

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT ONTARIO PROVINCIAL STANDARD DRAWINGS AND SPECIFICATIONS UNLESS NOTED.

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION AND MAINTAINED UNTIL SITE STABILIZATION HAS OCCURRED TO THE SATISFACTION OF THE CITY.

ALL SWALES TOPSOILED AND SODDED.

ALL DISTURBED AREAS TO BE STABILIZED.

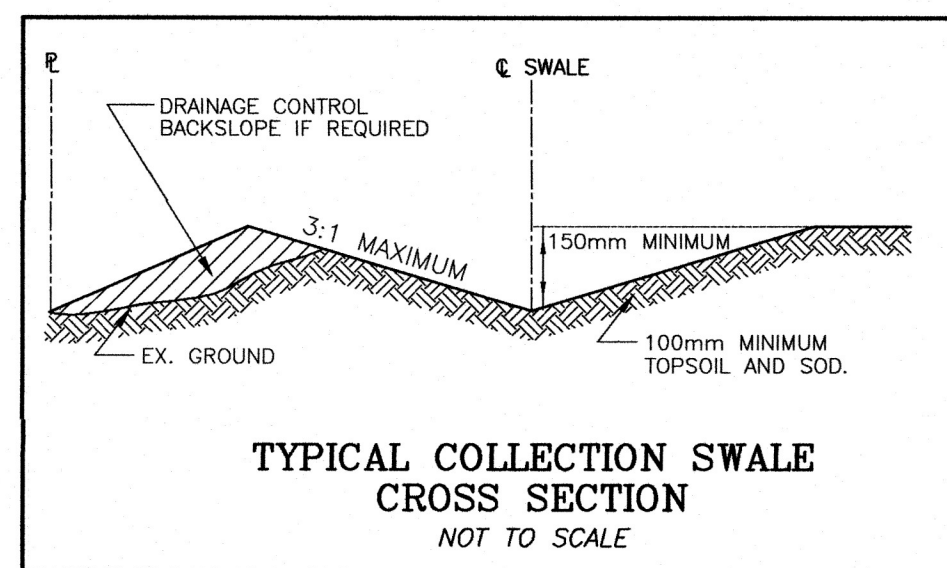
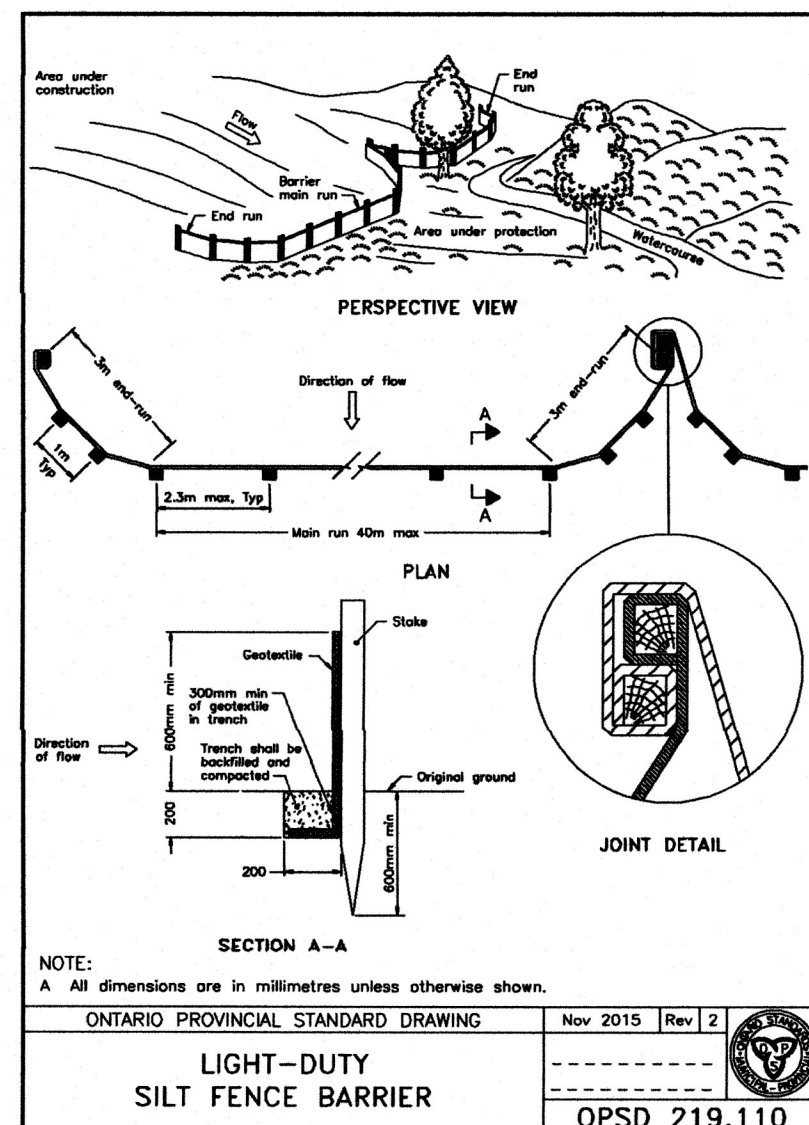
ALL DISTURBED VEGETATED AREAS TO BE SODDED OR SEEDED OVER 100mm OF TOPSOIL TO CITY SPECIFICATION.

ALL DOWNSPOUTS SHALL BE DIRECTED TO SPLASH PADS A MINIMUM OF 0.6m AWAY FROM THE BUILDING EDGE AND CONVEYED TO GRASSED OR GARDEN AREAS.

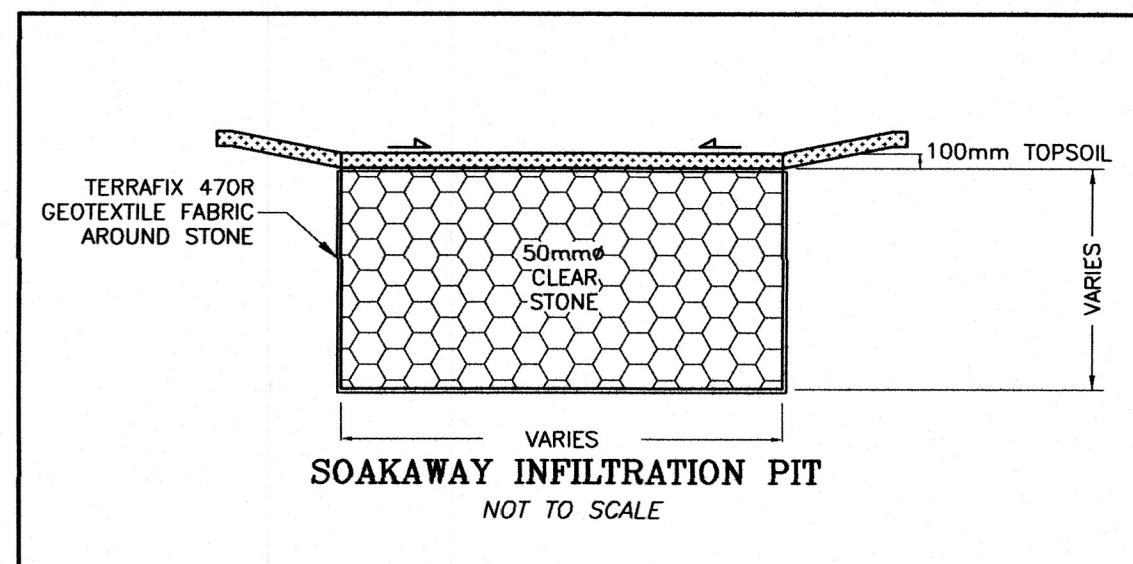
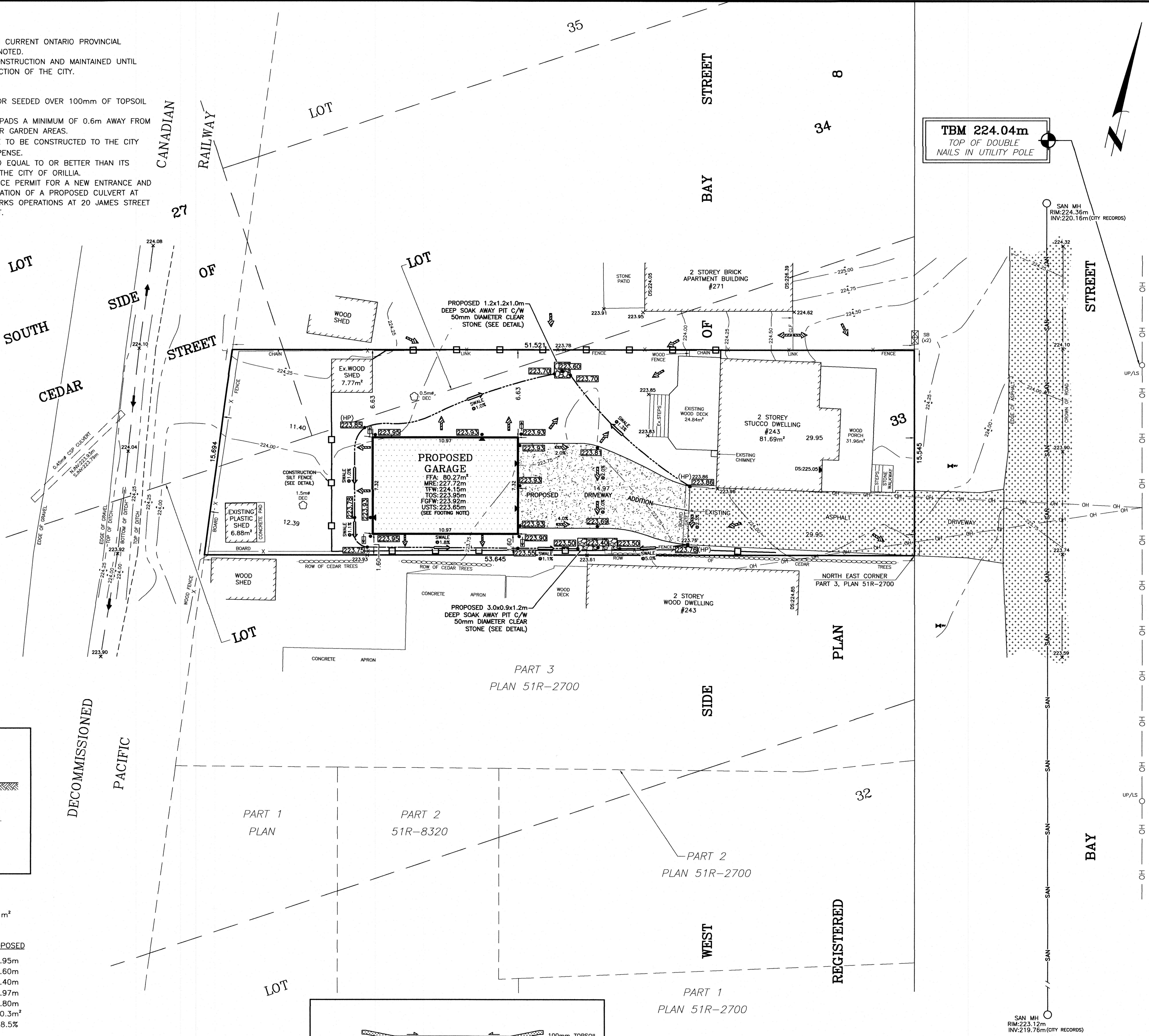
ALL CURB CUTS AND/OR DRIVEWAY ENTRANCES ARE TO BE CONSTRUCTED TO THE CITY OF ORILLIA'S SATISFACTION AT THE APPLICANT'S EXPENSE.

ALL BOULEVARD RESTORATION SHALL BE REINSTATED EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY OF ORILLIA.

THE APPLICANT IS REQUIRED TO OBTAIN AN ENTRANCE PERMIT FOR A NEW ENTRANCE AND A ROAD OCCUPANCY PERMIT PRIOR TO THE INSTALLATION OF A PROPOSED CULVERT AT APPLICANTS EXPENSE. PLEASE CONTACT PUBLIC WORKS OPERATIONS AT 20 JAMES STREET WEST, PHONE 705-325-2284, TO OBTAIN A PERMIT.



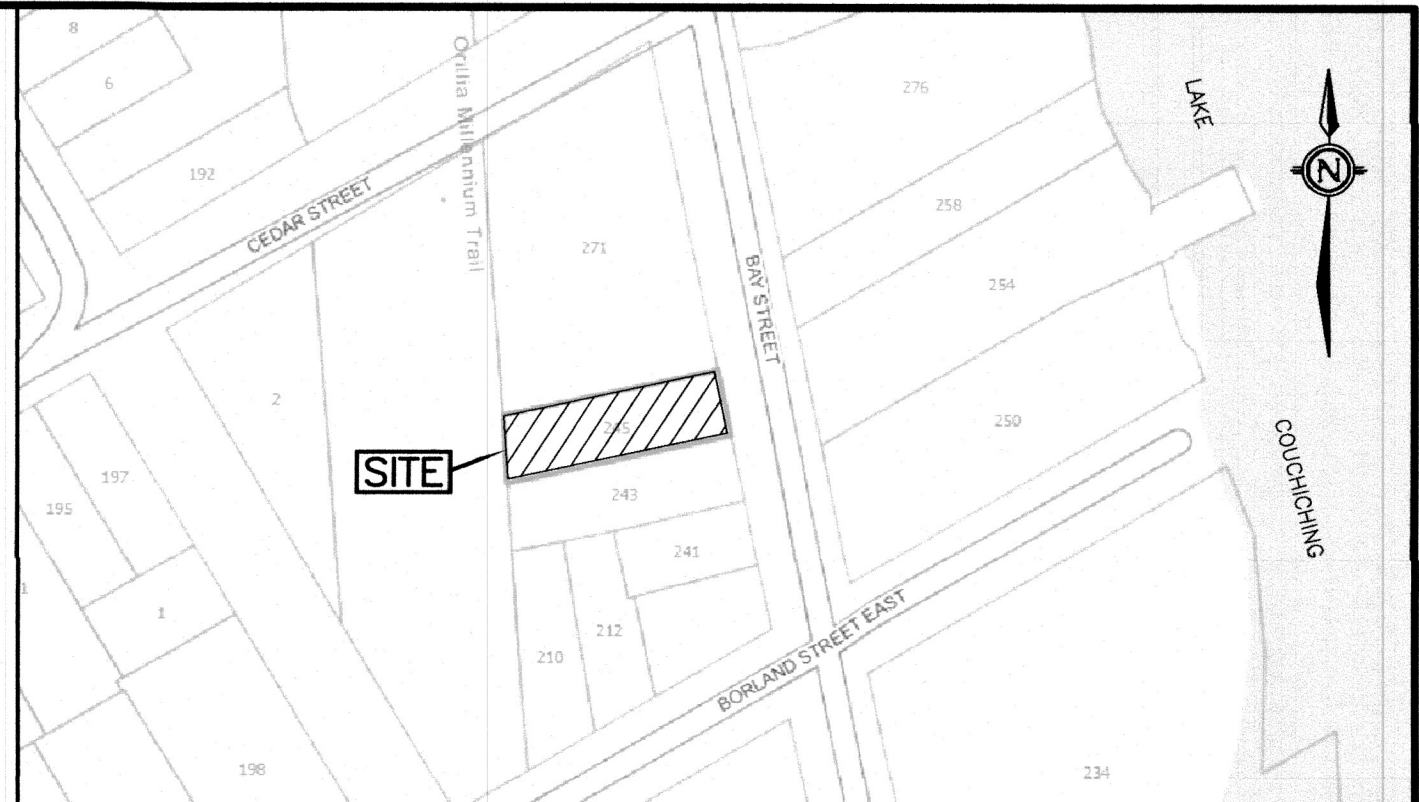
NOTE:
FINAL CONFIRMATION OF EXISTING ZONING REQUIREMENTS AND COMPLIANCE OF THIS PROPOSED CONSTRUCTION IS THE RESPONSIBILITY OF THE OWNER AND THE BUILDING CONTRACTOR. THIS IS A PROPOSED CONSTRUCTION PLAN AND DOES NOT REPRESENT A LEGAL PLAN OF SURVEY.



SURVEYOR'S SIGNATURE

ORILLIA, ONTARIO
JUNE 18, 2026

ONTARIO LAND SURVEYOR



KEY PLAN
(NOT TO SCALE)

NOTES:

ALL ELEVATIONS ARE GEODETIC REFERRED TO GNSS OBSERVATIONS USING THE REAL TIME NETWORK (RTN), GNSS REFERENCE DATUM HTV2 (HEIGHT TRANSFORMATION VERSION 2.0).

DISTANCES AND ELEVATIONS SHOWN HEREON ARE METRIC AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

TOPOGRAPHIC INFORMATION BASED ON FIELD WORK COMPLETED ON NOVEMBER 27, 2025.

TBM- TOP OF DOUBLE NAILS IN UTILITY POLE, LOCATED APPROXIMATELY 22.4m NORTH EAST OF THE NORTH EAST CORNER OF PART 3, 51R-2700, HAVING AN ELEVATION OF 224.04m.

BOUNDARY DIMENSIONS ARE DERIVED FROM A SURVEYOR'S REAL PROPERTY REPORT BY DEARDEN AND STANTON LTD., OLS, DATED NOVEMBER 23, 2015 (DRAWING C-798B).

LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AND SERVICES SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES.

DIMENSIONS AND ELEVATIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR. ANY DISCREPANCIES SHALL BE REPORTED TO THE SURVEYOR.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT PROVINCIAL STANDARD DRAWINGS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.

ALL DOWNSPOUTS, SUMP PUMP AND OTHER DRAINAGE DISCHARGE POINTS SHALL DISCHARGE ON TO A SLOSH PAD OR APPROVED EQUIVALENT TO SAFE RELEASE. DOWNSPOUTS SHALL BE RELEASE A MINIMUM OF 0.6m AWAY FROM BUILDING EDGE AND CONVEYED TO GRASSED OR GARDEN AREAS.

SIDELINE GRADES OF ABUTTING PROPERTIES ARE TO REMAIN AS EXISTING.

MAXIMUM CONTINUOUS LANDSCAPED SIDE SLOPES NOT TO EXCEED 3:1.

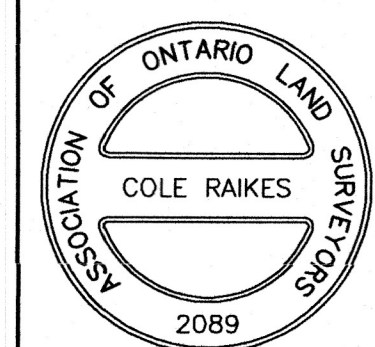
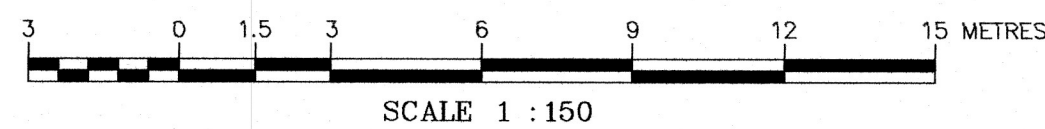
SURFACE DRAINAGE TO BE DIRECTED AWAY FROM THE BUILDING TO EXISTING AND PROPOSED SIDE YARD SWALES.

TEST PIT INFORMATION NOT PROVIDED BY CLIENT, NOR WAS A TEST PIT PRESENT AT THE TIME OF RECORDING TOPOGRAPHIC DETAIL BY THIS FIRM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR/OWNER TO ENSURE THAT THERE IS NO RISK OF HYDROSTATIC PRESSURE AFFECTING THE PROPOSED BUILDING.

2	18/06/26		REVISED AS PER CLIENT RE: REVISED UPDATED PLANS	C.P.R.
1	09/12/25		LOT GRADING PLAN RELEASED FOR COMMENT	C.P.R.
	DD/MM/YY		DESCRIPTION	C.P.R.

