



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

7220 Trade Street, Suite 350, San Diego, CA 92121 ▶ p 619-650-0010 ▶ mulhernkulp.com

CALCULATION PACKAGE

July 8, 2022

Architects NW Hatley Residence

Mercer Island, Washington

MULHERN & KULP STRUCTURAL ENGINEERING, INC.

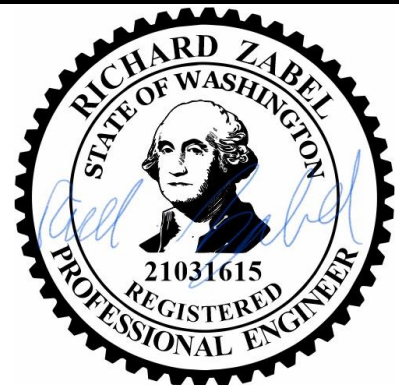
Prepared By:

John C. Leone, E.I.T.

Staff Engineer

Ricky J. Zabel, P.E.

Project Manager + Director of Engineering



Signature, Seal & Date

ARCHITECT NW
HATELY RESIDENCE

MERCER ISLAND, WA

SEISMIC SHEAR WALL CALCULATIONS - WIND

REVIEWED BY: RJZ

JULY 8, 2022

PARAMETERS:

SINGLE FAMILY HOME

DESIGN WIND SPEED: 100 MPH

WIND EXPOSURE CATEGORY: B

SEISMIC DESIGN CATEGORY: D

CODE & DESIGN STANDARD: 2018 IBC CH. 1609, ASCE 7-16 CH. 26-30

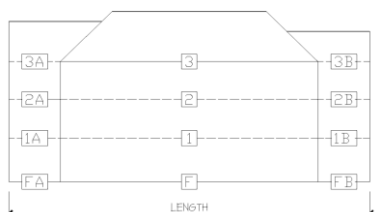


MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

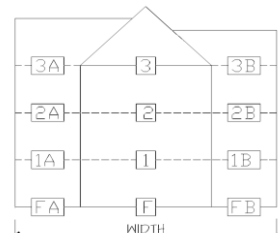
WIND DESIGN SUMMARY PER ASCE 7-16

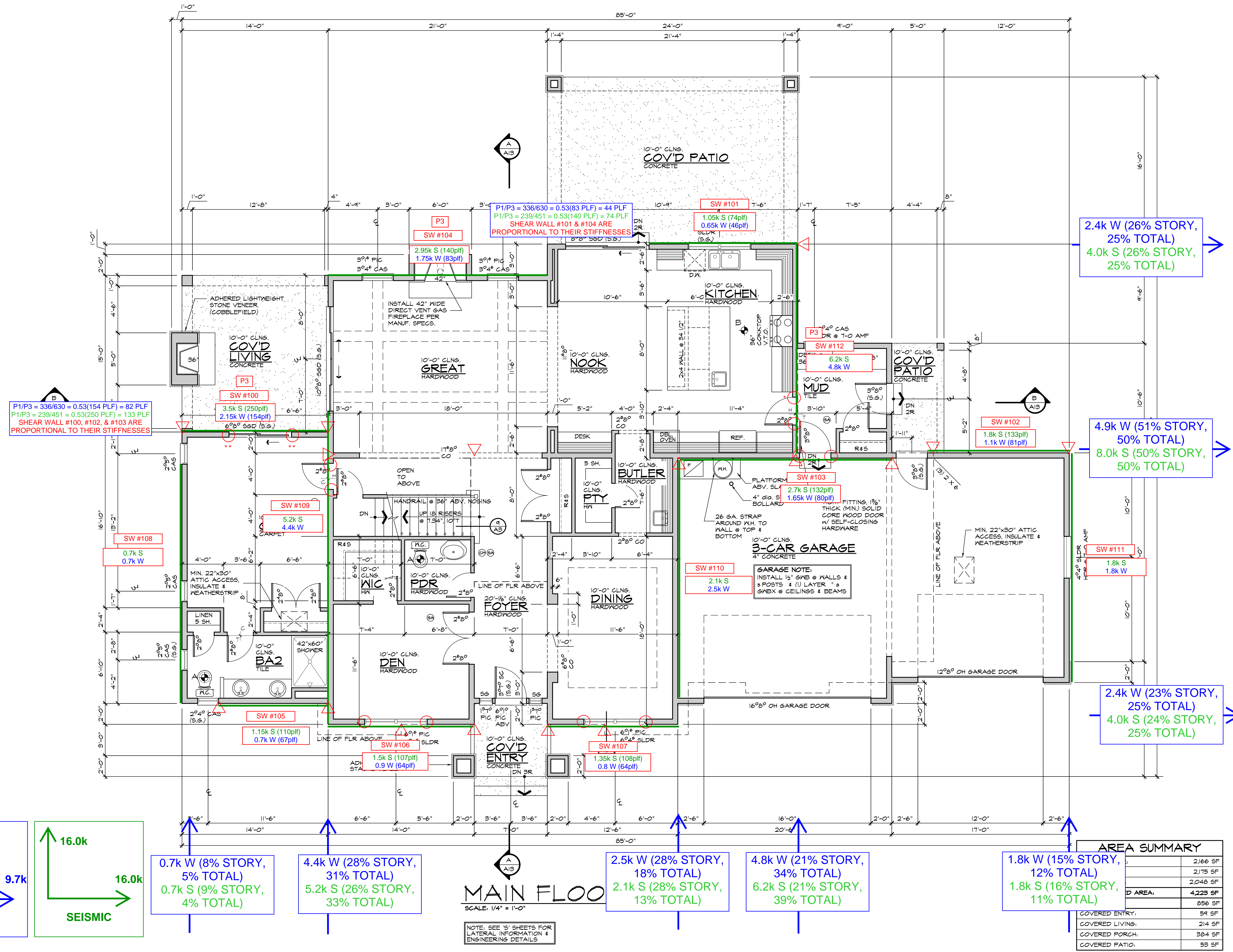
PARAMETERS:		ROOF GEOMETRY:		BUILDING GEOMETRY:	
WIND SPEED	100	TRANS. ROOF PITCH	5.0 : 12	LENGTH	80 FT
EXPOSURE CATEGORY	B	LONG. ROOF PITCH	5.0 : 12	WIDTH	46 FT
RISK CATEGORY	II	MEAN ROOF HEIGHT, H	27.50 FT	NUMBER OF STORIES	2
WIND DIRECTIONALITY FACTOR, K_D	0.85				
TOPOGRAPHIC FACTOR, K_{ZT}	1.30				
GUST FACTOR, G	0.85				
GROUND ELEV. ABOVE SEA LEVEL (FT)	0				
DESIGN TYPE	ASD 0.60				

TRANSVERSE DIRECTION (PERPENDICULAR TO MAIN RIDGE LINE)

DIAPHRAGM LEVEL	FLOOR-TO-FLOOR HEIGHT	Tributary Design Areas	Tributary Design Loads (0.6W)																										
			A	O	B																								
2	9.083 FT	Roof Surface: 0, 307, 0 sq ft Wall surface: 0, 254, 0 sq ft	0.00	5.21	0.00																								
1	11.583 FT	Roof Surface: 0, 92, 0 sq ft Wall surface: 0, 721, 0 sq ft	0.00	8.97	0.00																								
FND		Roof Surface: 0, 0, 0 sq ft Wall surface: 0, 0, 0 sq ft	0.00	14.18	0.00																								
																													
			<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3">Tributary Design Loads (0.6W)</th> </tr> <tr> <th>A</th> <th>O</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>0.00</td> <td>5.21</td> <td>0.00</td> </tr> <tr> <td colspan="3" style="text-align: center;">Total Shear: 5.21 kips</td> </tr> <tr> <td>0.00</td> <td>8.97</td> <td>0.00</td> </tr> <tr> <td colspan="3" style="text-align: center;">Total Shear: 14.18 kips</td> </tr> <tr> <td>0.00</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td colspan="3" style="text-align: center;">Total Shear: 14.18 kips</td> </tr> </tbody> </table>			Tributary Design Loads (0.6W)			A	O	B	0.00	5.21	0.00	Total Shear: 5.21 kips			0.00	8.97	0.00	Total Shear: 14.18 kips			0.00	0.00	0.00	Total Shear: 14.18 kips		
Tributary Design Loads (0.6W)																													
A	O	B																											
0.00	5.21	0.00																											
Total Shear: 5.21 kips																													
0.00	8.97	0.00																											
Total Shear: 14.18 kips																													
0.00	0.00	0.00																											
Total Shear: 14.18 kips																													

LONGITUDINAL DIRECTION (PARALLEL TO MAIN RIDGE LINE)

DIAPHRAGM LEVEL	FLOOR-TO-FLOOR HEIGHT	Tributary Design Areas	Tributary Design Loads (0.6W)																										
			A	O	B																								
2	9.083 FT	Roof Surface: 0, 256, 0 sq ft Wall surface: 0, 215, 0 sq ft	0.00	4.35	0.00																								
1	11.583 FT	Roof Surface: 0, 170, 0 sq ft Wall surface: 0, 392, 0 sq ft	0.00	5.32	0.00																								
FND		Roof Surface: 0, 0, 0 sq ft Wall surface: 0, 0, 0 sq ft	0.00	9.67	0.00																								
																													
			<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3">Tributary Design Loads (0.6W)</th> </tr> <tr> <th>A</th> <th>O</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>0.00</td> <td>4.35</td> <td>0.00</td> </tr> <tr> <td colspan="3" style="text-align: center;">Total Shear: 4.35 kips</td> </tr> <tr> <td>0.00</td> <td>5.32</td> <td>0.00</td> </tr> <tr> <td colspan="3" style="text-align: center;">Total Shear: 9.67 kips</td> </tr> <tr> <td>0.00</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td colspan="3" style="text-align: center;">Total Shear: 9.67 kips</td> </tr> </tbody> </table>			Tributary Design Loads (0.6W)			A	O	B	0.00	4.35	0.00	Total Shear: 4.35 kips			0.00	5.32	0.00	Total Shear: 9.67 kips			0.00	0.00	0.00	Total Shear: 9.67 kips		
Tributary Design Loads (0.6W)																													
A	O	B																											
0.00	4.35	0.00																											
Total Shear: 4.35 kips																													
0.00	5.32	0.00																											
Total Shear: 9.67 kips																													
0.00	0.00	0.00																											
Total Shear: 9.67 kips																													



P1/P3 = 336/630 = 0.53(154 PLF) = 82 PLF
 P1/P3 = 239/451 = 0.53(250 PLF) = 133 PLF
 SHEAR WALL #100, #102, & #103 ARE
 PROPORTIONAL TO THEIR STIFFNESSES

P1/P3 = 336/630 = 0.53(83 PLF) = 44 PLF
 P1/P3 = 239/451 = 0.53(140 PLF) = 74 PLF
 SHEAR WALL #101 & #104 ARE
 PROPORTIONAL TO THEIR STIFFNESSES

2.4k W (26% STORY,
 25% TOTAL)
 4.0k S (26% STORY,
 25% TOTAL)

4.9k W (51% STORY,
 50% TOTAL)
 8.0k S (50% STORY,
 50% TOTAL)

2.4k W (23% STORY,
 25% TOTAL)
 4.0k S (24% STORY,
 25% TOTAL)

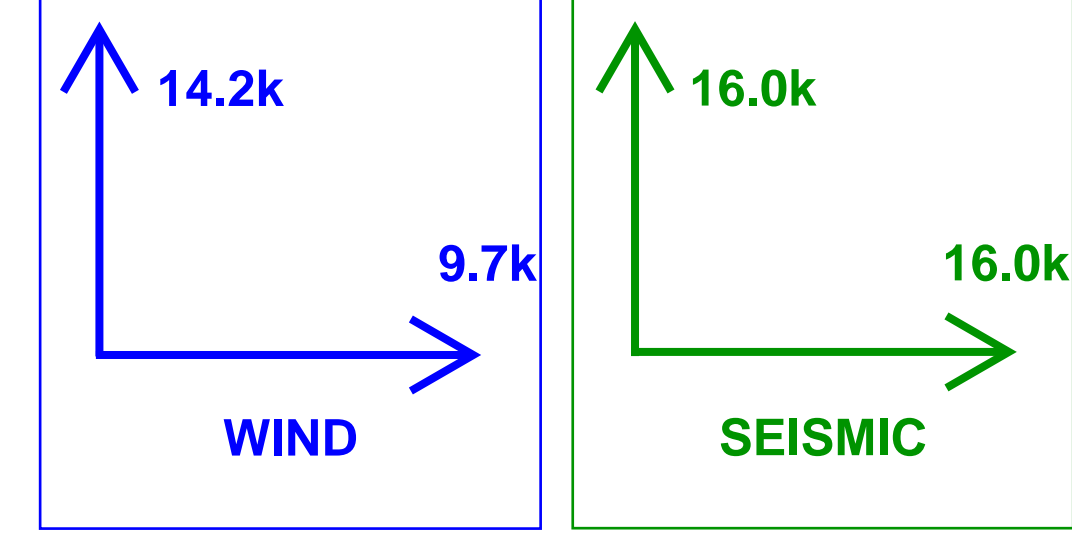
0.7k W (8% STORY,
 5% TOTAL)
 0.7k S (9% STORY,
 4% TOTAL)

4.4k W (28% STORY,
 31% TOTAL)
 5.2k S (26% STORY,
 33% TOTAL)

2.5k W (28% STORY,
 18% TOTAL)
 2.1k S (28% STORY,
 13% TOTAL)

4.8k W (21% STORY,
 34% TOTAL)
 6.2k S (21% STORY,
 39% TOTAL)

1.8k W (15% STORY,
 12% TOTAL)
 1.8k S (16% STORY,
 11% TOTAL)



MAIN FLOOR

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

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

AREA SUMMARY	
COVERED ENTRY:	54 SF
COVERED LIVING:	214 SF
COVERED PORCH:	384 SF
COVERED PATIO:	53 SF
TOTAL AREA:	4,229 SF
	856 SF

REGISTERED ARCHITECT
 JERRY P. ARNETT
 STATE OF WASHINGTON

ARCHITECTS NORTHWEST
 18915-142nd AVENUE NE SUITE 100 WOODINVILLE, WA 98072
 OFFICE: (425) 485-4900 FAX: (425) 487-6585
 (425) 487-6585 WWW.ARCHITECTSNW.COM

HATELY RESIDENCE
 4114 83RD AVE SE, MERCER ISLAND, WA 98040
PLAN M4061A3F-2FB

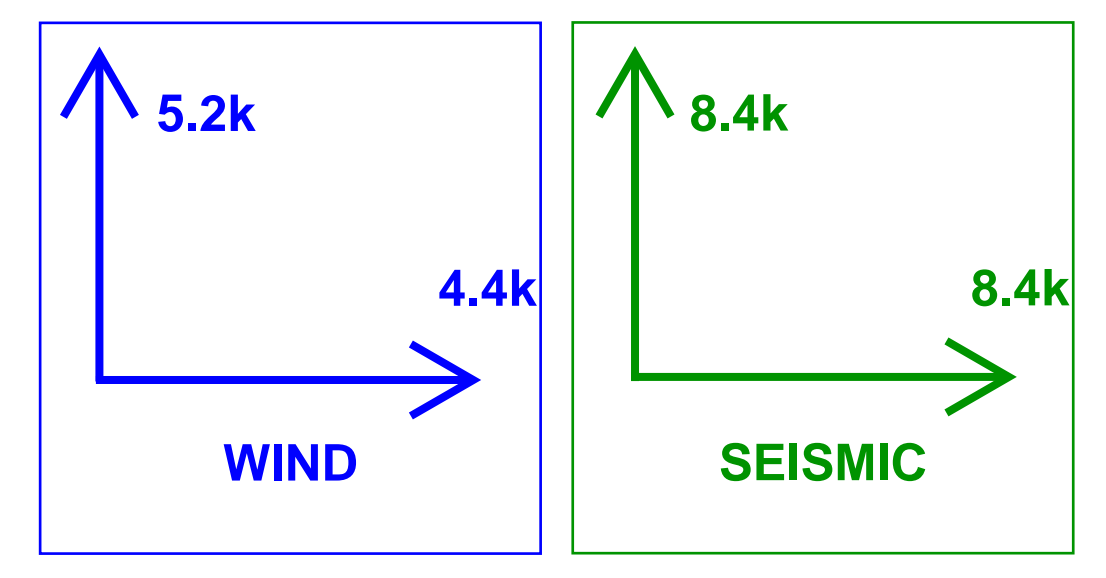
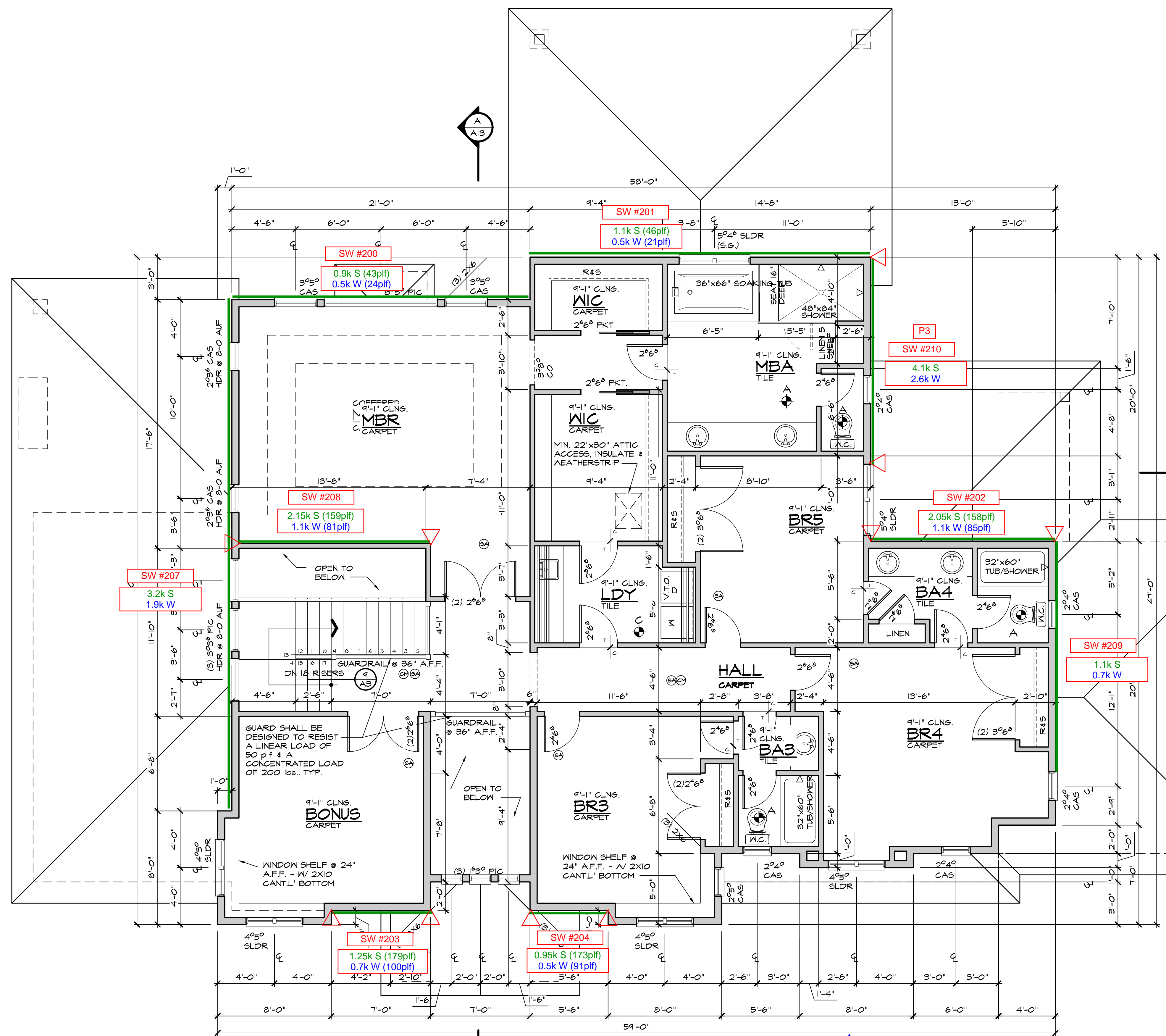
DESIGNED BY: JdeR DATE: 2012
 DRAWN BY: JIM DATE: 5/1/2012

PROJECT MANAGER: SARAH WEIGHT
 REVISED BY: JSC DATE: 4/14/22

LATERAL BY: DATE:
 LATERAL JOB NUMBER:

A7
 A13

ANW WOODVILLE OFFICE
 JOB NUMBER:
220006



1.9k W (37%)
3.2k S (37%)

2.6k W (50%)
4.1k S (49%)

0.7k W (13%)
1.1k S (13%)

1.2k W (27%)
2.2k S (26%)

2.2k W (50%)
4.2k S (50%)

1.0k W (23%)
2.0k S (24%)

UPPER FLOOR PLAN

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

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

REGISTERED ARCHITECT
JERRY P. GARRETT
STATE OF WASHINGTON

ARCHITECTS NORTHWEST
WOODINVILLE, WA 98072
18915-142nd AVENUE NE SUITE 100
OFFICE: (425) 485-4900 FAX: (425) 487-6585
18915-142nd AVENUE NE SUITE 100 WOODINVILLE, WA 98072
OFFICE: (425) 485-4900 FAX: (425) 487-6585
WWW.ARCHITECTSNW.COM

HATELY RESIDENCE
4114 83RD AVE SE, MERCER ISLAND, WA 98040
PLAN M4061A3F-2FB

DESIGNED BY: JdeR DATE: 2012
DRAWN BY: JM DATE: 5/1/2012

PROJECT MANAGER: SARAH WEIGHT
REVISED BY: JSC DATE: 4/14/22

LATERAL BY: DATE:
LATERAL JOB NUMBER:

A9
A13

ANN WOODVILLE OFFICE
JOB NUMBER:
220006



SHEARWALL DESIGN SUMMARY

SHEARWALL 200: 2ND - BACK EXT. WALL @ MBR

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="5.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="21.0"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="6.0"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="500"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="2016"/>	LBS
--------------------------	----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="189"/>	PLF	OVERTURNING MOMENT	<input type="text" value="4.5"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="375"/>	LBS	RESISTIVE MOMENT	<input type="text" value="29.7"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="0"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 201: 2ND - BACK EXT. WALL @ MBA

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="4.5"/>	FT.		
WALL LENGTH, L	<input type="text" value="24.0"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="19.0"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="500"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="6384"/>	LBS
--------------------------	----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="184"/>	PLF	OVERTURNING MOMENT	<input type="text" value="4.5"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="375"/>	LBS	RESISTIVE MOMENT	<input type="text" value="37.2"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="0"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 202: 2ND - BACK EXT. WALL @ BA4

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF DL AT ENDS OF WALL LBS
OVERTURNING MOMENT K-FT RESISTIVE MOMENT K-FT
HOLD DOWN DESIGN LOAD LBS HOLDDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDDOWN REQUIRED

SHEARWALL 203: 2ND - FRONT EXT. WALL @ BONUS

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF DL AT ENDS OF WALL LBS
OVERTURNING MOMENT K-FT RESISTIVE MOMENT K-FT
HOLD DOWN DESIGN LOAD LBS HOLDDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

SIMPSON GS16 STRAP TIE (14" END LENGTH)



SHEARWALL DESIGN SUMMARY

SHEARWALL 204: 2ND - FRONT EXT. WALL @ BR3

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="0.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="5.5"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="5.5"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="500"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="1848"/>	LBS
--------------------------	----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="184"/>	PLF	OVERTURNING MOMENT	<input type="text" value="4.5"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="349"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="289"/>	LBS	RESISTIVE MOMENT	<input type="text" value="2.6"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="1705"/>	LBS

HOLD-DOWN SPECIFICATION

SIMPSON GS16 STRAP TIE (14" END LENGTH)

SHEARWALL 205: - VOID

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="0.0"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="0.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="0.0"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="0.0"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="PO"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="0"/>	LBS	###	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="#DIV/0!"/>	LBS
--------------------------	--------------------------------	-----	-----	------------------------------	--------------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="0"/>	PLF	OVERTURNING MOMENT	<input type="text" value="#DIV/0!"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="0"/>	LBS	RESISTIVE MOMENT	<input type="text" value="0.0"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="0"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 206: - VOID

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
 LBS **###** LBS

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 207: 2ND - SIDE EXT. WALL @MBR/BONUS

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
 LBS < LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 208: 2ND - INTERIOR WALL @ MBR

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="0.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="13.5"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="13.5"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="1100"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="4536"/>	LBS
--------------------------	-----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="125"/>	PLF	OVERTURNING MOMENT	<input type="text" value="10.0"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="822"/>	LBS	RESISTIVE MOMENT	<input type="text" value="13.5"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="1705"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 209: 2ND - SIDE EXT. WALL @ BR4

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="4.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="16.3"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="14.3"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="700"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="4788"/>	LBS
--------------------------	----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="184"/>	PLF	OVERTURNING MOMENT	<input type="text" value="6.4"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="500"/>	LBS	RESISTIVE MOMENT	<input type="text" value="19.5"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="0"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 210: 2ND - SIDE EXT. WALL @ MBA

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P3 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 3"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

SIMPSON GS16 STRAP TIE (14" END LENGTH)

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
#DIV/0!

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
#DIV/0!

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
#DIV/0!

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
#DIV/0!

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS
###

SHEARWALL ASSEMBLY SPECIFICATION

P0 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 100: 1ST - BACK EXT. WALL @ MBR2

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P3 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 3"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

SIMPSON STHD14RJ HOLDOWN



SHEARWALL DESIGN SUMMARY

SHEARWALL 101: 1ST - BACK EXT. WALL @ KITCHEN

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="10.0"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="5.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="14.3"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="8.3"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="650"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="2772"/>	LBS
--------------------------	----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="439"/>	PLF	OVERTURNING MOMENT	<input type="text" value="6.5"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="1414"/>	LBS	RESISTIVE MOMENT	<input type="text" value="38.8"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="0"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 102: 1ST - REAR EXT. WALL @ GARAGE

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="11.0"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="0.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="13.5"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="13.5"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="1100"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="4536"/>	LBS
--------------------------	-----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="202"/>	PLF	OVERTURNING MOMENT	<input type="text" value="12.1"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="1200"/>	LBS	RESISTIVE MOMENT	<input type="text" value="20.8"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="4935"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 103: 1ST - INT.WALL @ GARAGE

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 104: 1ST - BACK EXT. WALL @ GREAT

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P3 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 3"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 105: 1ST - FRONT EXT. WALL @ BA2

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 106: 1ST - FRONT EXT. WALL @ DEN

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 107: 1ST - FRONT EXT. WALL @ DINING

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 108: 1ST - SIDE EXT. WALL @ MBR2

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 109: 1ST - SIDE EXT./INT. WALL @ GREAT

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 110: 1ST - INT. WALL @ GARAGE

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 111: 1ST - SIDE EXT. WALL @ GARAGE

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 112: 1ST - SIDE EXT. WALL @ KITCHEN

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P3 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 3"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

ARCHITECT NW
HATELY RESIDENCE

MERCER ISLAND, WA

SEISMIC SHEAR WALL CALCULATIONS - SEISMIC

REVIEWED BY: RJZ

JULY 8, 2022

PARAMETERS:

SINGLE FAMILY HOME

DESIGN WIND SPEED: 100 MPH

WIND EXPOSURE CATEGORY: B

SEISMIC DESIGN CATEGORY: D

CODE & DESIGN STANDARD: 2018 IBC CH. 1609, ASCE 7-16 CH. 26-30



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

SEISMIC CALCULATION - ASCE 7-16

SEISMIC DESIGN CATEGORY:

USER INPUTS:

SITE CLASS	C
SPECTRAL RESPONSE ACCELERATION 0.2 SEC, S_s	1.419
SPECTRAL RESPONSE ACCELERATION 1.0 SEC, S₁	0.493
OCCUPANCY CATEGORY	II

VARIABLES:

SITE COEFFICIENT, F _A	1.20
SITE COEFFICIENT, F _V	1.50

CALCULATED VALUES:

MAXIMUM SPECTRAL RESPONSE ACCELERATION, S_{MS}	1.703
MAXIMUM SPECTRAL RESPONSE ACCELERATION, S_{M1}	0.740
DESIGN SPECTRAL RESPONSE ACCELERATION, S_{DS}	1.135
DESIGN SPECTRAL RESPONSE ACCELERATION, S_{D1}	0.493
SEISMIC DESIGN CATEGORY (SHORT TERM)	D
SEISMIC DESIGN CATEGORY (1.0 SECOND TERM)	D

BUILDING PERIOD DETERMINATION:

USER INPUTS:

BUILDING PERIOD COEFFICIENT, C _T	0.020
LONG-PERIOD TRANS PERIOD, T _L (SEC)	6
HT. ABV BASE TO HIGHEST LEVEL, h _N	21

CALCULATED VALUES:

APPROXIMATE FUNDAMENTAL PERIOD, T _a	0.194
T ₀	0.087
T _s	0.434
SPECTRAL RESPONSE ACC., S _a (g)	1.135

SITE CLASS ASSUMPTION

NO PER ASCE 7-16 SECTION 11.4.3 THE SITE CLASS MAY BE ASSUMED TO BE D

EQUIVALENT LATERAL FORCE PROCEDURE

DEAD LOAD CALCULATION:

LEVEL	STORY HT. (FT.)	AREA (FT ²)	DEAD LOAD (PSF)	DL OF EXT WALL TRIB. TO LEVEL (KIPS)	TOTAL LEVEL DL
1	11.6	4153	16	14.5	81 K
2	9.1	2607	17	5.9	50 K
3	0.0	0	0	0.0	0 K
4	0.0	0	0	0.0	0 K
5	0.0	0	0	0.0	0 K
6	0.0	0	0	0.0	0 K
7	0.0	0	0	0.0	0 K
8	0.0	0	0	0.0	0 K
9	0.0	0	0	0.0	0 K
10	0.0	0	0	0.0	0 K
11	0.0	0	0	0.0	0 K
12	0.0	0	0	0.0	0 K
13	0.0	0	0	0.0	0 K
14	0.0	0	0	0.0	0 K
15	0.0	0	0	0.0	0 K
16	0.0	0	0	0.0	0 K
17	0.0	0	0	0.0	0 K
18	0.0	0	0	0.0	0 K
19	0.0	0	0	0.0	0 K
20	0.0	0	0	0.0	0 K

TOTAL DEAD LOAD OF STRUCTURE 131 KIPS

SEISMIC RESPONSE COEFFICIENT:

	TRANSVERSE	LONGITUDINAL
RESPONSE MODIFICATION FACTOR, R	6.5	6.5
OCCUPANCY IMPORTANCE FACTOR, I _e	1.00	1.00
SEISMIC RESPONSE COEFFICIENT, C _s	0.175	0.175

BASE SHEARS:

ULTIMATE LOADS

x 0.7 =

ALLOWABLE LOADS

TRANSVERSE	LONGITUDINAL	TRANSVERSE	LONGITUDINAL
23 K	23 K	16.0 K	16.0 K

STORY SHEAR CALCULATION:

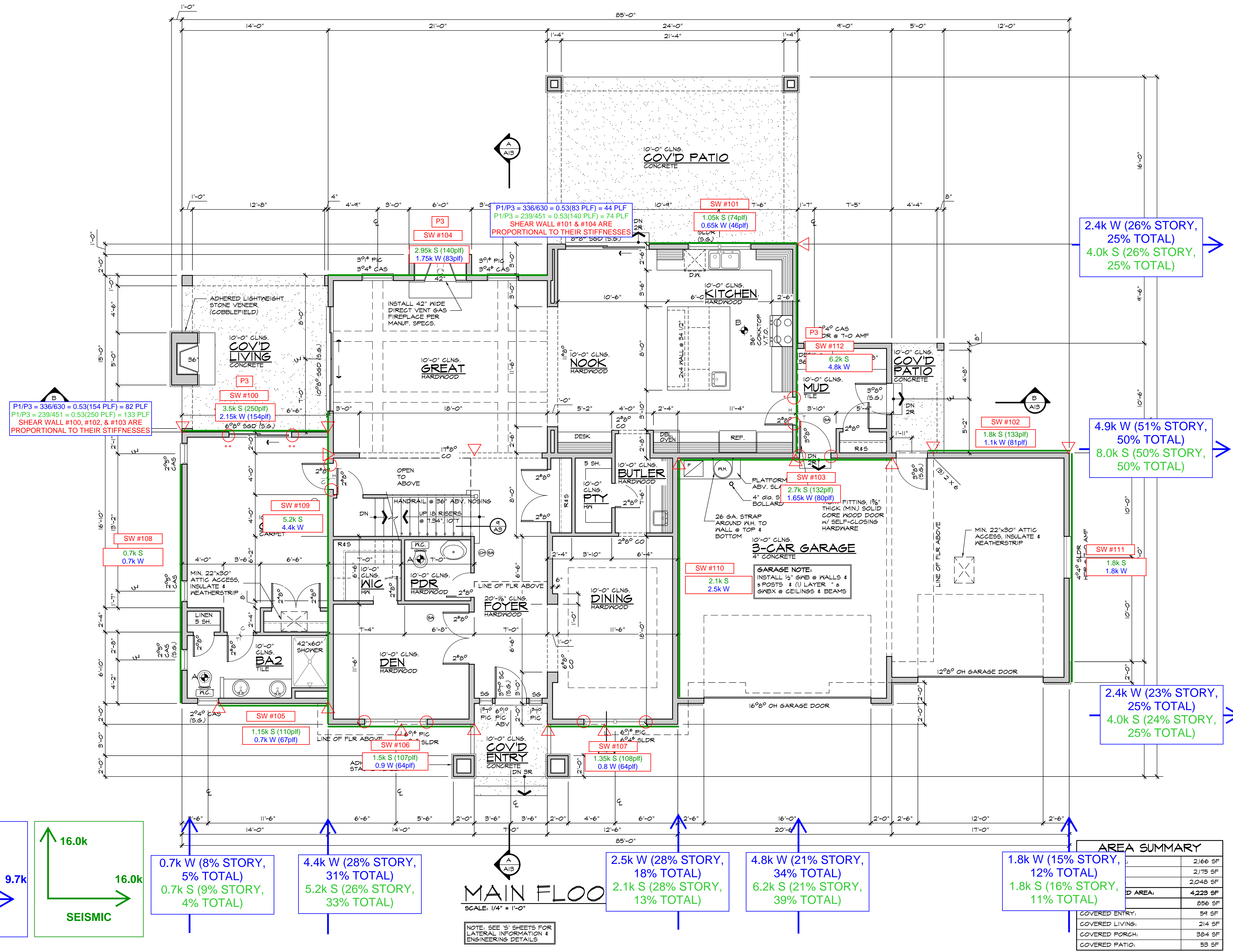
DISTRIBUTION EXPONENT, **1.00**

ULTIMATE LOADS

x 0.7 =

ALLOWABLE LOADS

LEVEL	VERT. DIST. FACTOR, C _{vk}	TRANSVERSE		LONGITUDINAL		TRANSVERSE		LONGITUDINAL	
		STORY SHEAR, F _x	STORY SHEAR, F _y	STORY SHEAR, F _x	STORY SHEAR, F _y	STORY SHEAR, F _x	STORY SHEAR, F _y	STORY SHEAR, F _x	STORY SHEAR, F _y
1	0.474	10.9 K	10.9 K	7.6 K	7.6 K	16.0 K	16.0 K	8.4 K	8.4 K
2	0.526	12.0 K	12.0 K	8.4 K	8.4 K	8.4 K	8.4 K	0.0 K	0.0 K
3	0.000	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
4	0.000	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
5	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
6	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
7	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
8	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
9	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
10	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
11	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
12	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
13	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
14	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
15	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
16	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
17	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
18	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
19	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K
20	0.00	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K	0.0 K



P1/P3 = 336/630 = 0.53(154 PLF) = 82 PLF
 P1/P3 = 239/451 = 0.53(250 PLF) = 133 PLF
 SHEAR WALL #100, #102, & #103 ARE
 PROPORTIONAL TO THEIR STIFFNESSES

P1/P3 = 336/630 = 0.53(83 PLF) = 44 PLF
 P1/P3 = 239/451 = 0.53(140 PLF) = 74 PLF
 SHEAR WALL #101 & #104 ARE
 PROPORTIONAL TO THEIR STIFFNESSES

2.4k W (26% STORY,
 25% TOTAL)
 4.0k S (26% STORY,
 25% TOTAL)

4.9k W (51% STORY,
 50% TOTAL)
 8.0k S (50% STORY,
 50% TOTAL)

2.4k W (23% STORY,
 25% TOTAL)
 4.0k S (24% STORY,
 25% TOTAL)

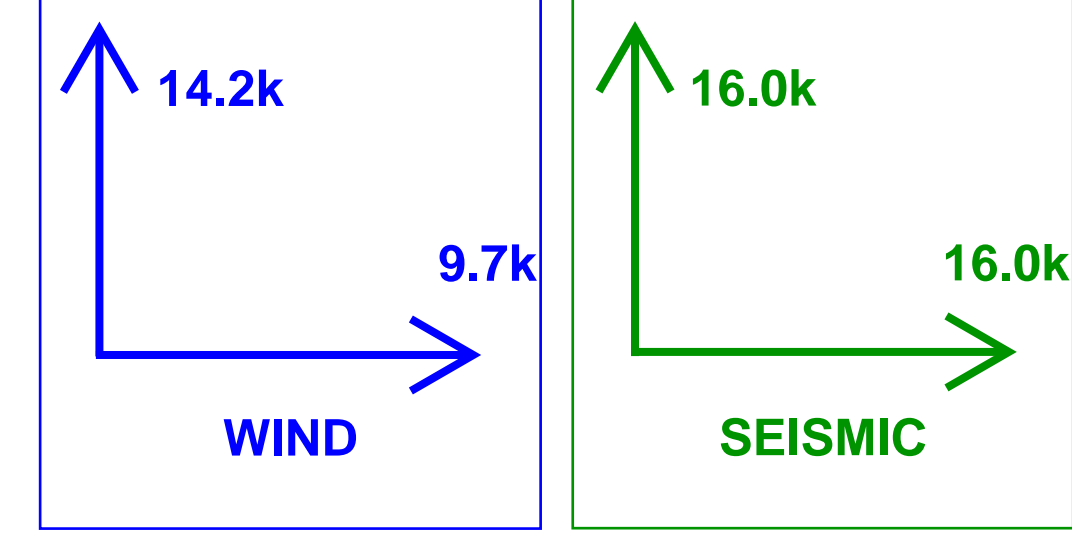
0.7k W (8% STORY,
 5% TOTAL)
 0.7k S (9% STORY,
 4% TOTAL)

4.4k W (28% STORY,
 31% TOTAL)
 5.2k S (26% STORY,
 33% TOTAL)

2.5k W (28% STORY,
 18% TOTAL)
 2.1k S (28% STORY,
 13% TOTAL)

4.8k W (21% STORY,
 34% TOTAL)
 6.2k S (21% STORY,
 39% TOTAL)

1.8k W (15% STORY,
 12% TOTAL)
 1.8k S (16% STORY,
 11% TOTAL)



MAIN FLOOR

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

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

AREA SUMMARY	
COVERED ENTRY:	54 SF
COVERED LIVING:	214 SF
COVERED PORCH:	384 SF
COVERED PATIO:	53 SF
TOTAL AREA:	4,229 SF
	856 SF

REGISTERED ARCHITECT
 JERRY P. ARNETT
 STATE OF WASHINGTON

ARCHITECTS NORTHWEST
 18915-142nd AVENUE NE SUITE 100 WOODINVILLE, WA 98072
 OFFICE: (425) 485-4900 FAX: (425) 487-6585
 (425) 487-6585 WWW.ARCHITECTSNW.COM

