



Kollaard Associates

Engineers

210 Prescott Street

P.O. Box 189

Kemptville, Ontario K0G 1J0

Civil • Geotechnical •
Structural • Environmental •
Hydrogeology •

(613) 860-0923

FAX: (613) 258-0475

June 29, 2022

Kollaard File # 210755 – LOT263

Phoenix Homes
18A Bentley Avenue
Ottawa, Ontario
K2E 6T8

Attn: Catherine Buck
Tel: 613-723-9227 x 191
Email: CBuck@phoenixhomes.ca



Re: Proposed Single Family Dwelling, 907 Omagaki Way, Lot # 263 Pathways, City of Ottawa, Kollaard Associates File # 220022

With regard to structural issues only, Kollaard Associates has reviewed the following drawings:

- Phoenix Homes, Lot # 263, Pathways PH2, Pages # 1 to 9, Dated 29/06/2022
- Grandor Lumber Inc., Roof Truss Layout, Cheasapeake 'B', Dated 24/05/2019
- Grandor Group, 2nd Floor Joist Layout, Cheasapeake 5 Bed, A, B, E, F, Dated 06/13/2019
- Grandor Group, 1st Floor Joist Layout, Cheasapeake 5 Bed, A, B, E, F, Dated 06/13/2019

Kollaard Associates offers the following comments:

Second Floor Plan – Pages # 4:

1. It is the opinion of Kollaard Associates that the proposed lintels and supporting posts shown on Phoenix Homes Pages # 4 are adequate.
2. The proposed tall wall construction noted on Phoenix Homes Pages # 1 is adequate.
3. Posts supporting girders may consist of built up 2x6 posts as indicated on Phoenix Homes Page # 4 and are laterally supported by plywood or OSB sheathing (i.e. posts form part of sheathed exterior walls unless noted).
4. Truss design is by others.

Ground Floor Plan – Pages # 3:

5. It is the opinion of Kollaard Associates that the proposed lintels, beams and supporting posts shown on Phoenix Homes Pages # 4 are adequate
6. Posts supporting girders may consist of built up 2x6 posts as indicated on Phoenix Homes Page # 3 and are laterally supported by plywood or OSB sheathing (i.e. posts form part of sheathed exterior walls unless noted).



Professional Engineers
Ontario

Authorized by the Association of Professional Engineers
of Ontario to offer professional engineering services.



**SITE
COPY**
City of Ottawa

7. Truss design is by others.
8. Floor joist design and flush LVL beams within the floor structure are by the manufacturer.

Basement Plan – Pages # 2:

9. It is the opinion of Kollaard Associates that the proposed steel beams, steel posts and built-up wood posts shown on Phoenix Homes Pages # 2 are adequate.
10. The front porch slab reinforcement described on Phoenix Homes Pages # 1 is adequate.
11. The foundation walls at the bottom of the window openings that exceed 47¼" in width (or the sum of the widths of the window openings exceed 25% of the length of the wall) are considered to be laterally unsupported as per 2012 OBC 9.15.4.3. The reinforcement around the window openings noted on Phoenix Homes Sheets # 2 is adequate.
12. The proposed grading plan (Phoenix Homes, 907 Omagaki Way) shows a maximum finished grade around the dwelling (including interior of garage) at the as 97.49 metres, which is 2.38 metres above the basement slab elevation. It is the understanding of Kollaard Associates that 2-15M bars are installed at the top and bottom of the foundation walls and bent around the corners. It is the opinion of Kollaard Associates that the 8" thick foundation walls with 2-15M bars at the top and bottom are adequate to withstand the lateral earth pressures as the grade difference between the garage slab (and exterior grade) and basement slab is 0.09 metres greater than the 2.30 metres specified in 2012 OBC Table 9.15.4.2.A.
13. The proposed strip footings and interior pad footings shown on Phoenix Homes Page # 2 and noted on Phoenix Homes Page # 1 are adequate.
14. Floor joist design, flush LVL beams within the floor structure and LVL lintels are by the manufacturer. The posts supporting the flush LVL lintels shown on Phoenix Homes Pages # 2 are adequate.
15. The details for the rear bracket supporting the landing are designed and approved by others (Estructura Inc. Dwg. # SK-1, Stamp Date: December 6, 2019).

