

Materials	RSI	R
Outside air film	0.03	0.17
(20mm) 7/8"ACRYLIC STUCCO	0.01	0.06
9.5 mm vented air space by pressure treated wood strapping (Rain Screen)	0.15	0.85
Sheathing membrane (Weather Barrier)	0	0.00
(12.5 mm) Sheathing 1/2" Plywood	0.139	0.97
R22 (RSI-3.87) 5.5" (140mm)batt insulation, 2 X 6 @ 16" o/c	2.55	14.48
6 Mil Continues caulked Poly (Vapour Retarder)	0	0.00
1/2" (12.7 mm) gypsum board	0.08	0.45
Interior air film	0.12	0.68
Total Effective RSI/R value of entire assembly	3.079	17.48
Minimum Effective RSI/R value required	2.78	15.79
Exterior Above Grade Wall Cedar Siding		
Exterior Above Grade Wall Cedar Siding		
Exterior Above Grade Wall Cedar Siding Materials	RSI	R
	RSI 0.03	R 0.17
Materials		
Materials Outside air film	0.03	0.17
Materials Outside air film (16mm Thick.) 11/16" X 4" Cedar Siding 9.5 mm vented air space by pressure treated wood	0.03	0.17
Materials Outside air film (16mm Thick.) 11/16" X 4" Cedar Siding 9.5 mm vented air space by pressure treated wood strapping (Rain Screen)	0.03 0.12 0.15	0.17 0.68 0.85
Materials Outside air film (16mm Thick.) 11/16" X 4" Cedar Siding 9.5 mm vented air space by pressure treated wood strapping (Rain Screen) Sheathing membrane (Weather Barrier)	0.03 0.12 0.15 0	0.17 0.68 0.85 0.00 0.97
Materials Outside air film (16mm Thick.) 11/16" X 4" Cedar Siding 9.5 mm vented air space by pressure treated wood strapping (Rain Screen) Sheathing membrane (Weather Barrier) (12.5 mm) Sheathing 1/2" Plywood R22 (RSI-3.87) 5.5" (140mm)batt insulation, 2 X 6 @	0.03 0.12 0.15 0 0.139	0.17 0.68 0.85 0.00
Materials Outside air film (16mm Thick.) 11/16" X 4" Cedar Siding 9.5 mm vented air space by pressure treated wood strapping (Rain Screen) Sheathing membrane (Weather Barrier) (12.5 mm) Sheathing 1/2" Plywood R22 (RSI-3.87) 5.5" (140mm)batt insulation, 2 X 6 @ 16" o/c	0.03 0.12 0.15 0 0.139 2.55	0.17 0.68 0.85 0.00 0.97
Materials Outside air film (16mm Thick.) 11/16" X 4" Cedar Siding 9.5 mm vented air space by pressure treated wood strapping (Rain Screen) Sheathing membrane (Weather Barrier) (12.5 mm) Sheathing 1/2" Plywood R22 (RSI-3.87) 5.5" (140mm)batt insulation, 2 X 6 @ 16" o/c 6 Mil Continues caulked Poly (Vapour Retarder)	0.03 0.12 0.15 0 0.139 2.55	0.17 0.68 0.85 0.00 0.97 14.48 0.00
Materials Outside air film (16mm Thick.) 11/16" X 4" Cedar Siding 9.5 mm vented air space by pressure treated wood strapping (Rain Screen) Sheathing membrane (Weather Barrier) (12.5 mm) Sheathing 1/2" Plywood R22 (RSI-3.87) 5.5" (140mm)batt insulation, 2 X 6 @ 16" o/c 6 Mil Continues caulked Poly (Vapour Retarder) 1/2" (12.7 mm) gypsum board	0.03 0.12 0.15 0 0.139 2.55 0 0.08	0.17 0.68 0.85 0.00 0.97 14.48 0.00 0.45

Siding		
Materials	RSI	R
Outside air film	0.03	0.17
(25mm) 1" Stone	0.01	0.06
9.5 mm vented air space by pressure treated wood strapping (Rain Screen)	0.15	0.85
Sheathing membrane (Weather Barrier)	0	0.00
(12.5 mm) Sheathing 1/2" Plywood	0.139	0.97
R22 (RSI-3.87) 5.5" (140mm)batt insulation, 2 X 6 @ 16" o/c	2.55	14.48
6 Mil Continues caulked Poly (Vapour Retarder)	0	0.00
1/2" (12.7 mm) gypsum board	0.08	0.45
Interior air film	0.12	0.68
Total Effective RSI/R value of entire assembly	3.079	17.48
Minimum Effective RSI/R value required	2.78	15.79
Minimum Effective RSI/R value required	2.78	15.79
Minimum Effective RSI/R value required Foundation Wall Below Grade	2.78	15.79
	2.78 RSI	15.79
Foundation Wall Below Grade		
Foundation Wall Below Grade Materials	RSI	R
Foundation Wall Below Grade Materials 60 Mil Damproofing	RSI 0	R 0.00
Foundation Wall Below Grade Materials 60 Mil Damproofing (203mm) 8" Concrete Foundation Wall	RSI 0 0.08	R 0.00 0.45
Foundation Wall Below Grade Materials 60 Mil Damproofing (203mm) 8" Concrete Foundation Wall (13 mm) 1/2" Air Space (RSI-2.17) 2-1/2" (62.5 mm) Foamular XPS,	RSI 0 0.08 0.16	R 0.00 0.45 0.91
Foundation Wall Below Grade Materials 60 Mil Damproofing (203mm) 8" Concrete Foundation Wall (13 mm) 1/2" Air Space (RSI-2.17) 2-1/2" (62.5 mm) Foamular XPS, (38mmX89mm)2X 4 wood stud@ 16" o/c 6 Mil Continues caulked Poly (Vapour	RSI 0 0.08 0.16	R 0.00 0.45 0.91 9.43
Foundation Wall Below Grade Materials 60 Mil Damproofing (203mm) 8" Concrete Foundation Wall (13 mm) 1/2" Air Space (RSI-2.17) 2-1/2" (62.5 mm) Foamular XPS, (38mmX89mm)2X 4 wood stud@ 16" o/c 6 Mil Continues caulked Poly (Vapour Retarder)	RSI 0 0.08 0.16 1.66	R 0.00 0.45 0.91 9.43
Foundation Wall Below Grade Materials 60 Mil Damproofing (203mm) 8" Concrete Foundation Wall (13 mm) 1/2" Air Space (RSI-2.17) 2-1/2" (62.5 mm) Foamular XPS, (38mmX89mm)2X 4 wood stud@ 16" o/c 6 Mil Continues caulked Poly (Vapour Retarder) 1/2" (12.7 mm) gypsum board	RSI 0 0.08 0.16 1.66 0	R 0.00 0.45 0.91 9.43 0.00 0.45

