to reduce the level to 55 dBA. Only in cases where the required noise control measures are not feasible for technical, economic or administrative reasons would an excess above the limit (55 dBA) be acceptable with a warning clause Type B.

Note C: The dwelling should be designed with a provision for the installation of central air conditioning in the future, at the occupant's discretion. Warning clause Type C is also recommended.

Note D: Installation of central air conditioning should be implemented with a warning clause Type D. In addition, building components including windows, walls and doors, where applicable, should be designed so that the indoor sound levels comply with the sound level limits in Table C-2.

Note E: Building components including windows, walls and doors, where applicable, need to be designed so that the indoor sound levels comply with the sound level limits in Table C-2. The acoustical performance of the building components (windows, doors and walls) needs to be specified. In addition, the exterior walls of the first row of dwellings next to railway tracks are to be built to a minimum of brick veneer or masonry equivalent construction, from the foundation to the rafters when the rail traffic Leq (24-hour), estimated at a location of a nighttime receptor, is greater than 60 dBA, and when the first row of dwellings is within 100 metres of the tracks.

If required, the following warning clauses are to be implemented in all development agreements, offers to Purchase, titles and agreements of Purchase or Sale or Lease of each dwelling unit:

Warning Clause(s) (where applicable):

Type A: "Purchasers/tenants are advised that sound levels due to increasing road traffic and rail 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, Conservation and Parks."

Type B: "Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic and rail traffic may on occasions 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, Conservation and Parks."

Type C: "This dwelling 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

low and medium density developments 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, Conservation and Parks."

Type D: "This dwelling unit has been equipped with central air conditioning to 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, Conservation and Parks. Air conditioning units are to be installed in a noise insensitive area."

Type E: "Purchasers/tenants are advised that due to the proximity of the adjacent facility, noise from the facility may at times be audible."

Aircraft Noise

The recommended noise control measures, as specified by the MECP Environmental Noise Guideline NPC-300, if required, that should be followed for the plane of a window (ventilation requirements) and the indoor living area (building components) noise assessments are given in Appendix D including the stated warning clauses and other requirements based on the predicted noise levels.

A review of the published Noise Exposure Forecast (NEF) contours indicates that the proposed development is located within the NEF 30 contour associated with the airport. In accordance with NPC-300, the aircraft noise exposure at the subject lands is above the threshold requiring acoustical mitigation or the implementation of aircraft noise warning clauses. Since the proposed development is at the NEF 30 contour, a Type B and Type D warning clause is warranted along with building components design (windows, walls, ceiling/roof) to achieve the indoor sound level limits of Table C-4 of NPC-300.

STC Requirements

Given the aircraft noise levels predicted at the proposed development, the calculation of the minimum sound transmission class (STC) for the window, building wall and roof components is necessary to abate the indoor sound levels.

Aircraft noise exposure was assessed by converting the applicable NEF value to approximate 24-hour equivalent sound level, $L_{eq}(24)$ using the following relationship:

$$L_{eq}(24) = NEF + 32 \text{ dBA}$$

As per the calculation above, the proposed development would be exposed to an aircraft noise level of 62 dBA. The sound level at the plane of the window was assumed to be a worst case 62 dBA during the daytime and 62 dBA at night. Given that the greatest noise impacts are from aircraft noise, the required façade STC requirements are calculated to achieve a 35 dBA daytime indoor sound level limit and a 32 dBA nighttime indoor sound level limit for the sleeping quarters using the procedures outlined in National Research Council Building Practice Note BPN-56. The windows are assumed to be openable thick double paned windows. The assessed bedroom details are assumed to have the following:

- a floor area of 9.185 m^2; low absorption (hard surfaces)
- with a window (openable, thick double or triple) area of 2.79 m^2
- and a wall area of 5.42 m^2.

The program inputs and results for the STC calculations and window schedule are given in Appendix G: STC Output Results. The building component STC requirements are given in Table 8.

Table 8: Building Components STC Requirements.

Component	Required STC
Window	34
Wall	37
Roof	40

Stationary Noise

From the onsite noise observations, it has been shown that the MECP noise limits are not exceeded at the proposed development POR and OLA locations resulting from the operations of the nearby stationary sources of noise from The NARMCO Group. Further, modelled noise levels did not exceed the exclusion limits due to impulsive sources of noise from Wolverine Freight System. As such, abatement is not required with respect to stationary noise impacts on this development. However, since the proposed development is near to stationary noise sources, a Type E warning clause should be applied.

Combined Results Summary

Table 9 summarizes the required warning clauses and building requirements for the proposed development. It is required that any necessary warning clauses be implemented in all development agreements, offers to Purchase, titles and agreements of Purchase or Sale or Lease as identified in Table 9.

Table 9: Summary of Warning Clauses and Building Component Requirements

POR	Noise Barrier Requirement (Y/N)	Warning Clause(s)	Building Component Requirement(s)	Ventilation Requirement(s)
All	N	Type B, D, E	Minimum STC Rating for the following Building Component: Window – 34 Wall – 37 Roof - 40	Installation of Central Air Conditioning

Given the need for the installation of central air conditioning, we recommend that a detailed technical analysis of the air conditioning details and location be conducted by a qualified acoustical engineer prior to the submission of a Building Permit application. This analysis should optimize the required sound rating of the air conditioning units to ensure compliance with provincial sound level standards at the nearest receptors, considering the specific building design and proposed AC unit locations. Where additional noise

control measures are necessary to achieve the prescribed sound levels at receptor locations, these measures should be clearly identified and incorporated into the relevant permit drawings and specifications.

Conclusion

A noise assessment report was prepared for the proposed residential development in accordance with the procedures for noise assessment outlined by the MECP Noise Pollution Control Guidelines (NPC-300). The impacts on the proposed development from roadway noise were found to not exceed the MECP noise limits. It was further concluded that the proposed residential development is not adversely impacted by noise from the operations of the nearby industrial facilities however a warning clause identifying the presence of such industry is applied.

