

**SCHEDULE A-4**

**Permit Application**

I / We hereby apply under Part 14 of the *Local Government Act* for a;

Development Variance Permit

Temporary Use Permit

Development Permit

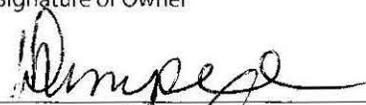
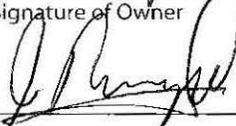
An Application Fee in the amount of \$ 1300.00 as stipulated in FVRD Application Fees Bylaw No. 1231, 2013 must be paid upon submission of this application.

Civic Address 43836 Loch Road, Lake Errock BC PID 006-668-054

Legal Description Lot 127 Block \_\_\_\_\_ Section 22 Township 24 Range \_\_\_\_\_ Plan NWP31743

*The property described above is the subject of this application and is referred to herein as the 'subject property.' This application is made with my full knowledge and consent. I declare that the information submitted in support of the application is true and correct in all respects.*

Owner's Declaration

Name of Owner (print) <b>Denise M Rempel</b>	Signature of Owner 	Date <b>5/18/2020</b>
Name of Owner (print) <b>Jeffrey A Rempel</b>	Signature of Owner 	Date <b>5/18/2020</b>

Owner's Contact Information

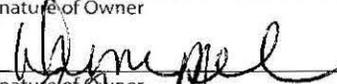
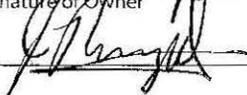
Address <b>43830 Loch Road</b>		City <b>Lake Errock</b>
Email		Postal Code <b>V0M 1N0</b>
Phone	Cell	Fax

<b>Office Use Only</b>	Date	File No.
	Received By	Folio No.
	Receipt No.	Fees Paid: \$

Agent

I hereby give permission to CLAIRE SEMOUR to act as my/our agent in all matters relating to this application.

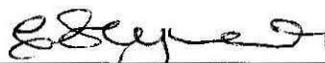
Only complete this section if the applicant is NOT the owner.

Signature of Owner 	Date <u>5/20/20</u>
Signature of Owner 	Date <u>5/20/20</u>

Agent's contact information and declaration

Name of Agent <u>CLAIRE SEMOUR</u>		Company <u>LAKY DEVELOPMENTS</u>
Address <u>Box 113</u>		City <u>DELOCHE</u>
Email		Postal Code <u>V0M 1G0</u>
Phone	Cell	Fax

I declare that the information submitted in support of this application is true and correct in all respects.

Signature of Agent 	Date <u>MAY 28, 2020</u>
---	-----------------------------

Development Details

Property Size 8150 sqft Present Zoning RS-1

Existing Use Residential

Proposed Development to add a raised hallway between two houses

Proposed Variation / Supplement existing application approved is construction of new residence next to another residence without any connecting structure, the variation is to add a connecting hallway on the 2nd floor

(use separate sheet if necessary)

Reasons in Support of Application - With the hallway emergency egress from one house will be increased by 100%. Emergency egress from the upper floor of the second house will also be increased by 100%

- Our elderly parents will be at less risk of falling due to a reduced amount of stairs and doors and exterior elements to contend with while making their way between the dining room and their bedrooms

- My wife Denise is in remission from cancer after two years of chemo (see additional page) PAGE 2B

Page 2B

Reasons in support of application (continued)

Treatments which has severely weakened her. Our hope is that with easy access to our new gym, she will be able to re-strengthen herself and enjoy her senior years after some 50 years of hard work.

After three hip replacements and five hip surgeries, not climbing the many stairs would give her a very welcomed relief.

**Riparian Areas Regulation**

Please indicate whether the development proposal involves residential, commercial, or including vegetation removal or alteration; soil disturbance; construction of buildings and structures; creation of impervious or semi-pervious surfaces; trails, roads, docks, wharves, bridges and, infrastructure and works of any kind – within:

yes      no     30 metres of the high water mark of any water body

yes      no     a ravine or within 30 metres of the top of a ravine bank

“Water body” includes; 1) a watercourse, whether it usually contains water or not; 2) a pond, lake, river, creek, or brook; 3) a ditch, spring, or wetland that is connected by surface flow to 1 or 2 above.

Under the *Riparian Areas Regulation* and the *Fish Protection Act*, a riparian area assessment report may be required before this application can be approved.

**Contaminated Sites Profile**

Pursuant to the *Environmental Management Act*, an applicant is required to submit a completed “Site Profile” for properties that are or were used for purposes indicated in Schedule 2 of the *Contaminated Sites Regulations*. Please indicate if:

yes      no     the property has been used for commercial or industrial purposes.

If you responded ‘yes,’ you may be required to submit a Site Profile. Please contact FVRD Planning or the Ministry of Environment for further information.

**Archaeological Resources**

Are there archaeological sites or resources on the subject property?

yes      no      I don't know

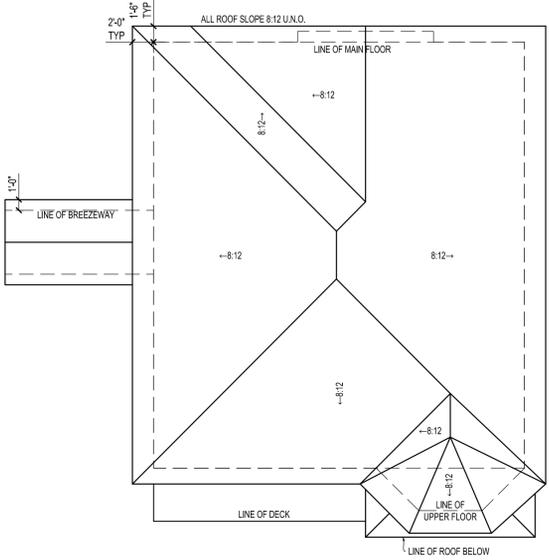
If you responded ‘yes’ or ‘I don’t know’ you may be advised to contact the Archaeology Branch of the Ministry of Tourism, Sport and the Arts for further information.

## Required Information

When providing Application Forms to the applicant, Regional District staff shall indicate which of the following attachments are required for this application. **Additional information may also be required at a later date.**

	Required	Received	Details
<b>Location Map</b>			Showing the parcel (s) to which this application pertains and uses on adjacent parcels
<b>Site Plan</b>			Reduced sets of metric plans
At a scale of: 1: _____			North arrow and scale
			Dimensions of property lines, rights-of-ways, easements
			Location and dimensions of existing buildings & setbacks to lot lines, rights-of-ways, easements
			Location and dimensions of proposed buildings & setbacks to lot lines, rights-of-ways, easements
			Location of all water features, including streams, wetlands, ponds, ditches, lakes on or adjacent to the property
			Location of all existing & proposed water lines, wells, septic fields, sanitary sewer & storm drain, including sizes
			Location, numbering & dimensions of all vehicle and bicycle parking, disabled persons' parking, vehicle stops & loading
			Natural & finished grades of site, at buildings & retaining walls
			Location of existing & proposed access, pathways
			Above ground services, equipment and exterior lighting details
			Location & dimensions of free-standing signs
			Storm water management infrastructure and impermeable surfaces
			Other:
	<b>Floor Plans</b>		
			Other:
<b>Landscape Plan</b>			Location, quantity, size & species of existing & proposed plants, trees & turf
Same scale as site plan			Contour information ( _____ metre contour intervals)
			Major topographical features (water course, rocks, etc.)
			All screening, paving, retaining walls & other details
			Traffic circulation (pedestrian, automobile, etc.)
			Other:
<b>Reports</b>			Geotechnical Report
			Environmental Assessment
			Archaeological Assessment
			Other:

The personal information on this form is being collected in accordance with Section 26 of the *Freedom of Information and Protection of Privacy Act, RSBC 1996 Ch. 165* and the *Local Government Act, RSBC 2015 Ch. 1*. It will only be collected, used and disclosed for the purpose of administering matters with respect to planning, land use management and related services delivered, or proposed to be delivered, by the FVRD. Questions about the use of personal information and the protection of privacy may be directed to the FVRD Privacy Officer at 45950 Cheam Avenue, Chilliwack, BC V2P 1N6, Tel: 1-800-528-0061 [FOI@fvrd.ca](mailto:FOI@fvrd.ca).



**ROOF PLAN**  
SCALE: 1/8"=1'-0"

**ZONING ANALYSIS REVIEW**

LEGAL DESCRIPTION: LOT 127, PLAN NWP31743, SEC 22, TOWNSHIP 24, NEW WESTMINSTER LAND DISTRICT

ZONING BYLAW: RS-1

CIVIC ADDRESS: 43836 LOCH RD. LAKE ERROCK, B.C.