MAINTAIN INSULATION VALUE FOR EXTERIOR ABOVE GROUND WALL AT RIM JOIST

Floor Over Exterior Space		
Materials	RSI	R
Interior air film	0.16	0.91
19mm Hardwood Flooring	0.02	0.11
38 mm concrete flooring	0.01	0.06
(18.5 mm) Sheathing 3/4" Plywood	0.16	0.91
Floor Joist 241mm TJI @ (406mm) 16" O/C, RSI 4.593 R-28 Bath Insulation filling cavity between Joists	4.37	24.83
	0	0.00
11/16" (16mm) Tick. Cedar soffit	0.12	0.45
Exterior air film	0.03	0.17
Total Effective RSI/R value of entire assembly	4.87	26.76
Minimum Effective RSI/R value required	4.67	26.52
Heated Floor Slabs		
Materials	RSI	R
	0.16	0.91
Interior air film		
Interior air film (102mm) 4" Concrete slab	0.04	0.23
	0.04 2.14	
(102mm) 4" Concrete slab		0.23 12.15 0.00
(102mm) 4" Concrete slab (RSI-2.14) 2-1/2" (63.5 mm) Foamular XPS	2.14	12.15

INTERIOR PARTITIONS

Wall between Garage and Living space		
Materials	RSI	R
Outside air film	0.03	0.17
1/2" (12.7 mm) gypsum board	0.08	0.45
R20(RSI-3.34) 5.5" (140mm)batt insulation, 2 X 6 @ 16" o/c	2.36	13.40
6 Mil Continues caulked Poly (Vapour Retarder)	0	0.00
1/2" (12.7 mm) gypsum board	0.08	0.45
Interior air film	0.12	0.68
Total Effective RSI/R value of entire assembly	2.67	15.16
Minimum Effective RSI/R value required	2.62	14.88

Materials 24 GA Standing Seam Metal Roof 1/2" Plywood Sheeting over roof truss Exterior air film in vented roof attic space RSI-4.93 R-28 Bath insulation above bottom chord Roof Truss (38mmx89mm) 2x4 bottom cord @ (610mm) 24" O/C, RSI 2.11,R-12 Bath Insulation filling cavity between bottom cord Polyethlene (Vapour retarder) 5/8" (15.9 mm) gypsum board Interior air film Total Effective RSI/R value of entire assembly Materials Plat Roof (Deck Over Conditioned space) Materials Plat Roof (Deck Over Conditioned space) Materials Poek Tiles Minimum (13 mm) 1/2" Air Space (Pedestal) 2 Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C, RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") fillling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board Interior air film Total Effective RSI/R value of entire assembly 4.7	
Exterior air film in vented roof attic space RSI-4.93 R-28 Bath insulation above bottom chord Roof Truss (38mmx89mm) 2x4 bottom cord @ (610mm) 24" O/C , RSI 2.11,R-12 Bath Insulation filling cavity between bottom cord Polyethlene (Vapour retarder) 5/8" (15.9 mm) gypsum board Interior air film Total Effective RSI/R value of entire assembly Minimum Effective RSI/R value required Flat Roof (Deck Over Conditioned space) Materials Deck Tiles Minimum(13 mm) 1/2" Air Space (Pedestal) 2 Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C , RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Jolsts Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board Interior air film 0.03	R
Exterior air film in vented roof attic space RSI-4.93 R-28 Bath insulation above bottom chord Roof Truss (38mmx89mm) 2x4 bottom cord @ (610mm) 24" O/C , RSI 2.11,R-12 Bath Insulation filling cavity between bottom cord Polyethlene (Vapour retarder) 5/8" (15.9 mm) gypsum board Interior air film Total Effective RSI/R value of entire assembly Minimum Effective RSI/R value required Flat Roof (Deck Over Conditioned space) Materials RSI Deck Tiles Minimum(13 mm) 1/2" Air Space (Pedestal) 2 Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C , RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board Interior air film 0.03	
RSI-4.93 R-28 Bath insulation above bottom chord Roof Truss (38mmx89mm) 2x4 bottom cord @ (610mm) 24" O/C , RSI 2.11,R-12 Bath Insulation filling cavity between bottom cord Polyethlene (Vapour retarder) 5/8" (15.9 mm) gypsum board Interior air film O.11 Total Effective RSI/R value of entire assembly Minimum Effective RSI/R value required 6.91 Flat Roof (Deck Over Conditioned space) Materials RSI Deck Tiles Minimum(13 mm) 1/2" Air Space (Pedestal) 2 Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C , RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board Interior air film 0.11	
Roof Truss (38mmx89mm) 2x4 bottom cord @ (610mm) 24" O/C , RSI 2.11,R-12 Bath Insulation filling cavity between bottom cord	0.17
(610mm) 24" O/C , RSI 2.11,R-12 Bath Insulation filling cavity between bottom cord 1.76 Polyethlene (Vapour retarder) 0 5/8" (15.9 mm) gypsum board 0.09 Interior air film 0.11 Total Effective RSI/R value of entire assembly 6.92 Minimum Effective RSI/R value required 6.91 Flat Roof (Deck Over Conditioned space) Materials RSI Deck Tiles Minimum(13 mm) 1/2" Air Space (Pedestal) 0.15 2 Ply Torch down waterproofing membrane 0 (18.5 mm) Sheathing 3/4" Plywood 0.16 Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C , RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 0 1/2" (12.7 mm) gypsum board 0.08 Interior air film 0.11	27.99
5/8" (15.9 mm) gypsum board Interior air film O.11 Total Effective RSI/R value of entire assembly Minimum Effective RSI/R value required Flat Roof (Deck Over Conditioned space) Materials Peck Tiles Minimum(13 mm) 1/2" Air Space (Pedestal) 2 Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C , RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board Interior air film O.11	9.99
Interior air film Total Effective RSI/R value of entire assembly Minimum Effective RSI/R value required 6.91 Flat Roof (Deck Over Conditioned space) Materials Peck Tiles Minimum(13 mm) 1/2" Air Space (Pedestal) 2 Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C , RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board Interior air film 0.11	0.00
Total Effective RSI/R value of entire assembly Minimum Effective RSI/R value required Flat Roof (Deck Over Conditioned space) Materials Peck Tiles Minimum(13 mm) 1/2" Air Space (Pedestal) Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C, RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board Interior air film O.11	0.51
Minimum Effective RSI/R value required Flat Roof (Deck Over Conditioned space) Materials RSI Deck Tiles Minimum(13 mm) 1/2" Air Space (Pedestal) 2 Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C, RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board Interior air film 0.11	0.62
Flat Roof (Deck Over Conditioned space) Materials Deck Tiles Minimum(13 mm) 1/2" Air Space (Pedestal) 2 Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C , RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board Interior air film O.11	39.29
Materials Deck Tiles Minimum(13 mm) 1/2" Air Space (Pedestal) 2 Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C, RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board 0.08 Interior air film 0.11	39.24
Deck Tiles Minimum(13 mm) 1/2" Air Space (Pedestal) 2 Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C , RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board 0.08 Interior air film 0.11	
Minimum(13 mm) 1/2" Air Space (Pedestal) 2 Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C, RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board 0.11	R
2 Ply Torch down waterproofing membrane (18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C , RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board 0.08 Interior air film 0.11	0.85
(18.5 mm) Sheathing 3/4" Plywood Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C , RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board O.08 Interior air film O.11	0.00
Deck Floor(Area over Living space)(38mmx184mm) 2x8 @ (406mm) 16" O/C , RSI 5.63, R-32 Medium Density Spray Foam (Avrage Insulation Depth 6.25") filling cavity between Joists Polyethylene (Vapour retarder) 1/2" (12.7 mm) gypsum board 0.08 Interior air film 0.11	0.91
1/2" (12.7 mm) gypsum board 0.08 Interior air film 0.11	23.85
Interior air film 0.11	0.00
	0.45
Total Effective RSI/R value of entire assembly	0.62
Total Ellective KSI/K value of elitile assembly 4.7	26.69
Minimum Effective RSI/R value required 4.67	26.52

