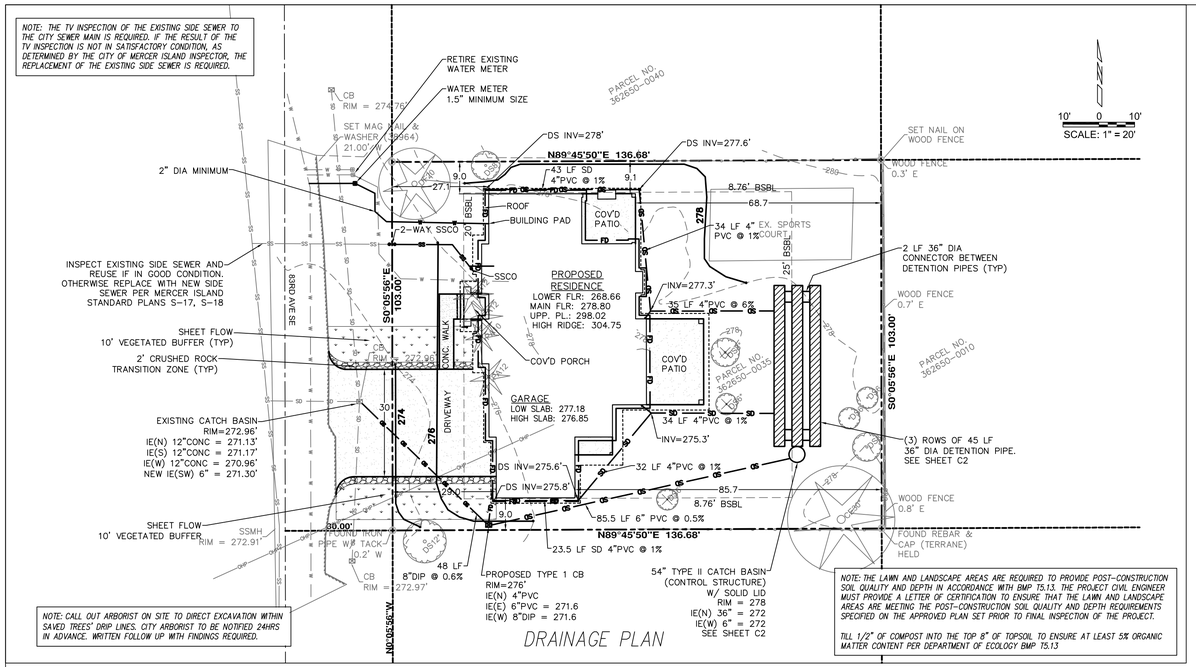
NOTE: THE TV INSPECTION OF THE EXISTING SIDE SEWER TO THE CITY SEWER MAIN IS REQUIRED. IF THE RESULT OF THE TV INSPECTION IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, THE REPLACEMENT OF THE EXISTING SIDE SEWER IS REQUIRED.



DRAINAGE PLAN

NOTE: CALL OUT ARBORIST ON SITE TO DIRECT EXCAVATION WITHIN SAVED TREES' DRIP LINES. CITY ARBORIST TO BE NOTIFIED 24HRS IN ADVANCE. WRITTEN FOLLOW UP WITH FINDINGS REQUIRED.

NOTE: THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST-CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT CIVIL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS SPECIFIED ON THE APPROVED PLAN SET PRIOR TO FINAL INSPECTION OF THE PROJECT.

TILL 1/2" OF COMPOST INTO THE TOP 8" OF TOPSOIL TO ENSURE AT LEAST 5% ORGANIC MATTER CONTENT PER DEPARTMENT OF ECOLOGY BMP T5.13

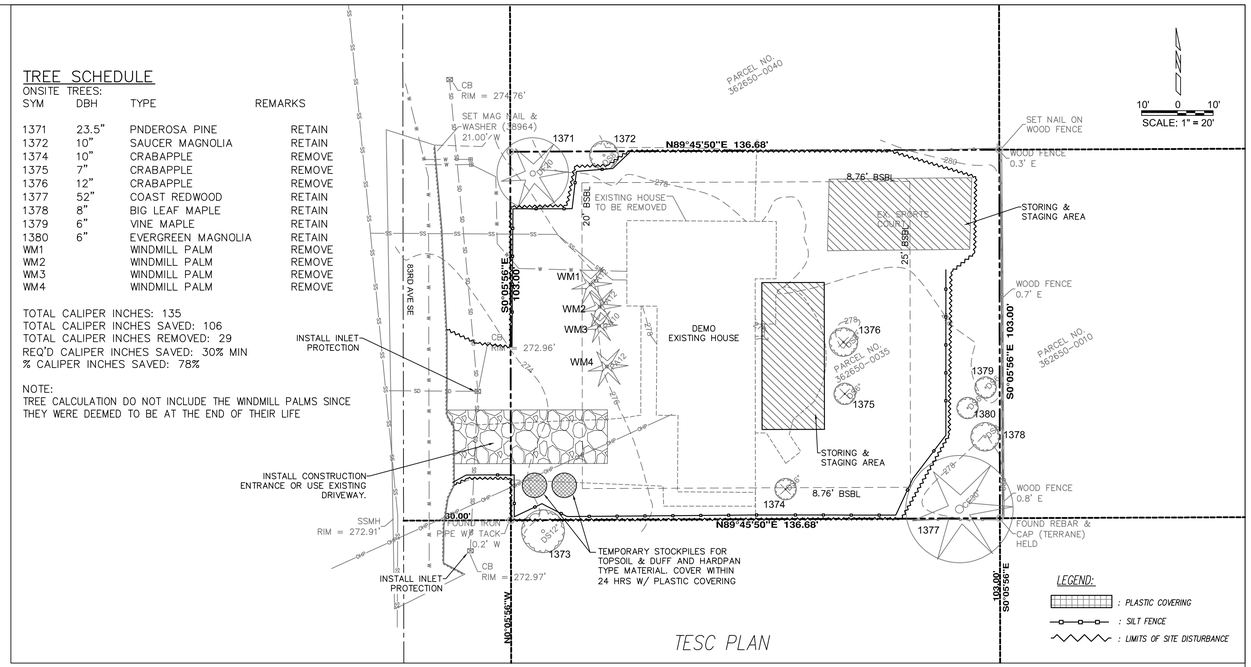
TREE SCHEDULE

ONSITE TREES:

SYM	DBH	TYPE	REMARKS
1371	23.5"	PNDEROSA PINE	RETAIN
1372	10"	SAUCER MAGNOLIA	RETAIN
1374	10"	CRABAPPLE	REMOVE
1375	7"	CRABAPPLE	REMOVE
1376	12"	CRABAPPLE	REMOVE
1377	52"	COAST REDWOOD	RETAIN
1378	8"	BIG LEAF MAPLE	RETAIN
1379	6"	VINE MAPLE	RETAIN
1380	6"	EVERGREEN MAGNOLIA	RETAIN
WM1		WINDMILL PALM	REMOVE
WM2		WINDMILL PALM	REMOVE
WM3		WINDMILL PALM	REMOVE
WM4		WINDMILL PALM	REMOVE

TOTAL CALIPER INCHES: 135
TOTAL CALIPER INCHES SAVED: 106
TOTAL CALIPER INCHES REMOVED: 29
REQ'D CALIPER INCHES SAVED: 30% MIN
% CALIPER INCHES SAVED: 78%

NOTE:
TREE CALCULATION DO NOT INCLUDE THE WINDMILL PALMS SINCE THEY WERE DEEMED TO BE AT THE END OF THEIR LIFE



LEGEND:
: PLASTIC COVERING
: SILT FENCE
: LIMITS OF SITE DISTURBANCE

TESC PLAN

NOTES :

1. CATCHBASINS TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) & ASTM C 890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE WSDOT / APWA SPECIFICATIONS

2. REINFORCING SHALL BE EQUIVALENT TO WELDED WIRE FABRIC HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A 497 (AASHTO M221). WIRE FABRIC SHALL NOT BE PLACED IN THE KNOCKOUTS.

3. THE BOTTOM OF THE PRECAST BASE SECTION MAY BE ROUNDED.

4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM.

5. KNOCKOUTS MAY BE ON ALL 4 SIDES WITH MAXIMUM DIAMETER OF 28". KNOCKOUTS MAY BE EITHER ROUND OR "D" SHAPED. PIPE TO BE INSTALLED IN FACTORY SUPPLIED KNOCKOUTS.

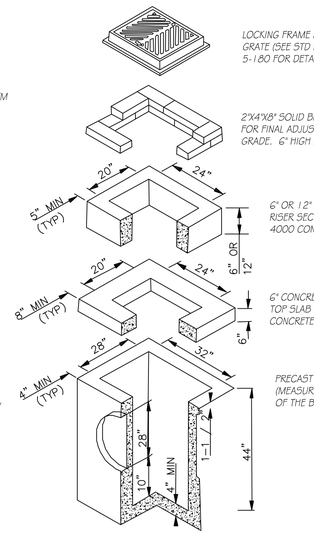
6. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS CONCRETE INLET WALL THICKNESS.

7. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2" PER FT.

8. CONCRETE INLET FRAME AND GRATE SHALL BE IN ACCORDANCE WITH THE WSDOT / APWA SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621D. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT.

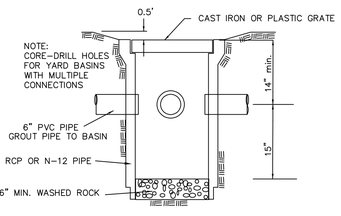
9. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.

SEE TEXT SECTION
5-06 WSDOT / APWA
PLAN 1-A



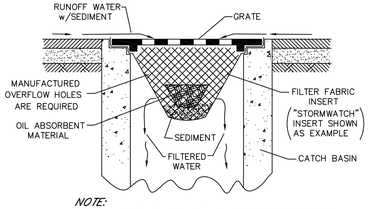
CATCH BASIN

N.T.S.



YARD BASIN

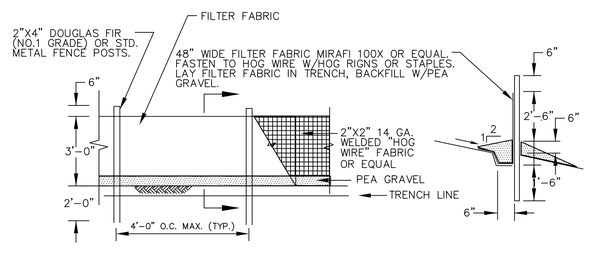
N.T.S.



NOTE:
"GULLYWASHER", "SILT SACK", OR OTHER APPROVED CATCH BASIN INSERT MAY BE USED FOR INLET PROTECTION. CONTACT: PRICE-MOON ENTERPRISES PH: 360-563-6709 OR "SILTSACK" BY ACF ENVIRONMENTAL AT PH: 1-800-644-9223 (OR APPROVED EQUAL).

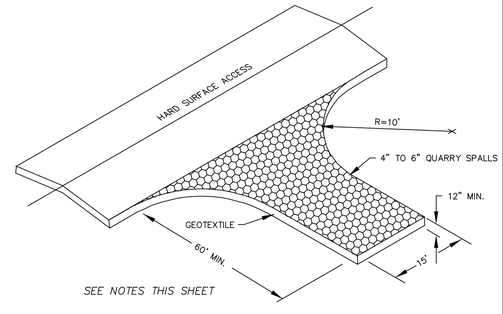
TEMPORARY INLET PROTECTION

N.T.S.



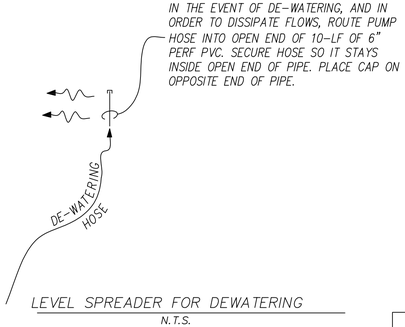
TEMPORARY SILT FENCE

N.T.S.



TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

N.T.S.



LEVEL SPREADER FOR DEWATERING

N.T.S.

811 Know what's below. Call 811 two business days before you dig.

HARDSCAPE	
GROSS LOT AREA:	14,078 SF
NET LOT AREA:	14,078 SF
AREA BORROWED FROM LOT COVERAGE:	0 SF
ALLOWED HARDSCAPE AREA = 9%	1,267 SF
TOTAL EXISTING HARDSCAPE AREA	
UNCOVERED PATIOS:	583 SF
WALKWAYS:	77 SF
CONCRETE SPORTS COURT AREA:	797 SF
TOTAL EXISTING HARDSCAPE AREA:	1,457 SF
TOTAL HARDSCAPE AREA REMOVED:	660 SF
TOTAL NEW HARDSCAPE AREA	
NEW WALKWAY:	97 SF
TOTAL NEW HARDSCAPE AREA:	97 SF
TOTAL PROJECT HARDSCAPE AREA:	894 SF
TOTAL PROJECT HARDSCAPE AREA PERCENT:	6.4%

SLOPE CALCULATIONS	
HIGHEST ELEVATION POINT OF LOT:	280.7'
LOWEST ELEVATION POINT OF LOT:	273.6'
DIFFERENCE:	7.1'
HORIZONTAL DIFFERENCE BETWEEN HIGH & LOW:	149.1'
LOT SLOPE:	4.8%

LOT SIZE (AS SURVEYED)	
LOT SIZE ACRES:	0.323
LOT SIZE SQ FT:	14,078 SF
ZONING:	R-9.6

LOT COVERAGE	
LOT AREA:	14,078 SF
PROPOSED HOUSE ROOF:	4,261 SF
PROPOSED DRIVEWAY:	781 SF
TOTAL LOT COVERAGE:	5,042 SF
ALLOWABLE LOT COVERAGE (40%):	5,631 SF

NOTE: 2 FT CONTOURS WERE DETERMINED FROM SURVEY

LEGAL DESCRIPTION
LOT 7, BLOCK 1, ISLAND RIDGE TRACTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 47 OF PLATS, PAGE 71, RECORDS OF KING COUNTY, WASHINGTON;

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

PRIOR TO THE CONSTRUCTION, PROVIDE TV INSPECTION OF THE EXISTING SIDE SEWER STUB BETWEEN THE STUB AND THE PUBLIC SEWER MAIN AND REPLACE IF FOUND TO BE DEFECTIVE AS DETERMINED BY THE CITY INSPECTOR.

PRIOR TO THE CONSTRUCTION, PROVIDE TV INSPECTION OF THE EXISTING STORM DRAINAGE PIPE ALL THE WAY TO THE LAKE (LOCATED ON THE PROPERTY OF 7231 W. MERCER WAY) AND REPLACE OR REPAIR IF FOUND TO BE DEFECTIVE AS DETERMINED BY THE CITY INSPECTOR.

QUARTER: NE
SECTION: 13
TOWNSHIP: 24
RANGE: 04

ZONING: R-9.6

PROJECT:
HATELY RESIDENCE

HARBERT ENGINEERS
4620 200TH ST. SW, STE. B
LYNNWOOD, WA 98036
PHONE: (206) 371-3079
LISAHARBERT@OUTLOOK.COM

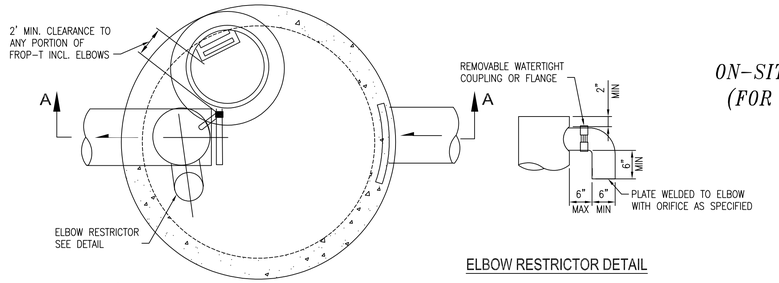
OWNER/CONTRACTOR:
CHARLES HATELY
4114 83RD AVE SE
MERCER ISLAND, WA 98040
425-894-0201

DRAINAGE PLAN/TESC
4114 83RD AVE SE, MERCER ISLAND, WA 98040
TAX ID: 362650-0035

SCALE: 1" = 20' | ISSUE DATE: 3-11-2023 | SHEET: C1

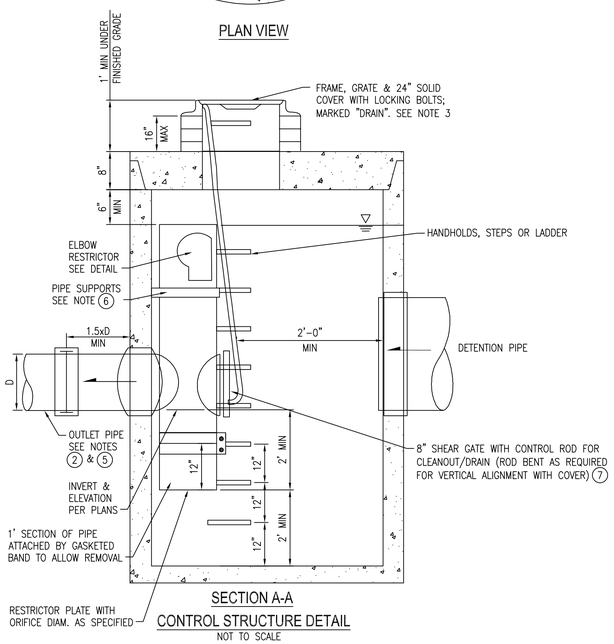
ATTACHMENT 1
CITY OF MERCER ISLAND
ON-SITE DETENTION SYSTEM WORKSHEET
(FOR NEW PLUS REPLACED IMPERVIOUS AREA OF 9,500 SF OR LESS)

OWNER: *CHARLES HATELY*	ADDRESS: *4114 83RD AVE SE*	PREPARED BY: *HARBERT ENGINEERS*
PERMIT #: *TO BE DETERMINED*	*MERCER ISLAND, WA 98040*	PHONE: *(206) 371-3079*
		DATE: *3-6-2023*
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): *4,261*	DETENTION PIPE DIA (INCH): *36*	DETENTION PIPE LENGTH (FT): *134*
SOIL TYPE: *TYPE B PER USDA WEB SOIL SURVEY*	PIPE MATERIAL: *N-12*	ORIFICE #1 DIA *0.5* INCH, ELEV _____
		ORIFICE #2 DIA *1.7* INCH, ELEV *277.3*



PLAN VIEW

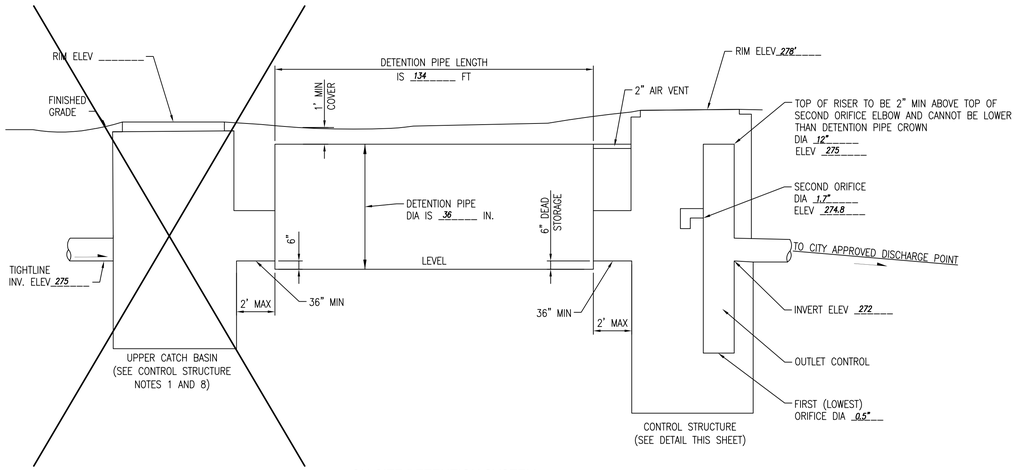
ELBOW RESTRICTOR DETAIL



SECTION A-A

CONTROL STRUCTURE DETAIL

NOT TO SCALE



ON-SITE DETENTION SYSTEM

NOT TO SCALE (ENGINEER TO FILL IN BLANKS)

CONTROL STRUCTURE NOTES:

(1) USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.

(2) OUTLET PIPE: MIN. 6 INCH.

(3) METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.

(4) FRAME AND LADDER OR STEPS OFFSET SO:

A. CLEANOUT GATE IS VISIBLE FROM TOP;
B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
C. FRAME IS CLEAR OF CURB.

(5) IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.

(6) PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STANLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).

(7) THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION ZG32A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B.
THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION), IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED.
A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE.
INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED.
THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT.
ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.

(8) THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FT.

ON-SITE DETENTION SYSTEM NOTES:

1. CALL DEVELOPMENT SERVICES (206-275-7605) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
2. RESPONSIBILITY FOR OPERATION AND MAINTANANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
3. PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 9.05 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING, LINED CORRUGATED POLYETHYLENE PIPE (LCPE), ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCH (MEETS AASHTO DESIGNATIONS M274 AND M36), CORRUGATED OR SPIRAL RIB ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.
4. FOOTING DRAINS SHALL NOT BE CONNECTED TO THE DETENTION SYSTEM.

LEGAL DESCRIPTION
LOT 7, BLOCK 1, ISLAND RIDGE TRACTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 47 OF PLATS, PAGE 71, RECORDS OF KING COUNTY, WASHINGTON;

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

QUARTER: NE
SECTION: 13
TOWNSHIP: 24
RANGE: 04

ZONING: R-9.6

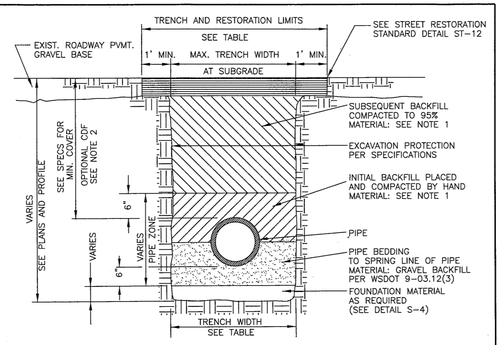
PROJECT:
HATELY RESIDENCE

HARBERT ENGINEERS
4620 200TH ST. SW, STE. B
LYNNWOOD, WA 98036
PHONE: (206) 371-3079
LISAHARBERT@OUTLOOK.COM

OWNER/CONTRACTOR:
CHARLES HATELY
4114 83RD AVE SE
MERCER ISLAND, WA 98040
425-894-0201

DETENTION PIPE DETAIL
4114 83RD AVE SE, MERCER ISLAND, WA 98040
TAX ID: 362650-0035

SCALE: 1" = 20' | *ISSUE DATE: 3-11-2023* | *SHEET: C2*



TRENCH WIDTH

PIPE SIZE	PIPE ZONE MAX. TRENCH WIDTH	MAX. TRENCH WIDTH AT SUBGRADE	MAX. RESTORATION WIDTH AT SURFACE
SIDE SEWER	2'-0"	2'-0"	6'-0"
4" OR 6"	2'-2"	3'-0"	8'-0"
8"	2'-4"	4'-0"	8'-0"
10"	2'-6"	4'-0"	8'-0"
12"	2'-8"	4'-6"	8'-6"

NOTES

1. ALL TRENCH BACKFILL IN PUBLIC RIGHT-OF-WAY OR ROADWAY AREAS SHALL BE CRUSHED SURFACING PER WSDOT 9-09.9(3) OR BANK RUN GRAVEL PER WSDOT 9-03.19, COMPACTED IN 6" LIFTS.
2. CDF FOR BACKFILL MAY BE REQUIRED BY CITY ENGINEER WHEN PROPER COMPACTION AROUND EXISTING UTILITIES MAY NOT BE POSSIBLE. CDF SHALL BE PER WSDOT 2-09.3(1)E.
3. SEE S-4 FOR PIPE BEDDING DETAILS.

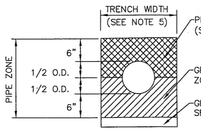
CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

SEWER TRENCH DETAIL

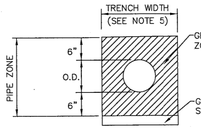
6-5-2009 | NO SCALE | **S-3**

REV DATE | APPROVED

BEDDING FOR RIGID PIPE MATERIAL



BEDDING FOR FLEXIBLE PIPE MATERIAL



NOTES

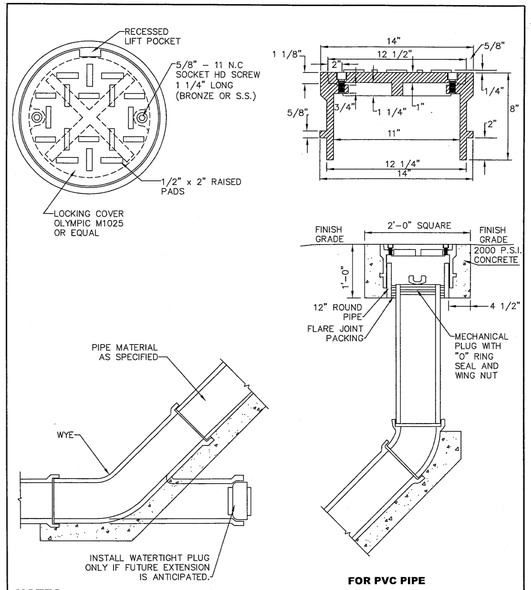
1. EXCAVATE UNSTABLE MATERIAL DOWN TO FIRM SOIL. REPLACE WITH GRAVEL BACKFILL PER WSDOT 9-03.12(3) AS DIRECTED BY THE CITY ENGINEER.
2. PROVIDE UNIFORM SUPPORT UNDER BARREL.
3. HAND TAMP UNDER HAUNCHES.
4. COMPACT BEDDING AND BACKFILL MATERIAL TO 95% MAX. DENSITY EXCEPT DIRECTLY OVER PIPE. HAND TAMP ONLY UNTIL MINIMUM 6" ABOVE TOP OF PIPE.
5. 30" MAXIMUM TRENCH WIDTH FOR PIPE UP TO AND INCLUDING 12", FOR PIPE LARGER THAN 12", USE O.D. PLUS 16".

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

PIPE BEDDING

6-5-2009 | NO SCALE | **S-4**

REV DATE | APPROVED



FOR PVC PIPE

NOTES

1. SEE S-27 FOR INSTALLATION DETAILS.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

CLEAN OUT DETAIL

6-5-2009 | NO SCALE | **S-19**

REV DATE | APPROVED

DISCONNECTION

WHEN DEMOLISHING AN EXISTING BUILDING, THE BUILDING SIDE SEWER SHALL BE DISCONNECTED PRIOR TO REMOVAL OF BUILDING FOUNDATIONS. THE CONTRACTOR SHALL INSTALL A MECHANICAL PLUG WITH NON-SHRINK GROUT AT THE END OF THE SIDE SEWER TO REMAIN IN PLACE. DISCONNECTION'S SHALL BE PERFORMED IN THE PRESENCE OF THE CITY'S UTILITY INSPECTOR. THE CONTRACTOR SHALL PROVIDE AN AS-BUILT DRAWING DEPICTING THE DISCONNECTED SIDE SEWER UPON COMPLETION OF THE WORK.

RECONNECTION

WHEN RECONNECTING TO AN EXISTING SIDE SEWER, THE POINT OF RECONNECTION WILL BE DETERMINED BASED ON THE MAGNITUDE OF THE CONSTRUCTION ON THE PROPERTY.

1. PARTIAL INTERIOR REMODEL AND/OR BUILDING ADDITION WITH NO ADDITIONAL PLUMBING FIXTURES – NO SIDE SEWER REPLACEMENT REQUIRED UNLESS A KNOWN PROBLEM EXISTS IN THE SIDE SEWER.
2. PARTIAL INTERIOR REMODEL AND/OR BUILDING ADDITION WITH ADDITIONAL PLUMBING FIXTURES– ASSESS CONDITION OF EXISTING SIDE SEWER THROUGH VIDEO INSPECTION FROM BUILDING TO PROPERTY LINE AND REPLACE AS NEEDED.
3. COMPLETE INTERIOR REMODEL OF RESIDENCE – ASSESS CONDITION OF EXISTING SIDE SEWER THROUGH VIDEO INSPECTION FROM BUILDING TO PROPERTY LINE AND REPLACE AS NEEDED. IF EXISTING SIDE SEWER IS ASBESTOS CEMENT OR CONCRETE, SIDE SEWER SHALL BE REPLACED FROM BUILDING TO PROPERTY LINE, UNLESS THE APPLICANT PROVES, TO THE SATISFACTION OF THE CITY ENGINEER, THAT THE SIDE SEWER IS WATER TIGHT AND IN SOUND CONDITION.*
4. COMPLETE INTERIOR REMODEL AND BUILDING ADDITION – NEW SIDE SEWER FROM BUILDING TO PROPERTY LINE.*
5. CONSTRUCTION OF A NEW SINGLE FAMILY RESIDENCE – NEW SIDE SEWER FROM BUILDING TO PROPERTY LINE.*

BACK WATER VALVE INSTALLATION PER CITY ENGINEER, IF SCENARIO 2, 3, 4, OR 5 IS DIRECTLY ATTACHED TO THE LAKE LINE OR THE ELEVATION OF THE LOWEST DRAIN IN THE RESIDENCE IS LOWER THAN THE RIM ELEVATION OF THE UPSTREAM SEWER MANHOLE ON THE MAIN.

VIDEO INSPECTION OF THE EXISTING SIDE SEWER, BETWEEN THE PROPERTY LINE AND THE SEWER MAIN SHALL BE PERFORMED FOR SCENARIOS NUMBER 4 AND 5.

PROVIDE A COPY OF THE VIDEO DOCUMENTATION (VIDEO AND HARDCOPY REPORT) TO THE CITY ENGINEER.

REPLACEMENT OR REPAIR OF THAT PORTION OF THE SIDE SEWER BETWEEN THE PROPERTY LINE AND THE SEWER MAIN, WILL BE DETERMINED BY THE CITY ENGINEER, BASED ON THE VIDEO INSPECTION.

*IF THE EXISTING SIDE SEWER IS PVC AND IS LESS THAN TEN YEARS OLD, THE SIDE SEWER DOES NOT HAVE TO BE REPLACED IF A VIDEO INSPECTION AND/OR HYDROSTATIC PRESSURE TEST CONFIRMS THAT THE SIDE SEWER IS IN PROPER WORKING CONDITION. THESE TESTS SHALL BE PERFORMED AFTER ALL HEAVY EQUIPMENT THAT COULD DAMAGE THE SIDE SEWER IS OFF OF THE SITE.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

RESIDENTIAL SIDE SEWER DISCONNECTION & RECONNECTION

6-5-2009 | NO SCALE | **S-22**

REV DATE | APPROVED

LEGAL DESCRIPTION
LOT 7, BLOCK 1, ISLAND RIDGE TRACTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 47 OF PLATS, PAGE 71, RECORDS OF KING COUNTY, WASHINGTON;

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

QUARTER: NE
SECTION: 13
TOWNSHIP: 24
RANGE: 04

ZONING: R-9.6

PROJECT:
HATELY
RESIDENCE

HARBERT ENGINEERS
4620 200TH ST. SW, STE. B
LYNNWOOD, WA 98036
PHONE: (206) 371-3079
LISAHARBERT@OUTLOOK.COM

OWNER/CONTRACTOR:
CHARLES HATELY
4114 83RD AVE SE
MERCER ISLAND, WA 98040
425-894-0201

DETENTION PIPE DETAIL
4114 83RD AVE SE, MERCER ISLAND, WA 98040

TAX ID: 362650-0035

SCALE: 1" = 20' | *ISSUE DATE: 3-11-2023* | *SHEET: C3*

Your Family Architect

GROSS FLOOR AREA

LOT AREA	14078.00 S.F.
MAX GROSS FLOOR AREA ALLOWED: 40%	5631.20 S.F.
PROPOSED COVERAGE AREA	
MAIN FLOOR	3031.00 S.F.
UPPER FLOOR	2260.00 S.F.
TOTAL PROPOSED COVERAGE AREA:	**5291.00 S.F.** **37.58%**

LOT COVERAGE

LOT AREA	14078.00 S.F.
MAX LOT COVERAGE ALLOWED: 40%	5631.20 S.F.
PROPOSED COVERAGE AREA	
ROOF AREA (HOUSE)	4261.00 S.F.
DRIVEWAY (EXCLUDING AREA UNDER ROOF)	781.00 S.F.
CONC. WALK	97.00 S.F.
TOTAL PROPOSED COVERAGE AREA:	**5139.00 S.F.** **36.50%**

LANDSCAPING

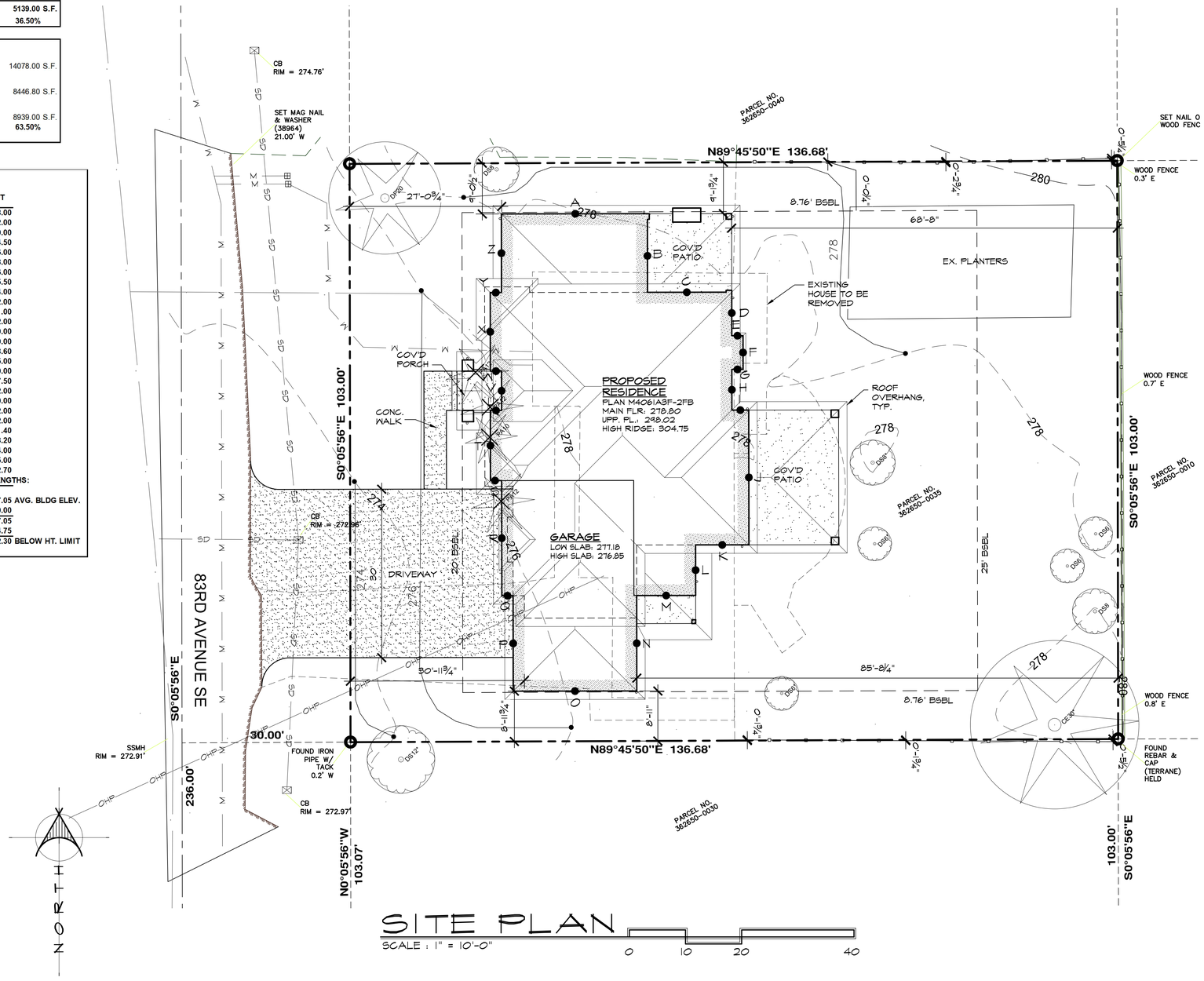
LOT AREA	14078.00 S.F.
Lot Slope less than 15% : 60%	8446.80 S.F.
PROPOSED LANDSCAPING AREA	8939.00 S.F. **63.50%**

HEIGHT CALCULATION

WALL SEGMENT	MIDPOINT ELEVATION	*	WALL LENGTH	=	PRODUCT
A	278.00		26.00		7228.00
B	278.00		14.00		3892.00
C	278.00		15.00		4170.00
D	278.00		7.75		2154.50
E	278.00		2.00		556.00
F	278.00		6.00		1668.00
G	278.00		2.00		556.00
H	278.00		7.25		2015.50
I	278.00		3.00		834.00
J	278.00		24.00		6672.00
K	278.00		9.50		2641.00
L	278.00		9.00		2502.00
M	278.00		10.50		2919.00
N	277.00		17.00		4709.00
O	276.30		22.00		6078.60
P	275.00		17.00		4675.00
Q	275.00		2.00		550.00
R	275.00		20.50		5637.50
S	276.00		2.00		552.00
T	276.00		12.50		3450.00
U	276.00		2.00		552.00
V	276.00		7.00		1932.00
W	275.70		2.00		551.40
X	276.30		14.00		3868.20
Y	277.00		2.00		554.00
Z	277.50		14.00		3885.00
TOTALS:			270.00		74802.70

AVERAGE EXG GRADE = TOTAL PRODUCTS/ TOTAL WALL LENGTHS:

74802.7 /	270.00 =	277.05 AVG. BLDG ELEV.
MAX HT. ALLOWABLE =	+	30.00
MAX ELEVATION @ RIDGE =		307.05
PROPOSED RIDGE ELEVATION =	-	304.75
PROPOSED RIDGE =		2.30 BELOW HT. LIMIT



SITE PLAN

SCALE : 1" = 10'-0"

0 10 20 40

SITE ADDRESS

4114 83RD AVE SE, MERCER ISLAND, WA 98040

PARCEL NUMBER

362650-0035

14,078 S.F. (0.323 ACRES) AS SURVEYED

ZONING

R-9.6

OWNER

CHARLES HATELY
4114 83RD AVE SE, MERCER ISLAND, WA 98040
PH: 425-894-0201

ARCHITECT

ARCHITECTS NORTHWEST / SARAH WEIGHT, PM
18915-142ND AVE NE / #100; WOODINVILLE, WA 98072
PH: 425 485 4900 / EM: SARAH@ARCHITECTSNW.COM

STRUCTURAL ENGINEER

MULHERN+KULP RESIDENTIAL STRUCTURAL ENGINEERING
7220 TRADE STREET, SUITE 350 / SAN DIEGO, CA 92121
PH: 619-650-0010

LEGAL DESCRIPTION

LOT 7, BLOCK 1, ISLAND RIDGE TRACTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 47 OF PLATS, PAGE 71, RECORDS OF KING COUNTY, WASHINGTON;

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARING

THE PLAT OF ISLAND RIDGE TRACTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 47 OF PLATS, PAGE 71, RECORDS OF KING COUNTY, WASHINGTON

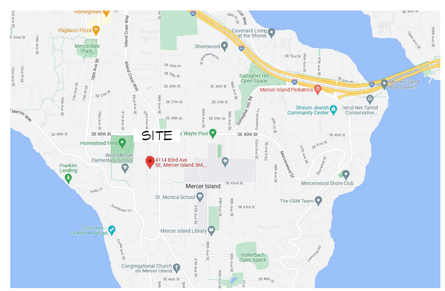
VERTICAL DATUM

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY KCGS SURVEY CONTROL DATABASE.

THE MARK IS A MONUMENT IN CASE AT THE INTERSECTION OF ISLAND CREST WAY AND SE 42ND STREET.

POINT ID NO. 3060;
ELEVATION: 384.936 FEET NAVD 88

2.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 1.0' FOR THIS PROJECT.



N

VICINITY MAP (NTS)

REGISTERED ARCHITECT 5046 STATE OF WASHINGTON 7/18/22

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-2

DESIGNED BY: JdeR	DATE: 2012
DRAWN BY: JM	DATE: 5/1/2012
PROJECT MANAGER: SARAH WEIGHT	
REVISED BY:	DATE:
JSC	7/14/22
JSC	9/1/22
LATERAL BY: M&K	DATE: 9/7/22
LATERAL JOB NUMBER: 202-22014	

A0
A12

ANW WOODINVILLE OFFICE JOB NUMBER: 220006

ENERGY CODE

2018 WASHINGTON STATE ENERGY CODE/ IECC (WSEC)

TABLE R402.1.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT [A]

CLIMATE ZONE	5 & MARINE 4	WITH USE OF CREDIT 1.3
FENESTRATION U-FACTOR [B]	0.30	0.28
SKYLIGHT [B] U-FACTOR	0.50	0.50
CEILING R-VALUE [E]	49	49
WOOD FRAME WALL [G,H] R-VALUE	21 INT	21 INT
FLOOR R-VALUE	30	38
BELOW GRADE [C,H] WALL R-VALUE	10/15/21 INT + 5TB	R-10 PERIMETER & ENTIRE SLAB
SLAB[D,F] R-VALUE & DEPTH	10, 2 FT.	R-10 PERIMETER & ENTIRE SLAB

TABLE R402.1.1 FOOTNOTES
FOR SI: 1 FOOT = 304.8 MM, CI = CONTINUOUS INSULATION, INT. = INTERMEDIATE FRAMING.

[A] R-VALUES ARE MINIMUMS. U-FACTORS AND SHGC ARE MAXIMUMS. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE COMPRESSED R-VALUE OF THE INSULATION FROM APPENDIX TABLE A101.4 SHALL NOT BE LESS THAN THE R-VALUE SPECIFIED IN THE TABLE.

[B] THE FENESTRATION U-FACTOR COLUMN EXCLUDES SKYLIGHTS.

[C] "10/15/21 +5TB" MEANS R-10 CONTINUOUS INSULATION ON THE EXTERIOR OF THE WALL, OR R-15 CONTINUOUS INSULATION ON THE INTERIOR OF THE WALL, OR R-21 CAVITY INSULATION PLUS A THERMAL BREAK BETWEEN THE SLAB AND THE BASEMENT WALL AT THE INTERIOR OF THE BASEMENT WALL. "10/15/21 +5TB" SHALL BE PERMITTED TO BE MET WITH R-13 CAVITY INSULATION ON THE INTERIOR OF THE BASEMENT WALL PLUS R-5 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE WALL. "5TB" MEANS R-5 THERMAL BREAK BETWEEN FLOOR SLAB AND BASEMENT WALL.

[D] R-10 CONTINUOUS INSULATION IS REQUIRED UNDER HEATED SLAB ON GRADE FLOORS. SEE R402.2.9.1.

[E] FOR SINGLE RAFTER- OR JOIST- VAULTED CEILINGS, THE INSULATION MAY BE REDUCED TO R-38 IF THE FULL INSULATION DEPTH EXTENDS OVER THE TOP PLATE OF THE EXTERIOR WALL.

[F] R-7.5 CONTINUOUS INSULATION INSTALLED OVER AN EXISTING SLAB IS DEEMED TO BE EQUIVALENT TO THE REQUIRED PERIMETER SLAB INSULATION WHEN APPLIED TO EXISTING SLABS COMPLYING WITH SECTION R503.1.1. IF FOAM PLASTIC IS USED, IT SHALL MEET THE REQUIREMENTS FOR THE THERMAL BARRIERS PROTECTING FOAM PLASTICS.

[G] FOR LOG STRUCTURES DEVELOPED IN COMPLIANCE WITH STANDARD ICC 400, LOG WALLS SHALL MEET THE REQUIREMENTS FOR CLIMATE ZONE 5 OF ICC 400.

[H] INT. (INTERMEDIATE FRAMING) DENOTES FRAMING AND INSULATION AS DESCRIBED IN SECTION A103.2.2 INCLUDING STANDARD FRAMING 16 INCHES ON CENTER, 78 PERCENT OF THE WALL CAVITY INSULATED AND HEADERS INSULATED WITH A MINIMUM OF R-10 INSULATION.

1. A CERTIFICATE COMPLYING WITH 2018 WSEC R401.3 IS REQUIRED TO BE COMPLETED BY THE BUILDER OR APPROVED PARTY AND PERMANENTLY POSTED.
2. AT LEAST ONE THERMOSTAT SHALL BE PROVIDED FOR EACH SEPARATE HEATING AND COOLING SYSTEM.
3. NOT LESS THAN 90 PERCENT OF LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.

WHOLE HOUSE VENTILATION

WHOLE HOUSE VENTILATION SYSTEM TO BE DESIGNED PER WSBC AMENDMENTS TO 2018 IRC SECTION M1505.4.4.

SEE "WHOLE HOUSE VENTILATION" ON THE SCHEDULE SHEET FOR SELECTED OPTION.

WHOLE-HOUSE MECHANICAL VENTILATION AIRFLOW RATE PER EQUATION 15-1 (M1505.4.3)

VENTILATION QUALITY ADJUSTMENT PER EQUATION 15-2 (M1505.4.3.1)

IRC TABLE M1505.4.3(2)

INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS [A,B]

RUN TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	50%	66%	75%	100%
FACTOR	2	1.5	1.3	1.0

A. FOR VENTILATION SYSTEM RUN TIME VALUES BETWEEN THOSE GIVEN, THE FACTORS ARE PERMITTED TO BE DETERMINED BY INTERPOLATION.
B. EXTRAPOLATION BEYOND THE TABLE IS PROHIBITED.

MECHANICAL

GENERAL

SOLID FUEL BURNING APPLIANCES INCLUDE AIRTIGHT STOVES, FIREPLACE STOVES, ROOM HEATERS, FACTORY BUILT FIREPLACES AND FIREPLACE INSERTS. ALL SOLID FUEL BURNING APPLIANCES SHALL COMPLY WITH THE PROVISIONS OF I.R.C. R1006

HEATING

EACH DWELLING UNIT SHALL BE PROVIDED WITH HEATING FACILITIES CAPABLE OF MAINTAINING A TEMPERATURE OF 68 DEGREES FAHRENHEIT AT A HEIGHT OF 3'-0" ABOVE THE FLOOR AND TWO FEET FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS WHEN THE OUTSIDE TEMPERATURE IS AS SET FORTH IN THE 2018 W.S.E.C.

DEFINITION OF BUILDING THERMAL ENVELOPE FROM THE 2018 WASHINGTON STATE ENERGY CODE:

> THE BELOW-GRADE WALLS, ABOVE-GRADE WALLS, FLOORS, CEILINGS, ROOF, AND ANY OTHER BUILDING ELEMENT ASSEMBLIES THAT ENCLOSE CONDITIONED SPACE OR PROVIDES A BOUNDARY BETWEEN CONDITIONED SPACE AND EXEMPT OR UNCONDITIONED SPACE.

1. FUEL BURNING APPLIANCES LOCATED WITHIN THE BUILDING ENVELOPE SHALL OBTAIN AIR FROM OUTDOORS, MEETING THE PROVISIONS OF IRC G2407
2. FUEL BURNING APPLIANCES LOCATED OUTSIDE THE BUILDING ENVELOPE SHALL MEET THE PROVISIONS OF CHAPTER 24 OF THE 2018 IRC.
3. DUCTWORK LOCATION SHALL MEET THE PROVISIONS OF CHAPTER 24 OF THE 2018 IRC.
4. COMBUSTION AIR TO MEET THE REQUIREMENTS OF I.R.C. M1701.1

ALL WARM AIR FURNACES SHALL BE LISTED AND LABELED BY AN APPROVED AGENCY PER CHAPTER M1302 OF THE 2018 IRC.

NO WARM AIR FURNACE SHALL BE INSTALLED IN A ROOM USED OR DESIGNED TO BE USED AS A BEDROOM, BATHROOM, CLOSET OR IN ANY ENCLOSED SPACE WITH ACCESS ONLY THROUGH SUCH ROOM OR SPACE, EXCEPT PER EXCEPTIONS IN IRC G2406.2

LIQUEFIED PETROLEUM GAS BURNING APPLIANCES SHALL NOT BE INSTALLED IN A PIT, BASEMENT OR SIMILAR LOCATION WHERE HEAVIER THAN AIR GASES MIGHT COLLECT. APPLIANCES SO FUELED SHALL NOT BE INSTALLED IN AN ABOVE GRADE UNDER FLOOR SPACE OR BASEMENT UNLESS SUCH LOCATION IS PROVIDED WITH AN APPROVED MEANS FOR REMOVAL OF UNBURNED GAS.

HEATING AND COOLING APPLIANCES LOCATED IN A GARAGE AND WHICH GENERATE A GLOW, SPARK OR FLAME CAPABLE OF IGNITING FLAMMABLE VAPORS SHALL BE INSTALLED WITH THE PILOTS AND BURNERS OR HEATING ELEMENTS AND SWITCHES AT LEAST 18" ABOVE THE FLOOR SURFACE.

FIRE DAMPERS NEED NOT BE INSTALLED IN AIR DUCTS PASSING THROUGH THE WALL, FLOOR OR CEILING SEPARATING A RESIDENCE (R-3 OCCUPANCY) FROM A GARAGE, PROVIDED SUCH DUCTS WITHIN THE GARAGE ARE CONSTRUCTED OF STEEL HAVING A THICKNESS NOT LESS THAN 0.019" (NO. 26 GALVANIZED SHEET GAUGE) AND HAVE NO OPENINGS INTO THE GARAGE

EVERY APPLIANCE DESIGNED TO BE VENTED SHALL BE CONNECTED TO A VENTING SYSTEM COMPLYING WITH CHAPTER 18 OF THE 2018 IRC.

EVERY FACTORY BUILT CHIMNEY, TYPE L VENT, TYPE B GAS VENT OR TYPE BW GAS VENT SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF ITS LISTING, MANUFACTURERS INSTALLATION INSTRUCTIONS AND THE REQUIREMENTS PER CHAPTER 24 OF THE 2018 IRC.

A TYPE B OR BW GAS VENT SHALL TERMINATE PER CHAPTER 24 OF THE 2018 IRC.

VENT CONNECTORS SHALL BE INSTALLED WITHIN THE SPACE OR AREA IN WHICH THE APPLIANCE IS LOCATED AND SHALL BE CONNECTED TO A CHIMNEY OR VENT IN SUCH A MANNER AS TO MAINTAIN THE CLEARANCE TO COMBUSTIBLES PER SECTION M1803 OF THE 2018 IRC.

HEATING EQUIPMENT

ALL HEATING EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE NATIONAL APPLIANCE ENERGY CONSERVATION ACT (NAECA) AND BE SO LABELED. EQUIPMENT SHALL ALSO COMPLY WITH SECTION M1411 OF THE 2018 IRC

DUCTWORK

1. DUCT SYSTEMS OR FACTORY BUILT AIR DUCTS SHALL BE OF METAL AS SET FORTH BY TABLE 1601.1.1 OF THE 2018 IRC.
2. RECTANGULAR, FLAT, OVAL AND ROUND DUCT JOINTS AND SEAMS SHALL BE AIRTIGHT PER SECTION M1601.4.1 OF THE 2018 IRC.
3. INSTALLATION OF DUCTS SHALL COMPLY WITH SECTION M1601.4 OF THE 2018 IRC.
4. DUCT INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH SECTION M1601.3 OF THE 2018 IRC.
5. FINAL DUCT LEAKAGE AFFIDAVIT IS TO BE PROVIDED TO THE BUILDING INSPECTOR PRIOR TO FINAL INSPECTION. DUCT LEAKAGE AND SEALING REQUIREMENTS IN 2018 W.S.E.C. SECTION R403.3.2 TO BE MET.
6. DUCTS INSULATAED TO A MINIMUM R-8 INSULATION IN UNCONDITIONED SPACES PER W.S.E.C. SECTION R403.3.1

CARPENTRY

GENERAL

ALL FRAMING SHALL COMPLY WITH THE APPLICABLE SECTION(S) OF THE 2018 IBC/IRC.
PRESSURE TREATED WOOD REQUIRED IN LOCATIONS LISTED IN IRC R317.1

- 2" MINIMUM VERTICAL CLEARANCE BETWEEN WOOD & CONCRETE STEPS, PORCH SLABS, PATIO SLABS & OTHER SIMILAR HORIZONTAL SURFACES EXPOSED TO THE WEATHER.
- 6" MINIMUM CLEARANCE BETWEEN WOOD AND EARTH.
- 8" MINIMUM CLEARANCE BETWEEN UNTREATED MUSILLS AND EARTH.
- 12" MINIMUM CLEARANCE BETWEEN FLOOR BEAMS AND EARTH.
- 18" MINIMUM CLEARANCE BETWEEN FLOOR JOISTS AND EARTH.