General Notes:

16. All gravity loads to be carried to foundation through solid blocking.
17. Truss design is by others.
18. Floor joist design, flush LVL beams within the floor structure and LVL lintels are by the manufacturer.
19. The self supporting stairs are to be designed by the stair manufacturer.
20. All dimension lumber, except non-load bearing 8 ft 2x6 studs to be No.2 grade SPF or better.
21. Non-load bearing 8 ft 2x6 studs to be No.3 or Stud grade SPF or better.
22. All guards to be as per OBC SB-7, unless otherwise mentioned and designed by others.
23. All brick lintels to be as per OBC Table 9.20.5.2.B.
24. Unless otherwise noted, LVL to be 1.8E 3000Fb LVL (Canadian Limit States bending strength of at least 39.5 MPa) with 1¼" nominal width or better.

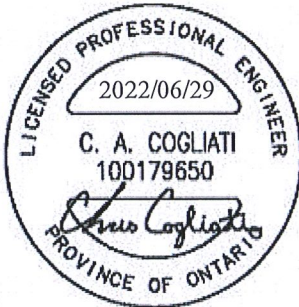




25. Pemco Steel adjustable posts are designed and approved by the manufacturer. The adjustable steel posts are designed for a maximum allowable load of 106.8 kN at a maximum height of 9'-3".
26. All 3" x 3" x 3/16" HSS posts c/w 6" x 6" x 3/8" top and bottom bearing plates.
27. The assumed soil bearing resistance of 125 kPa is to be verified prior to construction.
28. Note that the truss manufacturer/floor joist supplier has sized the flush LVL beams and girder trusses shown on the building drawings. The comments provided by Kollaard Associates in this report are based in part on the design indicated in the truss and floor layouts. If a different truss and/or floor layout is used in construction, comments made in this report may no longer be valid. Provide Kollaard Associates with the full truss package prior to construction.
29. Comments provided in this report are made in consideration of Part 9 and Part 4 (where applicable) of the 2012 OBC as amended.
30. This report constitutes a review of the structural information indicated on the building plans cited in this report for the client indicated above.

We trust this letter provides sufficient information for your present purposes. If you have any questions concerning this letter please do not hesitate to contact our office.

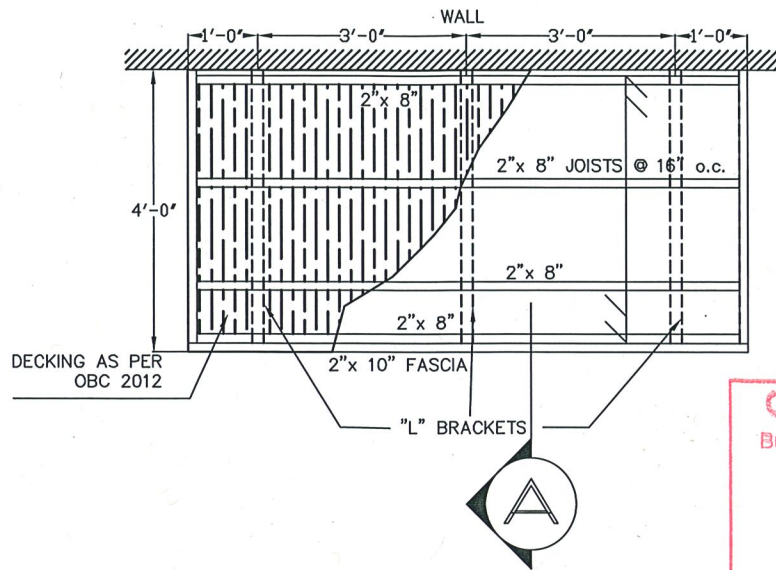
Sincerely,
Kollaard Associates Inc.



Christopher Cogliati, P.Eng.