	REQUIRED	PROPOSED
FRONT SETBACK:	6.00M	6.88M
REAR SETBACK:	6.00M	23.13M
SIDE SETBACK: (right)	1.50M	2.61M
SIDE SETBACK: (left)	1.50M	2.29M
MAXIMUM HEIGHT	11.00M @ EAVE 9.00M @ EAVE	10.57M 6.60M @ EAVE
LOT COVERAGE:	40.00%	19.33%
BUILDING AREA:	1,575 SQ.FT.	
LOT AREA:	8150 SQ.FT.	

- PROPOSED FINISHED GRADE (M)
- EXISTING GRADE (M)

NOTE:  
BUILDER AND/OR OWNER IS TO VERIFY ALL ON SITE CONDITIONS, DIMENSIONS AND STRUCTURE PRIOR TO CONSTRUCTION. 4TH DIMENSION DESIGN & DRAFTING SERVICES DOES NOT ACCEPT ANY RESPONSIBILITY FOR DISCREPANCIES BETWEEN THESE DRAWINGS AND ON SITE CONDITIONS.

PROJECT TITLE:  
**43836 LOCH RD.**  
LAKE ERROCK, BC



CLIENT:  
**REMPEL RESIDENCE**

**4TH DIMENSION DESIGN + DRAFTING**  
33082 1ST AVE. MISSION, BC, V2V 1G2  
P.604.567.9465 C.604.832.8811  
www.4ddrafting.com info@4ddrafting.com

SHEET TITLE:  
SITE PLAN  
ROOF PLAN  
ZONING ANALYSIS REVIEW

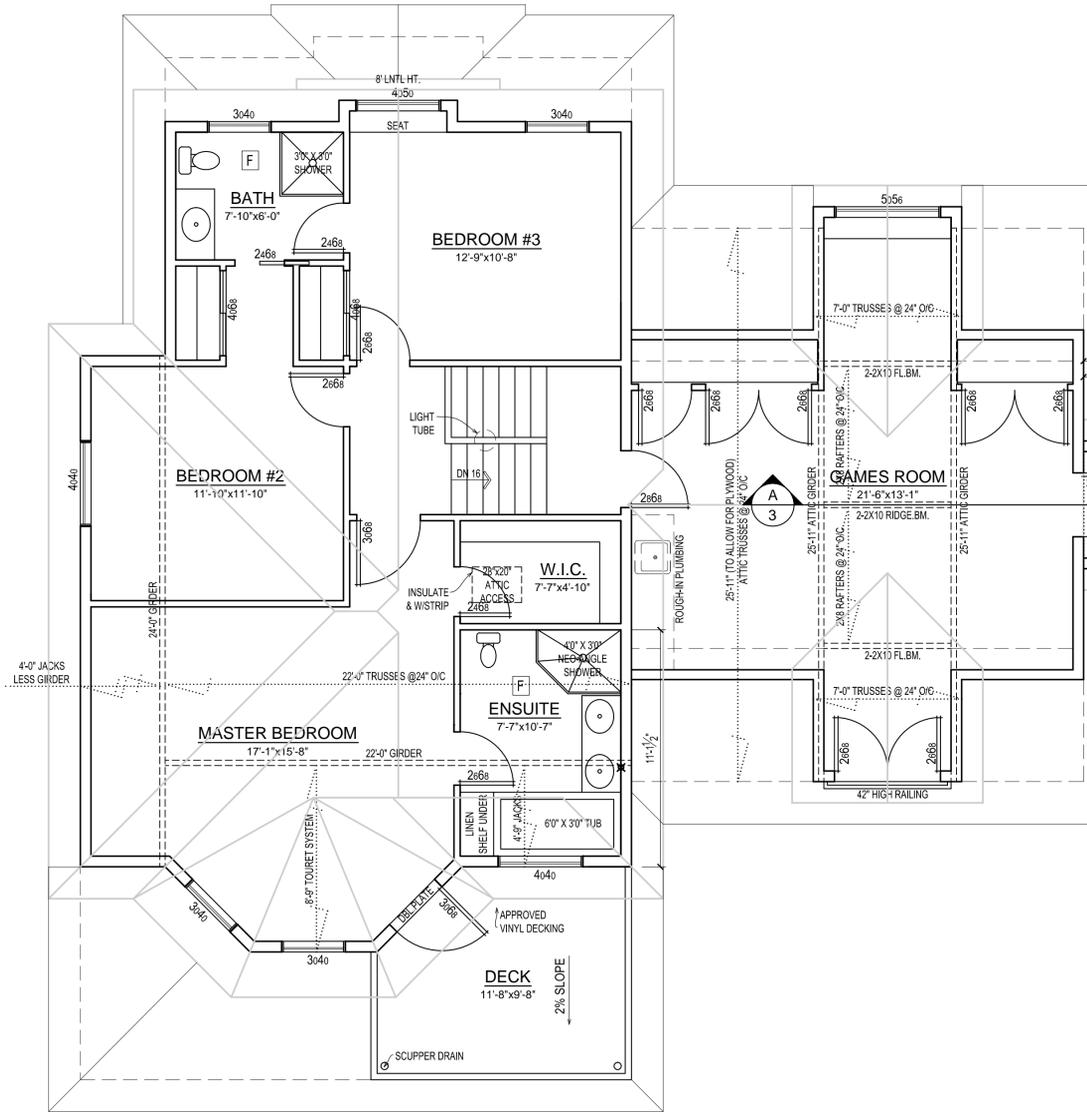
PAGE No:  
**1**  
OF 6

DATE: 02.19.2020  
PROJECT: RN-19-119  
DESIGNED/CHECKED: JM  
DRAWN: MJ

**SITE PLAN**  
SCALE: 1/128"=1'-0"  
979,516 SQ.FT.

# EXISTING RESIDENCE PLAN

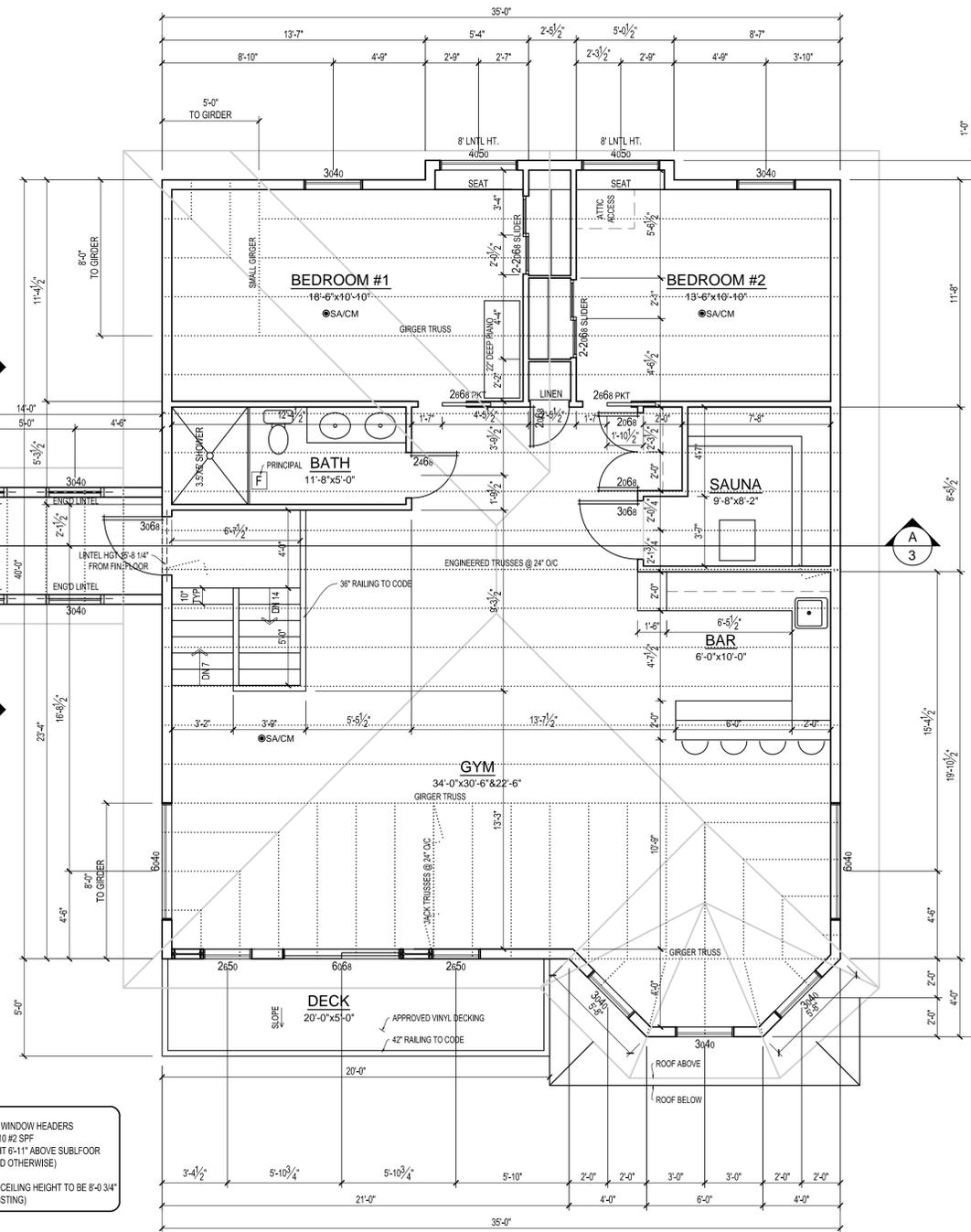
SCALE: 1/4"=1'-0"



