


1 • GENERAL NOTES

- Construction shall comply with all 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. 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.
- 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.
- The structure is designed to resist the design loads once completed. All bracing and support necessary for construction is the responsibility of the contractor.
- Use only drawings that have been prepared specifically for construction and are labeled as such.
- Detail marker represented as  shall be read as detail #1 on page S6.
- See architectural drawings for floor and roof elevations and sections, recesses, drainage slopes, etc.
- Any submissions noted issued for permit are provided for permitting purposes only and may not be fully complete. Minor revisions may be made prior to issuing for construction.
- The following notes in the various sub-categories of general notes are to be followed unless noted otherwise. If unclear, consult with the engineer.
- Any submissions noted issued for permit are provided for permitting purposes only. For construction, refer to the issued for construction plans and supporting documents.

2 • DESIGN DATA

- The structural components in this drawing package have been designed in accordance with the following codes:
 - BCBC 2018
- Climatic data used for the design of these structural components:
Location: Duncan, BC
Snow: $S_s = 1.8$ kPa $S_r = 0.4$ kPa
Wind: $q_{50} = 0.39$ kPa
Seismic: $S_a(0.2) = 1.17$ $S_a(1.0) = 0.631$
 $S_a(0.5) = 1.09$ $S_a(2.0) = 0.378$
 $P_GA = 0.513$ Site Class = C
 $R_d = 3$, $R_o = 1.7$
- All foundations are designed in accordance with limit states design. Soil bearing capacity is assumed to be as follows and should be verified by a geotechnical engineer or other suitable individual:
Serviceability Bearing Capacity (SLS) = 75 kPa
Ultimate Bearing Capacity (ULS) = 110 kPa
- Dead and Live Loading is as follows:

Roof:	dead:	framing, roofing, hardware	= 0.55 kPa
		electrical, insulation, etc.	= 0.15 kPa
		total dead load	= 0.70 kPa
	live:	Design Snow ($C_b = 0.55$)	= 1.45 kPa
Floor:	dead:	framing, hardware, flooring	= 0.6 kPa
	live:	residential occupancy	= 1.9 kPa
Decks:	dead:	framing, hardware	= 0.55 kPa
	live:	residential	= 2.4 kPa

3 • CONSTRUCTION REVIEWS

- Do not cover up any structural elements until bluepoint has been given the opportunity to review construction. Cover up of structural elements without review by bluepoint may require those components to be exposed for review if deemed necessary by bluepoint. Cover up may include but is not limited to:
 - pouring concrete.
 - insulating.
 - sheathing, decking, siding.Contact bluepoint if you have any questions.
- Please notify bluepoint 3 business days in advance for site visits.
- Site visits may be performed by proxy at the discretion of bluepoint.
- All site instructions must come from the signing engineer (EOR).
- All changes to construction drawings must be accompanied by a written instruction from bluepoint.
- Changes made without a written site instruction from the signing engineer may be considered unacceptable.
- At the discretion of the engineer, structural steel welds and bolt installation may be required to be inspected by an independent testing agency at the expense of the owner.

