

# CIENCIALA RESIDENCE

773 PARK RD, ENDERBY BC



DESIGN . SUPPLY . BUILD  
EFFICIENT BUILDING SOLUTIONS

265 CN JUNCTION RD  
KAMLOOPS BC  
V2H 1K3

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Date: 2021-05-10

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A1.01

Plotted On: 2021-05-10

TITLE SHEET



GENERAL NOTES & SPECIFICATIONS

GENERAL NOTES

- The Contractor or Owner shall resolve any problems arising out of any variances from the drawings and specifications, or from conditions encountered at the job site. Such a resolution shall be sole responsibility of the Contractor or Owner.
  - The Building Designer shall not be responsible for any departure from the drawings and specifications authorized by any inspection authority during the course of construction.
  - The Building Designer shall not be responsible for any unauthorized changes to the design by the Owner or Contractor.
  - The Contractor or Owner shall be responsible for correct placement of this building on the site. The Building Designer does not guarantee that this building will fit a particular site, unless a legal survey plan and a copy of the applicable zoning by-laws stating the required setbacks from all property lines is received by this office in advance of the development and issuance of these drawings.
  - The Building Designer shall not be responsible for site conditions such as soil bearing capacity, depths of water tables or buried structures.
  - Do not scale drawings. Written dimensions can be requested by sending a request for information (RFI) to The Building Designer.
  - Construction loads on the structure caused by interim storage of material or use of equipment will not be allowed to exceed the designed load.
  - The Building Designer makes every effort to provide complete and accurate home plans. This office assumes no liability for any errors or omissions that may affect construction.
  - Should any discrepancies be found on this set of drawings, please advise our office at your earliest convenience.
- STRUCTURAL DESIGN**
- All concrete work to be designed and inspected by a professional engineer to be paid by the OWNER.
  - All floor joist and roof trusses to be designed and inspected by a professional engineer to be paid for by the Contractor. Shop drawings must be submitted to the Designer for the review prior to construction.
  - Assumed roof design 

GSL=3.3 kPa  
RL=0.11 kPa
  - Assumed soil bearing capacity = **119.7 kN/m2 (2,500 p.s.f.)**
  - Concrete foundation walls and slab-on-grade shall have a minimum compressive strength of 28MPa (4000 psi) at 28 days.
  - All reinforcing bars shall be billet steel complying with CSA-G30.10.
  - Where possible, incorporate fly ash into concrete mixture.
- COMPRESSIVE STRENGTH**
- Min. 25MPa concrete in all cases, except garage floors and exterior steps and hallway have min. 32Mpa
  - Concrete used for garage floors and exterior steps shall have air entrainment of 5% +/- 1%

BUILDING SPECIFICATIONS

- Foundations:**
- Foundations shall be concrete on solid undisturbed bearing and below frost line.
  - Basement foundation walls shall be backfilled until:
    - I. Concrete has reached its specified 28 day strength
    - II. Structural floor framing, including subfloor, required to support the walls in complete and fully nailed and anchored.
  - Foundation wall heights may require adjustment to suit site conditions.
  - All concrete and masonry foundation walls exceeding limits specified in the current Building Code require engineering.
  - See structural engineering drawings for rebar sizing and placement.
  - Corner reinforcing to be capped min. 24" (600mm)
  - Provide min. clear concrete cover of 1 1/2" (38mm)
  - The Contractor shall examine all applicable drawings for locations of embedded items before placing concrete.
  - Perimeter drainage shall be installed where required to the approval of local authorities.

Wood-Frame Construction

- Dimensions are taken from outside face of exterior wall sheathing to centerline of interior wall studs. Face of exterior wall sheathing to be flush with outside face of foundation wall. Exception noted.
- All studs, plates, backing, blocking and bridging to be no. 2 Spruce - Pine - Fir (SPF) or better.
- All joists, rafters, beams and lintels to be no. 2 Spruce - Pine - Fir (SPF) or better. Exceptions noted.
- Floor joists are to be placed to accommodate heating, plumbing and other services.
- All lintels to be 3-2x10 (3-38x235). Exceptions noted on framing plan.
- Wood in contact with concrete to be dampproofed with Foam sill gasket, 45 lb. tar saturated felt, 6 mil polyethylene or other approved material.
- All wood plates are to be anchored to with 5/8" (16mm) diameter anchor bolts at spacing not exceeding 4'-0" (1,219mm) o.c. Exceptions noted.
- Exterior wood plates are to be level and sealed at contact with concrete foundation.
- Cross-bridging for floor joists and roof joists shall be 2x2 (38X38) diagonal type whenever possible.
- Cross-bridging rows shall be installed at mid-span for joist spans exceeding 7'-0" (2100mm) or at 7"-0" o.c. maximum, unless strapping or sheathing is applied to the underside of joist.
- Roof trusses require and engineer's certificate. For pre-engineered trusses, a certificate may be obtained from the truss fabricator.
- Caulk under all exterior door frames and at both sides of exposed masonry chimneys.
- All roofs sheathing to be 1/2" min.
- All wall sheathing to be 3/8" min.
- All subfloors to be 5/8" min.

Insulation and Ventilation

- Minimum insulation requirements as per **B.C.B.C. 9.36.2.6.B. (with HRV)**
- Walls: RSI = 2.97 (R16.8)
- Attic Space: RSI = 8.67 (R49.2)
- Roof Joist Assemblies: RSI = 4.67 (R26.5)
- Under Slabs: RSI = 1.96 (R11.12)
- \*See building section for project specific requirements.
- 6mil polyethylene vapor barrier shall be installed on the warm side of insulation, except when insulating concrete forms are used.
- Wall insulation to be expanded polystyrene, fiberglass or mineral fibre batt type and/ or closed cell polyurethane insulation.
- Ceiling insulation to be **closed cell** extruded polystyrene type.
- Provide a baffle of air space (equal to soffit venting area) between insulation and roof sheathing at exterior wall line.
- All walls and ceiling between residential spaces and garages or carports shall be insulated.
- Insulation requirements may vary with heating system and with local locations. Verify with local authorities.
- All roof spaces shall be ventilated with soffit, roof or gable vents, or a combination of these equally distributed between the top of roof space and soffits.
- The total unobstructed venting ares for attics and roof spaces shall be minimum 1/300 of the insulated ceiling area. Where the roof slope is less than 1 in 6, or in roofs constructed of roof joists, the unobstructed vent area shall be not less than 1/150.
- Vents for crawlspace must have a minimum total unobstructed area 1/500 of the crawlspace floor area, must be uniformly distributed on opposite sides of the building, and must be designed to prevent the entry of snow, rain, and insects.

- Air Sealing: It is recommended that a blower door test by an independent energy advisor to be conducted on the home prior to drywall insulation. Any leaks in walls or ceiling of new must be sealed. Test results must be submitted to The Building Designer by the energy advisor prior to installation of drywall.

Masonry, chimneys and Fireplaces:

- All masonry work shall be in accordance with the current B.C. Building Code.
- All chimney and fireplace installation shall be governed, inspected and approved by municipal authorities. A separate permit may be required.
- Zero clearance type metal fireplaces and metal chimneys to be CSA approved and installed to manufacturer's specification. Metal lining is recommended for chimney chases.

Finishing:

- All interior and exterior finishes shown on the drawings shall be confirmed by the Owner.
- Gypsum wall board is to be mechanically fastened and not glued to the wall.
- Interior paints, coatings, and sealants to have zero volatile organic compounds (VOCs)
- All horizontal changes in exterior finishes to be flashed.
- Openings in partitions shown without doors are to be full height unless shown otherwise.
- Coat and clothing closets shall have one rod and shelf. Linen closets shall have adjustable shelves where possible. Broom closets shall have one shelf.
- Trim to be solid wood or formaldehyde free MDF.
- All casework material to be formaldehyde free.
- Exterior doors shall be solid core and weather-stripped.
- Garage doors to dwelling area to be solid core, weather-stripped and self closing.
- Flashing, including end-dams, to be installed over all unprotected exterior openings
- All bathrooms shall have a wall medicine cabinet or one lockable cabinet drawer.
- Continuous ridge ventilation.

Heating:

- Installation of entire heating, ventilation and air conditioning system, whether electric, forced air or hot water, must comply with manufacturer's directions (where applicable) and conform to requirements of local codes and regulations in all respects.
- Bathroom exhaust fans must run a min. 4 hours twice per day and/or ventilation must comply with B.C.B.C.9.32.3 code requirements for mechanical ventilation.
- Installation of a Heat Recovery Ventilator is recommended.
- Gas connection will require separate permit and inspection.
- All supply air ducts to be installed overhead in basement unless specified otherwise.
- All return air intakes and registers to be designed and installed for maximum efficiency by a qualified heating contractor. Shop drawings to be submitted to The Building Designer for review prior to installation.

Plumbing:

- All materials, equipment and methods of installation shall be in accordance with requirements outlined in Part 7 of the B.C. Building Code and applicable local regulations.
- When the Owner's property is not located on a municipal sewer system, wells and septic disposal systems are to be located and constructed in accordance with health authorities having jurisdiction.

Electrical:

- Installation of electrical items must comply with B.C. Electrical Code and with the local Safety Authority in all respects.
- Outlet locations must comply with or exceed current minimum requirements outlined in the B.C. Building Code. The minimum requirements are to be used as a guide only, and may be adjusted according to the Owner's and/or local authority's specific requirements beyond the minimum.

Inspections:

- It will be the responsibility of the owner/contractor to give minimum 24 hours noticed to Building Inspection Services for booking an inspection request. The Permit Number must be quoted when requesting an inspection, and the owner/contractor is to ensure that the Building Permit Placard is posted in a conspicuous place on the property such as the driveway entrance.
- All work being inspected must be complete and ready prior to inspection.
- Work must not proceed past any of the stages listed without prior clearance.

