



For Office Use Only  
(to be inserted by the Secretary-Treasurer  
after application is deemed complete)

FILE NUMBER: A-2024-0308

The Personal Information collected on this form is collected pursuant to section 45 of the Planning Act and will be used in the processing of this application. Applicants are advised that the Committee of Adjustment is a public process and the information contained in the Committee of Adjustment files is considered public information and is available to anyone upon request and will be published on the City's website. Questions about the collection of personal information should be directed to the Secretary-Treasurer, Committee of Adjustment, City of Brampton.

APPLICATION

Minor Variance or Special Permission

(Please read Instructions)

**NOTE:** It is required that this application be filed with the Secretary-Treasurer of the Committee of Adjustment and be accompanied by the applicable fee.

The undersigned hereby applies to the Committee of Adjustment for the City of Brampton under section 45 of the Planning Act, 1990, for relief as described in this application from By-Law **270-2004**.

1. **Name of Owner(s)** Dennis Smith and Olufunlola Olubukola Smith  
**Address** 16 Amberglow Ct Brampton ON L6Y 0G8

**Phone #** 416-993-0974 **Fax #** \_\_\_\_\_  
**Email** dennisolasmith@gmail.com

2. **Name of Agent** Donya Abasiliasi  
**Address** 24 Almond Ave, Thornhill, ON L3T 1L1

**Phone #** 4168780861 **Fax #** \_\_\_\_\_  
**Email** donya.abasiliasi@gmail.com

3. **Nature and extent of relief applied for (variances requested):**  
Addition PROPOSED SUNROOM to the existng redsidential building

4. **Why is it not possible to comply with the provisions of the by-law?**  
Required rear yard setback of 6.0m for this proposal, but the proposed sunroom is on the existng deck which is 2.51m rear set back.

5. **Legal Description of the subject land:**  
**Lot Number** 173 to 176  
**Plan Number/Concession Number** 43M-1881  
**Municipal Address** 16 Amberglow Ct Brampton ON L6Y 0G8

6. **Dimension of subject land (in metric units)**  
**Frontage** 10.35  
**Depth** 28.24  
**Area** 19.92

7. **Access to the subject land is by:**  
**Provincial Highway** ☐ **Seasonal Road** ☐  
**Municipal Road Maintained All Year** ☒ **Other Public Road** ☐  
**Private Right-of-Way** ☐ **Water** ☐

8. Particulars of all buildings and structures on or proposed for the subject land: (specify in metric units ground floor area, gross floor area, number of storeys, width, length, height, etc., where possible)

**EXISTING BUILDINGS/STRUCTURES** on the subject land: List all structures (dwelling, shed, gazebo, etc.)

dwelling, deck

**PROPOSED BUILDINGS/STRUCTURES** on the subject land:

Proposed Cover Deck enclosure

9. Location of all buildings and structures on or proposed for the subject lands: (specify distance from side, rear and front lot lines in metric units)

**EXISTING**

Front yard setback 4.54

Rear yard setback 6.04

Side yard setback 1.24

Side yard setback 5.11

**PROPOSED**

Front yard setback 20.44

Rear yard setback 20.44

Side yard setback 7.76

Side yard setback 5.11

10. Date of Acquisition of subject land: November 28, 2011
11. Existing uses of subject property: Residential
12. Proposed uses of subject property: Residential
13. Existing uses of abutting properties: Residential
14. Date of construction of all buildings & structures on subject land: October 23, 2013
15. Length of time the existing uses of the subject property have been continued: 2013 to Present
16. (a) What water supply is existing/proposed?  
Municipal ☒ Other (specify) \_\_\_\_\_  
Well ☐
- (b) What sewage disposal is/will be provided?  
Municipal ☒ Other (specify) \_\_\_\_\_  
Septic ☐
- (c) What storm drainage system is existing/proposed?  
Sewers ☒ Other (specify) \_\_\_\_\_  
Ditches ☐  
Swales ☐

17. Is the subject property the subject of an application under the Planning Act, for approval of a plan of subdivision or consent?

Yes ☐ No ☒

If answer is yes, provide details: File # \_\_\_\_\_ Status \_\_\_\_\_

18. Has a pre-consultation application been filed?

Yes ☐ No ☒

19. Has the subject property ever been the subject of an application for minor variance?

Yes ☐ No ☒ Unknown ☐

If answer is yes, provide details:

|              |                |              |
|--------------|----------------|--------------|
| File # _____ | Decision _____ | Relief _____ |
| File # _____ | Decision _____ | Relief _____ |
| File # _____ | Decision _____ | Relief _____ |

  
Signature of Applicant(s) or Authorized Agent

DATED AT THE 22 city OF July Brampton  
THIS 12 DAY OF August, 2024.

IF THIS APPLICATION IS SIGNED BY AN AGENT, SOLICITOR OR ANY PERSON OTHER THAN THE OWNER OF THE SUBJECT LANDS, WRITTEN AUTHORIZATION OF THE OWNER MUST ACCOMPANY THE APPLICATION. IF THE APPLICANT IS A CORPORATION, THE APPLICATION SHALL BE SIGNED BY AN OFFICER OF THE CORPORATION AND THE CORPORATION'S SEAL SHALL BE AFFIXED.

I, Donya Abasiliasi, OF THE city OF Toronto

IN THE \_\_\_\_\_ OF \_\_\_\_\_ SOLEMNLY DECLARE THAT:

ALL OF THE ABOVE STATEMENTS ARE TRUE AND I MAKE THIS SOLEMN DECLARATION CONSCIENTIOUSLY BELIEVING IT TO BE TRUE AND KNOWING THAT IT IS OF THE SAME FORCE AND EFFECT AS IF MADE UNDER OATH.

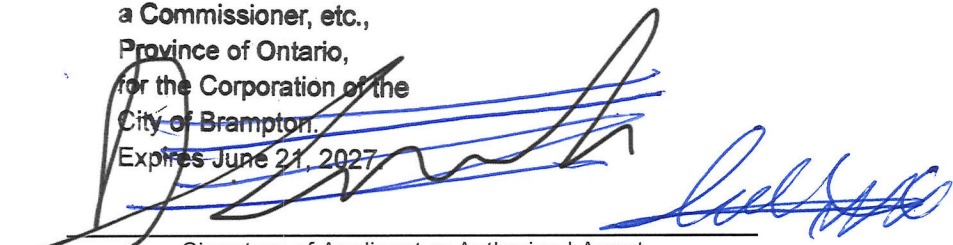
DECLARED BEFORE ME AT THE

CITY OF BRAMPTON  
IN THE REGION OF  
PEEL THIS 12 DAY OF  
AUG, 2024

  
A Commissioner etc.

Valerie Low

a Commissioner, etc.,  
Province of Ontario,  
for the Corporation of the  
City of Brampton.  
Expires June 21, 2027

  
Signature of Applicant or Authorized Agent

FOR OFFICE USE ONLY

Present Official Plan Designation: \_\_\_\_\_

Present Zoning By-law Classification: \_\_\_\_\_

R1F-2070

This application has been reviewed with respect to the variances required and the results of the said review are outlined on the attached checklist.

Shiza Athar

Zoning Officer

2024/08/07

Date

DATE RECEIVED

AUG 12, 2024

Date Application Deemed  
Complete by the Municipality

VL

Revised 2022/02/17

**APPOINTMENT AND AUTHORIZATION OF AGENT**

To: The Secretary-Treasurer  
Committee of Adjustment  
City of Brampton  
2 Wellington Street West  
Brampton, Ontario  
L6Y 4R2  
[coa@brampton.ca](mailto:coa@brampton.ca)

LOCATION OF THE SUBJECT LAND: 16 Amberglow Ct Brampton ON L6Y 0G8

I/We, Dennis Smith and Olufunlola Smith  
please print/type the full name of the owner(s)

the undersigned, being the registered owner(s) of the subject lands, hereby authorize

Donya Abasiliasi  
please print/type the full name of the agent(s)

to make application to the **City of Brampton Committee of Adjustment** in the matter of an application for **minor variance** with respect to the subject land.

Dated this 24 day of July, 2024.



(signature of the owner[s], or where the owner is a firm or corporation, the signature of an officer of the owner.)

(where the owner is a firm or corporation, please print or type the full name of the person signing.)

**NOTE: If the owner is a firm or corporation, the corporate seal shall be affixed hereto.**

**NOTE: Unit owners within a Peel Standard Condominium Corporation are to secure authorization from the Directors of the Condominium Corporation in a form satisfactory to the City of Brampton, prior to submission of an application. Signatures from all Members of the Board of Directors are required.**



**PERMISSION TO ENTER**

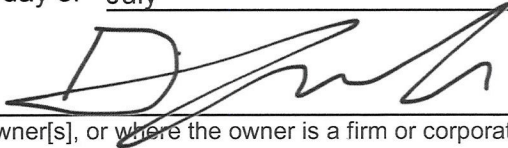
To: The Secretary-Treasurer  
Committee of Adjustment  
City of Brampton  
2 Wellington Street West  
Brampton, Ontario  
L6Y 4R2  
[coa@brampton.ca](mailto:coa@brampton.ca)

LOCATION OF THE SUBJECT LAND: 16 Amberglow Ct

I/We, Dennis Smith and Olufunlola Smith  
please print/type the full name of the owner(s)

the undersigned, being the registered owner(s) of the subject land, hereby authorize the Members of the City of Brampton Committee of Adjustment and City of Brampton staff members, to enter upon the above noted property for the purpose of conducting a site inspection with respect to the attached application for Minor Variance and/or consent.

Dated this 25 day of July, 2024.



(signature of the owner[s], or where the owner is a firm or corporation, the signature of an officer of the owner.)

(where the owner is a firm or corporation, please print or type the full name of the person signing.)

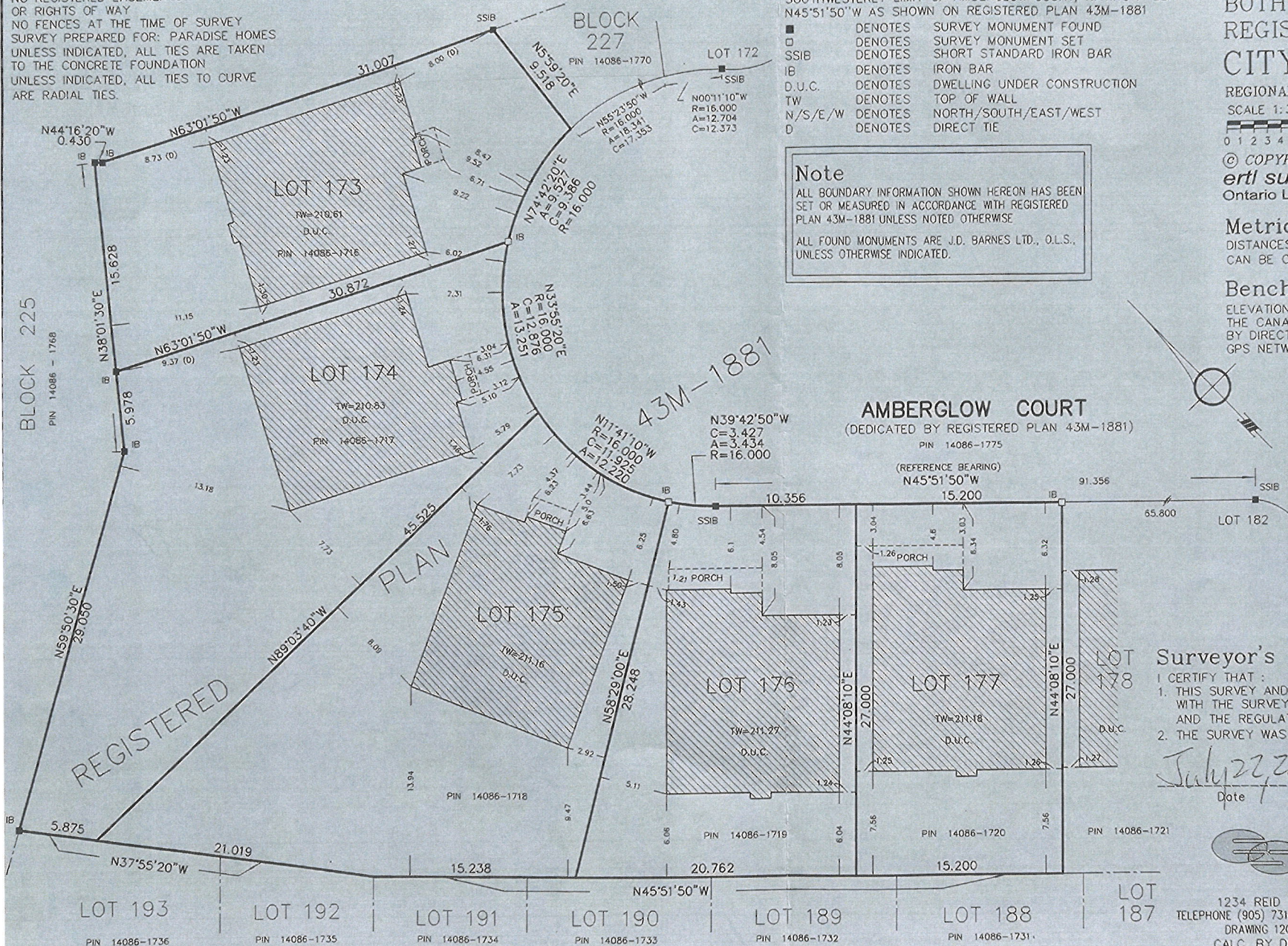
**NOTE: If the owner is a firm or corporation, the corporate seal shall be affixed hereto.**

**NO DISCUSSION SHALL TAKE PLACE BETWEEN THE COMMITTEE MEMBERS AND THE APPLICANT DURING THE SITE INSPECTION**



## Part 2

NO REGISTERED EASEMENTS  
OR RIGHTS OF WAY  
NO FENCES AT THE TIME OF SURVEY  
SURVEY PREPARED FOR: PARADISE HOMES  
UNLESS INDICATED, ALL TIES ARE TAKEN  
TO THE CONCRETE FOUNDATION  
UNLESS INDICATED, ALL TIES TO CURVE  
ARE RADIAL TIES.



## Notes

BEARINGS ARE GRID AND ARE REFERRED TO THE  
SOUTHWESTERLY LIMIT OF AMBERGLOW COURT, HAVING A BEARING  
N45°51'50" W AS SHOWN ON REGISTERED PLAN 43M-1881

■ DENOTES SURVEY MONUMENT FOUND  
□ DENOTES SURVEY MONUMENT SET  
SSIB DENOTES SHORT STANDARD IRON BAR  
IB DENOTES IRON BAR  
D.U.C. DENOTES DWELLING UNDER CONSTRUCTION  
TW DENOTES TOP OF WALL  
N/S/E/W DENOTES NORTH/SOUTH/EAST/WEST  
D DENOTES DIRECT TIE

## Note

ALL BOUNDARY INFORMATION SHOWN HEREON HAS BEEN  
SET OR MEASURED IN ACCORDANCE WITH REGISTERED  
PLAN 43M-1881 UNLESS NOTED OTHERWISE

ALL FOUND MONUMENTS ARE J.D. BARNES LTD., O.L.S.,  
UNLESS OTHERWISE INDICATED.

SURVEYOR'S REAL PROPERTY REPORT-PART 1  
PLAN OF LOTS 173 TO 177  
BOTH INCLUSIVE  
REGISTERED PLAN 43M-1881  
CITY OF BRAMPTON

REGIONAL MUNICIPALITY OF PEEL

SCALE 1:300



© COPYRIGHT

ertl surveyors 2013  
Ontario Land Surveyors

## Metric

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND  
CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

## Benchmark

ELEVATIONS ARE GEODETIC AND REFERRED TO  
THE CANADIAN GEODETIC VERTICAL DATUM (CGVD28)  
BY DIRECT MEASUREMENT TO THE CAN-NET  
GPS NETWORK

ASSOCIATION OF ONTARIO  
LAND SURVEYORS  
PLAN SUBMISSION FORM  
1879211



THIS PLAN IS NOT VALID  
UNLESS IT IS AN EMBOSSED  
ORIGINAL COPY  
ISSUED BY THE SURVEYOR.  
In accordance with  
Regulation 1026, Section 29(3).

## Surveyor's Certificate

I CERTIFY THAT:  
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE  
WITH THE SURVEYS ACT, THE SURVEYORS ACT  
AND THE REGULATIONS MADE UNDER THEM.  
2. THE SURVEY WAS COMPLETED ON THE 22nd DAY OF MAY, 2013

July 22, 2013  
Date

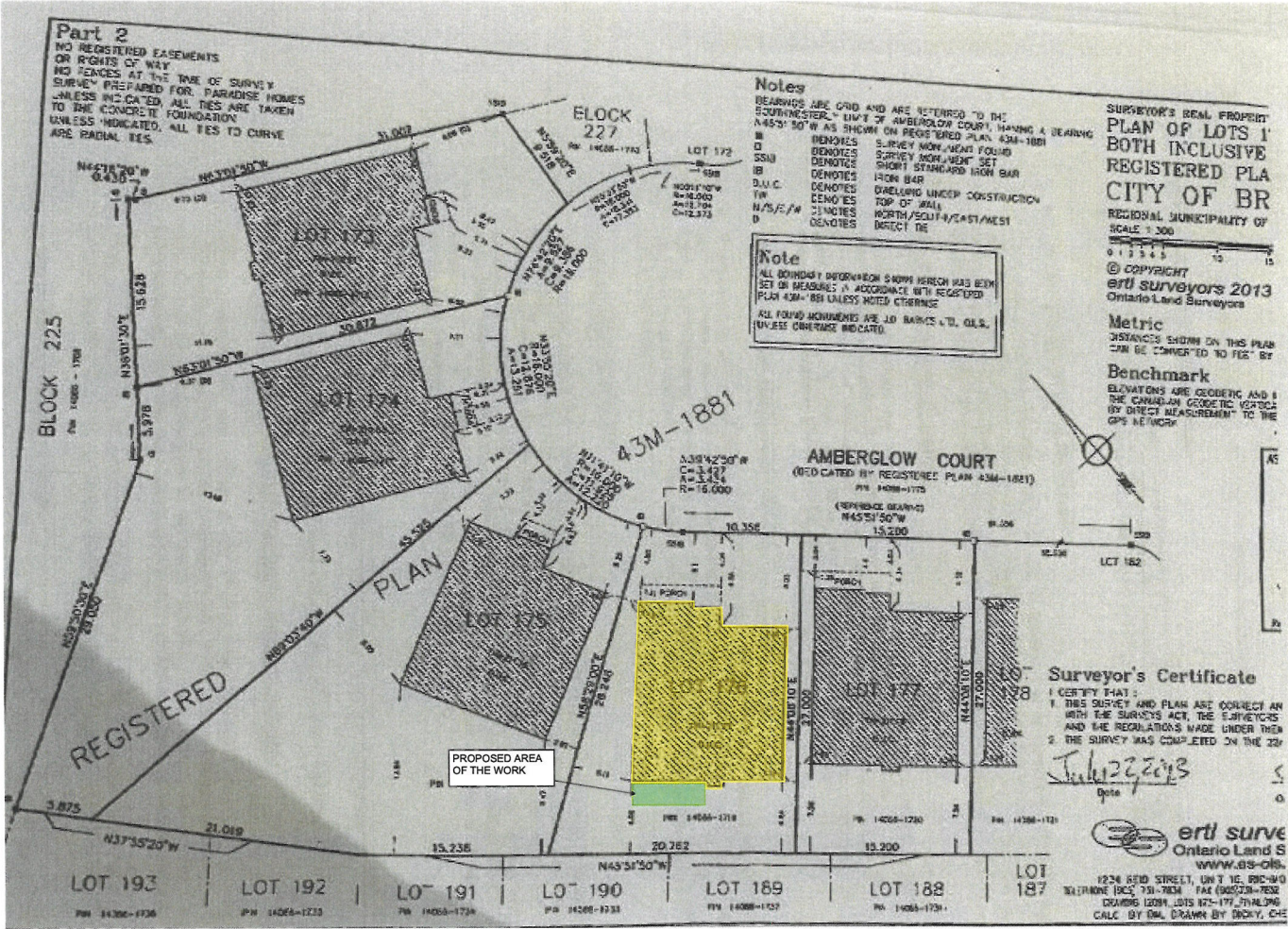
Jansky T.C. Lou  
Ontario Land Surveyor



ertl surveyors  
Ontario Land Surveyors  
www.es-ols.com

1234 REID STREET, UNIT 10, RICHMOND HILL L4B 1C1  
TELEPHONE (905) 731-7834 FAX (905) 731-7852 EMAIL info@es-ols.com  
DRAWING 12094\_LOTS 173-177\_FINAL.DWG PROJECT: 12094  
CALC. BY DM, DRAWN BY DICKY, CHECKED BY J.L.





