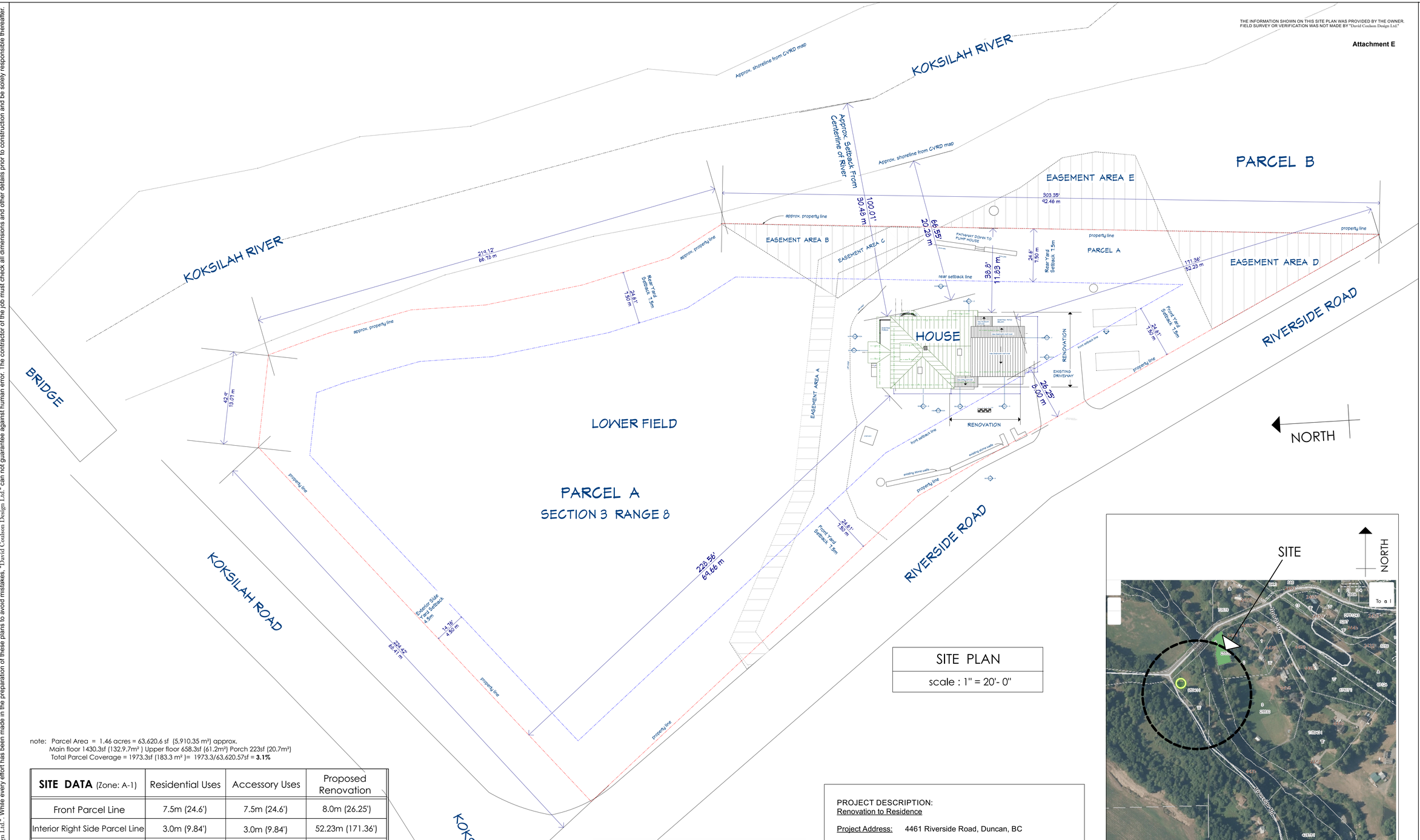
THE INFORMATION SHOWN ON THIS SITE PLAN WAS PROVIDED BY THE OWNER. FIELD SURVEY OR VERIFICATION WAS NOT MADE BY "David Coulson Design Ltd."

Attachment E



note: Parcel Area = 1.46 acres = 63,620.6 sf (5,910.35 m²) approx.
Main floor 1430.3sf (132.9.7m²) Upper floor 658.3sf (61.2m²) Porch 223sf (20.7m²)
Total Parcel Coverage = 1973.3sf (183.3 m²)= 1973.3/63,620.57sf = **3.1%**

SITE DATA (Zone: A-1)	Residential Uses	Accessory Uses	Proposed Renovation
Front Parcel Line	7.5m (24.6')	7.5m (24.6')	8.0m (26.25')
Interior Right Side Parcel Line	3.0m (9.84')	3.0m (9.84')	52.23m (171.36')
Interior Left Side Parcel Line	3.0m (9.84')	3.0m (9.84')	69.66m (228.56')
Exterior Side Parcel Line	4.5m (14.76')	4.5m (14.76')	69.66m (228.56')
Rear Parcel Line	7.5m (24.6')	7.5m (24.6')	11.83m (38.8')
Building Height	10.0m (32.8')	7.5m (24.6')	7.46m (24.47')
Parcel Coverage (all buildings)	**10 %** overall		**3.1 %** [1973.3sf (183.3m²) / 63,620.6sf (5,910.35m²)]
Floor Space Ratio	N / A	N / A	N / A
Parking	N / A	N / A	N / A

TABLE OF CONTENTS

PROJECT DESCRIPTION:
Renovation to Residence

Project Address: 4461 Riverside Road, Duncan, BC

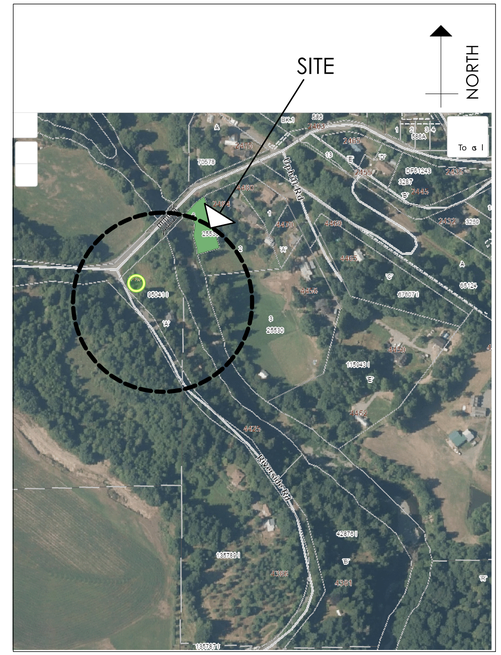
Legal Description : Parcel A (DD 95041I) of Section 3, Range 8
Quamichan District
PID : 009-533-141
Cowichan Valley Regional District Area E
Zoning: A-1 Primary Agricultural

Owner Contact: Che Hawkes & Jessica Ellis
4461 Riverside Road, Duncan, BC, V9L 6M9

Design Approved: _____
Client Signature

_____
Date

SITE PLAN
scale : 1" = 20'- 0"