LEGEND:

	DENOTES BENCHMARK		DENOTES FOUNDATION FOOTPRINT AREA
○ UP	↑ UTILITY POLE	MRE	↑↑ MID ROOF ELEVATION
○ LS	↑ LIGHT STANDARD	TFW	↑ TOP OF FOUNDATION WALL ELEVATION
☒ SB	↑ SERVICE BOX	TOS	↑↑ TOP OF SLAB ELEVATION
○ MH	↑ MANHOLE	FGFW	↑ FINISHED GRADE (FRONT WALL) ELEVATION
↖	↑ WATER VALVE	USTS	↑↑ UNDERSIDE OF THICKENED SLAB ELEVATION
—SAN—	↑ SANITARY SEWER	DS	↑ DOOR SILL ELEVATION
—OH—	↑ OVERHEAD WIRES	R	↑ RISER
—X—	↑ FENCE	▲	↑ ENTRANCE
∅	↑ DIAMETER	⬜	↑ DOWNSPOUT
INV	↑ INVERT	➡	↑ DITCH FLOW DIRECTION
N,S,E,W	↑ NORTH, SOUTH, EAST, WEST	➡	↑ GROUND SURFACE FLOW DIRECTION
CSP	↑ CORRUGATED STEEL PIPE	⇨	↑ PROPOSED SWALE FLOW DIRECTION
Ex.	↑ EXISTING	HP	↑ SWALE HIGH POINT
⬢	↑ TREE	×228.15	↑ EXISTING GRADE
DEC	↑ DECIDUOUS	• 253.20	↑ PROPOSED GRADE
CLF	↑ CHAIN LINK FENCE		



LOT GRADING PLAN

OF #245 BAY STREET
PART OF LOTS 33 AND 34, WEST SIDE OF BAY STREET
AND PART OF LOT 27, SOUTH SIDE OF CEDAR STREET
REGISTERED PLAN 8

CITY OF ORILLIA

PREPARED FOR: HOWARD LEE

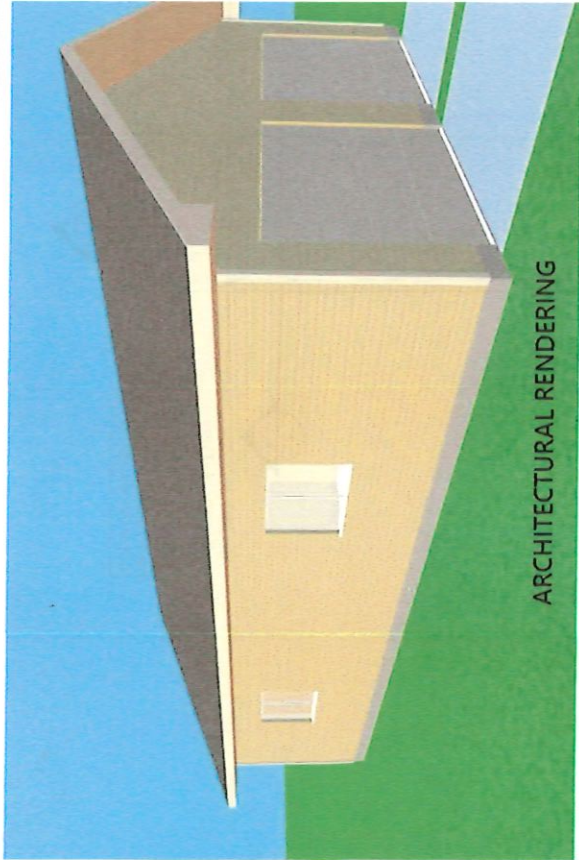
FILE: DK30286_LG (LOT GRADING)

DEARDEN AND STANTON LTD.

ONTARIO LAND SURVEYORS
CANADA LANDS SURVEYORS
89 COLDWATER STREET E. L3V 1W8
PHONE (705)325-9521 FAX (705)325-0241
info@o-stanton.ca www.dearandstanton.com
ORILLIA — ONTARIO

DWG. NO
E-4235

SHEET $\left(\frac{1}{1} \right)$ OF



ARCHITECTURAL RENDERING

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CLIMATIC & DESIGN LOAD DATA	
Orillia, Ontario	
ROOF LOADING	KPA (psf)
GROUND SNOW LOAD S _g	2.4 (50.13 psf)
RAIN LOAD S _r	0.4 (8.35 psf)
SNOW LOAD FACTOR C _b	0.55
ROOF DESIGN SNOW LOAD	1.72 (35.92 psf)
ROOF & CEILING DESIGN DEAD LOAD	0.57 (12.00 psf)
FLOOR LOADING	
GROUND & SECOND FLOOR	1.92 (40.00 psf)
FLOOR/CEILING DESIGN DEAD LOAD	0.72 (15.00 psf)
WIND LOADING	
1/50 WIND PRESSURE	0.36 (7.52 psf)
1/10 WIND PRESSURE	0.28 (5.85 psf)
SEISMIC LOADING	
S _A 02	0.16 (3.34 psf)
TEMPERATURE	
DEGREE DAYS BELOW 18 °C	4260
SOIL	
ASSUMED ALLOWABLE BEARING PRESSURE AT FOOTING FOUNDING ELEVATION(S)	75 (1570 psf) Firm Clay
SOIL CONDITION	Non-Frost Susceptible
FREEZING INDEX (°F) - 100 YR RETURN PERIOD	1984
ELEVATION (METERS)	230
THE DESIGN DEAD LOADS SPECIFIED ABOVE ARE BASED ON THE DIMENSIONS AND MATERIALS LISTED. WHERE DIFFERENT OR HEAVIER MATERIALS ARE PROPOSED THE CONTRACTOR MUST NOTIFY THE DESIGNER PRIOR TO CONSTRUCTION OF ANY LOAD-BEARING ELEMENTS THAT MAY BE AFFECTED.	

GENERAL NOTE: These drawings are not to be scaled. All dimensions must be verified by contractor prior to commencement of any work. Any discrepancies must be reported directly to the designer.



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(705) 326 7371

Phone: (647) 648-3969



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RECENT CHANGES IN THE NEW BUILDING CODE ADDRESSING LATERAL LOADS DUE TO WIND AND EARTH QUAKE HAVE BEEN CONSIDERED IN THE WALL DESIGN FOR THE SUBJECT BUILDING.

Howard Lee
245 Bay Street Orillia
Orillia, Ontario

Issue Date: Jun. 04, 2026

Scale: N/A

TITLE PAGE

Report No: GPS-26-84485
Drawing No: A-1

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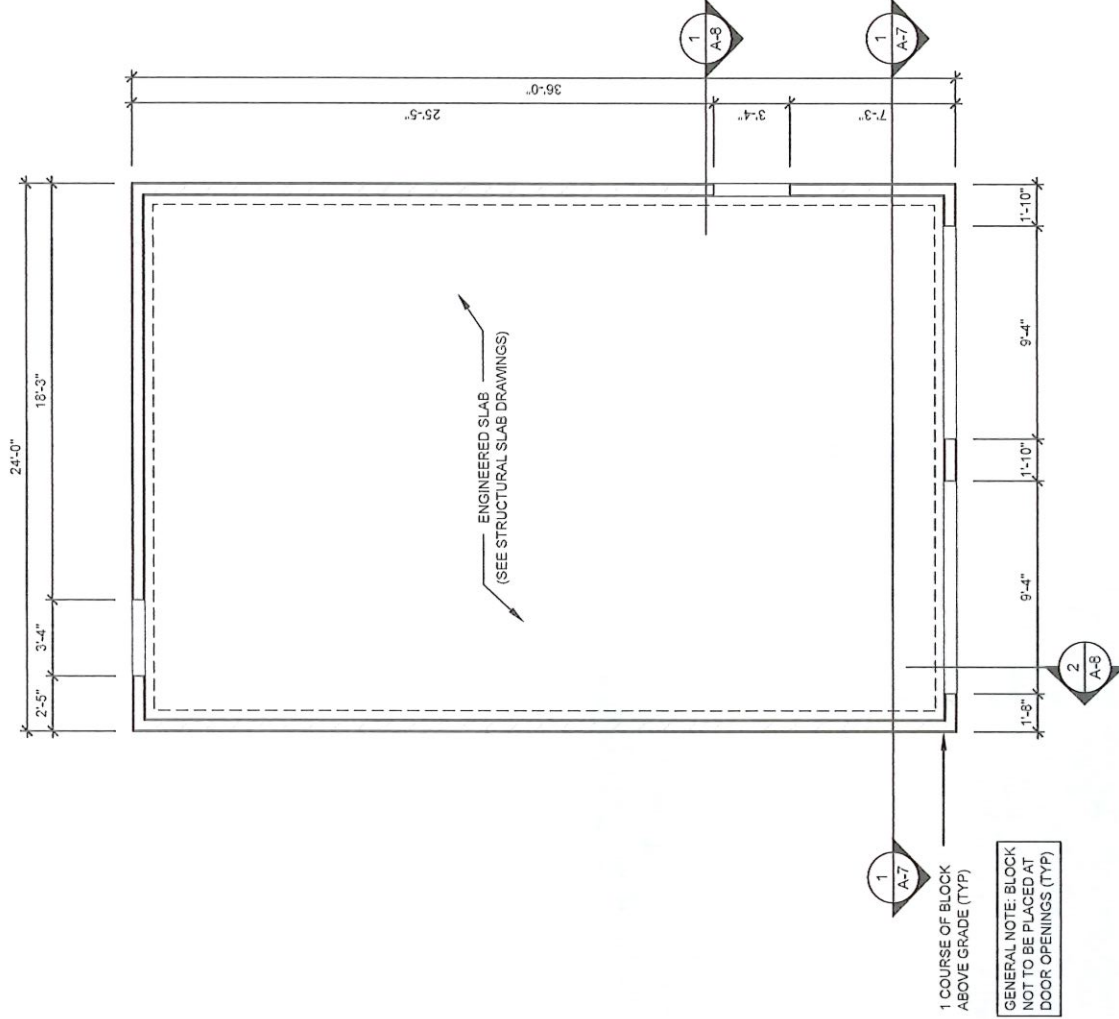
Howard Lee
245 Bay Street Orillia
Orillia, Ontario

Issue Date: Jun. 04, 2026

Scale: 3/16" = 1'-0"

FOUNDATION PLAN

Report No: GPS-26-84485
Drawing No: A-2



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RECENT CHANGES IN THE NEW BUILDING CODE REQUIRE ALL NEW BUILDINGS DUE TO WIND AND EARTH QUAKE HAVE BEEN CONSIDERED IN THE WALL DESIGN FOR THE SUBJECT BUILDING.

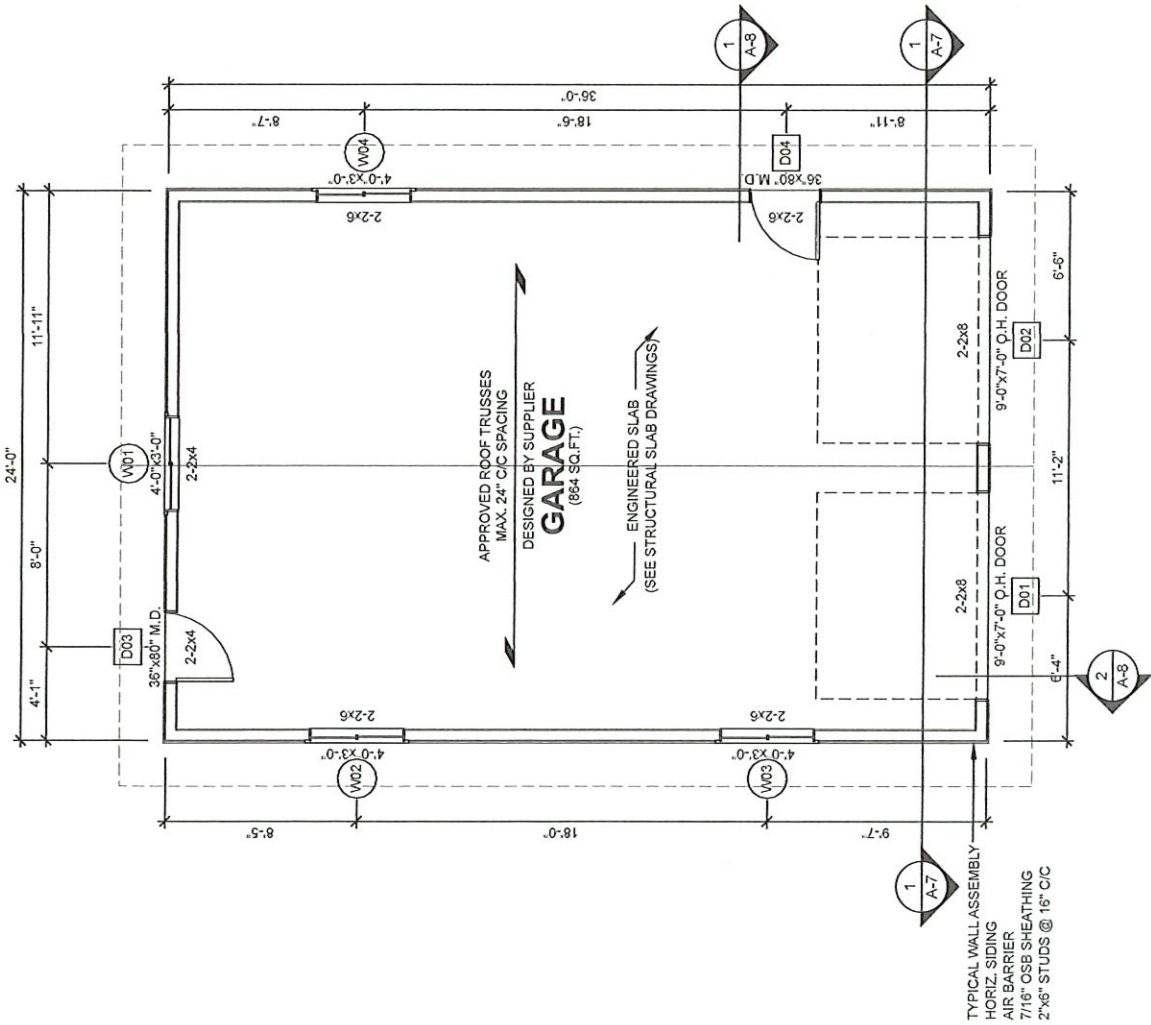
Howard Lee
245 Bay Street Orillia
Orillia, Ontario

Issue Date: Jun. 04, 2026

Scale: 3/16" = 1'-0"

MAIN FLOOR PLAN
864 SQ. FT.

Report No: GPS-26-84485
Drawing No: A-3



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RECENT CHANGES IN THE NEW BUILDING CODE ADDRESSING LATERAL LOADS DUE TO WIND AND EARTH QUAKE HAVE BEEN CONSIDERED IN THE WALL DESIGN FOR THE SUBJECT BUILDING.

Howard Lee
245 Bay Street Orillia
Orillia, Ontario

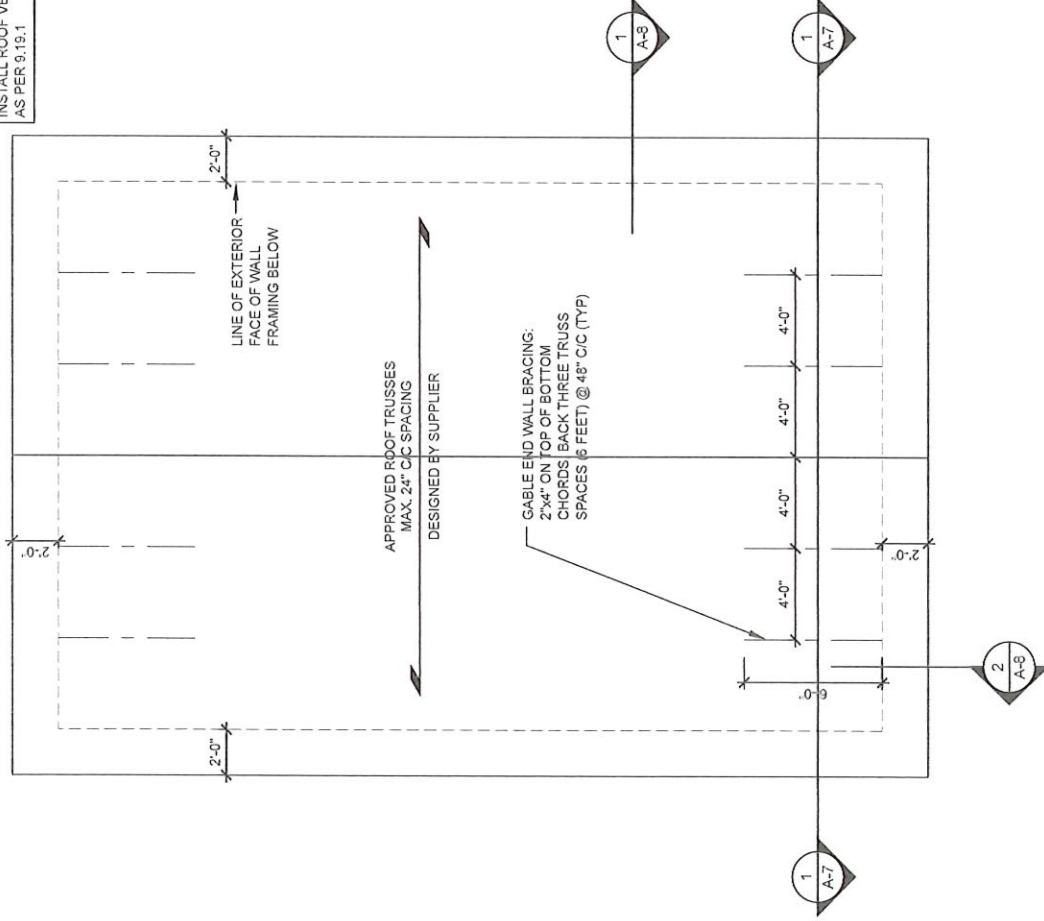
Issue Date: Jun. 04, 2026

Scale: 3/16" = 1'-0"

ROOF PLAN

Report No: GPS-26-84485
Drawing No: A-4

INSTALL ROOF VENTS MIN. 1300
AS PER 9.15.1



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17867 - Orilla Home Hardware Building Centre
(705) 329 7371

Phone: (847) 648-3959



PROFESSIONAL ENGINEER
M.S. REID
100024998
JUN. 04, 2025
PROVINCE OF ONTARIO

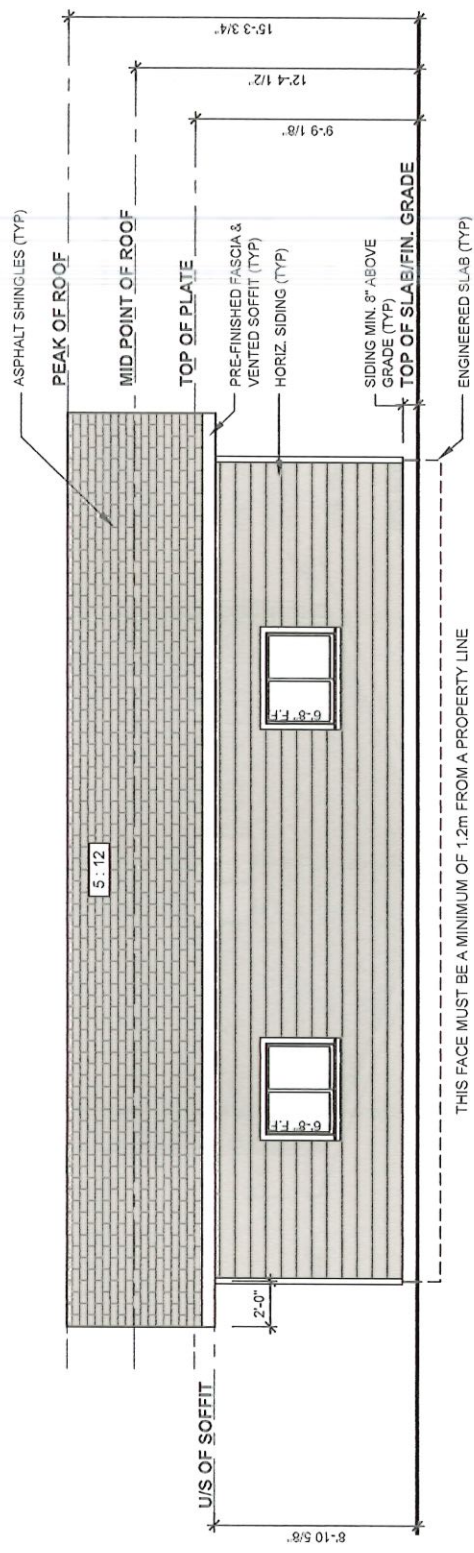


CERTIFIED
ENGINEERING TECHNOLOGIST
DOUGLAS
MACDONALD
No. 43768
PROVINCE OF ONTARIO

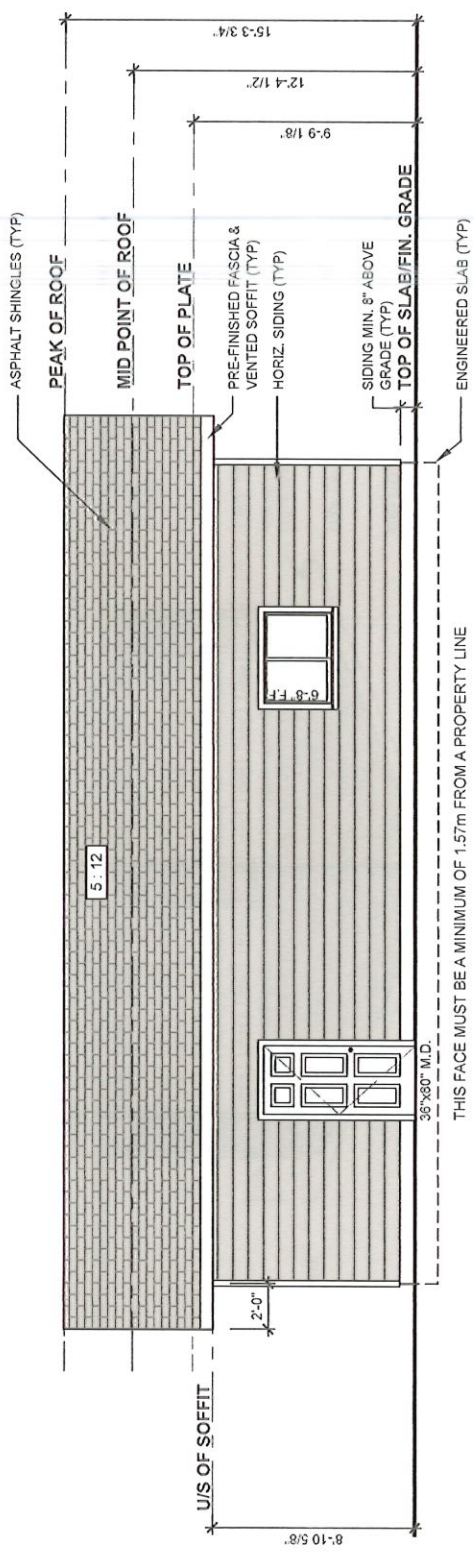
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Howard Lee 245 Bay Street Orillia Orillia, Ontario	
Issue Date: Jun. 04, 2025	
Scale: 3/16" = 1'-0"	
LEFT & RIGHT ELEVATIONS	
Report No: GPS-26-84485	Drawing No: A-6