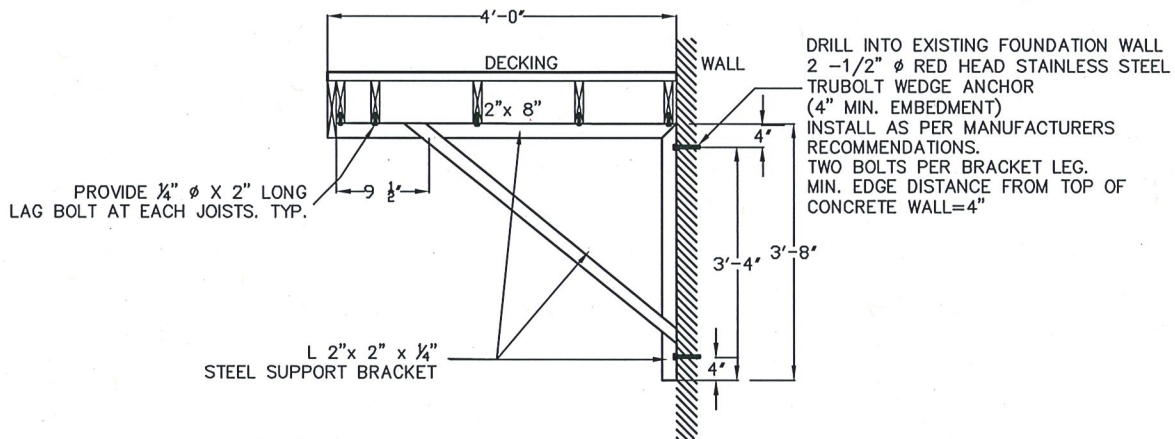
**SITE
COPY**
City of Ottawa



**SITE
COPY**
City of Ottawa



PLAN



SECTION 'A'



NOTES:

STEEL
-ALL STRUCTURAL STEEL WORK
INCLUDING DESIGN OF ALL
COMPONENTS SHALL BE CARRIED OUT
IN ACCORDANCE
WITH CAN/CSA-S16-09.
-HOLLOW STRUCTURAL SECTIONS TO
CAN/CSA G40.20 GRADE 350, CLASS C
OF H.
- STRUCTURAL STEEL SHALL CONFORM
TO CAN/CSA G40.21 GRADE 300W
ALL WORK SHALL CONFORM OBC 2012
CONTRACTOR TO VERIFY ALL
DIMENSIONS ON SITE.
FOR ADDITIONAL INFORMATION, SEE
ENGINEERING DWGS.

ALL HARDWARE TO BE HOT-DIP
GALVANIZED
CONCRETE MIN. STRENGTH: 25 MPA

No.	Revision	Date	By

Estructura Inc.

TEL: (819) 918-4382
EMAIL: estructurainc@yahoo.com



Client
CUT RITE CONSTRUCTION

Project
Name

Sheet Title
DECK CONNECTION 4'-0"x8'-0"

Drawn By
DS

Project No.