SITE LOCATION

SITE PLAN & SITE DATA
scale : as shown

SHEET A1

Scale: as shown

11/03/2021

Design: David Coulson
Drawn: Bill Robson
Structural :
Verified: David Coulson

Revision 12/03/2021
Revision 02/22/2022

Che Hawkes & Jessica Ellis

4461 Riverside Road, Duncan, BC

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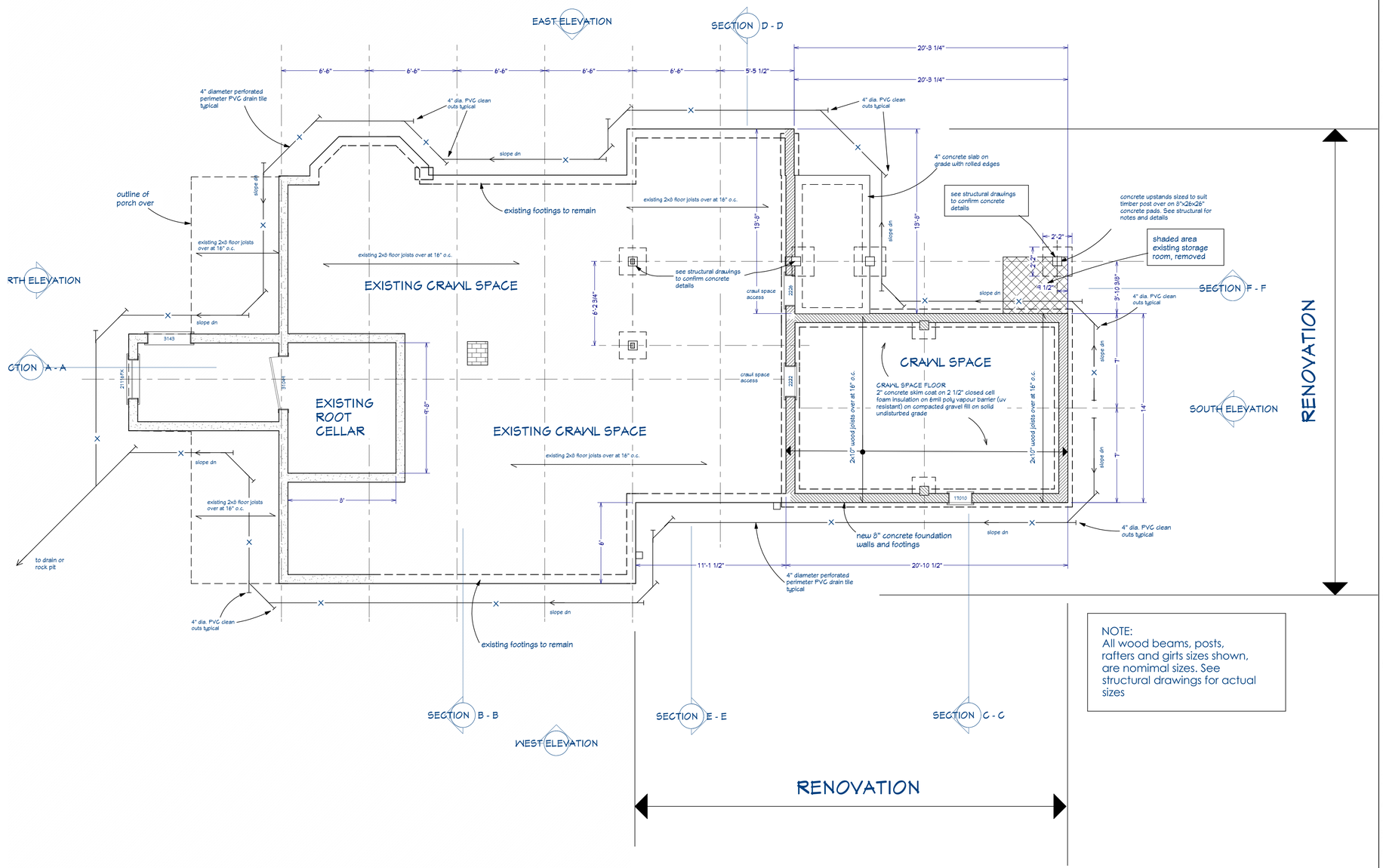
contemporary residential design & millwork,
specializing in heritage restoration,
design, specialized consultation, construction
5372 Miller Road, Duncan, B.C. V9L 6R2
Tel/Fax (250) 746-5372 Email: coulsondesign@shaw.ca
Website: davidcoulsondesign.com

GENERAL NOTES

01. Contractors to verify all dimensions prior to commencement of work and shall notify the owner and designer of any errors and discrepancies.
02. Noted dimensions shall take precedence over scaled drawings.
03. Exterior dimensioning is to the face of concrete/ framing. Interior dimensioning is to center line of partition. Unless otherwise noted.
04. Structure noted as "engineered" shall be engineered by certified structural engineer. Where required, drawings shall be stamped with engineer's seal.
05. All joists/beams sized herein, not noted "engineered by others" based on tables on BCBC 2018.
06. All work shall be equal in all respects to good construction practice, and shall conform to current zoning bylaws of the authority having jurisdiction and the British Columbia Building Code 2018 (BCBC).
07. It is the responsibility of the owner and contractor to have site soil conditions inspected and advise designer of any soil conditions which may require special foundation design.
08. All structural wood to be SPF #2 or better unless noted otherwise.
09. All roof trusses must be engineered and installed in accordance with manufacturers details and specifications if referenced in these plans.
10. Wood sill plates to be separated from concrete by waterproof sill gasket complete with 12.5mm (1/2") anchor bolts to foundation.
11. All wood in contact with concrete must be pressure treated or separated with approved material.
12. Conform to all fire and life safety provisions of the BCBC 2018, Part 9.
13. Verify existing and proposed grades prior to setting out. Cut, fill and compact according to building elevations. Verify maximum allowable building heights in the local jurisdictions zoning bylaws and ensure that the building is located to suit where not otherwise indicated.
14. Provide stepped footings where required in accordance with existing or future grades. Underside of bottom plate of framed wall shall not be less than 204mm (8") above adjacent grade.
15. Provide minimum 204mm (8") clearance from grade to wood cladding materials per BCBC 2018, 9.27.2.4. Exterior foundation walls shall not extend less than 204mm (8") above grade, unless adjacent to impermeable surface.
16. 20 mPa concrete to be used exclusively unless noted.
17. Install graspable handrail to all stairs @ 914mm (36") above nosing, per BCBC 2018.
18. Install guardrail at all balconies, decks and porches greater than 610mm (24") above adjacent grade. Install guardrail 1067mm (42") above deck. Install pickets where indicated @ max. 95mm (3 3/4") spacing between each. Guard to resist loads per BCBC 2018, 9.8.8.2. Install per BCBC 2018.
19. Install self-adhesive waterproof membrane around all openings according to the most current accepted building envelope guideline. Install membrane over top of properly lapped building paper at openings. Follow details provided within this set and assume similar for situations not expressly detailed.
20. PVC roof membranes shall conform to material standard CAN/CGSB 37.54, "Polyvinyl Chloride Roofing & Waterproofing Membrane" and installed per BCBC 2018, 9.26.16 "PVC Sheet Roofing."
21. Full rainscreen system to be implemented and conform to BCBC 2018, 9.27 Cladding and Moisture Protection as detailed within this set. If required.



NOTE:
All wood beams, posts, rafters and girts sizes shown, are nominal sizes. See structural drawings for actual sizes

PROPOSED FOUNDATION PLAN
scale : 1/4" = 1'-0"

NORTH

FOUNDATION PLAN & GENERAL NOTES
scale : 1/4" = 1'-0"

SHEET A2
Scale: as shown
11/03/2021

Design: David Coulson
Drawn: Bill Robson
Structural :
Verified: David Coulson

Revision 12/03/2021
Revision 02/22/2022

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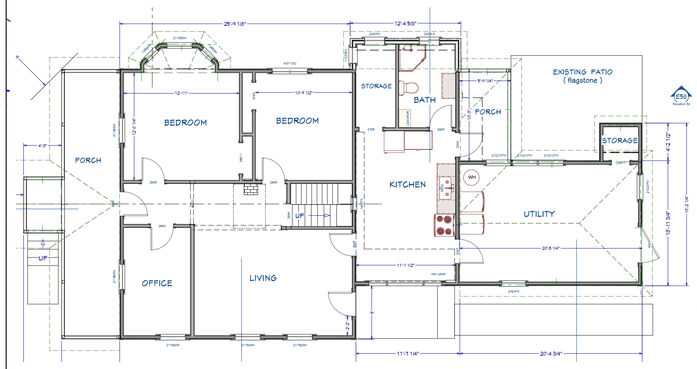
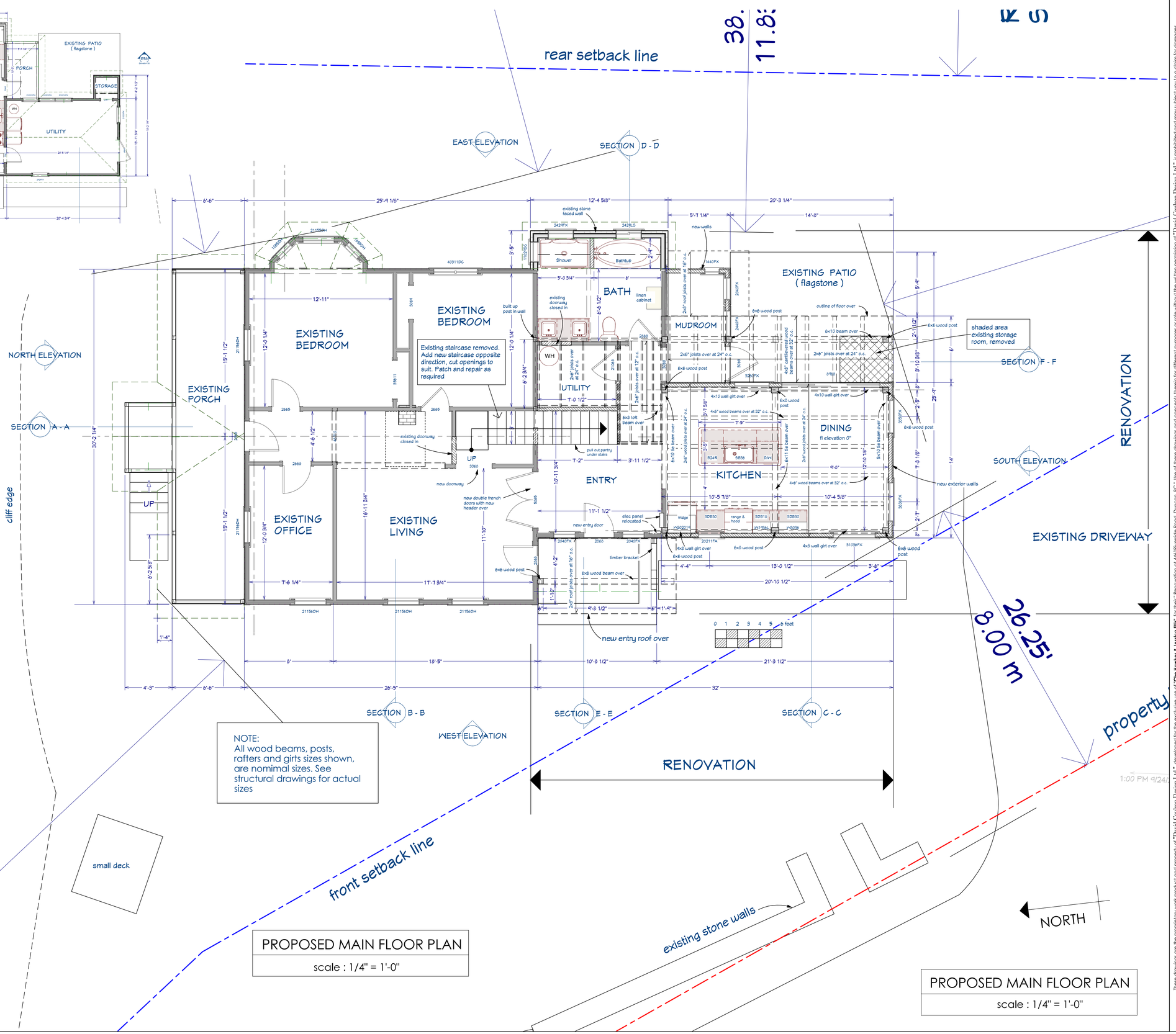


