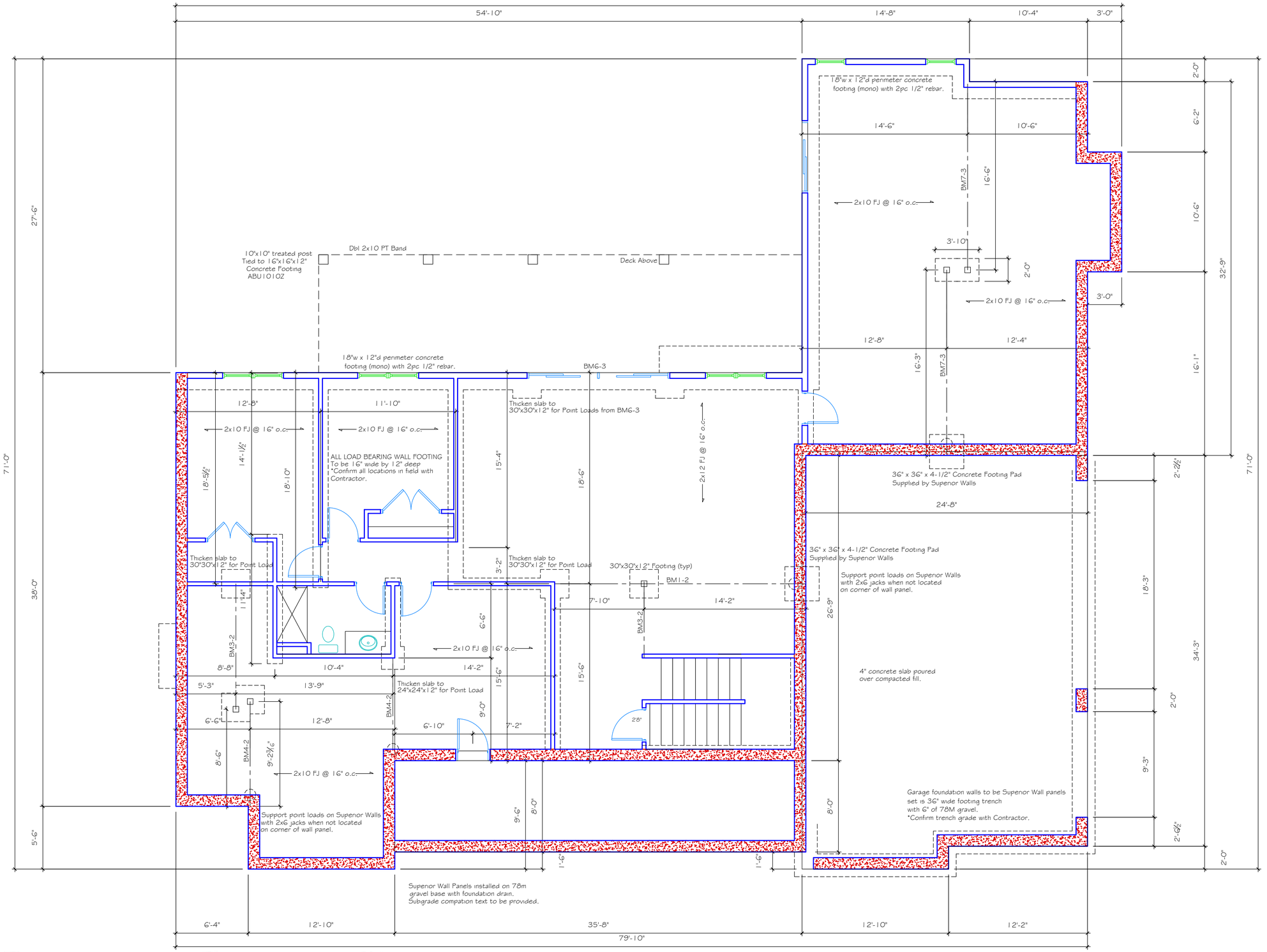


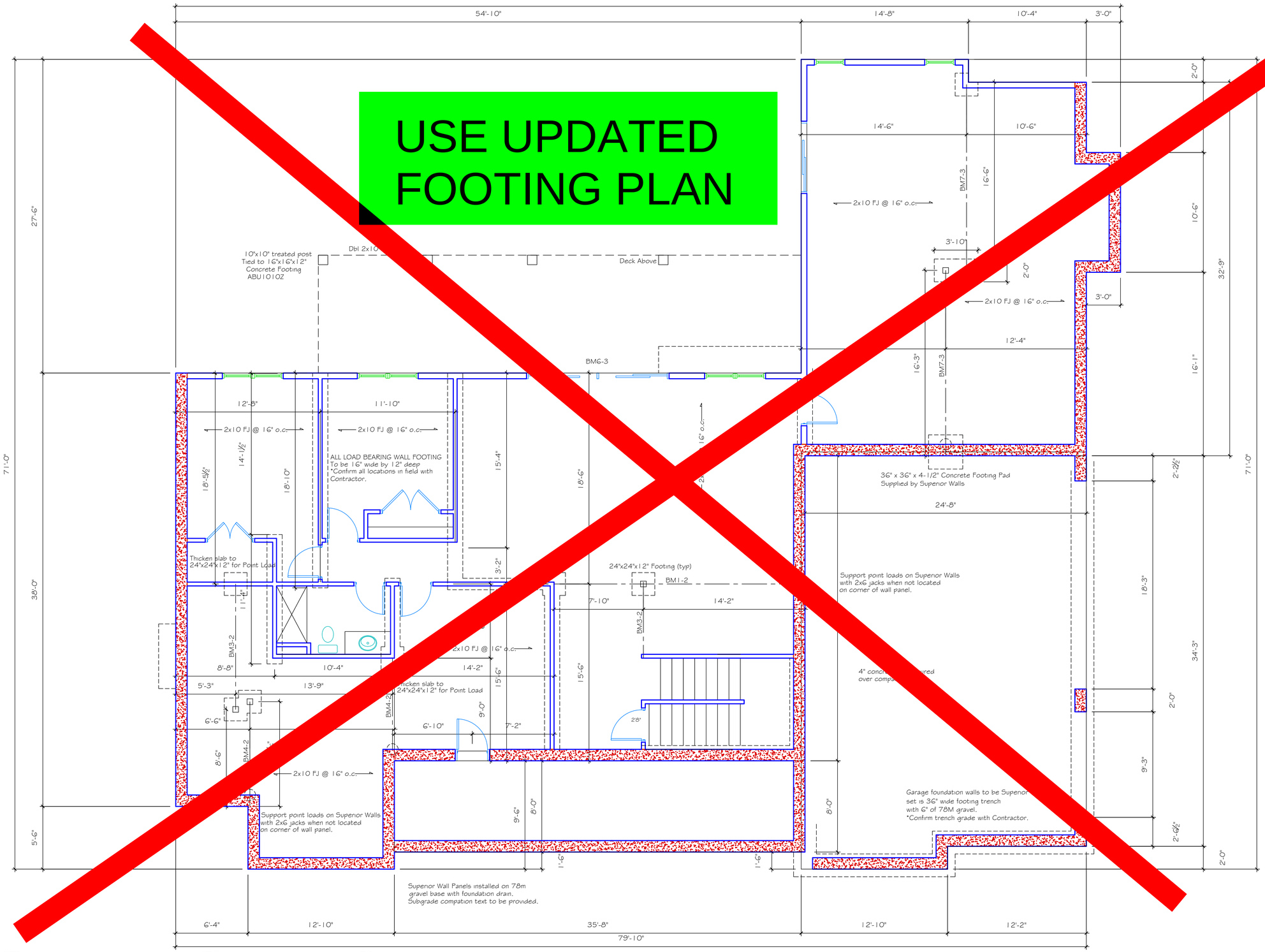
NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

APPROVED
Limited building only review
Permit holder responsible for full compliance with the code