16 Amberglow Ct  
Brampton, Ontario

Drawing Title

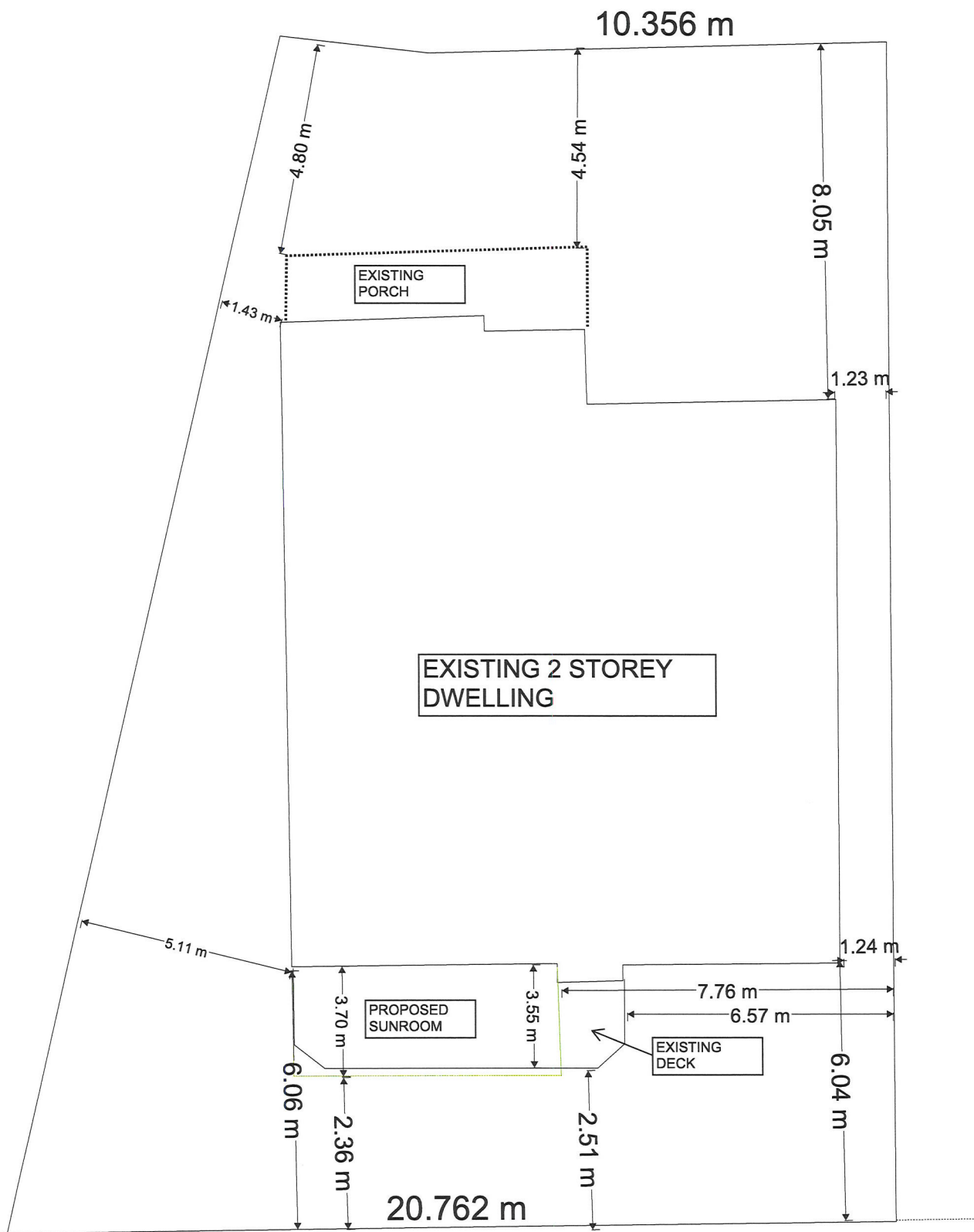
Drawn by  
BONNA ABASI

Scale  
1 : 100

Date  
MAY 2024







16 Amberglow Ct  
Brampton, Ontario

Drawing Title site plan

Drawn by  
DONIA ABASI

Scale  
1 : 100

Date  
MAY 2024

A-1



CONSTRUCTION SPECIFICATIONS

- 1

STUCCO FINISH WALL

ACRYLIC STUCCO (DUROCK OR APPROVED EQUAL) ON 2" THICK STYROFOAM ON EXTERIOR TYPE SHEATHING 2"x4" WOOD STUDS @ 16" O.C. R 22 BATT INSUL IN CONTINUOUS CONTACT W/ EXTERIOR SHEATHING CONTINUOUS AIR / VAPOUR BARRIER 1/2" INTERIOR DRYWALL FINISH DOUBLE PLATE @ TOP SOLE PLATE @ BOTTOM
- 2

BRICK (STONE) VENEER WALL:

4"FACE BRICK OR STONE, 1" AIR SPACE 1"x7"x22GA MTL TIES AT 16" O/C HORIZ & 24" O/C VERT. 15# BUILDING PAPER 1/2" EXTERIOR GRADE PLYWOOD 2"x4" WD STUDS @ 16" O/C W/ R22 BATT INSULATION 6 MIL POLY VAPOUR BARRIER 1/2" INTERIOR DRYWALL FINISH
- 3

PROVIDE WEEP HOLES AT 24"/O BOTTOM COURSE ONLY & OVER OPENINGS. PROVIDE BASE FLASHING 6 MIN. UP BEHIND BUILDING PAPER
- 4

FOUNDATION WALL:(REFER TO O.B.C. 9.15.3. & 9.15.4.)

BITUMINOUS DAMPPROOFING ON 10" THICK POURED CONCRETE REINFORCED FDN. WALLS, AS SHOWN. PROVIDE PARGING COVERED OVER 28"x 8" POURED CONC. FOOTING TO BEAR ON UNDISTURBED SOIL. PROVIDE DRAINAGE LAYER - MIN. 3/4" MINERAL FIBRE INSULATION W/ A DENSITY OF NOT LESS THAN 3.6 LB./FT. OR - MIN. 4" OF FREE DRAINING GRANULAR MATERIAL OR - A B.M.E.C. APPROVED DRAINAGE LAYER MATERIAL
- 5

SILL PLATE

2"x6" SILL PLATE FASTENED TO FOUNDATION WALL WITH MIN. 1/2" DIA. ANCHOR BOLTS EMBEDDED MIN. 4" IN CONCRETE @ 7"-10" O/C. MAX. & PROVIDE CAULKING OR GASKET BETWEEN PLATE & FOUNDATION WALL
- 6

FLOOR INSULATION

CONTINUOUS HEADER JOIST WITH R31 BATT INSULATION, EXTEND VAPOUR / AIR BARRIER & SEAL TO JOIST AND SUBFLOOR
- 7

BASEMENT INSULATION

2"x4" STUDS @16"O/C C.W. R20d1 BATT INSULATION, 6MIL POLY VAPOUR BARRIER,1/2" DRYWALL.

- 8

SLAB ON GROUND

3" POURED CONCRETE SLAB WITH 3/4" C/TOPPING (3600 PSI CONC. STRENGTH) 4" CRUSHED STONE BELOW (OBC 9.16.2.1) EXTENDED TO FOOTING AROUND THE PERIMETER OF C/SLAB BOND BREAKING MATERIAL SHALL BE PLACED BETWEEN SLAB AND F/WALL
- 9

DRAINAGE

4" DIA. WEEPING TILE W/ 6" CRUSHED STONE COVER
- 10

ROOF CONSTRUCTION

20 YEAR ASPHALT SHINGLES ON MIN. 5/8" EXTERIOR PLYWOOD SHEATHING ON APPROVED ROOF TRUSSES OR CONVENTIONAL FRAMING (SEE PLANS) USE 'H' CLIPS IF 24" O.C. SPACING
- 11

OVERHANG CONSTRUCTION

PREFINISHED ALUMINUM FASCIA, EAVESTROUGH & RAIN WATER LEADERS TO MATCH EXISTING FINISHES. PROVIDE DRIP EDGE AT FASCIA & VENTED SOFFIT EXTEND DOWNSPOUTS TO GRADE LEVEL
- 12

ROOF VENTILATION

1:150 OF THE INSULATED CEILING AREA UNIFORMLY DISTRIBUTED.
- 13

EAVES PROTECTION

EAVES PROTECTION MEMBRANE TO EXTEND FROM THE EDGE OF THE ROOF, 36" UP THE SLOPE BUT NOT LESS THAN 12" BEYOND THE INTERIOR FACE OF THE EXTERIOR WALL
- 14

CEILING CONSTRUCTION

5/8" INTERIOR DRYWALL FINISH CONTINUOUS AIR / VAPOUR BARRIER W/ MINIMUM R 60 BATT INSULATION
- 15

WALL INSULATION

CARRY MIN. R22 INSULATION TO COVER THE INTERIOR FACE OF THE EXTERIOR WALL
- 16

FLOOR CONSTRUCTION

3/4" T&G PLYWOOD SUBFLOOR FLOOR JOISTS @ 16" O/C. FLOOR JOISTS BRIDGED W/ CONTINUOUS 1"x3" STRAPPING OR 2 ROWS OF 2"x2" CROSS BRIDGING OR SOLID BLOCKING
- 17

INTERIOR STUD PARTITION

1/2" DRYWALL FINISH BOTH SIDES OF 2"x4" OR 2"x6" WOOD STUDS @ 16" O/C 2 TOP PLATES & 1 BOTTOM PLATE PROVIDE SOUND ATTENUATION INSULATION IN BATHROOM WALLS & WHERE INDICATED ON PLAN

- 18

MECHANICAL VENTILATION

PROVIDE MIN. 1 AIR CHANGE PER HOUR IN ROOMS SPECIFIED TO BE MECHANICALLY VENTED 80 CFM FOR BATH PRIMARY VENTS
- 19

STAIRS INTERIOR/EXTERIOR

MAXIMUM RISE = 7 7/8" MINIMUM RISE = 4 7/8" MINIMUM RUN = 8 1/4" MAXIMUM RUN = 14" MINIMUM TREAD = 9 1/4" MAXIMUM TREAD = 14" MAXIMUM NOSING = 1" MINIMUM WIDTH = 2'-10" MINIMUM HEADROOM = 6'-5"
- 20

GUARDS

INTERIOR LANDINGS = 2'-11" EXTERIOR BALCONY = 3'-6" INTERIOR STAIRS = 2'-11" EXTERIOR STAIRS = 2'-11" MAX. BETWEEN PICKETS = 4" GUARD HEIGHT IF DECK TO GRADE IS: GREATER THAN 5'-11" = 3'-6" 5'-11" OR LESS = 2'-11" NO MEMBER OR ATTACHMENT BETWEEN 4" & 2'-11" HIGH SHALL FACILITATE CLIMBING
- 21

ATTIC ACCESS

PROVIDE ATTIC ACCESS MIN. 20"x 28" W/ INSULATION & WEATHER STRIPPING
- 22

INSTALL A CARBON MONOXIDE DETECTOR CONFORMING TO CAN/CGA-6.19 OR UL 2034
- 23

PROVIDE SOLID BEARING ON MASONRY FOR BEAMS AND /OR COLUMNS
- 24

GARAGE CEILING:

3/4" T&G PLYWOOD SUBFLOOR 6 MIL POLY. VAPOUR BARRIER 2"x10" WD JOISTS (SEE PLAN FOR SPACING) W/R31 BATT INSUL & 5/8" GYPSUM BOARD (SMOKE PROOF JOINTS)
- 25

GARAGE SLAB:

4" CONC. SLAB W/6x6 W.W.M. ON 6" CRUSHED STONE (COMPACTED) CONC. STRENGTH 25MPa @ AT 28 DAYS W/5-8% AIR ENTRAINMENT
- 26

GRADE

SLOPE GRADE AWAY FROM BUILDING FACE & PROVIDE SEMI-SOLID BLOCK COURSE AT OR BELOW GRADE LEVEL

- STRUCTURAL NOTES
1. The floor LL = 40 psf (1.9 kPa) , Roof LL = 23.3 psf ( 1.12 kPa) + snow accumulation

2. The floor and roof DL = 15.00 psf (0.71 kPa)

3. All footings must be carried down to the undisturbed soil capable of sustaining bearing pressure of 2000 PSF minimum (to be confirmed on the site by a Soil Engineer)

4. Concrete construction shall adhere to CAN/CSA-A23.1 requirements.

5. Concrete for the footings and the slab-on-grade shall have compressive strength of 30MPa at 28 days

6. Reinforcing steel to be CSA G 30.18-M1992 deformed bars - Grade 400

7. Masonry construction to conform to CSA A371-94.

8. Use min. 20MPa block units and Type S mortar.

9. Grout solid all the voids in existing masonry and at new reinforced concrete blocks

10. All new wood shall be S-P-F No.2 Grade minimum.

11. All wood connectors to be by PARALLAM PSI.

12. Erection of Structural Composite Lumber, MICROLAM LVL or 2.0E ES must conform to Suppliers specifications

13. All new structural steel to be G40.21-M 300W & 350W for HSS members

14. Fabrication and erection steel shall be carried out in accordance with CAN/CSA-S16.1-94.

15. Provide solid bearing on existing concrete or masonry for steel beams and columns

16. Whenever it becomes necessary to cut or interfere in any manner with existing equipment or services, the work must be co-ordinated with the Owner

17. All new work must conform to the Ontario Building Code Requirement.

GENERAL STRUCTURAL NOTES

1. ALL CONSTRUCTION TO COMPLY WITH ONTARIO BUILDING CODE 2012 EDITION. DESIGN OF O.B.C. PART 9 MEMBERS IS IN ACCORDANCE WITH THE FOLLOWING LOADING.

2ND FLOOR LOADING:  
LL - 40.0 PSF  
DL - 15.0- PSF

GROUND FLOOR LOADING  
LL - 40.0 PSF  
DL - 15.0 PSF

MIN. LL DEFLECTION = L/360
2. DRAWINGS SHALL NOT BE SCALED.

3. FOOTINGS SHALL BE POURED ON UNDISTURBED SOIL. EXTERNAL FOOTINGS SHALL BE ERCTED 4'-0" MINIMUM BELOW GRADE .

DESIGN BEARING CAPACITY - 150 KPa ( 3000 PSF)  
EXISTING BEARING CAPACITY - NOT KNOWN.

THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE DESIGN BEARING CAPACITY AND REPORT TO THE ENGINEER OF ANY DISCREPANCIES.
4. CONCRETE SHALL BE F'c = 25 MPa. CONSTRUCTION JOINTS SHALL BE LEFT ROUGH.
5. ALL CONCRETE CONSTRUCTION, WORKMANSHIP AND MATERIALS NOT NOTED IN PART 9 OF THE O.B.C. SHALL BE IN ACCORDANCE WITH CAN/CSA-A23.1 ALL REINFORCEMENT SHALL BE DEFORMED BARS C.S.A. G30.12 WITH Fy=400 MPa. EXTEND CONTINUOUS BARS INTO INTERSECTING MEMBERS FOR A DISTANCE OF 36 BAR DIAMETERS AND BENT IF REQUIRED. PROVIDE CONCRETE COVER FOR REINFORCEMENT AS REQUIRED BY O.B.C. AND IN ACCORDANCE WITH CAN/CSA-A23.
6. ALL STRUCTURAL STEEL SHALL BE C.S.A. G40.21 GRADE 44W. HSS SECTIONS SHALL BE G40.21-50W FABRICATION, CONNECTION DESIGN AND WELDING SHALL CONFORM TO CAN/CSA-S16.1/94 AND W59-M1989.
7. MINIMUM BEARING OF STRUCTURAL MEMBERS ON MASONRY SHALL BE AS FOLLOWS:  
  
CONCRETE AND STEEL BEAMS 8"  
CONCRETE SLABS 4"  
O.W.S.J. 4"  
WOOD BEAMS AND JOISTS 4"

BEARING PLATES SHALL BEAR ON 3 COURSES OF 100% SOLID MASONRY WHICH SHALL EXTEND A MINIMUM OF 8" FROM EACH SIDE OF THE PLATE.

ALL BEAMS SHALL BE ONLY TOP BEARING ON STEEL COLUMNS.
8. MASONRY:  
  
MORTAR SHALL BE TYPE "S" OR BETTER WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI. AT 28 DAYS. (TYP. U/N NOTED ON SECTIONS AND DETAILS)

CONCRETE BLOCKS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OVER NET AREA IN ACCORDANCE WITH TABLE 9.20.2.7. AS PER PART 9 OF O.B.C. (TYP. U/N NOTED ON SECTIONS AND DETAILS)
9. REINFORCED MASONRY:  
  
MORTAR SHALL BE TYPE "S" OR BETTER WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS CONCRETE BLOCKS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2950 PSI. OVER NET AREA OF BLOCK  
FILL CELLS CONTAINING REINFORCEMENT SOLID WITH GROUT. GROUT SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS. LAP REINFORCING BARS 48 BAR DIAMETERS MINIMUM UNLESS OTHERWISE INDICATED ON PLANS .
10. ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE GENERAL CONTRACTOR AT THE SITE. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THIS OFFICE OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.
11. FABRICATED ITEMS WHICH FABRICATION AND DESIGN IS NOT PRESCRIBED IN PART 9 OF THE O.B.C. SHALL BE PREENGINEERED AND DESIGNED IN ACCORDANCE WITH PART 4 OF THE O.B.C. SHOP DETAILS, DRAWINGS AND DIAGRAMS OF THESE ITEMS SHALL BE SUBMITTED TO THIS OFFICE FOR REVIEW PRIOR TO FABRICATION. THESE DRAWINGS SHALL BE SEALED BY A P. ENG. OF ONTARIO RESPONSIBLE FOR THE DESIGN OF THESE ITEMS AND CLEARLY INDICATE THE METHOD OF CONNECTION OF THESE ITEMS TO THE STRUCTURE. THESE ITEMS SHALL INCLUDE STRUCTURAL STEEL, REINFORCING BARLISTS, CONNECTIONS BETWEEN WOOD MEMBERS AS PER HANGER SCHEDULE AND PRECAST ELEMENTS.
11. ALL FRAMING LUMBER SHALL BE SPF#2 UNLESS NOTED.

12. PLYWOOD SHALL BE 5/8" T&G UNLESS NOTED. PROVIDE EXTERIOR GRADE PLYWOOD WHERE REQUIRED BY O.B.C.
13. ALL THE JOISTS AND BEAMS LOCATED AT THE SAME ELEVATION SHALL BE CONNECTED WITH JOIST HANGERS. ALL MEMBER CONNECTIONS SHALL MEET THE MINIMUM REQUIREMENTS AS OUTLINED IN PART 9 OF THE ONTARIO BUILDING CODE. UNLESS STRONGER CONNECTIONS ARE SPECIFIED.
14. ALL WOOD POSTS SHALL BE AS PER WOOD POST SCHEDULE.  
PROVIDE POST P1 AT ALL WOOD Lintel BEARINGSS UNLESS NOTED OTHERWISE ON PLANS.  
ALL WOOD POSTS SHALL BE CONT'S FROM FOOTINGS OR FOUNDATION WALLS TO U/S SUPPORTED BEAMS OR TRUSSES . PROVIDE SOLID BLOCKING AT DISCONTINUITIES SUCH AS FLOOR SPACES. (TYP. AT ALL WOOD POST LOCATIONS)

PROVIDE 100 % SOLID BEARING U/S ALL POSTS AT BEARING. POSTS SHALL BEAR ON MINIMUM OF 3 COURSES OF SOLID MASONRY WHICH SHALL EXTEND A MINIMUM OF 8" FROM EACH SIDE OF THE PLATE OR SOLID CONCRETE.
15. HANGER SIZES SHALL BE AS PER HANGER SCHEDULE.  
THE HANGERS NOTED ABOVE ARE FOR INDICATION OF LVL PLIES AND CONNECTION SHEAR FORCE CAPACITY ONLY. THE ACTUAL SHAPE OR ANGLE OF CONNECTION BETWEEN MEMBERS SHALL BE SURVEYED AT THE SITE BY THE HANGER DESIGNER.
16. ALL MICRO-LAM BEAMS AND "I" TYPE JOISTS SHALL BE BY TRUS JOIST MACMILLAN OR EQUIVALENT. THE INSTALLATION OF THE MICRO-LAM BEAMS AND "I" JOISTS SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION GUIDELINES AND RECOMMENDATIONS.
17. THE LOAD BEARING STUD WALLS SHALL BE 2 X 6 @ 16" O/C SPF #2 LUMBER, TYPICAL UNLESS NOTED. PROVIDE BRIDGING OR BLOCKING AT THE STUD WALLS TO GIVE 8'-0" MAXIMUM UNBRACED LENGTH.
18. THE SPACING AND SIZES OF THE ROOF AND THE FLOOR JOISTS SHALL BE NOTED ON THE PLANS. PROVIDE FULL 2" SOLID BEARING AT THE SUPPORTS.
19. THE DESIGN OF THE STRUCTURAL COMPOSITE LUMBER MEMBERS SHALL CONFORM TO THE CSA STANDARD 086.1-94.  
  
THE INSTALLATION OF ALL THE STRUCTURAL COMPOSITE LUMBER BEAMS SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION GUIDE-LINES AND RECOMMENDATIONS
20. "I" TYPE JOISTS SHALL BE TJI JOISTS AS NOTED IN THE TRUS JOIST CANADA LTD. DESIGN CATALOGUE OR EQUIVALENT. SEE PLANS FOR THE LOCATION AND THE SPACING OF THE "I" JOISTS. THE INSTALLATION OF ALL "I" TYPE JOISTS SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION GUIDE-LINES AND RECOMMENDATIONS.
21. THE DESIGN AND ERECTION OF THE WOOD TRUSSES SHALL CONFORM TO THE CANADIAN STANDARD CSA-086.1-94 AND THE ONTARIO BUILDING CODE.