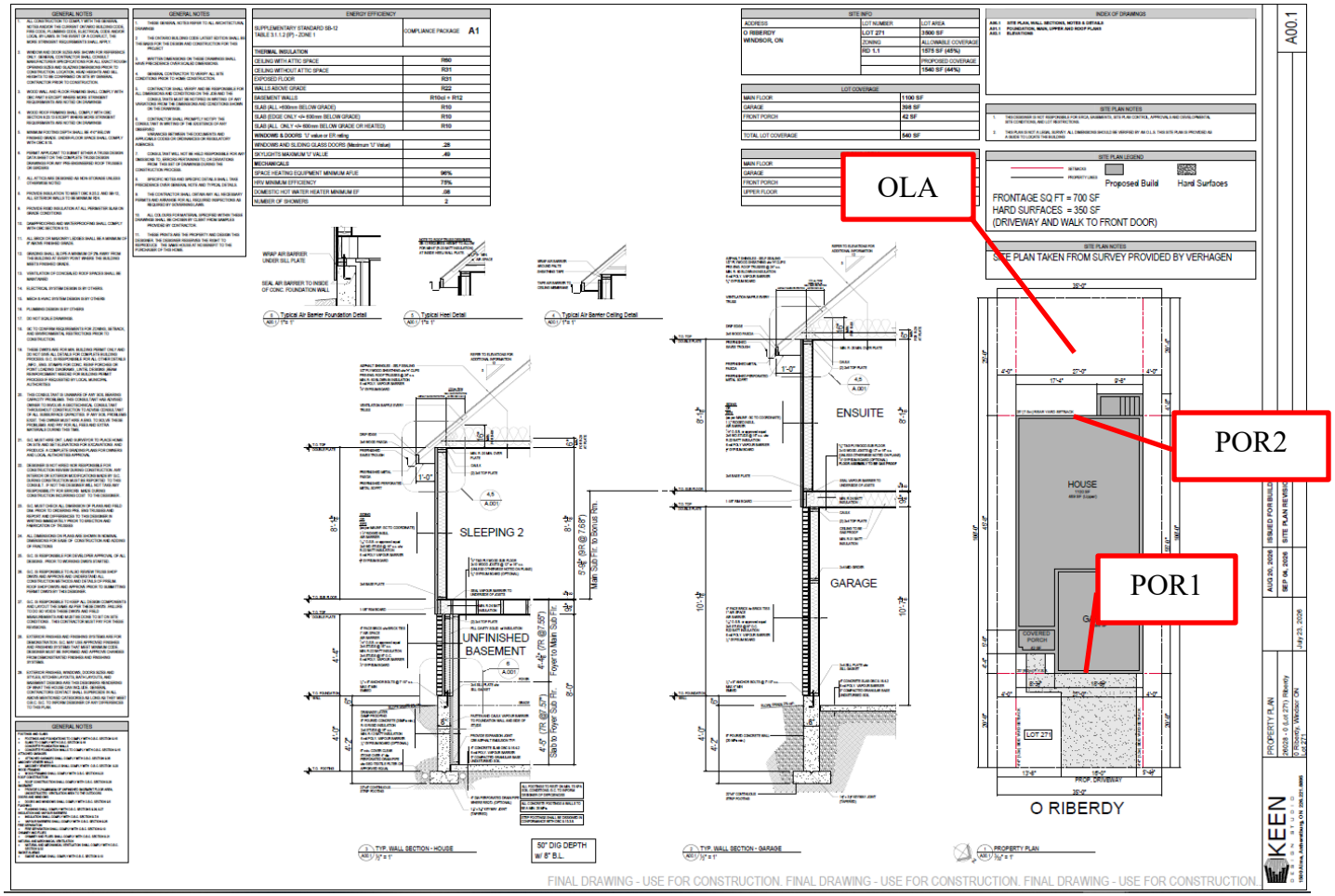
Based on a review of the published NEF contours for Windsor International Airport, the proposed development is located inside the NEF 30 contour. In accordance with the requirements of the MECP NPC-300 guideline, the aircraft noise exposure at the subject lands is above the threshold requiring an aircraft noise assessment, acoustical mitigation, and the implementation of aircraft noise warning clauses. Accordingly, the proposed development satisfies the applicable aircraft noise planning requirements of NPC-300 given that the stated building component requirements are adhered to as well as the required warning clauses.

As such, it is recommended that the development be given approval with respect to noise impacts with the understanding that the stated noise control measures and warning clauses are implemented in all development agreements, offers to Purchase, titles and agreements of Purchase or Sale or Lease.

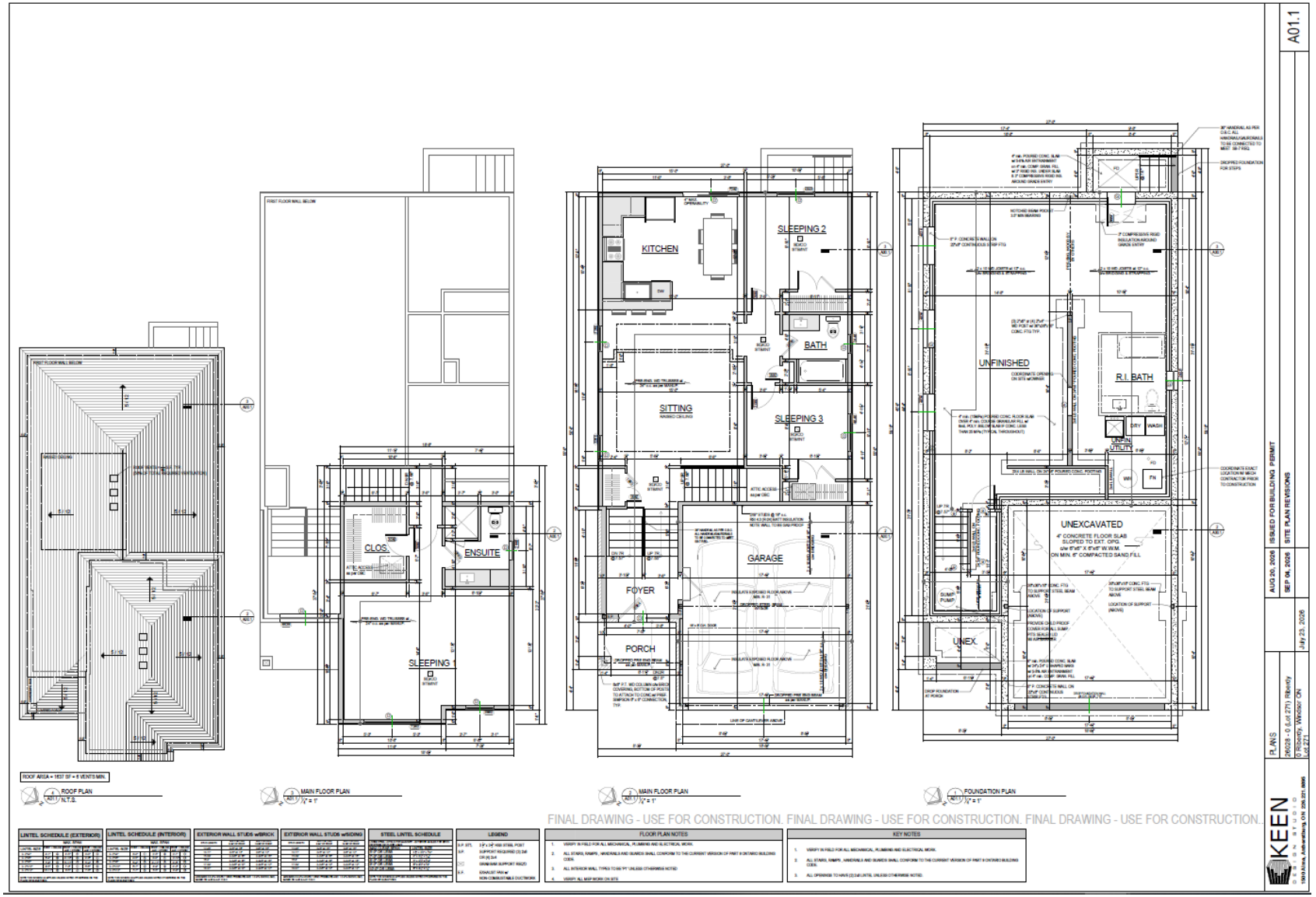
For akoustik engineering limited		
	Prepared by: **Helen Ule, Ph.D., PEng**	**Reviewed by:** **Colin Novak, Ph.D., PEng**