EXISTING MAIN FLOOR PLAN
scale : 1/8" = 1'-0"



NOTE:
All wood beams, posts, rafters and girts sizes shown, are nomimal sizes. See structural drawings for actual sizes

PROPOSED MAIN FLOOR PLAN
scale : 1/4" = 1'-0"

PROPOSED MAIN FLOOR PLAN
scale : 1/4" = 1'-0"

SHEET A3

Scale: as shown

11/03/2021

Design: David Coulson
Drawn: Bill Robson
Structural :
Verified: David Coulson

Revision 12/03/2021
Revision 02/22/2022

Che Howkes & Jessica Ellis
4461 Riverside Road, Duncan, BC

DAVID COULSON DESIGN Ltd.
commercial, institutional, residential & mixed-use building design, specialized consultation, construction management in heritage restoration.
5372 Miller Road, Duncan, B.C. V9L 6R2
Tel/Fax (250) 746-5372 Email: coulsondesign@shaw.ca
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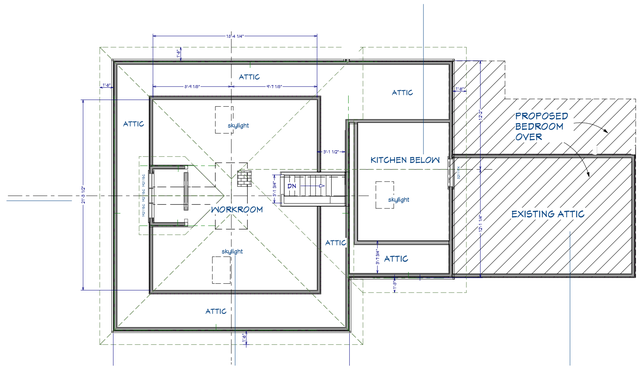
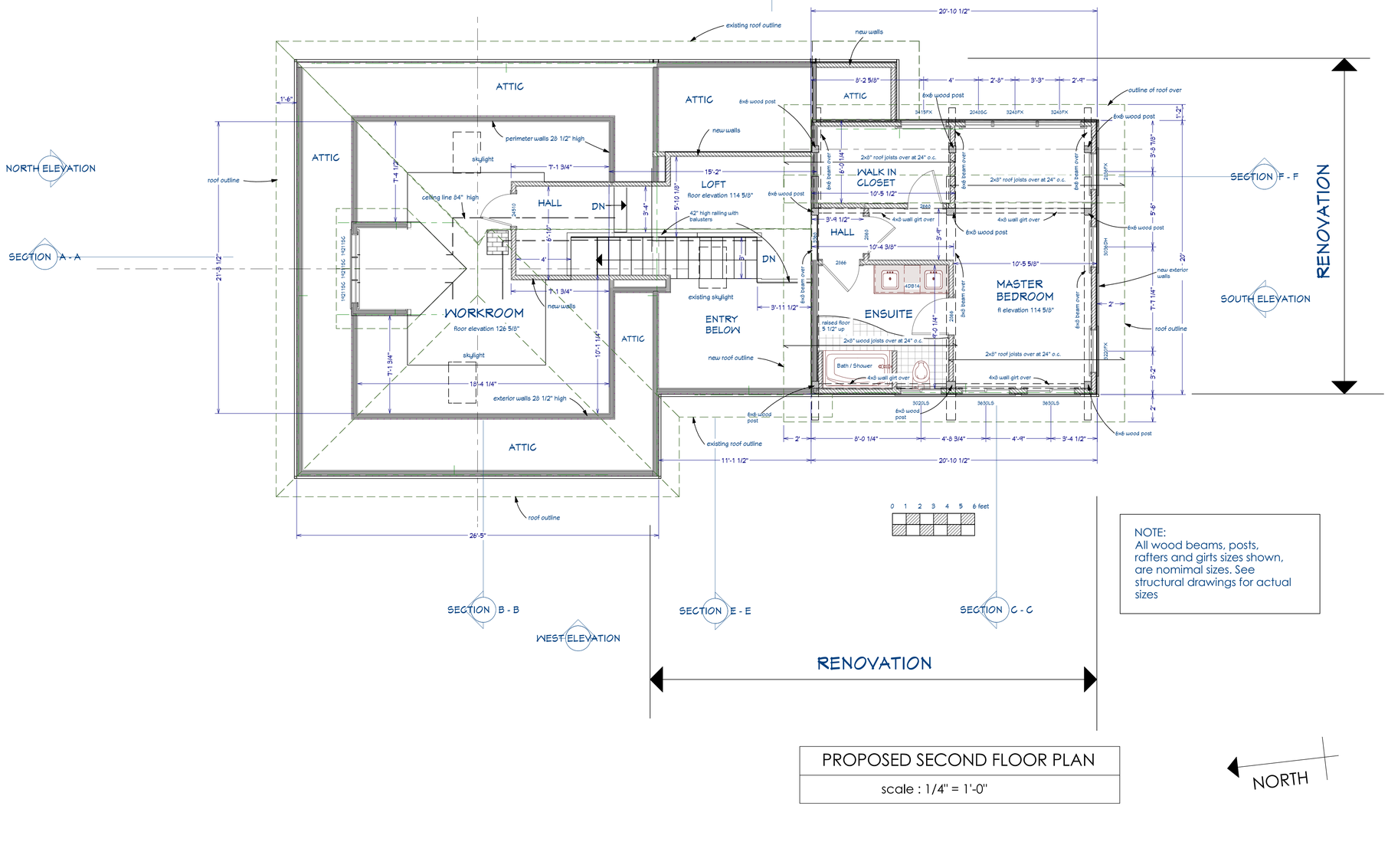


EXISTING SECOND FLOOR PLAN

scale : 1/8" = 1'-0"



NOTE:
All wood beams, posts, rafters and girts sizes shown, are nomimal sizes. See structural drawings for actual sizes

PROPOSED SECOND FLOOR PLAN

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

NORTH

BUILDING INFORMATION

ROOF STRUCTURE
30 year fiberglass asphalt shingles on roofing membrane on1/2" ply sheathing on 2x4 wood strapping at 16" o.c. on 2x8 roof joists @ 24" o.c. with rockwool batt insulation, 6mil poly vapour barrier (uv resistant) and 1/2" ceiling board drywall (painted or with clay plaster finish) on 6x8 wood beams

ROOF STRUCTURE OVER ENTRY
metal roofing on roofing membrane on1/2" ply sheathing on 2x6" t&g decking on 2x8 roof joists @ 16" o.c.

EXTERIOR WALL ENVELOPE
Bevelled or shiplap siding on horizontal rain screen drainage layer on Tyvek wrap on 1/2" plywood sheathing on 2x6 wood studs @ 16" o.c. with Rockwool batt insulation, 6mil poly vapour barrier (uv resistant) and 1/2" drywall (painted or with clay plaster finish)

MAIN FLOOR
finish flooring on underlay on 3/4" t&g DF plywood sheathing on 2x10 floor joists at 16" o.c. with solid blocking at mid-span

EXISTING MAIN FLOOR
3/4" t&g flooring on 1x6 wood sheathing on existing 2x8 floor joists at 18" o.c. approx.

NEW SECOND FLOOR
finish flooring on underlay on 3/4" t&g DF plywood sheathing on 2x6 floor joists at 24" o.c. on exposed 4x6" fir floor beams at 32" o.c.

NEW LOFT FLOOR
finish flooring on underlay on 3/4" t&g DF plywood sheathing on 2x6 floor joists at 24" o.c. See structural plans.

SECOND FLOOR OVER PATIO
finish flooring on underlay on 3/4" t&g DF plywood sheathing on 2x6 floor joists at 24" o.c. with 6mil poly vapour barrier (uv resistant) on Rockwool batt insulation with 1x4 v-joint cedar soffit on exposed 4x6" fir floor beams at 32" o.c.

