

June 1, 2026

**Attn: Rob Stovel
Timberworx Custom Homes Inc.
#201 – 1 Queen Street North,
Kitchener, ON N2H 2G7**

Via Email: stovel.associates@outlook.com

**RE : Responses to Peer Review Comments for Arkell Subdivision, South of Arkell
Road and East of Watson Road South, Puslinch, ON
HGC Project #: 02600117**

Dear Rob,

As requested, please see HGC Noise Vibration Acoustics responses to the Peer Review comments from Valcoustics Canada Ltd. dated April 21, 2025. The comments are presented below, and our responses follow in *italics*.

- a. The study recommends the future dwelling on Lot 1 be at least 45 m from the railway right-of-way to reduce vibration levels. Even at this setback distance, the vibration levels are above the CNR/GJR limit. In addition, the proposed building envelope shown on the Onsite Sewage Servicing Schematic has the setback at less than 45 m. Vibration mitigation to meet the limit is needed.

We recommend an increased setback of 55 m from the railway right of way, to the future dwelling on Lot 1. Figure has been updated to reflect this change and shows the recommended building envelope location, and is attached.

The "conceptual 240 m² building envelope" indicated on the "Onsite Sewage Servicing Schematic" drawing (attached) is preliminary. These are conceptual building envelopes and are not exact. The dwellings are not selected yet and therefore there is an opportunity to reduce the building envelope and dwelling setback to required distances.

- b. The noise study indicates there are existing stationary sources (i.e., small engine repair shop, bicycle store and pet boarding service) in the area. These need to be identified on a Key Plan to confirm there are existing noise sensitive uses that are closer to these than the proposed residential development as stated in the noise report.

Figure 1, the Key Plan, has been updated.

- c. Road traffic information was obtained from the Town of Puslinch and the County of Wellington. The assumptions regarding the traffic information, such as no truck traffic on Watson Road South and the 2035 volumes, should be confirmed by Crozier who authored the Traffic Impact Study on behalf of the developer.

The Traffic Impact Study for the subject site, prepared by Crozier and dated February 2026, has been obtained and reviewed. The traffic study indicates that there is a 2.0% commercial vehicle traffic on both Arkell Road and Watson Road South. The analysis has been updated to include 1.0% medium trucks, and 1.0% heavy trucks for Watson Road South.

The previously adopted commercial vehicle percentage of 1.2% medium truck and 2.5% heavy truck for Arkell Road, based on information previously obtained from the County of Wellington, has been retained as a conservative assumption. Results are presented in the updated report.

The overall recommendations do not change.

- d. The future sound levels at Prediction Location D presented in Table 4 assumes the dwelling is located to the north of the OLA which maximizes the distance from Arkell Road. However, the Onsite Sewage Servicing Schematic shows the dwelling at the southern portion of the lot with the OLA to the north and fully exposed to Arkell Road. An updated assessment for this location is needed.

The "conceptual 240 m² building envelope" indicated on the "Onsite Sewage Servicing Schematic" drawing (attached) is preliminary. These are conceptual building envelopes and are not exact. The dwellings are not selected yet and the building envelope may change.

Figure 2 has been updated to reflect the more conservative location of the OLA adjacent to the roadway. If the OLA is 15 m from the centerline of the roadway, the predicted sound level will be 60 dBA.

As per NPC-300., the OLA should be assessed 3 m from the building façade. In this scenario, the predicted sound level will be less than 55 dBA and physical mitigation is not required.

- e. To calculate the exterior façade sound isolation requirements, the report states that a window to floor ratio of 50% was used. How was a corner room where there could be windows on two façades accounted for? What wall to floor ratio was used?

The note under Table 4 indicates a 100% wall to floor area ratio. The exterior wall of the dwelling at location [A] is required to be brick which will reduce the window requirements compared to a non-brick facade.

Predictions at Lot 1 have been recalculated to include two façades of exposure (prediction location [A]). Window-to-floor area ratios are assumed to be 50% (30% fixed and 20% operable). Minimum STC requirements are shown in Table 4.



Regardless, once detailed floor plans are available, the glazing requirements should be refined and the exterior wall construction verified to be brick.

