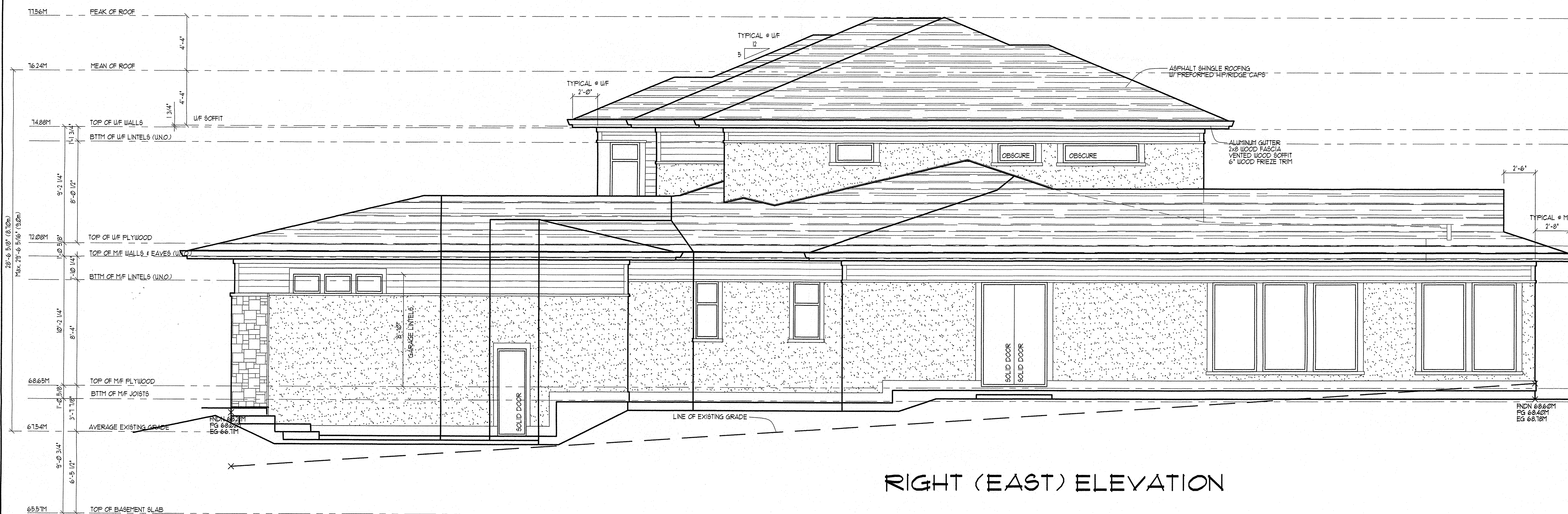


DESIGN BY RAYMOND S. BONTÉ, DESIGNER LTD.



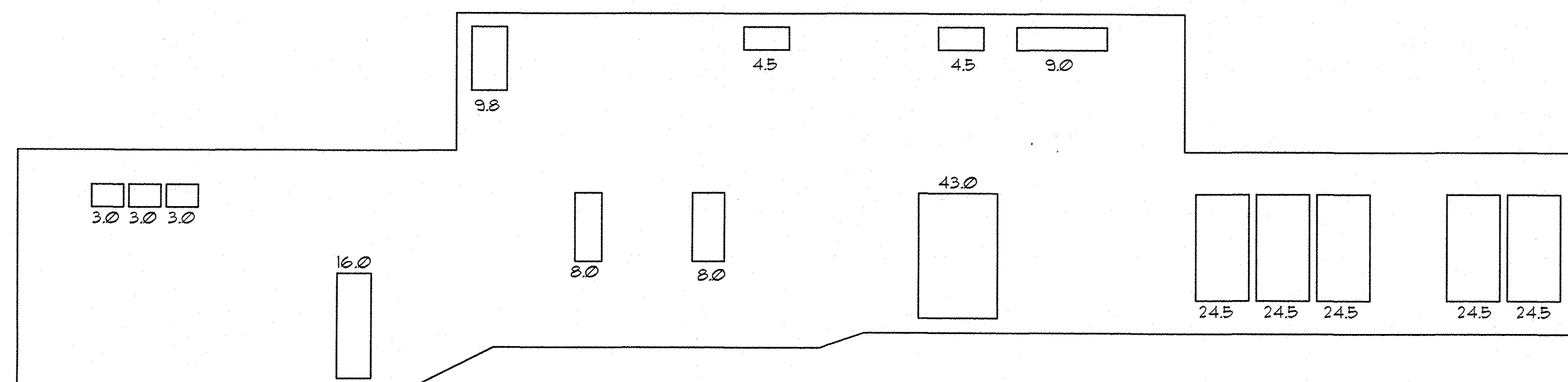
FRONT (SOUTH) ELEVATION



RIGHT (EAST) ELEVATION

TYPICAL ELEVATION CONSTRUCTION NOTES

- WALL CLADDING TO BE ON RAIN SCREEN (MIN. 10mm STRAPPING) UNO.
- CAULK JOINTS BETWEEN DISSIMILAR MATERIALS
- FLASH ALL UNPROTECTED EXTERIOR OPENINGS
- FLASHINGS TO BE MIN. 6% SLOPE AND HAVE END DAMS
- FLASH ALL HORIZONTAL INTERSECTIONS OF DIFFERING WALL FINISHES
- ALL WINDOW OPENERS TO BE CONFIRMED BY THE OWNER
- DOORS TO CONFORM TO SECTION 9.6 OF THE BUILDING CODE
- WINDOWS TO CONFORM TO SECTION 9.1 OF THE BUILDING CODE
- SEE ROOF PLAN FOR ROOF PITCHES AND OVERHANGS
- ALL HANDRAILS & GUARDS TO B.C.B.C. 2018 SEC. 9.8.1 AND 9.8.2
- ALL ROOF SOFFITS WITHIN 12m OF A LOT LINE MUST BE SOLID, UNVENTED, AND PROTECTED AS PER B.C.B.C. 9.10.15.5
- ALL EXTERIOR WINDOWS AND DOORS TO MEET NORTH AMERICAN FENESTRATION STANDARDS AS PER BCBC 2018 SECTION 9.1.4.2
- UNVENTED, AND PROTECTED AS PER B.C.B.C. 9.10.15.5
- ALL EXTERIOR WINDOWS AND DOORS TO MEET NORTH AMERICAN FENESTRATION STANDARDS AS PER BCBC 2018 SECTION 9.1.4.2
- A) AAMA/WDMA/CSA 1011.2/4440 NAFS - NORTH AMERICAN FENESTRATION STANDARD/ SPECIFICATION FOR WINDOWS, DOORS, AND SKYLIGHTS (HARMONIZED STANDARD)
- B) 4440S1 CANADIAN SUPPLEMENT TO AAMA/WDMA/CSA 1011.2/4440 NAFS - NORTH AMERICAN FENESTRATION STANDARD/SPECIFICATION FOR WINDOWS, DOORS, AND SKYLIGHTS



RIGHT WALL FACE
SCALE: 1/8" = 1'-0"

LIMITING DISTANCE CALCULATIONS	
EXPOSED BUILDING FACE AREA	1208.23 SF
AREA OF UNPROTECTED OPENINGS	234.30 SF
LIMITING DISTANCE	11.75' (5.41m)
MAX. PERMITTED U.P.O. PERCENT	15.50%
ACTUAL PROP. U.P.O. PERCENT	12.36%

THESE PLANS HAVE BEEN REVIEWED FOR SUBSTANTIAL COMPLIANCE WITH THE MINIMUM STANDARDS OF THE CURRENT EDITION OF THE BC BUILDING CODE, APPLICABLE DEVELOPMENT PERMIT(S) AND ALL RELEVANT SURREY BYLAWS. DETAILS ON THE PLANS THAT EXCEED THE ABOVE NOTED MINIMUM STANDARDS WERE NOT CONSIDERED IN THE ISSUANCE OF THIS PERMIT. THE REVIEW OF THESE PLANS DOES NOT GUARANTEE COMPLIANCE. City of Surrey

DATE: NOV 27 2022 PLAN REVIEWER: [Signature]

BUILDING PERMIT NO.:

Simplex Consultants Ltd.
#102 - 12725, 72nd Avenue, Surrey BC, V3W 2M7
T: 604.597.3582 F: 604.597.3513

THESE PLANS CONFORM WITH THE REGISTERED BUILDING SCHEME, IN THE LAND TITLE OFFICE.
Project # 7918-0308-00 Lot No. 3
Date: APRIL 13, 2021
Initials: [Signature]

EXTENT OF CONSULTANTS REVIEW: Plans are reviewed for conformance with the Registered Building Scheme. PLANS ARE NOT REVIEWED FOR: Conformance with the B.C. Building Code or Zoning Bylaws, Structural Integrity or the accuracy of Specifications EXCEPT with respect to the Registered Building Scheme.

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ELEVATIONS - FRONT, RIGHT

THESE PLANS CONFORM TO THE B.C. BUILDING CODE, 2018 ED. INCLUDING ALL REVISIONS

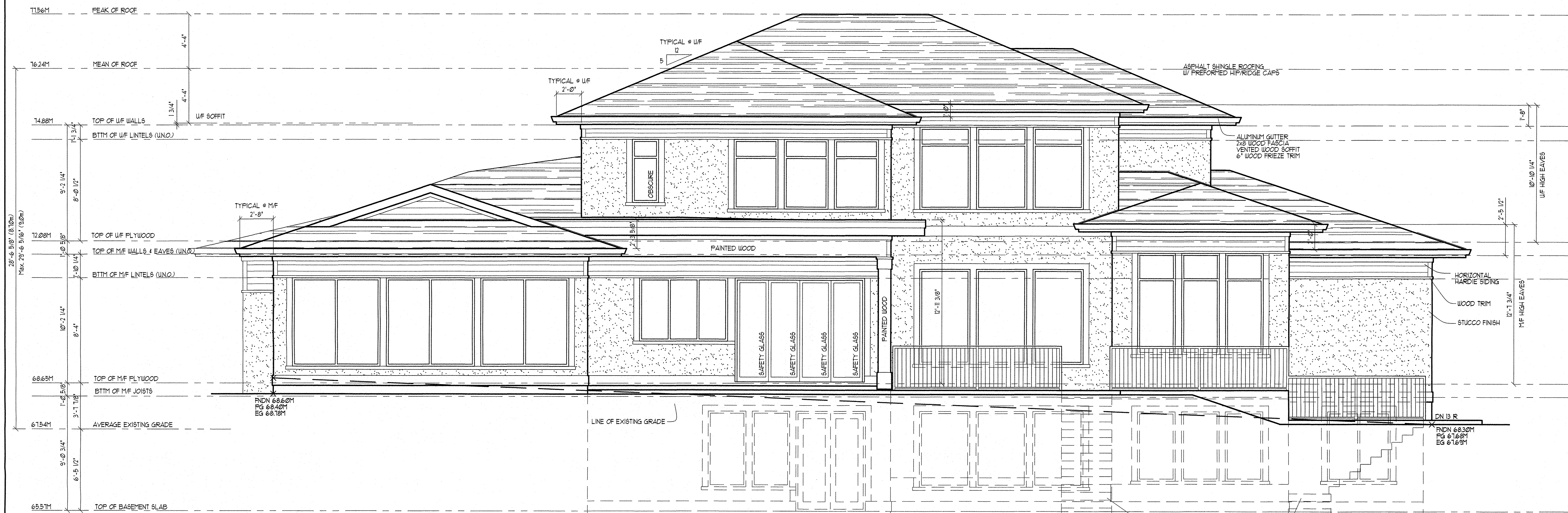
THESE DRAWINGS SHOULD BE PRINTED ON 34"x34" PAPER TO BE AT SCALE INDICATED. ON REDUCED SIZE THEY WILL NOT BE TO SCALE.

APRIL 02, 2021
SCALE 1/4" = 1'-0"

SHEET 2 OF 13

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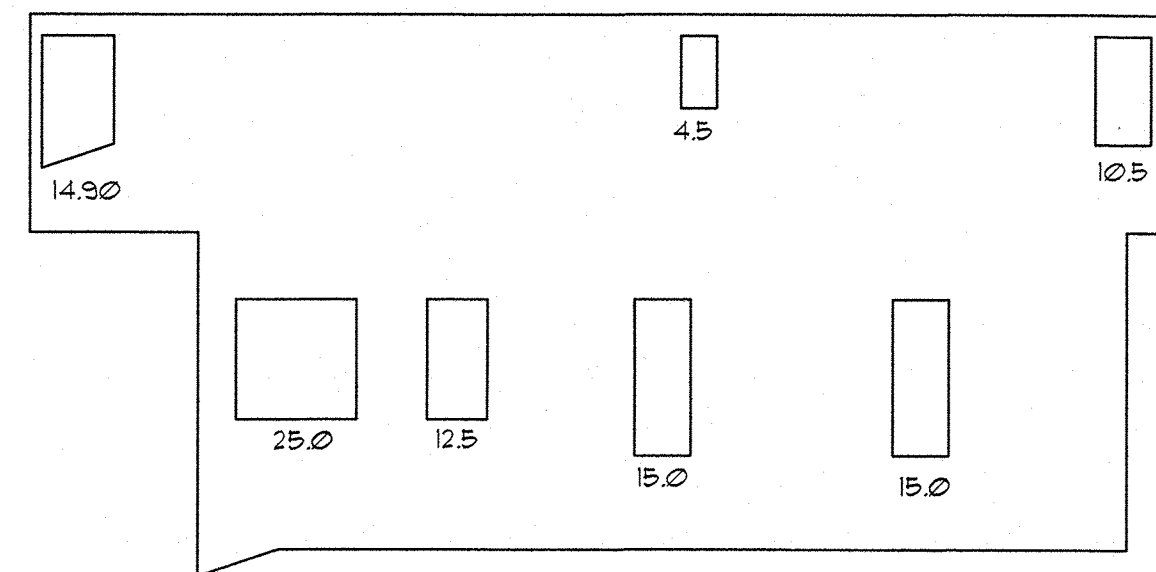
#88 - 1959 - 152nd STREET
SOUTH SURREY BC V4A 9E3
PHONE: 604-535-3322 FAX: 1-866-454-4711
E-MAIL: info@raymondsonbonterdesigner.ca



REAR (NORTH) ELEVATION



LEFT (WEST) ELEVATION



LEFT WALL FACE
SCALE: 1/8" = 1'-0"

LIMITING DISTANCE CALCULATIONS	
EXPOSED BUILDING FACE AREA	943.99 SF
AREA OF UNPROTECTED OPENINGS	91.40 SF
LIMITING DISTANCE	14.90' (4.54m)
MAX. PERMITTED U.P.O. PERCENT	28.0%
ACTUAL PROP. U.P.O. PERCENT	10.32%

Simplex Consultants Ltd.
#102 - 12725, 72nd Avenue, Surrey BC, V3W 2M7
t: 604.587.3582 f: 604.587.3513

THESE PLANS CONFORM WITH THE REGISTERED BUILDING SCHEME IN THE LAND TITLE OFFICE.
Project #: 7918-0308-00 Lot No: 3
Date: APRIL 13, 2021
Initials: _____ Signature: _____

EXTENT OF CONSULTANTS REVIEW: Plans were reviewed for conformance with the Registered Building Scheme. PLANS ARE NOT REVIEWED FOR: Conformance with the B.C. Building Code or zoning Bylaws, Structural Integrity or the accuracy of Specifications EXCEPT with respect to the Registered Building Scheme.

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DATE: NOV 27 2022 PLAN REVIEWER: _____

TYPICAL ELEVATION CONSTRUCTION NOTES

- WALL CLADDING TO BE ON RAIN SCREEN (MIN. 10mm STRAPPING) UNO.
- CAULK JOINTS BETWEEN DISSIMILAR MATERIALS
- FLASH ALL UNPROTECTED EXTERIOR OPENINGS
- FLASHINGS TO BE MIN. 6% SLOPE AND HAVE END DAMS
- FLASH ALL HORIZONTAL INTERSECTIONS OF DIFFERING WALL FINISHES
- ALL WINDOW OPENERS TO BE CONFIRMED BY THE OWNER
- DOORS TO CONFORM TO SECTION 9.6 OF THE BUILDING CODE
- WINDOWS TO CONFORM TO SECTION 9.1 OF THE BUILDING CODE
- (SEE ROOF PLAN FOR ROOF PITCHES) AND OVERHANGS
- ALL HANDRAILS & GUARDS TO B.C.B.C. 2018 SEC. 9.8.1 AND 9.8.8
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- ALL EXTERIOR WINDOWS AND DOORS TO MEET NORTH AMERICAN FENESTRATION STANDARDS AS PER BCBC 2018 SECTION 9.1.4.2
- A) AAMA/WDMA/CSA 1011/21/4440, NAFS - NORTH AMERICAN FENESTRATION STANDARD/ SPECIFICATION FOR WINDOWS, DOORS, AND SKYLIGHTS (HARMONIZED STANDARD)
- B) 4440S, CANADIAN SUPPLEMENT TO AAMA/WDMA/CSA 1011/21/4440, NAFS - NORTH AMERICAN FENESTRATION STANDARD/SPECIFICATION FOR WINDOWS, DOORS, AND SKYLIGHTS

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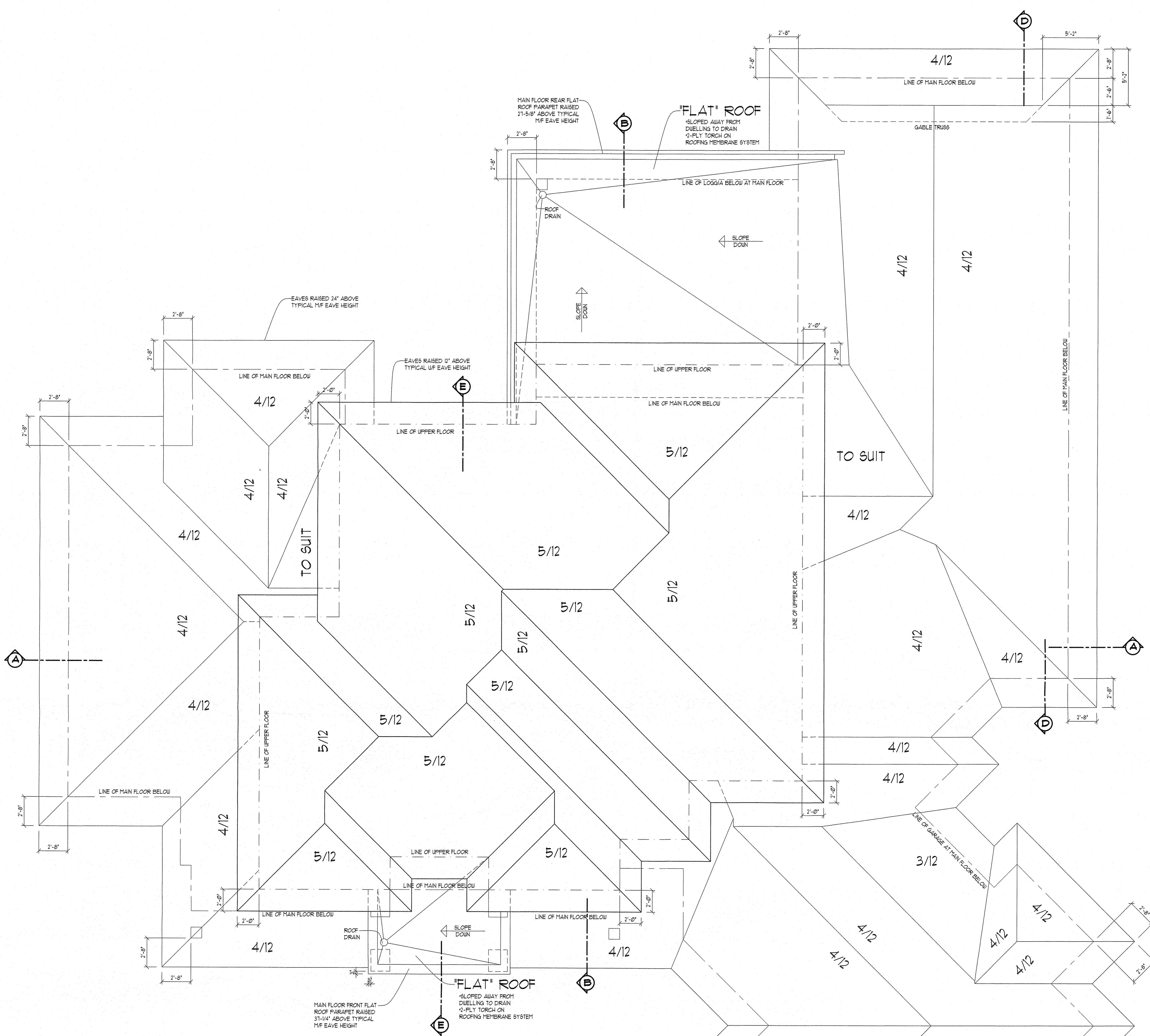
THESE PLANS CONFORM TO THE B.C. BUILDING CODE, 2018 ED. INCLUDING ALL REVISIONS

ELEVATIONS - REAR, LEFT

THESE DRAWINGS SHOULD BE PRINTED ON 34"x54" PAPER TO BE AT SCALE INDICATED. ON REDUCED SIZE THEY WILL NOT BE TO SCALE. APRIL 07, 2021 SCALE 1/4" = 1'-0" SHEET 3 OF 13

DESIGN BY RAYMOND S. BONTER, DESIGNER LTD.

#88 - 1959 - 152nd STREET
SOUTH SURREY, BC V4A 9E3
PHONE: 604-535-3322 FAX: 1-866-454-4711
E-MAIL: info@raymondbonterdesigner.ca



ROOF PLAN

TYPICAL ROOF NOTES:
- EAVE OVERHANGS ARE MEASURED TO THE OUTSIDE FACE OF THE 2x10 FASCIA BOARD
- GUTTER EAVES ARE MEASURED TO THE OUTSIDE FACE OF THE FASCIA BOARD
- EAVE HEIGHTS ARE MEASURED TO THE TOP OF THE 2x10 FASCIA BOARD
- GABLE HEIGHTS ARE MEASURED TO THE TOP OF THE 2x10 FASCIA BOARD
- VENTILATE ATTIC SPACES 1:300 SF
16\"/>

FRONT ENTRY FLAT ROOF HEIGHT
- 19' ABOVE M/F PLY.
REAR DECK FLAT ROOF HEIGHT
- 12'13/4\"/>

Simplex Consultants Ltd.
#102 - 12725, 72nd Avenue, Surrey BC, V3W 2M7
T: 604.597.9582 F: 604.597.9519

THESE PLANS CONFORM WITH THE REGISTERED BUILDING SCHEME #7918-0308-00
Project #7918-0308-00
Date: APRIL 13, 2021
Initials: [Signature] Let No. 3

EXTENT OF CONSULTANTS REVIEW: Plans are reviewed for conformance with the Registered Building Scheme. PLANS ARE NOT REVIEWED FOR: Compliance with the B.C. Building Code or Zoning Bylaws, Structural Integrity or the accuracy of Specifications EXCEPT with respect to the Registered Building Scheme.

ATTENTION STRUCTURAL ENGINEER
A STRUCTURAL ENGINEER IS REQUIRED TO PROVIDE SEISMIC SOLUTIONS AND CERTIFY THIS DESIGN UNDER PART 4 OF THE B.C. BUILDING CODE 2018 EDITION. ALL STRUCTURAL ENGINEERING MUST BE ON A SEPARATE SET OF DRAWINGS PRODUCED BY THE ENGINEER AND MUST NOT CONTAIN R.S.B.D. TITLE BLOCKS OR INDICATE DESIGN BY R.S.B.D. ENGINEERING NOTES MUST NOT BE APPLIED TO THESE DRAWINGS. R.S.B.D. DOES NOT TAKE ANY RESPONSIBILITY FOR UPDATING ENGINEERING IN THE CASE OF A REVISION OR MODIFICATION TO THESE DRAWINGS.