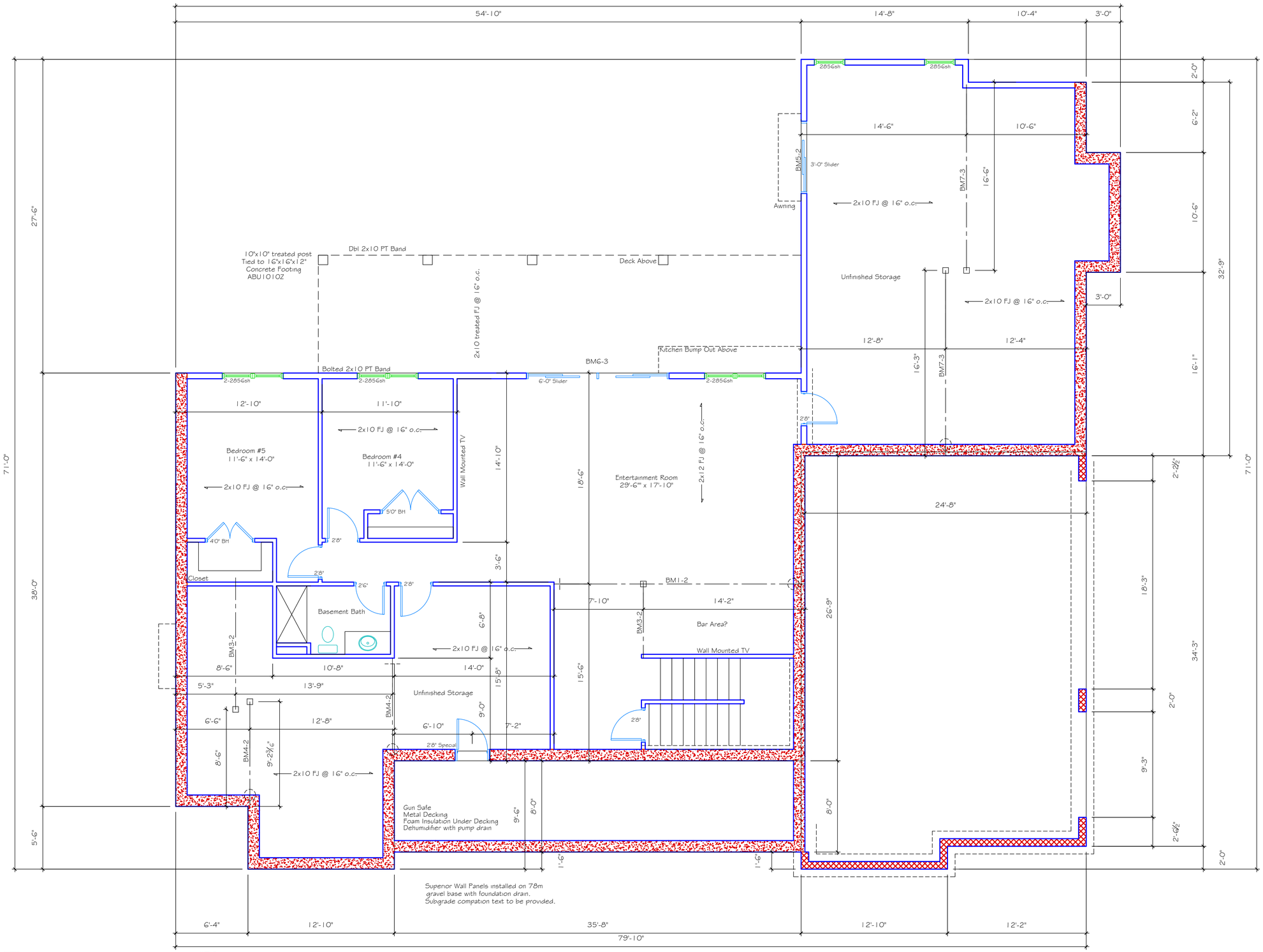
02/02/2023

Harnett COUNTY NORTH CAROLINA

Basement Footing Plan



Basement Footing Plan



Basement Plan

Span Table for Joist and Rafters.

-Floors shall be constructed in accordance with the provisions of Chapter 5 of the NC State Building Code, Sect. R502.2 and Sects R319 and R320.

-Spans for floor joist shall be in accordance with Tables R502.3.1(1) and R502.3.1(2). For other grades and species and for other loading conditions, refer to the AF&PA

-The allowable span of girders fabricated of dimension lumber shall not exceed the values set forth in Tables R502.5(1) and R502.5(2).

-Local soil conditions and/or local practice may necessitate a more stringent footing and foundation wall design. Consult with local building inspector. Soil design bearing pressure is assumed 2000 psf.

Carry all footings to firm undisturbed bearing:
- -24" x 10" footing for 8" foundation wall .
- -24" x 10" footing for 12" foundation wall.

Pier Footings (Typical Unless Otherwise Notes)

-Provide 1'-8" x 2'-4" x 1'-0" deep concrete footing under 8" x 16" masonry piers.

-Provide 2'-0" square x 1'-0" deep concrete footing with under 16" square masonry piers.

-Grout piers solid with 2500psi concrete (typ).