- f. The noise mitigation summary provided as Table 7 should include the locations where brick veneer or equivalent masonry construction is required for the exterior walls. Review of the recommended locations shown on the first Figure 4 indicate that in addition to the southeast façade, the southwest façade should also be brick veneer or equivalent masonry construction.

The table is reprinted here with the extra column. Figure 3 is attached.

Table 7: Summary of Noise Control Requirements and Noise Warning Clauses

Prediction Location	Lot Numbers	Acoustic Barrier	Ventilation Requirement	Type of Warning Clause	Façades with Brick Veneer or Equivalent Masonry Construction Required	Required Minimum STC for Glazing
[A]	Lot 1	✓	A/C	B, D, GJR	Southwest and Southeast	STC-39
[B]	Lots 2 and 3	--	Provision for A/C	A, C, GJR	Lot 2: Southwest and Southeast Lot 3: Southeast	STC-32
[C]	Lot 4	--	Provision for A/C	A, C, GJR	Southeast	OBC
[D]	Lot 22	--	Provision for A/C	A, C	--	OBC
[E]	Lots 5 to 21, and Lots 23 to 44	--	--	A	Lot 5: Southeast Lot 6: Southeast Lot 44: Southwest	OBC

- g. The minimum window STC for Location A (Lot 1) in Table 7 is indicated as being 37. However, Table 4 recommends 35 for the same location. Clarification is needed.

The table is reproduced here with the change. Again, please note that these STC ratings are likely to be changed after a review of the detailed floor plans and building elevations.





Table 4: Preliminary Glazing Requirements

Prediction Location	Description	^{1,2,3} Minimum STC Requirements for Glazing
[A]	Lot 1 – Southernmost dwelling with exposure to the railway	*STC-39]
[B]	Lot 2 – Southern dwelling with exposure to the railway	STC-32
	Remaining dwellings	OBC

Note:

¹ Assumed window to floor area ratios of 50% for living/dining rooms and bedrooms; and assumed 100% wall to floor area ratio.

² STC requirement refers to fixed glazing. Small leaks through operable doors and windows are assumed, however, tight weather seals should be provided to reduce such leakage to the extent feasible.

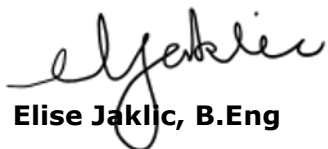
³ When detailed floor plans and building elevations are available, the drawings should be reviewed to confirm exterior façade constructions and refine window glazing requirements based on actual window to floor area ratio.

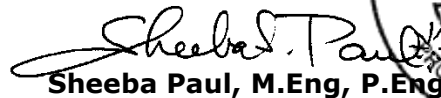
* Sound entering through windows and brick veneer or a masonry equivalent construction facades
OBC – Ontario Building Code

Due to the preliminary feasibility nature of the noise report, it is recommended that once the grading information including actual building envelopes are available, the acoustic requirements should be refined along with a review of the detailed floor plans and building elevations to refine the glazing constructions based on actual window to floor area ratios and verify the exterior wall to be brick for the required dwellings.

All other recommendations included in our previous report remain applicable. We trust the above is sufficient for your current purposes. If we can be of further assistance, please let us know.