THESE PLANS HAVE BEEN REVIEWED FOR SUBSTANTIAL COMPLIANCE WITH THE MINIMUM STANDARDS OF THE CURRENT EDITION OF THE BC BUILDING CODE, APPLICABLE DEVELOPMENT PERMIT(S) AND ALL RELEVANT SURREY BYLAWS. DETAILS ON THE PLANS THAT EXCEED THE ABOVE NOTED MINIMUM STANDARDS WILL NOT BE CONSIDERED IN THE ISSUANCE OF THIS PERMIT. THE REVIEW OF THESE PLANS DOES NOT GUARANTEE COMPLIANCE.

City of Surrey
NOV 27 2022
PLAN REVIEWER: [Signature]

12961 56A AVENUE, SURREY B.C.

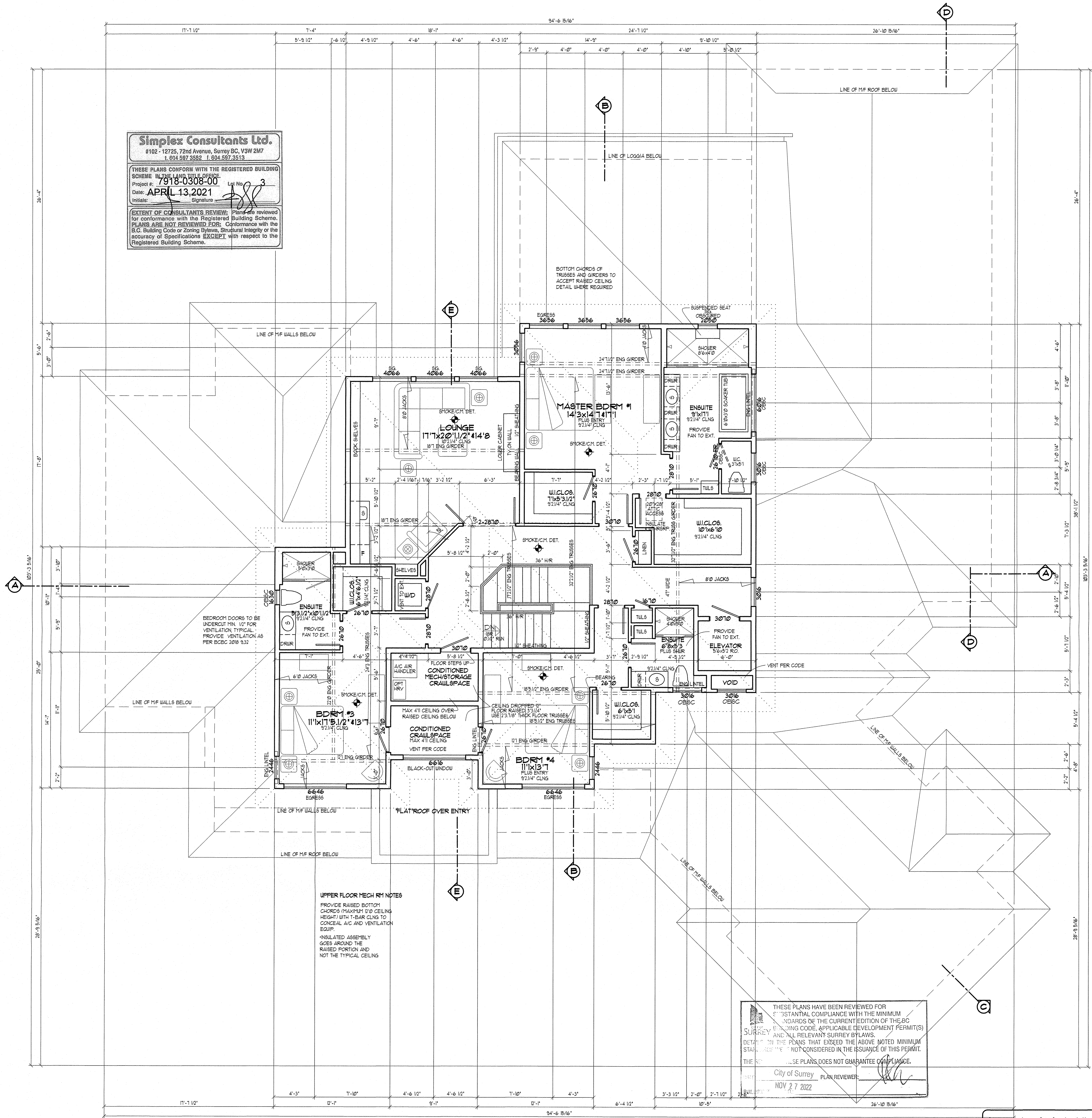
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T: 604.587.3592 F: 604.587.3513

THESE PLANS CONFORM WITH THE REGISTERED BUILDING SCHEME 11780.07 SQ.FT. OFFICE.
Project #: 7918-0308-00 Lot No. 3
Date: APRIL 13, 2021
Initials: Signature

EXTENT OF CONSULTANTS REVIEW: Plans are reviewed for conformance with the Registered Building Scheme. PLANS ARE NOT REVIEWED FOR: Conformance with the B.C. Building Code or Zoning Bylaws, Structural Integrity or the accuracy of Specifications EXCEPT with respect to the Registered Building Scheme.



UPPER FLOOR MECH RM NOTES
PROVIDE RAISED BOTTOM CHORDS (MAXIMUM 12" CEILING HEIGHT) WITH T-BEAR CLNG TO CONCEAL A/C AND VENTILATION EQUIP.
INSULATED ASSEMBLY GOES AROUND THE RAISED PORTION AND NOT THE TYPICAL CEILING

THESE PLANS HAVE BEEN REVIEWED FOR STANTANEOUS COMPLIANCE WITH THE MINIMUM STANDARDS OF THE CURRENT EDITION OF THE B.C. BUILDING CODE, APPLICABLE DEVELOPMENT PERMIT(S) SURREY, AND ALL RELEVANT SURREY BYLAWS.
DETAILS IN THE PLANS THAT EXCEED THE ABOVE NOTED MINIMUM STANDARDS ARE NOT CONSIDERED IN THE ISSUANCE OF THIS PERMIT.
THE REVIEWER'S REVIEW OF THESE PLANS DOES NOT GUARANTEE COMPLIANCE.
City of Surrey
NOV 27 2022
PLAN REVIEWER: [Signature]

UPPER FLOOR PLAN
1,780.07 SQ.FT.
PLUS 30.93 SQ.FT. STAIRS

ATTENTION STRUCTURAL ENGINEER
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"ALL CEILING HEIGHTS LISTED ON MAIN FLOOR AND UPPER FLOOR PLAN ARE FROM TOP OF PLYWOOD SHEATHING NOT TOP OF CONC. TOPPING"
"ALL ROOM SIZES MEASURED TO 'STUD FACE' NOT 'DRYWALL FACE'"

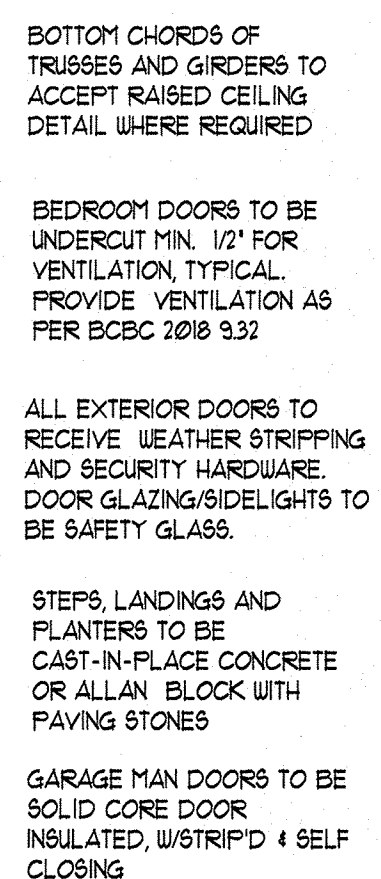
* NOTE:
- EXTERIOR WALLS ARE DRAWN 6" THICK ASSUMING 1/2" PLYWOOD SHEATHING ON 5-1/2" STUDS
- OUTSIDE OF WALL SHEATHING TO LINE UP WITH OUTSIDE OF FINISH
- ALL INTERIOR WALLS ARE DRAWN 5-1/2" OR 5-1/2" THICK FOR 3/4" OR 2x6 STUD WALLS
- NO DRYWALL IS REPRESENTED ON INTERIOR OR EXTERIOR WALLS
- SPECIAL WALL HEIGHT DIMENSIONS ARE MATHEMATICAL AND MUST BE CONFIRMED ON SITE

THESE DRAWINGS SHOULD BE PRINTED ON 34x34" PAPER TO BE AT SCALE INDICATED. ON REDUCED SIZE THEY WILL NOT BE TO SCALE.
APRIL 02, 2021
SCALE 1/4" = 1'-0"

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UPPER FLOOR, ROOF FRAMING
SHEET 5 OF 13

DESIGN BY RAYMOND S. BONTER, DESIGNER LTD.

#88 - 1959 - 152nd STREET
SOUTH SURREY, B.C. V4A 9E3
PHONE: 604-535-3322 FAX: 1-866-454-4211
E-MAIL: info@raymondbonterdesigner.ca

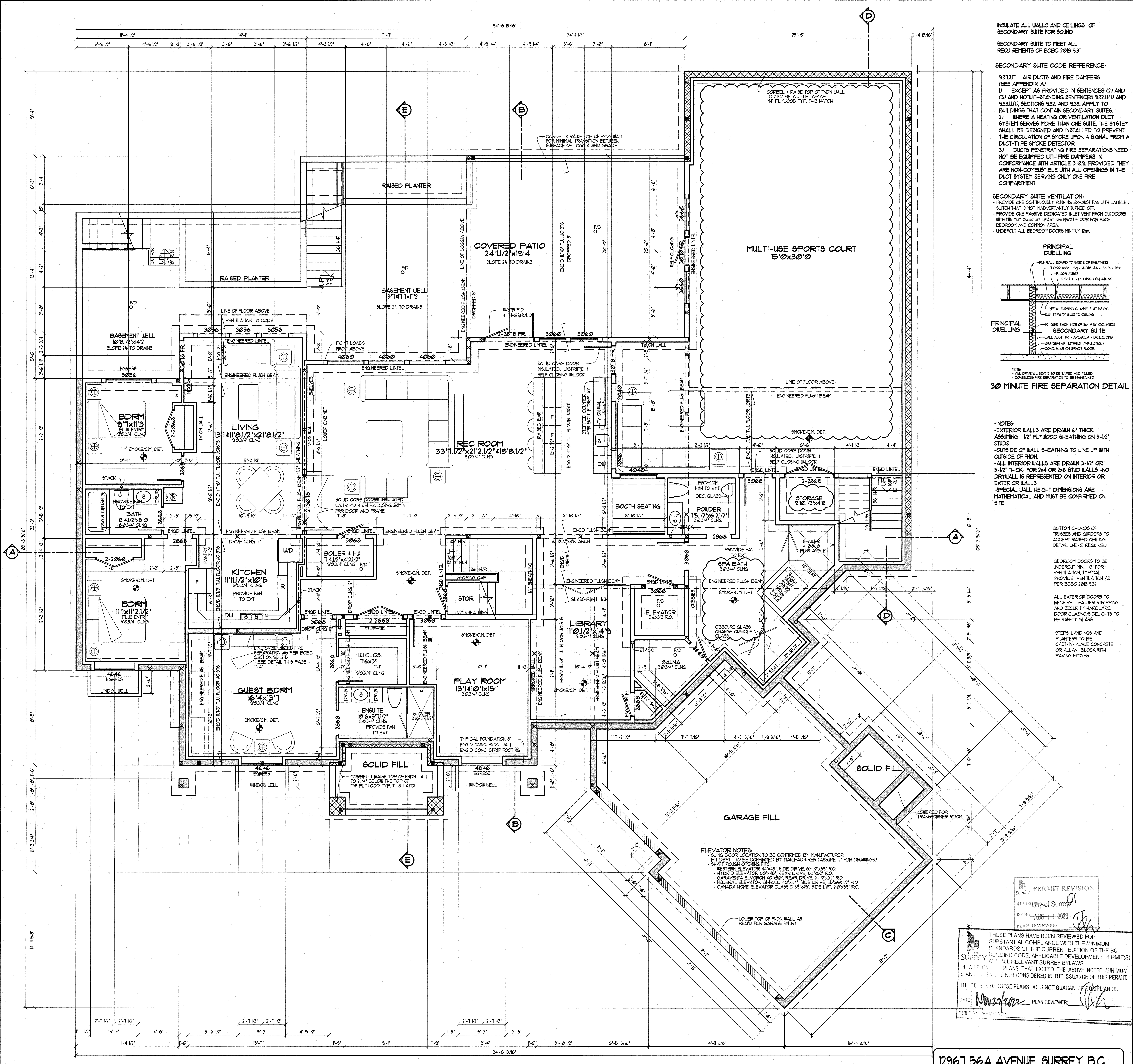


ALL ROOM SIZES MEASURED TO 'STUD FACE' NOT 'DRYWALL FACE'

APRIL 02, 2021
SCALE 1/4" = 1'-0"

DESIGN BY RAYMOND S. BONTER, DESIGNER LTD.

#88 - 1959 - 152nd STREET
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PHONE: 604-535-3332 FAX: 1-866-454-4271
E-MAIL: info@amondbonterdesigner.ca



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* NOTE:
- EXTERIOR WALLS ARE DRAWN 6" THICK ASSUMING 1/2" PLYWOOD SHEATHING ON 5-1/2" STUDS
- OUTSIDE OF WALL SHEATHING TO LINE UP WITH OUTSIDE OF FINISH
- ALL INTERIOR WALLS ARE DRAWN 5-1/2" OR 5-1/4" THICK FOR 2x4 OR 2x6 STUD WALLS
- NO DRYWALL IS REPRESENTED ON INTERIOR OR EXTERIOR WALLS
- SPECIAL WALL HEIGHT DIMENSIONS ARE MATHEMATICAL AND MUST BE CONFIRMED ON SITE

BASEMENT PLAN
4418.68 SQ.FT.
INCLUDES 1340.41 SQ.FT. POOL AREA
INCLUDES 821.13 SQ.FT. LEGAL SUITE

"ALL ROOM SIZES MEASURED TO 'STUD FACE' NOT 'DRYWALL FACE'"

SECONDARY SUITES
- THE MAXIMUM FLOOR AREA OF A SECONDARY SUITE IS THE LESSER OF 40% OF THE ENTIRE HABITABLE FLOOR AREA OR 960 SF (89 SQ.M)
- ONLY ONE SECONDARY SUITE IS PERMITTED PER RESIDENTIAL LOT.
- ONE ADDITIONAL OFF STREET PARKING SPACE MUST BE PROVIDED AND CANNOT BLOCK ACCESS TO THE REQUIRED PARKING FOR THE PRINCIPAL DWELLING.
- ALL B.C.B.C. RULES FOR SECONDARY SUITES APPLY INCLUDING FIRE RATINGS AND SEPARATIONS.

THESE PLANS CONFORM TO THE B.C. BUILDING CODE, 2018 ED. INCLUDING ALL REVISIONS

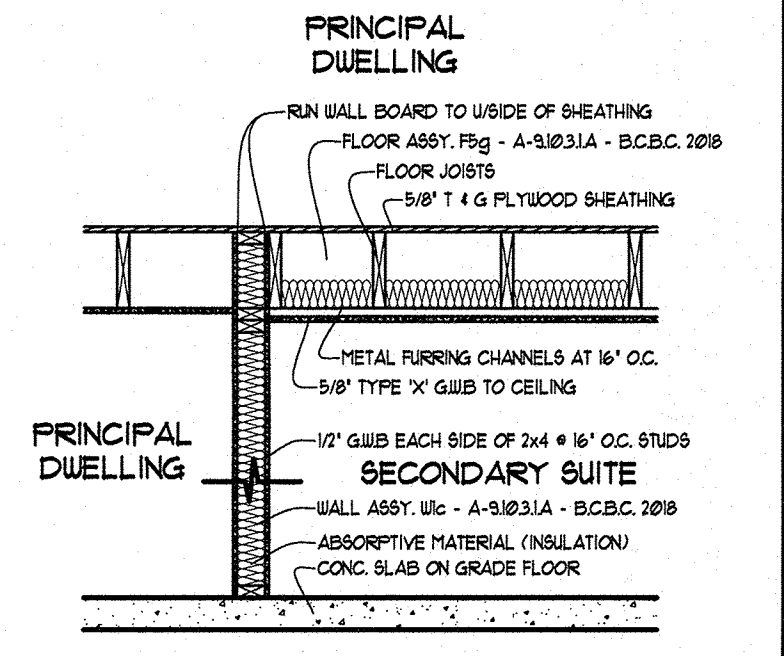
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- ALL FUNDS PAID ARE NON-REFUNDABLE.

BASEMENT, MAIN FLOOR FRAMING

INSULATE ALL WALLS AND CEILING OF SECONDARY SUITE FOR SOUND
SECONDARY SUITE TO MEET ALL REQUIREMENTS OF BCBC 2018 9.3.1
SECONDARY SUITE CODE REFERENCE:
9.3.12.1. AIR DUCTS AND FIRE DAMPERS (SEE APPENDIX A)
1) EXCEPT AS PROVIDED IN SENTENCES (2) AND (3) AND NOTWITHSTANDING SENTENCES 9.3.12.1(1) AND 9.3.12.1(2), SECTIONS 9.3.2. AND 9.3.3. APPLY TO BUILDINGS THAT CONTAIN SECONDARY SUITES.
2) WHERE A HEATING OR VENTILATION DUCT SYSTEM SERVES MORE THAN ONE SUITE, THE SYSTEM SHALL BE DESIGNED AND INSTALLED TO PREVENT THE CIRCULATION OF SMOKE UPON A SIGNAL FROM A DUCT-TYPE SMOKE DETECTOR.
3) DUCTS PENETRATING FIRE SEPARATIONS NEED NOT BE EQUIPPED WITH FIRE DAMPERS IN CONFORMANCE WITH ARTICLE 9.18.3, PROVIDED THEY ARE NON-COMBUSTIBLE WITH ALL OPENINGS IN THE DUCT SYSTEM SERVING ONLY ONE FIRE COMPARTMENT.
SECONDARY SUITE VENTILATION:
- PROVIDE ONE CONTINUOUSLY RUNNING EXHAUST FAN WITH LABELED SWITCH THAT IS NOT INADEQUATELY TURNED OFF.
- PROVIDE ONE PASSIVE DEDICATED INLET VENT FROM OUTDOORS WITH MINIMUM 25cm² AT LEAST 18cm FROM FLOOR FOR EACH BEDROOM AND COMMON AREA.
- UNDERCUT ALL BEDROOM DOORS MINIMUM 12mm.



30 MINUTE FIRE SEPARATION DETAIL

* NOTES:
- EXTERIOR WALLS ARE DRAWN 6" THICK ASSUMING 1/2" PLYWOOD SHEATHING ON 5-1/2" STUDS
- OUTSIDE OF WALL SHEATHING TO LINE UP WITH OUTSIDE OF FINISH
- ALL INTERIOR WALLS ARE DRAWN 5-1/2" OR 5-1/4" THICK FOR 2x4 OR 2x6 STUD WALLS - NO DRYWALL IS REPRESENTED ON INTERIOR OR EXTERIOR WALLS
- SPECIAL WALL HEIGHT DIMENSIONS ARE MATHEMATICAL AND MUST BE CONFIRMED ON SITE

BOTTOM CHORDS OF TRUSSES AND GIRDERS TO ACCEPT RAISED CEILING DETAIL WHERE REQUIRED

BEDROOM DOORS TO BE UNDERCUT MIN. 1/2" FOR VENTILATION, TYPICAL. PROVIDE VENTILATION AS PER BCBC 2018 9.3.1

ALL EXTERIOR DOORS TO RECEIVE WEATHER STRIPPING AND SECURITY HARDWARE. DOOR GLAZING/SIDELIGHTS TO BE SAFETY GLASS.

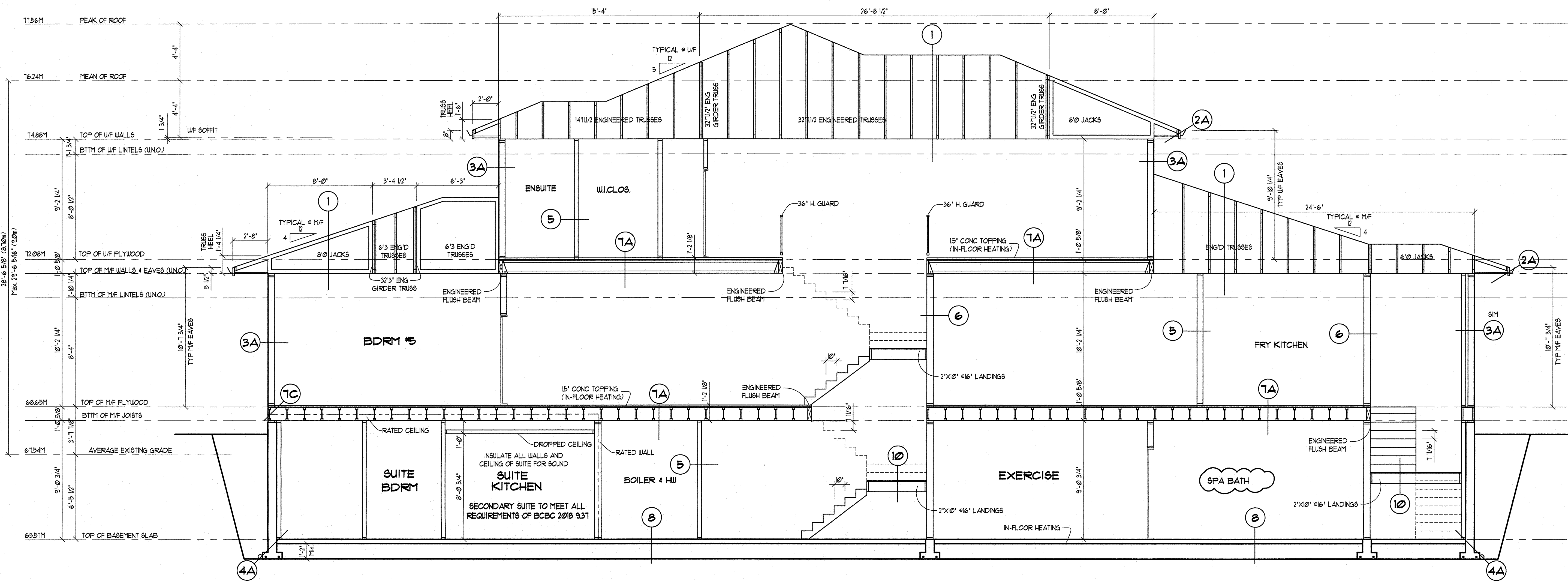
STEPS, LANDINGS AND PLINTHS TO BE CAST-IN-PLACE CONCRETE OR ALLAN BLOCK WITH PAVING STONES

PERMIT REVISION
SURREY City of Surrey
DATE: AUG 11 2023
PLAN REVIEWER: [Signature]

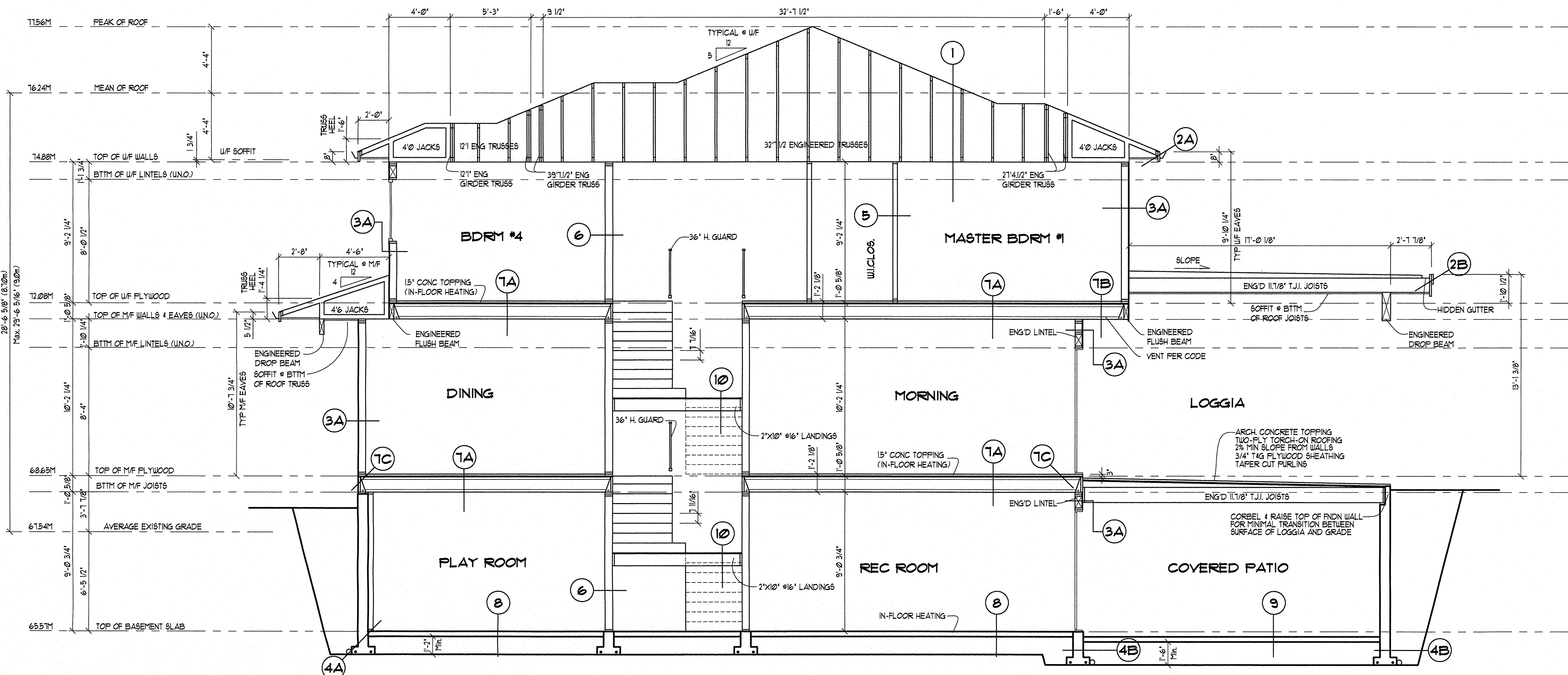
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THE REVIEW OF THESE PLANS DOES NOT GUARANTEE COMPLIANCE.
DATE: [Signature] PLAN REVIEWER: [Signature]

DESIGN BY RAYMOND S. BONTER, DESIGNER LTD.