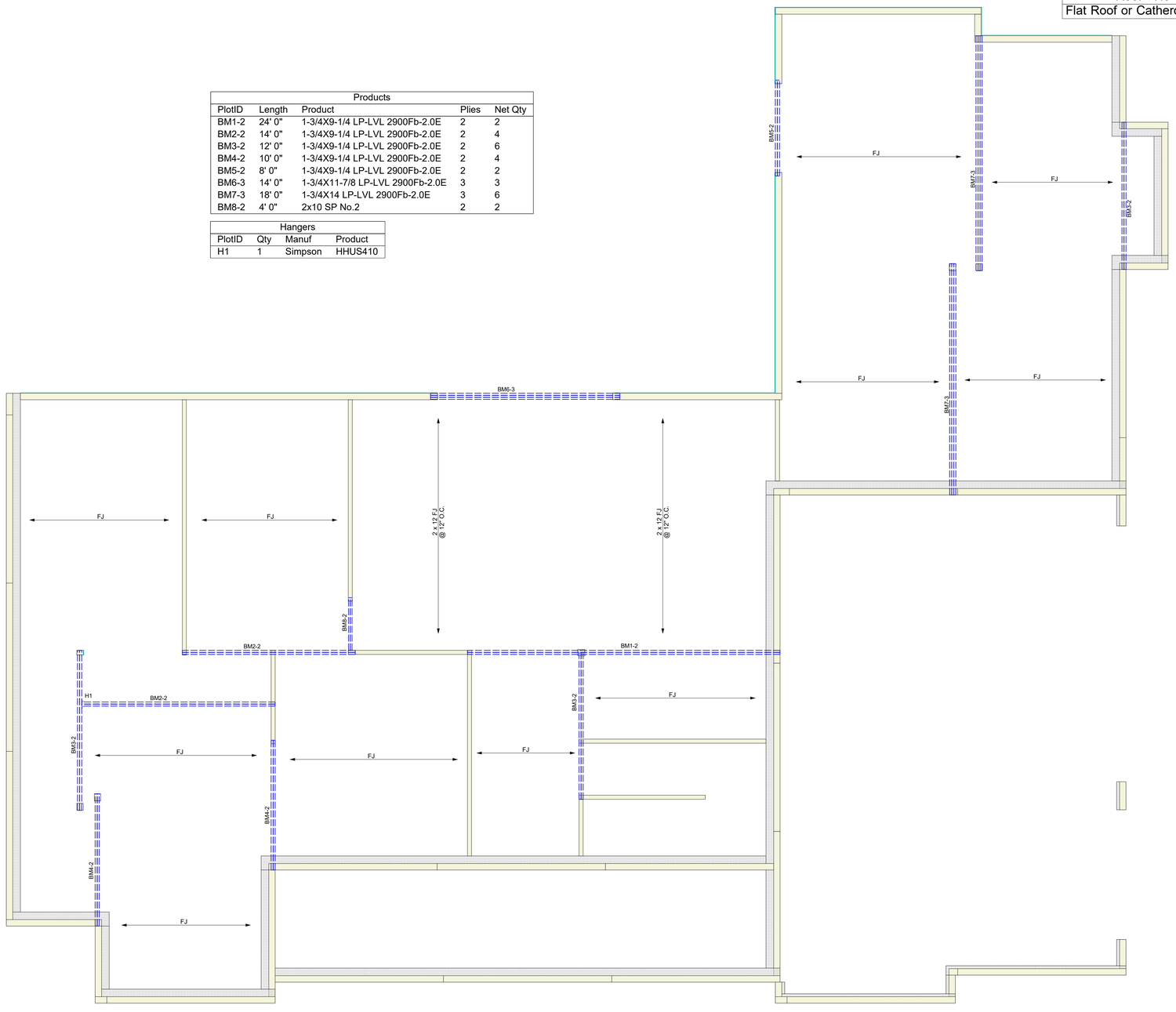
PROJECT TABULATIONS

Main Level	2937
Finished Basement (est)	1212
TOTAL HEATED	4149
Garage	873
Covered Back Porch	403
Front Porch	285
Unfinished Basement (est)	TBD

Joist & Rafter Area Loads	Live Load psf	Dead Load psf
Primary Living	40	10
Secondary & Attic Permanent Stairs	30	10
Ceiling - Limited Storage	20	10
Ceiling - No Storage	10	5
Roof - No Ceiling Load	20	10
Flat Roof or Catherdral w/Drywall Ceiling	20	15

Products				
PlotID	Length	Product	Plies	Net Qty
BM1-2	24' 0"	1-3/4X9-1/4 LP-LVL 2900Fb-2.0E	2	2
BM2-2	14' 0"	1-3/4X9-1/4 LP-LVL 2900Fb-2.0E	2	4
BM3-2	12' 0"	1-3/4X9-1/4 LP-LVL 2900Fb-2.0E	2	6
BM4-2	10' 0"	1-3/4X9-1/4 LP-LVL 2900Fb-2.0E	2	4
BM5-2	8' 0"	1-3/4X9-1/4 LP-LVL 2900Fb-2.0E	2	2
BM6-3	14' 0"	1-3/4X11-7/8 LP-LVL 2900Fb-2.0E	3	3
BM7-3	18' 0"	1-3/4X14 LP-LVL 2900Fb-2.0E	3	6
BM8-2	4' 0"	2x10 SP No.2	2	2

Hangers			
PlotID	Qty	Manuf	Product
H1	1	Simpson	HHUS410



GENERAL NOTES & DESIGN ASSUMPTIONS

ALL CEILING JOISTS ARE 2x8 SPF #2 @ 16" O.C. (UNO)
ALL RAFTERS ARE 2x8 SPF #2 @ 16" O.C. (UNO)
ALL LOAD HEADERS, NOT SHOWN ON LAYOUT, ARE (2)2x10 SYP #2 (UNO)
ALL 2x4, 2x6 & 2x8 ARE SPF #2 (UNO)
ALL 2x10 & 2x12 JOISTS ARE SYP #2 (UNO)
ALL RIDGES AND HIP RAFTERS ARE 2x10 (UNO)
ALL VALLEY RAFERS ARE 2x12 (UNO)
#J = NUMBER OF 2x4 SPF #2 JACK STUDS REQUIRED
= ROOF BRACE POINT