**Best Regards,
Howe Gastmeier Chapnik Limited**


Elise Jaklic, B.Eng


Sheeba Paul, M.Eng, P.Eng



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NOISE



VIBRATION



ACOUSTICS

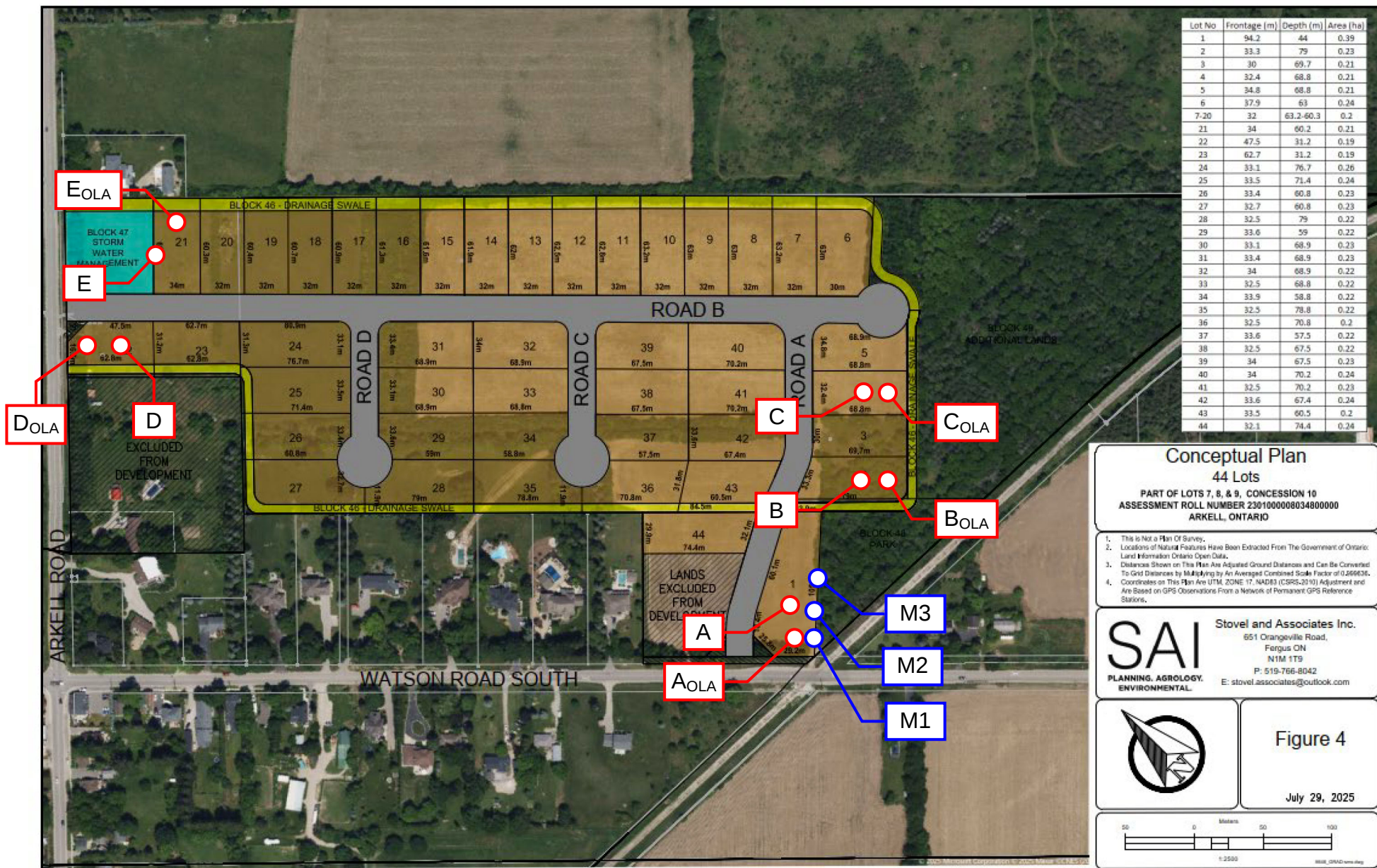