HATELY RESIDENCE
 4114 83RD AVE SE, MERCER ISLAND, WA 98040
PLAN M4061A3F-2FB

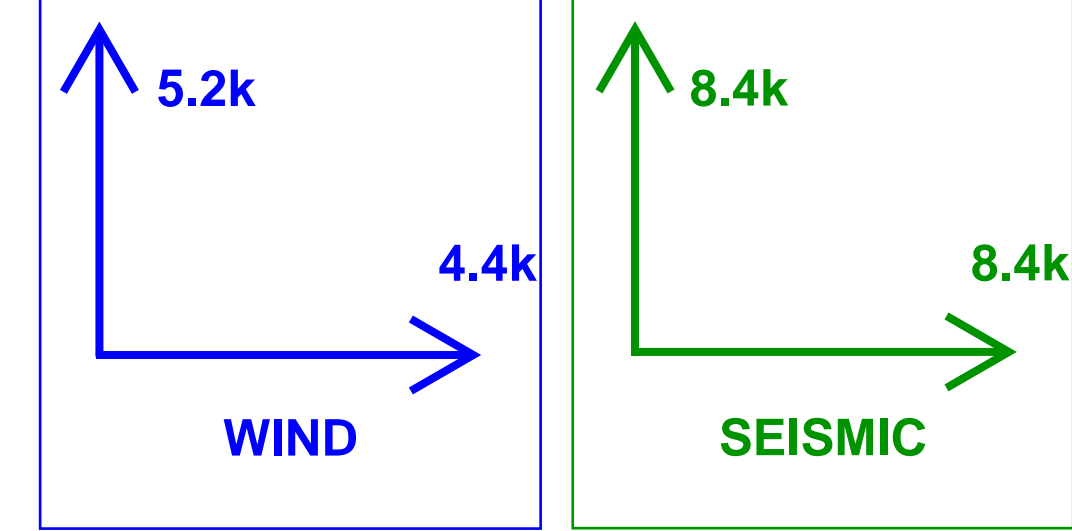
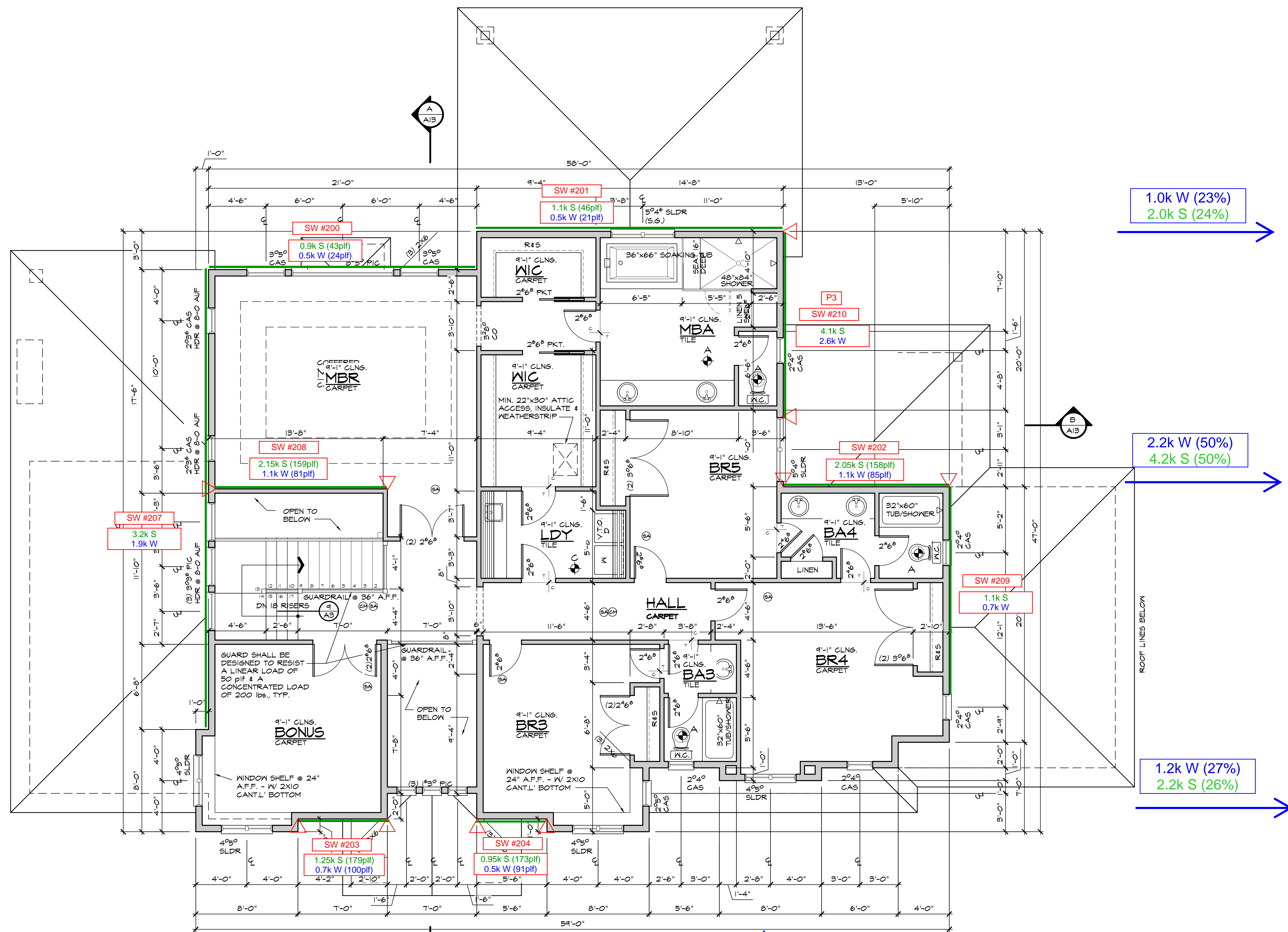
DESIGNED BY: JdeR DATE: 2012
 DRAWN BY: JIM DATE: 5/1/2012

PROJECT MANAGER: SARAH WEIGHT
 REVISED BY: JSC DATE: 4/14/22

LATERAL BY: DATE:
 LATERAL JOB NUMBER:

A7
 A13

ANW WOODVILLE OFFICE
 JOB NUMBER:
220006



1.9k W (37%)
3.2k S (37%)

2.6k W (50%)
4.1k S (49%)

0.7k W (13%)
1.1k S (13%)

1.2k W (27%)
2.2k S (26%)

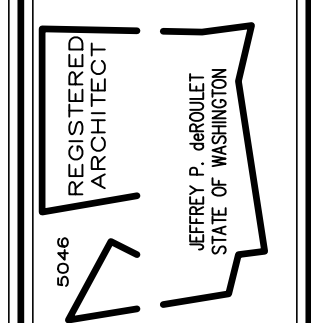
2.2k W (50%)
4.2k S (50%)

1.0k W (23%)
2.0k S (24%)

UPPER FLOOR PLAN

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

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS



PERMITS OF USE ARE TO BE OBTAINED FROM THE LOCAL JURISDICTION PRIOR TO CONSTRUCTION FOR THESE PLANS. THESE PLANS ARE COPYRIGHTED IN ACCORDANCE WITH THE ARCHITECTS ACT AND THE ARCHITECTS ACT REGULATIONS. NO PART OF THESE PLANS MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF ARCHITECTS NORTHWEST, INC. THESE DRAWINGS AND PLANS SET FORTH THE DESIGN AND SHALL REMAIN THE PROPERTY OF ARCHITECTS NORTHWEST, INC.

ARCHITECTS NORTHWEST
18915-142nd AVENUE NE SUITE 100 WOODINVILLE, WA 98072
OFFICE: (425) 485-4900 FAX: (425) 487-6585
FAX: (425) 487-6585 WWW.ARCHITECTSNW.COM

HATELY RESIDENCE
4114 83RD AVE SE, MERCER ISLAND, WA 98040
PLAN M4061A3F-2FB

DESIGNED BY: JdeR DATE: 2012
DRAWN BY: JM DATE: 5/1/2012

PROJECT MANAGER: SARAH WEIGHT
REVISED BY: JSC DATE: 4/14/22

LATERAL BY: DATE:
LATERAL JOB NUMBER:

A9
A13

ANN WOODVILLE OFFICE
JOB NUMBER:
220006



SHEARWALL DESIGN SUMMARY

SHEARWALL 200: 2ND - BACK EXT. WALL @ MBR

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="5.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="21.0"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="6.0"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="900"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="1434"/>	LBS
--------------------------	----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="189"/>	PLF	OVERTURNING MOMENT	<input type="text" value="8.2"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="375"/>	LBS	RESISTIVE MOMENT	<input type="text" value="22.5"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="0"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 201: 2ND - BACK EXT. WALL @ MBA

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="4.5"/>	FT.		
WALL LENGTH, L	<input type="text" value="24.0"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="19.0"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="1100"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="4541"/>	LBS
--------------------------	-----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="184"/>	PLF	OVERTURNING MOMENT	<input type="text" value="10.0"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="375"/>	LBS	RESISTIVE MOMENT	<input type="text" value="28.1"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="0"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 202: 2ND - BACK EXT. WALL @ BA4

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="0.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="13.0"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="13.0"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="2050"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="3107"/>	LBS
--------------------------	-----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="160"/>	PLF	OVERTURNING MOMENT	<input type="text" value="18.6"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="733"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="500"/>	LBS	RESISTIVE MOMENT	<input type="text" value="9.1"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="1705"/>	LBS

HOLD-DOWN SPECIFICATION

SIMPSON GS16 STRAP TIE (14" END LENGTH)

SHEARWALL 203: 2ND - FRONT EXT. WALL @ BONUS

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="0.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="7.0"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="7.0"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="1250"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="1673"/>	LBS
--------------------------	-----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="180"/>	PLF	OVERTURNING MOMENT	<input type="text" value="11.4"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="1205"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="289"/>	LBS	RESISTIVE MOMENT	<input type="text" value="2.9"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="1705"/>	LBS

HOLD-DOWN SPECIFICATION

SIMPSON GS16 STRAP TIE (14" END LENGTH)



SHEARWALL DESIGN SUMMARY

SHEARWALL 204: 2ND - FRONT EXT. WALL @ BR3

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="0.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="5.5"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="5.5"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="184"/>	PLF	OVERTURNING MOMENT	<input type="text" value="8.6"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="1208"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="289"/>	LBS	RESISTIVE MOMENT	<input type="text" value="2.0"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="1705"/>	LBS

HOLD-DOWN SPECIFICATION

SIMPSON CS16 STRAP TIE (14" END LENGTH)

SHEARWALL 205: - VOID

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="0.0"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="0.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="0.0"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="0.0"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="PO"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ####! ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="0"/>	PLF	OVERTURNING MOMENT	<input type="text" value="#DIV/0!"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="0"/>	LBS	RESISTIVE MOMENT	<input type="text" value="0.0"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="0"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 206: - VOID

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
###

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 207: 2ND - SIDE EXT. WALL @MBR/BONUS

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
<

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 208: 2ND - INTERIOR WALL @ MBR

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="0.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="13.5"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="13.5"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="2150"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="3227"/>	LBS
--------------------------	-----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="125"/>	PLF	OVERTURNING MOMENT	<input type="text" value="19.5"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="690"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="822"/>	LBS	RESISTIVE MOMENT	<input type="text" value="10.2"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="1705"/>	LBS

HOLD-DOWN SPECIFICATION

SIMPSON CS16 STRAP TIE (14" END LENGTH)

SHEARWALL 209: 2ND - SIDE EXT. WALL @ BR4

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="4.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="16.3"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="14.3"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="1100"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="3406"/>	LBS
--------------------------	-----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="184"/>	PLF	OVERTURNING MOMENT	<input type="text" value="10.0"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="500"/>	LBS	RESISTIVE MOMENT	<input type="text" value="14.7"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="0"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 210: 2ND - SIDE EXT. WALL @ MBA

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="9.1"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="4.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="14.5"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="12.5"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P3"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="4100"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="5638"/>	LBS
--------------------------	-----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P3 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 3"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="202"/>	PLF	OVERTURNING MOMENT	<input type="text" value="37.2"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="1676"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="500"/>	LBS	RESISTIVE MOMENT	<input type="text" value="12.9"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="1705"/>	LBS

HOLD-DOWN SPECIFICATION

SIMPSON CS16 STRAP TIE (14" END LENGTH)

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="0.0"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="0.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="0.0"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="0.0"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="PO"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="0"/>	LBS	###	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="#DIV/0!"/>	LBS
--------------------------	--------------------------------	-----	-----	------------------------------	--------------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="0"/>	PLF	OVERTURNING MOMENT	<input type="text" value="0.0"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="0"/>	LBS	RESISTIVE MOMENT	<input type="text" value="0.0"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="0"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
#DIV/0!

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
#DIV/0!

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
#DIV/0!

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
#DIV/0!

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS ALLOWABLE SHEARWALL CAPACITY LBS
#DIV/0!

SHEARWALL ASSEMBLY SPECIFICATION

PO - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - UNBLOCKED
#DIV/0!

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 100: 1ST - BACK EXT. WALL @ MBR2

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P3 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 3"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

SIMPSON STHD14RJ HOLDOWN



SHEARWALL DESIGN SUMMARY

SHEARWALL 101: 1ST - BACK EXT. WALL @ KITCHEN

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 102: 1ST - REAR EXT. WALL @ GARAGE

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

SIMPSON STHD14RJ HOLDOWN



SHEARWALL DESIGN SUMMARY

SHEARWALL 103: 1ST - INT.WALL @ GARAGE

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="10.0"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="8.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="20.5"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="17.5"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P1"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="2700"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="4183"/>	LBS
--------------------------	-----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="120"/>	PLF	OVERTURNING MOMENT	<input type="text" value="27.0"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="515"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="536"/>	LBS	RESISTIVE MOMENT	<input type="text" value="16.4"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="3695"/>	LBS

HOLD-DOWN SPECIFICATION

SIMPSON STDH14RJ HOLDOWN

SHEARWALL 104: 1ST - BACK EXT. WALL @ GREAT

SHEARWALL PROPERTIES:

WALL HEIGHT, H	<input type="text" value="10.0"/>	FT.	MAX WALL OPENING HT, H _c	<input type="text" value="6.0"/>	FT.		
WALL LENGTH, L	<input type="text" value="21.0"/>	FT.	QUALIFYING WALL LENGTH, L	<input type="text" value="10.0"/>	FT.	SHEARWALL ASSEMBLY	<input type="text" value="P3"/>

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL	<input type="text" value="2950"/>	LBS	<	ALLOWABLE SHEARWALL CAPACITY	<input type="text" value="4129"/>	LBS
--------------------------	-----------------------------------	-----	---	------------------------------	-----------------------------------	-----

SHEARWALL ASSEMBLY SPECIFICATION

P3 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 3"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL	<input type="text" value="420"/>	PLF	OVERTURNING MOMENT	<input type="text" value="29.5"/>	K-FT	HOLD DOWN DESIGN LOAD	<input type="text" value="0"/>	LBS
DL AT ENDS OF WALL	<input type="text" value="775"/>	LBS	RESISTIVE MOMENT	<input type="text" value="49.5"/>	K-FT	HOLD DOWN CAPACITY	<input type="text" value="0"/>	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 105: 1ST - FRONT EXT. WALL @ BA2

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

SIMPSON STD14RJ HOLDOWN

SHEARWALL 106: 1ST - FRONT EXT. WALL @ DEN

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 107: 1ST - FRONT EXT. WALL @ DINING

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 108: 1ST - SIDE EXT. WALL @ MBR2

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 109: 1ST - SIDE EXT./INT. WALL @ GREAT

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 110: 1ST - INT. WALL @ GARAGE

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED



SHEARWALL DESIGN SUMMARY

SHEARWALL 111: 1ST - SIDE EXT. WALL @ GARAGE

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P1 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 6"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 112: 1ST - SIDE EXT. WALL @ KITCHEN

SHEARWALL PROPERTIES:

WALL HEIGHT, H FT. MAX WALL OPENING HT, H_c FT.
WALL LENGTH, L FT. QUALIFYING WALL LENGTH, L FT. SHEARWALL ASSEMBLY

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL LBS < ALLOWABLE SHEARWALL CAPACITY LBS

SHEARWALL ASSEMBLY SPECIFICATION

P3 - 1-SIDE 7/16" OSB
FASTENED W/ 8D NAILS AT 3"O.C. PANEL EDGES & 12"O.C. PANEL FIELD - EDGES BLOCKED
ADEQUATE

OVERTURNING EVALUATION:

RESISTIVE DL PLF OVERTURNING MOMENT K-FT HOLD DOWN DESIGN LOAD LBS
DL AT ENDS OF WALL LBS RESISTIVE MOMENT K-FT HOLDOWN CAPACITY LBS

HOLD-DOWN SPECIFICATION

SIMPSON STHD14RJ HOLDOWN



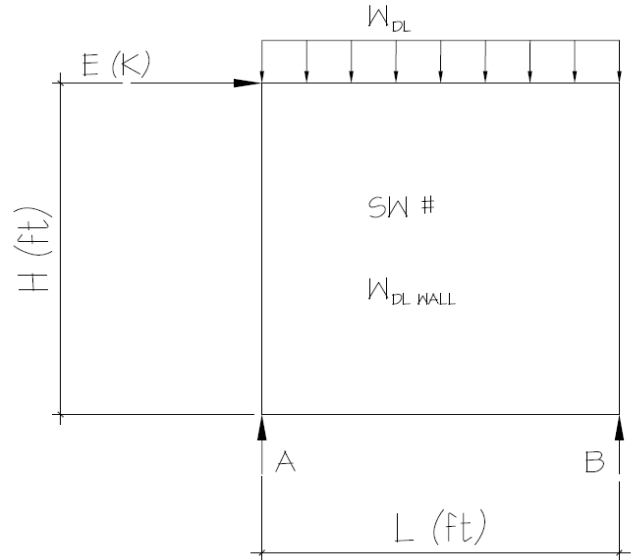
OVERSTRENGTH CALCULATIONS

WALL DESCRIPTION/SW #:

208

PARAMETERS:

L = 13.5 FT
H = 9.1 FT
E = 2.15 K
W_{DL WALL} = 0.10 KLF
W_{DL} = 0.025 KLF
Ω₀ = 2.5 (ASCE TABLE 12.2.1 FOOTNOTE G)
SDS = 1.135



ANALYSIS:

$E_{MH} = \Omega_0 * E = 5.38$ K $E_v = 0.2 * SDS * DL = 0.383$ K
 $E_M = E_{MH} + E_v = 5.758$ K
 $E_M = E_{MH} - E_v = 4.992$ K

$E_M (MAX) = \sum M_A = 0 = 5.76(9.1) + 0.125(13.5)(6.75) - R_B(13.5)$ $R_B = 0.8DL + 3.9E$
 $R_A = 0.8DL - 3.9E$
 $E_M (MIN) = \sum M_A = 0 = 4.99(9.1) + 0.125(13.5)(6.75) - R_B(13.5)$ $R_B = 0.8DL + 3.4E$
 $R_A = 0.8DL - 3.4E$

CHECK BEAMS FOR AXIAL FORCES SHOWN USING LOAD COMBOS PER SECTION 12.4.3.1 (ASD)

ALLOWABLE STRESS PERMITTED TO BE INCREASED BY 1.2

SEE FOLLOWING BEAM
CALCS FOR LOAD
APPLICATION

BEAM CALCULATIONS FOR

PLAN M4061A3F-2

TO BE BUILT IN MERCER ISLAND, WA

FOR

HATELY RESIDENCE

LOADING

Roof	15 PSF Dead Load + 25 PSF Live Load	=	40 PSF
Floor	10 PSF Dead Load + 40 PSF Live Load	=	50 PSF
Ceiling	5 PSF Dead Load + 10 PSF Live Load	=	15 PSF
Deck	5 PSF Dead Load + 60 PSF Live Load	=	65 PSF
Interior wall		=	07 PSF
Exterior wall		=	10 PSF

DEFLECTION

Roof	=	1 / 240 Live Load, 1 / 180 Total Load
Floor	=	1 / 360 Live Load, 1 / 240 Total Load

NOTE: This stamp applies to the members and assemblies described in these calculations only. And is valid if it has a wet stamp.



Architects Northwest JOB No. 220006

ARCHITECTS NORTHWEST, Inc.
18915 142nd Avenue NE Suite 100
Woodinville, WA 98072
(425) 485-4900 FAX (425) 487-6585
www.ArchitectsNW.com

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--		

PROJECT SUMMARY

Project Name: Hately

Governing Codes:

Building Code: 2018 International Building Code

ASCE: ASCE 7-16

Steel: AISC 360-16

Concrete: ACI 318-14

Masonry: TMS 402/602-16

Module Location: GT1 - GIRDER HIP MASTER (end reactions only)

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (1) 1.5 in. X 3.5 in. X 39.3 ft

Section Adequacy: -99.91%

Controlling Factor: Deflection

Module Location: GT2 - GIRDER TRUSS (end reactions only)

Module Level: StruCalc Members

Module Type: Roof Beam

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (1) 1.5 in. X 3.5 in. X 8 ft

Section Adequacy: -95.16%

Controlling Factor: Deflection

Module Location: GT3 - GIRDER TRUSS (end reactions only)

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (1) 1.5 in. X 3.5 in. X 8 ft

Section Adequacy: -97.28%

Controlling Factor: Deflection

Module Location: GT4 - GIRDER TRUSS (end reactions only)

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (1) 1.5 in. X 3.5 in. X 33.7 ft

Section Adequacy: -99.7%

Controlling Factor: Deflection

Module Location: GT5 - GIRDER TRUSS (end reactions only)

Module Level: StruCalc Members

Module Type: Roof Beam

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (1) 1.5 in. X 3.5 in. X 8 ft

Section Adequacy: -91.73%

Controlling Factor: Deflection

Module Location: GT6 - GIRDER TRUSS (end reactions only)

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (1) 1.5 in. X 3.5 in. X 33.7 ft

Section Adequacy: -99.72%

Controlling Factor: Deflection

Module Location: GT7 - STUB HIP MASTER (end reactions only)

Module Level: StruCalc Members

Module Type: Floor Beam
 Material Type: Solid Sawn Douglas Fir-Larch No. 2
 Member Dimensions: (1) 1.5 in. X 3.5 in. X 23.7 ft
 Section Adequacy: **-99.85%**
 Controlling Factor: Deflection

Module Location: GT8 - GIRDER TRUSS (end reactions only)
 Module Level: StruCalc Members
 Module Type: Floor Beam
 Material Type: Solid Sawn Douglas Fir-Larch No. 2
 Member Dimensions: (1) 1.5 in. X 3.5 in. X 39.3 ft
 Section Adequacy: **-99.9%**
 Controlling Factor: Deflection

Module Location: GT9 - HIP MASTER (end reactions only)
 Module Level: StruCalc Members
 Module Type: Floor Beam
 Material Type: Solid Sawn Douglas Fir-Larch No. 2
 Member Dimensions: (1) 1.5 in. X 3.5 in. X 22 ft
 Section Adequacy: **-99.21%**
 Controlling Factor: Deflection

Module Location: GT10 - HIP MASTER (end reactions only)
 Module Level: StruCalc Members
 Module Type: Floor Beam
 Material Type: Solid Sawn Douglas Fir-Larch No. 2
 Member Dimensions: (1) 1.5 in. X 3.5 in. X 24 ft
 Section Adequacy: **-99.38%**
 Controlling Factor: Deflection

Module Location: GT11 - MONO HIP MASTER (end reactions only)
 Module Level: StruCalc Members
 Module Type: Floor Beam
 Material Type: Solid Sawn Douglas Fir-Larch No. 2
 Member Dimensions: (1) 1.5 in. X 3.5 in. X 14.5 ft
 Section Adequacy: **-97.01%**
 Controlling Factor: Deflection

Module Location: R01 - GARAGE OHD HDR
 Module Level: StruCalc Members
 Module Type: Roof Beam
 Material Type: Solid Sawn Douglas Fir-Larch No. 2
 Member Dimensions: (1) 3.5 in. X 11.25 in. X 17 ft
 Section Adequacy: **53.97%**
 Controlling Factor: Bending Stress Y

Module Location: R02 - COV'D PATIO BEAM
 Module Level: StruCalc Members
 Module Type: Floor Beam
 Material Type: Solid Sawn Douglas Fir-Larch No. 2
 Member Dimensions: (1) 3.5 in. X 9.25 in. X 11 ft
 Section Adequacy: **31.71%**
 Controlling Factor: Bending Stress Y

Module Location: R03 - COV'D PATIO BEAMS
 Module Level: StruCalc Members
 Module Type: Floor Beam
 Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
 Member Dimensions: (1) 5.125 in. X 15 in. X 15.7 ft
 Section Adequacy: **51.74%**
 Controlling Factor: Bearing Stress

Module Location: R04 - COV'D PATIO BEAM
 Module Level: StruCalc Members
 Module Type: Floor Beam
 Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
 Member Dimensions: (1) 5.125 in. X 15 in. X 22 ft
 Section Adequacy:

Module Location: R05 - MBR WDO HDR

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF

Member Dimensions: (1) 3.125 in. X 13.5 in. X 8.5 ft

Section Adequacy: 21.06%

Controlling Factor: Shear Stress Y

Module Location: R06 - COV'D PATIO BEAM

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (1) 3.5 in. X 11.25 in. X 14.3 ft

Section Adequacy: 27.96%

Controlling Factor: Bending Stress Y

Module Location: R07 - COV'D PATIO BEAM

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (1) 3.5 in. X 9.25 in. X 4.7 ft

Section Adequacy: 58.27%

Controlling Factor: Bending Stress Y

Module Location: U01 - GARAGE BEAM

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF

Member Dimensions: (1) 5.5 in. X 21 in. X 21 ft

Section Adequacy: 17.45%

Controlling Factor: Bearing Stress

Module Location: U02 - GARAGE BEAM

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF

Member Dimensions: (1) 5.125 in. X 19.5 in. X 20 ft

Section Adequacy: 24.11%

Controlling Factor: Bearing Stress

Module Location: U03 - GARAGE BEAM

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF

Member Dimensions: (1) 5.5 in. X 18 in. X 22 ft

Section Adequacy: 40.22%

Controlling Factor: Deflection

Module Location: U04 - GARAGE OHD HDR

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF

Member Dimensions: (1) 5.125 in. X 12 in. X 12.3 ft

Section Adequacy: 38.78%

Controlling Factor: Bearing Stress

Module Location: U05 - KITCHEN WDO HDR

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (1) 3.5 in. X 11.25 in. X 6.3 ft

Section Adequacy: 29.98%

Controlling Factor: Bending Stress Y

Module Location: U06 - NOOK SGD HDR

Module Level: StruCalc Members

Module Type: Floor Beam

Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 3.125 in. X 10.5 in. X 8.3 ft
Section Adequacy: 36.91%
Controlling Factor: Bending Stress Y

Module Location: U07 - GREAT RM SGD HDR

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 3.125 in. X 12 in. X 10.3 ft
Section Adequacy: 41.42%
Controlling Factor: Bending Stress Y

Module Location: U08 - STAIR BEAM

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 3.5 in. X 9.25 in. X 8 ft
Section Adequacy: 50.73%
Controlling Factor: Bending Stress Y

Module Location: U09 - FOYER GREAT RM BEAM

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.125 in. X 19.5 in. X 21.5 ft
Section Adequacy: 27.95%
Controlling Factor: Deflection

Module Location: U10 - FOYER BEAM

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 3.5 in. X 11.25 in. X 8 ft
Section Adequacy: 18.45%
Controlling Factor: Bending Stress Y

Module Location: U11 - DEN DOOR HDR

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 3.5 in. X 9.25 in. X 7.6 ft
Section Adequacy: 26.63%
Controlling Factor: Bending Stress Y

Module Location: U12 - DINING OP HDR

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 3.5 in. X 9.25 in. X 8.3 ft
Section Adequacy: 20.42%
Controlling Factor: Bending Stress Y

Module Location: M01 - BASEMENT BEAM

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.125 in. X 19.5 in. X 21 ft
Section Adequacy: 30.23%
Controlling Factor: Deflection

Module Location: M02 - STAIR BEAM

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 3.125 in. X 10.5 in. X 13.8 ft
Section Adequacy: 24.67%
Controlling Factor: Deflection

Module Location: M03 - BASEMENT BEAM

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 3.5 in. X 9.25 in. X 7.2 ft
Section Adequacy: 66.76%
Controlling Factor: Bending Stress Y

Module Location: M04 - BASEMENT BEAM

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 6.75 in. X 16.5 in. X 15 ft
Section Adequacy: 28.82%
Controlling Factor: Bearing Stress

Module Location: M05 - BASEMENT BEAM

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 6.75 in. X 18 in. X 15.2 ft
Section Adequacy: 24.58%
Controlling Factor: Bearing Stress

Module Location: M06 - BASEMENT BEAM

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.5 in. X 10.5 in. X 8.2 ft
Section Adequacy: 10.11%
Controlling Factor: Bending Stress Y

Module Location: M07 - BASEMENT BEAM

Module Level: StruCalc Members
Module Type: Floor Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.125 in. X 13.5 in. X 11.9 ft
Section Adequacy: 25.32%
Controlling Factor: Deflection

Module Location: C01 - COL at GT1a & GT2a

Module Level: StruCalc Members
Module Type: Column
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 36.91%
Controlling Factor: Bearing Stress

Module Location: C02 - COL at GT2b & GT8a

Module Level: StruCalc Members
Module Type: Column
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 26.94%
Controlling Factor: Bearing Stress

Module Location: C03 - COL at GT4a

Module Level: StruCalc Members
Module Type: Column
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 76.03%
Controlling Factor: Bearing Stress

Module Location: C04 - COL at GT7b

Module Level: StruCalc Members
Module Type: Column
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft
Section Adequacy:

Controlling Factor: Bearing Stress

Module Location: C05 - COL at GT8b

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (1) 5.5 in. X 5.5 in. X 9.1 ft

Section Adequacy: 24.4%

Controlling Factor: Bearing Stress

Module Location: C06 - COL at R05ab

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft

Section Adequacy: 72.71%

Controlling Factor: Bearing Stress

Module Location: C07 - COL at R03a

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft

Section Adequacy: 81.28%

Controlling Factor: Bearing Stress

Module Location: C08 - COL at R03b

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.3 ft

Section Adequacy: 87.38%

Controlling Factor: Bearing Stress

Module Location: C09 - COL at GT4a & U01a

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (1) 5.5 in. X 7.5 in. X 9.1 ft

Section Adequacy: 15.46%

Controlling Factor: Bearing Stress

Module Location: C10 - COL at U01b

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft

Section Adequacy: 70.36%

Controlling Factor: Bearing Stress

Module Location: C11 - COL at U02ab

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft

Section Adequacy: 67.41%

Controlling Factor: Bearing Stress

Module Location: C12 - COL at U03b

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft

Section Adequacy: 81.8%

Controlling Factor: Bearing Stress

Module Location: C13 - COL at U04ab

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 73.71%
Controlling Factor: Bearing Stress

Module Location: C14 - COL at U09a

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 73.91%
Controlling Factor: Bearing Stress

Module Location: C15 - COL at U09b & U10b

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 60.96%
Controlling Factor: Bearing Stress

Module Location: C16 - COL at R05b & HDRs

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 49.7%
Controlling Factor: Bearing Stress

Module Location: C17 - COL at R05a & HDRs

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 90.17%
Controlling Factor: Bearing Stress

Module Location: C18 - COL at GT1a, GT2a, & U11a

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 32.61%
Controlling Factor: Bearing Stress

Module Location: C19 - COL at GT2b, GT8a, & U12a

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 22.55%
Controlling Factor: Bearing Stress

Module Location: C20 - COL at M01a

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 72.06%
Controlling Factor: Bearing Stress

Module Location: C21 - COL at M02b, M04b, & M03a

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 18.52%
Controlling Factor: Bearing Stress

Module Location: C23 - COL at M05a

Module Level: StruCalc Members
Module Type: Column
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 7.5 in. X 9.1 ft
Section Adequacy: 37.06%
Controlling Factor: Compressive Stress

Module Location: C24 - COL at M03b, M05b, & M06a

Module Level: StruCalc Members
Module Type: Column
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 7.5 in. X 9.1 ft
Section Adequacy: 23.98%
Controlling Factor: Compressive Stress

Module Location: C26 - COL at M07b

Module Level: StruCalc Members
Module Type: Column
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (3) 1.5 in. X 5.5 in. X 9.1 ft
Section Adequacy: 68.41%
Controlling Factor: Bearing Stress

Module Location: F01 - FTG at M04a (C22)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 4 ft. wide X 12 in. tall X 4 ft long
Section Adequacy: 38.34%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, No. Bars Short (6), No. Bars Long: (6)

Module Location: F02 - FTG at M05a (C23)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 4 ft. wide X 12 in. tall X 4 ft long
Section Adequacy: 34.67%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, No. Bars Short (6), No. Bars Long: (6)

Module Location: F03 - FTG at GT4a & U01a (C09)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3.5 ft. wide X 12 in. tall X 3.5 ft long
Section Adequacy: 28.71%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, No. Bars Short (6), No. Bars Long: (6)

Module Location: F04 - FTG at U01b (C10)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long
Section Adequacy: 26.05%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, No. Bars Short (4), No. Bars Long: (4)

Module Location: F05 - FTG at U02a (C11)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long
Section Adequacy: 18.69%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, No. Bars Short (4), No. Bars Long: (4)

Module Location: F06 - FTG at U04a (C13)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long
Section Adequacy: 34.4%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, No. Bars Short (4), No. Bars Long: (4)

Module Location: F07 - FTG at U04b (C13)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 54.42%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, No. Bars Short (3), No. Bars Long: (3)

Module Location: F08 - FTG at U03b (C12)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 29.05%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, No. Bars Short (3), No. Bars Long: (3)

Module Location: F09 - FTG at U02b (C11)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long
Section Adequacy: 18.69%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, No. Bars Short (4), No. Bars Long: (4)

Module Location: F10 - FTG at GT7b (C04)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3 ft. wide X 12 in. tall X 3 ft long
Section Adequacy: 34.45%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, No. Bars Short (5), No. Bars Long: (5)

Module Location: F11 - FTG at R03a (C07)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 19.2%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, No. Bars Short (3), No. Bars Long: (3)

Module Location: F12 - FTG at R03ab (C08)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 43.41%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, No. Bars Short (3), No. Bars Long: (3)

Module Location: F13 - FTG at R03a (C07)

Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 19.2%
Controlling Factor: Soil Bearing Pressure

Module Location: F14 - FTG at GT8b (C05)

Module Level: StruCalc Members

Module Type: Isolated Footing

Material Type: Concrete

Member Dimensions: 3 ft. wide X 12 in. tall X 3 ft long

Section Adequacy: 13.22%

Controlling Factor: Soil Bearing Pressure

Reinforcement Bars: Size #4, No. Bars Short (5), No. Bars Long: (5)

Module Location: F17 - FTG at U09a (C14)

Module Level: StruCalc Members

Module Type: Isolated Footing

Material Type: Concrete

Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long

Section Adequacy: 34.9%

Controlling Factor: Soil Bearing Pressure

Reinforcement Bars: Size #4, No. Bars Short (4), No. Bars Long: (4)

Module Location: F18 - FTG at M01a (C20)

Module Level: StruCalc Members

Module Type: Isolated Footing

Material Type: Concrete

Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long

Section Adequacy: 30.31%

Controlling Factor: Soil Bearing Pressure

Reinforcement Bars: Size #4, No. Bars Short (4), No. Bars Long: (4)

Module Location: F19 - FTG at M02b, M03a, & M04b (C21)

Module Level: StruCalc Members

Module Type: Isolated Footing

Material Type: Concrete

Member Dimensions: 3 ft. wide X 12 in. tall X 3 ft long

Section Adequacy: 18.67%

Controlling Factor: Soil Bearing Pressure

Reinforcement Bars: Size #4, No. Bars Short (5), No. Bars Long: (5)

Module Location: F20 - FTG at M03b, M05b, & M06a (C24)

Module Level: StruCalc Members

Module Type: Isolated Footing

Material Type: Concrete

Member Dimensions: 4 ft. wide X 12 in. tall X 4 ft long

Section Adequacy: 27.83%

Controlling Factor: Soil Bearing Pressure

Reinforcement Bars: Size #4, No. Bars Short (6), No. Bars Long: (6)

Module Location: F22 - FTG at M07b (C26)

Module Level: StruCalc Members

Module Type: Isolated Footing

Material Type: Concrete

Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long

Section Adequacy: 21.19%

Controlling Factor: Soil Bearing Pressure

Reinforcement Bars: Size #4, No. Bars Short (4), No. Bars Long: (4)

Module Location: C22 - COL at M04a

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 2

Member Dimensions: (1) 5.5 in. X 7.5 in. X 9.1 ft

Section Adequacy: 4.5%

Controlling Factor: Bearing Stress

Module Location: F15 - FTG at R05b & HDRS (C16)

Module Level: StruCalc Members

Module Type: Isolated Footing

Material Type: Concrete

Member Dimensions: 3 ft. wide X 12 in. tall X 3 ft long

Section Adequacy: 42.24%

Controlling Factor: Soil Bearing Pressure

Reinforcement Bars: Size #4, No. Bars Short (5), No. Bars Long: (5)

Module Location: F16 - FTG at R05a & HDRS (C17)

Module Level: StruCalc Members

Module Type: Isolated Footing

Material Type: Concrete

Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long

Section Adequacy: 55.92%

Controlling Factor: Soil Bearing Pressure

Reinforcement Bars: Size #4, No. Bars Short (3), No. Bars Long: (3)

Module Location: C25 - COL at M06b, M07a, U09b, & U10b

Module Level: StruCalc Members

Module Type: Column

Material Type: Solid Sawn Douglas Fir-Larch No. 1

Member Dimensions: (1) 5.5 in. X 7.5 in. X 9.1 ft

Section Adequacy: 29.85%

Controlling Factor: Compressive Stress

Module Location: F21 - FTG at M06b, M07a, U09b, & U10b (C25)

Module Level: StruCalc Members

Module Type: Isolated Footing

Material Type: Concrete

Member Dimensions: 4.5 ft. wide X 12 in. tall X 4.5 ft long

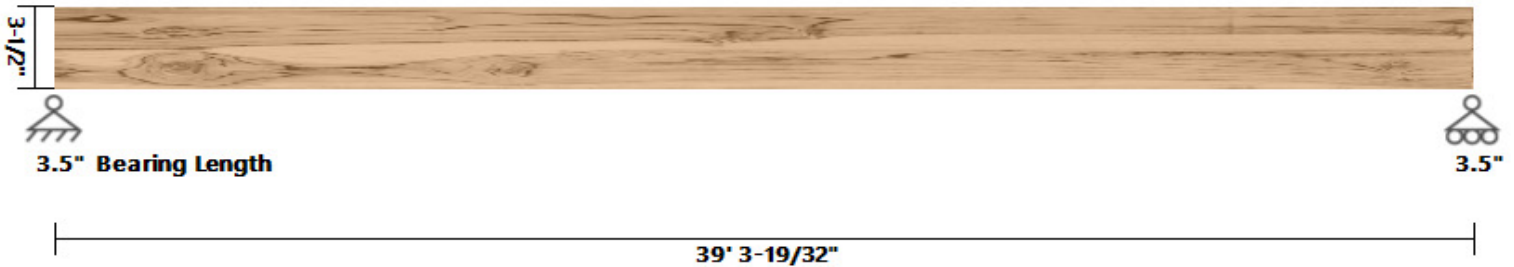
Section Adequacy: 28.61%

Controlling Factor: Soil Bearing Pressure

Reinforcement Bars: Size #4, No. Bars Short (7), No. Bars Long: (7)

FAIL

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	GT1 - GIRDER HIP MASTER (end rea...	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 1.5 X 3.5	DRY

GT1 - GIRDER HIP MASTER (end reactions only) DIAGRAM**BEAM PROPERTIES**

Start (ft): 0 End (ft): 39.3 Member Slope: 0/12 Actual Length (ft): 39.3

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
5.25	5.36	0.98	1.2	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1350	862	180	1552	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.5	1.5	1	1.15	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1**BEAM DATA**

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	39.3	2	39.3	0	0.99	0.37	0.99	0.99