1559 - 152nd STREET
SOUTH SURREY B.C. V4A 9E3
PHONE: 604-535-3322 FAX: 1-866-454-4271
E-MAIL: info@raymondsonter.ca



CROSS SECTION A-A



CROSS SECTION B-B

* NOTE:
- EXTERIOR WALLS ARE DRAWN 6" THICK ASSUMING 1/2" PLYWOOD SHEATHING ON 5-1/2" STUDS
- OUTSIDE OF WALL SHEATHING TO LINE UP WITH OUTSIDE OF FINISH FACE OF THE FASCIA BOARD
- ALL INTERIOR WALLS ARE DRAWN 3-1/2" OR 5-1/2" THICK FOR 2x4 OR 2x6 STUD WALLS
- NO DRYWALL REPRESENTED ON INTERIOR OR EXTERIOR WALLS
- SPECIAL WALL HEIGHT DIMENSIONS ARE MATHEMATICAL AND MUST BE CONFIRMED ON SITE

TYPICAL ROOF NOTES:
- EAVE OVERHANGS ARE MEASURED TO THE OUTSIDE FACE OF THE 2x10 FASCIA BOARD
- GUTTER EAVES ARE MEASURED TO THE OUTSIDE FACE OF THE FASCIA BOARD
- EAVE HEIGHTS ARE MEASURED TO THE TOP OF THE 2x10 FASCIA BOARD
- GABLE HEIGHTS ARE MEASURED TO THE TOP OF THE 2x10 FASCIA BOARD
- VENTILATE ATTIC SPACES 1300 CF
- 16/125 TRUSS HEEL = 4/12 PITCH 32" OHANG
- 18/125 TRUSS HEEL = 5/12 PITCH 24" OHANG

TYPICAL U/F EAVE HEIGHT
- 9/10/14" ABOVE U/F PLY.
- HIGH U/F EAVE HEIGHT
- 10/10/14" ABOVE U/F PLY.
TYPICAL M/F EAVE HEIGHT
- 10/13/14" ABOVE M/F PLY.
HIGH M/F EAVE HEIGHT
- 12/13/14" ABOVE M/F PLY.

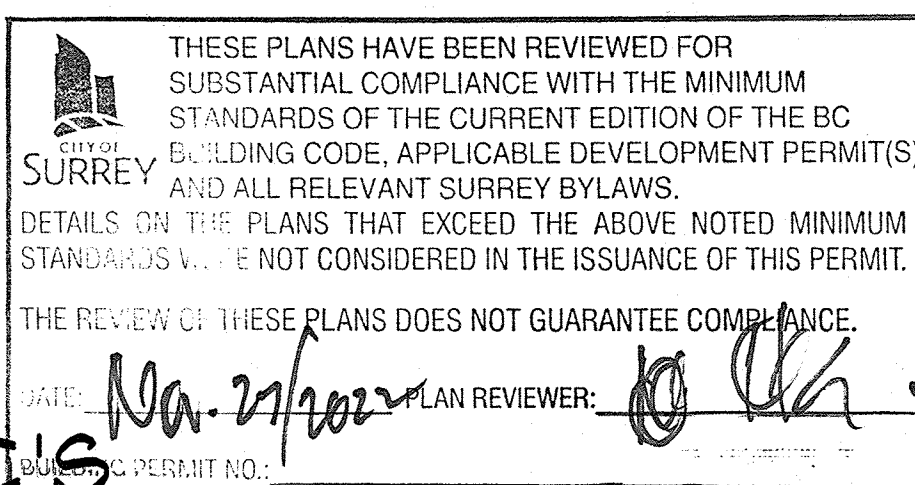
TYPICAL U/F EAVE OVERHANG
- 24"
TYPICAL M/F EAVE OVERHANG
- 32"

FRONT ENTRY FLAT ROOF HEIGHT
- 13'3" ABOVE M/F PLY.
REAR DECK FLAT ROOF HEIGHT
- 12'11/2" ABOVE M/F PLY.

ENERGY EFFICIENCY REQUIREMENTS

THIS HOME IS DESIGNED TO COMPLY WITH ENERGY EFFICIENCY REQUIREMENTS AND VALUES FOR CLIMATE ZONE 4 - LOWER MAINLAND AND SOUTHERN VANCOUVER ISLAND WITHOUT H.V. AND IS DESIGNED UNDER THE PRESCRIPTIVE PATH OF BCBC 2018 SECTION 9.36.

- TYPICAL NOTES:
- VENTILATION AND DUCTING MUST BE PROVIDED AS PER B.C.B.C. SECTION 9.32
- AN AIR BARRIER MUST BE INSTALLED AS PER B.C.B.C. 2018 SECTION 9.36
- THE AIR BARRIER SYSTEM MUST COMPLY WITH SECTIONS 9.36.2.13 AND 9.36.2.10 AND MUST SPECIFICALLY BE CONSTRUCTED USING METHODS OUTLINED IN SUBSECTION 9.36.2.10 (b) AND 9.36.2.10 (11)
- ALL INSULATION TO BE INSTALLED AS PER B.C.B.C. 2018 SECTION 9.36
- ALL GARAGE DOORS: MINIMUM NOMINAL R3.1, VALUE OF U
- ALL ACCESS HATCHES TO UNCONDITIONED SPACES: MAXIMUM U VALUE OF 2.6
- THE MINIMUM LEVEL OF PERFORMANCE REQUIRED FOR WINDOWS, DOORS AND SKYLIGHTS SHALL BE THAT OF THE PERFORMANCE CLASS R
- ALL WINDOWS AND DOORS: MAX U VALUE OF 1.8 EXCEPT FOR 1 ENTRY UNIT
- ALL SKYLIGHTS: MAXIMUM U VALUE OF 2.3



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- AND ALL WORK DONE BY RAYMOND S. BONTER, DESIGNER LTD. IS AND WILL REMAIN SOLELY THE PROPERTY OF THE SAME
- ALL FUNDS PAID ARE NON-REFUNDABLE.

BUILDING SPEC'S

- 1 TYPICAL TRUSS ROOF W/ ATTIC
SEE ASSEMBLY 936.2.6-A-1 (a) ON ATT. DETAIL SHEET
ASPHALT SHINGLE ROOFING
APPROVED ROOFING FELT
1/2" PLYWOOD SHEATHING
PROVIDE 1" CLIPS AT UNSUPPORTED SEAMS
FREE-FAB TRUSSES @ 24" O.C. W/
12" BLOWN CELLULOSE INSULATION (R40)
6 MIL POLY V.B.
5/8" GYPSUM WALL BOARD
- 2A TYPICAL EAVE OVERHANG
DECORATIVE METAL SURFACE GUTTERS
2x8 WOOD FASCIA BOARDS
PERFORATED SOFFIT FINISH
2x6 FRIEZE BOARD
- 2B TYPICAL FLAT ROOF OVERHANG
1x6 ON 2x10 LAYERED WOOD BARGE BOARDS
PERFORATED SOFFIT FINISH
2x6 SOFFIT TRIM
HIDDEN GUTTER SYSTEM
TAPERED PERLS ON ENGINEERED JOISTS
- 3A TYPICAL EXTERIOR WALLS
SEE ASSEMBLY 936.2.6-A-3 (a) ON ATT. DETAIL SHEET
CLADDING MTL. AS PER ELEVATIONS
RAIN SCREEN W/ MIN. 10mm STRAPPING UNO.
BUILDING PAPER
1/2" PLYWOOD SHEATHING
2x6 @ 16" O.C. W/ 5/8" F.G. BATT INSUL (R20)
6 MIL POLY V.B.
1/2" GYPSUM WALL BOARD
- 3B TYPICAL GARAGE/DWELLING WALLS
SEE ASSEMBLY 936.2.6-A-3 (c) ON ATT. DETAIL SHEET
5/8" GYPSUM WALL BOARD
2x8 WOOD FASCIA BOARD
PERFORATED SOFFIT FINISH
2x6 FRIEZE BOARD

- 4A TYPICAL BASEMENT FOUND. WALL
SEE ASSEMBLY 936.2.6-A-1 (a) ON ATT. DETAIL SHEET
ASPHALT EMULSION
8" ENG'D CONC. FOUNDATION WALL
1/2" AIR SPACE
2x4 @ 24" O.C. W/ 3/8" F.G. BATT INSUL (R12)
6 MIL POLY V.B. OR VAPOR BARRIER
1/2" GYPSUM WALL BOARD
ENG'D CONCRETE STRIP FOOTING
6" MIN DRAIN ROCK
4" PERIMETER DRAIN
- 4B TYPICAL SLAB-ON-GRADE FOUND. WALL
8" ENG'D CONC. FOUNDATION WALL
ENG'D CONCRETE STRIP FOOTING
6" MIN DRAIN ROCK
4" PERIMETER DRAIN
- 5 TYPICAL INTERIOR PARTITION WALLS
GYPSUM WALL BOARD BOTH SIDES
2x4 OR 2x6 STUDS @ 16" O.C.
- 6 TYPICAL INTERIOR BEARING WALL
2x6 STUDS @ 16" O.C.
5/8" ENG'D CONCRETE CURB
ENG'D CONCRETE STRIP FOOTING
- 7A TYPICAL WOOD FRAME FLOOR - CONDITIONED EACH SIDE
FINISH FLOORING
15" CONCRETE TOPPING W/ IN-FLOOR HEAT
3/4" TAG FLY. SHEATHING (GLUED & NAILLED)
ENG'D 1 1/8" FLOOR JOISTS
5/8" GYPSUM WALL BOARD
- 7B TYPICAL WOOD FRAME FLOOR OVER UNCONDITIONED SPACE
SEE ASSEMBLY 936.2.6-A-4 (a) ON ATT. DETAIL SHEET
FINISH FLOORING
15" CONCRETE TOPPING W/ IN-FLOOR HEAT
3/4" TAG FLY. SHEATHING (GLUED & NAILLED)
6 MIL POLY V.B.
ENG'D 1 1/8" FLOOR JOISTS
PERFORATED SOFFIT FINISH OR 5/8" GYPSUM WALL BOARD

- 7C TYPICAL JOIST SPACE AT EXTERIOR WALLS
SEE ASSEMBLY 936.2.6-A-3 (b) ON ATT. DETAIL SHEET
CLADDING MTL. AS PER ELEVATIONS
RAIN SCREEN W/ MIN. 10mm STRAPPING UNO.
BUILDING PAPER
2x4 RHT JOIST
5/8" THICK BATT INSULATION (R20)
6 MIL POLY V.B.
- 8 TYPICAL SLAB-ON-GRADE FLOOR
SEE ASSEMBLY 936.2.6-A-3 ON ATT. DETAIL SHEET
4" CONCRETE SLAB W/ IN-FLOOR HEAT
6 MIL POLY V.B.
25" TYPE 3 RIGID INSULATION (R12) UNDER ENTIRE SLAB
COMPACT GRANULAR FILL
- PROVIDE MIN. ER9.1 232 THERMAL BREAK FROM PERIM. OF SLAB TO EXTERIOR FLOOR.
- 9 TYPICAL GARAGE FLOOR - SLAB-ON-GRADE
4" CONCRETE SLAB
COMPACT GRANULAR FILL
1 1/2" MIN. SLOPE TO ENTRY
- 10 TYPICAL STAIRS
15" TREAD
10" RUN
1 1/2" x 1" RISE
PROVIDE HANDRAIL @ 32-36" @ STAIRS
W/ 3 OR MORE RISERS
PROVIDE 6'-8" MIN. FINISHED HEADROOM

ATTENTION STRUCTURAL ENGINEER
A STRUCTURAL ENGINEER IS REQUIRED TO PROVIDE SEISMIC SOLUTIONS AND CERTIFY THIS DESIGN UNDER PART 4 OF THE B.C. BUILDING CODE 1998 EDITION.
ALL STRUCTURAL ENGINEERING MUST BE ON A SEPARATE SET OF DRAWINGS PRODUCED BY THE ENGINEER AND MUST NOT CONTAIN R.S.D. TITLE BLOCKS OR INDICATE DESIGN BY R.S.D. ENGINEERING NOTES MUST NOT BE APPLIED TO THESE DRAWINGS. R.S.D. DOES NOT TAKE ANY RESPONSIBILITY FOR UPDATING ENGINEERING IN THE CASE OF A REVISION OR MODIFICATION TO THESE DRAWINGS.

12961 56A AVENUE, SURREY B.C.

THESE PLANS CONFORM TO THE B.C. BUILDING CODE, 2018 ED. INCLUDING ALL REVISIONS

SECTIONS, BLDG. SPEC'S

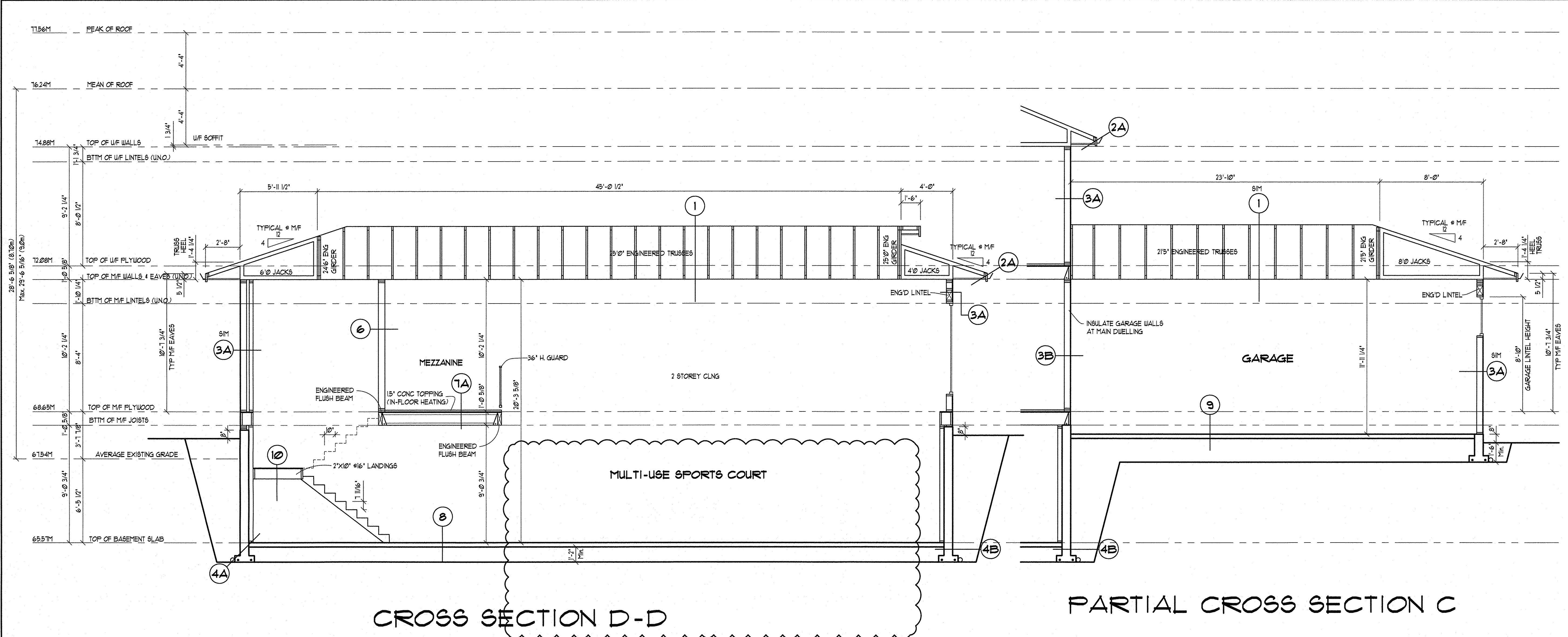
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APRIL 02, 2021
SCALE 1/4" = 1'-0"

SHEET 8 OF 13

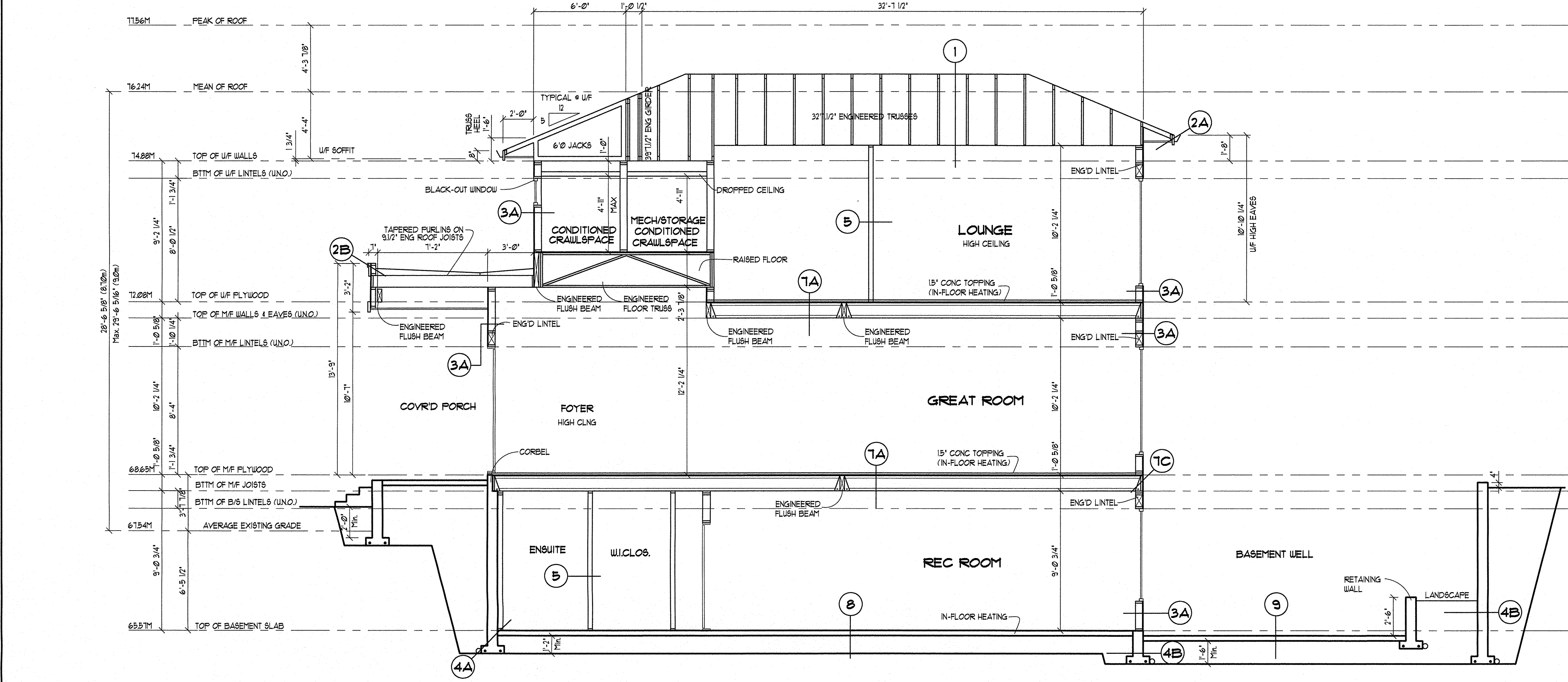
DESIGN BY RAYMOND S. BONTER, DESIGNER LTD.