LEFT ELEVATION
SCALE: 3/16" = 1'-0"



RIGHT ELEVATION
SCALE: 3/16" = 1'-0"

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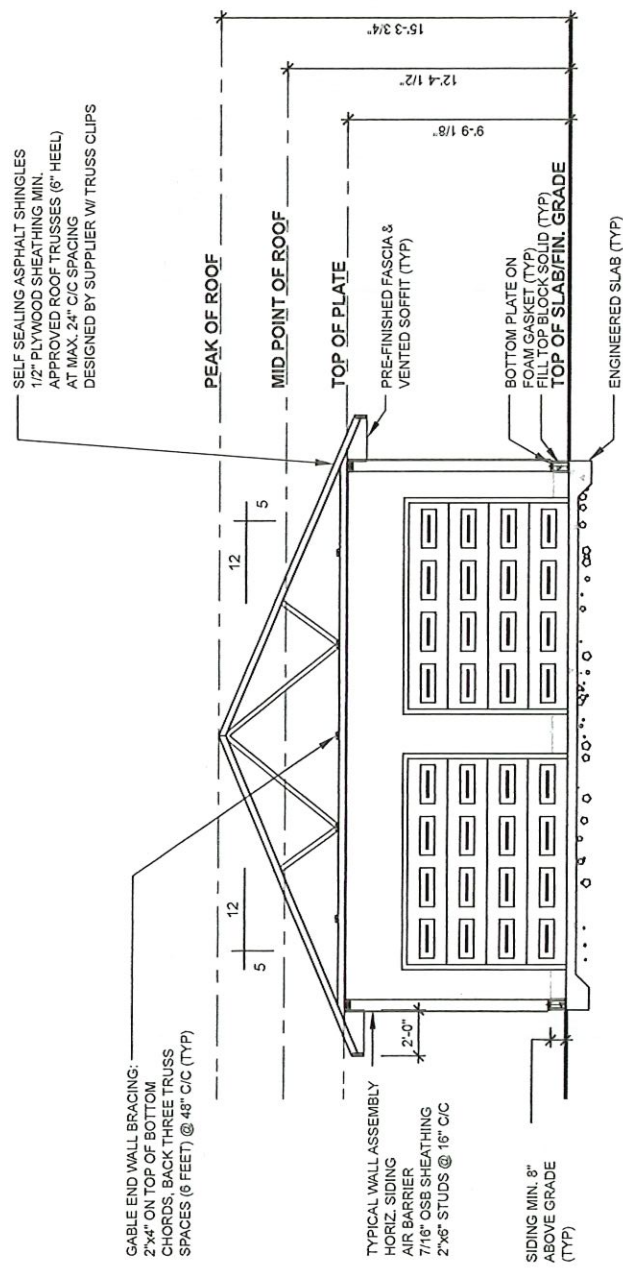


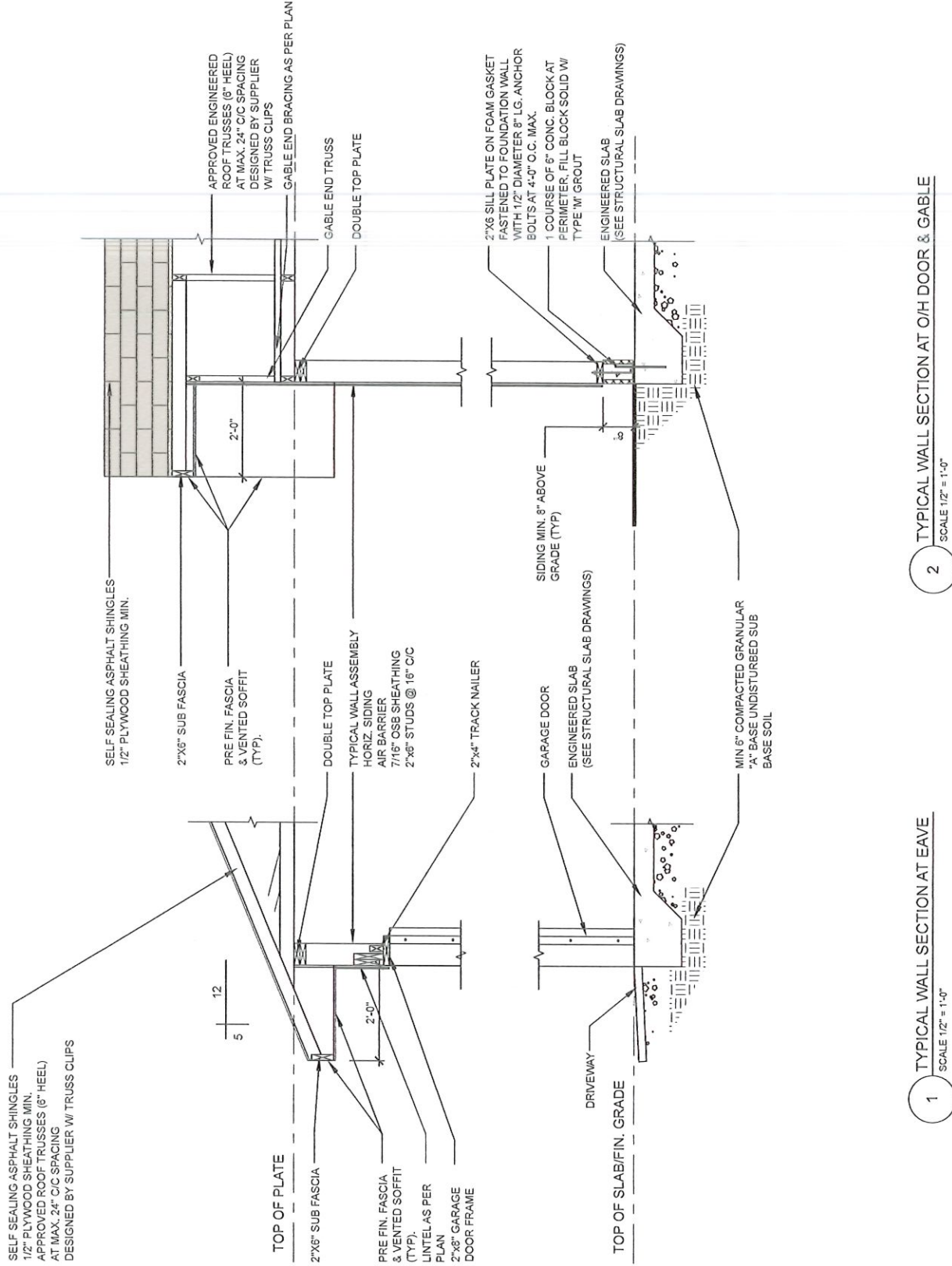


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Howard Lee 245 Bay Street Orillia Orillia, Ontario	
Issue Date: Jun. 04, 2026	
Scale: 3/16" = 1'-0"	
BUILDING SECTION	
Report No: GPS-26-84485	Drawing No: A-7





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Howard Lee
245 Bay Street Orillia
Orillia, Ontario

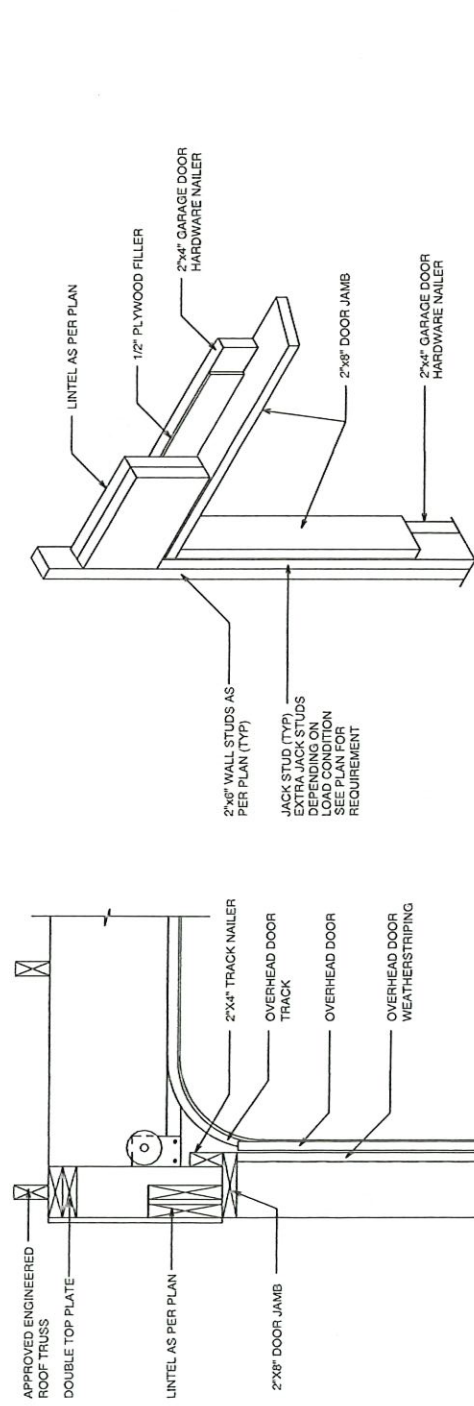
Issue Date: Jun. 04, 2026

Scale: AS NOTED

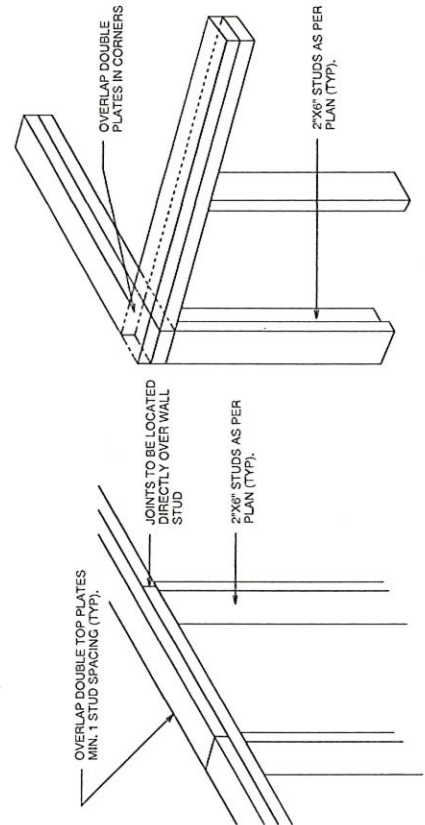
TYPICAL DETAILS

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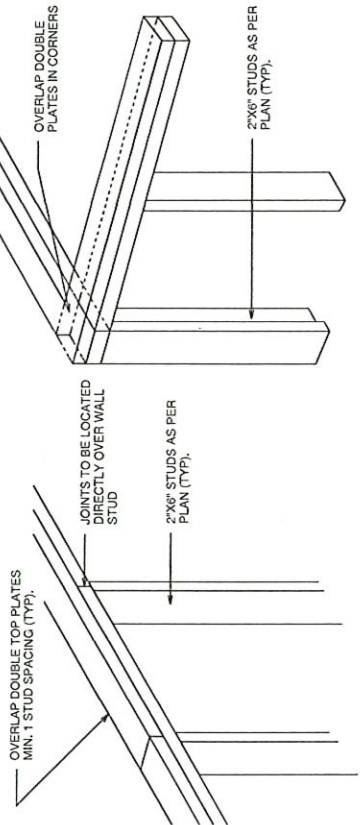
Drawing No: A-9



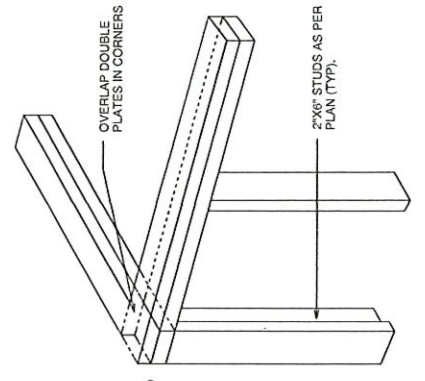
1 GARAGE DOOR JAMB DETAIL
SCALE: N.T.S.



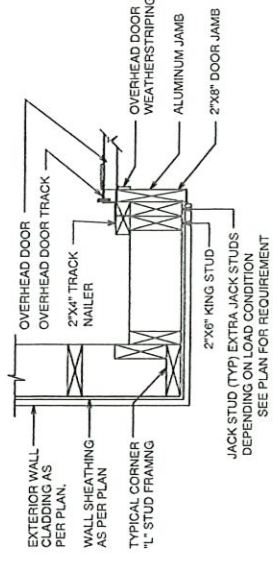
2 LINTEL DETAIL
SCALE: N.T.S.



4 TOP PLATE LAP DETAIL
SCALE: N.T.S.



5 DOUBLE TOP PLATE CORNER LAP
SCALE: N.T.S.



3 GARAGE O.H. DOOR JAMB DETAIL
SCALE: N.T.S.

JACK STUD (TYP) EXTRA JACK STUDS DEPENDING ON LOAD CONDITION SEE PLAN FOR REQUIREMENT

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RECENT CHANGES IN THE NEW BUILDING CODE ADDRESS THE LATEST REQUIREMENTS FOR WIND AND EARTH QUAKE HAVE BEEN CONSIDERED IN THE WALL DESIGN FOR THE SUBJECT BUILDING.

Howard Lee
245 Bay Street Orillia
Orillia, Ontario

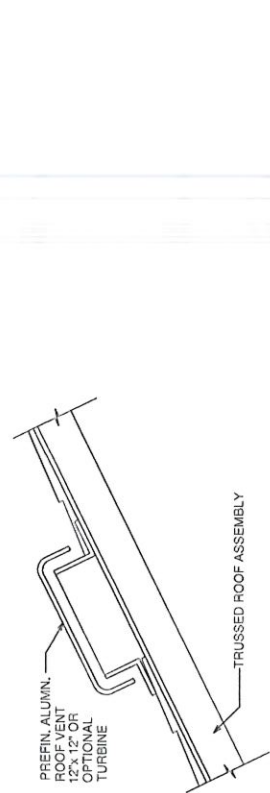
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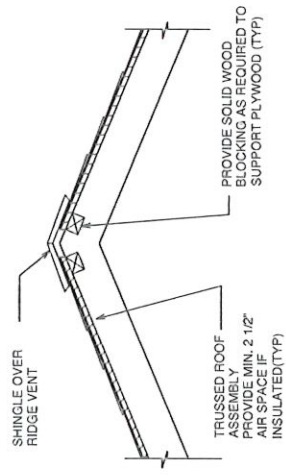
TYPICAL DETAILS

Report No: GPS-26-84485
Drawing No: A-10

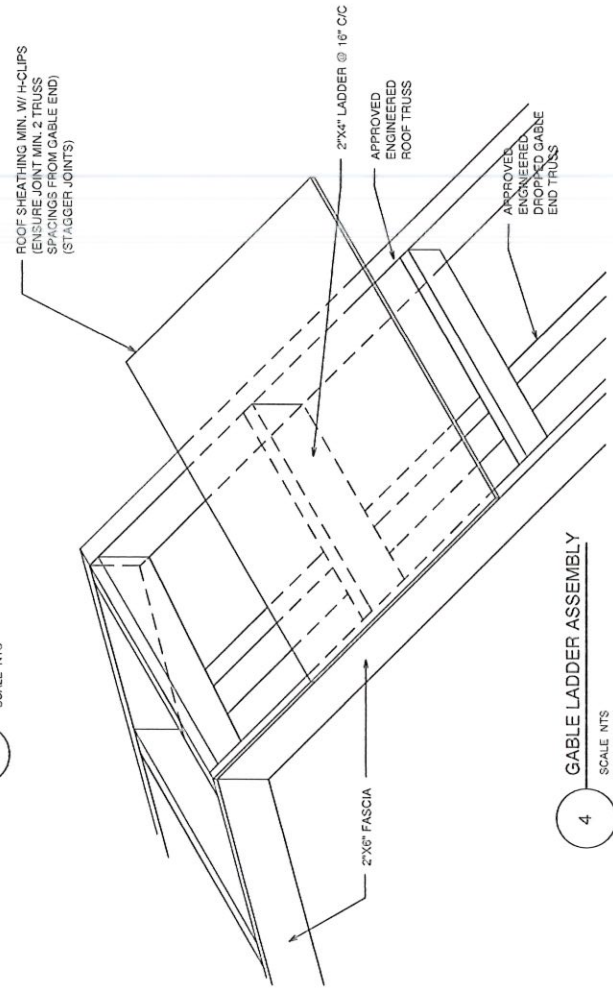
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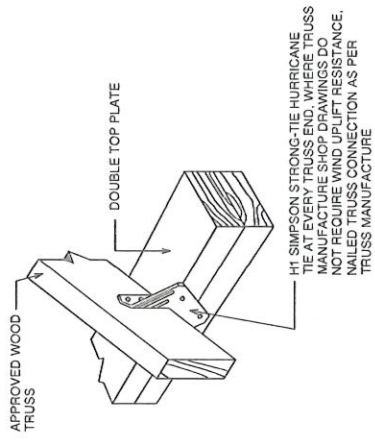
2 ROOF VENT DETAIL
SCALE NTS



1 ROOF RIDGE VENT DETAIL
SCALE NTS



4 GABLE LADDER ASSEMBLY
SCALE NTS



3 TRUSS CLIP DETAIL
SCALE NTS

CONSTRUCTION NOTES

- ALL CONSTRUCTION IS TO CONFORM TO THE LATEST ONTARIO BUILDING CODE (OBC) AND TO ALL OTHER CODES AND LOCAL AUTHORITIES HAVING JURISDICTION (UNLESS OTHERWISE NOTED).
- ALL DIMENSIONS GIVEN FIRST IN METRIC FOLLOWED BY METRIC.
- WHERE THERE IS A DISCREPANCY BETWEEN THESE NOTES AND THE PLAN, THE PLAN SHALL GOVERN.
- DO NOT SCALE DRAWINGS.

FOUNDATION SUBGRADE

- FOOTINGS TO BE ON NATIVE, NON-ORGANIC UNDISTURBED STABLE SOIL WITH A MINIMUM BEARING CAPACITY OF 75 kPa (GLS)
- ASSUMED WITH NO SOIL REPORT
- THE LOCAL BUILDING OFFICIAL MUST COMPLETE AN INSPECTION OF THE FOOTINGS PRIOR TO PLACING OF CONCRETE
- THE FOOTING BEARING ELEVATION MUST BE SET A MINIMUM OF 2" ABOVE THE WATER TABLE. SHOULD THERE BE ANY EVIDENCE TO SUGGEST THE WATER TABLE IS WITHIN 24" OF THE PROPOSED UNDERSIDE OF THE FOOTING A GEOTECHNICAL ENGINEER IS TO BE CONTACTED.
- IF A SOIL INVESTIGATION REPORT PROVIDED BY A GEOTECHNICAL ENGINEER CONFIRMS A BEARING CAPACITY GREATER THAN 75 kPa THEN A GREATER BEARING CAPACITY CAN BE USED.

FOOTINGS / SLABS

TYPICAL STRIP FOOTING: 9.15.1

- BASED ON 16" (4.0m) MAX. SUPPORTED JOIST LENGTH.
- MIN. 2300psi (15MPa) CONCRETE AFTER 28 DAYS (9.15.2.2).
- FOOTINGS SHALL REST ON UNDISTURBED SOIL, ROCK OR COMPACTED GRANULAR 3'-0" BELOW FINISHED GRADE UNLESS NOTED OTHERWISE ON THE PLANS (9.15.3.2).
- ENGINEERED FILL IS TO BE INSPECTED BY A CERTIFIED GEO-TECHNICAL SOILS ENGINEER.
- THE ASSUMED SOIL BEARING CAPACITY SHOWN ON SHEET A-1 MAY REQUIRE A REVIEW BY A CERTIFIED GEOTECHNICAL ENGINEER PRIOR TO POURING FOOTINGS

TYPICAL STRIP FOOTING - (INTERIOR WALLS) 9.15.3.4

- FOOTING TO EXTEND 3'-4" BELOW GRADE BUT NOT LESS THAN THE DEPTH OF FROST PENETRATION UNLESS ADEQUATE INSULATION PROTECTION IS PROVIDED.
 - 1 & 2 STOREY: 18" X 6" (465mm X 153mm).
 - 3 STOREY: 20" X 8" (508mm X 203mm).
- ### FINISHING FOOTINGS TO BEDROCK
- FROST PROTECTION IS NOT REQUIRED.
 - ROCK TO BE CLEAN AND FREE OF DEBRIS.
 - FOOTING TO BE PINNED TO ROCK WITH 10M DOWELS AT 24" C/C.
 - IF OVERALL SLOPE IS GREATER THAN 20% ENGINEERING IS REQUIRED.

TYPICAL STRIP FOOTING - (INTERIOR BEARING WALLS) 9.15.3.6

STEP FOOTING OBC 9.15.3.9

- SIZES AS PER NOTES 1 AND 2.
- 23 3/8" (600mm) MAX. VERTICAL RISE.
- 23 3/8" (600mm) MIN. HORIZONTAL RUN.

DRAINAGE TILE OR PIPE 9.14.3 - SOME ENGINEERED SLAB APPLICATIONS

- MATERIALS SHALL CONFORM TO OBC 9.14.3.1.
- 4" (100mm) MIN. DIA.
- LAND ON UNDISTURBED OR WELL-COMPACTED SOIL.
- TOP OF TILE OR PIPE TO BE BELOW BOTTOM OF FLOOR SLAB.
- COVER TOP AND SIDES OF TILE OR PIPE WITH 6" (150mm) OF CRUSHED STONE OR OTHER CLEAN GRANULAR MATERIAL.
- TILE SHALL DRAIN TO SUMP OR APPROVED FROST-FREE OUTLET.