LICENSED PROFESSIONAL ENGINEER
H. J. ULE
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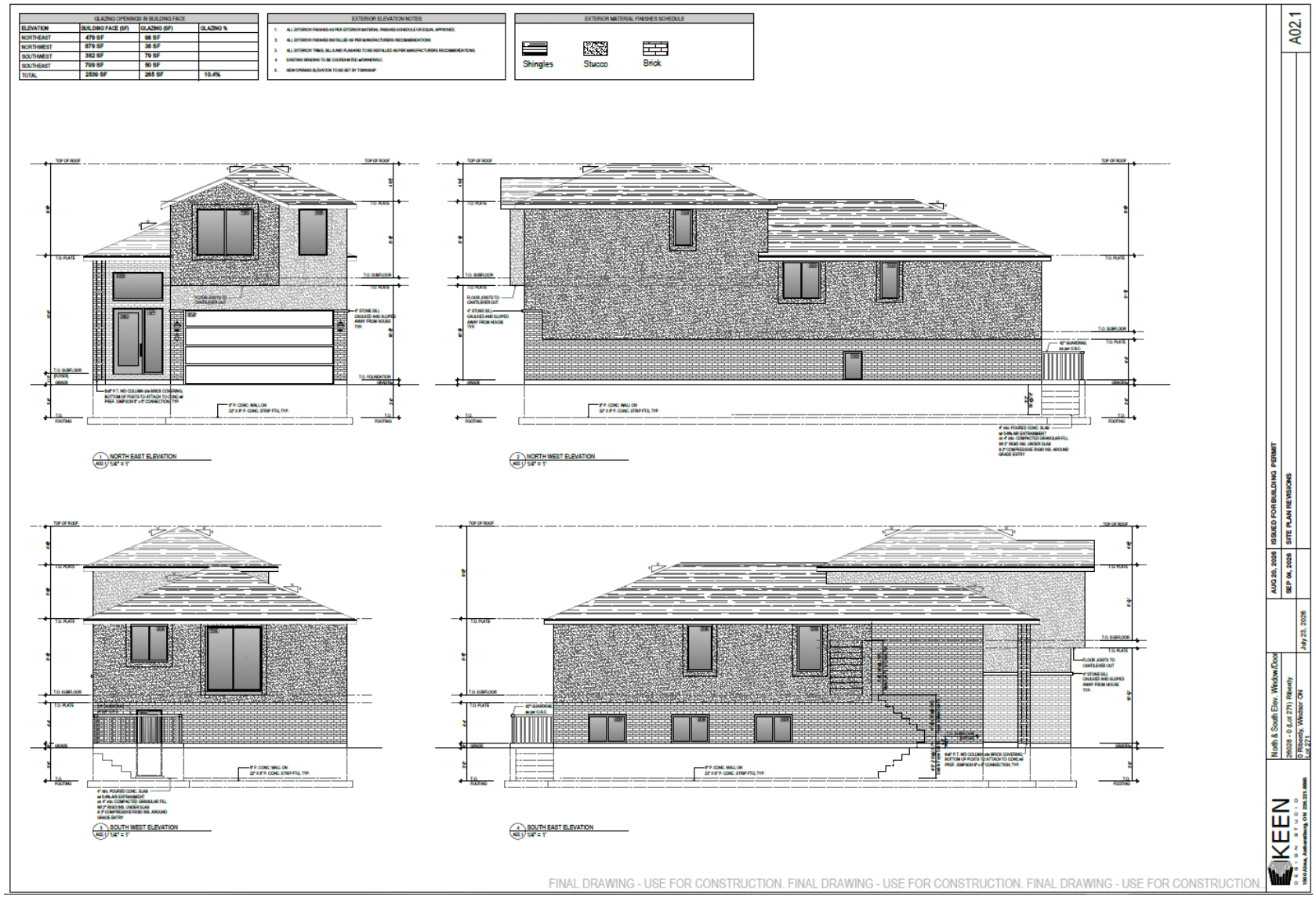
Appendix A: Location and Noise Sources