THERMAL CHARACTERISTICS OF FENESTRATION

- WINDOWS AND DOORS: MAX. USI 1.8 (U-0.32)
- FRONT DOOR:MAX. USI 2.6 (U-0.46)
- OVERHEAD GARAGE DOOR TO BE WEATHER STRIPPED - ATTIC ACCESS HATCHES: MIN. RSI 1.1(R-6.25)
- SKYLIGHTS MAX. 2.9 U-VALUE

OTHER CONDITIONS

- MEET BCBC 2014 UPDATES ENERGY EFFICIENCY REQUIREMENT - DUCT RUNNING THROUGH UNCONDITIONED SPACE TO BE RSI 2.78 (R-15.78)

Elevations shown are based on Geodetic Datum.

Bench Mark: Control Monument 82H4735, located at the intersection of Capilano Road and Handsworth Road. B.M. Elevation = 466.61 feet (142.224 metres)

NOTE:

For construction, use lead plugs in sidewalk or City survey monument only, for elevation control.

The building envelope shown is only our interpretation of the District of North Vancouver building bylaws. The size and location of the building envelope must be confirmed by the District Planning Department any prior to any design work. Failure to do so places sole responsibility for the design

Ken K. Wong and Associates Canada and B.C. Land Surveyors 5624 E. Hastings Street Burnaby, B.C. V5B 1R4 Telephone: (604) 294-8881 Fax: (604) 294-0825 160040 FB919 P98-97 R-6988 SU-2819 Drawn by: TB

LEGEND:

□ LP lead plug placed

🗱 DMH - storm manhole

🛇 RP: roof peak

⊗ MF: main floor ⊗ EV: eaves trough

min. minimum

AMD amended

o/a over-all

conc. concrete

min. minimum

O IP iron old post placed

O OIP old iron post found

diameter

square feet

power pole

PROJECT INFORMATION

onto the house designer.

ADDRESS: 4470 CAPILANO RD,

NORTH VANCOUVER BC, V7R 4J9 LEGAL DESCRIPTION: LOT8 BLOCK 5, DISTRICT LOT 596

PLAN 8098

SURVEY PLAN BY: KEN K. WONG & ASSOCIATES

> 5624 HASTINGS STREET HASTINGS STREET

BURNABY, BC CANADA GEOTECHNICAL ENGINEER: HORIZON ENGINEERING INC. KARIM KARIMZADEGAN

STRUCTURAL ENGINEER: ADB ENGINEERING

JOE KLARICH

ZONING:

SITE COVERAGE:

PROPERTY USE: SINGLE FAMILY RESIDENCE SITE AREA:

7264 SQ. FT. 35% OF LOT AREA

PERMITTED: 2542.4 SQ. FT. PROPOSED: 2475.37 SQ. FT.

MAIN: 2211.64 SQ. FT. ACCESSORY BLDG.: 264.48 SQ. FT.

MAX. PRINCIPAL BUILDING SIZE: 4359 SQ. FT. FRONT YARD SETBACK: 25 FEET

REAR YARD SETBACK: 25 FEET SIDE YARD SETBACK: 4 FEET MAXIMUM BUILDING DEPTH: 65 FEET

UPPER STOREY: MAX. 75% OF LARGEST STOREY BELOW FLOOR SPACE RATIO: 35% OF LOT AREA + 350 SQ. FT.

 $7264 \times .35 = 2542.4 + 350 = 2892.4$ SQ. FT.

1613 SQ. FT. (ENTIRELY BELOW GRADE) LOWER FLOOR:

(SECONDARY SUITE = 960 SQ. FT.)

MAIN FLOOR: 1982 - 400 (GARAGE EXEMPTION) = 1582

SQ.FT.

UPPER FLOOR: 1197.2 SQ. FT. (< 75% x 1613 = 1210)

TOTAL PROPOSED: 2779 SQ. FT.

All design Ideas and layouts represented are the property of "PA DESIGN CONSULTANTS". No plans or parts may be duplicated, altered, redrawn, or used for any project other than the one for which they