Wall Legend
Bearing Wall
Non-Load Bearing Wall

Boise Cascade
7601 BOEING DRIVE
GREENSBORO, NC 27409
V (336) 884-5454

4575 HAMPTON ROAD
CLEMMONS, NC 27409
V (336) 712-9910

1135 ROBESON STREET
FAYETTEVILLE, NC 28305
V (910) 485-1111

3189 NC HIGHWAY 5
ABERDEEN NC 28315
V (910) 944-2516

Builders FirstSource

GENERAL NOTES:
1.) READ THE INSTALLATION GUIDE BEFORE FRAMING.
2.) ALL WALLS SHOWN ARE LOAD BEARING UNLESS NOTED OTHERWISE. WALLS NOT SHOWN ARE CONSIDERED NON-LOAD BEARING.
3.) UNLESS STATED OTHERWISE ALL CEILING & ROOF LOADS BRACE DIRECTLY TO LOAD BEARING WALLS SUPPORTED BY FOUNDATION.
4.) CONTACT BUILDERS FIRSTSOURCE BEFORE MAKING ANY ALTERATIONS OR ADJUSTMENTS...FAILURE TO DO SO MAY RESULT IN COSTLY REPAIRS.

BRAD CUMMINGS CONSTRUCTION

KEANE RESIDENCE

FIRST FLOOR EWP PLACEMENT PLAN

Builders FirstSource, Central Carolina Markets

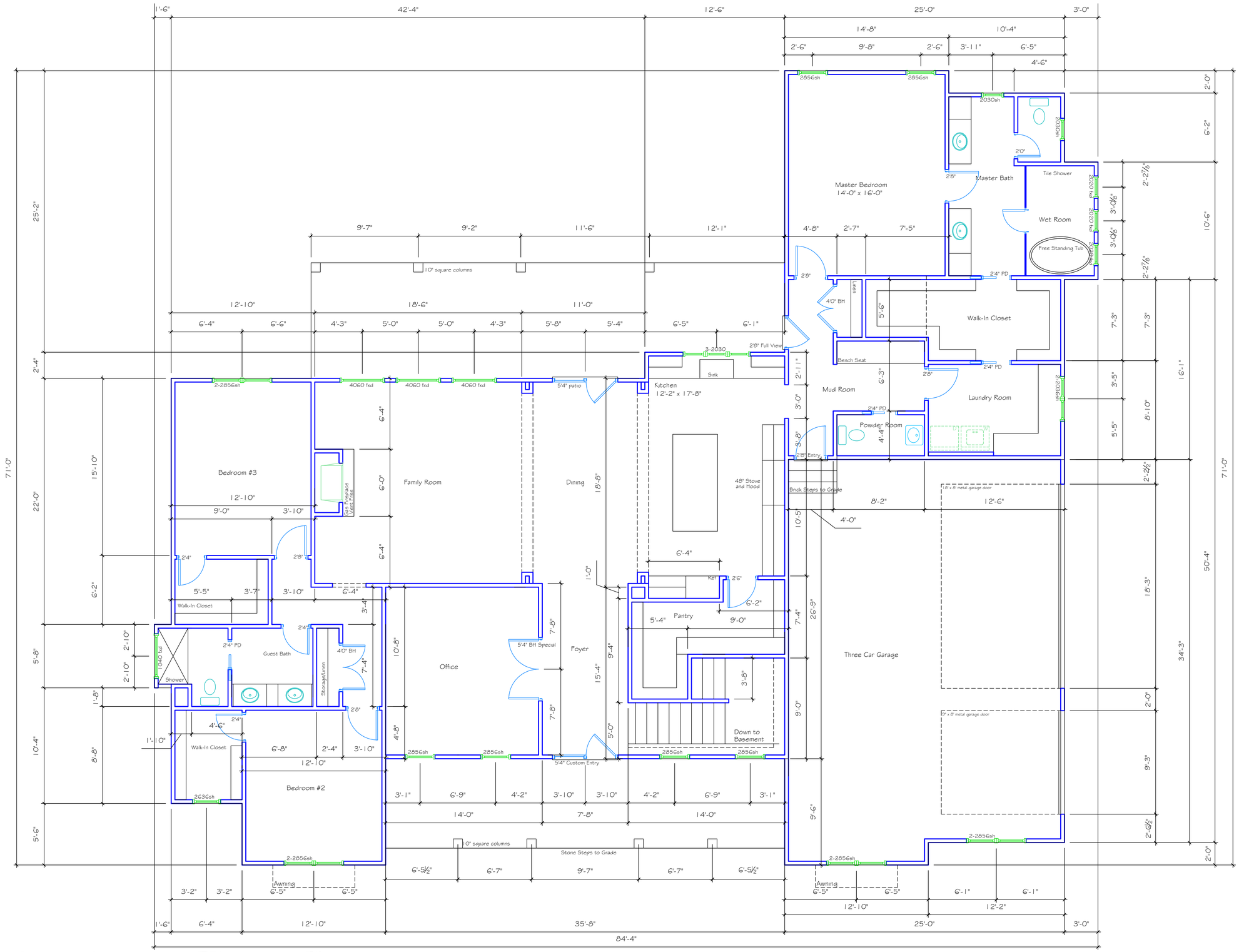
DRAWN BY: MARK BROOKS
DATE: 1/11/2023
SCALE: 1/4" = 1'
JOB NUMBER: 3303534

MINIMUM DESIGN DATA
LIVE LOAD 40 PSF
DEAD LOAD 10 PSF
TOTAL LOAD 50 PSF
DOL = 100%
DEFLECTION CRITERIA
L/480 (MINIMUM)