22. THE TRUSS FABRICATOR SHALL SUBMIT SHOP DRAWINGS AND ERECTION DIAGRAMS TO THIS OFFICE FOR APPROVAL. THE DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER OF ONTARIO.
23. ALL TYPICAL AND NON-TYPICAL TRUSS BEARINGS SHALL BE CLEARLY INDICATED ON THE SHOP DRAWINGS. ALL REACTIONS OF THE TRUSSES AND THE TRUSS ORDERS TO BE INDICATED ON THE SHOP DRAWINGS. LATERAL FORCES ON EXTERIOR BEARING WALLS ARE NOT ALLOWED.
24. THE ERECTION DIAGRAMS SHALL SPECIFY TEMPORARY AND PERMANENT BRACINGS, PROCEDURES AND METHODS REQUIRED BY THE FRAMING CONTRACTOR TO ERECT THE TRUSSES SUCCESSFULLY.
25. CP1 SHALL BE 14" @ R.C. PIER TO U/S OF WOOD POSTS OR STEEL COLUMNS IN GARAGE R.W. 6X15M VERTICALS + 10M RES @ 10" O/C. PROVIDE GALVANIZED COLUMN BASE CBX6X BY MGA CONNECTORS AT WOOD POST ENSURE THAT U/S OF POST IS 6" ABOVE FLOOR EL.
26. ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE GENERAL CONTRACTOR AT THE SITE PRIOR TO CONSTRUCTION. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE ARCHITECT AND THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE SITE CONDITIONS AND THE ASSUMED DESIGN CONDITIONS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. IN ADDITION THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION, METHOD OF ERECTION AND INSTALLATION PROCEDURES OF THE STRUCTURAL MEMBERS INCLUDING THE ERECTION OF STEEL BEAMS SUPPORTING EXISTING JOISTS. THE GENERAL CONTRACTOR SHALL SUBMIT SHORING DETAILS AND DRAWINGS STAMPED BY P. ENG. OF ONTARIO FOR REVIEW INDICATING THE SHORING PROCEDURE AND METHODS HE WILL EMPLOY TO SUPPORT EXISTING STRUCTURE. THE GENERAL CONTRACTOR SHALL EXERCISE EXTREME CAUTION AND CARE DURING THE DEMOLITION PROCESS OF THE EXISTING STRUCTURE AND MASONRY WALLS AND BE SOLELY RESPONSIBLE FOR THE SUPPORT OF THE EXISTING STRUCTURE DURING THE DEMOLITION. THE GENERAL CONTRACTOR SHALL CALL THE STRUCTURAL ENGINEER FOR AN INSPECTION PRIOR TO CUTTING EXISTING MEMBERS AND REMOVING EXISTING

16 Amberglow Ct  
Brampton, Ontario

Drawing Title  
GENERAL NOTE

Drawn by  
L. ABBASI

Scale  
1'-0" = 1/8"

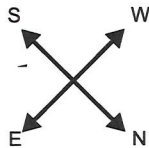
Date  
MAY 2024

A-2





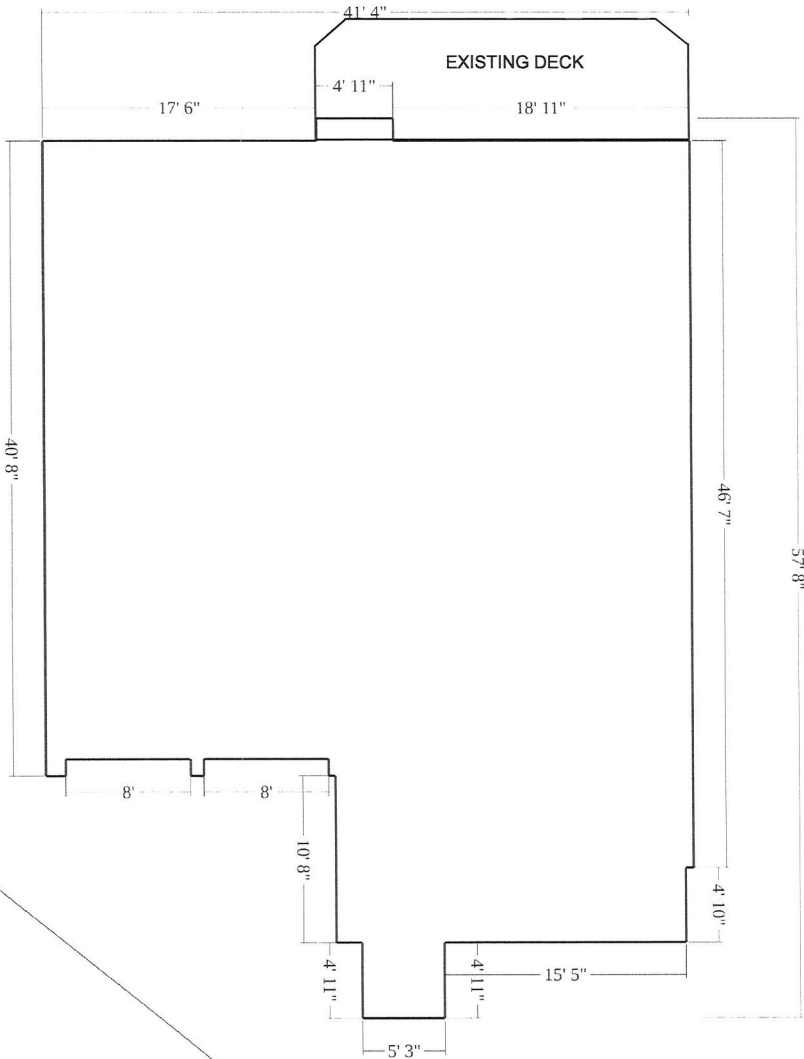
EXISTING GROUND FLOOR PLAN



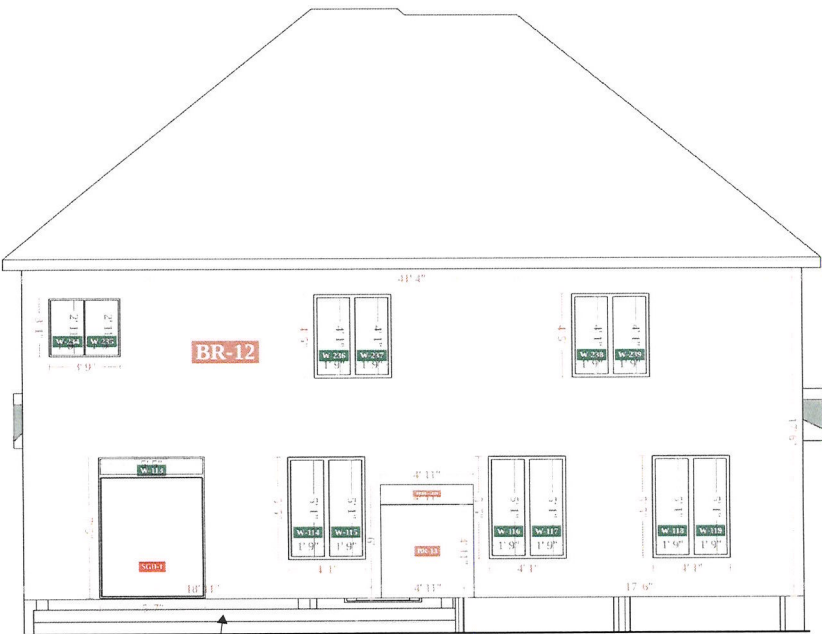
- NOTES
- 1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
  - 2. DO NOT SCALE DRAWINGS.
  - 3. REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE DESIGNER OR DESIGN ENGINEER AS APPLICABLE.
  - 4. USE ONLY LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION".
  - 5. THE DRAWINGS ARE NOT FOR CONSTRUCTION DRAWINGS. THE DRAWINGS HAVE BEEN ISSUED FOR PERMIT ONLY.

Number of Stories: > 1  
Footprint Perimeter: 202' 3"  
Footprint Area: 1939 ft<sup>2</sup>

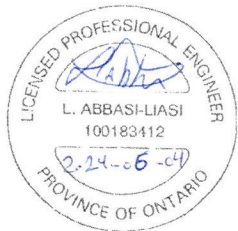
BACK



FRONT



EXISTING DECK



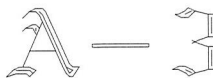
16 Amberglow Ct  
Brampton, Ontario

Drawing Title  
EXISTING GROUND FLOOR PLAN

Drawn by  
BONHA ABBASI

Scale  
1'-0" = 1/8"

Date  
MAY 2024

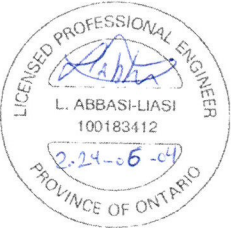
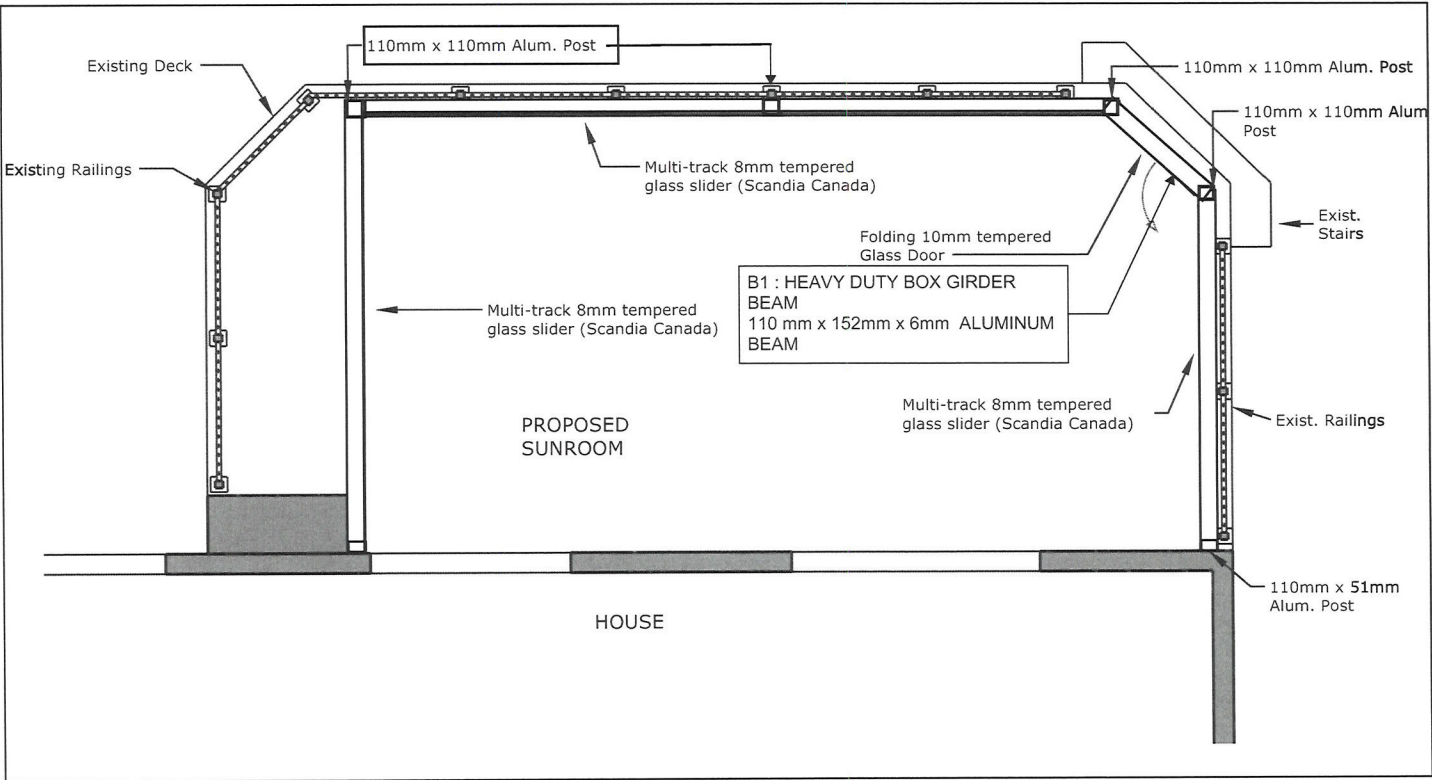
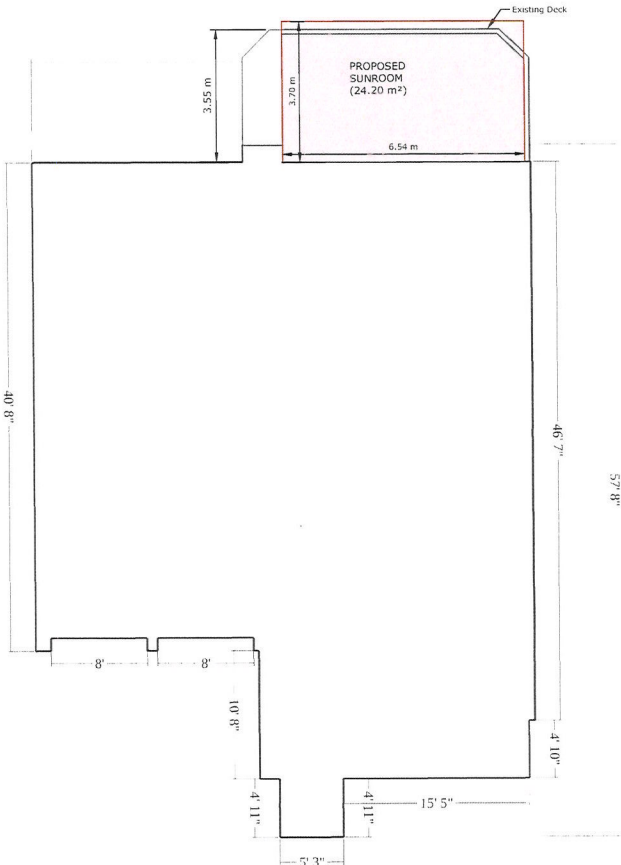




PROPOSED SUNROOM FLOOR PLAN

- NOTES
- 1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
  - 2. DO NOT SCALE DRAWINGS.
  - 3. REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE DESIGNER OR DESIGN ENGINEER AS APPLICABLE.
  - 4. USE ONLY LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION".
  - 5. THE DRAWINGS ARE NOT FOR CONSTRUCTION DRAWINGS. THE DRAWINGS HAVE BEEN ISSUED FOR PERMIT ONLY.

EXISTING GROUND FLOOR AREA: 1,939 SQF  
PROPOSED SUNROOM FLOOR AREA: 260.48 SQF



16 Amberglow Ct  
Brampton, Ontario

Drawing Title PROPOSED FLOOR PLAN

Drawn by **BONNA ABBASI**

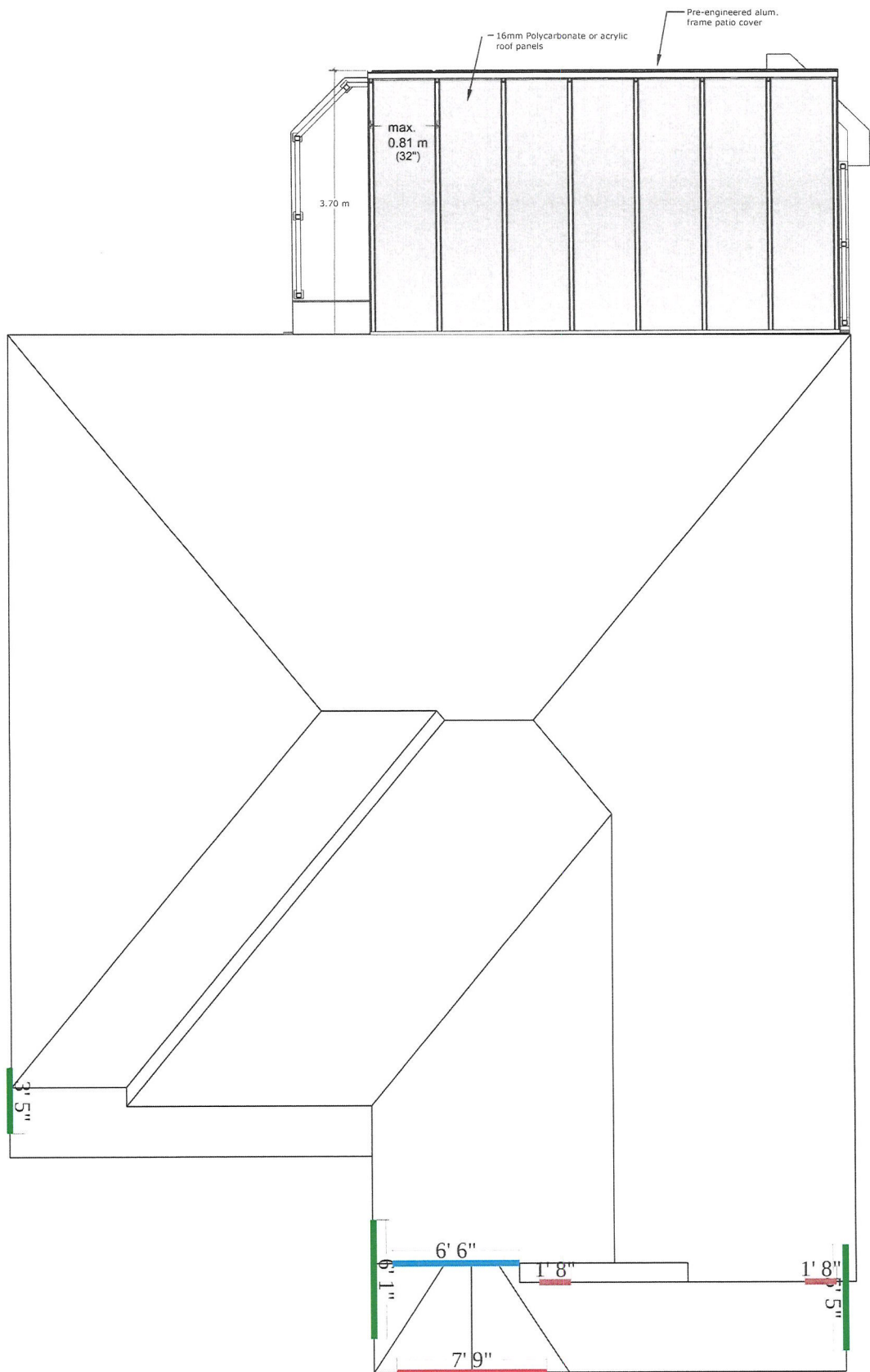
Scale 1'-0" = 1/8"

Date MAY 2024

A-4

## NOTES

1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
2. DO NOT SCALE DRAWINGS.
3. REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE DESIGNER OR DESIGN ENGINEER AS APPLICABLE.
4. USE ONLY LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION".
5. THE DRAWINGS ARE NOT FOR CONSTRUCTION DRAWINGS. THE DRAWINGS HAVE BEEN ISSUED FOR PERMIT ONLY.



16 Amberglow Ct  
Brampton, Ontario

Drawing Title **PROPOSED ROOF PLAN**

Drawn by **BONJA ABASI**

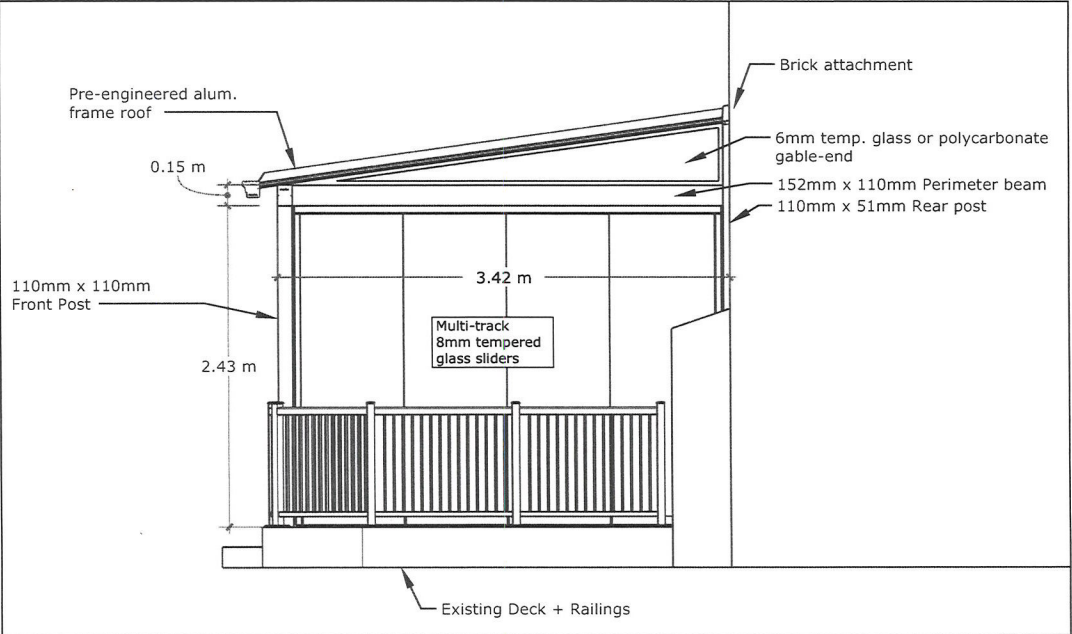
Scale  
1'-0" = 1/8"

Date MAY 2024

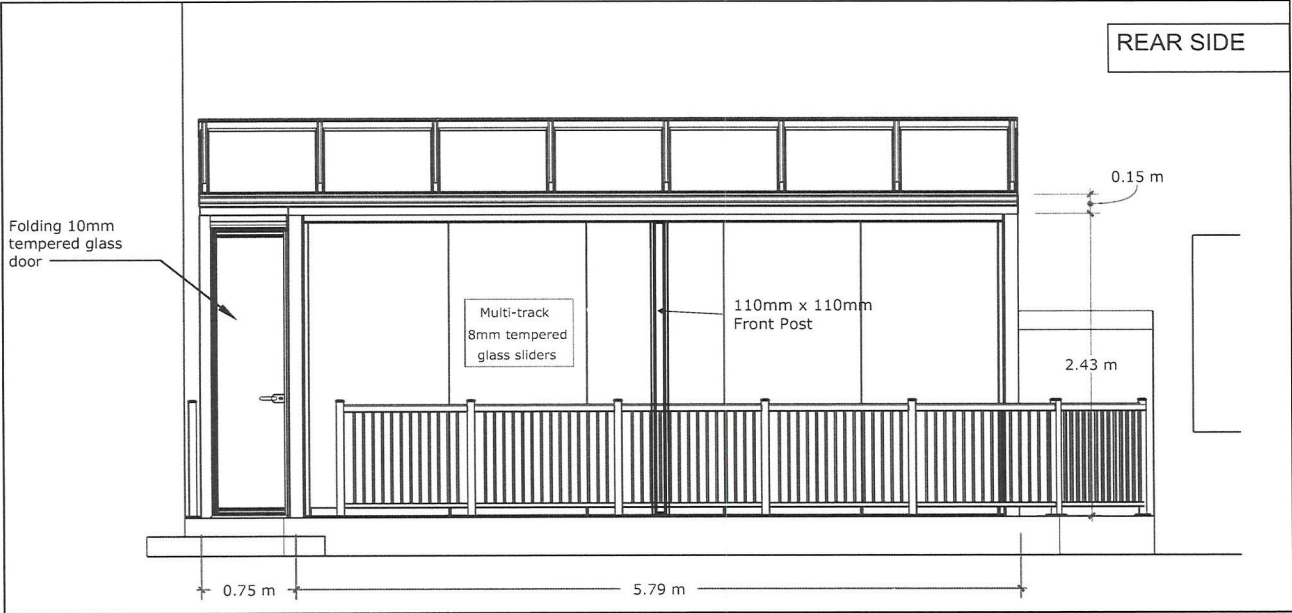


PROPOSED SUNROOM ELEVATION

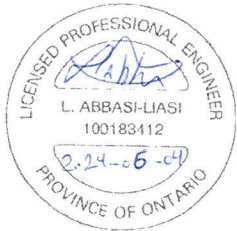
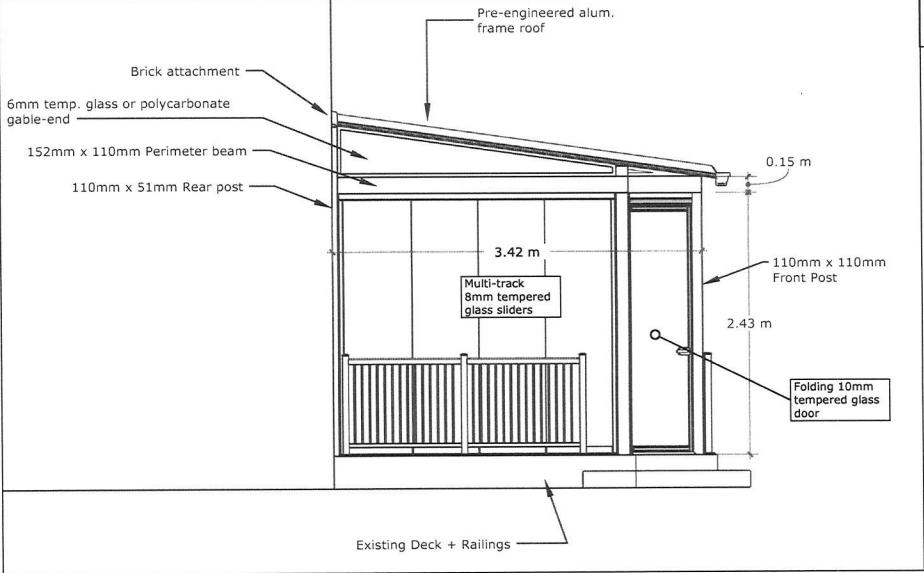
RIGHT SIDE