GARAGE CONCRETE SLAB ON GROUND

- 4" (100mm) CONCRETE SLAB.
- CONCRETE TO BE DESIGNED TO A MINIMUM 28-DAY 72MPa COMPRESSIVE STRENGTH WITH 6-8% AIR ENTRAINMENT. THE SLAB CONSTRUCTION MUST CONFORM TO CANCSA 323.3-04 AND THE ONTARIO BUILDING CODE.
- PLACE SLAB ON MIN. 5" GRANULAR A FILL (OBC 9.14.4.2) (COMPACTED TO 98% SPD) ON SOUND UNDISTURBED ORIGINAL SUB-GRADE. ALTERNATIVELY THE SLAB BASE MAY BE A MINIMUM OF 5" OF 3/4" CLEAR STONE WITHOUT COMPACTION.
- 6" X 8" (W2.0 X W2.0) WIRE MESH LOCATED NEAR MID-DEPTH OF SLAB.
- WELDED WIRE FABRIC TO CONFORM TO CSA C30.2M.
- SAW CUT TO 25% OF SLAB THICKNESS TO CONTROL SHRINKAGE CRACKING. REINFORCING MUST NOT BE CUT WITH THIS OPERATION, AND CARE MUST BE TAKEN TO PLACE THE REINFORCING TO ALLOW ADEQUATE CONCRETE TOP COVER FOR SAWCUTTING PURPOSES.

OPTIONAL ENGINEERED SLAB

- REINFORCING SHALL BE DETAILED, BENT, PLACED, AND SUPPORTED TO CONFORM TO ACI STANDARD 315 AND THE MANUAL OF STANDARD PRACTICE PUBLISHED BY THE REINFORCING STEEL INSTITUTE.
- SEE ATTACHED ENGINEERED SLAB PLANS FOR STEEL SIZING AND PLACEMENT.

STEEL COLUMNS

- WHERE COLUMN SITS ON FND WALL, USE 4" X 8" X 5/8" (102mm X 203mm X 16mm) BASE PLATE SECURED WITH (2-5/8" DIA. (16 mm) X 8" L.O. X 2" HOOK ANCHOR BOLTS.
- EXTERIOR OF STEEL COLUMNS SUSCEPTIBLE TO CORROSION SHALL BE TREATED WITH A RUST-INHIBITIVE PAINT OR GALVANIZED.

WOOD COLUMN

- 5 1/2" X 5 1/2" (140mm X 140mm) SOLID NO. 1 OR 2 SPF.
- 7 1/4" DIA (184mm) UNLESS CALCULATIONS PROVE A LESSER SIZE IS ADEQUATE, AS PER OBC 17.4.1. (2).
- APPROVED METAL SHOE ANCHORED TO FTG.
- CONCRETE PAD AS PER PLANS.
- WIDTH OF COLUMN SHALL BE NO LESS THAN THE WIDTH OF SUPPORTING MEMBERS OR AS PER ENGINEERED REPORT.

FOUNDATIONS

LOAD BEARING MASONRY NOTES:

THE FOLLOWING INDICATES ONLY THE MINIMUM REQUIREMENTS APPLICABLE TO STRUCTURAL LOAD-BEARING MASONRY BASED ON EMPIRICAL RULES FOR PLAIN MASONRY.

REFER ALSO TO ARCHITECTURAL DRAWINGS &/OR THE SPECIFICATION FOR REQUIREMENTS OTHER THAN STRUCTURAL, AND FOR NON-LOAD-BEARING WALLS AND PARTITIONS.

MASONRY CONSTRUCTION TO CONFORM TO CS & CAN3-A371-M.4 STANDARDS CAN3-S304-M.

CONCRETE BLOCKS & BRICKS:

- TO CONFORM TO ONE OR MORE OF CSA A165.1M, 2M, 3M, OR 4M.
- BLOCKS TO BE MODULAR UNITS AS SHOWN ON THE ARCHITECTURAL DRAWINGS AND/OR SPECIFICATIONS AND UNLESS OTHERWISE NOTED SHALL BE:
- FOR BELOW-GRADE & EXTERIOR EXPOSED WALLS, USE NORMAL WEIGHT UNITS:
 - STANDARD HOLLOW TYPE H75/AM.
 - 75% SOLID TYPE S75/AM.
 - 100% SOLID TYPE S15/AM.
- CLAY BRICKS TO CONFORM TO ONE OR MORE OF CSA A82.1M, 3M, 4M, 5M, OR 6M. SEE ARCHITECTURAL DRAWINGS &/OR SPECIFICATIONS FOR TYPES & STYLES OF BRICKS REQUIRED. UNLESS OTHERWISE NOTED, THE MINIMUM COMPRESSIVE STRENGTH (BRICK FLATWISE) CROSS AREA SHALL BE 20 MPa.
- MASONRY DESIGN SHALL CONFORM TO S304 LATEST STANDARD.

MORTAR AND GROUT:

- MORTAR CONFORM TO CSA A170M FOR LAYING CONCRETE BLOCKS.
- USE TYPE "S" MORTAR UNLESS NOTED FOR LAYING CLAY BRICKS.
- TO CONFORM TO CSA A170-M WITH A SLUMP OF +200mm (+8") AND THE MINIMUM 28-DAY COMPRESSIVE STRENGTH SHALL BE 12.5 MPa.

MASONRY CONNECTORS:

- (ANCHORS, FASTENERS, & TIES) SHALL CONFORM TO CSA CAN3-A371-M AND BE INSTALLED TO COMPLY WITH CSA CAN3-A371-M, SPACING, STRENGTH, AND GALVANIZING OF STRIP TIES, COVETAIL ANCHORS, BAR ANCHORS, ROD ANCHORS, STRAP ANCHORS, WALL, AND PARTITION ANCHORS SHALL COMPLY WITH CSA CAN3-A371-M.

HORIZONTAL JOINT REINFORCEMENT FOR ALL MASONRY WALLS:

THE FOLLOWING MINIMUM REQUIREMENTS:

- CONFORM TO CSA CAN3-A371-M & CAN3-A371-M.
- REINFORCEMENT SHALL BE APPROVED AS A CONTINUOUS "LADDER" TYPE (BLOCK) WITH 3/16" (4.76mm) DIAMETER LONGITUDINAL AND CROSS WIRES.
- SPACING: PROVIDE REINFORCING IN THE TOP COURSE IMMEDIATELY BELOW FLOOR AND ROOF BEARING LEVELS AND THE FIRST TWO COURSES ABOVE AND BELOW EVERY WALL OPENING. THE REINFORCING SHALL EXTEND 600mm (24") BEYOND SUCH OPENINGS. FOR THE REMAINDER OF WALLS, THE VERTICAL SPACING SHALL NOT EXCEED 400mm (16").
- OVERLAP SPLICES: SHALL BE A MINIMUM OF 150mm (6") FOR KNURED WIRE AND 300mm (12") FOR PLAIN WIRE. LAPS SHALL BE STAGGERED A MINIMUM OF 750mm (30") FROM COURSE TO COURSE. REINFORCING SHALL NOT PASS THROUGH A VERTICAL CONTROL JOINT UNLESS OTHERWISE SHOWN.
- CORROSION RESISTANCE: JOINT REINFORCING FOR ALL WALLS IN CONTACT WITH SOIL, EXTERIOR WALLS, AND WALLS IN A MOIST ENVIRONMENT SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION TO ASTM A153-B2, 48g/m² meter (1.5 oz/ft²).
- PROVIDE ALL PREFABRICATED CORNER AND TEE SECTIONS.

COMPOSITE WALLS:

- SHALL HAVE THE VERTICAL COLLAR JOINTS BETWEEN WYTHES COMPLETELY FILLED WITH MORTAR OR GROUT.

BOND BEAMS:

- MADE FROM UNTEL BLOCKS OR HALF-FAB BLOCKS WHERE SHOWN ON STRUCTURAL DRAWINGS SHALL CONFORM TO CSA A371-M.

GROUTING:

- BY FILLING VOIDS OF HOLLOW UNIT & REINFORCED HOLLOW UNITS SHALL CONFORM TO CSA 1-371-M (MORTAR IS NOT ACCEPTABLE).

EXPANSION & CONTROL JOINTS:

- SHALL BE PROVIDED WHERE THE LENGTH OF MASONRY WALL IS GREATER THAN 80'

GENERAL NOTE: These drawings are not to be scaled. All dimensions must be verified by contractor prior to commencement of any work. Any discrepancies must be reported directly to the designer.



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RECENT CHANGES IN THE NEW BUILDING CODE ADDRESSING LATERAL LOADS DUE TO WIND AND EARTH QUAKE HAVE BEEN CONSIDERED IN THE WALL DESIGN FOR THE SUBJECT BUILDING.

Howard Lee
245 Bay Street Orillia
Orillia, Ontario

Issue Date: Jun. 04, 2026

Scale: N/A

CONSTRUCTION NOTES

Report No: GPS-26-84485
Drawing No: A-11

EXECUTION:

BEARING ON MASONRY:

- MINIMUM BEARING ON MASONRY UNLESS OTHERWISE NOTED
 - BEAMS (STEEL, CONC., WOOD): 200mm (8") NOMINAL
 - LINTELS (STEEL, CONC., WOOD): 150mm (6") NOMINAL
 - JOISTS (STEEL, WOOD): 100mm (4") NOMINAL
 - SLABS (CAST-IN-PLACE, PRECAST): 100mm (4") NOMINAL
 - STEEL DESIGNING WELD PLATE): 100mm (4") NOMINAL
- MASONRY BEARINGS SHALL BE OF SOLID BLOCKS (OR GROUTED SOLID) OR BRICKS LAID IN MORTAR. ALL JOINTS ARE TO BE FULLY FILLED WITH TYPE 'S' MORTAR.
- MIN. SIZE OF SOLID BEARINGS AT BEAMS AND LINTELS UNLESS NOTED SHALL BE EQUAL TO TWICE THE BEARING/WALL PLATE (WP) LENGTH AND FOR A DEPTH EQUAL TO THE BEARING/WALL PLATE (WP) LENGTH, AND IN NO CASE LESS THAN 400 mm LONG X 200 mm DEEP (16" X 8"). SYMMETRICAL UNDER BEARING POINT.
- PROVIDE A MINIMUM OF ONE CONTINUOUS COURSE 200mm (8") OF SOLID OR CROUTED VOID BLOCKS OR BRICKS LAID IN MORTAR AT THE TOP COURSE IMMEDIATELY BELOW ALL FLOOR AND ROOF BEARING LEVELS.

COLD WEATHER CONSTRUCTION:

- REQUIREMENTS & PROTECTION SHALL CONFORM TO CSA CAN2 A37-14 AND UNDER NO CIRCUMSTANCES SHALL MASONRY CONSTRUCTION BE PERMITTED WHEN THE AIR TEMPERATURE FALLS BELOW -12°C.

CAST-IN PLACE CONCRETE NOTES:

- CONCRETE FOUNDATION WALLS TO BE MINIMUM 8" (200mm) THICK AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 15 MPa (MIN 20 MPa IS RECOMMENDED).
- PROVIDE ALL LABOUR, MATERIALS, TOOLS, AND EQUIPMENT REQUIRED TO CARRY OUT THE WORK.
- REFER ALSO TO GENERAL NOTES, NOTES UNDER PLANS AND SCHEDULES, TYPICAL DETAILS, AND SPECIFICATION.

PRODUCTS

- PORTLAND CEMENT, WATER, AND AGGREGATES SHALL CONFORM TO CSA CAN2-A23.1M.
- PROVIDE AN APPROVED WATER-REDUCING ADDITIVE IN ALL CONCRETE.
- PROVIDE AN APPROVED AIR ENTRAINING ADDITIVE IN ALL CONCRETE WHICH WILL BE EXPOSED TO A FREEZE/THAW CYCLE AND/OR THE ACTION OF DEICING SALT.
- AD MIXTURES SHALL CONFORM TO CSA CAN2-A23.1M AND FALSAWORK SHALL CONFORM TO CSA 5200.1.
- REINFORCING STEEL UNLESS SPECIFICALLY NOTED, SHALL BE DEFORMED BARS CONFORMING TO CSA G30.18-4M GRADE 400 (50000 PSI).
- WELDED WIRE FABRIC TO CONFORM TO CSA G30.5M.
- REINFORCING SHALL BE DETAILED, BENT, PLACED, AND SUPPORTED TO CONFORM TO ACI STANDARD 315 AND THE MANUAL OF STANDARD PRACTICE PUBLISHED BY THE REINFORCING STEEL INSTITUTE.
- CURING AND SEALING COMPOUNDS, WHERE APPROVED FOR USE, SHALL CONFORM TO ASTM STANDARD C309.
- GENERALLY ALL CONCRETE SURFACES ARE TO BE SEALED UNLESS NOTED OTHERWISE. COMPOUNDS ARE TO BE COMPATIBLE WITH APPLIED FINISHES.

EXECUTION

- MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE @ 28 DAYS SHALL BE AS NOTED ON THE DRAWINGS OR GENERAL NOTES.
- SUMP AT THE POINT OF DISCHARGE SHALL BE CONSISTENT AT 90mm + 20mm (3 1/2" + 3/4") NOTED OTHERWISE. GREATER SLUMPS ARE NOT ACCEPTABLE.
- CONCRETE MIXING, TRANSPORTATION, HANDLING, AND PLACING SHALL CONFORM TO CSA CAN2-A23.1M.
- CONSTRUCTION JOINTS FOR SLABS AND BEAMS NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL CONSULTANT BEFORE CONSTRUCTION. GENERALLY, JOINTS IN SLABS SHALL BE AT RIGHT ANGLES TO THE SPANS. AT MID-SPAN IF POSSIBLE, AND BE CLEAR OF SUPPORTS AND POINT LOADS.
- OPENINGS AND PLACED FASTENERS REQUIRED IN THE CONCRETE AFTER THE CONCRETE IS FINISHED SHALL BE APPROVED BY A STRUCTURAL CONSULTANT BEFORE PROCEEDING.
- FINISHING: REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR REQUIRED FINISH TO EXPOSED CONCRETE. ALL HONEYCOMBING SHALL BE CUT OUT AND FILLED. FLOOR FINISHES SHALL BE AS REQUIRED BY THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS AND SHALL CONFORM TO CSA STANDARD CAN2-A23.1M (GLASS A FINISH UNLESS NOTED).
- TOLERANCES FOR PLACING STRUCTURAL CONCRETE, REINFORCING STEEL, CAST-IN HARDWARE, AND FOR FLOOR AND ROOF FINISHES SHALL BE AS SPECIFIED IN CSA STANDARD CAN2-A23.1M.

QUALITY CONTROL

- FOR INSPECTION AND TESTING, SEE GENERAL NOTES.

ICF FOUNDATION WALL NOTES:

- ICF FOUNDATION WALL
- DAMP-PROOF EXTERIOR SURFACE
- INSULATED CONCRETE FORM FOUNDATIONS MUST BE INSTALLED IN ACCORDANCE WITH THE APPROVED MANUFACTURER'S SPECIFICATIONS.
- ROOF FRAMING FIXED TO TOP PLATES.

ICF FOUNDATION MINIMUM WALL REINFORCEMENT (PART 9 PRESCRIPTIVE)

HORIZONTAL REINFORCEMENT:

- 10M BARS SPACED NOT MORE THAN 23 5/8" (600mm) O.C. ON THE INSIDE HALF OF THE WALL SECTION, WITH A MINIMUM COVER OF 1 1/4" (30mm) FROM THE INSIDE FACE OF THE CONCRETE.
- ONE 10M BAR PLACED NOT MORE THAN 11 3/4" (300mm) FROM THE TOP OF THE WALL.

VERTICAL REINFORCEMENT:

- 10M BARS SPACED AT 10" (250mm) O.C. ON THE INSIDE HALF OF THE WALL SECTION, WITH A MINIMUM COVER OF 1 1/4" (30mm) FROM THE INSIDE FACE OF THE CONCRETE.
- WHERE INTERRUPTED BY WALL OPENING, BARS SHALL BE PLACED NOT MORE THAN 23 5/8" (600mm) FROM EACH SIDE OF THE OPENING.

MAIN FLOOR LEVEL ICF WALLS:

- COVER INSIDE FOAM WITH DRYWALL OR APPROVED WOOD SHEATHING. INSTALL IN ACCORDANCE WITH 9.2.29 OF THE ONTARIO BUILDING CODE.

ENGINEERED WOOD ACCEPTABLE TYPES:

- LP® SOLIDSTAR BY LOUISIANA PACIFIC.
- GANGLAM BY GANCA-NAIL CANADA LTD.
- MICROLAM BY TRUS JOIST CORPORATION.
- PARALAM® BY MACMILLAN BLOEDEL LTD.
- LAMINATED VENEER LUMBER (LVL): WOOD VENEERS AND ADHESIVES SHALL BE IN ACCORDANCE WITH APPROVED MANUFACTURER'S STANDARDS AND APPLICABLE CSA STANDARDS.
- ALL MEMBERS SHALL BEAR IDENTIFICATION MARKS OF THE MANUFACTURER.
- NAILING AND/OR BOLTING OF MULTIPLE'S SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND IN NO CASE LESS THAN 2 ROWS OF 16d (3 1/2") NAILS AT 300mm (12") CENTRES, EACH ROW.
- NAILS INTO EDGES OF LVL SHALL BE SPACED AT A MINIMUM OF 75mm (3") FOR 8d (2 1/2") NAILS AND 100mm (4") FOR 10d (3") NAILS.
- LVL MIN. END BEARING TO BE AS PER BEAM REPORT.

FRAME WALL CONSTRUCTION

LUMBER:

- UNLESS OTHERWISE NOTED, TO BE SPRUCE-PINE-FIR (SPF), GRADE NO. 2, CONFORMING TO CSA STANDARD (K11-0141) WITH A MAXIMUM MOISTURE CONTENT OF 19% AT THE TIME OF INSTALLATION. LUMBER SHALL BEAR THE GRADING STAMP OF AN AGENCY APPROVED BY THE CANADIAN LUMBER STANDARDS ADMINISTRATION BOARD.
- NAILS, SPIKES, AND STAPLES TO CSA STANDARD B111; GALVANIZED FOR EXTERIOR WORK, OR HIGHLY HUMID AREAS AND FOR TREATED LUMBER; PLAN ELSEWHERE, TABLES OF FRAMING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO TABLES 9.2.3.1 A, B, AND 9.2.3.13 IN THE ONTARIO BUILDING CODE.
- ROOF HARDWARE: BOLTS, NUTS, WASHERS, LAGS, PINS, SCREWS, ALL TO BE HOT DIP GALVANIZED.
- WOOD PRESERVATIVES (PRESSURE TREATED): WHERE REQUIRED, TO CONFORM TO CSA STANDARD 0804.
- FRAMING ANCHORS, FRAMING ANCHORS, JOIST HANGERS, BEAM HANGERS, POST CAPS, POST ANCHORS, BACK-UP CLIPS, AND ANGLES UNLESS OTHERWISE SHOWN ON THE STRUCTURAL DRAWINGS, ARE ALL TO BE AS MANUFACTURED BY TIMBER ENGINEERING COMPANY (TECO) OR AN APPROVED EQUAL, SIZED TO THE JOB AT HAND. ALL ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS UTILIZING "SPECIAL" NAILS WHERE REQUIRED.

STUD WALLS:

- PROVIDE FULL-WIDTH SILL PLATES, MATCHING WIDTH OF STUD WALL, ANCHORED TO FOUNDATION WITH 12mm (1/2") DIAMETER BOLTS X 250mm (10") LONG AT 1300mm (42") CENTRES. BOLTS TO BE GROUTED OR CONCRETED IN SOLID.
- PROVIDE MINIMUM TWO (2) TOP PLATES FOR LOAD-BEARING WALLS. PLATES TO BE LAPPED OR TIED AT CORNERS AND INTERSECTIONS.
- WOOD STUDS AS PER PLAN 9.2.3.10.1.
- EXTERIOR SIDING TO COMPLY WITH LIMITING DISTANCE REQUIREMENTS AS LISTED IN THE CBC 9.10.14, WHERE THE WALL IS CLOSER THAN 2'-0" TO THE PROPERTY LINE.
- SIDING OR STUCCO AS PER ELEVATIONS, MIN. 8" (200mm) FROM FINISHED GRADE.
- STONE OR BRICK AS PER ELEVATIONS, MIN. 8" (150mm) FROM FINISHED GRADE.
- WALL SHEATHING MEMBRANE TO BE MIN. 7/16" OSB SHEATHING OR EQUIVALENT AS PER CODE 9.2.3.15.
- WALL SHEATHING SHALL BE INSTALLED SO THAT ALL ENDS ARE SUPPORTED WITH END JOINTS STAGGERED. A GAP OF NOT LESS THAN 2mm (1/16") SHALL BE LEFT BETWEEN SHEETS OF PLYWOOD, WAFFER BOARD, OR FIBRE BOARD. MAKE BUTT JOINTS ON SOLID MATERIAL.
- SECURE WALL SHEATHING TO FRAMING MEMBERS WITH 2 1/2" COMMON SPIRAL NAILS SPACED NOT GREATER THAN 6" ON THE EDGES & 12" IN THE FIELD OF THE BOARD.
- NOT CHING & DRILLING. ONLY ALLOWED WITHIN THE LIMITATIONS SET OUT IN THE ONTARIO BUILDING CODE.
- BEAMS, LINTELS, AND JOISTS SHALL BE GRADED BY AN APPROVED LUMBER GRADING AGENCY & SUPPLIED BY AN APPROVED MANUFACTURER.