ARCHITECTUAL PLAN DATE
XX-XX-XX

REVISED ARCH. PLAN DATE
XX-XX-XX

XXXXXXX



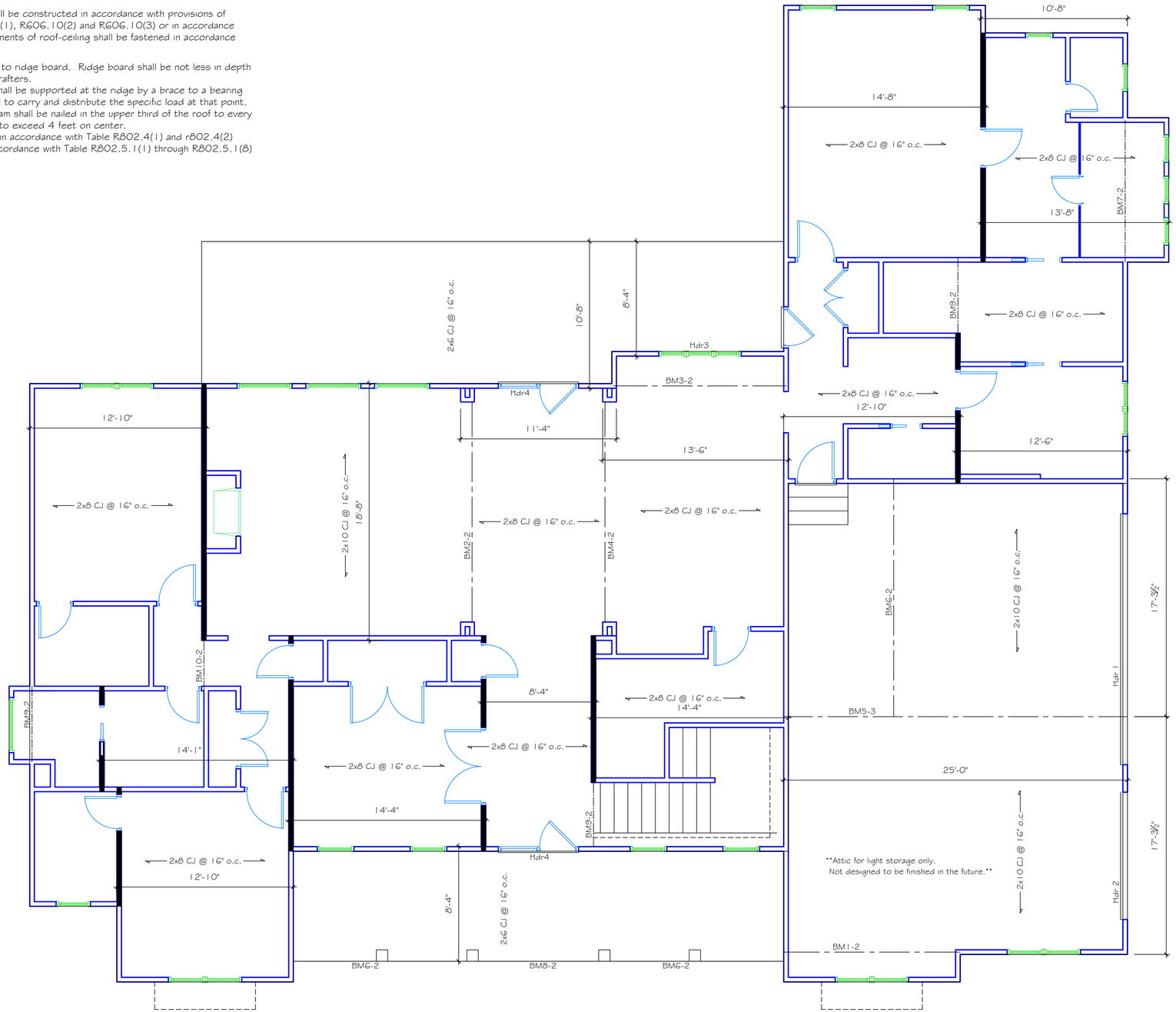
Main Level Floor Plan

PROJECT TABULATIONS

Main Level	2937
Finished Basement (est)	1212
TOTAL HEATED	4149
Garage	873
Covered Back Porch	403
Front Porch	285
Unfinished Basement (est)	TBD

-Roof-ceiling framing shall be constructed in accordance with provisions of Chapter 8 Fig.R606.10(1), R606.10(2) and R606.10(3) or in accordance with AFPA/NDS. Components of roof-ceiling shall be fastened in accordance with Table R602.3(1).

-Rafters shall be framed to ridge board. Ridge board shall be not less in depth than the cut end of the rafters.
-Hip and valley rafters shall be supported at the ridge by a brace to a beamng partition or be designed to carry and distribute the specific load at that point.
-A 1x6 or 2x4 collar beam shall be nailed in the upper third of the roof to every third pair of rafters not to exceed 4 feet on center.
-Ceiling Joist shall span in accordance with Table R802.4(1) and r802.4(2)
-Rafters shall span in accordance with Table R802.5.1(1) through R802.5.1(8)