Figure 2: Proposed Concept Plan Showing Prediction Locations

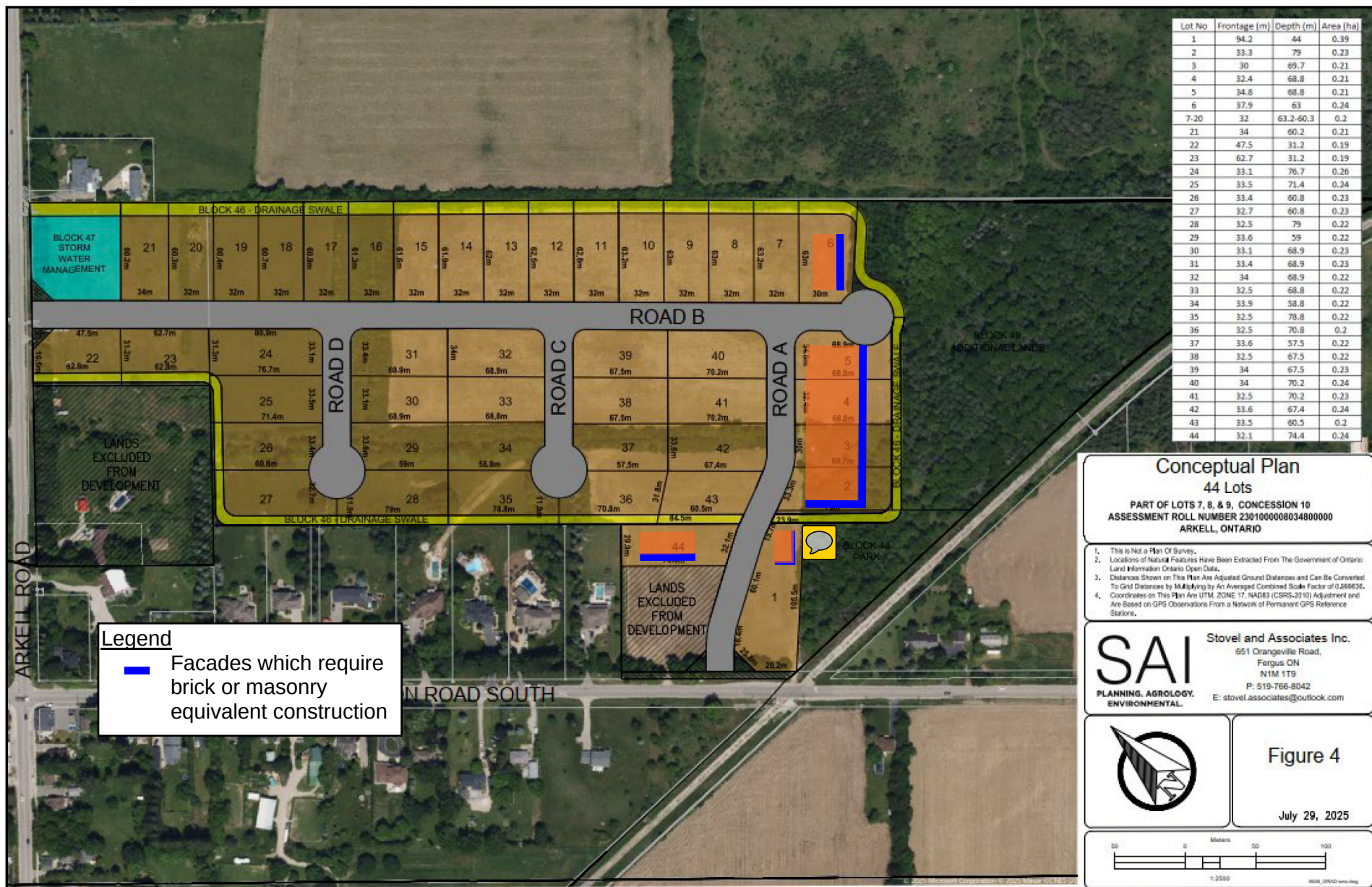