Inspections Required by The Building Authority:

1. SITING AND FOUNDATION

When the forms for footings are complete, but prior to placing of any concrete therein; (A string line must be extended between exposed IP's or setbacks pins must be located by a BC Land Surveyor).

2. DAMPROOFING

When foundation concrete damp-proofing, waterproofing and perimeter drains are complete, or after framing of a preserved wood foundation wall and floor assembly and application of damp-proofing, but prior to any backfilling being placed.

3. UNDERSLAB PLUMBING

After the under-slab plumbing has been complete, but PRIOR to backfilling (testing with a minimum of 5psi is required).

4. DAMP-PROOFING

When concrete slab dampproofing or soil gas control measures have been installed, but prior to pouring a concrete slab.

5. FRAMING

When framing and sheathing of the building are complete, including the installation of roof membrane, all exterior doors and windows, fire-stopping, bracing, chimneys, duct work, plumbing, gas venting and wiring, but before any insulation, drywall or other interior or exterior finish is applied which would conceal such work.

6. MASONRY FIREPLACE

During the construction of any masonry fireplace, when cantilevered hearth forms are placed but prior to pouring concrete; at the smoke chamber stage for a free-standing masonry chimney, at the thimble stage; before and factory-built or site constructed fireplace or chimney is enclosed by combustible material; and before the chimney cap is placed on a masonry chimney.

7. INSULATION/STUCCO WIRE

When installation of insulation, vapour barrier and second plane of protection (penetrations through building paper or building wrap are sealed) are complete but PRIOR to placement of any finish thereon. When exterior stucco wire and flashing is complete but prior to application of any scratch coat thereon.

8. FINAL INSPECTION

When all work is complete prior to occupancy.

ABBREVIATIONS

AC.	Acoustic
B.C.	British Columbia Building Code
BD.	Board
B.F.	Bifold door
BLDG.	Building
BM	Beam
B.U.	Built-up
CEIL.	Ceiling
COL.	Column
CONC.	Concrete
CONC. BLK	Concrete block
CONT.	Continuous
C.S.	Crawlspace
D.	Dryer
DIAM.	Diameter
DN.	Down
D.W.	Dishwasher
DIM.	Dimension
ESP	Expanded Poly Styrene
ELEV.	Elevation
EQ.	Equal
F.	Refrigerator
F.D.	Floor drain
FTG.	Footing
FURN.	Furnace
GA.	Gauge
G.I.	Galvanized iron
GYP. BD.	Gypsum board
H.B.	Hose bib
HORIZ.	Horizontal
HT.	Height
H.W.T.	Hot water tank
INSUL.	Insulation
L.X.	Laundry chute
LDRY.	Laundry
LIN.	Linen
LINO.	Linoleum
LOUV.	Louvered
MAX.	Maximum
M.C.	Medicine cabinet
MIN.	Minimum
MFR. SPEC'S	Manufacturer's specifications
MW.	Microwave
N.B.C.	National Building Code
N.I.C.	Not in Contract
N.T.S.	Not to scale
OBSC.	Obscure
O.C.	On centre
O/H	Overhead
PKT	Pocket door
PLYWD	Plywood
P.U.F.	Polyurethane foam (closed cell)
R.	Range
REQ'D	Required
R.C.	Rubber cover
R&S	Rod and shelf
RM.	Room
R.O.	Rough opening
RWL	Rain water leader
S.	Sink
SBPO	Spun Bonded Poly Olefin
S/C	Solid core
SH.	Shower
SUSP.	Suspended
T/O	Top of
TYP.	Typical
U/S	Underside
VERT.	Vertical
V.B.	Vapour barrier
W.	(Clothes) Washer
W/.	With
W.C.	Water closet (bathroom)
WD.	Wood
W.P.	Weatherproof
W.W.M.	Welded wire mesh
XPS.	Extruded Polystyrene (closed cell)



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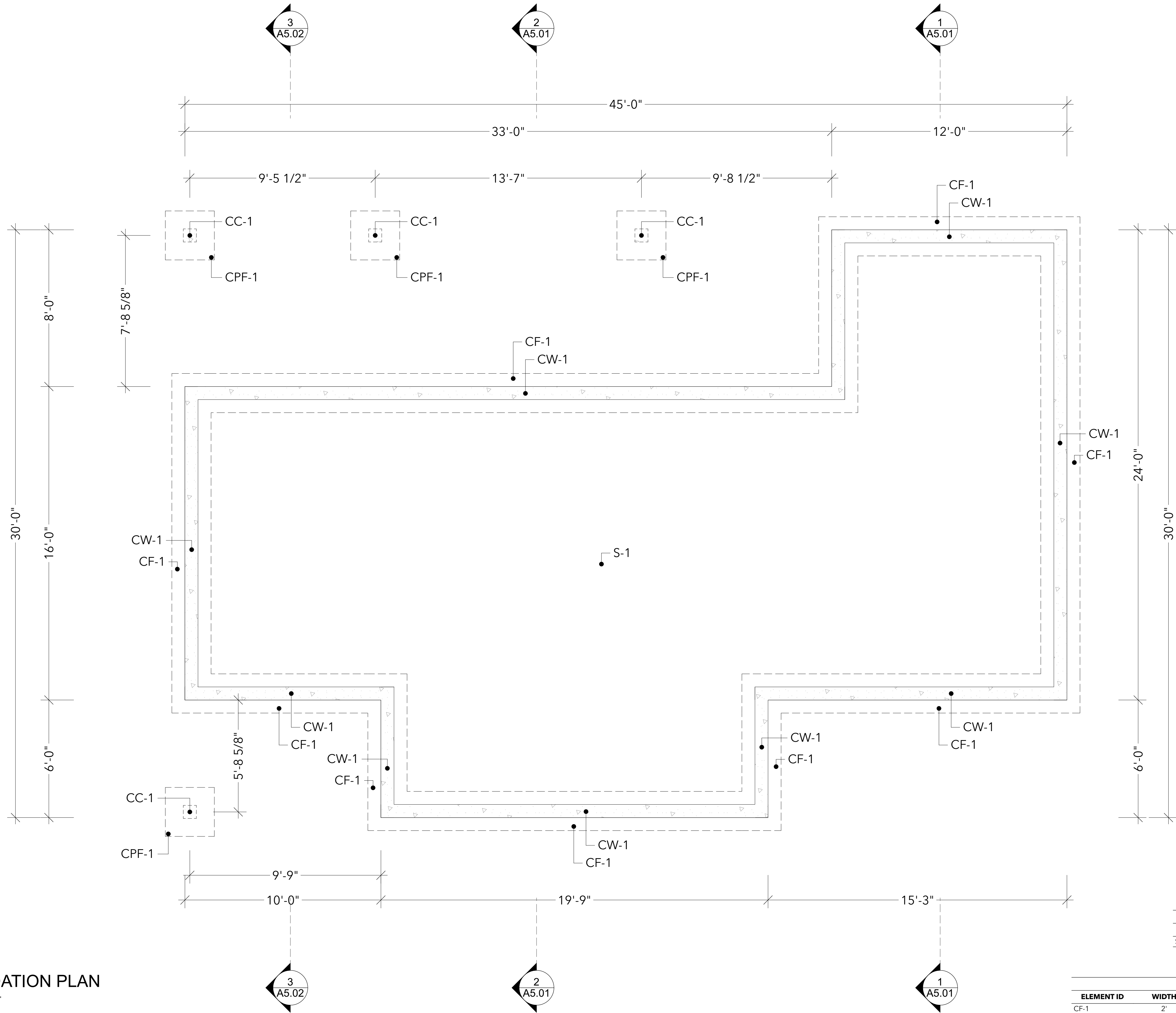
GENERAL NOTES & SPECIFICATIONS



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## FOUNDATION PLAN

SCALE: 3/8" = 1'-0"



### WALL LEGEND

	8" Concrete Fdn. Wall (CF-1)
	2x6 Exterior Wall (W-1)
	2x4 Interior Wall (W-2)
	2x4 Carport Wall (W-3)
	Timber Column
	Beam

SLAB SCHEDULE			
ELEMENT ID	TOP SURFACE AREA	THICKNESS	REINFORCING STEEL
S-1	934.50	4"	10M @ 24" O/C E/W MID HEIGHT

FOUNDATION WALL SCHEDULE				
ELEMENT ID	WIDTH	HEIGHT	MATERIAL	REINFORCING STEEL
CF-1	2'	10"	STRUCTURAL CONCRETE	3-15M REBAR
CW-1	8"	4'	STRUCTURAL CONCRETE	10M @ 16" O/C E/W

CONCRETE COLUMN SCHEDULE						
ELEMENT ID	QUANTITY	WIDTH	WIDTH	HEIGHT	REINFORCING STEEL	NOTES
CC-1	4	8"	8"	4'	4-10M VERT.	
CPF-1	4	2'-6"	2'-6"	8"	3-15M E/W	