SINGLE FAMILY RESIDENCE FOR: MR. & MRS. YOUSEFI 4470 CAPILANO RD, NORTH VANCOUVER, BC

PA DESIGN CONSULTANTS 2773 MARINE DRIVE, WEST VANCOUVER, BC,

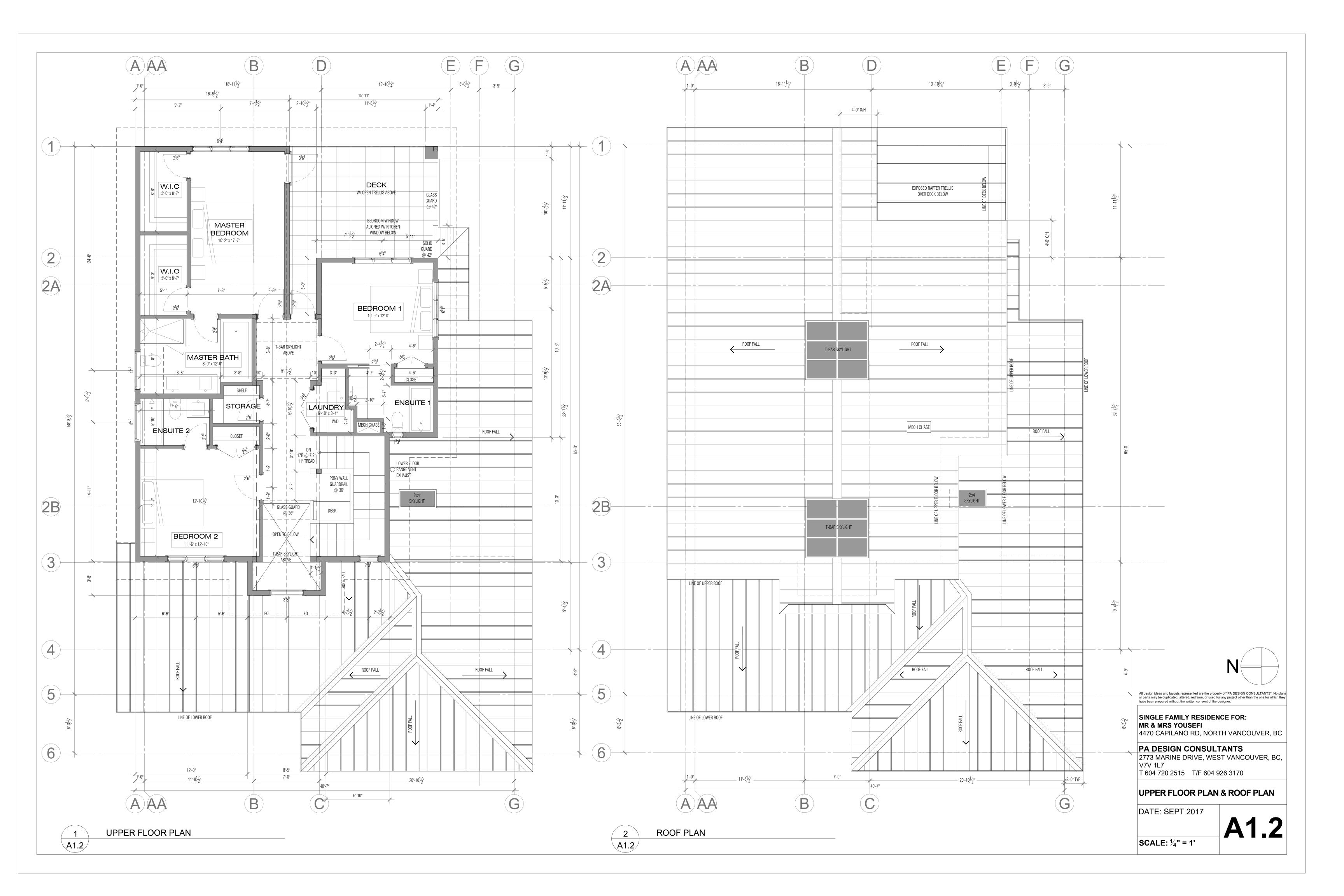
V7V 1L7 T 604 720 2515 T/F 604 926 3170

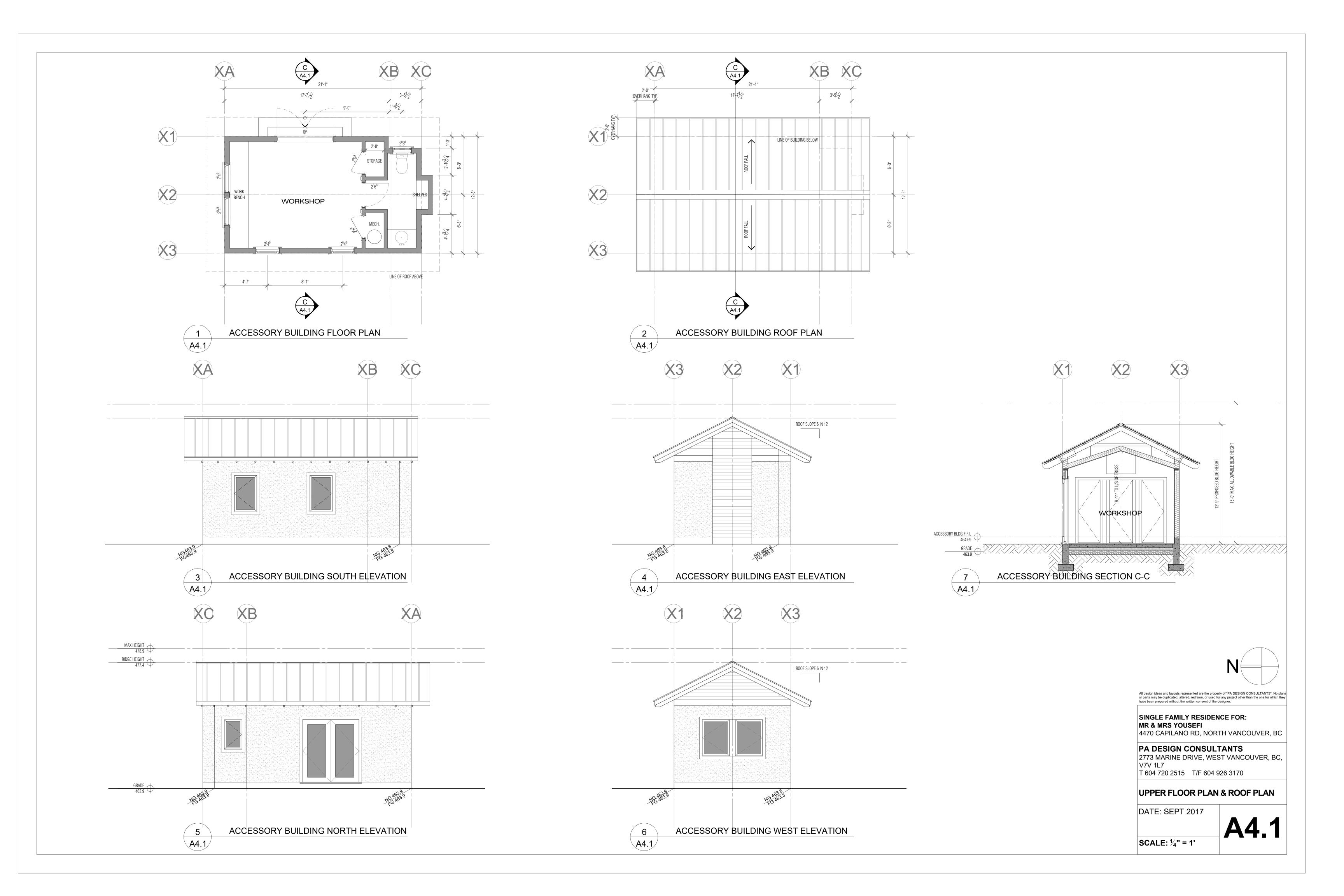
SITE PLAN

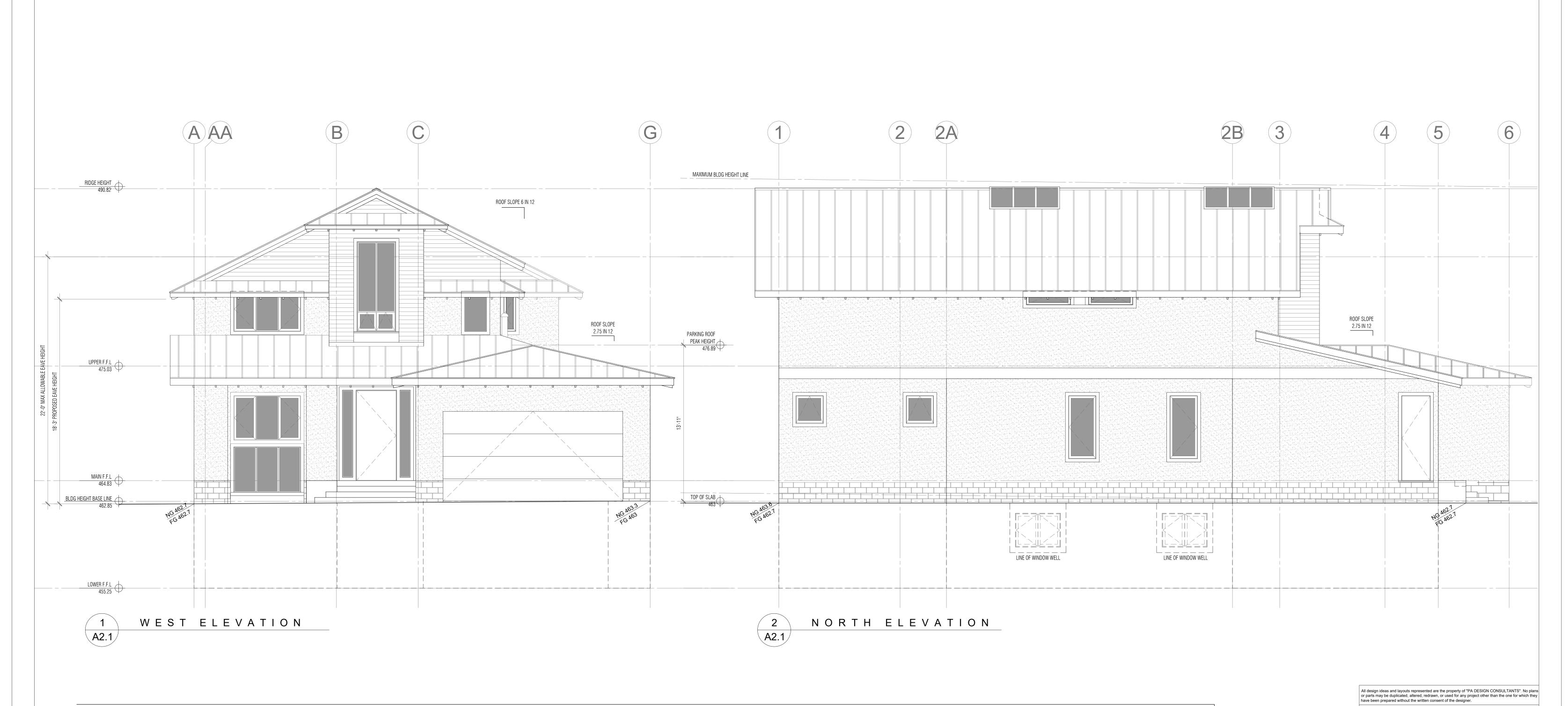
DATE: OCT 2017

SCALE: 1" = 1'-0"









SPATIAL SEPARATION CALCULATIONS: AS PER TABLE 9.10.14.4.A BCBC 2012

PRINCIPAL BUILDING- SOUTH ELEVATION

TOTAL AREA: 1084.448 SQ. FT. (100.75 SQ. M.)

LIMITING DISTANCE: 8.41' FEET (2.56 METERS)

UNPROTECTED OPENINGS

PERMITTED: @ 2 METERS 8% @ 4 METERS 12% @ 2.56 METERS 8.96%

 $100.75 \times 8.96 \% = 9.027 \text{ SQ. M} = 97.166 \text{ SQ. FT.}$