LOADING

ROOF	15 PSF DEAD LOAD	+	25 PSF LIVE LOAD	=	40 PSF
FLOOR TRUSSES	15 PSF DEAD LOAD	+	40 PSF LIVE LOAD	=	55 PSF
FLOOR	10 PSF DEAD LOAD	+	40 PSF LIVE LOAD	=	50 PSF
CEILING	5 PSF DEAD LOAD	+	10 PSF LIVE LOAD	=	15 PSF
DECK	10 PSF DEAD LOAD	+	60 PSF LIVE LOAD	=	70 PSF
INTERIOR PARTITION				=	7 PSF
EXTERIOR PARTITION				=	10 PSF

WOOD BEARING ON OR INSTALLED WITHIN ½" OF MASONRY OR CONCRETE TO BE TREATED WITH AN APPROVED PRESERVATIVE. SOLID BLOCKING OF NOT LESS THAN 2x THICKNESS SHALL BE PROVIDED AT ENDS AND AT ALL SUPPORT OF JOISTS AND RAFTERS. ANCHOR BOLTS TO BE PER SHEAR WALL SCHEDULE AND FOUNDATION PLAN. 7" MINIMUM EMBEDMENT. ALL METAL FRAMING ANCHORS AND HANGERS SHOWN ON DRAWINGS SHALL BE STRONG TIE CONNECTORS AS MANUFACTURED BY SIMPSON COMPANY.

PROVIDE FIREBLOCKING IN CONCEALED SPACES OF STUD WALLS & PARTITIONS, INCLUDING FURRED SPACES & PARALLEL ROWS OF STUDS OR STAGGERED STUDS AS FOLLOWS:

1. VERTICALLY AT THE CEILING & FLOOR LEVELS.
2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.

PROVIDE FIREBLOCKING AT OTHER LOCATIONS PER 2018 IRC R302.11.

INSULATION & MOISTURE PROTECTION

GENERAL

UNLESS NOTED OTHERWISE, INSULATION SHALL CONFORM TO THE WASHINGTON STATE ENERGY CODES. INSULATION BAFFLES TO MAINTAIN 1" CLEAR SPACE ABOVE INSULATION. BAFFLES TO EXTEND 6" ABOVE BATT INSULATION & 12" ABOVE LOOSE FILL INSULATION. INSULATE BEHIND BATHTUBS, SHOWERS, PARTITIONS AND CORNERS. PROVIDE FACE STAPLED BATTS OR FRICTION FIT FACED BATTS. PROVIDE 4 MIL (0.004") POLYETHYLENE VAPOR BARRIER AT WALLS OR USE CLASS II PVA PRIMER. PROVIDE R-10 INSULATION UNDER ELECTRIC WATER HEATERS.

INFILTRATION CONTROL

1. EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES, OPENINGS BETWEEN WALLS AND FOUNDATIONS, BETWEEN WALLS AND ROOF AND BETWEEN WALL PANELS, OPENINGS AT PENETRATIONS OF UTILITY SERVICES THROUGH WALLS, FLOORS, AND ROOF, AND ALL OTHERS SUCH OPENINGS IN THE BUILDING ENVELOPE, INCLUDING ACCESS PANELS INTO UNHEATED SPACES, SHALL BE SEALED, CAULKED, GASKETED OR WEATHER-STRIPPED TO LIMIT AIR INFILTRATION.
2. ALL EXTERIOR DOORS, OTHER THAN FIRE-RATED DOORS, SHALL BE DESIGNED TO LIMIT AIR INFILTRATION AROUND THEIR PERIMETER WHEN IN A CLOSED POSITION. DOORS BETWEEN RESIDENCE AND GARAGE ARE NOT CONSIDERED "FIRE-RATED" AND MUST MEET THE ABOVE REQUIREMENT.
3. ALL EXTERIOR WINDOWS SHALL BE DESIGNED TO ADMIT AIR INFILTRATION INTO OR FROM THE BUILDING ENVELOPE WHICH SHALL BE SUBSTANTIATED BY TESTING TO STANDARD ASTM E 283.73. SITE BUILT AND MILLWORK SHOP MADE WOODEN SASH ARE EXEMPT FROM TESTING BUT SHALL BE WEATHER-STRIPPED, CAULKED AND MORE TIGHTLY FITTING.
4. RECESSED LIGHT FIXTURES TO LIMIT AIR LEAKAGE PER W.S.E.C.

PIPING FOR HOT WATER / STEAM SYSTEMS OF PIPING FOR CONTINUOUSLY CIRCULATING HOT WATER SERVICE IS REQUIRED TO BE INSULATED PER THE W.S.E.C. HOT WATER PIPING SHALL BE INSULATED TO A MINIMUM OF R-3 PER W.S.E.C. R403.5.3. MECHANICAL SYSTEM PIPING SHALL BE INSULATED TO A MINIMUM R-6 PER W.S.E.C. R403.4

VAPOR BARRIERS / GROUND COVERS

AN APPROVED VAPOR BARRIER SHALL BE PROPERLY INSTALLED IN ROOF DECKS, IN ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, AND AT EXTERIOR WALLS. INSET STAPLED BATTS WITH A PERM RATING LESS THAN ONE MAY BE INSTALLED IF THE VAPOR BARRIER IS TO THE WARM SIDE, STAPLES SHALL BE PLACED NOT MORE THAN 8" O.C. AND GAPS BETWEEN THE FACING AND THE FRAMING SHALL NOT EXCEED 1/16"

VAPOR RETARDERS AT WALLS PER IRC R702.7

A GROUND COVER OF 6 MIL (0.006") BLACK POLYETHYLENE OR EQUIVALENT SHALL BE LAID OVER THE GROUND IN ALL CRAWL SPACES. THE GROUND COVER SHALL BE OVERLAPPED ONE FOOT AT EACH JOINT AND SHALL EXTEND TO THE FOUNDATION WALL.

DOORS, WINDOWS AND SKYLIGHTS

GENERAL

THE REQUIRED EGRESS DOOR MAY HAVE A MAXIMUM 7 ¾" STEP ON THE EXTERIOR SIDE FROM TOP OF THE THRESHOLD TO A MINIMUM 36" DEEP LANDING ON THE EXTERIOR SIDE OF THE DOOR. PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING, PER R311.3.1 OTHER EXTERIOR DOORS MAY HAVE A MAXIMUM (2) 7 ¾" STEPS TO A MIN. 36" DEEP LANDING. ALL GLAZING SHALL MEET THE REQUIREMENTS OF THE 2015 W.S.E.C. TABLE R402.1.1 UNLESS NOTED OTHERWISE. ALL SKYLIGHTS AND SKYWALLS SHALL HAVE LAMINATED GLASS UNLESS NOTED OTHERWISE. ALL BEDROOM EMERGENCY EGRESS WINDOWS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET. MINIMUM NET CLEAR OPERABLE WIDTH OF 20" AND A MINIMUM NET CLEAR OPENING HEIGHT OF 24", MAXIMUM SILL HEIGHT OF 44" MEASURED FROM THE FINISHED FLOOR TO THE BOTTOM OF THE CLEAR OPENING. OPERABLE WINDOWS WITH A SILL OF MORE THAN 72" ABOVE FINISHED THE GRADE OR SURFACE BELOW, TO BE A MINIMUM OF 24" ABOVE ADJACENT FINISHED FLOOR.

SAFETY GLAZING LOCATIONS PER 2018 IRC SECTION R308.4

R308.4.1 GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BI-FOLD DOORS.

R308.4.2 GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR & THE GLAZING IS EITHER WITHIN 24 INCHES OF EITHER SIDE OF THE DOOR IN THE PLANE OF THE DOOR IN A CLOSED POSITION OR ON A WALL LESS THAN 180 DEGREES FROM THE PLANE OF THE DOOR IN A CLOSED POSITION & WITHIN 24 INCHES OF THE HINGE SIDE OF AN IN-SWINGING DOOR.

R308.4.3 GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
1. THE EXPOSED AREA OF AN INDIVIDUAL PANEL IS LARGER THAN 9 SQUARE FEET;
2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18" ABOVE THE FLOOR;
3. THE TOP EDGE OF THE GLAZING IS MORE THAN 36" ABOVE THE FLOOR; AND
4. ONE OR MORE WALKING SURFACES ARE WITHIN 36" MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING.

R308.4.4 GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE.

R308.4.5 GLAZING IN WALLS, ENCLOSURES OR FENCES CONTAINING OR FACING HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND INDOOR OR OUTDOOR SWIMMING POOLS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE.

R308.4.6 GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36 INCHES (914 MM) ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS AND RAMPS.

R08.4.7 GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 36 INCHES ABOVE THE LANDING AND WITHIN A 60" HORIZONTAL ARC LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING.

FOR EXCEPTIONS SEE IRC SECTION R308.4

GENERAL

PLANS COMPLY WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE.

CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL PERMANENT CONNECTIONS HAVE BEEN MADE. IT IS THE CONTRACTORS RESPONSIBILITY TO IDENTIFY ALL DISCREPANCIES TO THE ARCHITECT AT THE TIME THEY ARE NOTED. DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS.

CODES:

ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION SHALL BE FOLLOWED
1. 2018 INTERNATIONAL RESIDENTIAL CODE (IRC) WITH WASHINGTON STATE AMENDMENTS (WSA) EXCEPT CHAPTERS 11 AND 25 THROUGH 42 ARE NOT ADOPTED. APPENDICES F,Q, & U ARE ADOPTED.
2. 2018 INTERNATIONAL BUILDING CODE (IBC) WITH WASHINGTON STATE AMENDMENTS (WSA)
3. 2018 INTERNATIONAL MECHANICAL CODE (IMC) WITH WASHINGTON STATE AMENDMENTS (WSA)
4. 2018 UNIFORM PLUMBING CODE (UPC) WITH WASHINGTON STATE AMENDMENTS.
5. 2018 INTERNATIONAL FIRE CODE WITH WASHINGTON STATE AMENDMENTS.
6. 2018 WASHINGTON STATE ENERGY CODE, RESIDENTIAL PROVISIONS (WSEC).

LOCAL JURISDICTION REQUIRES DWELLING UNIT FIRE SPRINKLER SYSTEM PER NFPA 13R AND NFPA CHAPTER 29 MONITORED FIRE ALARM SYSTEM
[X] YES
[ ] NO
(A)

SITE WORK

GENERAL

ALL FOOTINGS TO BEAR ON FIRM, UNDISTURBED EARTH BELOW ORGANIC SURFACE SOILS. ALL BACK FILL MATERIAL SHALL BE THOROUGHLY COMPACTED. FOUNDATION VENTS SHALL NOT INTERFERE WITH THE DIRECT LOAD PATH OF COLUMNS.

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

ROOF SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			OUTSIDE DESIGN TEMP HEAT/ COOL	ICE BARRIER UNDER-LAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP
	SPEED (MPH)	TOPO-GRAPHIC EFFECTS	SPECIAL WIND REGION	WIND-BORNE DEBRIS ZONE		WEATHERING	FROST LINE DEPTH	TERMITE					
25 psf	110	SEE NOTE 1			D2	MODERATE	12"	SLIGHT TO MODERATE	24/83	NO	N/A	113	53
EQUIVALENT FLUID PRESSURE = 35 P.C.F. (UNRESTRAINED WALLS) 50 P.C.F. (RESTRAINED WALLS)													

NOTES:
1. WIND EXPOSURE CATEGORY AND TOPOGRAPHIC EFFECTS (WIND SPEED-UP KZT FACTOR) SHALL BE DETERMINED ON A SITE-SPECIFIC BASIS BY THE ENGINEER OF RECORD (COMPONENTS AND CLADDING NEED NOT CONSIDER TOPOGRAPHIC EFFECTS UNLESS OTHERWISE DETERMINED BY THE ENGINEER OF RECORD).

SHEET INDEX

REGISTERED ARCHITECT 5046 JEFFREY P. deROULET STATE OF WASHINGTON 7/18/22

ARCHITECTS NORTHWEST
18915-142nd AVENUE NE SUITE 100 WOODINVILLE, WA 98072
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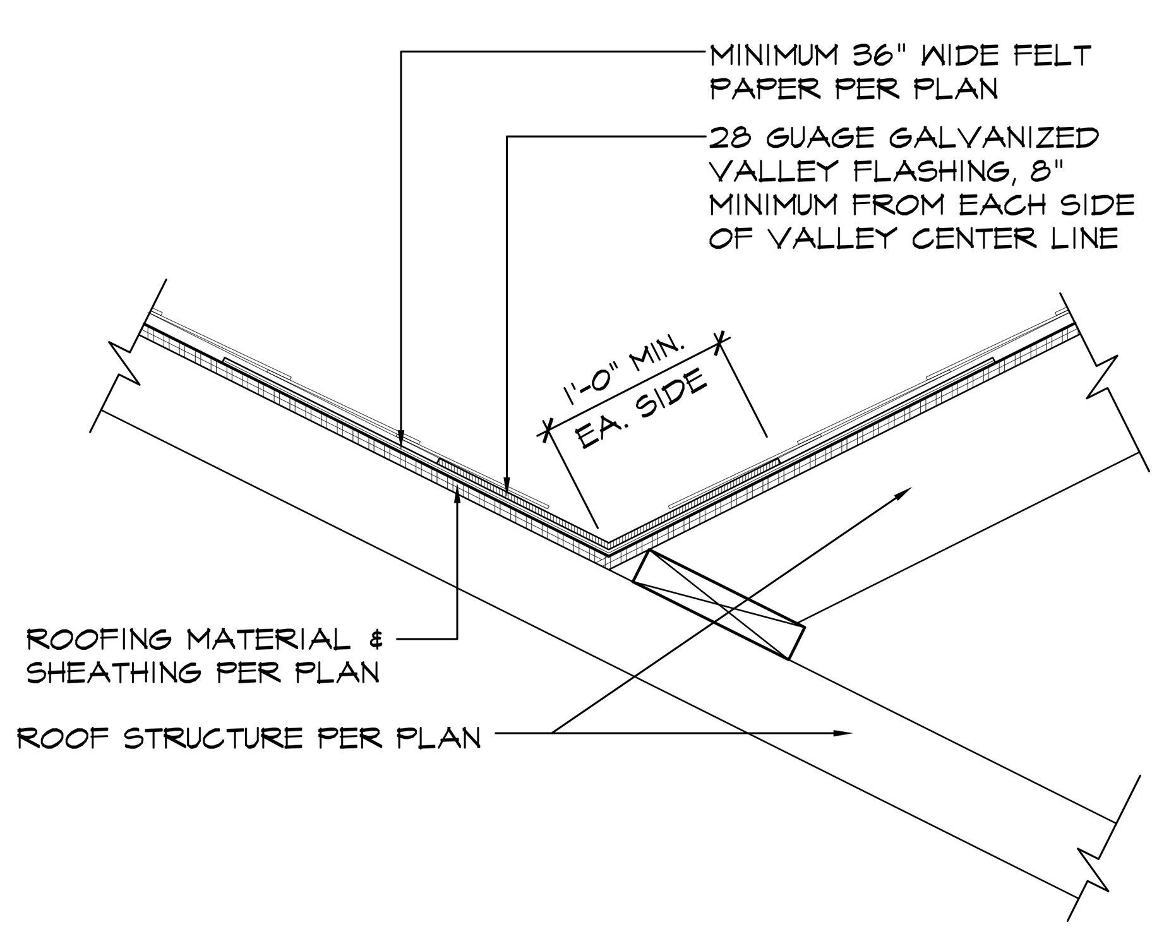
HATELY RESIDENCE
4114 83RD AVE SE, MERCER ISLAND, WA 98040
PLAN M4061A3F-2

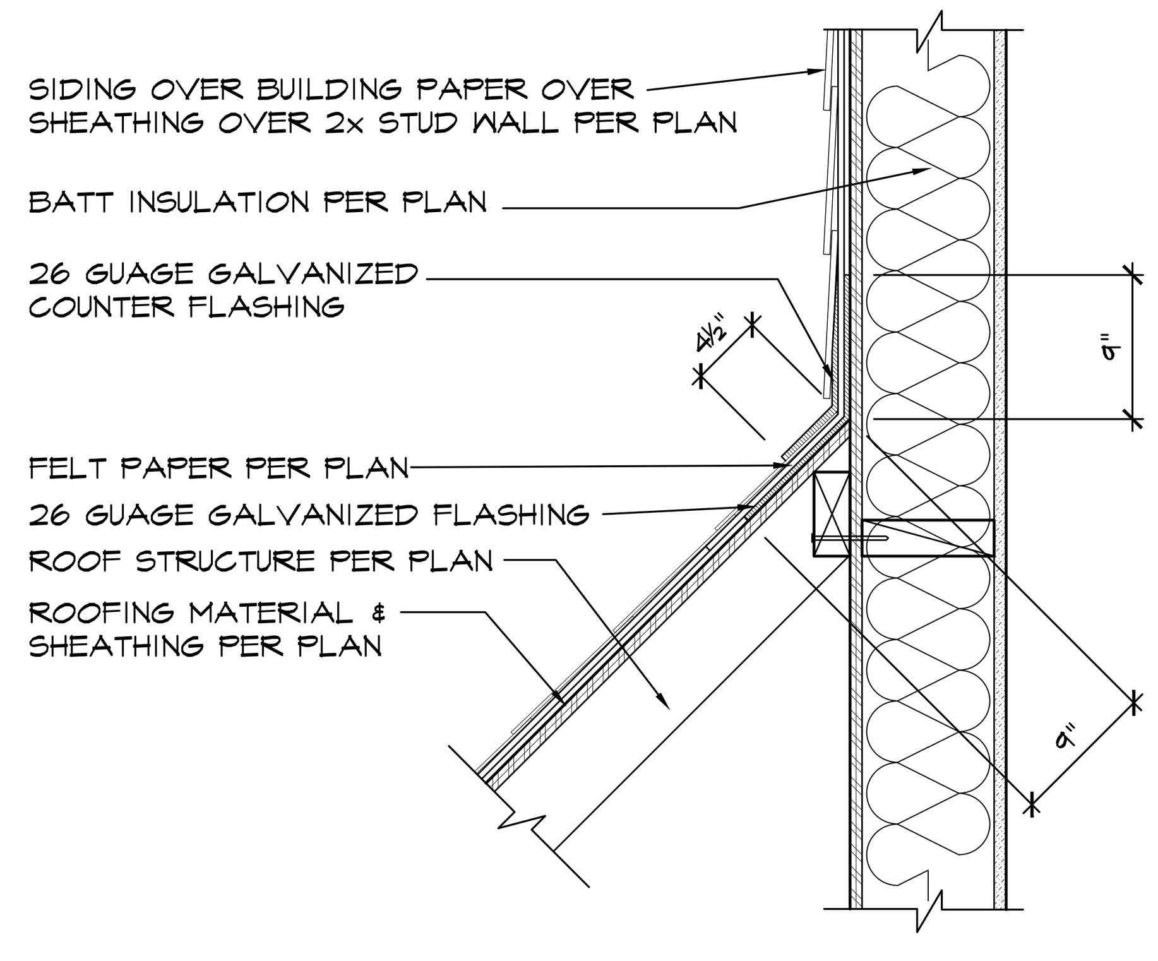
DESIGNED BY: JdeR DATE: 2012
DRAWN BY: JM DATE: 5/1/2012
PROJECT MANAGER: SARAH WEIGHT
REVISED BY: JSC DATE: 9/7/22
JSC (A) 12/6/22
LATERAL BY: M&K DATE: 9/7/22
LATERAL JOB NUMBER: 202-22014

A1 / A12

ANW WOODINVILLE OFFICE JOB NUMBER: 220006



1 ROOF VALLEY FLASHING
SCALE: NOT TO SCALE



2 ROOF TO WALL FLASHING
SCALE: NOT TO SCALE

FOUNDATION VENTILATION

Crawlspace Area:	2166 s.f.		
Ventilation Required:	2166 s.f. / 300 =		1039.7 s.i. Req'd
Use:	14" x 7"	Foundation Vents	
Vent Area =	98 s.i. - 25% reduct.,1/4"mesh =		73.5 s.i.
Vents Required =	1039.68 s.i. / Vent Area =		14.15 s.i.
Provide : 15	14" x 7"	Vents, Area =	1102.5 s.i.
Ventilation Provided =	1102.50 s.i. is Greater than		1039.7 s.i. Req'd
Use: 15	**14" x 7"**	**Foundation Vents**	

* **FOUNDATION VENTS SHALL NOT INTERFERE WITH DIRECT LOAD PATH OF COLUMNS**
* **INSTALL 6 MIL BLACK POLYETHYLENE VAPOR RETARDER GROUND COVER**
* **REQUIRED OPENINGS SHALL BE EVENLY PLACED TO PROVIDE CROSS VENTILATION, EXCEPT ONE SIDE OF THE BUILDING SHALL BE PERMITTED TO HAVE NO VENTS.**

VAPOR RETARDER

FLOOR	[ ] 4 MIL POLY	[ ] FACE STAPLED BACKED BATTS	[X] PLYWOOD W/ EXT. GLUE
WALL	[ ] 4 MIL POLY	[ ] FACE STAPLED BACKED BATTS	[X] CLASS 2 PVA PRIMER
RIM JOIST	[ ] 4 MIL POLY	[X] FACE STAPLED BACKED BATTS	[ ] CLASS 2 PVA PRIMER
CEILING	[ ] 4 MIL POLY	[ ] FACE STAPLED BACKED BATTS	[X] CLASS 2 PVA PRIMER

AIR LEAKAGE

Components of the building thermal envelope as listed in TABLE R402.4.1.1 shall be installed per manufacturer's specifications to limit air leakage rate to not exceed 3 air changes per hour (ACH)

AIR LEAKAGE CALCULATION (maximum blower test CFM)		$CFM_{50-calc}$	ACTUAL Blower test result
maximum ACH	$CFM_{50-calc}$ = BLDG VOL (ft^3) X 3 ACH / 60 min =	1921 cfm	cfm

ROOF VENTILATION

Standard Truss / Scissor Truss Roof Framing Assembly:

Roof Area : UPPER ROOF	**2260** s.f.	
Ventilation Required:	2260 s.f. x 144 / 300 =	1084.8 s.i. Req'd
Provide between 40% & 50% of the total required ventilation no more than 3 ft below the ridge or the highest point of the space. Remainder to be installed at eave vents.		
Upper Roof Ventilation:		
AF50 Roof Jack (10" x 7") =		50.00 s.i. each.
Upper Ventilation MINIMUM =	1084.8 s.i. x 0.4 / s.i. of each vent =	9 vents
Upper Ventilation MAXIMUM =	1084.8 s.i. x 0.5 / s.i. of each vent =	10 vents
Provide:	**10** -10"x7" roof jacks. Ventilation =	500.00 s.i.
Ventilation area remainder for eave vents =	584.80 s.i.	(Req'd vent.-Upper vent.)
Eave Ventilation:		
Birdblocking: (3)2.25" dia holes per bay =	5.96 s.i. per l.f. - 25% reduction =	4.47 s.i. per l.f.
Eave Ventilation Required =	584.80 s.i. / 4.47 s.i. per l.f. =	130.83 l.f.
Provide Minimum :	131 l.f. birdblocking. Ventilation =	585.57 s.i.
Minimum Ventilation Provided =	**1085.57 s.i. IS GREATER THAN :**	**1084.8 s.i. Req'd**

ROOF VENTILATION

Standard Truss / Scissor Truss Roof Framing Assembly:

Roof Area : LOWER ROOF	**569** s.f.	
Ventilation Required:	569 s.f. x 144 / 300 =	273.12 s.i. Req'd
Provide between 40% & 50% of the total required ventilation no more than 3 ft below the ridge or the highest point of the space. Remainder to be installed at eave vents.		
Upper Roof Ventilation:		
AF50 Roof Jack (10" x 7") =		50.00 s.i. each.
Upper Ventilation MINIMUM =	273.12 s.i. x 0.4 / s.i. of each vent =	3 vents
Upper Ventilation MAXIMUM =	273.12 s.i. x 0.5 / s.i. of each vent =	3 vents
Provide:	**3** -10"x7" roof jacks. Ventilation =	150.00 s.i.
Ventilation area remainder for eave vents =	123.12 s.i.	(Req'd vent.-Upper vent.)
Eave Ventilation:		
Birdblocking: (3)2.25" dia holes per bay =	5.96 s.i. per l.f. - 25% reduction =	4.47 s.i. per l.f.
Eave Ventilation Required =	123.12 s.i. / 4.47 s.i. per l.f. =	27.54 l.f.
Provide Minimum :	28 l.f. birdblocking. Ventilation =	125.16 s.i.
Minimum Ventilation Provided =	**275.16 s.i. IS GREATER THAN :**	**273.12 s.i. Req'd**

ROOF VENTILATION

Standard Truss / Scissor Truss Roof Framing Assembly:

Roof Area : GARAGE	**441** s.f.	
Ventilation Required:	441 s.f. x 144 / 300 =	211.68 s.i. Req'd
Provide between 40% & 50% of the total required ventilation no more than 3 ft below the ridge or the highest point of the space. Remainder to be installed at eave vents.		
Upper Roof Ventilation:		
AF50 Roof Jack (10" x 7") =		50.00 s.i. each.
Upper Ventilation MINIMUM =	211.68 s.i. x 0.4 / s.i. of each vent =	2 vents
Upper Ventilation MAXIMUM =	211.68 s.i. x 0.5 / s.i. of each vent =	2 vents
Provide:	**2** -10"x7" roof jacks. Ventilation =	100.00 s.i.
Ventilation area remainder for eave vents =	111.68 s.i.	(Req'd vent.-Upper vent.)
Eave Ventilation:		
Birdblocking: (3)2.25" dia holes per bay =	5.96 s.i. per l.f. - 25% reduction =	4.47 s.i. per l.f.
Eave Ventilation Required =	111.68 s.i. / 4.47 s.i. per l.f. =	24.98 l.f.
Provide Minimum :	25 l.f. birdblocking. Ventilation =	111.75 s.i.
Minimum Ventilation Provided =	**211.75 s.i. IS GREATER THAN :**	**211.68 s.i. Req'd**

SIMPLE HEATING SYSTEM SIZE

This heating system sizing is based on the Prescriptive Requirements of the 2018 Washington State Energy Code. This is for heating only. ACCA procedures for sizing cooling systems should be used to determing cooling.

Indoor Design Temperature			70		
Outdoor Design Temperature			24		
Design Temperature Difference					
Indoor - Outdoor Design Temp			46		
Conditioned Floor Area			4223		
Conditioned Volume			38429.3		
Glazing					
Sum of UA from Glazing Schedule				226.3	
Attic	**U-Factor**	**X**	**Area**	**= UA**	
R-49	0.026		2726	70.88	
Other:					
Single Rafter or Joist Vaulted Ceilings	**U-Factor**	**X**	**Area**	**= UA**	
R-38	0.027				
Other:					
Above Grade Walls	**U-Factor**	**X**	**Area**	**= UA**	
R-21 + R-10 HEADERS	0.056		3639	203.78	
Other:					
Floors	**U-Factor**	**X**	**Area**	**= UA**	
R-30	0.029				
Other: R-38	0.025		2714	67.85	
Below Grade Walls	**U-Factor**	**X**	**Area**	**= UA**	
R-21 Interior	0.042				
R-10 Continuous exterior	0.064				
Other:					
Slab Below Grade	**F-factor**	**X**	**Length**	**= UA**	
R-5 Thermal brk sl edge	0.57				
Other: R-10 Fully Insul	0.36				
Slab on Grade	**F-factor**	**X**	**Length**	**= UA**	
R-10 2' perimeter	0.54				
R-10 Fully insulated	0.36				
Other:					
Sum of UA				568.85	
Envelope Heat Load				26167	Btu / Hour
Sum of UA X Design Temperature Difference					
Air Leakage Heat Load				19092	Btu / Hour
((Volume X 0.6) X Design Outdoor Temp) X .018))					
Building Design Heat Load				45259	Btu / Hour
Air Leakage + Envelope Heat Loss					
Building and Duct Heat Load			1.1	49785	Btu / Hour
Use 1.1 if ducts are located in unconditioned space: Sum of Building Heat Loss X 1.1					
Use 1 if ducts are located in conditioned space: Sum of Building Heat Loss X 1					
Maximum Heat Equipment Output			1.25	62231	Btu / Hour
Use 1.4 for forced air furnace: Building & Duct Heat Loss x 1.4					
Use 1.25 for heat pump: Building & Duct Heat Loss x 1.25					

WHOLE-HOUSE MECHANICAL VENTILATION (PRESCRIPTIVE)

WHOLE-HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS M1505.4.1 THROUGH M1505.4.4 (WASHINGTON STATE AMENDMENTS)

- [x] WHOLE-HOUSE VENTILATION USING EXHAUST FANS (M1505.4.1.2)
- [ ] WHOLE-HOUSE VENTILATION USING SUPPLY FANS (M1505.4.1.3)
- [ ] WHOLE-HOUSE VENTILATION SYSTEM, BALANCED (M1505.4.1.4)
- [ ] WHOLE-HOUSE VENTILATION USING FURNACE INTEGRATED SUPPLY (M1505.4.1.5)

MECHANICAL VENTILATION AIRFLOW RATE PER EQUATION 15-1 (M1505.4.3) 87.23 CFM (CONTINUOUS)

VENTILATION QUALITY ADJUSTMENT PER EQUATION 15-2 (M1505.4.3.1)

- [ ] BALANCED & DISTRIBUTED (1.0 COEFFICIENT)
- [ ] BALANCED & NOT DISTRIBUTED (1.25 COEFFICIENT)
- [ ] NOT BALANCED & DISTRIBUTED (1.25 COEFFICIENT
- [x] NOT BALANCED & NOT DISTRIBUTED (1.5 COEFFICIENT)

ADJUSTED MECHANICAL VENTILATION AIRFLOW RATE 130.845 CFM (CONTINUOUS)

INTERMITTENT OFF OPERATION (M1505.4.3.2)

RUN-TIME % IN EACH 4-HOUR SEGMENT

- [ ] 50 PERCENT
- [ ] 66 PERCEINT
- [x] 75 PERCENT
- [ ] 100 PERCENT

INTERMITTENT FLOW RATE 170.099 CFM

WINDOW, SKYLIGHT & DOOR SCHEDULE

CONDITIONED FLOOR AREA: 4223 — SUM OF UA FOR HEATING SYSTEM SIZING: 226.3

SUM OF ALL GLAZING AREAS FROM BELOW: 686

EXEMPT DOOR AND WINDOW

ROOM		U-VAL	QTY	WIDTH	HEIGHT	AREA	UA
ENTRY	EXEMPT SWING DR (24 S.F. MAX.)	0.46	1	3.00	7.00	21.00	9.66
ENTRY	EXEMPT WINDOW (15 S.F. MAX.)	0.28	1	1.25	7.00	8.75	2.45
SUM OF AREA AND UA FOR HEATING SYSTEM SIZE ONLY:						**29.8**	**12.1**

EXTERIOR DOORS (OPAQUE)

ROOM	TYPE	DESCRIPTION	U-VAL	QTY	WIDTH	HEIGHT	AREA	UA
GARAGE	DOOR		0.46	1	3.00	8.00	24.00	11.04
MUD	DOOR		0.46	1	3.00	8.00	24.00	11.04
	DOOR						0.00	0.00
SUM OF AREA AND UA:							**48.0**	**22.1**
AREA WEIGHTED U = UA/AREA:								**0.46**

VERTICAL GLAZING

ROOM	TYPE	DESCRIPTION	U-VAL	QTY	WIDTH	HEIGHT	AREA	UA
ENTRY	PICTURE		0.28	1	1.25	7.00	8.75	2.45
DINING	SLIDER		0.28	1	6.00	4.50	27.00	7.56
DINING	PICTURE		0.28	1	6.00	1.50	9.00	2.52
MUD	CASE		0.28	1	2.00	4.00	8.00	2.24
KITCHEN	SLIDER		0.28	1	6.00	5.00	30.00	8.40
NOOK	S.G.D.		0.28	1	8.00	8.00	64.00	17.92
GREAT	CASE		0.28	2	3.00	4.50	27.00	7.56
GREAT	PICTURE		0.28	2	3.00	1.50	9.00	2.52
GREAT	S.G.D.		0.28	1	10.00	8.00	80.00	22.40
GUEST	S.G.D.		0.28	1	6.00	8.00	48.00	13.44
GUEST	CASE		0.28	2	2.00	5.00	20.00	5.60
BA 2	CASE		0.28	1	2.00	5.00	10.00	2.80
BA 2	CASE		0.28	1	2.00	4.00	8.00	2.24
DEN	SLIDER		0.28	1	6.00	4.50	27.00	7.56
DEN	PICTURE		0.28	1	6.00	1.50	9.00	2.52
OPEN TO ENTRY	PICTURE		0.28	3	1.50	3.00	13.50	3.78
BR 2	SLIDER		0.28	1	4.00	5.00	20.00	5.60
BR 2	CASE		0.28	1	2.00	5.00	10.00	2.80
BA 2	CASE		0.28	1	2.00	4.00	8.00	2.24
BR 3	SLIDER		0.28	1	4.00	5.00	20.00	5.60
BR 3	CASE		0.28	2	2.00	4.00	16.00	4.48
BA 3	CASE		0.28	1	2.00	4.00	8.00	2.24
BR 4	SLIDER		0.28	1	5.00	4.00	20.00	5.60
MBA	CASE		0.28	1	2.00	4.00	8.00	2.24
MBA	SLIDER		0.28	1	5.00	4.50	22.50	6.30
MBR	CASE		0.28	2	3.00	5.00	30.00	8.40
MBR	PICTURE		0.28	1	8.00	5.00	40.00	11.20
MBR	CASE		0.28	2	2.00	3.50	14.00	3.92
STAIRS	PICTURE		0.28	3	3.00	3.50	31.50	8.82
BONUS	SLIDER		0.28	2	4.00	5.00	40.00	11.20
							0.00	0.00
							0.00	0.00
							0.00	0.00
SUM OF AREA AND UA:							**686.25**	**192.15**
AREA WEIGHTED U = UA/AREA:								**0.28**

OVERHEAD GLAZING

ROOM	TYPE		U-VAL	QTY	WIDTH	HEIGHT	AREA	UA
	SKYLIGHT		0.50				0.00	0.00
	SKYLIGHT		0.50				0.00	0.00
	SKYLIGHT		0.50				0.00	0.00
	SKYLIGHT		0.50				0.00	0.00
	SKYLIGHT		0.50				0.00	0.00
	SKYLIGHT		0.50				0.00	0.00
SUM OF AREA AND UA:							**0.00**	**0.00**
AREA WEIGHTED U = UA/AREA:								**0.00**

VERTICAL GLAZING IN UNHEATED SPACES

ROOM	TYPE	DESCRIPTION	U-VAL	QTY	WIDTH	HEIGHT	AREA
GARAGE	SLIDER		0.00	1	4.00	4.00	16.00
							0.00
SUM OF VERTICAL GLAZING IN UNHEATED SPACES:							**16.00**

(not included in sum of all glazing above)

OVERHEAD GLAZING IN UNHEATED SPACES

ROOM	TYPE	DESCRIPTION	U-VAL	QTY	WIDTH	HEIGHT	AREA
	SKYLIGHT						0.00
	SKYLIGHT						0.00
SUM OF OVERHEAD GLAZING IN UNHEATED SPACES:							**0.00**

(not included in sum of all glazing above)

EXHAUST RATES

WSBC AMENDMENTS TO 2018 IRC SECTION M1505

SYMBOL	LOCATION	MINIMUM FAN REQUIREMENTS
A	Bath, Powder	Minimum 50 cfm Intermittent, 20 cfm Continuous (IRC TABLE M1505.4.4(1))
B	Kitchen	Minimum 100 cfm Intermittent, 30 cfm Continuous (IRC TABLE M1505.4.4(1)) (Range hood or down draft exhaust fan rated at min.100 cfm at 0.10" WG may be used for exhaust fan requirement.) **note**: fans in excess of 400 cfm shall provide make-up air per IRC section M1503.6
C	Whole House Fan	Flow rate per WHOLE-HOUSE MECHANICAL VENTILATION schedule

All fans to vent to outside. All other requirements of the 2018 WSEC and the WSBC amendments to the 2018 IRC section M1505 must be met.

ALARM SCHEDULE

2018 IRC SECTIONS R314 & R315

SYMBOL	DESCRIPTION	REQUIREMENTS
SA	Smoke Alarm	*110 V interconnected w/ battery backup. *Installed on each floor, in each sleeping area, and outside each separate sleeping area. Installed not less than 3 ft from the door of a bath which contains a tub or shower unless this prevents placement in a required location. *Listed in accordance with UL 217 and to comply with NFPA 72.
SA CM	Combination Smoke Alarm & Carbon Monoxide Alarm	*Installed on each floor, outside of each separate sleeping area in the immediate vicinity of the bedrooms, and in a bedroom that contains a gas fireplace in the bedroom or adjacent bathroom. *Smoke alarm requirements per above. *Combination smoke & carbon monoxide alarms listed in accordance with UL 217 & UL 2034.
HD	Heat Detector	*A heat detector or heat alarm to be installed in a central locatior in the garage and per the manufacturer's instructions. (WSBC amendments R314.2.1 & R314.2.3)

PRESCRIPTIVE ENERGY CODE COMPLIANCE

This project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. In addition, based on the size of the structure, the appropriate number of additional credits are checked.

CLIMATE ZONE 5 AND MARINE 4

	R-Value[a]	U-Factor[a]
Fenestration U-Factor[b]	n/a	0.30
Skylight U-Factor[b]	n/a	0.50
Ceiling	49	0.026
Wood Frame Wall[g,h]	21 int	0.056
Floor	30	0.029
Below Grade Wall[c,h]	10/15/21 int + 5TB	0.042
Slab[d,f] R-Value & Depth	10, 2 ft	n/a

For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38.

Table R402.1.1 footnotes included on Sheet A1.

Each dwelling unit in a residential building shall comply with sufficient options from Table R406.2 so as to achieve the following minimum number of credits:

- [ ] **1. Small Dwelling Unit: 3.0 points**
  Dwelling units less than 1500 square feet in conditioned floor area with less than 300 square feet of fenestration area. Additions to existing building that are greater than 500 square feet of heated floor area but less than 1500 square feet.
- [x] **2. Medium Dwelling Unit: 6.0 points**
  All dwelling units that are not included in #1 or #3.
- [ ] **3. Large Dwelling Unit: 7.0 points**
  Dwelling units exceeding 5000 square feet of conditioned floor area.
- [ ] **4. Additions less than 500 square feet: 1.5 credits**

ENERGY CREDIT SUMMARY TABLES

Heating Options	Fuel Normalization Descriptions	Credits	
1	Combustion heating minimum NAECA	0.0	[ ]
2	Heat pump	1.0	[x]
3	Electric resistance heat only - furnace or zonal	-1.0	[ ]
4	DHP with zonal electric resistance per option 3.4	0.5	[ ]
5	All other heating systems	-1.0	[ ]

Energy Options	Energy Credit Option Descriptions	Credits	
1.1	Efficient Building Envelope	0.5	[ ]
1.2	Efficient Building Envelope	1.0	[ ]
1.3	Efficient Building Envelope	0.5	[x]
1.4	Efficient Building Envelope	1.0	[ ]
1.5	Efficient Building Envelope	2.0	[ ]
1.6	Efficient Building Envelope	3.0	[ ]
1.7	Efficient Building Envelope	0.5	[ ]
2.1	Air Leakage Control and Efficient Ventilation	0.5	[x]
2.2	Air Leakage Control and Efficient Ventilation	1.0	[ ]
2.3	Air Leakage Control and Efficient Ventilation	1.5	[ ]
2.4	Air Leakage Control and Efficient Ventilation	2.0	[ ]
3.1	High Efficiency HVAC	1.0	[ ]
3.2	High Efficiency HVAC	1.0	[ ]
3.3	High Efficiency HVAC	1.5	[ ]
3.4	High Efficiency HVAC	1.5	[ ]
3.5	High Efficiency HVAC	1.5	[x]
3.6	High Efficiency HVAC	2.0	[ ]
4.1	High Efficiency HVAC Distribution System	0.5	[ ]
4.2	High Efficiency HVAC Distribution System	1.0	[ ]
5.1	Efficient Water Heating	0.5	[ ]
5.2	Efficient Water Heating	0.5	[ ]
5.3	Efficient Water Heating	1.0	[ ]
5.4	Efficient Water Heating	1.5	[ ]
5.5	Efficient Water Heating	2.0	[x]
5.6	Efficient Water Heating	2.5	[ ]
6.1	Renewable Electric Energy (3 credits max) 0	*1200 kwh	[ ]
7.1	Appliance Package	0.5	[x]
Total Credits		**6.0**	

4 2018 W.S.E.C. SCHEDULES
SCALE: NOT TO SCALE

REGISTERED ARCHITECT 5046 JEFFREY P. deROULET STATE OF WASHINGTON 7/18/22

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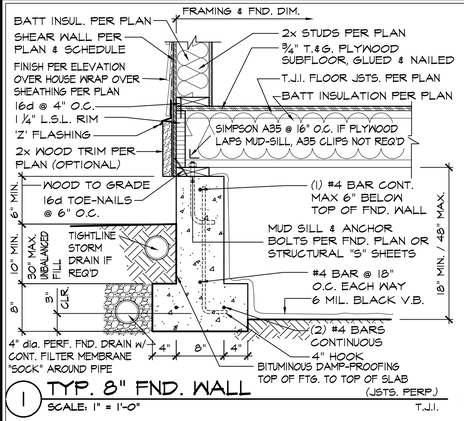
HATELY RESIDENCE
4114 83RD AVE SE, MERCER ISLAND, WA 98040
PLAN M4061A3F-2

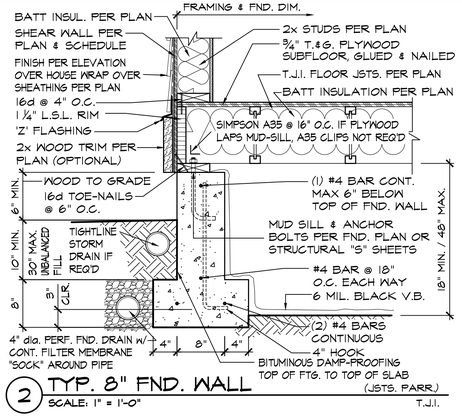
DESIGNED BY: JdeR	DATE: 2012
DRAWN BY: JM	DATE: 5/1/2012
PROJECT MANAGER: SARAH WEIGHT	
REVISED BY: JSC	DATE: 7/14/22
JSC	9/7/22
LATERAL BY: M&K	DATE: 9/7/22
LATERAL JOB NUMBER: 202-22014	

A2 / A12

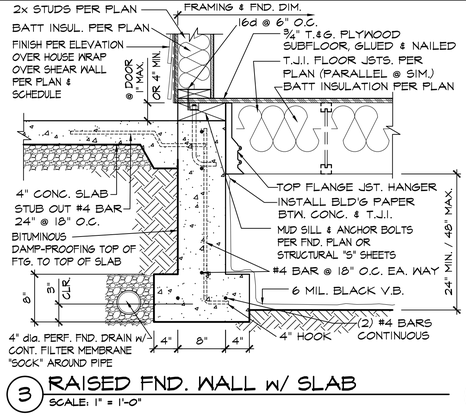
ANW WOODINVILLE OFFICE JOB NUMBER: 220006



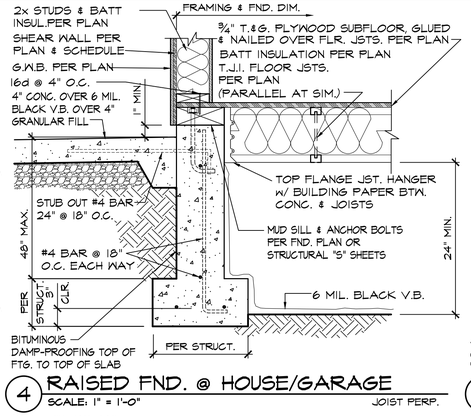
1 TYP. 8" FND. WALL
SCALE: 1" = 1'-0"



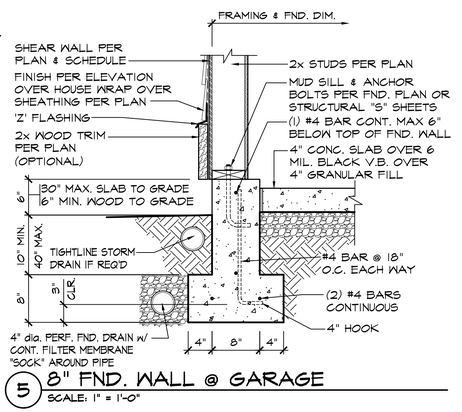
2 TYP. 8" FND. WALL
SCALE: 1" = 1'-0"



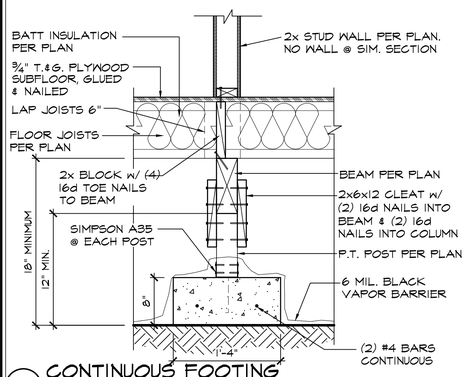
3 RAISED FND. WALL w/ SLAB
SCALE: 1" = 1'-0"



4 RAISED FND. @ HOUSE/GARAGE
SCALE: 1" = 1'-0"
JOIST PERP.

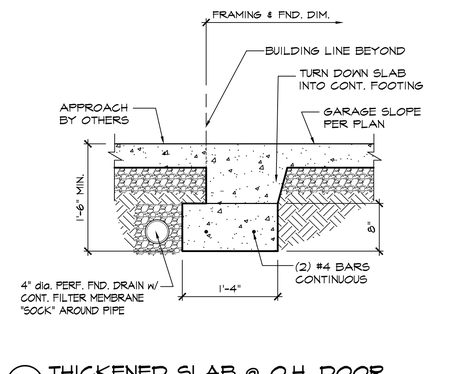


5 8" FND. WALL @ GARAGE
SCALE: 1" = 1'-0"

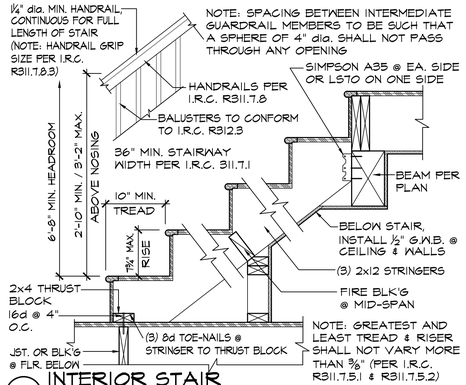


6 CONTINUOUS FOOTING
SCALE: 1" = 1'-0"
NO WALL @ SIM.

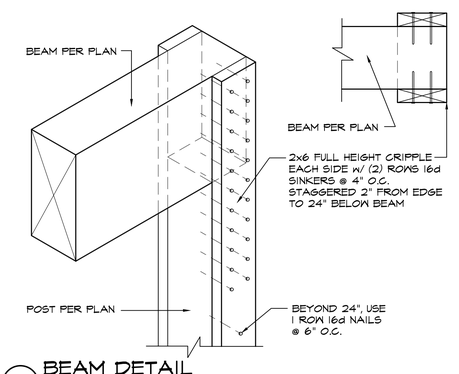
7 NOT USED
SCALE: 1" = 1'-0"



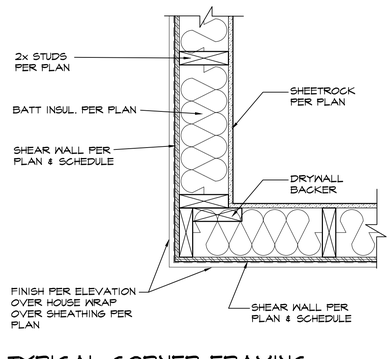
8 THICKENED SLAB @ O.H. DOOR
SCALE: 1" = 1'-0"



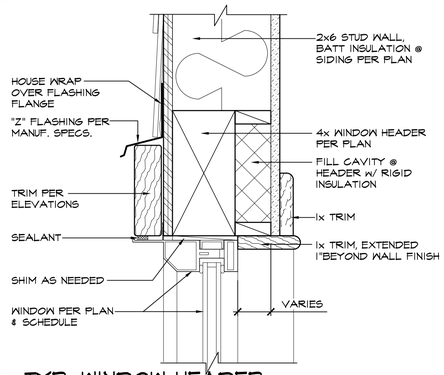
9 INTERIOR STAIR
SCALE: 1" = 1'-0"
@ FLOOR/CRAWL SPACE BELOW



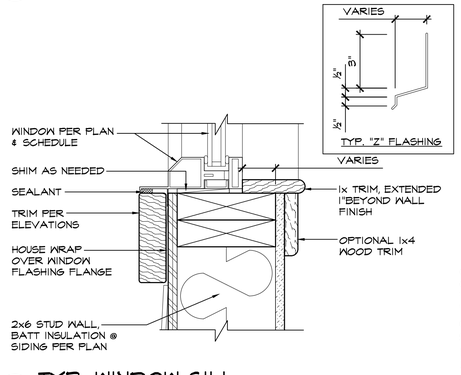
10 BEAM DETAIL
SCALE: 1 1/2" = 1'-0"



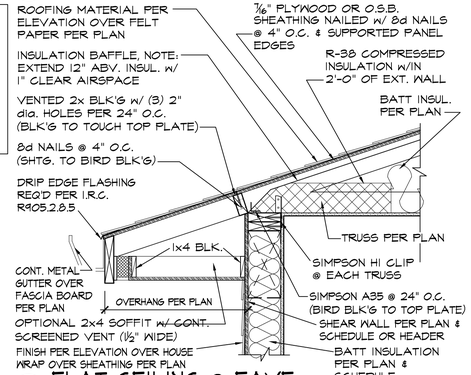
11 TYPICAL CORNER FRAMING
SCALE: 1 1/2" = 1'-0"



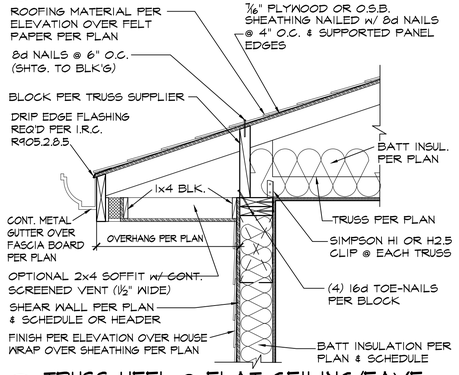
12 TYP. WINDOW HEADER
SCALE: 3" = 1'-0"



13 TYP. WINDOW SILL
SCALE: 3" = 1'-0"

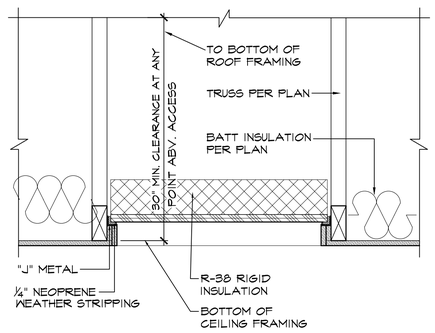


14 FLAT CEILING @ EAVE
SCALE: 1" = 1'-0"

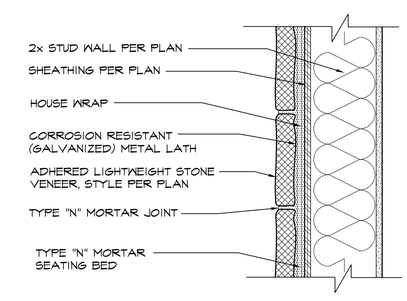


15 TRUSS HEEL @ FLAT CEILING/EAVE
SCALE: 1" = 1'-0"

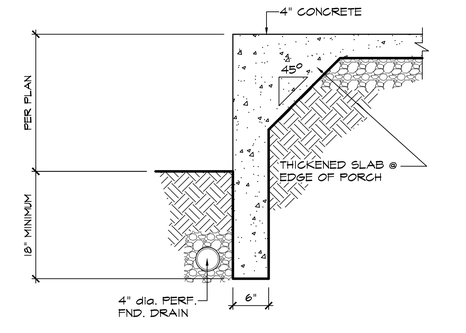
16 NOT USED
SCALE: 1" = 1'-0"



17 ATITC ACCESS
SCALE: NOT TO SCALE



18 ADHERED LIGHTWEIGHT VENEER
SCALE: NOT TO SCALE



19 FND. WALL PORCH/PATIO
SCALE: 1" = 1'-0"

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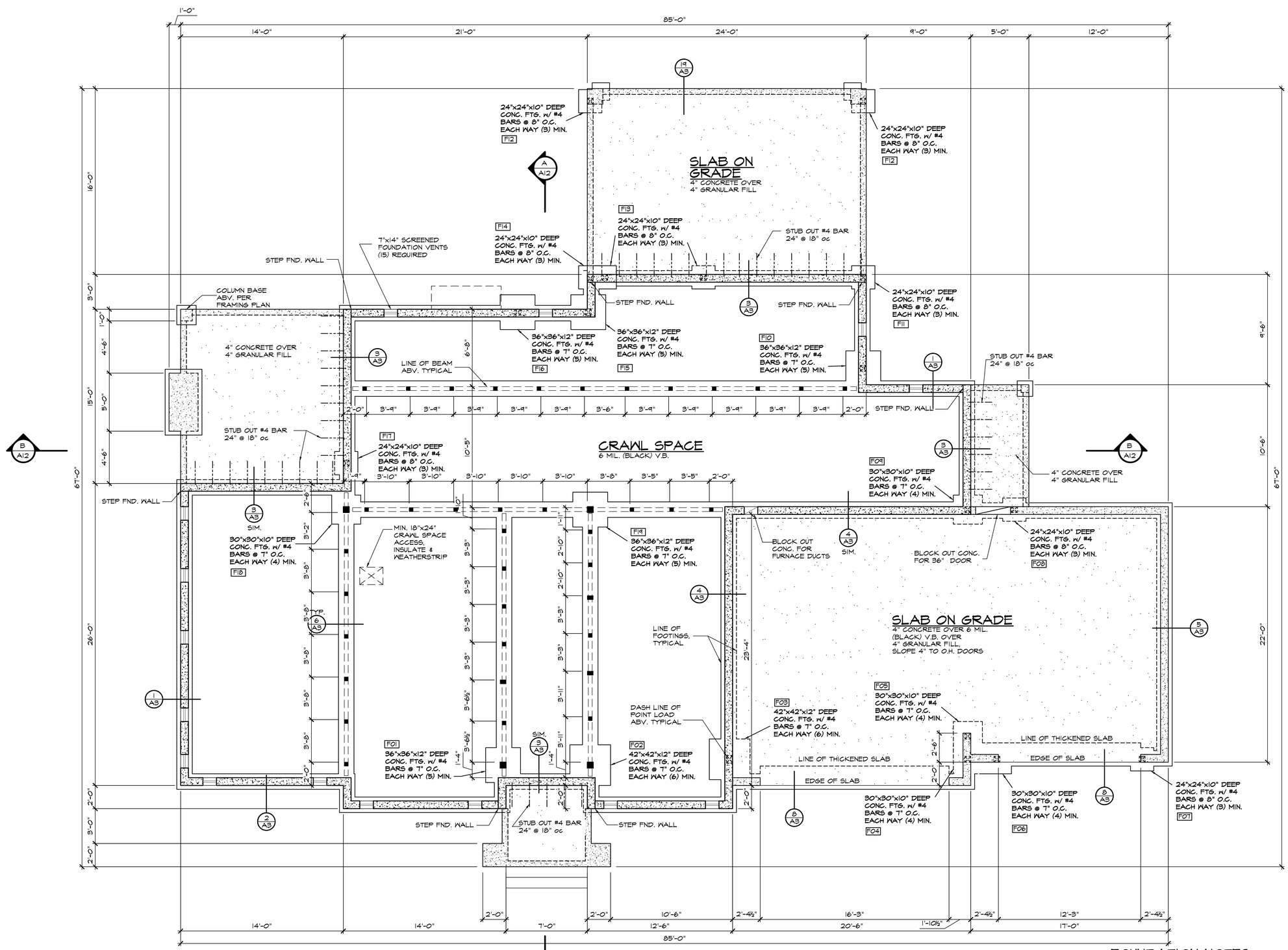
REGISTERED ARCHITECT
20446
STATE OF WASHINGTON
7/18/22

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

DESIGNED BY: JdeR	DATE: 2012
DRAWN BY: JM	DATE: 5/1/2012
PROJECT MANAGER: SARAH WEIGHT	
REVISED BY: JSC	DATE: 7/14/22
JSC	9/7/22
LATERAL BY: MEK	DATE: 9/7/22
LATERAL JOB NUMBER: 202-22014	

A3 / A12

ANW WOODINVILLE OFFICE JOB NUMBER: 220006



FOUNDATION PLAN

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

FOUNDATION NOTES:

1. CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
2. ALL FOOTINGS TO REST ON UNDISTURBED SOIL.
3. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED.
4. SOFFIT, VENT & INSULATE CANTILEVERED AREAS.
5. STEP FOUNDATION PER SITE CONDITIONS.
6. 1,500 P.S.F. ASSUMED SOIL BEARING CAPACITY SHALL BE VERIFIED IN FIELD.
7. SEE SHEET A1 FOR ADDITIONAL NOTES.
8. SEE SHEET A2 FOR FOUNDATION VENTILATION CALCULATION.