CABLE WALL WITH LARGE OPENINGS:

- ANALYSIS OF THE GARAGE FRONT WALL SHEAR RESISTANCE HAS NOT BEEN CONDUCTED DUE TO THE APPARENT FAST INSIGNIFICANCE OF SMALL ONE-STORY WOOD FRAME UNINHABITED STRUCTURES. PAST PERFORMANCE OF SIMILAR BUILDINGS HAS PRESENTED LITTLE OR NO DATA THAT HAS PROVEN THIS ASPECT OF A GARAGE STRUCTURE TO FAIL UNDER LATERAL WIND LOAD FORCES. PART 9 OF THE ONTARIO BUILDING CODE IS SILENT ON THE ISSUE OF LATERAL STABILITY IN EXTERIOR SHEAR WALLS. IBD THEREFORE THROUGH ITS DESIGN EXPERIENCE DEEMS THE FRONT WALL AT THIS TIME UNWARRANTED FOR DETAILED SHEAR WALL ANALYSIS.

WINDOW AND MAIN DOOR:

- THE WINDOW AND MAIN DOOR ON THE SIDE CAN BE MOVED WITHIN THE WALL AS LONG AS A MINIMUM OF 16" IS MAINTAINED BETWEEN THE WINDOW AND THE DOOR, AS WELL AS BE A MINIMUM OF 16" FROM THE CORNERS.
- IF THE SIDE WINDOW OR MAIN DOOR IS MOVED WITHIN THE WALL, THE OPENING MUST BE CLEAR OF ANY GIRDER TRUSS BEARING.

CONSTRUCTION NOTES

Report No: GPS-26-84485
Drawing No: AL-12

GENERAL NOTE: These drawings are not to be scaled. All dimensions must be verified by contractor prior to commencement of any work. Any discrepancies must be reported directly to the designer.



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RECENT CHANGES IN THE NEW BUILDING CODE ADDRESSING LATERAL LOADS DUE TO WIND AND EARTH QUAKE HAVE BEEN CONSIDERED IN THE WALL DESIGN FOR THE SUBJECT BUILDING.

Howard Lee
245 Bay Street Orilla
Orilla, Ontario

Issue Date: Jun. 04, 2026

Scale: N/A

HIGH WALL CONSTRUCTION:

- DOUBLE TOP PLATES ARE TO BE FASTENED TOGETHER WITH MIN. 3" NAILS @ 8" O.C. MAX.
- BOTTOM PLATES MUST BE FASTENED WITH THE EQUIVALENT OF 3 1/4" NAILS @ 8" O.C. MAX. 12" DIA. ANCHOR BOLTS SPACED AT 4'-0" O.C. MEETS THE EQUIVALENT.
- PROVIDE 4"X4" CONTINUOUS KING STUDS EACH SIDE OF THE WINDOW OPENINGS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 9.4.1.1) ALLOW FOR THE DEMPTION OF THE MINIMUM STUD HEIGHT PRESCRIPTIVE REQUIREMENTS IN 9.2.3.10.1, WHERE THE DESIGN HAS BEEN COMPLETED IN CONFORMANCE WITH GOOD ENGINEERING PRACTICE AND PART 4 OF THE BUILDING CODE.
- WALL BLOCKING IS NOT REQUIRED FOR DRAWINGS THAT HAVE BEEN SEALED BY ENGINEER.

SPATIAL SEPARATION:

- IF ELEVATION FACES ONE STREET, THEN PROPOSED UNPROTECTED OPENING AREA CAN BE 100%.
- IF ELEVATION FACES DWELLING ON SAME PROPERTY, THEN PROPOSED UNPROTECTED OPENING AREA CAN BE 100%.
- WHERE BUILDING REQUIRES PERIMETER INSULATION BUILDING CANNOT BE LESS THAN 4'-0" TO THE PROPERTY LINE.

TYPICAL ROOF CONSTRUCTION:

- NO. 210 (30.5KG/M2) ASPHALT SHINGLES.
- FOR ROOFS BETWEEN 4:12 AND 8:12 PITCH PROVIDE ICE AND WATER SHEILD INSTALLED ON PERIMETER OF ROOF. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.
- ICE AND WATER SHEILD TO BE LAID BENEATH STARTER STRIP.
- STARTER STRIP AS PER OBC 9.26.7.2.
- PROTECTION.
- 3/8" SHEATHING REQUIRES (G1 GRADE) WITH METAL "H" CLIPS OR NOT LESS THAN 2"X2" BLOCKING SECURELY NAILED BETWEEN FRAMING MEMBERS MAX. FRAMING MEMBER SPACING MAX. 24" O.C.
- ROOF SHEATHING PROVIDED AT LEAST A 2mm (1/16") GAP BETWEEN SHEETS.
- EXTERIOR TYPE PLYWOOD USED AS ROOF AND/OR WALL SHEATHING SHALL BE LEGIBLY IDENTIFIED AS MATERIAL OF EXTERIOR TYPE.
- APPROVED WOOD TRUSSES DESIGNED BY SUPPLIER. TRUSS BRACING AS PER TRUSS MANUFACTURER.
- PREFINISHED ALUMINUM FASCIA AND ALUMINUM VENTED SOFFIT.
- ROOF VENTILATION: 1 SQUARE FOOT PER 300 SQ. FT. OF CEILING AREA (50% AT EAVES) 6.2.2.7.

GENERAL NOTES:

- 1" X 2" (10mm X 30mm) BOTH SIDES OF STEEL BEAM FLANGE OR WOOD CONTINUOUS WOOD PLATE SECURED TO TOP FLANGE.
- WOOD FRAMING MEMBERS SUPPORTED ON CONCRETE IN CONTACT WITH GROUND OR FILL SHALL BE PRESSURE TREATED OR SEPARATED FROM CONCRETE WITH 6 MIL. POLYETHYLENE OR NO. 15 ROLL ROOFING.
- "S8" PROVIDE EQUAL NUMBER OF PILES IN POST AS ARE IN THE SUPPORTED BUILD-UP BEAM.

POINT LOAD:

- BUILT-UP POSTS SUPPORTING P.L. (FROM ABOVE) MUST BE AS WIDE AS THE MEMBER ABOVE. THE BLOCCING IN THE JOIST SPACE ABOVE THE BUILT-UP POST TO BE THE SAME NUMBER OF PILES AS IN THE POST.

TRUSSES:

- IF ANOTHER TRUSS MANUFACTURER IS DESIRED, THEN ANY APPROVED ENGINEERED TRUSS DETAILS AND LAYOUTS MUST BE REPLACED WITH THE CHOSEN MANUFACTURER'S APPROVED ENGINEERED DETAILS AND LAYOUT.
- THE FINAL TRUSS DETAILS AND LAYOUT MUST BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION AND MUST BE KEPT ON SITE FOR CONSTRUCTION AND INSPECTION PURPOSES.

CINDER TRUSS:

- ROOF TRUSS GIRDER LOADS HAVE BEEN CALCULATED FROM TRIBUTARY AREA.

LOW SLOPE ROOF APPLICATION (SLOPES LESS THAN 4:12) (AS PER 9.26.8):

- NO. 210 (30.5KG/M2) ASPHALT SHINGLES.
- EXCEPT FOR THE FIRST 2 COURSES, COVERAGE SHALL NOT BE LESS THAN 3 THICKNESSES OF SHINGLES OVER THE ENTIRE ROOF.
- ICE AND WATER SHEILD OVER ENTIRE ROOF SURFACE.
- STARTER STRIP TO BE LAID IN CONTINUOUS BAND OF CEMENT NOT LESS THAN 7 7/8" WIDE.
- SECURE TABS WITH COLD APPLICATION CEMENT APPLIED AT A RATE OF NOT LESS THAN 1 gal/100 sq. ft. OF CEMENTED AREA OR HOT APPLICATION ASPHALT AT A RATE OF 0.2 LBM OF CEMENTED AREA.
- SHINGLES ON HIPS AND RIDGES SHALL NOT BE LESS THAN 11 3/4" WIDE.
- ALL FLASHING TO WINDOWS, DOORS, AND CLADDING TO BE INSTALLED AS PER OBC 9.27.3.8.

STAIR CONSTRUCTION

STAIRS & GUARDS as per OBC 9.8 & 9.8-7

STAIRS: 9.8 - RESIDENTIAL

- MAX. RISE = 7-7/8" (200mm)
- MIN. RISE = 5" (125mm)
- MAX. RUN = 14" (355mm)
- MIN. RUN = 10" (255mm)
- MIN. TREAD = 11" (280mm)
- MAX. NOSING = 1" (25mm)
- MIN. HEADROOM = 6'-6" (1980mm) OVER CLEAR WIDTH OF STAIR
- RAIL @ STAIR & LANDING = MIN 2'-0" (605mm) MAX. 3'-2" (965mm)
- MIN. WIDTH = 2'-0" (605mm)
- MIN. LANDING = WIDTH OF STAIR BETWEEN WALL FACES)
- MIN. WIDTH = 2'-11" (660mm)
- MAX. HEIGHT = 3'-2" (975mm) BETWEEN GUARDS)
- AS PER OBC 9.8, TOLERANCE BETWEEN TREADS: 3/16" BETWEEN ADJACENT TREADS OR LANDINGS, AND 3/8" BETWEEN THE TALLEST AND SHORTEST RISERS IN A FLIGHT.
- FIN. RAILING ON WOOD PICKETS MAX. 4" CENTERLINE BETWEEN PICKETS
- EXT. CONC. STEPS TO HAVE 10" (254mm) RUN & 8" (203mm) RISE
- FDN. WALL REQUIRED WHEN NUMBER OF RISERS EXCEEDS 2
- FTG. FOR FDN. WALL TO BE MIN. 4'-0" (122mm) BELOW GRADE
- HANDRAIL TO BE CONTINUOUS THROUGH FLIGHT OF STAIRS EXCEPT AT LANDINGS
- SLOPE OF LANDING SHALL NOT EXCEED 1 IN 50
- HANDRAIL TO BE CONTINUOUS THROUGH WINDERS
- EXTERIOR CONCRETE STEPS = MAX. RISER 7-7/8" (200mm)
- LOFT SPACE HAS NOT BEEN DESIGNED AS A DWELLING UNIT, WHERE LOFT DEEMED TO BE A DWELLING UNIT, WINDOWS SHALL BE A MINIMUM OF 10" (480mm) ABOVE FINISHED FLOOR
- ANY OPENING BETWEEN STRINGER AND STAIR GUARD SHALL BE OF A SIZE THAT PREVENTS THE PASSAGE OF A SPHERICAL OBJECT HAVING A DIAMETER OF 6" (150mm).

STAIR LANDING:

- 5/8" T&G PLYWOOD ON 2"x6" @ 16" C/C SECURE LANDING TO EACH STUD W/ 2-3 1/4" COMMON SPIRAL NAILS, SUPPORT OUTSIDE CORNER W/ 4"x4" WOOD POST TO SLAB BELOW, SECURE

GUARDS: 9.8.1, GUARDS REQUIRED IF:

- THERE IS A DIFFERENCE IN ELEVATION OF MORE THAN 1'-11 5/8" (600mm) BETWEEN THE WALKING SURFACE AND THE ADJACENT SURFACE, OR
- THE ADJACENT SURFACE WITHIN 3'-11 1/4" (1200mm) FROM THE WALKING SURFACE HAS A SLOPE OF MORE THAN 1 IN 2.
- THE HEIGHT OF GUARDS FOR EXTERIOR STAIRS AND LANDINGS IS MORE THAN 10M ABOVE ADJACENT GROUND LEVEL SHALL BE NOT LESS THAN 4'-11 1/16" (1500mm).
- GUARDS SHALL BE DESIGNED TO RESIST LOADS AS SPECIFIED IN TABLE 9.8.8.2 OF THE OBC

OPENINGS IN GUARDS:

- EXCEPT AS PERMITTED IN SENTENCES (2) AND (3), OPENINGS THROUGH GUARDS SHALL BE OF A SIZE THAT PREVENTS THE PASSAGE OF A SPHERICAL OBJECT HAVING A DIAMETER OF 100mm (4").
- EXCEPT WHERE THEY SERVE STORAGE GARAGES, GUARDS IN INDUSTRIAL OCCUPANCIES ARE PERMITTED TO CONSIST OF: (A) A TOP RAILING, AND (B) ONE OR MORE HORIZONTAL INTERMEDIATE RAILS SPACED SUCH THAT THE SIZE OF THE OPENINGS THROUGH THE GUARD PREVENTS THE PASSAGE OF A SPHERICAL OBJECT HAVING A DIAMETER OF 53mm (2").
- OPENINGS THROUGH ANY GUARD THAT IS NOT REQUIRED BY ARTICLE 9.8.8.1, ONTARIO BUILDING CODE AND THAT SERVES AN OCCUPANCY OTHER THAN AN INDUSTRIAL OCCUPANCY, SHALL BE OF A SIZE THAT:

- PREVENTS THE PASSAGE OF A SPHERICAL OBJECT HAVING A DIAMETER OF 100mm, OR
- PERMITS THE PASSAGE OF A SPHERICAL OBJECT HAVING A DIAMETER OF 200mm.

HANDRAILS: 9.8.7.

- WHERE A STAIR OR RAMP IS REQUIRED TO BE AT LEAST 2200mm WIDE (86.6"), A HANDRAIL SHALL BE INSTALLED SUCH THAT NO POSITION ON THE STAIR OR RAMP IS MORE THAN 825mm (32.5") FROM A HANDRAIL
- THE CLEARANCE BETWEEN A HANDRAIL AND ANY SURFACE BEHIND IT SHALL NOT BE LESS THAN (a) 60mm IF THE SURFACE BEHIND THE HANDRAIL IS ROUGH OR ABRASIVE OR (b) 50mm IN ALL OTHER CASES
- ALL HANDRAILS SHALL BE CONSTRUCTED SO AS TO BE CONTINUALLY GRASPABLE ALONG THEIR ENTIRE LENGTH WITH NO OBSTRUCTION ON OR ABOVE THEM TO BREAK A HANDHOLD. 9.8.7.2 ERGONOMIC DESIGN
- A HANDRAIL IS NOT REQUIRED FOR STAIRS AND RAMPS SERVING A HOUSE OR AN INDIVIDUAL DWELLING UNIT, WHERE:
 - INTERIOR STAIRS HAVE NOT MORE THAN TWO RISERS,
 - EXTERIOR STAIRS HAVE NOT MORE THAN THREE RISERS, OR
 - RAMPS RISE NOT MORE THAN 400mm (16").
- ONLY ONE HANDRAIL IS REQUIRED ON EXTERIOR STAIRS HAVING MORE THAN THREE RISERS, PROVIDED SUCH STAIRS SERVE A HOUSE OR AN INDIVIDUAL DWELLING UNIT.
- EXCEPT FOR STAIRS SERVING A HOUSE OR INDIVIDUAL DWELLING UNIT, AT LEAST ONE HANDRAIL AT THE SIDES OF A STAIR OR RAMP SHALL EXTEND HORIZONTALLY NOT LESS THAN 12" (300mm) BEYOND THE TOP AND BOTTOM OF EACH FLIGHT OR RAMP
- THE HEIGHT OF HANDRAILS ON STAIRS AND RAMPS SHALL BE MEASURED VERTICALLY FROM THE TOP OF THE HANDRAIL TO:
 - A STRAIGHT LINE DRAWN TANGENT TO THE TREAD NOSINGS OF THE STAIR
 - THE SURFACE OF THE RAMP, FLOOR, OR LANDING SERVED BY THE HANDRAIL
- HANDRAILS SHALL BE 865mm (34") TO 1070mm (42") HIGH.
- HANDRAILS AND PROJECTIONS BELOW HANDRAILS, INCLUDING HANDRAIL SUPPORTS AND STAIR STRINGERS, SHALL NOT PROJECT MORE THAN 4" (100mm) INTO THE REQUIRED WIDTH OF A STAIR OR RAMP.
- HANDRAILS AND THEIR SUPPORTS SHALL BE DESIGNED AND CONSTRUCTED TO WITHSTAND THE FOLLOWING LOADS, WHICH NEED NOT BE CONSIDERED TO ACT SIMULTANEOUSLY:
 - A CONCENTRATED LOAD OF NOT LESS THAN 0.9 kN APPLIED AT ANY POINT AND IN ANY DIRECTION FOR ALL HANDRAILS, AND
 - FOR HANDRAILS OTHER THAN THOSE SERVING A HOUSE OR INDIVIDUAL DWELLING UNIT, A UNIFORM LOAD OF NOT LESS THAN 0.7 kN/m.

GENERAL NOTE: These drawings are not to be scaled. All dimensions must be verified by contractor prior to commencement of any work. Any discrepancies must be reported directly to the designer.



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RECENT CHANGES IN THE NEW BUILDING CODE ADDRESSING LATERAL LOADS DUE TO WIND AND EARTH QUAKE HAVE BEEN CONSIDERED IN THE WALL DESIGN FOR THE SUBJECT BUILDING.

Howard Lee
245 Bay Street Orillia
Orillia, Ontario

Issue Date: Jun. 04, 2026

Scale: N/A

CONSTRUCTION NOTES

Report No: GPS-26-84485
Drawing No: A-13

GENERAL NOTE: These drawings are not to be scaled. All dimensions must be verified by contractor prior to commencement of any work. Any discrepancies must be reported directly to the designer.



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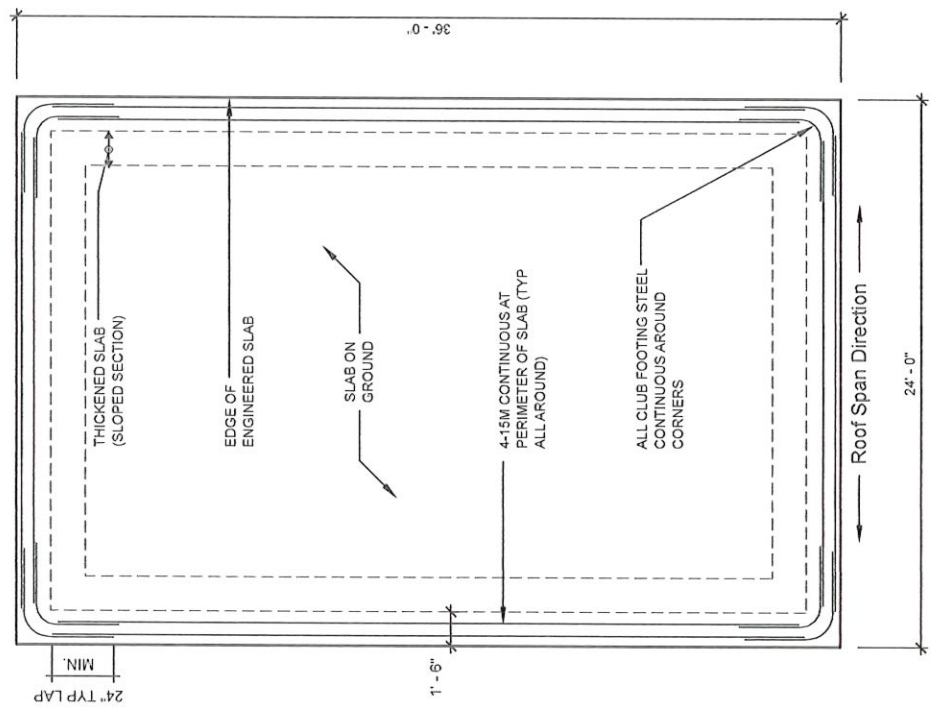
ISO and the engineer assume no liability for the design of the engineered slab where a building permit has not been obtained and subsequent inspections have not been completed prior to pouring concrete.

Howard Lee
245 Bay Street Orillia
Orillia, Ontario

Issue Date: Jun. 04, 2025
Scale: 3/16" = 1'-0"

GARAGE SLAB PLAN

Report No: GPS-26-84485
Drawing No: S-1



THE DESIGN FOR THE CONSTRUCTION OF THIS ENGINEERED SLAB HAS BEEN COMPLETED UNDER THE ASSUMPTION THAT BOTH A BUILDING PERMIT WILL BE OBTAINED AND THE MUNICIPAL BUILDING OFFICIAL HAS PERFORMED THE MANDATORY INSPECTIONS PRIOR TO POURING CONCRETE. SEE SLAB FOUNDATION GENERAL NOTE #1 ON DRAWING S-3.

GENERAL NOTE: These drawings are not to be scaled. All dimensions must be verified by contractor prior to commencement of any work. Any discrepancies must be reported directly to the designer.



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IBD and the engineer assume no liability for the design of the engineered slab where a building permit has not been obtained and subsequent inspections have not been completed prior to pouring concrete.