19.98 + 60 + 4 + 12.45 = 96.43 SQ. FT. PROVIDED:

PRINCIPAL BUILDING - NORTH ELEVATION:

TOTAL AREA: 1147.862 SQ. FT. (106.64 SQ. M.)

PERMITTED:

@1.2 METERS 7 %

 $106.64 \times 7\% = 7.46 \text{ SQ. M.} = 80.29 \text{ SQ. FT.}$

 $2.5 \times 2.5 \times 2 = 12.5 \text{ SQ. FT.} + 4 + 4 = 20.5 \text{ SQ. FT}$

 $5.5 \times 2.5 = 13.75 \times 2 = 27.5$ TOTAL: 27.5 + 20.5 = 47.5 SQ. FT. ACCESSORY BUILDING - SOUTH ELEVATION:

TOTAL AREA: 212 SQ. FT. (19.70 SQ. M.)

PERMITTED: @1.5 METERS 9 % @2.0 METERS 12% @1.73 METERS 10.5%

 $19.70 \times 10.5\% = 2.07 \text{ SQ. M.} = 22.28 \text{ SQ. FT.}$

PROVIDED: $2.5 \times 4 \times 2 = 20 \text{ SQ. FT.}$ **ELEVATIONS**

V7V 1L7

MR & MRS YOUSEFI

SINGLE FAMILY RESIDENCE FOR:

PA DESIGN CONSULTANTS

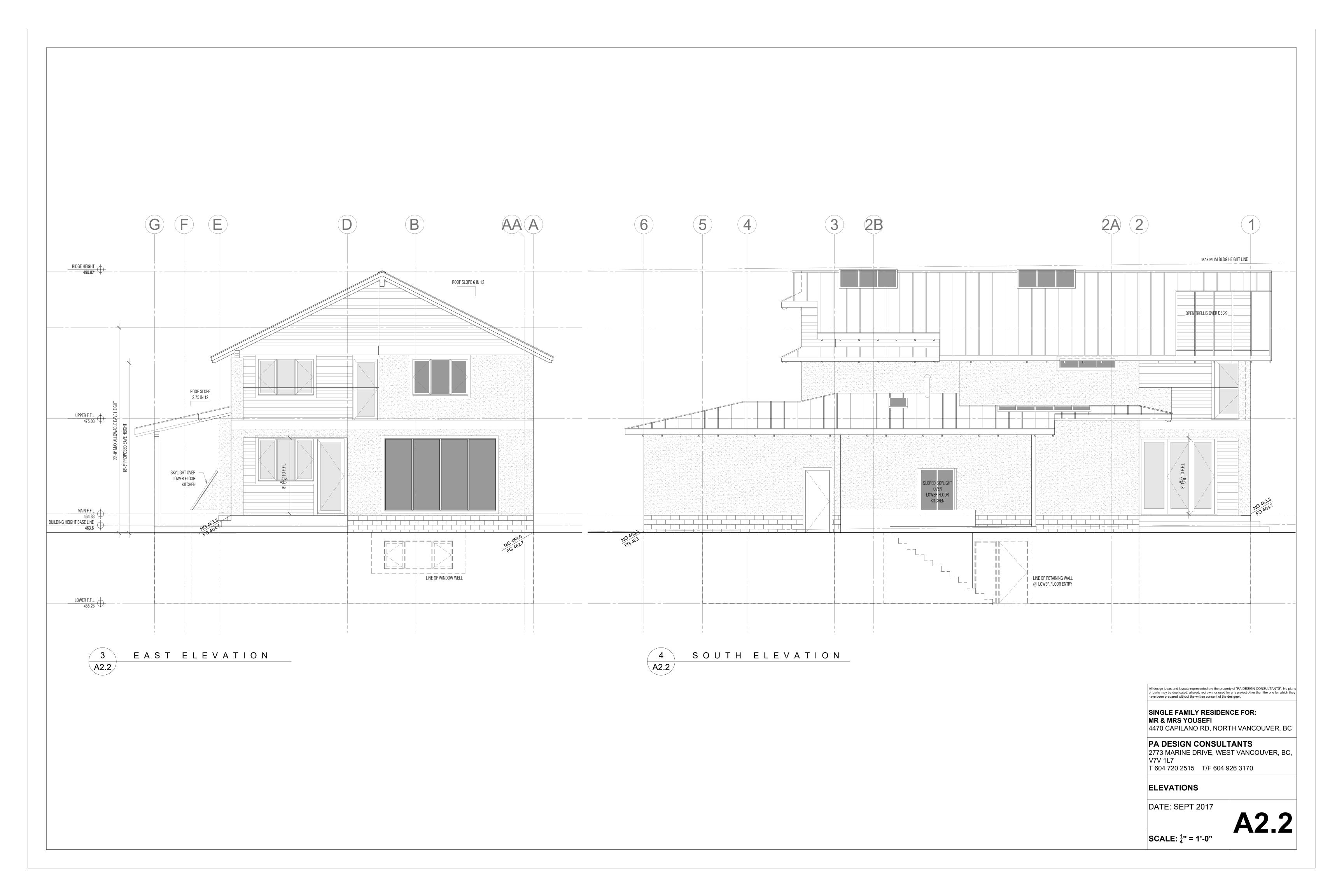
T 604 720 2515 T/F 604 926 3170

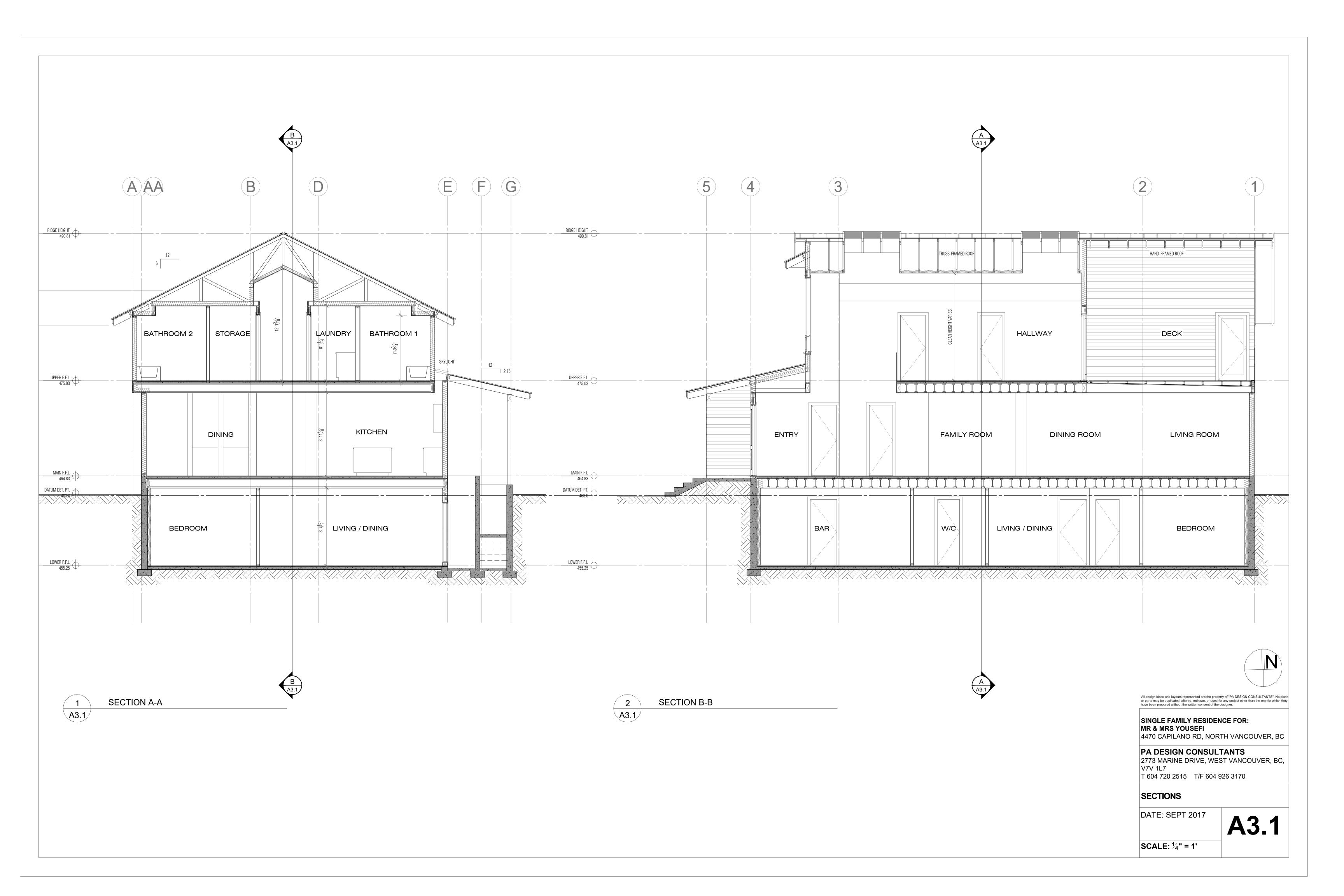
4470 CAPILANO RD, NORTH VANCOUVER, BC

2773 MARINE DRIVE, WEST VANCOUVER, BC,

DATE: SEPT 2017

SCALE: \frac{1}{4}" = 1'-0"





Contractor to check all dimensions & notes, and to notify PA Design of any discrepancies prior to commencement of construction. Do not scale off drawing, refer to dimensions. All material and workmanship to comply to latest BCBC. All drawings are to be read in conjunction with professional engineer's drawings.

EXCAVATIONS:

- Geotechnical Engineer is to certify a site is safe for workers when the slope of the excavations exceeds $\frac{3}{4}$ horizontal to one vertical or excavation exceeds 48".
- Inspections can only be done if site is posted as safe by Prof. Engineer

FOUNDATIONS:

- 1. Pad footings are required to have a minimum footing area of 4.3sf supporting 1 floor, 8sf supporting
- 2 floors and 10.7sf supporting 3 floors.
- Footings are to extend 18" below grade minimum.
- 3. Foundation wall of basement below grade and crawl spaces must be insulated with R12 to 24" below grade.
- Provide $\frac{1}{2}$ " Ø anchor bolts @ 8'-0" O.C. Anchor posts to footings to resist uplift.

CRAWL SPACE:

Provide crawl space access of 1'8" x 2'4" min., 18" clearance and ventilate to $\frac{1}{500}$ th of area. 2. Groundcover reqd. of 2" concrete over 6 mil U.V.

VENTILATION:

- Uniformly distribute ventilation to flat and vaulted roofs to $\frac{1}{150}$ of insulated ceiling area. Venting is required to be two-way.
- Min. 2x2 cross purlins to flat, vaulted ceilings, and decks over living areas to conform to #9.19.1.3.(4).
- Provide min. $2\frac{1}{2}$ " clearance between roof sheathing and insulation #9.19.1.3.
- Provide min. 1" clearance between insulation and top of roof joists.
- Ventilate attics to $\frac{1}{300}$ of insulated ceiling area. Roof vents must be uniformly distributed with a minimum of 25% at base and 25% in rooftop.
- Provide attic hatch of 3.4sf in area with no dimensions less than 1'10".
- Submit Mechanical Ventilation/Air Conditioning design and letter of supervision by Prof. Engineer, certified HRAI or HVC Technician at frame and final inspection.
- Continuous or intermittent exhaust fans are required to all bathrooms and kitchens as per #9.32.3.3.