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

Your Family Architect

ARCHITECTS NORTHWEST

REGISTERED ARCHITECT 2046 STATE OF WASHINGTON 7/18/22

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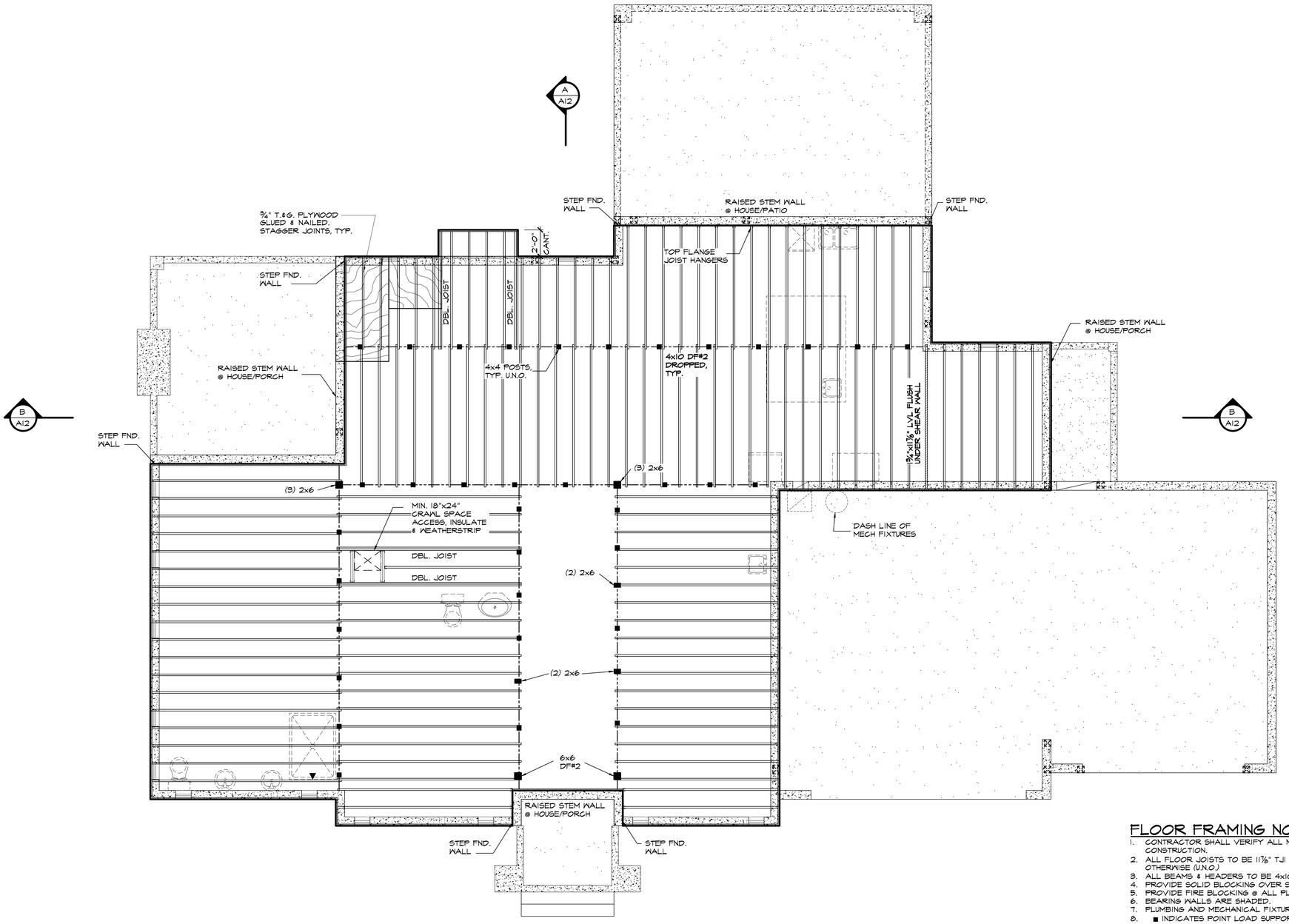
PLAN M4061A3F-2

DESIGNED BY: JdeR	DATE: 2012
DRAWN BY: JM	DATE: 5/1/2012
PROJECT MANAGER: SARAH WEIGHT	
REVISED BY: JSC	DATE: 7/14/22
JSC	9/7/22
LATERAL BY: M&K	DATE: 9/7/22
LATERAL JOB NUMBER: 202-22014	

A4 / A12

ANW WOODINVILLE OFFICE JOB NUMBER: 220006



MAIN FLOOR FRAMING PLAN

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

FLOOR FRAMING NOTES:

1. CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
2. ALL FLOOR JOISTS TO BE 11⅞" TJI 110 @ 16" ON CENTER UNLESS NOTED OTHERWISE (U.N.O.)
3. ALL BEAMS & HEADERS TO BE 4x10 DF#2 U.N.O.
4. PROVIDE SOLID BLOCKING OVER SUPPORTS.
5. PROVIDE FIRE BLOCKING @ ALL PLUMBING PENETRATIONS.
6. BEARING WALLS ARE SHADED.
7. PLUMBING AND MECHANICAL FIXTURES ARE DASHED.
8. ■ INDICATES POINT LOAD SUPPORTED BY (2) STUDS, U.N.O.
9. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED.
10. SEE SHEET A1 FOR ADDITIONAL NOTES.

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

BEAM SCHEDULE

PLAN VIEW	DESCRIPTION
	DROPPED BEAM DESIGNATED ON FLOOR PLANS.
	DROPPED BEAM DESIGNATED ON FRAMING PLANS.
	FLUSH AND TOP FLUSH BEAM DESIGNATED ON FRAMING PLANS.
	UPSET BEAM DESIGNATED ON FRAMING PLANS.

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1/18/22

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JSC 9/7/22
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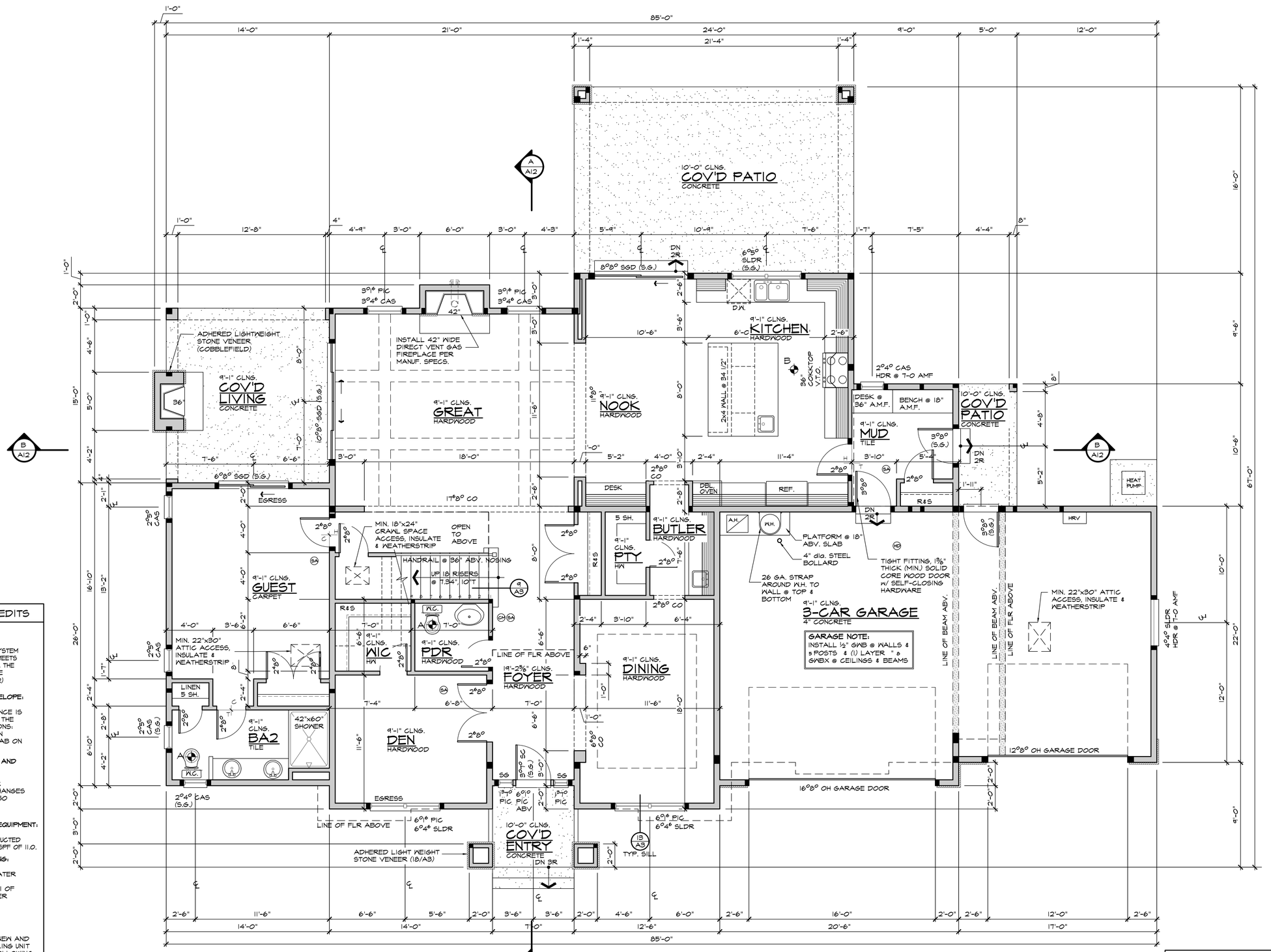
A5
A12

ANW WOODINVILLE OFFICE JOB NUMBER: 220006



MAIN FLOOR PLAN

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

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

2018 W.S.E.C. CREDITS

FUEL NORMALIZATION (SYSTEM TYPE 2)
FOR AN INITIAL HEATING SYSTEM USING A HEAT PUMP THAT MEETS FEDERAL STANDARDS FOR THE EQUIPMENT LISTED IN TABLE C403.3.2(1)C OR C403.3.2(2)

EFFICIENT BUILDING ENVELOPE: (PER OPTION 1.3)
PRESCRIPTIVE COMPLIANCE IS BASED ON R402.1.1 WITH THE FOLLOWING MODIFICATIONS: VERTICAL FENESTRATION U=0.28, FLOOR R-38, SLAB ON GRADE R-10

AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION: (PER OPTION 2.1)
REDUCE THE TESTED AIR LEAKAGE TO 3.0 AIR CHANGES PER HOUR MAXIMUM AT 50 PASCALS

HIGH EFFICIENCY HVAC EQUIPMENT: (PER OPTION 3.5)
AIR-SOURCE, CENTRALLY DUCTED HEAT PUMP WITH MINIMUM HSPF OF 11.0.

EFFICIENT WATER HEATING: (PER OPTION 5.5)
ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER III OF NEEA'S ADVANCED WATER HEATING SPECIFICATION

APPLIANCE PACKAGE: (PER OPTION 7.1)
ALL OF THE FOLLOWING APPLIANCES SHALL BE NEW AND INSTALLED IN THE DWELLING UNIT AND SHALL MEET THE FOLLOWING STANDARDS:

- DISHWASHER – ENERGY STAR RATED
- REFRIGERATOR (IF PROVIDED) – ENERGY STAR RATED
- WASHING MACHINE – ENERGY STAR RATED
- DRYER – ENERGY STAR RATED, VENTLESS DRYER WITH A MINIMUM CEF RATING OF 5.2.

AREA SUMMARY

MAIN FLOOR:	2,175 SF
UPPER FLOOR:	2,048 SF
TOTAL FINISHED AREA:	**4,223 SF**
GARAGE:	856 SF
COVERED ENTRY:	54 SF
COVERED LIVING:	214 SF
COVERED PORCH:	384 SF
COVERED PATIO:	53 SF

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HATELY RESIDENCE

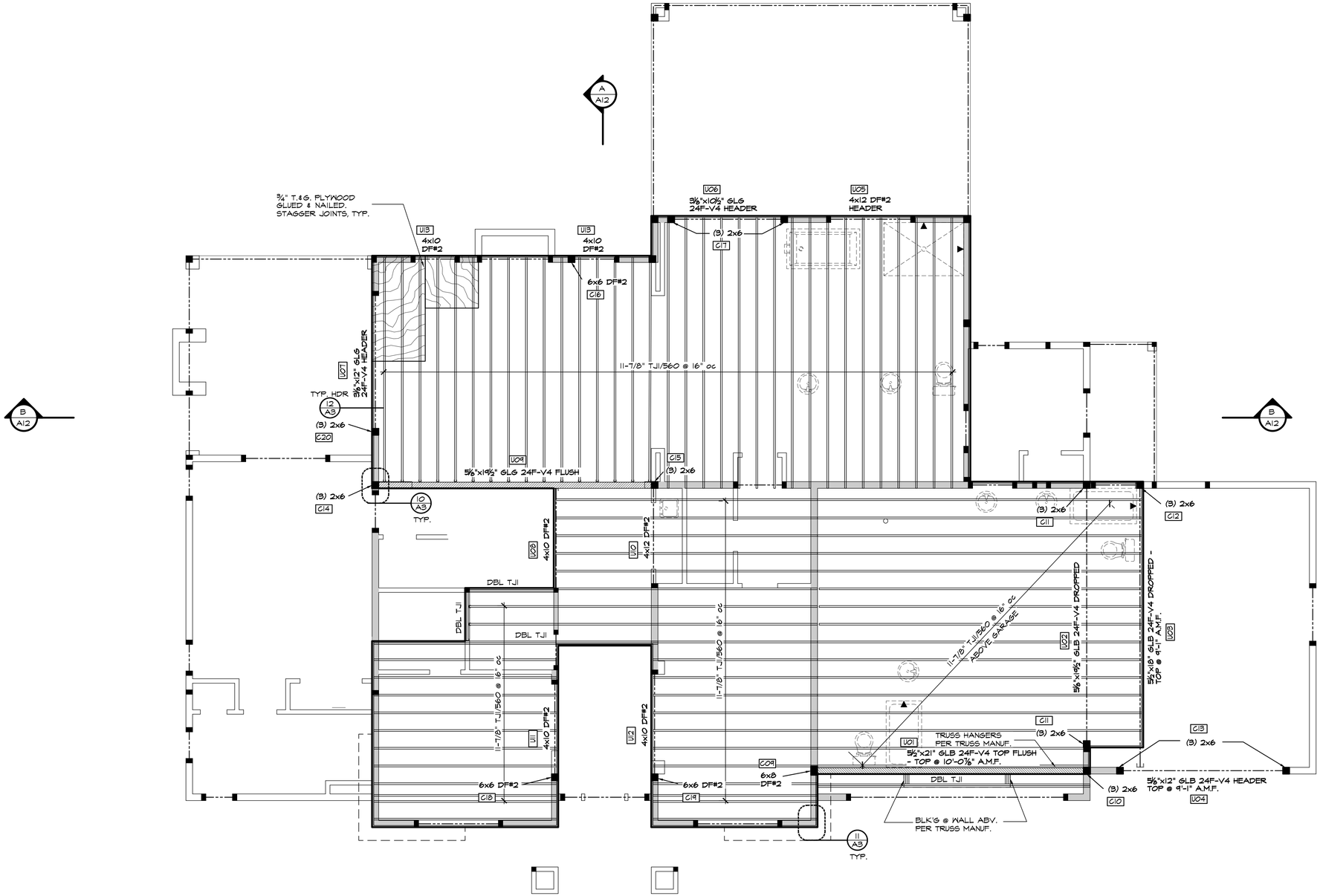
4114 83RD AVE SE, MERCER ISLAND, WA 98040

PLAN M4061A3F-2

DESIGNED BY: JdeR	DATE: 2012
DRAWN BY: JM	DATE: 5/1/2012
PROJECT MANAGER: SARAH WEIGHT	
REVISED BY: JSC	DATE: 7/14/22
JSC	9/7/22
LATERAL BY: M&K	DATE: 9/7/22
LATERAL JOB NUMBER: 202-22014	

A6 / A12

ANW WOODINVILLE OFFICE JOB NUMBER: 220006



UPPER FLOOR FRAMING PLAN

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

FLOOR FRAMING NOTES:

1. CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
2. ALL FLOOR JOISTS TO BE 11 7/8" T.J.I. SERIES 560 @ 16" ON CENTER UNLESS NOTED OTHERWISE (U.N.O.)
3. ALL BEAMS & HEADERS TO BE 4X10 DF#2 U.N.O.
4. PROVIDE SOLID BLOCKING OVER SUPPORTS.
5. PROVIDE FIRE BLOCKING @ ALL PLUMBING PENETRATIONS.
6. WINDOW HEADERS @ 8'-0" ABOVE FINISHED FLOOR @ MAIN FLOOR U.N.O. WINDOW HEADERS @ 7'-6" ABOVE FINISHED FLOOR @ UPPER FLOOR U.N.O.
7. BEARING WALLS ARE SHADED.
8. PLUMBING AND MECHANICAL FIXTURES ARE DASHED.
9. ■ INDICATES POINT LOAD SUPPORTED BY (2) STUDS, U.N.O.
10. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED.
11. SEE SHEET A1 FOR ADDITIONAL NOTES.

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

BEAM SCHEDULE

PLAN VIEW	DESCRIPTION
	DROPPED BEAM DESIGNATED ON FLOOR PLANS.
	DROPPED BEAM DESIGNATED ON FRAMING PLANS.
	FLUSH AND TOP FLUSH BEAM DESIGNATED ON FRAMING PLANS.
	UPSET BEAM DESIGNATED ON

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HATELY RESIDENCE

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PLAN M4061A3F-2

DESIGNED BY: JdeR	DATE: 2012
DRAWN BY: JM	DATE: 5/1/2012
PROJECT MANAGER: SARAH WEIGHT	
REVISED BY: JSC	DATE: 7/14/22
JSC	9/7/22
LATERAL BY: M&K	DATE: 9/7/22
LATERAL JOB NUMBER: 202-22014	

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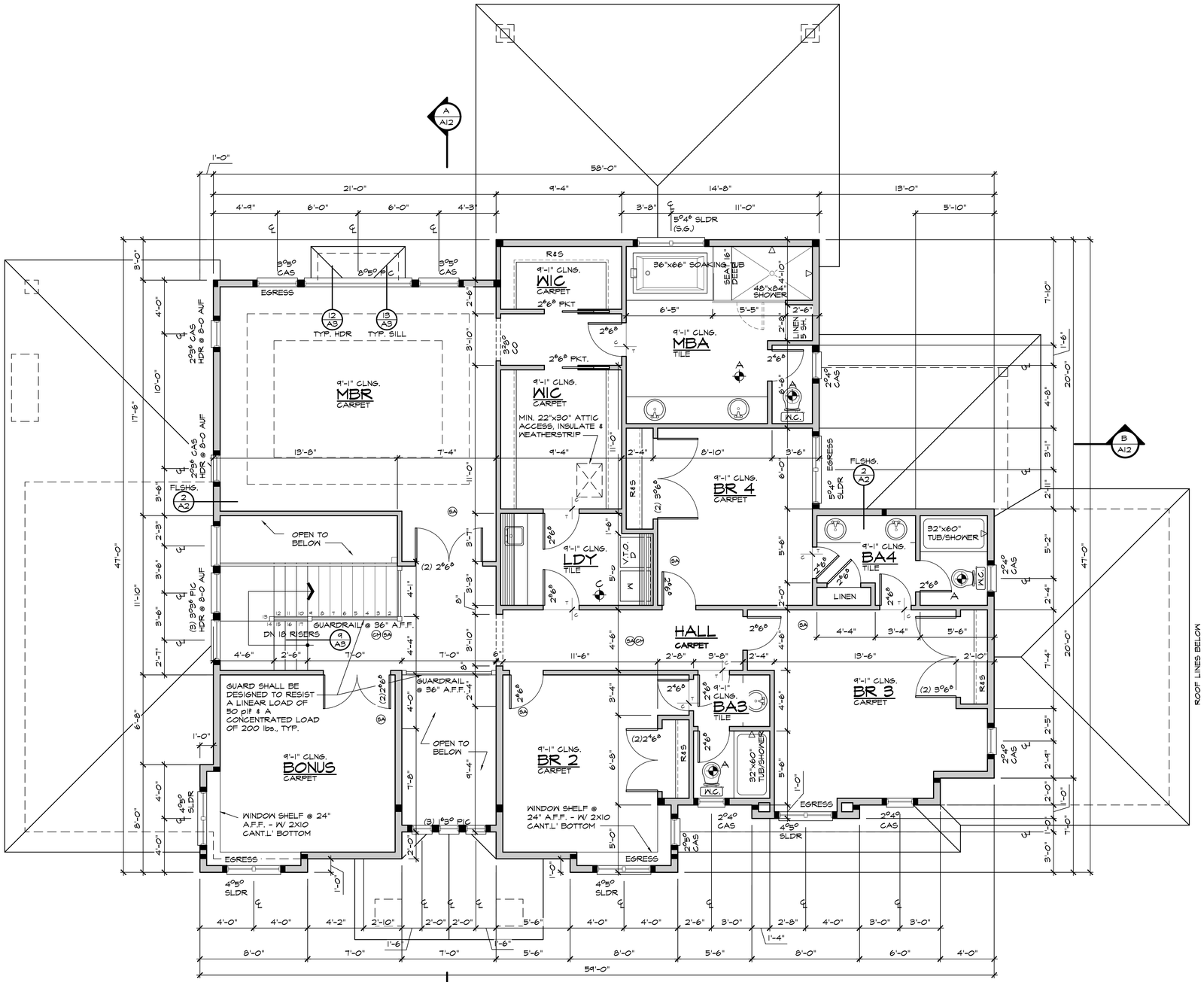
ANW WOODINVILLE OFFICE JOB NUMBER: 220006



UPPER FLOOR PLAN

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

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

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LATERAL JOB NUMBER: 202-22014	

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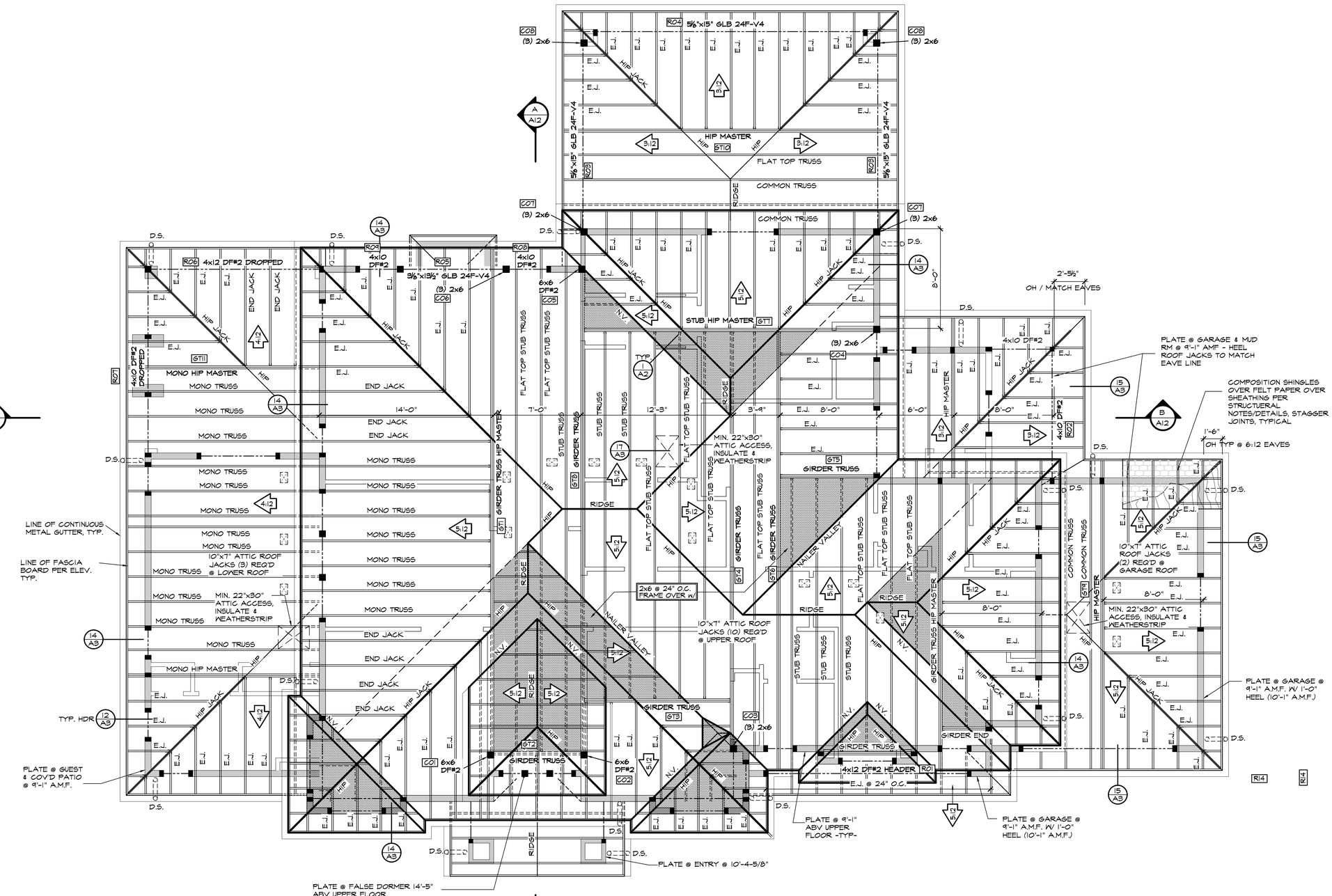
ANW WOODINVILLE OFFICE JOB NUMBER: 220006



ROOF FRAMING PLAN

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

ROOF FRAMING NOTES:

1. CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
2. ALL BEAMS & HEADERS TO BE 4x10 DF#2 U.N.O.
3. PROVIDE VENTED BLOCKING OVER SUPPORTS.
4. BEARING WALLS ARE SHADED.
5. WINDOW HEADERS @ 8'-0" ABOVE FINISHED FLOOR @ MAIN FLOOR U.N.O.
   WINDOW HEADERS @ 7'-6" ABOVE FINISHED FLOOR @ UPPER FLOOR U.N.O.
6. ALL TRUSSES:
   * SHALL CARRY MANUFACTURER'S STAMP.
   * SHALL BE INSTALLED & BRACED TO MANUFACTURERS SPECIFICATIONS.
   * SHALL HAVE DESIGN DETAILS & DRAWINGS ON SITE FOR FRAMING INSPECTION.
   * SHALL NOT BE FIELD ALTERED WITHOUT PRIOR BUILDING DEPARTMENT APPROVAL OF ENGINEERS CALCULATIONS.
   * TRUSS HANGERS SHALL BE SPECIFIED BY THE TRUSS ENGINEER.
7. ■ INDICATES POINT LOAD SUPPORTED BY (2) STUDS, U.N.O.
8. INSTALL SHEAR WALLS &/OR BLOCKING IN ROOF STRUCTURE BEFORE INSTALLING FINISH ROOFING.
9. SEE SHEET A1 FOR ADDITIONAL NOTES.
10. SEE SHEET A2 FOR ROOF VENTILATION CALCULATION(S).

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

BEAM SCHEDULE

PLAN VIEW	DESCRIPTION
	DROPPED BEAM DESIGNATED ON FLOOR PLANS.
	DROPPED BEAM DESIGNATED ON FRAMING PLANS.
	FLUSH AND TOP FLUSH BEAM DESIGNATED ON FRAMING PLANS.
	UPSET BEAM DESIGNATED ON FRAMING PLANS.

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PLAN M4061A3F-2

DESIGNED BY:	DATE:
JdeR	2012
DRAWN BY:	DATE:
JM	5/1/2012
PROJECT MANAGER:	
SARAH WEIGHT	
REVISED BY:	DATE:
JSC	7/14/22
JSC	9/7/22
LATERAL BY:	DATE:
M&K	9/7/22
LATERAL JOB NUMBER:	
202-22014	

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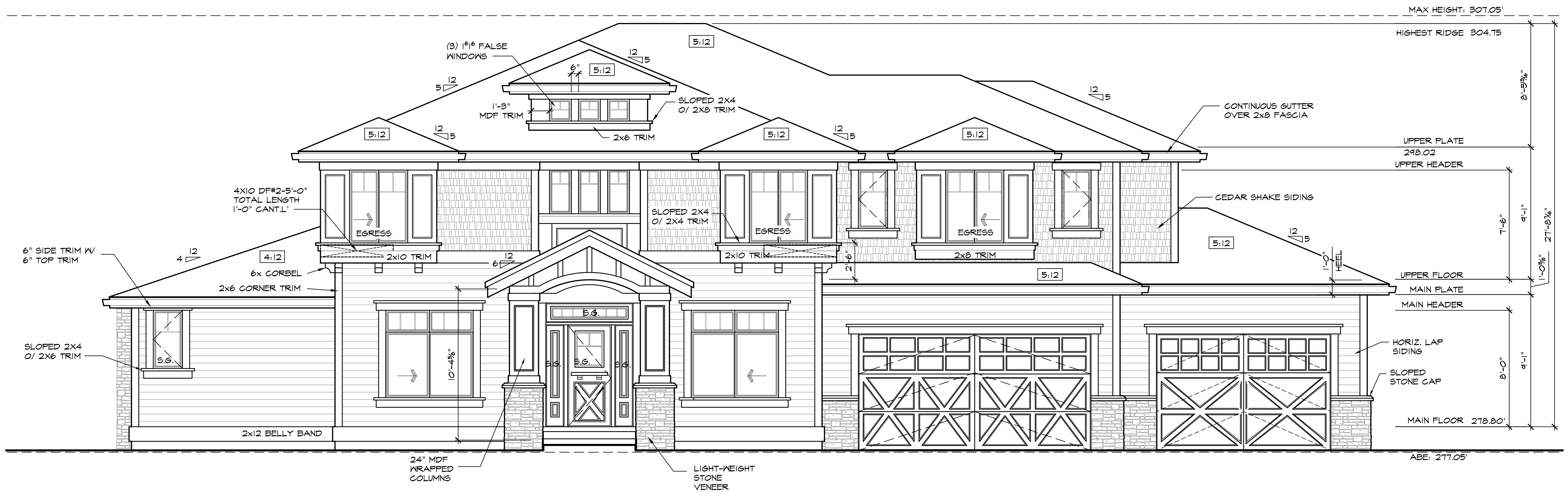
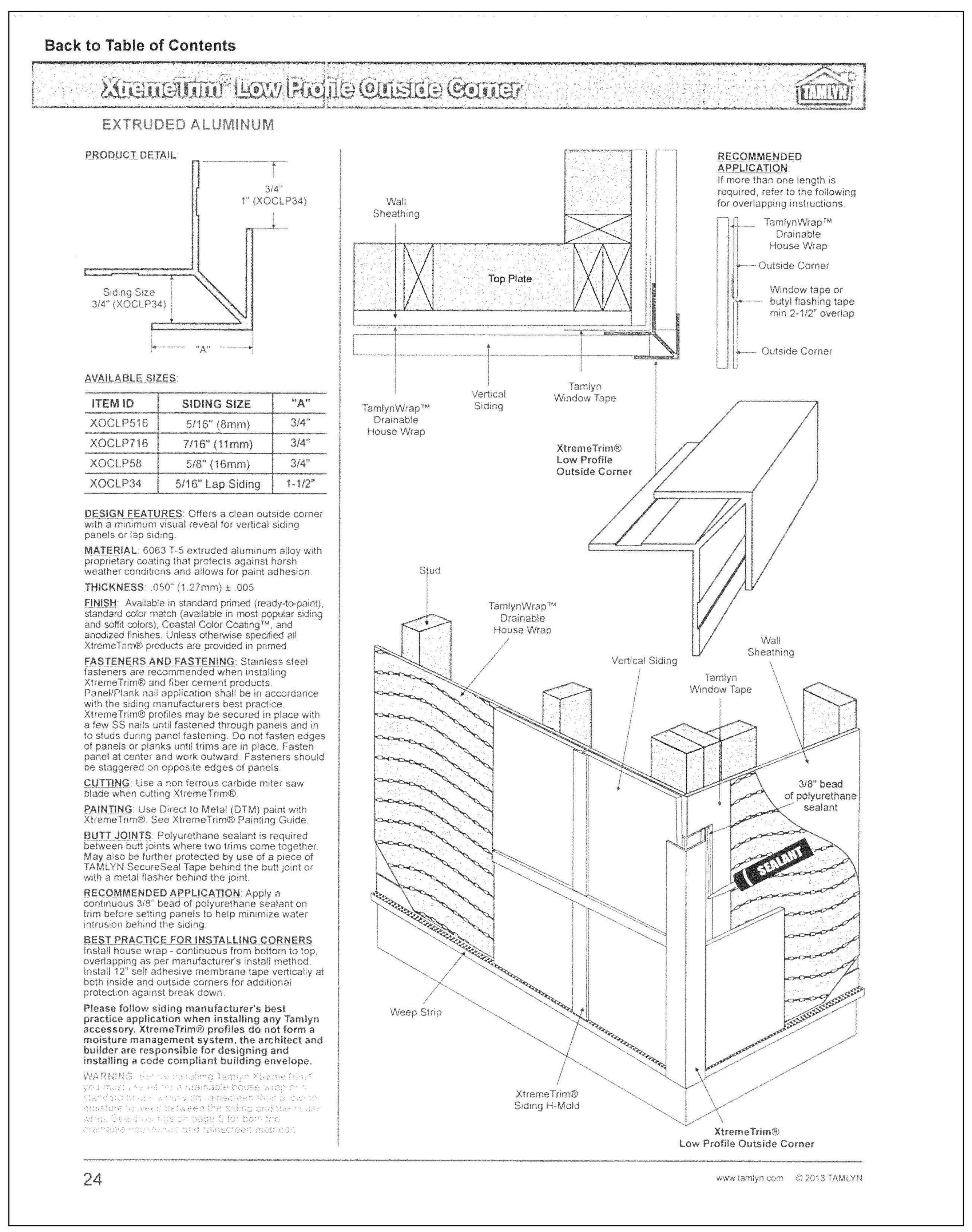
A12

ANW WOODINVILLE OFFICE JOB NUMBER:
220006



FRONT ELEVATION

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


Back to Table of Contents

XtremeTrim® Low Profile Outside Corner

EXTRUDED ALUMINUM

PRODUCT DETAIL:

3/4"
1" (XOCLP34)

Siding Size
3/4" (XOCLP34)

"A"

Wall Sheathing

Top Plate

TamlynWrap™ Drainable House Wrap

Vertical Siding

Tamlyn Window Tape

RECOMMENDED APPLICATION: If more than one length is required, refer to the following for overlapping instructions.

TamlynWrap™ Drainable House Wrap

Outside Corner

Window tape or butyl flashing tape min 2-1/2" overlap

Outside Corner

XtremeTrim® Low Profile Outside Corner

AVAILABLE SIZES:

ITEM ID	SIDING SIZE	"A"
XOCLP516	5/16" (8mm)	3/4"
XOCLP716	7/16" (11mm)	3/4"
XOCLP58	5/8" (16mm)	3/4"
XOCLP34	5/16" Lap Siding	1-1/2"

DESIGN FEATURES: Offers a clean outside corner with a minimum visual reveal for vertical siding panels or lap siding.

MATERIAL: 6063 T-5 extruded aluminum alloy with proprietary coating that protects against harsh weather conditions and allows for paint adhesion.

THICKNESS: .050" (1.27mm) ± .005

FINISH: Available in standard primed (ready-to-paint), standard color match (available in most popular siding and soffit colors), Coastal Color Coating™, and anodized finishes. Unless otherwise specified all XtremeTrim® products are provided in primed.

FASTENERS AND FASTENING: Stainless steel fasteners are recommended when installing XtremeTrim® and fiber cement products. Panel/Plank nail application shall be in accordance with the siding manufacturers best practice. XtremeTrim® profiles may be secured in place with a few SS nails until fastened through panels and in to studs during panel fastening. Do not fasten edges of panels or planks until trims are in place. Fasten panel at center and work outward. Fasteners should be staggered on opposite edges of panels.

CUTTING: Use a non ferrous carbide miter saw blade when cutting XtremeTrim®.

PAINTING: Use Direct to Metal (DTM) paint with XtremeTrim®. See XtremeTrim® Painting Guide.

BUTT JOINTS: Polyurethane sealant is required between butt joints where two trims come together. May also be further protected by use of a piece of TAMLYN SecureSeal Tape behind the butt joint or with a metal flasher behind the joint.

RECOMMENDED APPLICATION: Apply a continuous 3/8" bead of polyurethane sealant on trim before setting panels to help minimize water intrusion behind the siding.

BEST PRACTICE FOR INSTALLING CORNERS: Install house wrap - continuous from bottom to top, overlapping as per manufacturer's install method. Install 12" self adhesive membrane tape vertically at both inside and outside corners for additional protection against break down.

Please follow siding manufacturer's best practice application when installing any Tamlyn accessory. XtremeTrim® profiles do not form a moisture management system, the architect and builder are responsible for designing and installing a code compliant building envelope.

WARNING: [illegible]

Stud

TamlynWrap™ Drainable House Wrap

Vertical Siding

Tamlyn Window Tape

Wall Sheathing

3/8" bead of polyurethane sealant

SEALANT

Weep Strip

XtremeTrim® Siding H-Mold

XtremeTrim® Low Profile Outside Corner

24

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(1) SIDING CORNER DETAIL

SCALE: NOT TO SCALE

ELEVATION NOTES:

1. VERIFY SHEAR WALL NAILING & HOLDOWNS PER PLAN PRIOR TO INSTALLING SIDING.
2. MASONRY & WOOD FRAME CHIMNEYS ARE TO BE CONSTRUCTED PER I.R.C. CHAPTER 10.
3. CAULK ALL EXTERIOR JOINTS & PENETRATIONS.
4. PROVIDE APPROVED CORROSION RESISTANT FLASHING AT EXTERIOR WALL ENVELOPE PER I.R.C. R703.8
5. PROVIDE FLASHING AT ROOF PENETRATIONS PER I.R.C. R903.2 & R903.2.1
6. PROVIDE WEATHER STRIPPING AT ALL EXTERIOR & GARAGE-INTERIOR DOORS.
7. PROVIDE CONTINUOUS GUTTERS & DOWNSPOUTS @ ALL EAVES, TYP.
8. ADDRESS OR HOUSE NUMBER TO BE POSTED AND PLAINLY VISIBLE FROM THE STREET FRONTAGE. HUMBERS TO BE MIN. 4" HIGH WITH ½" WIDE STROKE & CONTRASTING BACKGROUND.
9. PROVIDE STAIRWAY ILLUMINATION PER I.R.C. R303.6
10. SEE COVERSHEET FOR ADDITIONAL NOTES.

LEFT ELEVATION

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

REGISTERED ARCHITECT
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JEFFREY P. deROULET
STATE OF WASHINGTON
7/18/22

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HATELY RESIDENCE

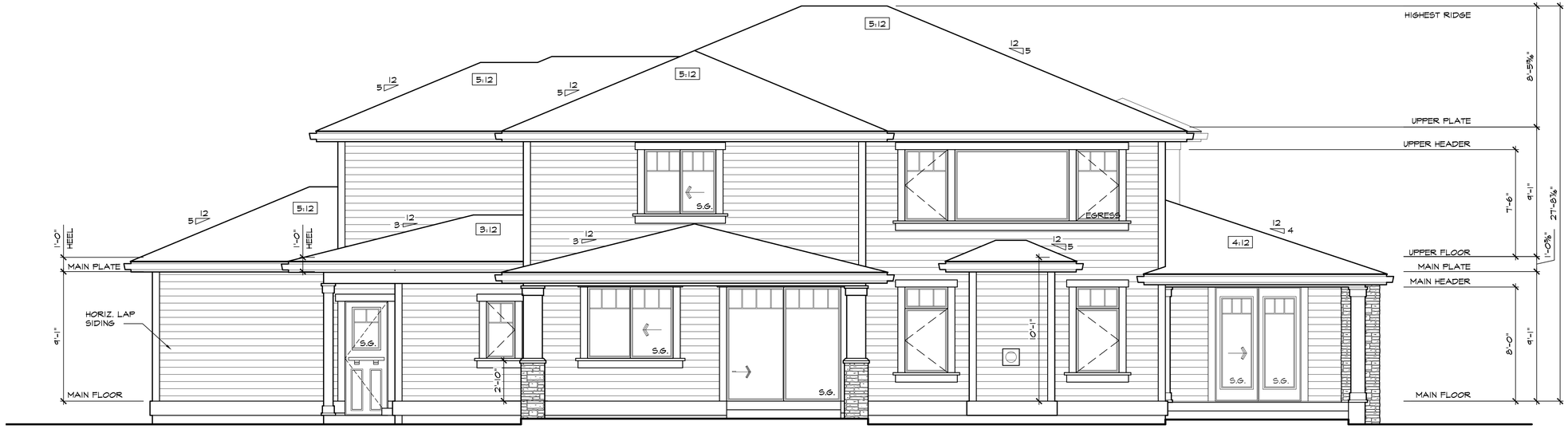
4114 83RD AVE SE, MERCER ISLAND, WA 98040

PLAN M4061A3F-2

DESIGNED BY: JdeR	DATE: 2012
DRAWN BY: JM	DATE: 5/1/2012
PROJECT MANAGER: SARAH WEIGHT	
REVISED BY: JSC	DATE: 7/14/22
JSC	9/7/22
LATERAL BY: M&K	DATE: 9/7/22
LATERAL JOB NUMBER: 202-22014	

A10 / A12

ANW WOODINVILLE OFFICE JOB NUMBER: 220006



REAR ELEVATION

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

ELEVATION NOTES:

1. VERIFY SHEAR WALL NAILING & HOLDOWNS PER PLAN PRIOR TO INSTALLING SIDING.
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RIGHT ELEVATION

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

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REVISED BY: JSC	DATE: 7/14/22
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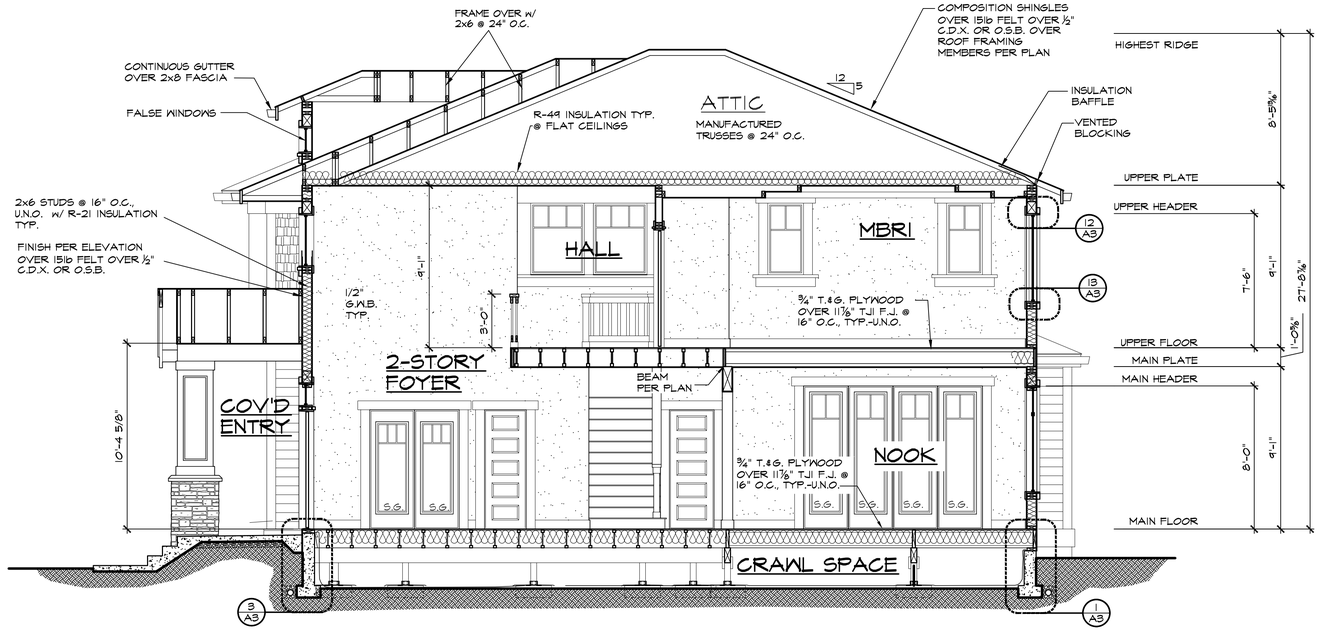
LATERAL JOB NUMBER: 202-22014	

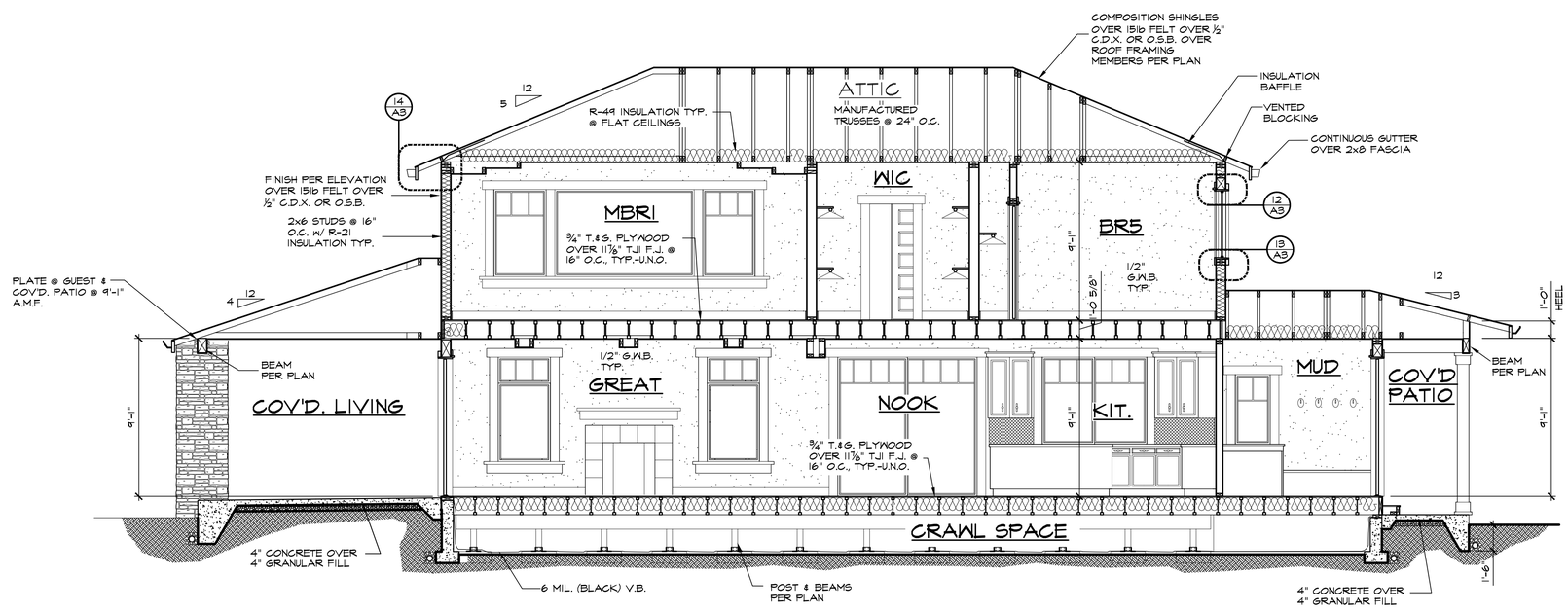
A11
A12

ANW WOODINVILLE OFFICE JOB NUMBER: 220006



A BUILDING SECTION

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



B BUILDING SECTION

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

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REGISTERED ARCHITECT 2046 STATE OF WASHINGTON 7/18/22

HATELY RESIDENCE

4114 83RD AVE SE, MERCER ISLAND, WA 98040

PLAN M4061A3F-2

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DRAWN BY: JM	DATE: 5/1/2012
PROJECT MANAGER: SARAH WEIGHT	
REVISED BY: JSC	DATE: 7/14/22
JSC	9/7/22
LATERAL BY: M&K	DATE: 9/7/22
LATERAL JOB NUMBER: 202-22014	

A12 / A12

ANW WOODINVILLE OFFICE JOB NUMBER: 220006

LOADING AND DESIGN PARAMETERS

GRAVITY DESIGN LOADS:

DEAD LOAD (PSF):

ROOF TRUSS TOP CHORD :	10
ROOF TRUSS BOTTOM CHORD :	7
FLOOR (I-JOISTS) :	10
FLOOR (TRUSSES) :	15
TILE FLOORS :	10

SNOW LOAD:

GROUND SNOW LOAD (P_g) (PSF) :	25
SNOW EXPOSURE FACTOR (C_e) :	0.9
SNOW LOAD IMPORTANCE FACTOR (I) :	1.0
THERMAL FACTOR (C_t) :	1.2

LATERAL DESIGN LOADS:

WIND LOAD: (IBC 1609)

SPEED (V_{ult}) (MPH) :	100
WIND RISK CATEGORY :	II
IMPORTANCE FACTOR (I_w) :	1.0
EXPOSURE CATEGORY :	B
INTERNAL PRESSURE COEFF. (GC_{pi}) :	±0.18
TOPOGRAPHIC FACTOR (K_{zt}) :	1.3

SEISMIC LOAD: (IBC 1613)

SEISMIC RISK CATEGORY :	II
SEISMIC IMPORTANCE FACTOR (I_e) :	1.0
MAPPED SPECTRAL RESPONSE :	
S_{DS}: 1.419 S_{D1}: 0.493	
SITE CLASS :	C
SPECTRAL RESPONSE COEFF. :	
S_{DS}: 1.135 S_{D1}: 0.493	
SEISMIC DESIGN CATEGORY:	D
BASIC SEISMIC-FORCE-RESISTING SYS :	
LIGHT FRAMED WALLS w/ WOOD STRUCTURAL PANELS	
ULTIMATE BASE SHEAR:	
TRANS: 25k LONG: 23k	
SEISMIC RESPONSE COEFF. (C_s) :	
TRANS: 0.175 LONG: 0.175	
RESPONSE MODIFICATION FACTOR (R) :	
TRANS: 6.5 LONG: 6.5	
ANALYSIS PROCEDURE USED:	
EQUIVALENT LATERAL FORCE	

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.I) HOLD-DOWN
HD-5	SIMPSON CS16 STRAP TIE (14" END LENGTH)
HD-6	SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)
HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

LATERAL BRACING NOTES

THIS HOME HAS BEEN ENGINEERED TO RESIST LATERAL FORCES RESULTING FROM:
100 MPH WIND SPEED, EXP. B
(ASCE 7-16 WIND MAP, PER IRC R301.2.1.1)
RISK CAT. 2 & SEISMIC CAT. D2.