PATIO WOOD POSTS
6x6" Douglas Fir timber posts on 8"x 8" reinforced concrete upstands (15mm re-bar) on 8" x26" x26" concrete pads with 15mm re-bar both ways at the bottom on solid undisturbed grade. See structural drawings for details.

EXPOSED TIMBER STRUCTURE INSIDE BUILDING
See structural drawings for actual sizes of posts, beams, rafters and girts. See also for connection details

FOUNDATION WALL
cement plaster on 1/2" concrete board on 2 1/2" closed cell foam insulation on waterproofing on 8" reinforced concrete walls (15mm re-bar) on 8"x16" continuous concrete strip footing with 15mm re-bar on solid undisturbed ground, min. 18" below grade

INTERIOR WALLS
2x4 or 2x6 wood studs @ 16" o.c. with 1/2" drywall (painted or with clay plaster finish) both sides

INTERIOR PLUMBING WALL
2x6 or 2x4 wood studs @ 16" o.c. with rockwool batt insulation with 1/2" waterguard drywall (bath side) and with 1/2" drywall (painted or with clay plaster finish) other side

CRAWL SPACE FLOOR
2" concrete skim coat on 2 1/2" closed cell foam insulation on 6mil poly vapour barrier (uv resistant) on compacted gravel fill on solid undisturbed grade

DRAINAGE SYSTEM
4" diameter PVC perforated perimeter drain tile and 3" solid rain water leader with 6" drain rock top & side located below interior slab height with landscape cloth over

PROPOSED SECOND FLOOR PLAN & BUILDING INFORMATION

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

SHEET A4

Scale: as shown

11/03/2021

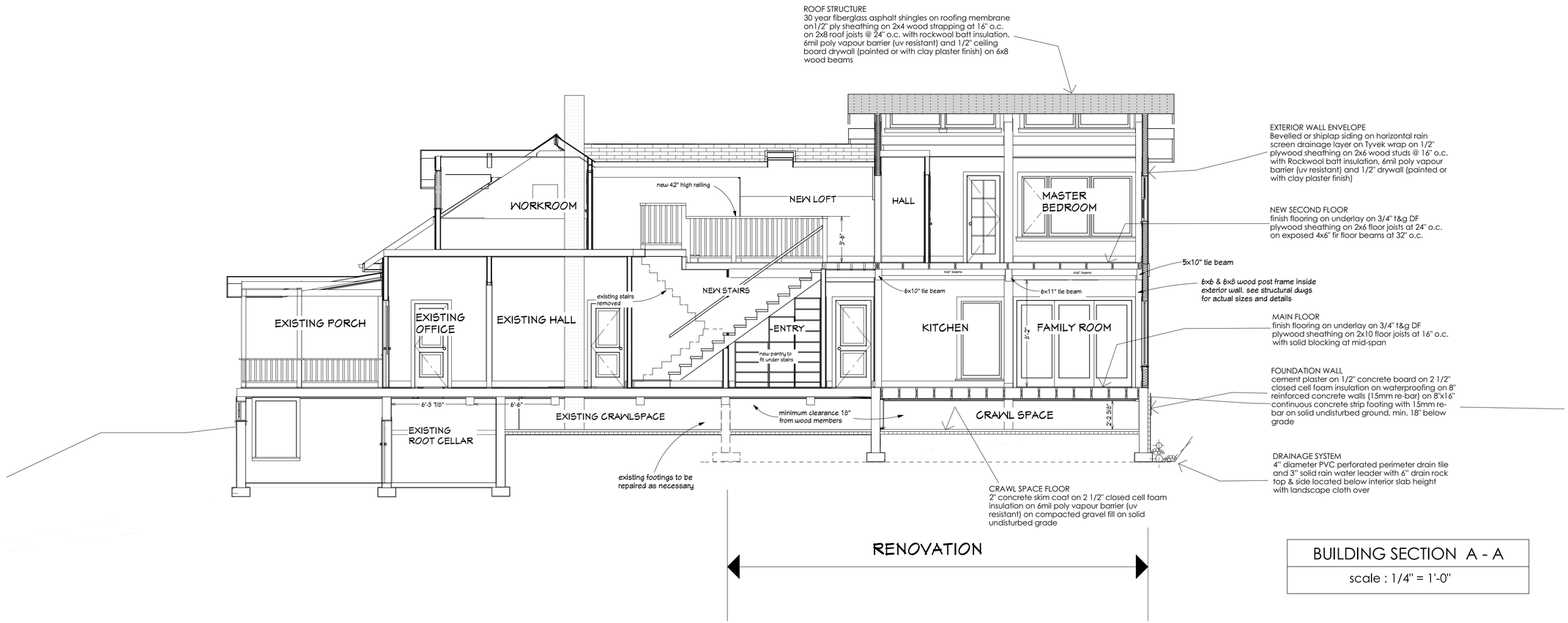
Design: David Coulson
Drawn: Bill Robson
Structural :
Verified: David Coulson

Revision 12/03/2021
Revision 02/22/2022

Che Howkes & Jessica Ellis

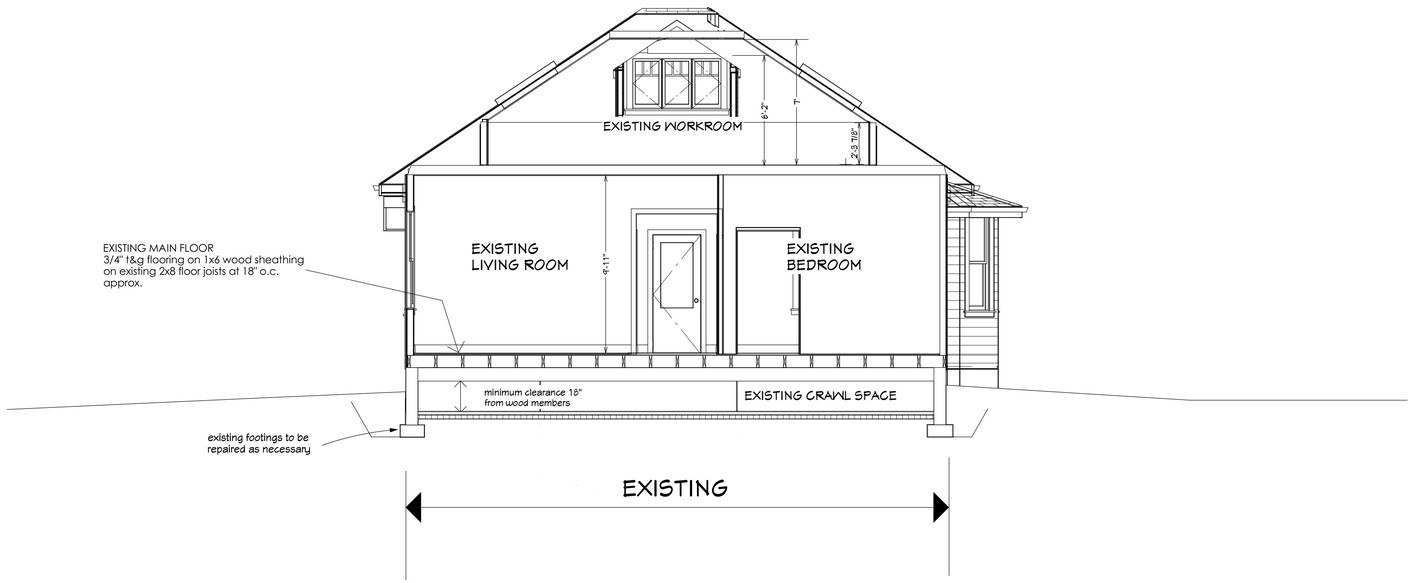
4461 Riverside Road, Duncan, BC

DAVID COULSON DESIGN Ltd.
contemporary residential design & renovations, specializing in heritage restoration, design, specialized consultation, construction
5372 Miller Road, Duncan, B.C. V9L 6R2
Tel/Fax (250) 746-5372 Email: coulsondesign@shaw.ca
Website: davidcoulsondesign.com