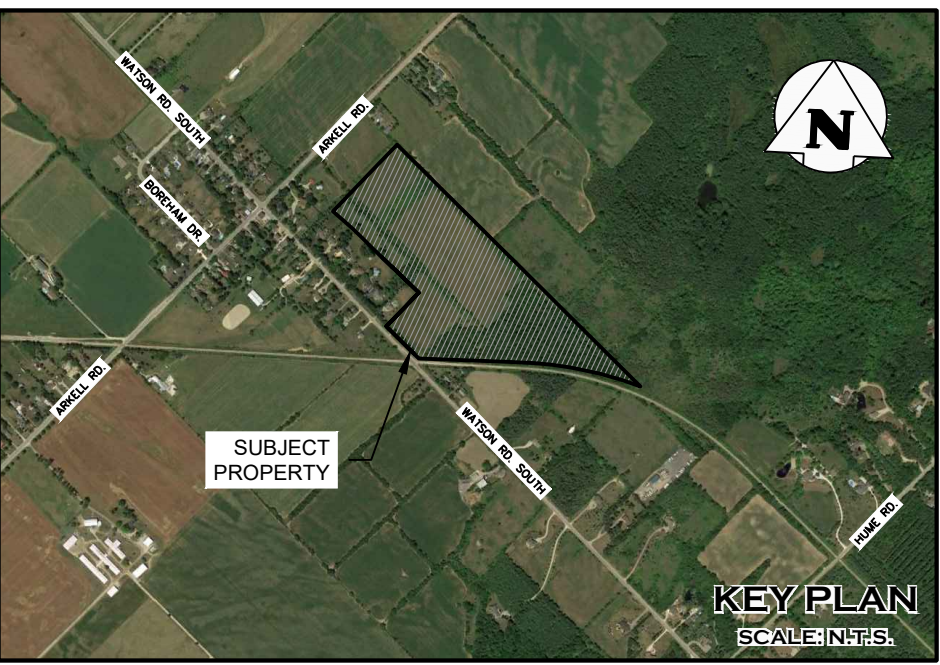
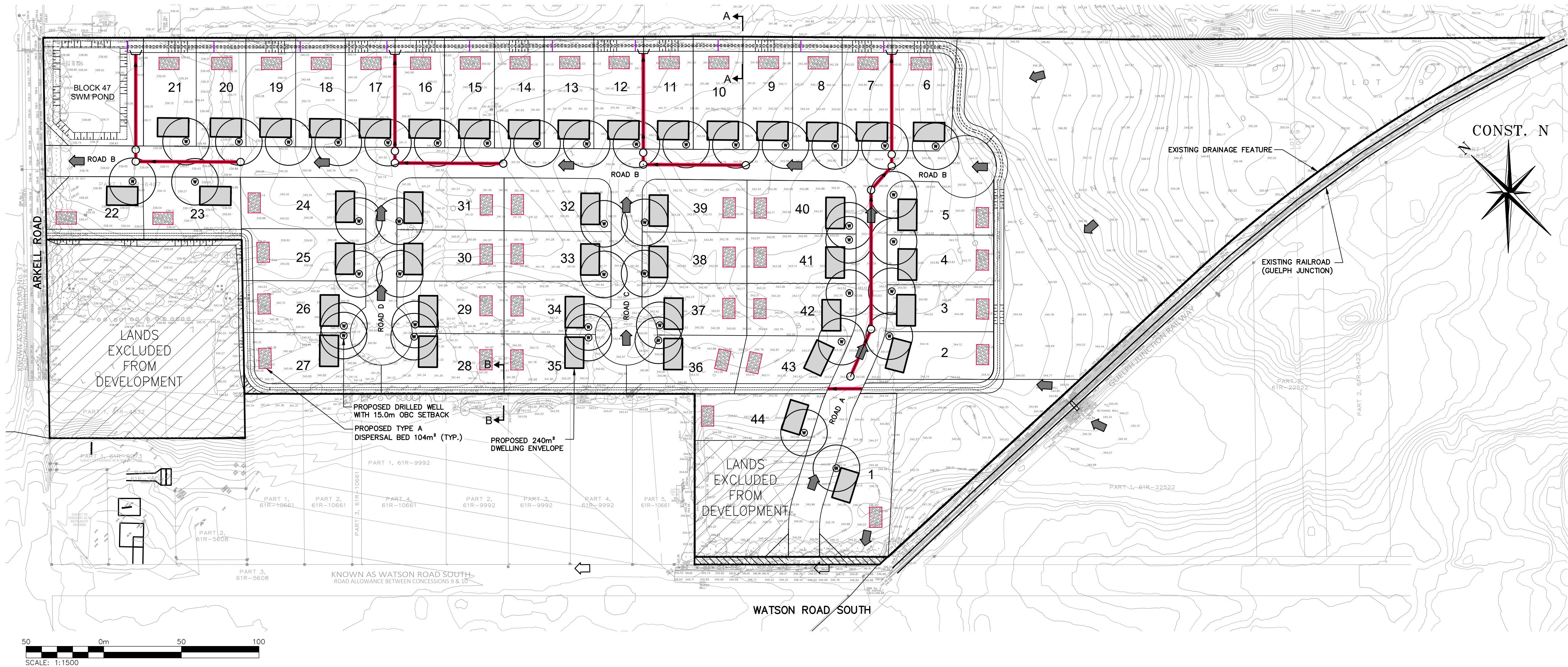
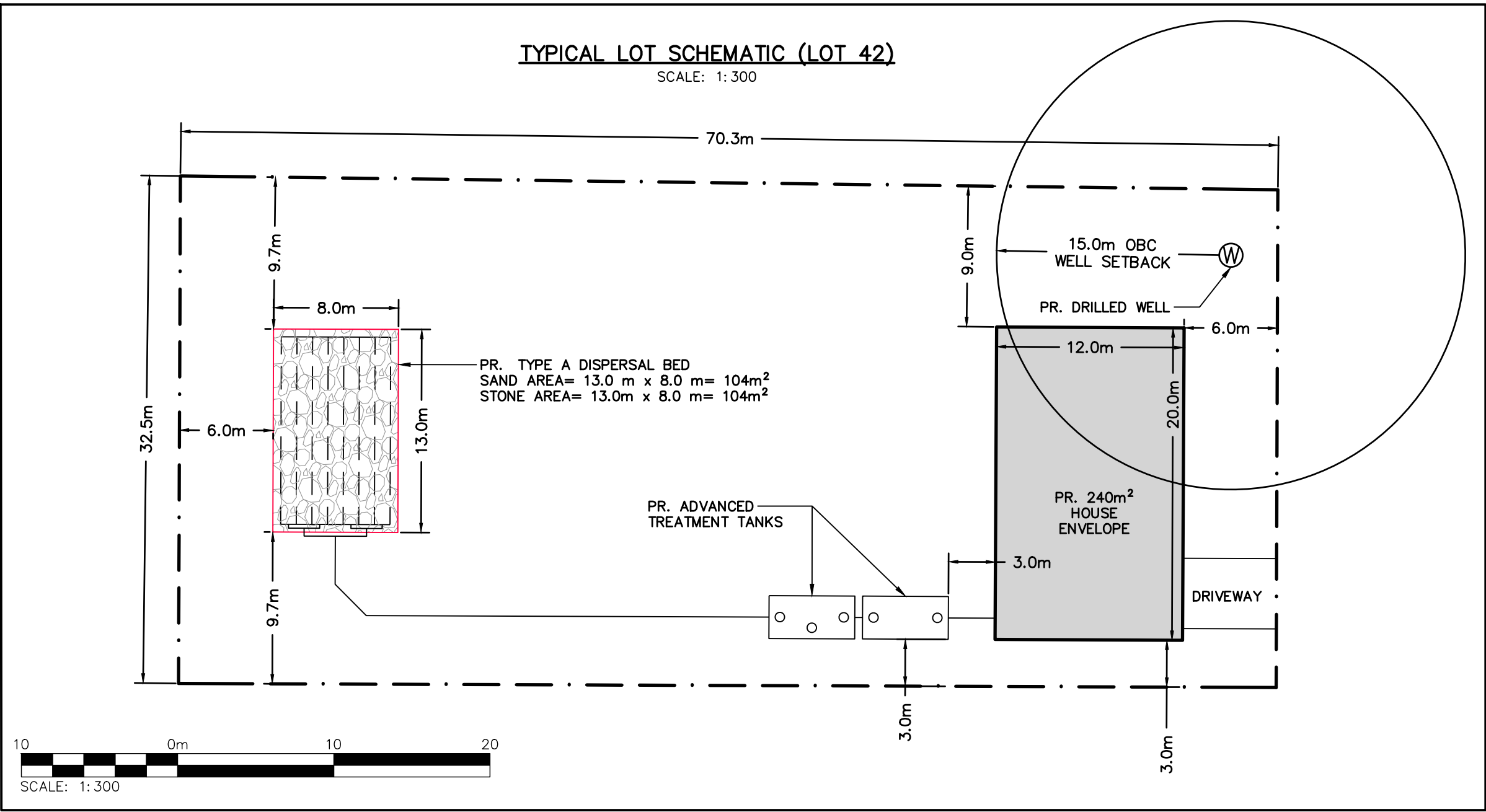