A1: Proposed Development Site Plan and POR Locations



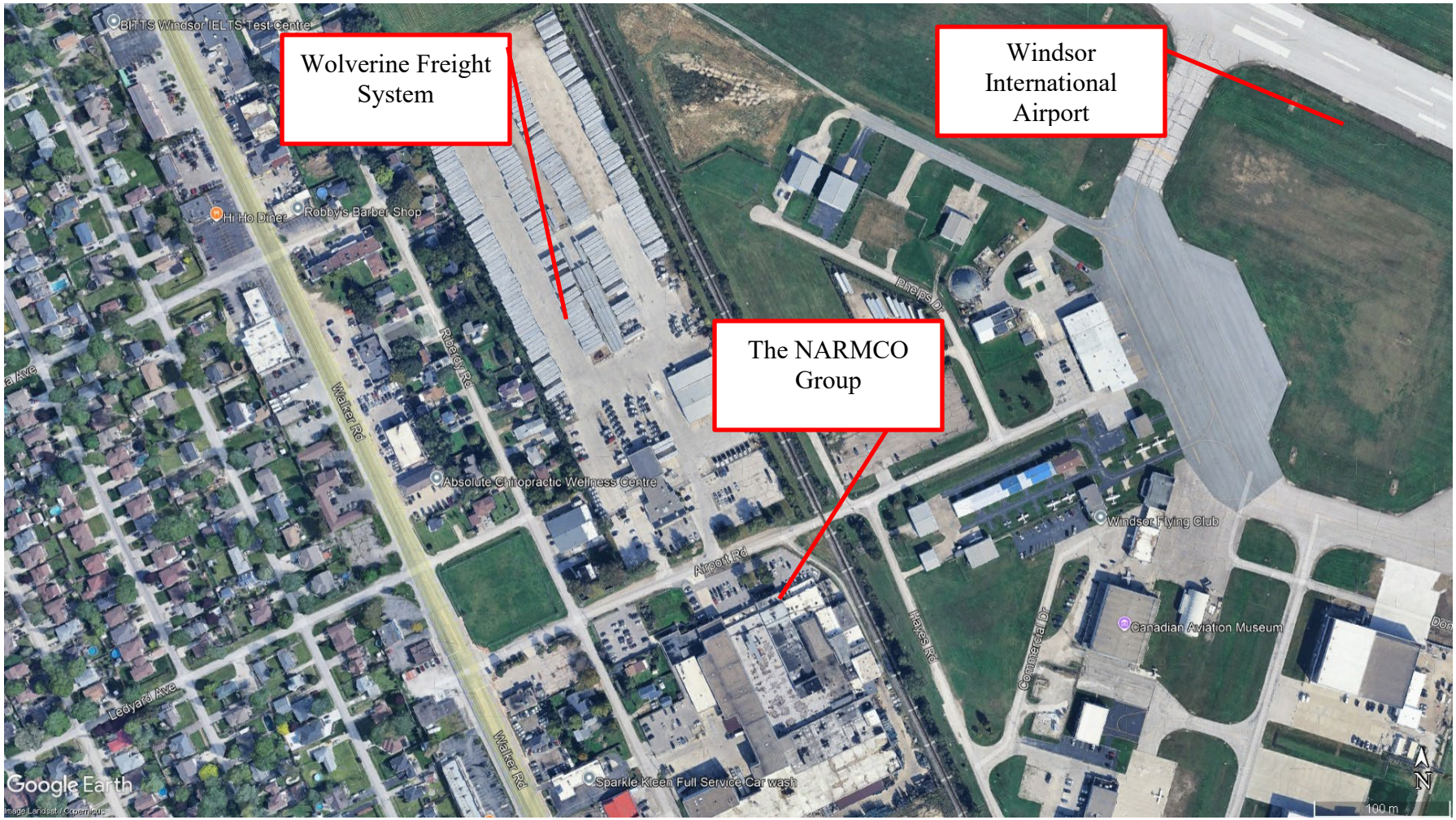
A2: Proposed Development Floor Plan



A3: Proposed Development Elevation Drawings

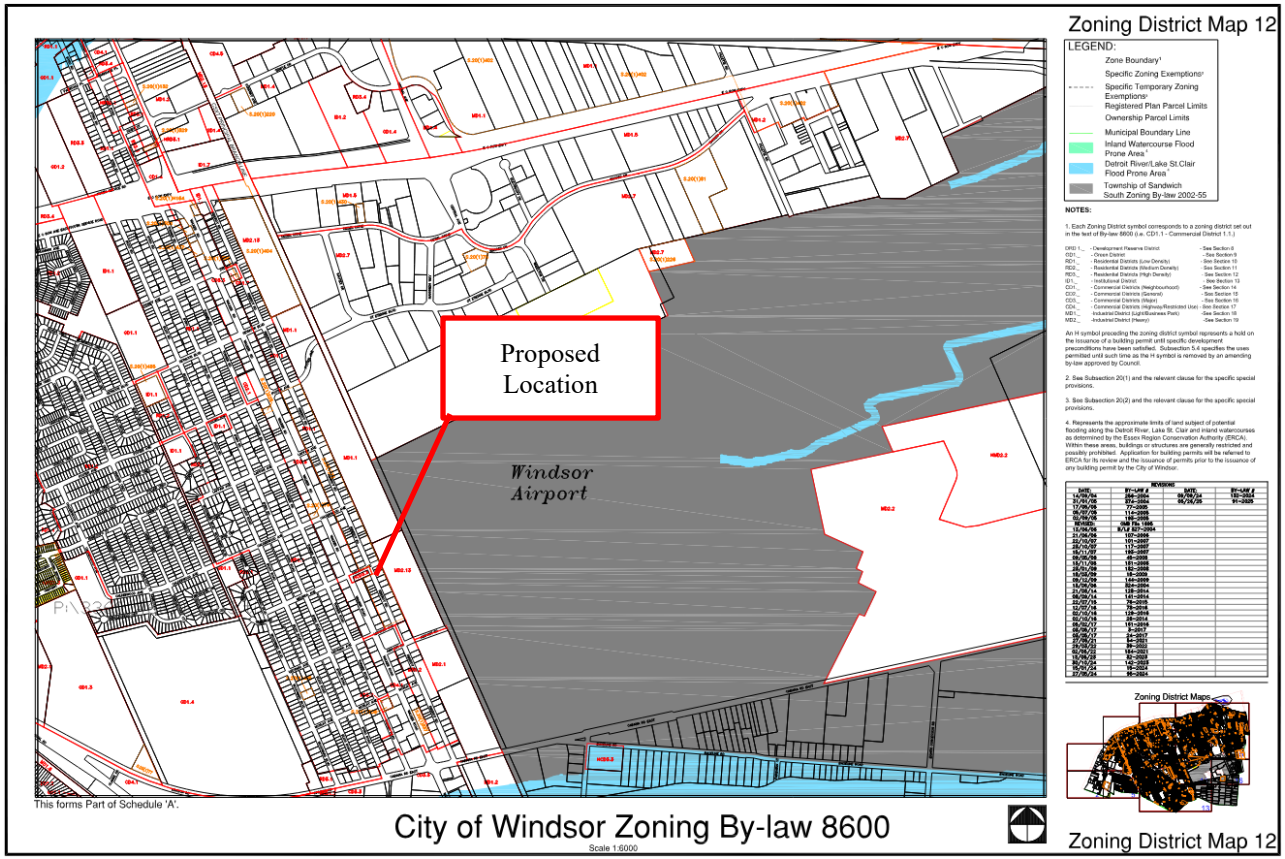


A4: Aerial View of Proposed Development Location



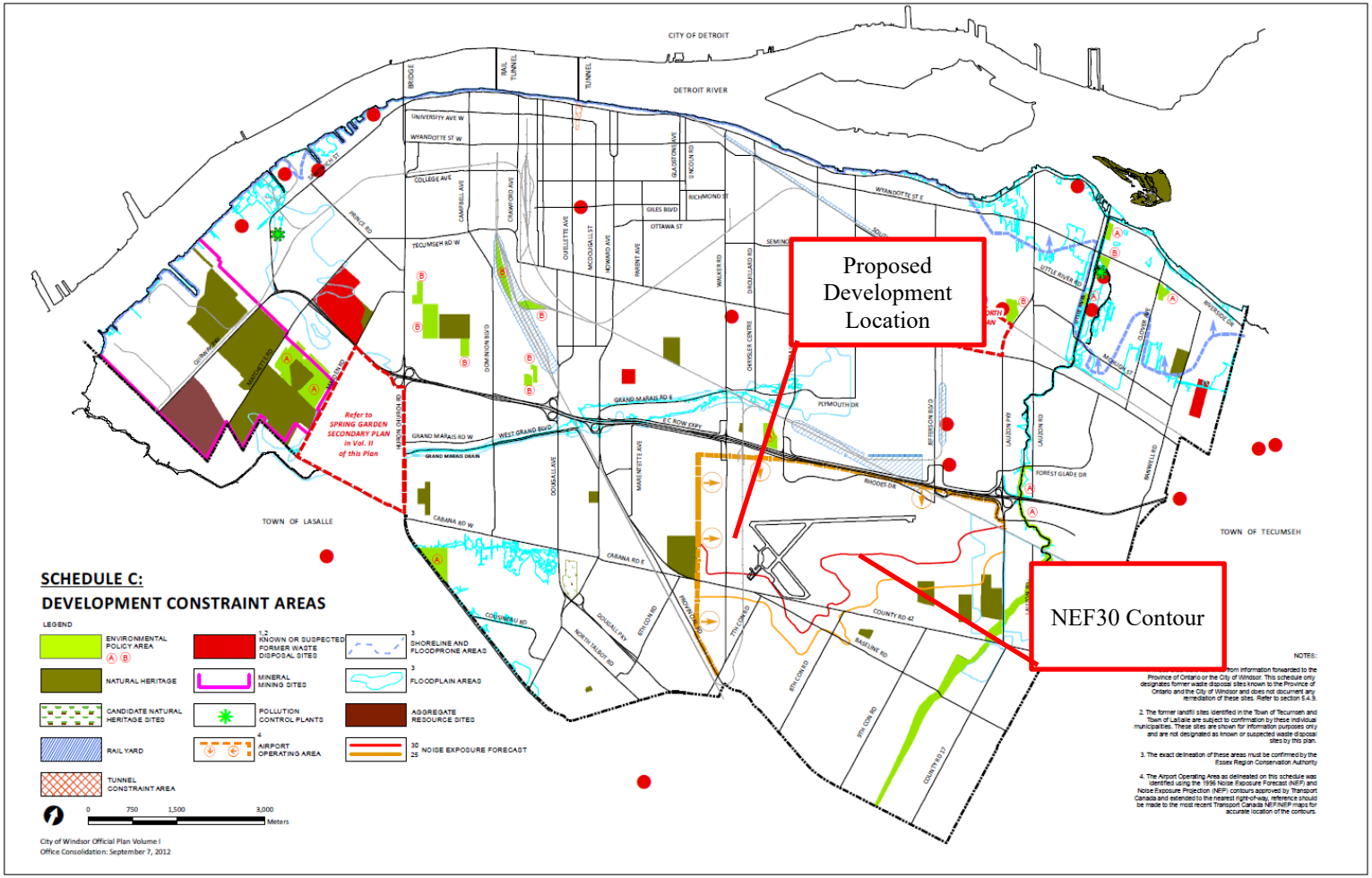
A5: Aerial View of Proposed Development Location