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	FAIL (-88.8%)	1854.6	207.0	0	D+S	1.15
Bending Stress Y (psi)	FAIL (-99.5%)	296926.1	1540.7	19.65	D+S	1.15
Deflection (in)	FAIL (-99.9%)	1483.465 (=L/0)	1.310 (=L/360)	19.65	S	
Bearing Stress (psi)	FAIL (-49.4%)	1236.4	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	2541	0	0	3951	0	0	0	0	0	0	0
B	2217	0	0	3452	0	0	0	0	0	0	0

Reaction Location

A

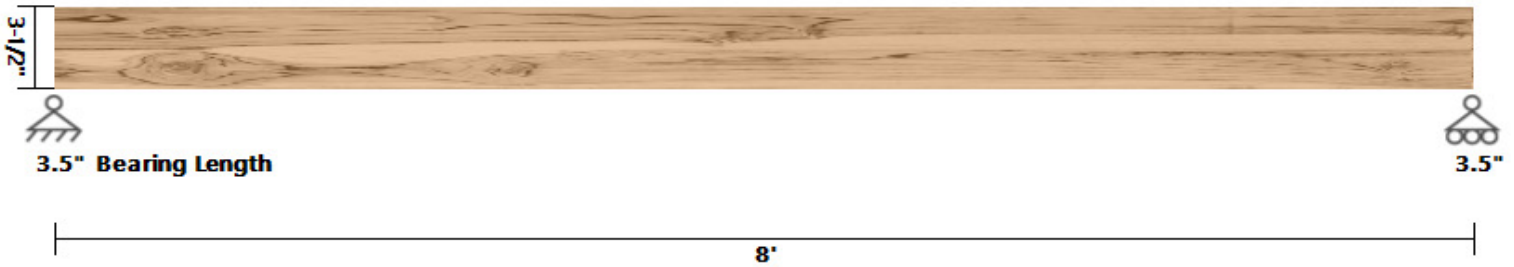
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	39.3	Snow	Y
Uniform (lbf/ft)	15	15	0	39.3	Dead	Y
Trapezoidal (lbf/ft)	25	25	0	10.1	Snow	Y
Trapezoidal (lbf/ft)	15	15	0	10.1	Dead	Y
Trapezoidal (lbf/ft)	173	173	10.1	25.6	Snow	Y
Trapezoidal (lbf/ft)	104	104	10.1	25.6	Dead	Y
Trapezoidal (lbf/ft)	25	25	25.6	39.3	Snow	Y
Trapezoidal (lbf/ft)	15	15	25.6	39.3	Dead	Y
Point (lbf)	1572	-	10.1	-	Snow	Y
Point (lbf)	1076	-	10.1	-	Dead	Y
Point (lbf)	1572	-	25.6	-	Snow	Y
Point (lbf)	1076	-	25.6	-	Dead	Y
Self Weight (lbf/ft)	1.2	1.2	0	39.3	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	GT2 - GIRDER TRUSS (end reactions ...	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 1.5 X 3.5	DRY

GT2 - GIRDER TRUSS (end reactions only) DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 8 Member Slope: 0/12 Actual Length (ft): 8

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
5.25	5.36	0.98	1.2	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1350	862	180	1552	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.5	1.5	1	1.15	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8	2	8	0	0.99	0.95	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	FAIL (-77.9%)	938.5	207.0	0	D+S	1.15
Bending Stress Y (psi)	FAIL (-94.0%)	25742.0	1540.6	4	D+S	1.15
Deflection (in)	FAIL (-95.2%)	5.508 (=L/17)	0.267 (=L/360)	4	S	
Bearing Stress (psi)	FAIL (-0.1%)	625.7	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	1235	0	0	2050	0	0	0	0	0	0	0
B	1235	0	0	2050	0	0	0	0	0	0	0

Reaction Location

A

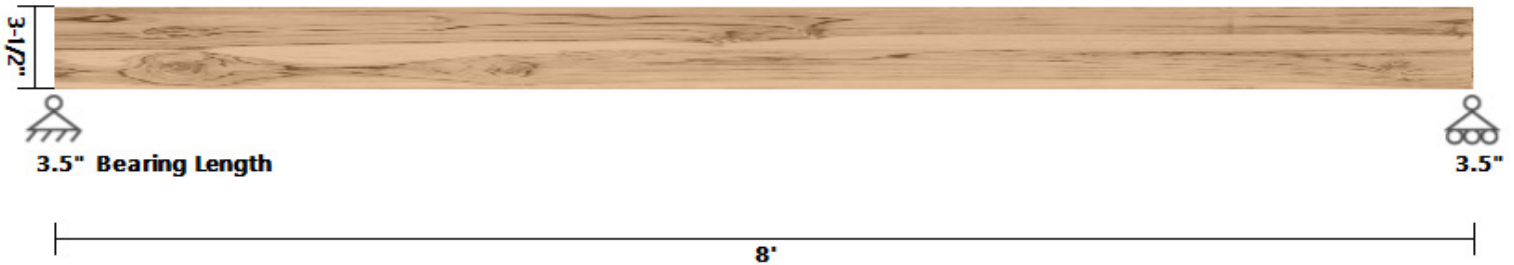
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	512.5	512.5	0	8	Snow	Y
Uniform (lb/ft)	307.5	307.5	0	8	Dead	Y
Self Weight (lb/ft)	1.2	1.2	0	8	Dead	Y

FAIL

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	GT3 - GIRDER TRUSS (end reactions ...	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 1.5 X 3.5	DRY

GT3 - GIRDER TRUSS (end reactions only) DIAGRAM**BEAM PROPERTIES**

Start (ft): 0 End (ft): 8 Member Slope: 0/12 Actual Length (ft): 8

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
5.25	5.36	0.98	1.2	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1350	862	180	1552	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.5	1.5	1	1.15	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1**BEAM DATA**

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8	2	8	0	0.99	0.95	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	FAIL (-87.3%)	1623.5	207.0	0	D+S	1.15
Bending Stress Y (psi)	FAIL (-96.7%)	47132.0	1540.8	4.24	D+S	1.15
Deflection (in)	FAIL (-97.3%)	9.790 (=L/10)	0.267 (=L/360)	4	S	
Bearing Stress (psi)	FAIL (-42.3%)	1082.4	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	2148	0	0	3534	0	0	0	0	0	0	0
B	2086	0	0	3425	0	0	0	0	0	0	0

Reaction Location

A

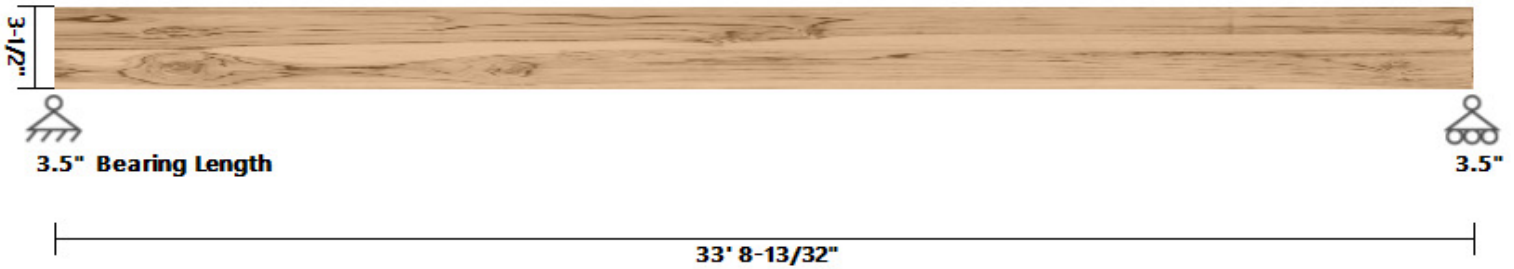
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	738	738	0	8	Snow	Y
Uniform (lbf/ft)	443	443	0	8	Dead	Y
Trapezoidal (lbf/ft)	100	100	0	4.3	Snow	Y
Trapezoidal (lbf/ft)	60	60	0	4.3	Dead	Y
Trapezoidal (lbf/ft)	25	25	4.3	8	Snow	Y
Trapezoidal (lbf/ft)	15	15	4.3	8	Dead	Y
Point (lbf)	533	-	4.3	-	Snow	Y
Point (lbf)	367	-	4.3	-	Dead	Y
Self Weight (lbf/ft)	1.2	1.2	0	8	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	GT4 - GIRDER TRUSS (end reactions ...	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 1.5 X 3.5	DRY

GT4 - GIRDER TRUSS (end reactions only) DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 33.7 Member Slope: 0/12 Actual Length (ft): 33.7

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
5.25	5.36	0.98	1.2	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1350	862	180	1552	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.5	1.5	1	1.15	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	33.7	2	33.7	0	0.99	0.43	0.99	0.99

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	FAIL (-88.8%)	1841.8	207.0	0	D+S	1.15
Bending Stress Y (psi)	FAIL (-98.5%)	102140.4	1540.9	8.43	D+S	1.15
Deflection (in)	FAIL (-99.7%)	374.257 (=L/1)	1.123 (=L/360)	15.5	S	
Bearing Stress (psi)	FAIL (-49.1%)	1227.9	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	2447	0	0	3999	0	0	0	0	0	0	0
B	787	0	0	1271	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

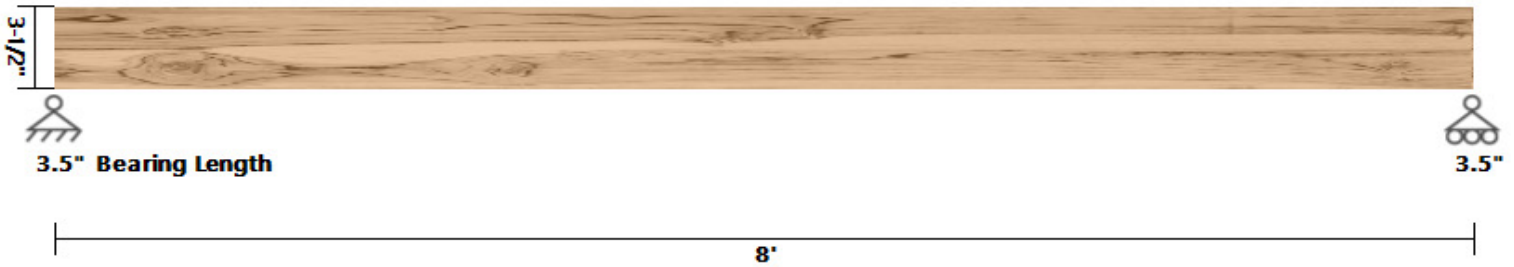
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	33.7	Snow	Y
Uniform (lbf/ft)	15	15	0	33.7	Dead	Y
Trapezoidal (lbf/ft)	40	88	0	4.1	Snow	Y
Trapezoidal (lbf/ft)	24	53	0	4.1	Dead	Y
Trapezoidal (lbf/ft)	25	25	4.1	33.7	Snow	Y
Trapezoidal (lbf/ft)	15	15	4.1	33.7	Dead	Y
Self Weight (lbf/ft)	1.2	1.2	0	33.7	Dead	Y

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2086.056	-	4.1	-	Dead	Y
Point (lbf)	3425.16	-	4.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	GT5 - GIRDER TRUSS (end reactions ...	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 1.5 X 3.5	DRY

GT5 - GIRDER TRUSS (end reactions only) DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 8 Member Slope: 0/12 Actual Length (ft): 8

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
5.25	5.36	0.98	1.2	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1350	862	180	1552	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.5	1.5	1	1.15	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8	2	8	0	0.99	0.95	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	FAIL (-62.4%)	549.9	207.0	0	D+S	1.15
Bending Stress Y (psi)	FAIL (-89.8%)	15084.1	1540.6	4	D+S	1.15
Deflection (in)	FAIL (-91.7%)	3.224 (=L/30)	0.267 (=L/360)	4	S	
Bearing Stress (psi)	PASS (41.3%)	366.6	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	725	0	0	1200	0	0	0	0	0	0	0
B	725	0	0	1200	0	0	0	0	0	0	0

Reaction Location

A

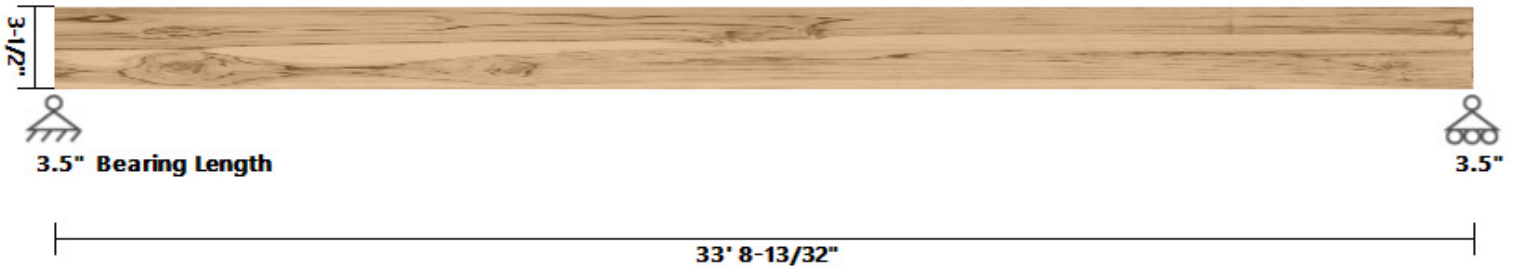
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	300	300	0	8	Snow	Y
Uniform (lb/ft)	180	180	0	8	Dead	Y
Self Weight (lb/ft)	1.2	1.2	0	8	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	GT6 - GIRDER TRUSS (end reactions ...	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 1.5 X 3.5	DRY

GT6 - GIRDER TRUSS (end reactions only) DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 33.7 Member Slope: 0/12 Actual Length (ft): 33.7

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
5.25	5.36	0.98	1.2	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1350	862	180	1552	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.5	1.5	1	1.15	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	33.7	2	33.7	0	0.99	0.46	0.99	0.99

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	FAIL (-80.8%)	1080.8	207.0	33.7	D+S	1.15
Bending Stress Y (psi)	FAIL (-98.7%)	118531.5	1541.7	21.9	D+S	1.15
Deflection (in)	FAIL (-99.7%)	404.879 (=L/1)	1.123 (=L/360)	17.86	S	
Bearing Stress (psi)	FAIL (-13.3%)	720.5	625.0	33.7	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	865	0	0	1405	0	0	0	0	0	0	0
B	1433	0	0	2350	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	33.7	Snow	Y
Uniform (lbf/ft)	15	15	0	33.7	Dead	Y
Trapezoidal (lbf/ft)	25	25	0	22.1	Snow	Y
Trapezoidal (lbf/ft)	15	15	0	22.1	Dead	Y
Trapezoidal (lbf/ft)	100	100	22.1	33.7	Snow	Y
Trapezoidal (lbf/ft)	60	60	22.1	33.7	Dead	Y
Self Weight (lbf/ft)	1.2	1.2	0	33.7	Dead	Y

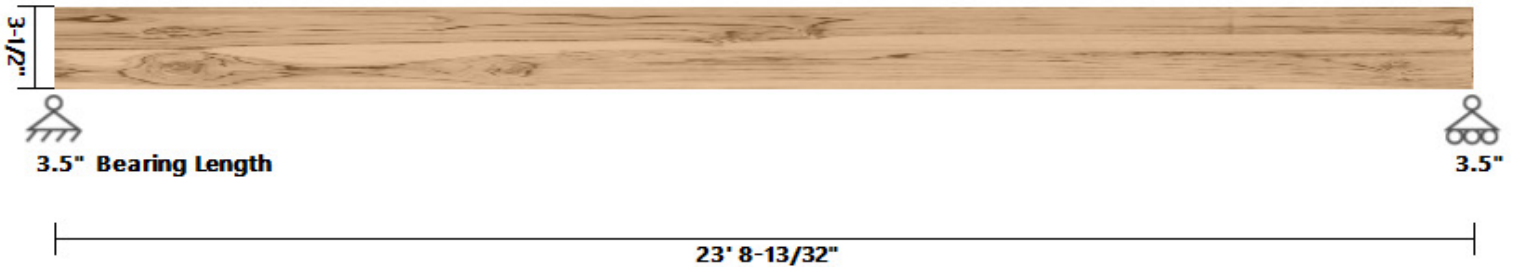
LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	724.7895	-	22.1	-	Dead	Y
Point (lbf)	1200	-	22.1	-	Snow	Y

FAIL

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	GT7 - STUB HIP MASTER (end reacti...	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 1.5 X 3.5	DRY

GT7 - STUB HIP MASTER (end reactions only) DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 23.7 Member Slope: 0/12 Actual Length (ft): 23.7

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
5.25	5.36	0.98	1.2	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1350	862	180	1552	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.5	1.5	1	1.15	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	23.7	2	23.7	0	0.99	0.61	0.99	0.99

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	FAIL (-93.1%)	3011.8	207.0	0	D+S	1.15
Bending Stress Y (psi)	FAIL (-99.5%)	298478.1	1541.1	11.85	D+S	1.15
Deflection (in)	FAIL (-99.9%)	529.655 (=L/1)	0.790 (=L/360)	11.85	S	
Bearing Stress (psi)	FAIL (-68.9%)	2007.9	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	4007	0	0	6534	0	0	0	0	0	0	0
B	3375	0	0	5474	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	23.7	Snow	Y
Uniform (lbf/ft)	15	15	0	23.7	Dead	Y
Trapezoidal (lbf/ft)	369	369	0	11.9	Snow	Y
Trapezoidal (lbf/ft)	222	222	0	11.9	Dead	Y
Trapezoidal (lbf/ft)	423	423	11.9	15.6	Snow	Y
Trapezoidal (lbf/ft)	254	254	11.9	15.6	Dead	Y
Trapezoidal (lbf/ft)	25	25	15.6	23.7	Snow	Y
Trapezoidal (lbf/ft)	15	15	15.6	23.7	Dead	Y
Trapezoidal (lbf/ft)	75	75	8	15.7	Snow	Y
Trapezoidal (lbf/ft)	45	45	8	15.7	Dead	Y
Point (lbf)	533	-	8	-	Snow	Y
Point (lbf)	367	-	8	-	Dead	Y
Point (lbf)	533	-	15.7	-	Snow	Y
Point (lbf)	367	-	15.7	-	Dead	Y
Self Weight (lbf/ft)	1.2	1.2	0	23.7	Dead	Y

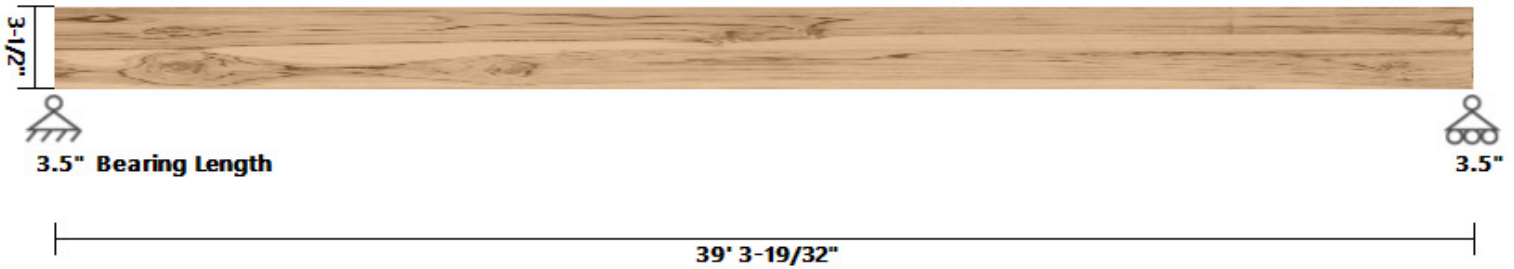
LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	786.5361	-	11.9	-	Dead	Y
Point (lbf)	1270.934	-	11.9	-	Snow	Y
Point (lbf)	1433.142	-	15.6	-	Dead	Y
Point (lbf)	2349.709	-	15.6	-	Snow	Y

FAIL

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	GT8 - GIRDER TRUSS (end reactions ...	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 1.5 X 3.5	DRY

GT8 - GIRDER TRUSS (end reactions only) DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 39.3 Member Slope: 0/12 Actual Length (ft): 39.3

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
5.25	5.36	0.98	1.2	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1350	862	180	1552	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.5	1.5	1	1.15	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	39.3	2	39.3	0	0.99	0.35	0.99	0.99

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	FAIL (-93.8%)	3347.1	207.0	39.3	D+S	1.15
Bending Stress Y (psi)	FAIL (-99.3%)	231683.8	1539.9	29.08	D+S	1.15
Deflection (in)	FAIL (-99.9%)	1258.895 (=L/0)	1.310 (=L/360)	20.44	S	
Bearing Stress (psi)	FAIL (-72.0%)	2231.4	625.0	39.3	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	3051	0	0	4986	0	0	0	0	0	0	0
B	4458	0	0	7257	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

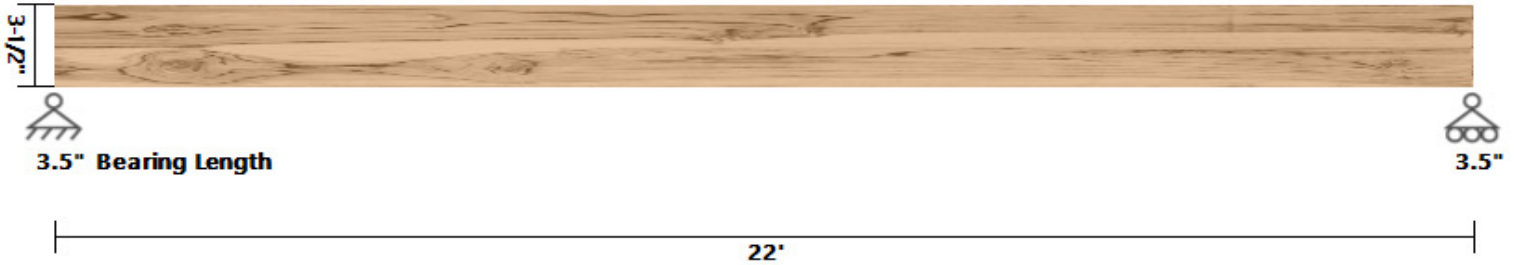
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	39.3	Snow	Y
Uniform (lbf/ft)	15	15	0	39.3	Dead	Y
Trapezoidal (lbf/ft)	25	25	0	34.2	Snow	Y
Trapezoidal (lbf/ft)	15	15	0	34.2	Dead	Y
Trapezoidal (lbf/ft)	94	38	34.2	39.3	Snow	Y
Trapezoidal (lbf/ft)	57	23	34.2	39.3	Dead	Y
Self Weight (lbf/ft)	1.2	1.2	0	39.3	Dead	Y

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2148.024	-	4.4	-	Dead	Y
Point (lbf)	3534.341	-	4.4	-	Snow	Y
Point (lbf)	4007.496	-	34.2	-	Dead	Y
Point (lbf)	6533.909	-	34.2	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	GT9 - HIP MASTER (end reactions o...	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 1.5 X 3.5	DRY

GT9 - HIP MASTER (end reactions only) DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 22 Member Slope: 0/12 Actual Length (ft): 22

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
5.25	5.36	0.98	1.2	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1350	862	180	1552	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.5	1.5	1	1.15	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	22	2	22	0	0.99	0.64	0.99	0.99

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	FAIL (-66.4%)	615.2	207.0	22	D+S	1.15
Bending Stress Y (psi)	FAIL (-97.5%)	60861.8	1541.0	11	D+S	1.15
Deflection (in)	FAIL (-99.2%)	92.982 (=L/3)	0.733 (=L/360)	11	S	
Bearing Stress (psi)	PASS (34.4%)	410.1	625.0	22	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	845	0	0	1308	0	0	0	0	0	0	0
B	845	0	0	1308	0	0	0	0	0	0	0

Reaction Location

A

B

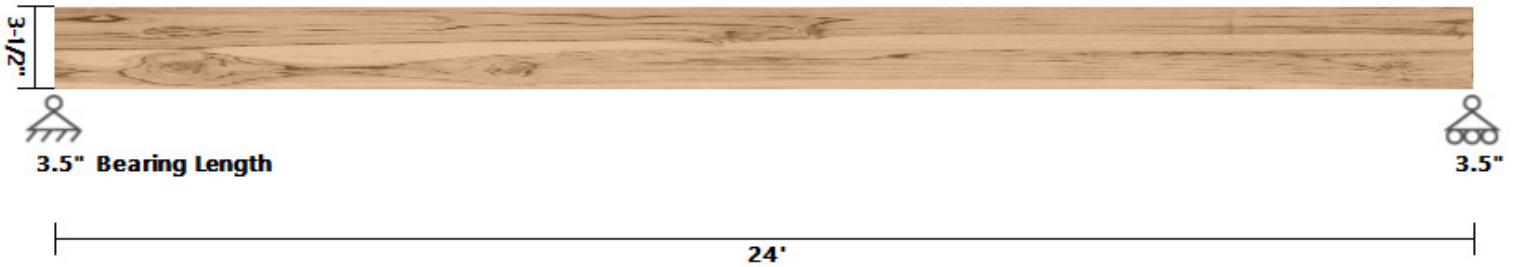
LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	22	Snow	Y
Uniform (lbf/ft)	15	15	0	22	Dead	Y
Trapezoidal (lbf/ft)	25	25	0	8	Snow	Y
Trapezoidal (lbf/ft)	15	15	0	8	Dead	Y
Trapezoidal (lbf/ft)	100	100	8	14	Snow	Y
Trapezoidal (lbf/ft)	60	60	8	14	Dead	Y
Trapezoidal (lbf/ft)	25	25	14	22	Snow	Y
Trapezoidal (lbf/ft)	15	15	14	22	Dead	Y
Point (lbf)	533	-	8	-	Snow	Y
Point (lbf)	367	-	8	-	Dead	Y
Point (lbf)	533	-	14	-	Snow	Y
Point (lbf)	367	-	14	-	Dead	Y
Self Weight (lbf/ft)	1.2	1.2	0	22	Dead	Y

FAIL

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	GT10 - HIP MASTER (end reactions o...	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 1.5 X 3.5	DRY

GT10 - HIP MASTER (end reactions only) DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 24 Member Slope: 0/12 Actual Length (ft): 24

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
5.25	5.36	0.98	1.2	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1350	862	180	1552	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.5	1.5	1	1.15	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	24	2	24	0	0.99	0.59	0.99	0.99

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	FAIL (-69.2%)	672.7	207.0	24	D+S	1.15
Bending Stress Y (psi)	FAIL (-97.8%)	69928.0	1540.9	12	D+S	1.15
Deflection (in)	FAIL (-99.4%)	129.288 (=L/2)	0.800 (=L/360)	12	S	
Bearing Stress (psi)	PASS (28.2%)	448.5	625.0	24	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	921	0	0	1433	0	0	0	0	0	0	0
B	921	0	0	1433	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	24	Snow	Y
Uniform (lbf/ft)	15	15	0	24	Dead	Y
Trapezoidal (lbf/ft)	25	25	0	8	Snow	Y
Trapezoidal (lbf/ft)	15	15	0	8	Dead	Y
Trapezoidal (lbf/ft)	100	100	8	16	Snow	Y
Trapezoidal (lbf/ft)	60	60	8	16	Dead	Y
Trapezoidal (lbf/ft)	25	25	16	24	Snow	Y
Trapezoidal (lbf/ft)	15	15	16	24	Dead	Y
Point (lbf)	533	-	8	-	Snow	Y
Point (lbf)	367	-	8	-	Dead	Y
Point (lbf)	533	-	16	-	Snow	Y
Point (lbf)	367	-	16	-	Dead	Y
Self Weight (lbf/ft)	1.2	1.2	0	24	Dead	Y

FAIL

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	GT11 - MONO HIP MASTER (end rea...	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 1.5 X 3.5	DRY

GT11 - MONO HIP MASTER (end reactions only) DIAGRAM**BEAM PROPERTIES**

Start (ft): 0 End (ft): 14.5 Member Slope: 0/12 Actual Length (ft): 14.5

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
5.25	5.36	0.98	1.2	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1350	862	180	1552	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.5	1.5	1	1.15	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1**BEAM DATA**

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	14.5	2	14.5	0	0.99	0.86	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	FAIL (-57.1%)	483.0	207.0	14.5	D+S	1.15
Bending Stress Y (psi)	FAIL (-94.1%)	26348.6	1541.7	7.97	D+S	1.15
Deflection (in)	FAIL (-97.0%)	16.177 (=L/11)	0.483 (=L/360)	7.54	S	
Bearing Stress (psi)	PASS (48.5%)	322.0	625.0	14.5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	456	0	0	711	0	0	0	0	0	0	0
B	656	0	0	1035	0	0	0	0	0	0	0

Reaction Location

A

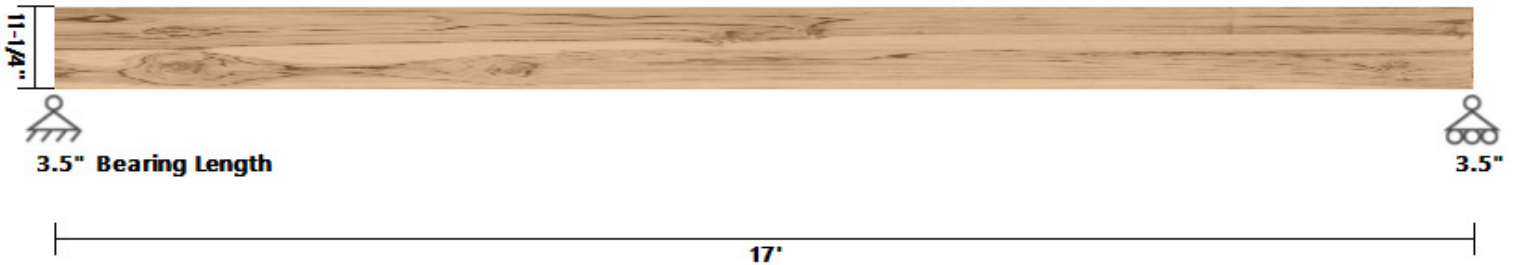
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	14.5	Snow	Y
Uniform (lbf/ft)	15	15	0	14.5	Dead	Y
Trapezoidal (lbf/ft)	25	25	0	8	Snow	Y
Trapezoidal (lbf/ft)	15	15	0	8	Dead	Y
Trapezoidal (lbf/ft)	100	100	8	14.5	Snow	Y
Trapezoidal (lbf/ft)	60	60	8	14.5	Dead	Y
Point (lbf)	533	-	8	-	Snow	Y
Point (lbf)	367	-	8	-	Dead	Y
Self Weight (lbf/ft)	1.2	1.2	0	14.5	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	R01 - GARAGE OHD HDR	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 3.5 X 11.25	DRY

R01 - GARAGE OHD HDR DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 17 Member Slope: 0/12 Actual Length (ft): 17

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
39.38	415.28	40.2	8.98	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	990	575	180	1350	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	17	2	17	0	1.00	0.96	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (86.1%)	28.8	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (54.0%)	522.5	1135.0	8.5	D+S	1.15
Deflection (in)	PASS (75.0%)	0.141 (=L/1443)	0.567 (=L/360)	8.5	S	
Bearing Stress (psi)	PASS (90.1%)	61.7	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	331	0	0	425	0	0	0	0	0	0	0
B	331	0	0	425	0	0	0	0	0	0	0

Reaction Location

A

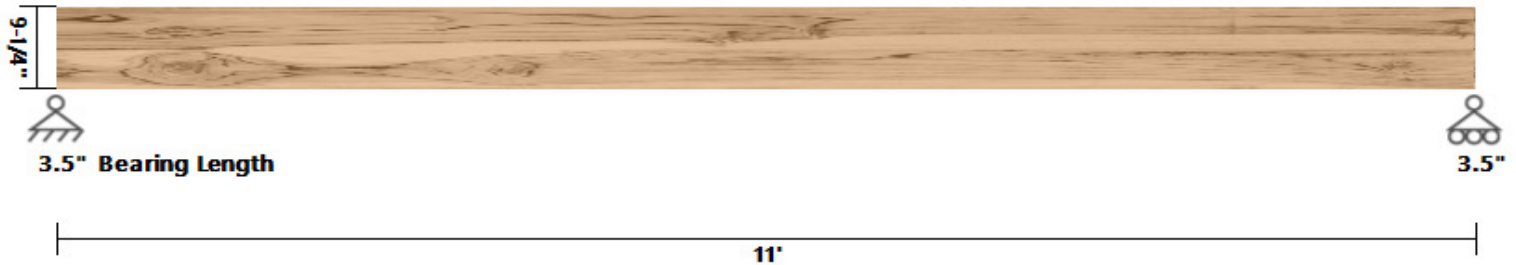
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	50	50	0	17	Snow	Y
Uniform (lb/ft)	30	30	0	17	Dead	Y
Self Weight (lb/ft)	8.98	8.98	0	17	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	R02 - COV'D PATIO BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 3.5 X 9.25	DRY

R02 - COV'D PATIO BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 11 Member Slope: 0/12 Actual Length (ft): 11

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1080	632	180	1350	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11	2	11	0	1.00	0.98	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (68.5%)	65.3	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (31.7%)	845.8	1238.6	5.06	D+S	1.15
Deflection (in)	PASS (66.0%)	0.125 (=L/1059)	0.367 (=L/360)	5.39	S	
Bearing Stress (psi)	PASS (81.6%)	115.0	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	554	0	0	855	0	0	0	0	0	0	0
B	431	0	0	648	0	0	0	0	0	0	0

Reaction Location

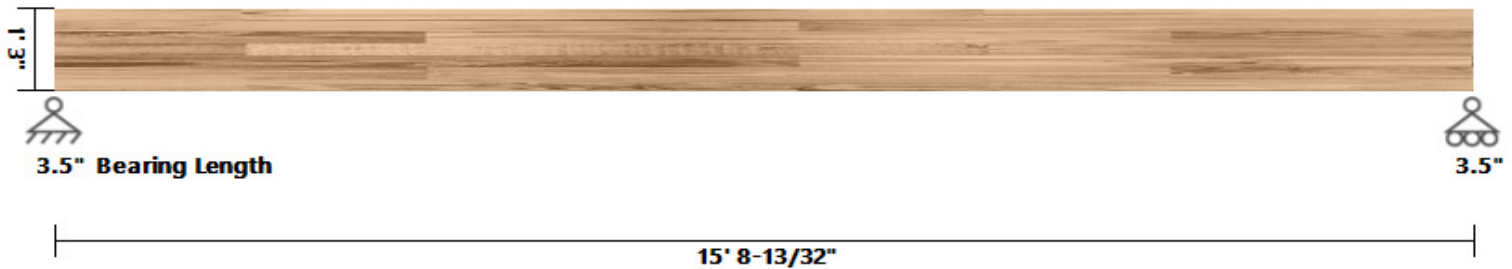


LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	73	73	0	11	Snow	Y
Uniform (lb/ft)	44	44	0	11	Dead	Y
Trapezoidal (lb/ft)	100	100	0	3	Snow	Y
Trapezoidal (lb/ft)	60	60	0	3	Dead	Y
Trapezoidal (lb/ft)	100	0	3	11	Snow	Y
Trapezoidal (lb/ft)	60	0	3	11	Dead	Y
Self Weight (lb/ft)	7.38	7.38	0	11	Dead	Y

PASS

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	R03 - COV'D PATIO BEAMS	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 15	DRY

R03 - COV'D PATIO BEAMS DIAGRAM**BEAM PROPERTIES**

Start (ft): 0 End (ft): 15.7 Member Slope: 0/12 Actual Length (ft): 15.7

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
76.88	1441.41	168.26	17.53	1	0.5	1

STRENGTH PROPERTIES

	F _{bx+}	F _{bx-}	F _{by}	F _t	F _{vx}	F _{vy}	F _c	F _{c⊥}	E _x	E _{xmin}	E _y	E _{ymin}
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{vr} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	15.7	2	15.7	0	1.00	0.98	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (69.0%)	94.6	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (52.3%)	1312.9	2751.8	8.48	D+S	1.15
Deflection (in)	PASS (61.7%)	0.201 (=L/940)	0.523 (=L/360)	7.69	S	
Bearing Stress (psi)	PASS (51.7%)	270.3	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	1923	0	0	2925	0	0	0	0	0	0	0
B	1381	0	0	2014	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

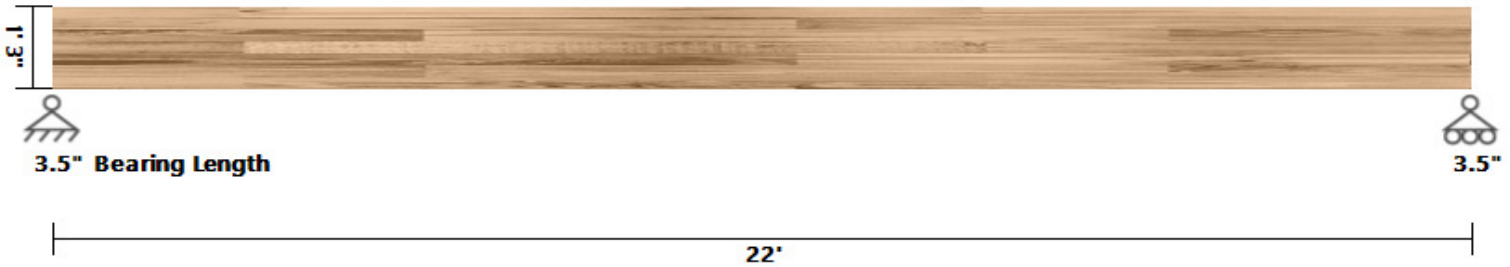
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	38	38	0	15.7	Snow	Y
Uniform (lbf/ft)	23	23	0	15.7	Dead	Y
Trapezoidal (lbf/ft)	300	300	0	8.5	Snow	Y
Trapezoidal (lbf/ft)	180	180	0	8.5	Dead	Y
Trapezoidal (lbf/ft)	100	0	8.5	15.7	Snow	Y
Trapezoidal (lbf/ft)	60	0	8.5	15.7	Dead	Y
Self Weight (lbf/ft)	17.53	17.53	0	15.7	Dead	Y

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	921.3686	-	8.5	-	Dead	Y
Point (lbf)	1432.999	-	8.5	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	R04 - COV'D PATIO BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 15	DRY

R04 - COV'D PATIO BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 22 Member Slope: 0/12 Actual Length (ft): 22

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
76.88	1441.41	168.26	17.53	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{VR} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	22	2	22	0	1.00	0.96	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (86.9%)	40.1	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (69.6%)	815.7	2686.6	11	D+S	1.15
Deflection (in)	PASS (66.1%)	0.249 (=L/1061)	0.733 (=L/360)	11	S	
Bearing Stress (psi)	PASS (79.6%)	114.4	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	885	0	0	1168	0	0	0	0	0	0	0
B	885	0	0	1168	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	38	38	0	22	Snow	Y
Uniform (lbf/ft)	22	22	0	22	Dead	Y
Trapezoidal (lbf/ft)	0	100	0	7	Snow	Y
Trapezoidal (lbf/ft)	0	60	0	7	Dead	Y
Trapezoidal (lbf/ft)	100	100	7	15	Snow	Y
Trapezoidal (lbf/ft)	60	60	7	15	Dead	Y
Trapezoidal (lbf/ft)	100	0	15	22	Snow	Y
Trapezoidal (lbf/ft)	60	0	15	22	Dead	Y
Self Weight (lbf/ft)	17.53	17.53	0	22	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	R05 - MBR WDO HDR	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 3.125 X 13.5	DRY

R05 - MBR WDO HDR DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 8.5 Member Slope: 0/12 Actual Length (ft): 8.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
42.19	640.72	34.33	9.62	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{vr} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8.5	2	8.5	0	0.99	0.96	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (21.1%)	240.6	304.8	8.5	D+S	1.15
Bending Stress Y (psi)	PASS (67.8%)	880.7	2738.5	6.89	D+S	1.15
Deflection (in)	PASS (84.4%)	0.044 (=L/2302)	0.283 (=L/360)	4.67	S	
Bearing Stress (psi)	PASS (29.7%)	393.7	560.0	8.5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	731	0	0	1125	0	0	0	0	0	0	0
B	2640	0	0	4127	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