#88 - 1959 - 152nd STREET
SOUTH SURREY B.C. V4A 9E3
PHONE: 604-535-3322 FAX: 1-866-454-4271
E-MAIL: info@raymondontdesigner.ca



CROSS SECTION D-D

PARTIAL CROSS SECTION C



CROSS SECTION E-E

* NOTE:
- EXTERIOR WALLS ARE DRAIN 6" THICK ASSUMING 1/2" PLYWOOD SHEATHING ON 5-1/2" STUDS
- OUTSIDE OF WALL SHEATHING TO LINE UP WITH OUTSIDE OF FINISH FACE OF THE FASCIA BOARD
- ALL INTERIOR WALLS ARE DRAIN 3-1/2" OR 5-1/2" THICK FOR 2x4 OR 2x6 STUD WALLS
- NO DRY WALL IS REPRESENTED ON INTERIOR OR EXTERIOR WALLS
- SPECIAL WALL HEIGHT DIMENSIONS ARE MATHEMATICAL AND MUST BE CONFIRMED ON SITE

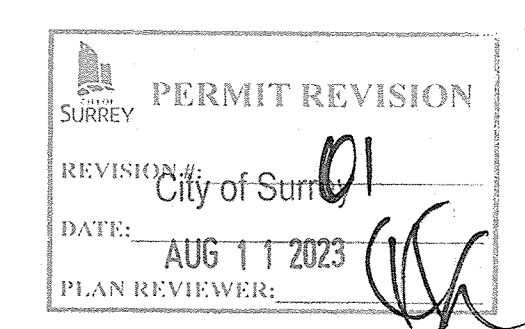
TYPICAL ROOF NOTES:
- EAVE OVERHANGS ARE MEASURED TO THE OUTSIDE FACE OF THE 2x6 FASCIA BOARD
- GUTTER EAVES ARE MEASURED TO THE OUTSIDE FACE OF THE FASCIA BOARD
- EAVE HEIGHTS ARE MEASURED TO THE TOP OF THE 2x6 FASCIA BOARD
- GABLE HEIGHTS ARE MEASURED TO THE TOP OF THE 2x6 FASCIA BOARD
- VENTILATE ATTIC SPACES 1:300 GF
1x25" TRUSSES HEEL @ 4/12 PITCH 32" ONKANG
1x TRUSSES HEEL @ 5/12 PITCH 24" ONKANG
TYPICAL UF EAVE HEIGHT
- 9'10 1/4" ABOVE UF FLY.
HIGH UF EAVE HEIGHT
- 10'10 1/4" ABOVE UF FLY.
TYPICAL MF EAVE HEIGHT
- 10'13 1/4" ABOVE MF FLY.
HIGH MF EAVE HEIGHT
- 12'13 1/4" ABOVE MF FLY.

TYPICAL UF EAVE OVERHANG
- 24"
TYPICAL MF EAVE OVERHANG
- 32"
FRONT ENTRY FLAT ROOF HEIGHT
- 13'9" ABOVE MF FLY.
REAR DECK FLAT ROOF HEIGHT
- 12'11 1/2" ABOVE MF FLY.

ENERGY EFFICIENCY REQUIREMENTS

THIS HOME IS DESIGNED TO COMPLY WITH ENERGY EFFICIENCY REQUIREMENTS AND VALUES FOR CLIMATE ZONE 4 - LOWER MAINLAND AND SOUTHERN VANCOUVER ISLAND WITHOUT H.V. AND IS DESIGNED UNDER THE PRESCRIPTIVE PATH OF BCBC 2018 SECTION 936.

TYPICAL NOTES:
- VENTILATION AND DUCTING MUST BE PROVIDED AS PER B.C.B.C. SECTION 932
- AN AIR BARRIER MUST BE INSTALLED AS PER B.C.B.C. 2018 SECTION 936
- THE AIR BARRIER SYSTEM MUST COMPLY WITH SECTIONS 936.2.3 AND 936.2.10 AND MUST SPECIFICALLY BE CONSTRUCTED USING METHODS OUTLINED IN SUBSECTION 936.2.10 (b) AND 936.2.10 (11)
- ALL INSULATION TO BE INSTALLED AS PER B.C.B.C. 2018 SECTION 936
- ALL GARAGE DOORS: MINIMUM NOMINAL R-5 VALUE OF U
- ALL ACCESS HATCHES TO UNCONDITIONED SPACES: MAXIMUM U VALUE OF 2.6
- THE MINIMUM LEVEL OF PERFORMANCE REQUIRED FOR WINDOWS, DOORS AND SKYLIGHTS SHALL BE THAT OF THE PERFORMANCE CLASS R
- ALL WINDOWS AND DOORS: MAX U VALUE OF 1.8 EXCEPT FOR 1 ENTRY UNIT
- ALL SKYLIGHTS: MAXIMUM U VALUE OF 2.9



THESE PLANS HAVE BEEN REVIEWED FOR SUBSTANTIAL COMPLIANCE WITH THE MINIMUM STANDARDS OF THE CURRENT EDITION OF THE BC BUILDING CODE, APPLICABLE DEVELOPMENT PERMIT(S) DETAILS ON THE PLANS THAT EXCEED THE ABOVE NOTED MINIMUM STANDARDS ARE NOT CONSIDERED IN THE ISSUANCE OF THIS PERMIT.
THE REVIEW OF THESE PLANS DOES NOT GUARANTEE COMPLIANCE.
DATE: [Signature] REVIEWER: [Signature]

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ALL FUNDS PAID ARE NON-REFUNDABLE.

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ATTENTION STRUCTURAL ENGINEER
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- 1 TYPICAL TRUSS ROOF W/ ATTIC
SEE ASSEMBLY 936.2.6.A-1 (a) ON ATT. DETAIL SHEET
ASPHALT SHINGLE ROOFING
APPROVED ROOFING FELT
1/2" PLYWOOD SHEATHING
PROVIDE 1" CLIPS AT UNSUPPORTED BEAMS
FIRE-RATED TRUSSES @ 24" O.C. W/
12" BLOWN CELLULOSE INSULATION (R40)
6 MIL POLY V.B.
5/8" GYPSUM WALL BOARD
- 2A TYPICAL EAVE OVERHANG
DECORATIVE METAL SURFACE GUTTERS
2x6 WOOD FASCIA BOARDS
PERFORATED SOFFIT FINISH
2x6 FRIEZE BOARD
- 2B TYPICAL FLAT ROOF OVERHANG
1x6 ON 2x10 LAYERED WOOD BARGE BOARDS
PERFORATED SOFFIT FINISH
2x6 SOFFIT TRIM
HIDDEN GUTTER SYSTEM
TAPERED FURLING ON ENGINEERED JOISTS
- 3A TYPICAL EXTERIOR WALLS
SEE ASSEMBLY 936.2.6.A-3 (a) ON ATT. DETAIL SHEET
CLADDING MTRL. AS PER ELEVATIONS
RAIN SCREEN W/ MIN. 10mm STRAPPING UNO.
BUILDING PAPER
1/2" PLYWOOD SHEATHING
2x6 @ 16" O.C. W/ 5/8" F.G. BATT INSUL (R20)
6 MIL POLY V.B.
1/2" GYPSUM WALL BOARD
- 3B TYPICAL GARAGE/DUELLING WALLS
SEE ASSEMBLY 936.2.6.A-3 (c) ON ATT. DETAIL SHEET
5/8" GYPSUM WALL BOARD
1/2" PLYWOOD SHEATHING
2x6 @ 16" O.C. W/ 5/8" F.G. BATT INSUL
6 MIL POLY V.B.
1/2" GYPSUM WALL BOARD
- 4A TYPICAL BASEMENT FOUND. WALL
SEE ASSEMBLY 936.2.6.A-1 (a) ON ATT. DETAIL SHEET
ASPHALT EMULSION
8" ENG'D CONC. FOUNDATION WALL
1/2" AIR SPACE
2x4 @ 24" O.C. W/ 3/8" F.G. BATT INSUL (R20)
6 MIL POLY VAPOR BARRIER
1/2" GYPSUM WALL BOARD
ENG'D CONCRETE STRIP FOOTING
6" MIN DRAIN ROCK
4" PERIMETER DRAIN
- 4B TYPICAL SLAB-ON-GRADE FOUND. WALL
8" ENG'D CONC. FOUNDATION WALL
ENG'D CONCRETE STRIP FOOTING
6" MIN DRAIN ROCK
4" PERIMETER DRAIN
- 5 TYPICAL INTERIOR PARTITION WALLS
GYPSUM WALL BOARD BOTH SIDES
2x4 OR 2x6 STUDS @ 16" O.C.
- 6 TYPICAL INTERIOR BEARING WALL
2x6 STUDS @ 16" O.C.
5/8" ENG'D CONCRETE CURB
ENG'D CONCRETE STRIP FOOTING
- 1A TYPICAL WOOD FRAME FLOOR - CONDITIONED EACH SIDE
FINISH FLOORING
1 1/2" CONC. TOPPING W/ IN-FLOOR HEAT
3/4" T&G FLY. SHEATHING (GLUED & NAILED)
ENG'D 11/8" FLOOR JOISTS
5/8" GYPSUM WALL BOARD
- 1B TYPICAL WOOD FRAME FLOOR OVER UNCONDITIONED SPACE
SEE ASSEMBLY 936.2.6.A-4 (a) ON ATT. DETAIL SHEET
FINISH FLOORING
1 1/2" CONC. TOPPING W/ IN-FLOOR HEAT
3/4" T&G FLY. SHEATHING (GLUED & NAILED)
6 MIL POLY V.B.
ENG'D 11/8" FLOOR JOISTS
PERFORATED SOFFIT FINISH OR 5/8" GYPSUM WALL BOARD
- 1C TYPICAL JOIST SPACE AT EXTERIOR WALLS
SEE ASSEMBLY 936.2.6.A-3 (b) ON ATT. DETAIL SHEET
CLADDING MTRL. AS PER ELEVATIONS
RAIN SCREEN W/ MIN. 10mm STRAPPING UNO.
BUILDING PAPER
2x RPT JOIST
5/8" THICK BATT INSULATION (R20)
6 MIL POLY V.B.
- 2 TYPICAL SLAB-ON-GRADE FLOOR
SEE ASSEMBLY 936.2.6.A-3 ON ATT. DETAIL SHEET
4" CONCRETE SLAB W/ IN-FLOOR HEAT
6 MIL POLY V.B.
25" TYPE 3 RIGID INSULATION (R20) UNDER ENTIRE SLAB
COMPACT GRANULAR FILL
- PROVIDE MIN. ER51 232 THERMAL BREAK FROM PERIM. OF SLAB TO EXTERIOR FOUND.
- 3 TYPICAL GARAGE FLOOR - SLAB-ON-GRADE
4" CONCRETE SLAB
COMPACT GRANULAR FILL
1 1/2" MIN. SLOPE TO ENTRY
- 10 TYPICAL STAIRS
15" TREAD
1 1/2" RISE
PROVIDE HANDRAIL @ 32-36" STAIRS
W/ 3 OR MORE RISERS
PROVIDE 6'-8" MIN. FINISHED HEADROOM

BUILDING SPEC'S

12961 56A AVENUE, SURREY B.C.

THESE PLANS CONFORM TO THE B.C. BUILDING CODE, 2018 ED. INCLUDING ALL REVISIONS

SECTIONS, BLDG. SPEC'S

THESE DRAWINGS SHOULD BE PRINTED ON 34"x34" PAPER TO BE AT SCALE INDICATED. ON REDUCED SIZE THEY WILL NOT BE TO SCALE.

APRIL 27, 2023
SCALE 1/4" = 1'-0"

SHEET 9 OF 13

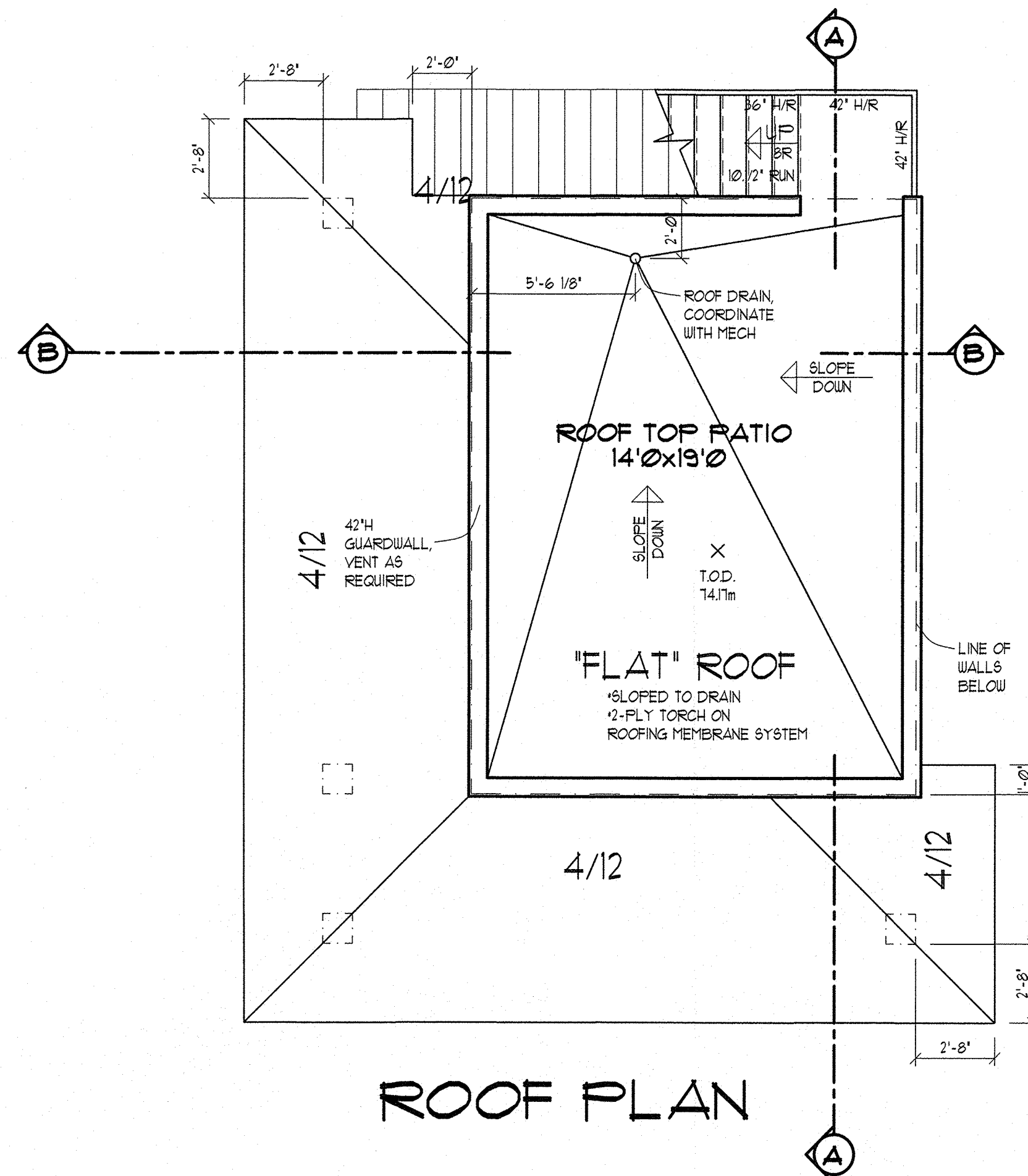
488 - 1959 - 152nd STREET
SOUTH SURREY B.C. V4A 9E3
PHONE: 604-535-3322 FAX: 1-866-454-4271
E-MAIL: info@raymondsonbonterdesigner.ca

DESIGN BY RAYMOND S. BONTER, DESIGNER LTD.

Simplex Consultants Ltd.
 #102 - 12725, 72nd Avenue, Surrey BC, V3W 2M7
 T. 604.597.3582 F. 604.597.3513

THESE PLANS CONFORM WITH THE REGISTERED BUILDING SCHEME IN THE LAND TITLE OFFICE.
 Project #: 7918-0308-00
 Date: APRIL 13, 2021
 Initials: _____ Signature: _____

EXTENT OF CONSULTANTS REVIEW: Plans are reviewed for conformance with the Registered Building Scheme. PLANS ARE NOT REVIEWED FOR: Conformance with the B.C. Building Code or Zoning Bylaws, Structural Integrity or the accuracy of Specifications EXCEPT with respect to the Registered Building Scheme.



ROOF PLAN

TYPICAL ROOF NOTES:
 - EAVE OVERHANGS ARE MEASURED TO THE OUTSIDE FACE OF THE 2x10 FASCIA BOARD
 - GUTTER EAVES ARE MEASURED TO THE OUTSIDE FACE OF THE FASCIA BOARD
 - EAVE HEIGHTS ARE MEASURED TO THE TOP OF THE 2x10 FASCIA BOARD
 - VENTILATE ATTIC SPACES 1:300 SF
 20.0625' TRUSS HEEL = 4/12 PITCH, 32" OHANG
TYPICAL EAVE HEIGHT
 - 10'10 1/4" ABOVE M.F. FLY.
TYPICAL EAVE OVERHANG
 - 32"
ROOF DECK PARAPET HEIGHT
 - 10'3 3/4" ABOVE M.F. FLY.

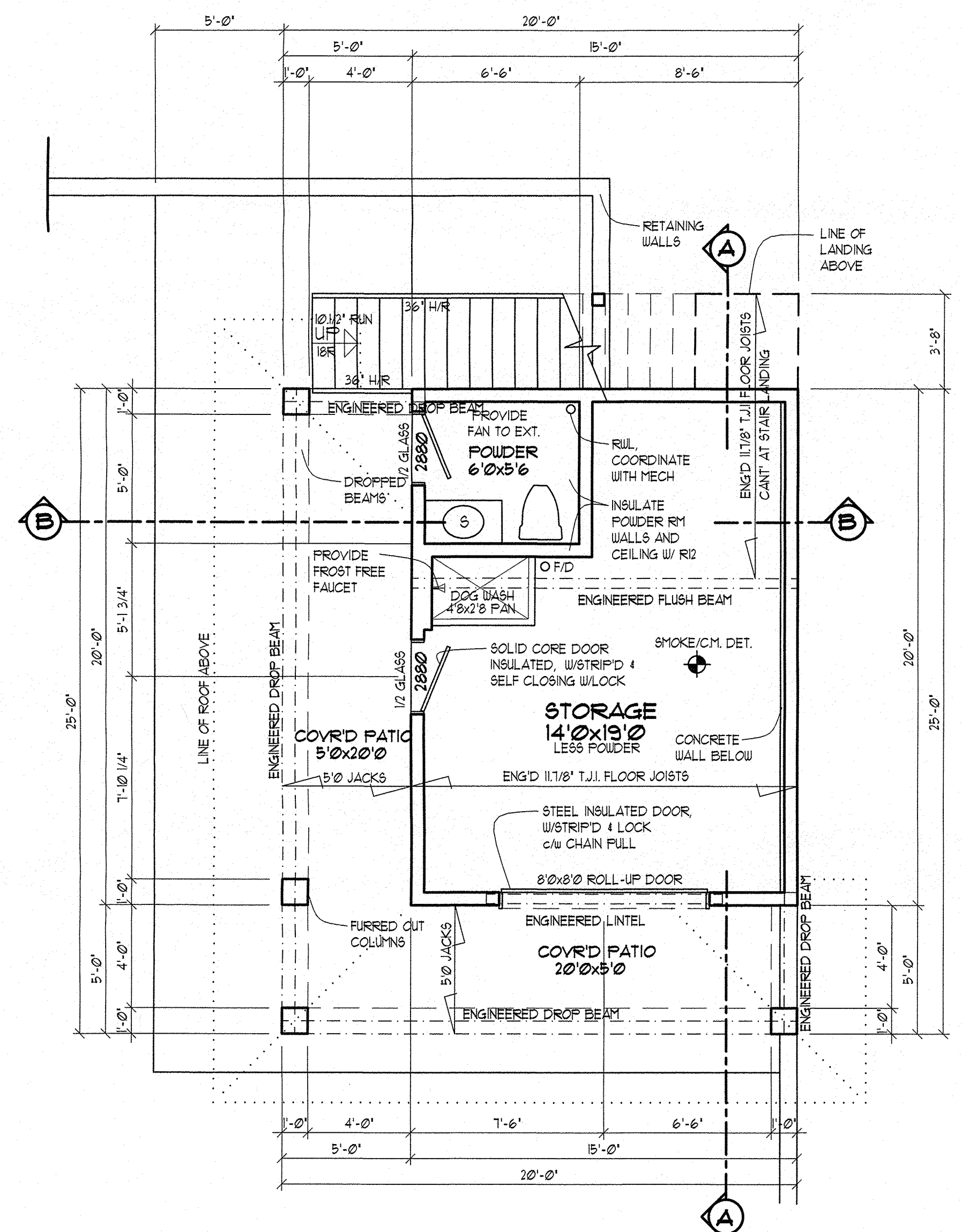
GENERAL PROJECT NOTES

- DIMENSIONS TO BE TAKEN FROM OUTSIDE FACE OF SHEATHING FOR EXT. WALLS AND CENTRE OR FACE OF STUDS FOR INT. WALLS AS SHOWN.
- ALL HEIGHT DIMENSIONS ON FLOOR PLANS ARE FROM TOP OF FLOOR PLYWOOD.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR OR BUILDER TO CHECK AND VERIFY ALL DIMENSIONS AND TO ENSURE ALL WORK CONFORMS TO ALL LOCAL BYLAWS AND REGULATIONS, AND TO THE CURRENT EDITION OF THE BRITISH COLUMBIA BUILDING CODE.
- THE OWNER AND/OR CONTRACTOR IS TO ENSURE THAT THE LANDSCAPING MEETS THE REQUIREMENTS OF THE APPLICABLE BY-LAWS AND REGULATIONS IN EFFECT AT THE TIME OF CONSTRUCTION. IF NECESSARY, UTILIZE PLANTING BEDS AROUND THE BUILDING(S), TO ENSURE THE FINISHED LOT GRADING BLENDS INTO THE EXISTING LOT GRADING.
- BRING FOOTINGS TO UNDISTURBED, SOUND BEARING SOIL BELOW FROSTLINE (18" MIN. BELOW GRADE).
- APPLY ASPHALT EMULSION TO FOUNDATION WALLS BELOW GRADE.
- FOUNDATION CONCRETE STRENGTH TO BE MIN. 20 MPa.
- INTERIOR SLAB CONCRETE STRENGTH TO BE MIN. 20 MPa.
- EXTERIOR SLAB CONCRETE STRENGTH TO BE MIN. 32 MPa WITH 3-8% AIR ENTRAINMENT.
- LUMBER IN CONTACT WITH CONCRETE TO BE DAMPROOFED, AND ANCHORED WITH 1/2" AB, # 6 @ 2' O.C. MAX.
- STRUCTURAL LUMBER TO BE 2 DFIR-L UNO.
- LINTELS TO BE 2x10 DFIR-L UNO.
- PROVIDE SOLID LAMINATED STUDGING @ BEARING POINTS.
- DOUBLE JOISTS @ PARALLEL PARTITIONS (OPT. 2x10 BLOCKING @ 24" O.C.).
- BEDROOM WINDOWS MUST CONFORM TO B.C.B.C. SEC. 9.113.
- DUELLING MUST MEET CURRENT B.C. VENTILATION CODE.
- MIRROR DOORS ARE NOT PERMITTED @ WALK-IN CLOSETS.
- LINO OR EQUAL REQ'D ON BATHROOM FLOORS.
- WATERPROOF WALLBOARD REQ'D AT TILE SURROUNDS @ TUBS AND SHOWERS.
- IN SURREY FOLDING PANEL DOORS MUST BE COVERED BY A ROOF OR FLOOR AND ENGINEER'S APPROVAL AND SCHEDULE 'B' REQUIRED.