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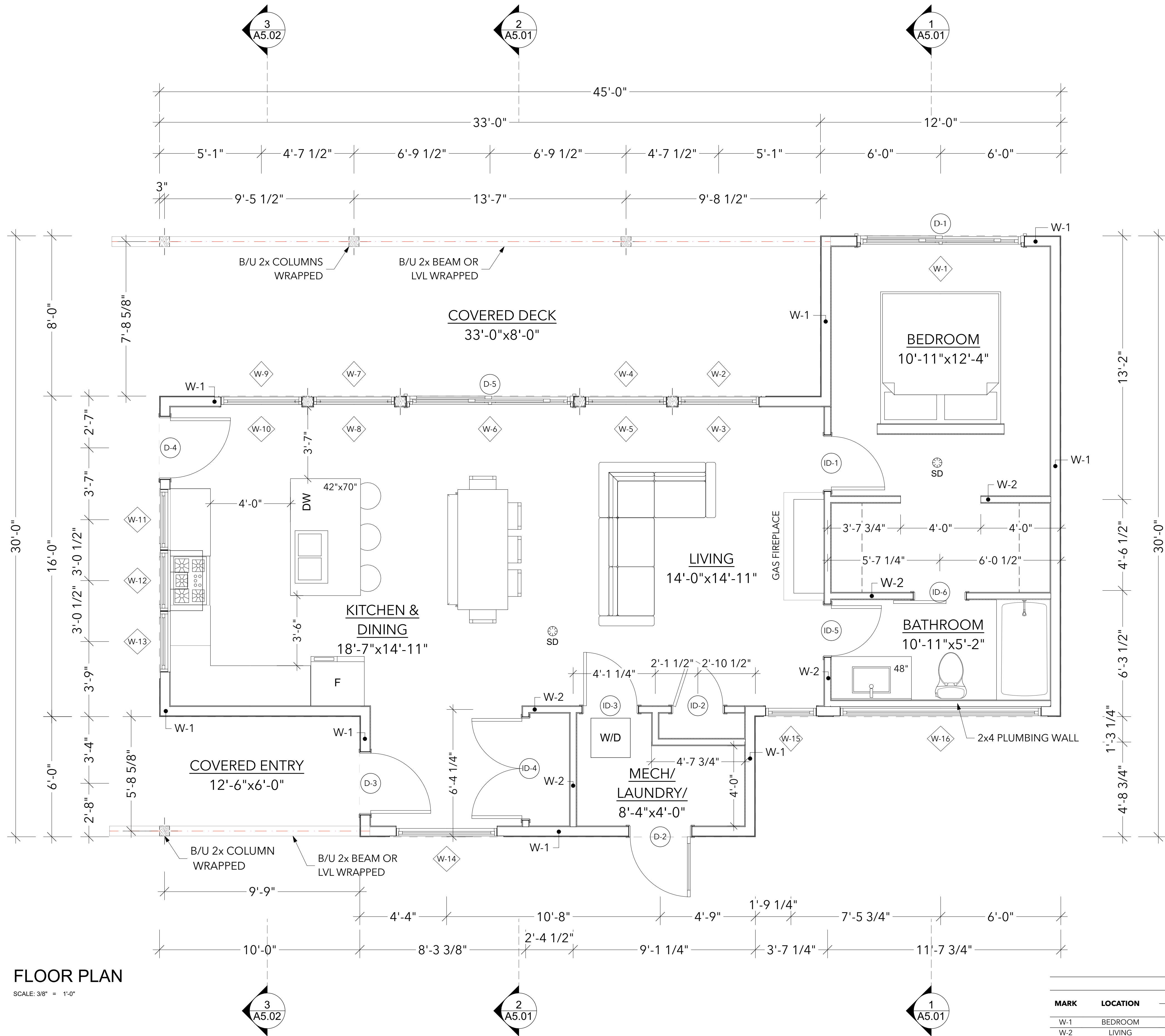
FOUNDATION PLAN

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DOOR SCHEDULE				
MARK	LOCATION	DOOR SIZE		NOTES
		WIDTH	HEIGHT	
D-1	BEDROOM	8'	7'	SLIDING GLASS
D-2	MECH.	3'	7'	HINGED
D-3	ENTRANCE	3'	7'	HINGED
D-4	KITCHEN	3'	7'	HINGED
D-5	DINING	8'	7'	SLIDING GLASS
ID-1	BEDROOM	2'-8"	6'-8"	HINGED
ID-2	PANTRY	2'-6"	6'-8"	HINGED
ID-3	LAUNDRY CLOSET	2'-8"	6'-8"	HINGED
ID-4	ENTRY CLOSET	5'	6'-8"	HINGED
ID-5	BATHROOM	2'-6"	6'-8"	HINGED
ID-6	BATHROOM	2'-6"	6'-8"	SLIDING BARN

## FLOOR PLAN

SCALE: 3/8" = 1'-0"



### WALL LEGEND

	8" Concrete Fdn. Wall (CF-1)
	2x6 Exterior Wall (W-1)
	2x4 Interior Wall (W-2)
	2x4 Carport Wall (W-3)
	Timber Column
	Beam



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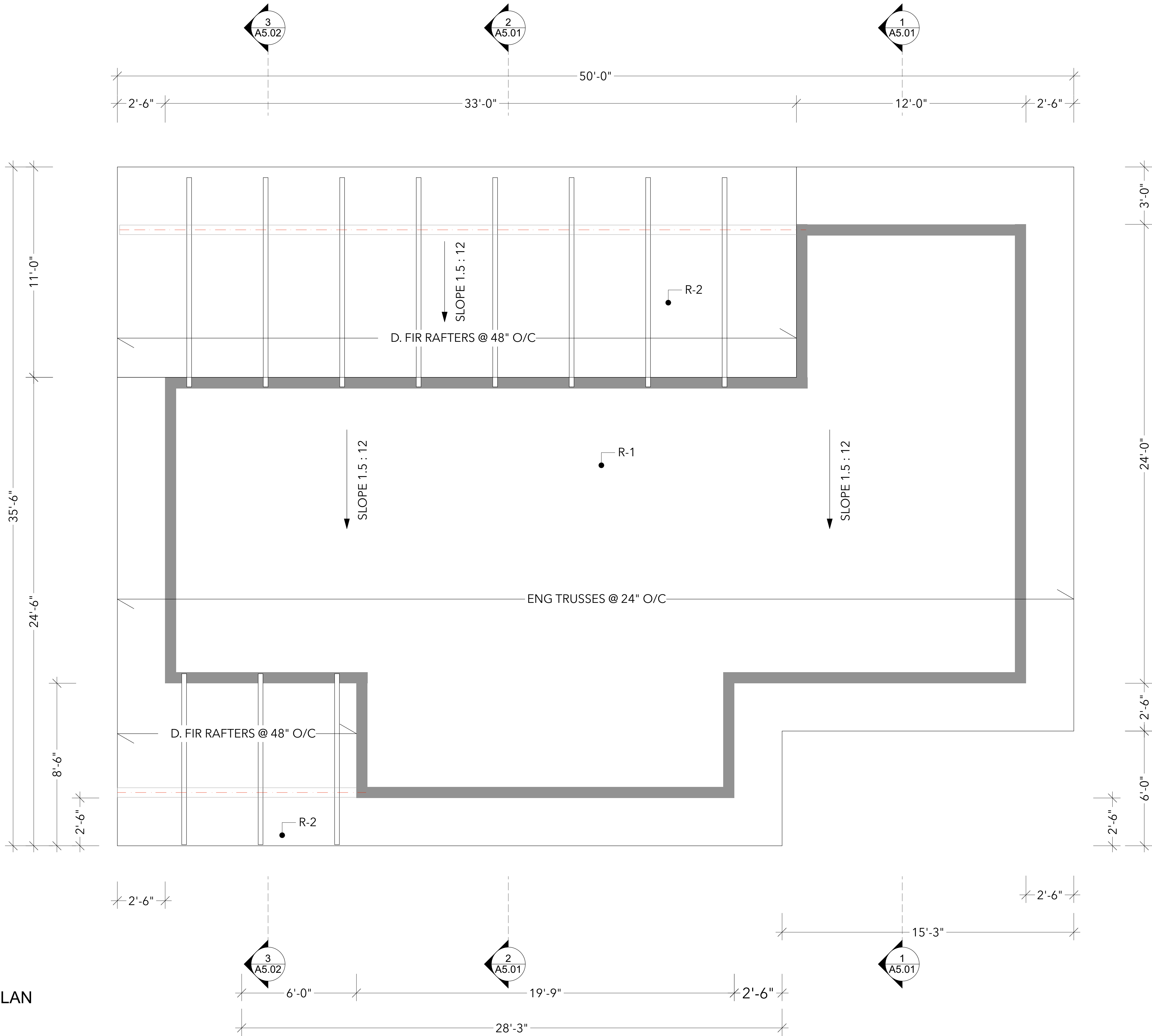
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FLOOR PLAN

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ROOF PLAN

SCALE: 3/8" = 1'-0"