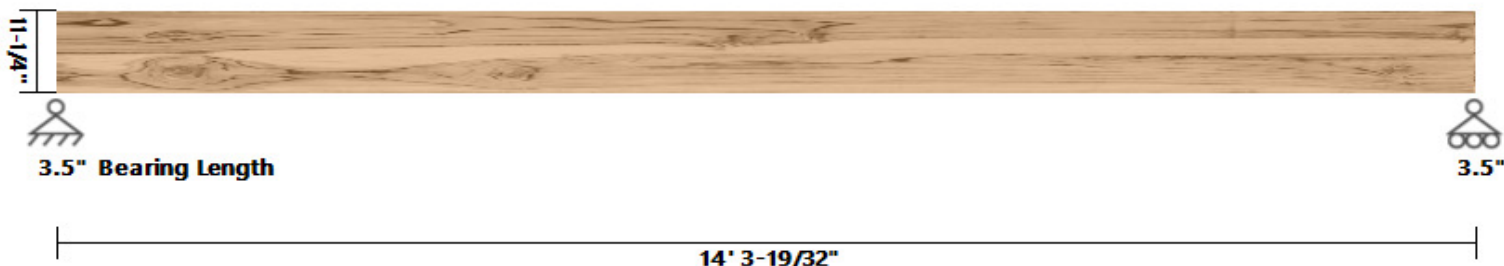
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	38	38	0	8.5	Snow	Y
Uniform (lbf/ft)	22	22	0	8.5	Dead	Y
Trapezoidal (lbf/ft)	82	172	0	7.4	Snow	Y
Trapezoidal (lbf/ft)	49	103	0	7.4	Dead	Y
Trapezoidal (lbf/ft)	488	488	7.4	8.5	Snow	Y
Trapezoidal (lbf/ft)	293	293	7.4	8.5	Dead	Y
Self Weight (lbf/ft)	9.62	9.62	0	8.5	Dead	Y

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2217.029	-	7.6	-	Dead	Y
Point (lbf)	3452.432	-	7.6	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	R06 - COV'D PATIO BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 3.5 X 11.25	DRY

R06 - COV'D PATIO BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 14.3 Member Slope: 0/12 Actual Length (ft): 14.3

Area (in ²)	I _x (in ⁴)	I _y (in ⁴)	BSW (lbf/ft)	Lams	G	K _{cr} Creep Factor
39.38	415.28	40.2	8.98	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	990	575	180	1350	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	14.3	2	14.3	0	1.00	0.97	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (72.1%)	57.8	207.0	14.3	D+S	1.15
Bending Stress Y (psi)	PASS (28.0%)	817.7	1135.0	7.72	D+S	1.15
Deflection (in)	PASS (65.5%)	0.165 (=L/1043)	0.477 (=L/360)	7.29	S	
Bearing Stress (psi)	PASS (80.2%)	123.9	625.0	14.3	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	455	0	0	661	0	0	0	0	0	0	0
B	606	0	0	912	0	0	0	0	0	0	0

Reaction Location

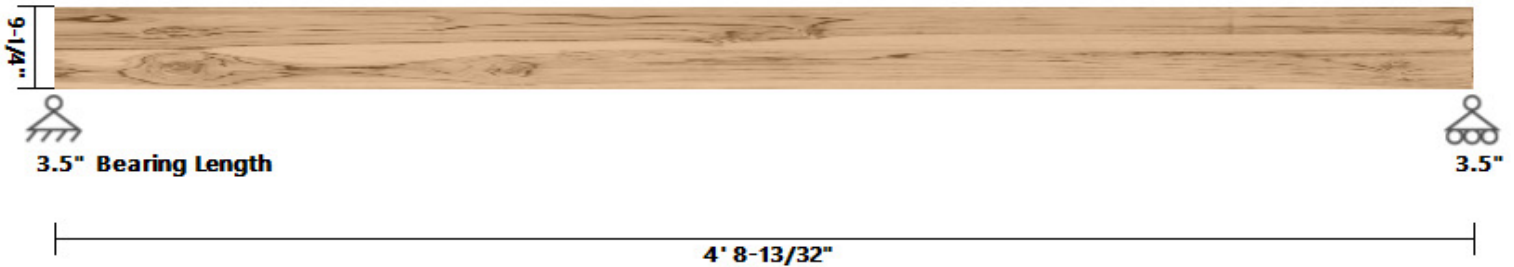


LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	38	38	0	14.3	Snow	Y
Uniform (lbf/ft)	22	22	0	14.3	Dead	Y
Trapezoidal (lbf/ft)	0	100	0	8	Snow	Y
Trapezoidal (lbf/ft)	0	60	0	8	Dead	Y
Trapezoidal (lbf/ft)	100	100	8	14.3	Snow	Y
Trapezoidal (lbf/ft)	60	60	8	14.3	Dead	Y
Self Weight (lbf/ft)	8.98	8.98	0	14.3	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	R07 - COV'D PATIO BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 3.5 X 9.25	DRY

R07 - COV'D PATIO BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 4.7 Member Slope: 0/12 Actual Length (ft): 4.7

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1080	632	180	1350	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	4.7	0	4.7	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (69.7%)	62.7	207.0	4.7	D+S	1.15
Bending Stress Y (psi)	PASS (58.3%)	518.3	1242.0	2.4	D+S	1.15
Deflection (in)	PASS (92.1%)	0.012 (=L/4586)	0.157 (=L/360)	2.4	S	
Bearing Stress (psi)	PASS (82.3%)	110.4	625.0	4.7	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	446	0	0	692	0	0	0	0	0	0	0
B	527	0	0	826	0	0	0	0	0	0	0

Reaction Location



LOAD LIST

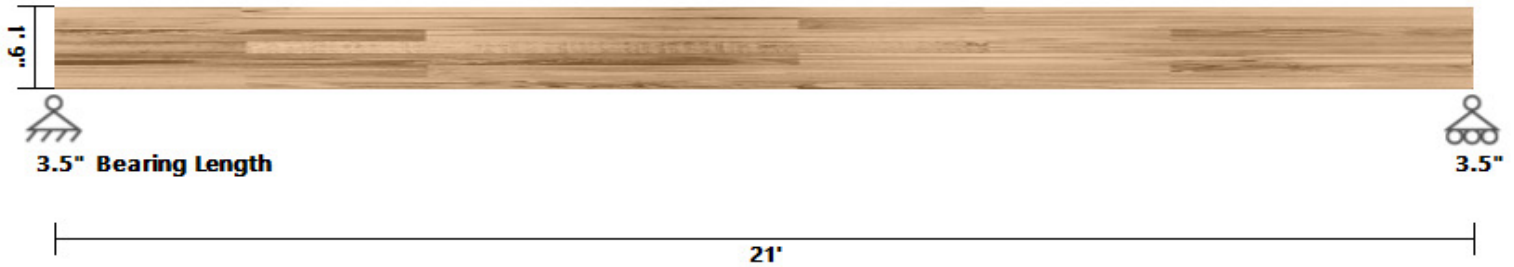
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	38	38	0	4.7	Snow	Y
Uniform (lbf/ft)	22	22	0	4.7	Dead	Y
Trapezoidal (lbf/ft)	73	100	0	2.4	Snow	Y
Trapezoidal (lbf/ft)	44	60	0	2.4	Dead	Y
Trapezoidal (lbf/ft)	183	183	2.4	4.7	Snow	Y
Trapezoidal (lbf/ft)	110	110	2.4	4.7	Dead	Y
Self Weight (lbf/ft)	7.38	7.38	0	4.7	Dead	Y

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	456.2585	-	2.4	-	Dead	Y
Point (lbf)	710.6982	-	2.4	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	U01 - GARAGE BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 21	DRY

U01 - GARAGE BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 21 Member Slope: 0/12 Actual Length (ft): 21

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
115.5	4244.62	291.16	26.34	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{VR} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	21	4	21	0	0.99	0.95	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (56.4%)	115.6	265.0	0	D+L	1
Bending Stress Y (psi)	PASS (43.3%)	1276.8	2253.4	10.29	D+L	1
Deflection (in)	PASS (36.4%)	0.445 (=L/566)	0.700 (=L/360)	10.5	D+L	
Bearing Stress (psi)	PASS (17.5%)	462.3	560.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	3918	4981	0	0	0	0	0	0	0	0	0
B	3181	3752	0	0	0	0	0	0	0	0	0

Reaction Location

A

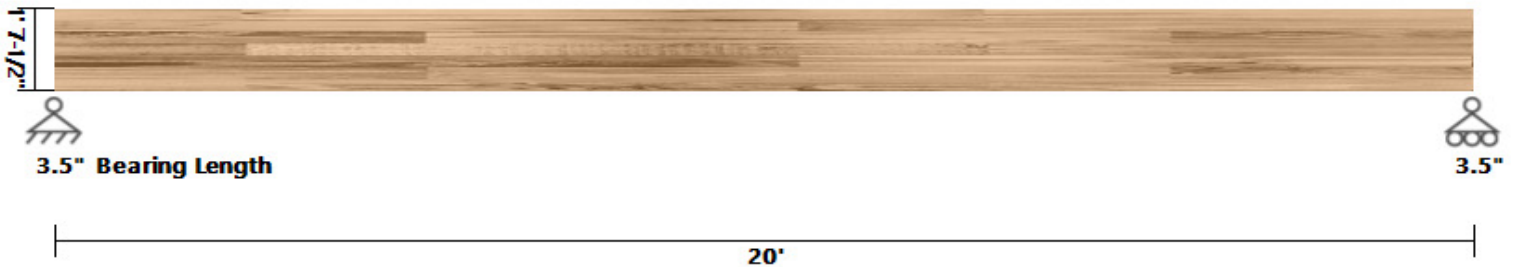
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	21	Live	Y
Uniform (lbf/ft)	105	105	0	21	Dead	Y
Trapezoidal (lbf/ft)	460	460	0	3.9	Live	Y
Trapezoidal (lbf/ft)	276	276	0	3.9	Dead	Y
Trapezoidal (lbf/ft)	338	338	3.9	16.9	Live	Y
Trapezoidal (lbf/ft)	203	203	3.9	16.9	Dead	Y
Trapezoidal (lbf/ft)	83	83	16.9	21	Live	Y
Trapezoidal (lbf/ft)	50	50	16.9	21	Dead	Y
Trapezoidal (lbf/ft)	80	80	0	21	Live	Y
Trapezoidal (lbf/ft)	20	20	0	21	Dead	Y
Self Weight (lbf/ft)	26.34	26.34	0	21	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	U02 - GARAGE BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 19.5	DRY

U02 - GARAGE BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 20 Member Slope: 0/12 Actual Length (ft): 20

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
99.94	3166.77	218.74	22.79	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{VR} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	20	0	20	0	1.00	0.95	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (56.8%)	114.4	265.0	0	D+L	1
Bending Stress Y (psi)	PASS (38.7%)	1408.2	2297.4	10	D+L	1
Deflection (in)	PASS (27.8%)	0.481 (=L/499)	0.667 (=L/360)	10	D+L	
Bearing Stress (psi)	PASS (24.1%)	425.0	560.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	2703	4920	0	0	0	0	0	0	0	0	0
B	2703	4920	0	0	0	0	0	0	0	0	0

Reaction Location

A

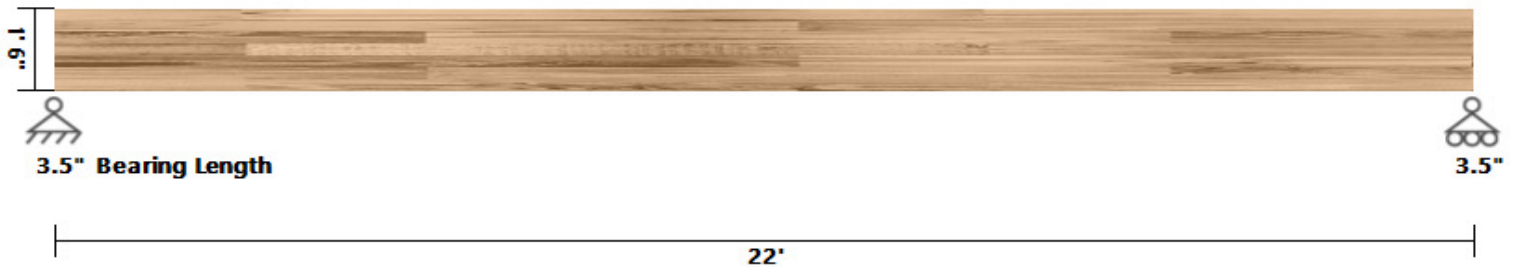
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft ²)	492	492	0	20	Live	Y
Uniform (lb/ft ²)	184.5	184.5	0	20	Dead	Y
Uniform (lb/ft)	63	63	0	20	Dead	Y
Self Weight (lb/ft)	22.79	22.79	0	20	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	U03 - GARAGE BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 18	DRY

U03 - GARAGE BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 22 Member Slope: 0/12 Actual Length (ft): 22

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
99	2673	249.56	22.58	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{vr} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	22	2	22	0	1.00	0.96	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (75.7%)	64.5	265.0	22	D+L	1
Bending Stress Y (psi)	PASS (56.7%)	987.0	2277.8	11.22	D+L	1
Deflection (in)	PASS (40.2%)	0.438 (=L/602)	0.733 (=L/360)	11	D+L	
Bearing Stress (psi)	PASS (60.5%)	221.2	560.0	22	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	2319	1804	0	0	0	0	0	0	0	0	0
B	2273	1984	0	0	0	0	0	0	0	0	0

Reaction Location

A

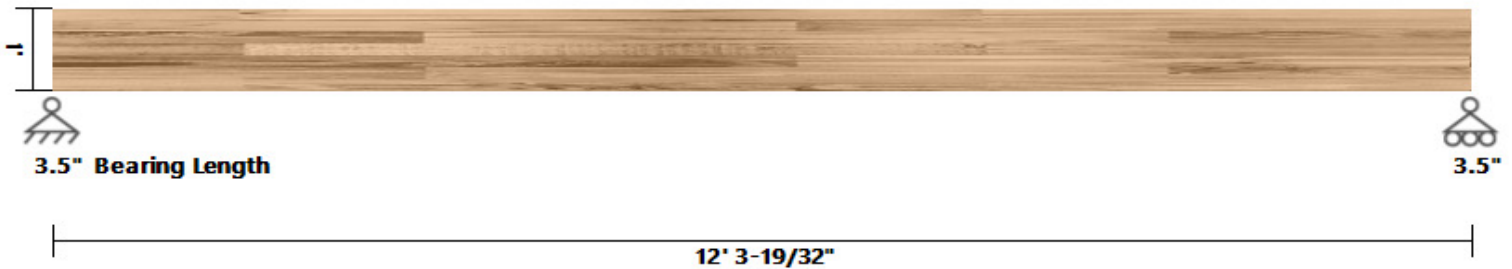
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	22	Live	Y
Uniform (lbf/ft)	105	105	0	22	Dead	Y
Trapezoidal (lbf/ft)	38	138	2	10	Live	Y
Trapezoidal (lbf/ft)	23	83	2	10	Dead	Y
Trapezoidal (lbf/ft)	138	138	10	14	Live	Y
Trapezoidal (lbf/ft)	83	83	10	14	Dead	Y
Trapezoidal (lbf/ft)	138	38	14	22	Live	Y
Trapezoidal (lbf/ft)	83	23	14	22	Dead	Y
Trapezoidal (lbf/ft)	16	76	0	22	Live	Y
Trapezoidal (lbf/ft)	19	19	0	22	Dead	Y
Point (lbf)	266	-	2	-	Live	Y
Point (lbf)	187	-	2	-	Dead	Y
Self Weight (lbf/ft)	22.58	22.58	0	22	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	U04 - GARAGE OHDR HDR	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 12	DRY

U04 - GARAGE OHDR HDR DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 12.3 Member Slope: 0/12 Actual Length (ft): 12.3

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
61.5	738	134.61	14.03	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{vr} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12.3	4	12.3	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (43.4%)	150.0	265.0	0	D+L	1
Bending Stress Y (psi)	PASS (49.8%)	1200.4	2389.3	5.29	D+L	1
Deflection (in)	PASS (39.3%)	0.249 (=L/593)	0.410 (=L/360)	5.78	D+L	
Bearing Stress (psi)	PASS (38.8%)	342.8	560.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	3295	2855	0	617	0	0	0	0	0	0	0
B	1360	1142	0	691	0	0	0	0	0	0	0

Reaction Location



LOAD LIST

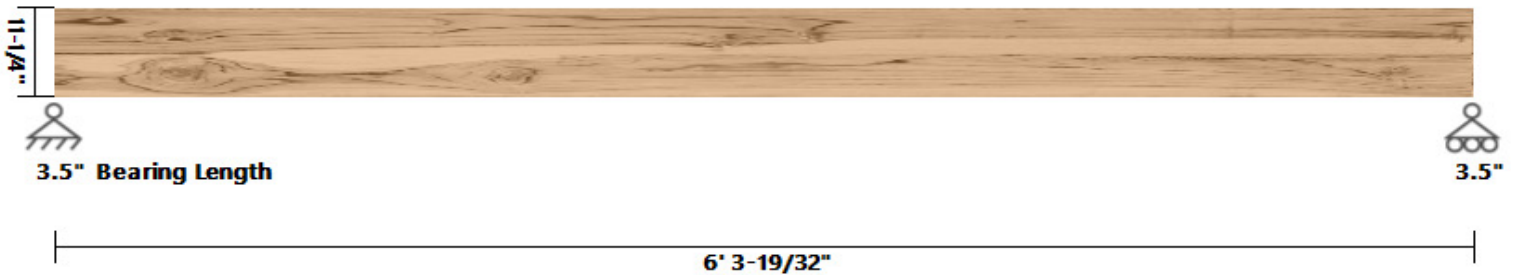
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	38	38	0	12.3	Live	Y
Uniform (lbf/ft)	23	23	0	12.3	Dead	Y
Trapezoidal (lbf/ft)	25	25	0	1.7	Live	Y
Trapezoidal (lbf/ft)	15	15	0	1.7	Dead	Y
Trapezoidal (lbf/ft)	275	275	1.7	6.5	Live	Y
Trapezoidal (lbf/ft)	165	165	1.7	6.5	Dead	Y
Trapezoidal (lbf/ft)	100	25	6.5	12.3	Live	Y
Trapezoidal (lbf/ft)	60	15	6.5	12.3	Dead	Y
Self Weight (lbf/ft)	14.03	14.03	0	12.3	Dead	Y

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	845.171	-	6.5	-	Dead	Y
Point (lbf)	1307.999	-	6.5	-	Snow	Y
Point (lbf)	2318.751	-	1.4	-	Dead	Y
Point (lbf)	1803.714	-	1.4	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	U05 - KITCHEN WDO HDR	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 3.5 X 11.25	DRY

U05 - KITCHEN WDO HDR DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 6.3 Member Slope: 0/12 Actual Length (ft): 6.3

Area (in ²)	I _x (in ⁴)	I _y (in ⁴)	BSW (lbf/ft)	Lams	G	K _{cr} Creep Factor
39.38	415.28	40.2	8.98	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	990	575	180	1350	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6.3	2	6.3	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (42.3%)	103.8	180.0	0	D+L	1
Bending Stress Y (psi)	PASS (30.0%)	691.4	987.4	3.15	D+L	1
Deflection (in)	PASS (78.2%)	0.046 (=L/1654)	0.210 (=L/360)	3.15	D+L	
Bearing Stress (psi)	PASS (64.4%)	222.5	625.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	936	1790	0	0	0	0	0	0	0	0	0
B	906	1739	0	0	0	0	0	0	0	0	0

Reaction Location

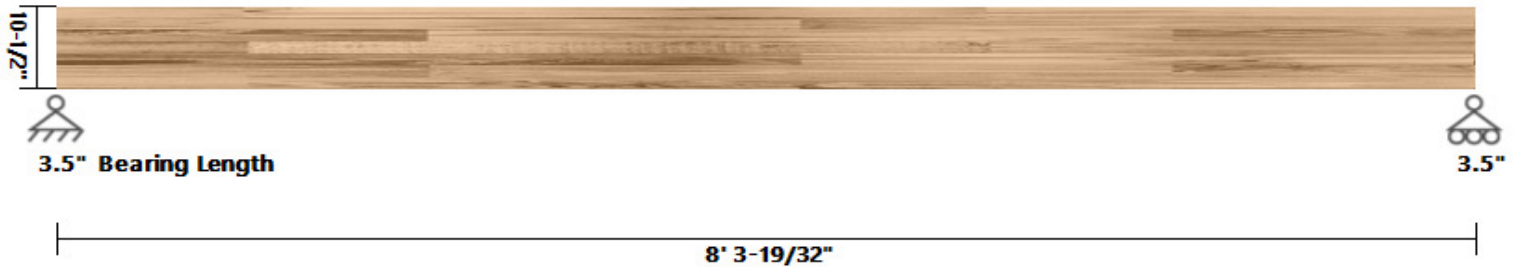


LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	6.3	Live	Y
Uniform (lbf/ft)	105	105	0	6.3	Dead	Y
Trapezoidal (lbf/ft)	138	138	0	2.7	Live	Y
Trapezoidal (lbf/ft)	83	83	0	2.7	Dead	Y
Trapezoidal (lbf/ft)	138	93	2.7	6.3	Live	Y
Trapezoidal (lbf/ft)	83	56	2.7	6.3	Dead	Y
Trapezoidal (lbf/ft)	410	410	0	6.3	Live	Y
Trapezoidal (lbf/ft)	103	103	0	6.3	Dead	Y
Self Weight (lbf/ft)	8.98	8.98	0	6.3	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	U06 - NOOK SGD HDR	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 3.125 X 10.5	DRY

U06 - NOOK SGD HDR DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 8.3 Member Slope: 0/12 Actual Length (ft): 8.3

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.81	301.46	26.7	7.48	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1472	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{VR} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8.3	2	8.3	0	1.00	0.98	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (39.0%)	161.7	265.0	8.3	D+L	1
Bending Stress Y (psi)	PASS (36.9%)	1505.9	2387.0	4.23	D+L	1
Deflection (in)	PASS (40.5%)	0.165 (=L/605)	0.277 (=L/360)	4.15	D+L	
Bearing Stress (psi)	PASS (42.2%)	323.4	560.0	8.3	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	1153	2235	0	0	0	0	0	0	0	0	0
B	1209	2329	0	0	0	0	0	0	0	0	0

Reaction Location

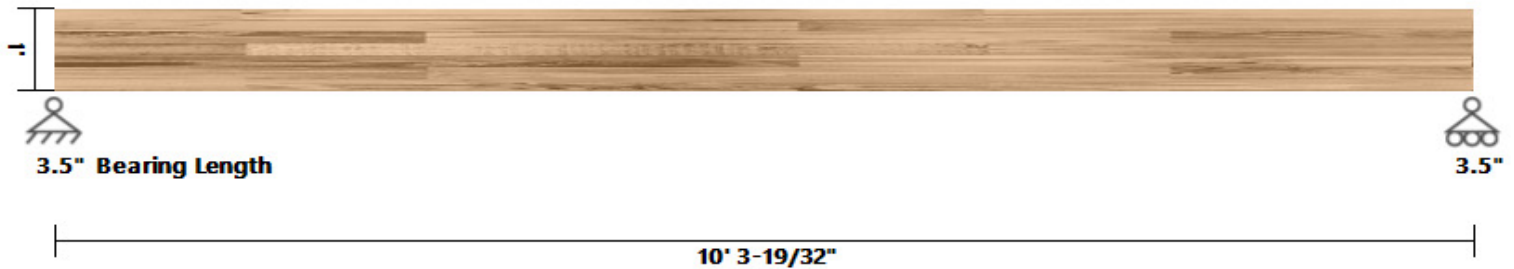


LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	8.3	Live	Y
Uniform (lbf/ft)	105	105	0	8.3	Dead	Y
Trapezoidal (lbf/ft)	78	138	0	6.4	Live	Y
Trapezoidal (lbf/ft)	47	83	0	6.4	Dead	Y
Trapezoidal (lbf/ft)	138	138	6.4	8.3	Live	Y
Trapezoidal (lbf/ft)	83	83	6.4	8.3	Dead	Y
Trapezoidal (lbf/ft)	410	410	0	8.3	Live	Y
Trapezoidal (lbf/ft)	103	103	0	8.3	Dead	Y
Self Weight (lbf/ft)	7.48	7.48	0	8.3	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	U07 - GREAT RM SGD HDR	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 3.125 X 12	DRY

U07 - GREAT RM SGD HDR DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 10.3 Member Slope: 0/12 Actual Length (ft): 10.3

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
37.5	450	30.52	8.55	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{VR} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	10.3	2	10.3	0	0.99	0.97	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (46.3%)	142.4	265.0	0	D+L	1
Bending Stress Y (psi)	PASS (41.4%)	1397.5	2385.5	4.94	D+L	1
Deflection (in)	PASS (42.5%)	0.197 (=L/626)	0.343 (=L/360)	5.05	D+L	
Bearing Stress (psi)	PASS (41.9%)	325.4	560.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	1809	1751	0	532	0	0	0	0	0	0	0
B	1424	1142	0	502	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

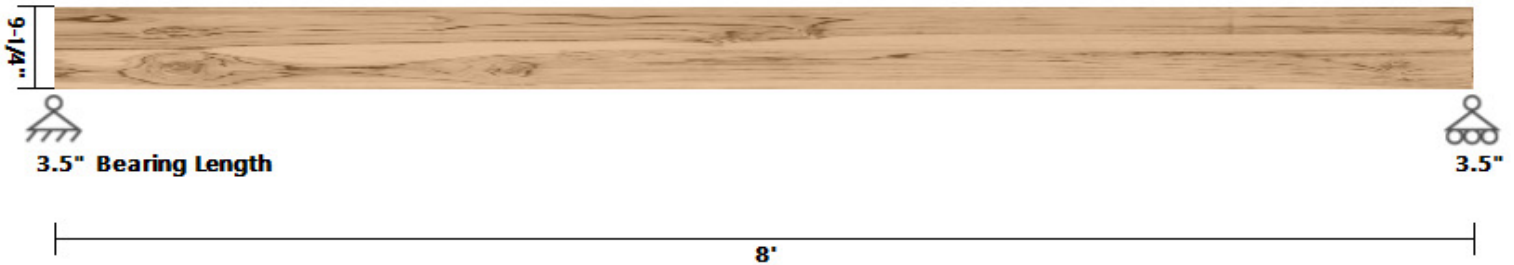
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	90	90	0	10.3	Dead	Y
Trapezoidal (lbf/ft)	203	73	0	10.3	Live	Y
Trapezoidal (lbf/ft)	122	44	0	10.3	Dead	Y
Trapezoidal (lbf/ft)	175	175	0	5	Live	Y
Trapezoidal (lbf/ft)	105	105	0	5	Dead	Y
Trapezoidal (lbf/ft)	25	25	5	10.3	Live	Y
Trapezoidal (lbf/ft)	15	15	5	10.3	Dead	Y
Trapezoidal (lbf/ft)	45	45	0	10.3	Live	Y
Trapezoidal (lbf/ft)	10	10	0	10.3	Dead	Y
Self Weight (lbf/ft)	8.55	8.55	0	10.3	Dead	Y

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	655.6031	-	5	-	Dead	Y
Point (lbf)	1034.802	-	5	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	U08 - STAIR BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 3.5 X 9.25	DRY

U08 - STAIR BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 8 Member Slope: 0/12 Actual Length (ft): 8

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1080	632	180	1350	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8	0	8	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (71.5%)	51.3	180.0	0	D+L	1
Bending Stress Y (psi)	PASS (50.7%)	532.1	1080.0	4	D+L	1
Deflection (in)	PASS (74.1%)	0.069 (=L/1391)	0.267 (=L/360)	4	D+L	
Bearing Stress (psi)	PASS (85.5%)	90.3	625.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	507	600	0	0	0	0	0	0	0	0	0
B	507	600	0	0	0	0	0	0	0	0	0

Reaction Location



LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft ²)	150	150	0	8	Live	Y
Uniform (lb/ft ²)	56.25	56.25	0	8	Dead	Y
Uniform (lb/ft)	63	63	0	8	Dead	Y
Self Weight (lb/ft)	7.38	7.38	0	8	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	U09 - FOYER GREAT RM BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 19.5	DRY

U09 - FOYER GREAT RM BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 21.5 Member Slope: 0/12 Actual Length (ft): 21.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
99.94	3166.77	218.74	22.79	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{vr} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	21.5	2	21.5	0	1.00	0.95	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (62.3%)	99.9	265.0	21.5	D+L	1
Bending Stress Y (psi)	PASS (42.4%)	1313.6	2280.9	11.61	D+L	1
Deflection (in)	PASS (27.9%)	0.516 (=L/500)	0.717 (=L/360)	10.97	D+L	
Bearing Stress (psi)	PASS (33.7%)	371.0	560.0	21.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	2066	4037	0	0	0	0	0	0	0	0	0
B	2255	4400	0	0	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

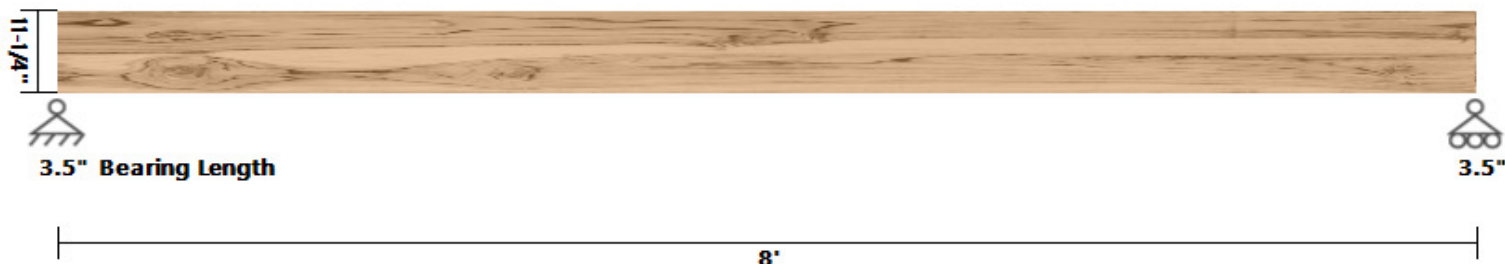
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	63	63	0	21.5	Dead	Y
Trapezoidal (lbf/ft)	350	350	0	21.5	Live	Y
Trapezoidal (lbf/ft)	88	88	0	21.5	Dead	Y
Trapezoidal (lbf/ft)	40	40	13.7	21.5	Live	Y
Trapezoidal (lbf/ft)	10	10	13.7	21.5	Dead	Y
Self Weight (lbf/ft)	22.79	22.79	0	21.5	Dead	Y

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	506.5351	-	13.7	-	Dead	Y
Point (lbf)	600	-	13.7	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	U10 - FOYER BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 3.5 X 11.25	DRY

U10 - FOYER BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 8 Member Slope: 0/12 Actual Length (ft): 8

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
39.38	415.28	40.2	8.98	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	990	575	180	1350	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8	2	8	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (47.6%)	94.4	180.0	0	D+L	1
Bending Stress Y (psi)	PASS (18.4%)	805.2	987.4	4	D+L	1
Deflection (in)	PASS (67.8%)	0.086 (=L/1118)	0.267 (=L/360)	4	D+L	
Bearing Stress (psi)	PASS (67.6%)	202.2	625.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	885	1592	0	0	0	0	0	0	0	0	0
B	885	1592	0	0	0	0	0	0	0	0	0

Reaction Location

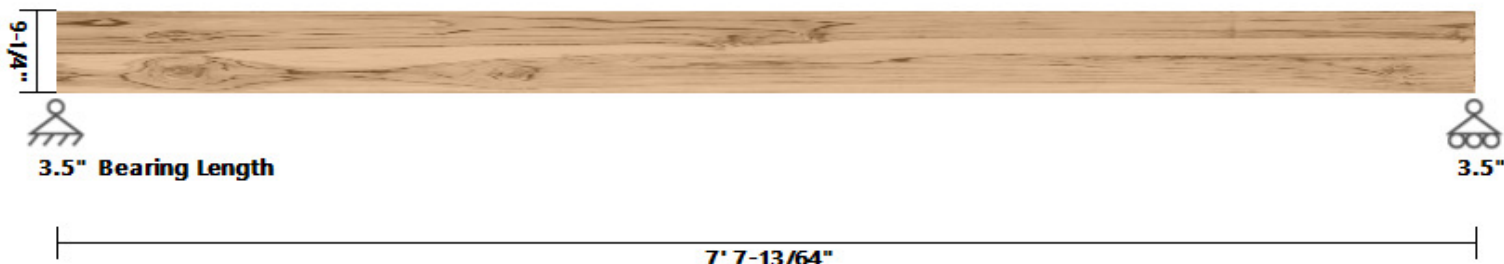


LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft ²)	398	398	0	8	Live	Y
Uniform (lb/ft ²)	149.25	149.25	0	8	Dead	Y
Uniform (lb/ft)	63	63	0	8	Dead	Y
Self Weight (lb/ft)	8.98	8.98	0	8	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	U11 - DEN DOOR HDR	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 3.5 X 9.25	DRY

U11 - DEN DOOR HDR DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 7.6 Member Slope: 0/12 Actual Length (ft): 7.6

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1080	632	180	1350	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	7.6	2	7.6	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (55.5%)	80.2	180.0	7.6	D+L	1
Bending Stress Y (psi)	PASS (26.6%)	790.5	1077.4	3.8	D+L	1
Deflection (in)	PASS (63.5%)	0.093 (=L/985)	0.253 (=L/360)	3.8	D+L	
Bearing Stress (psi)	PASS (77.4%)	141.3	625.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	666	1064	0	0	0	0	0	0	0	0	0
B	666	1064	0	0	0	0	0	0	0	0	0

Reaction Location

A

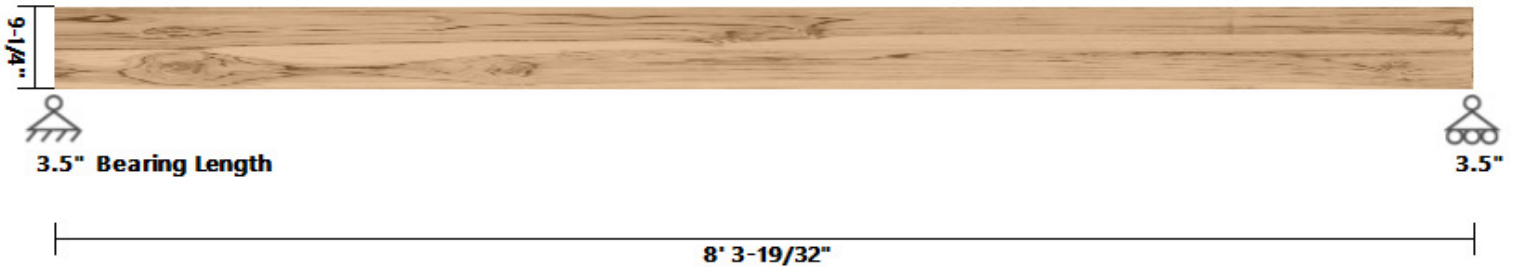
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft ²)	280	280	0	7.6	Live	Y
Uniform (lb/ft ²)	105	105	0	7.6	Dead	Y
Uniform (lb/ft)	63	63	0	7.6	Dead	Y
Self Weight (lb/ft)	7.38	7.38	0	7.6	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	U12 - DINING OP HDR	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 3.5 X 9.25	DRY

U12 - DINING OP HDR DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 8.3 Member Slope: 0/12 Actual Length (ft): 8.3

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1080	632	180	1350	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8.3	2	8.3	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (55.8%)	79.6	180.0	8.3	D+L	1
Bending Stress Y (psi)	PASS (20.4%)	857.4	1077.4	4.15	D+L	1
Deflection (in)	PASS (56.7%)	0.120 (=L/832)	0.277 (=L/360)	4.15	D+L	
Bearing Stress (psi)	PASS (77.6%)	140.3	625.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	681	1038	0	0	0	0	0	0	0	0	0
B	681	1038	0	0	0	0	0	0	0	0	0

Reaction Location

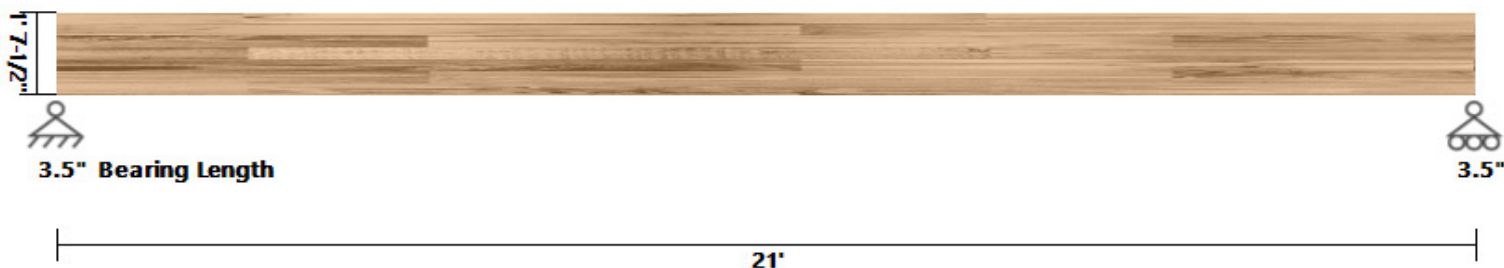


LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft ²)	250	250	0	8.3	Live	Y
Uniform (lb/ft ²)	93.75	93.75	0	8.3	Dead	Y
Uniform (lb/ft)	63	63	0	8.3	Dead	Y
Self Weight (lb/ft)	7.38	7.38	0	8.3	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	M01 - BASEMENT BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 19.5	DRY

M01 - BASEMENT BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 21 Member Slope: 0/12 Actual Length (ft): 21

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
99.94	3166.77	218.74	22.79	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{vr} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	21	2	21	0	1.00	0.95	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (60.4%)	104.9	265.0	21	D+L	1
Bending Stress Y (psi)	PASS (43.5%)	1291.2	2286.3	10.71	D+L	1
Deflection (in)	PASS (30.2%)	0.488 (=L/516)	0.700 (=L/360)	10.5	D+L	
Bearing Stress (psi)	PASS (30.5%)	389.5	560.0	21	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	2027	4506	0	0	0	0	0	0	0	0	0
B	2118	4868	0	0	0	0	0	0	0	0	0

Reaction Location

A

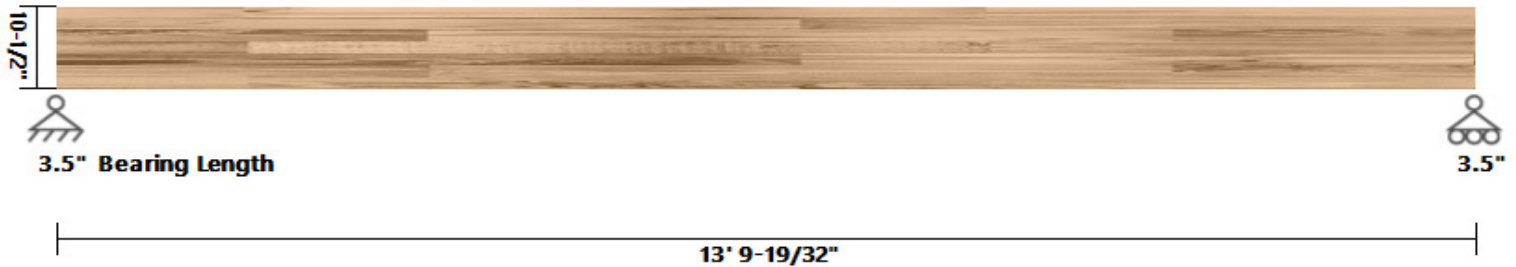
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	63	63	0	21	Dead	Y
Trapezoidal (lb/ft)	420	420	0	21	Live	Y
Trapezoidal (lb/ft)	105	105	0	21	Dead	Y
Trapezoidal (lb/ft)	76	76	13.7	21	Live	Y
Trapezoidal (lb/ft)	19	19	13.7	21	Dead	Y
Self Weight (lb/ft)	22.79	22.79	0	21	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	M02 - STAIR BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 3.125 X 10.5	DRY