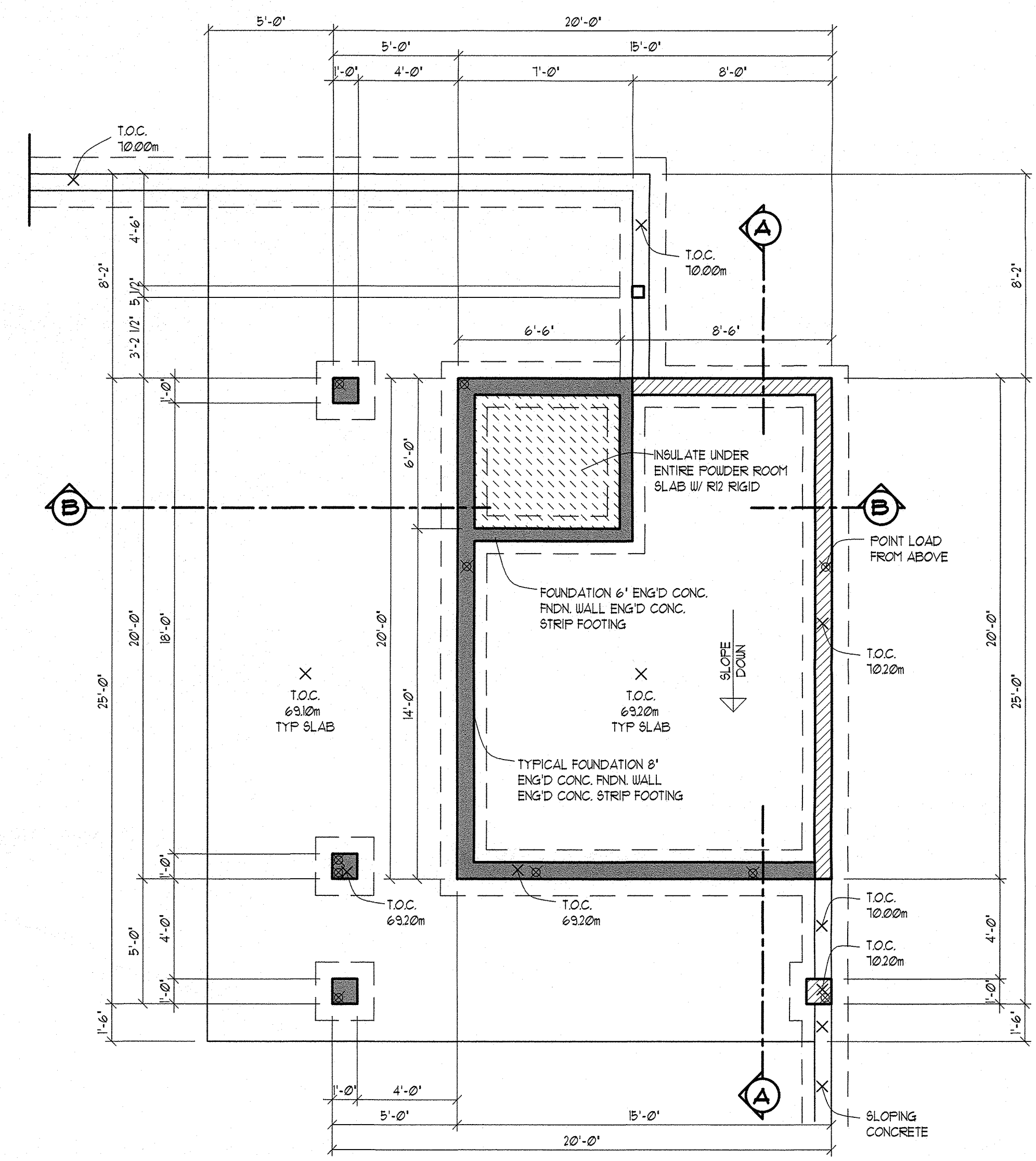
BOTTOM CHORDS OF TRUSSES AND GIRDERS TO ACCEPT RAISED CEILING DETAIL WHERE REQUIRED.

ALL EXTERIOR DOORS TO RECEIVE LEATHER STRIPPING AND SECURITY HARDWARE. DOOR GLAZING/SIDELIGHTS TO BE SAFETY GLASS.

STEPS, LANDINGS AND PLANTERS TO BE CAST-IN-PLACE CONCRETE OR ALLAN BLOCK WITH PAVING STONES.



MAIN FLOOR PLAN
300.00 SQ.FT.



FOUNDATION PLAN

THESE PLANS HAVE BEEN REVIEWED FOR SUBSTANTIAL COMPLIANCE WITH THE MINIMUM STANDARDS OF THE CURRENT EDITION OF THE BC BUILDING CODE, APPLICABLE DEVELOPMENT PERMIT(S) AND ALL RELEVANT SURREY BYLAWS. PLANS THAT EXCEED THE ABOVE NOTED MINIMUM STANDARDS WILL NOT BE CONSIDERED IN THE ISSUANCE OF THIS PERMIT. THE CITY OF SURREY DOES NOT GUARANTEE COMPLIANCE.
 DATE: NOV 27 2022 PLAN REVIEWER: [Signature]
 BUILDING: [Signature]

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12961 56A AVENUE, SURREY B.C.

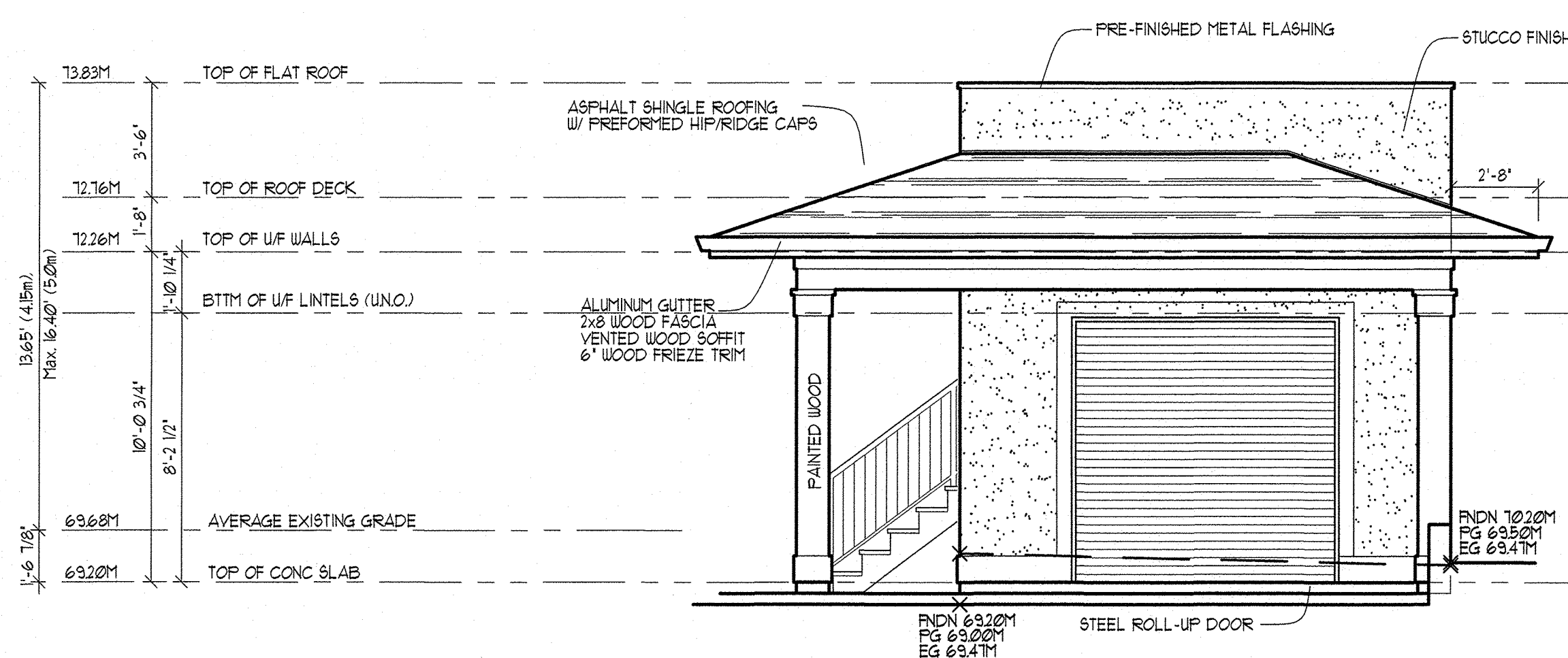
THESE PLANS CONFORM TO THE B.C. BUILDING CODE, 2018 ED. INCLUDING ALL REVISIONS

ACCY. BLDG. - PLANS

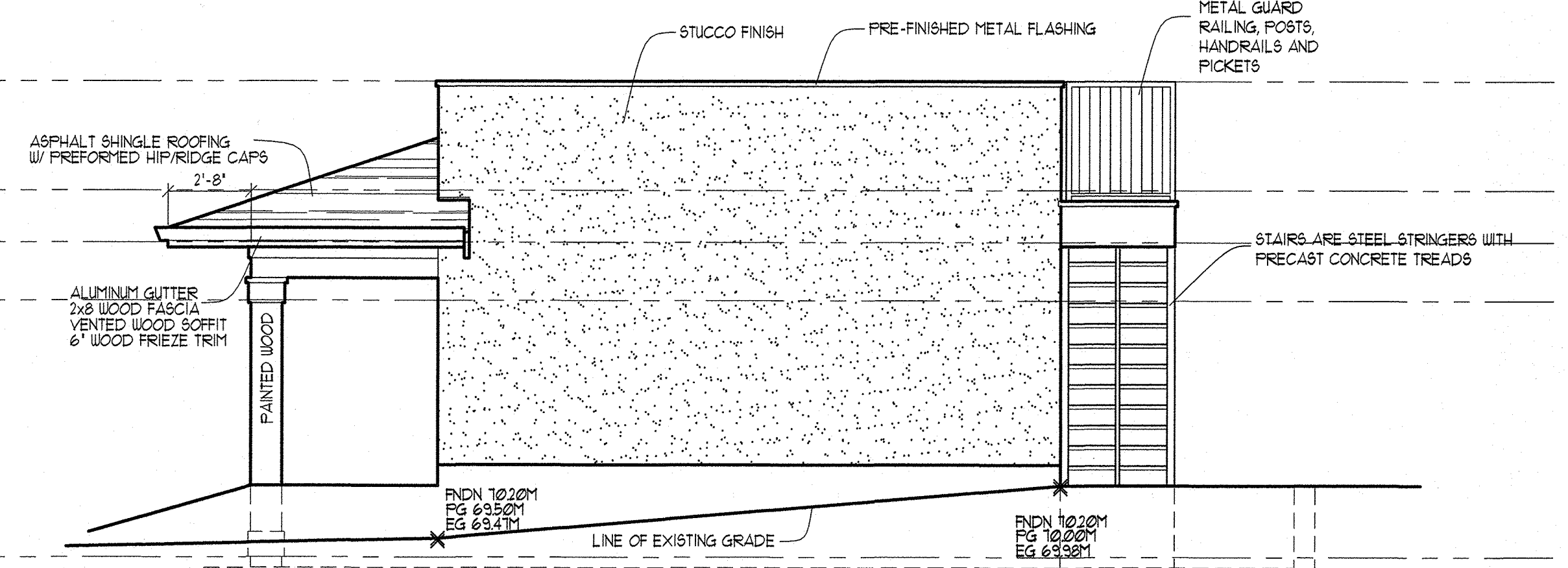
THESE DRAWINGS SHOULD BE PRINTED ON 34x34" PAPER TO BE AT SCALE INDICATED. ON REDUCED SIZE THEY WILL NOT BE TO SCALE. APRIL 07, 2021 SCALE 1/4" = 1'-0" SHEET 10 OF 13

DESIGN BY RAYMOND S. BONTER, DESIGNER LTD.

#88 - 1959 - 152nd STREET
 SOUTH SURREY, B.C. V4A 9E3
 PHONE: 604-535-3372 FAX: 1-866-454-4271
 E-MAIL: info@raymondbonterdesigner.ca

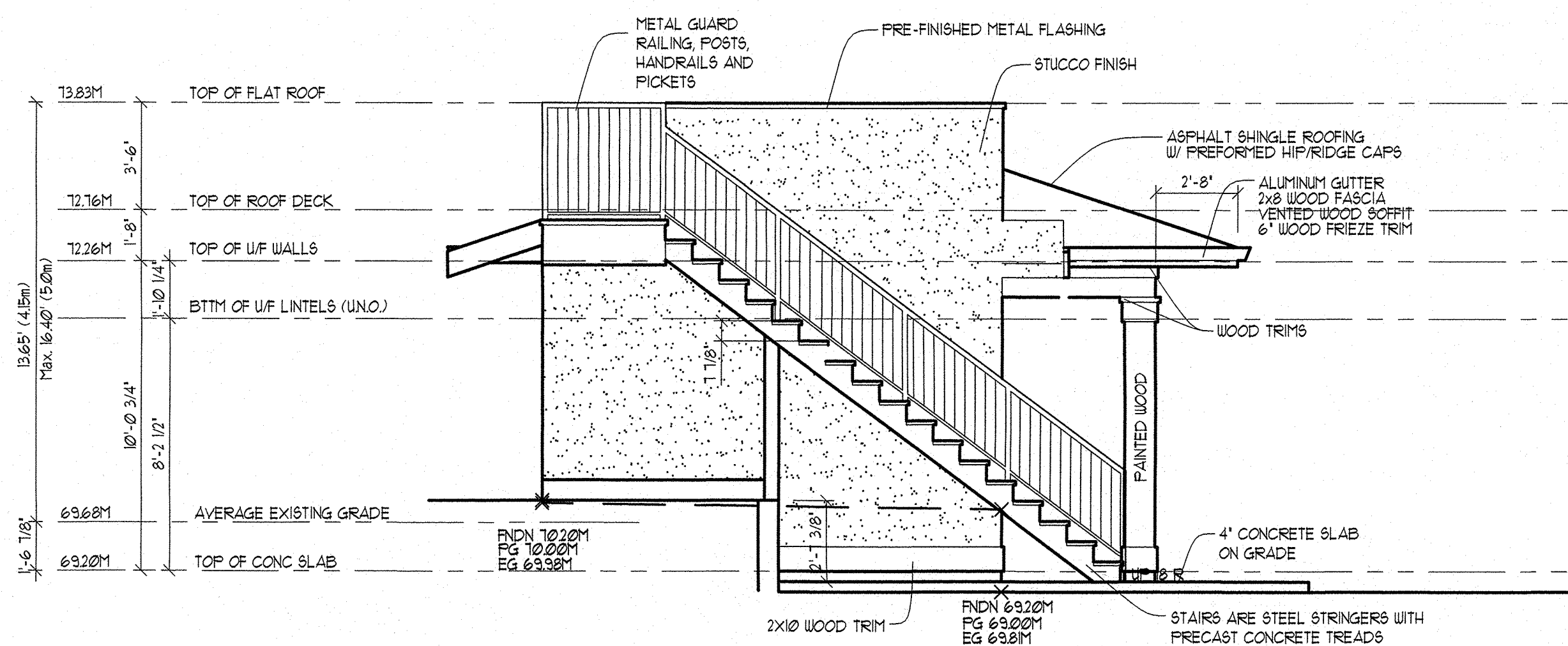


FRONT (SOUTH) ELEVATION

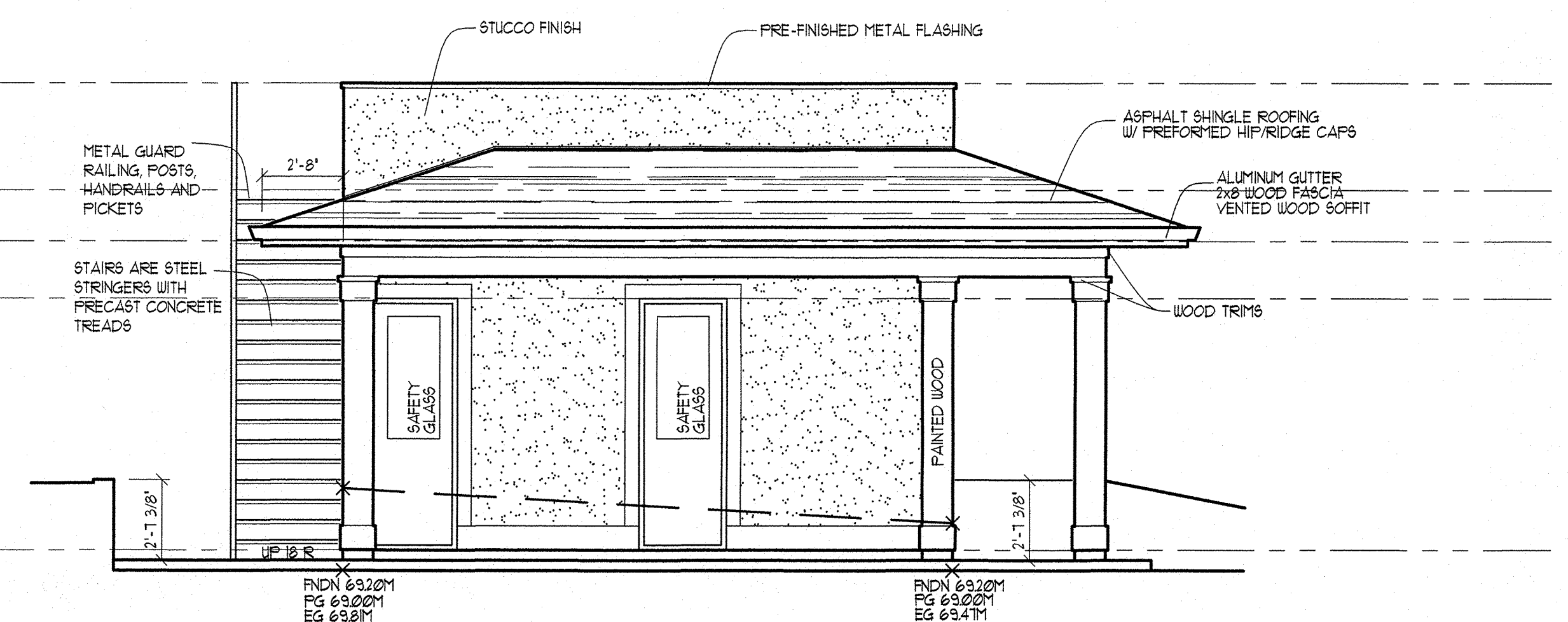


RIGHT (EAST) ELEVATION

ALL ASSEMBLIES, COLOURS, MATERIALS, FINISHES, ETC. TO MATCH PRINCIPAL DWELLING



REAR (NORTH) ELEVATION

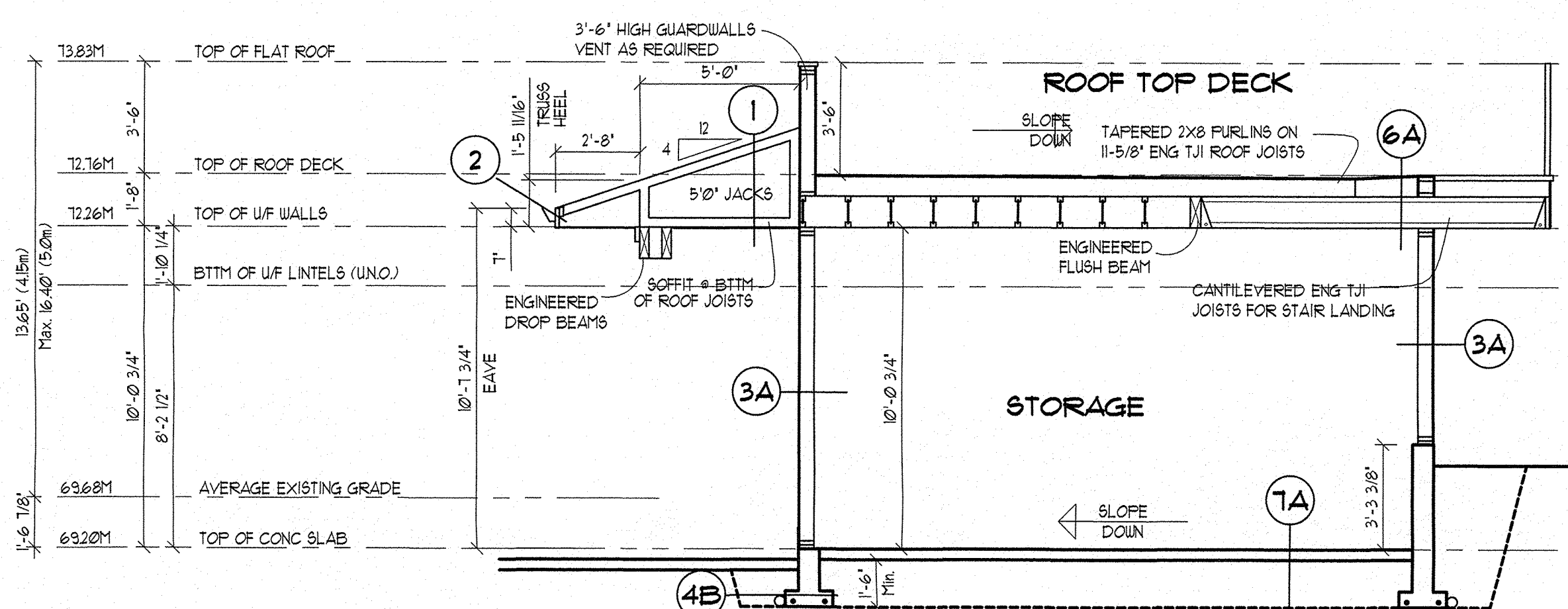


LEFT (WEST) ELEVATION

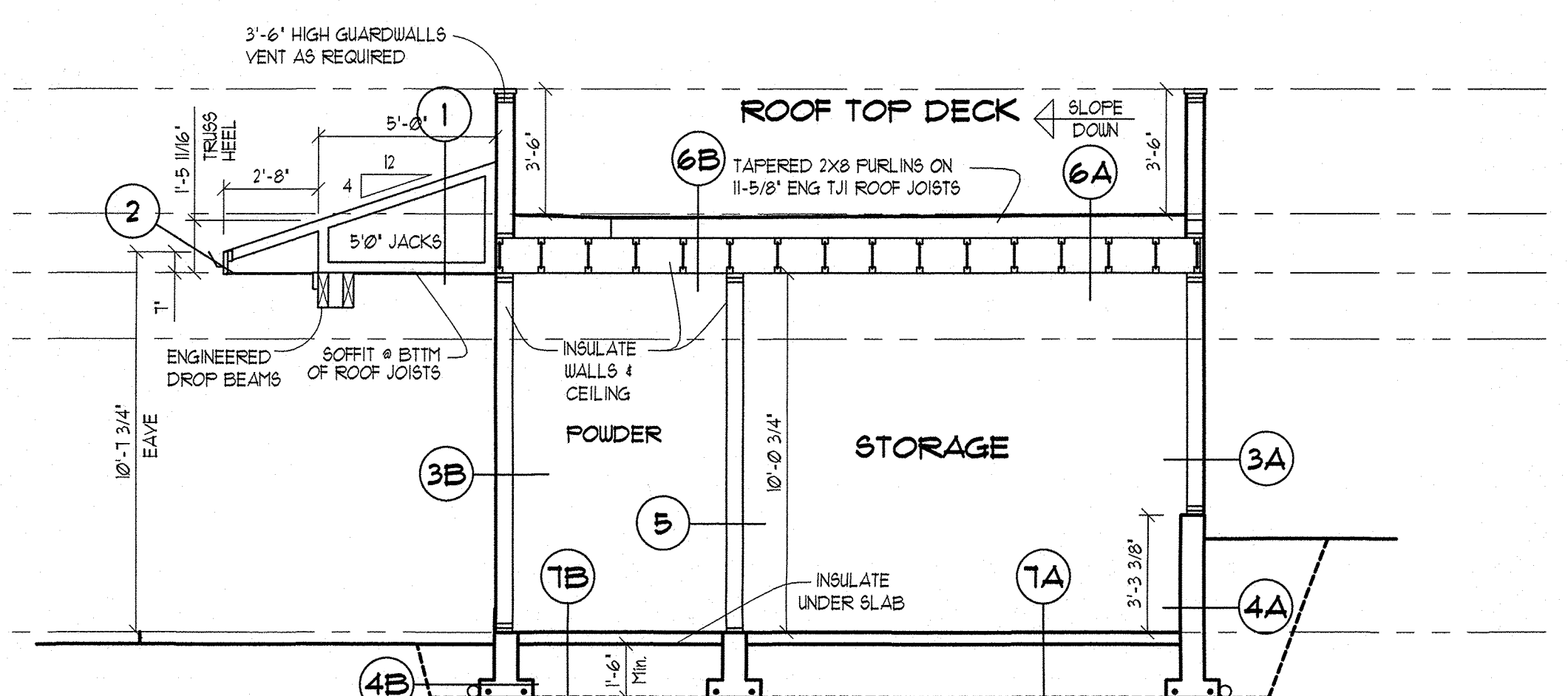
Simplex Consultants Ltd.
 #102 - 12725, 72nd Avenue, Surrey BC, V3W 2M7
 T. 604.597.3582 F. 604.597.3513

THESE PLANS CONFORM WITH THE REGISTERED BUILDING SCHEME IN THE LAND TITLE OFFICE.
 Project: 1918-0308-00 Lot No: 3
 Date: APRIL 13, 2021
 Initials: Signature: [Signature]

EXTENT OF CONSULTANTS REVIEW: Plans are reviewed for conformance with the Registered Building Scheme. PLANS ARE NOT REVIEWED FOR: Conformance with the B.C. Building Code or Zoning Bylaws, Structural Integrity or the accuracy of Specifications EXCEPT with respect to the Registered Building Scheme.