Date
DECEMBER 2019
File Name

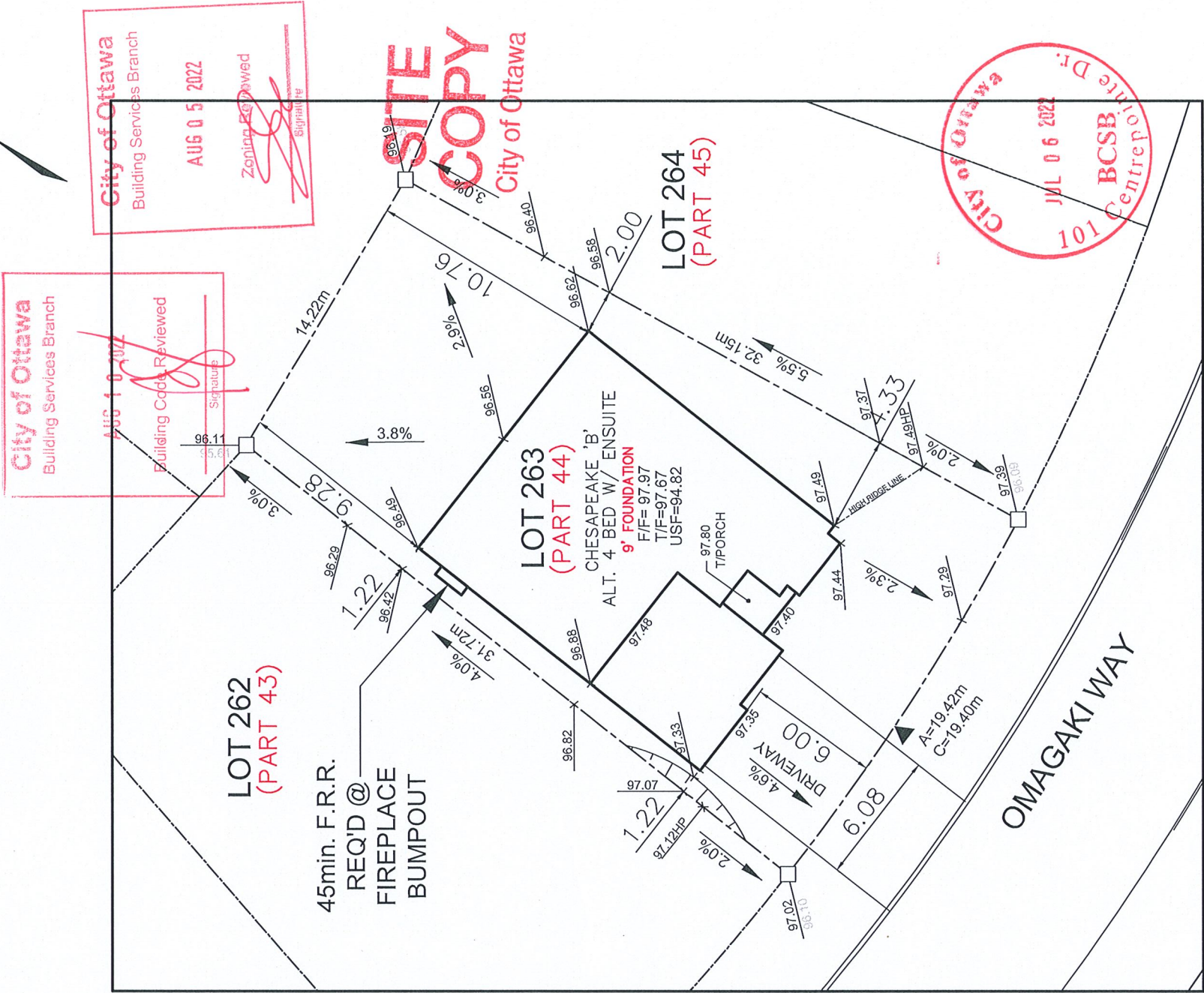
Checked By
-

Scale
N.T.S.

Drawing No.