M02 - STAIR BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 13.8 Member Slope: 0/12 Actual Length (ft): 13.8

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.81	301.46	26.7	7.48	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1472	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{VR} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	13.8	4	13.8	0	0.99	0.95	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (70.3%)	78.6	265.0	13.8	D+L	1
Bending Stress Y (psi)	PASS (51.5%)	1150.4	2371.4	7.31	D+L	1
Deflection (in)	PASS (24.7%)	0.347 (=L/478)	0.460 (=L/360)	7.04	D+L	
Bearing Stress (psi)	PASS (71.9%)	157.3	560.0	13.8	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	1076	386	0	0	0	0	0	0	0	0	0
B	1179	541	0	0	0	0	0	0	0	0	0

Reaction Location

A

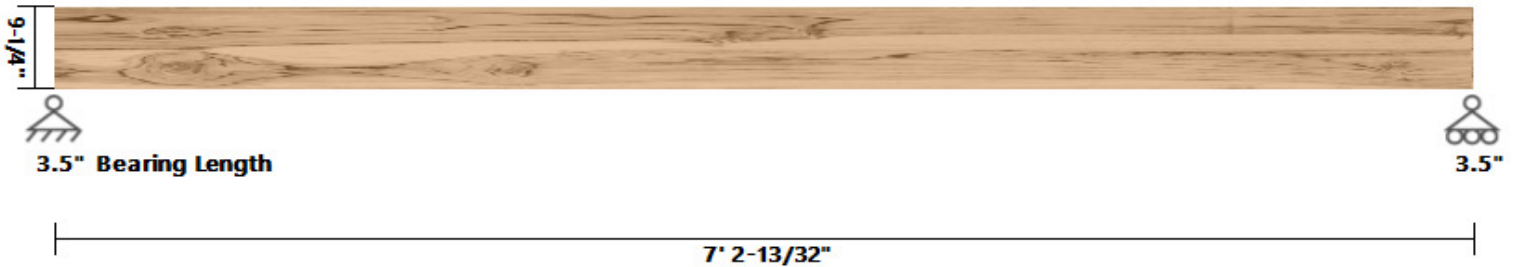
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	126	126	0	13.8	Dead	Y
Trapezoidal (lb/ft)	45	45	7	13.8	Live	Y
Trapezoidal (lb/ft)	10	10	7	13.8	Dead	Y
Trapezoidal (lb/ft)	45	45	0	13.8	Live	Y
Trapezoidal (lb/ft)	10	40	0	13.8	Dead	Y
Self Weight (lb/ft)	7.48	7.48	0	13.8	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	M03 - BASEMENT BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 3.5 X 9.25	DRY

M03 - BASEMENT BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 7.2 Member Slope: 0/12 Actual Length (ft): 7.2

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1080	632	180	1350	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	7.2	2	7.2	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (78.7%)	38.3	180.0	0	D+L	1
Bending Stress Y (psi)	PASS (66.8%)	358.1	1077.4	3.6	D+L	1
Deflection (in)	PASS (84.3%)	0.038 (=L/2298)	0.240 (=L/360)	3.6	D+L	
Bearing Stress (psi)	PASS (89.2%)	67.6	625.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	410	418	0	0	0	0	0	0	0	0	0
B	410	418	0	0	0	0	0	0	0	0	0

Reaction Location



LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft ²)	116	116	0	7.2	Live	Y
Uniform (lb/ft ²)	43.5	43.5	0	7.2	Dead	Y
Uniform (lb/ft)	63	63	0	7.2	Dead	Y
Self Weight (lb/ft)	7.38	7.38	0	7.2	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	M04 - BASEMENT BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 6.75 X 16.5	DRY

M04 - BASEMENT BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 15 Member Slope: 0/12 Actual Length (ft): 15

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
111.38	2526.82	422.88	25.4	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{VR} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	15	2	15	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (34.6%)	199.3	304.8	0	D+0.75L+0.75S	1.15
Bending Stress Y (psi)	PASS (44.8%)	1292.0	2339.0	8.1	D+L	1
Deflection (in)	PASS (42.0%)	0.290 (=L/621)	0.500 (=L/360)	7.5	D+L	
Bearing Stress (psi)	PASS (28.8%)	398.6	560.0	0	D+0.75L+0.75S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	6547	5441	0	5561	0	0	0	0	0	0	0
B	3016	5416	0	440	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

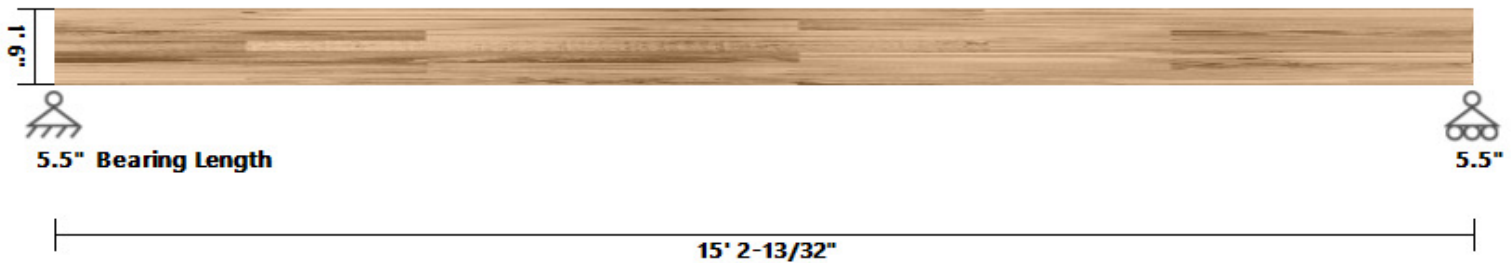
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	126	126	0	15	Dead	Y
Trapezoidal (lbf/ft)	432	432	0	15	Live	Y
Trapezoidal (lbf/ft)	108	108	0	15	Dead	Y
Trapezoidal (lbf/ft)	280	280	0	1.1	Live	Y
Trapezoidal (lbf/ft)	70	70	0	1.1	Dead	Y
Trapezoidal (lbf/ft)	280	280	8.2	11.3	Live	Y
Trapezoidal (lbf/ft)	70	70	8.2	11.3	Dead	Y
Trapezoidal (lbf/ft)	290	290	11.3	15	Live	Y
Trapezoidal (lbf/ft)	73	73	11.3	15	Dead	Y
Self Weight (lbf/ft)	25.4	25.4	0	15	Dead	Y

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2540.525	-	1.1	-	Dead	Y
Point (lbf)	3950.57	-	1.1	-	Snow	Y
Point (lbf)	1234.789	-	1.1	-	Dead	Y
Point (lbf)	2050	-	1.1	-	Snow	Y
Point (lbf)	666.4584	-	1.1	-	Dead	Y
Point (lbf)	666.4584	-	8.2	-	Dead	Y
Point (lbf)	1064	-	1.1	-	Live	Y
Point (lbf)	1064	-	8.2	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	M05 - BASEMENT BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 6.75 X 18	DRY

M05 - BASEMENT BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 15.2 Member Slope: 0/12 Actual Length (ft): 15.2

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
121.5	3280.5	461.32	27.71	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{VR} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	15.2	2	15.2	0	1.00	0.98	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (36.5%)	193.6	304.8	0	D+0.75L+0.75S	1.15
Bending Stress Y (psi)	PASS (54.7%)	1048.8	2315.7	8.82	D+L	1
Deflection (in)	PASS (55.6%)	0.225 (=L/811)	0.507 (=L/360)	7.6	D+L	
Bearing Stress (psi)	PASS (24.6%)	422.3	560.0	0	D+0.75L+0.75S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	6978	5075	0	6527	0	0	0	0	0	0	0
B	3115	5439	0	509	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

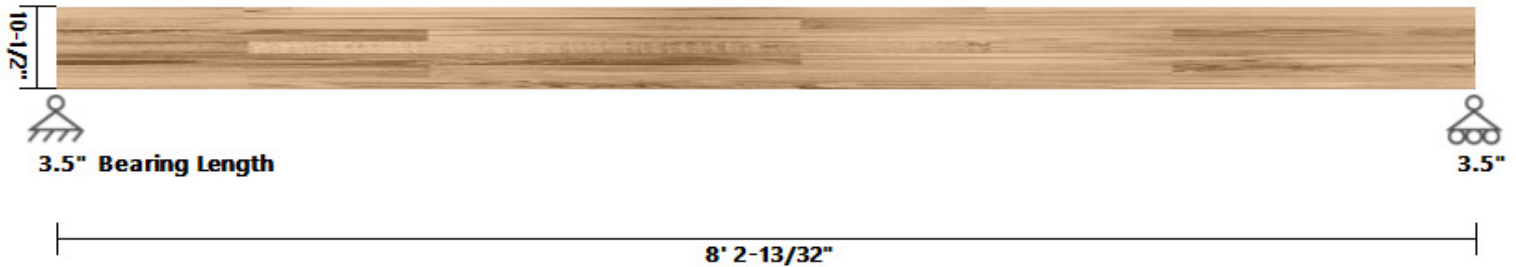
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	126	126	0	15.2	Dead	Y
Trapezoidal (lbf/ft)	396	396	0	15.2	Live	Y
Trapezoidal (lbf/ft)	99	99	0	15.2	Dead	Y
Trapezoidal (lbf/ft)	252	252	0	1.1	Live	Y
Trapezoidal (lbf/ft)	63	63	0	1.1	Dead	Y
Trapezoidal (lbf/ft)	252	252	8.9	11	Live	Y
Trapezoidal (lbf/ft)	63	63	8.9	11	Dead	Y
Trapezoidal (lbf/ft)	384	384	11	15.2	Live	Y
Trapezoidal (lbf/ft)	96	96	11	15.2	Dead	Y
Self Weight (lbf/ft)	27.71	27.71	0	15.2	Dead	Y

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1234.789	-	1.1	-	Dead	Y
Point (lbf)	2050	-	1.1	-	Snow	Y
Point (lbf)	3050.767	-	1.1	-	Dead	Y
Point (lbf)	4985.719	-	1.1	-	Snow	Y
Point (lbf)	681.1551	-	1.1	-	Dead	Y
Point (lbf)	681.1551	-	8.9	-	Dead	Y
Point (lbf)	1037.5	-	1.1	-	Live	Y
Point (lbf)	1037.5	-	8.9	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	M06 - BASEMENT BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 10.5	DRY

M06 - BASEMENT BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 8.2 Member Slope: 0/12 Actual Length (ft): 8.2

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
57.75	530.58	145.58	13.17	1	0.5	1

STRENGTH PROPERTIES

	F _{bx+}	F _{bx-}	F _{by}	F _t	F _{vx}	F _{vy}	F _c	F _{c⊥}	E _x	E _{xmin}	E _y	E _{ymin}
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1472	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{vr} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8.2	2	8.2	0	1.00	1.00	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (22.2%)	206.2	265.0	0	D+L	1
Bending Stress Y (psi)	PASS (10.1%)	2154.2	2396.5	3.94	D+L	1
Deflection (in)	PASS (28.3%)	0.196 (=L/502)	0.273 (=L/360)	4.02	D+L	
Bearing Stress (psi)	PASS (26.4%)	412.4	560.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	2591	5348	0	0	0	0	0	0	0	0	0
B	1640	3524	0	0	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

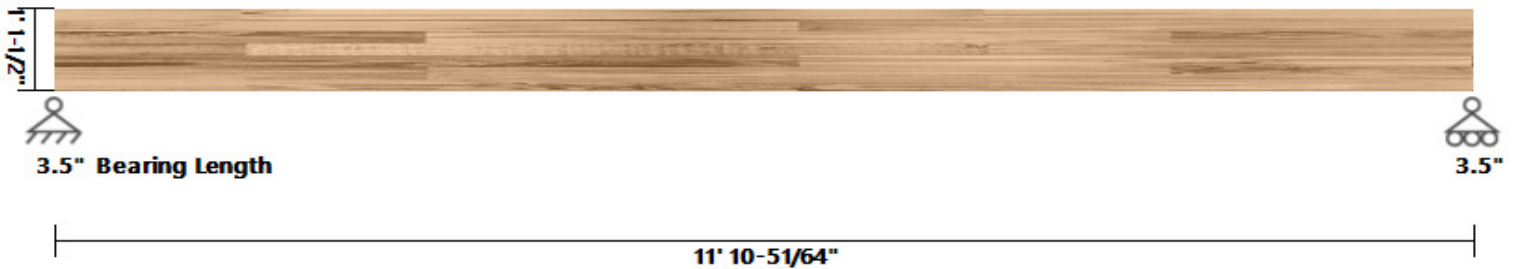
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	63	63	0	8.2	Dead	Y
Trapezoidal (lbf/ft)	280	280	0	8.2	Live	Y
Trapezoidal (lbf/ft)	70	70	0	8.2	Dead	Y
Trapezoidal (lbf/ft)	384	384	0	0.3	Live	Y
Trapezoidal (lbf/ft)	96	96	0	0.3	Dead	Y
Self Weight (lbf/ft)	13.17	13.17	0	8.2	Dead	Y

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	884.9211	-	0.3	-	Dead	Y
Point (lbf)	1592	-	0.3	-	Live	Y
Point (lbf)	2117.917	-	3.9	-	Dead	Y
Point (lbf)	4868.369	-	3.9	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	M07 - BASEMENT BEAM	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 13.5	DRY

M07 - BASEMENT BEAM DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 11.9 Member Slope: 0/12 Actual Length (ft): 11.9

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
69.19	1050.79	151.44	15.78	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{VR} = 1											

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11.9	2	11.9	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (39.6%)	160.2	265.0	11.9	D+L	1
Bending Stress Y (psi)	PASS (29.2%)	1694.4	2394.1	5.95	D+L	1
Deflection (in)	PASS (25.3%)	0.296 (=L/482)	0.397 (=L/360)	5.95	D+L	
Bearing Stress (psi)	PASS (26.4%)	411.9	560.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	2153	5236	0	0	0	0	0	0	0	0	0
B	2153	5236	0	0	0	0	0	0	0	0	0

Reaction Location

A

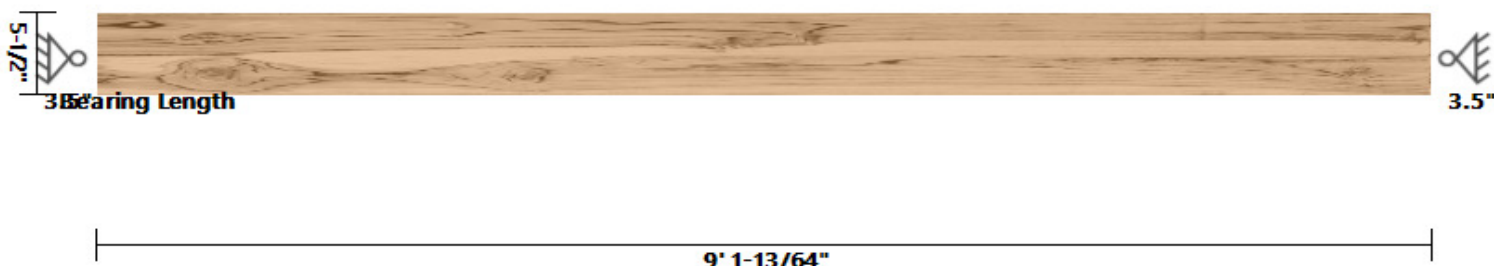
B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	126	126	0	11.9	Dead	Y
Trapezoidal (lbf/ft)	440	440	0	11.9	Live	Y
Trapezoidal (lbf/ft)	110	110	0	11.9	Dead	Y
Trapezoidal (lbf/ft)	440	440	0	11.9	Live	Y
Trapezoidal (lbf/ft)	110	110	0	11.9	Dead	Y
Self Weight (lbf/ft)	15.78	15.78	0	11.9	Dead	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C01 - COL at GT1a & GT2a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 5.5 X 5.5	DRY

C01 - COL at GT1a & GT2a DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
30.25	76.26	76.26	6.9	1	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	750	475	170	700	625	1300	470
Adjusted Values	750	475	170	700	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End		Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
		X	Y	Offset	CP				
1	9.1	9.1	9.1	0	0.75	1.00	1.00	19.85	19.85

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	515.6	0	D	0.9
Bearing Stress (psi)	PASS (36.9%)	507.8	805.0	9.1	D+S	1.15

REACTIONS

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	63	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-3775	0	0	-6001	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

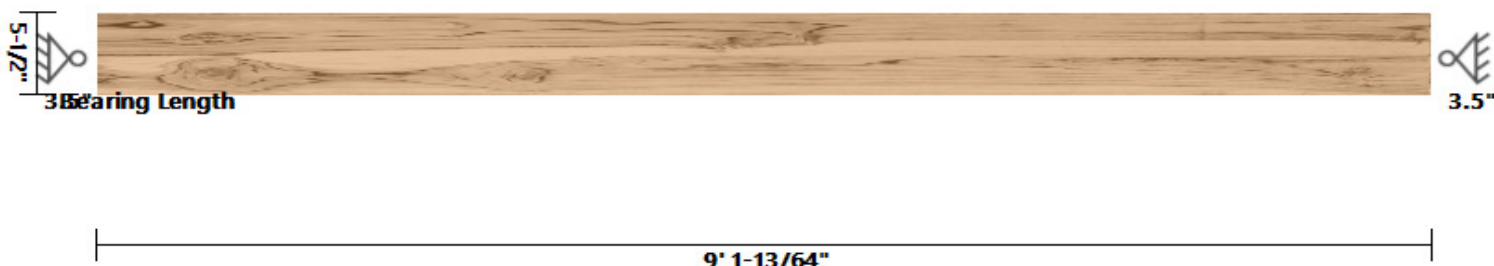
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	6.9	6.9	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2540.525	-	9.1	-	Dead	Y
Point (lbf)	-3950.57	-	9.1	-	Snow	Y
Point (lbf)	-1234.789	-	9.1	-	Dead	Y
Point (lbf)	-2050	-	9.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C02 - COL at GT2b & GT8a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 5.5 X 5.5	DRY

C02 - COL at GT2b & GT8a DIAGRAM



COLUMN PROPERTIES

Start(ft)	0	End(ft)	9.1				
Area	lx	ly	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
30.25	76.26	76.26	6.9	1	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	750	475	170	700	625	1300	470
Adjusted Values	750	475	170	700	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

		Unbraced Length (ft)		Column End					
Span	Length (ft)	X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.75	1.00	1.00	19.85	19.85

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	515.6	0	D	0.9
Bearing Stress (psi)	PASS (26.9%)	588.1	805.0	9.1	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	63	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-4286	0	0	-7036	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

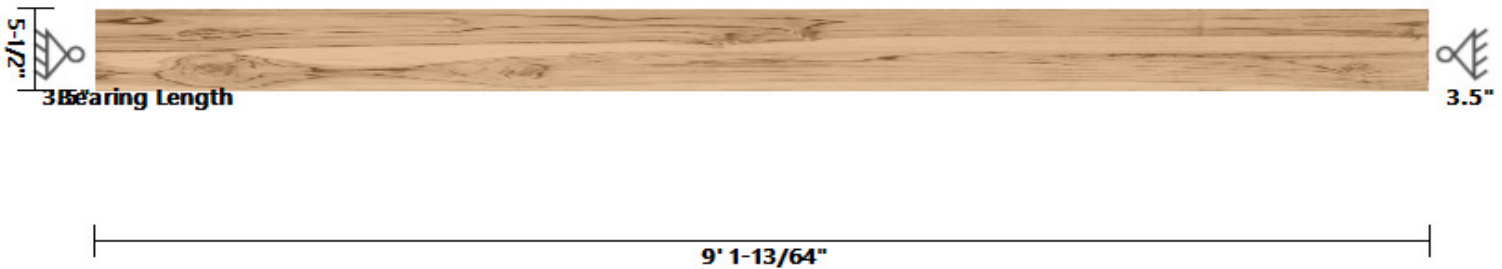
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	6.9	6.9	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-1234.789	-	9.1	-	Dead	Y
Point (lbf)	-2050	-	9.1	-	Snow	Y
Point (lbf)	-3050.767	-	9.1	-	Dead	Y
Point (lbf)	-4985.719	-	9.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C03 - COL at GT4a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C03 - COL at GT4a DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End					
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.31	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (76.0%)	409.3	1707.8	9.1	D+S	1.15

REACTIONS

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-2447	0	0	-3999	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

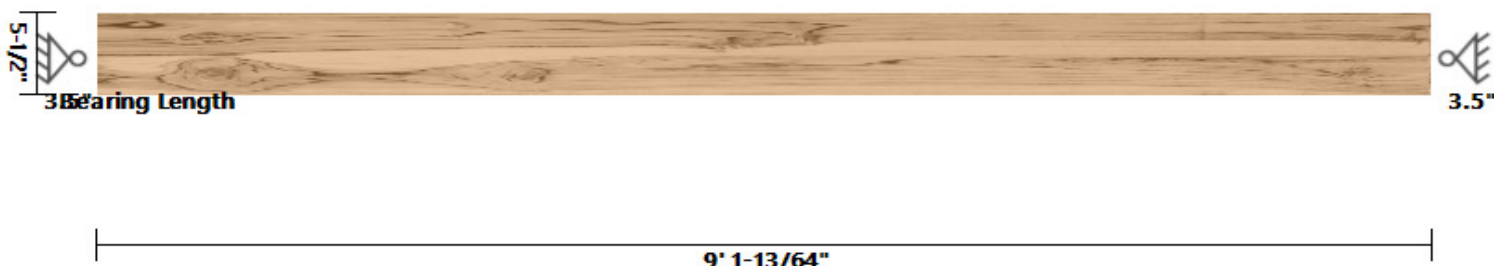
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2447.216	-	9.1	-	Dead	Y
Point (lbf)	-3999.122	-	9.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C04 - COL at GT7b	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C04 - COL at GT7b DIAGRAM



COLUMN PROPERTIES

Start(ft)	0	End(ft)	9.1				
Area	lx	ly	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

		Unbraced Length (ft)		Column End					
Span	Length (ft)	X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.31	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (66.7%)	569.2	1707.8	9.1	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-3491	-165	0	-5474	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

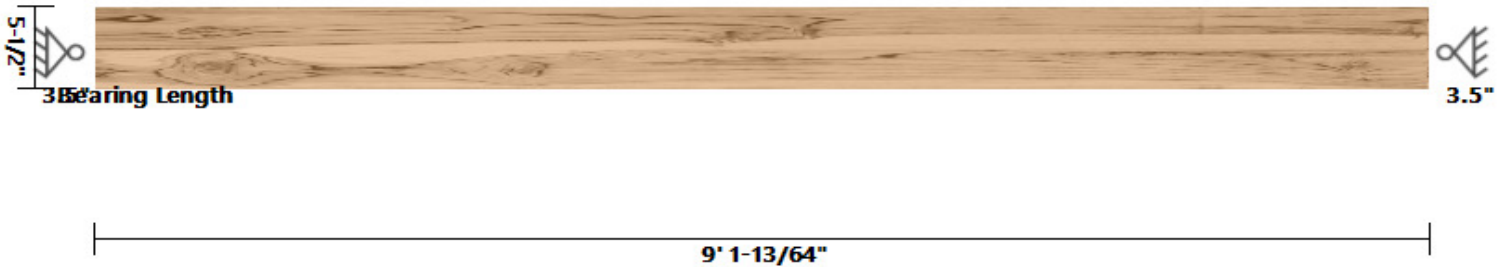
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-165	-	9.1	-	Live	Y
Point (lbf)	-116	-	9.1	-	Dead	Y
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-3375.125	-	9.1	-	Dead	Y
Point (lbf)	-5473.887	-	9.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C05 - COL at GT8b	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 5.5 X 5.5	DRY

C05 - COL at GT8b DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
30.25	76.26	76.26	6.9	1	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	750	475	170	700	625	1300	470
Adjusted Values	750	475	170	700	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End					
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.75	1.00	1.00	19.85	19.85

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	515.6	0	D	0.9
Bearing Stress (psi)	PASS (24.4%)	608.6	805.0	9.1	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	63	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-4458	0	0	-7257	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

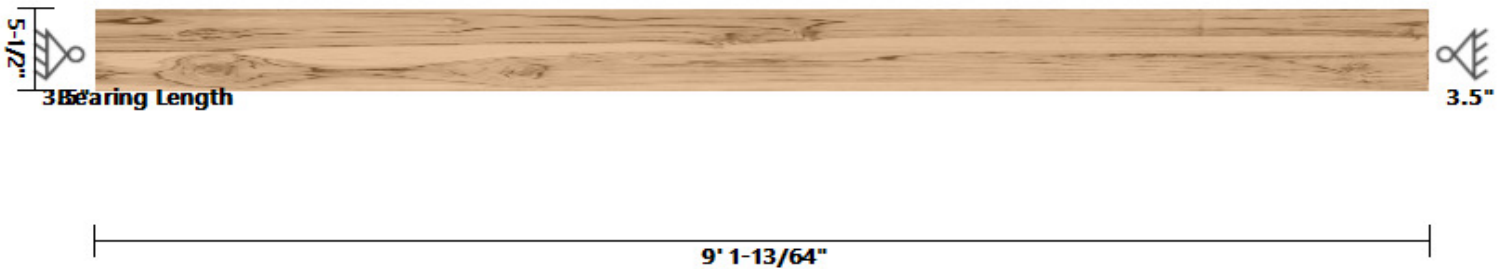
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	6.9	6.9	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-4458.315	-	9.1	-	Dead	Y
Point (lbf)	-7256.631	-	9.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C06 - COL at R05ab	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C06 - COL at R05ab DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End					
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.31	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (72.7%)	466.1	1707.8	9.1	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-3215	-893	0	-4127	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

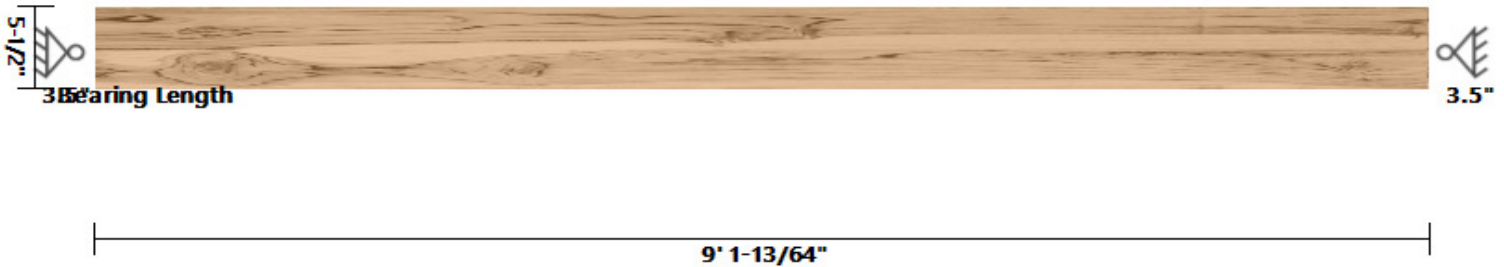
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-893	-	9.1	-	Live	Y
Point (lbf)	-575	-	9.1	-	Dead	Y
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2639.769	-	9.1	-	Dead	Y
Point (lbf)	-4126.636	-	9.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C07 - COL at R03a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C07 - COL at R03a DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End					
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.31	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (81.3%)	319.7	1707.8	9.1	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-2110	-266	0	-2925	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

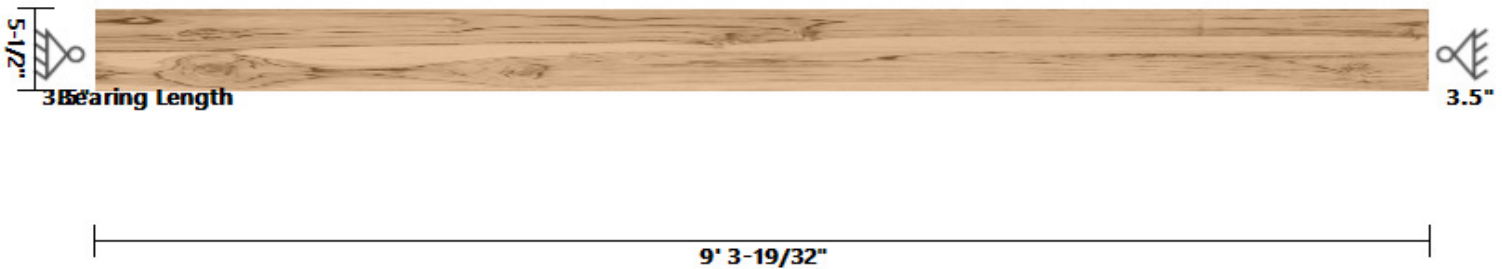
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-266	-	9.1	-	Live	Y
Point (lbf)	-187	-	9.1	-	Dead	Y
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-1922.588	-	9.1	-	Dead	Y
Point (lbf)	-2925.249	-	9.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C08 - COL at R03b	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C08 - COL at R03b DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.3						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End					
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.3	9.3	9.3	0	0.30	1.00	1.00	20.29	24.8

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	488.5	0	D	0.9
Bearing Stress (psi)	PASS (87.4%)	215.6	1707.8	9.3	D+S	1.15

REACTIONS

		Units for V: lbf			Units for M: lbf-ft						
Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	52	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-1381	0	0	-2014	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

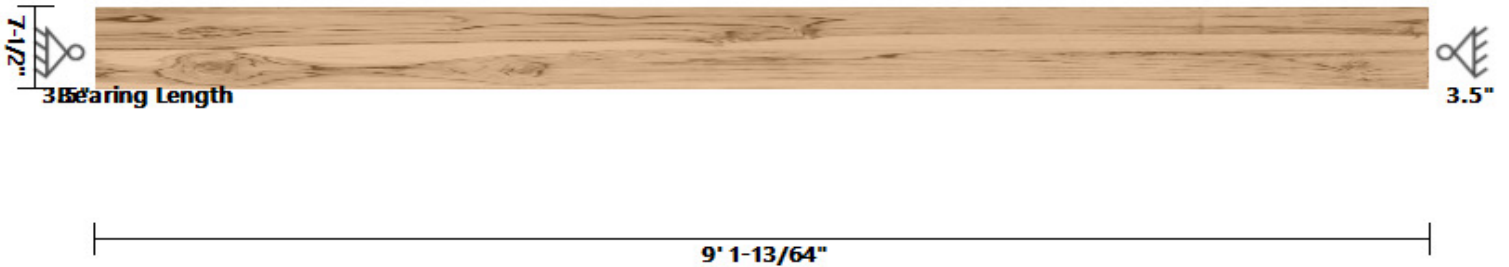
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lb/ft)	5.64	5.64	0	9.3	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb)	-1381.147	-	9.3	-	Dead	Y
Point (lb)	-2014.35	-	9.3	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C09 - COL at GT4a & U01a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 5.5 X 7.5	DRY

C09 - COL at GT4a & U01a DIAGRAM



COLUMN PROPERTIES

Start(ft)	0	End(ft)	9.1				
Area	lx	ly	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
41.25	193.36	103.98	9.41	1	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	750	475	170	700	625	1300	470
Adjusted Values	750	475	170	700	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1
Bending Adjustment Factors	C _{fu} = 1	C _r = 1					

COLUMN DATA

		Unbraced Length (ft)		Column End					
Span	Length (ft)	X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.75	1.00	1.00	14.56	19.85

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	515.6	0	D	0.9
Bearing Stress (psi)	PASS (15.5%)	680.5	805.0	9.1	D+0.75L+0.75S	1.15

REACTIONS

	Units for V: lbf			Units for M: lbf-ft							
Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	86	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-6365	-4981	0	-3999	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

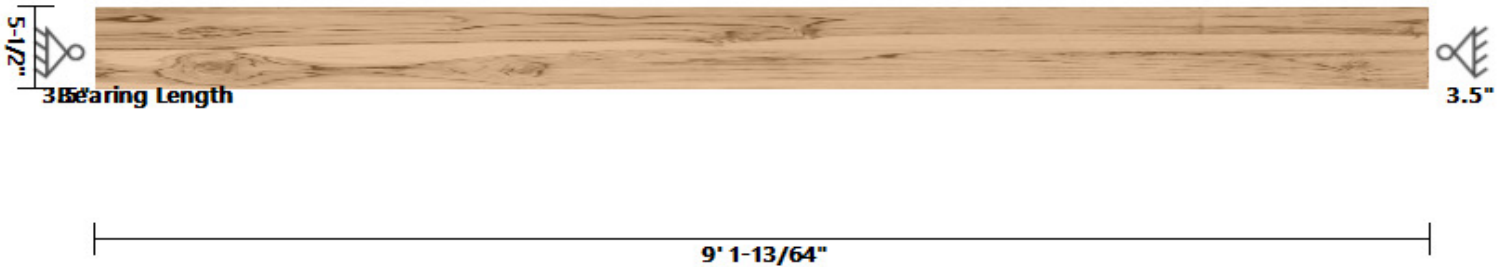
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	9.41	9.41	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2447.216	-	9.1	-	Dead	Y
Point (lbf)	-3999.122	-	9.1	-	Snow	Y
Point (lbf)	-3917.622	-	9.1	-	Dead	Y
Point (lbf)	-4981.051	-	9.1	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C10 - COL at U01b	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C10 - COL at U01b DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1
Bending Adjustment Factors	C _{fu} = 1		C _r = 1				

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End		Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
		X	Y	Offset	CP				
1	9.1	9.1	9.1	0	0.35	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (70.4%)	440.2	1485.0	9.1	D+L	1

REACTIONS

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-3181	-3752	0	0	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

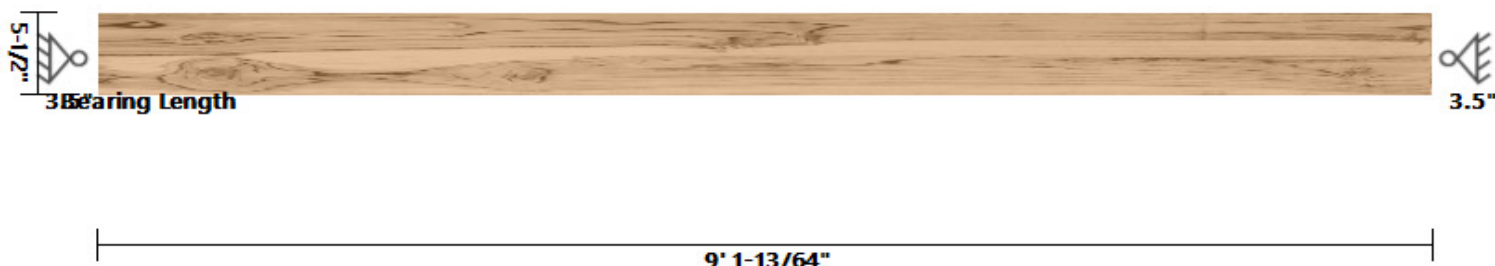
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-3180.97	-	9.1	-	Dead	Y
Point (lbf)	-3752.244	-	9.1	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C11 - COL at U02ab	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C11 - COL at U02ab DIAGRAM



COLUMN PROPERTIES

Start(ft)	0	End(ft)	9.1				
Area	lx	ly	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

		Unbraced Length (ft)		Column End					
Span	Length (ft)	X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.35	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (67.4%)	484.0	1485.0	9.1	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-2703	-4920	0	0	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

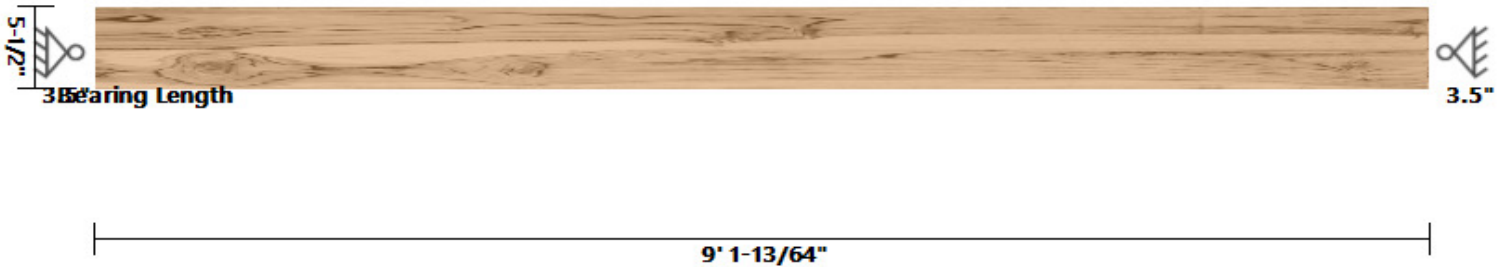
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2702.928	-	9.1	-	Dead	Y
Point (lbf)	-4920	-	9.1	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C12 - COL at U03b	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C12 - COL at U03b DIAGRAM



COLUMN PROPERTIES

Start(ft)	0	End(ft)	9.1				
Area	lx	ly	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

		Unbraced Length (ft)		Column End					
Span	Length (ft)	X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.35	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (81.8%)	270.3	1485.0	9.1	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-2273	-1984	0	0	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

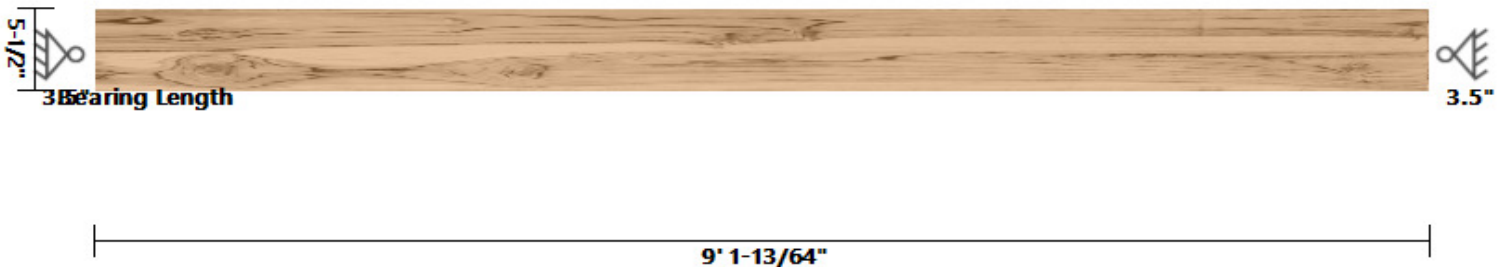
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2273.002	-	9.1	-	Dead	Y
Point (lbf)	-1984.269	-	9.1	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C13 - COL at U04ab	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C13 - COL at U04ab DIAGRAM



COLUMN PROPERTIES

Start(ft)	0	End(ft)	9.1				
Area	lx	ly	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

		Unbraced Length (ft)		Column End					
Span	Length (ft)	X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.35	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (73.7%)	390.5	1485.0	9.1	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-3295	-2855	0	-617	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

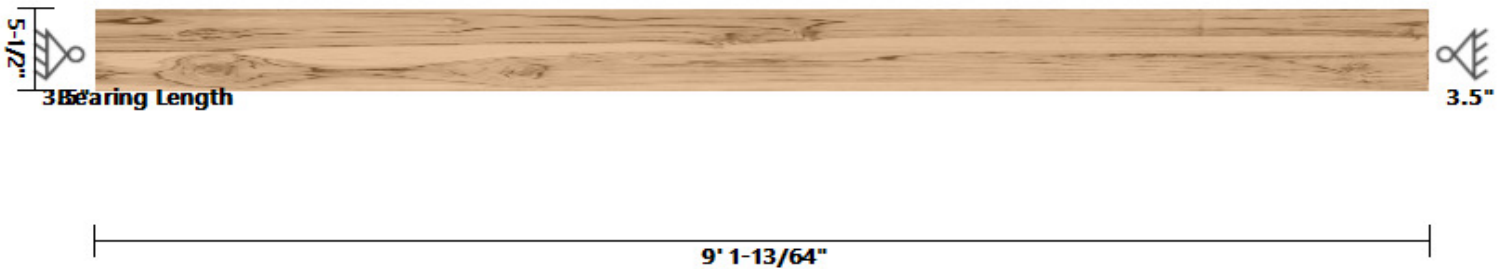
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-3294.965	-	9.1	-	Dead	Y
Point (lbf)	-2854.772	-	9.1	-	Live	Y
Point (lbf)	-617.0391	-	9.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C14 - COL at U09a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C14 - COL at U09a DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End					
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.35	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (73.9%)	387.5	1485.0	9.1	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-2066	-4037	0	0	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2066.188	-	9.1	-	Dead	Y
Point (lbf)	-4036.77	-	9.1	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C15 - COL at U09b & U10b	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C15 - COL at U09b & U10b DIAGRAM