110 MPH WIND IN 2018 IRC MAP

ENGINEERED DESIGN WAS COMPLETED PER 2018 IBC (SECTION 1604 & 1613) & ASCE 7-16, AS PERMITTED BY R301.1.3 OF THE 2018 IRC. ACCORDINGLY, THIS HOME, AS DOCUMENTED AND DETAILED HEREWITHIN, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES, AND DOES NOT NEED TO CONFORM TO THE PRESCRIPTIVE PROVISIONS OF R602.10.

STANDARD EXTERIOR WALL SHEATHING SPECIFICATIONS
(INTERIOR WALL SPECIFICATION WHERE NOTED ON PLANS)

- 7/16" OSB OR 15/32" PLYWOOD:

  FASTEN SHEATHING W/ 2½"x0.131" NAILS @ 6"O.C. AT ALL SUPPORTED PANEL EDGES AND 12" O.C. IN THE PANEL FIELD. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED PER THIS SPECIFICATION U.N.O. ON PLANS.

3" o.c. EDGE NAILING
(WHERE NOTED ON PLANS)

- 7/16" OSB OR 15/32" PLYWOOD:

  ONLY AT LOCATIONS INDICATED ON PLANS - SHEATHE WALL SHOWN WITH 7/16" OSB. FASTEN SHEATHING W/ 2½"x0.131" NAILS @ 3" O.C. AT EDGES AND 12" O.C. AT CENTER. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE AND 3" O.C. FASTENING.

NOTES:

1. LATERAL ANALYSIS ASSUMES STUD SPACING @ 16" o.c.
2. ALL SHEAR WALLS SHALL HAVE DOUBLE TOP PLATES FASTENED TOGETHER W/ 3"x0.131" NAILS @ 8" O.C. USE (12)8d"x0.135" NAILS AT EACH LAP SPLICE, (6) EACH SIDE OF JOINT (TYP. U.N.O.)
3. ALL EXTERIOR WALLS ARE CONTINUOUSLY SHEATHED.
4. ALL INTERIOR SHEAR WALLS AND EXTERIOR WALLS ARE SHEATHED ABOVE AND BELOW OPENINGS.
5. TYP. SILL PLATE: 2x P.T. PLATE W/ ⅝" DIA. A.B. W/ 7" MIN EMBED. @ 6'-0" O.C. W/ 3"x3"x¼" PLATE WASHER. PROVIDE (2) PER PLATE, MIN. 12" FROM EACH END.

GENERAL STRUCTURAL NOTES

DESIGN PARAMETERS

- DESIGN IS BASED ON 2018 INTERNATIONAL RESIDENTIAL CODE & 2018 INTERNATIONAL BUILDING CODE
- WOOD FRAME ENGINEERING IS BASED ON NDS, "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" - LATEST EDITION.

GENERAL FRAMING

- ALL FRAMING LUMBER SHALL BE KILN DRIED TO 15% MC (KD-15).
- ALL TYP. NAIL FASTENER REQUIREMENTS ARE NOTED IN GENERAL NOTES, IN DETAILS, OR ON PLANS. ALL NAILS SPECIFIED ARE MIN DIAMETER AND LENGTH REQUIRED FOR CONNECTION. ALL HANGER NAILS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS FOR MAX CHARTED CAPACITY. NOTE: HANGERS USE COMMON NAIL DIAMETERS NOT TYPICAL FRAMING GUN NAILS.
- REFER TO IRC FASTENING SCHEDULE TABLE R602.3(1) FOR ALL CONNECTIONS, TYP. U.N.O.

FLOOR FRAMING

- FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED 'STURD-I-FLOOR' 24" O.C. EXPOSURE 1 (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS W/ GLUE AND 2 ½" x 0.131" NAILS @ 6"O.C. @ PANEL EDGES & @ 12"O.C. FIELD.

ROOF FRAMING

- FASTEN EACH ROOF TRUSS TO TOP PLATE W/ (4) 3"x0.131" TOENAILS (MIN.) & (1) 'SIMPSON' SDWC15600 SCREW @ ALL BEARING POINTS. PROVIDE (2) 'SIMPSON' SDWC15600 SCREWS AT 2-PLY GIRDER TRUSSES, (3) 'SIMPSON' SDWC15600 SCREWS AT 3-PLY GIRDER TRUSSES AT ALL BEARING POINTS.
- FASTEN EACH ROOF RAFTER TO TOP PLATE WITH (1) 'SIMPSON' SDWC15600 SCREW. PROVIDE (2) 'SIMPSON' SDWC15600 SCREWS AT FLUSH BEAMS IN THE ROOF - AT ALL BEARING POINTS.
- ROOF SHEATHING SHALL BE 7/16" A.P.A. RATED SHEATHING 24/16 EXPOSURE 1 (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS W/ 2 ½" x 0.131" NAILS @ 6"O.C. AT PANEL EDGES & @ 12" O.C. AT INTERMEDIATE SUPPORTS. ROOF SHEATHING SHALL EXTEND BELOW ALL INSTANCES OF OVERFRAMING. BLOCKING SHALL BE INSTALLED AS REQUIRED TO LIMIT ROOF SHEATHING SPANS TO 24" MAX.
- WITHIN 48" OF ALL ROOF EDGES, RIDGES, & HIPS FASTEN ROOF SHEATHING FIELDS PER EDGE NAILING SPEC.

seal:

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M&K project number: 202-22014

project mgr: RJZ
drawn by: JCL
issue date: 07-08-22

REVISIONS:

date:	initial:

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LATERAL DESIGN NOTES

HATELY RESIDENCE
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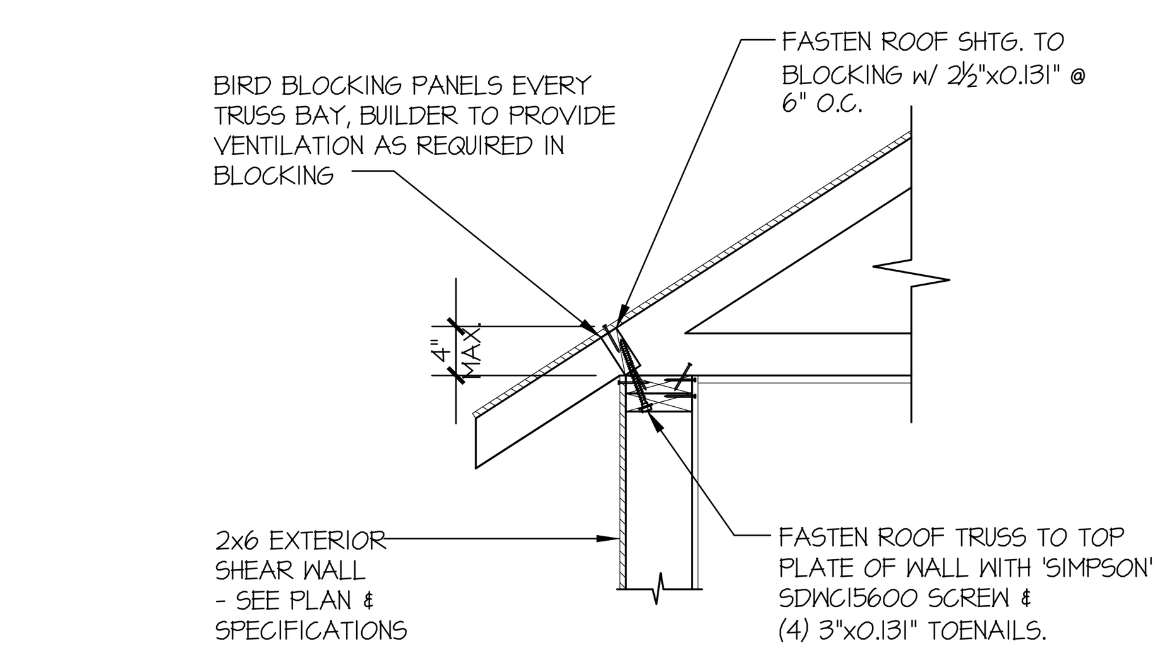
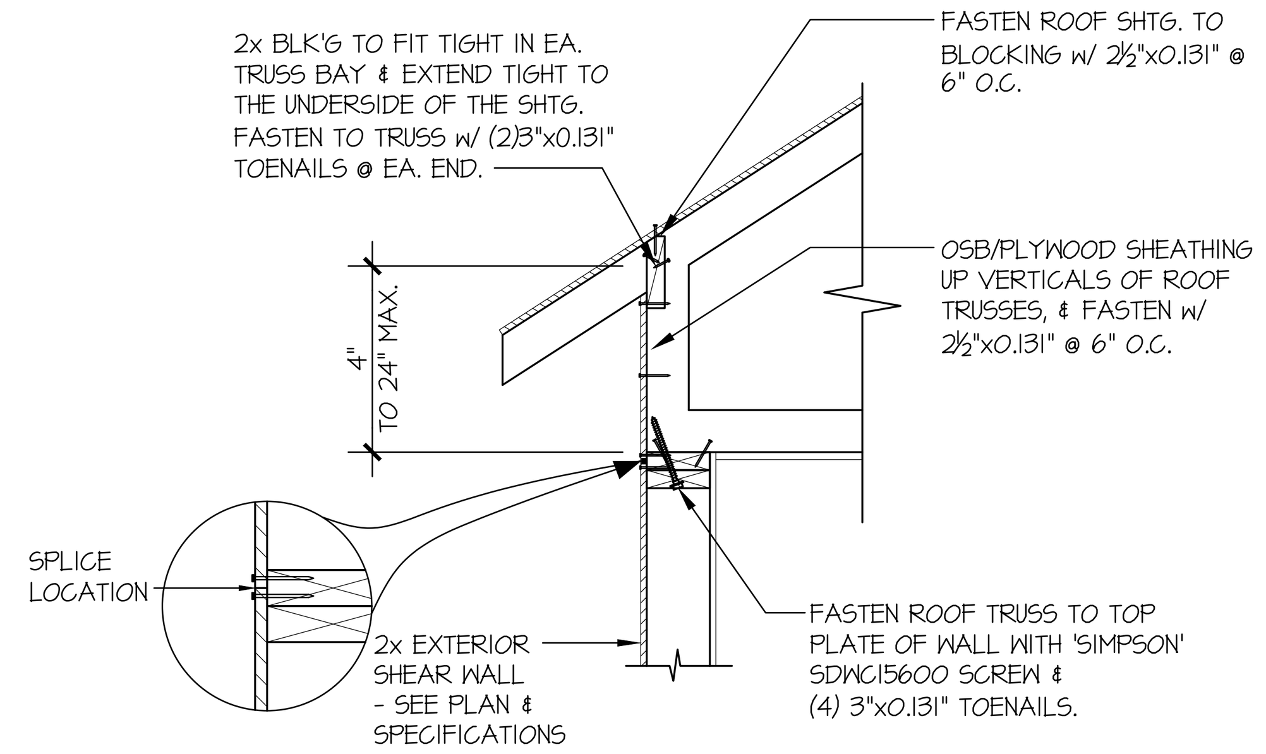
MERCER ISLAND, WASHINGTON

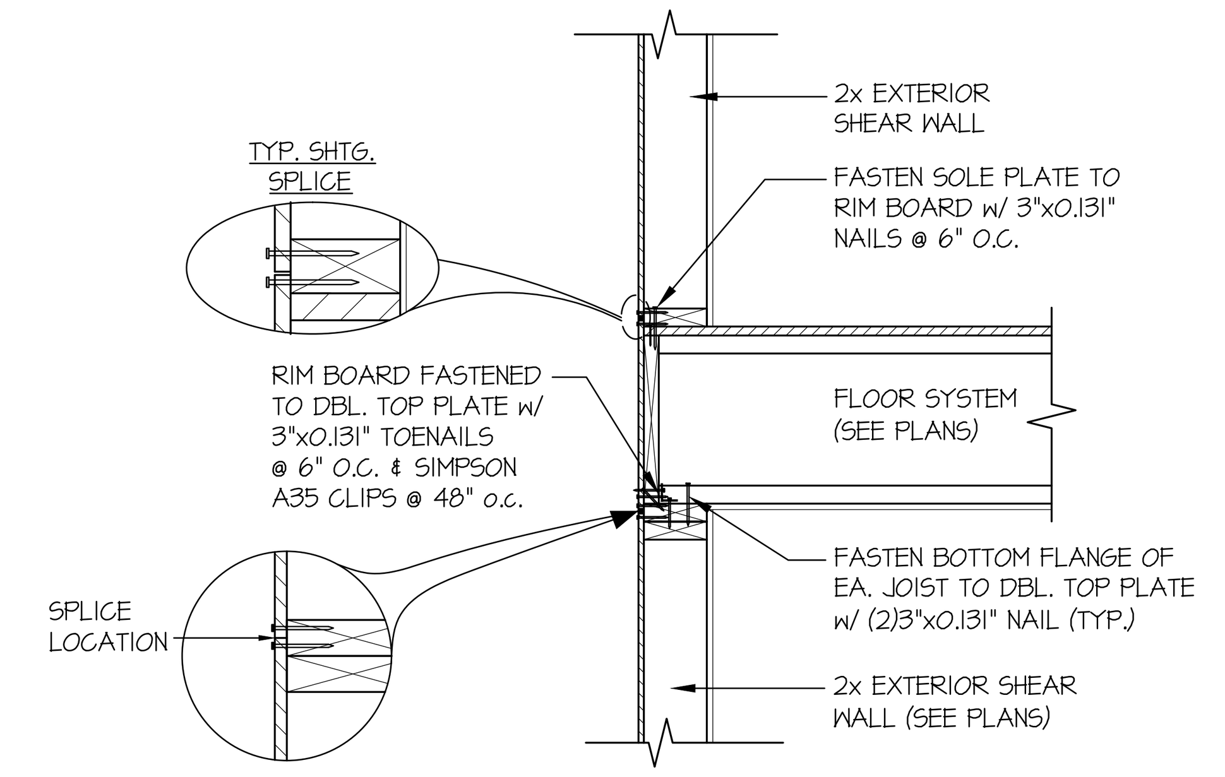
sheet: S-0.0



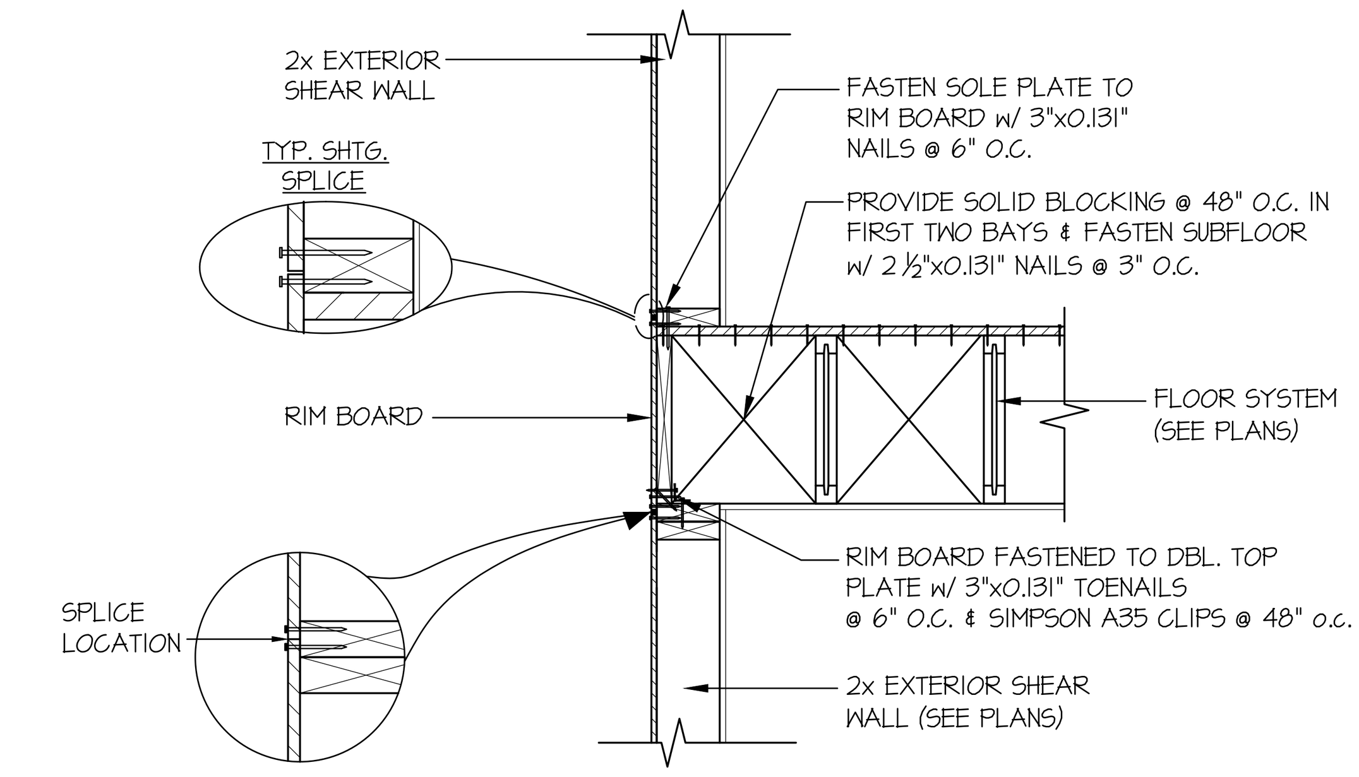
TYPICAL SHEAR TRANSFER DETAIL @ ROOF
1 SCALE: 3/4"=1'-0" HEEL HEIGHT LESS THAN 4"



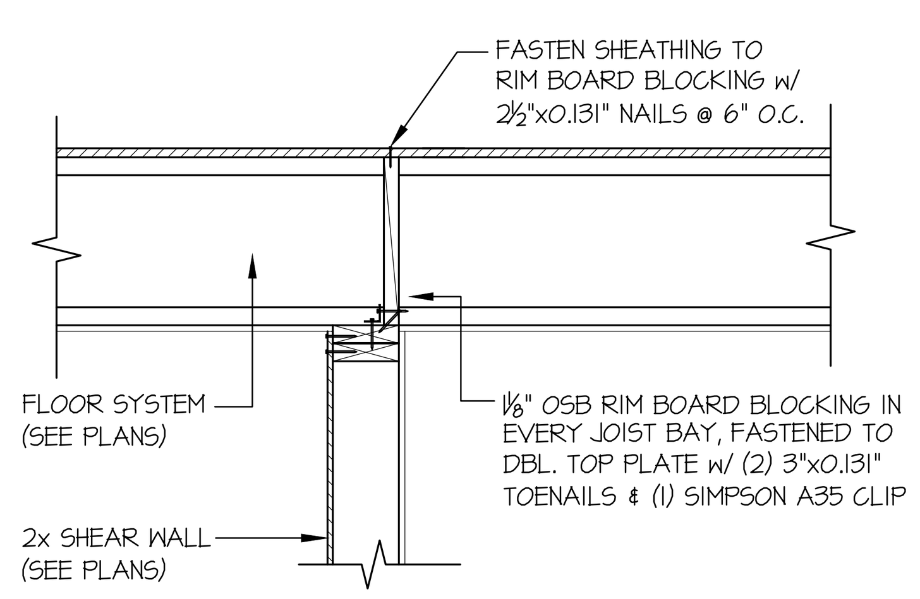
TYPICAL SHEAR TRANSFER DETAIL @ RAISED HEEL TRUSS
1 SCALE: 3/4"=1'-0" HEEL HEIGHT UP TO 24" MAX.



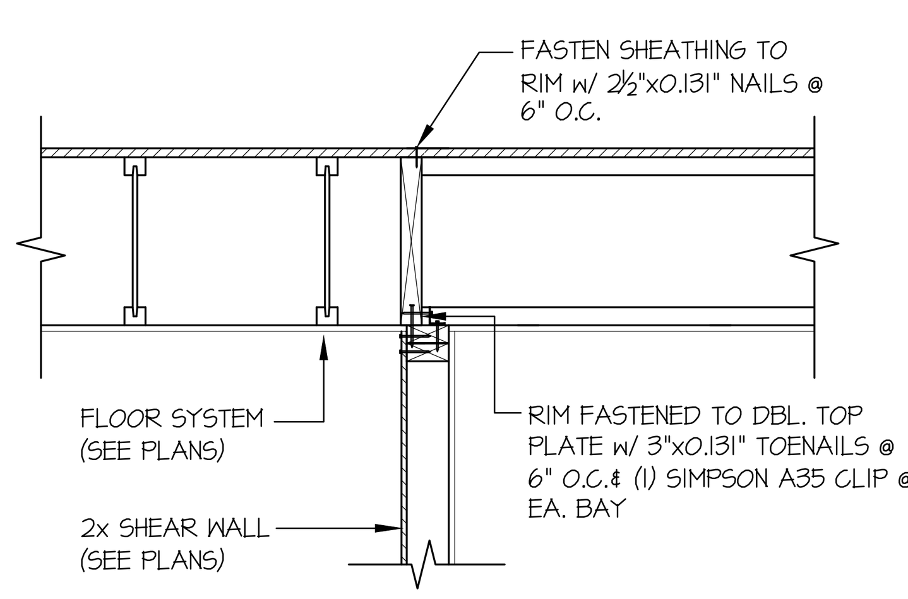
TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL
3 SCALE: 3/4"=1'-0" PERPENDICULAR FRAMING



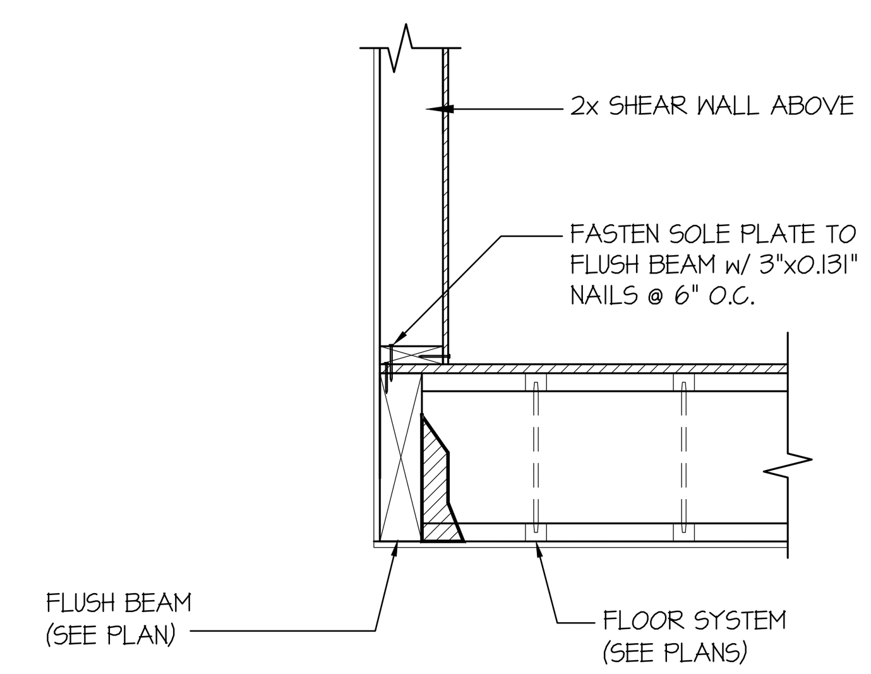
TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL
4 SCALE: 3/4"=1'-0" PARALLEL FRAMING



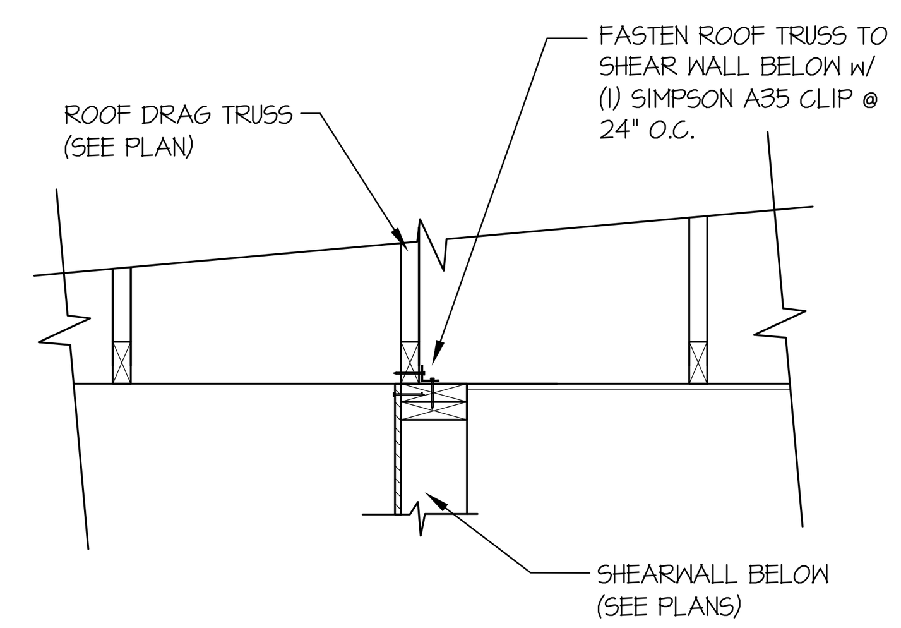
SHEAR TRANSFER DETAIL @ INTERIOR SHEAR WALL
13 SCALE: 3/4"=1'-0"



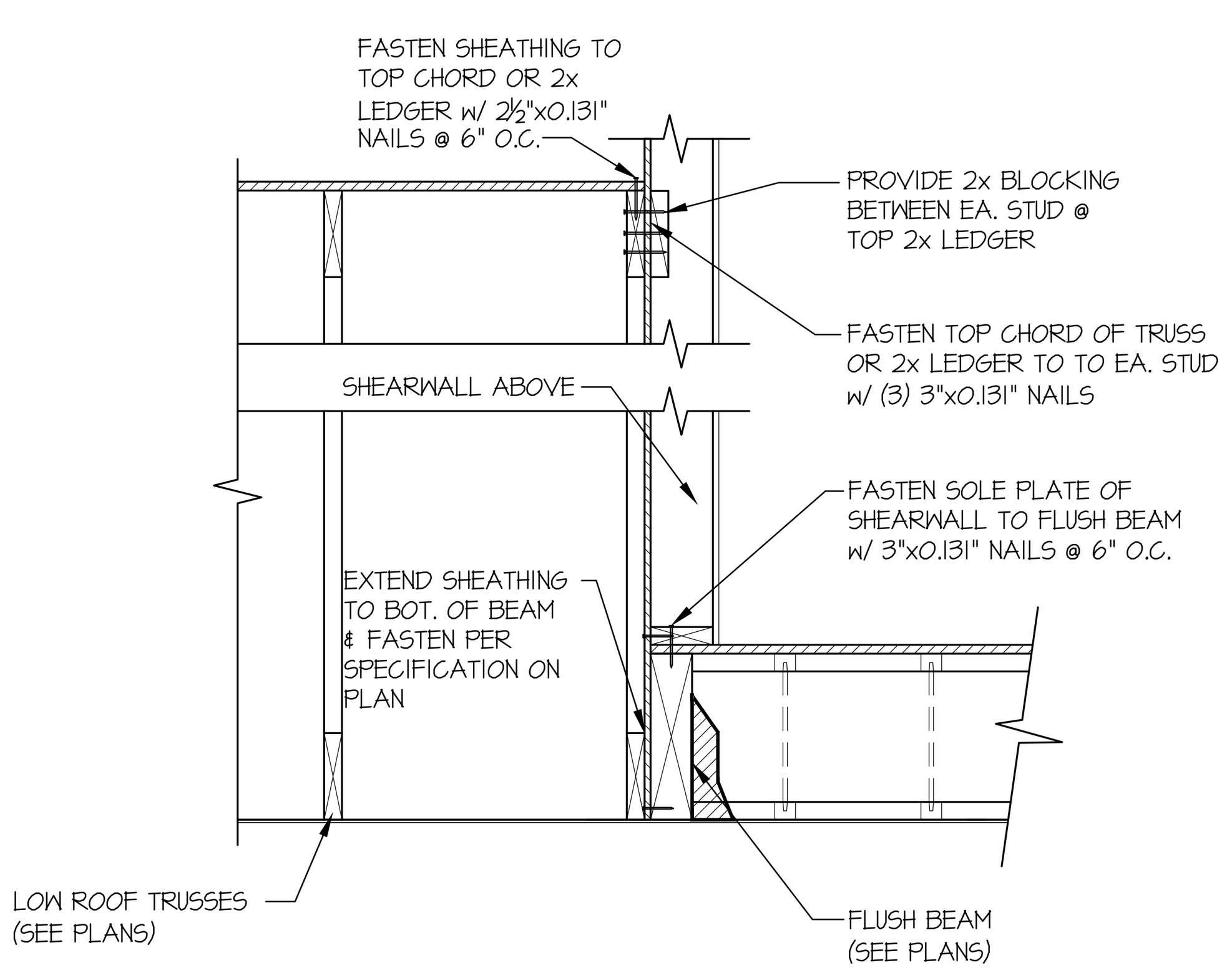
SHEAR TRANSFER DETAIL @ INTERIOR SHEAR WALL
15 SCALE: 3/4"=1'-0"



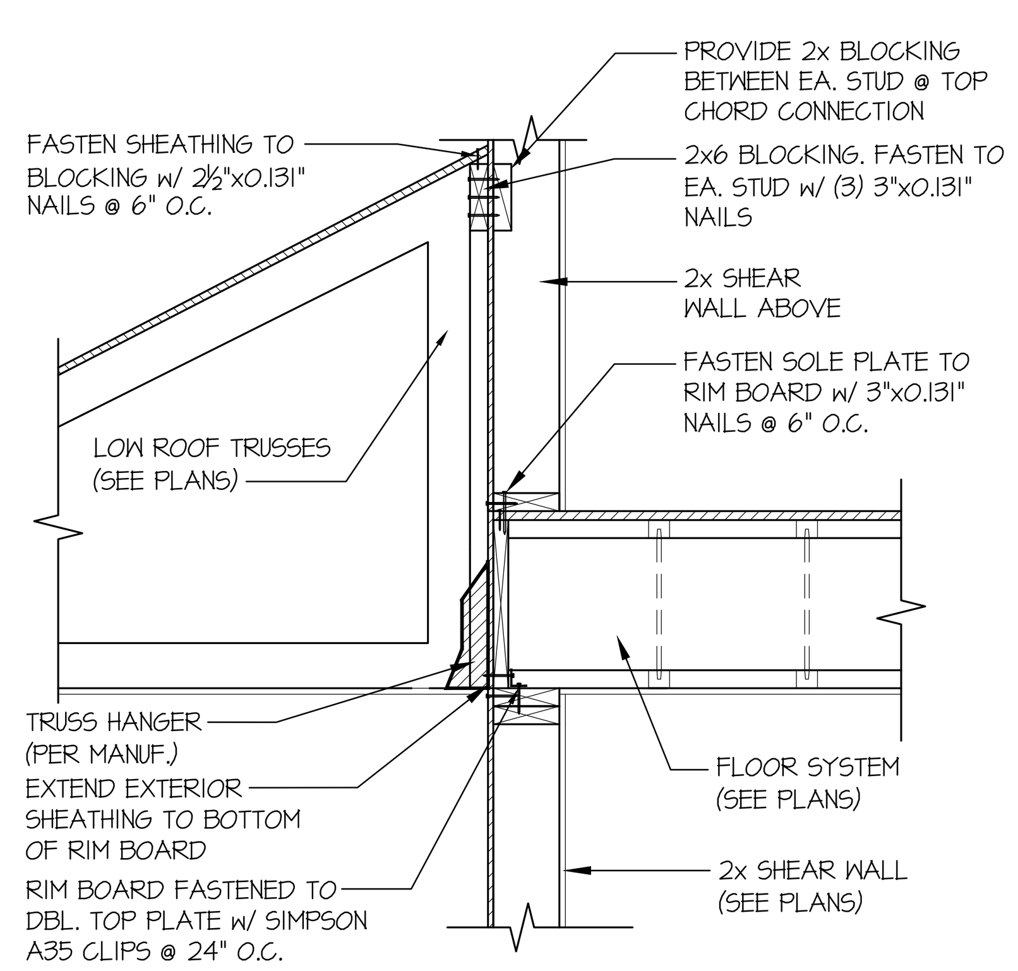
TYPICAL SHEAR TRANSFER DETAIL @ EXTERIOR WALL ABOVE FLUSH BEAM
34 SCALE: 3/4"=1'-0"



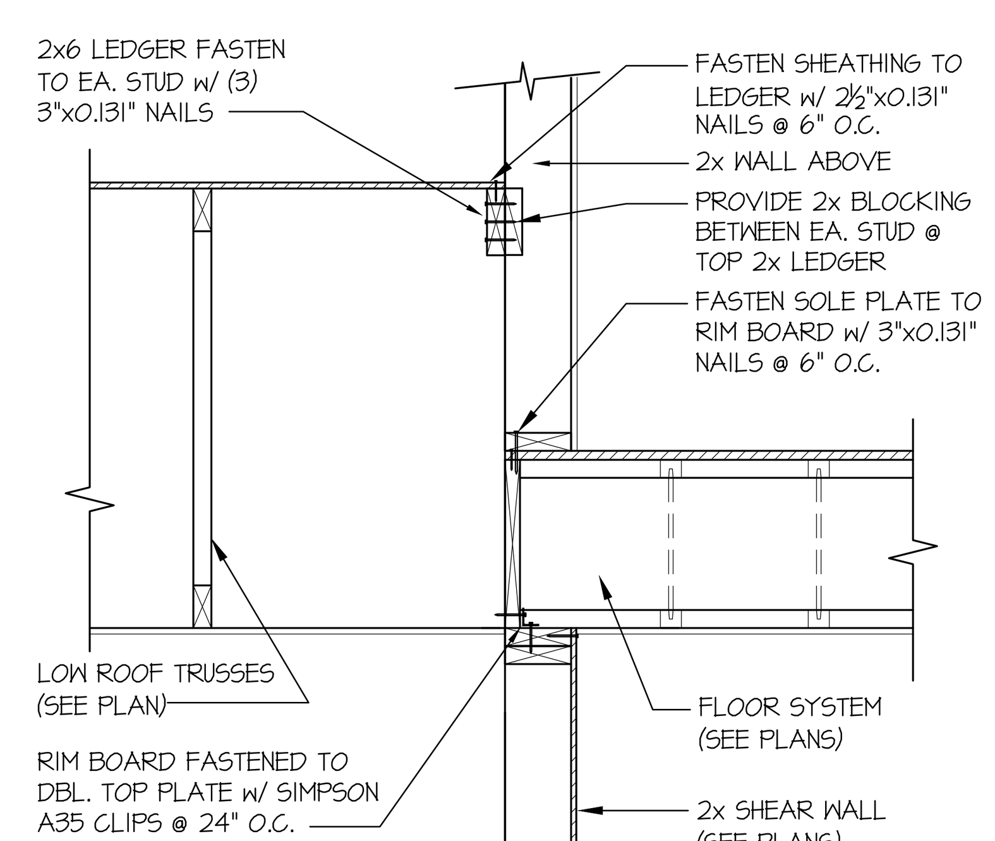
SHEAR TRANSFER DETAIL @ INTERIOR SHEARWALL BELOW
47 SCALE: 3/4"=1'-0"



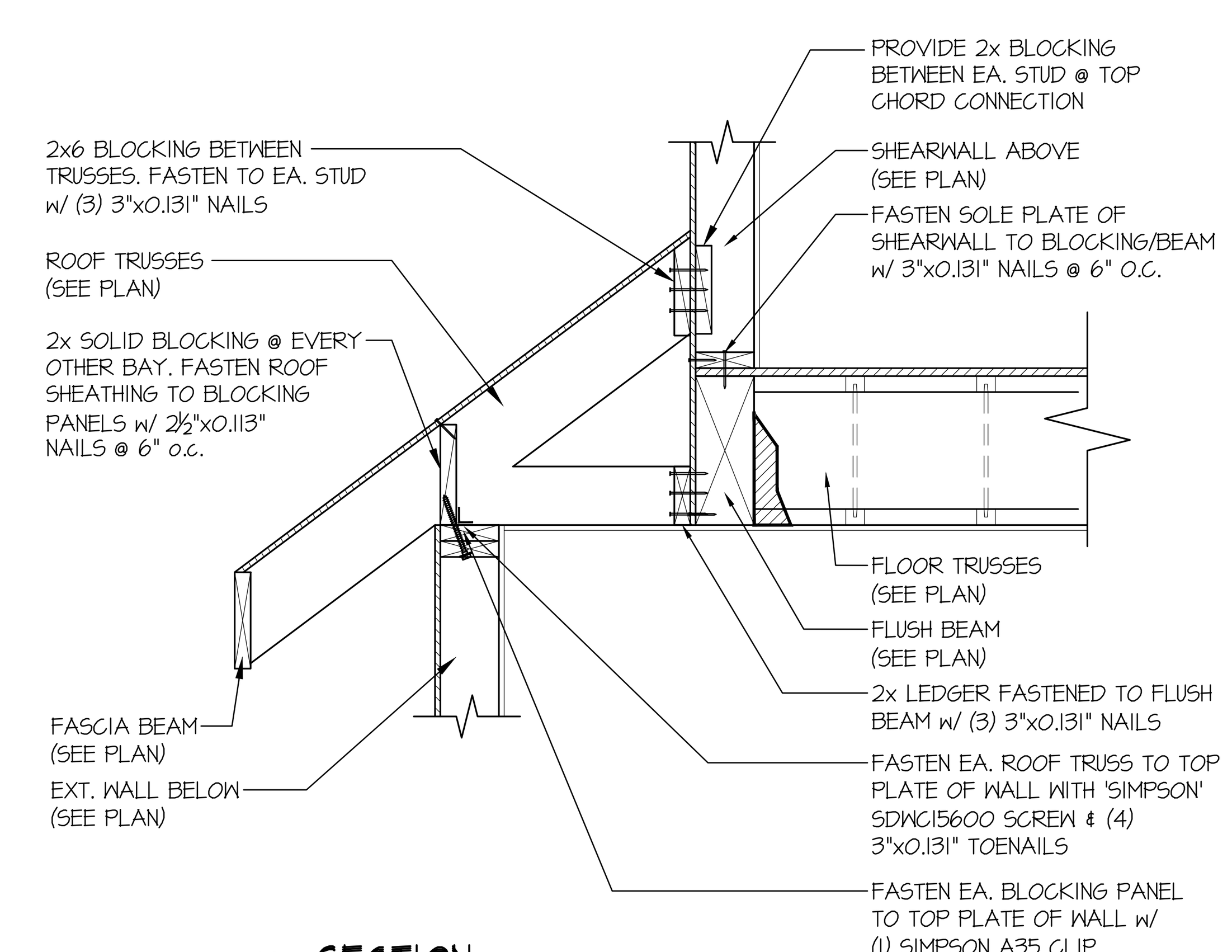
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
59 SCALE: 3/4"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL
60 SCALE: 3/4"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL
61 SCALE: 3/4"=1'-0"



SECTION
76 SCALE: 3/4"=1'-0"

seal: RICHARD ZABEL, STATE OF WASHINGTON, 21031615, REGISTERED PROFESSIONAL ENGINEER

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REVISIONS:
date: initial:

ARCHITECTS NORTHWEST

Lateral Bracing Details

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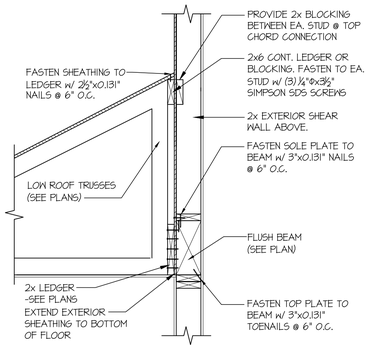
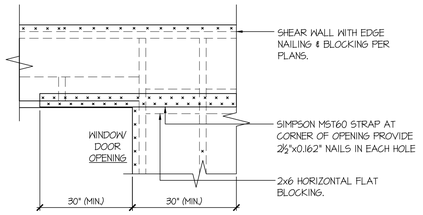
Mercer Island, Washington

sheet: LB-1

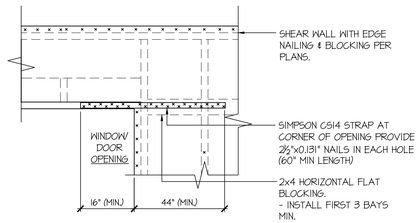


88 SECTION
SCALE: 3/4"=1'-0"



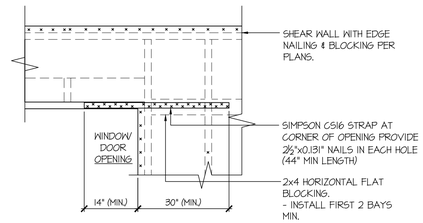
- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS

EXT. WALL & INT. SHEARWALL OPENING ELEVATION
92 SCALE: NTS



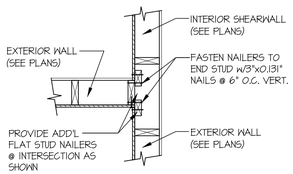
- DETAIL SIMILAR AT BOTTOM CORNERS OF WINDOWS.
- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS
- IF MIN LENGTH IS NOT PROVIDED RUN STRAP TO END OF WALL

EXT. WALL & INT. SHEARWALL OPENING ELEVATION
93 SCALE: NTS

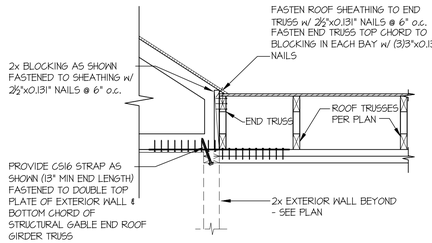


- DETAIL SIMILAR AT BOTTOM CORNERS OF WINDOWS.
- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS
- IF MIN LENGTH IS NOT PROVIDED RUN STRAP TO END OF WALL

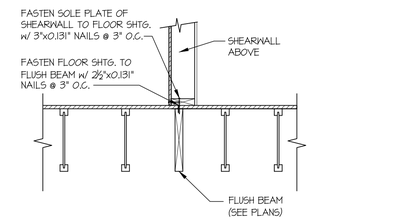
EXT. WALL & INT. SHEARWALL OPENING ELEVATION
94 SCALE: NTS



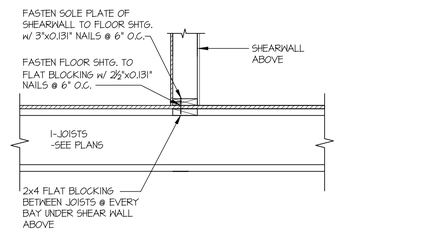
95 SHEAR TRANSFER DETAIL @ INTERSECTING INT. SHEARWALL
SCALE: 3/4"=1'-0" SHTG. ON SAME FACE



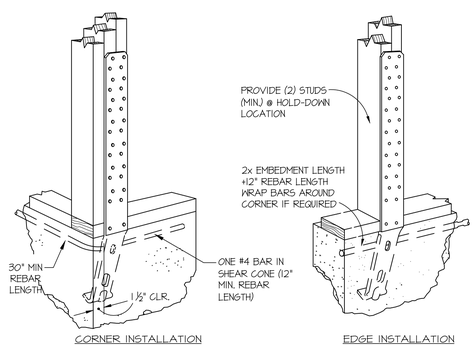
117 STRAP DETAIL
SCALE: 3/4"=1'-0"



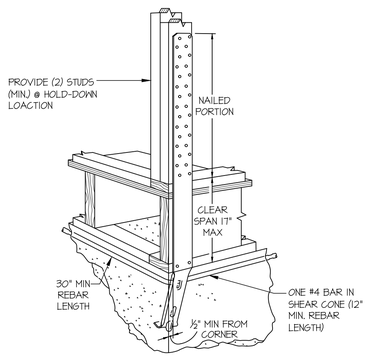
119 SHEAR TRANSFER DETAIL @ INTERIOR SHEARWALL ABOVE
SCALE: 3/4"=1'-0" PARALLEL FRAMING



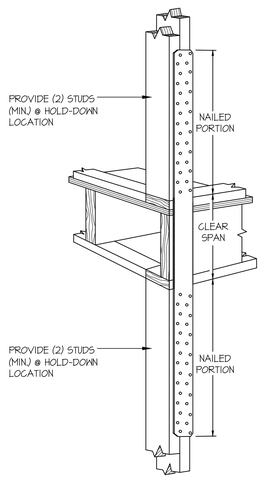
SHEAR TRANSFER DETAIL @ INT. SHEARWALL ABOVE
20 SCALE: 3/4"=1'-0"



A TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE SIMPSON STHD HD @ FOUNDATION



B TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE SIMPSON STHD HD @ FLOOR FRAMING



C TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE SIMPSON STRAP HD @ FLOOR FRAMING

seal:
RICHARD ZABEL STATE OF WASHINGTON 21031615 REGISTERED PROFESSIONAL ENGINEER

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M&K project number: 202-22014

project mgr: RJZ
drawn by: JCL
issue date: 07-08-22

REVISIONS:
date: initial:

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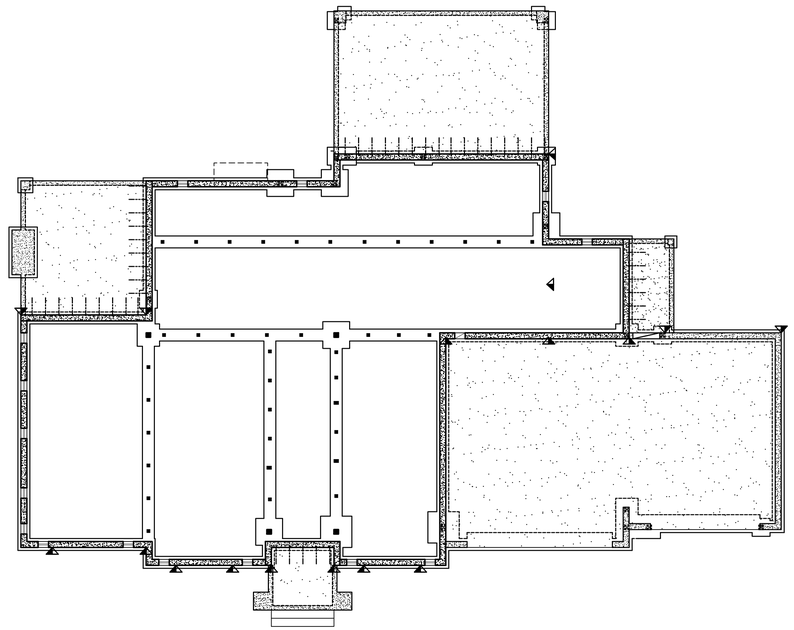
LATERAL BRACING DETAILS
HATELY RESIDENCE
4114 83RD AVE SE
MERCER ISLAND, WASHINGTON

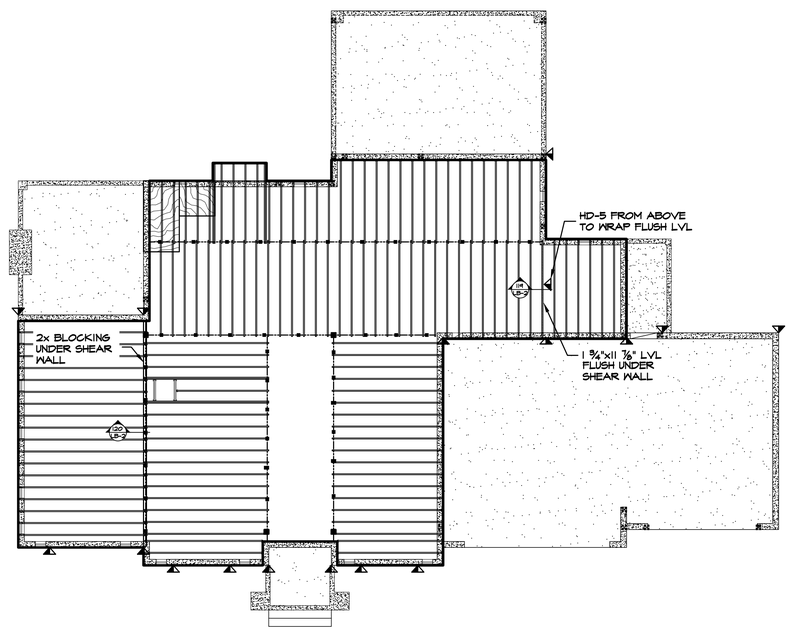
sheet: LB-2

ALL HOLDDOWNS THIS LEVEL SHALL BE HD-1 (SEE S-0.0) FASTENED FROM POST ABOVE TO FOUNDATION BELOW (TYP. U.N.O.)



1 FOUNDATION (WALLS & HARDWARE)
SCALE: 1/8" = 1'-0"

ALL HOLDDOWNS THIS LEVEL SHALL BE HD-1 (SEE S-0.0) FASTENED FROM POST ABOVE TO FOUNDATION BELOW (TYP. U.N.O.)



2 MAIN FLOOR - FRAMING & DETAILS
SCALE: 1/8" = 1'-0"

ALL HOLDDOWNS THIS LEVEL SHALL BE HD-1 (SEE S-0.0) FASTENED FROM (2)2x MIN. POST TO FND BELOW (TYP. U.N.O.)

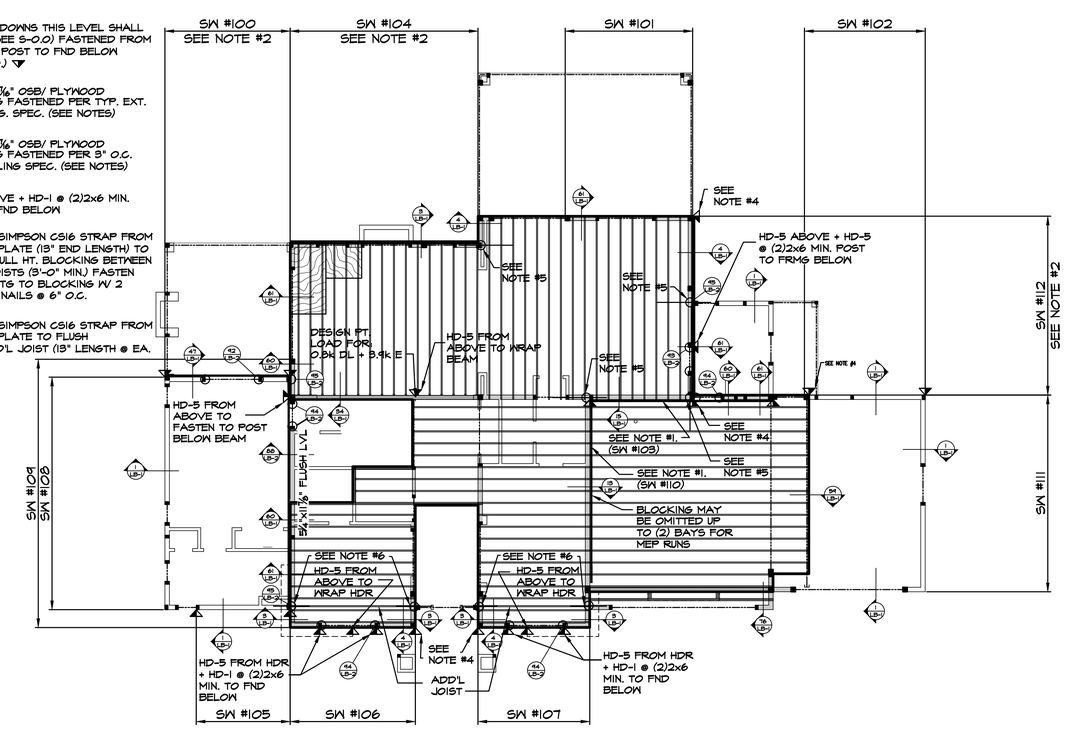
NOTE #1:
PROVIDE 7/16" OSB/ PLYWOOD SHEATHING FASTENED PER TYP. EXT. WALL SHTG. SPEC. (SEE NOTES)

NOTE #2:
PROVIDE 7/16" OSB/ PLYWOOD SHEATHING FASTENED PER 3" O.C. EDGE NAILING SPEC. (SEE NOTES)

NOTE #4:
HD-5 ABOVE + HD-1 @ (2)2x6 MIN. POST TO FND BELOW

NOTE #5:
PROVIDE SIMPSON CS16 STRAP FROM DBL TOP PLATE (13" END LENGTH) TO BOT. OF FULL HT. BLOCKING BETWEEN FLOOR JOISTS (3'-0" MIN.) FASTEN FLOOR SHTG TO BLOCKING W/ 2 1/2"x0.131" NAILS @ 6" O.C.