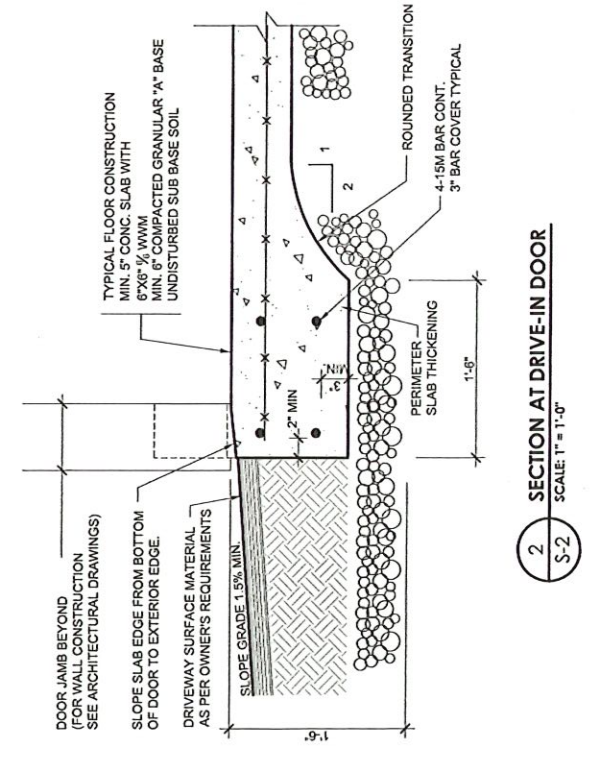
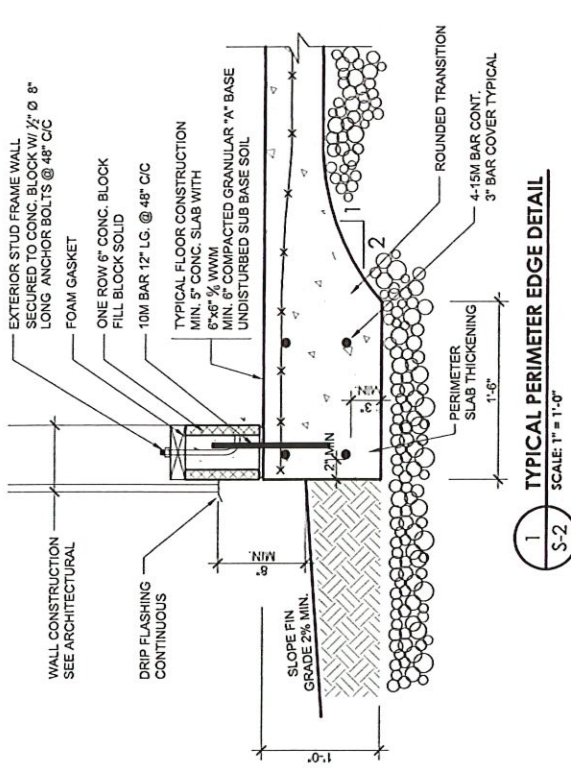
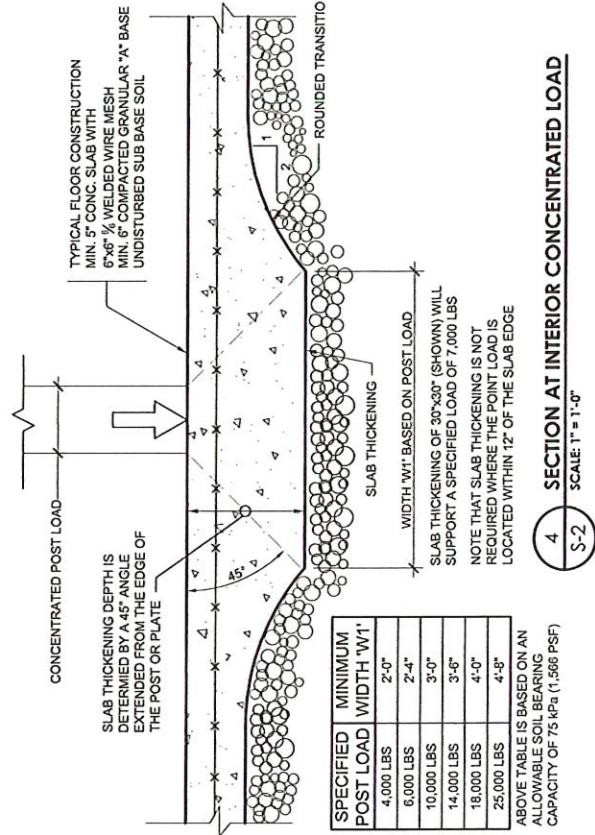
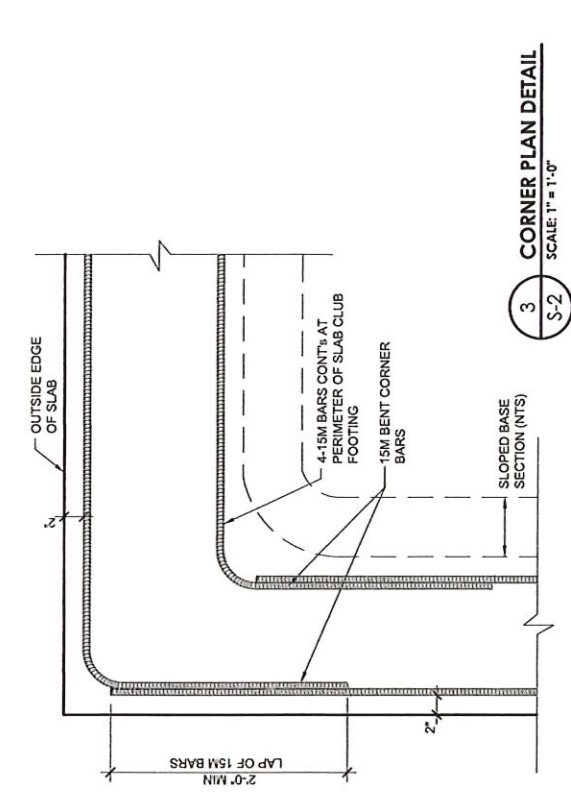
Howard Lee
245 Bay Street Orillia
Orillia, Ontario

Issue Date: Jun. 04, 2026
Scale: AS NOTED

GARAGE SLAB DETAILS

Report No: GP-S-26-84485
Drawing No: S-2

Sheet Size: 11x17



CAST-IN-PLACE CONCRETE NOTES

1.0 GENERAL

- 1.1 PROVIDE ALL LABOUR, MATERIALS, TOOLS, AND EQUIPMENT REQUIRED TO CARRY OUT THE WORK.
- 1.2 REFER ALSO TO GENERAL NOTES, NOTES UNDER PLANS AND SCHEDULES, TYPICAL DETAILS, AND SPECIFICATION.

2.0 PRODUCTS

- 2.1 PORTLAND CEMENT, WATER, AND AGGREGATES SHALL CONFORM TO CSA CAN-423.1M.
- 2.2 PROVIDE AN APPROVED WATER-REDUCING ADDITIVE IN ALL CONCRETE. PROVIDE AN APPROVED AIR ENTRAINING ADDITIVE IN ALL CONCRETE WHICH WILL BE EXPOSED TO A FREEZE/THAW CYCLE AND/OR THE ACTION OF DEICING SALT. ADMIXTURES SHALL CONFORM TO CSA CAN-423.3M SERIES.

- 2.3 FORMWORK SHALL CONFORM TO CSA CAN-243.1M AND FALSEWORK SHALL CONFORM TO CSA 523.1.

- 2.4 REINFORCING STEEL, UNLESS SPECIFICALLY NOTED, SHALL BE DEFORMED BARS CONFORMING TO CSA C30.13-M GRADE 400 (58000 PSI).

- 2.4(b) FIBREGLASS REBAR BY MTS MANUFACTURER IS AN ACCEPTABLE ALTERNATIVE TO STEEL REBAR.

- 2.5 WELDED WIRE FABRIC TO CONFORM TO CSA C30.3M.

- 2.6 REINFORCING SHALL BE DETAILED, BENT, PLACED, AND SUPPORTED TO CONFORM TO A4 STANDARD 315 AND THE MANUAL OF STANDARD PRACTICE PUBLISHED BY THE REINFORCING STEEL INSTITUTE OF ONTARIO.

- 2.7 CURING AND SEALING COMPOUNDS, WHERE APPROVED FOR USE, SHALL CONFORM TO ASTM STANDARD C309. GENERALLY, ALL CONCRETE SURFACES ARE TO BE SEALED UNLESS NOTED OTHERWISE. COMPOUNDS ARE TO BE COMPATIBLE WITH APPLIED FINISHES.

3.0 EXECUTION

- 3.1 MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE @ 28 DAYS SHALL BE AS NOTED ON THE DRAWINGS OR GENERAL NOTES (30 MPa MINIMUM).

- 3.2 SLUMP AT THE POINT OF DISCHARGE SHALL BE CONSISTENT AT 90MM + 20MM (3 1/2" + 3/4") UNLESS NOTED OTHERWISE. GREATER SLUMPS ARE NOT ACCEPTABLE.

- 3.3 CONCRETE MIXING, TRANSPORTATION, HANDLING, AND PLACING SHALL CONFORM TO CSA CAN-243.1M.

- 3.7 CONSTRUCTION JOINTS FOR SLABS AND BEAMS NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL CONSULTANT BEFORE CONSTRUCTION. GENERALLY, JOINTS IN SLABS SHALL BE AT RIGHT ANGLES TO THE SPANS. AT MID-SPAN IF POSSIBLE, AND BE CLEAR OF SUPPORTS AND POINT LOADS.

- 3.8 OPENINGS AND DRIVEN FASTENERS REQUIRED IN THE CONCRETE AFTER THE CONCRETE IS PLACED SHALL BE APPROVED BY A STRUCTURAL CONSULTANT BEFORE PROCEEDING.

- 3.9 FINISHING: REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR THE REQUIRED FINISH TO EXPOSED CONCRETE. ALL HONEYCOMBING SHALL BE CUT OUT AND FILLED. FLOOR FINISHES SHALL BE AS REQUIRED BY THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS AND SHALL CONFORM TO CSA STANDARD CAN-243.1M (CLASS A FINISH UNLESS NOTED).

- 3.10 TOLERANCES FOR PLACING STRUCTURAL CONCRETE, REINFORCING STEEL, CAST-IN HARDWARE, AND FOR FLOOR & ROOF FINISHES SHALL BE AS SPECIFIED IN CSA STANDARD CAN-243.1M.

4.0 QUALITY CONTROL

- 4.1 FOR INSPECTION AND TESTING, SEE GENERAL NOTES.

DESIGN LOADS/NOTES

(DESIGN LOADS ARE UNFACTORED)

ROOF SNOW LOAD: 2.40 kPa (50 PSF) MAX

ROOF DEAD LOAD: 0.75 kPa (15 PSF)

FLOOR DEAD LOAD: 2.4 kPa (50 PSF)

FLOOR DEAD LOAD: SELF WEIGHT

THE LIVE LOAD HAS BEEN DESIGNED FOR LIGHT VEHICLES AND EQUIPMENT. IF HEAVY COMMERCIAL USE IS ANTICIPATED, THE DESIGNER MUST BE NOTIFIED PRIOR TO THE CONSTRUCTION OF THE SLAB.

THE ATTACHED SLAB DRAWINGS HAVE BEEN PREPARED BY A PERSON QUALIFIED TO DESIGN IN ACCORDANCE WITH PART 4 OF THE ONTARIO BUILDING CODE AND AS SUCH COMPLIES WITH THE APPLICABLE PROVISIONS IN CSA A23.3. QUALIFYING OBC SECTION 0.4.1.1, 4.1(1) & (2).

SLAB FOUNDATION GENERAL NOTES

1. PROVIDE ADEQUATE GRADING AND DRAINAGE. SUBGRADE SHALL BE SUITABLE FOR A MINIMUM OF 75 kPa (1500 psf) BEARING PRESSURE. ENSURE THAT THE SOIL IS FREE DRAINING AND NON-FROST SUSCEPTIBLE TO A DEPTH OF 1.2m.

2. CONCRETE TO BE DESIGNED TO A MINIMUM 28-DAY 32 MPa COMPRESSIVE STRENGTH WITH 0.6% AIR ENTRAINMENT FOR GARAGE AND EXPOSED SLABS. THE SLAB CONSTRUCTION MUST CONFORM TO CAN/CSA A23.3 - 94 AND THE ONTARIO BUILDING CODE.

3. PLACE SLAB ON MINIMUM 6" GRANULAR 'A' FILL COMPACTED TO 95% SPD ON SOUND UNDISTURBED ORIGINAL SUBGRADE. ALTERNATELY, THE GRANULAR SLAB BASE MAY BE A MINIMUM OF 6" OF 3/4" CLEAR STONE WITHOUT COMPACTION.

4. SLOPE PERIMETER GRADE TO DRAIN AWAY FROM THE SLAB. IN CASES WHERE THE CONDITIONS OF EXISTING GRADES WILL NOT REASONABLY PERMIT POSITIVE SLOPES AWAY FROM THE SLAB, 4"x9" WEEDING TILE SHALL BE INSTALLED ON AFFECTED SIDES AND DRAINED TO A SUITABLE LOCATION AWAY FROM THE SLAB EDGES.

5. ALL REBAR TO BE DEFORMED, GRADE 400 CONFORMING TO THE CSA-C30.13-M STANDARD. SPURCE FOR 10M & 13M BARS: LAP MINIMUM 24" LAP MIN.

6. THIS SLAB ON GROUND IS DESIGNED FOR A ONE OR TWO-STORY WOOD-FRAMED STRUCTURE.

7. SAW CUT TO 25% OF SLAB THICKNESS TO CONTROL SHRINKAGE CRACKING. REINFORCING MUST NOT BE CUT WITH THIS OPERATION, AND THEREFORE CARE MUST BE TAKEN TO PLACE THE REINFORCING, ALLOWING ADEQUATE CONCRETE TOP COVER FOR SAWCUTTING PURPOSES.

8. FLOOR FINISHES (E.G., CERAMIC TILE) MUST BE INSTALLED WITH SUFFICIENT ISOLATION JOINT MATERIAL TO PREVENT DAMAGE DUE TO MOVEMENT WHERE TEMPERATURE, SHRINKAGE, OR SETTLEMENT MIGHT ADVERSELY AFFECT THE SLAB'S FLATNESS OR DIMENSIONAL STABILITY.

9. HYDRONIC HEATING LINES UP TO 3/4"x2" TUBING ARE PERMITTED.

BELOW GRADE INSULATION

ALL BELOW GRADE INSULATION TO HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 20 PSI UNLESS NOTED OTHERWISE IN THE SECTION DETAILS. ALL BELOW GRADE INSULATION MUST BE APPROVED FOR BELOW GRADE USE. ALL PERIMETER INSULATION SHALL BE SLIGHTLY SLOPED AWAY FROM THE SLAB IT PROTECTS. MIN. R-VALUES SHALL BE IN ACCORDANCE WITH BUILDING CODE INSULATION REQUIREMENTS, FREEZING INDEX, AND FROST PROTECTION.

ONTARIO BUILDING CODE REFERENCES

1. SECTION 9.3.2.3.3, SENTENCE (1) ALLOWS FOR A 50mm² (932 RF) FLOOR AREA FOR SMALL SINGLE STOREY GARAGES TO BE SUPPORTED ON "MUD SILLS"

(UNDEFINED) PROVIDED THE GARAGE IS NOT OF MASONRY OR MASONRY VENEER CONSTRUCTION. (THIS SECTION IS NOT APPLICABLE).

2. SECTION 9.12.2.2 (B) DEREGULATES FOUNDATION DEPTHS FOR ACCESSORY STRUCTURES AS DESCRIBED ABOVE (PERMITS SLAB FOUNDATIONS).

3. SECTION 9.15.1.1 (2) REQUIRES THAT A FOUNDATION OTHER THAN CONVENTIONAL CONCRETE OR MASONRY WALLS ON A CONCRETE FOOTING BE DESIGNED IN ACCORDANCE WITH OBC SECTION 4.2.

4. SECTION 6.1.1.1 (3) STATES THAT FOUNDATIONS ERECTED ON FILLED GROUND, PEAT OR SENSITIVE CLAY MUST HAVE THE FOOTINGS DESIGNED IN CONFORMANCE WITH SECTION 4.2.

5. OBC SECTION 9.16.1.2, "STRUCTURAL FLOOR SLABS" SENTENCE (1) REQUIRES THAT FLOORS ON GROUND THAT SUPPORT LOADS FROM THE SUPERSTRUCTURE SHALL BE DESIGNED IN CONFORMANCE WITH PART 4.

6. IT IS THE RESPONSIBILITY OF THE LOCAL MUNICIPAL BUILDING INSPECTOR TO CARRY OUT ALL OF THE REQUIRED INSPECTIONS FOR THIS ENGINEERED SLAB.

7. SECTION 10.2(1) OF THE ONTARIO BUILDING CODE ACT STATES THAT AFTER A NOTICE FOR INSPECTION IS RECEIVED, AN INSPECTOR OR REGISTERED CODE AGENCY, AS THE CASE MAY BE, SHALL CARRY OUT THE INSPECTION REQUIRED BY THE BUILDING CODE WITHIN THE PRESCRIBED PERIOD.

8. IT IS FURTHER NOTED THAT THE RELEVANT ONTARIO BUILDING CODE SECTION 1.3.3.1, OF DIVISION C, PART 1, "PRESCRIBED NOTICES" REQUIRES THAT NOTICE MUST BE GIVEN UPON READINESS TO CONSTRUCT FOOTINGS. IN THIS CASE THE ENGINEERED SLAB PRIOR TO POURING CONCRETE.

9. THE RESPONSIBILITY TO INSPECT THE FOOTINGS FOR A BUILDING OF THIS AREA IS REQUIRED TO BE COMPLETED BY THE INSPECTOR AND NOT THE ENGINEER OF RECORD. BUILDINGS LARGER THAN 3 STOREYS IN BUILDING HEIGHT OR LARGER THAN 800m² IN BUILDING AREA REQUIRE PROFESSIONAL GENERAL REVIEW BY THE ENGINEER. (NOTE THAT ONLY WHERE THE PROPOSED SINGLE USE OF THIS BUILDING IS ASSEMBLY, INSTITUTIONAL CARE OR DETENTION FACILITY AN ENGINEER WOULD BE REQUIRED TO REVIEW THE SLAB CONSTRUCTION).

GENERAL NOTE: These drawings are not to be scaled. All dimensions must be verified by contractor prior to commencement of any work. Any discrepancies must be reported directly to the designer.



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IBD and the engineer assume no liability for the design of the engineered slab where a building permit has not been obtained and subsequent inspections have not been completed prior to pouring concrete.

Howard Lee
245 Bay Street Orillia
Orillia, Ontario

Issue Date: Jun. 04, 2025

Scale: AS NOTED

SECTION DETAILS

Report No: GPS-26-94485
Drawing No: S-3

CAST-IN PLACE CONCRETE NOTES

TABLE 2 (CSA-A23.3-04)

DEFINITIONS OF C, F, N, A AND S CLASSES OF EXPOSURE	
CXL	STRUCTURALLY REINFORCED CONCRETE EXPOSED TO CHLORIDES OR OTHER SEVERE ENVIRONMENTS WITH OR WITHOUT FREEZING AND THAWING CONDITIONS WITH HIGHER DURABILITY PERFORMANCE EXPECTATIONS THAN THE C-1, A-1, OR S-1 CLASSES.
C-1	STRUCTURALLY REINFORCED CONCRETE EXPOSED TO CHLORIDES WITH OR WITHOUT FREEZING AND THAWING CONDITIONS.
C-2	NON-STRUCTURALLY REINFORCED (PLAIN) CONCRETE EXPOSED TO CHLORIDES AND FREEZING AND THAWING. EXAMPLES: GARAGE FLOORS, PORCHES, STEPS/PAVEMENTS.
C-3	CONTINUOUSLY SUBMERGED CONCRETE EXPOSED TO CHLORIDES BUT NOT TO FREEZING AND THAWING. EXAMPLE: UNDER WATER PORTIONS OF MARINE STRUCTURES.
C-4	NON-STRUCTURALLY REINFORCED CONCRETE EXPOSED TO CHLORIDES BUT NOT TO FREEZING AND THAWING. EXAMPLES: UNDERGROUND PARKING SLABS ON GRADE.
F-1	CONCRETE EXPOSED TO FREEZING & THAWING IN A SATURATED CONDITION BUT NOT TO CHLORIDES. EXAMPLES: POOL DECKS, PATIOS, TENNIS COURTS, FRESHWATER POOLS, FRESH WATER CONTROL STRUCTURES.
F-2	CONCRETE IN AN UNSATURATED CONDITION EXPOSED TO FREEZING AND THAWING BUT NOT TO CHLORIDES. EXAMPLES: EXTERIOR WALLS AND COLUMNS.
N	CONCRETE NOT EXPOSED TO CHLORIDES NOR FREEZINGS AND THAWING. EXAMPLES: FOOTINGS AND INTERIOR SLABS.
A-1	STRUCTURALLY REINFORCED CONCRETE EXPOSED TO SEVERE MANURE AND/OR SILAGE GASES WITH OR WITHOUT FREEZE-THAW EXPOSURE. CONCRETE EXPOSED TO THE VAPOUR ABOVE MUNICIPAL SEWAGE OR INDUSTRIAL EFFLUENT, WHERE HYDROGEN SULPHIDE GAS MAY BE GENERATED. EXAMPLES: REINFORCED BEAMS, SLABS AND COLUMNS OVER MANURE PITS AND SILOS, CANALS, AND PIG SLATS, AND ACCESS HOLES, ENCLOSED CHAMBERS, AND PIPES THAT ARE PARTIALLY FILLED WITH EFFLUENTS.
A-2	STRUCTURALLY REINFORCED CONCRETE EXPOSED TO MODERATE TO SEVERE MANURE AND/OR SILAGE GASES AND LIQUIDS, WITH OR WITHOUT FREEZE-THAW EXPOSURE. EXAMPLES: REINFORCED WALLS IN EXTERIOR MANURE TANKS, SILOS, AND FEED BUNKERS, AND EXTERIOR SLABS.
A-3	STRUCTURALLY REINFORCED CONCRETE EXPOSED TO MODERATE TO SEVERE MANURE AND/OR SILAGE GASES AND LIQUIDS, WITH OR WITHOUT FREEZE-THAW EXPOSURE IN A CONTINUOUSLY SUBMERGED CONDITION. CONCRETE CONTINUOUSLY SUBMERGED IN MUNICIPAL OR INDUSTRIAL EFFLUENTS. EXAMPLES: INTERIOR GUTTER WALLS, BEAMS, SLABS, AND COLUMNS, SEWAGE APPLIES THAT ARE CONTINUOUSLY FULL (E.G. FORCEMAIN), AND SUBMERGED PORTIONS OF SEWAGE TREATMENT STRUCTURES.
A-4	NON-STRUCTURALLY REINFORCED CONCRETE EXPOSED TO MODERATE MANURE AND/OR SILAGE GASES AND LIQUIDS, WITH OR WITHOUT FREEZE-THAW EXPOSURE. EXAMPLES: INTERIOR SLABS ON GRADE.
S-1	CONCRETE SUBJECTED TO VERY SEVERE SULPHATE EXPOSURES.
S-2	CONCRETE SUBJECTED TO SEVERE SULPHATE EXPOSURES.
S-3	CONCRETE SUBJECTED TO MODERATE SULPHATE EXPOSURES.