9' 1-13/64"

COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End					
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.35	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (61.0%)	579.8	1485.0	9.1	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-3140	-5992	0	0	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

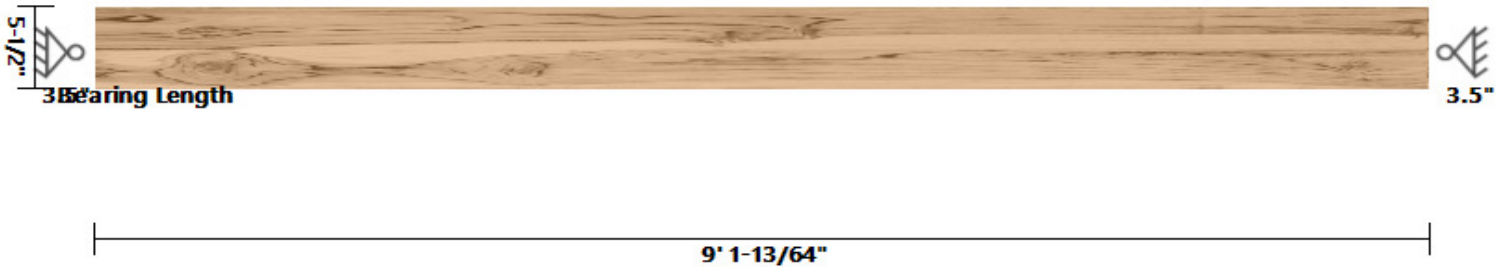
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2254.893	-	9.1	-	Dead	Y
Point (lbf)	-4400.229	-	9.1	-	Live	Y
Point (lbf)	-884.9211	-	9.1	-	Dead	Y
Point (lbf)	-1592	-	9.1	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C16 - COL at R05b & HDRs	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 5.5 X 5.5	DRY

C16 - COL at R05b & HDRs DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
30.25	76.26	76.26	6.9	1	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	750	475	170	700	625	1300	470
Adjusted Values	750	475	170	700	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End					
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.75	1.00	1.00	19.85	19.85

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	515.6	0	D	0.9
Bearing Stress (psi)	PASS (49.7%)	404.9	805.0	9.1	D+0.75L+0.75S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	63	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-3597	-1471	0	-4127	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

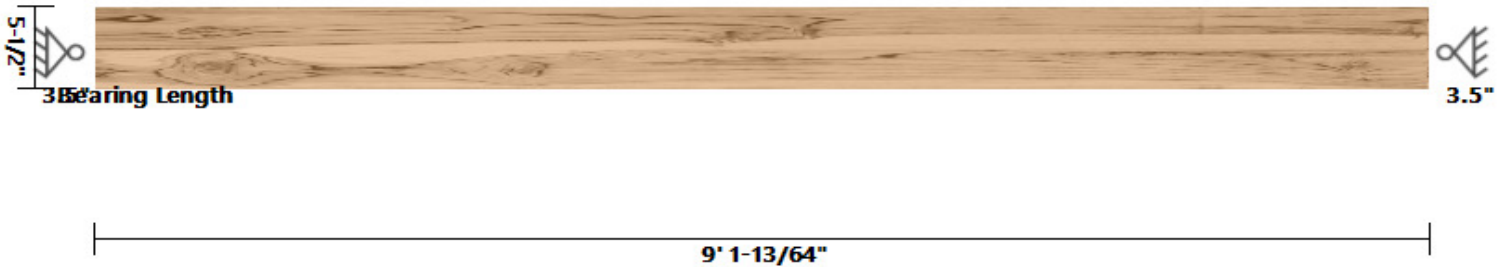
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-893	-	9.1	-	Live	Y
Point (lbf)	-575	-	9.1	-	Dead	Y
Point (lbf)	-578	-	9.1	-	Live	Y
Point (lbf)	-382	-	9.1	-	Dead	Y
Self Weight (lbf/ft)	6.9	6.9	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2639.769	-	9.1	-	Dead	Y
Point (lbf)	-4126.636	-	9.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C17 - COL at R05a & HDRs	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C17 - COL at R05a & HDRs DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End					
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.31	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (90.2%)	167.9	1707.8	9.1	D+0.75L+0.75S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-1233	-757	0	-1125	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

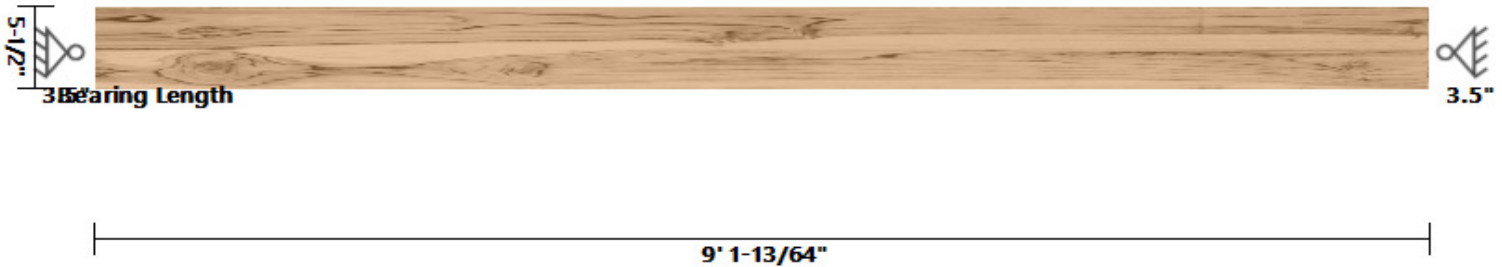
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-578	-	9.1	-	Live	Y
Point (lbf)	-382	-	9.1	-	Dead	Y
Point (lbf)	-179	-	9.1	-	Live	Y
Point (lbf)	-120	-	9.1	-	Dead	Y
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-730.7566	-	9.1	-	Dead	Y
Point (lbf)	-1125.412	-	9.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C18 - COL at GT1a, GT2a, & U11a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 5.5 X 5.5	DRY

C18 - COL at GT1a, GT2a, & U11a DIAGRAM



COLUMN PROPERTIES

Start(ft)	0	End(ft)	9.1				
Area	lx	ly	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
30.25	76.26	76.26	6.9	1	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	750	475	170	700	625	1300	470
Adjusted Values	750	475	170	700	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

		Unbraced Length (ft)		Column End					
Span	Length (ft)	X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.75	1.00	1.00	19.85	19.85

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	515.6	0	D	0.9
Bearing Stress (psi)	PASS (32.6%)	542.5	805.0	9.1	D+S	1.15

REACTIONS

	Units for V: lbf			Units for M: lbf-ft							
Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	63	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-4442	-1064	0	-6001	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

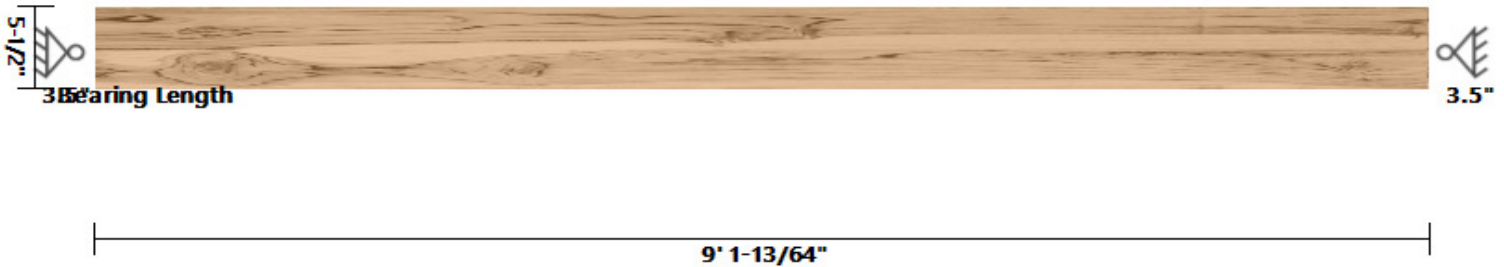
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	6.9	6.9	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2540.525	-	9.1	-	Dead	Y
Point (lbf)	-3950.57	-	9.1	-	Snow	Y
Point (lbf)	-1234.789	-	9.1	-	Dead	Y
Point (lbf)	-2050	-	9.1	-	Snow	Y
Point (lbf)	-666.4584	-	9.1	-	Dead	Y
Point (lbf)	-1064	-	9.1	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C19 - COL at GT2b, GT8a, & U12a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 5.5 X 5.5	DRY

C19 - COL at GT2b, GT8a, & U12a DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
30.25	76.26	76.26	6.9	1	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	750	475	170	700	625	1300	470
Adjusted Values	750	475	170	700	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End					
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.75	1.00	1.00	19.85	19.85

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	515.6	0	D	0.9
Bearing Stress (psi)	PASS (22.5%)	623.5	805.0	9.1	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	63	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-4967	-1038	0	-7036	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

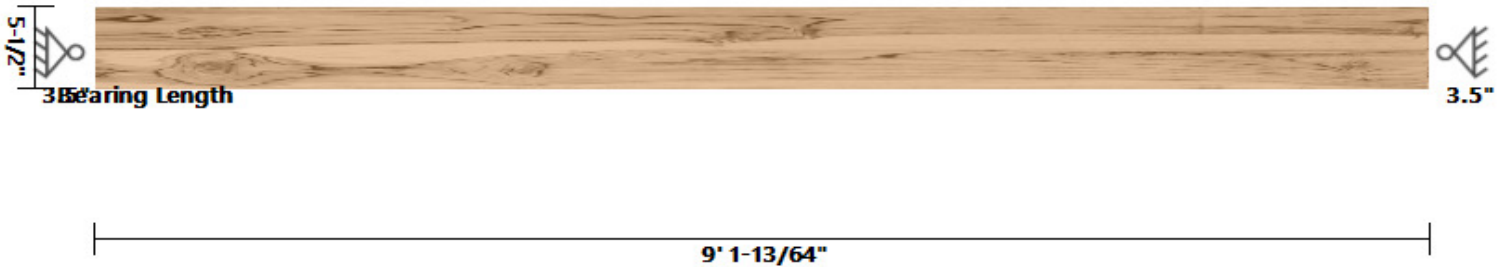
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	6.9	6.9	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-1234.789	-	9.1	-	Dead	Y
Point (lbf)	-2050	-	9.1	-	Snow	Y
Point (lbf)	-3050.767	-	9.1	-	Dead	Y
Point (lbf)	-4985.719	-	9.1	-	Snow	Y
Point (lbf)	-681.1551	-	9.1	-	Dead	Y
Point (lbf)	-1037.5	-	9.1	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C20 - COL at M01a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C20 - COL at M01a DIAGRAM



COLUMN PROPERTIES

Start(ft)	0	End(ft)	9.1				
Area	lx	ly	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

		Unbraced Length (ft)		Column End					
Span	Length (ft)	X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.35	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (72.1%)	414.8	1485.0	9.1	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-2027	-4506	0	0	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

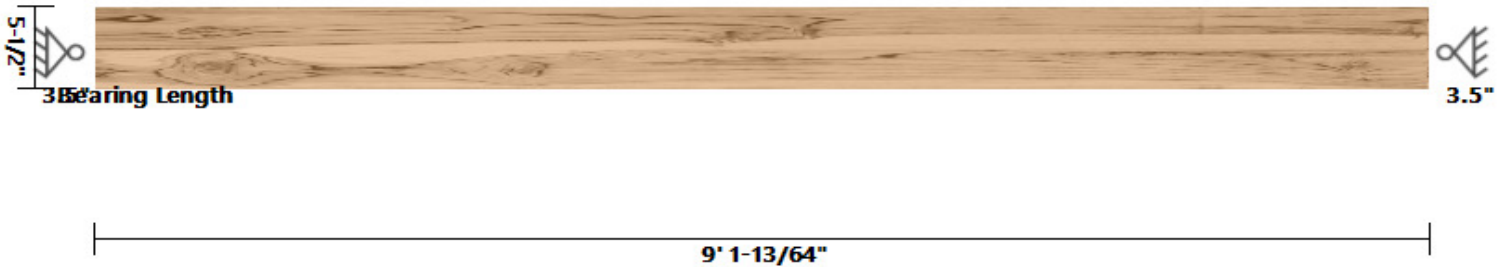
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2027.431	-	9.1	-	Dead	Y
Point (lbf)	-4506.429	-	9.1	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C21 - COL at M02b, M04b, & M03a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 5.5 X 5.5	DRY

C21 - COL at M02b, M04b, & M03a DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
30.25	76.26	76.26	6.9	1	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	750	475	170	700	625	1300	470
Adjusted Values	750	475	170	700	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End					
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.79	1.00	1.00	19.85	19.85

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	515.6	0	D	0.9
Bearing Stress (psi)	PASS (18.5%)	570.4	700.0	9.1	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	63	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-4605	-6375	0	-440	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

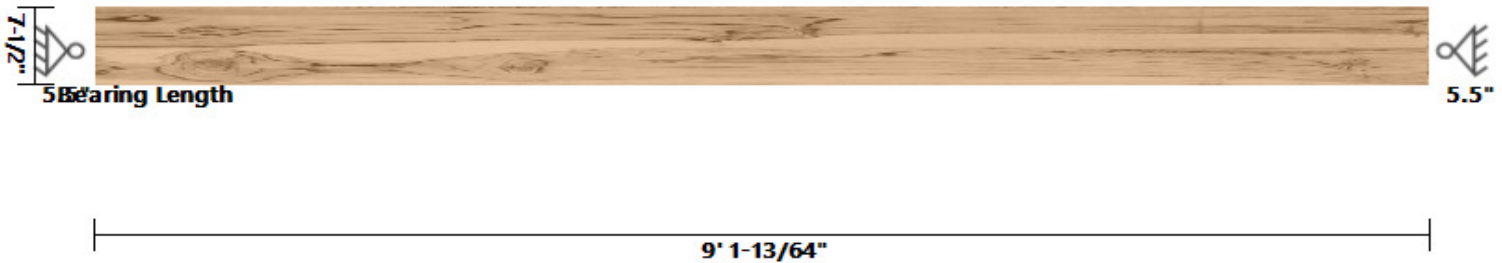
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	6.9	6.9	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-1179.282	-	9.1	-	Dead	Y
Point (lbf)	-541.1088	-	9.1	-	Live	Y
Point (lbf)	-409.9816	-	9.1	-	Dead	Y
Point (lbf)	-417.6	-	9.1	-	Live	Y
Point (lbf)	-3016.229	-	9.1	-	Dead	Y
Point (lbf)	-5415.833	-	9.1	-	Live	Y
Point (lbf)	-440.0415	-	9.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C23 - COL at M05a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 5.5 X 7.5	DRY

C23 - COL at M05a DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
41.25	193.36	103.98	9.41	1	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	750	475	170	700	625	1300	470
Adjusted Values	750	475	170	700	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End		Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
		X	Y	Offset	CP				
1	9.1	9.1	9.1	0	0.75	1.00	1.00	14.56	19.85

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Deflection (in)	PASS (97.8%)	0.013 (=L/8211)	0.607 (=L/180)	9.1	S	
Compressive Stress (psi)	PASS (37.1%)	382.2	607.2	0	D+0.75L+0.75S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	7064	5075	0	6527	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

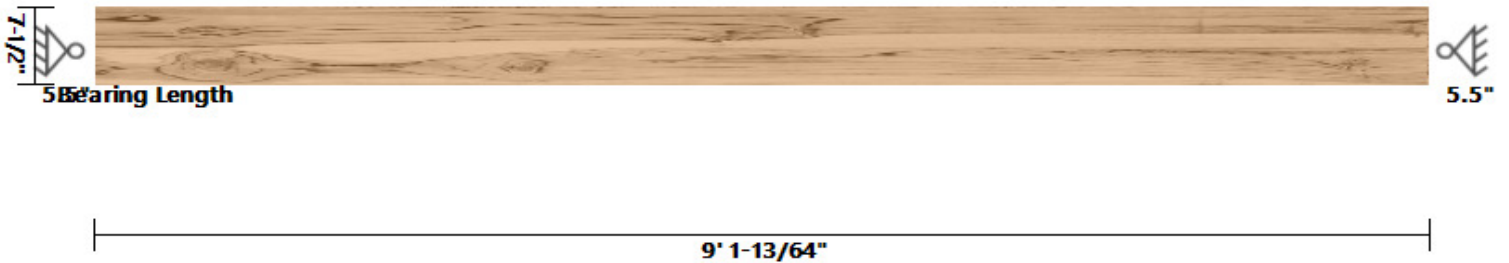
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	9.41	9.41	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-6978.391	-	9.1	-	Dead	Z
Point (lbf)	-5074.712	-	9.1	-	Live	Z
Point (lbf)	-6526.531	-	9.1	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C24 - COL at M03b, M05b, & M06a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 5.5 X 7.5	DRY

C24 - COL at M03b, M05b, & M06a DIAGRAM



COLUMN PROPERTIES

Start(ft)	0	End(ft)	9.1				
Area	lx	ly	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
41.25	193.36	103.98	9.41	1	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	750	475	170	700	625	1300	470
Adjusted Values	750	475	170	700	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

		Unbraced Length (ft)		Column End					
Span	Length (ft)	X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.79	1.00	1.00	14.56	19.85

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Deflection (in)	PASS (96.2%)	0.023 (=L/4790)	0.607 (=L/180)	9.1	L	
Compressive Stress (psi)	PASS (24.0%)	422.0	555.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	6202	11204	0	509	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0

Reaction Location

A B

LOAD LIST

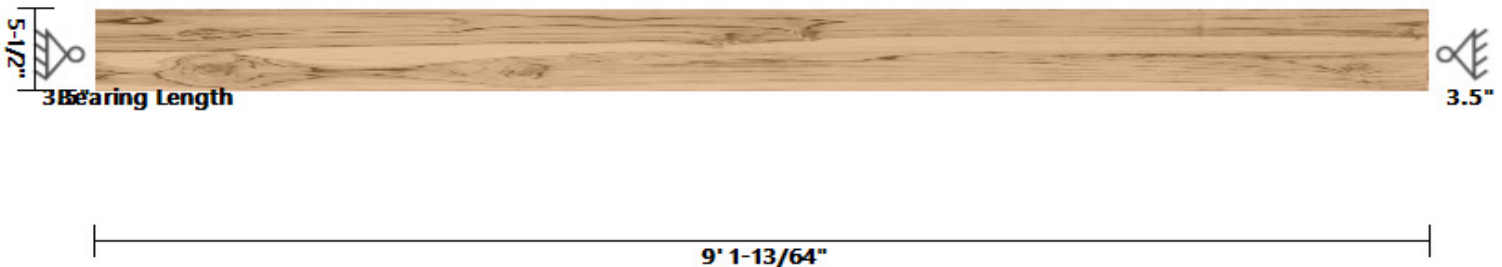
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	9.41	9.41	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-409.9816	-	9.1	-	Dead	Z
Point (lbf)	-417.6	-	9.1	-	Live	Z
Point (lbf)	-3115.474	-	9.1	-	Dead	Z
Point (lbf)	-5438.586	-	9.1	-	Live	Z
Point (lbf)	-509.1636	-	9.1	-	Snow	Z
Point (lbf)	-2590.826	-	9.1	-	Dead	Z
Point (lbf)	-5347.6	-	9.1	-	Live	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C26 - COL at M07b	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(3) 1.5 X 5.5	DRY

C26 - COL at M07b DIAGRAM



COLUMN PROPERTIES

Start(ft)	0	End(ft)	9.1				
Area	lx	ly	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
24.75	62.39	4.64	5.64	3	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

		Unbraced Length (ft)		Column End					
Span	Length (ft)	X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.35	1.00	1.00	19.85	24.27

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	504.8	0	D	0.9
Bearing Stress (psi)	PASS (68.4%)	469.1	1485.0	9.1	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	51	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-2153	-5236	0	0	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

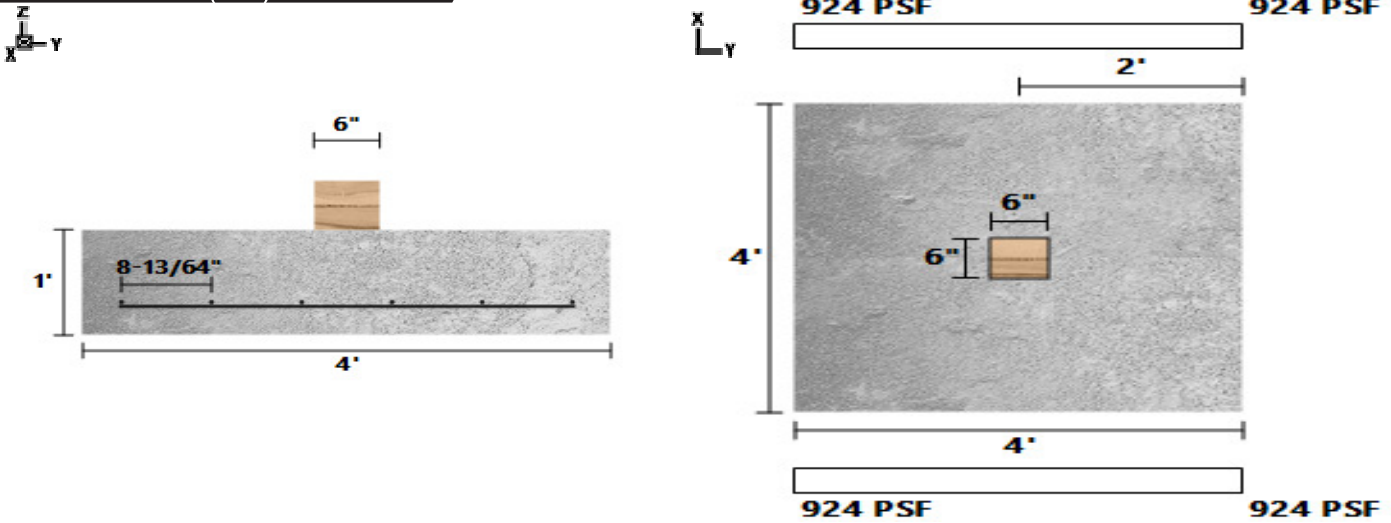
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	5.64	5.64	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2152.589	-	9.1	-	Dead	Y
Point (lbf)	-5236	-	9.1	-	Live	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F01 - FTG at M04a (C22)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
4 (ft) X 4 (ft) X 12 (in)		Soil Depth TOF: 0 (ft)	(6) #4 Long, (6) #4 Short

F01 - FTG at M04a (C22) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	4	4	12	16
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
58	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	6	6	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (38.3%)	924.9	1500.0	D+0.75L+0.75S
Two-Way Shear (Punching) (lbf)	PASS (70.0%)	22194.5	73950.0	1.2D+1.6S+L
One-Way Shear X (lbf)	PASS (81.1%)	5779.8	30600.0	1.2D+1.6S+L
Moment X (lbf-ft)	PASS (71.4%)	8496.3	29752.9	1.2D+1.6S+L
One-Way Shear Y (lbf)	PASS (81.1%)	5779.8	30600.0	1.2D+1.6S+L
Moment Y (lbf-ft)	PASS (71.4%)	8496.3	29752.9	1.2D+1.6S+L
Crushing (psi)	PASS (55.4%)	616.5	1381.3	1.2D+1.6S+L

LOAD LIST

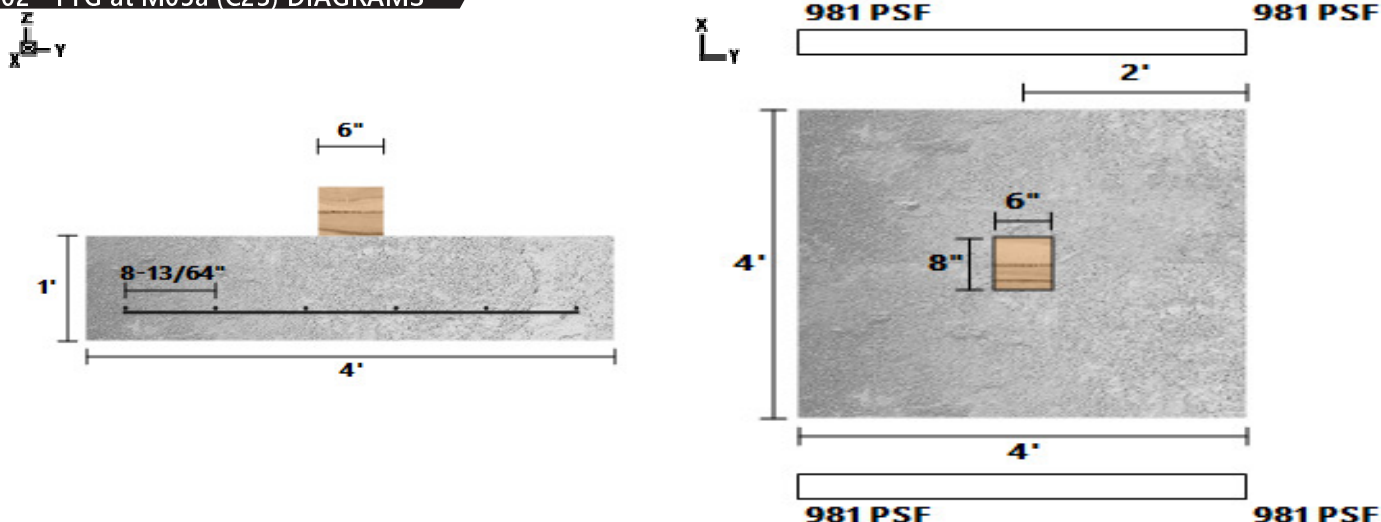
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	6547.108	-	0	-	Dead	Z
Point (lbf)	5441.131	-	0	-	Live	Z
Point (lbf)	5560.531	-	0	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F02 - FTG at M05a (C23)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
4 (ft) X 4 (ft) X 12 (in)		Soil Depth TOF: 0 (ft)	(6) #4 Long, (6) #4 Short

F02 - FTG at M05a (C23) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	4	4	12	16
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
62	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	8	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	6	6	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (34.7%)	980.0	1500.0	D+0.75L+0.75S
Two-Way Shear (Punching) (lbf)	PASS (69.8%)	23891.2	79050.0	1.2D+1.6S+L
One-Way Shear X (lbf)	PASS (81.3%)	5723.9	30600.0	1.2D+1.6S+L
Moment X (lbf-ft)	PASS (72.1%)	8295.6	29752.9	1.2D+1.6S+L
One-Way Shear Y (lbf)	PASS (79.7%)	6221.7	30600.0	1.2D+1.6S+L
Moment Y (lbf-ft)	PASS (69.3%)	9145.9	29752.9	1.2D+1.6S+L
Crushing (psi)	PASS (64.0%)	497.7	1381.3	1.2D+1.6S+L

LOAD LIST

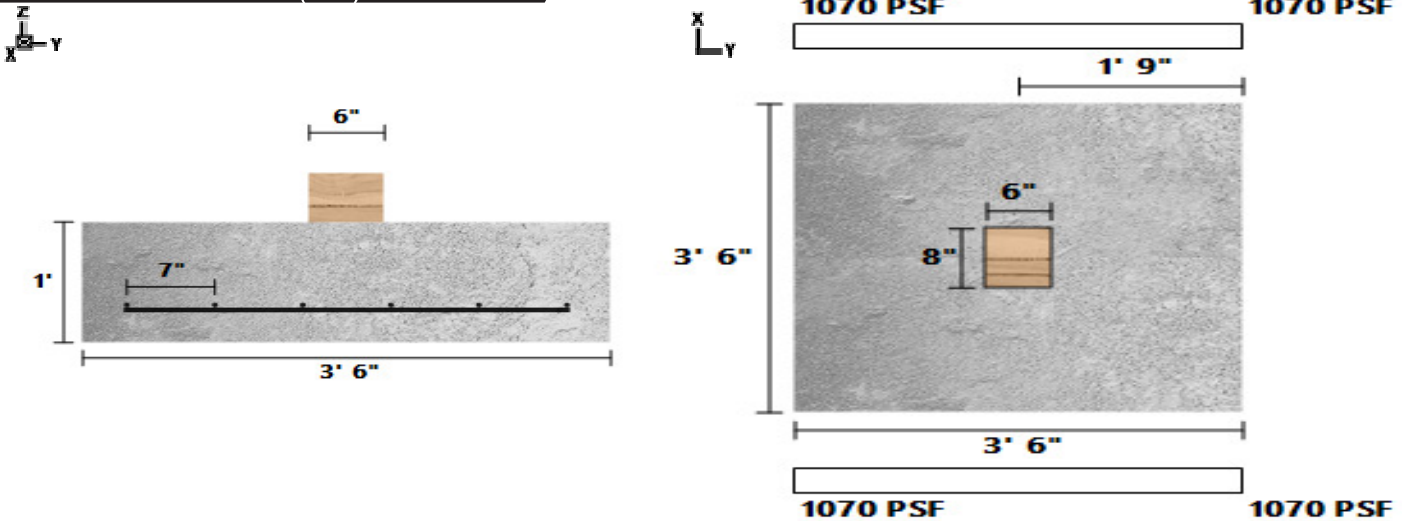
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	6978.391	-	0	-	Dead	Z
Point (lbf)	5074.712	-	0	-	Live	Z
Point (lbf)	6526.531	-	0	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F03 - FTG at GT4a & U01a (C09)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3.5 (ft) X 3.5 (ft) X 12 (in)		Soil Depth TOF: 0 (ft)	(6) #4 Long, (6) #4 Short

F03 - FTG at GT4a & U01a (C09) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	3.5	3.5	12	12.25
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
62	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	8	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	6	6	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (28.7%)	1069.4	1500.0	D+0.75L+0.75S
Two-Way Shear (Punching) (lbf)	PASS (75.9%)	19017.5	79050.0	1.2D+1.6S+L
One-Way Shear X (lbf)	PASS (85.6%)	3848.8	26775.0	1.2D+1.6S+L
Moment X (lbf-ft)	PASS (81.6%)	5452.4	29631.9	1.2D+1.6S+L
One-Way Shear Y (lbf)	PASS (83.9%)	4301.6	26775.0	1.2D+1.6S+L
Moment Y (lbf-ft)	PASS (79.4%)	6112.8	29631.9	1.2D+1.6S+L
Crushing (psi)	PASS (71.3%)	396.2	1381.3	1.2D+1.6S+L

LOAD LIST

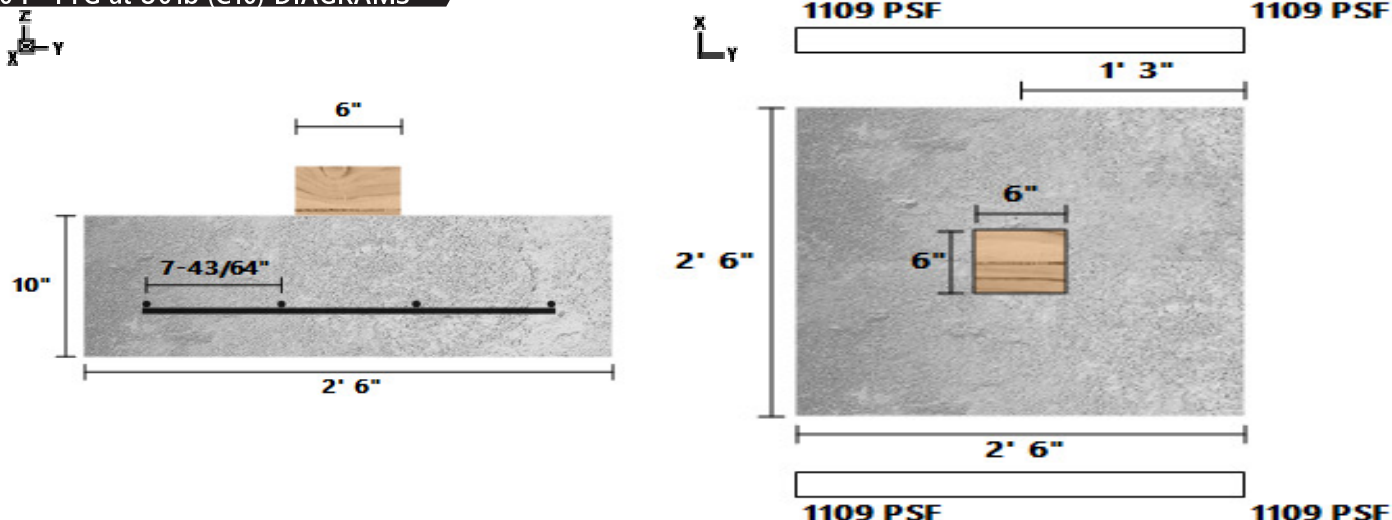
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2447.216	-	0	-	Dead	Z
Point (lbf)	3999.122	-	0	-	Snow	Z
Point (lbf)	3917.622	-	0	-	Dead	Z
Point (lbf)	4981.051	-	0	-	Live	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F04 - FTG at U01b (C10)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2.5 (ft) X 2.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(4) #4 Long, (4) #4 Short

F04 - FTG at U01b (C10) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2.5	2.5	10	5.21
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	4	4	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (26.0%)	1109.3	1500.0	D+L
Two-Way Shear (Punching) (lbf)	PASS (79.9%)	9820.8	48750.0	1.2D+1.6L+0.5Lr
One-Way Shear X (lbf)	PASS (87.7%)	1800.5	14625.0	1.2D+1.6L+0.5Lr
Moment X (lbf-ft)	PASS (50.9%)	1964.2	4000.0	1.2D+1.6L+0.5Lr
One-Way Shear Y (lbf)	PASS (87.7%)	1800.5	14625.0	1.2D+1.6L+0.5Lr
Moment Y (lbf-ft)	PASS (50.9%)	1964.2	4000.0	1.2D+1.6L+0.5Lr
Crushing (psi)	PASS (80.2%)	272.8	1381.3	1.2D+1.6L+0.5Lr

LOAD LIST

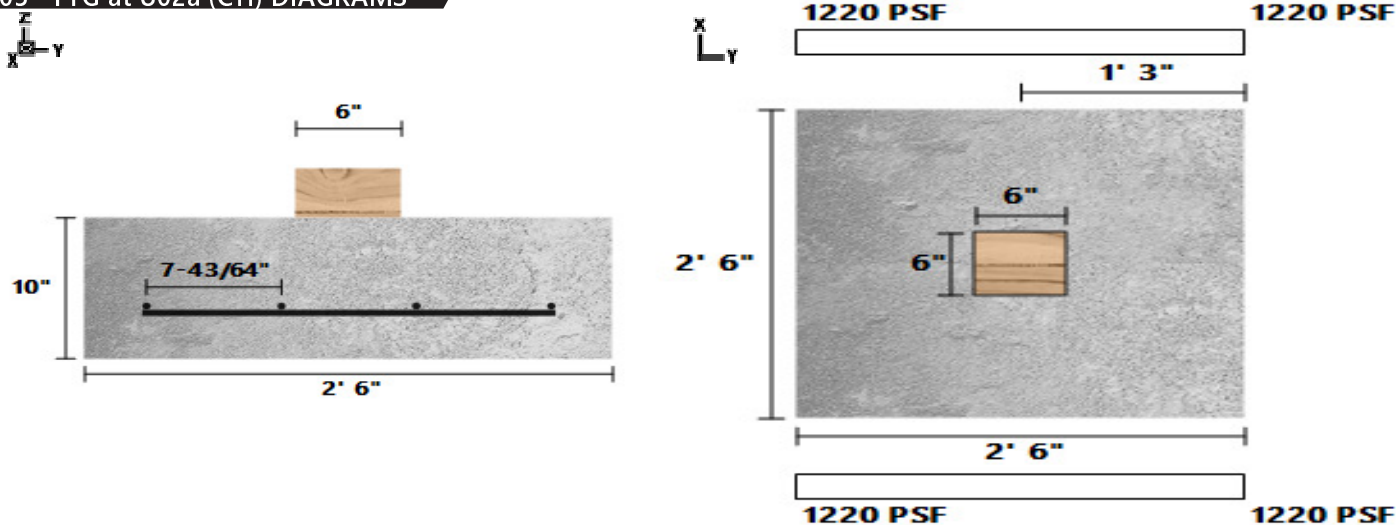
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	3180.97	-	0	-	Dead	Z
Point (lbf)	3752.244	-	0	-	Live	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F05 - FTG at U02a (C11)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2.5 (ft) X 2.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(4) #4 Long, (4) #4 Short

F05 - FTG at U02a (C11) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2.5	2.5	10	5.21
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	4	4	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (18.7%)	1219.7	1500.0	D+L
Two-Way Shear (Punching) (lbf)	PASS (77.2%)	11115.5	48750.0	1.2D+1.6L+0.5Lr
One-Way Shear X (lbf)	PASS (86.1%)	2037.8	14625.0	1.2D+1.6L+0.5Lr
Moment X (lbf-ft)	PASS (44.4%)	2223.1	4000.0	1.2D+1.6L+0.5Lr
One-Way Shear Y (lbf)	PASS (86.1%)	2037.8	14625.0	1.2D+1.6L+0.5Lr
Moment Y (lbf-ft)	PASS (44.4%)	2223.1	4000.0	1.2D+1.6L+0.5Lr
Crushing (psi)	PASS (77.6%)	308.8	1381.3	1.2D+1.6L+0.5Lr

LOAD LIST

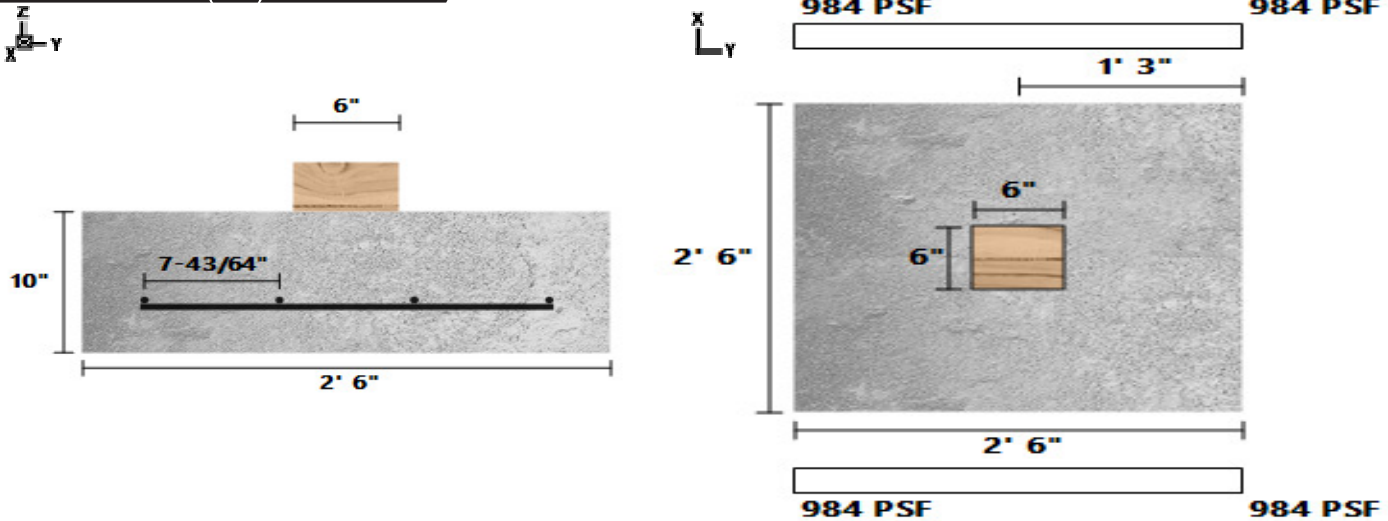
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2702.928	-	0	-	Dead	Z
Point (lbf)	4920	-	0	-	Live	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F06 - FTG at U04a (C13)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2.5 (ft) X 2.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(4) #4 Long, (4) #4 Short