NOTE 6:
PROVIDE SIMPSON CS16 STRAP FROM DBL TOP PLATE TO FLUSH BEAM/ADD'L JOIST (13" LENGTH @ EA. END)



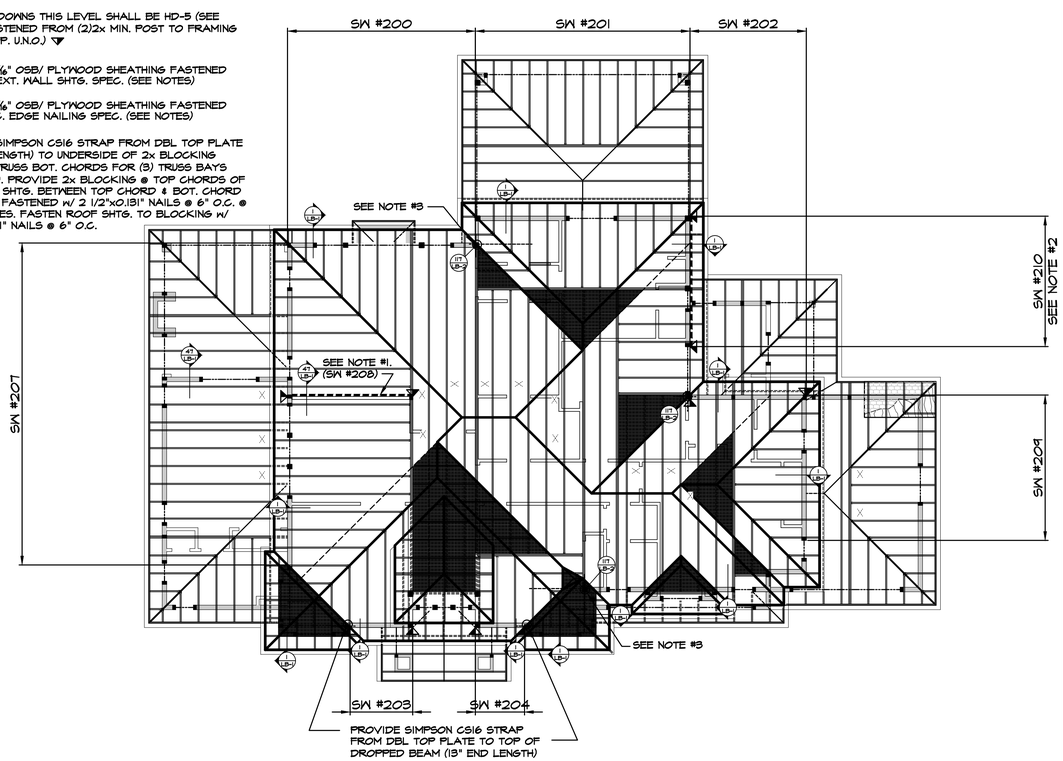
3 UPPER FLOOR - SHEARWALL, FRAMING & DETAILS
SCALE: 1/8" = 1'-0"

ALL HOLDDOWNS THIS LEVEL SHALL BE HD-5 (SEE S-0.0) FASTENED FROM (2)2x MIN. POST TO FRAMING BELOW (TYP. U.N.O.)

NOTE #1:
PROVIDE 7/16" OSB/ PLYWOOD SHEATHING FASTENED PER TYP. EXT. WALL SHTG. SPEC. (SEE NOTES)

NOTE #2:
PROVIDE 7/16" OSB/ PLYWOOD SHEATHING FASTENED PER 3" O.C. EDGE NAILING SPEC. (SEE NOTES)

NOTE #3:
PROVIDE SIMPSON CS16 STRAP FROM DBL TOP PLATE (13" END LENGTH) TO UNDERSIDE OF 2x BLOCKING BETWEEN TRUSS BOT. CHORDS FOR (3) TRUSS BAYS (6'-0" MIN.). PROVIDE 2x BLOCKING @ TOP CHORDS OF TRUSSES + SHTG. BETWEEN TOP CHORD + BOT. CHORD BLOCKING FASTENED W/ 2 1/2"x0.131" NAILS @ 6" O.C. @ SHTG. EDGES. FASTEN ROOF SHTG. TO BLOCKING W/ 2 1/2"x0.131" NAILS @ 6" O.C.



4 ROOF - SHEAR WALL, FRAMING & DETAILS
SCALE: 1/8" = 1'-0"

REGISTERED ARCHITECT
5046
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HATELY RESIDENCE
4114 83RD AVE SE, MERCER ISLAND, WA 98040

PLAN M406|A3F-2

DESIGNED BY: JdeR	DATE: 2012
DRAWN BY: JM	DATE: 5/1/2012
PROJECT MANAGER: SARAH WEIGHT	
REVISED BY: JSC	DATE: 7/14/22
JSC	9/7/22
LATERAL BY: M&K	DATE: 9/7/22
LATERAL JOB NUMBER: 202-22014	

S1
S1

ANW WOODINVILLE OFFICE JOB NUMBER: 220006

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
Hately 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

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RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 04-JUL-22

WIND DESIGN SUMMARY PER ASCE 7-16

PARAMETERS:

WIND SPEED	100
EXPOSURE CATEGORY	B
RISK CATEGORY	II
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

ROOF GEOMETRY:

TRANS. ROOF PITCH	5.0	:12
LONG. ROOF PITCH	5.0	:12
MEAN ROOF HEIGHT, H	27.50	FT

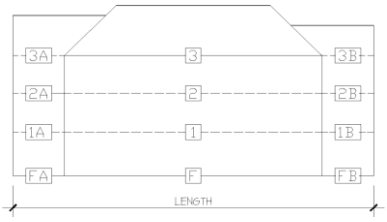
BUILDING GEOMETRY:

LENGTH	80	FT
WIDTH	46	FT
NUMBER OF STORIES	2	

TRANSVERSE DIRECTION (PERPENDICULAR TO MAIN RIDGE LINE)

TRIBUTARY DESIGN AREAS:

DIAPHRAGM LEVEL	FLOOR-TO-FLOOR HEIGHT		SECTION A	SECTION O	SECTION B	
2	9.083 FT	Roof Surface	0	307	0	sq ft
		Wall surface	0	254	0	sq ft
1	11.583 FT	Roof Surface	0	92	0	sq ft
		Wall surface	0	721	0	sq ft
FND		Roof Surface	0	0	0	sq ft
		Wall surface	0	0	0	sq ft



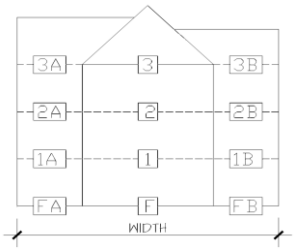
TRIBUTARY DESIGN LOADS: (0.6W)

	SECTION A	SECTION O	SECTION B	
Story Shear	0.00	5.21	0.00	kips
Total Shear	0.00	5.21	0.00	kips
		5.21		kips
Story Shear	0.00	8.97	0.00	kips
Total Shear	0.00	14.18	0.00	kips
		14.18		kips
Story Shear	0.00	0.00	0.00	kips
Total Shear	0.00	14.18	0.00	kips
		14.18		kips

LONGITUDINAL DIRECTION (PARALLEL TO MAIN RIDGE LINE)

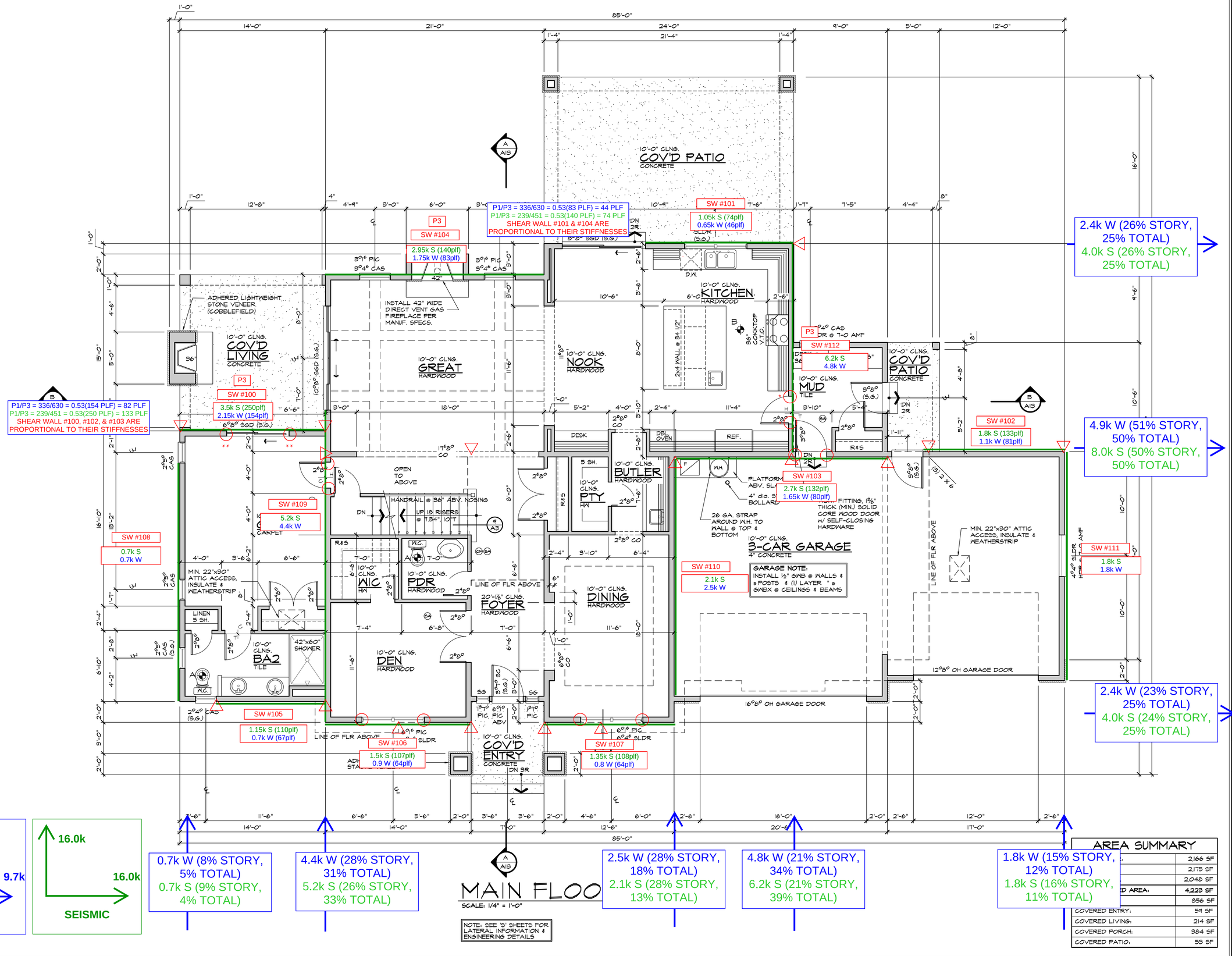
TRIBUTARY DESIGN AREAS:

DIAPHRAGM LEVEL	FLOOR-TO-FLOOR HEIGHT		SECTION A	SECTION O	SECTION B	
2	9.083 FT	Roof Surface	0	256	0	sq ft
		Wall surface	0	215	0	sq ft
1	11.583 FT	Roof Surface	0	170	0	sq ft
		Wall surface	0	392	0	sq ft
FND		Roof Surface	0	0	0	sq ft
		Wall surface	0	0	0	sq ft



TRIBUTARY DESIGN LOADS: (0.6W)

	SECTION A	SECTION O	SECTION B	
Story Shear	0.00	4.35	0.00	kips
Total Shear	0.00	4.35	0.00	kips
		4.35		kips
Story Shear	0.00	5.32	0.00	kips
Total Shear	0.00	9.67	0.00	kips
		9.67		kips
Story Shear	0.00	0.00	0.00	kips
Total Shear	0.00	9.67	0.00	kips
		9.67		kips



AREA SUMMARY	
	2,166 SF
	2,175 SF
	2,048 SF
D AREA:	4,223 SF
	856 SF
COVERED ENTRY:	59 SF
COVERED LIVING:	214 SF
COVERED PORCH:	384 SF
COVERED PATIO:	53 SF

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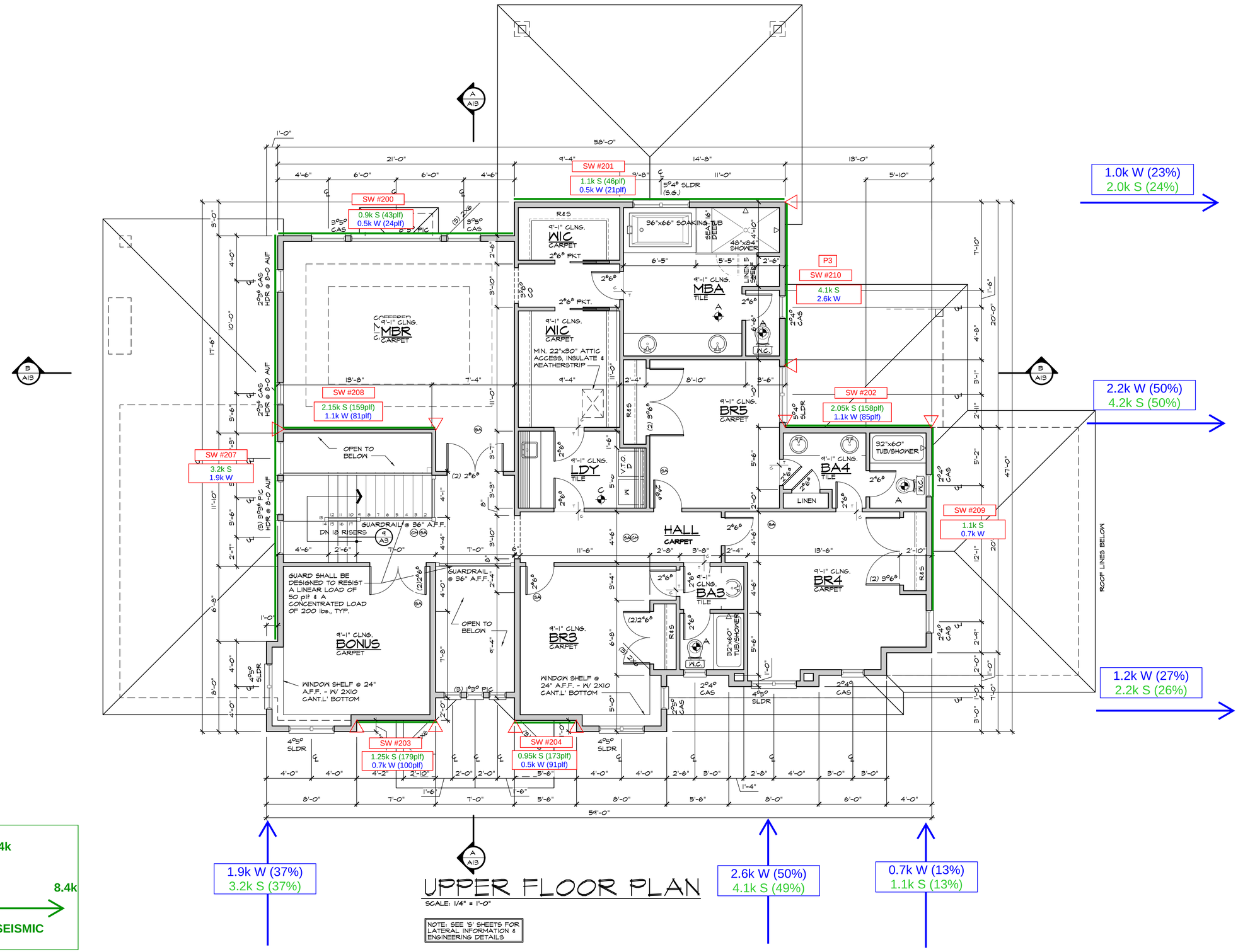
4114 83RD AVE SE, MERCER ISLAND, WA 98040

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:

A7
A13

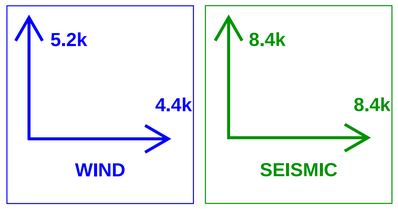
ANW WOODINVILLE OFFICE JOB NUMBER: 220006



UPPER FLOOR PLAN

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

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



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JEFFREY P. ARNOLET
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5046
REGISTERED ARCHITECT

HATELY RESIDENCE

4114 83RD AVE SE, MERCER ISLAND, WA 98040

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LATERAL BY: DATE:
LATERAL JOB NUMBER:

A9
A13

ANW WOODINVILLE OFFICE JOB NUMBER: 220006

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, H_o	5.0	FT.		
WALL LENGTH, L	21.0	FT.	QUALIFYING WALL LENGTH, L	6.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
500 LBS	<	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	189	PLF	OVERTURNING MOMENT	4.5	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	375	LBS	RESISTIVE MOMENT	29.7	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, Hc	4.5	FT.		
WALL LENGTH, L	24.0	FT.	QUALIFYING WALL LENGTH, L	19.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
500 LBS	<	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	184	PLF	OVERTURNING MOMENT	4.5	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	375	LBS	RESISTIVE MOMENT	37.2	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, H_c	0.0	FT.		
WALL LENGTH, L	13.0	FT.	QUALIFYING WALL LENGTH, L	13.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1100 LBS	<	4368 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	160	PLF	OVERTURNING MOMENT	10.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	500	LBS	RESISTIVE MOMENT	12.0	K-FT	HOLDOWN CAPACITY	1705	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	7.0	FT.	QUALIFYING WALL LENGTH, L	7.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
700 LBS	<	2352 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	180	PLF	OVERTURNING MOMENT	6.4	K-FT	HOLD DOWN DESIGN LOAD	357	LBS
DL AT ENDS OF WALL	289	LBS	RESISTIVE MOMENT	3.9	K-FT	HOLDOWN CAPACITY	1705	LBS

HOLD-DOWN SPECIFICATION

SIMPSON CS16 STRAP TIE (14" END LENGTH)

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, H_c	0.0	FT.		
WALL LENGTH, L	5.5	FT.	QUALIFYING WALL LENGTH, L	5.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
500 LBS	<	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	184	PLF	OVERTURNING MOMENT	4.5	K-FT	HOLD DOWN DESIGN LOAD	349	LBS
DL AT ENDS OF WALL	289	LBS	RESISTIVE MOMENT	2.6	K-FT	HOLDOWN CAPACITY	1705	LBS

HOLD-DOWN SPECIFICATION

SIMPSON CS16 STRAP TIE (14" END LENGTH)

SHEARWALL 205: - VOID

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	#DIV/0!	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

SHEARWALL 206: - VOID

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, H_c	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	#DIV/0!	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, Hc	3.5	FT.		
WALL LENGTH, L	36.0	FT.	QUALIFYING WALL LENGTH, L	22.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1900 LBS	<	7392 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	235	PLF	OVERTURNING MOMENT	17.3	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	500	LBS	RESISTIVE MOMENT	102.3	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

SHEARWALL 208: 2ND - INTERIOR WALL @ MBR

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, H_o	0.0	FT.		
WALL LENGTH, L	13.5	FT.	QUALIFYING WALL LENGTH, L	13.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1100 LBS	<	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	125	PLF	OVERTURNING MOMENT	10.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	822	LBS	RESISTIVE MOMENT	13.5	K-FT	HOLDOWN CAPACITY	1705	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, Hc	4.0	FT.		
WALL LENGTH, L	16.3	FT.	QUALIFYING WALL LENGTH, L	14.3	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
700 LBS	<	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	184	PLF	OVERTURNING MOMENT	6.4	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	500	LBS	RESISTIVE MOMENT	19.5	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, H_c	4.0	FT.		
WALL LENGTH, L	14.5	FT.	QUALIFYING WALL LENGTH, L	12.5	FT.	SHEARWALL ASSEMBLY	P3

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
2600 LBS	<	7875 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	202	PLF	OVERTURNING MOMENT	23.6	K-FT	HOLD DOWN DESIGN LOAD	450	LBS
DL AT ENDS OF WALL	500	LBS	RESISTIVE MOMENT	17.1	K-FT	HOLDOWN CAPACITY	1705	LBS

HOLD-DOWN SPECIFICATION

SIMPSON CS16 STRAP TIE (14" END LENGTH)

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	#DIV/0!	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, H_c	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	0.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	0.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, H_c	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	0.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	0.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, H_c	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	0.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, Hc	8.0	FT.		
WALL LENGTH, L	14.0	FT.	QUALIFYING WALL LENGTH, L	8.0	FT.	SHEARWALL ASSEMBLY	P3

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
2150 LBS	<	4961 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	134	PLF	OVERTURNING MOMENT	21.5	K-FT	HOLD DOWN DESIGN LOAD	26	LBS
DL AT ENDS OF WALL	1578	LBS	RESISTIVE MOMENT	21.1	K-FT	HOLDOWN CAPACITY	4935	LBS

HOLD-DOWN SPECIFICATION

SIMPSON STHD14RJ HOLDOWN

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, H_o	5.0	FT.		
WALL LENGTH, L	14.3	FT.	QUALIFYING WALL LENGTH, L	8.3	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
650 LBS	<	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	439	PLF	OVERTURNING MOMENT	6.5	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	1414	LBS	RESISTIVE MOMENT	38.8	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	11.0	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	13.5	FT.	QUALIFYING WALL LENGTH, L	13.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1100 LBS	<	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	202	PLF	OVERTURNING MOMENT	12.1	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	1200	LBS	RESISTIVE MOMENT	20.8	K-FT	HOLDOWN CAPACITY	4935	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

SHEARWALL 103: 1ST - INT.WALL @ GARAGE

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, H_o	8.0	FT.		
WALL LENGTH, L	20.5	FT.	QUALIFYING WALL LENGTH, L	17.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1650 LBS	<	5880 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	120	PLF	OVERTURNING MOMENT	16.5	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	536	LBS	RESISTIVE MOMENT	21.7	K-FT	HOLDOWN CAPACITY	4935	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, Hc	6.0	FT.		
WALL LENGTH, L	21.0	FT.	QUALIFYING WALL LENGTH, L	10.0	FT.	SHEARWALL ASSEMBLY	P3

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1750 LBS	<	5768 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	420	PLF	OVERTURNING MOMENT	17.5	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	775	LBS	RESISTIVE MOMENT	65.4	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, H_o	0.0	FT.		
WALL LENGTH, L	10.5	FT.	QUALIFYING WALL LENGTH, L	10.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
700 LBS	<	3528 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	185	PLF	OVERTURNING MOMENT	7.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	150	LBS	RESISTIVE MOMENT	7.1	K-FT	HOLDOWN CAPACITY	4935	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, Hc	6.0	FT.		
WALL LENGTH, L	14.0	FT.	QUALIFYING WALL LENGTH, L	8.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
900 LBS	<	2688 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	300	PLF	OVERTURNING MOMENT	9.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	800	LBS	RESISTIVE MOMENT	24.4	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, H_o	6.0	FT.		
WALL LENGTH, L	12.5	FT.	QUALIFYING WALL LENGTH, L	6.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
800 LBS	<	2184 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	300	PLF	OVERTURNING MOMENT	8.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	800	LBS	RESISTIVE MOMENT	20.1	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, Hc	5.0	FT.		
WALL LENGTH, L	23.0	FT.	QUALIFYING WALL LENGTH, L	19.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
700 LBS	<	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	246	PLF	OVERTURNING MOMENT	7.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	536	LBS	RESISTIVE MOMENT	46.4	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, H_o	8.0	FT.		
WALL LENGTH, L	30.0	FT.	QUALIFYING WALL LENGTH, L	27.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
4400 LBS	<	9240 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	438	PLF	OVERTURNING MOMENT	44.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	400	LBS	RESISTIVE MOMENT	125.5	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 110: 1ST - INT. WALL @ GARAGE

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	23.0	FT.	QUALIFYING WALL LENGTH, L	23.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
2500 LBS	<	7728 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	373	PLF	OVERTURNING MOMENT	25.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	1010	LBS	RESISTIVE MOMENT	73.1	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
15044 SE 45TH PL
M&K PROJECT #: 202-22013
ENGINEER: LGH
DATE: 07-JUN-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	11.0	FT.	MAX WALL OPENING HT, H_o	4.0	FT.		
WALL LENGTH, L	22.0	FT.	QUALIFYING WALL LENGTH, L	18.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1800 LBS	<	6048 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	194	PLF	OVERTURNING MOMENT	19.8	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	536	LBS	RESISTIVE MOMENT	35.2	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, Hc	8.0	FT.		
WALL LENGTH, L	20.0	FT.	QUALIFYING WALL LENGTH, L	17.3	FT.	SHEARWALL ASSEMBLY	P3

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
4800 LBS	<	10715 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	300	PLF	OVERTURNING MOMENT	48.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	1200	LBS	RESISTIVE MOMENT	50.4	K-FT	HOLDOWN CAPACITY	4935	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

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: HATELY RESIDENCE
ARCHITECTS NW
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 04-JUL-22

SEISMIC CALCULATION - ASCE 7-16

SEISMIC DESIGN CATEGORY:

USER INPUTS:

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

VARIABLES:

SITE COEFFICIENT, Fa	1.20
SITE COEFFICIENT, Fv	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

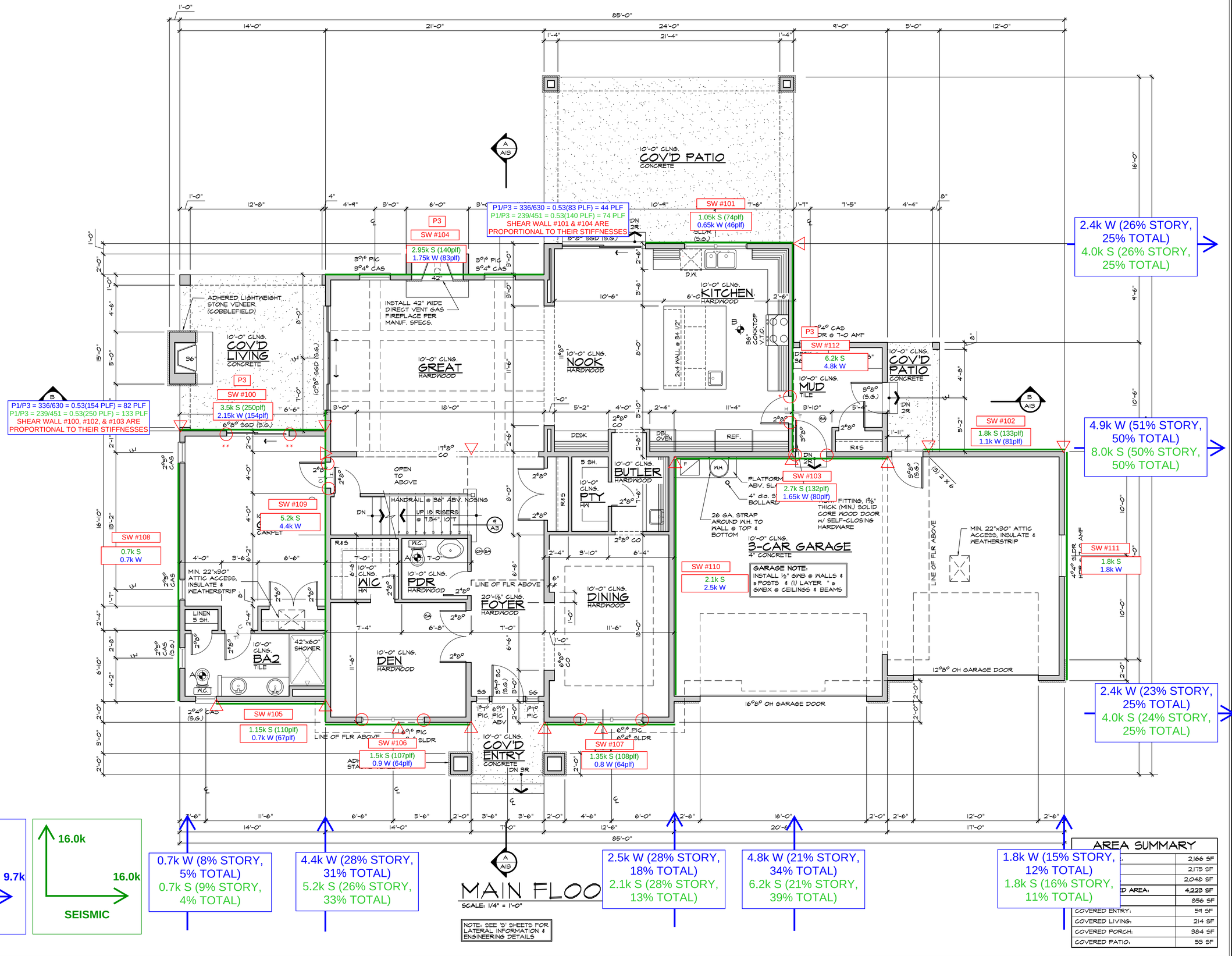
BASE SHEARS:

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, k: 1.00

	ULTIMATE LOADS				x 0.7 =	ALLOWABLE LOADS					
		TRANSVERSE		LONGITUDINAL		TRANSVERSE			LONGITUDINAL		
LEVEL	VERT. DIST. FACTOR, C_{VX}	STORY SHEAR, F_x		STORY SHEAR, F_x		STORY SHEAR, F_x	Σ STORY SHEAR		STORY SHEAR, F_x	Σ STORY SHEAR	
1	0.474	10.9	K	10.9	K	7.6 K	16.0	K	7.6 K	16.0	K
2	0.526	12.0	K	12.0	K	8.4 K	8.4	K	8.4 K	8.4	K
3	0.000	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
5	0.00	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
7	0.00	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
9	0.00	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
11	0.00	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
13	0.00	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
15	0.00	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
17	0.00	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
19	0.00	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



AREA SUMMARY	
	2,166 SF
	2,175 SF
	2,048 SF
D AREA:	4,223 SF
	856 SF
COVERED ENTRY:	59 SF
COVERED LIVING:	214 SF
COVERED PORCH:	384 SF
COVERED PATIO:	53 SF

REGISTERED ARCHITECT
8046
JEFFREY P. ARNOLET
STATE OF WASHINGTON

ARCHITECTS NORTHWEST
18915-142nd AVENUE NE SUITE 100
WOODINVILLE, WA 98072
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WWW.ARCHITECTSNW.COM

HATELY RESIDENCE

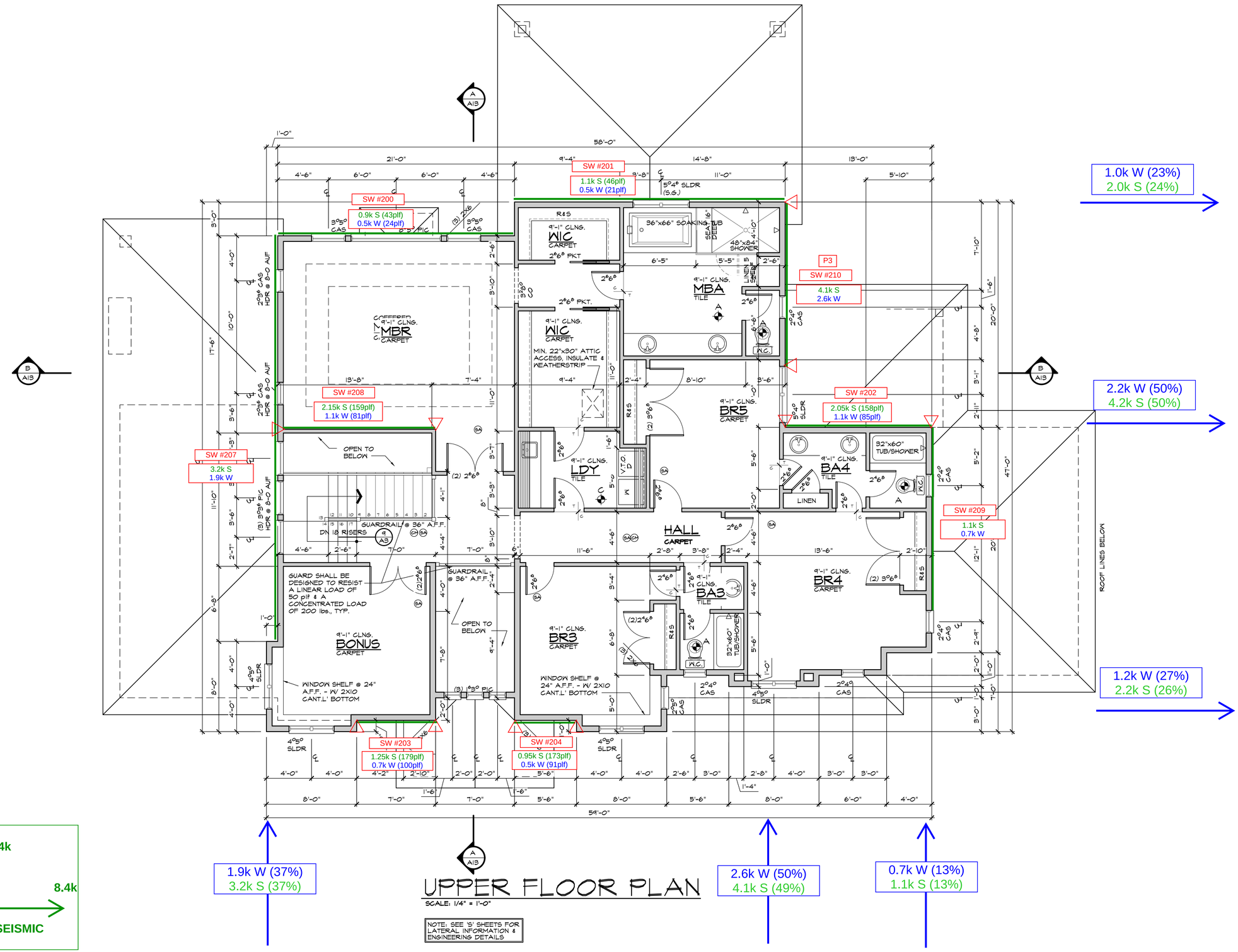
4114 83RD AVE SE, MERCER ISLAND, WA 98040

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:

A7
A13

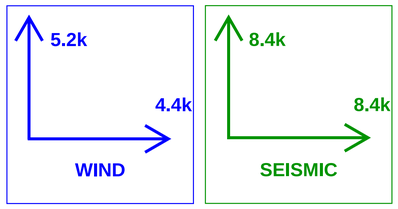
ANW WOODINVILLE OFFICE JOB NUMBER: 220006



UPPER FLOOR PLAN

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

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



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A9
A13

ANW WOODINVILLE OFFICE JOB NUMBER: 220006

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, H_c	5.0	FT.		
WALL LENGTH, L	21.0	FT.	QUALIFYING WALL LENGTH, L	6.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
900 LBS	<	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	189	PLF	OVERTURNING MOMENT	8.2	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	375	LBS	RESISTIVE MOMENT	22.5	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, Hc	4.5	FT.		
WALL LENGTH, L	24.0	FT.	QUALIFYING WALL LENGTH, L	19.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1100 LBS	<	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	184	PLF	OVERTURNING MOMENT	10.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	375	LBS	RESISTIVE MOMENT	28.1	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, H_o	0.0	FT.		
WALL LENGTH, L	13.0	FT.	QUALIFYING WALL LENGTH, L	13.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
2050 LBS	<	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	160	PLF	OVERTURNING MOMENT	18.6	K-FT	HOLD DOWN DESIGN LOAD	733	LBS
DL AT ENDS OF WALL	500	LBS	RESISTIVE MOMENT	9.1	K-FT	HOLDOWN CAPACITY	1705	LBS

HOLD-DOWN SPECIFICATION

SIMPSON CS16 STRAP TIE (14" END LENGTH)

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	7.0	FT.	QUALIFYING WALL LENGTH, L	7.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1250 LBS	<	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	180	PLF	OVERTURNING MOMENT	11.4	K-FT	HOLD DOWN DESIGN LOAD	1205	LBS
DL AT ENDS OF WALL	289	LBS	RESISTIVE MOMENT	2.9	K-FT	HOLDOWN CAPACITY	1705	LBS

HOLD-DOWN SPECIFICATION

SIMPSON CS16 STRAP TIE (14" END LENGTH)

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, H_c	0.0	FT.		
WALL LENGTH, L	5.5	FT.	QUALIFYING WALL LENGTH, L	5.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
950 LBS	<	1315 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	184	PLF	OVERTURNING MOMENT	8.6	K-FT	HOLD DOWN DESIGN LOAD	1208	LBS
DL AT ENDS OF WALL	289	LBS	RESISTIVE MOMENT	2.0	K-FT	HOLDOWN CAPACITY	1705	LBS

HOLD-DOWN SPECIFICATION

SIMPSON CS16 STRAP TIE (14" END LENGTH)

SHEARWALL 205: - VOID

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	#DIV/0!	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

SHEARWALL 206: - VOID

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, H_c	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	#DIV/0!	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, Hc	3.5	FT.		
WALL LENGTH, L	36.0	FT.	QUALIFYING WALL LENGTH, L	22.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
3200 LBS	<	5258 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	235	PLF	OVERTURNING MOMENT	29.1	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	500	LBS	RESISTIVE MOMENT	77.4	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

SHEARWALL 208: 2ND - INTERIOR WALL @ MBR

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, H_o	0.0	FT.		
WALL LENGTH, L	13.5	FT.	QUALIFYING WALL LENGTH, L	13.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
2150 LBS	<	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	125	PLF	OVERTURNING MOMENT	19.5	K-FT	HOLD DOWN DESIGN LOAD	690	LBS
DL AT ENDS OF WALL	822	LBS	RESISTIVE MOMENT	10.2	K-FT	HOLDOWN CAPACITY	1705	LBS

HOLD-DOWN SPECIFICATION

SIMPSON CS16 STRAP TIE (14" END LENGTH)

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, Hc	4.0	FT.		
WALL LENGTH, L	16.3	FT.	QUALIFYING WALL LENGTH, L	14.3	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1100 LBS	<	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	184	PLF	OVERTURNING MOMENT	10.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	500	LBS	RESISTIVE MOMENT	14.7	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	9.1	FT.	MAX WALL OPENING HT, H_o	4.0	FT.		
WALL LENGTH, L	14.5	FT.	QUALIFYING WALL LENGTH, L	12.5	FT.	SHEARWALL ASSEMBLY	P3

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
4100 LBS	<	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	202	PLF	OVERTURNING MOMENT	37.2	K-FT	HOLD DOWN DESIGN LOAD	1676	LBS
DL AT ENDS OF WALL	500	LBS	RESISTIVE MOMENT	12.9	K-FT	HOLDOWN CAPACITY	1705	LBS

HOLD-DOWN SPECIFICATION

SIMPSON CS16 STRAP TIE (14" END LENGTH)

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	0.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, H_c	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	0.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	0.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, H_c	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	0.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	0.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

SHEARWALL XXX: - NOT USED

SHEARWALL PROPERTIES:

WALL HEIGHT, H	0.0	FT.	MAX WALL OPENING HT, H_c	0.0	FT.		
WALL LENGTH, L	0.0	FT.	QUALIFYING WALL LENGTH, L	0.0	FT.	SHEARWALL ASSEMBLY	P0

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
0 LBS	####	#DIV/0! 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	0	PLF	OVERTURNING MOMENT	0.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	0	LBS	RESISTIVE MOMENT	0.0	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, Hc	8.0	FT.		
WALL LENGTH, L	14.0	FT.	QUALIFYING WALL LENGTH, L	8.0	FT.	SHEARWALL ASSEMBLY	P3

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
3500 LBS	<	3552 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	134	PLF	OVERTURNING MOMENT	35.0	K-FT	HOLD DOWN DESIGN LOAD	1358	LBS
DL AT ENDS OF WALL	1578	LBS	RESISTIVE MOMENT	16.0	K-FT	HOLDOWN CAPACITY	3695	LBS

HOLD-DOWN SPECIFICATION

SIMPSON STHD14RJ HOLDOWN

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, H_o	5.0	FT.		
WALL LENGTH, L	14.3	FT.	QUALIFYING WALL LENGTH, L	8.3	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1050 LBS	<	1972 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	439	PLF	OVERTURNING MOMENT	10.5	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	1414	LBS	RESISTIVE MOMENT	29.4	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	11.0	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	13.5	FT.	QUALIFYING WALL LENGTH, L	13.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1800 LBS	<	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	202	PLF	OVERTURNING MOMENT	19.8	K-FT	HOLD DOWN DESIGN LOAD	303	LBS
DL AT ENDS OF WALL	1200	LBS	RESISTIVE MOMENT	15.7	K-FT	HOLDOWN CAPACITY	3695	LBS

HOLD-DOWN SPECIFICATION

SIMPSON STHD14RJ HOLDOWN

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

SHEARWALL 103: 1ST - INT.WALL @ GARAGE

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, H_o	8.0	FT.		
WALL LENGTH, L	20.5	FT.	QUALIFYING WALL LENGTH, L	17.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
2700 LBS	<	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	120	PLF	OVERTURNING MOMENT	27.0	K-FT	HOLD DOWN DESIGN LOAD	515	LBS
DL AT ENDS OF WALL	536	LBS	RESISTIVE MOMENT	16.4	K-FT	HOLDOWN CAPACITY	3695	LBS

HOLD-DOWN SPECIFICATION

SIMPSON STHD14RJ HOLDOWN

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, Hc	6.0	FT.		
WALL LENGTH, L	21.0	FT.	QUALIFYING WALL LENGTH, L	10.0	FT.	SHEARWALL ASSEMBLY	P3

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
2950 LBS	<	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	420	PLF	OVERTURNING MOMENT	29.5	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	775	LBS	RESISTIVE MOMENT	49.5	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, H_c	0.0	FT.		
WALL LENGTH, L	10.5	FT.	QUALIFYING WALL LENGTH, L	10.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1150 LBS	<	2510 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	185	PLF	OVERTURNING MOMENT	11.5	K-FT	HOLD DOWN DESIGN LOAD	586	LBS
DL AT ENDS OF WALL	150	LBS	RESISTIVE MOMENT	5.3	K-FT	HOLDOWN CAPACITY	3695	LBS

HOLD-DOWN SPECIFICATION

SIMPSON STHD14RJ HOLDOWN

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, Hc	6.0	FT.		
WALL LENGTH, L	14.0	FT.	QUALIFYING WALL LENGTH, L	8.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1500 LBS	<	1912 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	300	PLF	OVERTURNING MOMENT	15.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	800	LBS	RESISTIVE MOMENT	18.4	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, H_c	6.0	FT.		
WALL LENGTH, L	12.5	FT.	QUALIFYING WALL LENGTH, L	6.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1350 LBS	<	1554 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	300	PLF	OVERTURNING MOMENT	13.5	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	800	LBS	RESISTIVE MOMENT	15.2	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, Hc	5.0	FT.		
WALL LENGTH, L	23.0	FT.	QUALIFYING WALL LENGTH, L	19.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
700 LBS	<	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	246	PLF	OVERTURNING MOMENT	7.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	536	LBS	RESISTIVE MOMENT	35.1	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, H_o	8.0	FT.		
WALL LENGTH, L	30.0	FT.	QUALIFYING WALL LENGTH, L	27.5	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
5200 LBS	<	6573 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	438	PLF	OVERTURNING MOMENT	52.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	400	LBS	RESISTIVE MOMENT	94.9	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

SHEARWALL 110: 1ST - INT. WALL @ GARAGE

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, Hc	0.0	FT.		
WALL LENGTH, L	23.0	FT.	QUALIFYING WALL LENGTH, L	23.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
2100 LBS	<	5497 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	373	PLF	OVERTURNING MOMENT	21.0	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	1010	LBS	RESISTIVE MOMENT	55.3	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING

PROJECT NAME: ARCHITECT NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

SHEARWALL DESIGN SUMMARY

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	11.0	FT.	MAX WALL OPENING HT, H_o	4.0	FT.		
WALL LENGTH, L	22.0	FT.	QUALIFYING WALL LENGTH, L	18.0	FT.	SHEARWALL ASSEMBLY	P1

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
1800 LBS	<	4302 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	194	PLF	OVERTURNING MOMENT	19.8	K-FT	HOLD DOWN DESIGN LOAD	0	LBS
DL AT ENDS OF WALL	536	LBS	RESISTIVE MOMENT	26.7	K-FT	HOLDOWN CAPACITY	0	LBS

HOLD-DOWN SPECIFICATION

NO HOLDOWN REQUIRED

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

SHEARWALL PROPERTIES:

WALL HEIGHT, H	10.0	FT.	MAX WALL OPENING HT, Hc	8.0	FT.		
WALL LENGTH, L	20.0	FT.	QUALIFYING WALL LENGTH, L	17.3	FT.	SHEARWALL ASSEMBLY	P3

CAPACITY EVALUATION:

TOTAL SHEAR LOAD ON WALL		ALLOWABLE SHEARWALL CAPACITY
6200 LBS	<	7670 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	300	PLF	OVERTURNING MOMENT	62.0	K-FT	HOLD DOWN DESIGN LOAD	1193	LBS
DL AT ENDS OF WALL	1200	LBS	RESISTIVE MOMENT	38.1	K-FT	HOLDOWN CAPACITY	3695	LBS

HOLD-DOWN SPECIFICATION

SIMPSON STHD14RJ HOLDOWN

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 350 ▸ San Diego, CA 92121
p 619-650-0010 ▸ mulhernkulp.com

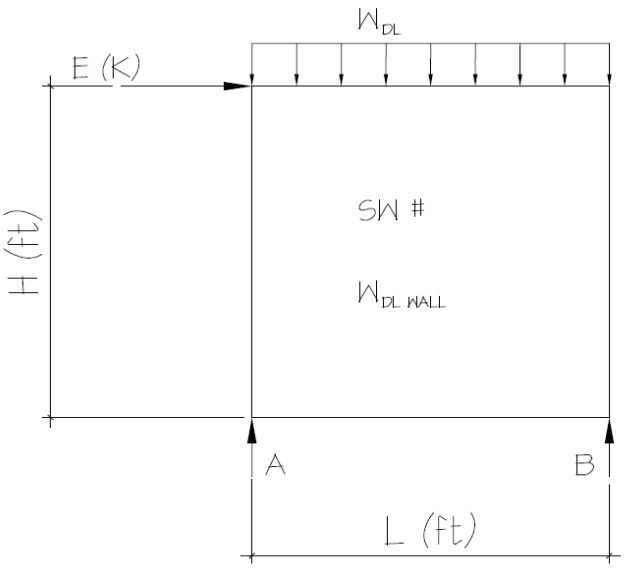
PROJECT NAME: ARCHITECTS NW
HATELY RESIDENCE
M&K PROJECT #: 202-22014
ENGINEER: JCL
DATE: 08-JUL-22

OVERSTRENGTH CALCULATIONS

WALL DESCRIPTION/SW #: 208

PARAMETERS:

L =	13.5	FT
H =	9.1	FT
E =	2.15	K
W_{DLWALL} =	0.10	KLF
W_{DL} =	0.025	KLF
Ω_0 =	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
$E_M = E_{MH} + E_V$		$E_M = E_{MH} + E_V$ =	5.758 K
$E_M = E_{MH} - E_V$		$E_M = E_{MH} - E_V$ =	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 STESS 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

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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:

66.07%
Controlling Factor: Deflection

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:

66.67%
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

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

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

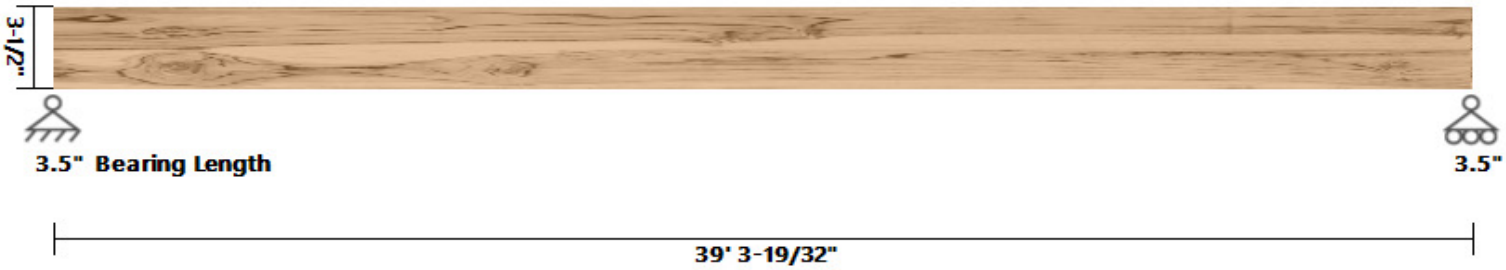
Module Location: F21 - FTG at M06b, M07a, U09b, & U10b (C25)
Module Level: StruCalc Members
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 4.5 ft. wide X 12 in. tall X 4.5 ft long
Section Adequacy: 28.61%
Controlling Factor: Soil Bearing Pressure
Reinforcement Bars: Size #4, 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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

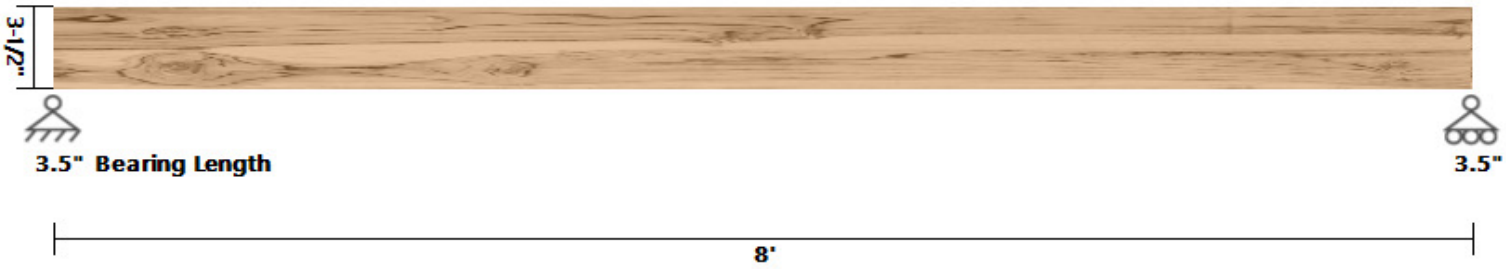
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	39.3	Snow	Y
Uniform (lbf/ft)	15	15	0	39.3	Dead	Y
Trapezoidal (lbf/ft)	25	25	0	10.1	Snow	Y
Trapezoidal (lbf/ft)	15	15	0	10.1	Dead	Y
Trapezoidal (lbf/ft)	173	173	10.1	25.6	Snow	Y
Trapezoidal (lbf/ft)	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

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

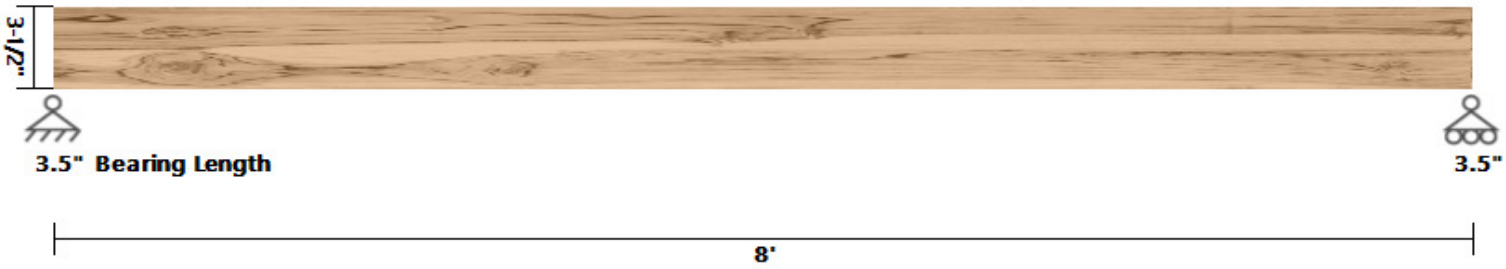
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	512.5	512.5	0	8	Snow	Y
Uniform (lbf/ft)	307.5	307.5	0	8	Dead	Y
Self Weight (lbf/ft)	1.2	1.2	0	8	Dead	Y

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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