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ROOF PLAN



FINISH LEGEND

- 1

HORIZONTAL FIBRE CEMENT SIDING
- 2

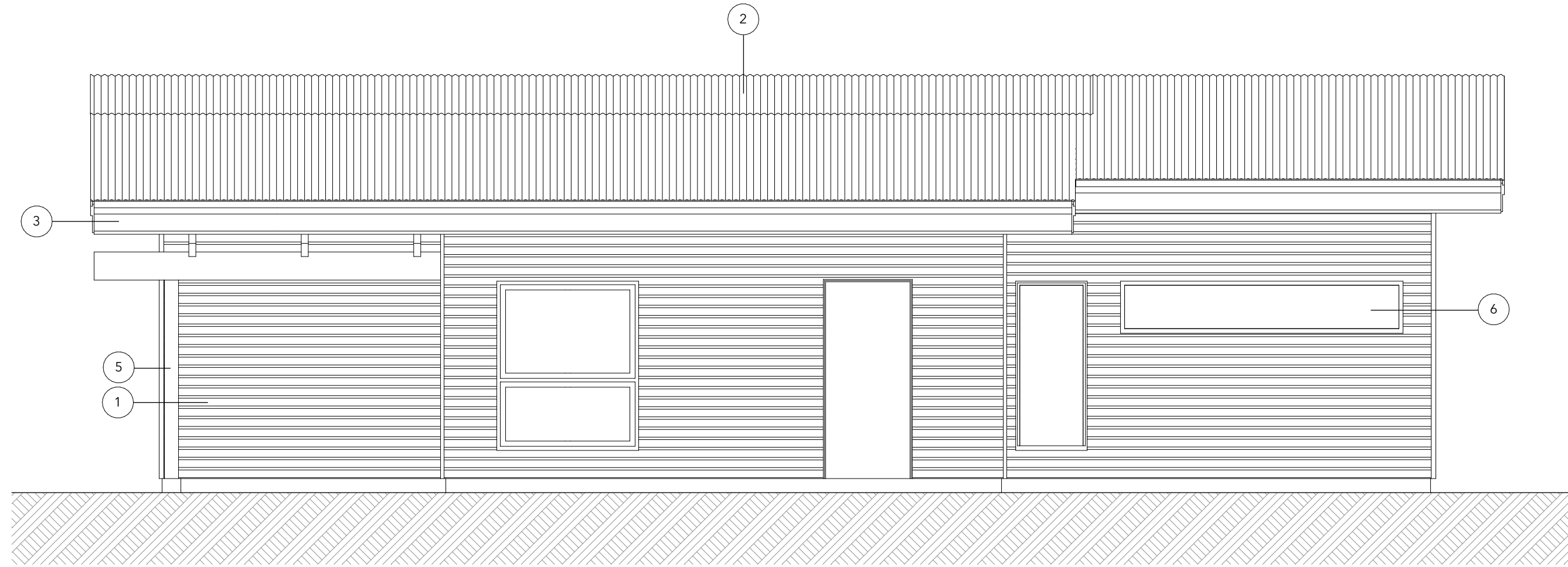
METAL ROOFING
- 3

METAL FASCIA
- 4

D. FIR BEAMS
- 5

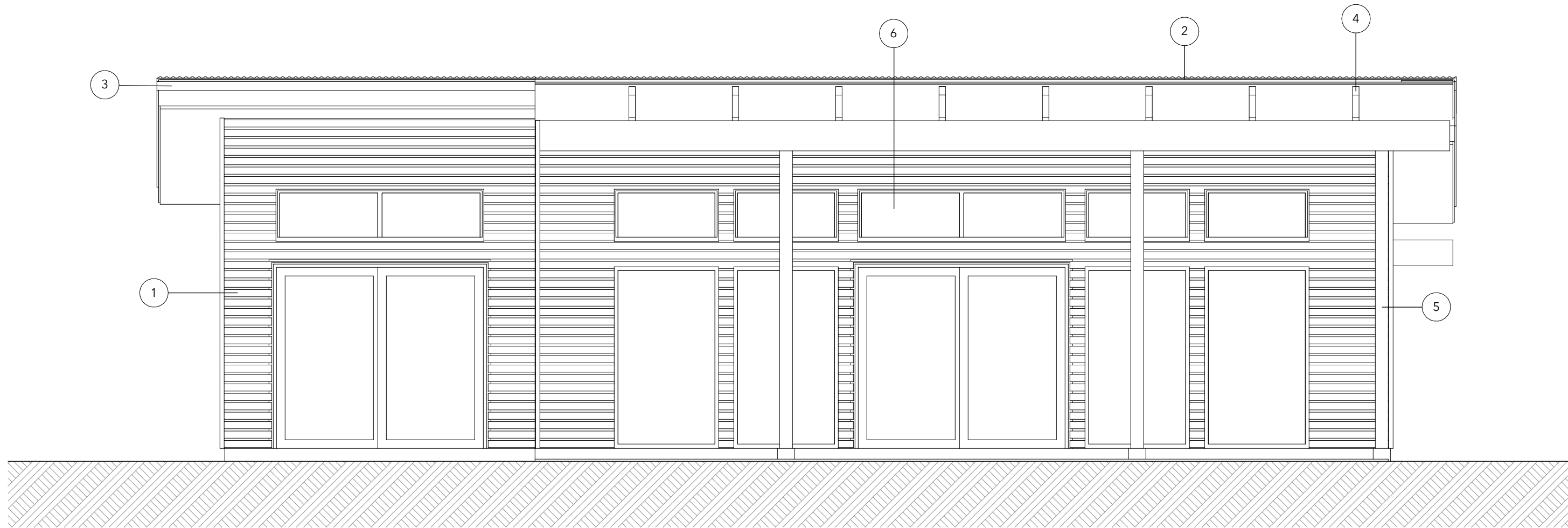
BUILT UP OR LVL BEAMS/POSTS WRAPPED
- 6

TRIPLE GLAZE VINYL WINDOWS



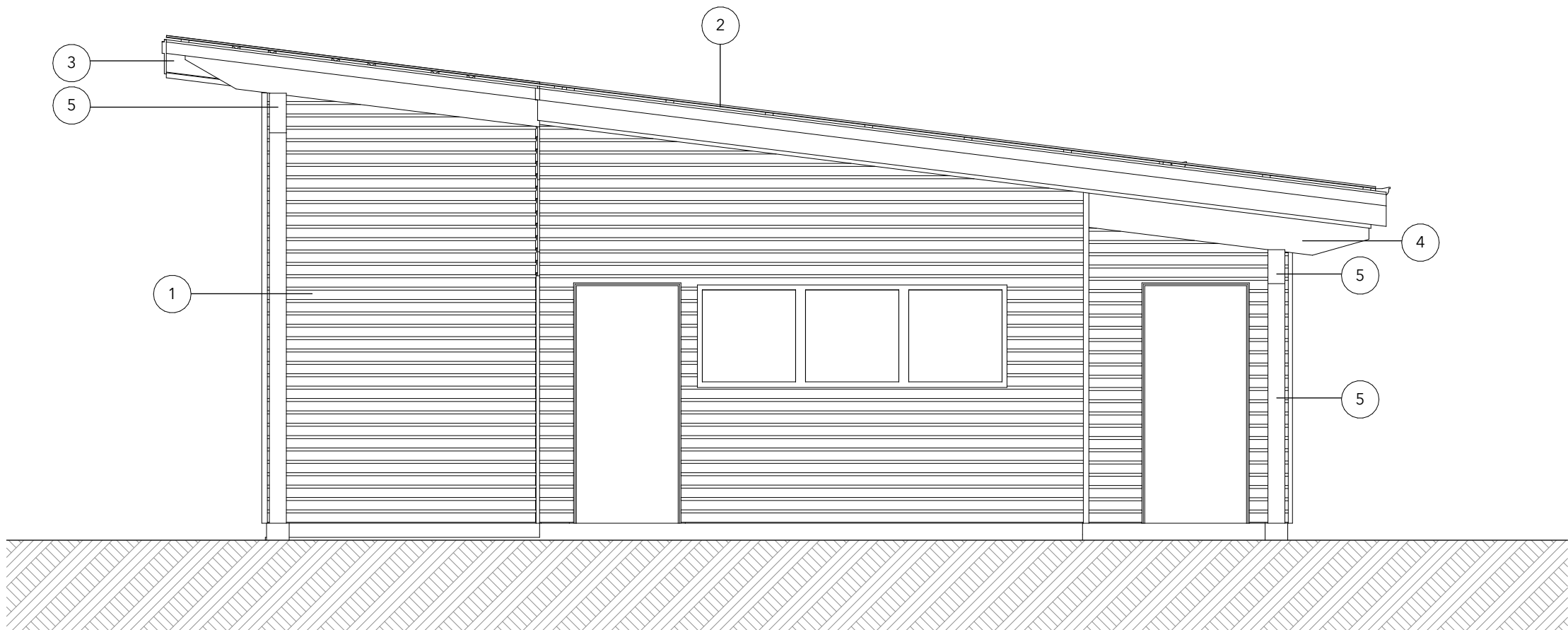
FRONT ELEVATION

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



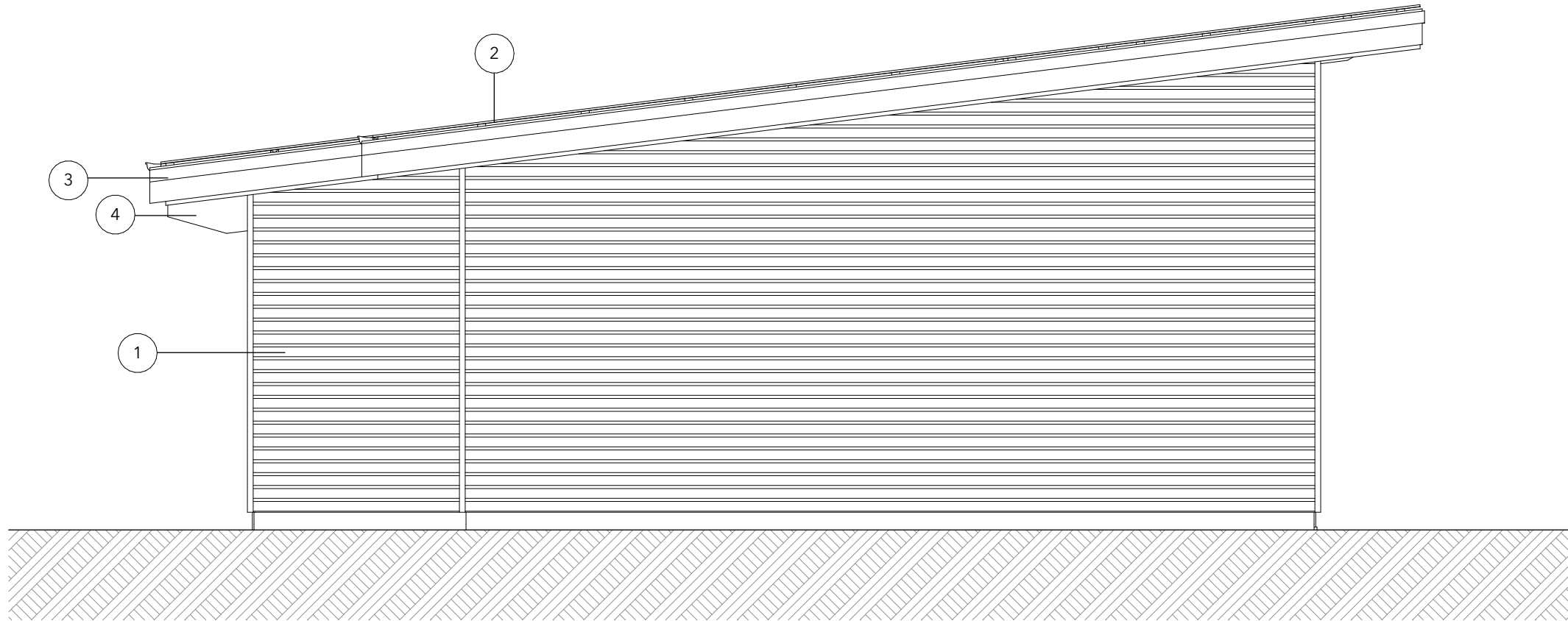
REAR ELEVATION

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



SIDE ELEVATION

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



SIDE ELEVATION

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



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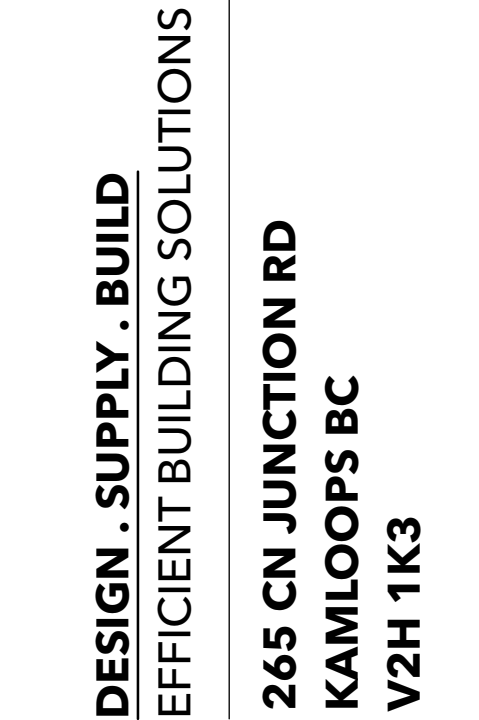
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BUILDING ELEVATIONS



## BUILDING SECTIONS

**CIENCIALA RESIDENCE**  
**773 PARK RD.**  
**ENDERBY B.C.**

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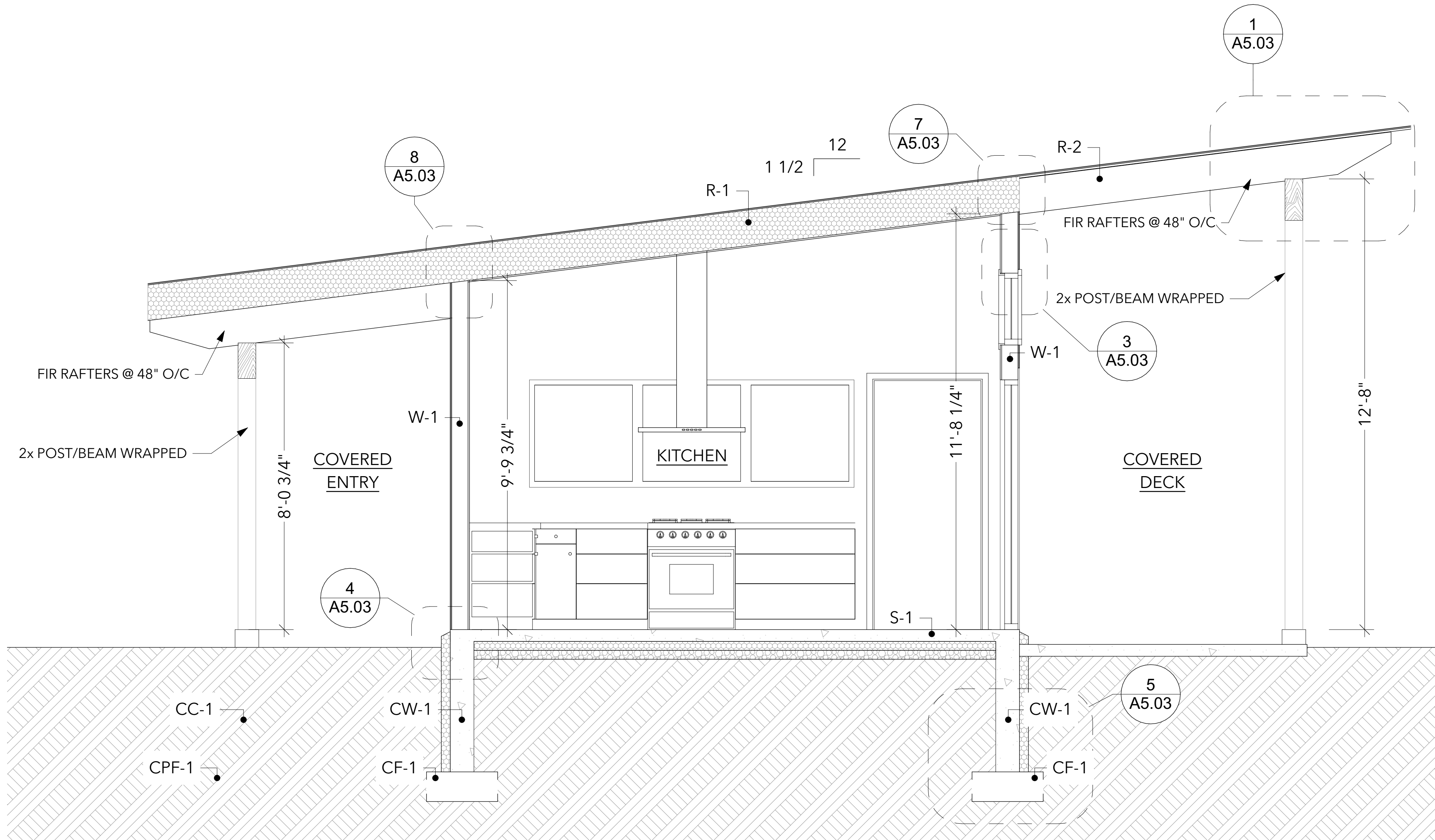
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- 4.04.10: SHEET METAL ROOFING  
COLOUR: TBD
- 4.04: MOISTURE BARRIER
- 3.02.14: 1/2" ROOF SHEATHING  
OSB OR PLYWOOD
- 4.05.31: WOOD SOFFIT  
6" x 5/8"
- 3.02.27: TIMBER RAFTER  
FIR RAFTERS @ 48" O/C



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### SECTION 3

SCALE: 1/2" = 1'-0"

Walls Above and Not In Contact with Ground

2x6 Framing			
	COMPONENT	RSI VALUE	R-VALUE
1	Air Film Exterior	0.03	0.17
2	Fibre cement cladding	0.08	0.45
3	OSB Sheathing, 11.1mm @ .0098 RSI/mm	0.11	0.62
4	Stud Dimensional Lumber - 38mm X 140mm (2"X6") @ 406mm (16") O/C (R24) Nominal Cavity Fill Between Studs	2.66	15.10