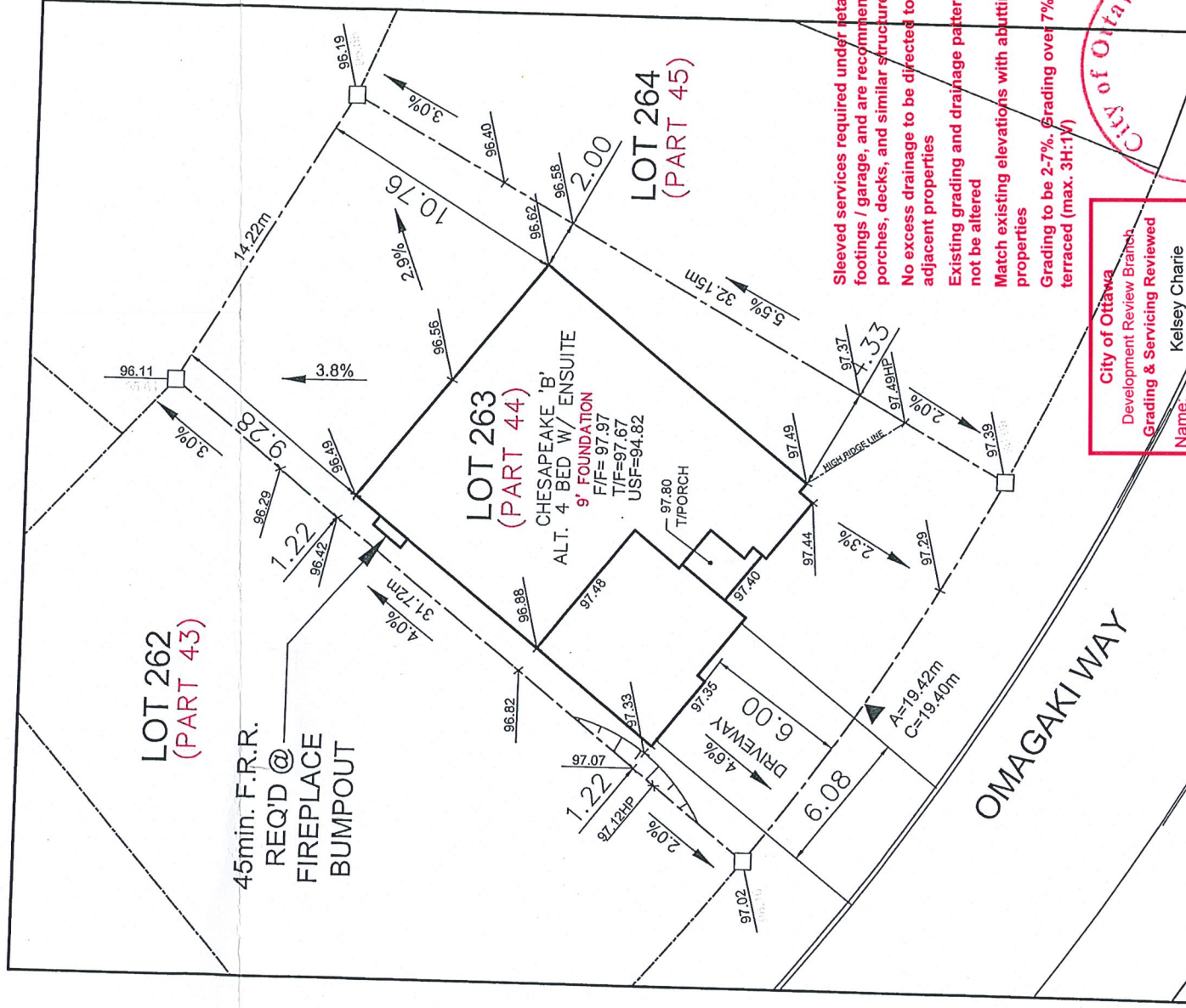
SK-1

NOTE: UTILITIES/SERVICES/MAILBOXES/EASEMENT PLANS HAVE NOT BEEN FINALIZED – THIS PLAN SUBJECT TO FURTHER CHANGES.

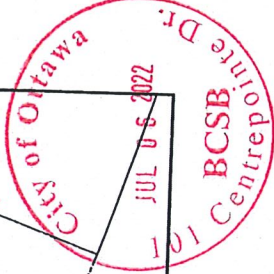


Owner/Applicant DCR/PHOENIX HOMES	 PHOENIX HOMES	 LOT 263	SITE/GRADING PLAN PATHWAYS PHASE 2
Telephone # 723-9227	INDIVIDUAL LOT GRADING REVIEW SUMMARY FOR SITED HOUSE AS COMPARED WITH OVERALL SUBDIVISION PLAN		
Plan # 4M- 1618	NOTE: THIS PLAN IS NOT A SURVEY PLAN OR SUBDIVISION PLAN WITHIN THE MEANING OF PLANNING ACT.		
Project name: PATHWAYS			
Civic Address: 907 OMAGAKI WAY			
House model: CHESAPEAKE 'B'			
Bldg. Ht. _____ m			
Lot coverage 36.5 %			
Scale 1:250			
Sod Area 363.57 m ²			
Asphalt Area 73 m ²			
CHECKED/APPROVED BY: T.L.MAK ENG.			

NOTE: UTILITIES/SERVICES/MAILBOXES/EASEMENT PLANS HAVE NOT BEEN FINALIZED – THIS PLAN SUBJECT TO FURTHER CHANGES.



City of Ottawa
Development Review Branch
Grading & Servicing Reviewed
Name: Kelsey Charle
Signed: *[Signature]*
Date: Jul 20 2022



Owner/Applicant

DCR/PHOENIX HOMES

Telephone # 723-9227

Plan # 4M-1618

Project name: PATHWAYS

Civic Address: 1907 OMAGAKI WAY

House model: CHESAPEAKE 'B'

Bldg. Ht. _____ m

Lot coverage _____ 36.5 %

Scale 1:250

Sod Area _____ 363.57 m²

Asphalt Area _____ 73 m²

CHECKED/APPROVED BY: T.L.MAK ENG.