Appendix B: Zoning By-law Map

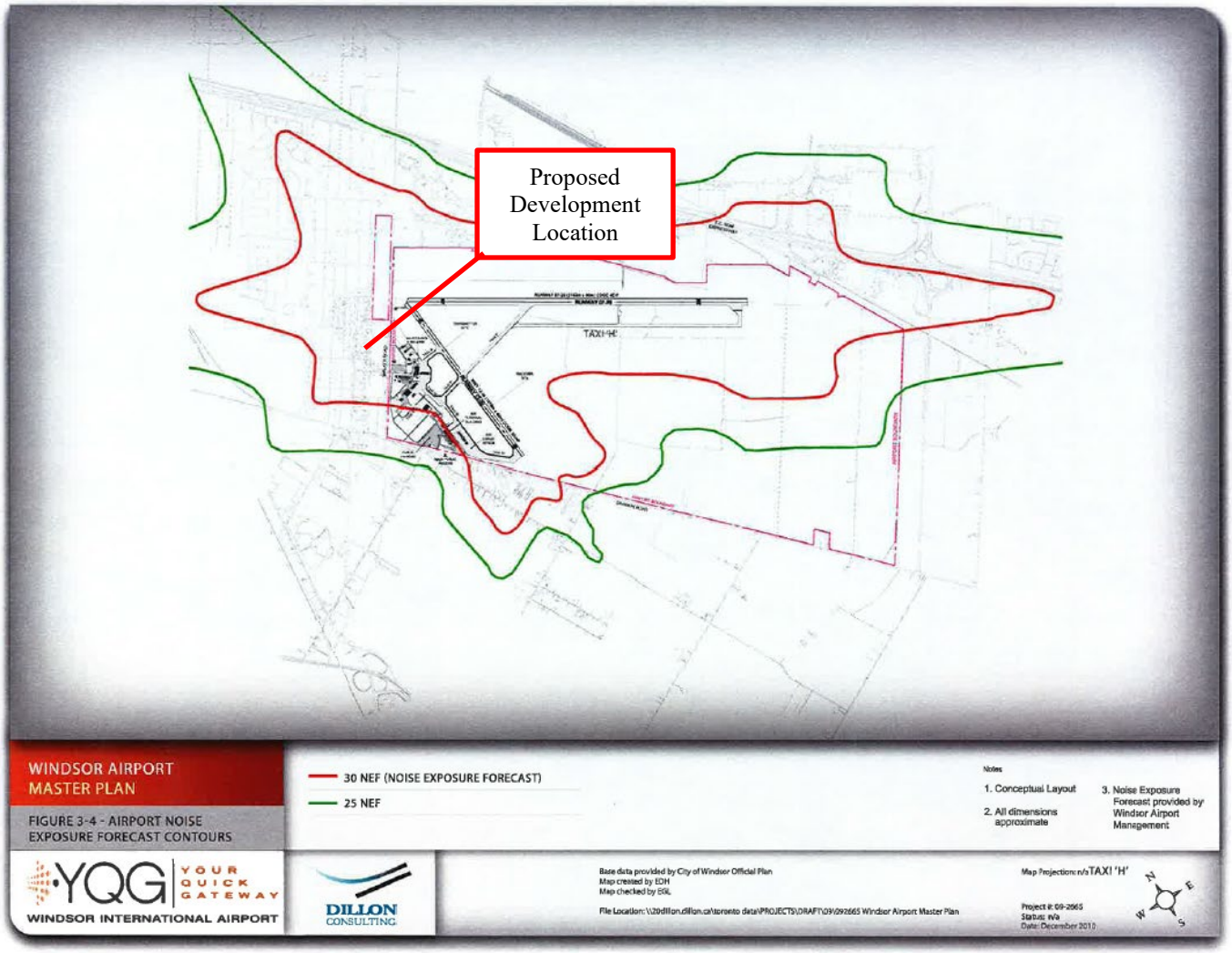


B1: Zoning Map – City of Windsor, Map 12

Appendix C: City of Windsor Development Constraint Areas



C1: Development Constraint Areas – see noise exposure forecast location



C2: Airport Noise Exposure Forecast Contours from Windsor Airport Master Plan

Appendix D: NPC-300 Reference Pages

for that point of reception. The outdoor sound level limits for stationary sources apply only to daytime and evening (07:00 – 23:00 hours). Sound level limits apply during the nighttime period (23:00 – 07:00) for the plane of the window of a noise sensitive space. In general, the outdoor points of reception will be protected during the nighttime as a consequence of meeting the sound level limits at the adjacent plane of window of noise sensitive spaces.

Note that for Class 1, 2 and 3 areas, the plane of window limits apply to a window that is assumed to be open. For Class 4 areas, the plane of window limits apply to a window which is assumed to be closed. This distinction does not affect the prediction of plane of window sound levels.

Table B-1
Exclusion Limit Values of One-Hour Equivalent Sound Level (L_{eq}, dBA)
Outdoor Points of Reception

Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 19:00	50	50	45	55
19:00 – 23:00	50	45	40	55

Table B-2
Exclusion Limit Values of One-Hour Equivalent Sound Level (L_{eq}, dBA)
Plane of Window of Noise Sensitive Spaces

Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 19:00	50	50	45	60
19:00 – 23:00	50	50	40	60
23:00 – 07:00	45	45	40	55

B7.2 Impulsive Sound – Outdoors and Plane of Window

For impulsive sound, other than Quasi-Steady Impulsive Sound, from a stationary source, the sound level limit at a point of reception expressed in terms of the Logarithmic Mean Impulse Sound Level (L_{LM}) is the higher of the applicable exclusion limit value given in Table B-3 or Table B-4, or the background sound level for that point of reception. The outdoor sound level limits for stationary sources apply only to daytime and evening (07:00 – 23:00 hours). Sound level limits apply during the nighttime period (23:00 – 07:00) for the plane of the window of a noise sensitive space. In general, the outdoor points of reception will be protected during the nighttime as a consequence of meeting the sound level limits at the adjacent plane of window of noise sensitive spaces.

Notwithstanding Publication NPC-103, Reference [29], the following sound level limits in Table B-3 and Table B-4 below apply to impulsive sound:

D 1: Exclusion Limit Values for Stationary Sources

In addition, sound level limits do not apply to emergency equipment operating in emergency situations.

B7.4 Sound Level Limits for Layover Sites

The sound level limit for noise from a layover site in any hour, expressed in terms of the One-Hour Equivalent Sound Level (L_{eq}) is the higher of either 55 dBA or the background sound level.

B8 Noise Impact Assessment – Multiple Sources

Impulse sources, non-impulse sources and emergency equipment are to be analyzed separately. Where there are multiple, non-impulse sources at a stationary source, the noise assessment needs to be based on the combined effect of all sources comprising the stationary source, added together on an energy basis.

B9 Determination of Area Class

Area classification refers to the receptor location.

B9.1 Class 1, 2 and 3 Areas

Determination of whether an area is Class 1, 2 or 3 can usually be done by determining the proximity of the point of reception to roads, the volumes of road traffic (and associated sound levels), and the nature of land uses and activities (or lack thereof) in the area, as a function of time.

B9.2 Class 4 Area

Class 4 area classification is based on the principle of formal confirmation of the classification by the land use planning authority. Such confirmation would be issued at the discretion of the land use planning authority and under the procedures developed by the land use planning authority, in the exercise of its responsibility and authority under the Planning Act.

The following considerations apply to new noise sensitive land uses proposed in a Class 4 area:

- an appropriate noise impact assessment should be conducted for the land use planning authority as early as possible in the land use planning process that verifies that the applicable sound level limits will be met;
- noise control measures may be required to ensure the stationary source complies with the applicable sound level limits at the new noise sensitive land use;

D 2: Determination of Area Class

L_{eq} (8). For complete description on assessing road traffic impacts, refer to ORNAMENT. Other traffic noise prediction models have been and are being developed by various authorities and may be adopted from time to time for use in Ontario by the MOE.

In order to be consistent with MOE guidelines, the sound level should be assessed in an OLA, such as a rear yard or a patio, and in indoor living areas, such as bedrooms and living rooms. Where the noise impact exceeds the applicable sound level limits, mitigation measures such as site planning, architectural design, noise barriers, building envelope elements (windows, exterior walls, doors) with upgraded sound isolation performance and/or central air conditioning may be required. Noise control measures are not required if the sound level estimated in the OLA is 55 dBA or less during the daytime and 50 dBA or less in the plane of bedroom windows during either daytime or nighttime.

C3.2.2 Daytime Outdoor Sound Level Limit

Table C-1 gives the equivalent sound level (L_{eq}) limit for designated OLAs. The limit applies to the entire daytime period from 07:00 to 23:00.

Table C-1
Sound Level Limit for Outdoor Living Areas
Road and Rail

Time Period	L_{eq} (16) (dBA)
16-hour, 07:00 – 23:00	55

C3.2.3 Indoor Sound Level Limits

Table C-2 gives the equivalent sound level (L_{eq}) limits and the applicable time periods for the indicated types of indoor spaces. The specified indoor sound level limits are maxima and apply to the indicated indoor spaces with windows and doors closed.