BUILDING SECTION A - A

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



BUILDING SECTION B - B

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

BUILDING SECTIONS

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

SHEET A5

Scale: as shown

11/03/2021

Design: David Coulson
Drawn: Bill Robson
Structural :
Verified: David Coulson

Revision 12/03/2021

Revision 02/22/2022

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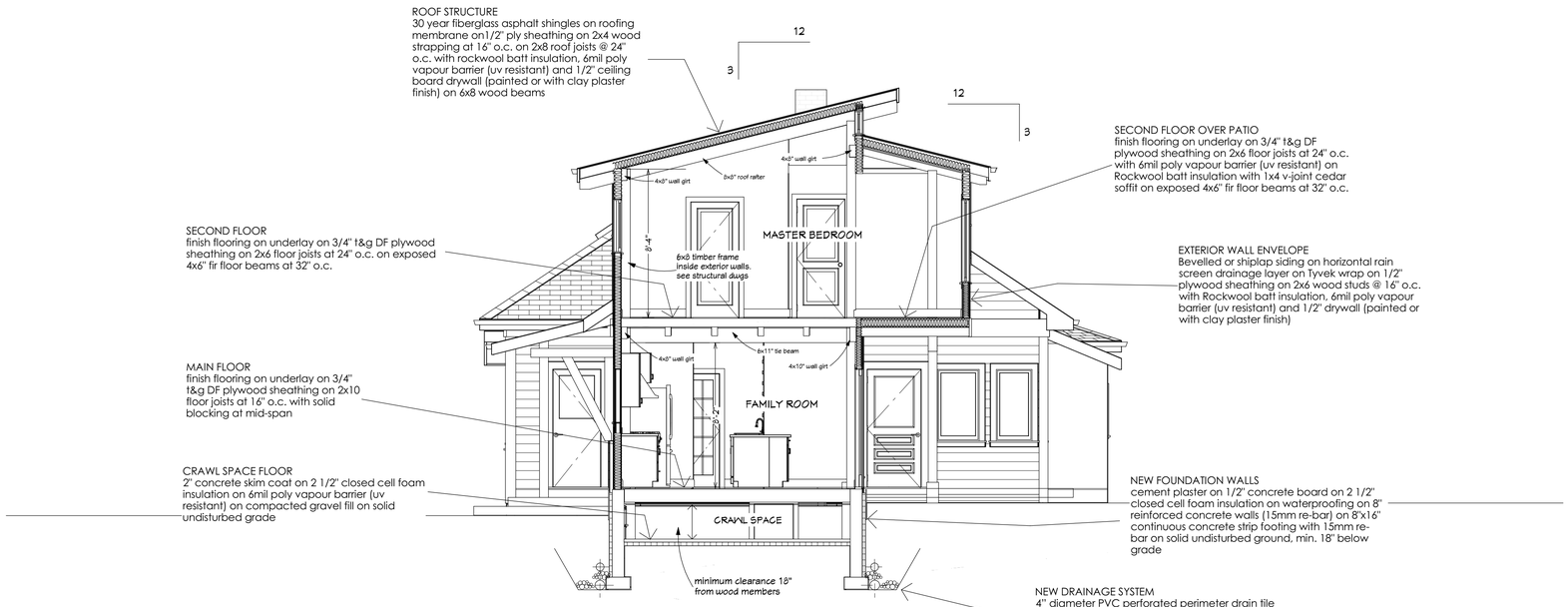
4461 Riverside Road, Duncan, BC

DAVID COULSON DESIGN Ltd.
contemporary architecture, home building & millwork, design, specialized consultation, construction management, care, assessing & heritage restoration.
5372 Miller Road, Duncan, B.C. V9L 6B2
Tel/Fax (250) 746-5372 Email: coulsondesign@shaw.ca
Website: davidcoulsondesign.com



BUILDING SECTION C - C

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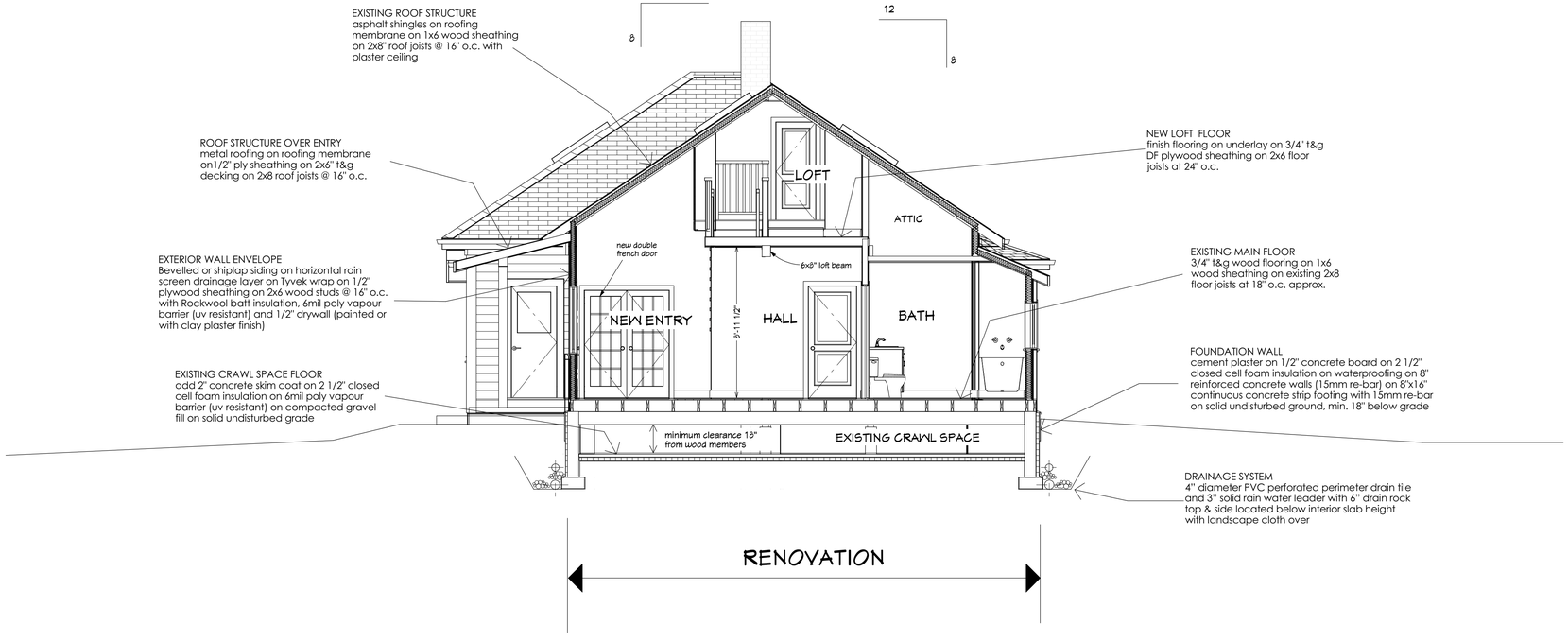


BUILDING SECTION D - D

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

BUILDING SECTIONS

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

SHEET A6

Scale: as shown

11/03/2021

Design: David Coulson
Drawn: Bill Robson
Structural :
Verified: David Coulson

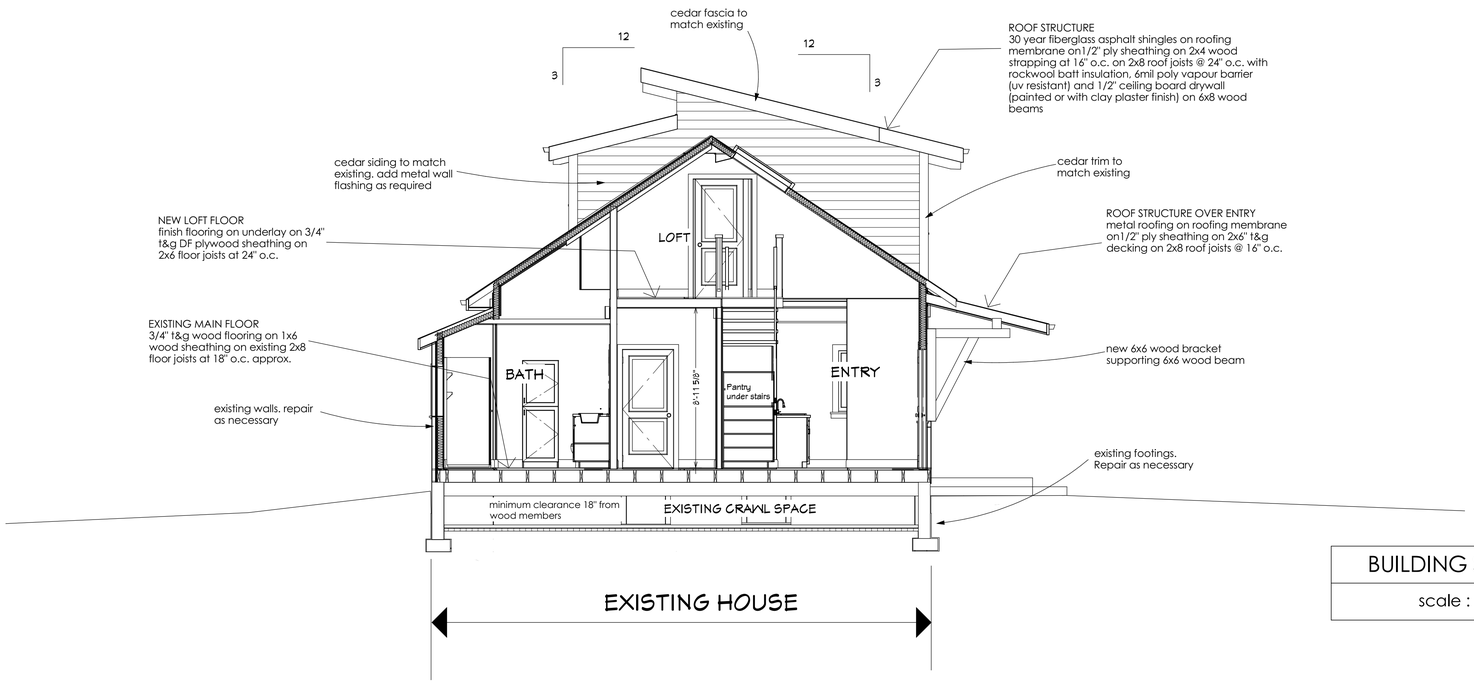
Revision 12/03/2021

Revision 02/22/2022

Che Hawkes & Jessica Ellis

4461 Riverside Road, Duncan, BC

DAVID COULSON DESIGN Ltd.
contemporary, post & beam construction & millwork, design, specialized consultation, construction specializing in heritage restoration
5372 Miller Road, Duncan, B.C. V9L 6R2
Tel/Fax (250) 746-5372 Email: coulsondesign@shaw.ca
Website: davidcoulsondesign.com