CONCRETE COVER FOR REINFORCING BARS

EXPOSURE CONDITION	EXPOSURE CLASS		
	F-1, F-2, S-1, S-2	CXL, C-1, C-2	A-1, A-2, A-3
CAST AGAINST PERMANENTLY EXPOSED EARTH (BEAMS, GIRDERS, COLUMNS, and PILES)	75mm	75mm	75mm
SLABS, WALLS, JOISTS, SHELLS, and FOLDED PLATES	40mm	40mm	60mm
RATIO OF COVER TO NOMINAL BAR DIAMETER	20mm	1.0	1.5
RATIO OF COVER TO NOMINAL MAXIMUM AGGREGATE SIZE	1.0	1.5	2.0

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Howard Lee
245 Bay Street Orillia
Orillia, Ontario

Issue Date: Jun. 04, 2026

Scale: AS NOTED

SECTION DETAILS

Report No: GPS-26-84485
Drawing No: S-3

Load Determination

Lintel Supporting Roof

Location	Construction	PSF
Roof/Clg Dead Load:	Wd. Frame & Asphalt Shingles	12
Roof Design Snow Load:	Orillia	35.92

Calculation Results

Factored Load at Left Beam Support	990 Lbs
Factored Load at Right Beam Support	990 Lbs
% Stress Allowed in Bending	51 % OK
% Stress Allowed in Shear	23% OK
% Allowed Live Load Deflection	41% OK
% Allowed Total Load Deflection	29% OK
% Allowed Permanent Deflection	17% OK
Minimum Length of Bearing for Beam (Left)	0.54
Minimum Length of Bearing for Beam (Right)	0.54
Min. Length of Bearing for Support Member (Lft)	0.25
Min. Length of Bearing for Support Member (Rt)	0.25

Wood - Lumber Built-up

Generic Material

Species	Grade	Width	Depth	# of Plies
S-P-F	No. 1/No. 2	2	8	2

Load at Left Supports (Lbs)

Dead:	188	Dead:	188
Live:	0	Live:	0
Snow:	503	Snow:	503
Factored:	990	Factored:	990

Load at Right Supports (Lbs)

Max Moment Location: 4.62' From Left Support

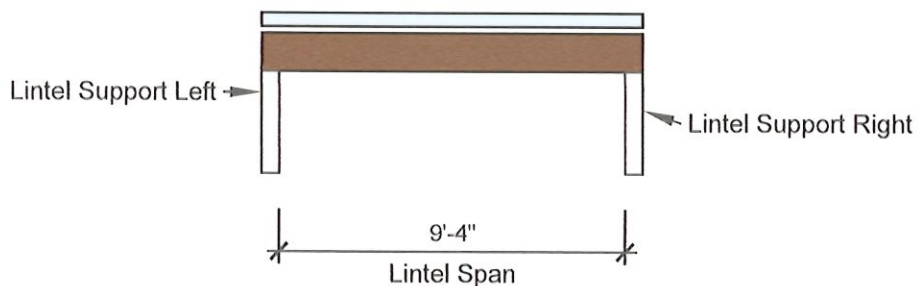
Design Summary

Description:	2-2x8
Minimum Left Bearing Length:	0.54 in B/U Stud
Minimum Right Bearing Length:	0.54 in B/U Stud
Beam Weight Based on Span	40 Lbs

Qualification Notes:

All Beams and Lintels must be supported on the compression edge at intervals not exceeding 24" O.C. - Beams must be laterally supported at their bearing points - Design of wood beams is based on dry service conditions without treatments and "Standard Term" load duration - 1.75" wide Engineered Wood Beams greater than 14" in depth must be comprised of multiple member units - Where a Generic LVL Material has been chosen always verify sizing with a Manufacturer.

Any of the supporting members for the beam are not included in this design. The support must be the same width as the beam.



1766-7 - Orillia Home Hardware Building
Centre
(705) 326-7371

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Phone: (647) 648-3969



Drawing Title:

LINTEL SUPPORTING
ROOF CALCULATIONS

Date: Jun. 04, 2026

Scale: N/A

Lintel Name:

LINTEL D01

Project Title:

Howard Lee

Project Address:

245 Bay Street Orillia
Orillia, Ontario

Drawing No.: 1

File No.:

Sheet Size: 8.5x11

Load Determination		
Lintel Supporting Roof		
Location	Construction	PSF
Roof/Clg Dead Load:	Wd. Frame & Asphalt Shingles	12
Roof Design Snow Load:	Orillia	35.92

Calculation Results		
Factored Load at Left Beam Support	990 Lbs	
Factored Load at Right Beam Support	990 Lbs	
% Stress Allowed in Bending	51 %	OK
% Stress Allowed in Shear	23%	OK
% Allowed Live Load Deflection	41%	OK
% Allowed Total Load Deflection	29%	OK
% Allowed Permanent Deflection	17%	OK
Minimum Length of Bearing for Beam (Left)	0.54	
Minimum Length of Bearing for Beam (Right)	0.54	
Min. Length of Bearing for Support Member (Lft)	0.25	
Min. Length of Bearing for Support Member (Rt)	0.25	

Wood - Lumber Built-up				
Generic Material				
Species	Grade	Width	Depth	# of Plies
S-P-F	No. 1/No. 2	2	8	2

Load at Left Supports (Lbs)		Load at Right Supports (Lbs)	
Dead:	188	Dead:	188
Live:	0	Live:	0
Snow:	503	Snow:	503
Factored:	990	Factored:	990

Max Moment Location: 4.62' From Left Support

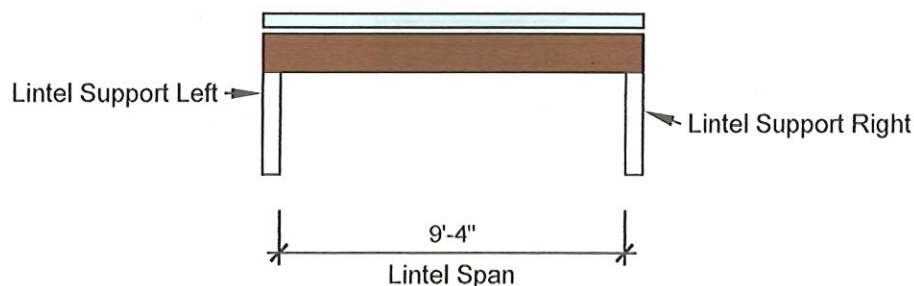
Design Summary

Description:	2-2x8
Minimum Left Bearing Length:	0.54 in B/U Stud
Minimum Right Bearing Length:	0.54 in B/U Stud
Beam Weight Based on Span	40 Lbs

Qualification Notes:

All Beams and Lintels must be supported on the compression edge at intervals not exceeding 24" O.C. - Beams must be laterally supported at their bearing points - Design of wood beams is based on dry service conditions without treatments and "Standard Term" load duration - 1.75" wide Engineered Wood Beams greater than 14" in depth must be comprised of multiple member units - Where a Generic LVL Material has been chosen always verify sizing with a Manufacturer.

Any of the supporting members for the beam are not included in this design. The support must be the same width as the beam.



hh

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Drawing Title:

**LINTEL SUPPORTING
ROOF CALCULATIONS**

Date: Jun. 04, 2026

Scale: N/A

Lintel Name:

LINTEL D02

Project Title:

Howard Lee

Project Address:

245 Bay Street Orillia
Orillia, Ontario

Drawing No.: **2**

File No.:

Load Determination

Lintel Supporting Roof

Location	Construction	PSF
Roof/Clg Dead Load:	Wd. Frame & Asphalt Shingles	12
Roof Design Snow Load:	Orillia	35.92

Calculation Results

Factored Load at Left Beam Support	454 Lbs
Factored Load at Right Beam Support	454 Lbs
% Stress Allowed in Bending	33 % OK
% Stress Allowed in Shear	16% OK
% Allowed Live Load Deflection	37% OK
% Allowed Total Load Deflection	26% OK
% Allowed Permanent Deflection	15% OK
Minimum Length of Bearing for Beam (Left)	0.25
Minimum Length of Bearing for Beam (Right)	0.25
Min. Length of Bearing for Support Member (Lft)	0.11
Min. Length of Bearing for Support Member (Rt)	0.11

Wood - Lumber Built-up

Generic Material

Species	Grade	Width	Depth	# of Plies
S-P-F	No. 1/No. 2	2	4	2

Load at Left Supports (Lbs)

Dead:	83	Dead:	83
Live:	0	Live:	0
Snow:	234	Snow:	234
Factored:	454	Factored:	454

Load at Right Supports (Lbs)

Max Moment Location: 2.15' From Left Support

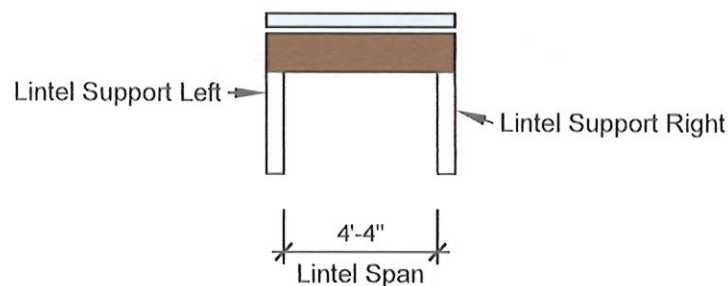
Design Summary

Description:	2-2x4
Minimum Left Bearing Length:	0.25 in B/U Stud
Minimum Right Bearing Length:	0.25 in B/U Stud
Beam Weight Based on Span	9 Lbs

Qualification Notes:

All Beams and Lintels must be supported on the compression edge at intervals not exceeding 24" O.C. - Beams must be laterally supported at their bearing points - Design of wood beams is based on dry service conditions without treatments and "Standard Term" load duration - 1.75" wide Engineered Wood Beams greater than 14" in depth must be comprised of multiple member units - Where a Generic LVL Material has been chosen always verify sizing with a Manufacturer.

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Drawing Title:

LINTEL SUPPORTING
ROOF CALCULATIONS

Date: Jun. 04, 2026

Scale: N/A

Lintel Name:

LINTEL W01

Project Title:

Howard Lee

Project Address:

245 Bay Street Orillia
Orillia, Ontario

Drawing No.: 3

File No.:

Sheet Size: 8.5x11

Load Determination		
Lintel Supporting Roof		
Location	Construction	PSF
Roof/Clg Dead Load:	Wd. Frame & Asphalt Shingles	12
Roof Design Snow Load:	Orillia	35.92

Calculation Results		
Factored Load at Left Beam Support	349 Lbs	
Factored Load at Right Beam Support	349 Lbs	
% Stress Allowed in Bending	20 %	OK
% Stress Allowed in Shear	12%	OK
% Allowed Live Load Deflection	17%	OK
% Allowed Total Load Deflection	12%	OK
% Allowed Permanent Deflection	7%	OK
Minimum Length of Bearing for Beam (Left)	0.19	
Minimum Length of Bearing for Beam (Right)	0.19	
Min. Length of Bearing for Support Member (Lft)	0.09	
Min. Length of Bearing for Support Member (Rt)	0.09	

Wood - Lumber Built-up				
Generic Material				
Species	Grade	Width	Depth	# of Plies
S-P-F	No. 1/No. 2	2	4	2

Load at Left Supports (Lbs)		Load at Right Supports (Lbs)	
Dead:	64	Dead:	64
Live:	0	Live:	0
Snow:	180	Snow:	180
Factored:	349	Factored:	349

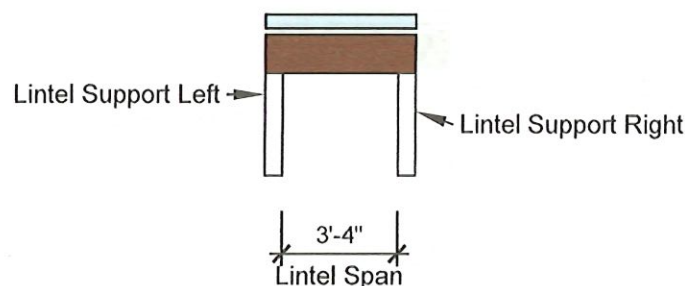
Max Moment Location: 1.65' From Left Support

Design Summary	
Description:	2-2x4
Minimum Left Bearing Length:	0.19 in B/U Stud
Minimum Right Bearing Length:	0.19 in B/U Stud
Beam Weight Based on Span	7 Lbs

Qualification Notes:

All Beams and Lintels must be supported on the compression edge at intervals not exceeding 24" O.C. - Beams must be laterally supported at their bearing points - Design of wood beams is based on dry service conditions without treatments and "Standard Term" load duration - 1.75" wide Engineered Wood Beams greater than 14" in depth must be comprised of multiple member units - Where a Generic LVL Material has been chosen always verify sizing with a Manufacturer.

Any of the supporting members for the beam are not included in this design. The support must be the same width as the beam.





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Drawing Title:

LINTEL SUPPORTING ROOF CALCULATIONS

Date: Jun. 04, 2026 Scale: N/A

Lintel Name:

LINTEL D03

Project Title:

Howard Lee

Project Address:

245 Bay Street Orillia
Orillia, Ontario

Drawing No.: **4**

File No.:

Load Determination

Lintel Supporting Roof

Location	Construction	PSF
Roof/Clg Dead Load:	Wd. Frame & Asphalt Shingles	12
Roof Design Snow Load:	Orillia	35.92

Calculation Results

Factored Load at Left Beam Support	2068 Lbs
Factored Load at Right Beam Support	2068 Lbs
% Stress Allowed in Bending	74 % OK
% Stress Allowed in Shear	50% OK
% Allowed Live Load Deflection	43% OK
% Allowed Total Load Deflection	30% OK
% Allowed Permanent Deflection	17% OK
Minimum Length of Bearing for Beam (Left)	1.12
Minimum Length of Bearing for Beam (Right)	1.12
Min. Length of Bearing for Support Member (Lft)	0.52
Min. Length of Bearing for Support Member (Rt)	0.52

Wood - Lumber Built-up

Generic Material

Species	Grade	Width	Depth	# of Plies
S-P-F	No. 1/No. 2	2	6	2

Load at Left Supports (Lbs)

Dead:	366	Dead:	366
Live:	0	Live:	0
Snow:	1074	Snow:	1074
Factored:	2068	Factored:	2068

Load at Right Supports (Lbs)

Max Moment Location: 2.15' From Left Support

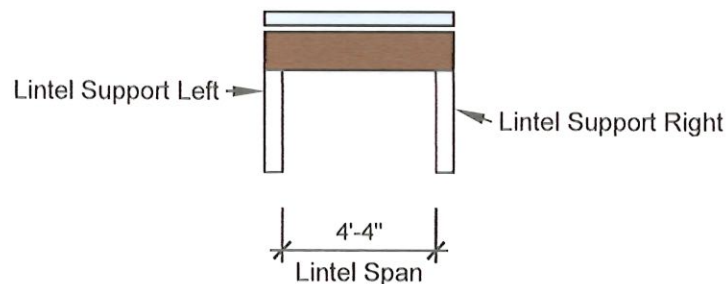
Design Summary

Description:	2-2x6
Minimum Left Bearing Length:	1.12 in B/U Stud
Minimum Right Bearing Length:	1.12 in B/U Stud
Beam Weight Based on Span	15 Lbs

Qualification Notes:

All Beams and Lintels must be supported on the compression edge at intervals not exceeding 24" O.C. - Beams must be laterally supported at their bearing points - Design of wood beams is based on dry service conditions without treatments and "Standard Term" load duration - 1.75" wide Engineered Wood Beams greater than 14" in depth must be comprised of multiple member units - Where a Generic LVL Material has been chosen always verify sizing with a Manufacturer.

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Drawing Title:

LINTEL SUPPORTING ROOF CALCULATIONS

Date: Jun. 04, 2026

Scale: N/A

Lintel Name:

LINTEL W02

Project Title:

Howard Lee

Project Address:

245 Bay Street Orillia
Orillia, Ontario

Drawing No.: 5

File No.:

Sheet Size: 8.5x11

Load Determination

Lintel Supporting Roof

Location	Construction	PSF
Roof/Clg Dead Load:	Wd. Frame & Asphalt Shingles	12
Roof Design Snow Load:	Orillia	35.92

Calculation Results

Factored Load at Left Beam Support	2068 Lbs
Factored Load at Right Beam Support	2068 Lbs
% Stress Allowed in Bending	74 % OK
% Stress Allowed in Shear	50% OK
% Allowed Live Load Deflection	43% OK
% Allowed Total Load Deflection	30% OK
% Allowed Permanent Deflection	17% OK
Minimum Length of Bearing for Beam (Left)	1.12
Minimum Length of Bearing for Beam (Right)	1.12
Min. Length of Bearing for Support Member (Lft)	0.52
Min. Length of Bearing for Support Member (Rt)	0.52

Wood - Lumber Built-up

Generic Material

Species	Grade	Width	Depth	# of Plies
S-P-F	No. 1/No. 2	2	6	2

Load at Left Supports (Lbs)

Dead:	366	Dead:	366
Live:	0	Live:	0
Snow:	1074	Snow:	1074
Factored:	2068	Factored:	2068

Load at Right Supports (Lbs)

Max Moment Location: 2.15' From Left Support

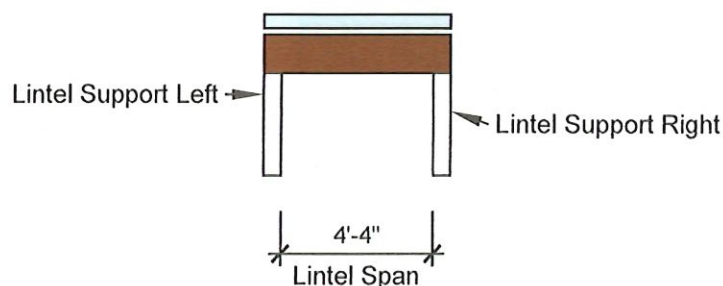
Design Summary

Description:	2-2x6
Minimum Left Bearing Length:	1.12 in B/U Stud
Minimum Right Bearing Length:	1.12 in B/U Stud
Beam Weight Based on Span	15 Lbs

Qualification Notes:

All Beams and Lintels must be supported on the compression edge at intervals not exceeding 24" O.C. - Beams must be laterally supported at their bearing points - Design of wood beams is based on dry service conditions without treatments and "Standard Term" load duration - 1.75" wide Engineered Wood Beams greater than 14" in depth must be comprised of multiple member units - Where a Generic LVL Material has been chosen always verify sizing with a Manufacturer.

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Drawing Title:

LINTEL SUPPORTING
ROOF CALCULATIONS

Date: Jun. 04, 2026

Scale: N/A

Lintel Name:

LINTEL W03

Project Title:

Howard Lee

Project Address:

245 Bay Street Orillia
Orillia, Ontario

Drawing No.: 6

File No.:

Load Determination

Lintel Supporting Roof

Location	Construction	PSF
Roof/Clg Dead Load:	Wd. Frame & Asphalt Shingles	12
Roof Design Snow Load:	Orillia	35.92

Calculation Results

Factored Load at Left Beam Support	1591 Lbs
Factored Load at Right Beam Support	1591 Lbs
% Stress Allowed in Bending	44 % OK
% Stress Allowed in Shear	35% OK
% Allowed Live Load Deflection	20% OK
% Allowed Total Load Deflection	14% OK
% Allowed Permanent Deflection	8% OK
Minimum Length of Bearing for Beam (Left)	0.86
Minimum Length of Bearing for Beam (Right)	0.86
Min. Length of Bearing for Support Member (Lft)	0.4
Min. Length of Bearing for Support Member (Rt)	0.4

Wood - Lumber Built-up

Generic Material

Species	Grade	Width	Depth	# of Plies
S-P-F	No. 1/No. 2	2	6	2

Load at Left Supports (Lbs)

Dead:	282	Dead:	282
Live:	0	Live:	0
Snow:	826	Snow:	826
Factored:	1591	Factored:	1591

Load at Right Supports (Lbs)

Max Moment Location: 1.65' From Left Support

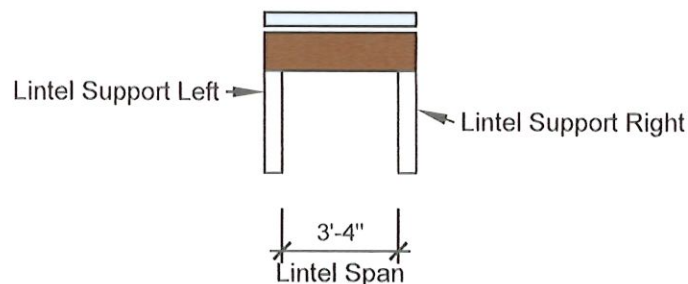
Design Summary

Description:	2-2x6
Minimum Left Bearing Length:	0.86 in B/U Stud
Minimum Right Bearing Length:	0.86 in B/U Stud
Beam Weight Based on Span	11 Lbs

Qualification Notes:

All Beams and Lintels must be supported on the compression edge at intervals not exceeding 24" O.C. - Beams must be laterally supported at their bearing points - Design of wood beams is based on dry service conditions without treatments and "Standard Term" load duration - 1.75" wide Engineered Wood Beams greater than 14" in depth must be comprised of multiple member units - Where a Generic LVL Material has been chosen always verify sizing with a Manufacturer.