- 1. Insulation where subject to mechanical damage is to be covered as per #9.25.2.3.(7) with drywall or equivalent (eg. crawl storage areas).
- Wall insulation to be R20 minimum if dwelling is not heated by natural gas.
- Minimum insulation values R14 walls, R28 for flat or vaulted ceilings, and R40 for attic spaces.
- Ceiling and walls to have 6 mil U.V. poly fully caulked as per #9.25.
- R10 rigid insulation required around unheated slabs on grade; 20" vertical or horizontal from bottom edge of slab.
- R12 rigid insulation under entire slab area for slabs with radiant heating.

- 1. Straight stair: Rise min. 5" max. 7.87"
- Run min. 8.25" max. 14"
- All treads to have a 1" nosing.
- Minimum headroom is 6'5" from a line through nosings measured vertically.
- Handrail to be between 32" to 38" from a line, measured vertically, through nosing.
- 5. Winders to conform to 9.8.4.5.
- Primary stair minimum width 2'-10".
- Curved stairs and stairs 43" in width or greater require 2 handrails.
- Handrail regd. on interior stairs with three or more risers, and exterior stairs with four or more risers.
- Handrail as a guard is to be between 36" and 38".

CHIMNEY AND FIREPLACES:

- Minimum 2" clearance between chimney and combustible framing. Minimum 4" clearance between fireplace and combustible framing.
- Masonry fireplace hearths must conform to #9.22.5.1
- Hard wired C.O. detectors are required in each bedroom or within 5 metres of each bedroom door in conformance with #9.32.4.2.

GUARDRAILS:

- Guardrails to be a minimum 42" exterior and 36" interior height.
- No member facilitating climbing permitted from 4" to 36" above the floor or walking surface (in all guards)
- Maximum 4" opening in all stair, deck and balcony guards (interior and exterior) All glass guards to have top cap unless approved by Prof. Engineer.
- A minimum of 36" in height is permitted for decks within 5'-11" of grade.
- Guard required to all drops exceeding 24" where access is provided (eg. window wells). Guard required where the adjacent surface within 1.2m of the walking surface has a slope of more than 1 in 2.

GLAZING:

- Glass in windows and doors to be double-glazed.
- Glass in entrace, shower and sliding doors, and windows within 8" of floors and withing 36" of deadbolts are all to be safety glass.
- Sidelights 20'' + in width are to be safety glass.
- Windows in walls enclosing shower or tubs are to be safety glass and be located above the waterproof wall finish height.
- The bottom of an openable window in a bedroom is not to exceed 4'-11" above the floor, and have a minimum opening width of 15" with an area of 3.75 sf.
- Windows over stairs, ramps and landings that extend to less than 36" above the surface shall be protected with guards or be non-openable and designed to #4.1.5.15.
- Window wells are to be 22" minimum width when required as a bedroom egress.
- Bedroom windows required as exits must maintain the required opening during an emergency without the need for additional support in conformance with #9.7.1.2.2.b.
- 9. Where a protective enclosure is installed over a window well, it shall be openable from the inside without the use of keys, tools or special knowledge.

MASONRY VENEER WALLS:

1. Provide masonry/veneer wall flashing ties and weep holes as per #9.20.

- 1. Doors between garage and dwelling are to be a self-closing and weather-stripped solid core door.
- 2. Thicken slab at garage entry to 18" below grade.

- MOISTURE PROTECTION: 1. Provide flashing between horizontal intersections of differing wall finishes. All flashing to slope away
- from the building a minimum of 6%.
- Provide flashing at all wall-roof junctions, including parapets for solid guards on decks.
- Rainscreen assembly required for all buildings, with a minimum capillary break of $\frac{3}{8}$ ".
- All platforms are roofs.
- All roofs must slope 1 in 50 away from walls, this includes parapet walls surrounding decks. 6. 6" clearance required between deck membranes and floor.

- Cross bridging required @ 7'-0" O.C. maximum for floor and roof joists.
- Lino or equal required to bathroom floors.
- Waterproof wallboard required as tile base around tubs and showers.
- 5/8" drywall required to ceiling members at 24" O.C.
- Provide 8" clearance between grade and siding.
- Damp-proofing for slabs including crawl spaces, are to be 6 mil "UV" poly.
- Furnace and laundry room door width of 2'-8" min. N.R.P. hinges required for outswing exterior doors.
- One hard wired-smoke alarm required per floor, all smoke alarms to be interconnected.
- 10. Smoke alarms required on every floor level, differing by 36" and within 5 metres of bedroom doors and 15 metres of each other. 11. A 5lb A.B.C. dry chemical fire extinguisher is required near the kitchen.

12. Heating and air conditioning equipment must be secured to the building to resist overturning and displacement.

A3.2

UPPER FLOOR F.F.L.

A3.2

SKYLIGHT WELL OVER

SKYLIGHT @ MAIN FLOOR KITCHEN

MAIN FLOOR KITCHEN COUNTER

TYP. EXTERIOR WALL ASSEMBLY

AS PER DETAIL 3/A3.2

1.5" INTERIOR WOOD SILL

AS PER DETAIL 3/A3.2

TYP. BASEMENT WALL ASSEMBLY

SKYLIGHT @ LOWER FLOOR KITCHEN

T-BAR SKYLIGHT HEAD @ WALL AS PER DETAIL 1/A3.2

CONTINUOUS HEAD FLASHING

T-BAR SKYLIGHT RAFTER BAR

- CONTINUOUS ALUMINUM HEAD ANGLE

C/W GLAZING AS PER MANUFACTURER SPECS

-CONTINUOUS SILL W/WEEPHOLES

-SILL FLASHING OVER 2x4 CURB

ROOF FLASHING TO EXTEND UP 2x4 CURB

- 24 GA STANDING SEAM METAL ROOF

BETWEEN 2x8 RAFTERS, FRAMED INTO EXTERIOR WALL

SEE STRUCT'L DWGS FOR FRAMING DETAIL

AGAINST 2x BLOCKING BETWEEN RAFTERS, TYP.