15 • CONCRETE

- All concrete is to meet the following requirements in accordance with CSA 23.1/23.2 and CSA 23.3:
 - minimum 28-day compressive strength $f'c = 25$ MPa, U.N.O.
- The contractor is responsible for concrete that meets the performance requirements stated above.
- Concrete is to be suitable for the concrete finishes as specified by the design drawings and is to be the responsibility of the contractor.
- Provide the following minimum concrete clear covers U.N.O.
 - Footings placed on soil or fill: 75mm (3")
 - Placed beside normal, free draining soil or fill: 38mm (1-1/2")
 - Against soils with sulfides, chlorides or saturated: 65mm (2-1/2")
 - Slabs-on-grade: 50mm (2")
 - Minimum clear cover U.N.O. 32mm (1-1/4")
- All slabs to have 6mil poly vapor barrier between slab and subgrade. Poly joints to be lapped a minimum of 6". Slabs are to be reinforced with 10M bars at 20" o/c each way or 152x152 MW9.1/MW9.1 (6x6 W1.4/W1.4) welded wire mesh centered in the slab (chaired, not on the ground) U.N.O. Provide bond break between slab and foundation with AIFB.
- Edges of all slabs shall have (2) 12M bottom continuous with splice distance of 600mm (24"). At reentrant corners rebar is to extend 600mm beyond corner, U.N.O.
- All openings in slab shall have (2) 12M bars parallel to all edges extending 600mm beyond corners.
- Slab reinforcing shall not be cut at plumbing or other openings, U.N.O.
- Slabs on grade are not to bear on foundation walls.
- Rebar to have a minimum yield 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.
- Splice length of rebar to be a minimum of 600 mm (24") U.N.O.
- Rebar placement to be within $\pm 14"$ of the specified placement.
- Provide a sampling of concrete cylinders for testing in accordance with CSA A23.1 to verify compressive strength and failure mode at 7 days and 28 days.
- It is recommended to provide saw cut control joints at 16' intervals to control cracking. Control joints may be replaced with construction joints where required. Crack control is the responsibility of the contractor.
- Be sure to properly vibrate and consolidate concrete in TCF walls by a suitably trained individual (provide extra vibrating at all corners and interface changes).
- TCF walls may require exposure of concrete faces in spot check locations to determine pour quality.
- Contractor may be asked to provide additional rebar on site, as directed by the engineer.
- Helix fibre reinforcing may be used in lieu of rebar grid as designed by bluepoint.
- Reinforce top of foundation wall with two 15M continuous outside of any anchors.
- Conduits, pipes and sleeves embedded in concrete to conform to the following:
 - Conduits must be located between top and bottom reinforcing when in the plane of the slab. Maximum conduit size not to exceed 1/4 of concrete slab thickness.
 - No boxes, conduit, sleeves or embedded pipes are allowed in columns without written approval from bluepoint.
 - Maximum size of horizontal conduit or piping in a concrete beam not to exceed 4% of the area. No sleeves are permitted through beams or slab bands without written approval from bluepoint.
 - Minimum centerline spacing to be three diameters, U.N.O.
 - Minimum centerline spacing between parallel conduit and reinforcing to be three diameters, U.N.O.
- Epoxy to be Hilti HY-200, Simpson Set-XP or approved alternative.

ABBREVIATIONS

AIFB	asphalt impregnated fiberboard
ARCH	architectural plans
BCBC	British Columbia building code
B/W	between
CANT	cantilever
CONT	continuous
CSA	Canadian standards association
C/W	complete with
FH	full height
FND	foundation
FTG	footing
O/C	on center
P,T	pressure treated
R/W	reinforced with
SIM	similar
SOG	slab-on-grade
TYP	typical
U.N.O	unless noted otherwise
U/S	underside
c.l	center line
e.f	each face
i.f	inside face
o.f	outside face

REVISIONS

1	Issued for construction	M.B.	2021.05.21



Duncan, BC (250) 597 2296
Langford, BC (778) 400 1790
New Westminster, BC (604) 239 2430
engineering@bluepoint.com

SEAL:



05/21/2021

This document is a printed copy from a digitally signed and sealed original.

(C) COPYRIGHT RESERVED.
THIS PLAN AND DESIGN ARE, AND AT ALL TIMES, THE EXCLUSIVE PROPERTY OF BLUEPOINT CONSULTING REPRODUCTION OR USE WITHOUT WRITTEN CONSENT IS PROHIBITED. CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON PROJECT AND THIS OFFICE SHALL BE INFORMED OF ANY VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWING. DO NOT SCALE DRAWING.

PROJECT TITLE:

Khenipsen Grade Beam

934 Khenipsen Road, Duncan, BC

DRAWING TITLE:

General notes

DESIGNED BY:

MB

CHECKED BY:

MB

DRAWN BY:

MG

PROJECT NO:

11399

DATE:

2021.05.21

SCALE:

As indicated

DRAWING NO.

S1