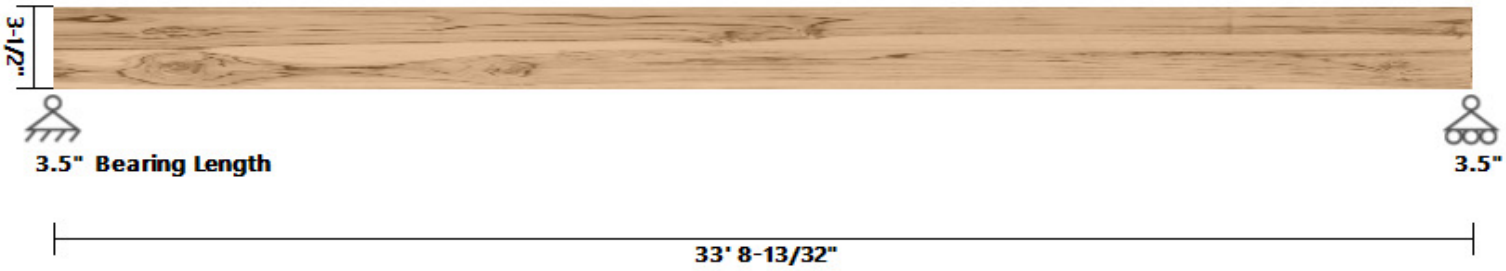
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	738	738	0	8	Snow	Y
Uniform (lbf/ft)	443	443	0	8	Dead	Y
Trapezoidal (lbf/ft)	100	100	0	4.3	Snow	Y
Trapezoidal (lbf/ft)	60	60	0	4.3	Dead	Y
Trapezoidal (lbf/ft)	25	25	4.3	8	Snow	Y
Trapezoidal (lbf/ft)	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

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:	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	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

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	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

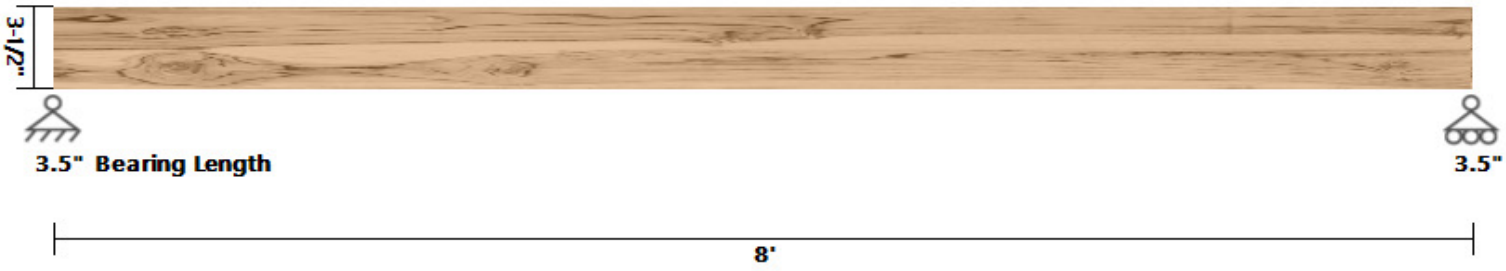
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2086.056	-	4.1	-	Dead	Y
Point (lbf)	3425.16	-	4.1	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

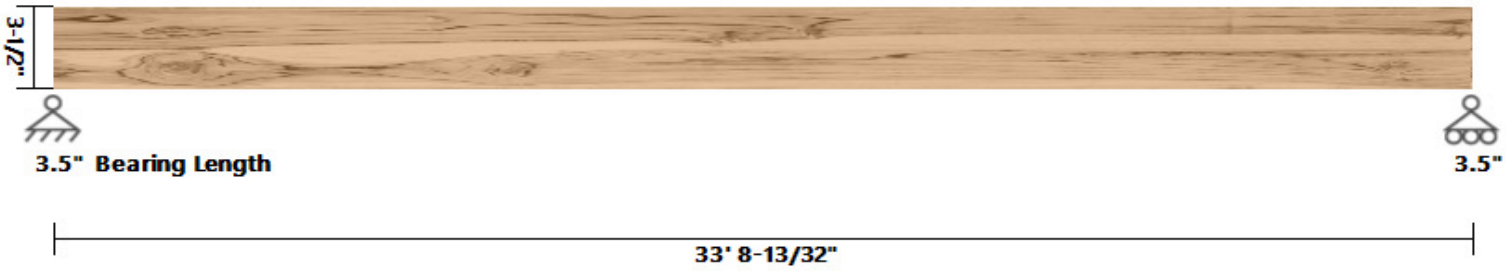
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	300	300	0	8	Snow	Y
Uniform (lbf/ft)	180	180	0	8	Dead	Y
Self Weight (lbf/ft)	1.2	1.2	0	8	Dead	Y

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:	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	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

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	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

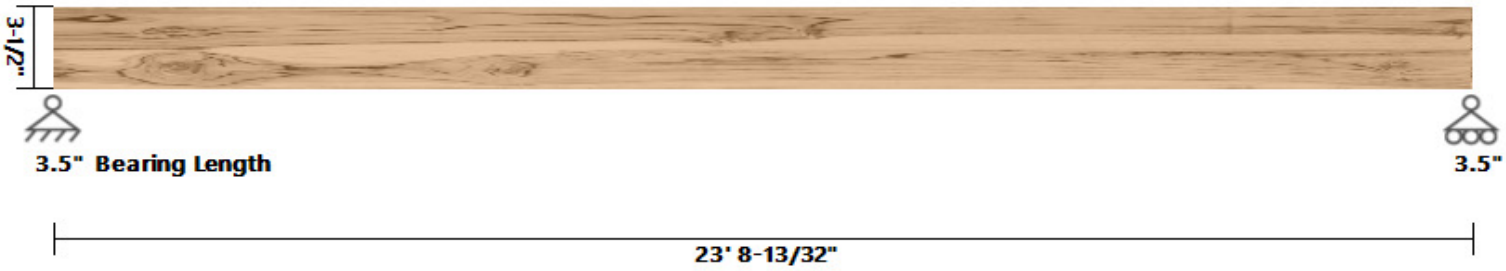
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	724.7895	-	22.1	-	Dead	Y
Point (lbf)	1200	-	22.1	-	Snow	Y

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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

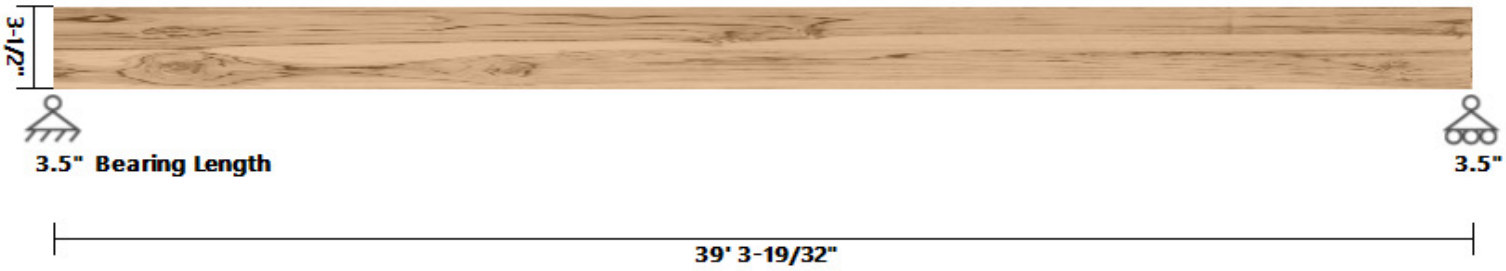
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	786.5361	-	11.9	-	Dead	Y
Point (lbf)	1270.934	-	11.9	-	Snow	Y
Point (lbf)	1433.142	-	15.6	-	Dead	Y
Point (lbf)	2349.709	-	15.6	-	Snow	Y

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

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	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

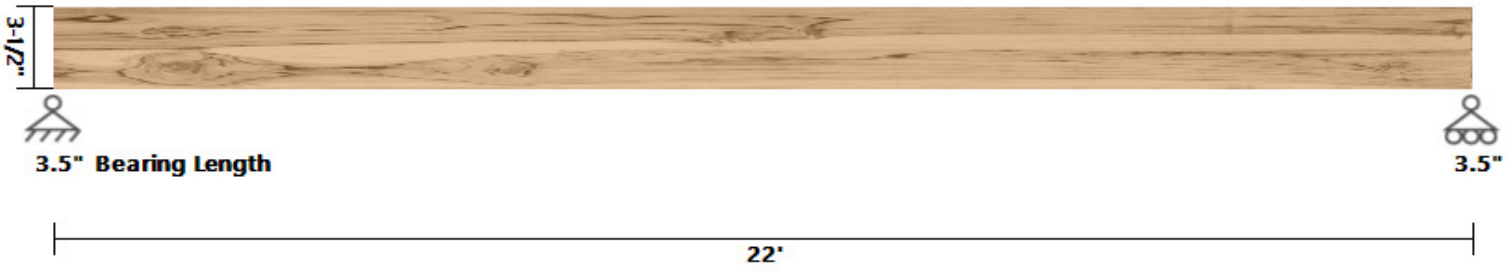
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2148.024	-	4.4	-	Dead	Y
Point (lbf)	3534.341	-	4.4	-	Snow	Y
Point (lbf)	4007.496	-	34.2	-	Dead	Y
Point (lbf)	6533.909	-	34.2	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

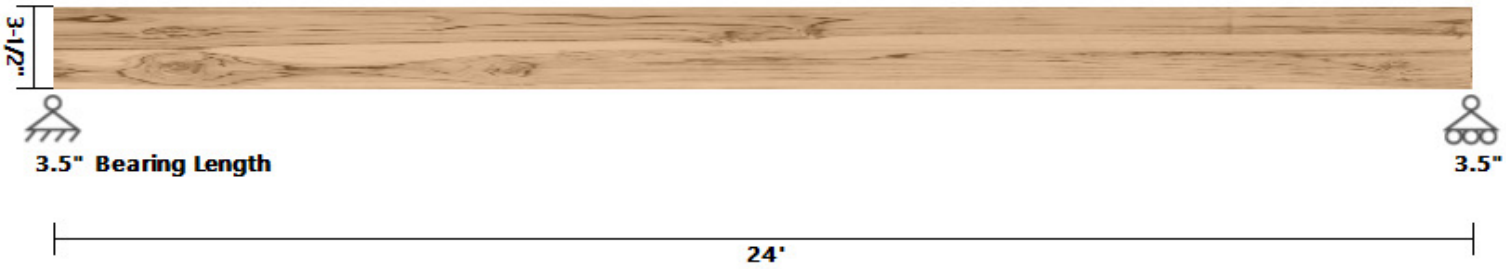
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	22	Snow	Y
Uniform (lbf/ft)	15	15	0	22	Dead	Y
Trapezoidal (lbf/ft)	25	25	0	8	Snow	Y
Trapezoidal (lbf/ft)	15	15	0	8	Dead	Y
Trapezoidal (lbf/ft)	100	100	8	14	Snow	Y
Trapezoidal (lbf/ft)	60	60	8	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

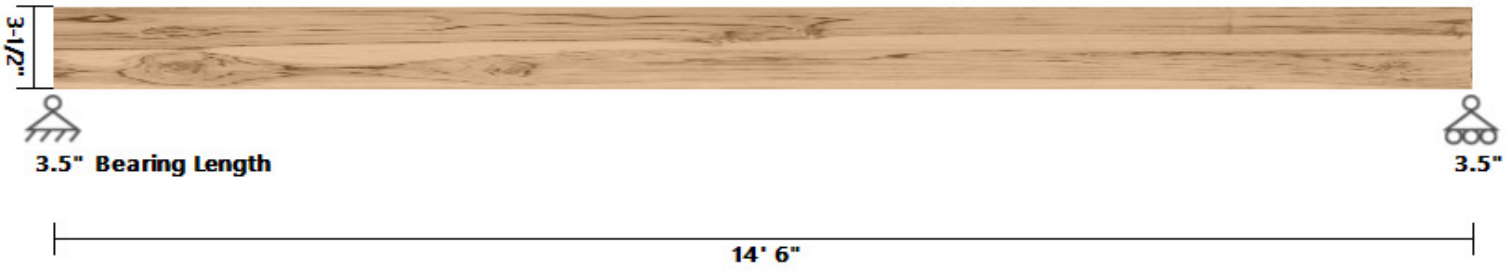
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	24	Snow	Y
Uniform (lbf/ft)	15	15	0	24	Dead	Y
Trapezoidal (lbf/ft)	25	25	0	8	Snow	Y
Trapezoidal (lbf/ft)	15	15	0	8	Dead	Y
Trapezoidal (lbf/ft)	100	100	8	16	Snow	Y
Trapezoidal (lbf/ft)	60	60	8	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

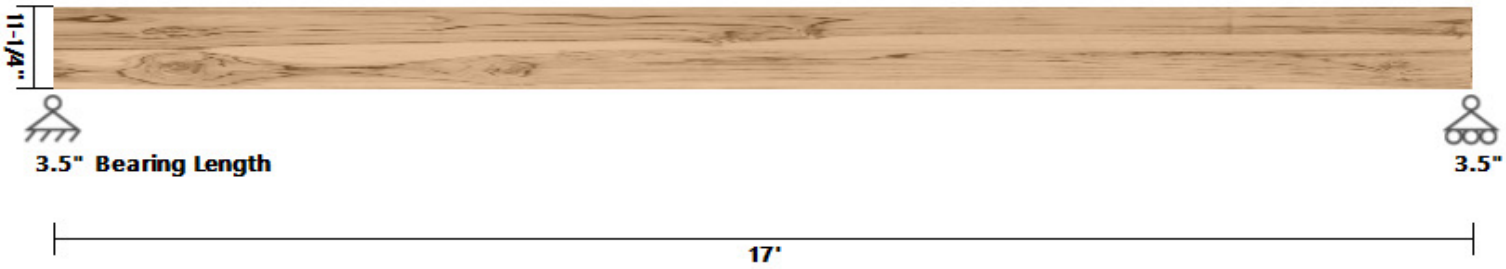
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	14.5	Snow	Y
Uniform (lbf/ft)	15	15	0	14.5	Dead	Y
Trapezoidal (lbf/ft)	25	25	0	8	Snow	Y
Trapezoidal (lbf/ft)	15	15	0	8	Dead	Y
Trapezoidal (lbf/ft)	100	100	8	14.5	Snow	Y
Trapezoidal (lbf/ft)	60	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

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

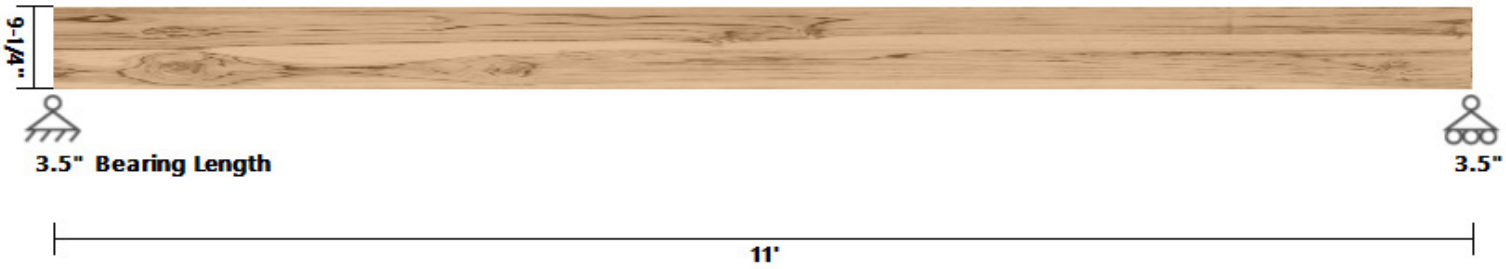
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	50	50	0	17	Snow	Y
Uniform (lbf/ft)	30	30	0	17	Dead	Y
Self Weight (lbf/ft)	8.98	8.98	0	17	Dead	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

A B

LOAD LIST

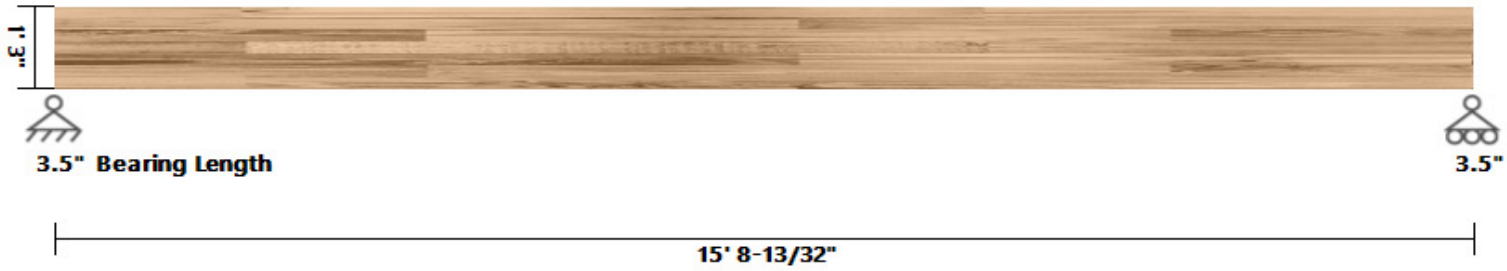
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	73	73	0	11	Snow	Y
Uniform (lbf/ft)	44	44	0	11	Dead	Y
Trapezoidal (lbf/ft)	100	100	0	3	Snow	Y
Trapezoidal (lbf/ft)	60	60	0	3	Dead	Y
Trapezoidal (lbf/ft)	100	0	3	11	Snow	Y
Trapezoidal (lbf/ft)	60	0	3	11	Dead	Y
Self Weight (lbf/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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
76.88	1441.41	168.26	17.53	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (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) Top	Unbraced Length (ft) Bottom	Beam End 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

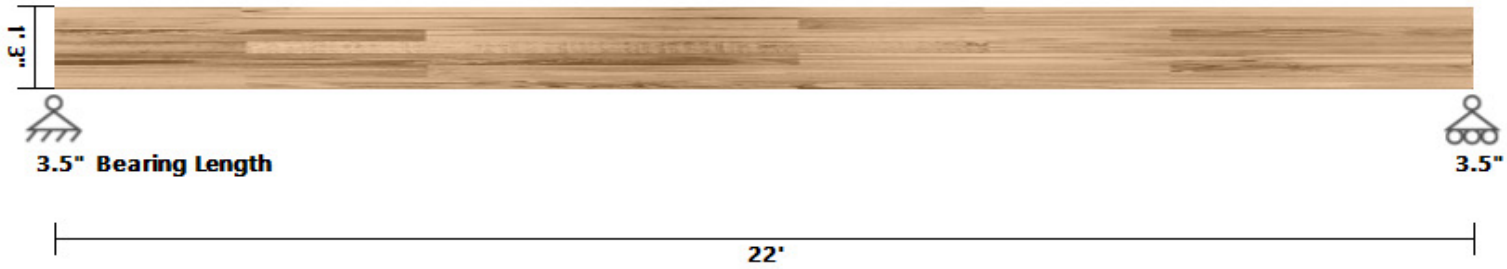
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	921.3686	-	8.5	-	Dead	Y
Point (lbf)	1432.999	-	8.5	-	Snow	Y

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

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (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) Top	Unbraced Length (ft) Bottom	Beam End 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

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

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (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) Top	Unbraced Length (ft) Bottom	Beam End 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

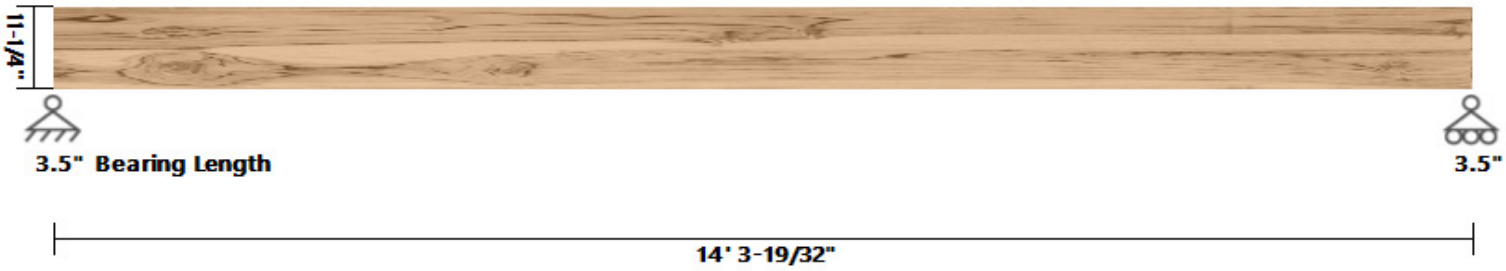
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2217.029	-	7.6	-	Dead	Y
Point (lbf)	3452.432	-	7.6	-	Snow	Y

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:	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)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

A B

LOAD LIST

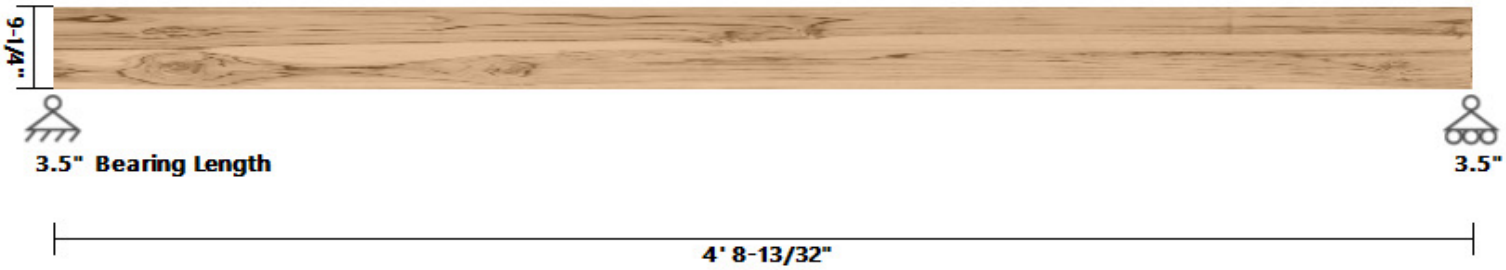
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	38	38	0	14.3	Snow	Y
Uniform (lbf/ft)	22	22	0	14.3	Dead	Y
Trapezoidal (lbf/ft)	0	100	0	8	Snow	Y
Trapezoidal (lbf/ft)	0	60	0	8	Dead	Y
Trapezoidal (lbf/ft)	100	100	8	14.3	Snow	Y
Trapezoidal (lbf/ft)	60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

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

A B

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

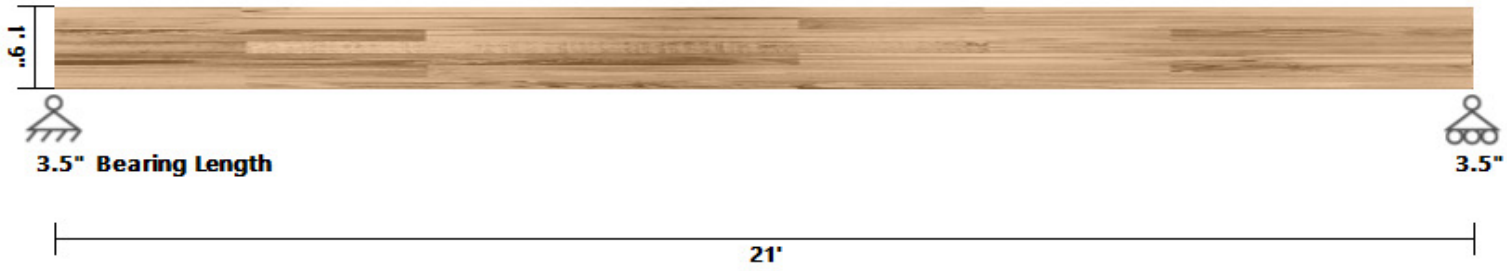
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	456.2585	-	2.4	-	Dead	Y
Point (lbf)	710.6982	-	2.4	-	Snow	Y

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

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (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) Top	Unbraced Length (ft) Bottom	Beam End 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

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

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (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) Top	Unbraced Length (ft) Bottom	Beam End 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

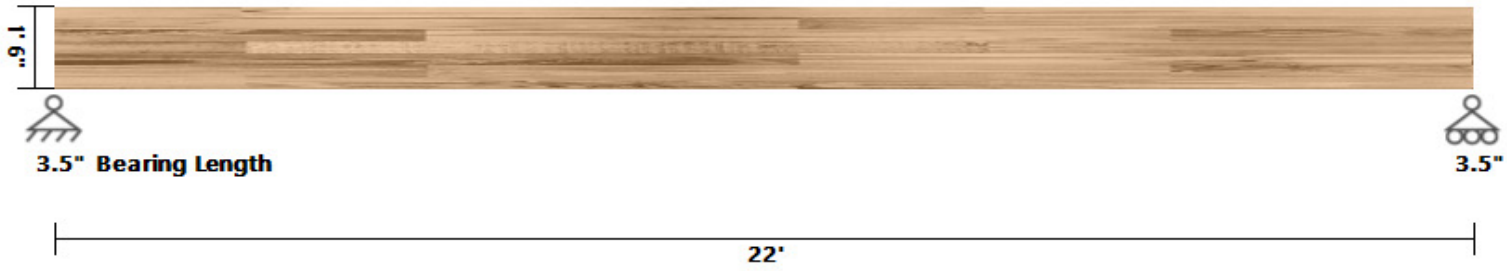
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	492	492	0	20	Live	Y
Uniform (lbf/ft^2)	184.5	184.5	0	20	Dead	Y
Uniform (lbf/ft)	63	63	0	20	Dead	Y
Self Weight (lbf/ft)	22.79	22.79	0	20	Dead	Y

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

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (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) Top	Unbraced Length (ft) Bottom	Beam End 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

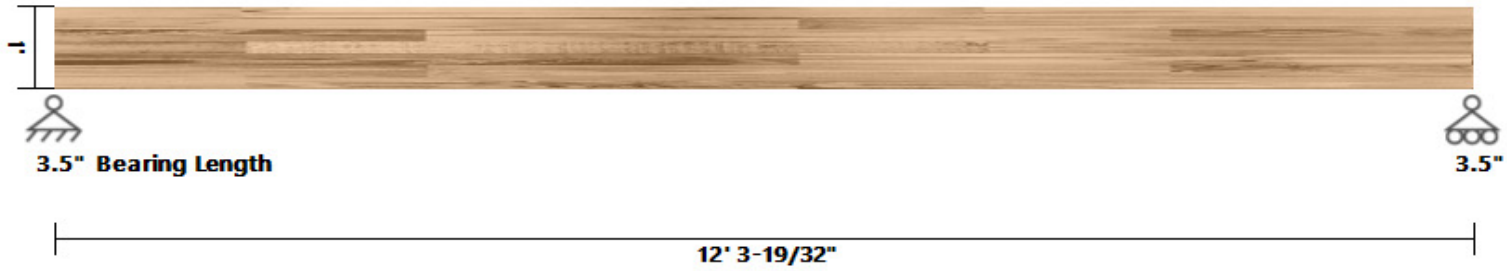
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	22	Live	Y
Uniform (lbf/ft)	105	105	0	22	Dead	Y
Trapezoidal (lbf/ft)	38	138	2	10	Live	Y
Trapezoidal (lbf/ft)	23	83	2	10	Dead	Y
Trapezoidal (lbf/ft)	138	138	10	14	Live	Y
Trapezoidal (lbf/ft)	83	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

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:	U04 - GARAGE OHD 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 OHD HDR DIAGRAM



BEAM PROPERTIES

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

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

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (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) Top	Unbraced Length (ft) Bottom	Beam End 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

A B

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

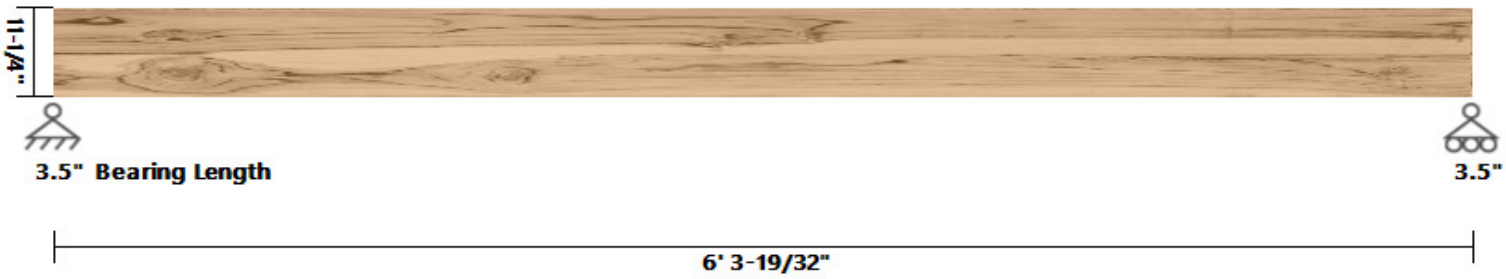
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	845.171	-	6.5	-	Dead	Y
Point (lbf)	1307.999	-	6.5	-	Snow	Y
Point (lbf)	2318.751	-	1.4	-	Dead	Y
Point (lbf)	1803.714	-	1.4	-	Live	Y

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:	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)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

A B

LOAD LIST

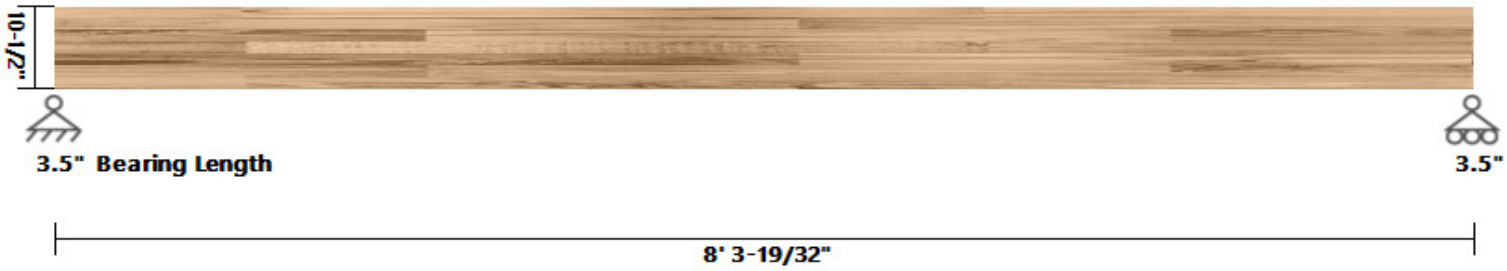
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	6.3	Live	Y
Uniform (lbf/ft)	105	105	0	6.3	Dead	Y
Trapezoidal (lbf/ft)	138	138	0	2.7	Live	Y
Trapezoidal (lbf/ft)	83	83	0	2.7	Dead	Y
Trapezoidal (lbf/ft)	138	93	2.7	6.3	Live	Y
Trapezoidal (lbf/ft)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

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:	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

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	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

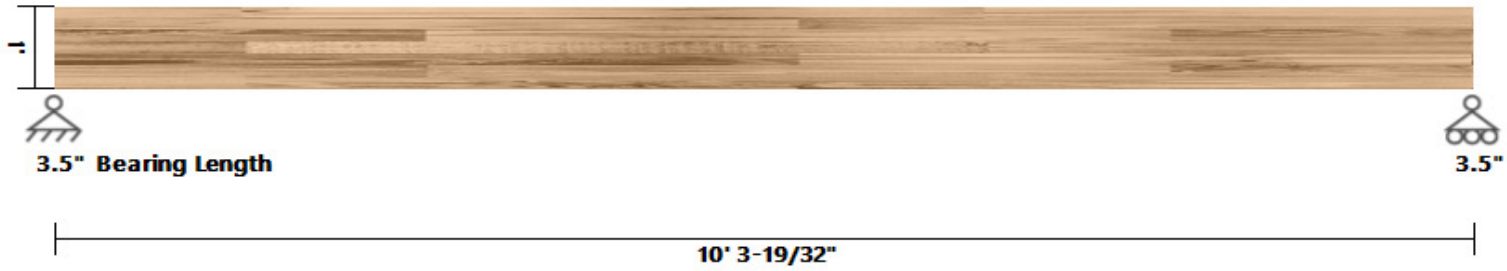
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	25	25	0	8.3	Live	Y
Uniform (lbf/ft)	105	105	0	8.3	Dead	Y
Trapezoidal (lbf/ft)	78	138	0	6.4	Live	Y
Trapezoidal (lbf/ft)	47	83	0	6.4	Dead	Y
Trapezoidal (lbf/ft)	138	138	6.4	8.3	Live	Y
Trapezoidal (lbf/ft)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

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:	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

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	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

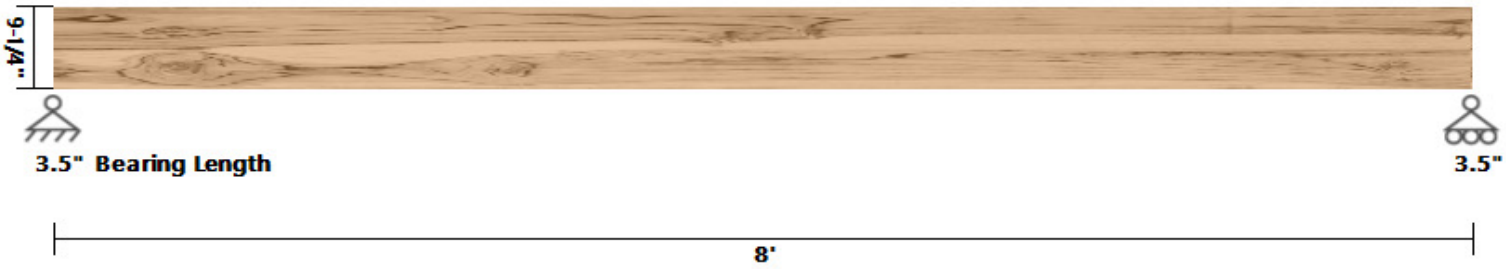
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	655.6031	-	5	-	Dead	Y
Point (lbf)	1034.802	-	5	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

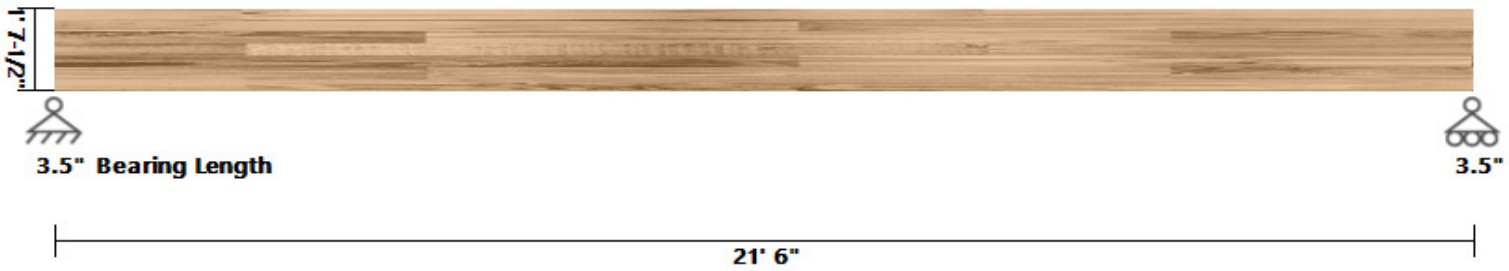
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	150	150	0	8	Live	Y
Uniform (lbf/ft^2)	56.25	56.25	0	8	Dead	Y
Uniform (lbf/ft)	63	63	0	8	Dead	Y
Self Weight (lbf/ft)	7.38	7.38	0	8	Dead	Y

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

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (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) Top	Unbraced Length (ft) Bottom	Beam End 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

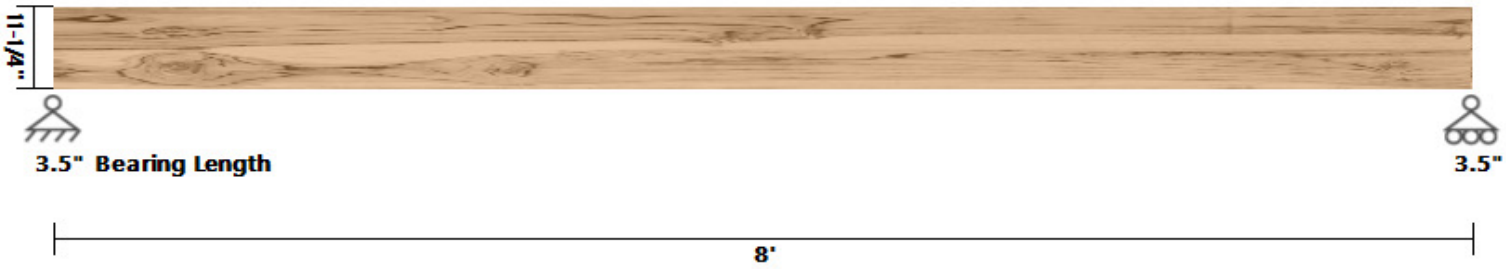
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	506.5351	-	13.7	-	Dead	Y
Point (lbf)	600	-	13.7	-	Live	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	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

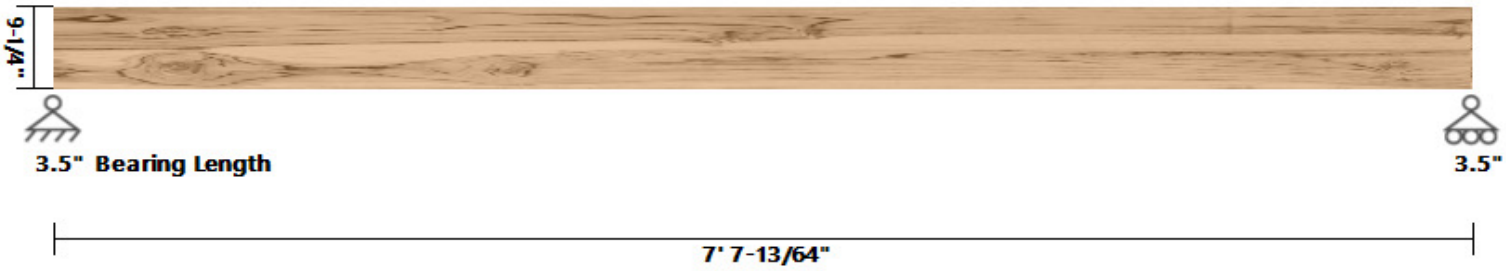
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	398	398	0	8	Live	Y
Uniform (lbf/ft^2)	149.25	149.25	0	8	Dead	Y
Uniform (lbf/ft)	63	63	0	8	Dead	Y
Self Weight (lbf/ft)	8.98	8.98	0	8	Dead	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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

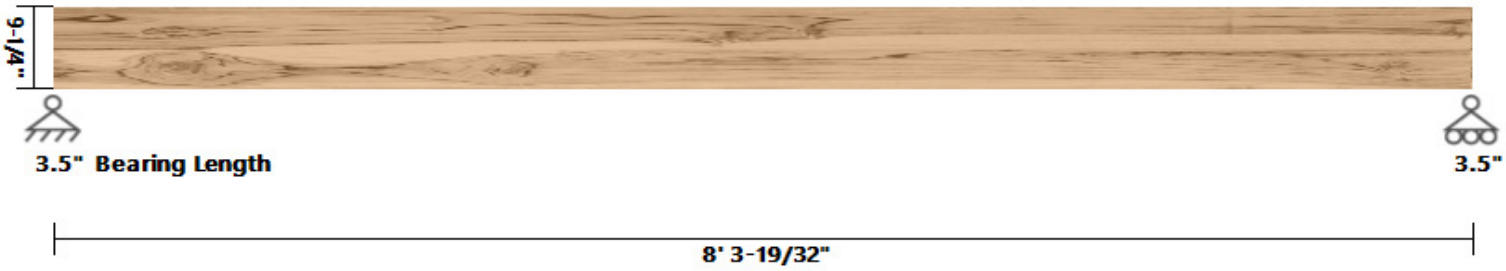
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	280	280	0	7.6	Live	Y
Uniform (lbf/ft^2)	105	105	0	7.6	Dead	Y
Uniform (lbf/ft)	63	63	0	7.6	Dead	Y
Self Weight (lbf/ft)	7.38	7.38	0	7.6	Dead	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	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

A B

LOAD LIST

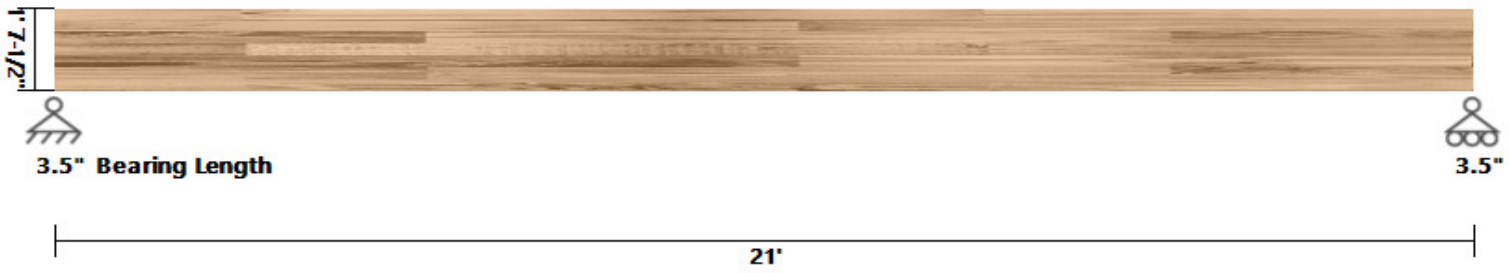
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	250	250	0	8.3	Live	Y
Uniform (lbf/ft^2)	93.75	93.75	0	8.3	Dead	Y
Uniform (lbf/ft)	63	63	0	8.3	Dead	Y
Self Weight (lbf/ft)	7.38	7.38	0	8.3	Dead	Y

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

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (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) Top	Unbraced Length (ft) Bottom	Beam End 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

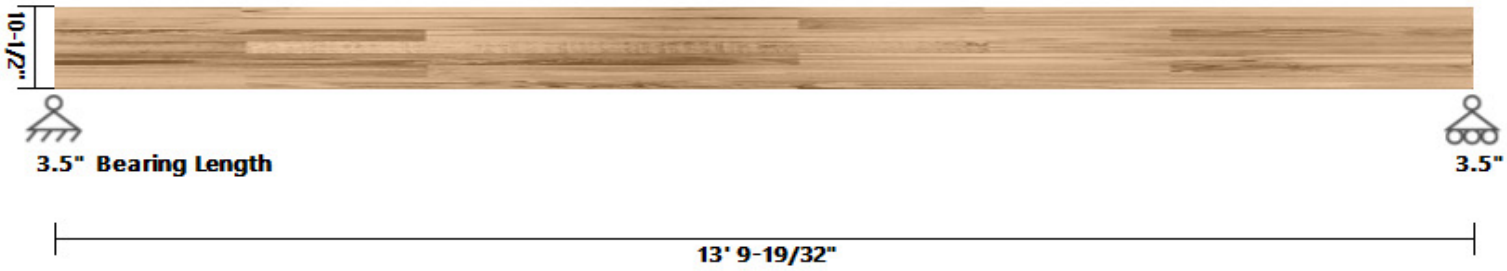
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	63	63	0	21	Dead	Y
Trapezoidal (lbf/ft)	420	420	0	21	Live	Y
Trapezoidal (lbf/ft)	105	105	0	21	Dead	Y
Trapezoidal (lbf/ft)	76	76	13.7	21	Live	Y
Trapezoidal (lbf/ft)	19	19	13.7	21	Dead	Y
Self Weight (lbf/ft)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

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	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

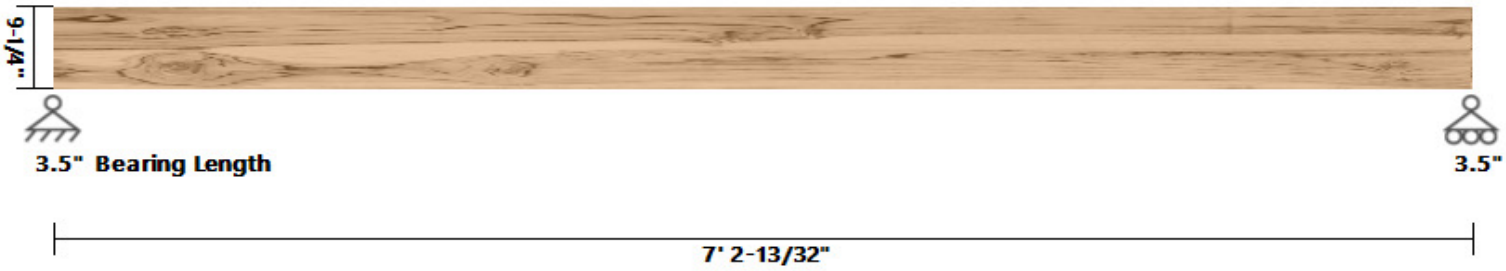
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	126	126	0	13.8	Dead	Y
Trapezoidal (lbf/ft)	45	45	7	13.8	Live	Y
Trapezoidal (lbf/ft)	10	10	7	13.8	Dead	Y
Trapezoidal (lbf/ft)	45	45	0	13.8	Live	Y
Trapezoidal (lbf/ft)	10	40	0	13.8	Dead	Y
Self Weight (lbf/ft)	7.48	7.48	0	13.8	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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) Top	Unbraced Length (ft) Bottom	Beam End 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 (lbf/ft^2)	116	116	0	7.2	Live	Y
Uniform (lbf/ft^2)	43.5	43.5	0	7.2	Dead	Y
Uniform (lbf/ft)	63	63	0	7.2	Dead	Y
Self Weight (lbf/ft)	7.38	7.38	0	7.2	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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
111.38	2526.82	422.88	25.4	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (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) Top	Unbraced Length (ft) Bottom	Beam End 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

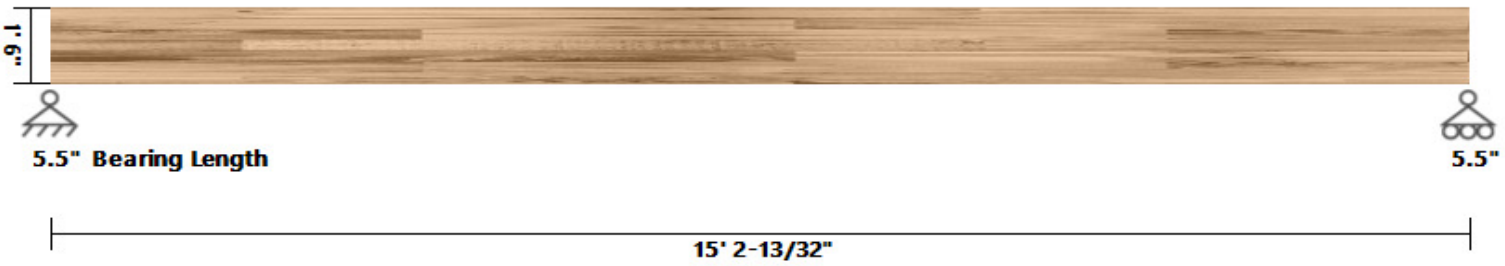
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2540.525	-	1.1	-	Dead	Y
Point (lbf)	3950.57	-	1.1	-	Snow	Y
Point (lbf)	1234.789	-	1.1	-	Dead	Y
Point (lbf)	2050	-	1.1	-	Snow	Y
Point (lbf)	666.4584	-	1.1	-	Dead	Y
Point (lbf)	666.4584	-	8.2	-	Dead	Y
Point (lbf)	1064	-	1.1	-	Live	Y
Point (lbf)	1064	-	8.2	-	Live	Y

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:	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

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	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

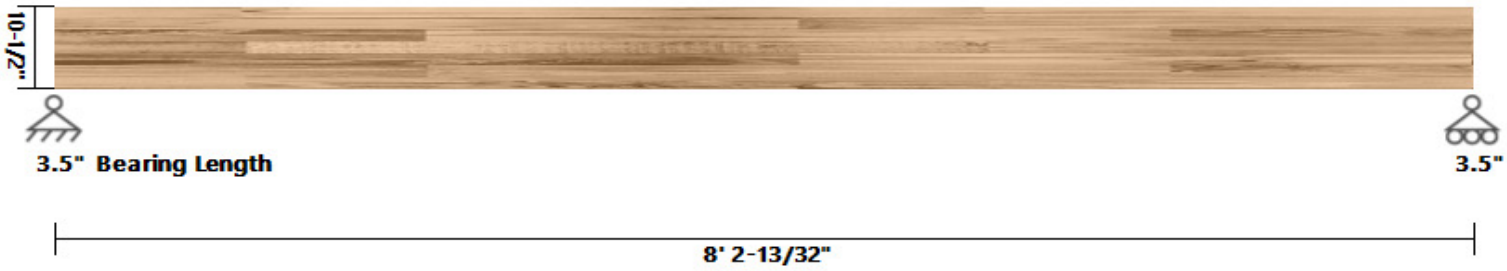
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1234.789	-	1.1	-	Dead	Y
Point (lbf)	2050	-	1.1	-	Snow	Y
Point (lbf)	3050.767	-	1.1	-	Dead	Y
Point (lbf)	4985.719	-	1.1	-	Snow	Y
Point (lbf)	681.1551	-	1.1	-	Dead	Y
Point (lbf)	681.1551	-	8.9	-	Dead	Y
Point (lbf)	1037.5	-	1.1	-	Live	Y
Point (lbf)	1037.5	-	8.9	-	Live	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
57.75	530.58	145.58	13.17	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (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) Top	Unbraced Length (ft) Bottom	Beam End 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

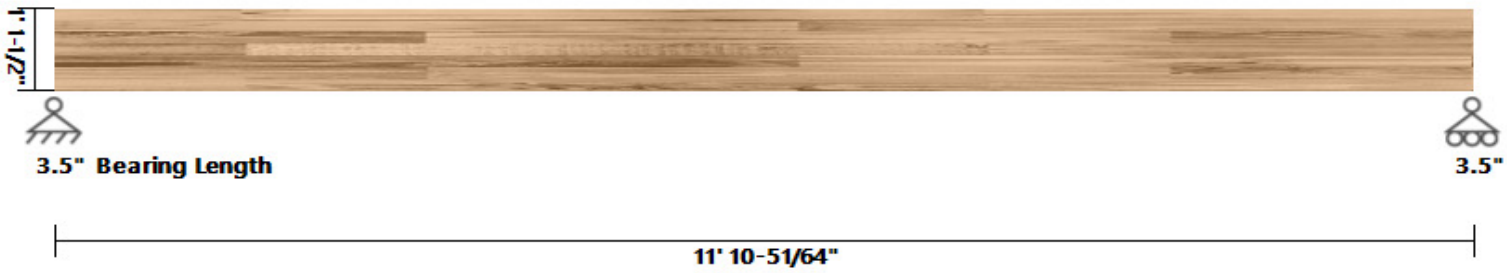
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	884.9211	-	0.3	-	Dead	Y
Point (lbf)	1592	-	0.3	-	Live	Y
Point (lbf)	2117.917	-	3.9	-	Dead	Y
Point (lbf)	4868.369	-	3.9	-	Live	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
69.19	1050.79	151.44	15.78	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (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) Top	Unbraced Length (ft) Bottom	Beam End 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

LOAD LIST

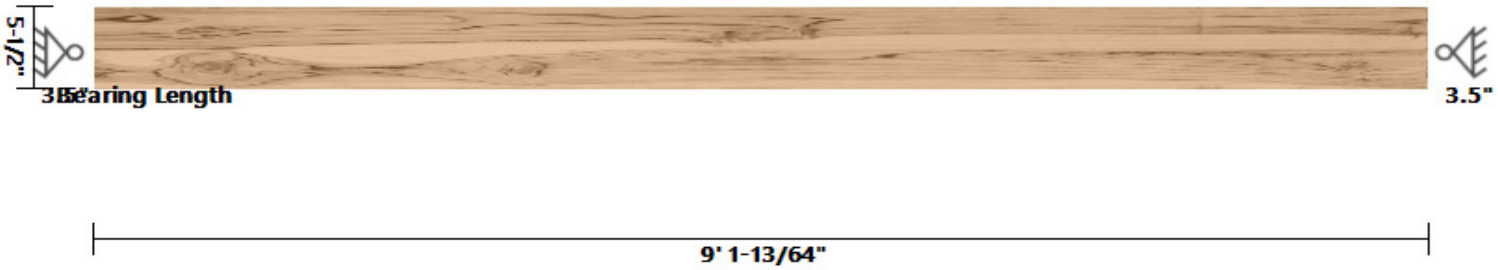
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	126	126	0	11.9	Dead	Y
Trapezoidal (lbf/ft)	440	440	0	11.9	Live	Y
Trapezoidal (lbf/ft)	110	110	0	11.9	Dead	Y
Trapezoidal (lbf/ft)	440	440	0	11.9	Live	Y
Trapezoidal (lbf/ft)	110	110	0	11.9	Dead	Y
Self Weight (lbf/ft)	15.78	15.78	0	11.9	Dead	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) X	Unbraced Length (ft) Y	Column End 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 (36.9%)	507.8	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	-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