ON ROOFING MEMBRANE

ON ½ ROOF SHEATHING

ON 1x4 T&G CEDAR BOARDS

3" STUCCO REVEAL BEAD

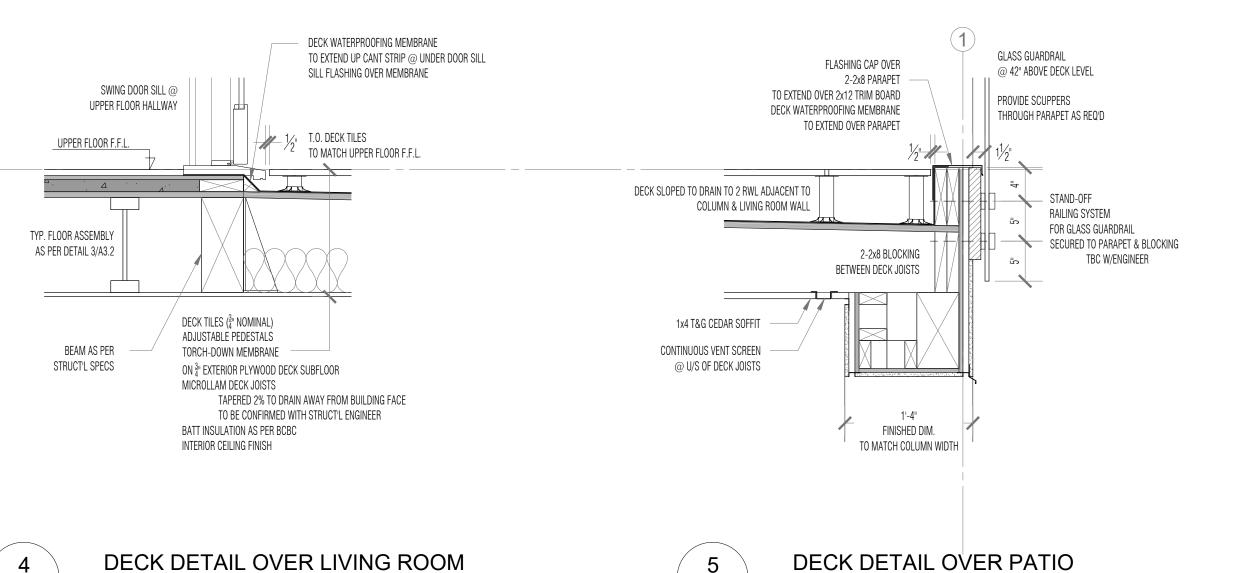
TYP. EXTERIOR WALL ASSEMBLY

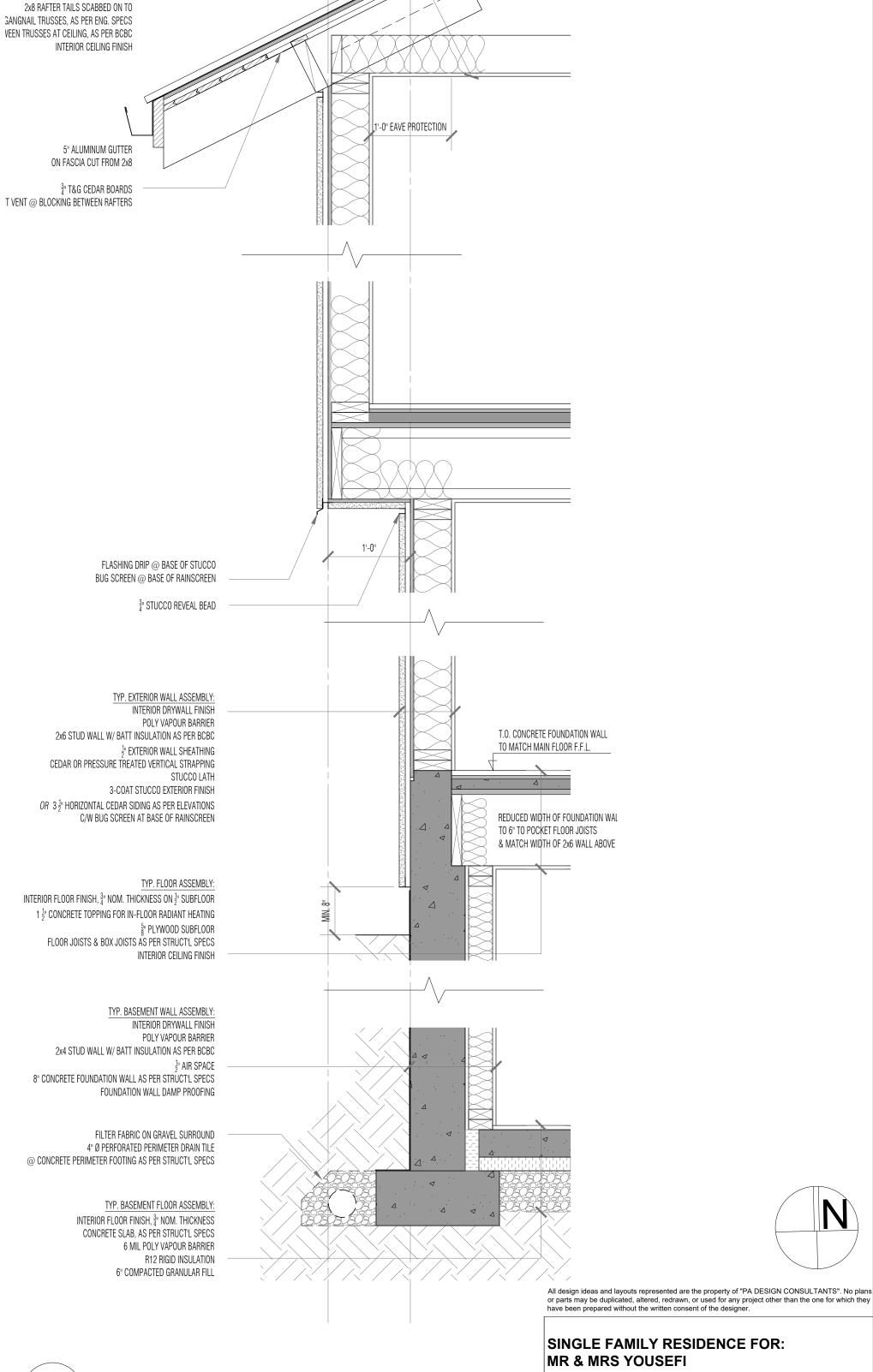
-CONTINUOUS ALUMINUM SILL ANGLE

-CONTINUOUS SILL W/WEEPHOLES

T.O. CONCRETE FOUNDATION WALL FLASHING TO EXTEND OVER 2x8 SILL PLATE

-SILL FLASHING OVER





TYPICAL ROOF ASSEMBLY 24 GA STANDING SEAM METAL ROOF

ON ROOFING MEMBRANE

ON ½" ROOF SHEATHING

PPING, STRAPPED PARALLEL TO RAFTERS

STRAPPED PERPENDICULAR TO RAFTERS

WALL SECTION DETAILS | MATERIALS

\A3.2

SINGLE FAMILY RESIDENCE FOR: MR & MRS YOUSEFI 4470 CAPILANO RD, NORTH VANCOUVER, BC

PA DESIGN CONSULTANTS 2773 MARINE DRIVE, WEST VANCOUVER, BC,

V7V 1L7 T 604 720 2515 T/F 604 926 3170

GENERAL NOTES + SECTION DETAILS

DATE: SEPT 2017

A3.2

SCALE: 1" = 1'

REV:

A3.2

A3.2