BUILDING SECTION E - E

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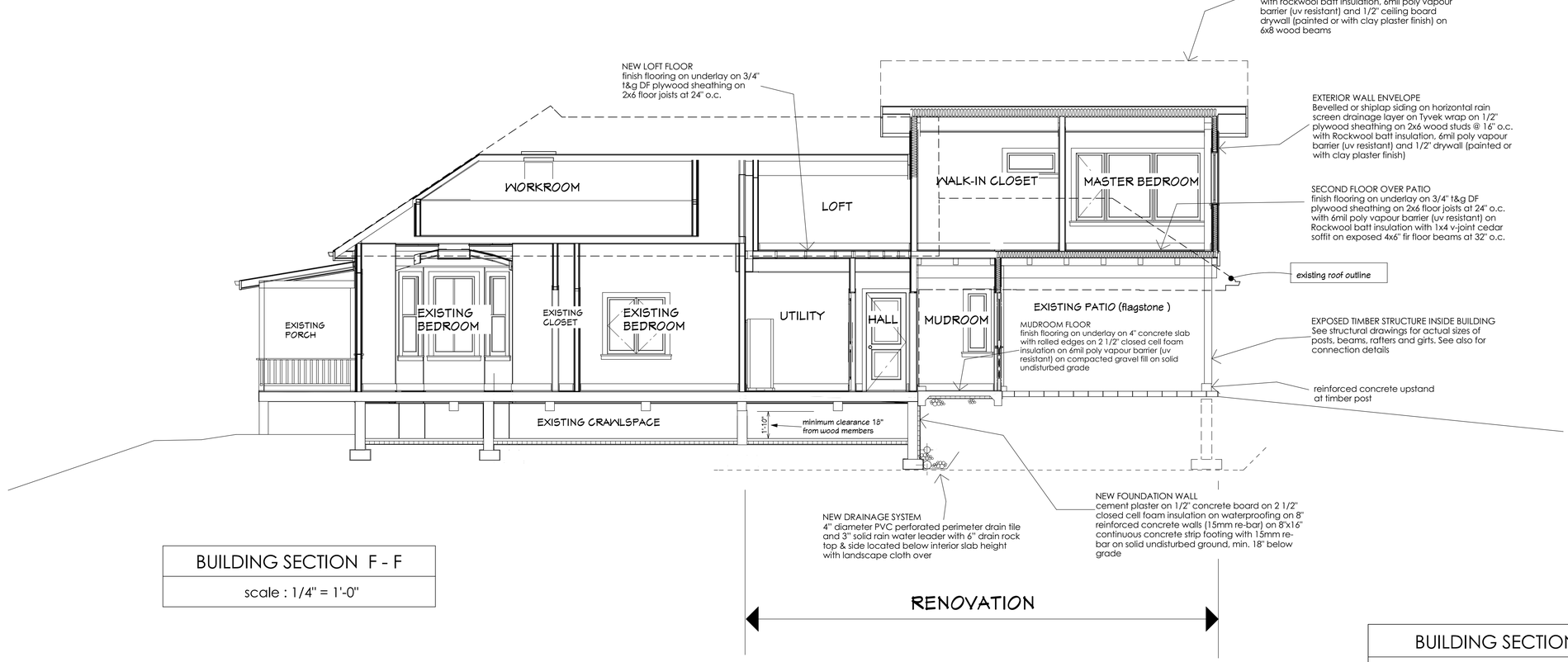

BUILDING SECTION F - F

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

BUILDING SECTIONS

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

SHEET A7

Scale: as shown

11/03/2021

Design: David Coulson
Drawn: Bill Robson
Structural :
Verifier: David Coulson

Revision 12/03/2021
Revision 02/22/2022

Che Hawkes & Jessica Ellis

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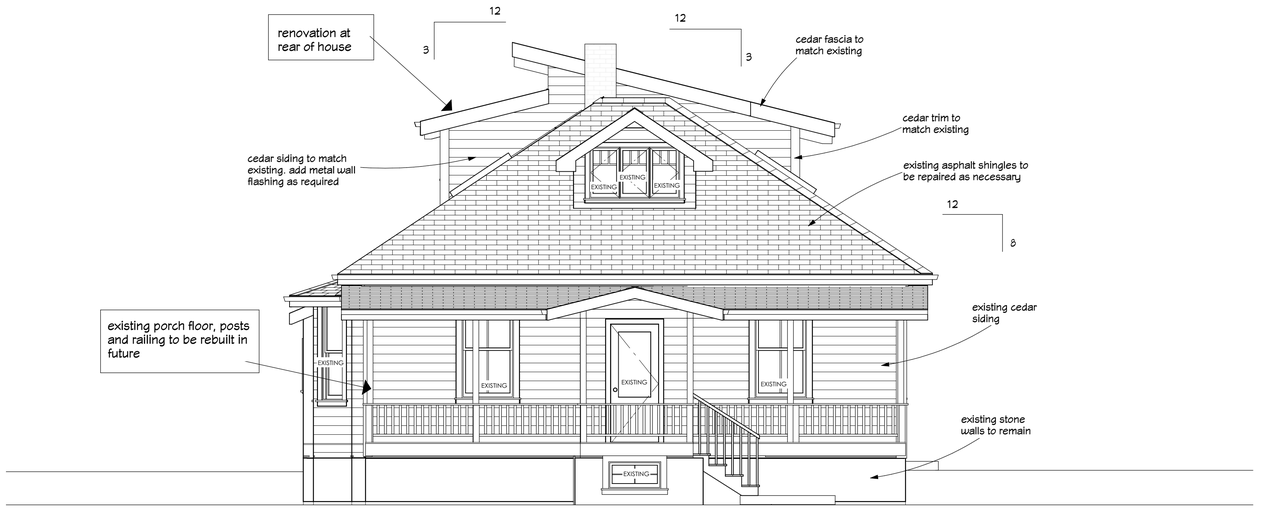
DAVID COULSON DESIGN Ltd.
contemporary residential design & renovation, specializing in heritage restoration, design, specialized consultation, construction management
5372 Miller Road, Duncan, B.C. V9L 6R2
Tel/Fax (250) 746-5372 Email: couslondesign@shaw.ca
Website: davidcoulsondesign.com

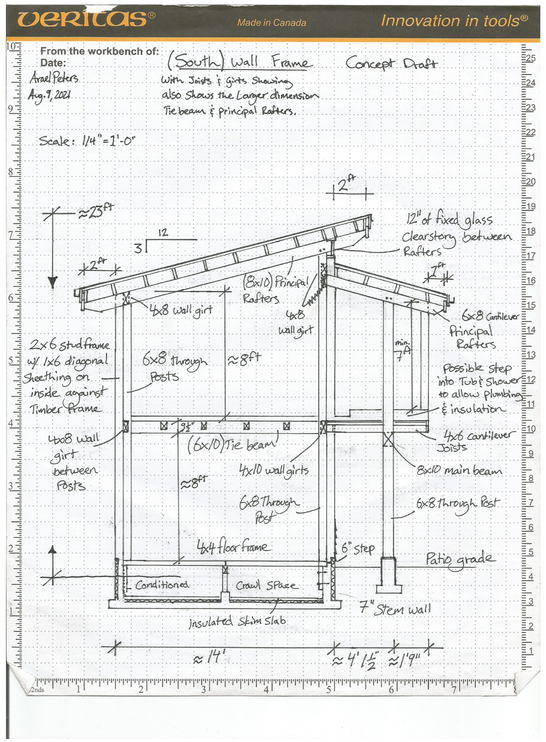
EXISTING NORTH ELEVATION

scale : 1/8" = 1'-0"