LOT 263 SITE/GRADING PLAN PATHWAYS PHASE 2

INDIVIDUAL LOT GRADING REVIEW SUMMARY FOR SITED HOUSE AS COMPARED WITH OVERALL SUBDIVISION PLAN

NOTE: THIS PLAN IS NOT A SURVEY PLAN OR SUBDIVISION PLAN WITHIN THE MEANING OF PLANNING ACT.



Energy Efficiency Design Summary: Prescriptive Method

(Building Code Part 9, Residential)

This form is used by a designer to demonstrate that the energy efficiency design of a house complies with the building code using the prescriptive method described in Subsection 3.1.1. of SB-12. This form is applicable where the ratio of gross area of windows/sideights/skylights/glazing in doors and sliding glass doors to the gross area of peripheral walls is not more than 22%.

For use by Principal Authority	
Application No:	Model/Certification Number

A. Project Information

Building number, street name 907 Omagaki Way		Unit number 263	Lot/Con
Municipality Gloucester	Postal code	Reg. Plan number / other description 4M-1618	

B. Prescriptive Compliance

[indicate the building code compliance package being employed in this house design]

SB-12 Prescriptive (input design package): Package: A1 Table: 3.1.1.2.A(1P)

C. Project Design Conditions

Climatic Zone (SB-1):	Heating Equipment Efficiency	Space Heating Fuel Source
☒ Zone 1 (< 5000 degree days)	☒ ≥ 92% AFUE	☒ Gas ☐ Propane ☐ Solid Fuel
☐ Zone 2 (≥ 5000 degree days)	☐ ≥ 84% < 92% AFUE	☐ Oil ☐ Electric ☐ Earth Energy
Ratio of Windows, Skylights & Glass (W, S & G) to Wall Area		Other Building Characteristics
Area of walls = _____ m ² or 4033 ft ²	W, S & G % = <u>15.5</u>	☐ Log/Post&Beam ☐ ICF Above Grade ☐ ICF Basement
Area of W, S & G = _____ m ² or 624 ft ²	Utilize window averaging: ☐ Yes ☒ No	☐ Slab-on-ground ☐ Walkout Basement
		☐ Air Conditioning ☐ Combo Unit
		☐ Air Sourced Heat Pump (ASHP)
		☐ Ground Sourced Heat Pump (GSHP)

D. Building Specifications

[provide values and ratings of the energy efficiency components proposed]

Energy Efficiency Substitutions				
☐ ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5) & (6))				
☐ Combined space heating and domestic water heating systems (3.1.1.2.(7) / 3.1.1.3.(7))				
☐ Airtightness substitution(s)				
Airtightness test required (Refer to Design Guide Attached)		Required: _____ Permitted Substitution: _____		
		Required: _____ Permitted Substitution: _____		
Building Component	Minimum RSI / R values or Maximum U-Value ⁽¹⁾		Building Component	Efficiency Ratings
Thermal Insulation	Nominal	Effective	Windows & Doors Provide U-Value ⁽¹⁾ or ER rating	
Ceiling with Attic Space	R60		Windows/Sliding Glass Doors	25
Ceiling without Attic Space	R31		Skylights/Glazed Roofs	0.49
Exposed Floor	R31		Mechanicals	
Walls Above Grade	R22		Heating Equip.(AFUE)	96%
Basement Walls		R21.12	HRV Efficiency (SRE% at 0°C)	75%
Slab (all >600mm below grade)	--		DHW Heater (EF)	0.8
Slab (edge only ≤600mm below grade)	R10		DWHR (CSA B55.1 (min. 42% efficiency))	# Showers _____
Slab (all ≤600mm below grade, or heated)	R10		Combined Heating System	NO

(1) U value to be provided in either W/(m²•K) or Btu/(h•ft²•F) but not both.