NOTE:  
ALL EXTERIOR WINDOW HEADERS  
TO BE 2" PLY 2x10 #2 SPF  
HEADER HEIGHT 8-11" ABOVE SUBFLOOR  
(UNLESS NOTED OTHERWISE)  
UPPER FLOOR CEILING HEIGHT TO BE 8'-0" 3/4"  
(TO MATCH EXISTING)

# UPPER FLOOR PLAN

SCALE: 1/4"=1'-0"



NOTE:  
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ALL ON SITE CONDITIONS, DIMENSIONS  
AND STRUCTURE PRIOR TO  
CONSTRUCTION. 4TH DIMENSION  
DESIGN & DRAFTING SERVICES DOES  
NOT ACCEPT ANY RESPONSIBILITY  
FOR DISCREPANCIES BETWEEN THESE  
DRAWINGS AND ON SITE CONDITIONS.

PROJECT TITLE:  
**43836 LOCH RD.**  
LAKE ERROCK, BC



CLIENT:  
**REMPEL RESIDENCE**

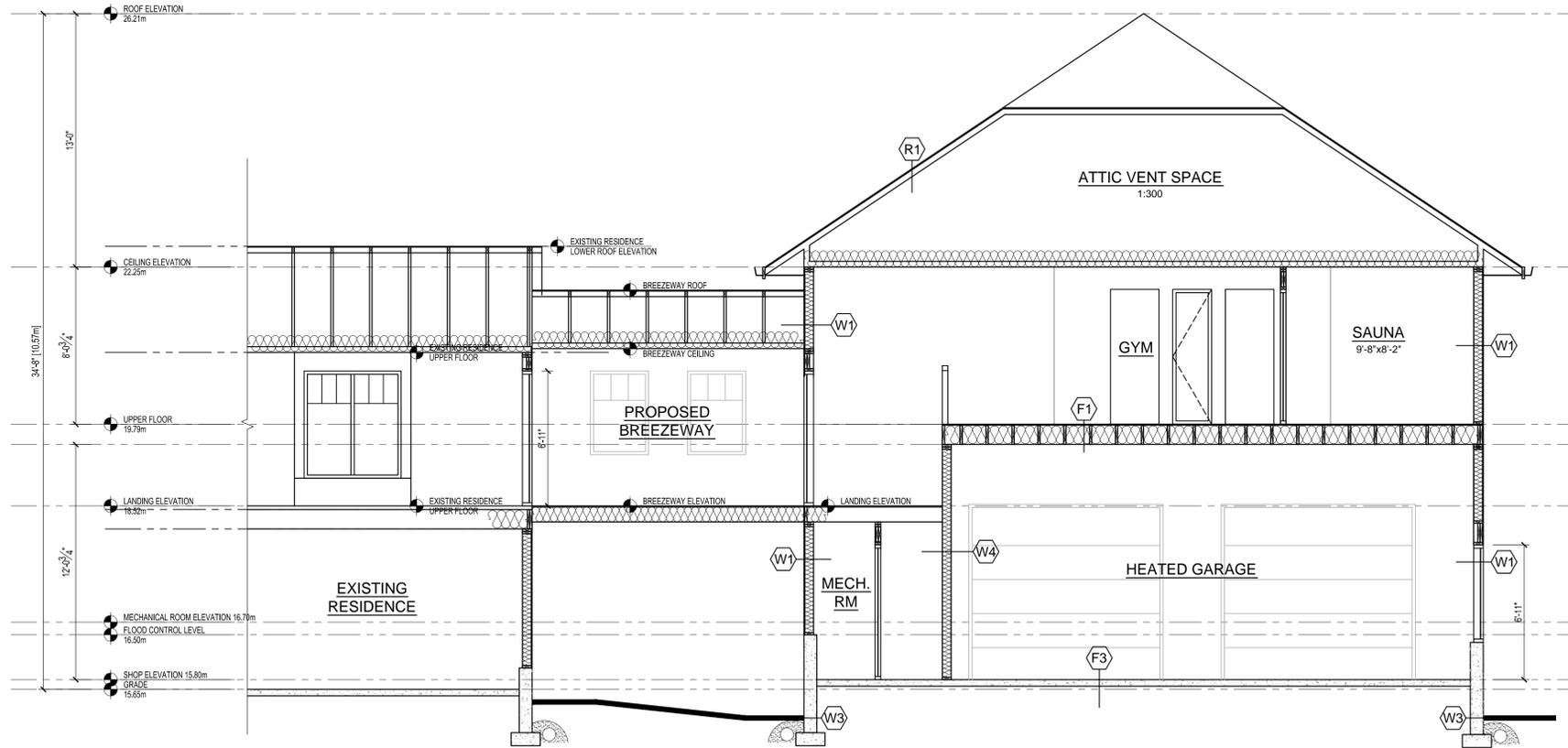
PAGE No:  
**2**  
OF 6

REV.	DATE	DESCRIPTION

4TH DIMENSION DESIGN + DRAFTING  
33082 1ST AVE. MISSION, BC, V2V 1G2  
P.604.557.9465 C.604.832.8811  
www.4ddrafting.com info@4ddrafting.com

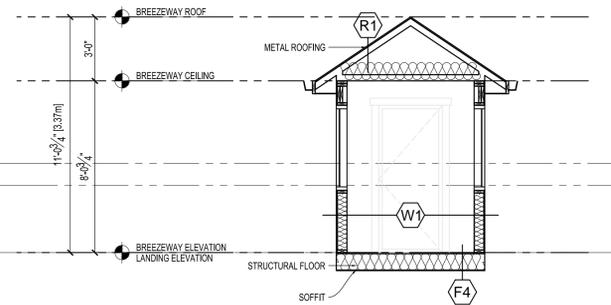
SHEET TITLE:  
MAIN FLOOR PLAN  
UPPER FLOOR PLAN

DATE:  
02.19.2020  
PROJECT:  
RN-19-119  
DESIGNED/CHECKED:  
JM  
DRAWN:  
MJ



## SECTION A

SCALE: 1/4"=1'-0"



## SECTION B

SCALE: 1/4"=1'-0"