5	Polyethylene Vapour Retarder	0.00	0.00
6	Gypsum Board, 12.7mm @ .0063 RSI/mm	0.08	0.45
7	Air Film Interior, wall (heat flow horizontal)	0.12	0.68
TOTAL VALUE		3.08	17.49
EFFECTIVE VALUE REQUIRED W/ HRV		2.97	16.86
EFFECTIVE VALUE REQUIRED W/O HRV		3.08	17.49

Unheated Floor on Ground Above Frost Line

4" Concrete Slab			
	COMPONENT	RSI VALUE	R-Value
1	Air Film Interior	0.16	0.91
2	Concrete Slab 100 mm @ 0.0004 RSI/mm	0.04	0.23
3	Expanded Polystyrene (EPS) 76mm @ 0.035 RSI/mm	2.66	15.10
TOTAL VALUE		2.86	16.24
EFFECTIVE VALUE REQUIRED W/ HRV		1.96	13.20
EFFECTIVE VALUE REQUIRED W/O HRV		1.96	13.20

Roofs - Cathedral Ceilings and Flat Roofs

Eng. I Beam Rafters			
	COMPONENT	RSI VALUE	R-Value
1	Exterior air film	0.03	0.17
2	Metal roofing	0	0.00
3	Eng. trusses (24") on Centre with with R28 batt insulation	4.67	26.52
4	Gypsum Board, 12.7mm @ .0063 RSI/mm	0.08	0.45
5	Interior Air Film	0.11	0.62
TOTAL VALUE		4.89	27.77
EFFECTIVE VALUE REQUIRED W/ HRV		4.67	26.52
EFFECTIVE VALUE REQUIRED W/O HRV		4.67	26.52

#### W-1

- 4.05.02: FIBRE CEMENT SIDING  
COLOR: TBD
- 4.03.03: MOISTURE BARRIER  
NOVA SHIELD BUILDING WRAP
- 3.02.13: 1/2" WALL SHEATHING  
OSB OR PLYWOOD
- 3.02.07: 2x6 WOOD STUDS @ 16" O/C  
#2 OR BETTER
- 4.02: INSULATION  
R24 BATT INSULATION
- 4.03.01: 6 MIL UV POLY  
TAPE AND ACOUSIC SEAL  
ALL OPENINGS AND EXTRUSIONS
- 6.02.01: 1/2" GYPSUM BOARD  
1/2" GYPSUM BOARD  
2 COATS LOW-VOC PRIMER  
2 COATS LOW-VOC PAINT

#### W-2

- 3.02.09: 2x4 WOOD STUDS@ 16" O/C  
#2 OR BETTER
- 6.02.01: 1/2" GYPSUM BOARD  
1/2" GYPSUM BOARD  
2 COATS LOW-VOC PRIMER  
2 COATS LOW-VOC PAINT