REAR SIDE



LEFT SIDE



16 Amberglow Ct  
Brampton, Ontario

Drawing Title PROPOSED COVER PATIO ELEVATIONS

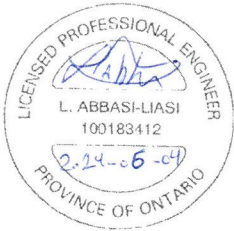
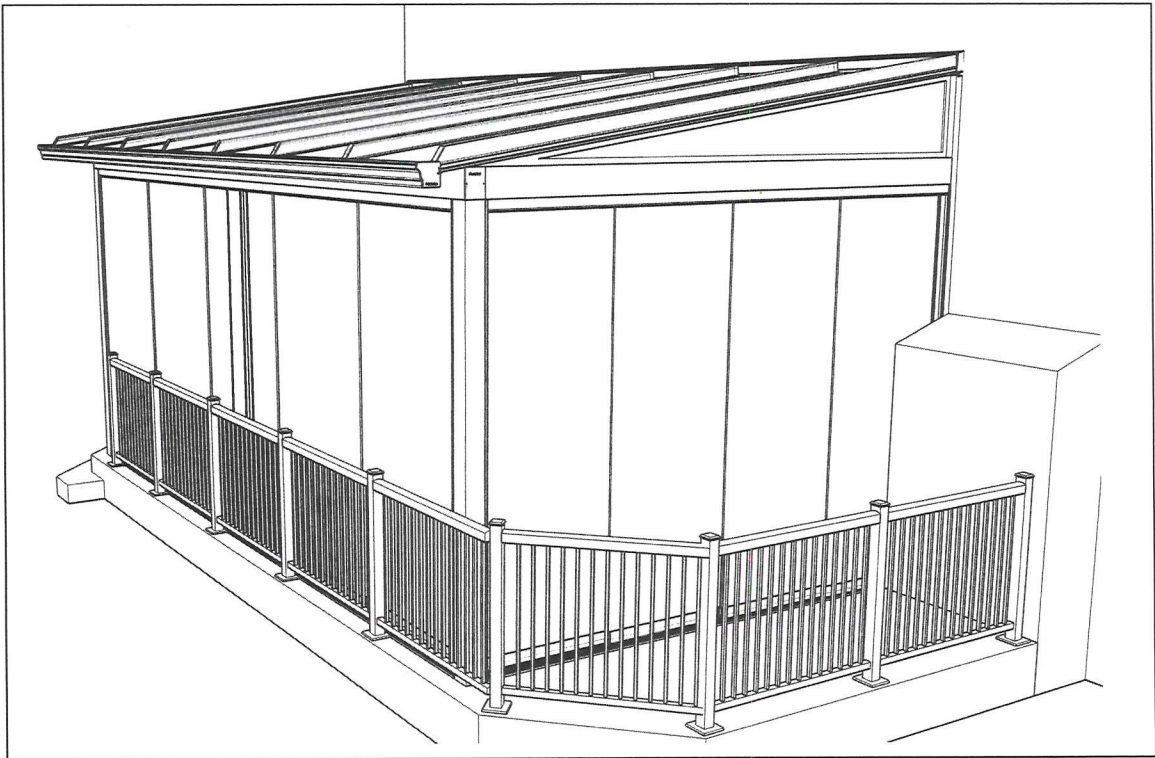
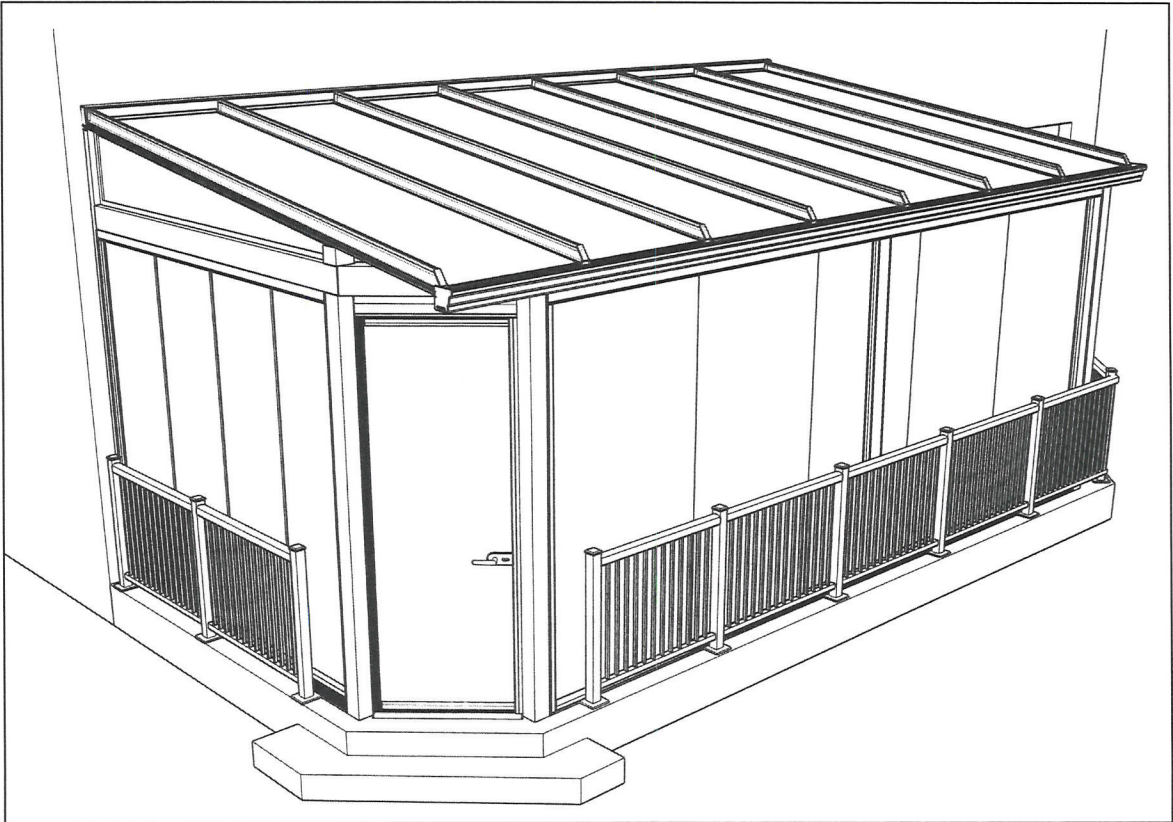
Drawn by **BONJA ABBASI**

Scale 1'-0" = 1/8"

Date MAY 2024

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PROPOSED SUNROOM 3-D



16 Amberglow Ct  
Brampton, Ontario

Drawing Title PROPOSED COVER PATIO 3-D

Drawn by **BONHA ABBASI**

Scale  
1'-0" = 1/8"

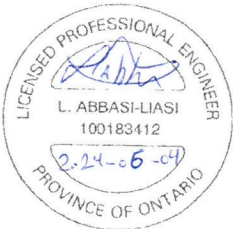
Date  
MAY 2024

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Table 2  
Climatic Design Data

| Location                               | Elevation,<br>m | Design Temperature |           |            |            | Degree<br>Days<br>Below<br>18°C | 15 Min<br>Rainfall,<br>mm | One Day<br>Rainfall,<br>1/50, mm | Annual<br>Rainfall,<br>mm | Annual<br>Total<br>Precipitation,<br>mm | Driving Rain<br>Wind<br>Pressures,<br>Pa, 1/5 | Snow Load,<br>kPa, 1/50 |                | Hourly Wind<br>Pressures, kPa |      |
|----------------------------------------|-----------------|--------------------|-----------|------------|------------|---------------------------------|---------------------------|----------------------------------|---------------------------|-----------------------------------------|-----------------------------------------------|-------------------------|----------------|-------------------------------|------|
|                                        |                 | January            |           | July 2.5%  |            |                                 |                           |                                  |                           |                                         |                                               | S <sub>e</sub>          | S <sub>r</sub> | 1/10                          | 1/50 |
|                                        |                 | 2.5%,<br>°C        | 1%,<br>°C | Dry,<br>°C | Wet,<br>°C |                                 |                           |                                  |                           |                                         |                                               |                         |                |                               |      |
|                                        |                 |                    |           |            |            |                                 |                           |                                  |                           |                                         |                                               |                         |                |                               |      |
| Alise Craig                            | 230             | -17                | -19       | 30         | 23         | 3840                            | 25                        | 103                              | 800                       | 950                                     | 180                                           | 2.2                     | 0.4            | 0.39                          | 0.50 |
| Ajax                                   | 95              | -20                | -22       | 30         | 23         | 3820                            | 23                        | 92                               | 760                       | 825                                     | 160                                           | 1.0                     | 0.4            | 0.37                          | 0.48 |
| Alexandrie                             | 80              | -24                | -26       | 30         | 23         | 4500                            | 25                        | 103                              | 800                       | 975                                     | 160                                           | 2.4                     | 0.4            | 0.31                          | 0.40 |
| Alliston                               | 220             | -23                | -25       | 29         | 23         | 4200                            | 28                        | 113                              | 690                       | 875                                     | 120                                           | 2.0                     | 0.4            | 0.28                          | 0.36 |
| Almonte                                | 120             | -26                | -28       | 30         | 23         | 4620                            | 25                        | 97                               | 730                       | 800                                     | 140                                           | 2.5                     | 0.4            | 0.32                          | 0.41 |
| Armstrong                              | 340             | -37                | -40       | 28         | 21         | 6500                            | 23                        | 97                               | 525                       | 725                                     | 100                                           | 2.7                     | 0.4            | 0.23                          | 0.30 |
| Amprior                                | 85              | -27                | -29       | 30         | 23         | 4680                            | 23                        | 86                               | 630                       | 775                                     | 140                                           | 2.5                     | 0.4            | 0.29                          | 0.37 |
| Atikokan                               | 400             | -33                | -35       | 29         | 22         | 5750                            | 25                        | 103                              | 570                       | 760                                     | 100                                           | 2.4                     | 0.3            | 0.23                          | 0.30 |
| Attawapiskat                           | 10              | -37                | -39       | 28         | 21         | 7100                            | 18                        | 81                               | 450                       | 650                                     | 160                                           | 2.8                     | 0.3            | 0.32                          | 0.41 |
| Aurora                                 | 270             | -21                | -23       | 30         | 23         | 4210                            | 28                        | 108                              | 700                       | 800                                     | 140                                           | 2.0                     | 0.4            | 0.34                          | 0.44 |
| Bancroft                               | 365             | -28                | -31       | 29         | 23         | 4740                            | 25                        | 92                               | 720                       | 900                                     | 100                                           | 3.1                     | 0.4            | 0.25                          | 0.32 |
| Barnes                                 | 245             | -24                | -26       | 29         | 23         | 4380                            | 28                        | 97                               | 700                       | 900                                     | 120                                           | 2.5                     | 0.4            | 0.28                          | 0.36 |
| Barnesfield                            | 100             | -22                | -24       | 28         | 23         | 3990                            | 23                        | 108                              | 780                       | 950                                     | 160                                           | 2.1                     | 0.4            | 0.36                          | 0.47 |
| Beaverton                              | 240             | -24                | -26       | 30         | 23         | 4300                            | 25                        | 108                              | 720                       | 950                                     | 120                                           | 2.2                     | 0.4            | 0.28                          | 0.36 |
| Belleville                             | 90              | -22                | -24       | 29         | 23         | 3910                            | 23                        | 97                               | 760                       | 850                                     | 180                                           | 1.7                     | 0.4            | 0.33                          | 0.43 |
| Belmont                                | 260             | -17                | -19       | 30         | 24         | 3840                            | 25                        | 97                               | 850                       | 950                                     | 180                                           | 1.7                     | 0.4            | 0.36                          | 0.47 |
| Big Trout Lake<br>(Kitchenuhmaykoosib) | 215             | -38                | -40       | 26         | 20         | 7450                            | 18                        | 92                               | 400                       | 600                                     | 150                                           | 3.2                     | 0.2            | 0.33                          | 0.42 |
| CFB Borden                             | 225             | -23                | -25       | 29         | 23         | 4300                            | 28                        | 103                              | 690                       | 875                                     | 120                                           | 2.2                     | 0.4            | 0.28                          | 0.36 |
| Brookbridge                            | 310             | -26                | -28       | 29         | 23         | 4800                            | 25                        | 103                              | 630                       | 1050                                    | 120                                           | 3.1                     | 0.4            | 0.27                          | 0.35 |
| Bredford                               | 240             | -23                | -25       | 30         | 23         | 4280                            | 28                        | 108                              | 680                       | 800                                     | 120                                           | 2.1                     | 0.4            | 0.28                          | 0.36 |
| Brimpton                               | 215             | -19                | -21       | 30         | 23         | 4100                            | 28                        | 119                              | 720                       | 820                                     | 140                                           | 1.3                     | 0.4            | 0.34                          | 0.44 |
| Brentford                              | 205             | -18                | -20       | 30         | 23         | 3900                            | 23                        | 103                              | 780                       | 850                                     | 160                                           | 1.3                     | 0.4            | 0.33                          | 0.42 |
| Brighton                               | 95              | -21                | -23       | 29         | 23         | 4000                            | 23                        | 84                               | 760                       | 850                                     | 160                                           | 1.6                     | 0.4            | 0.37                          | 0.48 |
| Brookville                             | 85              | -23                | -25       | 29         | 23         | 4060                            | 25                        | 103                              | 770                       | 975                                     | 180                                           | 2.2                     | 0.4            | 0.34                          | 0.44 |
| Burk's Falls                           | 305             | -26                | -28       | 29         | 22         | 5020                            | 25                        | 97                               | 810                       | 1010                                    | 120                                           | 2.7                     | 0.4            | 0.27                          | 0.35 |
| Burlington                             | 80              | -17                | -19       | 31         | 23         | 3740                            | 23                        | 103                              | 770                       | 850                                     | 160                                           | 1.1                     | 0.4            | 0.36                          | 0.46 |
| Cambridge                              | 295             | -18                | -20       | 29         | 23         | 4100                            | 25                        | 113                              | 800                       | 890                                     | 160                                           | 1.6                     | 0.4            | 0.28                          | 0.36 |
| Campbellford                           | 150             | -23                | -26       | 30         | 23         | 4280                            | 25                        | 97                               | 730                       | 850                                     | 160                                           | 1.7                     | 0.4            | 0.32                          | 0.41 |
| Cannington                             | 255             | -24                | -26       | 30         | 23         | 4310                            | 25                        | 108                              | 740                       | 950                                     | 120                                           | 2.2                     | 0.4            | 0.28                          | 0.36 |
| Carlton Place                          | 135             | -25                | -27       | 30         | 23         | 4600                            | 25                        | 97                               | 730                       | 850                                     | 160                                           | 2.5                     | 0.4            | 0.32                          | 0.41 |
| Cavan                                  | 200             | -23                | -25       | 30         | 23         | 4400                            | 25                        | 97                               | 740                       | 850                                     | 140                                           | 2.0                     | 0.4            | 0.34                          | 0.44 |
| Centraire                              | 260             | -17                | -19       | 30         | 23         | 3800                            | 25                        | 103                              | 820                       | 1000                                    | 180                                           | 2.3                     | 0.4            | 0.38                          | 0.49 |
| Chapleau                               | 425             | -35                | -38       | 27         | 21         | 5900                            | 20                        | 97                               | 530                       | 650                                     | 80                                            | 3.6                     | 0.4            | 0.23                          | 0.30 |
| Chatham                                | 180             | -16                | -18       | 31         | 24         | 3470                            | 28                        | 103                              | 800                       | 850                                     | 180                                           | 1.0                     | 0.4            | 0.33                          | 0.43 |
| Chesley                                | 275             | -19                | -21       | 29         | 22         | 4320                            | 28                        | 103                              | 810                       | 1125                                    | 140                                           | 2.8                     | 0.4            | 0.37                          | 0.48 |
| Column 1                               | 2               | 3                  | 4         | 5          | 6          | 7                               | 8                         | 9                                | 10                        | 11                                      | 12                                            | 13                      | 14             | 15                            | 16   |



16 Amberglow Ct  
Brampton, Ontario

Drawing Title

GENERAL INFORMATION

Drawn by

BONNA ABBASI

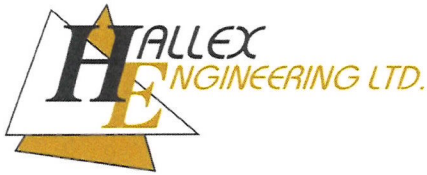
Scale

1'-0" = 1/8"

Date

MAY 2024

A-7



SCANDIA CANADA ROOF SELECTION TABLES

|            |             |          |
|------------|-------------|----------|
| 230525     | N/A         | N/A      |
| Job Number | Trade RFI # | ND RFI # |

|                   |                                                   |
|-------------------|---------------------------------------------------|
| PROJECT:          | Scandia Canada Roof Members Span Selection Tables |
| CLIENT:           | SCANDIA CANADA LTD.                               |
| TRADE CONTRACTOR: | N/A                                               |
| DATE:             | 05/29/2024                                        |
| AUTHOR:           | Paul Wang, Structural EIT/ J.A. Halucha, P.Eng    |

General Note: This report is prepared as a review only as to the general conformance with the requirements of the project described above. Hallex Engineering Ltd. does not warrant or represent that the actual dimensions, measurements or elevations with respect to the contract drawings are accurate, and that the sole responsibility for the correct implementation of the design, details and dimensions shall remain with the contractor listed above.

Hallex Response:

Hallex Engineering Ltd. was commissioned by Scandia Canada LTD. to produce allowable span tables of aluminum joist, beams, and posts to meet OBC Part 9 requirements. The new beam and post drawings and details were provided by Scandia Canada LTD. and are summarized in this report.

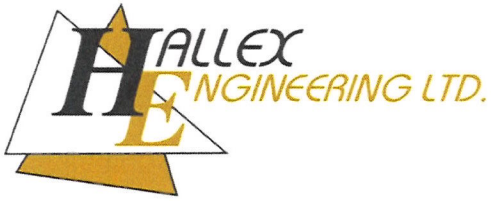
The professional seal affixed to this cover page is in relation to all 20 pages included herein and shall be read together with this cover page in sequential order.

Regards,  
HALLEX ENGINEERING LTD.



J.A. Halucha, M.A.Sc., P.Eng  
Senior Structural Engineer





**1.0 Provided Dimensions of Sections:**

Scandia Canada LTD. provided the following drawings are used to determine the layout and spacing to determine the maximum span of posts & beam to meet OBC requirements.

The following sections are analyzed for roof span limits to produce post spacing selection tables: (NOT TO SCALE)

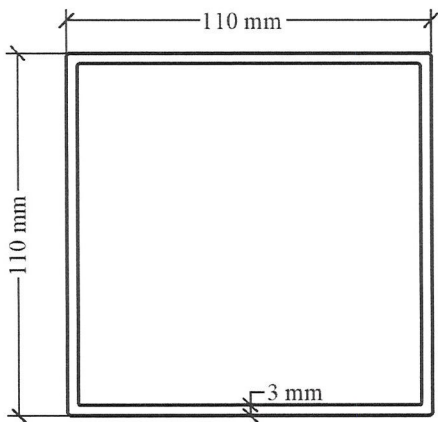


Figure 1.1. 110 mm X 110 mm X 3 mm Aluminum Double Wall Post

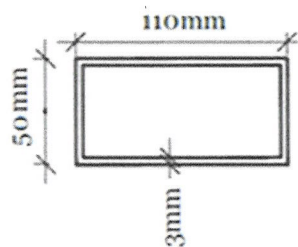


Figure 1.2. 50 mm X 110 mm X 3 mm Aluminum End/Rear Post

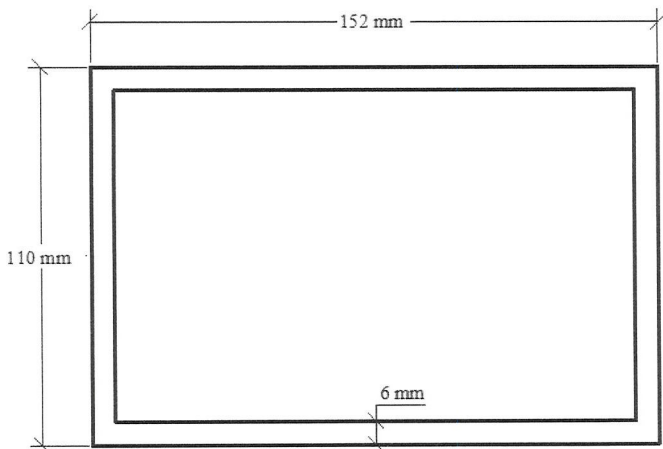


Figure 1.3. 110 mm X 152 mm X 6 mm Aluminum Beam

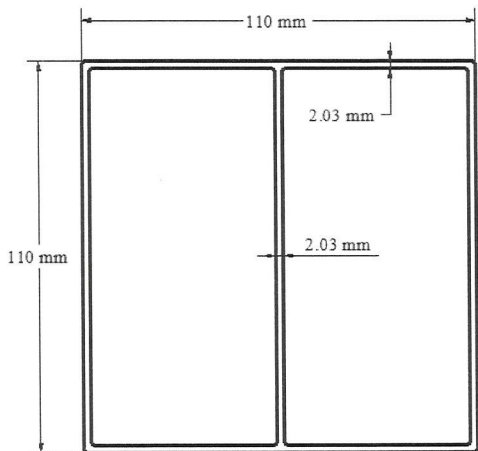


Figure 1.4. 110 mm X 110 mm X 2.03 mm Aluminum End/Rear Post with Middle Wall

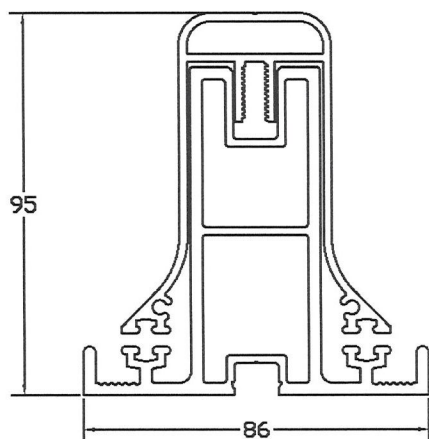
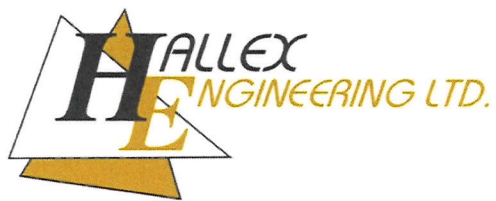
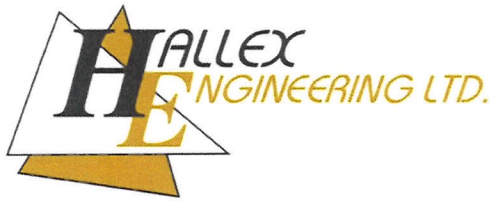


Figure 1.5. T-Bar Joist (X36965-1)





## **2.0 Expected Loading**

### **Dead Loads Considered:**

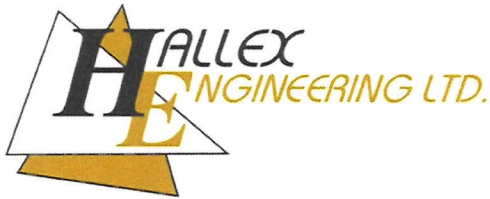
The roof system is expected to be composed of roof panels with the addition of T-bars acting as joists.