## SPECIFICATIONS

### WALL ASSEMBLIES

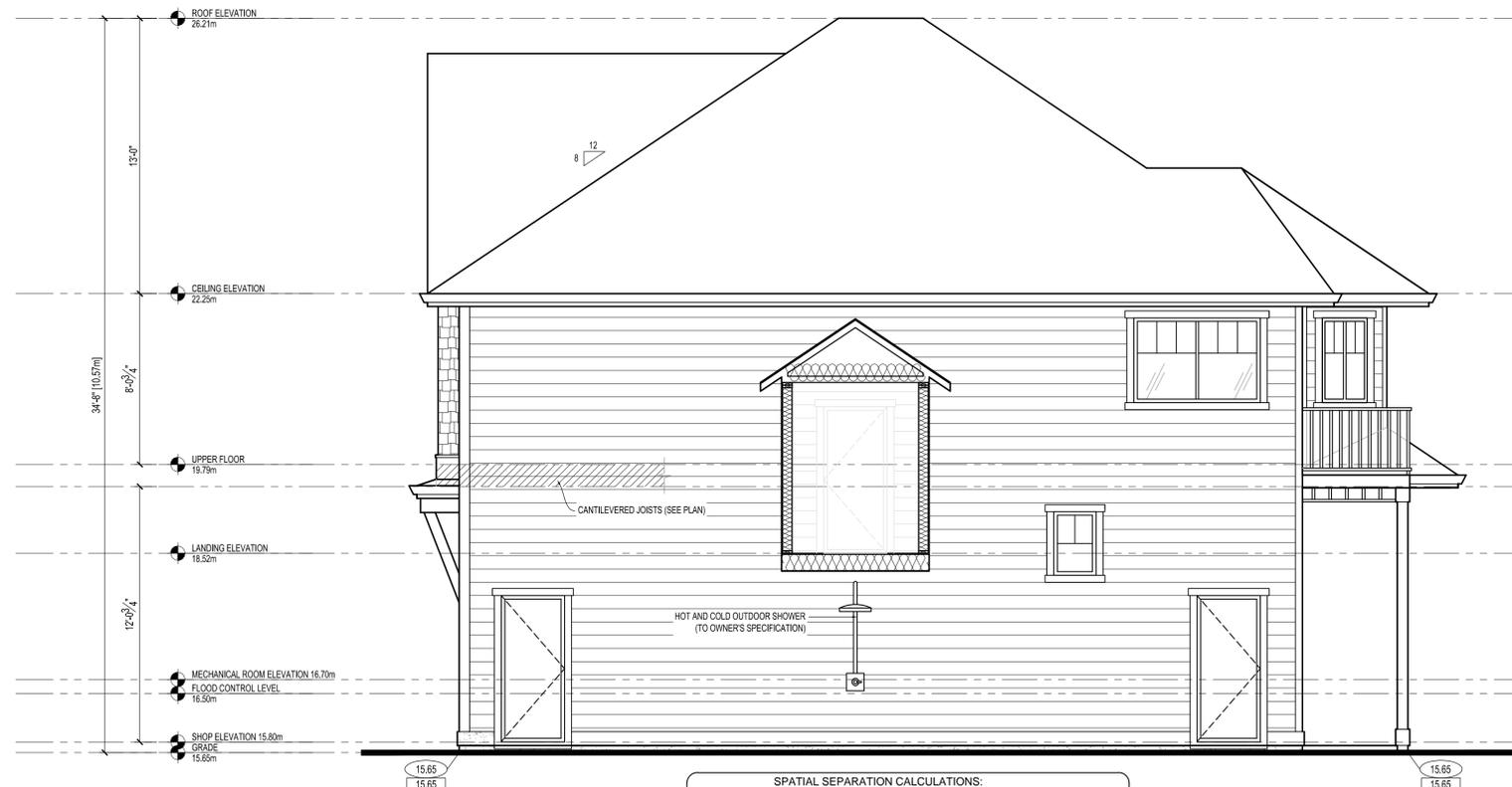
- W1 HARDIE BOARD RAINSCREEN (SEE DETAILS), 15LB. BUILDING PAPER, 1/2" PLYWOOD SHEATHING, 2x6 STUDS @ 16" O.C., R-20 BATT INSULATION, 6 MIL POLY V.B., 1/2" PAINTED GYPROC
- W2 2x4 STUD PARTITION WALL, 1/2" PAINTED GYPROC B/S
- W3 8" CONC. WALL, 15M REIN. @24" O.C. E.W. ON 16x16x8 CONC STRIP FOOTING, ASPHALT WATERPROOFING B/S
- W4 2x4 STUD PARTITION WALL, R-20 BATT INSULATION, 1/2" PAINTED GYPROC B/S (5/8" @ GARAGE)

### FLOOR ASSEMBLIES

- F1 5/8" T&G PLY SHEATHING (GLUED AND SCREWED), 11 7/8" TJI FLOOR JOISTS, R-40 BATT INSULATION, 1/2" GYPROC
- F2 APPROVED VINYL DECKING, 5/8" T&G PLY DECKING (GLUED AND SCREWED), 2X10 P.T. FLOOR JOISTS
- F3 4" CONCRETE GARAGE SLAB, REINFORCED W/W.W.M., 1% MN. SLOPE TO ENTRY, 6 MIL POLY V.B., MIN. 5" GRAVEL BASE
- F4 5/8" T&G PLY SHEATHING (GLUED AND SCREWED), 2x10 FLOOR JOISTS, R-32 BATT INSULATION, SOFFIT

### ROOF ASSEMBLIES

- R1 ASPHALT SHINGLE ROOFING, 15LB. BUILDING PAPER, 1/2" PLYWOOD SHEATHING, ENG. TRUSSES @ 24" O.C., 14.3" BLOW-IN INSULATION, 6 MIL POLY V.B., 5/8" GYPROC



## LEFT SIDE ELEVATION

SCALE: 1/4"=1'-0"

SPATIAL SEPARATION CALCULATIONS:  
 WALL AREA = 866.17 SQ. FT.  
 MAX. ALLOWABLE UNPROTECTED OPENINGS @ 7.73% = 66.98 SQ.FT.  
 PROPOSED UNPROTECTED OPENINGS = 26.00 SQ.FT. (3.00%)

NOTE:  
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43836 LOCH RD.  
 LAKE ERROCK, BC

REV.	DATE	DESCRIPTION

PROJECT TITLE:



4TH DIMENSION DESIGN + DRAFTING

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REMPER RESIDENCE

SECTION A  
 SECTION B  
 LEFT SIDE ELEVATION

PAGE No:

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DATE: 02.19.2020  
 PROJECT: RN-19-119  
 DESIGNED/CHECKED: JM  
 DRAWN: MJ



**FRONT ELEVATION**  
SCALE: 1/4"=1'-0"



**REAR ELEVATION**  
SCALE: 1/4"=1'-0"

NOTE:  
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AND STRUCTURE PRIOR TO  
CONSTRUCTION. 4TH DIMENSION  
DESIGN & DRAFTING SERVICES DOES  
NOT ACCEPT ANY RESPONSIBILITY  
FOR DISCREPANCIES BETWEEN THESE  
DRAWINGS AND ON SITE CONDITIONS.

PROJECT TITLE:  
**43836 LOCH RD.**  
LAKE ERROCK, BC

REV.	DATE	DESCRIPTION



**4TH DIMENSION DESIGN + DRAFTING**

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P.604.557.9465 C.604.832.8811  
www.4ddrafting.com info@4ddrafting.com

CLIENT:  
**REMPEL RESIDENCE**

SHEET TITLE:  
**ELEVATIONS**

PAGE No:  
**4**  
OF 6

DATE:  
02.19.2020  
PROJECT:  
RN-19-119  
DESIGNED/CHECKED:  
JM  
DRAWN:  
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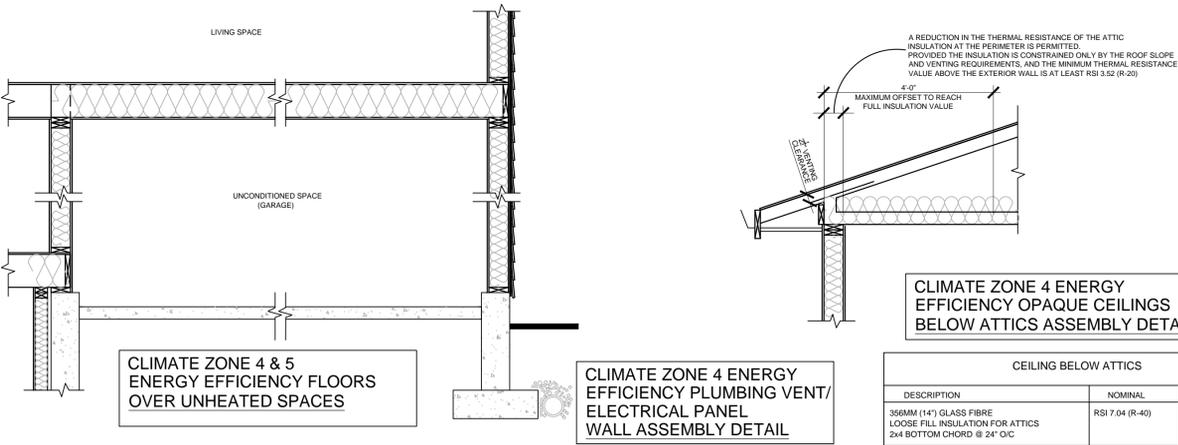
FLOORS OVER UNHEATED SPACES (HARDWOOD FLOORING)		
DESCRIPTION	NOMINAL	EFFECTIVE
R-28 BATT INSULATION IN 2X10 WOOD FRAMING @ 12" O/C	RSI 4.93 (R-28)	RSI 4.06 (R-23.0)
R-28 BATT INSULATION IN 2X10 WOOD FRAMING @ 16" O/C	RSI 4.93 (R-28)	RSI 4.14 (R-23.5)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. INTERIOR AIR FILM	0.12	
2. FLOORING MATERIAL - HARDWOOD	0.12	
3. 5/8" PLYWOOD SUBFLOOR	0.14	
4. 3/4" AIR BARRIER	0.18	
5. POLYETHYLENE	0.10	
6. 5/8" GYPSUM CEILING BOARD	0.10	
7. EXTERIOR AIR FILM	0.03	
TOTAL EFFECTIVE INSULATION VALUE (12" O/C FRAMING)		RSI 4.75 (R-27.0)
TOTAL EFFECTIVE INSULATION VALUE (16" O/C FRAMING)		RSI 4.83 (R-27.4)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.67 (R-26.5)