#### S-1

- 3.01.06: CONCRETE SLAB  
4" CONCRETE
- 4.03.01: 6 MIL UV POLY  
TAPE AND ACOUSIC SEAL  
ALL OPENINGS AND EXTRUSIONS
- 4.02.07: RIGID INSULATION  
3" EPS OR XPS RIGID FOAM BOARD
- 2.07.05: 1" CLEAR STONE  
4" CLEAR ROCK  
LIGHTLY COMPACTED
- 5.01.07: UNDER SLAB RADON  
PIPING  
4" PERFORATED PVC PIPE,  
TERMINATE INTO MECH ROOM  
AND CAP

#### CF-1/CW-1

- 3.01.01: CONCRETE FOOTING  
24" X 8" FOOTING  
3-15M REINF.  
15M TIE @ 4'-0" O.C.
- 3.01: CONCRETE FOUNDATION  
8" CONCRETE FOUNDATION  
15M VERTICAL @ 16" O/C  
15M HORIZ. @ 16" O/C
- 4.02.07: RIGID INSULATION  
3" EPS OR XPS RIGID FOAM BOARD

#### R-1

- 4.04.10: SHEET METAL ROOFING  
COLOUR: TBD
- 4.04: MOISTURE BARRIER
- 3.02.14: 1/2" ROOF SHEATHING  
OSB OR PLYWOOD
- 3.02.20: ENGINEERED RAFTERS  
ENGINEERED I BEAM RAFTERS @ 24" O/C
- 4.02.09: BATT INSULATION  
R28 BATT INSULATION
- 4.03.01: 6 MIL UV POLY  
TAPE AND ACOUSIC SEAL  
ALL OPENINGS AND EXTRUSIONS
- 6.02.01: 1/2" GYPSUM BOARD  
1/2" GYPSUM BOARD  
2 COATS LOW-VOC PRIMER  
2 COATS LOW-VOC PAINT
- 4.05.31: WOOD SOFFIT  
6" x 5/8"

#### R-2

- 4.04.10: SHEET METAL ROOFING  
COLOUR: TBD
- 4.04: MOISTURE BARRIER
- 3.02.14: 1/2" ROOF SHEATHING  
OSB OR PLYWOOD
- 4.05.31: WOOD SOFFIT  
6" x 5/8"
- 3.02.27: TIMBER RAFTER  
FIR RAFTERS @ 48" O/C



DESIGN . SUPPLY . BUILD  
EFFICIENT BUILDING SOLUTIONS

265 CN JUNCTION RD  
KAMLOOPS BC  
V2H 1K3

CONSULTANT:

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773 PARK RD.  
ENDERBY B.C.

1" ACTUAL

IF THE ABOVE DIMENSION DOES  
NOT MEASURE ONE INCH (1")  
EXACTLY, THIS DRAWING WILL HAVE  
BEEN ENLARGED OR REDUCED,  
AFFECTING ALL LABELED SCALES.

BY	REVISIONS	DATE
BG	IFC	21/5/10

Date: 2021-05-10

Scale: AS NOTED

Drawn:

Job:

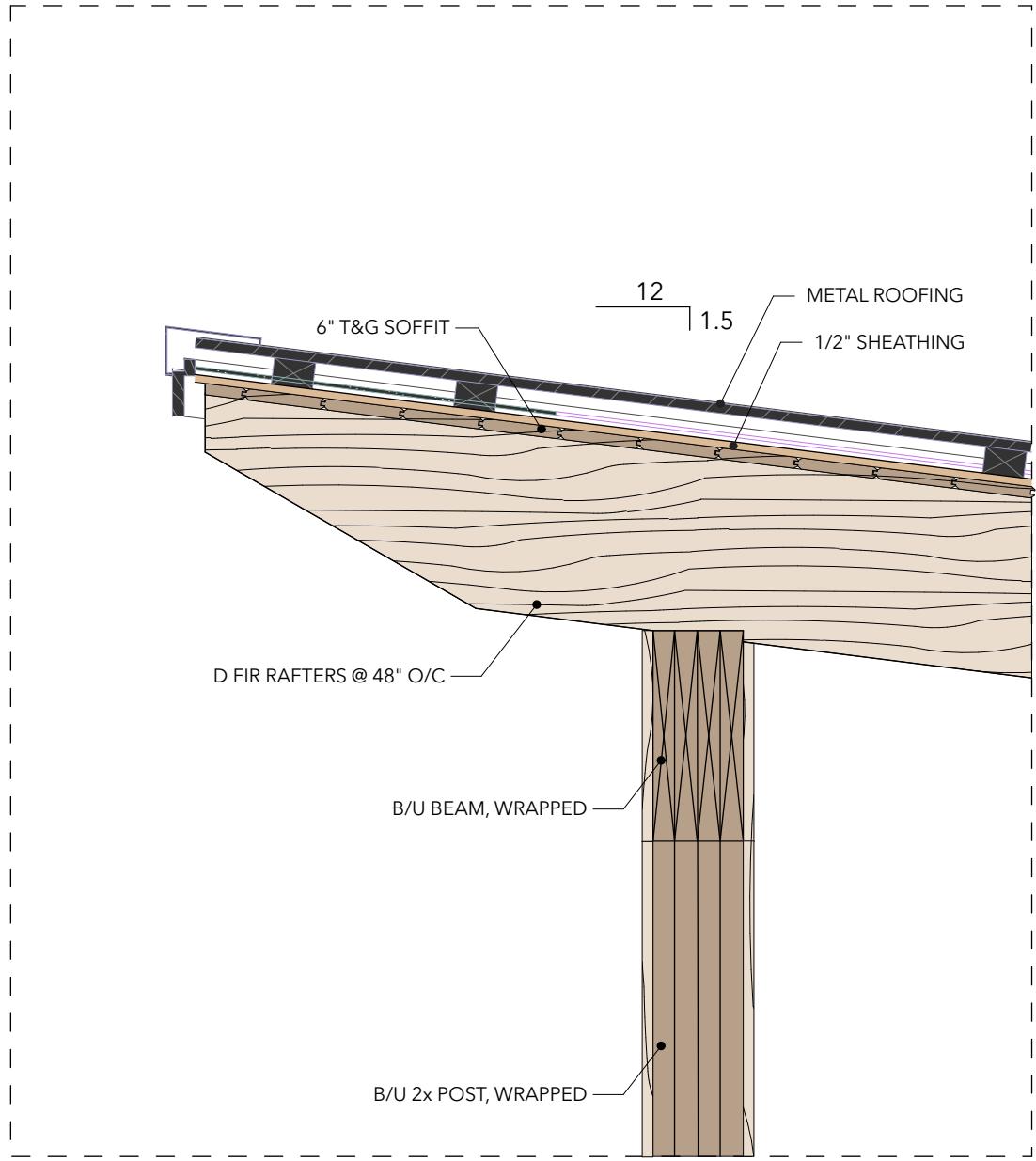
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A5.02

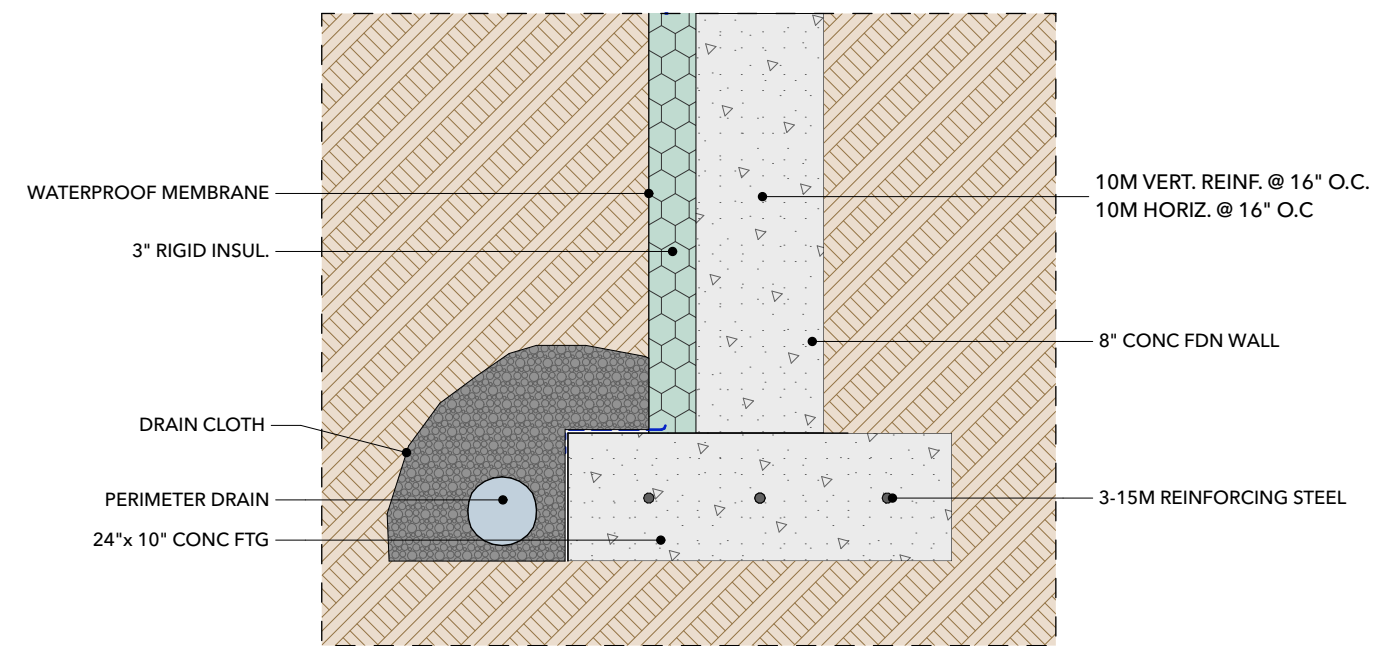
Plotted On: 2021-05-10

BUILDING SECTIONS CONT.