Table C-2
Indoor Sound Level Limits
Road and Rail

Type of Space	Time Period	L_{eq} (dBA)	
		Road	Rail
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	07:00 – 23:00	45	40
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	23:00 – 07:00	45	40
Sleeping quarters	07:00 – 23:00	45	40

D 3: Daytime Outdoor and Daytime/Nighttime Indoor Sound Level Limits

Table C-10
Supplementary Indoor Aircraft Noise Limits
(Applicable over 24-hour period)

Type of Space	Indoor NEF/NEP*
General offices, reception areas, retail stores, etc.	15
Individual or semi-private offices, conference rooms, etc.	10
Living/dining areas of residences, sleeping quarters of hotels/motels, theatres, libraries, schools, daycare centres, places of worship, etc.	5
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	0

* The indoor NEF/NEP values listed in Table C-10 are not obtained from NEF/NEP contour maps. The values are representative of the indoor sound levels and are used as assessment criteria for the evaluation of acoustical insulation requirements.

C7 Noise Control Measures

The following sections provide MOE guidance for appropriate noise control measures. These sections constitute requirements that are applied to MOE approvals for stationary sources. This information is also provided as guidance which land use planning authorities may consider adopting.

The definition in Part A describes the various types and application of noise control measures. All the noise control measures described in the definition are appropriate to address the impact of noise of transportation sources (road, rail and aircraft) on planned sensitive land uses. Only some of the noise control measures described in the definition are appropriate to address the noise impact of stationary sources on planned sensitive land uses.

C7.1 Road Noise Control Measures

C7.1.1 Outdoor Living Areas

If the 16-Hour Equivalent Sound Level, L_{eq} (16) in the OLA is greater than 55 dBA and less than or equal to 60 dBA, noise control measures may be applied to reduce the sound level to 55 dBA. If measures are not provided, prospective purchasers or tenants should be informed of potential noise problems by a warning clause Type A.

If the 16-Hour Equivalent Sound Level, L_{eq} (16) in the OLA is greater than 60 dBA, noise control measures should be implemented to reduce the level to 55 dBA. Only in cases where the required noise control measures are not feasible for technical, economic or administrative reasons would an excess above the limit (55 dBA) be acceptable with a warning clause Type B. In the above situations, any excess above the limit will not be acceptable if it exceeds 5 dBA.

D 4: Noise Control Measures – Road Noise Control Measures

C7.1.2 Plane of a Window – Ventilation Requirements

C7.1.2.1 Daytime Period, 07:00 – 23:00 Hours

Noise control measures may not be required if the L_{eq} (16) daytime sound level in the plane of a bedroom or living/dining room window is less than or equal to 55 dBA. If the sound level in the plane of a bedroom or living/dining room window is greater than 55 dBA and less than or equal to 65 dBA, the dwelling should be designed with a provision for the installation of central air conditioning in the future, at the occupant's discretion. Warning clause Type C is also recommended.

If the daytime sound level in the plane of a bedroom or living/dining room window is greater than 65 dBA, installation of central air conditioning should be implemented with a warning clause Type D. In addition, building components including windows, walls and doors, where applicable, should be designed so that the indoor sound levels comply with the sound level limits in Table C-2. The location and installation of the outdoor air conditioning device should comply with sound level limits of Publication NPC-216, Reference [32], and guidelines contained in Environmental Noise Guidelines for Installation of Residential Air Conditioning Devices, Reference [6], or should comply with other criteria specified by the municipality.

C7.1.2.2 Nighttime Period, 23:00 – 07:00 Hours

Noise control measures may not be required if the L_{eq} (8) nighttime sound level in the plane of a bedroom or living/dining room window is less than or equal to 50 dBA. If the sound level in the plane of a bedroom or living/dining room window is greater than 50 dBA and less than or equal to 60 dBA, the dwelling should be designed with a provision for the installation of central air conditioning in the future, at the occupant's discretion. Warning clause Type C is also recommended.

If the nighttime sound level in the plane of a bedroom or living/dining room window is greater than 60 dBA, installation of central air conditioning should be implemented, with a warning clause Type D. In addition, building components including windows, walls and doors, where applicable, should be designed so that the indoor sound levels comply with the sound level limits in Table C-2. The location and installation of the outdoor air conditioning device should comply with sound level limits of Publication NPC-216, Reference [32], and guidelines contained in Environmental Noise Guidelines for Installation of Residential Air Conditioning Devices, Reference [6], or should comply with other criteria specified by the municipality.

C7.1.3 Indoor Living Areas – Building Components

If the nighttime sound level outside the bedroom or living/dining room windows exceeds 60 dBA or the daytime sound level outside the bedroom or living/dining area windows exceeds 65 dBA, building components including windows, walls and doors, where applicable, should be designed so that the indoor sound levels comply with the

D 5: Noise Control Measures – Road Noise Control Measures (Continued)

In Class 4 areas, where windows for noise sensitive spaces are assumed to be closed, the use of central air conditioning may be acceptable if it forms an essential part of the overall building designs.

C7.9 Verification of Noise Control Measures

It is recommended that the implementation of noise control measures be verified by qualified individuals with experience in environmental acoustics.

C8 Warning Clauses

The use of warning clauses or easements in respect of noise are recommended when circumstances warrant. Noise warning clauses may be used to warn of potential annoyance due to an existing source of noise and/or to warn of excesses above the sound level limits. Direction on the use of warning clauses should be included in agreements that are registered on title to the lands in question. The warning clauses would be included in agreements of Offers of Purchase and Sale, lease/rental agreements and condominium declarations. Alternatively, the use of easements in respect of noise may be appropriate in some circumstances. Additional guidance on the use of noise warning clauses is provided in Section C7.1.1, Section C7.1.2.1, Section C7.1.2.2, Section C7.3 and Section C7.4.

C8.1 Transportation Sources

The following warning clauses may be used individually or in combination:

TYPE A: (see Section C7.1.1)

> "Purchasers/tenants are advised that sound levels due to increasing road traffic (rail traffic) (air 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."

TYPE B: (see Section C7.1.1 and Section C7.4)

> "Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic (rail traffic) (air traffic) may on occasions 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."

TYPE C: (see Section C7.1.2.1, Section C7.1.2.2 and Section C7.4)

> "This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of

D 6: Noise Control Measures – Warning Clauses

central air conditioning by the occupant in low and medium density developments 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."

TYPE D: (see Section C7.1.2.1, Section C7.1.2.2 and Section C7.4)

"This dwelling unit has been supplied with a central air conditioning system which 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."

C8.2 Stationary Sources

It is not acceptable to use warning clauses in place of physical noise control measures to identify an excess over the MOE sound level limits. Warning clause (Type E) for stationary sources may identify a potential concern due to the proximity of the facility but it is not acceptable to justify exceeding the sound level limits.

TYPE E: (see Section C7.6)

"Purchasers/tenants are advised that due to the proximity of the adjacent industry (facility) (utility), noise from the industry (facility) (utility) may at times be audible."

C8.3 Class 4 Area Notification

TYPE F: (see Section B9.2 and Section C4.4.2)

"Purchasers/tenants are advised that sound levels due to the adjacent industry (facility) (utility) are required to comply with sound level limits that are protective of indoor areas and are based on the assumption that windows and exterior doors are closed. This dwelling unit has been supplied with a ventilation/air conditioning system which will allow windows and exterior doors to remain closed."