E. Designer(s)

[name(s) & BCIN(s), if applicable, of person(s) providing information herein to substantiate that design meets the building code]

Qualified Designer Declaration of designer to have reviewed and take responsibility for the design work.		
Name Catherine Buck	BCIN 46674	Signature

Mechanical Design Report

Low rise residential



Location of Installation	Address		House Builder
	PHOENIX		
Installing Contractor	Application Number	House Model (if applicable)	
		CHEASARHAKH	
	Name	AUG 10 2022	
	HARDING MECHANICAL	COPY	
Address	2210 CAVANMORE RD	Building Code Reviewed	
	City	OTTAWA	
	Postal Code	KOA 1LO	
	Telephone Number	613-831-2257	
Fax Number		613-831-9011	

SYSTEM DESIGN PARAMETERS

Combustion Appliances 9.32.3.1.(1) a) ☒ Direct vent (sealed combustion) only b) ☐ Positive venting induced draft (except fireplaces) c) ☐ Natural draft, B-vent or induced draft fireplace d) ☐ Solid Fuel (including fireplaces) e) ☐ No Combustion Appliances	Heating System ☒ Forced Air ☐ Non-Forced Air (Other -) ☐ Electric Space Heat ☐ Radiant Floor Heat (attach pipe details) ☐ Geothermal (attach loop, pipe & well details) ☐ High Velocity Residential (attach duct details)
House Type 9.32.3.1.(2) ☒ I Type a) or b) appliances only, no solid fuel ☐ II Type I except with solid fuel (including fireplace) ☐ III Any Type c) appliance = Part 6 Design ☐ IV Electric space heat ☐ Other: No forced air = Option 4	Ventilation System ☐ CAN/CSA-F326 ☐ HRV - Exhaust Ducts / Forced Air System ☒ HRV - Simplified Connection to Forced Air System ☐ HRV - Full Ducting / Not Coupled to Forced Air System ☐ Part 6 Design (Other -)

EQUIPMENT DESIGN REQUIREMENTS

Total Ventilation Capacity 9.32.3.3.(1)				TOTAL
Master Bedroom	1	x	10 L/s	= 10 L/s
Unfinished Basement	1	x	10 L/s	= 10
Other Habitable Rooms	15	x	5 L/s	= 75
Principal Ventilation Capacity 9.32.3.4.(1)				95 T.V.C.
Master Bedroom	1	x	15 L/s	= 15
Other Bedrooms	3	x	7.5 L/s	= 22.5
Required Supplemental Ventilation Capacity (T.V.C. less P.V.C.) =				- 37.5 P.V.C.
				57.5

Furnace size: GMEC961004CNA 100,000 BTU KJ

Air conditioner size: GSX13048 4 TON A/C KJ (If provided / applicable)

Heating / Cooling Equipment sized according to heat loss/gain calculations of CAN/CSA F280: Yes

Geothermal Equipment designed according to CAN/CSA-C448.2: No

Hydronic Equipment designed according to CAN/CSA-B214: No

Duct (and pipe) schematic attached including sizes, runs and material used: Yes

VENTILATION EQUIPMENT

Heat Recovery Ventilator

Model: CLEAN COMFORT VH30100RNC HRV

95 L/s High 47.5 L/s Low

Exhaust Fans

	Location	Model	L/s	Sones	Principal or Supplemental
1	PDRM	DX90	45	2.5	PRINCIPAL
2	ENSUITE	EC50	25	3.	SUPPLEMENTAL
3	BATH	EC50	25	3.	SUPPLEMENTAL
4	BATH 2	EC50	25	3.	SUPPLEMENTAL

EQUIPMENT EFFICIENCIES (Please also refer to Energy Efficiency Design Summary)

Heating system:

Cooling system (if applicable):

Water heater:

HRV: 75 % sensible efficiency at 0 degrees:

60 % sensible efficiency at -25 degrees:

SITE COPY

City of Ottawa

City of Ottawa

Building Services Branch

AUG 10 2022

Building Code Reviewed

Signature

DESIGNER CERTIFICATION

I hereby certify that this ventilation system has been designed in accordance with the 2012 Ontario Building Code.

Name: LINDA MCPARLAN

Company Name: HARDING MECHANICAL

Signature: *Linda McParlan*

Date: JUNE 29/22

BCIN 24379

HRAI # 6080



TECHNICAL MEMORANDUM

DATE May 30, 2018

Project No. 13-1121-0083 (1046)

TO Erin O'Connor, MCIP, RPP
Leitrim South Holdings Inc.