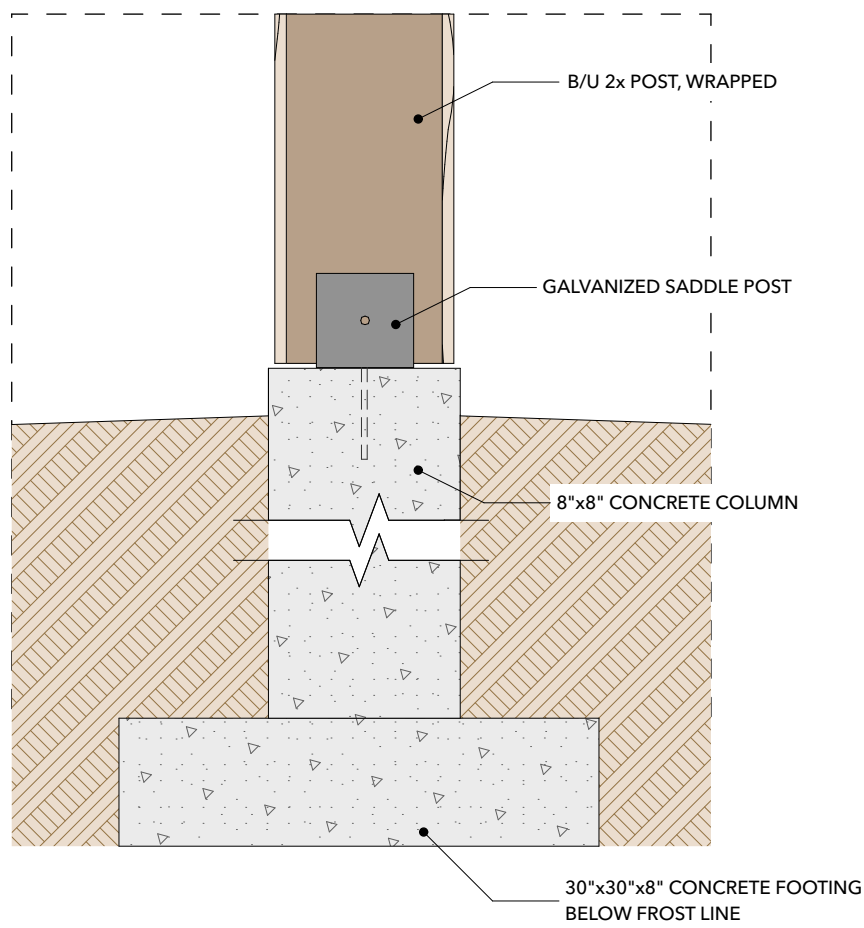




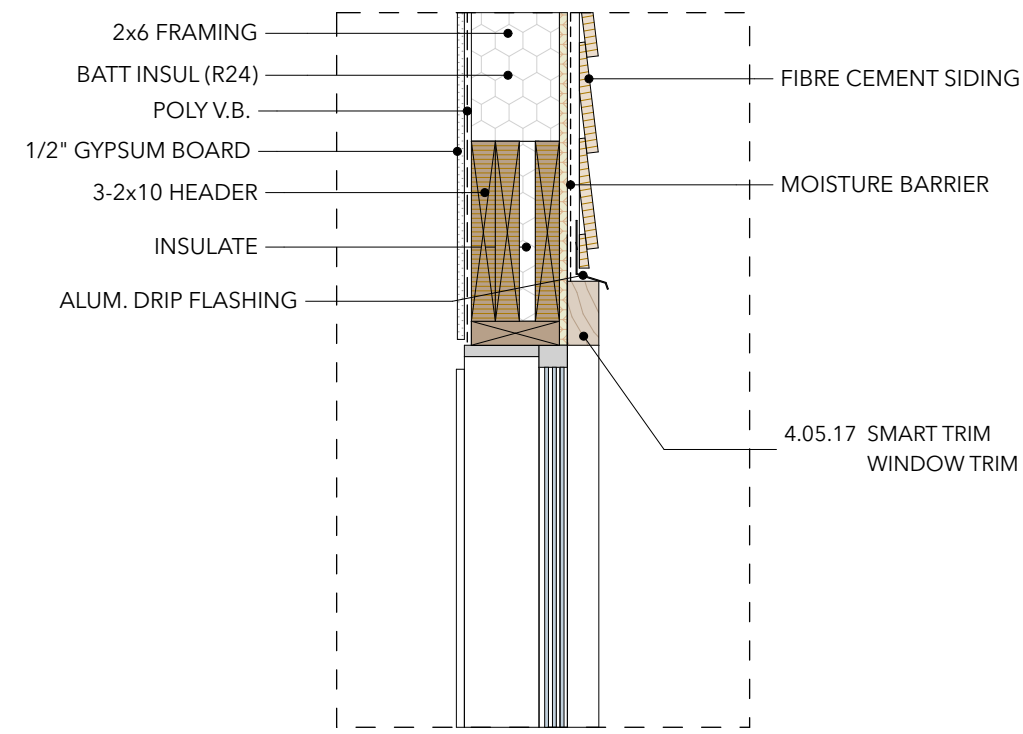
1 EXTERIOR RAFTER OVERHANG  
SCALE: 1" = 1'-0"



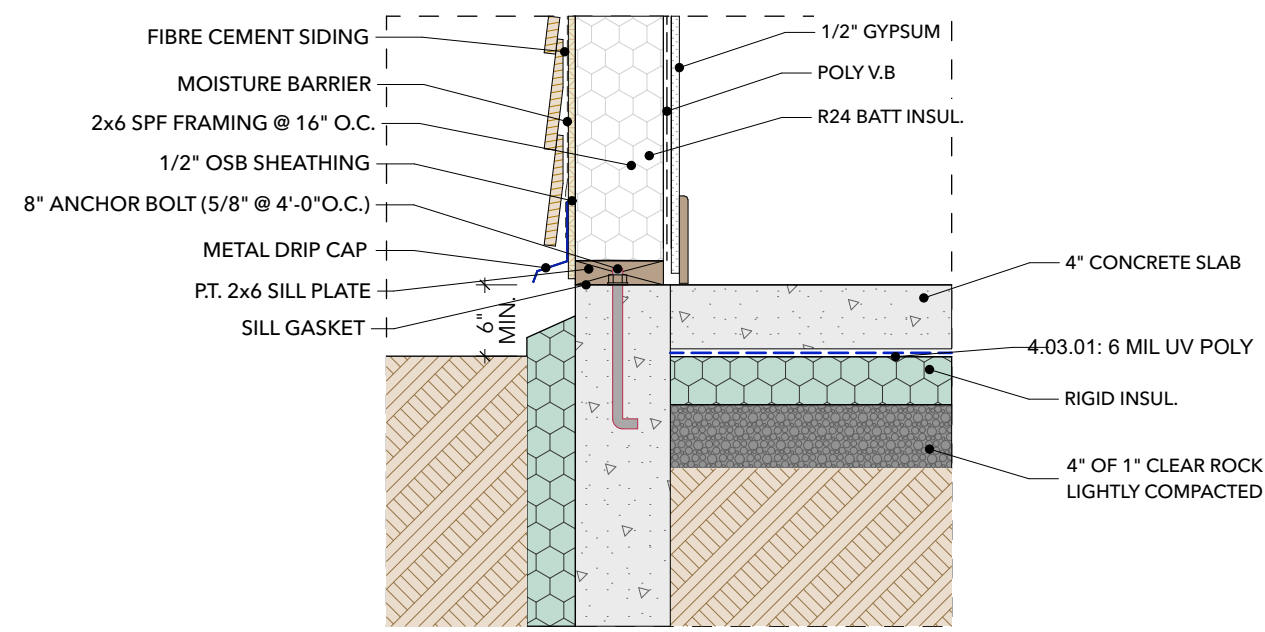
5 FOUNDATION WALL DETAIL  
SCALE: 1" = 1'-0"



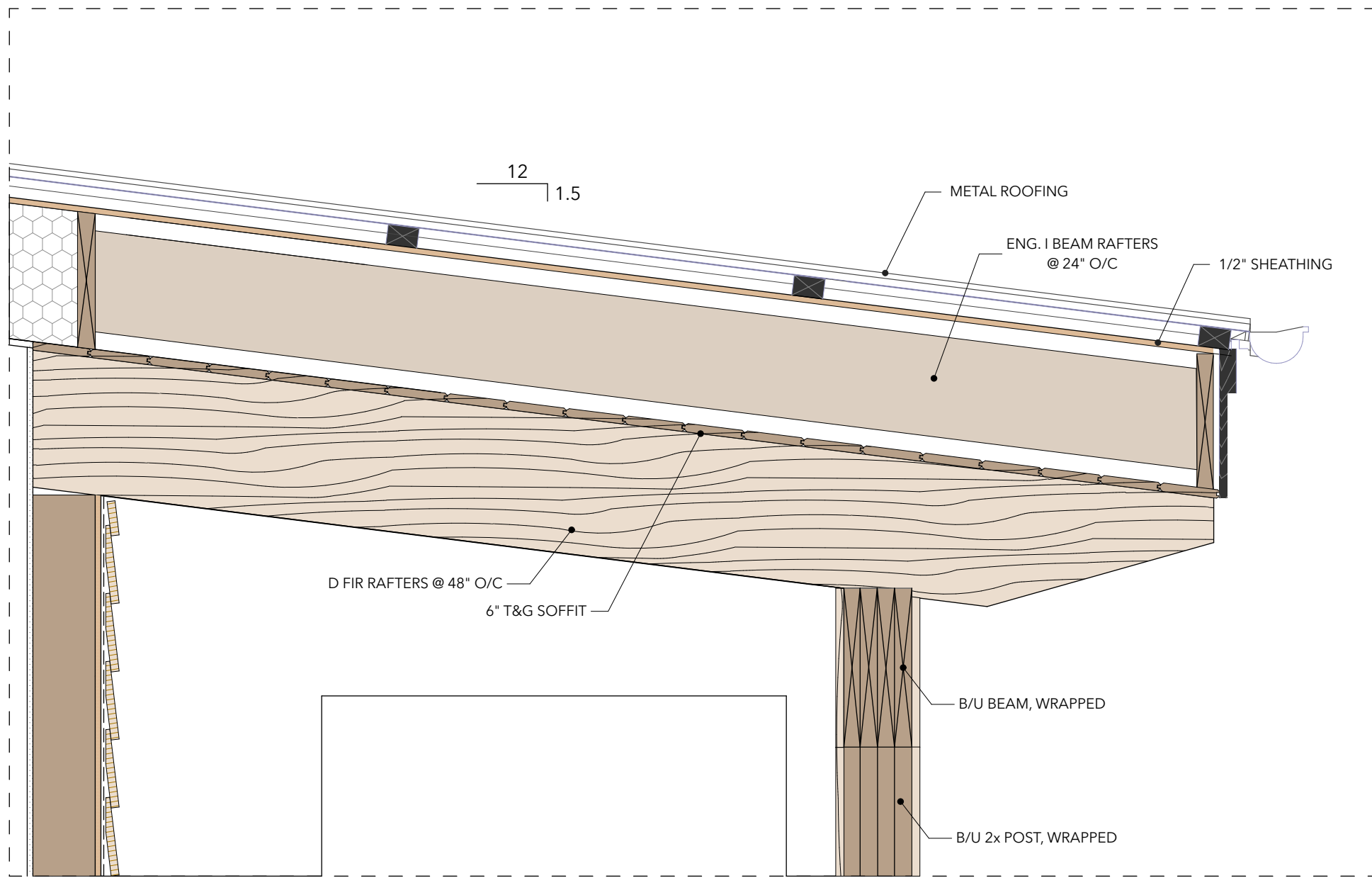
2 POST DETAIL  
SCALE: 1" = 1'-0"