FLOORS OVER UNHEATED SPACES (CARPET FLOORING)		
DESCRIPTION	NOMINAL	EFFECTIVE
R-28 BATT INSULATION IN 2X10 WOOD FRAMING @ 12" O/C	RSI 4.93 (R-28)	RSI 4.06 (R-23.0)
R-28 BATT INSULATION IN 2X10 WOOD FRAMING @ 16" O/C	RSI 4.93 (R-28)	RSI 4.14 (R-23.5)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. INTERIOR AIR FILM	0.12	
2. FLOORING MATERIAL - CARPET & RUBBER PAD	0.22	
3. 5/8" PLYWOOD SUBFLOOR	0.14	
4. 3/4" AIR BARRIER	0.18	
5. POLYETHYLENE	0.10	
6. 5/8" GYPSUM CEILING BOARD	0.10	
7. EXTERIOR AIR FILM	0.03	
TOTAL EFFECTIVE INSULATION VALUE (12" O/C FRAMING)		RSI 4.85 (R-27.5)
TOTAL EFFECTIVE INSULATION VALUE (16" O/C FRAMING)		RSI 4.93 (R-28.0)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.67 (R-26.5)

FLOORS OVER UNHEATED SPACES (CERAMIC TILE FLOORING)		
DESCRIPTION	NOMINAL	EFFECTIVE
R-28 BATT INSULATION IN 2X10 WOOD FRAMING @ 12" O/C	RSI 4.93 (R-28)	RSI 4.06 (R-23.0)
R-28 BATT INSULATION IN 2X10 WOOD FRAMING @ 16" O/C	RSI 4.93 (R-28)	RSI 4.14 (R-23.5)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. INTERIOR AIR FILM	0.12	
2. FLOORING MATERIAL - CERAMIC TILE	0.005	
3. 1/4" PLYWOOD SUBFLOOR	0.05	
4. 5/8" PLYWOOD SUBFLOOR	0.14	
5. 3/4" AIR BARRIER	0.18	
6. POLYETHYLENE	0.10	
7. 5/8" GYPSUM CEILING BOARD	0.10	
8. EXTERIOR AIR FILM	0.03	
TOTAL EFFECTIVE INSULATION VALUE (12" O/C FRAMING)		RSI 4.685 (R-26.55)
TOTAL EFFECTIVE INSULATION VALUE (16" O/C FRAMING)		RSI 4.765 (R-27.05)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.67 (R-26.5)

ABOVE GRADE WALL ASSEMBLY (6.35MM FIBRE-CEMENT BOARD SIDING)		
DESCRIPTION	NOMINAL	EFFECTIVE
3" XPS INSULATION IN 2X6 WOOD FRAMING @ 16" O/C	RSI 2.64 (R-15)	RSI 2.52 (R-14.3)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. EXTERIOR AIR FILM	0.03	
2. 6.35MM FIBRE-CEMENT BOARD SIDING	0.023	
3. 1/2" AIR SPACE FOR RAIN SCREEN	0.16	
4. SHEATHING MEMBRANE	0.11	
5. 1/2" PLYWOOD SHEATHING	0.16	
6. 2 1/2" AIR CAVITY	0.16	
7. POLYETHYLENE	0.10	
8. 1/2" GYPSUM WALL BOARD	0.08	
9. INTERIOR AIR FILM	0.12	
TOTAL EFFECTIVE INSULATION VALUE		RSI 0.683 (R-3.88)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 2.78 (R-15.8)

SPECIFIC REQUIREMENTS	
<ul style="list-style-type: none"> <li>EFFECTIVE INSULATION OF CEILINGS, WALLS, AND FLOORS MEET THE REQUIREMENTS OF TABLE 9.36.2.6.A AND TABLE 9.36.2.6.B FOR THE CORRECT CLIMATE ZONE</li> <li>THE THERMAL CHARACTERISTICS OF WINDOWS, DOOR AND SKYLIGHTS MEET THE REQUIREMENTS OF TABLE 9.36.2.7.A, B AND C FOR CORRECT CLIMATE ZONE</li> <li>EFFECTIVE INSULATION OF FOUNDATIONS MEET THE REQUIREMENTS OF TABLE 9.36.2.8.A OR B FOR THE CORRECT CLIMATE ZONE</li> <li>DUCTS LOCATED OUTSIDE THE THERMAL ENCLOSURE ARE SEALED AND INSULATED TO THE EXTERIOR WALL INSULATION REQUIREMENTS</li> <li>DAMPERS ARE INSTALLED AT AIR INLETS AND EXHAUSTS WHERE REQUIRED</li> <li>PIPING FOR HEATING OR COOLING SYSTEMS IS LOCATED WITHIN THE THERMAL ENCLOSURE OR ARE FULLY INSULATED</li> <li>HVAC EQUIPMENT IS LOCATED WITHIN THERMAL ENCLOSURE OR DESIGNATED TO BE INSTALLED OUTSIDE OF THERMAL ENCLOSURE</li> <li>TEMPERATURE CONTROLS ARE INSTALLED ON HEATING AND COOLING EQUIPMENT</li> <li>INDOOR POOLS ARE COVERED OR HAVE AN HRV/DEHUMIDIFIER</li> <li>HVAC &amp; SWH EQUIPMENT MEET MINIMUM PERFORMANCE REQUIREMENTS DETERMINED IN TABLES 9.36.3.1.0 AND 9.36.4.2</li> <li>SERVICE WATER HEATING PIPES ARE INSULATED AT THE INLET AND OUTLET OF STORAGE TANKS</li> <li>SERVICE WATER HEATERS HAVE TEMPERATURE CONTROLS</li> <li>THE AIR BARRIER DETAILS, AND LOCATIONS HAVE BEEN IDENTIFIED</li> </ul>	
TEMPERATURE CONTROLS AS PER SECTION 9.36.3.6	
<ul style="list-style-type: none"> <li>TEMPERATURE CONTROLS ARE GENERALLY REQUIRED FOR HEATING AND COOLING EQUIPMENT. THE ACCURACY OF THE CONTROL MUST BE BETTER THAN PLUS OR MINUS 0.5 DEGREES CELSIUS</li> </ul>	
ENERGY EFFICIENCY REQUIREMENTS	
<ul style="list-style-type: none"> <li>THIS HOME IS DESIGNED TO COMPLY WITH ENERGY EFFICIENCY REQUIREMENTS AND VALUES USING THE PRESCRIPTIVE METHOD FOR CLIMATE 4-LOWER MAINLAND AND SOUTHERN VANCOUVER ISLAND WITH NO H.R.V. (BCBC 2018 LATEST EDITION)</li> </ul>	



WALLS ADJOINING ENCLOSED UN-CONDITIONED SPACE		
DESCRIPTION	NOMINAL	EFFECTIVE
R-20 BATT INSULATION IN 2X6 WOOD FRAMING @ 16" O/C	RSI 3.51 (R-20)	RSI 2.36 (R-13.4)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. EXTERIOR AIR FILM	0.03	
2. VINYL CLADDING HOLLOW BACKED	0.11	
3. SHEATHING MEMBRANE	0.11	
4. 1/2" PLYWOOD SHEATHING	0.16	
5. 1/2" AIR CAVITY	0.16	
6. POLYETHYLENE	0.08	
7. 1/2" GYPSUM WALL BOARD	0.08	
8. INTERIOR AIR FILM	0.12	
TOTAL EFFECTIVE INSULATION VALUE		RSI 2.67 (R-15.17)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 2.62 (R-14.9)

BELOW GRADE HEATED FLOOR		
DESCRIPTION	NOMINAL	EFFECTIVE
3.5" POURED IN-PLACE CONCRETE SLAB	RSI 2.36 (R-13.4)	RSI 2.42 (R-13.74)
2.5" EXTRUDED POLYSTYRENE INSULATION		
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. INTERIOR AIR FILM	0.16	
2. 3.5" CONCRETE SLAB		
TOTAL EFFECTIVE INSULATION VALUE		RSI 2.58 (R-14.64)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR BELOW GRADE HEATED FLOORS		RSI 2.32 (R-13.2)