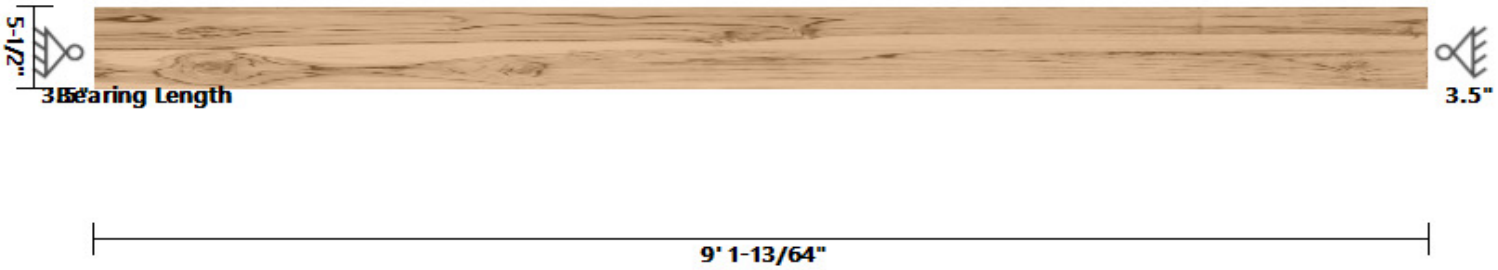
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2540.525	-	9.1	-	Dead	Y
Point (lbf)	-3950.57	-	9.1	-	Snow	Y
Point (lbf)	-1234.789	-	9.1	-	Dead	Y
Point (lbf)	-2050	-	9.1	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) X	Unbraced Length (ft) Y	Column End 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

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

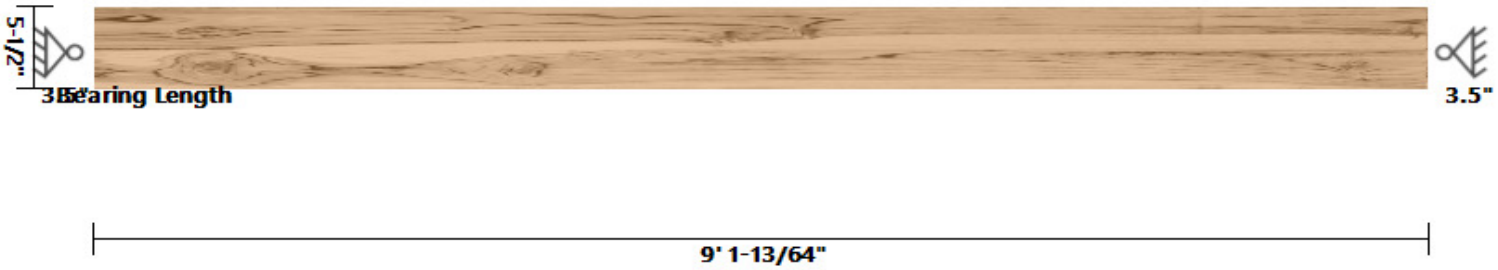
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-1234.789	-	9.1	-	Dead	Y
Point (lbf)	-2050	-	9.1	-	Snow	Y
Point (lbf)	-3050.767	-	9.1	-	Dead	Y
Point (lbf)	-4985.719	-	9.1	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

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	-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

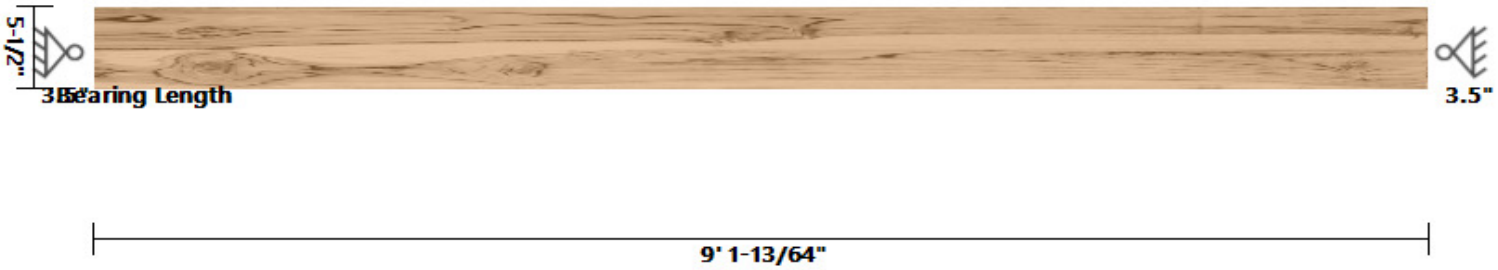
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2447.216	-	9.1	-	Dead	Y
Point (lbf)	-3999.122	-	9.1	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

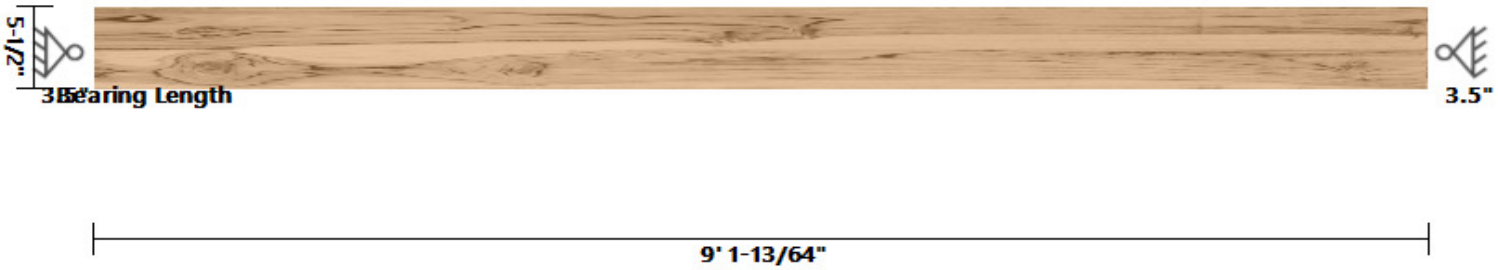
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-3375.125	-	9.1	-	Dead	Y
Point (lbf)	-5473.887	-	9.1	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) X	Unbraced Length (ft) Y	Column End 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

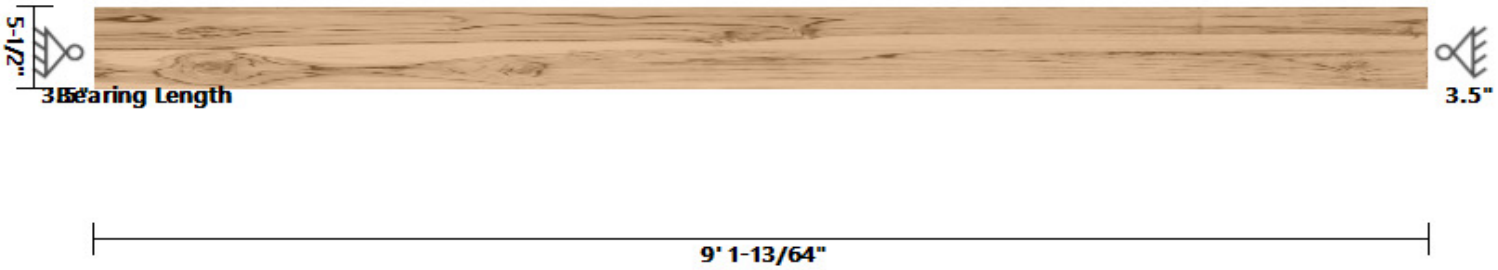
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-4458.315	-	9.1	-	Dead	Y
Point (lbf)	-7256.631	-	9.1	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

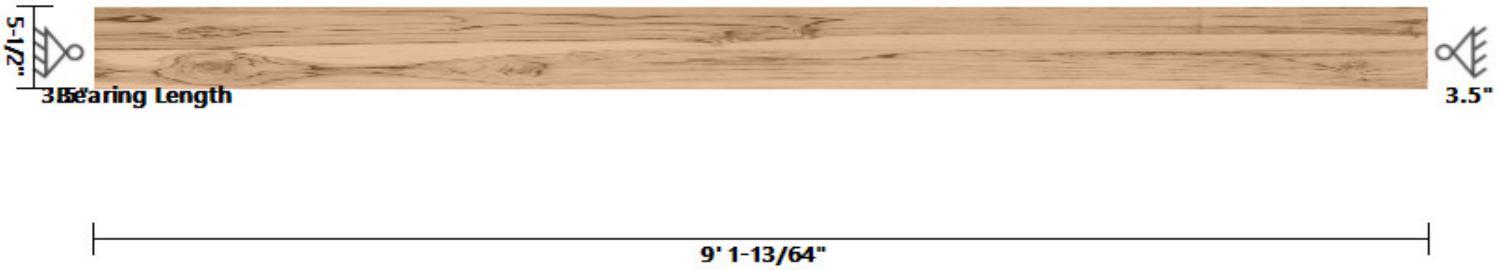
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2639.769	-	9.1	-	Dead	Y
Point (lbf)	-4126.636	-	9.1	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

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

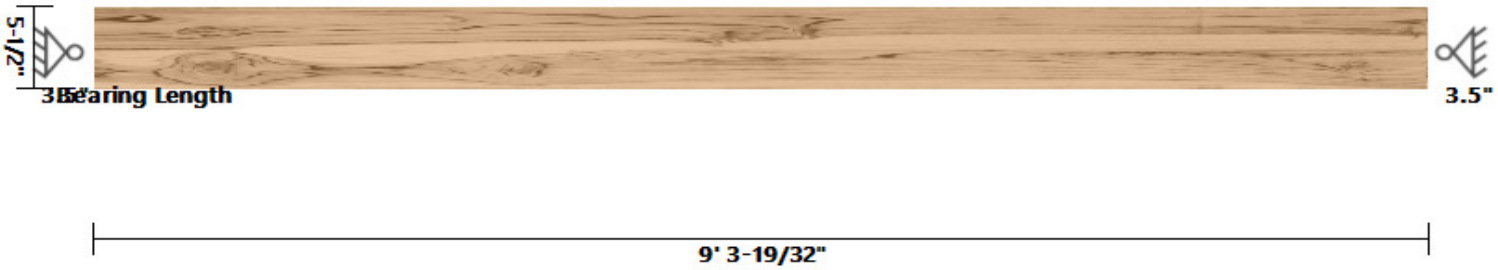
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-1922.588	-	9.1	-	Dead	Y
Point (lbf)	-2925.249	-	9.1	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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 (lbf/ft)	5.64	5.64	0	9.3	Dead	Z

LINKED LOAD LIST

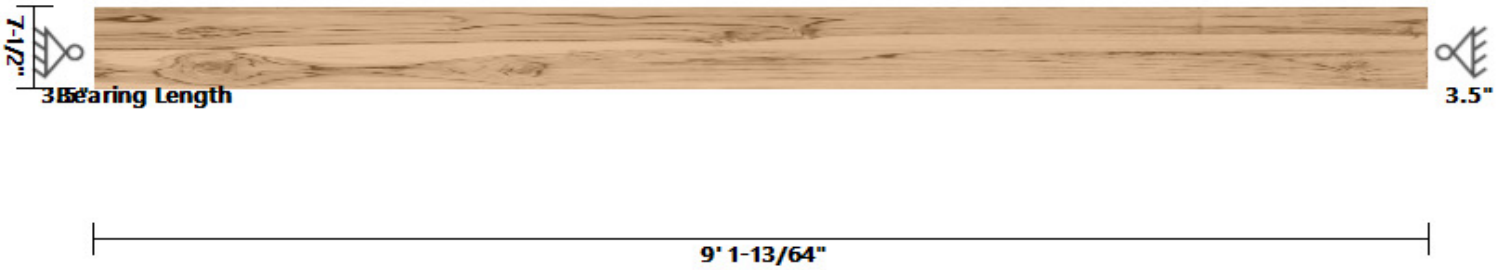
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-1381.147	-	9.3	-	Dead	Y
Point (lbf)	-2014.35	-	9.3	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

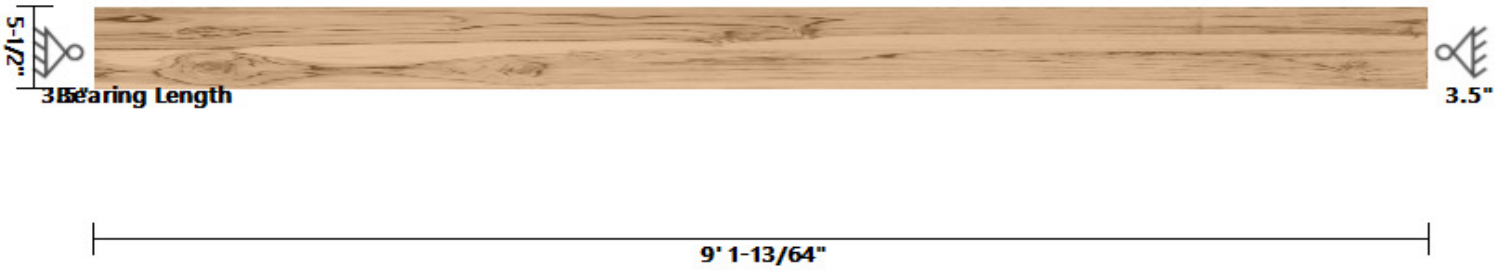
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2447.216	-	9.1	-	Dead	Y
Point (lbf)	-3999.122	-	9.1	-	Snow	Y
Point (lbf)	-3917.622	-	9.1	-	Dead	Y
Point (lbf)	-4981.051	-	9.1	-	Live	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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 (70.4%)	440.2	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	-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

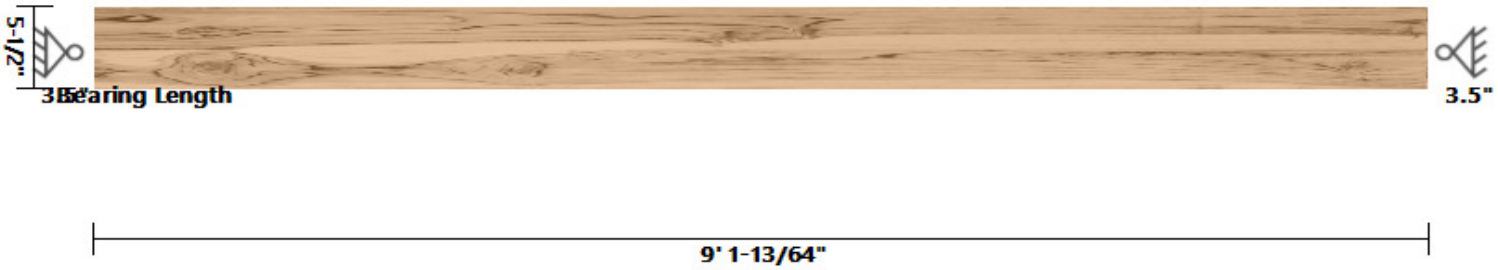
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-3180.97	-	9.1	-	Dead	Y
Point (lbf)	-3752.244	-	9.1	-	Live	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

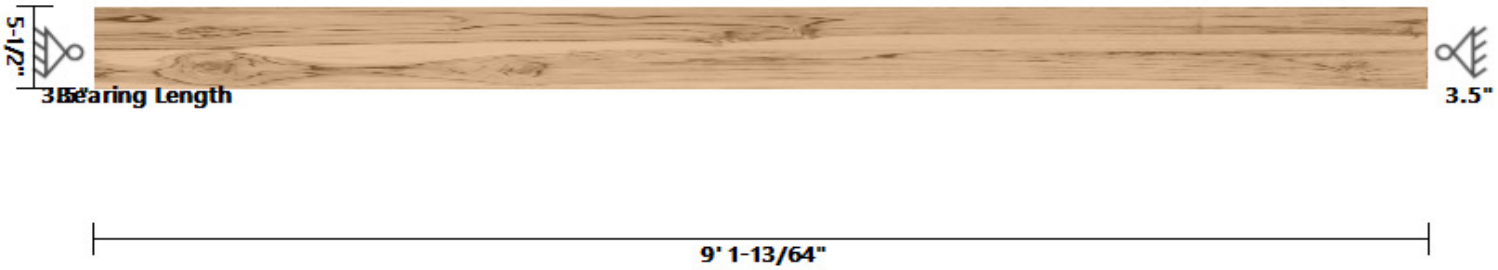
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2702.928	-	9.1	-	Dead	Y
Point (lbf)	-4920	-	9.1	-	Live	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

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

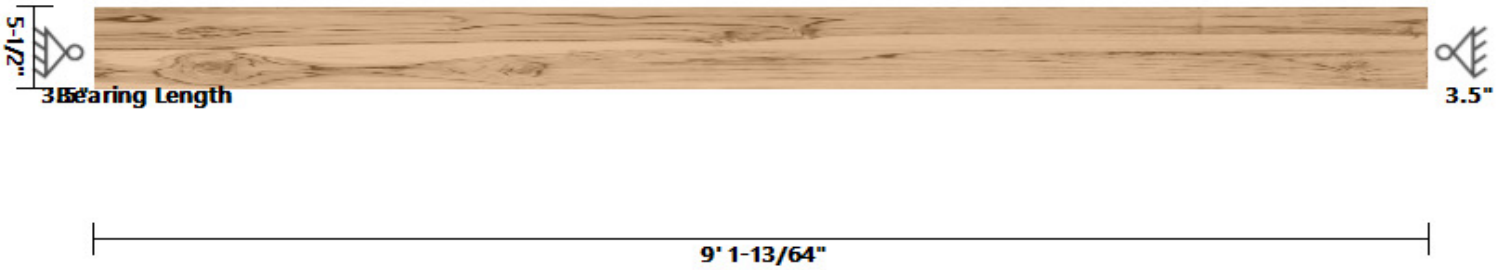
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2273.002	-	9.1	-	Dead	Y
Point (lbf)	-1984.269	-	9.1	-	Live	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

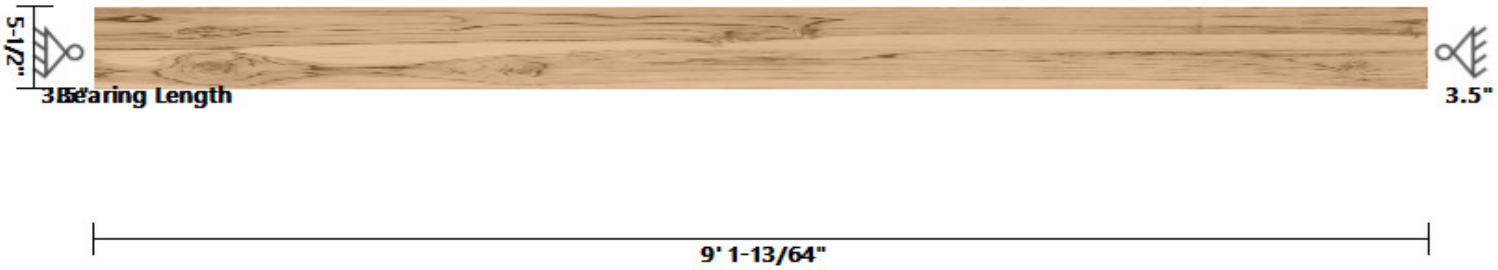
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-3294.965	-	9.1	-	Dead	Y
Point (lbf)	-2854.772	-	9.1	-	Live	Y
Point (lbf)	-617.0391	-	9.1	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

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

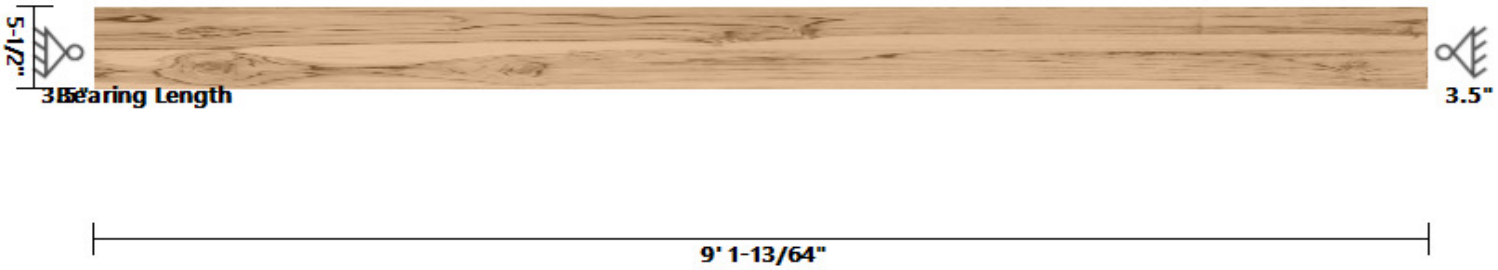
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2066.188	-	9.1	-	Dead	Y
Point (lbf)	-4036.77	-	9.1	-	Live	Y

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:	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



COLUMN PROPERTIES

Start(ft) 0 End(ft): 9.1

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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 (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

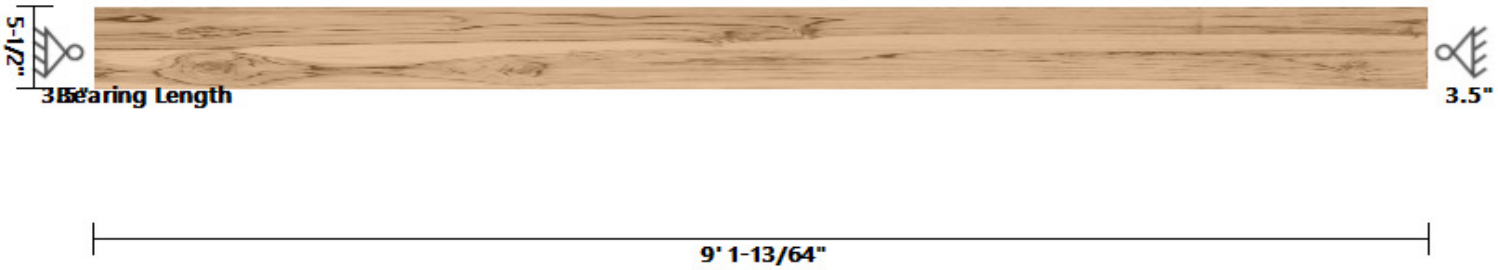
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2254.893	-	9.1	-	Dead	Y
Point (lbf)	-4400.229	-	9.1	-	Live	Y
Point (lbf)	-884.9211	-	9.1	-	Dead	Y
Point (lbf)	-1592	-	9.1	-	Live	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) X	Unbraced Length (ft) Y	Column End 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

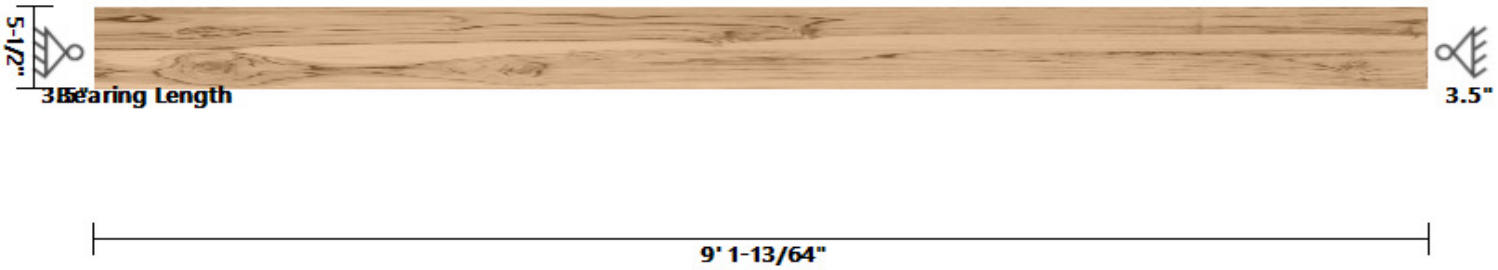
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2639.769	-	9.1	-	Dead	Y
Point (lbf)	-4126.636	-	9.1	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

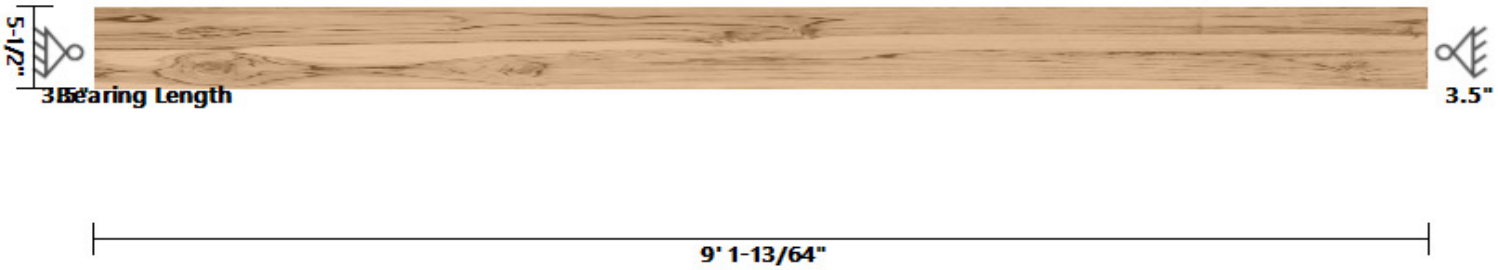
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-730.7566	-	9.1	-	Dead	Y
Point (lbf)	-1125.412	-	9.1	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) X	Unbraced Length (ft) Y	Column End 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

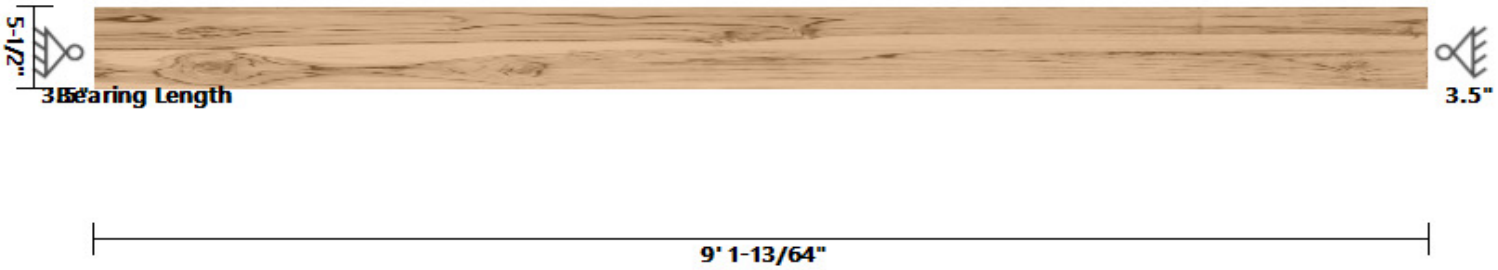
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2540.525	-	9.1	-	Dead	Y
Point (lbf)	-3950.57	-	9.1	-	Snow	Y
Point (lbf)	-1234.789	-	9.1	-	Dead	Y
Point (lbf)	-2050	-	9.1	-	Snow	Y
Point (lbf)	-666.4584	-	9.1	-	Dead	Y
Point (lbf)	-1064	-	9.1	-	Live	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) X	Unbraced Length (ft) Y	Column End 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

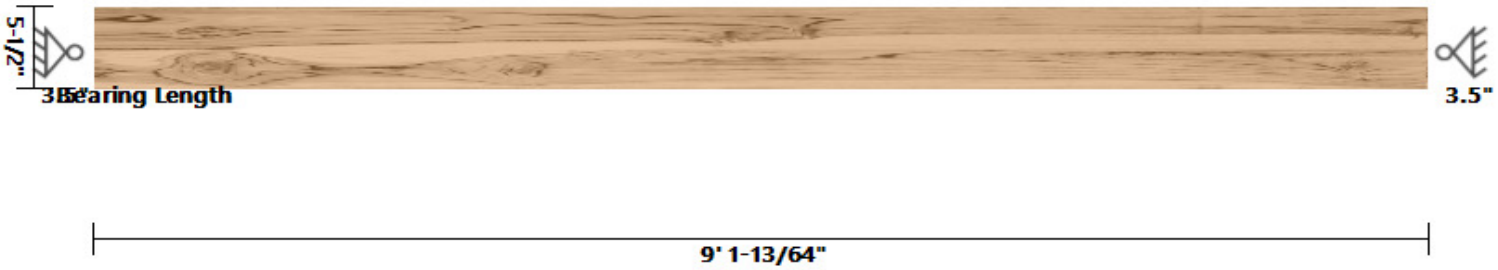
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-1234.789	-	9.1	-	Dead	Y
Point (lbf)	-2050	-	9.1	-	Snow	Y
Point (lbf)	-3050.767	-	9.1	-	Dead	Y
Point (lbf)	-4985.719	-	9.1	-	Snow	Y
Point (lbf)	-681.1551	-	9.1	-	Dead	Y
Point (lbf)	-1037.5	-	9.1	-	Live	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

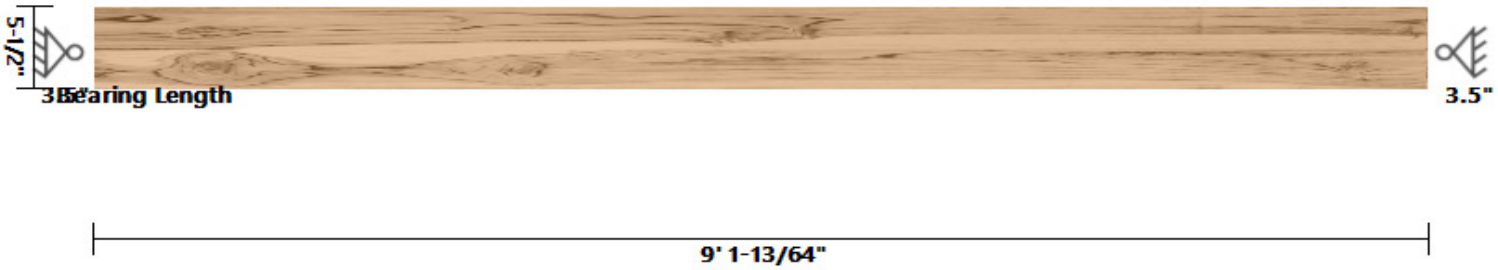
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2027.431	-	9.1	-	Dead	Y
Point (lbf)	-4506.429	-	9.1	-	Live	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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) X	Unbraced Length (ft) Y	Column End 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

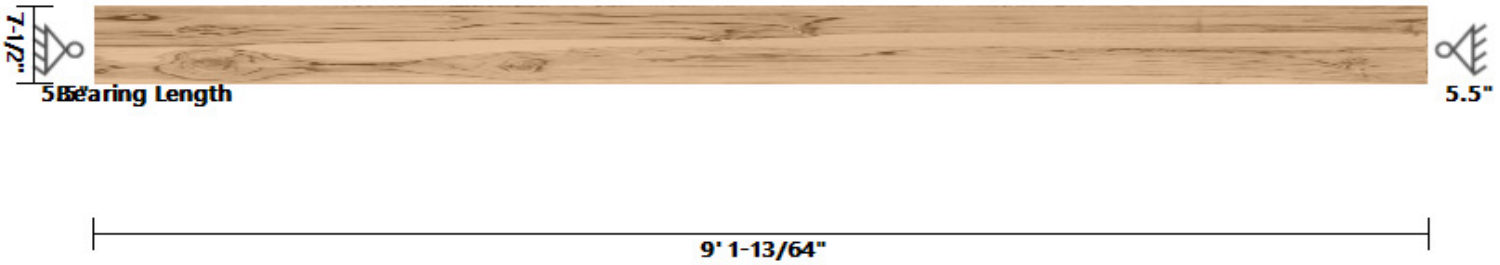
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-1179.282	-	9.1	-	Dead	Y
Point (lbf)	-541.1088	-	9.1	-	Live	Y
Point (lbf)	-409.9816	-	9.1	-	Dead	Y
Point (lbf)	-417.6	-	9.1	-	Live	Y
Point (lbf)	-3016.229	-	9.1	-	Dead	Y
Point (lbf)	-5415.833	-	9.1	-	Live	Y
Point (lbf)	-440.0415	-	9.1	-	Snow	Y

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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 (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

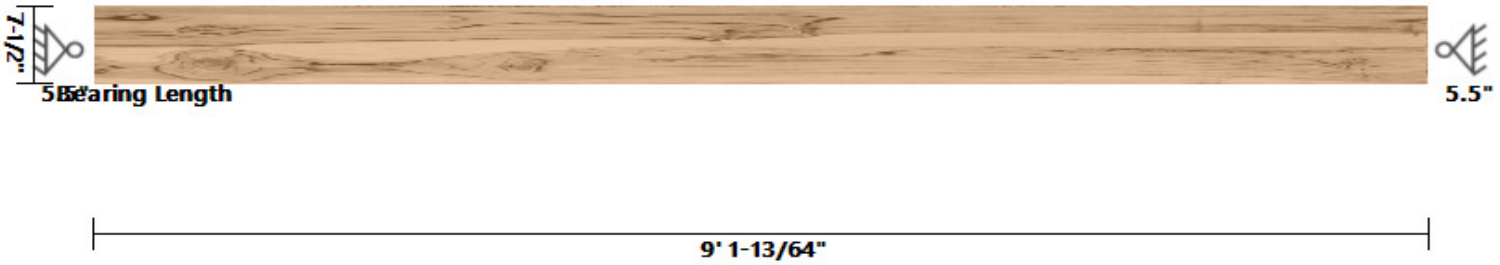
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-6978.391	-	9.1	-	Dead	Z
Point (lbf)	-5074.712	-	9.1	-	Live	Z
Point (lbf)	-6526.531	-	9.1	-	Snow	Z

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

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

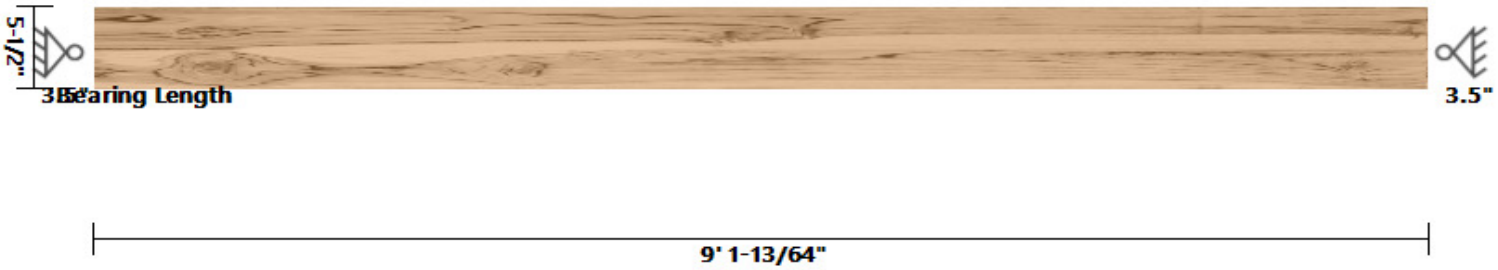
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-409.9816	-	9.1	-	Dead	Z
Point (lbf)	-417.6	-	9.1	-	Live	Z
Point (lbf)	-3115.474	-	9.1	-	Dead	Z
Point (lbf)	-5438.586	-	9.1	-	Live	Z
Point (lbf)	-509.1636	-	9.1	-	Snow	Z
Point (lbf)	-2590.826	-	9.1	-	Dead	Z
Point (lbf)	-5347.6	-	9.1	-	Live	Z

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

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

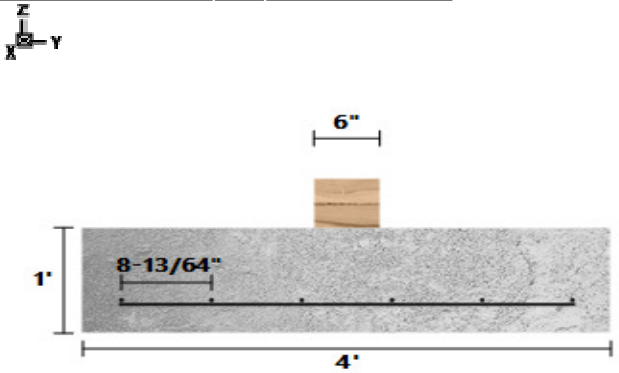
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2152.589	-	9.1	-	Dead	Y
Point (lbf)	-5236	-	9.1	-	Live	Y

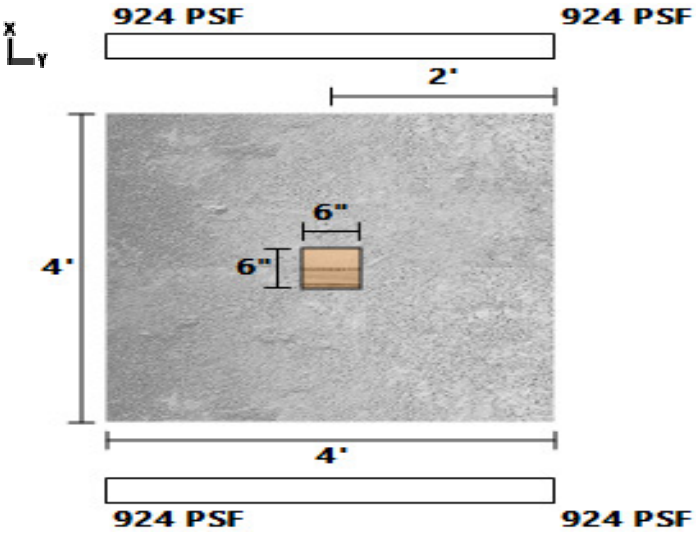
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

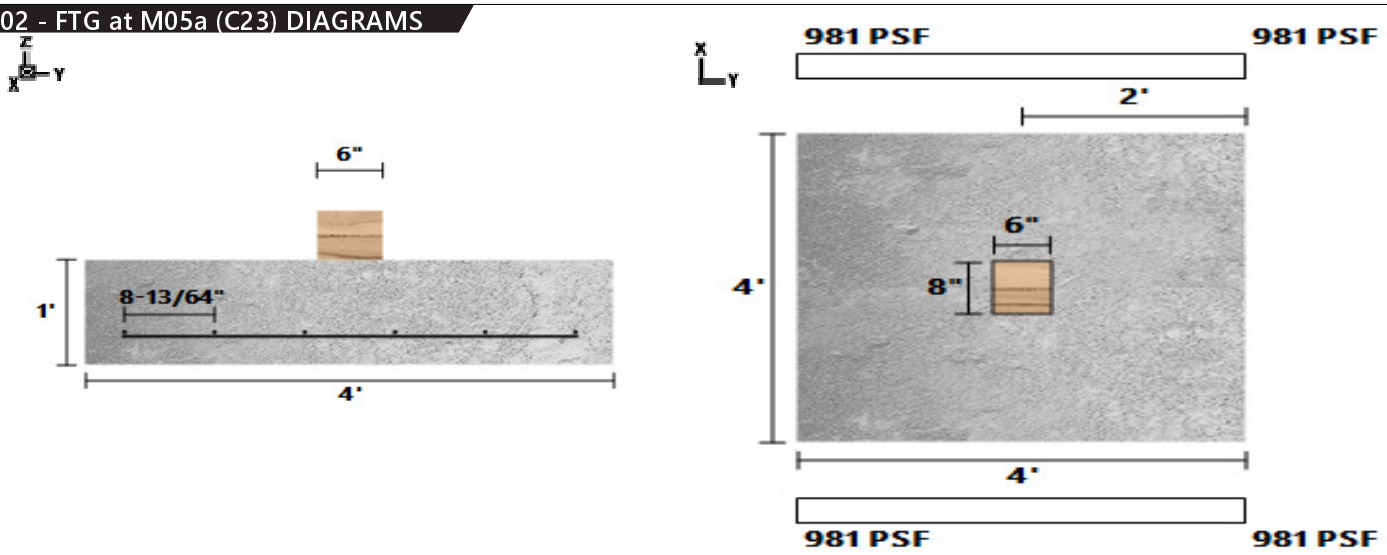
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	6547.108	-	0	-	Dead	Z
Point (lbf)	5441.131	-	0	-	Live	Z
Point (lbf)	5560.531	-	0	-	Snow	Z

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

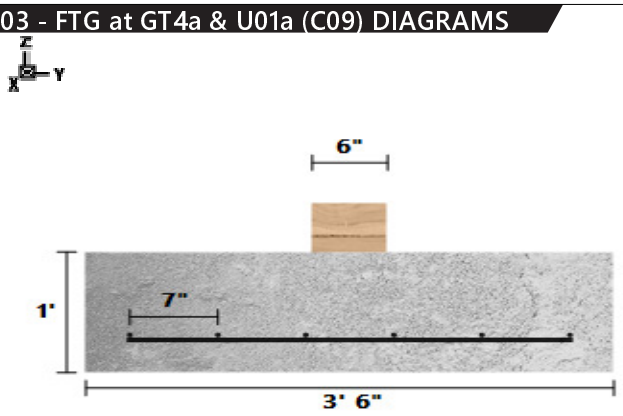
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	6978.391	-	0	-	Dead	Z
Point (lbf)	5074.712	-	0	-	Live	Z
Point (lbf)	6526.531	-	0	-	Snow	Z

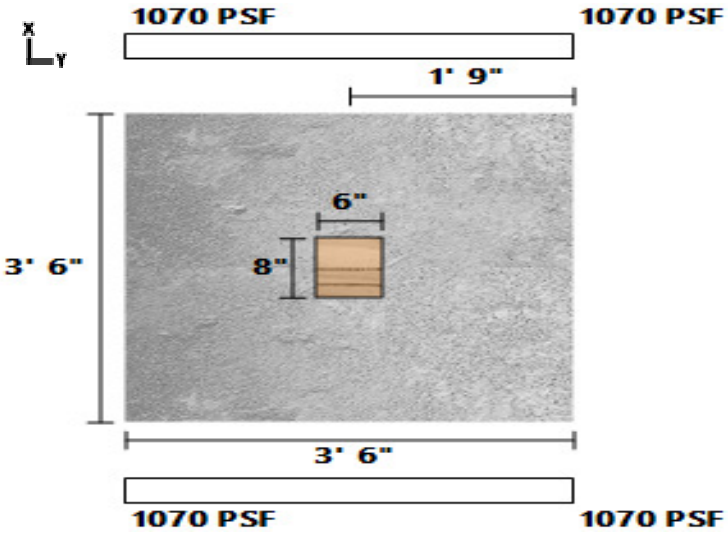
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

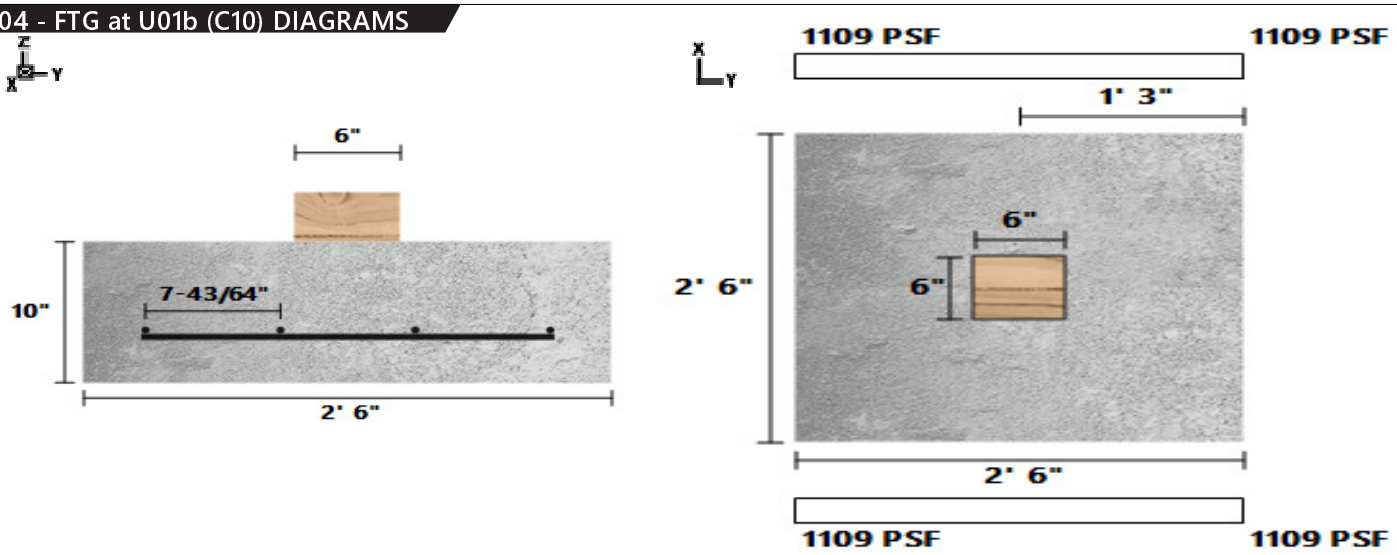
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2447.216	-	0	-	Dead	Z
Point (lbf)	3999.122	-	0	-	Snow	Z
Point (lbf)	3917.622	-	0	-	Dead	Z
Point (lbf)	4981.051	-	0	-	Live	Z

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

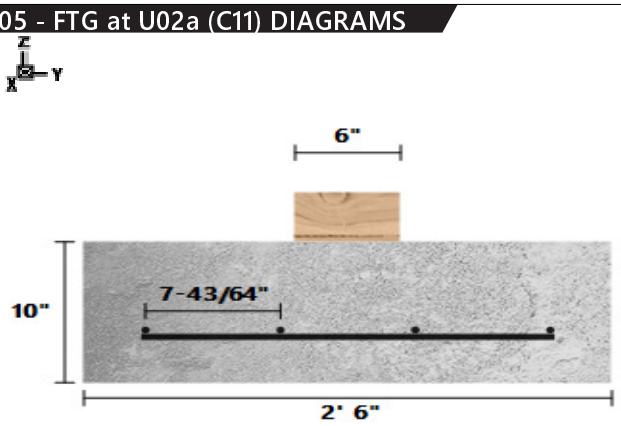
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	3180.97	-	0	-	Dead	Z
Point (lbf)	3752.244	-	0	-	Live	Z

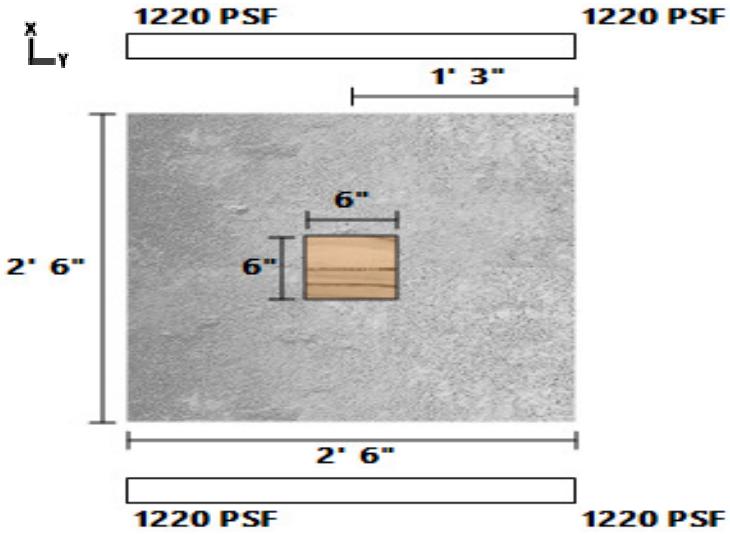
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

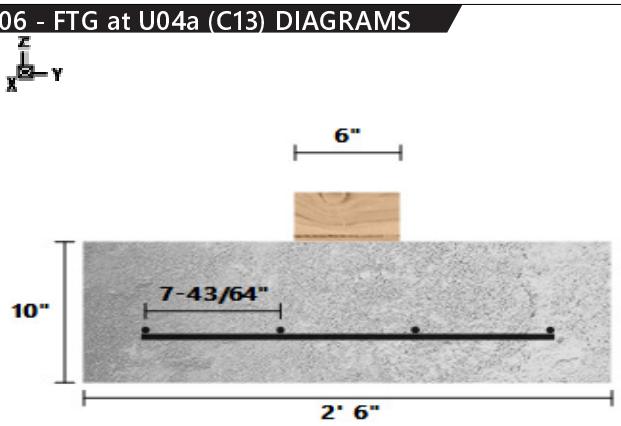
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2702.928	-	0	-	Dead	Z
Point (lbf)	4920	-	0	-	Live	Z

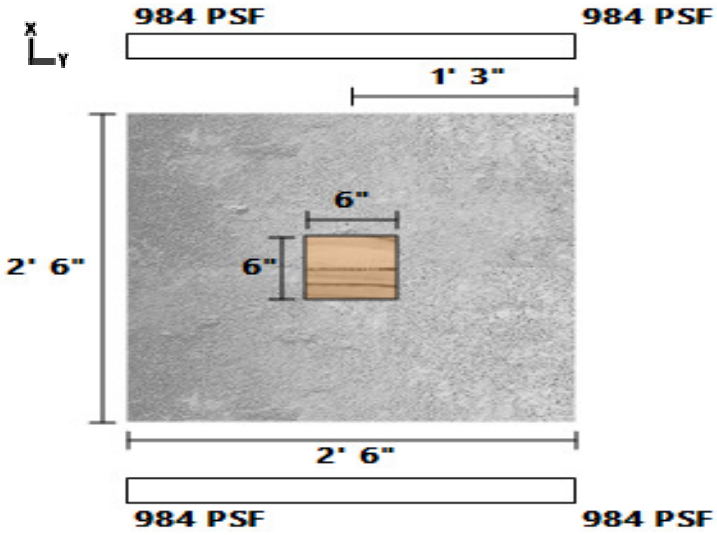
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

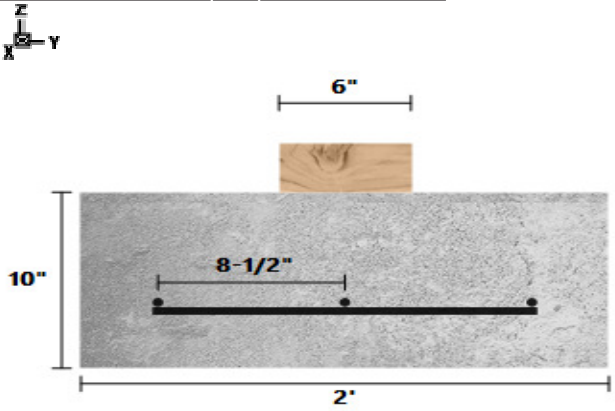
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	3294.965	-	0	-	Dead	Z
Point (lbf)	2854.772	-	0	-	Live	Z
Point (lbf)	617.0391	-	0	-	Snow	Z

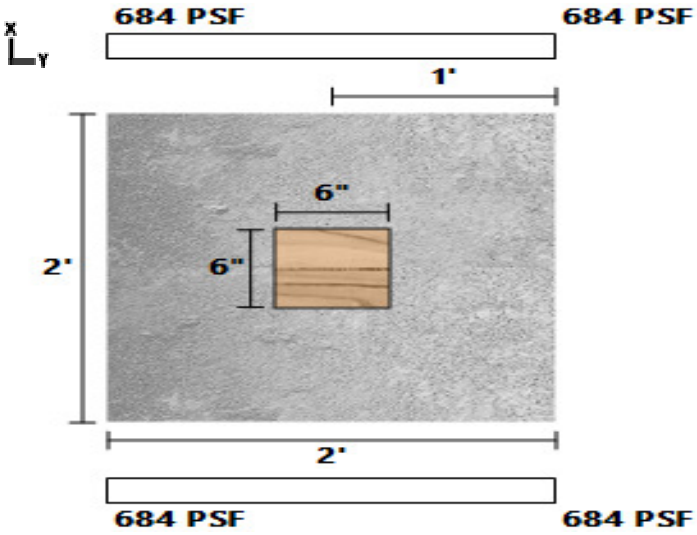
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

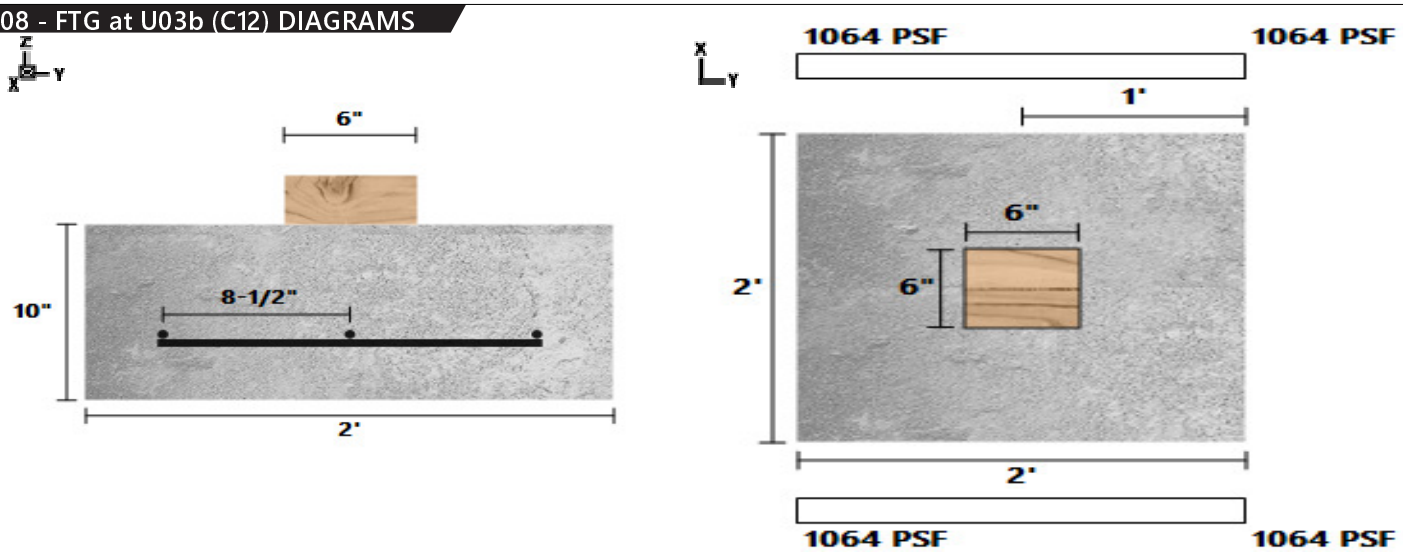
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1360.113	-	0	-	Dead	Z
Point (lbf)	1141.976	-	0	-	Live	Z
Point (lbf)	691.2676	-	0	-	Snow	Z