FROM Christine Ko, P.Eng.

EMAIL Christine_Ko@golder.com

SITE COPY
City of Ottawa

GEOTECHNICAL REVIEW OF PROPOSED SITE GRADING
PATHWAYS RESIDENTIAL DEVELOPMENT – PHASE 1
4800 BANK STREET
OTTAWA, ONTARIO

It is understood that Leitrim South Holdings Inc. has been requested to provide a detailed geotechnical review of the proposed site grading, including a summary table for each individual lot/block, for Phase 1 of the Pathways residential development located at 4800 Bank Street in Ottawa, Ontario. This memo provides our review and geotechnical recommendations pertaining to the grading of this site, and as described below fulfills the same intended purpose of a detailed table for each lot/block.

Subsurface Conditions

Golder Associates previously carried out a geotechnical investigation for this proposed development and the results of that investigation were provided in a report to Leitrim South Holdings Inc. and 4840 Bank Street Ltd. titled “*Geotechnical Investigation, Proposed Residential Development, Remer and Idone Lands, Ottawa, Ontario*” dated January 2017 (report number 13-1121-0083 (1046)).

Based on the results of the geotechnical investigation, in general, the subsurface conditions on this site consist of topsoil or peat (at the western portion of the site) overlying sands, silts, and followed by bouldery glacial till, which is in turn underlain by bedrock. Localized thin layers of silty clay were encountered below the peat or topsoil at two of the test holes (i.e., TP16-15 and TP 1).

The depth to the bedrock surface varies from about 2 to greater than 7 metres below the ground surface, generally increasing in depth from east to west.

Grading Plan Review

As mentioned above, localized layers of silty clay soils were encountered only in TP 16-15 and TP 1. TP 16-5 is located just outside of the northwest boundary of the site, whereas TP 1 is located within the extreme southwest corner of the site, which is designated as a “No Touch Zone” (i.e., no structures will be constructed in this area).

In other words, silty clay soils were not encountered in areas where structures are being proposed on the Pathways site. It is the presence and strength of a silty clay deposit that typically imposes grade raise restrictions on a development site.

Golder Associates Ltd.
1931 Robertson Road, Ottawa, Ontario, K2H 5B7, Canada

T: +1 613 592 9600 F: +1 613 592 9601

Golder and the G logo are trademarks of Golder Associates Corporation

golder.com

Based on the above and as noted in the geotechnical report, from a foundation design perspective there is no practical restrictions for the thickness of grade raise fill that may be placed within the proposed residential development area.

Golder Associates has reviewed the following grading plans prepared by IBI Group for this site.

- Grading Plan, Project No. 33956, Drawing Nos. 200 to 205, Revision 8, Revised April 13, 2018.

Upon review, the grading plans were found to be in general accordance with the recommendations provided in Golder Associates' report from a grading perspective and therefore considered acceptable from a geotechnical point of view. As such, detailed grading and underside of footing elevation review on a lot-by-lot or block-by-block basis for Phase 1 is not relevant in view of the subsurface conditions at the Pathways site and therefore preparation of a summary table for each individual lot/block is deemed not necessary.

Closure

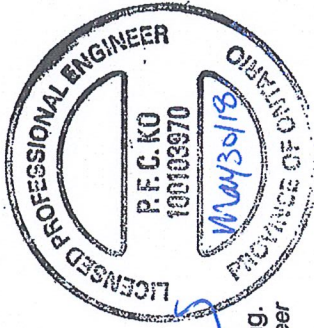
We trust that this memo provides sufficient information for your present requirements. If you have any questions concerning this memo, please don't hesitate to contact the undersigned.

Yours truly,

GOLDER ASSOCIATES LTD.



Christine Ko, P.Eng.
Geotechnical Engineer



Paul Smolkin, P.Eng.
Principal

CK/PAS/mvrd

n:\active\2013\1121 - geotechnical\13-1121-0083 rener and idone lands\phase 1046 rener detailed design\07-memos\techmem-002 detailed grading review\final_rev\113-1121-0083-tm-rev1-grading review-30may2018.docx