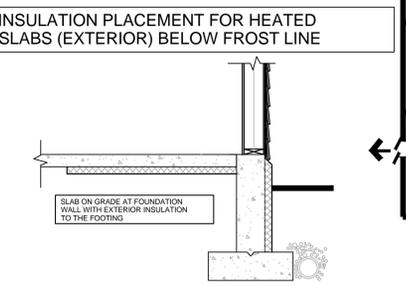
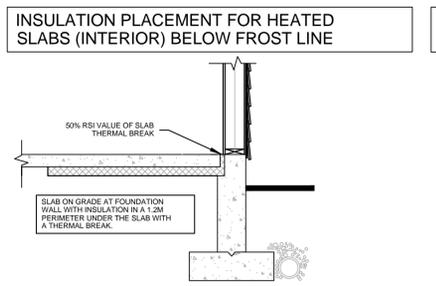
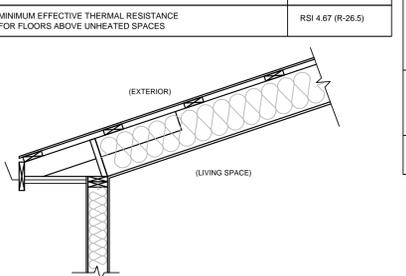
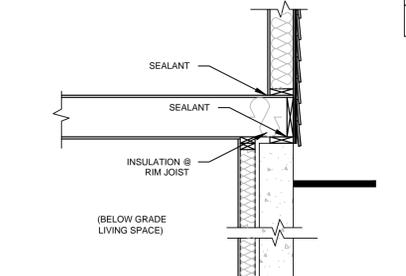
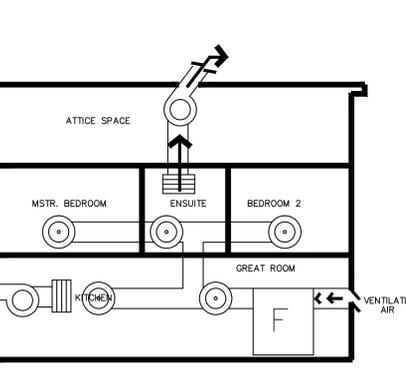
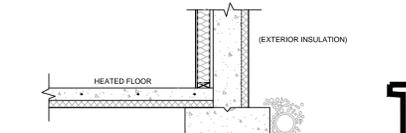
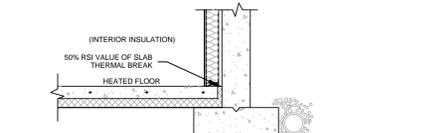
BONUS ROOM WALLS ATTIC TRUSS WEB WALLS @ 24" O.C.		
DESCRIPTION	NOMINAL	EFFECTIVE
R-20 BATT INSULATION IN 2X6 WOOD FRAMING @ 24" O/C	RSI 3.51 (R-20)	RSI 2.68 (R-15.2)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. INTERIOR AIR FILM	0.12	
2. 12.7MM GYPSUM BOARD INT. FINISH	0.08	
3. 6 MILL POLY SEAL PLASTIC - NEGLIGIBLE	0.00	
4. 11MM ORIENTED STRAND BOARD	0.00	
5. AIR CAVITY	0.00	
6. 20MM OR 40MM AIR CAVITIES	0.00	
7. EXTERIOR AIR FILM	0.00	
TOTAL EFFECTIVE INSULATION VALUE		RSI 2.88 (R-16.37)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 2.78 (R-15.80)

ABOVE GRADE WALL ASSEMBLY (6.35MM FIBRE-CEMENT BOARD SIDING)		
DESCRIPTION	NOMINAL	EFFECTIVE
3" XPS INSULATION IN 2X6 WOOD FRAMING @ 16" O/C	RSI 2.64 (R-15)	RSI 2.52 (R-14.3)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. EXTERIOR AIR FILM	0.03	
2. 6.35MM FIBRE-CEMENT BOARD SIDING	0.023	
3. 1/2" AIR SPACE FOR RAIN SCREEN	0.16	
4. SHEATHING MEMBRANE	0.11	
5. 1/2" PLYWOOD SHEATHING	0.16	
6. 2 1/2" AIR CAVITY	0.16	
7. POLYETHYLENE	0.08	
8. 1/2" GYPSUM WALL BOARD	0.08	
9. INTERIOR AIR FILM	0.12	
TOTAL EFFECTIVE INSULATION VALUE		RSI 3.203 (R-18.18)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 2.78 (R-15.8)

BELOW GRADE WALL ASSEMBLY		
DESCRIPTION	NOMINAL	EFFECTIVE
8" POURED-IN-PLACE CONCRETE WALL	RSI 4.65 (R-31)	RSI 4.62 (R-26.3)
R-14 BATT INSULATION IN 2X4 WOOD FRAMING @ 24" O/C	RSI 1.91 (R-10.85)	
R-31 BATT INSULATION IN 2X10 WOOD FRAMING @ 16" O/C	RSI 4.65 (R-31)	RSI 4.46 (R-25.4)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. DAMPROOFING	0.21	
2. 1" AIR SPACE	0.16	
3. 5/8" GYPSUM WALL BOARD	0.08	
4. INTERIOR AIR FILM	0.12	
TOTAL EFFECTIVE INSULATION VALUE		RSI 2.48 (R-14.08)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR BELOW GRADE WALLS		RSI 1.99 (R-11.3)

CEILINGS BELOW CATHEDRAL & FLAT ROOFS		
DESCRIPTION	NOMINAL	EFFECTIVE
R-31 BATT INSULATION IN 2X12 WOOD FRAMING @ 24" O/C	RSI 4.65 (R-31)	RSI 4.62 (R-26.3)
R-31 BATT INSULATION IN 2X10 WOOD FRAMING @ 16" O/C	RSI 4.65 (R-31)	RSI 4.46 (R-25.4)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. EXTERIOR AIR FILM	0.03	
2. POLYETHYLENE	0.10	
3. 5/8" GYPSUM CEILING BOARD	0.10	
4. INTERIOR AIR FILM	0.12	
TOTAL EFFECTIVE INSULATION VALUE		RSI 4.86 (R-31)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.67 (R-26.5)

HVAC PERFORMANCE REQUIREMENTS		
EQUIPMENT TYPE	SIZE	PERFORMANCE REQUIREMENT
SPACE HEATING EQUIPMENT		
GAS FIRED FURNACE	LESS THAN 220,000 BTU/Hr (66 kW)	ANNUAL FUEL EFFICIENCY (AFUE) MUST BE GREATER OR EQUAL TO 92%
GAS FIRED BOILER	LESS THAN OR EQUAL TO 300,000 BTU/Hr (66 kW)	ANNUAL FUEL EFFICIENCY (AFUE) MUST BE GREATER OR EQUAL TO 90%
AIR COOLED UNITARY AIR CONDITIONER AND HEAT PUMP SPLIT SYSTEM	LESS THAN OR EQUAL TO 65,000 BTU/Hr (19 kW)	SEASONAL ENERGY EFFICIENCY RATING (SEER) OF 14.5 OR ENERGY EFFICIENCY RATING (EER) OF 11.5
GAS FIRED TANKLESS	LESS THAN 220,000 BTU/Hr (66 kW)	ENERGY FACTOR (EF) MUST BE GREATER THAN OR EQUAL TO 0.8
SERVICE WATER HEATING EQUIPMENT		
ELECTRIC STORAGE	13-71 GAL (50 TO 270L)	STANBY LOSS LESS THAN OR EQUAL TO: 25- 0.20V (TOP INLET) 45- 0.20V (BOTTOM INLET) WHERE V=THE TANK VOLUME (IN LITRES)
GAS FIRED STORAGE	LESS THAN 75,000 BTU/Hr (22 kW)	ENERGY FACTOR (EF) MUST BE GREATER THAN OR EQUAL TO 0.67-0.0065V WHERE V=THE TANK VOLUME (IN LITRES)
GAS FIRED TANKLESS	LESS THAN OR EQUAL TO 250,000 BTU/Hr (73.2 kW)	ENERGY FACTOR MUST BE GREATER THAN OR EQUAL TO 0.8



POCKET BEAM INSULATION R. VALUE		
1" XPS = .035 X 25.4MM		RSI 0.89
5" FRAMING = .0085 X 127MM		RSI 1.08
TOTAL R VALUE REQ. = 60% OF 2.78 = 1.67		RSI 1.97

FLOOR AREA, m2	MINIMUM AIR-FLOW RATE, L/s						
	NUMBER OF BEDROOMS						
	0-1	2-3	4-5	6-7	> 7		
150	14	23	28	35	42		
140-280	21	28	35	42	49		
281-420	28	35	42	49	56		
421-560	35	42	49	56	64		
561-700	42	49	56	64	71		
> 700	49	56	64	71	78		