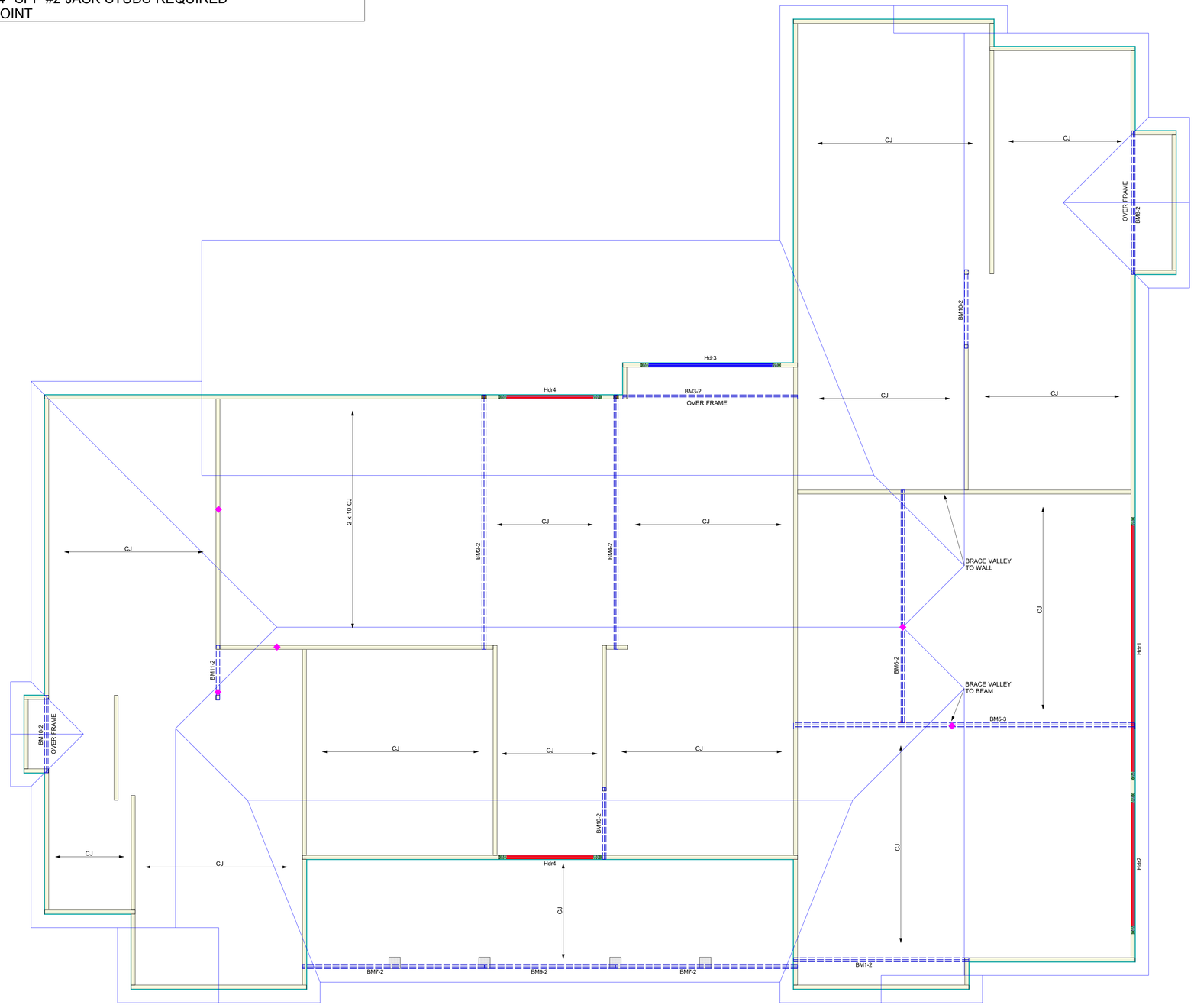


Framing Plan

GENERAL NOTES & DESIGN ASSUMPTIONS

ALL CEILING JOISTS ARE 2x8 SPF #2 @ 16" O.C. (UNO)
ALL RAFTERS ARE 2x8 SPF #2 @ 16" O.C. (UNO)
ALL LOAD HEADERS, NOT SHOWN ON LAYOUT, ARE (2)2x10 SYP #2 (UNO)
ALL 2x4, 2x6 & 2x8 ARE SPF #2 (UNO)
ALL 2x10 & 2x12 JOISTS ARE SYP #2 (UNO)
ALL RIDGES AND HIP RAFTERS ARE 2x10 (UNO)
ALL VALLEY RAFERS ARE 2x12 (UNO)
#J = NUMBER OF 2x4 SPF #2 JACK STUDS REQUIRED
= ROOF BRACE POINT

Joist & Rafter Area Loads	Live Load psf	Dead Load psf
Primary Living	40	10
Secondary & Attic Permanent Stairs	30	10
Ceiling - Limited Storage	20	10
Ceiling - No Storage	10	5
Roof - No Ceiling Load	20	10
Flat Roof or Catherdral w/Drywall Ceiling	20	15



Products				
PlotID	Length	Product	Plies	Net Qty
BM1-2	14' 0"	1-3/4X9-1/4 LP-LVL 2900Fb-2.0E	2	2
BM2-2	20' 0"	1-3/4X11-7/8 LP-LVL 2900Fb-2.0E	2	2
BM3-2	14' 0"	1-3/4X11-7/8 LP-LVL 2900Fb-2.0E	2	2
BM4-2	20' 0"	1-3/4X14 LP-LVL 2900Fb-2.0E	2	2
BM5-3	26' 0"	1-3/4X18 LP-LVL 2900Fb-2.0E	3	3
BM6-2	18' 0"	2x10 SP No.2	2	2
BM7-2	14' 0"	2x10 SP No.2	2	4
BM8-2	12' 0"	2x10 SP No.2	2	2
BM9-2	10' 0"	2x10 SP No.2	2	2
BM10-2	6' 0"	2x10 SP No.2	2	6
BM11-2	4' 0"	2x10 SP No.2	2	2

Wall Framing				
PlotID	Length	Product	Plies	Net Qty