- Panels: Acrylic (16 mm), polycarbonate (16 mm), and Tempered Glass (6 mm & 8 mm)
  - o The weight of the Acrylic panel is 1.04 PSF (0.0500 kPa) and poly carbonate panel is 2.72 PSF (0.130 kPa)
  - o The governing weight is the 8 mm Tempered Glass weighing **4.10 PSF (0.200 kPa)**
- Self-weight of joists: Aluminum is assumed with a density of  $2700 \text{ kg/m}^3$ 
  - o The weight of T-bars is taken as 0.0440 kN/m
  - o The minimum spacing is taken as 16", therefore weight is **2.30 PSF (0.110 kPa)**.
- **NOTE: COLLADERAL LOAD IS NOT CONSIDERED IN THESE TABLES**

### **Snow Loads Considered:**

According to OBC §9.4.2.2. the snow loads can be reduced by the basic snow load roof factor  $C_b = 0.45$  for roof widths under 4.3 m and 0.55 for all other roofs. This is allowable if the conditions of §9.4.2.1. are met. This report will consider this factor to reduce  $S_s$  for the roof system.

- (i.e. for  $S_s = 1.2 \text{ kPa}$ ,  $S_r = 0.40 \text{ kPa}$ ,  $SL = 0.55 \cdot 1.2 + 0.4 = 1.06 \text{ kPa}$ )
- Rain load ( $S_r$ ) is taken as 0.40 kPa conservatively for all calculations.



3.0 Joist Bending Resistance Sample Calculation

Sectional properties for the new T-bar for roof joists are summarized below.

Table 3.0. Sectional Properties of T-Bar

| Section Properties | Aluminum Rating | F <sub>y</sub> (MPa) | E (MPa)          | J (mm <sup>3</sup> ) | Area (mm <sup>2</sup> ) | I <sub>x</sub> (mm <sup>4</sup> ) | I <sub>y</sub> (mm <sup>4</sup> ) | S <sub>x</sub> (mm <sup>3</sup> ) | S <sub>y</sub> (mm <sup>3</sup> ) |
|--------------------|-----------------|----------------------|------------------|----------------------|-------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| New T-bar Joist    | 6063-T65        | 227                  | 70,000 (Assumed) | 188,200              | 1673                    | 1.595x10 <sup>6</sup>             | 6.222x10 <sup>5</sup>             | 29600                             | 14470                             |

Sample Calculation:

From CSA S175-05 – §9.5.3.1. Members with lateral restraint of the tension flange only

M<sub>r</sub> = φ<sub>y</sub>S<sub>x</sub>F̄F<sub>o</sub>

Where: F̄ = normalized buckling stress factor (§ 9.3.3.) (Taken as 1, see below)

F̄ = β - √(β² - 1/λ²)      λ̄ = √(F<sub>e</sub>F<sub>y</sub>)      F<sub>e</sub> = π²E / λ² ,  
λ = √(10S<sub>x</sub> / (0.4J/d + (I<sub>y</sub>I<sub>m</sub>/a)⁰.⁵))

Where:

I<sub>m</sub> = I<sub>x</sub> of roof panel,      a = unbraced length between. T-bars      φ<sub>y</sub> = 0.9,  
F<sub>o</sub>=F<sub>y</sub>

Calculated Bending Capacity is found to be:

New T-bar M<sub>r</sub> = 6.05 kN-m

The governing cases of bending capacity and deflection are shown (shear not governing for spans).



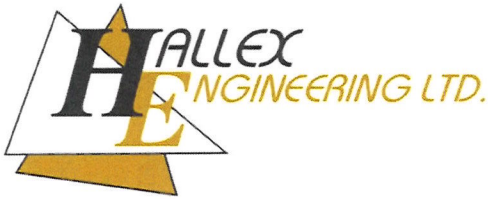
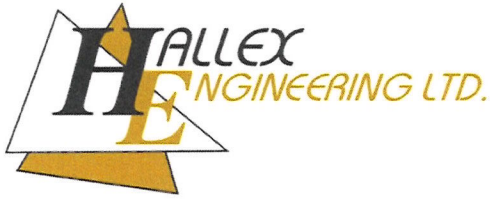


Table 3.1. T-BAR SPAN TABLE GOVERNED BY LOADING

HEAVY DUTY T-BAR JOISTS AND T-BAR CAP ASSUMED SCREWED TOGETHER CONTIOUSLY  
ALONG LENGTH WITH ARCYLIC (16mm) OR TEMPERED GLASS (6mm OR 8m) PANELS

|                                                     | T-BAR SPACED @ 16"               |                                       | T-BAR SPACED @ 24"               |                                       | T-BAR SPACED @ 32"               |                                       | T-BAR SPACED @ 48"               |                                       |
|-----------------------------------------------------|----------------------------------|---------------------------------------|----------------------------------|---------------------------------------|----------------------------------|---------------------------------------|----------------------------------|---------------------------------------|
| GROUND SNOW<br>LOAD S <sub>s</sub><br><br>PSF (kPa) | MAXIMUM<br>SPAN<br><br>(ft.-in.) | SELECTED<br>OVERHANG<br><br>(ft.-in.) | MAXIMUM<br>SPAN<br><br>(ft.-in.) | SELECTED<br>OVERHANG<br><br>(ft.-in.) | MAXIMUM<br>SPAN<br><br>(ft.-in.) | SELECTED<br>OVERHANG<br><br>(ft.-in.) | MAXIMUM<br>SPAN<br><br>(ft.-in.) | SELECTED<br>OVERHANG<br><br>(ft.-in.) |
| 25 (1.2)                                            | 25'-5"                           | 0'-0"                                 | 21'-0"                           | 0'-0"                                 | 18'-3"                           | 0'-0"                                 | 15'-0"                           | 0'-0"                                 |
|                                                     | 25'-6"                           | 1'-0"                                 | 21'-0"                           | 1'-0"                                 | 18'-4"                           | 1'-0"                                 | 15'-1"                           | 1'-0"                                 |
|                                                     | 25'-7"                           | 2'-0"                                 | 21'-2"                           | 2'-0"                                 | 18'-6"                           | 2'-0"                                 | 15'-3"                           | 2'-0"                                 |
|                                                     | 25'-9"                           | 3'-0"                                 | 21'-5"                           | 3'-0"                                 | 18'-9"                           | 3'-0"                                 | 15'-7"                           | 3'-0"                                 |
| 29 (1.4)                                            | 24'-5"                           | 0'-0"                                 | 20'-2"                           | 0'-0"                                 | 17'-6"                           | 0'-0"                                 | 14'-5"                           | 0'-0"                                 |
|                                                     | 24'-6"                           | 1'-0"                                 | 20'-2"                           | 1'-0"                                 | 17'-7"                           | 1'-0"                                 | 14'-6"                           | 1'-0"                                 |
|                                                     | 24'-7"                           | 2'-0"                                 | 20'-4"                           | 2'-0"                                 | 17'-9"                           | 2'-0"                                 | 14'-8"                           | 2'-0"                                 |
|                                                     | 24'-9"                           | 3'-0"                                 | 20'-7"                           | 3'-0"                                 | 18'-0"                           | 3'-0"                                 | 15'-0"                           | 3'-0"                                 |
| 33.4 (1.6)                                          | 23'-6"                           | 0'-0"                                 | 19'-5"                           | 0'-0"                                 | 16'-11"                          | 0'-0"                                 | 13'-10"                          | 0'-0"                                 |
|                                                     | 23'-7"                           | 1'-0"                                 | 19'-5"                           | 1'-0"                                 | 16'-11"                          | 1'-0"                                 | 13'-11"                          | 1'-0"                                 |
|                                                     | 23'-8"                           | 2'-0"                                 | 19'-7"                           | 2'-0"                                 | 17'-1"                           | 2'-0"                                 | 14'-2"                           | 2'-0"                                 |
|                                                     | 23'-11"                          | 3'-0"                                 | 19'-10"                          | 3'-0"                                 | 17'-5"                           | 3'-0"                                 | 14'-6"                           | 3'-0"                                 |
| 38 (1.8)                                            | 22'-9"                           | 0'-0"                                 | 18'-9"                           | 0'-0"                                 | 16'-3"                           | 0'-0"                                 | 13'-4"                           | 0'-0"                                 |
|                                                     | 22'-9"                           | 1'-0"                                 | 18'-9"                           | 1'-0"                                 | 16'-4"                           | 1'-0"                                 | 13'-5"                           | 1'-0"                                 |
|                                                     | 22'-11"                          | 2'-0"                                 | 18'-11"                          | 2'-0"                                 | 16'-6"                           | 2'-0"                                 | 13'-8"                           | 2'-0"                                 |
|                                                     | 23'-1"                           | 3'-0"                                 | 19'-2"                           | 3'-0"                                 | 16'-10"                          | 3'-0"                                 | 14'-0"                           | 3'-0"                                 |
| 42 (2.0)                                            | 22'-0"                           | 0'-0"                                 | 18'-1"                           | 0'-0"                                 | 15'-9"                           | 0'-0"                                 | 12'-11"                          | 0'-0"                                 |
|                                                     | 22'-1"                           | 1'-0"                                 | 18'-2"                           | 1'-0"                                 | 15'-10"                          | 1'-0"                                 | 13'-0"                           | 1'-0"                                 |
|                                                     | 22'-2"                           | 2'-0"                                 | 18'-4"                           | 2'-0"                                 | 16'-0"                           | 2'-0"                                 | 13'-3"                           | 2'-0"                                 |
|                                                     | 22'-5"                           | 3'-0"                                 | 18'-7"                           | 3'-0"                                 | 16'-4"                           | 3'-0"                                 | 13'-7"                           | 3'-0"                                 |
| 46 (2.2)                                            | 21'-4"                           | 0'-0"                                 | 17'-7"                           | 0'-0"                                 | 15'-3"                           | 0'-0"                                 | 12'-6"                           | 0'-0"                                 |
|                                                     | 21'-5"                           | 1'-0"                                 | 17'-7"                           | 1'-0"                                 | 15'-4"                           | 1'-0"                                 | 12'-7"                           | 1'-0"                                 |
|                                                     | 21'-6"                           | 2'-0"                                 | 17'-9"                           | 2'-0"                                 | 15'-6"                           | 2'-0"                                 | 12'-10"                          | 2'-0"                                 |
|                                                     | 21'-9"                           | 3'-0"                                 | 18'-1"                           | 3'-0"                                 | 15'-10"                          | 3'-0"                                 | 13'-2"                           | 3'-0"                                 |
| 50 (2.4)                                            | 20'-9"                           | 0'-0"                                 | 17'-1"                           | 0'-0"                                 | 14'-10"                          | 0'-0"                                 | 12'-2"                           | 0'-0"                                 |
|                                                     | 20'-9"                           | 1'-0"                                 | 17'-1"                           | 1'-0"                                 | 14'-11"                          | 1'-0"                                 | 12'-3"                           | 1'-0"                                 |
|                                                     | 20'-11"                          | 2'-0"                                 | 17'-3"                           | 2'-0"                                 | 15'-1"                           | 2'-0"                                 | 12'-6"                           | 2'-0"                                 |
|                                                     | 21'-2"                           | 3'-0"                                 | 17'-7"                           | 3'-0"                                 | 15'-5"                           | 3'-0"                                 | 12'-10"                          | 3'-0"                                 |
| 54 (2.6)                                            | 20'-2"                           | 0'-0"                                 | 16'-7"                           | 0'-0"                                 | 14'-5"                           | 0'-0"                                 | 11'-10"                          | 0'-0"                                 |
|                                                     | 20'-3"                           | 1'-0"                                 | 16'-8"                           | 1'-0"                                 | 14'-6"                           | 1'-0"                                 | 11'-11"                          | 1'-0"                                 |
|                                                     | 20'-5"                           | 2'-0"                                 | 16'-10"                          | 2'-0"                                 | 14'-8"                           | 2'-0"                                 | 12'-2"                           | 2'-0"                                 |
|                                                     | 20'-7"                           | 3'-0"                                 | 17'-1"                           | 3'-0"                                 | 15'-0"                           | 3'-0"                                 | 12'-6"                           | 3'-0"                                 |
| 59 (2.8)                                            | 19'-8"                           | 0'-0"                                 | 16'-2"                           | 0'-0"                                 | 14'-1"                           | 0'-0"                                 | 11'-6"                           | 0'-0"                                 |
|                                                     | 19'-9"                           | 1'-0"                                 | 16'-3"                           | 1'-0"                                 | 14'-1"                           | 1'-0"                                 | 11'-7"                           | 1'-0"                                 |
|                                                     | 19'-11"                          | 2'-0"                                 | 16'-5"                           | 2'-0"                                 | 14'-4"                           | 2'-0"                                 | 11'-10"                          | 2'-0"                                 |
|                                                     | 20'-1"                           | 3'-0"                                 | 16'-8"                           | 3'-0"                                 | 14'-8"                           | 3'-0"                                 | 12'-3"                           | 3'-0"                                 |



|          |         |       |         |       |         |       |         |       |
|----------|---------|-------|---------|-------|---------|-------|---------|-------|
| 63 (3.0) | 19'-2"  | 0'-0" | 15'-9"  | 0'-0" | 13'-8"  | 0'-0" | 11'-3"  | 0'-0" |
|          | 19'-3"  | 1'-0" | 15'-10" | 1'-0" | 13'-9"  | 1'-0" | 11'-4"  | 1'-0" |
|          | 19'-5"  | 2'-0" | 16'-0"  | 2'-0" | 14'-0"  | 2'-0" | 11'-7"  | 2'-0" |
|          | 19'-8"  | 3'-0" | 16'-4"  | 3'-0" | 14'-4"  | 3'-0" | 12'-0"  | 3'-0" |
| 67 (3.2) | 18'-9"  | 0'-0" | 15'-5"  | 0'-0" | 13'-5"  | 0'-0" | 10'-11" | 0'-0" |
|          | 18'-10" | 1'-0" | 15'-6"  | 1'-0" | 13'-5"  | 1'-0" | 11'-0"  | 1'-0" |
|          | 19'-0"  | 2'-0" | 15'-8"  | 2'-0" | 13'-8"  | 2'-0" | 11'-4"  | 2'-0" |
|          | 19'-3"  | 3'-0" | 16'-0"  | 3'-0" | 14'-0"  | 3'-0" | 11'-9"  | 3'-0" |
| 71 (3.4) | 18'-4"  | 0'-0" | 15'-1"  | 0'-0" | 13'-1"  | 0'-0" | 10'-8"  | 0'-0" |
|          | 18'-5"  | 1'-0" | 15'-2"  | 1'-0" | 13'-2"  | 1'-0" | 10'-10" | 1'-0" |
|          | 18'-7"  | 2'-0" | 15'-4"  | 2'-0" | 13'-4"  | 2'-0" | 11'-1"  | 2'-0" |
|          | 18'-10" | 3'-0" | 15'-8"  | 3'-0" | 13'-9"  | 3'-0" | 11'-6"  | 3'-0" |
| 75 (3.6) | 17'-11" | 0'-0" | 14'-9"  | 0'-0" | 12'-10" | 0'-0" | 10'-6"  | 0'-0" |
|          | 18'-0"  | 1'-0" | 14'-10" | 1'-0" | 12'-10" | 1'-0" | 10'-7"  | 1'-0" |
|          | 18'-2"  | 2'-0" | 15'-0"  | 2'-0" | 13'-1"  | 2'-0" | 10'-10" | 2'-0" |
|          | 18'-5"  | 3'-0" | 15'-4"  | 3'-0" | 13'-6"  | 3'-0" | 11'-3"  | 3'-0" |
| 79 (3.8) | 17'-7"  | 0'-0" | 14'-5"  | 0'-0" | 12'-6"  | 0'-0" | 10'-3"  | 0'-0" |
|          | 17'-8"  | 1'-0" | 14'-6"  | 1'-0" | 12'-7"  | 1'-0" | 10'-4"  | 1'-0" |
|          | 17'-10" | 2'-0" | 14'-8"  | 2'-0" | 12'-10" | 2'-0" | 10'-8"  | 2'-0" |
|          | 18'-1"  | 3'-0" | 15'-0"  | 3'-0" | 13'-3"  | 3'-0" | 11'-1"  | 3'-0" |

TABLE 3.1 NOTES:

EXISTING STRUCTURAL WALL

MAX SPACING

OVERHANG

GLASS/ ACRYLIC PANEL

BOX POST

BOX GIRDER

T-BAR SPACING

POST SPACING

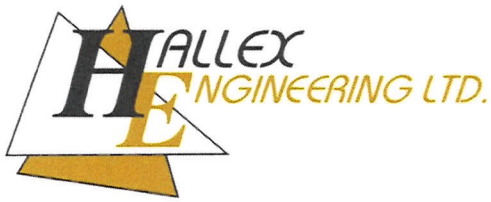
**ALUMNINUM:**

- Structural elements and systems made of aluminum must conform to CSA S157-17/S157.1-17 *Strength design in aluminum/Commentary on CSA S157-17, Strength design in aluminum.* and CSA S157-17, *Strength design in aluminum*
- Aluminum alloy must conform to mechanical requirements of ISO 6361-2:1990, ISO 6362-2:1990 or United States Department of Defense MIL-HDBK-5G 1994.

**BUILDING CODE**

- The design is in accordance with *Ontario Building Code 2012*. Applicable factored structural loads are taken into account with limit states design as set by the applicable building code and CSA 157-17 *Strength design in aluminum.*

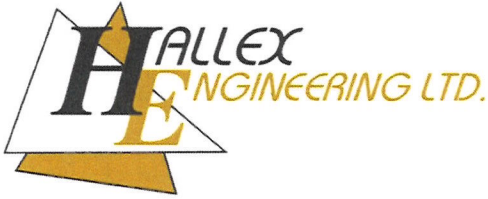




- Load combination governing spans  $1.25 \text{ DL} + 1.5 \text{ SL}$  in accordance with *OBC 2012*.
- Roof structure is of residential use only. Variation from intended use and individual conditions require consultation with the engineer of record.
- Maximum spans do not consider snow build-up conditions as described in the *Ontario Building Code 2012*. Snow built-up conditions require consultation with the engineer of record.
- Changes to the roof system require consultation with the engineer of record.
- Variation from intended use and individual conditions require consultation with the engineer of record.