PROJECT TITLE: 43836 LOCH RD., LAKE ERROCK, BC

CLIENT: REMPEL RESIDENCE

4TH DIMENSION DESIGN + DRAFTING

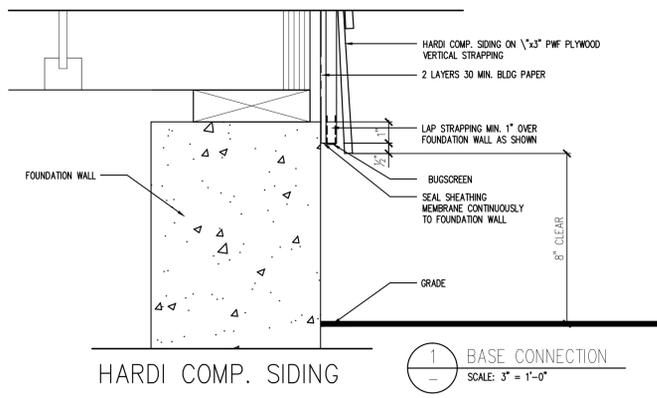
PAGE No: 5 OF 6

REV.	DATE	DESCRIPTION

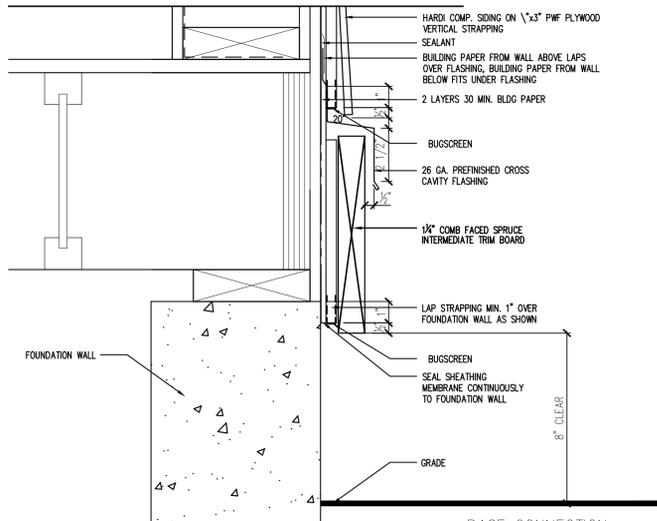
203-33082 1ST AVE. MISSION, BC, V2V 1G2  
P.604.557.9465 C.604.832.8811  
www.4ddrafting.com info@4ddrafting.com

NOTES AND DETAILS

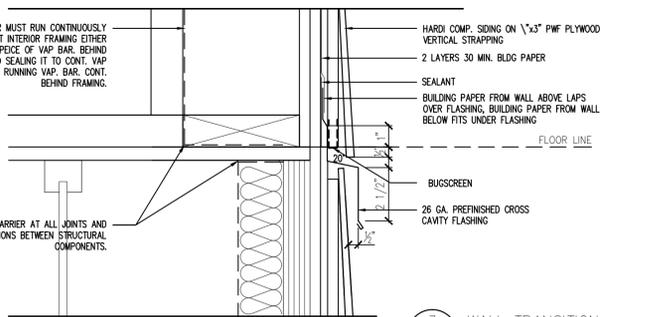
DATE: 02.13.2020  
PROJECT: RN-19-119  
DESIGNED/CHECKED: JM  
DRAWN: MJ



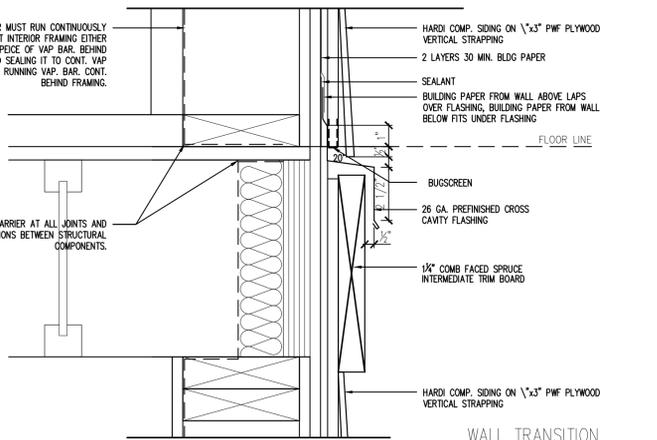
**1 BASE CONNECTION**  
SCALE: 3" = 1'-0"



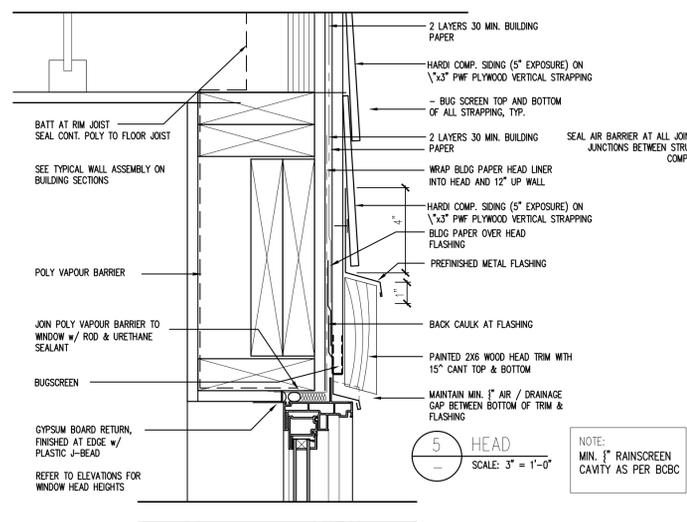
**2 BASE CONNECTION WITH TRIM BOARD**  
SCALE: 3" = 1'-0"



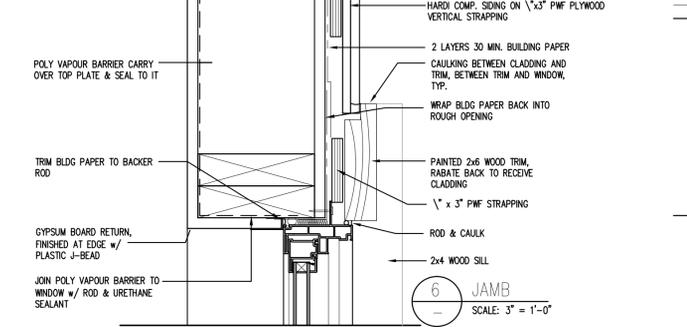
**3 WALL TRANSITION**  
SCALE: 3" = 1'-0"



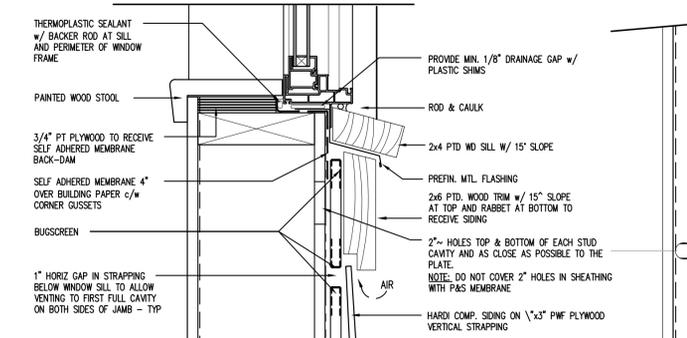
**4 WALL TRANSITION WITH TRIM BOARD**  
SCALE: 3" = 1'-0"



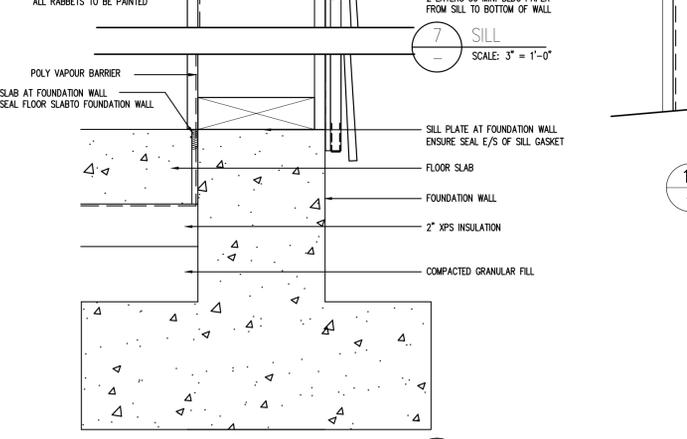
**5 HEAD**  
SCALE: 3" = 1'-0"



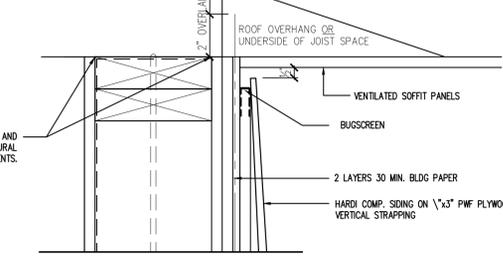
**6 JAMB**  
SCALE: 3" = 1'-0"



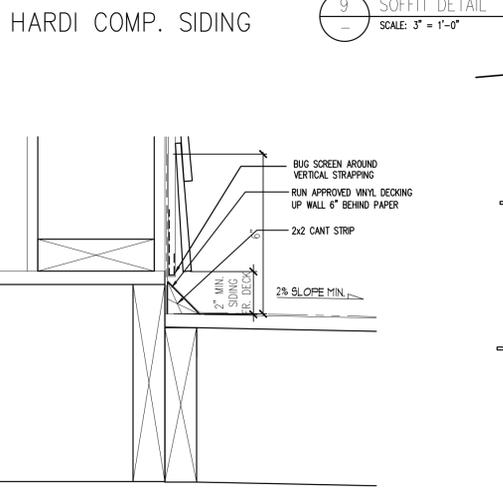
**7 SILL**  
SCALE: 3" = 1'-0"