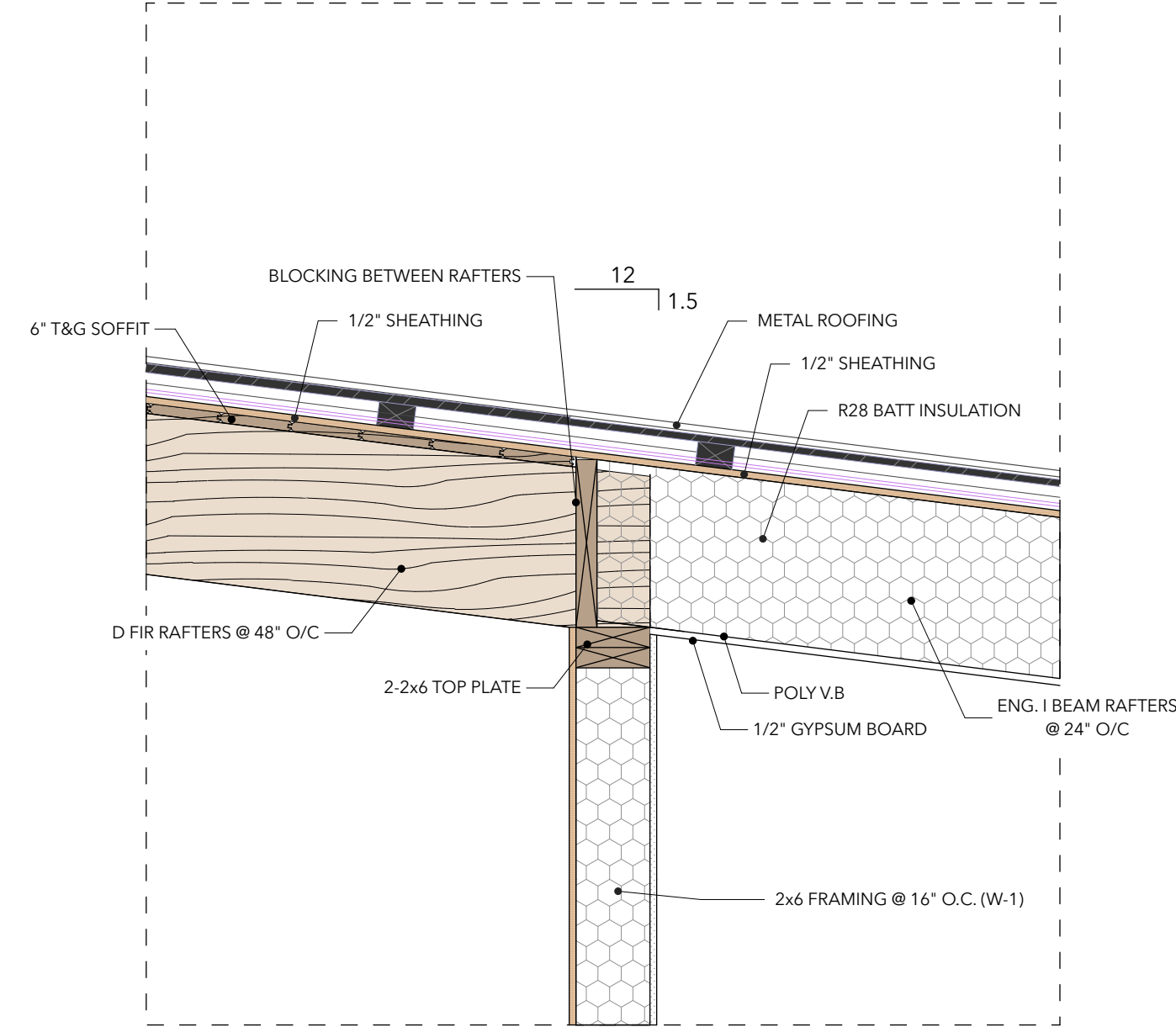
3 HEADER DETAIL  
SCALE: 1" = 1'-0"



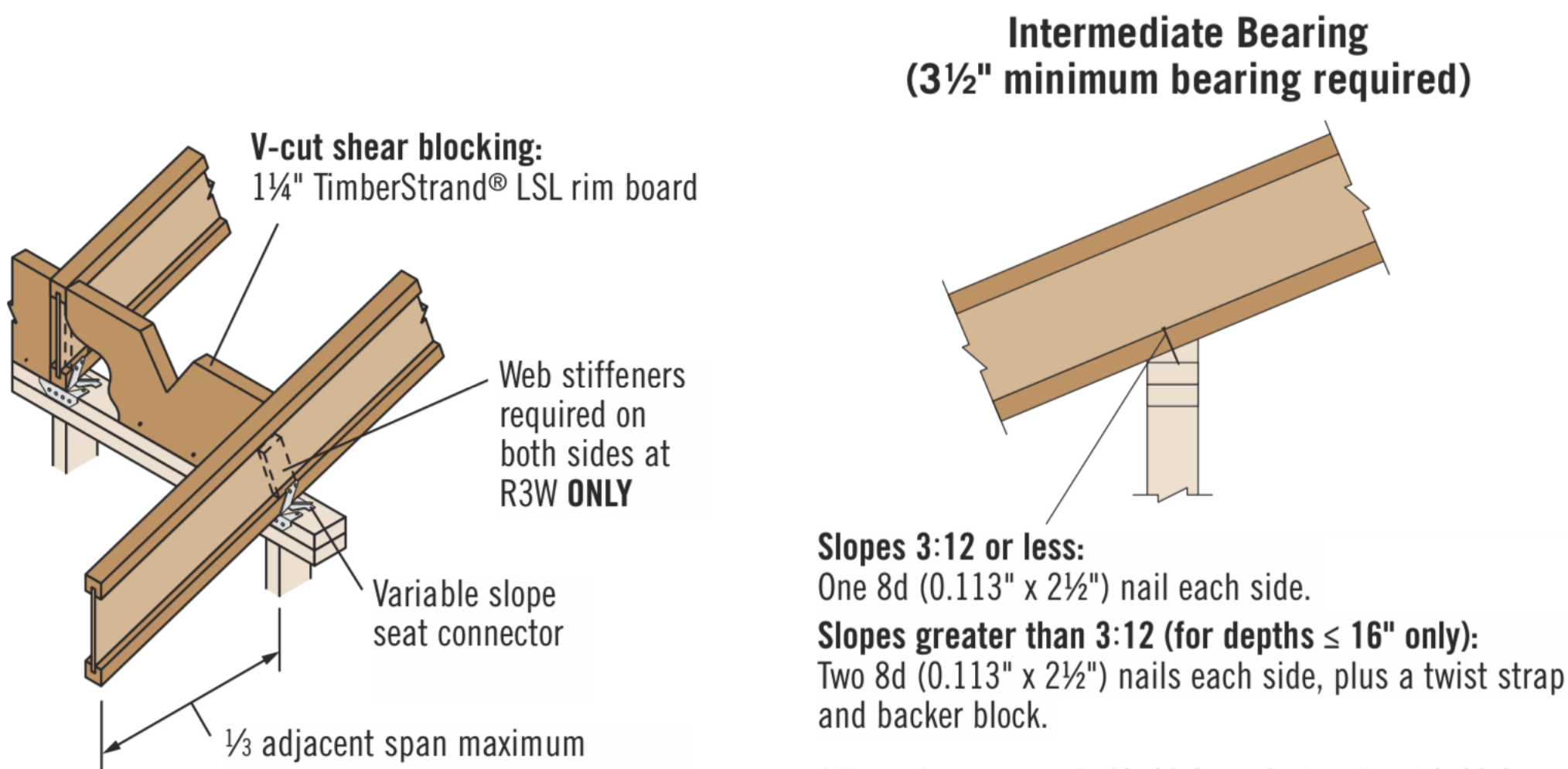
4 EXTERIOR WALL DETAIL  
SCALE: 1" = 1'-0"



6 COVERED ENTRY  
SCALE: 1" = 1'-0"



7 COVERED DECK RAFTERS  
SCALE: 1" = 1'-0"



8 RAFTER TO WALL CONNECTION  
SCALE: 1" = 1'-0"