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Drawing Title:

LINTEL SUPPORTING
ROOF CALCULATIONS

Date: Jun. 04, 2026

Scale: N/A

Lintel Name:

LINTEL D04

Project Title:

Howard Lee

Project Address:

245 Bay Street Orillia
Orillia, Ontario

Drawing No.: 7

File No.:

Sheet Size: 8.5x11

Load Determination

Lintel Supporting Roof

Location	Construction	PSF
Roof/Clg Dead Load:	Wd. Frame & Asphalt Shingles	12
Roof Design Snow Load:	Orillia	35.92

Calculation Results

Factored Load at Left Beam Support	2068 Lbs
Factored Load at Right Beam Support	2068 Lbs
% Stress Allowed in Bending	74 % OK
% Stress Allowed in Shear	50% OK
% Allowed Live Load Deflection	43% OK
% Allowed Total Load Deflection	30% OK
% Allowed Permanent Deflection	17% OK
Minimum Length of Bearing for Beam (Left)	1.12
Minimum Length of Bearing for Beam (Right)	1.12
Min. Length of Bearing for Support Member (Lft)	0.52
Min. Length of Bearing for Support Member (Rt)	0.52

Wood - Lumber Built-up

Generic Material

Species	Grade	Width	Depth	# of Plies
S-P-F	No. 1/No. 2	2	6	2

Load at Left Supports (Lbs)

Dead:	366	Dead:	366
Live:	0	Live:	0
Snow:	1074	Snow:	1074
Factored:	2068	Factored:	2068

Load at Right Supports (Lbs)

Max Moment Location: 2.15' From Left Support

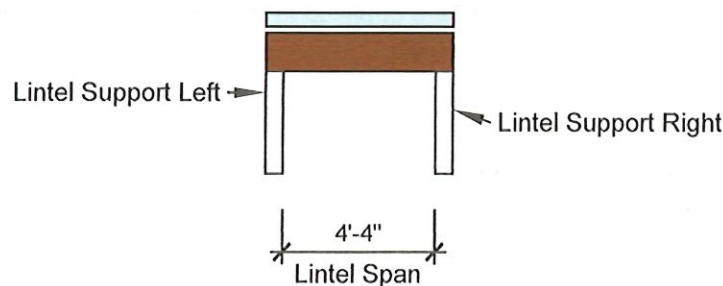
Design Summary

Description:	2-2x6
Minimum Left Bearing Length:	1.12 in B/U Stud
Minimum Right Bearing Length:	1.12 in B/U Stud
Beam Weight Based on Span	15 Lbs

Qualification Notes:

All Beams and Lintels must be supported on the compression edge at intervals not exceeding 24" O.C. - Beams must be laterally supported at their bearing points - Design of wood beams is based on dry service conditions without treatments and "Standard Term" load duration - 1.75" wide Engineered Wood Beams greater than 14" in depth must be comprised of multiple member units - Where a Generic LVL Material has been chosen always verify sizing with a Manufacturer.

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Drawing Title:

LINTEL SUPPORTING
ROOF CALCULATIONS

Date: Jun. 04, 2026

Scale: N/A

Lintel Name:

LINTEL W04

Project Title:

Howard Lee

Project Address:

245 Bay Street Orillia
Orillia, Ontario

Drawing No.: 8

File No.:

Sheet Size: 8.5x11

Schedule 1: Designer Information

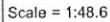
Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Project Information			
Building number, street name 245 Bay Street Orillia		Unit no.	Lot/con.
Municipality Orillia, City of, Ontario		Postal code	Plan number/ other description
B. Individual who reviews and takes responsibility for design activities			
Name Doug MacDonald		Firm MacDonald Design & Management	
Street address 36 Melrose Place		Lot/con	Plan number / other description
Municipality Guelph	Postal code N1K 1W4	Province Ontario	Email doug@ibdweb.ca
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1. of Division C]			
☒ House ☒ Small Buildings ☐ Large Buildings ☐ Complex Buildings		☐ HVAC - House ☐ Building Services ☐ Detection, Lighting and Power ☐ Fire Protection	
		☒ Building Structural ☐ Plumbing - House ☐ Plumbing - All Buildings ☐ On-site Sewage Systems	
Description of designer's work New Detached Wood Frame Garage			
D. Declaration of Designer			
I, Doug MacDonald, C.E.T., M.A.A.T.O., OAAAS declare that (choose one as appropriate):			
☒ I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories. Individual BCIN: 25628 Firm BCIN: 31087			
☐ I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code. Individual BCIN: _____ Basis for exemption from registration: _____			
☐ The design work is exempt from the registration and qualification requirements of the Building Code. Basis for exemption from registration and qualification: _____			
I certify that:			
1. The information contained in this schedule is true to the best of my knowledge. 2. I have submitted this application with the knowledge and consent of the firm.			
2026-06-04 _____ Date		Digitally signed by: Doug MacDonald Date: 2026-06-04 08:56:53 EDT _____ Signature of Designer	

NOTE:

1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1)(c). of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.

2. Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of practice, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Professional Engineers of Ontario.

Page: 1 of 1

Total Weight = 1 x 18 = 18 lb [F]

Support	Max. Factored Reactions (lb),			Bearing Information				Unfactored Reactions (lb)				Bracing Requirements		
	Down (LC)	Uplift	Horiz	Input	Req'd	Brq. Material	Brq. Enhancer	Snow	Live	Dead	Wind	Top Chord: Rigid sheathing directly applied or 3.45 ft oc lateral restraint required.		
	2429 (1)	--	0	5-08	2-10	SPF No.2	none	1322/0	--/--	357/0	--/--			
F	2429 (1)	--	0	5-08	2-10	SPF No.2	none	1322/0	--/--	357/0	--/--	Bottom Chord: Rigid Ceiling directly applied or 10 ft oc lateral restraint required.		
Factored Vertical Load in LC1 (plf), Max Factored Member Forces (lb), CSI, Max Unbraced Length (MUL)												Load Cases: 4	All pitch breaks and perimeter corner joints must be laterally restrained	
Member	Start	End	MaxC	MaxT	CSI (LC)	MUL (ft)	Member	Start	End	MaxC	MaxT	CSI (LC)		MUL (ft)
Too Ch	A-B	-158.2	-158.2	0	49	0.34 (1)	10	B-L	-160.3	-160.3	4295	0	0.28 (1)	3.7
	C-L	-158.6	-158.6	4053	0	0.59 (1)	3.45	C-D	-158.6	-158.6	3469	0	0.62 (1)	3.65
	D-E	-158.6	-158.6	3469	0	0.62 (1)	3.65	E-N	-158.6	-158.6	4053	0	0.59 (1)	3.45
	F-N	-160.3	-160.3	4295	0	0.28 (1)	3.7	F-G	-158.2	-158.2	0	49	0.34 (1)	10
Bot Ch.	B-K	-18.3	-18.3	0	3760	0.46 (1)	10	J-K	-18.3	-18.3	0	3760	0.53 (1)	10
	I-J	-18.3	-18.3	0	2458	0.37 (1)	10	H-I	-18.3	-18.3	0	2458	0.37 (1)	10
	H-M	-18.3	-18.3	0	3760	0.53 (1)	10	F-M	-18.3	-18.3	0	3760	0.46 (1)	10
Webs	C-J	--	--	994	0	0.15 (1)	--	D-J	--	--	0	1184	0.19 (1)	--
	D-H	--	--	0	1184	0.19 (1)	--	E-H	--	--	994	0	0.15 (1)	--

Lumber Table

Lumber (NLGA Grading Rules)

Chords

2x4 SPF 1650F 1.5E

B1, T1

Webs

2x3 SPF 1650F 1.5E

All Webs

2x3 Left Wedge

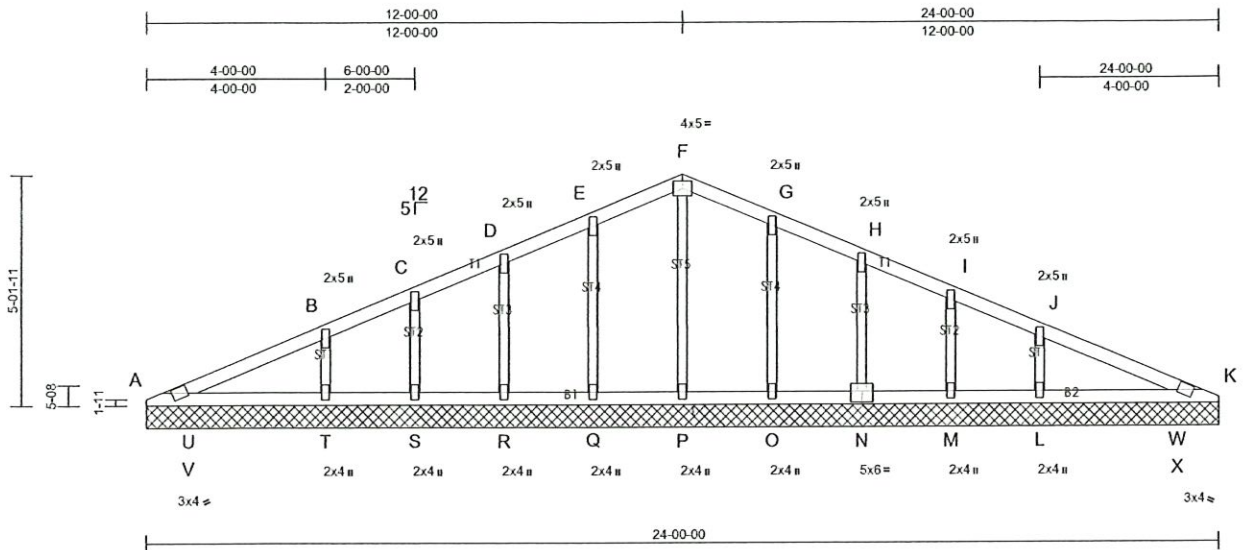
2x3 Right Wedge

NOTES

1. Bearing size factor = 1.15 at joint(s) B, F (Based on the support depth = 1-08)
2. Specified Snow Load: $S = S_s(C_b) + S_r = 71.00 (0.55) + 8.40 = 47.45$ psf
3. Truss plate manufacturer is not responsible for quality control in the truss manufacturing plant. Dimensions, supports, and loadings specified by fabricator to be verified by building designer. All lumber is dry (moisture content is less than 19%) at time of fabrication, unless otherwise specified



Job Name: Stock2026	Truss Name: 24-DG512	Qty 1	Ply 1	Job Desc: 2026 Stock Trusses -Roof	Drawing No.:
				Truss Desc:	



Scale = 1:50.2	24'-00-00	
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Plate Offsets (Joint: x, y): (N: 3.00 ", 3.00 ")				Total Weight = 1 x 76 = 76 lb			
SPECIFIED LOADS	CODES / STANDARDS	DESIGN INFORMATION	DEFLECTIONS	PLATE INFORMATION			
Top ch. Snow Top ch. Dead Bot ch. Live Bot ch. Dead Total Load	(psf) 47.45 6.00 0.00 7.30 60.75	Part 9 Div B NBCC 2020 Residential Application: Roof This design complies with: CBC2024, NBC-2023AE, MBC2024, OBC2024, TPIC2019, CSAO86-19	SPACING: 24.0 in cc KS = 1.00 (Dry Service) KH = 1.00 (Single Member) KD = 1.00 (Load Duration LC1) CSI Top 0.44/1.00 J-X (1) CSI Bot 0.36/1.00 T-U (1) CSI Web 0.20/1.00 F-P (1) SSI 0.49/1.00 J-X (1)	Ceiling Type: Plaster / Gypsum DESIGN (in) LIMIT (in)	All plates are MT20 unless otherwise noted. Placement Tolerance: 0.25 in Rotation Tolerance: 5 ° JSI Grip (max): 0.86 @ Joint K, Limit = 0.90 JSI Metal (max): 0.38 @ Joint J, Limit = 1.00		
					Plate MT20	Grip (psi) 650/371	Shear (psi) 1747/783
							Section (psi) 1537/1873

BEARINGS

THIS TRUSS IS DESIGNED FOR CONTINUOUS BEARING.
THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.
BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S).

Factored Vertical Load in LC1 (plf), Max Factored Member Forces (lb), CSI, Max Unbraced Length (MUL)										LoadCases: 4	
Member	Start	End	MaxC	MaxT	CSI (LC)	MUL (ft)	Member	Start	End	MaxC	MaxT
Top Ch											
A-V	-317.5	-318.7	0	79	0.11 (1)	10	B-V	-318.9	-322.8	0	158
B-C	-322.8	-325.4	0	97	0.43 (1)	10	C-D	-325.4	-328.0	0	174
D-E	-328.0	-330.6	0	160	0.20 (1)	10	E-F	-330.6	-333.3	0	161
F-G	-333.3	-330.6	0	161	0.20 (1)	10	G-H	-330.6	-328.0	0	160
H-I	-328.0	-325.4	0	174	0.17 (1)	10	I-J	-325.4	-322.8	0	97
J-X	-322.8	-318.9	0	158	0.44 (1)	10	K-X	-318.7	-317.5	0	79
Bot Ch							T-U	-19.9	-23.9	93	0
A-U	-18.9	-20.1	147	0	0.36 (1)	6.25	R-S	-26.5	-29.1	150	0
S-T	-23.9	-26.5	138	0	0.20 (1)	6.25	P-Q	-31.7	-34.3	172	0
Q-R	-29.1	-31.7	162	0	0.03 (1)	6.25	N-O	-31.7	-29.1	162	0
O-P	-34.3	-31.7	172	0	0.03 (4)	6.25	L-M	-26.5	-23.9	138	0
M-N	-29.1	-26.5	150	0	0.04 (1)	6.25	K-W	-20.1	-18.9	147	0
L-W	-23.9	-19.9	93	0	0.36 (1)	6.25					
Webs							E-Q	--	--	747	0
F-P	--	--	691	0	0.20 (1)	--	C-S	--	--	480	0
D-R	--	--	667	0	0.10 (1)	--	G-O	--	--	747	0
B-T	--	--	1062	0	0.11 (1)	--	I-M	--	--	480	0
H-N	--	--	667	0	0.10 (1)	--					
J-L	--	--	1062	0	0.11 (1)	--					

NOTES

- Bearing size factor = 1.15 at joint(s) A, K, P, Q, R, S, T, O, N, M, L (Based on the support depth = 1'-08)
- Specified Snow Load: S = Ss(Cb) + Sr = 71.00 (0.55) + 8.40 = 47.45 psf
- Truss plate manufacturer is not responsible for quality control in the truss manufacturing plant. Dimensions, supports, and loadings specified by fabricator to be verified by building designer. All lumber is dry (moisture content is less than 19%) at time of fabrication, unless otherwise specified

Bracing Requirements

- Top Chord: Rigid sheathing directly applied or 10 ft oc lateral restraint required.
- Bottom Chord: Rigid Ceiling directly applied or 6.25 ft oc lateral restraint required.
- All pitch breaks and perimeter corner joints must be laterally restrained

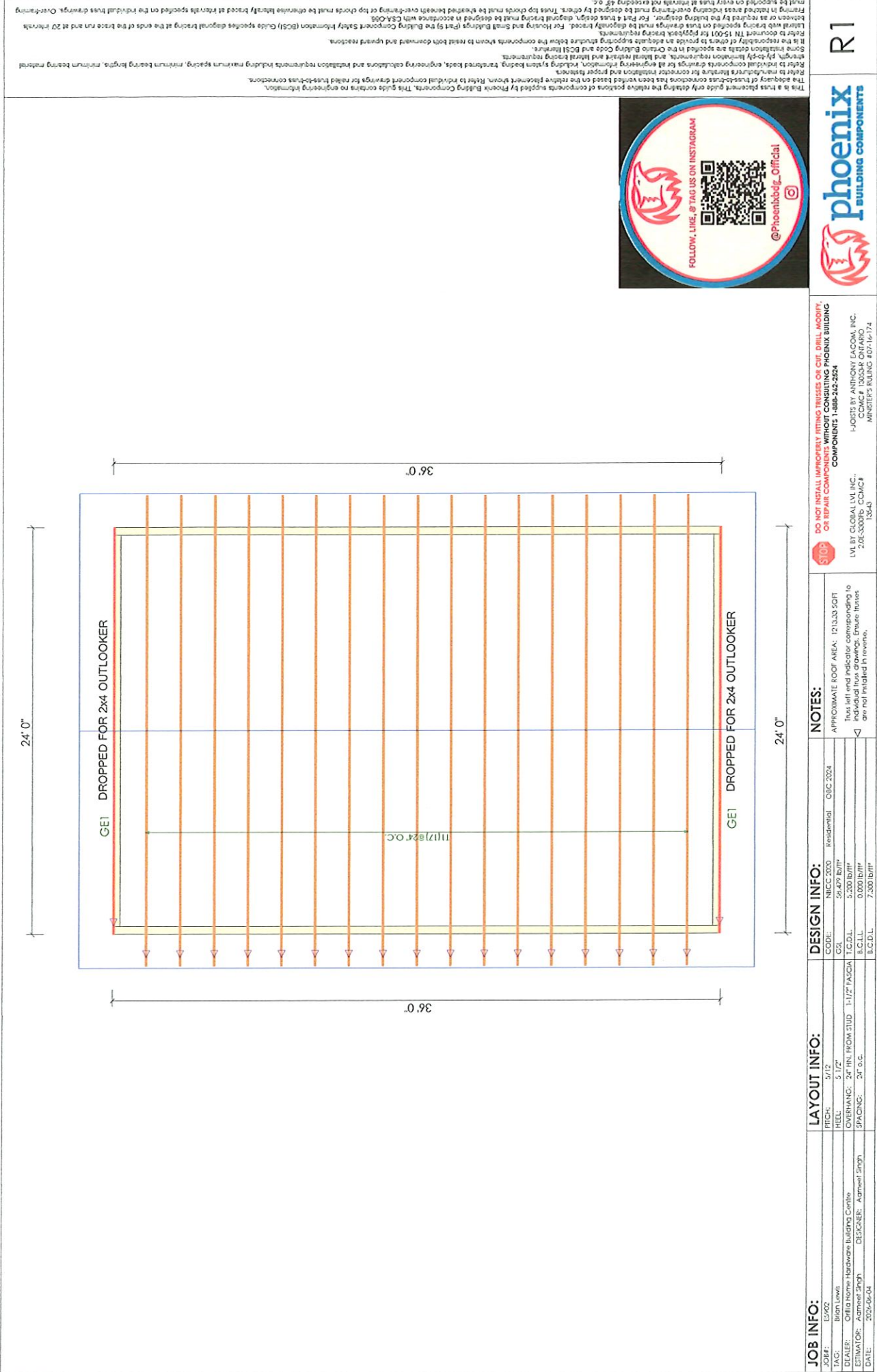
Lumber Table

Lumber (NLGA Grading Rules)

Chords

- 2x3 SPF 1650F 1.5E ST5, ST4, ST3, ST2, ST1
- 2x4 SPF 1650F 1.5E B1, B2, T1





This is a truss placement guide only detailing the relative positions of components supplied by Phoenix Building Components. This guide contains no engineering information. Refer to individual component drawings for all engineering information, including system loading, braced member details, and lateral bracing requirements. Refer to manufacturer's literature for connector installation and proper fasteners. Some installation details are specified in the Ontario Building Code and BCSI literature. Refer to individual component drawings for all engineering information, including system loading, braced member details, and lateral bracing requirements. Refer to manufacturer's literature for connector installation and proper fasteners. At the responsibility of others to provide an adequate supporting structure below the components when to resist both downward and upward reactions. Later web bracing specified on truss drawings must be designed by others. Truss top chords must be braced beneath overhanging or top chords must be otherwise laterally braced at intervals specified on the individual truss drawings. Overhanging members or truss required by the building designer. For Part 4 truss design, diagonal bracing must be designed in accordance with CSA C405. Framing in hatched areas indicating overhanging must be designed by others. Truss top chords must be braced beneath overhanging or top chords must be otherwise laterally braced at intervals specified on the individual truss drawings. Overhanging must be supported on every truss at intervals not exceeding 45' o.c.



JOB INFO:		LAYOUT INFO:		DESIGN INFO:		NOTES:	
JOB#:	E302	PITCH:	5/12	CODE:	NBC 2024	APPROXIMATE ROOF AREA:	121,333 SQ FT
TAC:	Brian Lewis	HEEL:	5 1/2"	CSL:	59,499 lb/ft	Truss left end indicator corresponding to	
DEALER:	Orilla Home Hardware Building Centre	OVERHANG:	24" FIN. FROM STUD	T.C.D.L.	5,200 lb/ft	Individual floor drawings. Ensure floors	
ESTIMATOR:	Aamir Singh	SPACING:	24" o.c.	B.C.D.L.	0,000 lb/ft	are not installed in reverse.	
DATE:	2024-06-04						

STOP DO NOT INSTALL IMPROPERLY FITTING TRUSSES OR CUT, DRILL, MODIFY, OR REPAIR COMPONENTS WITHOUT CONSULTING PHOENIX BUILDING COMPONENTS 1-888-242-3224

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