#### LOAD SPAN SELECTION TABLE GENERAL NOTES

- Lateral and seismic connections to base building structure are to be designed by others.
  - Aluminum alloy to be 6063-T65.
-



**Table 3.2. T-BAR SPAN TABLE GOVERNED BY DEFLECTION**

**HEAVY DUTY T-BAR JOISTS AND T-BAR CAP ASSUMED SCREWED TOGETHER CONTIOUSLY  
ALONG LENGTH WITH ARCYLIC (16mm) OR TEMPERED GLASS (6mm OR 8m) PANELS**

|                                     | T-BAR SPACED @ 16"        | T-BAR SPACED @ 24"        | T-BAR SPACED @ 32"        | T-BAR SPACED @ 48"        |
|-------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| GROUND SNOW LOAD $S_s$<br>PSF (kPa) | MAXIMUM SPAN<br>(ft.-in.) | MAXIMUM SPAN<br>(ft.-in.) | MAXIMUM SPAN<br>(ft.-in.) | MAXIMUM SPAN<br>(ft.-in.) |
| 25 (1.2)                            | 15'-8"                    | 13'-9"                    | 12'-5"                    | 10'-11"                   |
| 29 (1.4)                            | 15'-2"                    | 13'-3"                    | 12'-1"                    | 10'-6"                    |
| 33.4 (1.6)                          | 14'-9"                    | 12'-11"                   | 11'-8"                    | 10'-3"                    |
| 38 (1.8)                            | 14'-4"                    | 12'-6"                    | 11'-5"                    | 9'-11"                    |
| 42 (2.0)                            | 14'-0"                    | 12'-3"                    | 11'-1"                    | 9'-8"                     |
| 46 (2.2)                            | 13'-8"                    | 11'-11"                   | 10'-10"                   | 9'-5"                     |
| 50 (2.4)                            | 13'-4"                    | 11'-8"                    | 10'-7"                    | 9'-3"                     |
| 54 (2.6)                            | 13'-1"                    | 11'-5"                    | 10'-5"                    | 9'-1"                     |
| 59 (2.8)                            | 12'-10"                   | 11'-2"                    | 10'-2"                    | 8'-11"                    |
| 63 (3.0)                            | 12'-7"                    | 11'-0"                    | 10'-0"                    | 8'-9"                     |
| 67 (3.2)                            | 12'-5"                    | 10'-10"                   | 9'-10"                    | 8'-7"                     |
| 71 (3.4)                            | 12'-2"                    | 10'-8"                    | 9'-8"                     | 8'-5"                     |
| 75 (3.6)                            | 12'-0"                    | 10'-6"                    | 9'-6"                     | 8'-4"                     |
| 79 (3.8)                            | 11'-10"                   | 10'-4"                    | 9'-4"                     | 8'-2"                     |



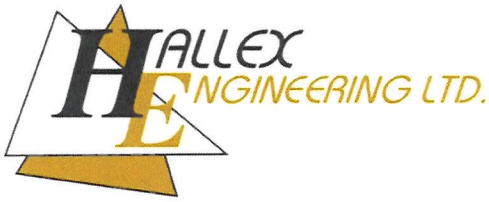
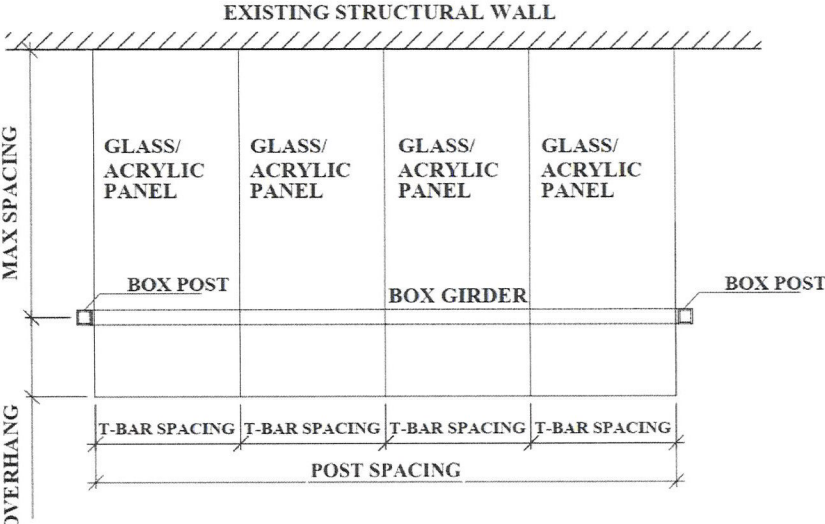
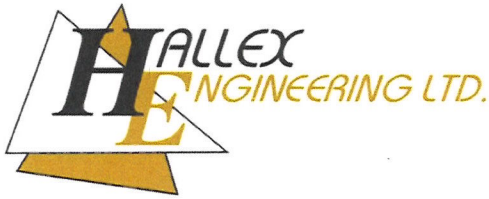


TABLE 3.2 NOTES:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | <b>ALUMNINUM:</b> <ul style="list-style-type: none"><li>- Structural elements and systems made of aluminum must conform to CSA S157-17/S157.1-17 <i>Strength design in aluminum/Commentary on CSA S157-17, Strength design in aluminum.</i> and CSA S157-17, <i>Strength design in aluminum</i></li><li>- Aluminum alloy must conform to mechanical requirements of ISO 6361-2:1990, ISO 6362-2:1990 or United States Department of Defense MIL-HDBK-5G 1994.</li></ul> |
| <b>BUILDING CODE</b> <ul style="list-style-type: none"><li>- The design is in accordance with <i>Ontario Building Code 2012</i>. Applicable factored structural loads are taken into account with limit states design as set by the applicable building code and CSA 157-17 <i>Strength design in aluminum</i>.</li><li>- Deflection considering live loads designed not to exceed limits set by <i>Ontario Building Code 2012</i> (1/180) provided roof system is consistent.</li><li>- Roof structure is of residential use only. Variation from intended use and individual conditions require consultation with the engineer of record.</li><li>- Maximum spans do not consider snow build-up conditions as described in the <i>Ontario Building Code 2012</i>. Snow built-up conditions require consultation with the engineer of record.</li><li>- Changes to the roof system require consultation with the engineer of record.</li><li>- Variation from intended use and individual conditions require consultation with the engineer of record.</li></ul> |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>LOAD SPAN SELECTION TABLE GENERAL NOTES</b> <ul style="list-style-type: none"><li>- Lateral and seismic connections to base building structure are to be designed by others.</li><li>- Aluminum alloy to be 6063-T65.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |



4.0. New Posts and Beam Spacing Selection Tables:

Sectional properties for the new beam are summarized below.

Table 4.1. Sectional Properties of 110 mm X 152 mm X 6 mm Aluminum Beam

| Section Properties | Aluminum Rating | F <sub>y</sub> (MPa) | E (MPa)          | J (mm <sup>3</sup> )  | Area (mm <sup>2</sup> ) | I <sub>x</sub> (mm <sup>4</sup> ) | I <sub>y</sub> (mm <sup>4</sup> ) | S <sub>x</sub> (mm <sup>3</sup> ) | S <sub>y</sub> (mm <sup>3</sup> ) | r <sub>x</sub> (mm) | r <sub>y</sub> (mm) |
|--------------------|-----------------|----------------------|------------------|-----------------------|-------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------------|---------------------|
| Aluminum Beam      | 6063-T65        | 227                  | 70,000 (Assumed) | 1.14 x10 <sup>7</sup> | 3000                    | 9.78x10 <sup>6</sup>              | 5.88x10 <sup>6</sup>              | 129000                            | 10700                             | 57.1                | 44.3                |

Sample Calculation:

From CSA S175-05 – § 9.5.3.2. Unrestrained members

M<sub>r</sub> = φ<sub>y</sub>S<sub>x</sub>̄F F<sub>o</sub>

Where: ̄F = normalized buckling stress factor (§ 9.3.3.) (Taken as 0.97, see below)

̄F = β - √(β² - 1/λ²)      λ̄ = √(F<sub>e</sub>F<sub>y</sub>)      F<sub>e</sub> = π²E / λ² ,  
λ = √(2.2(r<sub>x</sub>r<sub>y</sub>)(L/d)²)

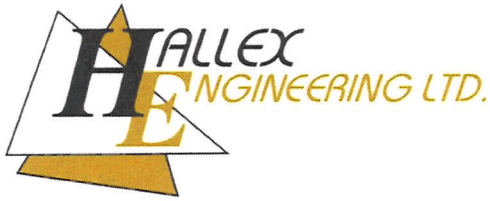
Where:

φ<sub>y</sub> = 0.9,      F<sub>o</sub>=F<sub>y</sub>

Calculated Bending Capacity is found to be:

New Girder M<sub>r</sub> = 26.3 kN-m





Sectional properties for the new post are summarized below.

Table 4.2. Sectional Properties of 110 mm X 110 mm X 3 mm Double Wall Post

| Section Properties | Aluminum Rating | F <sub>y</sub> (MPa) | E (MPa)          | J (mm <sup>3</sup> )  | Area (mm <sup>2</sup> ) | I <sub>x</sub> (mm <sup>4</sup> ) | I <sub>y</sub> (mm <sup>4</sup> ) | S <sub>x</sub> (mm <sup>3</sup> ) | S <sub>y</sub> (mm <sup>3</sup> ) | r <sub>x</sub> (mm) |
|--------------------|-----------------|----------------------|------------------|-----------------------|-------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------------|
| Post               | 6063-T65        | 227                  | 70,000 (Assumed) | 3.73 x10 <sup>6</sup> | 1284                    | 2.45x10 <sup>6</sup>              | 2.45x10 <sup>6</sup>              | 44600                             | 44600                             | 43.7                |

Sample Calculation:

From CSA S175-05 – § 9.4.2. Flexural Buckling Compression Members

C<sub>r</sub> = φ<sub>y</sub>A $\bar{F}$ F<sub>o</sub>

Where:  $\bar{F}$  = normalized buckling stress factor (§ 9.3.3.) (Taken as 0.97, see below)

$\bar{F} = \beta - \sqrt{(\beta^2 - \frac{1}{\lambda^2})}$        $\bar{\lambda} = \sqrt{F_e F_y}$   
 $F_e = \frac{\pi^2 E}{\lambda^2}$  ,       $\lambda = KL/r$

Where:

φ<sub>y</sub> = 0.9,      F<sub>o</sub>=F<sub>y</sub>      Height = taken as 3000mm

Calculated Compression Capacity is found to be:

New Post C<sub>r</sub> = 117 kN

Note:

End/rear posts properties and sample calculations are not shown in this report. All end/rear posts are assumed to be laterally connected to existing wall structure.

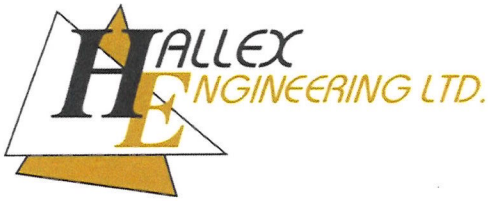


Table 4.3. POST SPACING TABLE GOVERNED BY STRENGTH

HEAVY DUTY BOX-GIRDER & BOX POSTS WITH ARCYLIC (16 mm THICK), POLYCARBONATE (16 mm THICK) OR TEMPERED GLASS (6 mm OR 8 mm THICK) PANELS

| Ground<br>Snow<br>Load S <sub>s</sub><br>PSF<br>(kPa) | Roof<br>Projections<br>(ft) | Overhang = 0'-0" |    |    |     |     | Overhang = 1'-0" |    |    |     |     | Overhang = 2'-0" |    |    |     |     | Overhang = 3'-0" |    |    |     |     |
|-------------------------------------------------------|-----------------------------|------------------|----|----|-----|-----|------------------|----|----|-----|-----|------------------|----|----|-----|-----|------------------|----|----|-----|-----|
| 25 (1.2)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 29.57            | "  | "  | "   | "   | 26.45            | "  | "  | "   | "   | 24.14            | "  | "  | "   | "   | 22.35            | "  | "  | "   | "   |
|                                                       | 10                          | 26.45            | "  | "  | "   | "   | 24.14            | "  | "  | "   | "   | 22.35            | "  | "  | "   | "   | 20.91            | "  | "  | "   | "   |
|                                                       | 12                          | 24.14            | "  | "  | "   | "   | 22.35            | "  | "  | "   | "   | 20.91            | "  | "  | "   | "   | 19.71            | "  | "  | "   | "   |
|                                                       | 14                          | 22.35            | "  | "  | "   | "   | 20.91            | "  | "  | "   | "   | 19.71            | "  | "  | "   | "   | 18.70            | "  | "  | "   | "   |
|                                                       | 16                          | 20.91            | "  | "  | "   | "   | 19.71            | "  | "  | "   | "   | 18.70            | "  | "  | "   | "   | 17.83            | "  | "  | "   | "   |
|                                                       | 18                          | 19.71            | "  | "  | "   | "   | 18.70            | "  | "  | "   | "   | 17.83            | "  | "  | "   | "   | 17.07            | "  | "  | "   | "   |
|                                                       | 20                          | 18.70            | "  | "  | "   | "   | 17.83            | "  | "  | "   | "   | 17.07            | "  | "  | "   | "   | 16.40            | "  | "  | "   | "   |
|                                                       | 22                          | 17.83            | "  | "  | "   | "   | 17.07            | "  | "  | "   | "   | 16.40            | "  | "  | "   | "   | 15.81            | "  | "  | "   | "   |
| 29 (1.4)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 28.46            | "  | "  | "   | "   | 25.46            | "  | "  | "   | "   | 23.24            | "  | "  | "   | "   | 21.51            | "  | "  | "   | "   |
|                                                       | 10                          | 25.46            | "  | "  | "   | "   | 23.24            | "  | "  | "   | "   | 21.51            | "  | "  | "   | "   | 20.12            | "  | "  | "   | "   |
|                                                       | 12                          | 23.24            | "  | "  | "   | "   | 21.51            | "  | "  | "   | "   | 20.12            | "  | "  | "   | "   | 18.97            | "  | "  | "   | "   |
|                                                       | 14                          | 21.51            | "  | "  | "   | "   | 20.12            | "  | "  | "   | "   | 18.97            | "  | "  | "   | "   | 18.00            | "  | "  | "   | "   |
|                                                       | 16                          | 20.12            | "  | "  | "   | "   | 18.97            | "  | "  | "   | "   | 18.00            | "  | "  | "   | "   | 17.16            | "  | "  | "   | "   |
|                                                       | 18                          | 18.97            | "  | "  | "   | "   | 18.00            | "  | "  | "   | "   | 17.16            | "  | "  | "   | "   | 16.43            | "  | "  | "   | "   |
|                                                       | 20                          | 18.00            | "  | "  | "   | "   | 17.16            | "  | "  | "   | "   | 16.43            | "  | "  | "   | "   | 15.79            | "  | "  | "   | "   |
|                                                       | 22                          | 17.16            | "  | "  | "   | "   | 16.43            | "  | "  | "   | "   | 15.79            | "  | "  | "   | "   | 15.21            | "  | "  | "   | "   |
| 33 (1.6)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 27.47            | "  | "  | "   | "   | 24.57            | "  | "  | "   | "   | 22.43            | "  | "  | "   | "   | 20.76            | "  | "  | "   | "   |
|                                                       | 10                          | 24.57            | "  | "  | "   | "   | 22.43            | "  | "  | "   | "   | 20.76            | "  | "  | "   | "   | 19.42            | "  | "  | "   | "   |
|                                                       | 12                          | 22.43            | "  | "  | "   | "   | 20.76            | "  | "  | "   | "   | 19.42            | "  | "  | "   | "   | 18.31            | "  | "  | "   | "   |
|                                                       | 14                          | 20.76            | "  | "  | "   | "   | 19.42            | "  | "  | "   | "   | 18.31            | "  | "  | "   | "   | 17.37            | "  | "  | "   | "   |
|                                                       | 16                          | 19.42            | "  | "  | "   | "   | 18.31            | "  | "  | "   | "   | 17.37            | "  | "  | "   | "   | 16.56            | "  | "  | "   | "   |
|                                                       | 18                          | 18.31            | "  | "  | "   | "   | 17.37            | "  | "  | "   | "   | 16.56            | "  | "  | "   | "   | 15.86            | "  | "  | "   | "   |
|                                                       | 20                          | 17.37            | "  | "  | "   | "   | 16.56            | "  | "  | "   | "   | 15.86            | "  | "  | "   | "   | 15.24            | "  | "  | "   | "   |
|                                                       | 22                          | 16.56            | "  | "  | "   | "   | 15.86            | "  | "  | "   | "   | 15.24            | "  | "  | "   | "   | 14.68            | "  | "  | "   | "   |
| 38 (1.8)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 26.57            | "  | "  | "   | "   | 23.77            | "  | "  | "   | "   | 21.70            | "  | "  | "   | "   | 20.09            | "  | "  | "   | "   |
|                                                       | 10                          | 23.77            | "  | "  | "   | "   | 21.70            | "  | "  | "   | "   | 20.09            | "  | "  | "   | "   | 18.79            | "  | "  | "   | "   |
|                                                       | 12                          | 21.70            | "  | "  | "   | "   | 20.09            | "  | "  | "   | "   | 18.79            | "  | "  | "   | "   | 17.71            | "  | "  | "   | "   |
|                                                       | 14                          | 20.09            | "  | "  | "   | "   | 18.79            | "  | "  | "   | "   | 17.71            | "  | "  | "   | "   | 16.81            | "  | "  | "   | "   |
|                                                       | 16                          | 18.79            | "  | "  | "   | "   | 17.71            | "  | "  | "   | "   | 16.81            | "  | "  | "   | "   | 16.02            | "  | "  | "   | "   |
|                                                       | 18                          | 17.71            | "  | "  | "   | "   | 16.81            | "  | "  | "   | "   | 16.02            | "  | "  | "   | "   | 15.34            | "  | "  | "   | "   |
|                                                       | 20                          | 16.81            | "  | "  | "   | "   | 16.02            | "  | "  | "   | "   | 15.34            | "  | "  | "   | "   | 14.74            | "  | "  | "   | "   |
|                                                       | 22                          | 16.02            | "  | "  | "   | "   | 15.34            | "  | "  | "   | "   | 14.74            | "  | "  | "   | "   | 14.20            | "  | "  | "   | "   |



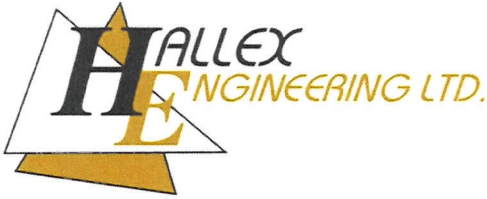


Table 4.3 (Continued)

| Ground<br>Snow<br>Load S <sub>s</sub><br>PSF<br>(kPa) | Roof<br>Projections<br>(ft) | Overhang = 0'-0" |    |    |     |     | Overhang = 1'-0" |    |    |     |     | Overhang = 2'-0" |    |    |     |     | Overhang = 3'-0" |    |    |     |     |
|-------------------------------------------------------|-----------------------------|------------------|----|----|-----|-----|------------------|----|----|-----|-----|------------------|----|----|-----|-----|------------------|----|----|-----|-----|
|                                                       |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
| 42 (2.0)                                              |                             | 25.76            | "  | "  | "   | "   | 23.04            | "  | "  | "   | "   | 21.03            | "  | "  | "   | "   | 19.47            | "  | "  | "   | "   |
|                                                       | 8                           | 23.04            | "  | "  | "   | "   | 21.03            | "  | "  | "   | "   | 19.47            | "  | "  | "   | "   | 18.21            | "  | "  | "   | "   |
|                                                       | 10                          | 21.03            | "  | "  | "   | "   | 19.47            | "  | "  | "   | "   | 18.21            | "  | "  | "   | "   | 17.17            | "  | "  | "   | "   |
|                                                       | 12                          | 19.47            | "  | "  | "   | "   | 18.21            | "  | "  | "   | "   | 17.17            | "  | "  | "   | "   | 16.29            | "  | "  | "   | "   |
|                                                       | 14                          | 18.21            | "  | "  | "   | "   | 17.17            | "  | "  | "   | "   | 16.29            | "  | "  | "   | "   | 15.53            | "  | "  | "   | "   |
|                                                       | 16                          | 17.17            | "  | "  | "   | "   | 16.29            | "  | "  | "   | "   | 15.53            | "  | "  | "   | "   | 14.87            | "  | "  | "   | "   |
|                                                       | 18                          | 16.29            | "  | "  | "   | "   | 15.53            | "  | "  | "   | "   | 14.87            | "  | "  | "   | "   | 14.29            | "  | "  | "   | "   |
|                                                       | 20                          | 15.53            | "  | "  | "   | "   | 14.87            | "  | "  | "   | "   | 14.29            | "  | "  | "   | "   | 13.77            | "  | "  | "   | "   |
|                                                       | 22                          | 14.87            | "  | "  | "   | "   | 14.29            | "  | "  | "   | "   | 13.77            | "  | "  | "   | "   | 13.30            | "  | "  | "   | "   |
|                                                       | 24                          | 14.29            | "  | "  | "   | "   | 13.77            | "  | "  | "   | "   | 13.30            | "  | "  | "   | "   | 12.88            | "  | "  | "   | "   |
| 46 (2.2)                                              |                             | 25.02            | "  | "  | "   | "   | 22.37            | "  | "  | "   | "   | 20.43            | "  | "  | "   | "   | 18.91            | "  | "  | "   | "   |
|                                                       | 8                           | 22.37            | "  | "  | "   | "   | 20.43            | "  | "  | "   | "   | 18.91            | "  | "  | "   | "   | 17.69            | "  | "  | "   | "   |
|                                                       | 10                          | 20.43            | "  | "  | "   | "   | 18.91            | "  | "  | "   | "   | 17.69            | "  | "  | "   | "   | 16.68            | "  | "  | "   | "   |
|                                                       | 12                          | 18.91            | "  | "  | "   | "   | 17.69            | "  | "  | "   | "   | 16.68            | "  | "  | "   | "   | 15.82            | "  | "  | "   | "   |
|                                                       | 14                          | 17.69            | "  | "  | "   | "   | 16.68            | "  | "  | "   | "   | 15.82            | "  | "  | "   | "   | 15.09            | "  | "  | "   | "   |
|                                                       | 16                          | 16.68            | "  | "  | "   | "   | 15.82            | "  | "  | "   | "   | 15.09            | "  | "  | "   | "   | 14.44            | "  | "  | "   | "   |
|                                                       | 18                          | 15.82            | "  | "  | "   | "   | 15.09            | "  | "  | "   | "   | 14.44            | "  | "  | "   | "   | 13.88            | "  | "  | "   | "   |
|                                                       | 20                          | 15.09            | "  | "  | "   | "   | 14.44            | "  | "  | "   | "   | 13.88            | "  | "  | "   | "   | 13.37            | "  | "  | "   | "   |
|                                                       | 22                          | 14.44            | "  | "  | "   | "   | 13.88            | "  | "  | "   | "   | 13.37            | "  | "  | "   | "   | 12.92            | "  | "  | "   | "   |
|                                                       | 24                          | 13.88            | "  | "  | "   | "   | 13.37            | "  | "  | "   | "   | 12.92            | "  | "  | "   | "   | 12.51            | "  | "  | "   | "   |
| 50 (2.4)                                              |                             | 24.33            | "  | "  | "   | "   | 21.76            | "  | "  | "   | "   | 19.87            | "  | "  | "   | "   | 18.39            | "  | "  | "   | "   |
|                                                       | 8                           | 21.76            | "  | "  | "   | "   | 19.87            | "  | "  | "   | "   | 18.39            | "  | "  | "   | "   | 17.21            | "  | "  | "   | "   |
|                                                       | 10                          | 19.87            | "  | "  | "   | "   | 18.39            | "  | "  | "   | "   | 17.21            | "  | "  | "   | "   | 16.22            | "  | "  | "   | "   |
|                                                       | 12                          | 18.39            | "  | "  | "   | "   | 17.21            | "  | "  | "   | "   | 16.22            | "  | "  | "   | "   | 15.39            | "  | "  | "   | "   |
|                                                       | 14                          | 17.21            | "  | "  | "   | "   | 16.22            | "  | "  | "   | "   | 15.39            | "  | "  | "   | "   | 14.67            | "  | "  | "   | "   |
|                                                       | 16                          | 16.22            | "  | "  | "   | "   | 15.39            | "  | "  | "   | "   | 14.67            | "  | "  | "   | "   | 14.05            | "  | "  | "   | "   |
|                                                       | 18                          | 15.39            | "  | "  | "   | "   | 14.67            | "  | "  | "   | "   | 14.05            | "  | "  | "   | "   | 13.50            | "  | "  | "   | "   |
|                                                       | 20                          | 14.67            | "  | "  | "   | "   | 14.05            | "  | "  | "   | "   | 13.50            | "  | "  | "   | "   | 13.01            | "  | "  | "   | "   |
|                                                       | 22                          | 14.05            | "  | "  | "   | "   | 13.50            | "  | "  | "   | "   | 13.01            | "  | "  | "   | "   | 12.57            | "  | "  | "   | "   |
|                                                       | 24                          | 13.50            | "  | "  | "   | "   | 13.01            | "  | "  | "   | "   | 12.57            | "  | "  | "   | "   | 12.17            | "  | "  | "   | "   |
| 54 (2.6)                                              |                             | 23.70            | "  | "  | "   | "   | 21.20            | "  | "  | "   | "   | 19.35            | "  | "  | "   | "   | 17.92            | "  | "  | "   | "   |
|                                                       | 8                           | 21.20            | "  | "  | "   | "   | 19.35            | "  | "  | "   | "   | 17.92            | "  | "  | "   | "   | 16.76            | "  | "  | "   | "   |
|                                                       | 10                          | 19.35            | "  | "  | "   | "   | 17.92            | "  | "  | "   | "   | 16.76            | "  | "  | "   | "   | 15.80            | "  | "  | "   | "   |
|                                                       | 12                          | 17.92            | "  | "  | "   | "   | 16.76            | "  | "  | "   | "   | 15.80            | "  | "  | "   | "   | 14.99            | "  | "  | "   | "   |
|                                                       | 14                          | 16.76            | "  | "  | "   | "   | 15.80            | "  | "  | "   | "   | 14.99            | "  | "  | "   | "   | 14.29            | "  | "  | "   | "   |
|                                                       | 16                          | 15.80            | "  | "  | "   | "   | 14.99            | "  | "  | "   | "   | 14.29            | "  | "  | "   | "   | 13.69            | "  | "  | "   | "   |
|                                                       | 18                          | 14.99            | "  | "  | "   | "   | 14.29            | "  | "  | "   | "   | 13.69            | "  | "  | "   | "   | 13.15            | "  | "  | "   | "   |
|                                                       | 20                          | 14.29            | "  | "  | "   | "   | 13.69            | "  | "  | "   | "   | 13.15            | "  | "  | "   | "   | 12.67            | "  | "  | "   | "   |
|                                                       | 22                          | 13.69            | "  | "  | "   | "   | 13.15            | "  | "  | "   | "   | 12.67            | "  | "  | "   | "   | 12.24            | "  | "  | "   | "   |
|                                                       | 24                          | 13.15            | "  | "  | "   | "   | 12.67            | "  | "  | "   | "   | 12.24            | "  | "  | "   | "   | 11.85            | "  | "  | "   | "   |
| 59 (2.8)                                              |                             | 23.12            | "  | "  | "   | "   | 20.68            | "  | "  | "   | "   | 18.88            | "  | "  | "   | "   | 17.48            | "  | "  | "   | "   |
|                                                       | 8                           | 20.68            | "  | "  | "   | "   | 18.88            | "  | "  | "   | "   | 17.48            | "  | "  | "   | "   | 16.35            | "  | "  | "   | "   |
|                                                       | 10                          | 18.88            | "  | "  | "   | "   | 17.48            | "  | "  | "   | "   | 16.35            | "  | "  | "   | "   | 15.41            | "  | "  | "   | "   |
|                                                       | 12                          | 17.48            | "  | "  | "   | "   | 16.35            | "  | "  | "   | "   | 15.41            | "  | "  | "   | "   | 14.62            | "  | "  | "   | "   |
|                                                       | 14                          | 16.35            | "  | "  | "   | "   | 15.41            | "  | "  | "   | "   | 14.62            | "  | "  | "   | "   | 13.94            | "  | "  | "   | "   |
|                                                       | 16                          | 15.41            | "  | "  | "   | "   | 14.62            | "  | "  | "   | "   | 13.94            | "  | "  | "   | "   | 13.35            | "  | "  | "   | "   |
|                                                       | 18                          | 14.62            | "  | "  | "   | "   | 13.94            | "  | "  | "   | "   | 13.35            | "  | "  | "   | "   | 12.83            | "  | "  | "   | "   |
|                                                       | 20                          | 13.94            | "  | "  | "   | "   | 13.35            | "  | "  | "   | "   | 12.83            | "  | "  | "   | "   | 12.36            | "  | "  | "   | "   |
|                                                       | 22                          | 13.35            | "  | "  | "   | "   | 12.83            | "  | "  | "   | "   | 12.36            | "  | "  | "   | "   | 11.94            | "  | "  | "   | "   |
|                                                       | 24                          | 12.83            | "  | "  | "   | "   | 12.36            | "  | "  | "   | "   | 11.94            | "  | "  | "   | "   | 11.56            | "  | "  | "   | "   |