PROPOSED NORTH ELEVATION

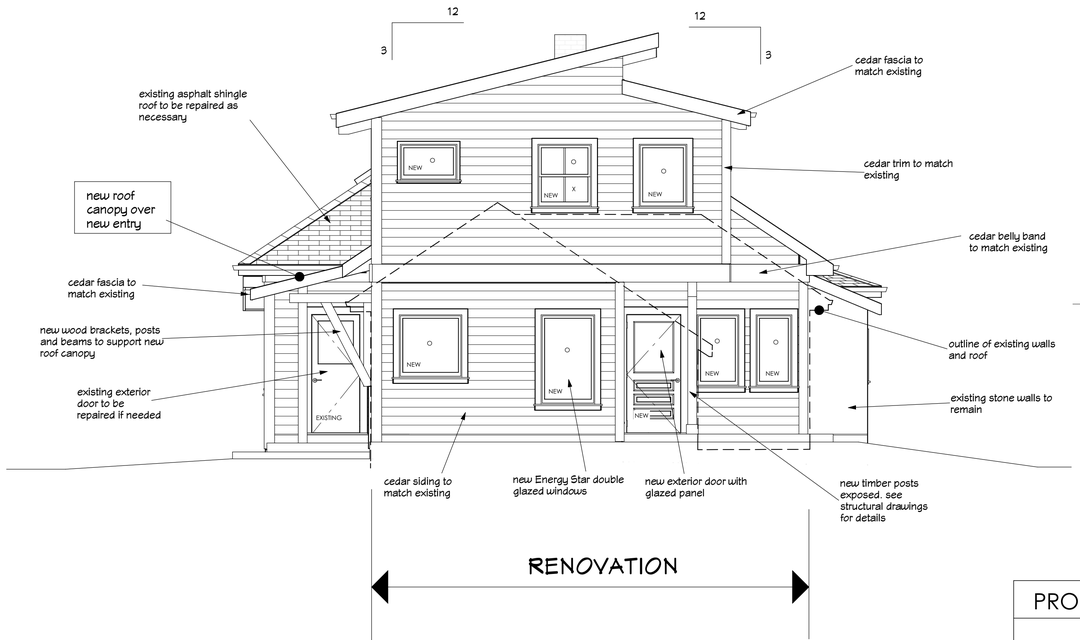
scale : 1/4" = 1'-0"

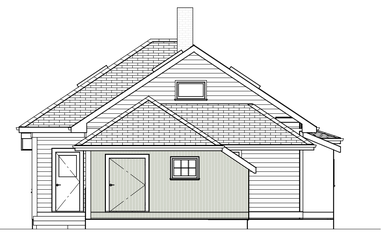


South Wall Frame / See Structural Drawings for actual Timber sizes & Connections

BUILDER'S DETAILS

not to scale





EXISTING SOUTH ELEVATION

scale : 1/8" = 1'-0"

PROPOSED SOUTH ELEVATION

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

PROPOSED ELEVATIONS

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

SHEET A8

Scale: as shown

11/03/2021

Design: David Coulson
Drawn: Bill Robson
Structural :
Verified: David Coulson

Revision 12/03/2021
Revision 02/22/2022

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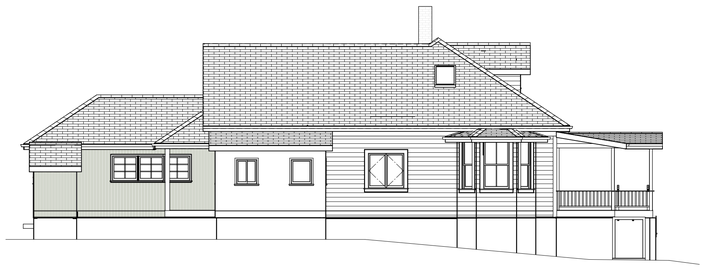

EXISTING EAST ELEVATION
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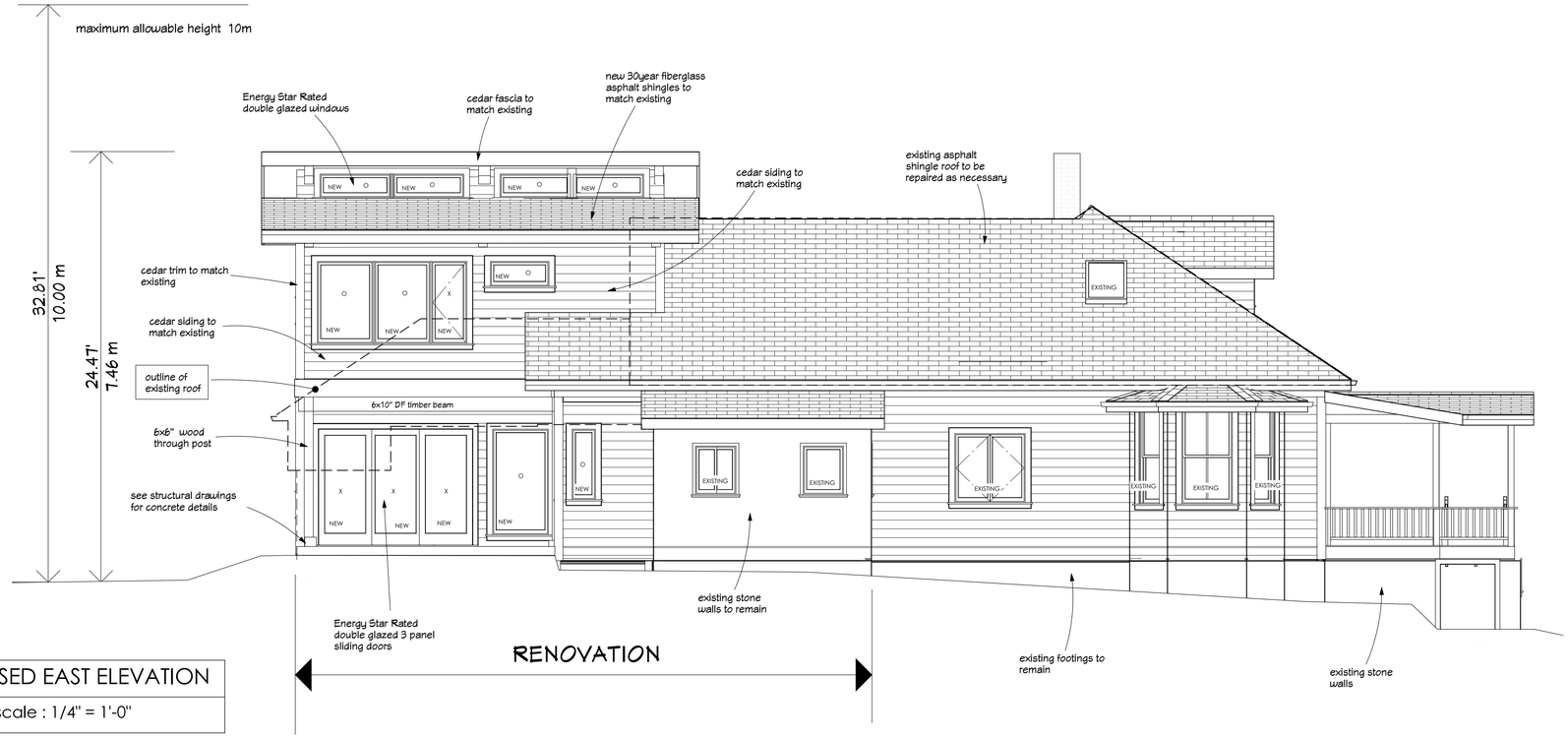
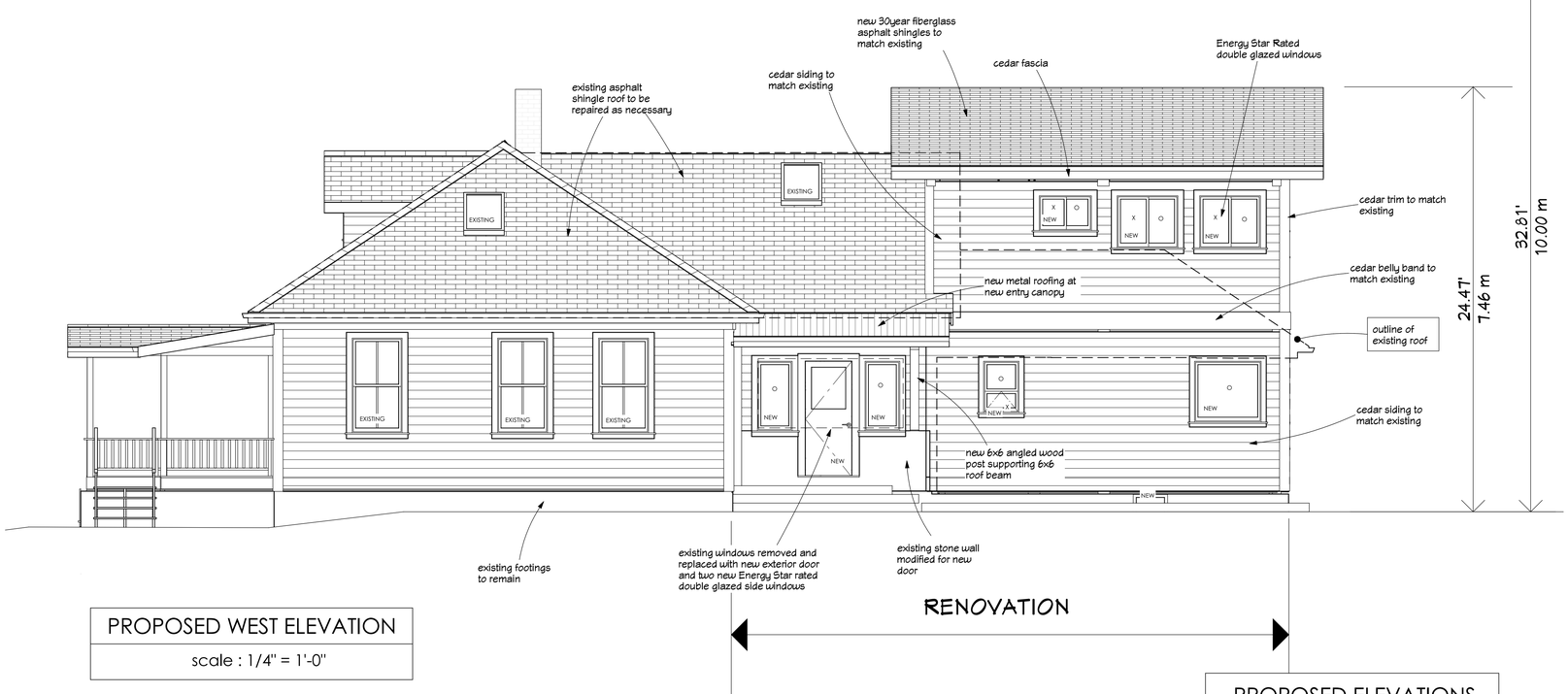