F06 - FTG at U04a (C13) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2.5	2.5	10	5.21
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	4	4	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (34.4%)	984.0	1500.0	D+L
Two-Way Shear (Punching) (lbf)	PASS (81.9%)	8830.1	48750.0	1.2D+1.6L+0.5S
One-Way Shear X (lbf)	PASS (88.9%)	1618.9	14625.0	1.2D+1.6L+0.5S
Moment X (lbf-ft)	PASS (55.8%)	1766.0	4000.0	1.2D+1.6L+0.5S
One-Way Shear Y (lbf)	PASS (88.9%)	1618.9	14625.0	1.2D+1.6L+0.5S
Moment Y (lbf-ft)	PASS (55.8%)	1766.0	4000.0	1.2D+1.6L+0.5S
Crushing (psi)	PASS (82.2%)	245.3	1381.3	1.2D+1.6L+0.5S

LOAD LIST

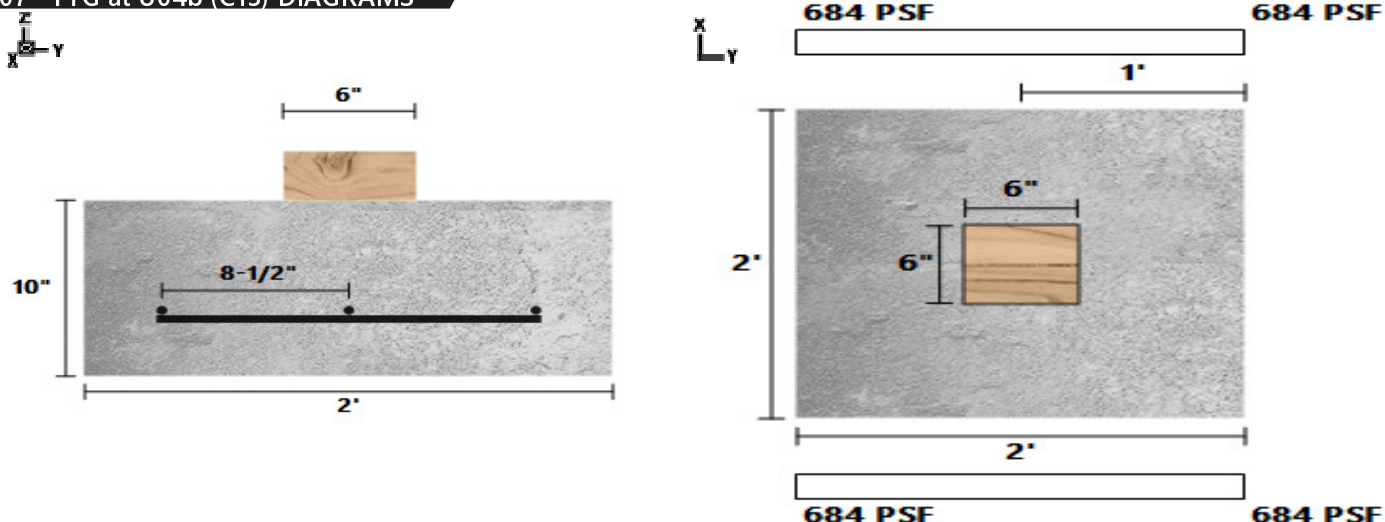
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	3294.965	-	0	-	Dead	Z
Point (lbf)	2854.772	-	0	-	Live	Z
Point (lbf)	617.0391	-	0	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F07 - FTG at U04b (C13)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) X 2 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(3) #4 Long, (3) #4 Short

F07 - FTG at U04b (C13) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2	2	10	3.33
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	3	3	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (54.4%)	683.8	1500.0	D+0.75L+0.75S
Two-Way Shear (Punching) (lbf)	PASS (92.0%)	3880.1	48750.0	1.2D+1.6S+L
One-Way Shear X (lbf)	PASS (96.5%)	404.2	11700.0	1.2D+1.6S+L
Moment X (lbf-ft)	PASS (82.9%)	545.6	3200.0	1.2D+1.6S+L
One-Way Shear Y (lbf)	PASS (96.5%)	404.2	11700.0	1.2D+1.6S+L
Moment Y (lbf-ft)	PASS (82.9%)	545.6	3200.0	1.2D+1.6S+L
Crushing (psi)	PASS (92.2%)	107.8	1381.3	1.2D+1.6S+L

LOAD LIST

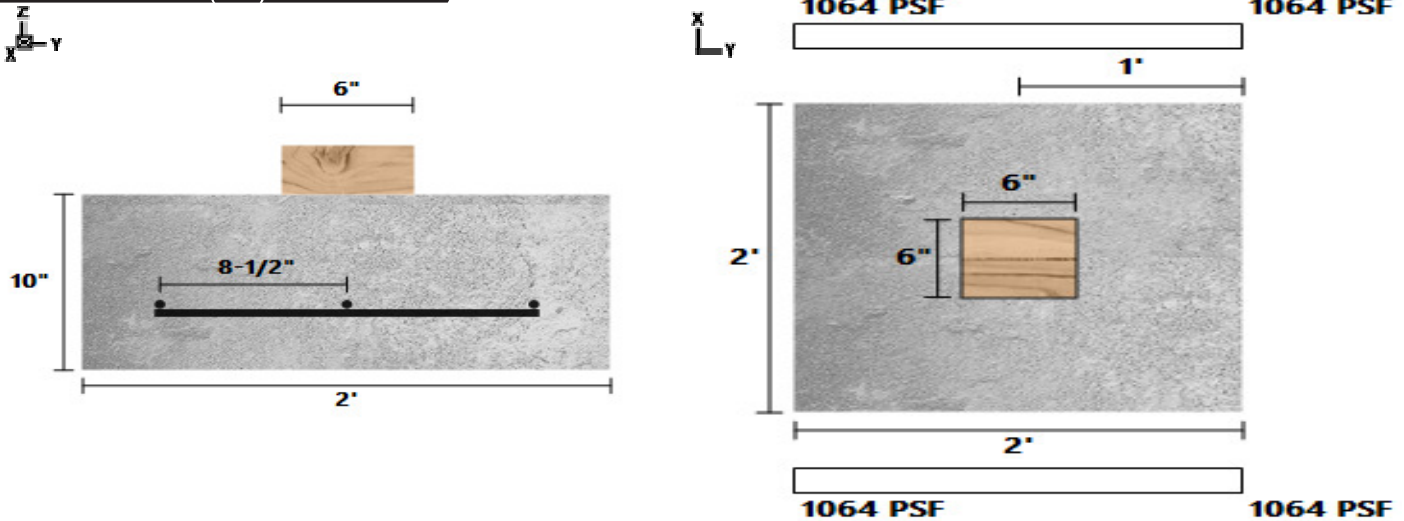
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1360.113	-	0	-	Dead	Z
Point (lbf)	1141.976	-	0	-	Live	Z
Point (lbf)	691.2676	-	0	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F08 - FTG at U03b (C12)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) X 2 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(3) #4 Long, (3) #4 Short

F08 - FTG at U03b (C12) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2	2	10	3.33
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	3	3	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (29.0%)	1064.3	1500.0	D+L
Two-Way Shear (Punching) (lbf)	PASS (87.9%)	5902.4	48750.0	1.2D+1.6L+0.5Lr
One-Way Shear X (lbf)	PASS (94.7%)	614.8	11700.0	1.2D+1.6L+0.5Lr
Moment X (lbf-ft)	PASS (74.1%)	830.0	3200.0	1.2D+1.6L+0.5Lr
One-Way Shear Y (lbf)	PASS (94.7%)	614.8	11700.0	1.2D+1.6L+0.5Lr
Moment Y (lbf-ft)	PASS (74.1%)	830.0	3200.0	1.2D+1.6L+0.5Lr
Crushing (psi)	PASS (88.1%)	164.0	1381.3	1.2D+1.6L+0.5Lr

LOAD LIST

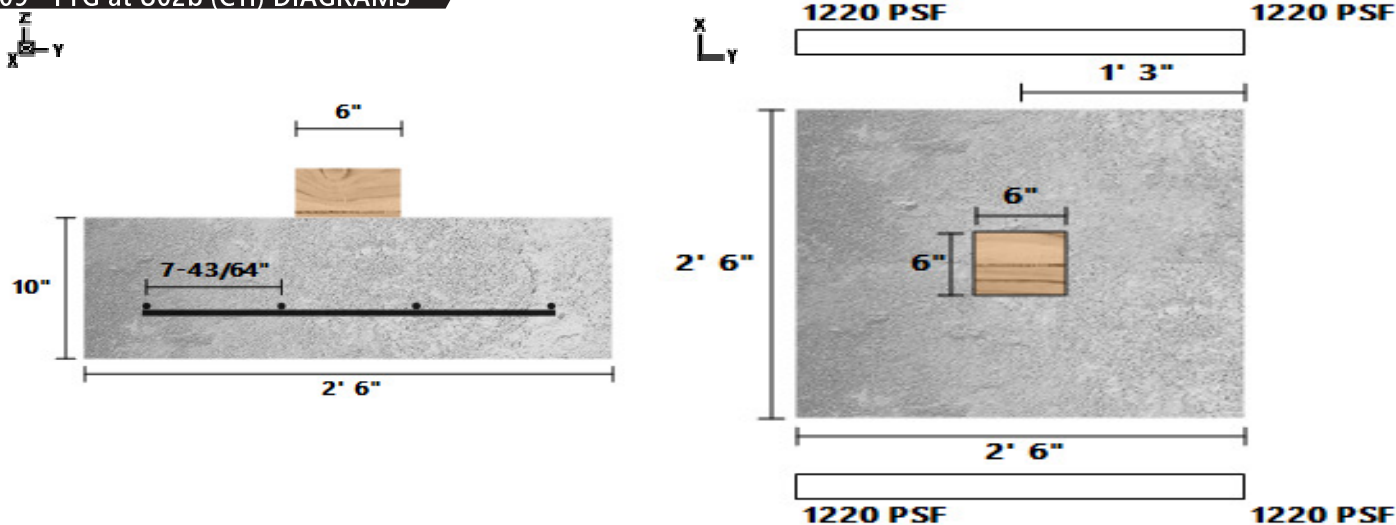
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2273.002	-	0	-	Dead	Z
Point (lbf)	1984.269	-	0	-	Live	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F09 - FTG at U02b (C11)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2.5 (ft) X 2.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(4) #4 Long, (4) #4 Short

F09 - FTG at U02b (C11) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2.5	2.5	10	5.21
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	4	4	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (18.7%)	1219.7	1500.0	D+L
Two-Way Shear (Punching) (lbf)	PASS (77.2%)	11115.5	48750.0	1.2D+1.6L+0.5Lr
One-Way Shear X (lbf)	PASS (86.1%)	2037.8	14625.0	1.2D+1.6L+0.5Lr
Moment X (lbf-ft)	PASS (44.4%)	2223.1	4000.0	1.2D+1.6L+0.5Lr
One-Way Shear Y (lbf)	PASS (86.1%)	2037.8	14625.0	1.2D+1.6L+0.5Lr
Moment Y (lbf-ft)	PASS (44.4%)	2223.1	4000.0	1.2D+1.6L+0.5Lr
Crushing (psi)	PASS (77.6%)	308.8	1381.3	1.2D+1.6L+0.5Lr

LOAD LIST

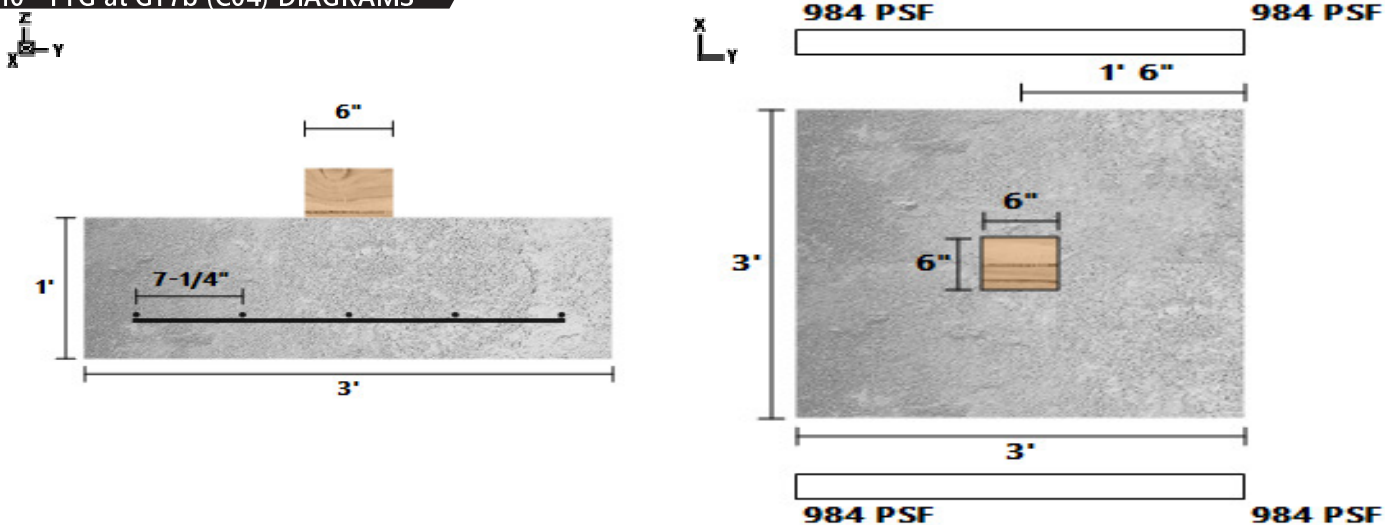
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2702.928	-	0	-	Dead	Z
Point (lbf)	4920	-	0	-	Live	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F10 - FTG at GT7b (C04)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3 (ft) X 3 (ft) X 12 (in)		Soil Depth TOF: 0 (ft)	(5) #4 Long, (5) #4 Short

F10 - FTG at GT7b (C04) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	3	3	12	9
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
58	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	5	5	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (34.5%)	983.2	1500.0	D+S
Two-Way Shear (Punching) (lbf)	PASS (82.7%)	12808.4	73950.0	1.2D+1.6S+L
One-Way Shear X (lbf)	PASS (89.9%)	2312.6	22950.0	1.2D+1.6S+L
Moment X (lbf-ft)	PASS (86.5%)	3335.5	24715.7	1.2D+1.6S+L
One-Way Shear Y (lbf)	PASS (89.9%)	2312.6	22950.0	1.2D+1.6S+L
Moment Y (lbf-ft)	PASS (86.5%)	3335.5	24715.7	1.2D+1.6S+L
Crushing (psi)	PASS (74.2%)	355.8	1381.3	1.2D+1.6S+L

LOAD LIST

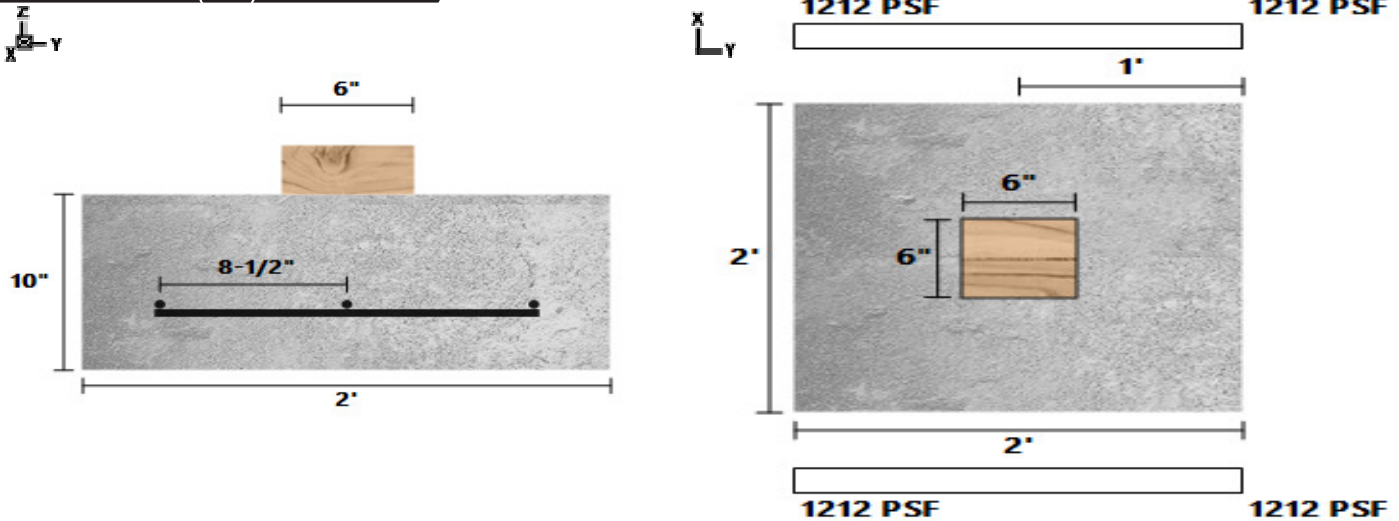
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	3375.125	-	0	-	Dead	Z
Point (lbf)	5473.887	-	0	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F11 - FTG at R03a (C07)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) X 2 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(3) #4 Long, (3) #4 Short

F11 - FTG at R03a (C07) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2	2	10	3.33
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	3	3	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (19.2%)	1212.0	1500.0	D+S
Two-Way Shear (Punching) (lbf)	PASS (85.7%)	6987.5	48750.0	1.2D+1.6S+L
One-Way Shear X (lbf)	PASS (93.8%)	727.9	11700.0	1.2D+1.6S+L
Moment X (lbf-ft)	PASS (69.3%)	982.6	3200.0	1.2D+1.6S+L
One-Way Shear Y (lbf)	PASS (93.8%)	727.9	11700.0	1.2D+1.6S+L
Moment Y (lbf-ft)	PASS (69.3%)	982.6	3200.0	1.2D+1.6S+L
Crushing (psi)	PASS (85.9%)	194.1	1381.3	1.2D+1.6S+L

LOAD LIST

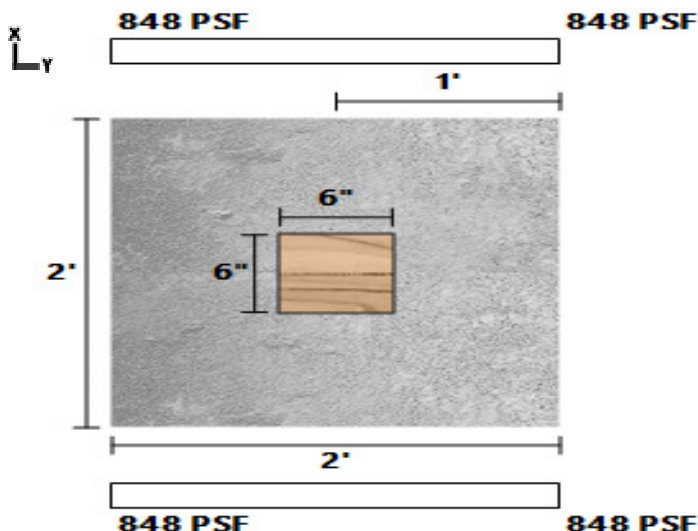
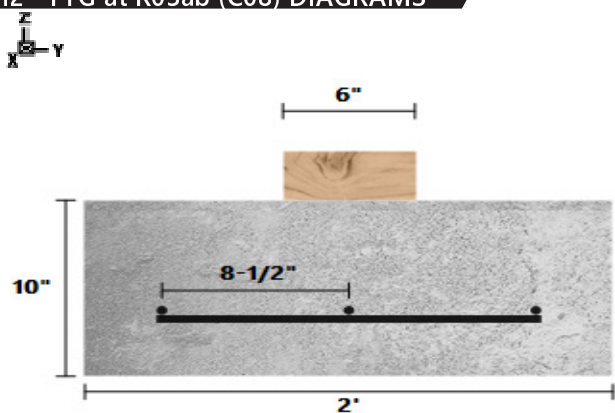
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1922.588	-	0	-	Dead	Z
Point (lbf)	2925.249	-	0	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F12 - FTG at R03ab (C08)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) X 2 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(3) #4 Long, (3) #4 Short

F12 - FTG at R03ab (C08) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2	2	10	3.33
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	3	3	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (43.4%)	848.9	1500.0	D+S
Two-Way Shear (Punching) (lbf)	PASS (90.0%)	4880.3	48750.0	1.2D+1.6S+L
One-Way Shear X (lbf)	PASS (95.7%)	508.4	11700.0	1.2D+1.6S+L
Moment X (lbf-ft)	PASS (78.6%)	686.3	3200.0	1.2D+1.6S+L
One-Way Shear Y (lbf)	PASS (95.7%)	508.4	11700.0	1.2D+1.6S+L
Moment Y (lbf-ft)	PASS (78.6%)	686.3	3200.0	1.2D+1.6S+L
Crushing (psi)	PASS (90.2%)	135.6	1381.3	1.2D+1.6S+L

LOAD LIST

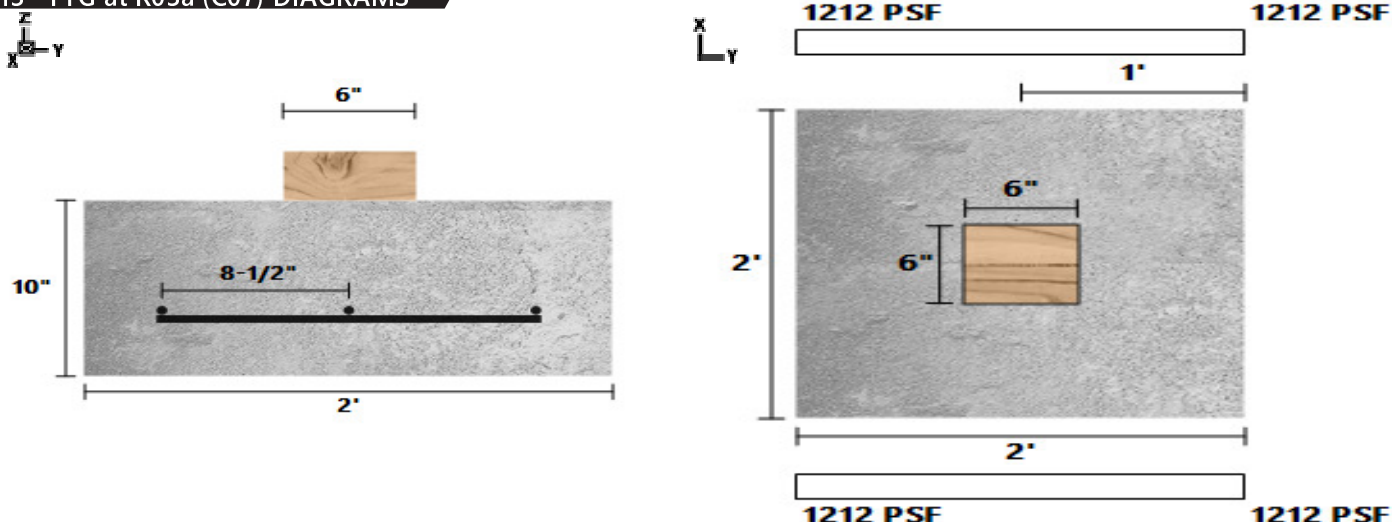
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1381.147	-	0	-	Dead	Z
Point (lbf)	2014.35	-	0	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F13 - FTG at R03a (C07)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) X 2 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(3) #4 Long, (3) #4 Short

F13 - FTG at R03a (C07) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2	2	10	3.33
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	3	3	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (19.2%)	1212.0	1500.0	D+S
Two-Way Shear (Punching) (lbf)	PASS (85.7%)	6987.5	48750.0	1.2D+1.6S+L
One-Way Shear X (lbf)	PASS (93.8%)	727.9	11700.0	1.2D+1.6S+L
Moment X (lbf-ft)	PASS (69.3%)	982.6	3200.0	1.2D+1.6S+L
One-Way Shear Y (lbf)	PASS (93.8%)	727.9	11700.0	1.2D+1.6S+L
Moment Y (lbf-ft)	PASS (69.3%)	982.6	3200.0	1.2D+1.6S+L
Crushing (psi)	PASS (85.9%)	194.1	1381.3	1.2D+1.6S+L

LOAD LIST

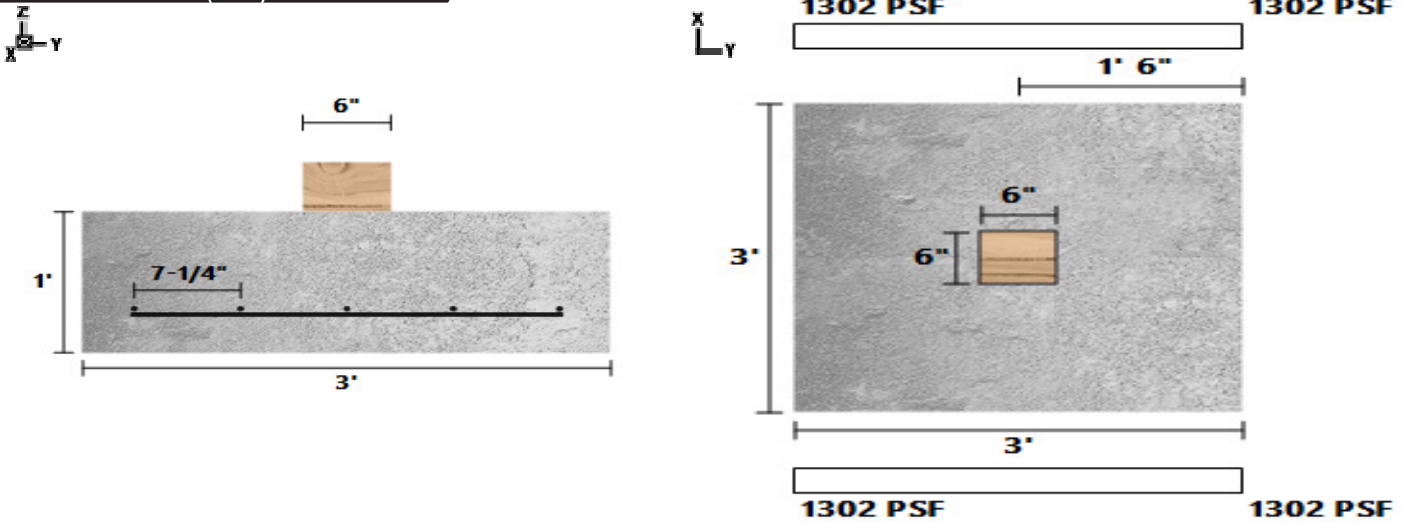
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1922.588	-	0	-	Dead	Z
Point (lbf)	2925.249	-	0	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F14 - FTG at GT8b (C05)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3 (ft) X 3 (ft) X 12 (in)		Soil Depth TOF: 0 (ft)	(5) #4 Long, (5) #4 Short

F14 - FTG at GT8b (C05) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	3	3	12	9
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
58	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	5	5	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (13.2%)	1301.7	1500.0	D+S
Two-Way Shear (Punching) (lbf)	PASS (77.1%)	16960.6	73950.0	1.2D+1.6S+L
One-Way Shear X (lbf)	PASS (86.7%)	3062.3	22950.0	1.2D+1.6S+L
Moment X (lbf-ft)	PASS (82.1%)	4416.8	24715.7	1.2D+1.6S+L
One-Way Shear Y (lbf)	PASS (86.7%)	3062.3	22950.0	1.2D+1.6S+L
Moment Y (lbf-ft)	PASS (82.1%)	4416.8	24715.7	1.2D+1.6S+L
Crushing (psi)	PASS (65.9%)	471.1	1381.3	1.2D+1.6S+L

LOAD LIST

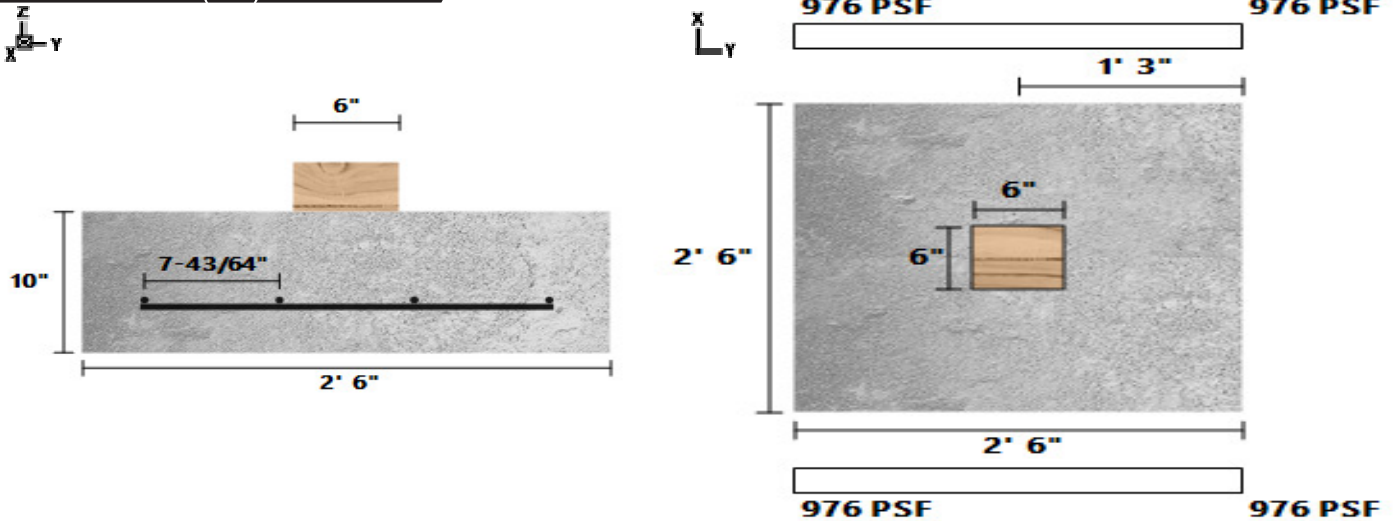
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	4458.315	-	0	-	Dead	Z
Point (lbf)	7256.631	-	0	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F17 - FTG at U09a (C14)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2.5 (ft) X 2.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(4) #4 Long, (4) #4 Short

F17 - FTG at U09a (C14) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2.5	2.5	10	5.21
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	4	4	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (34.9%)	976.5	1500.0	D+L
Two-Way Shear (Punching) (lbf)	PASS (81.7%)	8938.3	48750.0	1.2D+1.6L+0.5Lr
One-Way Shear X (lbf)	PASS (88.8%)	1638.7	14625.0	1.2D+1.6L+0.5Lr
Moment X (lbf-ft)	PASS (55.3%)	1787.7	4000.0	1.2D+1.6L+0.5Lr
One-Way Shear Y (lbf)	PASS (88.8%)	1638.7	14625.0	1.2D+1.6L+0.5Lr
Moment Y (lbf-ft)	PASS (55.3%)	1787.7	4000.0	1.2D+1.6L+0.5Lr
Crushing (psi)	PASS (82.0%)	248.3	1381.3	1.2D+1.6L+0.5Lr

LOAD LIST

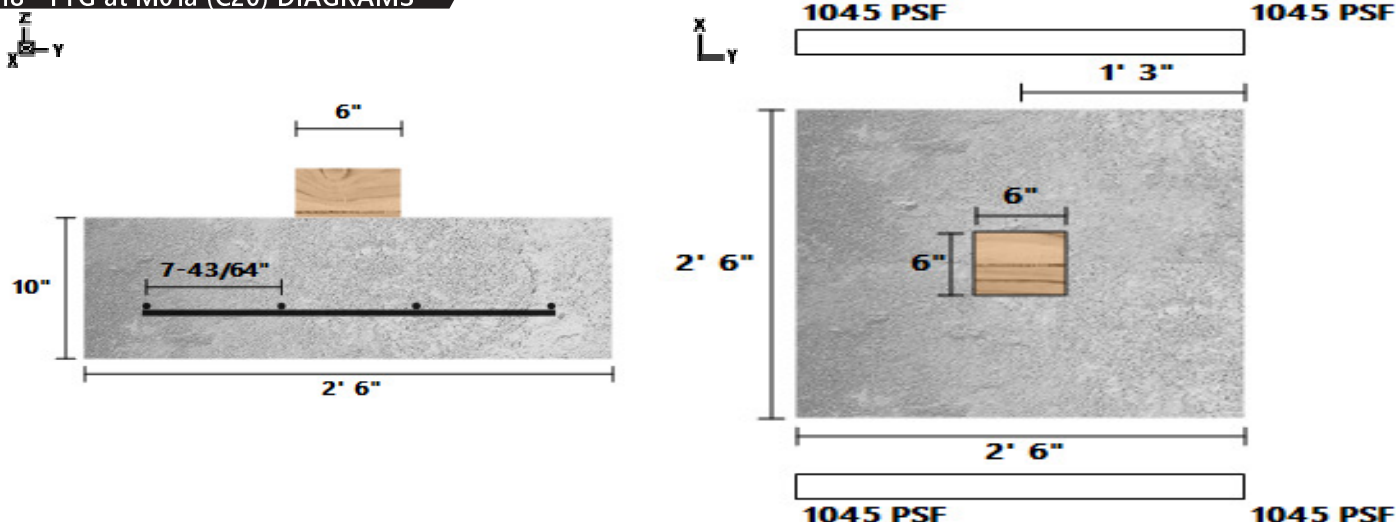
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2066.188	-	0	-	Dead	Z
Point (lbf)	4036.77	-	0	-	Live	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F18 - FTG at M01a (C20)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2.5 (ft) X 2.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(4) #4 Long, (4) #4 Short

F18 - FTG at M01a (C20) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2.5	2.5	10	5.21
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	4	4	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (30.3%)	1045.4	1500.0	D+L
Two-Way Shear (Punching) (lbf)	PASS (80.2%)	9643.2	48750.0	1.2D+1.6L+0.5Lr
One-Way Shear X (lbf)	PASS (87.9%)	1767.9	14625.0	1.2D+1.6L+0.5Lr
Moment X (lbf-ft)	PASS (51.8%)	1928.6	4000.0	1.2D+1.6L+0.5Lr
One-Way Shear Y (lbf)	PASS (87.9%)	1767.9	14625.0	1.2D+1.6L+0.5Lr
Moment Y (lbf-ft)	PASS (51.8%)	1928.6	4000.0	1.2D+1.6L+0.5Lr
Crushing (psi)	PASS (80.6%)	267.9	1381.3	1.2D+1.6L+0.5Lr

LOAD LIST

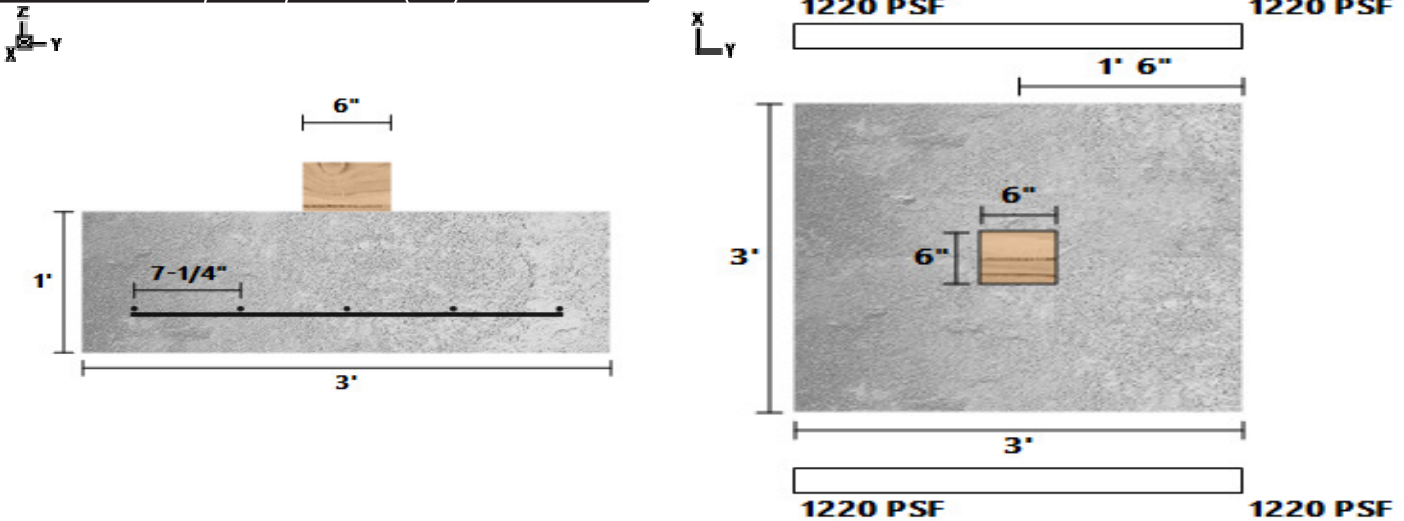
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2027.431	-	0	-	Dead	Z
Point (lbf)	4506.429	-	0	-	Live	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F19 - FTG at M02b, M03a, & M04b (...)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3 (ft) X 3 (ft) X 12 (in)		Soil Depth TOF: 0 (ft)	(5) #4 Long, (5) #4 Short

F19 - FTG at M02b, M03a, & M04b (C21) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	3	3	12	9
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
58	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	5	5	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (18.7%)	1220.0	1500.0	D+L
Two-Way Shear (Punching) (lbf)	PASS (78.4%)	15945.9	73950.0	1.2D+1.6L+0.5S
One-Way Shear X (lbf)	PASS (87.5%)	2879.1	22950.0	1.2D+1.6L+0.5S
Moment X (lbf-ft)	PASS (83.2%)	4152.6	24715.7	1.2D+1.6L+0.5S
One-Way Shear Y (lbf)	PASS (87.5%)	2879.1	22950.0	1.2D+1.6L+0.5S
Moment Y (lbf-ft)	PASS (83.2%)	4152.6	24715.7	1.2D+1.6L+0.5S
Crushing (psi)	PASS (67.9%)	442.9	1381.3	1.2D+1.6L+0.5S

LOAD LIST

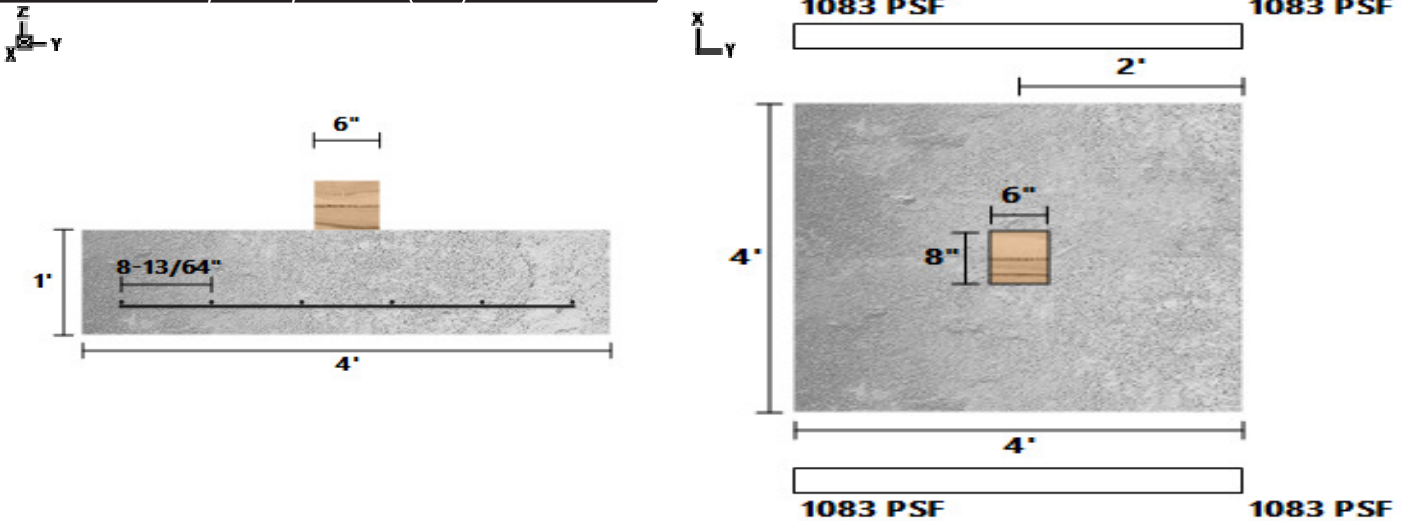
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1179.282	-	0	-	Dead	Z
Point (lbf)	541.1088	-	0	-	Live	Z
Point (lbf)	409.9816	-	0	-	Dead	Z
Point (lbf)	417.6	-	0	-	Live	Z
Point (lbf)	3016.229	-	0	-	Dead	Z
Point (lbf)	5415.833	-	0	-	Live	Z
Point (lbf)	440.0415	-	0	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F20 - FTG at M03b, M05b, & M06a (...)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
4 (ft) X 4 (ft) X 12 (in)		Soil Depth TOF: 0 (ft)	(6) #4 Long, (6) #4 Short