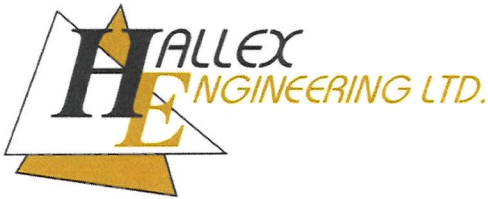


Table 4.3 (Continued)

| Ground<br>Snow<br>Load S <sub>s</sub><br>PSF<br>(kPa) | Roof<br>Projections<br>(ft) | Overhang = 0'-0" |    |    |     |     | Overhang = 1'-0" |    |    |     |     | Overhang = 2'-0" |    |    |     |     | Overhang = 3'-0" |    |    |     |     |
|-------------------------------------------------------|-----------------------------|------------------|----|----|-----|-----|------------------|----|----|-----|-----|------------------|----|----|-----|-----|------------------|----|----|-----|-----|
| 63 (3.0)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 22.58            | "  | "  | "   | "   | 20.20            | "  | "  | "   | "   | 18.44            | "  | "  | "   | "   | 17.07            | "  | "  | "   | "   |
|                                                       | 10                          | 20.20            | "  | "  | "   | "   | 18.44            | "  | "  | "   | "   | 17.07            | "  | "  | "   | "   | 15.97            | "  | "  | "   | "   |
|                                                       | 12                          | 18.44            | "  | "  | "   | "   | 17.07            | "  | "  | "   | "   | 15.97            | "  | "  | "   | "   | 15.05            | "  | "  | "   | "   |
|                                                       | 14                          | 17.07            | "  | "  | "   | "   | 15.97            | "  | "  | "   | "   | 15.05            | "  | "  | "   | "   | 14.28            | "  | "  | "   | "   |
|                                                       | 16                          | 15.97            | "  | "  | "   | "   | 15.05            | "  | "  | "   | "   | 14.28            | "  | "  | "   | "   | 13.62            | "  | "  | "   | "   |
|                                                       | 18                          | 15.05            | "  | "  | "   | "   | 14.28            | "  | "  | "   | "   | 13.62            | "  | "  | "   | "   | 13.04            | "  | "  | "   | "   |
|                                                       | 20                          | 14.28            | "  | "  | "   | "   | 13.62            | "  | "  | "   | "   | 13.04            | "  | "  | "   | "   | 12.52            | "  | "  | "   | "   |
|                                                       | 22                          | 13.62            | "  | "  | "   | "   | 13.04            | "  | "  | "   | "   | 12.52            | "  | "  | "   | "   | 12.07            | "  | "  | "   | "   |
| 69 (3.2)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 22.07            | "  | "  | "   | "   | 19.74            | "  | "  | "   | "   | 18.02            | "  | "  | "   | "   | 16.69            | "  | "  | "   | "   |
|                                                       | 10                          | 19.74            | "  | "  | "   | "   | 18.02            | "  | "  | "   | "   | 16.69            | "  | "  | "   | "   | 15.61            | "  | "  | "   | "   |
|                                                       | 12                          | 18.02            | "  | "  | "   | "   | 16.69            | "  | "  | "   | "   | 15.61            | "  | "  | "   | "   | 14.72            | "  | "  | "   | "   |
|                                                       | 14                          | 16.69            | "  | "  | "   | "   | 15.61            | "  | "  | "   | "   | 14.72            | "  | "  | "   | "   | 13.96            | "  | "  | "   | "   |
|                                                       | 16                          | 15.61            | "  | "  | "   | "   | 14.72            | "  | "  | "   | "   | 13.96            | "  | "  | "   | "   | 13.31            | "  | "  | "   | "   |
|                                                       | 18                          | 14.72            | "  | "  | "   | "   | 13.96            | "  | "  | "   | "   | 13.31            | "  | "  | "   | "   | 12.74            | "  | "  | "   | "   |
|                                                       | 20                          | 13.96            | "  | "  | "   | "   | 13.31            | "  | "  | "   | "   | 12.74            | "  | "  | "   | "   | 12.24            | "  | "  | "   | "   |
|                                                       | 22                          | 13.31            | "  | "  | "   | "   | 12.74            | "  | "  | "   | "   | 12.24            | "  | "  | "   | "   | 11.80            | "  | "  | "   | "   |
| 71 (3.4)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 21.60            | "  | "  | "   | "   | 19.32            | "  | "  | "   | "   | 17.64            | "  | "  | "   | "   | 16.33            | "  | "  | "   | "   |
|                                                       | 10                          | 19.32            | "  | "  | "   | "   | 17.64            | "  | "  | "   | "   | 16.33            | "  | "  | "   | "   | 15.27            | "  | "  | "   | "   |
|                                                       | 12                          | 17.64            | "  | "  | "   | "   | 16.33            | "  | "  | "   | "   | 15.27            | "  | "  | "   | "   | 14.40            | "  | "  | "   | "   |
|                                                       | 14                          | 16.33            | "  | "  | "   | "   | 15.27            | "  | "  | "   | "   | 14.40            | "  | "  | "   | "   | 13.66            | "  | "  | "   | "   |
|                                                       | 16                          | 15.27            | "  | "  | "   | "   | 14.40            | "  | "  | "   | "   | 13.66            | "  | "  | "   | "   | 13.03            | "  | "  | "   | "   |
|                                                       | 18                          | 14.40            | "  | "  | "   | "   | 13.66            | "  | "  | "   | "   | 13.03            | "  | "  | "   | "   | 12.47            | "  | "  | "   | "   |
|                                                       | 20                          | 13.66            | "  | "  | "   | "   | 13.03            | "  | "  | "   | "   | 12.47            | "  | "  | "   | "   | 11.98            | "  | "  | "   | "   |
|                                                       | 22                          | 13.03            | "  | "  | "   | "   | 12.47            | "  | "  | "   | "   | 11.98            | "  | "  | "   | "   | 11.55            | "  | "  | "   | "   |
| 75 (3.6)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 21.16            | "  | "  | "   | "   | 18.92            | "  | "  | "   | "   | 17.27            | "  | "  | "   | "   | 15.99            | "  | "  | "   | "   |
|                                                       | 10                          | 18.92            | "  | "  | "   | "   | 17.27            | "  | "  | "   | "   | 15.99            | "  | "  | "   | "   | 14.96            | "  | "  | "   | "   |
|                                                       | 12                          | 17.27            | "  | "  | "   | "   | 15.99            | "  | "  | "   | "   | 14.96            | "  | "  | "   | "   | 14.10            | "  | "  | "   | "   |
|                                                       | 14                          | 15.99            | "  | "  | "   | "   | 14.96            | "  | "  | "   | "   | 14.10            | "  | "  | "   | "   | 13.38            | "  | "  | "   | "   |
|                                                       | 16                          | 14.96            | "  | "  | "   | "   | 14.10            | "  | "  | "   | "   | 13.38            | "  | "  | "   | "   | 12.76            | "  | "  | "   | "   |
|                                                       | 18                          | 14.10            | "  | "  | "   | "   | 13.38            | "  | "  | "   | "   | 12.76            | "  | "  | "   | "   | 12.22            | "  | "  | "   | "   |
|                                                       | 20                          | 13.38            | "  | "  | "   | "   | 12.76            | "  | "  | "   | "   | 12.22            | "  | "  | "   | "   | 11.74            | "  | "  | "   | "   |
|                                                       | 22                          | 12.76            | "  | "  | "   | "   | 12.22            | "  | "  | "   | "   | 11.74            | "  | "  | "   | "   | 11.31            | "  | "  | "   | "   |
| 79 (3.8)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 20.74            | "  | "  | "   | "   | 18.55            | "  | "  | "   | "   | 16.93            | "  | "  | "   | "   | 15.68            | "  | "  | "   | "   |
|                                                       | 10                          | 18.55            | "  | "  | "   | "   | 16.93            | "  | "  | "   | "   | 15.68            | "  | "  | "   | "   | 14.67            | "  | "  | "   | "   |
|                                                       | 12                          | 16.93            | "  | "  | "   | "   | 15.68            | "  | "  | "   | "   | 14.67            | "  | "  | "   | "   | 13.83            | "  | "  | "   | "   |
|                                                       | 14                          | 15.68            | "  | "  | "   | "   | 14.67            | "  | "  | "   | "   | 13.83            | "  | "  | "   | "   | 13.12            | "  | "  | "   | "   |
|                                                       | 16                          | 14.67            | "  | "  | "   | "   | 13.83            | "  | "  | "   | "   | 13.12            | "  | "  | "   | "   | 12.51            | "  | "  | "   | "   |
|                                                       | 18                          | 13.83            | "  | "  | "   | "   | 13.12            | "  | "  | "   | "   | 12.51            | "  | "  | "   | "   | 11.97            | "  | "  | "   | "   |
|                                                       | 20                          | 13.12            | "  | "  | "   | "   | 12.51            | "  | "  | "   | "   | 11.97            | "  | "  | "   | "   | 11.50            | "  | "  | "   | "   |
|                                                       | 22                          | 12.51            | "  | "  | "   | "   | 11.97            | "  | "  | "   | "   | 11.50            | "  | "  | "   | "   | 11.09            | "  | "  | "   | "   |



- Structural elements and systems made of aluminum must conform to CSA S157-17/S157.1-17 *Strength design in aluminum/Commentary on CSA S157-17, Strength design in aluminum.* and CSA S157-17, *Strength design in aluminum*
- Aluminum alloy must conform to mechanical requirements of ISO 6361-2:1990, ISO 6362-2:1990 or United States Department of Defense MIL-HDBK-5G 1994.

## BUILDING CODE

- The design is in accordance with *OBC 2012*. Applicable factored structural loads are taken into account with limit states design as set by the applicable building code and CSA 157-17 *Strength design in aluminum*
- Load combination governing spans 1.25 DL + 1.5 SL in accordance with *OBC 2012*.
- Roof structure is of residential use only. Variation from intended use and individual conditions require consultation with the engineer of record.
- Maximum spans do not consider snow build-up conditions as described in the *OBC 2012*. Snow built-up conditions require consultation with the engineer of record.
- Changes to the roof system require consultation with the engineer of record.
- Variation from intended use and individual conditions require consultation with the engineer of record.

### LOAD SPAN SELECTION TABLE GENERAL NOTES

- Lateral and seismic connections to base building structure are to be designed by others.
- Span between posts is constant for varying post heights per constant roof projection and overhang.



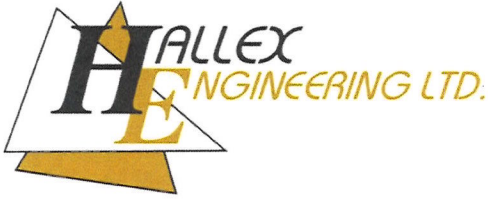


Table 4.4. POST SPACING TABLE GOVERNED BY DEFLECTION

HEAVY DUTY BOX-GIRDER & BOX POSTS WITH ARCYLIC (16 mm THICK), POLYCARBONATE (16 mm THICK) OR TEMPERED GLASS (6 mm OR 8 mm THICK) PANELS

| Ground<br>Snow<br>Load S <sub>s</sub><br>PSF<br>(kPa) | Roof<br>Projections<br>(ft) | Overhang = 0'-0" |    |    |     |     | Overhang = 1'-0" |    |    |     |     | Overhang = 2'-0" |    |    |     |     | Overhang = 3'-0" |    |    |     |     |
|-------------------------------------------------------|-----------------------------|------------------|----|----|-----|-----|------------------|----|----|-----|-----|------------------|----|----|-----|-----|------------------|----|----|-----|-----|
| 25 (1.2)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 19.99            | "  | "  | "   | "   | 18.55            | "  | "  | "   | "   | 17.46            | "  | "  | "   | "   | 16.59            | "  | "  | "   | "   |
|                                                       | 10                          | 18.55            | "  | "  | "   | "   | 17.46            | "  | "  | "   | "   | 16.59            | "  | "  | "   | "   | 15.86            | "  | "  | "   | "   |
|                                                       | 12                          | 17.46            | "  | "  | "   | "   | 16.59            | "  | "  | "   | "   | 15.86            | "  | "  | "   | "   | 15.25            | "  | "  | "   | "   |
|                                                       | 14                          | 16.59            | "  | "  | "   | "   | 15.86            | "  | "  | "   | "   | 15.25            | "  | "  | "   | "   | 14.73            | "  | "  | "   | "   |
|                                                       | 16                          | 15.86            | "  | "  | "   | "   | 15.25            | "  | "  | "   | "   | 14.73            | "  | "  | "   | "   | 14.27            | "  | "  | "   | "   |
|                                                       | 18                          | 15.25            | "  | "  | "   | "   | 14.73            | "  | "  | "   | "   | 14.27            | "  | "  | "   | "   | 13.86            | "  | "  | "   | "   |
|                                                       | 20                          | 14.73            | "  | "  | "   | "   | 14.27            | "  | "  | "   | "   | 13.86            | "  | "  | "   | "   | 13.49            | "  | "  | "   | "   |
|                                                       | 22                          | 14.27            | "  | "  | "   | "   | 13.86            | "  | "  | "   | "   | 13.49            | "  | "  | "   | "   | 13.16            | "  | "  | "   | "   |
| 29 (1.4)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 19.34            | "  | "  | "   | "   | 17.95            | "  | "  | "   | "   | 16.89            | "  | "  | "   | "   | 16.05            | "  | "  | "   | "   |
|                                                       | 10                          | 17.95            | "  | "  | "   | "   | 16.89            | "  | "  | "   | "   | 16.05            | "  | "  | "   | "   | 15.35            | "  | "  | "   | "   |
|                                                       | 12                          | 16.89            | "  | "  | "   | "   | 16.05            | "  | "  | "   | "   | 15.35            | "  | "  | "   | "   | 14.76            | "  | "  | "   | "   |
|                                                       | 14                          | 16.05            | "  | "  | "   | "   | 15.35            | "  | "  | "   | "   | 14.76            | "  | "  | "   | "   | 14.25            | "  | "  | "   | "   |
|                                                       | 16                          | 15.35            | "  | "  | "   | "   | 14.76            | "  | "  | "   | "   | 14.25            | "  | "  | "   | "   | 13.80            | "  | "  | "   | "   |
|                                                       | 18                          | 14.76            | "  | "  | "   | "   | 14.25            | "  | "  | "   | "   | 13.80            | "  | "  | "   | "   | 13.41            | "  | "  | "   | "   |
|                                                       | 20                          | 14.25            | "  | "  | "   | "   | 13.80            | "  | "  | "   | "   | 13.41            | "  | "  | "   | "   | 13.06            | "  | "  | "   | "   |
|                                                       | 22                          | 13.80            | "  | "  | "   | "   | 13.41            | "  | "  | "   | "   | 13.06            | "  | "  | "   | "   | 12.74            | "  | "  | "   | "   |
| 33 (1.6)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 18.77            | "  | "  | "   | "   | 17.42            | "  | "  | "   | "   | 16.40            | "  | "  | "   | "   | 15.57            | "  | "  | "   | "   |
|                                                       | 10                          | 17.42            | "  | "  | "   | "   | 16.40            | "  | "  | "   | "   | 15.57            | "  | "  | "   | "   | 14.90            | "  | "  | "   | "   |
|                                                       | 12                          | 16.40            | "  | "  | "   | "   | 15.57            | "  | "  | "   | "   | 14.90            | "  | "  | "   | "   | 14.32            | "  | "  | "   | "   |
|                                                       | 14                          | 15.57            | "  | "  | "   | "   | 14.90            | "  | "  | "   | "   | 14.32            | "  | "  | "   | "   | 13.83            | "  | "  | "   | "   |
|                                                       | 16                          | 14.90            | "  | "  | "   | "   | 14.32            | "  | "  | "   | "   | 13.83            | "  | "  | "   | "   | 13.40            | "  | "  | "   | "   |
|                                                       | 18                          | 14.32            | "  | "  | "   | "   | 13.83            | "  | "  | "   | "   | 13.40            | "  | "  | "   | "   | 13.01            | "  | "  | "   | "   |
|                                                       | 20                          | 13.83            | "  | "  | "   | "   | 13.40            | "  | "  | "   | "   | 13.01            | "  | "  | "   | "   | 12.67            | "  | "  | "   | "   |
|                                                       | 22                          | 13.40            | "  | "  | "   | "   | 13.01            | "  | "  | "   | "   | 12.67            | "  | "  | "   | "   | 12.36            | "  | "  | "   | "   |
| 38 (1.8)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 18.26            | "  | "  | "   | "   | 16.95            | "  | "  | "   | "   | 15.95            | "  | "  | "   | "   | 15.15            | "  | "  | "   | "   |
|                                                       | 10                          | 16.95            | "  | "  | "   | "   | 15.95            | "  | "  | "   | "   | 15.15            | "  | "  | "   | "   | 14.49            | "  | "  | "   | "   |
|                                                       | 12                          | 15.95            | "  | "  | "   | "   | 15.15            | "  | "  | "   | "   | 14.49            | "  | "  | "   | "   | 13.93            | "  | "  | "   | "   |
|                                                       | 14                          | 15.15            | "  | "  | "   | "   | 14.49            | "  | "  | "   | "   | 13.93            | "  | "  | "   | "   | 13.45            | "  | "  | "   | "   |
|                                                       | 16                          | 14.49            | "  | "  | "   | "   | 13.93            | "  | "  | "   | "   | 13.45            | "  | "  | "   | "   | 13.03            | "  | "  | "   | "   |
|                                                       | 18                          | 13.93            | "  | "  | "   | "   | 13.45            | "  | "  | "   | "   | 13.03            | "  | "  | "   | "   | 12.66            | "  | "  | "   | "   |
|                                                       | 20                          | 13.45            | "  | "  | "   | "   | 13.03            | "  | "  | "   | "   | 12.66            | "  | "  | "   | "   | 12.33            | "  | "  | "   | "   |
|                                                       | 22                          | 13.03            | "  | "  | "   | "   | 12.66            | "  | "  | "   | "   | 12.33            | "  | "  | "   | "   | 12.03            | "  | "  | "   | "   |