PROPOSED EAST ELEVATION
scale : 1/4" = 1'-0"

EXISTING WEST ELEVATION
scale : 1/8" = 1'-0"



PROPOSED WEST ELEVATION
scale : 1/4" = 1'-0"

PROPOSED ELEVATIONS
scale : 1/4" = 1'-0"

SHEET
A9

Scale: as shown

11/03/2021

Design: David Coulson
Drawn: Bill Robson
Structural :
Verified: David Coulson

Revision 12/03/2021
Revision 02/22/2022

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Tel/Fax (250) 746-5372 Email couslondesign@shaw.ca
Website: davidcoulsondesign.com

GENERAL NOTES

1. Construction shall comply with all latest applicable codes and industry standards as noted in the contract documents. The consulting structural engineer assumes no responsibility for the consequences of failure by the contractor/owner to build in strict conformance with the contract documents and drawings.

2. The contractor shall review all contract documents in conjunction for errors or omissions and shall verify all dimensions and review documentation for discrepancies. Contact the engineer and design team for clarification prior to construction. All unreported discrepancies are the responsibility of the contractor.

3.All structural design is limited to the structural components shown on these drawings. Design of components not clearly identified on these drawings is to be done by the supplier of those components and fastened to the structure as per the supplier's specifications within the parameters shown on these drawings. If there is any ambiguity, consult the structural engineer.

4.The structure is designed to resist the design loads once completed. All bracing and support necessary for construction is the responsibility of the contractor.
5.Use only drawings that have been prepared specifically for construction and are labeled as such.

DESIGN DATA

1.The structural components in this drawing package have been designed in accordance with the following codes:
- a. BCBC 2018

2.Climatic data used for the design of these structural components:

Location:	DUNCAN, BC	
Snow:	Ss = 1.8 kPa	Sr = 0.2 kPa
Wind:	q50 = 0.4Pa	
Seismic:	Sa(0.2) = 1.1	
	Sa(0.5) = 0.74	
	Sa(1.0) = 0.37	
	Sa(2.0) = 0.18	
	PGA = 0.54	

3.All foundations are designed by others and are assumed to be suitable for this structure as noted by foundation engineer. Assumed bearing capacity of 150 kPa.

4.Dead and Live Loading is as follows:

Roof:	dead:	framing, roofing, hardware	= 0.5 kPa
		electrical, insulation, etc.	= 0.25 kPa
	live:	Design Snow (Cb = 0.65)	= 1.2 kPa
Floor:	dead:	framing, hardware, flooring	= 0.75 kPa
	live:	residential occupancy	= 1.9 kPa
		partition loads	= 1.0 kPa

CONCRETE

1.All concrete is to be as per the supplier's specifications to meet the following requirements in accordance with CSA 23.1/23.2 and CSA 23.3:
- a. minimum 28-day compressive strength f`c = 25 MPa, U.N.O.

2.The supplier is responsible for concrete delivery that meets the performance requirements stated above.
3.Concrete is to be suitable for the concrete finishes as specified by the design drawings and is to be the responsibility of the contractor.
4.Do not add water or plasticizers on site unless specified by the supplier.
5.Provide the following minimum concrete clear covers U.N.O.
- a. Footings placed on soil or fill:
- b. Placed beside normal, free draining soil or fill:
- c. Against soils with sulfides, chlorides or saturated:
- d. Slabs-on-grade:
- e. Minimum clear cover U.N.O.

6.Rebar to have a minimum yeild strength of 300 MPa for 10M bar and 400 MPa for all larger bar with a maximum of 500 MPa as per CSA 23.3 and CSA G30.18.
7.Splice length of rebar to be a minimum of 600 mm (24") U.N.O.
8.Rebar placement to be within ± 1/4" of the specified placement

VIEW FROM SOUTH EAST

ROUGH CARPENTRY

1. All wood framing is to conform with CSA O86.
2. Wire nails, spikes and staples are to be fabricated in accordance with CSA 19111
3. Framing lumber is to be SPF #2 or better U.N.O.
4. Engineered Wood Beams to have shop drawings submitted with full specifications.
5. All floors and roofs are considered to be diaphragms and must be built with the following:
   - a.All floor sheathing is to be 3/4" plywood glued and nailed to framing
     - i. perimeter nailing of sheets to be 2-1/2" nails at 6" o/c
     - ii. intermediate nailing of sheets to be 2-1/2" nails at 12" o/c
   - b.All roof sheathing is to be 1/2" plywood nailed to the framing:
     - i. perimeter nailing of sheets to be 2-1/2" nails at 6" o/c
     - ii. intermediate nailing of sheets to be 2-1/2" nails at 12" o/c
   - c. T&G decking is permitted to act as a diaphragm in lieu of sheathing if it is oriented at 45° to the framing.
6. U.N.O. walls are considered to provide lateral restraint and are constructed with:
   - a. 1/2" Plywood sheathing or better
   - b. 2-1/2" nails at 6" o/c around perimeter of each panel
   - c. 2-1/2" nails at 12" o/c for intermediate panel framing
   - d. 2x6 studs at 16" o/c
7. Provide double top plates on all load bearing walls.
   Lap splice top plates with a minimum of 12-3" nails and 24" overlap.
8. Provide a suitable post base connector and post cap connector for all free standing posts.
   Verify suitability of connector with Engineer before installation.
9. All lintels are to be placed directly above openings.
10. Birdsmouth's in joists are not to exceed noted size or 1/4 depth of member.
11. All posts are to be continuous with blocking in floor systems or posts below to match post right down to the foundation. Larger posts may be specified at lower levels.
12. Provide double bottom plates for all walls on floors with concrete topping.

FOUNDATIONS

1.All concrete for foundations is to be as per the supplier's specifications to meet the following requirements in accordance with CSA 23.1/23.2 and CSA 23.3:
- a. minimum 28-day compressive strength f`c = 25 MPa
- b. exterior foundation walls and footings to meet class F-2 performance
- c. interior foundation walls, footings and slabs to meet class N performance

2.Foundations to be cast in place with tolerances not to exceed the following:

a.	Footing width:	-1"	to +2"
b.	Footing depth:	-1/2"	to +10"
c.	wall thickness:	± 1/4"	
d.	concrete clear cover:	± 1/4"	

3.Footings to be placed on a suitable subgrade with the specified frost protection.
4.It is the contractors responsibility to verify that the soil conditions are suitable for the foundations as per these drawings by engaging a qualified geotechnical engineer to confirm the soil bearing capacity and usefulness.
5.Protection of adjacent structures is the responsibility of the contractor.
6.All foundations to be located as per these structural drawings. Where specific notes aren't provided, the foundations are to be centered under the support from above.
7.Footings are designed in accordane with limit states design.
8.Confirm service locations prior to placing footings as footings may need to be lowered to suit site services.
9.Dowels are to be placed prior to concrete pour unless approval to do otherwise has been obtained from HCL. Templates should be used to set column or holddown anchorage.
10.All foundation walls are to be continuous from footing to floor system
11.Provide two 15M continuous at top of all foundation walls
12.Provide minimum 2x3 keyway in all footings
13.Provide minimum two 15M continuous through footings
14.Unless specified otherwise, provide 15M @ 10" o/c each way at bottom of pad footings.

GENERAL VIEW & SPECIFICATIONS

not to scale

SHEET A10

Scale: as shown

11/03/2021

Design: David Coulson
Drawn: Bill Robson
Structural :
Verified: David Coulson

Revision 12/03/2021
Revision 02/22/2022

Che Hawkes & Jessica Ellis

4461 Riverside Road, Duncan, BC

DAVID COULSON DESIGN Ltd.
contemporary residential, commercial & millwork,
specializing in heritage restoration,
design, specialized consultation, construction
5372 Miller Road, Duncan, B.C. V9L 6R2
Tel/Fax (250) 746-5372 Email: coulsondesign@shaw.ca
Website: davidcoulsondesign.com

PARTIAL SITE SURVEY PLAN
not to scale

PARTIAL SITE SURVEY PLAN
scale : as shown

NORTH

Che Hawkes & Jessica Ellis

4461 Riverside Road, Duncan, BC

SHEET A11

Scale: as shown

11/03/2021

Design: David Coulson
Drawn: Bill Robson
Structural :
Verified: David Coulson

Revision 12/03/2021
Revision 02/22/2022

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