F20 - FTG at M03b, M05b, & M06a (C24) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	4	4	12	16
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
62	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	8	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	6	6	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (27.8%)	1082.5	1500.0	D+L
Two-Way Shear (Punching) (lbf)	PASS (67.7%)	25520.2	79050.0	1.2D+1.6L+0.5S
One-Way Shear X (lbf)	PASS (80.0%)	6114.2	30600.0	1.2D+1.6L+0.5S
Moment X (lbf-ft)	PASS (70.2%)	8861.2	29752.9	1.2D+1.6L+0.5S
One-Way Shear Y (lbf)	PASS (78.3%)	6645.9	30600.0	1.2D+1.6L+0.5S
Moment Y (lbf-ft)	PASS (67.2%)	9769.4	29752.9	1.2D+1.6L+0.5S
Crushing (psi)	PASS (61.5%)	531.7	1381.3	1.2D+1.6L+0.5S

LOAD LIST

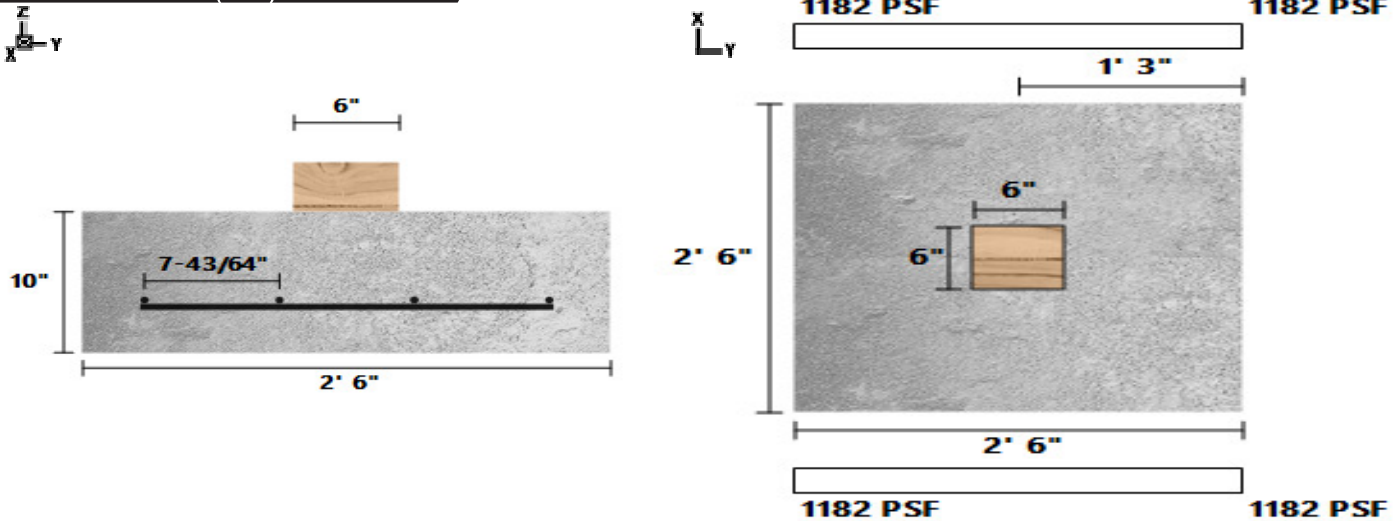
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	409.9816	-	0	-	Dead	Z
Point (lbf)	417.6	-	0	-	Live	Z
Point (lbf)	3115.474	-	0	-	Dead	Z
Point (lbf)	5438.586	-	0	-	Live	Z
Point (lbf)	509.1636	-	0	-	Snow	Z
Point (lbf)	2590.826	-	0	-	Dead	Z
Point (lbf)	5347.6	-	0	-	Live	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F22 - FTG at M07b (C26)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2.5 (ft) X 2.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(4) #4 Long, (4) #4 Short

F22 - FTG at M07b (C26) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2.5	2.5	10	5.21
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	4	4	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (21.2%)	1182.2	1500.0	D+L
Two-Way Shear (Punching) (lbf)	PASS (77.5%)	10960.7	48750.0	1.2D+1.6L+0.5Lr
One-Way Shear X (lbf)	PASS (86.3%)	2009.5	14625.0	1.2D+1.6L+0.5Lr
Moment X (lbf-ft)	PASS (45.2%)	2192.1	4000.0	1.2D+1.6L+0.5Lr
One-Way Shear Y (lbf)	PASS (86.3%)	2009.5	14625.0	1.2D+1.6L+0.5Lr
Moment Y (lbf-ft)	PASS (45.2%)	2192.1	4000.0	1.2D+1.6L+0.5Lr
Crushing (psi)	PASS (78.0%)	304.5	1381.3	1.2D+1.6L+0.5Lr

LOAD LIST

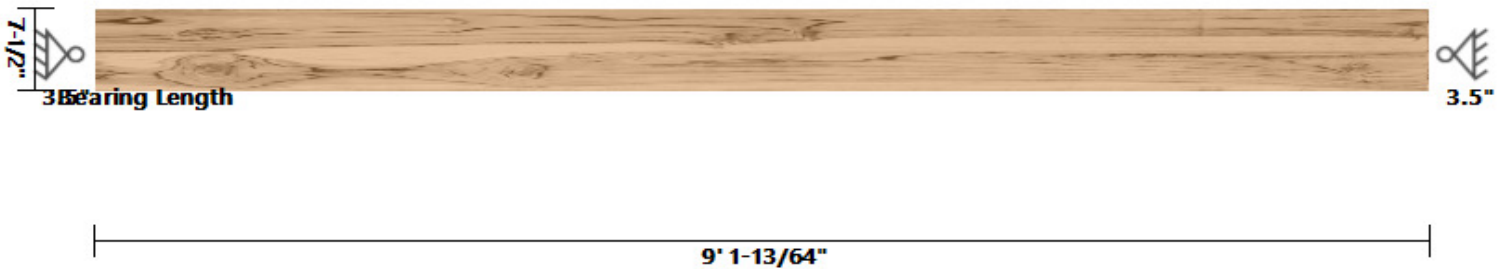
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2152.589	-	0	-	Dead	Z
Point (lbf)	5236	-	0	-	Live	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C22 - COL at M04a	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 2	(1) 5.5 X 7.5	DRY

C22 - COL at M04a DIAGRAM



COLUMN PROPERTIES

Start(ft) 0	End(ft): 9.1						
Area	Ix	Iy	BSW	Lams	G	Kcr	Creep Factor
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)				
41.25	193.36	103.98	9.41	1	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	750	475	170	700	625	1300	470
Adjusted Values	750	475	170	700	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End					
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.75	1.00	1.00	14.56	19.85

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (99.6%)	2.1	515.6	0	D	0.9
Bearing Stress (psi)	PASS (4.5%)	768.7	805.0	9.1	D+0.75L+0.75S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	86	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0
Y axis											
A	0	0	0	0	0	0	0	0	0	0	0
B	-6547	-5441	0	-5561	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

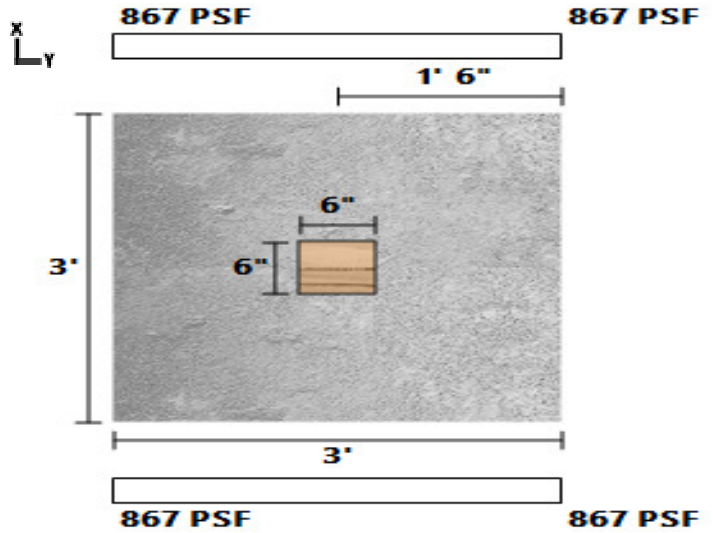
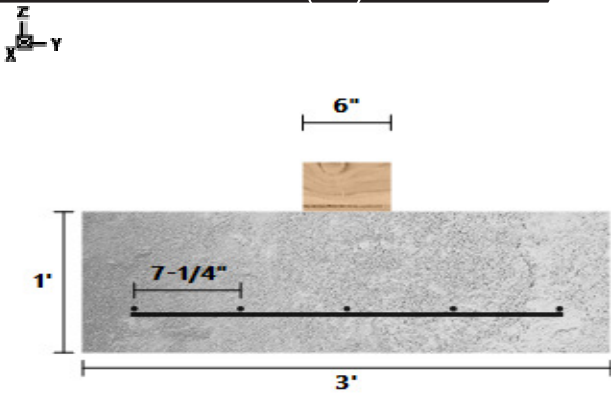
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	9.41	9.41	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-6547.108	-	9.1	-	Dead	Y
Point (lbf)	-5441.131	-	9.1	-	Live	Y
Point (lbf)	-5560.531	-	9.1	-	Snow	Y

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F15 - FTG at R05b & HDRS (C16)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3 (ft) X 3 (ft) X 12 (in)		Soil Depth TOF: 0 (ft)	(5) #4 Long, (5) #4 Short

F15 - FTG at R05b & HDRS (C16) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	3	3	12	9
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
58	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	5	5	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (42.2%)	866.4	1500.0	D+0.75L+0.75S
Two-Way Shear (Punching) (lbf)	PASS (83.2%)	12392.7	73950.0	1.2D+1.6S+L
One-Way Shear X (lbf)	PASS (90.3%)	2237.6	22950.0	1.2D+1.6S+L
Moment X (lbf-ft)	PASS (86.9%)	3227.3	24715.7	1.2D+1.6S+L
One-Way Shear Y (lbf)	PASS (90.3%)	2237.6	22950.0	1.2D+1.6S+L
Moment Y (lbf-ft)	PASS (86.9%)	3227.3	24715.7	1.2D+1.6S+L
Crushing (psi)	PASS (75.1%)	344.2	1381.3	1.2D+1.6S+L

LOAD LIST

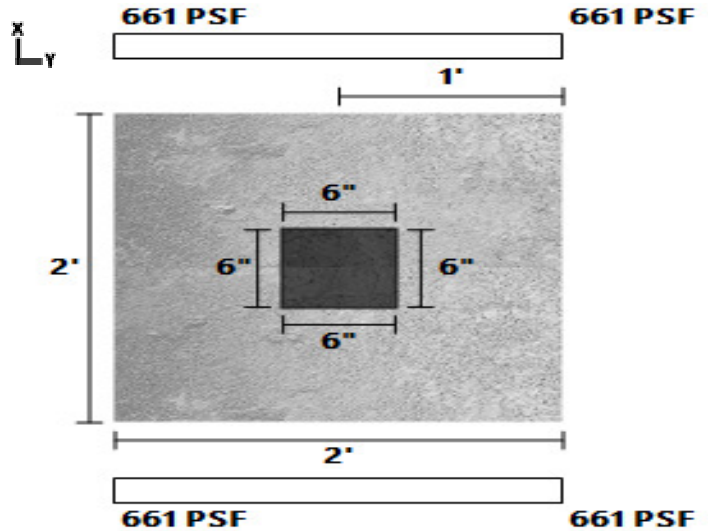
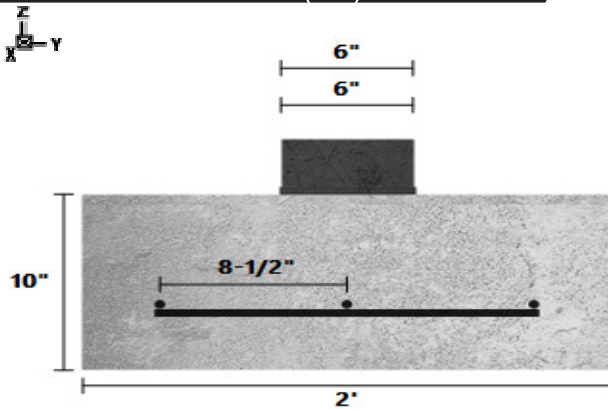
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1474	-	0	-	Live	Z
Point (lbf)	957	-	0	-	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2639.769	-	0	-	Dead	Z
Point (lbf)	4126.636	-	0	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	-- --	PROJECT NAME:	Hately
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F16 - FTG at R05a & HDRS (C17)	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) X 2 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	(3) #4 Long, (3) #4 Short

F16 - FTG at R05a & HDRS (C17) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	2	2	10	3.33
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
50	0	0				
COLUMN						
Width (in)	length (in)	Plate Width (in)	Plate Length (in)	Plate Thickness (in)	Material	Offset (in)
6	6	6	6	0	Steel	0
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	3	3	40000	2.9E+07		

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (55.9%)	661.1	1500.0	D+0.75L+0.75S
Two-Way Shear (Punching) (lbf)	PASS (91.7%)	4037.0	48750.0	1.2D+1.6S+L
One-Way Shear X (lbf)	PASS (96.4%)	420.5	11700.0	1.2D+1.6S+L
Moment X (lbf-ft)	PASS (82.3%)	567.7	3200.0	1.2D+1.6S+L
One-Way Shear Y (lbf)	PASS (96.4%)	420.5	11700.0	1.2D+1.6S+L
Moment Y (lbf-ft)	PASS (82.3%)	567.7	3200.0	1.2D+1.6S+L
Crushing (psi)	PASS (91.9%)	112.1	1381.3	1.2D+1.6S+L

LOAD LIST

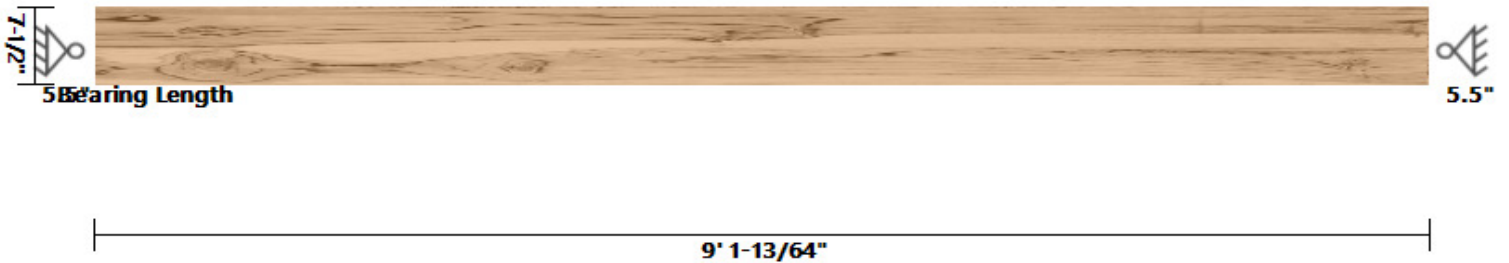
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	757	-	0	-	Live	Z
Point (lbf)	502	-	0	-	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	730.7566	-	0	-	Dead	Z
Point (lbf)	1125.412	-	0	-	Snow	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	ASD
MEMBER NAME:	C25 - COL at M06b, M07a, U09b, & ...	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	No. 1	(1) 5.5 X 7.5	DRY

C25 - COL at M06b, M07a, U09b, & U10b DIAGRAM



COLUMN PROPERTIES

Start(ft)	0	End(ft)	9.1				
Area	lx	ly	BSW	Lams	G	Kcr	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
41.25	193.36	103.98	9.41	1	0.5	1	

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	1200	825	170	1000	625	1600	580
Adjusted Values	1200	825	170	1000	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 0.74C_r = 1

COLUMN DATA

		Unbraced Length (ft)		Column End					
Span	Length (ft)	X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)
1	9.1	9.1	9.1	0	0.75	1.00	1.00	14.56	19.85

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Deflection (in)	PASS (96.0%)	0.024 (=L/4476)	0.607 (=L/180)	9.1	L	
Compressive Stress (psi)	PASS (29.9%)	527.7	752.3	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	7018	14752	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

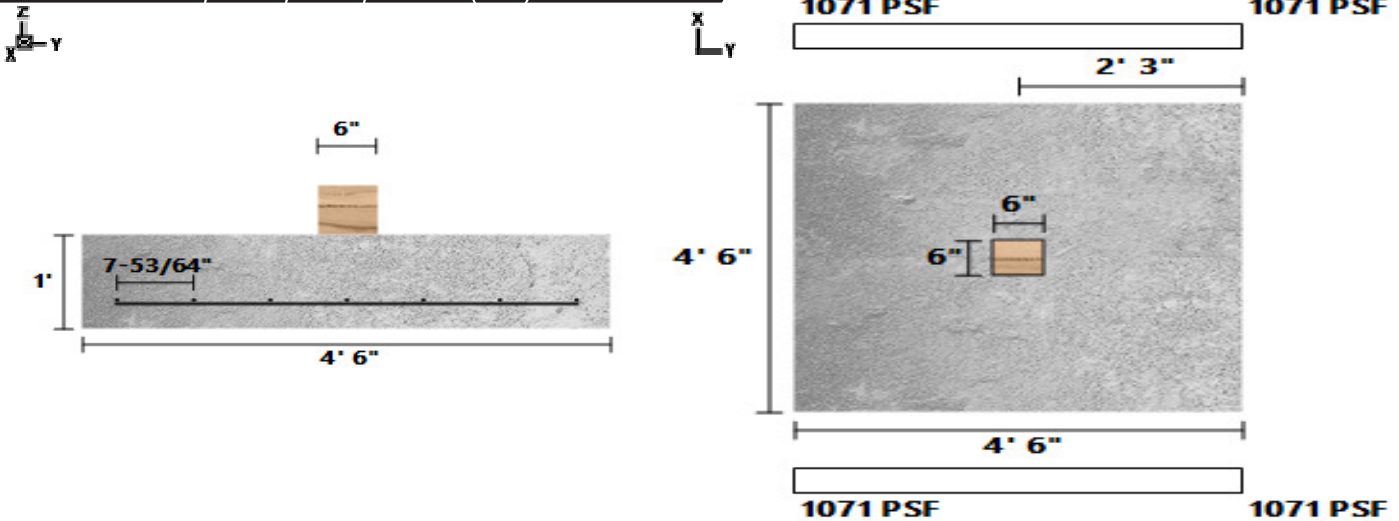
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	9.41	9.41	0	9.1	Dead	Z

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2254.893	-	9.1	-	Dead	Z
Point (lbf)	-4400.229	-	9.1	-	Live	Z
Point (lbf)	-884.9211	-	9.1	-	Dead	Z
Point (lbf)	-1592	-	9.1	-	Live	Z
Point (lbf)	-1639.504	-	9.1	-	Dead	Z
Point (lbf)	-3523.793	-	9.1	-	Live	Z
Point (lbf)	-2152.589	-	9.1	-	Dead	Z
Point (lbf)	-5236	-	9.1	-	Live	Z

DATE:	6/6/2022	COMPANY:	Architects Northwest
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Sarah Weight
CUSTOMER:		REVIEWED BY:	Sarah Weight
PROJ. ADDRESS:	--	PROJECT NAME:	Hately
	--		
LEVEL:	StruCalc Members	LOADING:	
MEMBER NAME:	F21 - FTG at M06b, M07a, U09b, & U...	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
4.5 (ft) X 4.5 (ft) X 12 (in)		Soil Depth TOF: 0 (ft)	(7) #4 Long, (7) #4 Short

F21 - FTG at M06b, M07a, U09b, & U10b (C25) DIAGRAMS



MATERIAL PROPERTIES

FOOTING						
fc' (psi)	Ec (psi)	Density (lbf/ft ³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)
2500	2880952	145	4.5	4.5	12	20.25
CALCULATION VARIABLES						
Bo (in)	Φ-X	Φ-Y				
58	0	0				
COLUMN						
Width (in)	Length (in)	Material	Offset (in)			
6	6	Wood	0			
SOIL						
Bearing Strength (lbf/ft ²)	Density (lbf/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)	
1500	120	0	30	0	3	
REBAR						
Bar Size #	# Bars Long	# Bars Short	fy (psi)	Es (psi)		
4	7	7	40000	2.9E+07		

PASS-FAIL

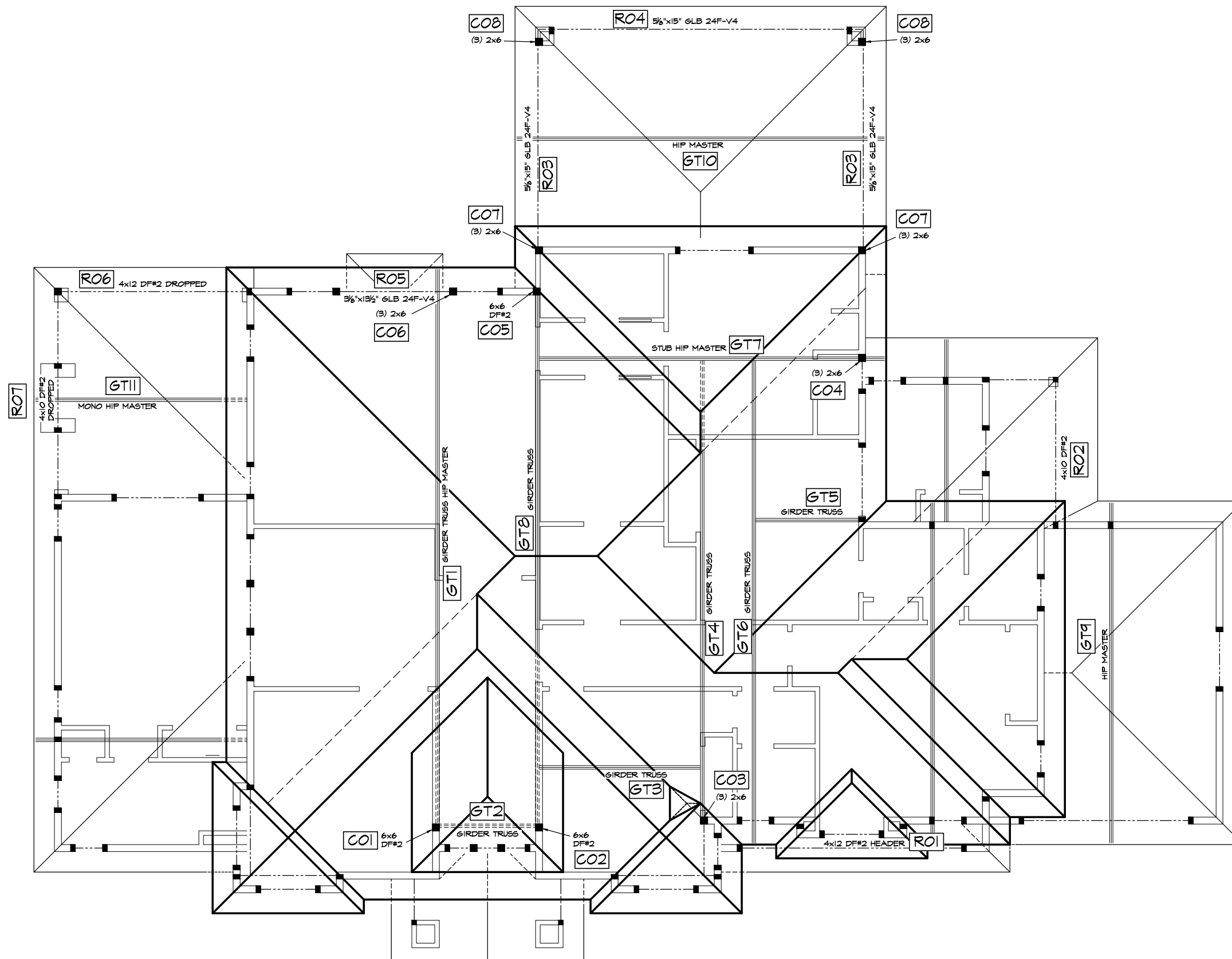
	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft ²)	PASS (28.6%)	1070.8	1500.0	D+L
Two-Way Shear (Punching) (lbf)	PASS (56.8%)	31921.5	73950.0	1.2D+1.6L+0.5Lr
One-Way Shear X (lbf)	PASS (73.4%)	9162.7	34425.0	1.2D+1.6L+0.5Lr
Moment X (lbf-ft)	PASS (59.1%)	14187.3	34675.2	1.2D+1.6L+0.5Lr
One-Way Shear Y (lbf)	PASS (73.4%)	9162.7	34425.0	1.2D+1.6L+0.5Lr
Moment Y (lbf-ft)	PASS (59.1%)	14187.3	34675.2	1.2D+1.6L+0.5Lr
Crushing (psi)	PASS (35.8%)	886.7	1381.3	1.2D+1.6L+0.5Lr

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
------	----------------	-----------------	-----------------	---------------	-----------	-----------

LINKED LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2254.893	-	0	-	Dead	Z
Point (lbf)	4400.229	-	0	-	Live	Z
Point (lbf)	884.9211	-	0	-	Dead	Z
Point (lbf)	1592	-	0	-	Live	Z
Point (lbf)	1639.504	-	0	-	Dead	Z
Point (lbf)	3523.793	-	0	-	Live	Z
Point (lbf)	2152.589	-	0	-	Dead	Z
Point (lbf)	5236	-	0	-	Live	Z

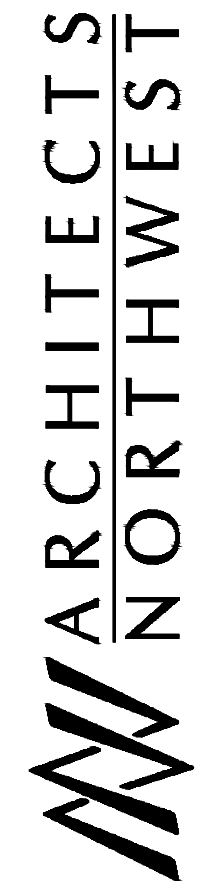


BEAM KEY

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

ROOF FRAMING

18915-142nd AVENUE NE SUITE 100
 WOODINVILLE, WA 98072
 TOLL FREE: 1-888-884-9488
 FAX: (425) 487-6585



DESIGNED BY: DATE:

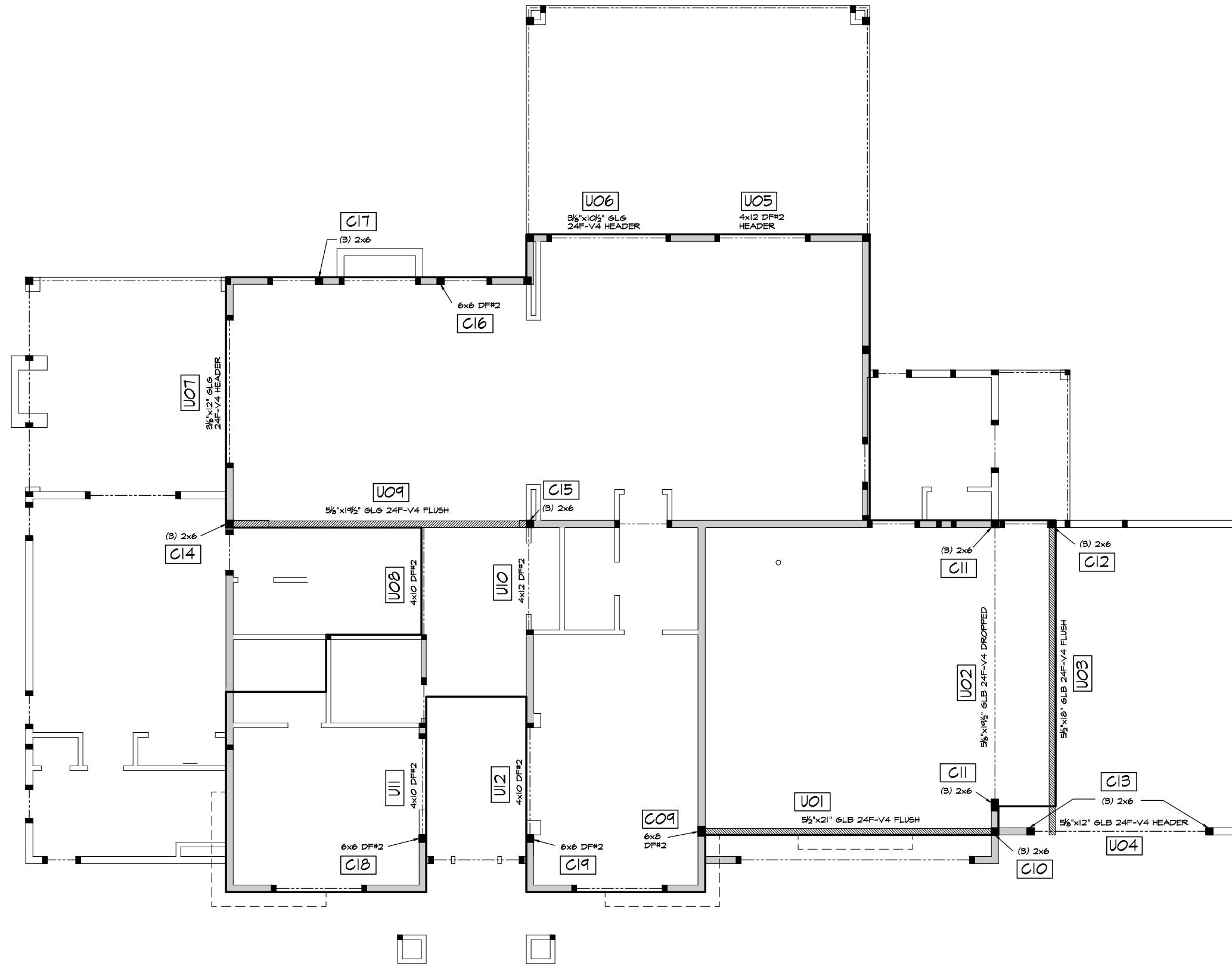
DRAWN BY: DATE:

PROJECT MANAGER:

REVISED BY: DATE:

ANW WOODINVILLE OFFICE
 JOB NUMBER:

220006



BEAM KEY

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

UPPER FLOOR FRAMING

DESIGNED BY: DATE:

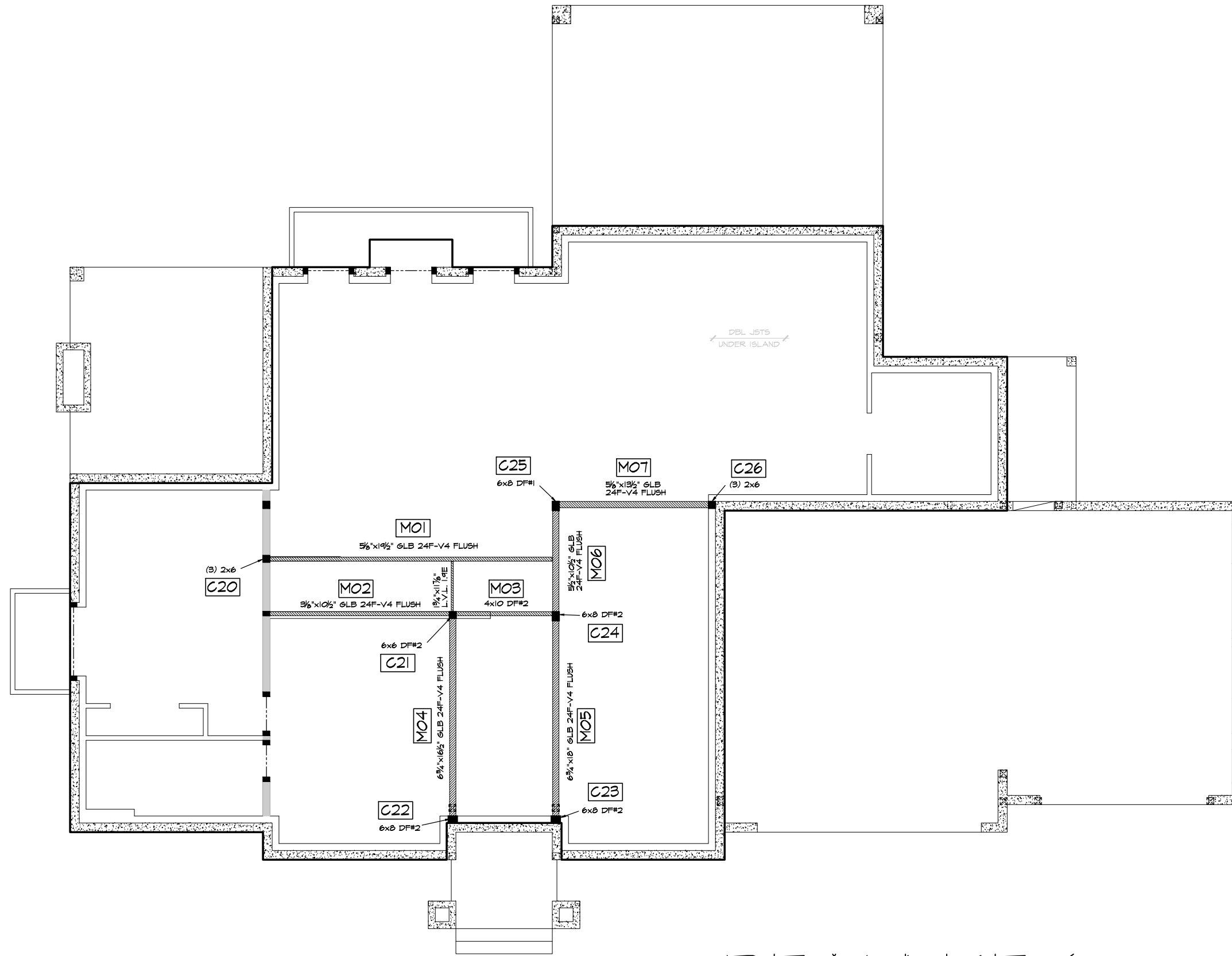
DRAWN BY: DATE:

PROJECT MANAGER:

REVISED BY: DATE:

ANW WOODINVILLE OFFICE
JOB NUMBER:

220006



BEAM KEY

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

MAIN FLOOR FRAMING

DESIGNED BY: DATE:

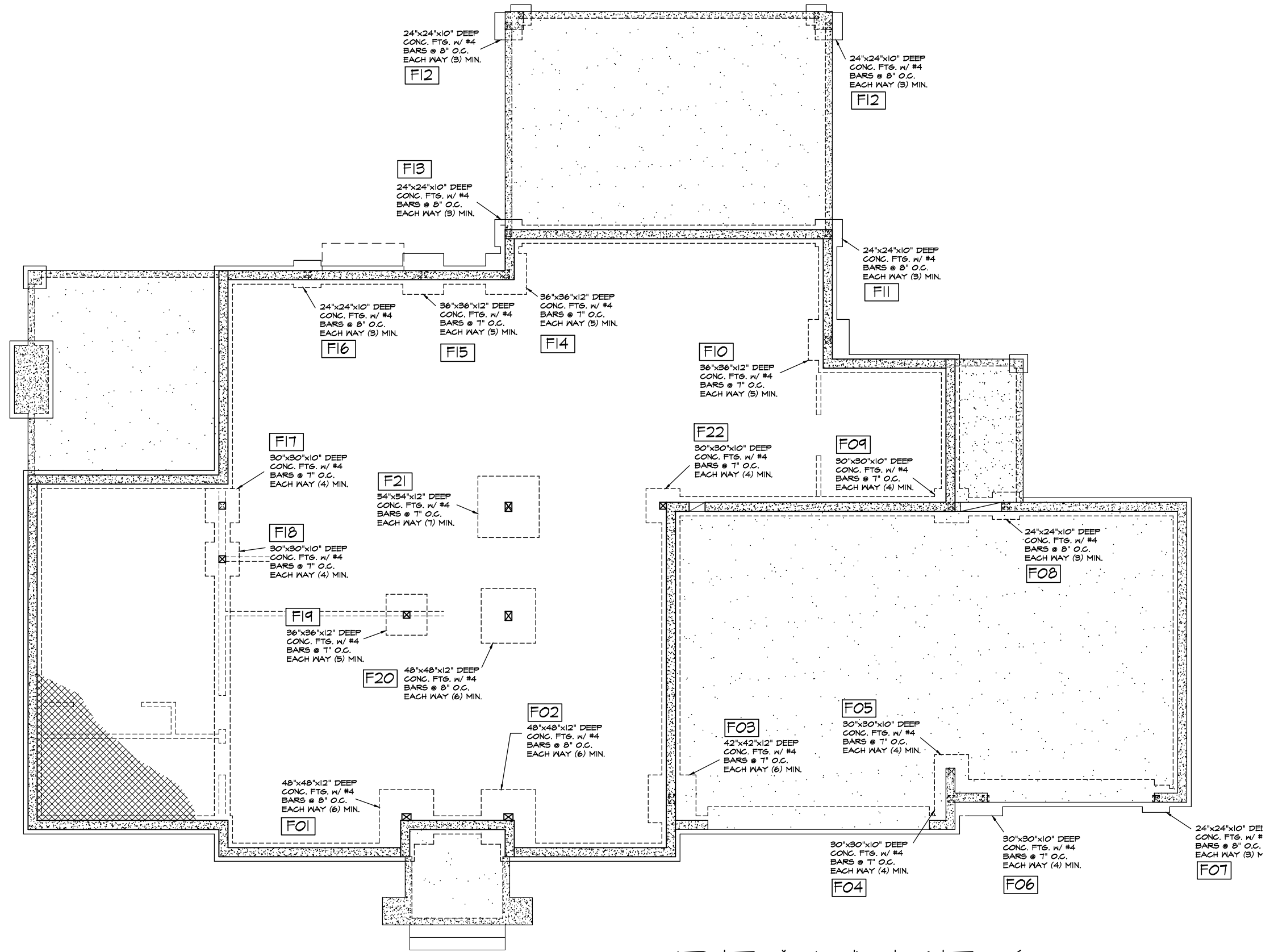
DRAWN BY: DATE:

PROJECT MANAGER:

REVISED BY: DATE:

ANW WOODINVILLE OFFICE
JOB NUMBER:

220006

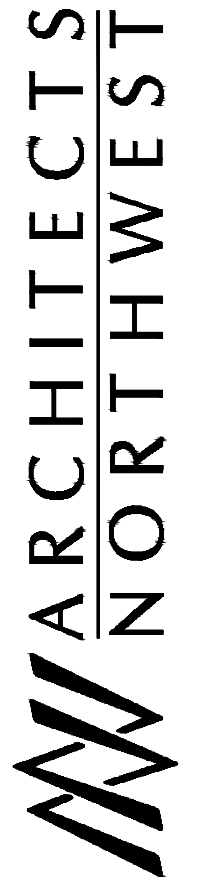


BEAM KEY

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

FND/FOOTINGS

18915-142nd AVENUE NE SUITE 100
WOODINVILLE, WA 98072
TOLL FREE: 1-888-884-9488
FAX: (425) 487-6585



DESIGNED BY: DATE:

DRAWN BY: DATE:

PROJECT MANAGER:

REVISED BY: DATE:

ANW WOODINVILLE OFFICE
JOB NUMBER:
220006