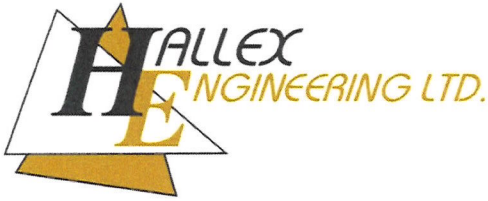


Table 4.4 (Continued)

| Ground<br>Snow<br>Load S <sub>s</sub><br>PSF<br>(kPa) | Roof<br>Projections<br>(ft) | Overhang = 0'-0" |    |    |     |     | Overhang = 1'-0" |    |    |     |     | Overhang = 2'-0" |    |    |     |     | Overhang = 3'-0" |    |    |     |     |
|-------------------------------------------------------|-----------------------------|------------------|----|----|-----|-----|------------------|----|----|-----|-----|------------------|----|----|-----|-----|------------------|----|----|-----|-----|
| 42 (2.0)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 17.80            | "  | "  | "   | "   | 16.53            | "  | "  | "   | "   | 15.55            | "  | "  | "   | "   | 14.77            | "  | "  | "   | "   |
|                                                       | 10                          | 16.53            | "  | "  | "   | "   | 15.55            | "  | "  | "   | "   | 14.77            | "  | "  | "   | "   | 14.13            | "  | "  | "   | "   |
|                                                       | 12                          | 15.55            | "  | "  | "   | "   | 14.77            | "  | "  | "   | "   | 14.13            | "  | "  | "   | "   | 13.59            | "  | "  | "   | "   |
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|                                                       | 16                          | 14.13            | "  | "  | "   | "   | 13.59            | "  | "  | "   | "   | 13.12            | "  | "  | "   | "   | 12.71            | "  | "  | "   | "   |
|                                                       | 18                          | 13.59            | "  | "  | "   | "   | 13.12            | "  | "  | "   | "   | 12.71            | "  | "  | "   | "   | 12.34            | "  | "  | "   | "   |
|                                                       | 20                          | 13.12            | "  | "  | "   | "   | 12.71            | "  | "  | "   | "   | 12.34            | "  | "  | "   | "   | 12.02            | "  | "  | "   | "   |
|                                                       | 22                          | 12.71            | "  | "  | "   | "   | 12.34            | "  | "  | "   | "   | 12.02            | "  | "  | "   | "   | 11.72            | "  | "  | "   | "   |
| 46 (2.2)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 17.39            | "  | "  | "   | "   | 16.14            | "  | "  | "   | "   | 15.19            | "  | "  | "   | "   | 14.43            | "  | "  | "   | "   |
|                                                       | 10                          | 16.14            | "  | "  | "   | "   | 15.19            | "  | "  | "   | "   | 14.43            | "  | "  | "   | "   | 13.80            | "  | "  | "   | "   |
|                                                       | 12                          | 15.19            | "  | "  | "   | "   | 14.43            | "  | "  | "   | "   | 13.80            | "  | "  | "   | "   | 13.27            | "  | "  | "   | "   |
|                                                       | 14                          | 14.43            | "  | "  | "   | "   | 13.80            | "  | "  | "   | "   | 13.27            | "  | "  | "   | "   | 12.81            | "  | "  | "   | "   |
|                                                       | 16                          | 13.80            | "  | "  | "   | "   | 13.27            | "  | "  | "   | "   | 12.81            | "  | "  | "   | "   | 12.41            | "  | "  | "   | "   |
|                                                       | 18                          | 13.27            | "  | "  | "   | "   | 12.81            | "  | "  | "   | "   | 12.41            | "  | "  | "   | "   | 12.06            | "  | "  | "   | "   |
|                                                       | 20                          | 12.81            | "  | "  | "   | "   | 12.41            | "  | "  | "   | "   | 12.06            | "  | "  | "   | "   | 11.74            | "  | "  | "   | "   |
|                                                       | 22                          | 12.41            | "  | "  | "   | "   | 12.06            | "  | "  | "   | "   | 11.74            | "  | "  | "   | "   | 11.45            | "  | "  | "   | "   |
| 50 (2.4)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 17.01            | "  | "  | "   | "   | 15.79            | "  | "  | "   | "   | 14.86            | "  | "  | "   | "   | 14.11            | "  | "  | "   | "   |
|                                                       | 10                          | 15.79            | "  | "  | "   | "   | 14.86            | "  | "  | "   | "   | 14.11            | "  | "  | "   | "   | 13.50            | "  | "  | "   | "   |
|                                                       | 12                          | 14.86            | "  | "  | "   | "   | 14.11            | "  | "  | "   | "   | 13.50            | "  | "  | "   | "   | 12.98            | "  | "  | "   | "   |
|                                                       | 14                          | 14.11            | "  | "  | "   | "   | 13.50            | "  | "  | "   | "   | 12.98            | "  | "  | "   | "   | 12.53            | "  | "  | "   | "   |
|                                                       | 16                          | 13.50            | "  | "  | "   | "   | 12.98            | "  | "  | "   | "   | 12.53            | "  | "  | "   | "   | 12.14            | "  | "  | "   | "   |
|                                                       | 18                          | 12.98            | "  | "  | "   | "   | 12.53            | "  | "  | "   | "   | 12.14            | "  | "  | "   | "   | 11.79            | "  | "  | "   | "   |
|                                                       | 20                          | 12.53            | "  | "  | "   | "   | 12.14            | "  | "  | "   | "   | 11.79            | "  | "  | "   | "   | 11.48            | "  | "  | "   | "   |
|                                                       | 22                          | 12.14            | "  | "  | "   | "   | 11.79            | "  | "  | "   | "   | 11.48            | "  | "  | "   | "   | 11.20            | "  | "  | "   | "   |
| 54 (2.6)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 16.66            | "  | "  | "   | "   | 15.47            | "  | "  | "   | "   | 14.55            | "  | "  | "   | "   | 13.83            | "  | "  | "   | "   |
|                                                       | 10                          | 15.47            | "  | "  | "   | "   | 14.55            | "  | "  | "   | "   | 13.83            | "  | "  | "   | "   | 13.22            | "  | "  | "   | "   |
|                                                       | 12                          | 14.55            | "  | "  | "   | "   | 13.83            | "  | "  | "   | "   | 13.22            | "  | "  | "   | "   | 12.71            | "  | "  | "   | "   |
|                                                       | 14                          | 13.83            | "  | "  | "   | "   | 13.22            | "  | "  | "   | "   | 12.71            | "  | "  | "   | "   | 12.28            | "  | "  | "   | "   |
|                                                       | 16                          | 13.22            | "  | "  | "   | "   | 12.71            | "  | "  | "   | "   | 12.28            | "  | "  | "   | "   | 11.89            | "  | "  | "   | "   |
|                                                       | 18                          | 12.71            | "  | "  | "   | "   | 12.28            | "  | "  | "   | "   | 11.89            | "  | "  | "   | "   | 11.55            | "  | "  | "   | "   |
|                                                       | 20                          | 12.28            | "  | "  | "   | "   | 11.89            | "  | "  | "   | "   | 11.55            | "  | "  | "   | "   | 11.25            | "  | "  | "   | "   |
|                                                       | 22                          | 11.89            | "  | "  | "   | "   | 11.55            | "  | "  | "   | "   | 11.25            | "  | "  | "   | "   | 10.97            | "  | "  | "   | "   |
| 59 (2.8)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 16.34            | "  | "  | "   | "   | 15.17            | "  | "  | "   | "   | 14.27            | "  | "  | "   | "   | 13.56            | "  | "  | "   | "   |
|                                                       | 10                          | 15.17            | "  | "  | "   | "   | 14.27            | "  | "  | "   | "   | 13.56            | "  | "  | "   | "   | 12.97            | "  | "  | "   | "   |
|                                                       | 12                          | 14.27            | "  | "  | "   | "   | 13.56            | "  | "  | "   | "   | 12.97            | "  | "  | "   | "   | 12.47            | "  | "  | "   | "   |
|                                                       | 14                          | 13.56            | "  | "  | "   | "   | 12.97            | "  | "  | "   | "   | 12.47            | "  | "  | "   | "   | 12.04            | "  | "  | "   | "   |
|                                                       | 16                          | 12.97            | "  | "  | "   | "   | 12.47            | "  | "  | "   | "   | 12.04            | "  | "  | "   | "   | 11.66            | "  | "  | "   | "   |
|                                                       | 18                          | 12.47            | "  | "  | "   | "   | 12.04            | "  | "  | "   | "   | 11.66            | "  | "  | "   | "   | 11.33            | "  | "  | "   | "   |
|                                                       | 20                          | 12.04            | "  | "  | "   | "   | 11.66            | "  | "  | "   | "   | 11.33            | "  | "  | "   | "   | 11.03            | "  | "  | "   | "   |
|                                                       | 22                          | 11.66            | "  | "  | "   | "   | 11.33            | "  | "  | "   | "   | 11.03            | "  | "  | "   | "   | 10.76            | "  | "  | "   | "   |

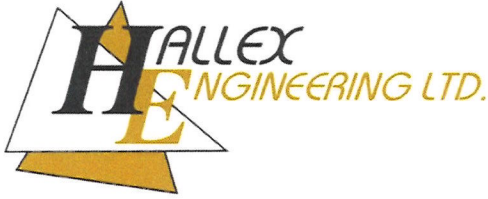


Table 4.4 (Continued)

| Ground<br>Snow<br>Load S <sub>s</sub><br>PSF<br>(kPa) | Roof<br>Projections<br>(ft) | Overhang = 0'-0" |    |    |     |     | Overhang = 1'-0" |    |    |     |     | Overhang = 2'-0" |    |    |     |     | Overhang = 3'-0" |    |    |     |     |
|-------------------------------------------------------|-----------------------------|------------------|----|----|-----|-----|------------------|----|----|-----|-----|------------------|----|----|-----|-----|------------------|----|----|-----|-----|
| 63 (3.0)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 16.04            | "  | "  | "   | "   | 14.89            | "  | "  | "   | "   | 14.01            | "  | "  | "   | "   | 13.31            | "  | "  | "   | "   |
|                                                       | 10                          | 14.89            | "  | "  | "   | "   | 14.01            | "  | "  | "   | "   | 13.31            | "  | "  | "   | "   | 12.73            | "  | "  | "   | "   |
|                                                       | 12                          | 14.01            | "  | "  | "   | "   | 13.31            | "  | "  | "   | "   | 12.73            | "  | "  | "   | "   | 12.24            | "  | "  | "   | "   |
|                                                       | 14                          | 13.31            | "  | "  | "   | "   | 12.73            | "  | "  | "   | "   | 12.24            | "  | "  | "   | "   | 11.82            | "  | "  | "   | "   |
|                                                       | 16                          | 12.73            | "  | "  | "   | "   | 12.24            | "  | "  | "   | "   | 11.82            | "  | "  | "   | "   | 11.45            | "  | "  | "   | "   |
|                                                       | 18                          | 12.24            | "  | "  | "   | "   | 11.82            | "  | "  | "   | "   | 11.45            | "  | "  | "   | "   | 11.12            | "  | "  | "   | "   |
|                                                       | 20                          | 11.82            | "  | "  | "   | "   | 11.45            | "  | "  | "   | "   | 11.12            | "  | "  | "   | "   | 10.83            | "  | "  | "   | "   |
|                                                       | 22                          | 11.45            | "  | "  | "   | "   | 11.12            | "  | "  | "   | "   | 10.83            | "  | "  | "   | "   | 10.57            | "  | "  | "   | "   |
| 69 (3.2)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 15.76            | "  | "  | "   | "   | 14.63            | "  | "  | "   | "   | 13.77            | "  | "  | "   | "   | 13.08            | "  | "  | "   | "   |
|                                                       | 10                          | 14.63            | "  | "  | "   | "   | 13.77            | "  | "  | "   | "   | 13.08            | "  | "  | "   | "   | 12.51            | "  | "  | "   | "   |
|                                                       | 12                          | 13.77            | "  | "  | "   | "   | 13.08            | "  | "  | "   | "   | 12.51            | "  | "  | "   | "   | 12.03            | "  | "  | "   | "   |
|                                                       | 14                          | 13.08            | "  | "  | "   | "   | 12.51            | "  | "  | "   | "   | 12.03            | "  | "  | "   | "   | 11.62            | "  | "  | "   | "   |
|                                                       | 16                          | 12.51            | "  | "  | "   | "   | 12.03            | "  | "  | "   | "   | 11.62            | "  | "  | "   | "   | 11.25            | "  | "  | "   | "   |
|                                                       | 18                          | 12.03            | "  | "  | "   | "   | 11.62            | "  | "  | "   | "   | 11.25            | "  | "  | "   | "   | 10.93            | "  | "  | "   | "   |
|                                                       | 20                          | 11.62            | "  | "  | "   | "   | 11.25            | "  | "  | "   | "   | 10.93            | "  | "  | "   | "   | 10.64            | "  | "  | "   | "   |
|                                                       | 22                          | 11.25            | "  | "  | "   | "   | 10.93            | "  | "  | "   | "   | 10.64            | "  | "  | "   | "   | 10.38            | "  | "  | "   | "   |
| 71 (3.4)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 15.51            | "  | "  | "   | "   | 14.39            | "  | "  | "   | "   | 13.55            | "  | "  | "   | "   | 12.87            | "  | "  | "   | "   |
|                                                       | 10                          | 14.39            | "  | "  | "   | "   | 13.55            | "  | "  | "   | "   | 12.87            | "  | "  | "   | "   | 12.31            | "  | "  | "   | "   |
|                                                       | 12                          | 13.55            | "  | "  | "   | "   | 12.87            | "  | "  | "   | "   | 12.31            | "  | "  | "   | "   | 11.83            | "  | "  | "   | "   |
|                                                       | 14                          | 12.87            | "  | "  | "   | "   | 12.31            | "  | "  | "   | "   | 11.83            | "  | "  | "   | "   | 11.42            | "  | "  | "   | "   |
|                                                       | 16                          | 12.31            | "  | "  | "   | "   | 11.83            | "  | "  | "   | "   | 11.42            | "  | "  | "   | "   | 11.07            | "  | "  | "   | "   |
|                                                       | 18                          | 11.83            | "  | "  | "   | "   | 11.42            | "  | "  | "   | "   | 11.07            | "  | "  | "   | "   | 10.75            | "  | "  | "   | "   |
|                                                       | 20                          | 11.42            | "  | "  | "   | "   | 11.07            | "  | "  | "   | "   | 10.75            | "  | "  | "   | "   | 10.47            | "  | "  | "   | "   |
|                                                       | 22                          | 11.07            | "  | "  | "   | "   | 10.75            | "  | "  | "   | "   | 10.47            | "  | "  | "   | "   | 10.21            | "  | "  | "   | "   |
| 75 (3.6)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 15.26            | "  | "  | "   | "   | 14.17            | "  | "  | "   | "   | 13.33            | "  | "  | "   | "   | 12.67            | "  | "  | "   | "   |
|                                                       | 10                          | 14.17            | "  | "  | "   | "   | 13.33            | "  | "  | "   | "   | 12.67            | "  | "  | "   | "   | 12.11            | "  | "  | "   | "   |
|                                                       | 12                          | 13.33            | "  | "  | "   | "   | 12.67            | "  | "  | "   | "   | 12.11            | "  | "  | "   | "   | 11.65            | "  | "  | "   | "   |
|                                                       | 14                          | 12.67            | "  | "  | "   | "   | 12.11            | "  | "  | "   | "   | 11.65            | "  | "  | "   | "   | 11.25            | "  | "  | "   | "   |
|                                                       | 16                          | 12.11            | "  | "  | "   | "   | 11.65            | "  | "  | "   | "   | 11.25            | "  | "  | "   | "   | 10.89            | "  | "  | "   | "   |
|                                                       | 18                          | 11.65            | "  | "  | "   | "   | 11.25            | "  | "  | "   | "   | 10.89            | "  | "  | "   | "   | 10.58            | "  | "  | "   | "   |
|                                                       | 20                          | 11.25            | "  | "  | "   | "   | 10.89            | "  | "  | "   | "   | 10.58            | "  | "  | "   | "   | 10.30            | "  | "  | "   | "   |
|                                                       | 22                          | 10.89            | "  | "  | "   | "   | 10.58            | "  | "  | "   | "   | 10.30            | "  | "  | "   | "   | 10.05            | "  | "  | "   | "   |
| 79 (3.8)                                              |                             | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     | Post Height      |    |    |     |     |
|                                                       |                             | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' | 7'               | 8' | 9' | 10' | 12' |
|                                                       | 8                           | 15.03            | "  | "  | "   | "   | 13.96            | "  | "  | "   | "   | 13.13            | "  | "  | "   | "   | 12.48            | "  | "  | "   | "   |
|                                                       | 10                          | 13.96            | "  | "  | "   | "   | 13.13            | "  | "  | "   | "   | 12.48            | "  | "  | "   | "   | 11.93            | "  | "  | "   | "   |
|                                                       | 12                          | 13.13            | "  | "  | "   | "   | 12.48            | "  | "  | "   | "   | 11.93            | "  | "  | "   | "   | 11.47            | "  | "  | "   | "   |
|                                                       | 14                          | 12.48            | "  | "  | "   | "   | 11.93            | "  | "  | "   | "   | 11.47            | "  | "  | "   | "   | 11.08            | "  | "  | "   | "   |
|                                                       | 16                          | 11.93            | "  | "  | "   | "   | 11.47            | "  | "  | "   | "   | 11.08            | "  | "  | "   | "   | 10.73            | "  | "  | "   | "   |
|                                                       | 18                          | 11.47            | "  | "  | "   | "   | 11.08            | "  | "  | "   | "   | 10.73            | "  | "  | "   | "   | 10.42            | "  | "  | "   | "   |
|                                                       | 20                          | 11.08            | "  | "  | "   | "   | 10.73            | "  | "  | "   | "   | 10.42            | "  | "  | "   | "   | 10.15            | "  | "  | "   | "   |
|                                                       | 22                          | 10.73            | "  | "  | "   | "   | 10.42            | "  | "  | "   | "   | 10.15            | "  | "  | "   | "   | 9.90             | "  | "  | "   | "   |



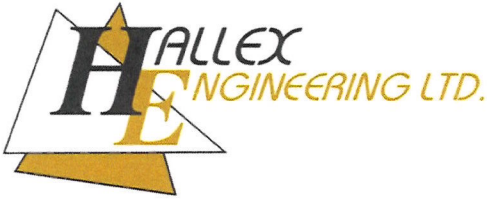
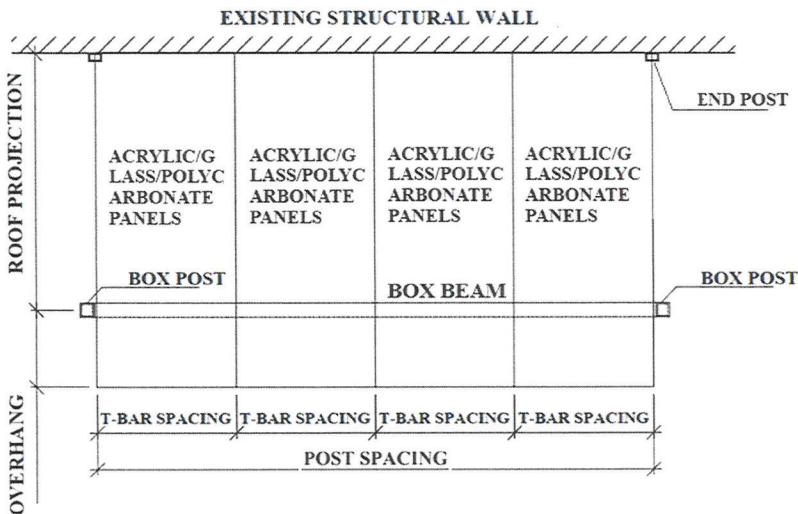


TABLE 4.4 NOTES:



ALUMNINUM:

- Structural elements and systems made of aluminum must conform to CSA S157-17/S157.1-17 *Strength design in aluminum/Commentary on CSA S157-17, Strength design in aluminum.* and CSA S157-17, *Strength design in aluminum*
- Aluminum alloy must conform to mechanical requirements of ISO 6361-2:1990, ISO 6362-2:1990 or United States Department of Defense MIL-HDBK-5G 1994.

BUILDING CODE

- The design is in accordance with *OBC 2012*. Applicable factored structural loads are taken into account with limit states design as set by the applicable building code and CSA 157-17 *Strength design in aluminum*.
- Deflection considering live loads designed not to exceed limits set by *Ontario Building Code 2012* (1/180) provided roof system is consistent with specifications in this table.
- Roof structure is of residential use only. Variation from intended use and individual conditions require consultation with the engineer of record.
- Maximum spans do not consider snow build-up conditions as described in the *OBC*. Snow built-up conditions require consultation with the engineer of record.
- Changes to the roof system require consultation with the engineer of record.
- Variation from intended use and individual conditions require consultation with the engineer of record.

LOAD SPAN SELECTION TABLE GENERAL NOTES

- Lateral and seismic connections to base building structure are to be designed by others.
- Span between posts is constant for varying post heights per constant roof projection and overhang.





# Zoning Non-compliance Checklist

File No.  
A-2024-0308

Applicant: Donya Abasiliasi  
Address: 16 Amberglow Crt  
Zoning: R1F-2070  
By-law 270-2004, as amended

| Category                               | Proposal                                                               | By-law Requirement                                               | Section # |
|----------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------|-----------|
| USE                                    |                                                                        |                                                                  |           |
| LOT DIMENSIONS<br>AREA / DEPTH / WIDTH |                                                                        |                                                                  |           |
| BUILDING SETBACKS -<br>REAR            | To permit a rear yard setback of 2.36m to a proposed sunroom addition, | whereas the by-law requires a minimum rear yard setback of 6.0m. | 2070.2    |
| BUILDING SIZE                          |                                                                        |                                                                  |           |
| BUILDING HEIGHT                        |                                                                        |                                                                  |           |
| COVERAGE                               |                                                                        |                                                                  |           |
| BELOW GRADE<br>ENTRANCE                |                                                                        |                                                                  |           |
| ACCESSORY STRUCTURE<br>SETBACKS        |                                                                        |                                                                  |           |
| ACCESSORY STRUCTURE<br>SIZE / HEIGHT   |                                                                        |                                                                  |           |
| MULTIPLE ACCESSORY<br>STRUCTURES       |                                                                        |                                                                  |           |
| GARAGE WIDTH                           |                                                                        |                                                                  |           |
| LANDSCAPED OPEN<br>SPACE               |                                                                        |                                                                  |           |
| ENCROACHMENTS                          |                                                                        |                                                                  |           |
| TWO-UNIT DWELLING                      |                                                                        |                                                                  |           |
| SCHEDULE "C"                           |                                                                        |                                                                  |           |
| OTHER – DECK                           |                                                                        |                                                                  |           |

Shiza Athar

Reviewed by Zoning

2024/08/07

Date