CROSS SECTION A



CROSS SECTION B

- | | | |
|---|--|--|
| <p>1 TYPICAL TRUSS ROOF</p> <p>ASPHALT SHINGLE ROOFING
 APPROVED ROOFING FELT
 1/2\"/> </p> | <p>3B TYPICAL EXTERIOR WALLS - INSULATED</p> <p>CLADDING MTRL. AS PER ELEVATIONS
 BUILDING PAPER
 1/2\"/> </p> | <p>6A TYPICAL WOOD FRAME FLOOR/ROOF</p> <p>2-PLY 988 TORCH ON MEMBRANE
 5/8\"/> </p> |
| <p>2 TYPICAL EAVE OVERHANG</p> <p>DECORATIVE METAL SURFACE GUTTERS
 2x8 WOOD FASCIA BOARDS
 PERFORATED SOFFIT FINISH
 2x6 FRIEZE BOARD</p> | <p>4A TYPICAL BASEMENT FOUND. WALL</p> <p>ASPHALT EMULSION
 8\"/> </p> | <p>6B TYPICAL WOOD FRAME FLOOR/ROOF - INSULATED</p> <p>2-PLY 988 TORCH ON MEMBRANE
 5/8\"/> </p> |
| <p>3A TYPICAL EXTERIOR WALLS</p> <p>CLADDING MTRL. AS PER ELEVATIONS
 BUILDING PAPER
 1/2\"/> </p> | <p>4B TYPICAL SLAB-ON-GRADE FOUND. WALL</p> <p>8\"/> </p> | <p>1A TYPICAL CONC FLOOR - SLAB-ON-GRADE</p> <p>4\"/> </p> |
| | <p>5 TYPICAL INTERIOR PARTITION WALLS</p> <p>GYPSON WALL BOARD BOTH SIDES
 2x6 @ 16\"/> </p> | <p>1B TYPICAL CONC FLOOR - SLAB-ON-GRADE - INSULATED</p> <p>4\"/> </p> |

ACCESSORY BUILDING SPEC'S

ATTENTION STRUCTURAL ENGINEER
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THESE PLANS CONFORM TO THE B.C. BUILDING CODE, 2018 ED. INCLUDING ALL REVISIONS

ACCY. BLDG. - ELEV6. & SECTIONS

THESE DRAWINGS SHOULD BE PRINTED ON 34x34\"/>

APRIL 02, 2021
 SCALE 1/4\"/>

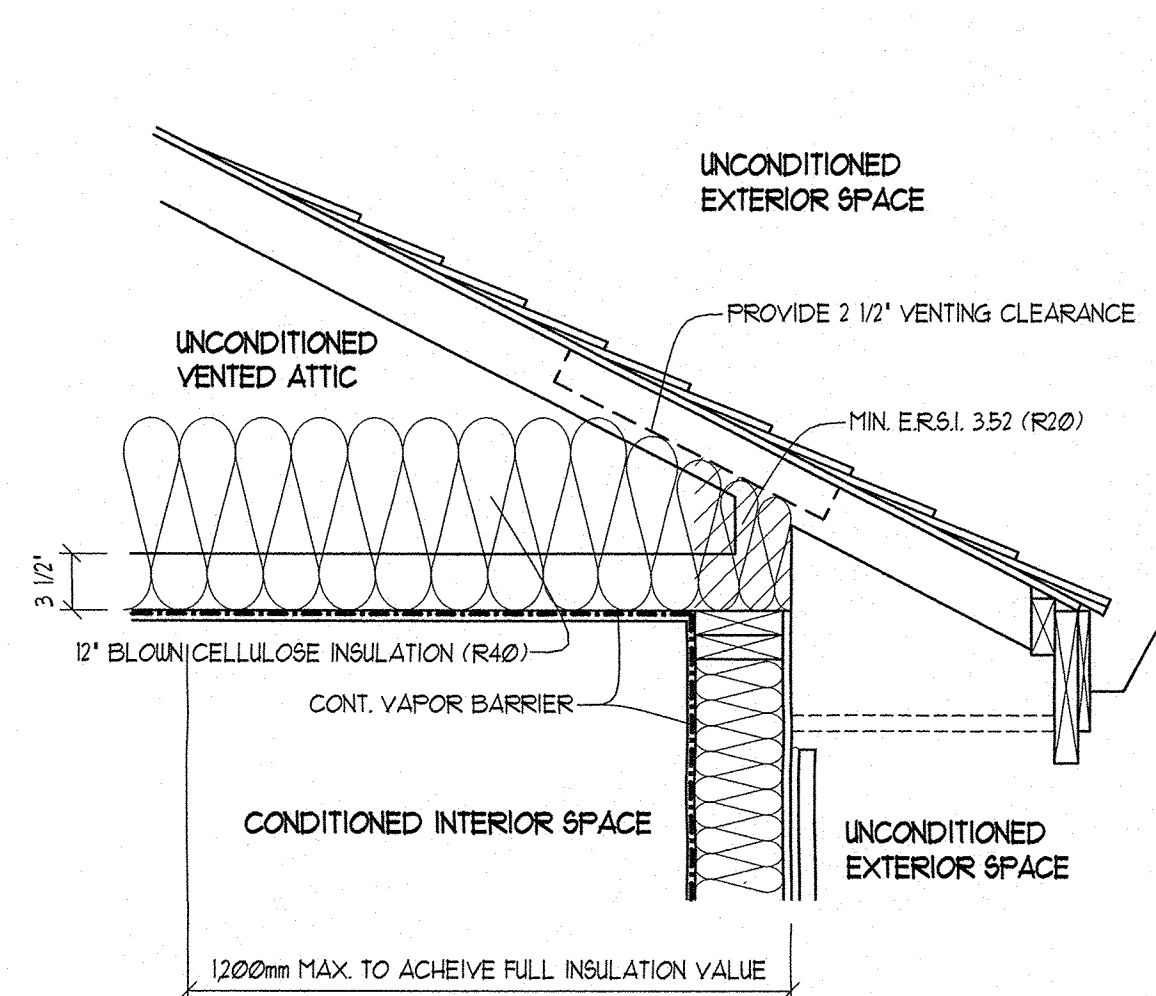
SHEET 11 OF 13

DESIGN BY RAYMOND S. BONTER, DESIGNER LTD.

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 E-MAIL: info@raymondbonterdesigner.ca

936.2.6.A - EFFECTIVE THERMAL RESISTANCE OF ABOVE-GROUND OPAQUE ASSEMBLIES IN BUILDINGS WITHOUT A HEAT-RECOVERY VENTILATOR - CLIMATE ZONE 4

DETAIL 936.2.6.A-1 - CEILINGS BELOW ATTICS



- A REDUCTION IN THE EFFECTIVE THERMAL RESISTANCE OF CEILING ASSEMBLIES IN ATTICS UNDER SLOPED ROOFS IS PERMITTED FOR A LENGTH NO GREATER THAN 1200 MM BUT ONLY TO THE EXTENT IMPOSED BY THE ROOF SLOPE AND MINIMUM VENTING CLEARANCE, PROVIDED THE NOMINAL THERMAL RESISTANCE OF THE INSULATION DIRECTLY ABOVE THE EXTERIOR WALL IS NOT LESS THAN ESR.I. 352 (R20).

ASSEMBLY 936.2.6.A-1 (a)
TYPICAL TRUSS ROOF W/ ATTIC
REQUIRED MIN. ESR.I. VALUE = 6.91

- ROOFING MATERIAL AS PER BUILDING SPECIFICATIONS
- 1/2" PLYWOOD SHEATHING, PROVIDE 1" CLIPS AT SEAMS, OR 1/4" STRAPPING WITH SOLID EAVE PROTECTION PER B.C.B.C.
- EXTERIOR AIR FILM (E.S.R.I. 0.03)
- PRE-FAB TRUSSES @ 24" O.C. W/ 12" BLOUN CELLULOSE INSULATION (R40) (E.S.R.I. 1.10)
- (SEE CALCULATION FOR PARALLEL MATERIALS)
- 6 MIL POLY V.B. (E.S.R.I. 0.02)
- 5/8" GYPSUM WALL BOARD (E.S.R.I. 0.10)
- INTERIOR AIR FILM (E.S.R.I. 0.11)

TOTAL EFFECTIVE R.S.I. VALUE = 134

CALCULATION FOR ESR.I. OF PARALLEL MATERIALS

35" WOOD TRUSS BTM (E.S.R.I. 0.0005/25mm=0.16)
CELLULOSE INSUL (E.S.R.I. 0.0015/m)
35" CELLULOSE INSUL (E.S.R.I. 0.0015/20mm=1.25)
6" POLY V.B. (E.S.R.I. 0.0005/25mm=0.02)

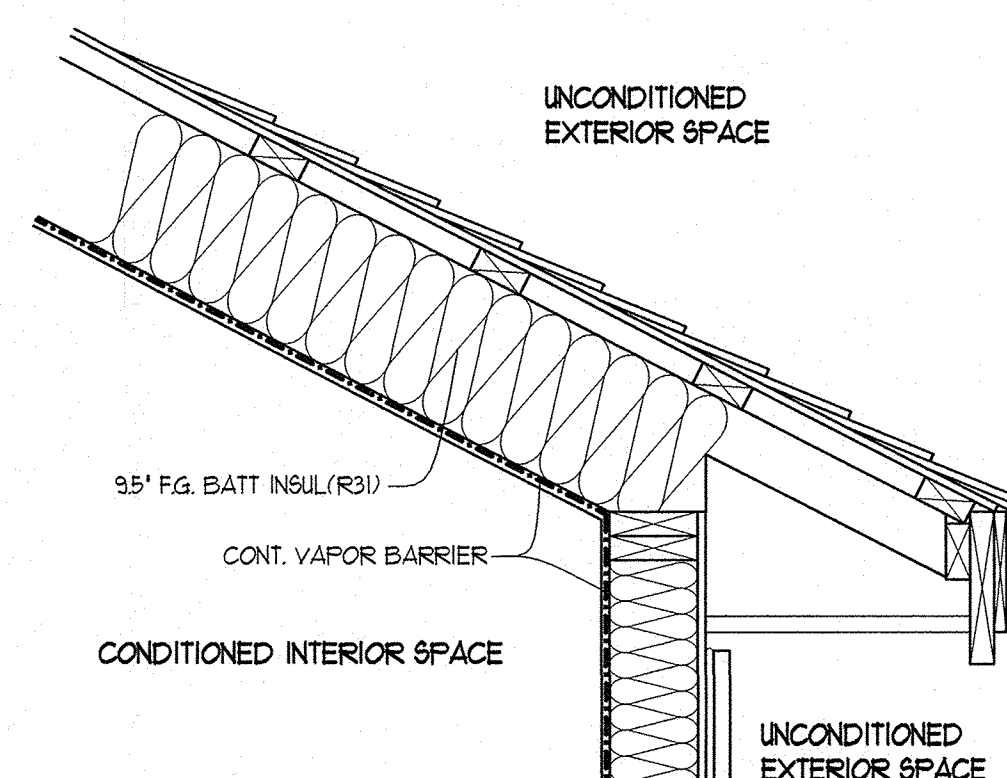
PART 1 - 35" TRUSS BTM W/ 35" CELLULOSE INSUL IN FRAMING AND 8% INSUL FOR 14" O.C.

1100/16/99725

PART 2 - 8" CELLULOSE INSUL (E.S.R.I. 5.25)

PART 1 + PART 2 + TOTAL ESR.I. = 6.91

DETAIL 936.2.6.A-2 - CATHEDRAL CEILINGS AND FLAT ROOFS



ASSEMBLY 936.2.6.A-2 (a)
TYPICAL 2x10 @ 16" RAFTER ROOF
REQUIRED MIN. ESR.I. VALUE = 4.61

- ROOFING MATERIAL AS PER BUILDING SPECIFICATIONS
- 1/2" PLYWOOD SHEATHING, PROVIDE 1" CLIPS AT SEAMS, OR 1/4" STRAPPING WITH SOLID EAVE PROTECTION PER B.C.B.C.
- 2x4 STRAPPING AT 24" O.C. W/ VENTED AIRSPACE
- EXTERIOR AIR FILM (E.S.R.I. 0.03)
- 2x10 @ 16" O.C. W/ 95% F.G. BATT INSUL (R31) (E.S.R.I. 4.46)
- (SEE CALCULATION FOR PARALLEL MATERIALS)
- 6 MIL POLY V.B. (E.S.R.I. 0.02)
- 5/8" GYPSUM WALL BOARD (E.S.R.I. 0.10)
- INTERIOR AIR FILM (E.S.R.I. 0.11)

TOTAL EFFECTIVE R.S.I. VALUE = 4.70

CALCULATION FOR ESR.I. OF PARALLEL MATERIALS

2x10 WOOD ESR.I. 0.0005/25mm=1.00
95% F.G. BATT INSUL (E.S.R.I. 24mm TH + 5.46
10% FRAMING AND 8% INSUL FOR 16" O.C.

100
(107.00/4.5075.46) = 4.61

ASSEMBLY 936.2.6.A-2 (b)
TYPICAL 2x10 @ 24" RAFTER ROOF
REQUIRED MIN. ESR.I. VALUE = 4.61

- ROOFING MATERIAL AS PER BUILDING SPECIFICATIONS
- 1/2" PLYWOOD SHEATHING, PROVIDE 1" CLIPS AT SEAMS, OR 1/4" STRAPPING WITH SOLID EAVE PROTECTION PER B.C.B.C.
- 2x4 STRAPPING AT 24" O.C. W/ VENTED AIRSPACE
- EXTERIOR AIR FILM (E.S.R.I. 0.03)
- 2x10 @ 24" O.C. W/ 95% F.G. BATT INSUL (R31) (E.S.R.I. 4.65)
- (SEE CALCULATION FOR PARALLEL MATERIALS)
- 6 MIL POLY V.B. (E.S.R.I. 0.02)
- 5/8" GYPSUM WALL BOARD (E.S.R.I. 0.10)
- INTERIOR AIR FILM (E.S.R.I. 0.11)

TOTAL EFFECTIVE R.S.I. VALUE = 4.89

CALCULATION FOR ESR.I. OF PARALLEL MATERIALS

2x10 WOOD ESR.I. 0.0005/25mm=1.00
95% F.G. BATT INSUL (E.S.R.I. 24mm TH + 5.46
10% FRAMING AND 8% INSUL FOR 24" O.C.

100
(107.00/4.5075.46) = 4.65

ASSEMBLY 936.2.6.A-2 (c)
TYPICAL 2x12 @ 16" RAFTER ROOF
REQUIRED MIN. ESR.I. VALUE = 4.61

- ROOFING MATERIAL AS PER BUILDING SPECIFICATIONS
- 1/2" PLYWOOD SHEATHING, PROVIDE 1" CLIPS AT SEAMS, OR 1/4" STRAPPING WITH SOLID EAVE PROTECTION PER B.C.B.C.
- 2x4 STRAPPING AT 24" O.C. W/ VENTED AIRSPACE
- EXTERIOR AIR FILM (E.S.R.I. 0.03)
- 2x12 @ 16" O.C. W/ 95% F.G. BATT INSUL (R31) (E.S.R.I. 4.81)
- (SEE CALCULATION FOR PARALLEL MATERIALS)
- 6 MIL POLY V.B. (E.S.R.I. 0.02)
- 5/8" GYPSUM WALL BOARD (E.S.R.I. 0.10)
- INTERIOR AIR FILM (E.S.R.I. 0.11)

TOTAL EFFECTIVE R.S.I. VALUE = 4.93

CALCULATION FOR ESR.I. OF PARALLEL MATERIALS

2x12 WOOD ESR.I. 0.0005/25mm=1.42
95% F.G. BATT INSUL (E.S.R.I. 24mm TH + 5.46
10% FRAMING AND 8% INSUL FOR 16" O.C.

100
(107.42/4.5075.46) = 4.69

ASSEMBLY 936.2.6.A-2 (d)
TYPICAL 2x12 @ 24" RAFTER ROOF
REQUIRED MIN. ESR.I. VALUE = 4.61

- ROOFING MATERIAL AS PER BUILDING SPECIFICATIONS
- 1/2" PLYWOOD SHEATHING, PROVIDE 1" CLIPS AT SEAMS, OR 1/4" STRAPPING WITH SOLID EAVE PROTECTION PER B.C.B.C.
- 2x4 STRAPPING AT 24" O.C. W/ VENTED AIRSPACE
- EXTERIOR AIR FILM (E.S.R.I. 0.03)
- 2x12 @ 24" O.C. W/ 95% F.G. BATT INSUL (R31) (E.S.R.I. 4.85)
- (SEE CALCULATION FOR PARALLEL MATERIALS)
- 6 MIL POLY V.B. (E.S.R.I. 0.02)
- 5/8" GYPSUM WALL BOARD (E.S.R.I. 0.10)
- INTERIOR AIR FILM (E.S.R.I. 0.11)

TOTAL EFFECTIVE R.S.I. VALUE = 5.09

CALCULATION FOR ESR.I. OF PARALLEL MATERIALS

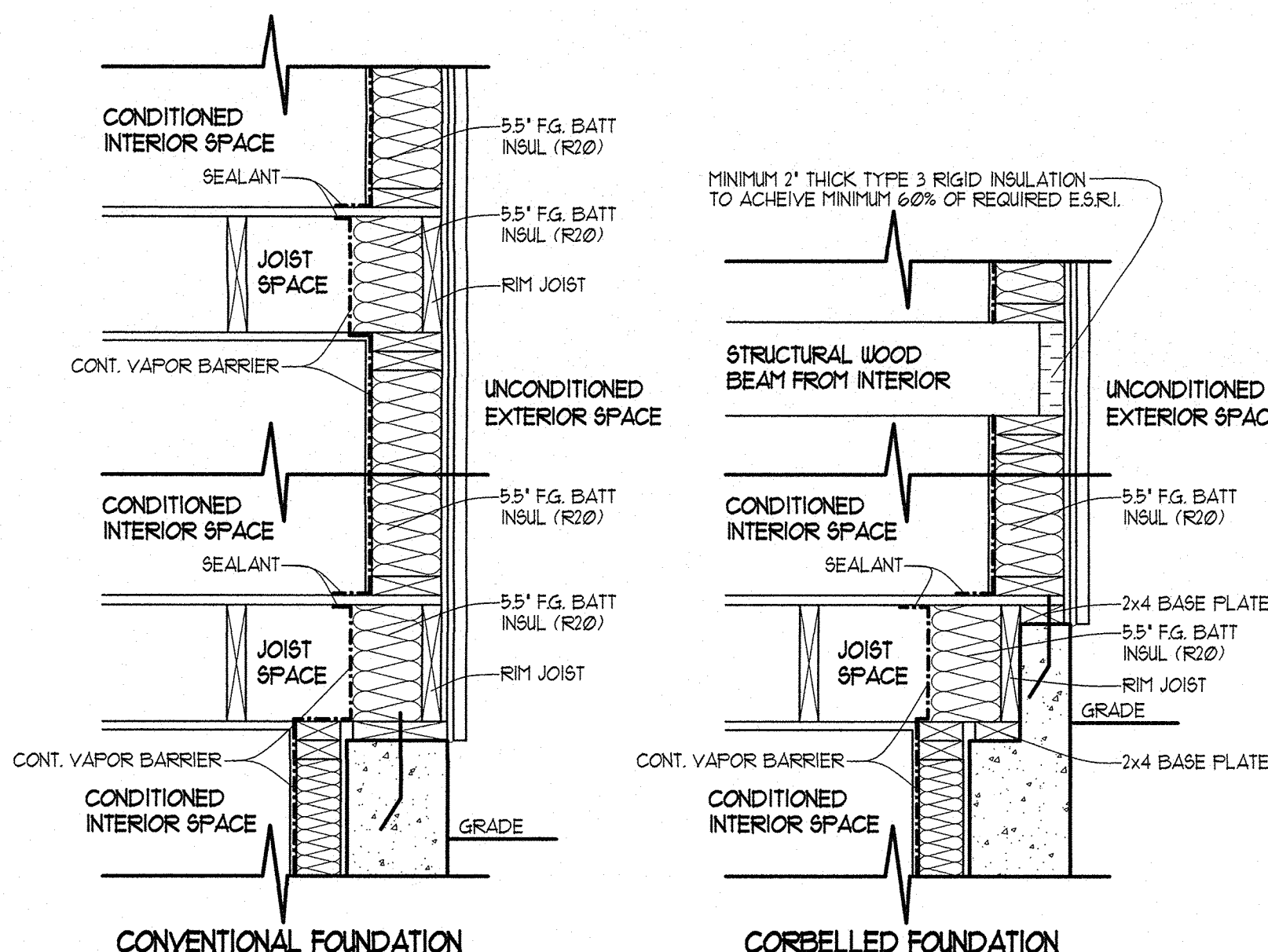
2x12 WOOD ESR.I. 0.0005/25mm=1.42
95% F.G. BATT INSUL (E.S.R.I. 24mm TH + 5.46
10% FRAMING AND 8% INSUL FOR 24" O.C.

100
(107.42/4.5075.46) = 4.69

SPECIAL NOTE:
TOTAL ESR.I. VALUES ARE THE SAME FOR FLAT ROOF ASSEMBLIES ALTHOUGH THE MATERIALS ABOVE THE COMPONENTS WITH ESR.I. VALUES MAY BE DIFFERENT (IE. ROOFING MATERIALS AND VENTING ASSEMBLIES). SEE BUILDING SPECIFICATIONS ON DESIGN DRAWINGS FOR SPECIFIC ASSEMBLY MATERIALS.

ALTHOUGH ESR.I. VALUES FOR TRUSS JOISTS ARE NOT PROVIDED IN THE CODE IT IS ASSUMED THAT 95% AND 118% T.J. JOISTS ON SIMILAR CENTERS MEET OR EXCEED THE VALUES LISTED FOR DIMENSIONAL LUMBER.

DETAIL 936.2.6.A-3 - EXTERIOR WALLS



ASSEMBLY 936.2.6.A-3 (a)
TYPICAL EXTERIOR WALLS
REQUIRED MIN. ESR.I. VALUE = 2.78

- EXTERIOR AIR FILM (E.S.R.I. 0.03)
- CLADDING MATERIAL AS PER BUILDING SPECIFICATIONS (E.S.R.I. VARIES)
- (SEE LIST OF TYPICAL CLADDING MATERIALS)
- RAIN SCREEN W/ MIN 10mm STRAPPING UNO. (E.S.R.I. 0.12)
- BUILDING PAPER (E.S.R.I. 0.01)
- 1/2" PLYWOOD SHEATHING (E.S.R.I. 0.11)
- 2x6 @ 16" O.C. W/ 5.5" F.G. BATT INSUL (R20) (E.S.R.I. 2.36)
- (SEE CALCULATION FOR PARALLEL MATERIALS)
- 6 MIL POLY V.B. (E.S.R.I. 0.02)
- 1/2" GYPSUM WALL BOARD (E.S.R.I. 0.08)
- INTERIOR AIR FILM (E.S.R.I. 0.12)

TOTAL EFFECTIVE R.S.I. VALUE = 2.82*

*TOTAL ESR.I. EXCEEDS REQUIREMENT WITHOUT CLADDING INCLUDED IN CALCULATION HOWEVER CLADDING MUST BE PROVIDED. SEE LIST OF TYPICAL CLADDING MATERIALS FOR ESR.I. VALUES.