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

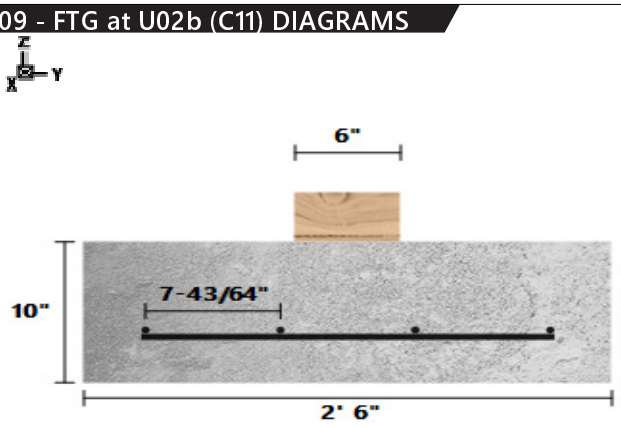
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2273.002	-	0	-	Dead	Z
Point (lbf)	1984.269	-	0	-	Live	Z

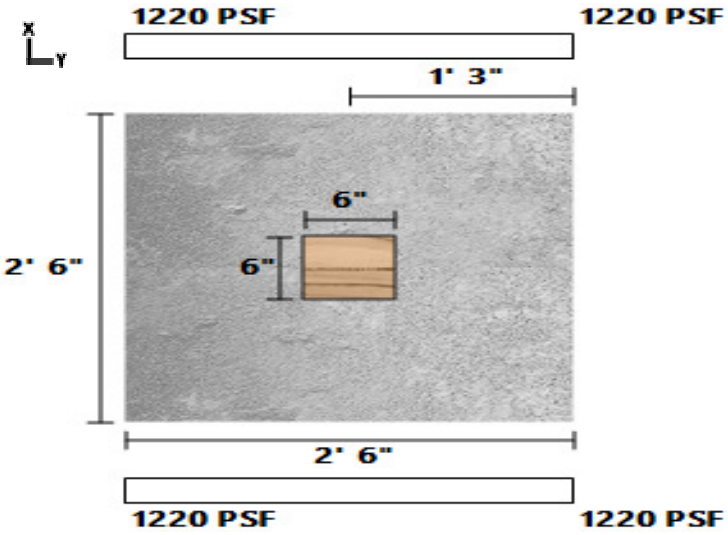
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

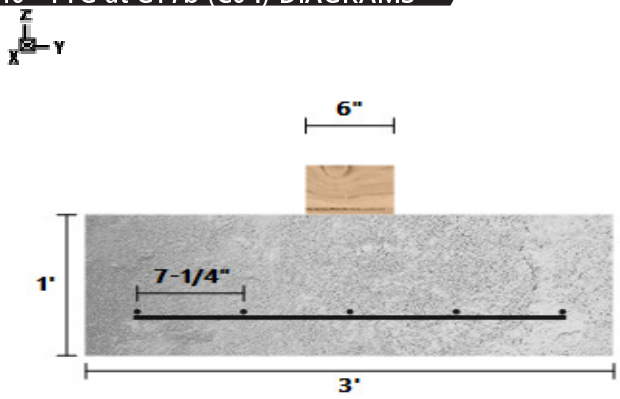
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2702.928	-	0	-	Dead	Z
Point (lbf)	4920	-	0	-	Live	Z

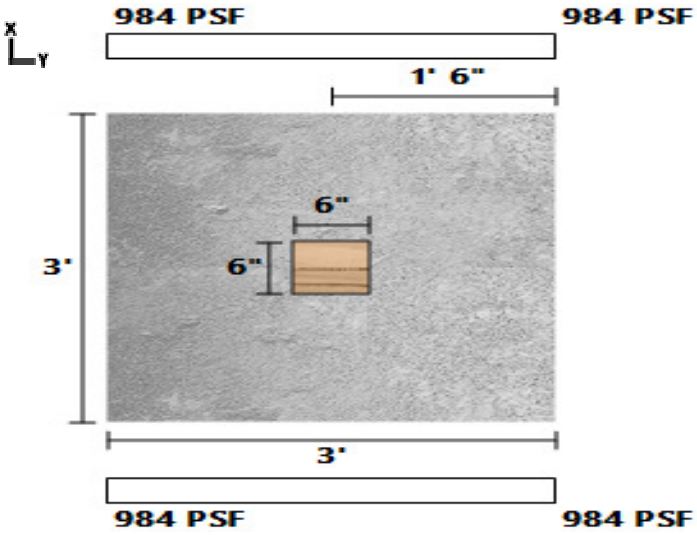
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

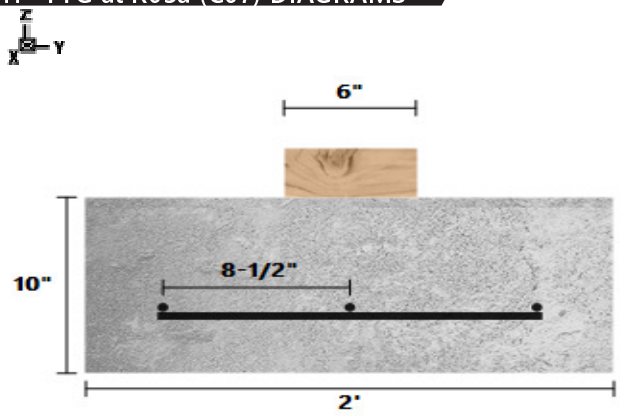
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	3375.125	-	0	-	Dead	Z
Point (lbf)	5473.887	-	0	-	Snow	Z

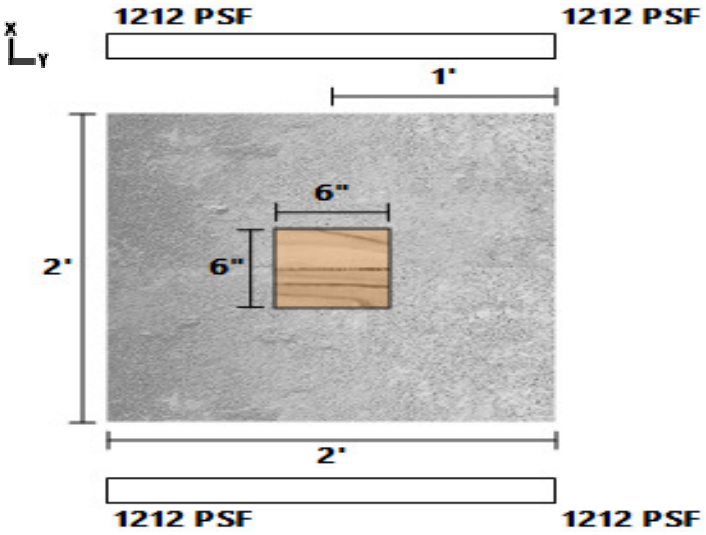
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

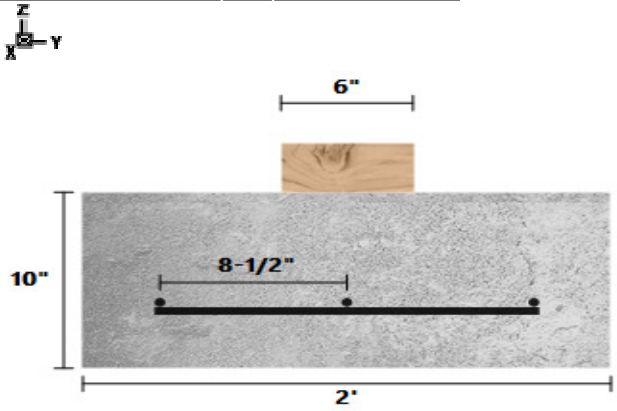
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1922.588	-	0	-	Dead	Z
Point (lbf)	2925.249	-	0	-	Snow	Z

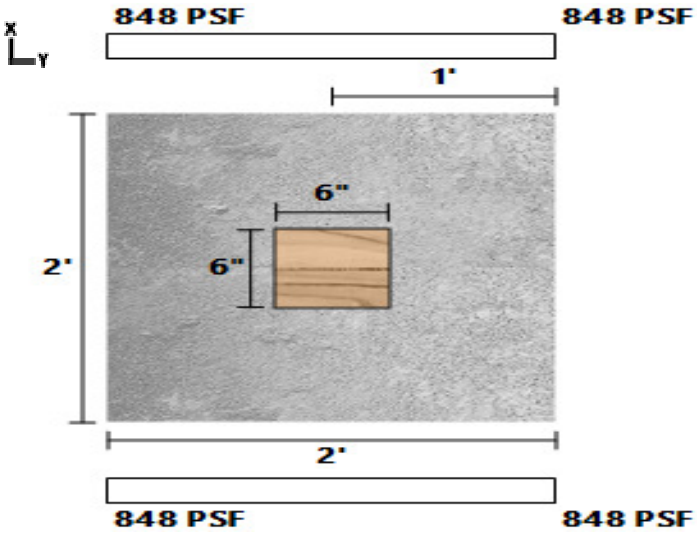
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

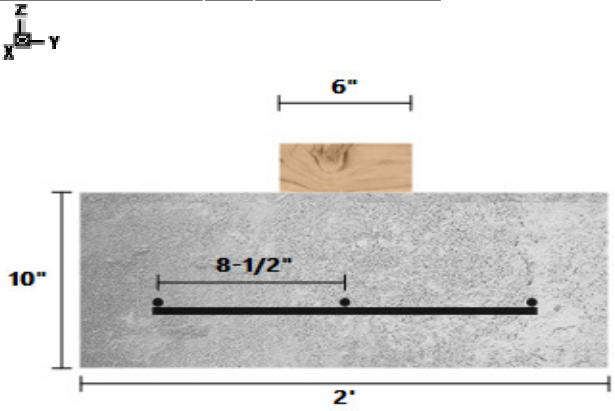
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1381.147	-	0	-	Dead	Z
Point (lbf)	2014.35	-	0	-	Snow	Z

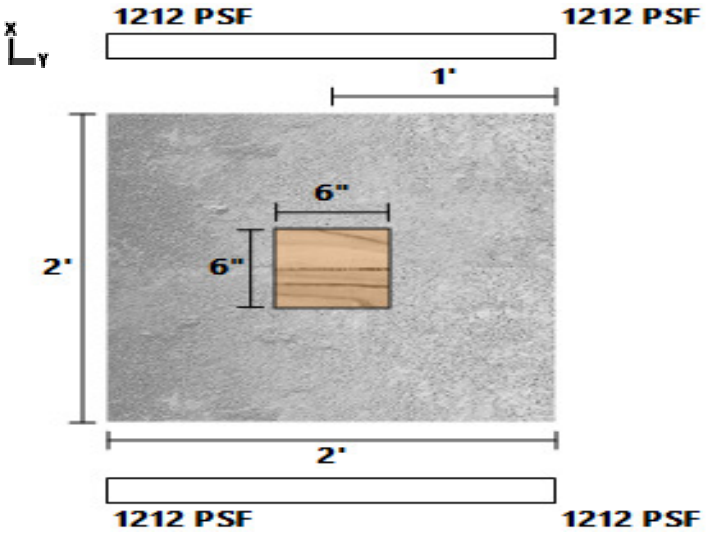
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

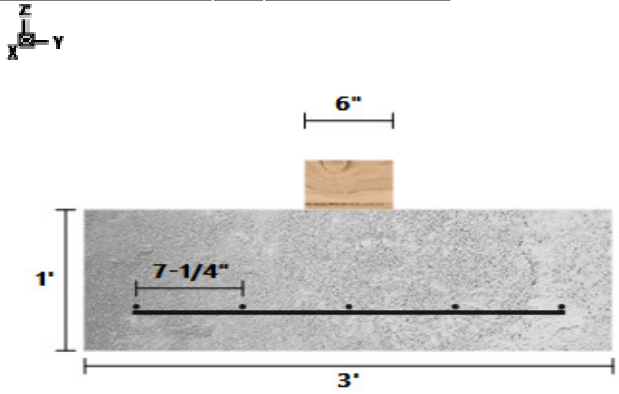
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1922.588	-	0	-	Dead	Z
Point (lbf)	2925.249	-	0	-	Snow	Z

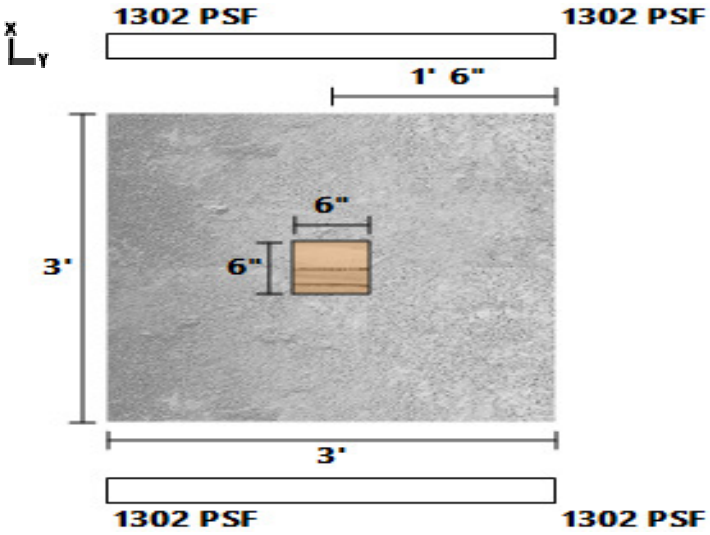
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

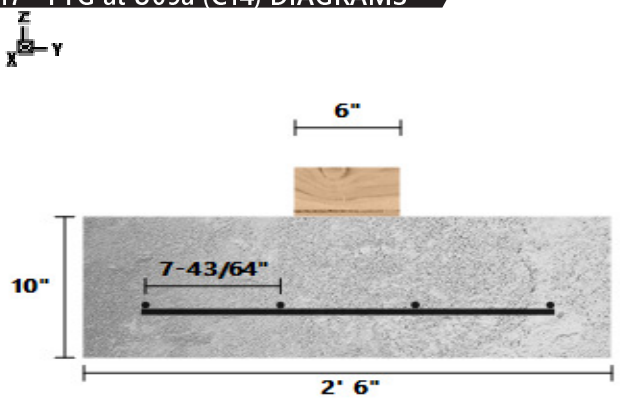
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	4458.315	-	0	-	Dead	Z
Point (lbf)	7256.631	-	0	-	Snow	Z

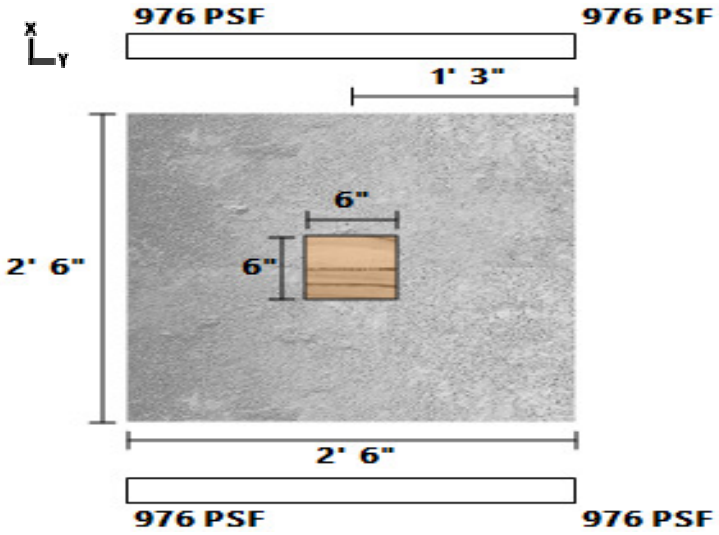
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

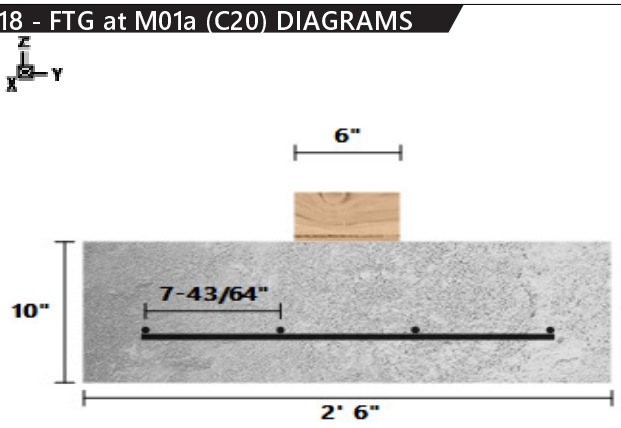
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2066.188	-	0	-	Dead	Z
Point (lbf)	4036.77	-	0	-	Live	Z

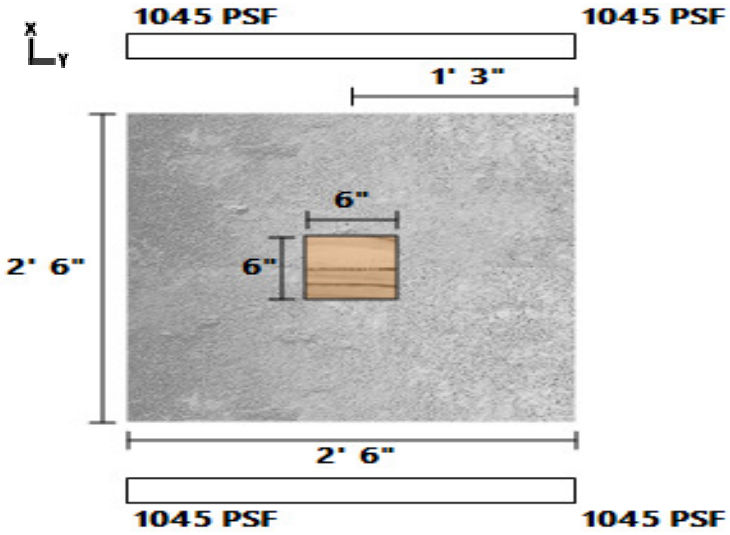
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

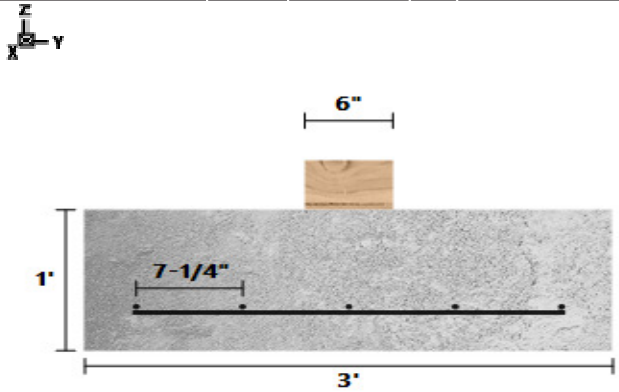
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2027.431	-	0	-	Dead	Z
Point (lbf)	4506.429	-	0	-	Live	Z

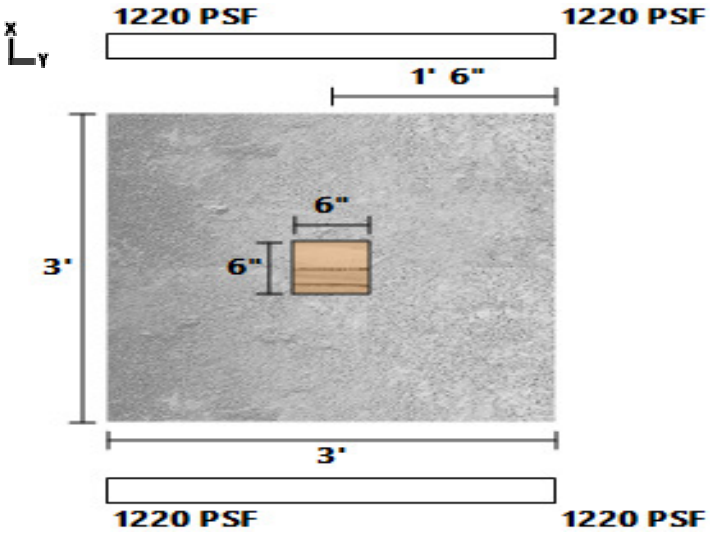
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

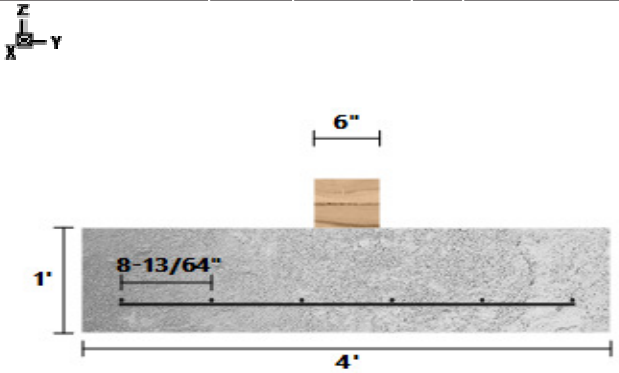
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	1179.282	-	0	-	Dead	Z
Point (lbf)	541.1088	-	0	-	Live	Z
Point (lbf)	409.9816	-	0	-	Dead	Z
Point (lbf)	417.6	-	0	-	Live	Z
Point (lbf)	3016.229	-	0	-	Dead	Z
Point (lbf)	5415.833	-	0	-	Live	Z
Point (lbf)	440.0415	-	0	-	Snow	Z

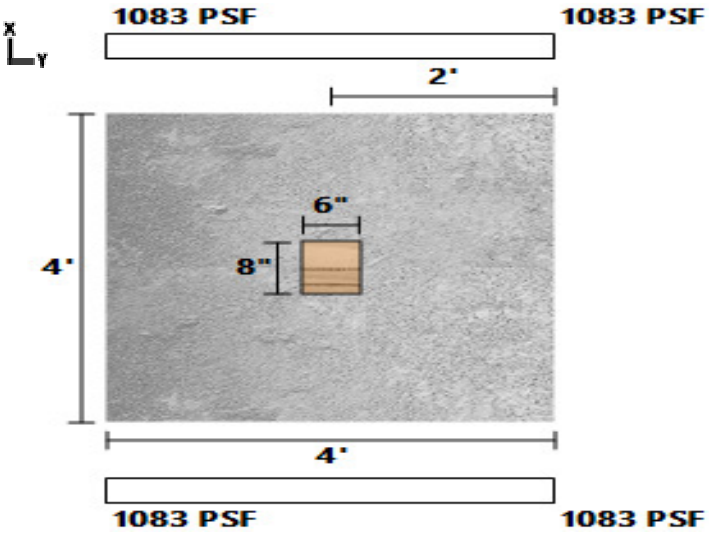
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

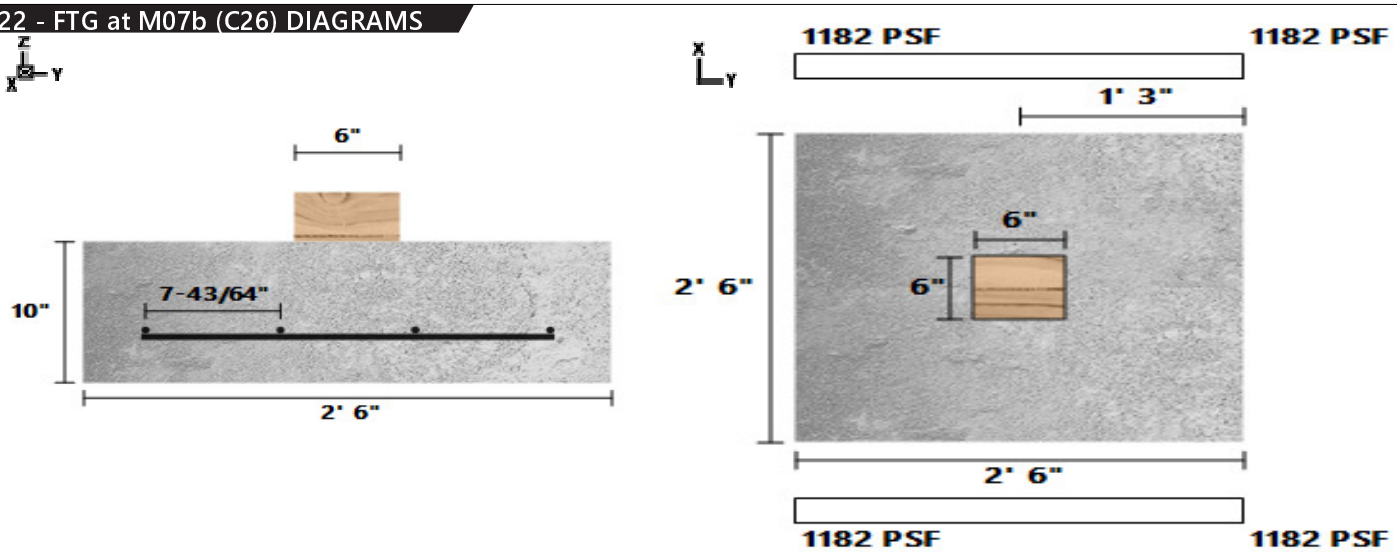
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	409.9816	-	0	-	Dead	Z
Point (lbf)	417.6	-	0	-	Live	Z
Point (lbf)	3115.474	-	0	-	Dead	Z
Point (lbf)	5438.586	-	0	-	Live	Z
Point (lbf)	509.1636	-	0	-	Snow	Z
Point (lbf)	2590.826	-	0	-	Dead	Z
Point (lbf)	5347.6	-	0	-	Live	Z

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

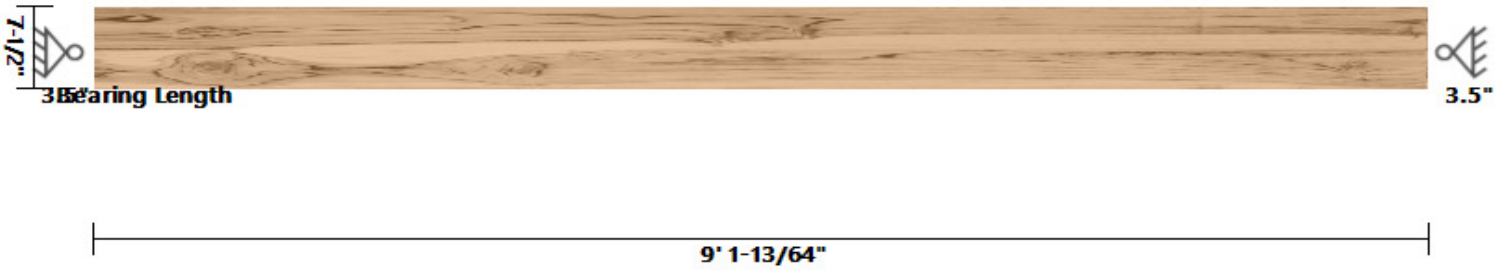
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2152.589	-	0	-	Dead	Z
Point (lbf)	5236	-	0	-	Live	Z

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

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

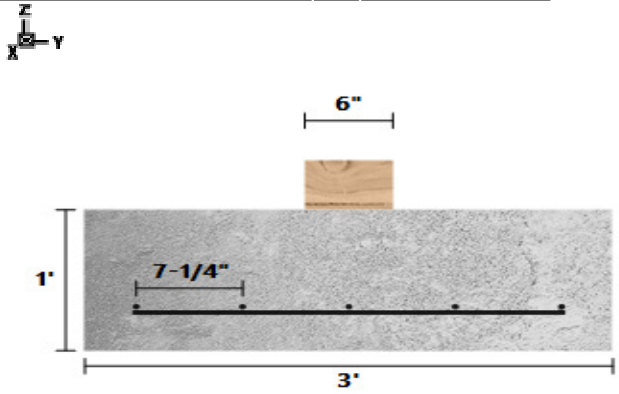
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-6547.108	-	9.1	-	Dead	Y
Point (lbf)	-5441.131	-	9.1	-	Live	Y
Point (lbf)	-5560.531	-	9.1	-	Snow	Y

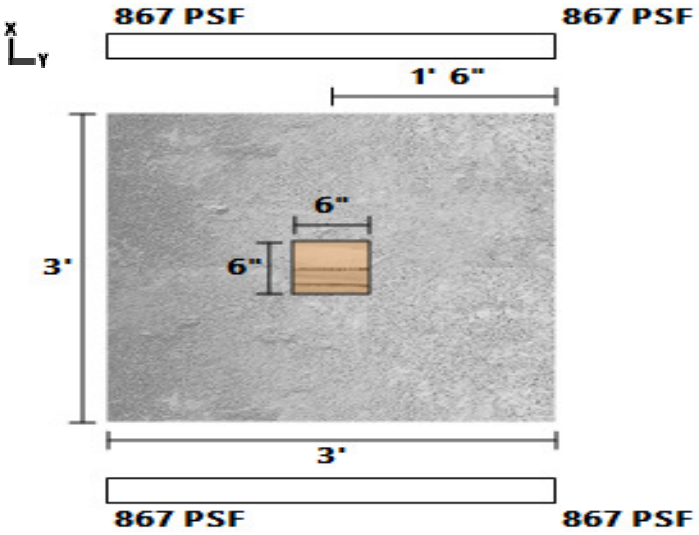
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

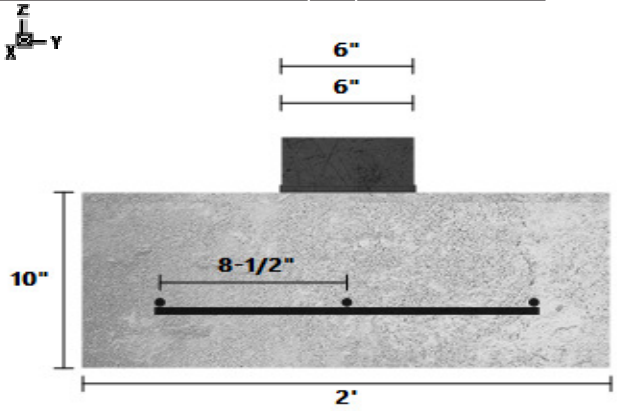
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	2639.769	-	0	-	Dead	Z
Point (lbf)	4126.636	-	0	-	Snow	Z

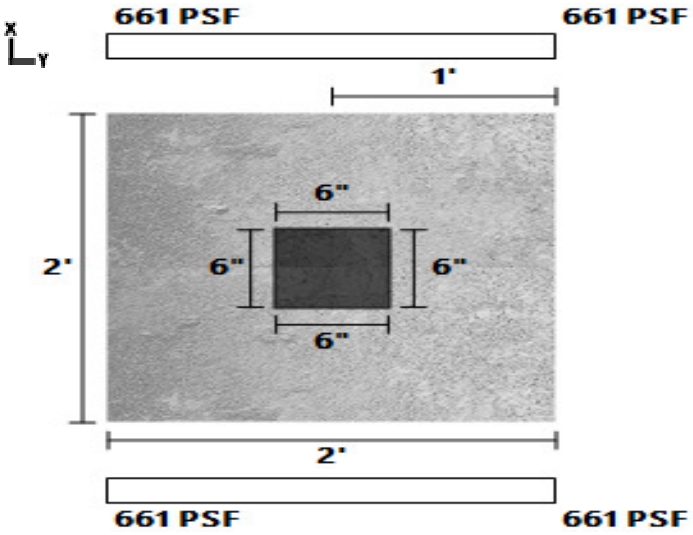
PASS

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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/ft²)	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

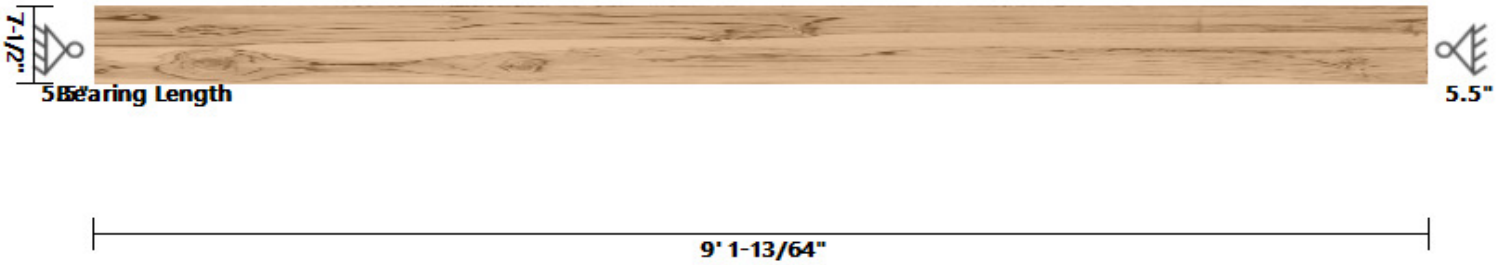
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	730.7566	-	0	-	Dead	Z
Point (lbf)	1125.412	-	0	-	Snow	Z

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:	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 (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr 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

Span	Length (ft)	Unbraced Length (ft) X	Unbraced Length (ft) Y	Column End 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

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

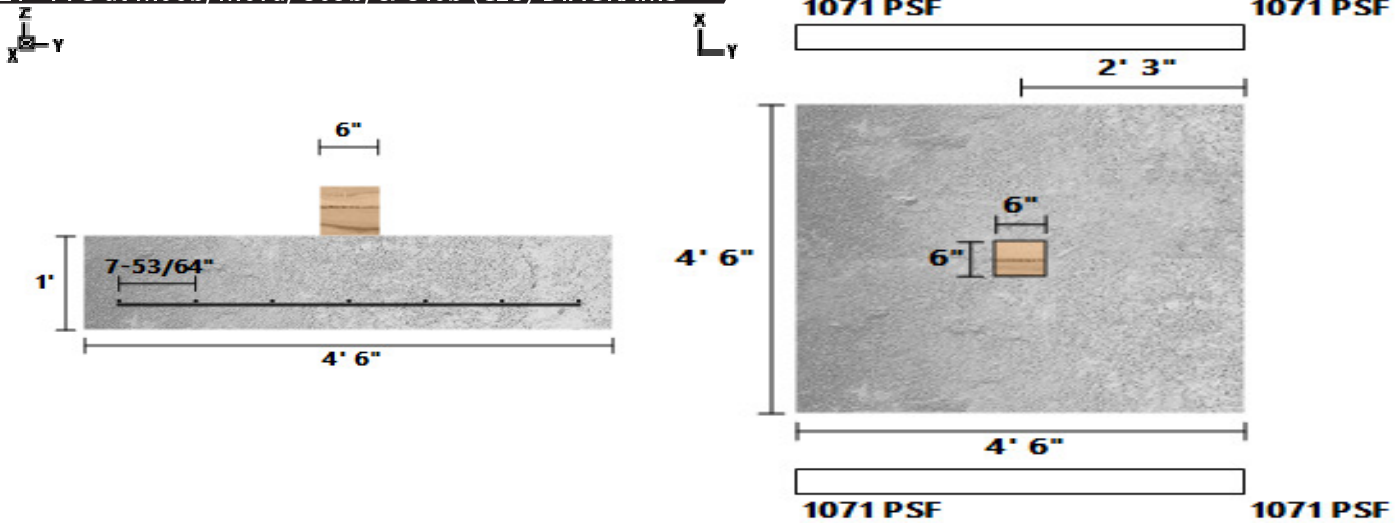
Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	-2254.893	-	9.1	-	Dead	Z
Point (lbf)	-4400.229	-	9.1	-	Live	Z
Point (lbf)	-884.9211	-	9.1	-	Dead	Z
Point (lbf)	-1592	-	9.1	-	Live	Z
Point (lbf)	-1639.504	-	9.1	-	Dead	Z
Point (lbf)	-3523.793	-	9.1	-	Live	Z
Point (lbf)	-2152.589	-	9.1	-	Dead	Z
Point (lbf)	-5236	-	9.1	-	Live	Z

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:	
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/ft³)	Width (ft)	Length (ft)	Depth (in)	Volume (ft³)
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/ft²)	Density (lbf/ft³)	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

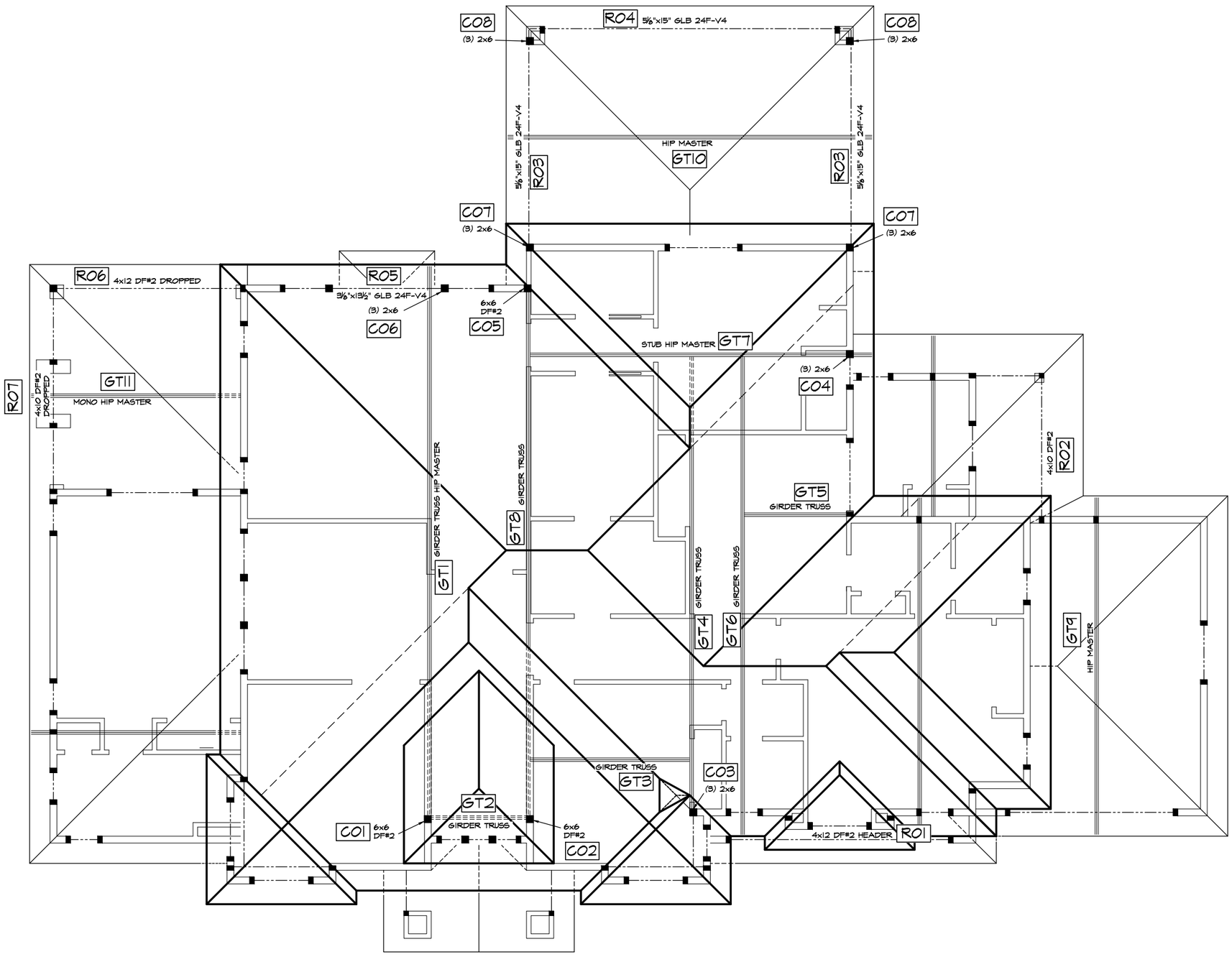
	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO
Soil Bearing Pressure (lbf/ft²)	PASS (28.6%)	1070.8	1500.0	D+L
Two-Way Shear (Punching) (lbf)	PASS (56.8%)	31921.5	73950.0	1.2D+1.6L+0.5Lr
One-Way Shear X (lbf)	PASS (73.4%)	9162.7	34425.0	1.2D+1.6L+0.5Lr
Moment X (lbf-ft)	PASS (59.1%)	14187.3	34675.2	1.2D+1.6L+0.5Lr
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

ARCHITECTS NORTHWEST

18915-142nd AVENUE NE SUITE 100
WOODINVILLE, WA 98072
TOLL FREE: 1-888-884-9488
FAX: (425) 487-6585

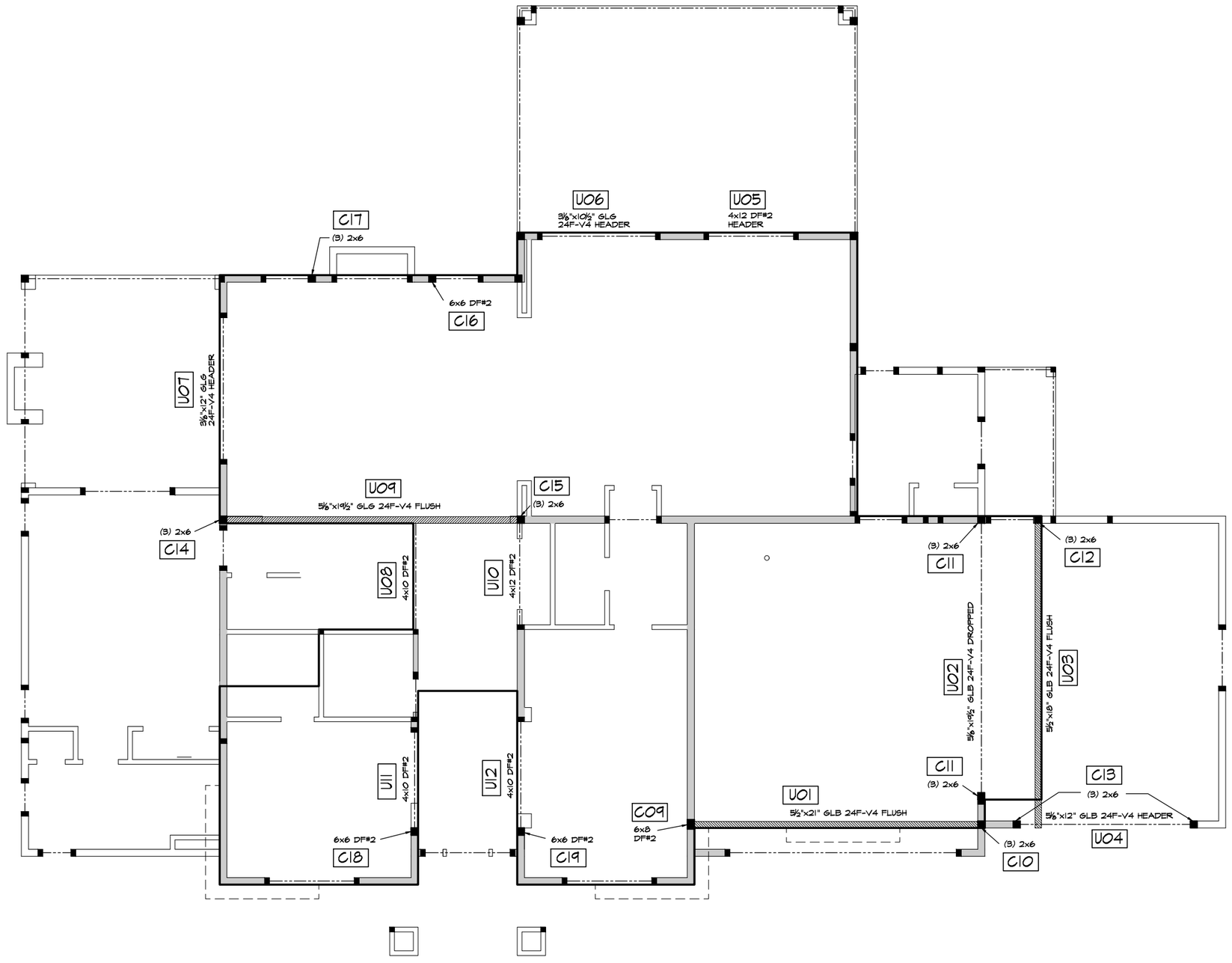
DESIGNED BY: DATE:

DRAWN BY: DATE:

PROJECT MANAGER:

REVISED BY: DATE:

ANW WOODINVILLE OFFICE
JOB NUMBER:
220006



BEAM KEY

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

UPPER FLOOR FRAMING

ARCHITECTS NORTHWEST

18915-142nd AVENUE NE SUITE 100
WOODINVILLE, WA 98072
TOLL FREE: 1-888-884-9488
FAX: (425) 487-6585

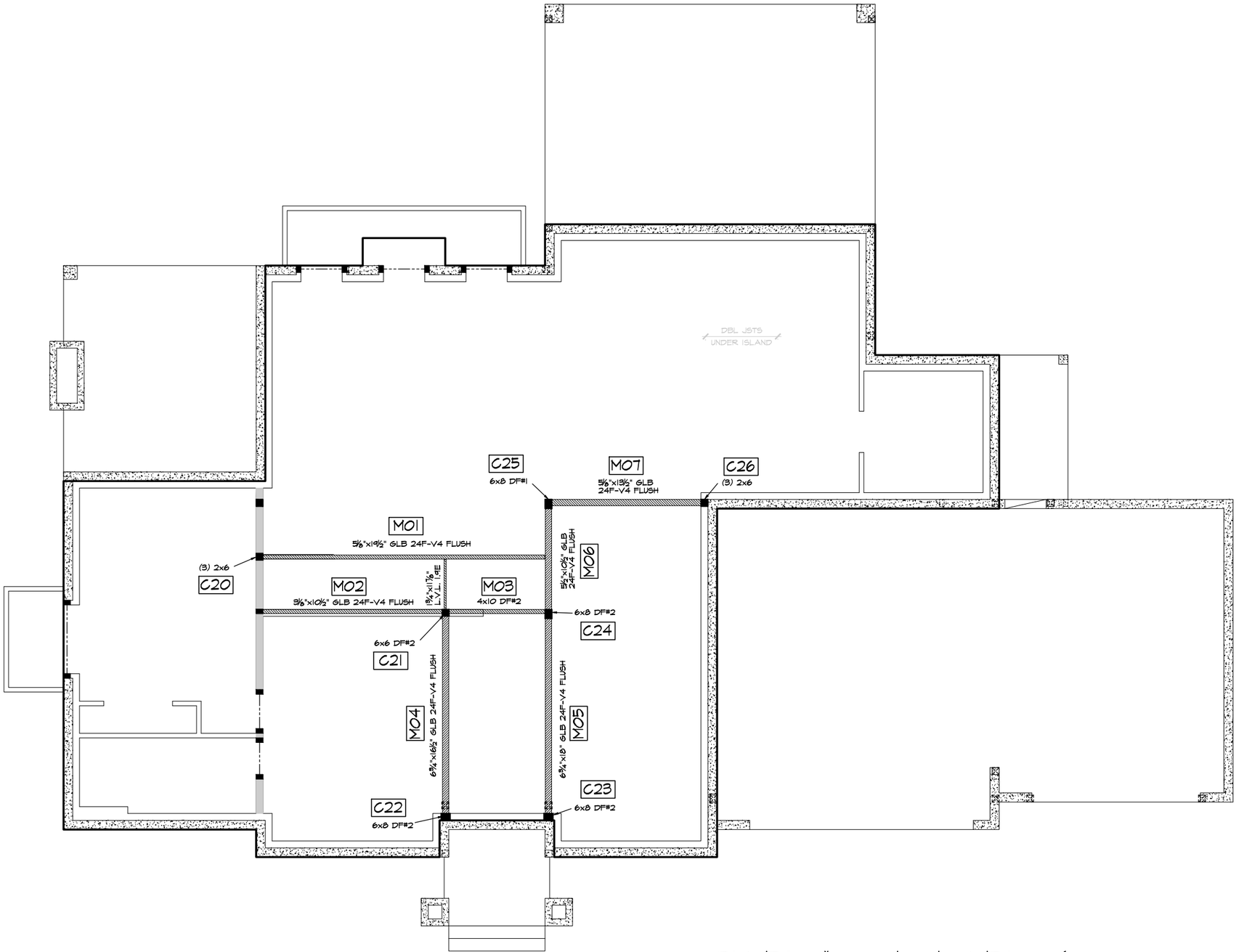
DESIGNED BY: DATE:

DRAWN BY: DATE:

PROJECT MANAGER:

REVISED BY: DATE:

ANW WOODINVILLE OFFICE
JOB NUMBER:
220006



BEAM KEY

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

MAIN FLOOR FRAMING

ARCHITECTS NORTHWEST

18915-142nd AVENUE NE SUITE 100
WOODINVILLE, WA 98072
TOLL FREE: 1-888-884-9488
FAX: (425) 487-6585

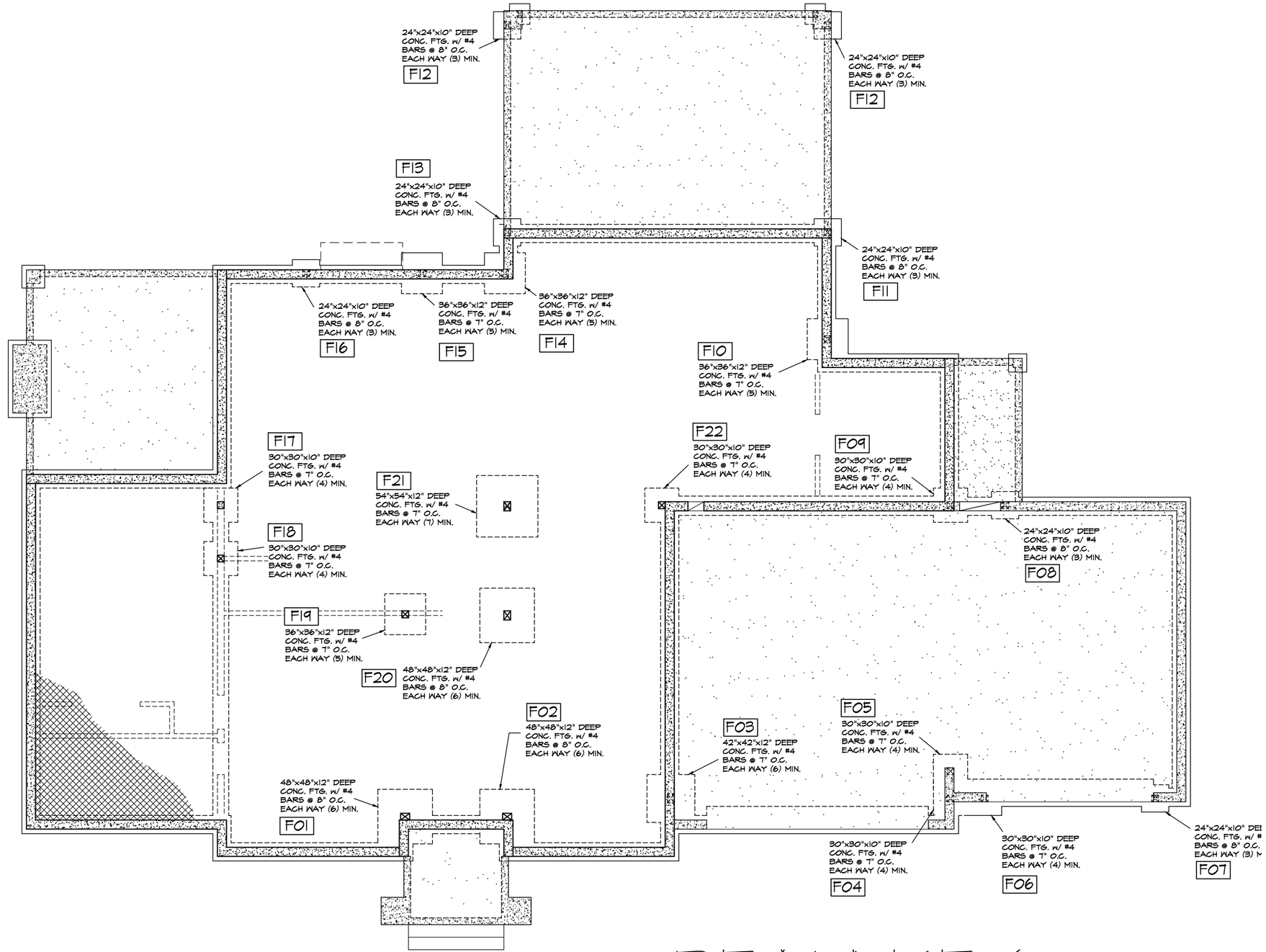
DESIGNED BY: DATE:

DRAWN BY: DATE:

PROJECT MANAGER:

REVISED BY: DATE:

ANW WOODINVILLE OFFICE
JOB NUMBER:
220006



BEAM KEY

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

FND/FOOTINGS

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