Figure 3: Proposed Concept Plan Showing Ventilation and Acoustic Barrier Requirements



LEGEND	
	PROPERTY LINE
	EXISTING CONTOUR (0.5m)
	EXISTING CONTOUR (1.0m)
	LOT NUMBER
	EXISTING GRADE
	PROPOSED GRADE
	PROPOSED GRADE (TO MATCH EXISTING)
	PROPOSED SLOPE (3:1 MAX.)
	PROPOSED LOT-LINE
	CONCEPTUAL 240 m² BUILDING ENVELOPE
	PROPOSED TYPE A DISPERSAL BED 104 m²
	CONCEPTUAL PROPOSED DRILLED WELL LOCATION C/W 15.0m OBC SETBACK

ONSITE SEWAGE SYSTEM DESIGN TYPICAL LOT NOTES	
PROPOSED 6 BEDROOM, 240 m² HOME WITH SIXTY-TWO (62) FIXTURE UNITS	BASE FLOW (6 BEDROOMS)= 2,500 L/DAY ADDITIONAL FLOOR AREA (40 m²)= 400 L/DAY ADDITIONAL FIXTURE UNITS (42)= 2,075 L/DAY Q TOTAL (2,500+2,075)= 4,575 L/DAY
SOIL PERCOLATION RATE	T = 15 min/cm (ESTIMATED BY C.F. CROZIER)
PROPOSED TREATMENT UNIT	WATERLOO BIOFILTER AD-BA50
TYPE A DISPERSAL BED STONE AREA	MINIMUM SIZE=Q/50=4,575/50 = 91.5m² PROVIDED 13m x 8m = 104m²
TYPE A DISPERSAL BED SAND AREA	MINIMUM SIZE=QT/850= 4,575*15/850 = 80.7m² PROVIDED 13m x 8m = 104m²



No.	ISSUE / REVISION	DATE
1	ISSUED FOR 2nd DRAFT PLAN SUBMISSION	2025/AUG/01
0	ISSUED FOR PRE-CONSULTATION	2023/AUG/31

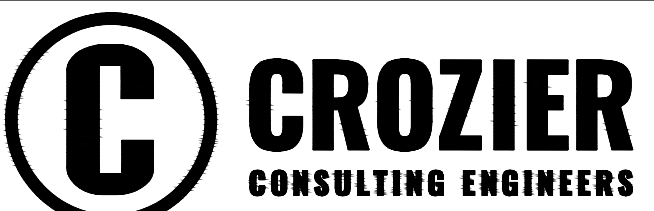
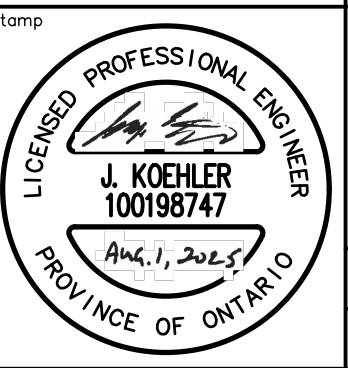
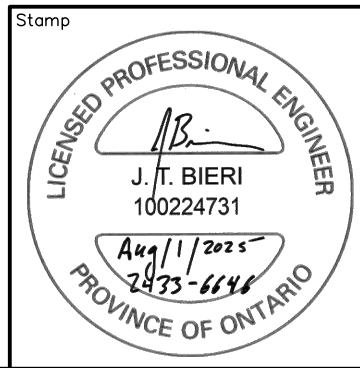
No.	ISSUE / REVISION	YYYY/MM/DD
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SITE PLAN NOTES:
DESIGN ELEMENTS ARE BASED ON DRAFT SITE PLAN BY STOVEL AND ASSOCIATES INC.
PROJECT No. XXX
DRAWING No. XXX
DATE RECEIVED 2025/JUL/29

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Project
**WATSON ROAD SOUTH
TOWN OF PUSLINCH**

Drawing
ONSITE SEWAGE SERVICING SCHEMATIC



Drawn	J.G.	Design	J.G.	Project No.	2433-6646
Check	J.G.	Check	J.G.	Scale	1:1500
				Dwg.	C102