CALCULATION FOR ESR.I. OF PARALLEL MATERIALS

2x6 WOOD ESR.I. 0.0005/40mm=1.19
R20 F.G. BATT INSUL (E.S.R.I. 140mm TH + 3.34
10% FRAMING AND 8% INSUL FOR 16" O.C.

100
(73.19/4.19334) = 2.36

THE EFFECTIVE THERMAL RESISTANCE OF RIM JOISTS SHALL BE NOT LESS THAN THAT REQUIRED FOR ABOVE-GROUND WALLS.

ASSEMBLY 936.2.6.A-3 (b)
TYPICAL JOIST SPACE AT EXTERIOR WALLS
REQUIRED MIN. ESR.I. VALUE = 2.78

- EXTERIOR AIR FILM (E.S.R.I. 0.03)
- CLADDING MATERIAL AS PER BUILDING SPECIFICATIONS (E.S.R.I. VARIES)
- (SEE LIST OF TYPICAL CLADDING MATERIALS)
- RAIN SCREEN W/ MIN 10mm STRAPPING UNO. (E.S.R.I. 0.12)
- BUILDING PAPER (E.S.R.I. 0.01)
- 15" THICK RIM JOIST (E.S.R.I. 0.33)
- 5.5" THICK BATT INSULATION (R20) (E.S.R.I. 3.36)
- 6 MIL POLY V.B. (E.S.R.I. 0.02)
- INTERIOR AIR FILM (E.S.R.I. 0.12)

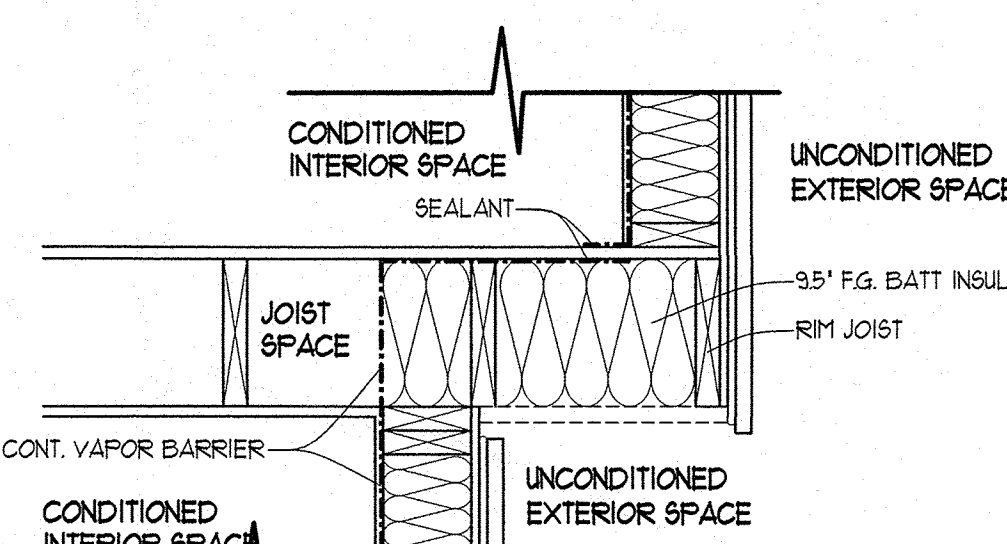
TOTAL EFFECTIVE R.S.I. VALUE = 3.95*

*TOTAL ESR.I. EXCEEDS REQUIREMENT WITHOUT CLADDING INCLUDED IN CALCULATION HOWEVER CLADDING MUST BE PROVIDED. SEE LIST OF TYPICAL CLADDING MATERIALS FOR ESR.I. VALUES.

TYP. CLADDING MATERIALS AND ASSOCIATED ESR.I. VALUES

- 1/2" HOLLOW BACKED VINYL SIDING - E.S.R.I. 0.11
- SOME PROFILES MAY NOT REQUIRE RAINSCREEN HOWEVER MINIMUM TOTAL ESR.I. WILL BE MET WITH SIDING ONLY
- 6.35mm FIBER CEMENT SIDING - E.S.R.I. 0.023
- WOOD SHINGLES WITH 190mm EXPOSURE - E.S.R.I. 0.15
- 25mm THICK STUCCO - E.S.R.I. 0.011
- 50mm THICK STONE - E.S.R.I. 0.011
- 100mm THICK BRICK - E.S.R.I. 0.01

DETAIL 936.2.6.A-4 - FLOORS OVER UNHEATED SPACES



ASSEMBLY 936.2.6.A-4 (a)
TYPICAL 2x10 @ 16" FLOOR OVER UNHEATED SPACE
REQUIRED MIN. ESR.I. VALUE = 4.61 OVER EXTERIOR
REQUIRED MIN. ESR.I. VALUE = 4.51 OVER GARAGE

- INTERIOR AIR FILM (E.S.R.I. 0.16)
- FINISH FLOORING (SEE LIST OF TYPICAL FLOORING MATERIALS)
- 3/4" TAG PLY. SHEATHING (GLUED & NAILED) (E.S.R.I. 0.16)
- 6 MIL POLY V.B. (E.S.R.I. 0.02)
- 2x10 @ 16" O.C. W/ 95% F.G. BATT INSUL (R31) (E.S.R.I. 4.46)
- (SEE CALCULATION FOR PARALLEL MATERIALS)
- EXTERIOR AIR FILM (E.S.R.I. 0.03)
- PERFORATED SOFFIT FINISH OR 5/8" GYPSUM WALL BOARD (SOFFIT FINISH FOR EXT. OR G.W.B. FOR GARAGE)

TOTAL EFFECTIVE R.S.I. VALUE = 4.81*

*TOTAL ESR.I. EXCEEDS REQUIREMENT WITHOUT FLOORING INCLUDED IN CALCULATION. SEE LIST OF TYPICAL FLOORING MATERIALS FOR ESR.I. VALUES.

CALCULATION FOR ESR.I. OF PARALLEL MATERIALS

2x10 WOOD ESR.I. 0.0005/25mm=1.00
95% F.G. BATT INSUL (E.S.R.I. 24mm TH + 5.46
10% FRAMING AND 8% INSUL FOR 16" O.C.

100
(107.00/4.5075.46) = 4.61

ASSEMBLY 936.2.6.A-4 (b)
TYPICAL 2x12 @ 16" FLOOR OVER UNHEATED SPACE
REQUIRED MIN. ESR.I. VALUE = 4.61 OVER EXTERIOR
REQUIRED MIN. ESR.I. VALUE = 4.51 OVER GARAGE

- INTERIOR AIR FILM (E.S.R.I. 0.16)
- FINISH FLOORING (SEE LIST OF TYPICAL FLOORING MATERIALS)
- 3/4" TAG PLY. SHEATHING (GLUED & NAILED) (E.S.R.I. 0.16)
- 6 MIL POLY V.B. (E.S.R.I. 0.02)
- 2x12 @ 16" O.C. W/ 95% F.G. BATT INSUL (R31) (E.S.R.I. 4.81)
- (SEE CALCULATION FOR PARALLEL MATERIALS)
- EXTERIOR AIR FILM (E.S.R.I. 0.03)
- PERFORATED SOFFIT FINISH OR 5/8" GYPSUM WALL BOARD (SOFFIT FINISH FOR EXT. OR G.W.B. FOR GARAGE)

TOTAL EFFECTIVE R.S.I. VALUE = 5.04*

*TOTAL ESR.I. EXCEEDS REQUIREMENT WITHOUT FLOORING INCLUDED IN CALCULATION. SEE LIST OF TYPICAL FLOORING MATERIALS FOR ESR.I. VALUES.

CALCULATION FOR ESR.I. OF PARALLEL MATERIALS

2x12 WOOD ESR.I. 0.0005/25mm=1.42
95% F.G. BATT INSUL (E.S.R.I. 24mm TH + 5.46
10% FRAMING AND 8% INSUL FOR 16" O.C.

100
(107.42/4.5075.46) = 4.69

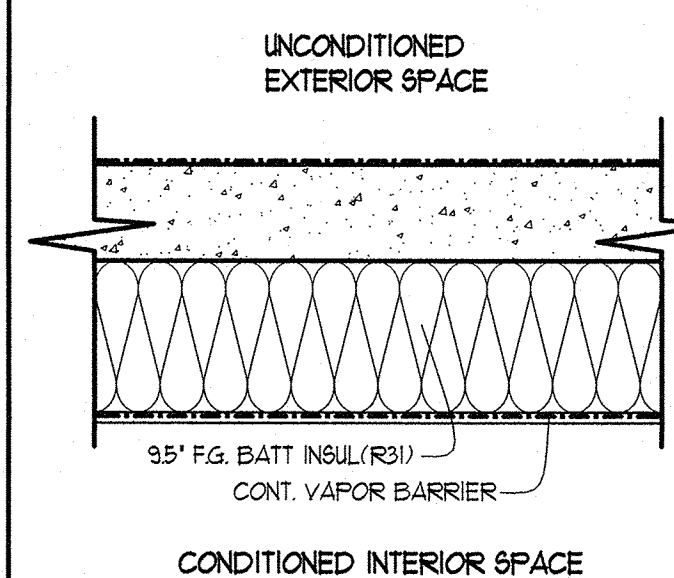
TYP. FLOORING MATERIALS AND ASSOCIATED ESR.I. VALUES

- CERAMIC TILE ON 3/8" LOW DENSITY PARTICLE BOARD - E.S.R.I. 0.10
- VINYL OR LINOLEUM TILE ON 3/8" LOW DENSITY PARTICLE BOARD - E.S.R.I. 0.10
- CARPET AND RUBBER PAD - E.S.R.I. 0.22
- 19mm HARDWOOD FLOORING - E.S.R.I. 0.12

ALTHOUGH ESR.I. VALUES FOR TRUSS JOISTS ARE NOT PROVIDED IN THE CODE IT IS ASSUMED THAT 95% AND 118% T.J. JOISTS ON SIMILAR CENTERS MEET OR EXCEED THE VALUES LISTED FOR DIMENSIONAL LUMBER.

IT IS ASSUMED THAT HEATED CONCRETE TOPPING ADDED TO THE TOP OF THE FLOOR SHEATHING WOULD ONLY INCREASE THE TOTAL ESR.I. VALUE OF THE ASSEMBLY AND IS NOT REQUIRED TO BE CALCULATED TO SHOW CONFORMITY WITH THE MINIMUM REQUIRED VALUES.

DETAIL 936.2.6.A-5 - SUSPENDED SLAB ROOF



ASSEMBLY 936.2.6.A-5 (a)
SUSPENDED SLAB CEILING WITH 6" ESR.I. REQUIREMENTS AS CATHEDRAL CEILINGS
REQUIRED MIN. ESR.I. VALUE = 4.61

- EXTERIOR AIR FILM (E.S.R.I. 0.03)
- WATERPROOF EXPOXY COATING (E.S.R.I. 0.02)
- 8" ENG'D CONC. SUSPENDED SLAB (E.S.R.I. 0.02)
- 2x10 @ 16" O.C. W/ 95% F.G. BATT INSUL (R31) (E.S.R.I. 4.46)
- (SEE CALCULATION FOR PARALLEL MATERIALS)
- 6 MIL POLY V.B. (E.S.R.I. 0.02)
- 5/8" GYPSUM WALL BOARD (E.S.R.I. 0.10)
- INTERIOR AIR FILM (E.S.R.I. 0.11)

TOTAL EFFECTIVE R.S.I. VALUE = 4.70

CALCULATION FOR ESR.I. OF PARALLEL MATERIALS

2x10 WOOD ESR.I. 0.0005/25mm=1.00
95% F.G. BATT INSUL (E.S.R.I. 24mm TH + 5.46
10% FRAMING AND 8% INSUL FOR 16" O.C.

100
(107.00/4.5075.46) = 4.61

ASSEMBLY 936.2.6.A-3 (c)
TYPICAL WALL BETWEEN GARAGE AND DWELLING
REQUIRED MIN. ESR.I. VALUE = 2.62

- EXTERIOR AIR FILM (E.S.R.I. 0.03)
- 5/8" GYPSUM WALL BOARD (E.S.R.I. 0.10)
- 2x6 @ 16" O.C. W/ 5.5" (R20) F.G. BATT INSUL (E.S.R.I. 2.36)
- (SEE CALCULATION FOR PARALLEL MATERIALS)
- 6 MIL POLY V.B. (E.S.R.I. 0.02)
- 1/2" GYPSUM WALL BOARD (E.S.R.I. 0.08)
- INTERIOR AIR FILM (E.S.R.I. 0.12)

TOTAL EFFECTIVE R.S.I. VALUE = 2.69

CALCULATION FOR ESR.I. OF PARALLEL MATERIALS

2x6 WOOD ESR.I. 0.0005/40mm=1.19
R20 F.G. BATT INSUL (E.S.R.I. 140mm TH + 3.34
10% FRAMING AND 8% INSUL FOR 16" O.C.

100
(73.19/4.19334) = 2.36

ASSEMBLY 936.2.6.A-3 (d)
TYPICAL WALL BETWEEN SKYLIGHT SHAFT AND ATTIC
REQUIRED MIN. ESR.I. VALUE = 2.78

- EXTERIOR AIR FILM (E.S.R.I. 0.03)
- 1/2" INSULATING FIBERBOARD (E.S.R.I. 0.19)
- 2x6 @ 16" O.C. W/ 5.5" (R20) F.G. BATT INSUL (E.S.R.I. 2.36)
- (SEE CALCULATION FOR PARALLEL MATERIALS)
- 6 MIL POLY V.B. (E.S.R.I. 0.02)
- 1/2" GYPSUM WALL BOARD (E.S.R.I. 0.08)
- INTERIOR AIR FILM (E.S.R.I. 0.12)

TOTAL EFFECTIVE R.S.I. VALUE = 2.78

CALCULATION FOR ESR.I. OF PARALLEL MATERIALS

2x6 WOOD ESR.I. 0.0005/40mm=1.19
R20 F.G. BATT INSUL (E.S.R.I. 140mm TH + 3.34
10% FRAMING AND 8% INSUL FOR 16" O.C.

100
(73.19/4.19334) = 2.36

TYPICAL NOTES:

- VENTILATION AND DUCTING MUST BE PROVIDED AS PER B.C.B.C. 2010 SECTION 9.32
- AN AIR BARRIER MUST BE INSTALLED AS PER B.C.B.C. 2010 SECTION 9.36
- THE AIR BARRIER SYSTEM MUST COMPLY WITH SECTIONS 9.36.2.3 AND 9.36.2.10
- AND MUST SPECIFICALLY BE CONSTRUCTED USING METHODS OUTLINED IN SUBSECTION 9.36.2.10 (b) AND 9.36.2.10 (1)
- ALL INSULATION TO BE INSTALLED AS PER B.C.B.C. 2010 SECTION 9.36
- ALL GARAGE DOORS: MINIMUM NOMINAL R.S.I. VALUE OF 1
- ALL ACCESS HATCHES TO UNCONDITIONED SPACES: MAXIMUM U VALUE OF 2.6
- THE MINIMUM LEVEL OF PERFORMANCE REQUIRED FOR WINDOWS, DOORS AND SKYLIGHTS SHALL BE THAT OF THE PERFORMANCE CLASS R
- ALL WINDOWS AND DOORS: MAX U VALUE OF 1.8 EXCEPT FOR ENTRY UNIT
- ALL SKYLIGHTS: MAXIMUM U VALUE OF 2.9

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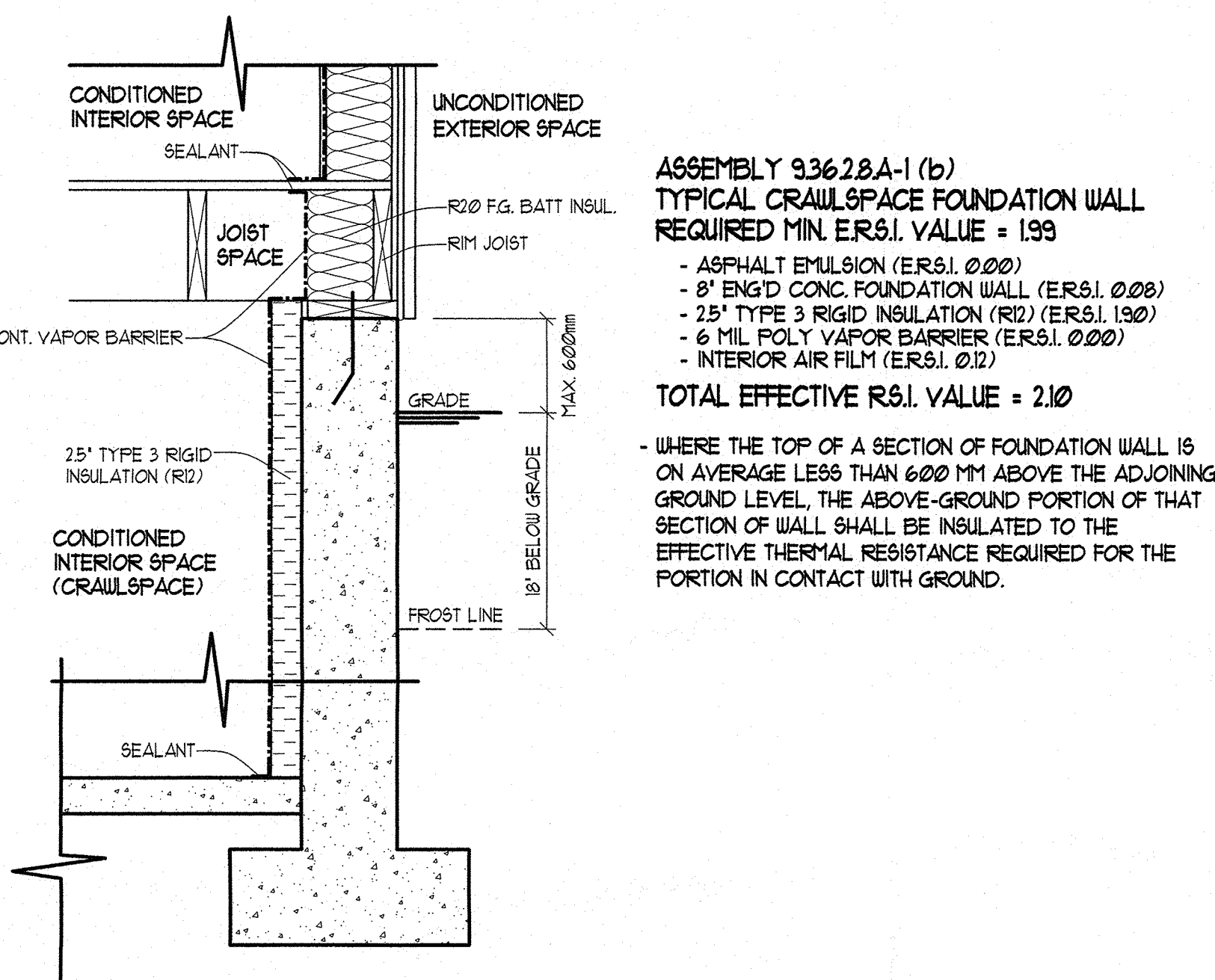
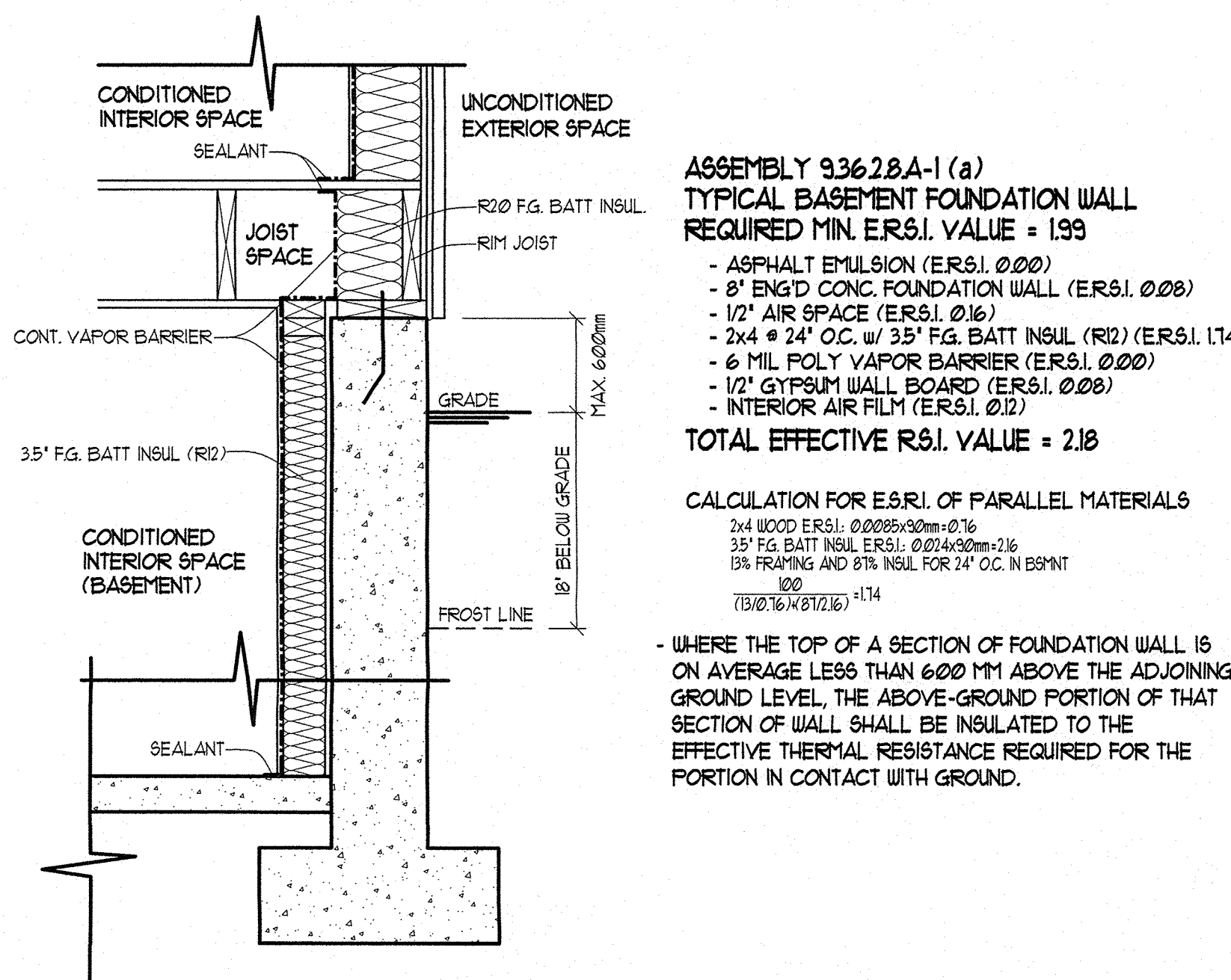
DECEMBER 31, 2015
SCALE 1" = 1'-0"