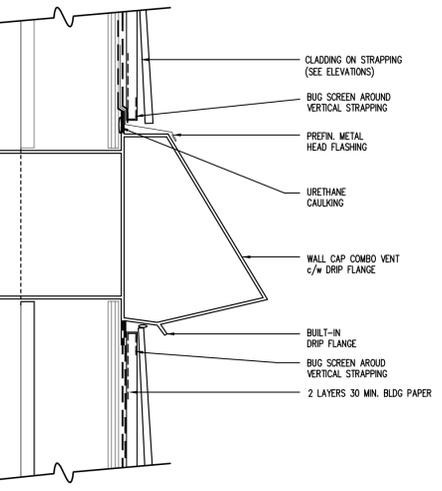
**8 SLAB ON GRADE**  
SCALE: 3" = 1'-0"



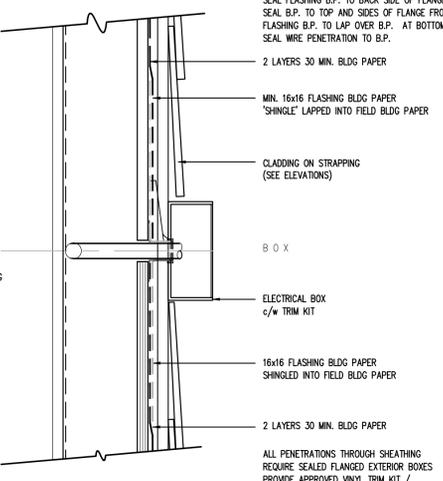
**9 SOFFIT DETAIL**  
SCALE: 3" = 1'-0"



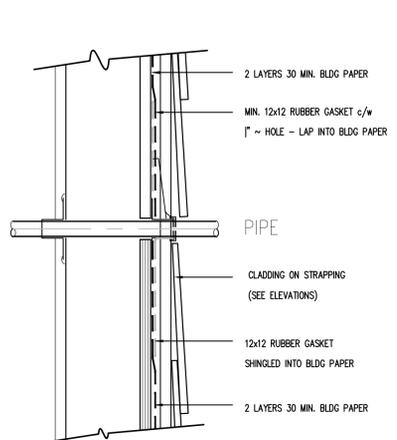
**11 VINYL DECKS**  
SCALE: 3" = 1'-0"



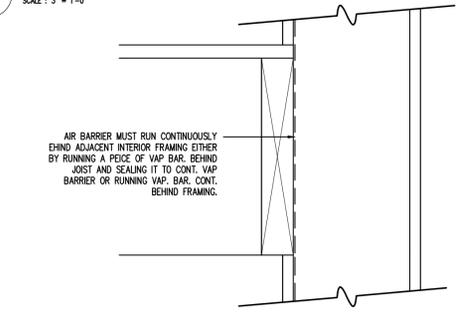
**12 TYP. THRU-WALL VENT DETAIL**  
SCALE: 3" = 1'-0"



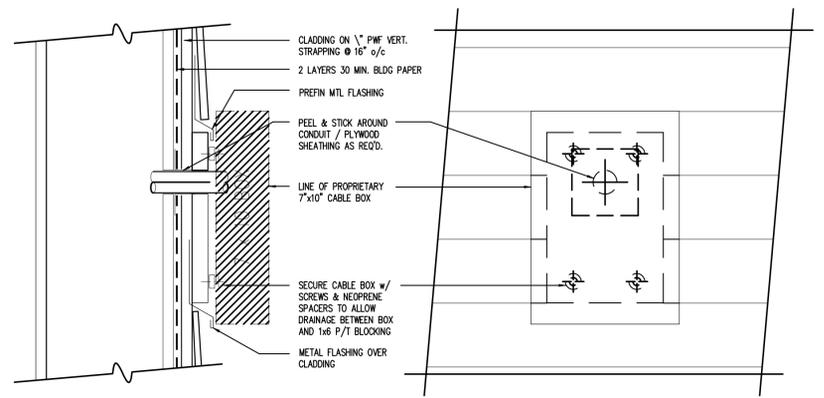
**13 ELECTRICAL BOX DTL.**  
SCALE: 3" = 1'-0"



**14 PIPE / HOSE BIB DTL.**  
SCALE: 3" = 1'-0"



**15 STAIR LEDGER**  
SCALE: 3" = 1'-0"



**10 TYP. CABLE BOX.**  
SCALE: 3" = 1'-0"

**ARTIGHTNESS NOTES:**

**MECHANICAL FLUES AND CHIMNEYS:** STEEL-LINED CHIMNEYS THAT PENETRATE THE BUILDING ENVELOPE MUST BE MADE AIRTIGHT BY BLOCKING THE VOID BETWEEN REQUIRED CLEARANCES FOR METAL CHIMNEYS AND SURROUNDING CONSTRUCTION WITH SHEET METAL AND SEALANT CAPABLE OF WITHSTANDING HIGH TEMPERATURES.

**PLUMBING STACKS:** PLUMBING VENT STACKS PIPES THAT PENETRATE THE BUILDING ENVELOPE MUST BE MADE AIRTIGHT BY EITHER SEALING THE AIR BARRIER MATERIAL OR SHEATHING TAPE, OR INSTALLING A RUBBER GASKET OR PREFABRICATED ROOF FLASHING AT THE PENETRATION OF THE PLAN OF AIRTIGHTNESS AND SEALING IT TO THE TOP PLATE.

**SKYLIGHTS:** THE INTERFACE BETWEEN THE SKYLIGHT AND WALL ASSEMBLY MUST BE MADE AIRTIGHT BY SEALING ALL JOINTS AND JUNCTIONS BETWEEN THE AIR BARRIER MATERIAL IN THE WALL AND SKYLIGHT.

**ATTIC HATCHES:** AIR LEAKAGE OCCURS THROUGH THE JOINT BETWEEN THE HATCH AND THE CEILING. THE HATCH IS MOST OFTEN ON A LEDGE MADE FROM WOOD TRIM OR THE EDGE OF THE CEILING. AIR SEALING CAN BE ACHIEVED BY ENSURING THE HATCH IS SIZED PROPERLY SO THAT IT HAS ENOUGH CONTACT WITH THE OPENING LEDGE AND PROVIDING A CLOSED CELL FOAM GASKET.

**POT LIGHTS:** RECESSED POT LIGHT HOUSINGS ARE ONE OF THE MOST COMMON AIR LEAKAGE POINTS THROUGH THE CEILING PLANE INTO THE ATTIC. AIR LEAKAGE OCCURS BETWEEN THE HOUSING AND AIR BARRIER THROUGH THE FIXTURE.

**WALL VENTED DUCTS:** DUCT PENETRATIONS THROUGH THE BUILDING ENVELOPE MUST HAVE AN AIRTIGHT SEAL.

**ELECTRICAL PENETRATIONS IN WALLS:** ELECTRICAL PENETRATIONS IN WALLS INCLUDING OUTLETS, SWITCHES, RECESSED LIGHT FIXTURES THROUGH THE PLAN OF AIRTIGHTNESS MUST BE AIRTIGHT. OPTIONS INCLUDING A COMPONENT THAT IS DESIGNED TO BE AIRTIGHT AND SEALING IT TO THE ADJACENT AIR BARRIER MATERIAL, OR BY COVERING THE COMPONENT WITH AN AIR BARRIER MATERIAL AND SEALING IT TO THE ADJACENT AIR BARRIER MATERIAL.

**NOTE:**  
USE ONLY APPROVED SEALANTS AT SELF ADHERED MEMBRANE

ALL PRESSURE TREATED PLYWOOD WALL SHEATHING TO BE FASTENED WITH GALVANIZED NAILS.

ALL BORATE TREATED WOOD STRAPPING, CEDAR SHINGLES, AND HARDPLANK TO BE FASTENED WITH HOT DIP GALVANIZED NAILS.

REV.	DATE	DESCRIPTION

PROJECT TITLE: **43836 LOCH RD. LAKE ERROCK, BC**

**4TH DIMENSION DESIGN + DRAFTING**  
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**REMPER RESIDENCE**

SHEET TITLE: **RAINSCREEN, AIRTIGHTNESS & FLASHING DETAILS**

PAGE No: **6** OF 6

DATE: 02.13.2020  
PROJECT: RN-19-119  
DESIGNED/CHECKED: JM  
DRAWN: MJ















**BC Cancer Agency**

CARE & RESEARCH

*Fraser Valley Cancer Centre*

**Urgent after hours instructions**

Call 604-581-2211 (Surrey Memorial Hospital)

**State:**

I am a FVC patient

I need to speak to a FVC oncologist

*Please turn over*



My BCCA chart number is [REDACTED]

My Oncologist is Dr. [REDACTED]

protocol: [REDACTED]

**Please note:**

If you report to SMH, please take a number and report directly to the triage nurse. Tell them you are a FVC patient.

WT: [REDACTED]