

MORRISON RESIDENCE: STUDIO ACCESSORY BUILDING

1454 BEGBIE STREET, VICTORIA BC, V8R 1K7
Lot 96 Plan VIP262 Section 75 Land District 57, PID: 003-871-053

SHEET INDEX:

- 01 COVER SHEET
- 02 SITE PLAN
- 03 FOUNDATION PLAN
- 04 FLOOR PLAN & SCHEDULES
- 05 ROOF PLAN
- 06 BUILDING CROSS SECTION
- 07 ELEVATIONS
- 08 ELECTRICAL PLAN

PROJECT NOTES:

OWNER NAME: RICK MORRISON, CLIFF MORRISON
PROJECT ADDRESS: 1454 BEGBIE STREET,
VICTORIA BC
V8R 1K7
PLANS PREPARED BY: WOODROW MORRISON
PHONE: 250 886-2683
OCCUPANCY GROUP: RESIDENTIAL
R-2 (RI-B REQUIREMENTS)
CONSTRUCTION TYPE: NEW WOOD FRAMED
PROJECT DESCRIPTION: ACCESSORY BUILDING

NOTES AND SPECIFICATIONS

SITEWORK:

GRAVEL AND FILL MATERIALS:
CLEAR CRUSH ¾": SUPERIOR DRAINAGE AND COMPACTION TO ROAD BASE,
ROAD BASE ¾": CONTAINS FINES AND HAS SUB-OPTIMAL DRAINAGE
EXISTENT SOIL: MUST BE FREE OF ORGANIC MATERIAL TO BE REUSED
CLAY: SAVED DURING EXCAVATION TO REUSE AS A CLAY CAP

FOUNDATION:

CONCRETE STRENGTH:
*MUST CONTAIN 5-8% AIR ENTRAINMENT

15 MPA (MIN) REQUIREMENT:
FOUNDATION FOOTING
FOUNDATION WALL
COLUMN FOOTING
COLUMN PIER WALL

20 MPA (MIN) REQUIREMENT:
INTERIOR CONCRETE SLAB FLOOR
EXTERIOR CONCRETE ENTRY LANDING

FOOTING BEARING:
MUST OCCUR ON UNDISTURBED EARTH OR GRAVEL. IF COMPACTED GRAVEL IS
TO BE USED UNDER FOOTING IT MUST NOT EXCEED 5" IN DEPTH

FOUNDATIONAL WALL DESIGN:

- A REDUCTION OF THICKNESS WILL OCCUR TO ACCOMMODATE THE XPS
FOAM ACTING AS BOND BREAK BETWEEN SLAB AND FOUNDATION WALL.
- THE REDUCTION IN THICKNESS CAN OCCUR TO A MAXIMUM OF 14" IN
VERTICAL DISTANCE, TO A MINIMUM OF 3-½" IN WALL THICKNESS.
- FOUNDATION WALLS SHALL EXTEND NOT LESS THAN 6" ABOVE FINISHED
GROUND

FRAMING:

- BUILT-UP WOOD COLUMNS:
- 4-2X6 SPF (MIN)
 - NAILED WITH 3" NAILS AT 12" O/C (MIN)
 - ANCHORED TO THE BOTTOM PLATE WITH SIMPSON HARDWARE
 - WHERE CONTINUITY OF COLUMNS IS BROKEN BY WALL PLATES THE COLUMN
SECTIONS WILL BE JOINED ACROSS PLATES USING SIMPSON HARDWARE
 - EACH MEMBER OF THE BUILT-UP COLUMN WILL BE NAILED TO WALL
SHEATHING AS PER B.W.P. REQUIREMENTS (AT OWNERS REQUEST, NOT
REQUIRED BY CODE FOR THIS BUILDING)

ENGINEERED RIDGE BEAM
TO BE WAYERHAUSER MICROLAM LVL AS PER MANUFACTURER'S INSTRUCTION
* SEE THE CALCULATION NOTES FOR ACCEPTABLE SOLUTIONS

NOTCHING AND DRILLING:

- IN ROOF FRAMING MUST OCCUR 2" AWAY FROM EDGES OF FRAMING AND
NOT EXCEED ¼ OF THE FRAMING MEMBERS WIDTH
- IN STUDS MUST NOT EXCEED ¼ OF THE STUD WIDTH AND OCCUR AT LEAST 2"
AWAY FROM EDGES. (MAXIMUM 1-½" FOR 2X6 STUD WHEN DEAD CENTER)
- IN TOP PLATES THE REDUCED WIDTH MUST BE AT LEAST 2" UNLESS
SUITABLY REINFORCED

MOISTURE PROTECTION & INSULATION:

FLASHING:
SHEET METAL FLASHING SHALL NOT BE LESS THAN:
0.35MM THICK STEEL OR COPPER
0.35MM THICK ZINC
0.48MM THICK ALUMINUM

DRAIN WATER LEADER:
D.W.L. WILL BE DISCHARGED INTO YARD AT A DISTANCE GREATER THAN THE
CLAY CAP EXTENDS BEYOND THE BACKFILL. IT WILL BE DISCHARGED INTO, AND
HIDDEN BY, A SHALLOW BED OF DRAINAGE ROCK. THE D.W.L. WILL NOT CONNECT
TO CITY SERVICES.

PERIMETER DRAIN:

- EITHER 6" OR 4" RIGID PERFORATED PVC PIPE
- DOUBLE-45° OR LONG SNEEP CORNERS
- TWO WAY CLEANOUTS LOCATED REGULARLY
- ACHIEVES 1% SLOPE MINIMUM (2% BEST PRACTICE)
- HOLES PLACED DOWNWARD
- BOTTOM OF PIPE 2 INCHES BELOW THE TOP OF FOOTING (MIN)
- P.D. TO BE COVERED IN 6" (MIN) OF CLEAR CRUSH AROUND ALL SIDES
- FILTER FABRIC MUST ENCLOSE LAYER OF CLEAR CRUSH AROUND THE P.D.
AND MUST NOT BE IN DIRECT CONTACT WITH THE P.D.

VENTILATION & INTERIOR AIR QUALITY:

AS PER BCBC 4.3.2:
THIS ACCESSORY BUILDING IS NOT A DWELLING UNIT AND THEREFORE INTERIOR
VENTILATION IS NOT REQUIRED, HOWEVER THE FOLLOWING DESIGN SHALL BE
USED AND WILL EXCEED CODE REQUIREMENTS:

NON-HEATING SEASON VENTILATION REQUIREMENTS:

- WILL BE MET USING PASSIVE MEANS SUCH AS WINDOWS
- VENTILATION AREA SHALL BE 2% (MIN) OF INTERIOR FLOOR AREA
- MAIN ROOM REQUIRES 4.9 FT² OF VENTILATION
- STORAGE ROOM REQUIRES 1.06 FT² OF VENTILATION AND WILL BE VENTED
INTO THE MAIN ROOM THROUGH VENT IN SHARED WALL.

HEATING SEASON VENTILATION:

- AS PER BCBC 4.3.2.3.4 (6)(b):
- JANUARY DESIGN TEMPERATURE ALLOWS FOR PASSIVE HEATING SEASON
VENTILATION
 - PASSIVE SUPPLY AIR WILL BE PROVIDED FROM OUTDOORS THROUGH A
DEDICATED INLET SERVING THE ONE COMMON AREA (MAIN ROOM)
 - THE INLET WILL BE AT LEAST 6' ABOVE THE FLOOR AND HAVE AN
UNOBSTRUCTED VENT AREA OF NOT LESS THAN 4 IN²
 - THE PASSIVE AIR INLET WILL BE AT THE NORTH GABLE END WALL.

NAILING:

FRAMING NAILING:
STUD TO PLATE (TOE NAIL): 4 NAILS, 2-½" LONG (MIN)
STUD TO PLATE (END NAIL): 2 NAILS, 3-½" LONG
DOUBLE STUDS AT OPENINGS: 3" NAILS, 30" O.C.
DOUBLE TOP PLATES: 3" NAILS, 24" O.C.
LINTELS TO STUDS: 2 NAILS EACH END, 3-½" LONG
ROOF JOIST TO TOP PLATE: 3 NAILS, 3-½" LONG
ROOF JOIST TO RIDGE BOARD (TOE NAIL OR END NAIL): 3 NAILS, 3-½" LONG

SHEATHING NAILING:

- 2" NAILS (MIN)
- 6" O.C. AT EDGES
- 12" O.C. AT INTERMEDIATE SUPPORTS

ROOF SHEATHING NAILING:

- 3" O.C. NAILING ABOVE EAVE UNTIL WITHIN EXTERIOR WALLS PERIMETER
- GALVANIZED ROOFING NAILS OF SUFFICIENT LENGTH TO PENETRATE ½"
INTO SHEATHING

BRACED WALL PANELS:

B.W.P. WILL BE 24" (MIN) LONG WHERE INTERSECTING ANOTHER B.W.P. OR 30"
(MIN) WHERE IT IS INDEPENDENT. SHEATHING WILL BE 1/2" (MIN).

B.W.P. WILL BE NAILED:

- 3" O.C. AT EDGES
- 12" O.C. AT INTERMEDIATE SUPPORTS
- USING 2-½" NAILS

GRIDLINE NOTES:

"GRIDLINE A" IS 36" SETBACK FROM, AND PARALLEL TO THE REAR LOT
PROPERTY LINE
"GRIDLINE 1" REPRESENTS THE SIDE LOT PROPERTY LINE
"GRIDLINE 2" IS 24" SETBACK FROM, AND PARALLEL TO THE SIDE LOT

CALCULATIONS:

COLUMN FOOTING: 48 X 24 = 1152 IN², 10" THICK
COLUMN SPACING: 15.75 FT O.C.

BCBC 9.15.3.3. BCBC 9.15.3.7. TABLE 9.15.3.4

- COLUMNS SPACED 9.84 FT O.C. REQUIRE 620 IN² FOOTING AREA
- FOOTING AREA FOR COLUMNS SPACED OTHER 9.84 FT O.C. SHALL BE
ADJUSTED IN PROPORTION TO THE DISTANCE BETWEEN COLUMNS.

FOOTING AREA FOR COLUMN SPACED 15.75 FT O.C. = 993 IN² (MIN)
15.75 O.C. / 9.84 O.C. = 1.6
1.6 X 620 IN² = 993 IN²

THE COLUMN FOOTING WILL BE 24 X 48 = 1152 IN² > 993 IN²
(EXCEEDS MIN FOOTING AREA)

BUILT-UP WOOD COLUMN:

BCBC 9.17.4.1

- 4-2X6 SPF (MINIMUM)
- AT LEAST 5-1/2" X 5-1/2"
- EXCEED WIDTH OF THE SUPPORTED MEMBER (LVL BEAM)
- SHEATHING NAILED TO EACH INDIVIDUAL MEMBER

ROOF AND BEAM LOAD CALCULATION:

ROOF ASSEMBLY LOAD:
2X12 ROOF JOIST 24" O.C.: 2.5 LB/FT²
5/8 DRYWALL: 2.5 LB/FT²
R-30 BATT: 6 LB/FT²
2X4 PURLINS 24" O.C.: 0.5 LB/FT²
5/8 SHEATHING PLY: 1.5 LB/FT²
LVL BEAM: 1.8 LB/FT²
ASPHALT SHINGLE: 2.5 LB/FT²
TOTAL DEAD LOAD: 17.3 LB/FT²
TOTAL LIVE LOAD: 32 LB/FT² (BASED ON 15 KPA CLIMACTIC DATA)
COMBINED DEAD AND LIVE LOAD: 49.3 LB/FT²

BEAM TRIBUTARY AREA:
CLEAR SPAN OF BEAM IS 15.2 FT
SUPPORTED ROOF JOISTS SPAN 8' (4 FT PER SIDE)
BEAM TRIBUTARY AREA IS 15.2 X 8 = 121.6 FT²

BEAM LOAD IN PSF:
121.6 FT² X 49.3 PSF = 5995 LB

BEAM LOAD IN PLF:
5995 LB / 15.2 (BEAM CLEAR SPAN) = 395 PLF

BEAM SIZE CALCULATION:
REFERENCE DOCUMENT:
WEYERHAEUSER MICROLAM LVL 2.0E
#TJ-9000 SPECIFIERS GUIDE
PAGE 15, 16-6" SPAN

BASED ON 395 BEAM LOAD PLF

ACCEPTABLE BEAM SOLUTIONS:

2 PLY LVL
3-1/2" X 14" 805 PLF
3-1/2" X 16" 1035 PLF
3-1/2" X 18" 1291 PLF

3 PLY LVL
5-1/4" X 11-1/4" 765 PLF
5-1/4" X 11-7/8" 886 PLF
5-1/4" X 14" 1208 PLF
5-1/4" X 16" 1552 PLF

PROJECT INFORMATION

PROJECT SUMMARY:

THE WORK WILL INCLUDE THE CONSTRUCTION OF AN ACCESSORY BUILDING OF
APPROXIMATELY 340 FT² IN THE REAR LOT. IT WILL HAVE A VAULTED CEILING
SUPPORTED BY A RIDGE BEAM AND BE RESTING ON A FOUNDATION WALL, AND
A CONCRETE FLOOR.

WORK RESTRICTION

HOURS OF WORK MUST COMPLY WITH THE MUNICIPAL BYLAW AS FOLLOWS:

"A PERSON MAY CARRY OUT ANY CONSTRUCTION THAT DISTURBS THE QUIET,
PEACE, REST OR ENJOYMENT OF THE PUBLIC, ONLY:
(A) BETWEEN 7:00 A.M. AND 7:00 P.M. ON A WEEKDAY THAT IS NOT A
HOLIDAY;
(B) BETWEEN 10:00 A.M. AND 7:00 P.M. ON A SATURDAY THAT IS NOT A
HOLIDAY."

ADVANCE NOTICE OF WORK ACTIVITIES OF LOUD AND ENDURING NOISE SUCH AS
JACK HAMMERING, ONGOING CUTTING, SANDING OR GRINDING OR EXCAVATION
TO BE PROVIDED TO NEIGHBORS.

SITE ACCESS

SITE ACCESS WILL BE VIA THE DRIVEWAY OFF OF BEGBIE STREET. IF ACCESS
TO THE REAR LOT IS REQUIRED FOR HEAVY EQUIPMENT OR MATERIALS, SUCH AS
AN EXCAVATOR, IT MUST FIRST BE DEMONSTRATED THAT THE CONCRETE SLAB
CAN BEAR THE LOAD WITHOUT CRACKING.

TEMPORARY FACILITIES

A LARGE GARBAGE BIN AND CANOPIED WORK AREA PROTECTED FROM
WEATHER MAY BE REQUIRED ON SITE.

SITE SAFETY

A FIRST AID KIT, EYE WASH AND CLASS ABC FIRE EXTINGUISHER MUST BE
AVAILABLE AT ALL TIMES. FOR WORK AT HEIGHTS OR AROUND HEAVY
MACHINERY THERE MUST BE ANOTHER PERSON AT THE RESIDENCE.

DEPENDENCIES

- *ELECTRICAL PLAN PRIOR TO FOUNDATION CONSTRUCTION
- *BC 1 CALL TICKET ACQUISITION
- *SOIL BEARING 75 KPA MINIMUM CONFIRMED BY PICKET TEST

ABBREVIATIONS

| | |
|-----|----------------------|
| GWB | GYPSUM WALL BOARD |
| PD | PERIMETER DRAIN |
| DWL | DRAIN WATER LEADER |
| FG | FIBER GLASS |
| VB | VAPOR BARRIER |
| BWP | BRACED WALL PANEL |
| BWB | BRACED WALL BAND |
| XPS | EXTRUDED POLYSTYRENE |

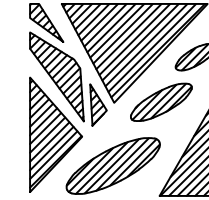
DESIGN CRITERIA

ASSUMED SOIL
BEARING CAPACITY: 75 KPA

SEISMIC DATA: S_A(0.2): 1.2
SNOW LOAD 1/50 KPA: 1.5 S_s 0.2 S_r
HOURLY WIND 1/50 KPA: 0.37
JANUARY DESIGN TEMP: 2.5% °C: -4

DEGREE DAYS
BELOW 18° C: 2700

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COMMENTS

NO DATE

DATE: 12/03/2021

1454 BEGBIE STREET
VICTORIA BC, V8R 1K7

DATE: 12/03/2021

SCALE: 1/8" = 1'-0" (COVER SHEET)

STUDIO ACC. BUILDING

COVER SHEET

~SHEET~

1 OF 8