SHEET 12 OF 13

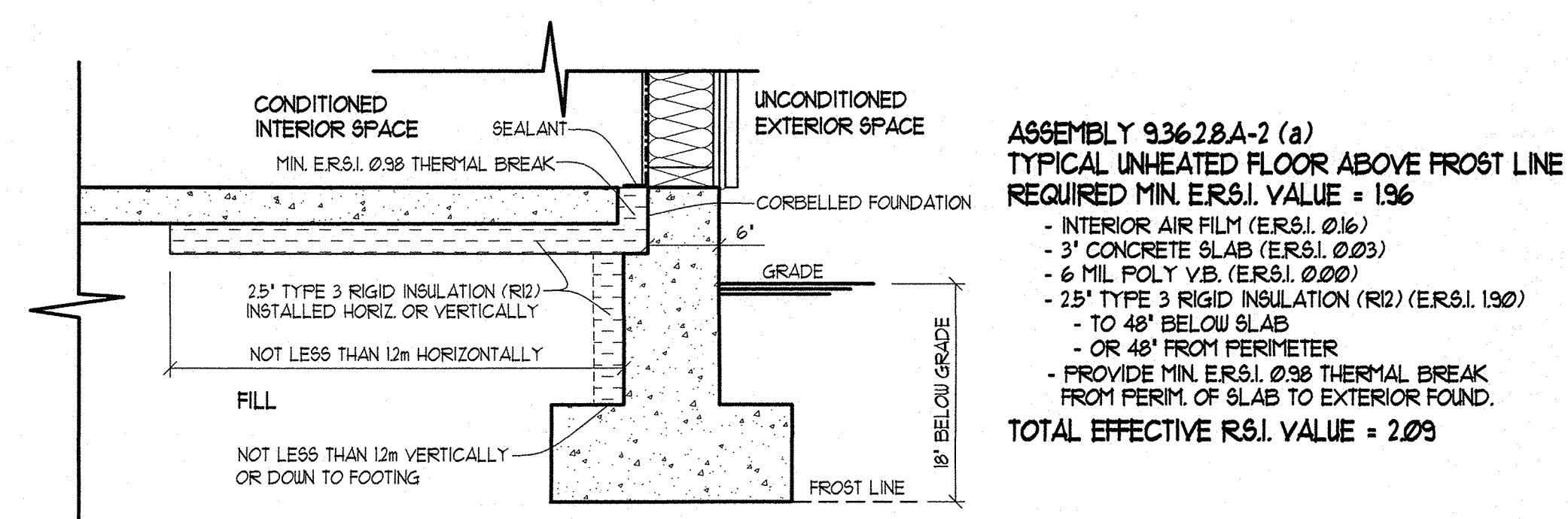
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936.2.8.A - EFFECTIVE THERMAL RESISTANCE OF ASSEMBLIES BELOW-GRADE OR IN CONTACT WITH THE GROUND IN BUILDINGS WITHOUT A HEAT-RECOVERY VENTILATOR - CLIMATE ZONE 4

DETAIL 936.2.8.A-1 - FOUNDATION WALLS



DETAIL 936.2.8.A-2 - UNHEATED FLOOR ABOVE FROST LINE



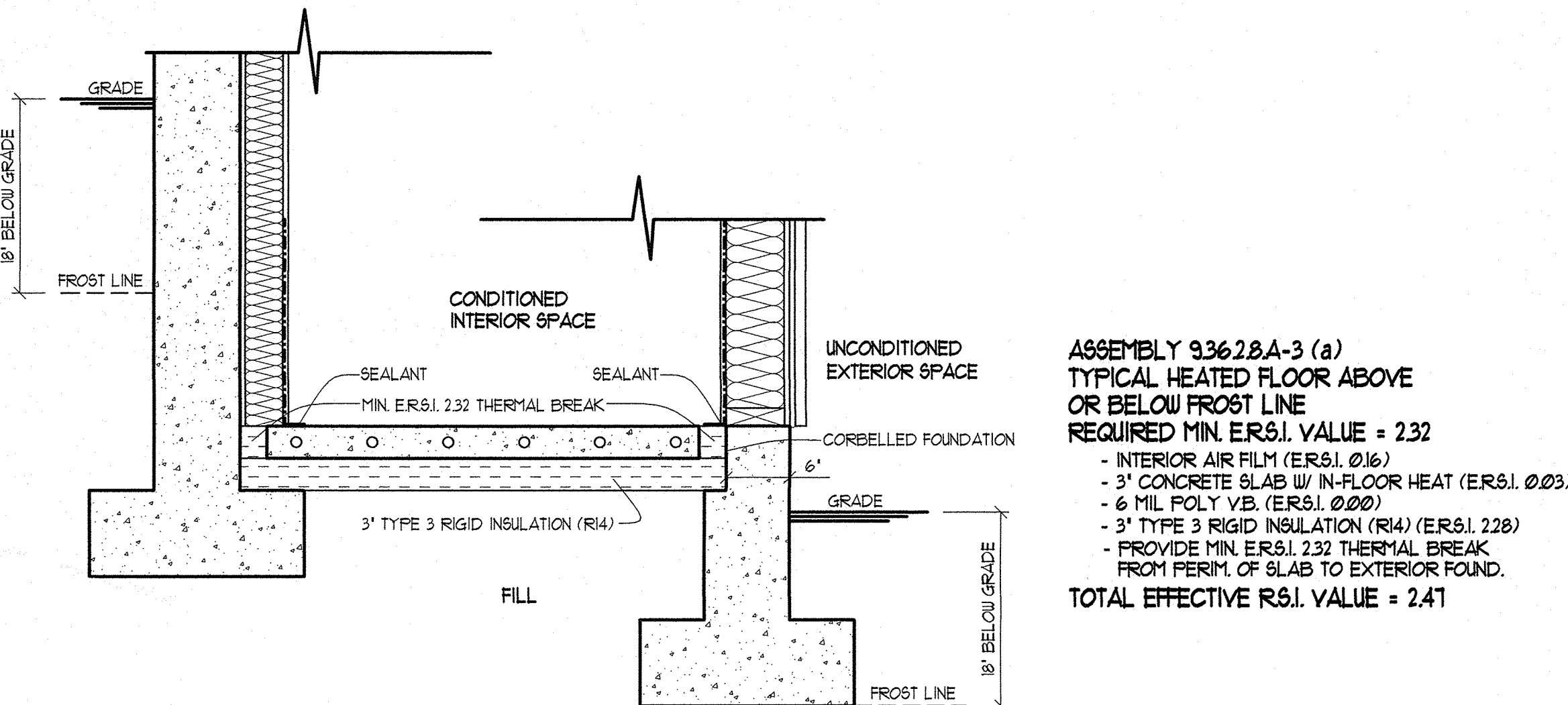
- UNHEATED FLOORS-ON-GROUND THAT ARE ABOVE THE FROST LINE AND HAVE NO EMBEDDED HEATING PIPES, CABLES OR DUCTS SHALL BE INSULATED TO THE EFFECTIVE THERMAL RESISTANCE REQUIRED
- A) ON THE EXTERIOR OF THE FOUNDATION WALL DOWN TO THE FOOTING, AND
- B) ON THE INTERIOR OF THE FOUNDATION WALL AND, AS APPLICABLE:
- I) BENEATH THE SLAB FOR A DISTANCE NOT LESS THAN 12 M HORIZONTALLY OR VERTICALLY DOWN FROM ITS PERIMETER WITH A THERMAL BREAK ALONG THE EDGE OF THE SLAB THAT MEETS AT LEAST 50% OF THE REQUIRED THERMAL RESISTANCE,
- II) ON TOP OF THE SLAB FOR A DISTANCE NOT LESS THAN 12 M HORIZONTALLY FROM ITS PERIMETER, OR
- III) WITHIN THE WOODEN SLEEPERS BELOW THE FLOOR FOR A DISTANCE NOT LESS THAN 12 M HORIZONTALLY FROM ITS PERIMETER.

SPECIAL NOTE: UNHEATED FLOORS BELOW FROST LINE (BASEMENT OR CRAWLSPACE SLAB) DO NOT REQUIRE INSULATION.

EXCERPT FROM B.C. BUILDING CODE 2018 SECTION 936

- 936.21. Scope and Application**
- 1) Except as provided in Sentence (2), this Subsection is concerned with the loss of energy due to heat transfer and air leakage through materials, components and assemblies, including their interfaces, forming part of the building envelope where it separates conditioned spaces from unconditioned spaces or the exterior air or the ground.
- 2) The requirements of this Subsection also apply to components of a building envelope assembly that separate a conditioned space from an adjoining storage garage, even if the storage garage is intended to be heated. (See Appendix A and A-336.13/5) in Appendix A.)
- 3) Except for slight shafts addressed in Sentence 336.26.13), for the purpose of this Subsection, wall assemblies inclined less than 60° from the horizontal shall be considered as roof assemblies, and roof assemblies inclined 60° or more from the horizontal shall be considered as wall assemblies.
- 4) The properties, performance and installation of windows, doors and skylights shall also conform to Section 937.
- 5) The properties, location and installation of thermal insulation, air barrier systems, vapor barriers, and materials with low air or vapor permeance shall also conform to Section 935.
- 936.22. Determination of Thermal Characteristics of Materials, Components and Assemblies**
- 1) The thermal characteristics of materials shall be determined by calculation in accordance with the applicable product standards listed in the Code or, in the absence of such standards or where such standards do not address the determination of thermal resistance, in accordance with:
- a) ASTM C 177, "Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus," or
- b) ASTM C 518, "Steady-State Thermal Transmission Properties by Means of the Heat-Flow Meter Apparatus," (See Table A-336.24(2) in Appendix A for the thermal characteristics of commonly used materials.)
- 2) Calculations and tests performed in accordance with Sentence (1) shall be carried out at an average temperature of 20°C and under a temperature differential of 22°C.
- 3) The thermal characteristics of windows, doors and skylights shall be determined by calculation or testing in accordance with:
- a) CSA A440.1/A440.3, "Transmission Energy Performance/Guide to CSA A440.2-09, Transmission Energy Performance," for the reference sizes listed therein; or
- b) NFRC 100, "Determining Fenestration Product U-Factors," and NFRC 100, "Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence," for the reference sizes listed therein. (See Appendix A.)
- 4) The effective thermal resistance of opaque building assemblies shall be determined from:
- a) calculations conforming to Article 336.24, or
- b) laboratory tests performed in accordance with ASTM C 1363, "Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus," using an indoor air temperature of 20°C and an outdoor air temperature of -35°C.
- 5) The thermal characteristic of log walls shall be determined by calculation in accordance with Section 305 of ICC 400, "Design and Construction of Log Structures." (See Appendix A.)
- 936.23. Calculation of Ceiling, Wall, Fenestration and Door Areas**
- 1) The gross roof-ceiling assembly area shall be calculated as the sum of the interior surface areas of insulated roof-ceiling assemblies and of skylight openings.
- 2) Except as permitted by Sentence (3), the gross wall area shall be calculated as the sum of the interior surface areas of all exterior building envelope assemblies above the finished ground level that are inclined 60° or more from the horizontal, including:
- a) rim joists,
- b) fenestration and opaque portions of doors,
- c) insulated walls extending from finished ground level to the interior side of the insulated roof-ceiling assembly, and
- d) the exposed areas of below-ground building envelope assemblies, where fenestration or doors are located below the plane of the adjacent finished ground. (See Appendix A.)
- 3) Where a building of residential occupancy contains more than 2 dwelling units, the gross wall area enclosing conditioned spaces shall be permitted to include the interior surface areas of walls that enclose a suite, measured from the top surface of the lowest floor to the underside of the highest ceiling in the suite. (See Appendix A.)
- 4) Fenestration and door areas shall be the actual sizes of windows, doors and skylights including all related frame and sash members.
- 5) The fenestration area made of flat panes that are not all in the same plane or curved panes shall be measured along the surface of the glass. (See Appendix A.)
- 936.24. Calculation of Effective Thermal Resistance of Assemblies**
- 1) In calculating the effective thermal resistance of assemblies for the purpose of compliance with the requirements of Articles 936.26, and 936.28, the thermal bridging effect of closely spaced, repetitive structural members, such as studs and joists, and of ancillary members, such as lintels, sills and plates, shall be accounted for. (See Appendix A.)
- 2) Where penetrations through assemblies, such as pipes, ducts, equipment with through-the-wall venting packaged terminal air conditioners or heat pumps, shell angles, anchors and ties and associated fasteners, and other structural members that must partially or completely penetrate the building envelope to perform their intended function need not be taken into account in the calculation of the effective thermal resistance of that assembly.
- 3) Where structural penetrations, such as balconies and canopy slabs, beams, columns and ornamentation or appendages that must completely penetrate the building envelope to perform their intended function need not be taken into account in the calculation of the effective thermal resistance of the penetrated assembly, provided:
- a) the insulation is installed tight against the surface of the penetration; and
- b) the sum of the areas of all such major structural penetrations is limited to a maximum of 2 % of the gross wall area calculated as described in Sentence 336.23(2). (See Appendix A.)
- 4) Where a component of the building envelope is protected by an enclosed unconditioned space, such as a sun porch, enclosed veranda, vestibule or attached garage, the required effective thermal resistance of the building envelope component between the building and the unconditioned enclosure is permitted to be reduced by 0.16 m²·K/W. (See Appendix A.)
- 936.25. Continuity of Insulation**
- 1) Except as provided in Sentences (2) to (9) and in Sentence 336.24(3) regarding balconies and canopy slabs, and except for clearances around components required for fire safety systems, interior building components that meet building envelope components and major structural members that partly penetrate the building envelope shall not break the continuity of the insulation and shall not decrease the effective thermal resistance at their projected area to less than that required in Article 936.26, and 936.28. (See Appendix A.)
- 2) Where an interior wall, foundation wall, freestanding party wall or structural element penetrates an exterior wall or insulated roof or ceiling and breaks the continuity of the plane of insulation, the penetrating element shall be insulated:
- a) on both of its sides, inward or outward from the building envelope, for a distance equal to 4 times its unmineralized thickness to an effective thermal resistance not less than that required for exterior walls as stated in Table 936.26.A or 936.26.B, to within the plane of insulation of the penetrated element; or to an effective thermal resistance not less than 60% of that required for the penetrated element; or
- b) within half to an effective thermal resistance not less than that required for the penetrated element. (See Appendix A.)
- 3) Where a masonry fireplace or fire penetrates an exterior wall and breaks the continuity of the plane of insulation, it shall be insulated within the plane of insulation of the wall or either half to an effective thermal resistance not less than 50% of that required for the exterior wall as stated in Table 936.26.A or 936.26.B.
- 4) Where an ornamentation or appendage penetrates an exterior wall and breaks the continuity of the plane of insulation, the penetrating element shall be insulated:
- a) on both of its sides, inward or outward from the building envelope, for a distance equal to 4 times the insulated thickness of the exterior wall to an effective thermal resistance not less than that required for the wall as stated in Table 936.26.A or 936.26.B,
- b) within the plane of insulation of the wall to an effective thermal resistance not less than 50% of that required for the exterior wall; or
- c) within the penetrating element to an effective thermal resistance not less than that required for the exterior wall.
- 5) Except as provided in Sentences (8) and (9) where two planes of insulation are separated by a building envelope assembly and cannot be physically joined, one of the planes of insulation shall be extended for a distance equal to at least 4 times the thickness of the assembly separating the two planes. (See Appendix A.)
- 6) Where mechanical, plumbing or electrical system components, such as pipes, ducts, conduits, cabinets, chases, panels or recessed heaters, are placed within and parallel to a wall assembly required to be insulated, the effective thermal resistance of that wall at the projected area of the system component shall be not less than that required by Table 936.26.A, 936.26.B, 936.28.A, and 936.28.B. (See Appendix A.)
- 7) Except as permitted by Article 336.23, where mechanical ducts, plumbing pipes, conduits for electrical services or communication cables are placed within the insulated portion of a floor or ceiling assembly, the effective thermal resistance of the assembly at the projected area of the ducts, pipes, conduits or cables shall be not less than 2.78 m²·K/W.
- 8) Joints and junctions between walls and other building envelope components shall be insulated in a manner that provides an effective thermal resistance that is no less than the lower of the minimum values required for the respective adjoining components. (See Appendix A.)
- 9) Sentence (1) does not apply where the continuity of the insulation is interrupted:
- a) between the insulation in the foundation wall and that of the floor slab;
- b) by an integral perimeter footing of a slab-on-grade (see Sentences 336.23(5) and 936.28(8)) or
- c) at the horizontal portion of a foundation wall that supports masonry veneer and is insulated on the exterior.

DETAIL 936.2.8.A-3 - HEATED FLOOR ABOVE OR BELOW FROST LINE



- FLOORS-ON-GROUND WITH EMBEDDED HEATING DUCTS, CABLES OR PIPES SHALL BE INSULATED TO THE EFFECTIVE THERMAL RESISTANCE REQUIRED UNDER THEIR FULL BOTTOM SURFACE INCLUDING THE EDGES.
- WHERE ONLY A PORTION OF A FLOOR-ON-GROUND HAS EMBEDDED HEATING DUCTS, CABLES OR PIPES, THAT HEATED PORTION SHALL BE INSULATED TO THE EFFECTIVE THERMAL RESISTANCE REQUIRED UNDER ITS FULL BOTTOM SURFACE TO 12 M BEYOND ITS PERIMETER INCLUDING EXTERIOR EDGES IF APPLICABLE.
- IN ADDITION TO THE REQUIREMENTS STATED ABOVE, HEATED FLOORS-ON-GROUND SHALL BE INSULATED TO THE EFFECTIVE THERMAL RESISTANCE REQUIRED VERTICALLY:
- A) AROUND THEIR PERIMETER, OR
- B) ON THE OUTSIDE OF THE FOUNDATION WALL, EXTENDING DOWN TO THE LEVEL OF THE BOTTOM OF THE FLOOR.

CONSIDERATION MUST BE GIVEN TO THE FOLLOWING AT THE TIME OF CONSTRUCTION:

- DUCTS LOCATED OUTSIDE THE THERMAL ENCLOSURE ARE SEALED AND INSULATED TO THE EXTERIOR WALL INSULATION REQUIREMENTS.
- DAMPERS ARE INSTALLED AT AIR INLETS AND EXHAUSTS WHERE REQUIRED.
- PIPING FOR HEATING OR COOLING SYSTEMS IS LOCATED WITHIN THE THERMAL ENCLOSURE OR ARE FULLY INSULATED.
- HVAC EQUIPMENT IS LOCATED WITHIN THERMAL ENCLOSURE OR DESIGNATED TO BE INSTALLED OUTSIDE OF THERMAL ENCLOSURE.
- TEMPERATURE CONTROLS ARE INSTALLED ON HEATING AND COOLING EQUIPMENT.
- INDOOR POOLS ARE COVERED OR HAVE AN HRV/DEHUMIDIFIER.
- HVAC AND SWH EQUIPMENT MEET MINIMUM PERFORMANCE REQUIREMENTS DETERMINED IN TABLES 936.310, AND 936.42.
- SERVICE WATER HEATING PIPES ARE INSULATED AT THE INLET AND OUTLET OF STORAGE TANKS.
- SERVICE WATER HEATERS HAVE TEMPERATURE CONTROLS.

ENERGY EFFICIENCY REQUIREMENTS

THIS HOME IS DESIGNED TO COMPLY WITH ENERGY EFFICIENCY REQUIREMENTS AND VALUES FOR CLIMATE ZONE 4 - LOWER MAINLAND AND SOUTHERN VANCOUVER ISLAND WITHOUT H.R.V. AND IS DESIGNED UNDER THE PRESCRIPTIVE PATH OF B.C.B.C. 2018 SECTION 936.

THESE PLANS CONFORM TO THE B.C. BUILDING CODE, 2018 ED. INCLUDING ALL REVISIONS

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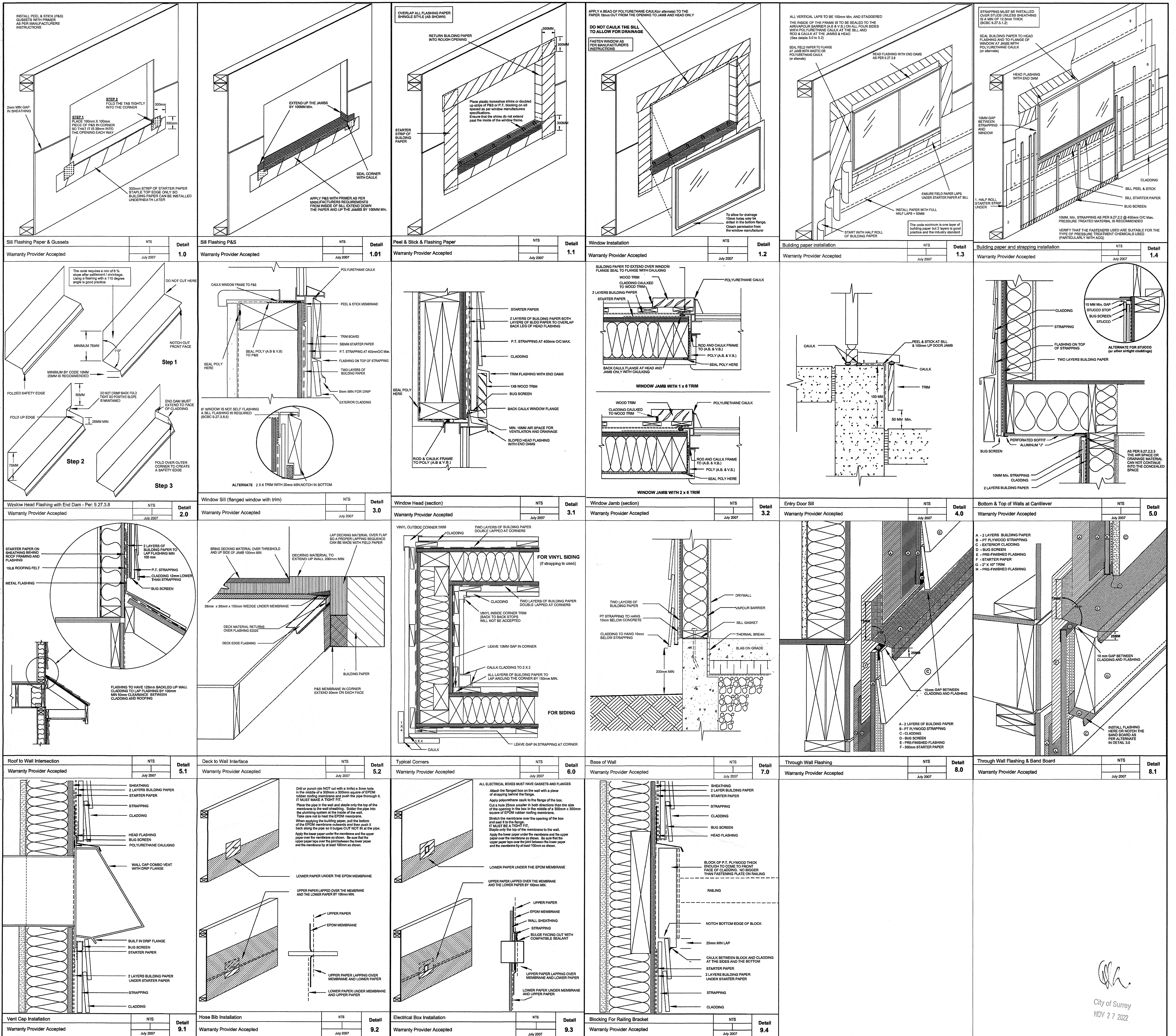
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#288 - 1959 - 152nd STREET
SOUTH SURREY, B.C. V4A 9E3
PHONE: 604-535-3322 FAX: 1-866-454-4211
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TYPICAL RAIN SCREEN DETAIL SHEET

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