D 7: Noise Control Measures – Warning Clauses (Continued)

Appendix E: Noise Model Printout

POR 1: POR2 at 2.8 m (Including road noise)

```
STAMSON 5.0        NORMAL REPORT        Date: 30-10-2026 12:40:05
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: POR2.te              Time Period: Day/Night 16/8 hours
Description: POR2 - Rear bedroom


Road data, segment # 1: Walker Rd (day/night)
----------------------------------------------
Car traffic volume  : 43097/4789  veh/TimePeriod
Medium truck volume :  1134/126   veh/TimePeriod
Heavy truck volume  :  1134/126   veh/TimePeriod
Posted speed limit  :    60 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 1: Walker Rd (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      1 / 1
House density             :     90 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  50.00 / 50.00  m
Receiver height           :   2.80 / 2.80   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Results segment # 1: Walker Rd (day)
-----------------------------------

Source height = 1.26 m

ROAD (0.00 + 54.87 + 0.00) = 54.87 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
--
   -90     90   0.63  72.85   0.00  -8.51  -1.40   0.00  -8.07   0.00
54.87
-------------------------------------------------------------------------
--

Segment Leq : 54.87 dBA

Total Leq All Segments: 54.87 dBA

Results segment # 1: Walker Rd (night)
-------------------------------------
```

Source height = 1.26 m

ROAD (0.00 + 48.34 + 0.00) = 48.34 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.63	66.32	0.00	-8.51	-1.40	0.00	-8.07	0.00	48.34

Segment Leq : 48.34 dBA

Total Leq All Segments: 48.34 dBA

Page 2

TOTAL Leq FROM ALL SOURCES (DAY): 54.87
(NIGHT): 48.34

Appendix F: Road Traffic Volume Data

F 1: Predicted Walker Road Traffic Volumes (2% growth rate per annum)

Year	Road	Location	ADT
2017	Walker Road	North of Division	34600
2036	Walker Road	North of Division	50405

F 2: Predicted Traffic Volumes (Rest Acres Road) per Period and Breakdown of Cars, Medium Trucks and Heavy Trucks

Period	Auto Traffic Volume (Vehicles/hr)	Medium Truck Traffic Volume (Vehicles/hr)	Heavy Truck Traffic Volume (Vehicles/hr)
Day (16 hours)	2694	71	71
Night (8 hours)	599	16	16

E 3: POR Distance and angles for Stamson model (Mill Street)

POR	Floor	Height (m)	Walker Road	
			Angle	Distance (m)
1	2	4.5	-90-90	N/A
2	1	2.8	-90-90	50
OLA	1	1.5	-90-90	50

Appendix G: STC Output Results

```
Indoor sound level in dB(A) is  35
Room absorption category is: low absorption
Outdoor sound level is  62 dB(A) (plus 0 dB from Table 2)


                        After   From Table 3   From Table 4   From Table 5  STC
Components:             Step 2   (% energy)   (% floor area)   (spectrum)
                        ------------------------------------------------------
1. Wndow, openable thick d 27    +5 dB ( 33 %)   -2 dB ( 30 %)    +1 dB      31
2. Exterior wall          27     +5 dB ( 33 %)   +1 dB ( 59 %)    +2 dB      34
3. Roof / ceiling         27     +5 dB ( 33 %)   +3 dB (100 %)    +2 dB      37

Calculation is for: Riberdy Air Day



------------------------------------------------------------------------------
OPTIONS : 1. Find/change required STC for components
          2. Calculate noise reduction by specified components
          3. Load or save result file
          4. STOP                                ....... Choose action [ 1]: _
```

G 1: STC Results for Aircraft Noise Source, Daytime

```
Indoor sound level in dB(A) is  32
Room absorption category is: low absorption
Outdoor sound level is  62 dB(A) (plus 0 dB from Table 2)


                        After   From Table 3   From Table 4   From Table 5  STC
Components:             Step 2   (% energy)   (% floor area)   (spectrum)
                        ------------------------------------------------------
1. Wndow, openable thick d 30    +5 dB ( 33 %)   -2 dB ( 30 %)    +1 dB      34
2. Exterior wall          30     +5 dB ( 33 %)   +1 dB ( 59 %)    +2 dB      37
3. Roof / ceiling         30     +5 dB ( 33 %)   +3 dB (100 %)    +2 dB      40

Calculation is for: Riberdy Air Night



------------------------------------------------------------------------------
OPTIONS : 1. Find/change required STC for components
          2. Calculate noise reduction by specified components
          3. Load or save result file
          4. STOP                                ....... Choose action [ 1]:
```

G 2: STC Results for Aircraft Noise Source, Night

Appendix H: List of Assumptions

List of Assumptions

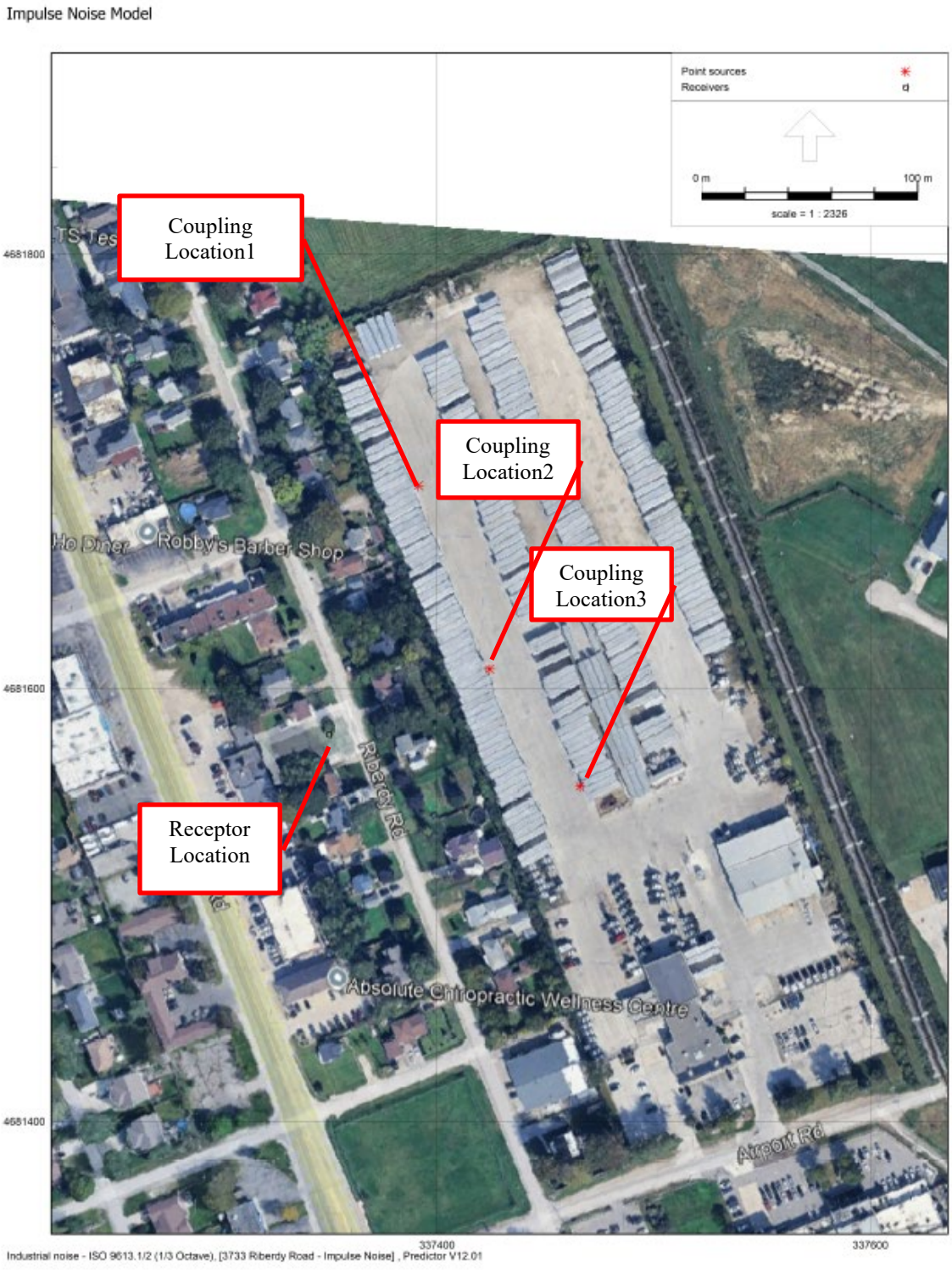
General:

- Ground attenuation factor 0.5 (with 1 being absorbent and 0 being reflective)
- Truck height 2 m
- Model considered worst case hour
- Trucks moving at 20 km/h; 45 passes in daytime, 7 passes in evening, 13 passes in nighttime
- Coupling noise = 112 dBA (impulsive)

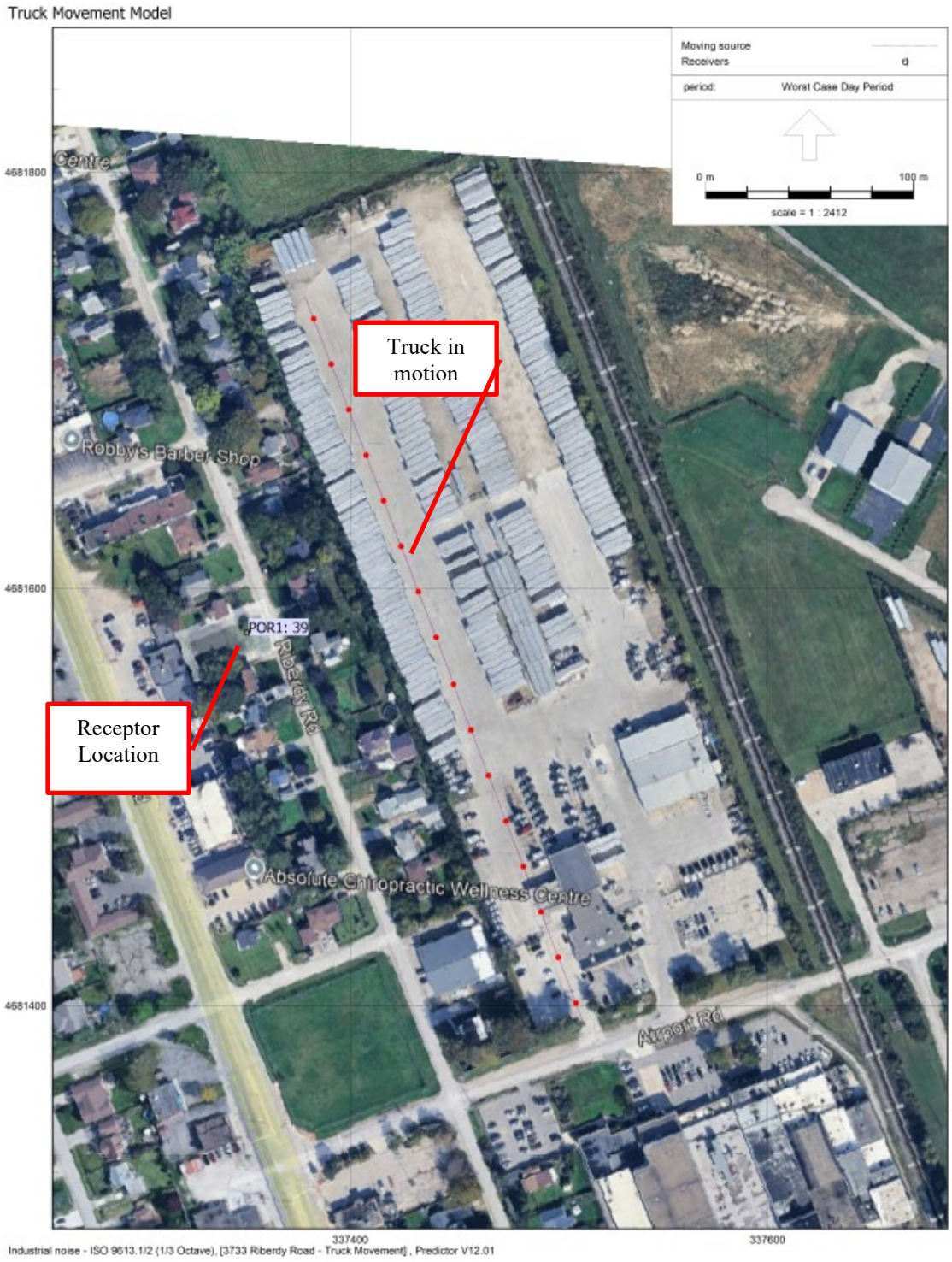
Sound Power of Truck

Truck (2m)			
LZeq [dB]	Measurement Distance (m)	DI	Lw[dBA]
59.74	5	3	37.02
70.4	5	3	52.98
58.99	5	3	46.37
63.07	5	3	54.85
75.04	5	3	70.82
65.34	5	3	64.82
70.15	5	3	73.03
65.64	5	3	71.52
64.18	5	3	72.76
58.91	5	3	69.99
58.8	5	3	72.18
60.23	5	3	75.61
61.02	5	3	78.20
58.8	5	3	77.58
61.79	5	3	81.87
60.35	5	3	81.53
60.22	5	3	82.20
60.5	5	3	83.08
61.09	5	3	84.07
60.91	5	3	84.09
58.21	5	3	81.49
53.25	5	3	76.43
53.07	5	3	76.05
49.66	5	3	72.14
48.02	5	3	69.90
47.76	5	3	68.64
41.4	5	3	60.88

Appendix I: Predictor Input Data



I1: Predictor Model; Point Sources and Receiver Location



I2: Predictor Model; Moving Sources and Receiver Location

I3: Predictor Input Parameters

3733 Riberdy Road
Oct 2026

Model: Truck Movement
3733 Riberdy Road - Riberdy Road
Group: (main group)
Listing of: Moving source, for method Industrial noise - ISO 9613.1/2 (1/3 Octave)

Name	Desc.	ISO H	ISO Terr.	HDef.	Flow(D)	Flow(E)	Flow(N)	Cb(D)	Cb(E)	Cb(N)	Avg.speed
Trucks	Trucks	2.00	0.00	Relative	45	7	13	12.78	20.86	18.17	20

Name	Max.dist.	Lw 25	Lw 31	Lw 40	Lw 50	Lw 63	Lw 80	Lw 100	Lw 125	Lw 160	Lw 200	Lw 250
Trucks	25.00	37.02	52.98	46.37	54.85	70.82	64.82	73.03	71.52	72.76	69.99	72.18

Name	Lw 315	Lw 400	Lw 500	Lw 630	Lw 800	Lw 1k	Lw 1.25k	Lw 1.6k	Lw 2k	Lw 2.5k	Lw 3.1k	Lw 4k
Trucks	75.61	78.20	77.58	81.87	81.53	82.02	83.08	84.07	84.09	81.49	76.43	76.05

Name	Lw 5k	Lw 6.3k	Lw 8k	Lw 10k	Red 25	Red 31	Red 40	Red 50	Red 63	Red 80	Red 100	Red 125
Trucks	72.14	69.90	68.64	60.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Name	Red 160	Red 200	Red 250	Red 315	Red 400	Red 500	Red 630	Red 800	Red 1k	Red 1.25k	Red 1.6k	Red 2k
Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Name	Red 2.5k	Red 3.1k	Red 4k	Red 5k	Red 6.3k	Red 8k	Red 10k
Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Model: Truck Movement
3733 Riberdy Road - Riberdy Road
Group: (main group)
Listing of: Receivers, for method Industrial noise - ISO 9613.1/2 (1/3 Octave)

Name	Desc.	Terrain L	HDef.	Height A	Height B	Height C	Height D	Height E	Height F	Façade
POR1	POR1	0.00	Relative	4.50	--	--	--	--	--	Yes