Hdr2	10' 0"	1-3/4X11-7/8 LP-LVL 2900Fb-2.0E	2	2
Hdr1	20' 0"	1-3/4X18 LP-LVL 2900Fb-2.0E	2	2
Hdr3	10' 0"	2x10 SP No.2	2	2
Hdr4	8' 0"	2x10 SP No.2	2	4

Wall Legend	
	Bearing Wall
	Non-Load Bearing Wall

Boise Cascade
7601 BOEING DRIVE
GREENSBORO, NC 27409
V (336) 884-5454

4575 HAMPTON ROAD
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V (910) 944-2516

Builders FirstSource

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BRAD CUMMINGS CONSTRUCTION

KEANE RESIDENCE

SECOND FLOOR EWP PLACEMENT PLAN

Builders FirstSource, Central Carolina Markets

DATE: 1/11/2023

JOB NUMBER: 3303534

DRAWN BY: MARK BROOKS

SCALE: 1/4" = 1'

MINIMUM DESIGN DATA

LIVE LOAD 40 PSF
DEAD LOAD 10 PSF

TOTAL LOAD 50 PSF

DOL = 100%

DEFLECTION CRITERIA
L/480 (MINIMUM)

ARCHITECTUAL PLAN DATE
xx-xx-xx

REVISED ARCH. PLAN DATE
xx-xx-xx

xxxxxxx

Sheet
2 OF 2

-Roof-ceiling framing shall be constructed in accordance with provisions of Chapter 8 Fig.R606.10(1), R606.10(2) and R606.10(3) or in accordance with AFPA/NDS. Components of roof-ceiling shall be fastened in accordance with Table R602.3(1).

-Rafters shall be framed to ridge board. Ridge board shall be not less in depth than the cut end of the rafters.
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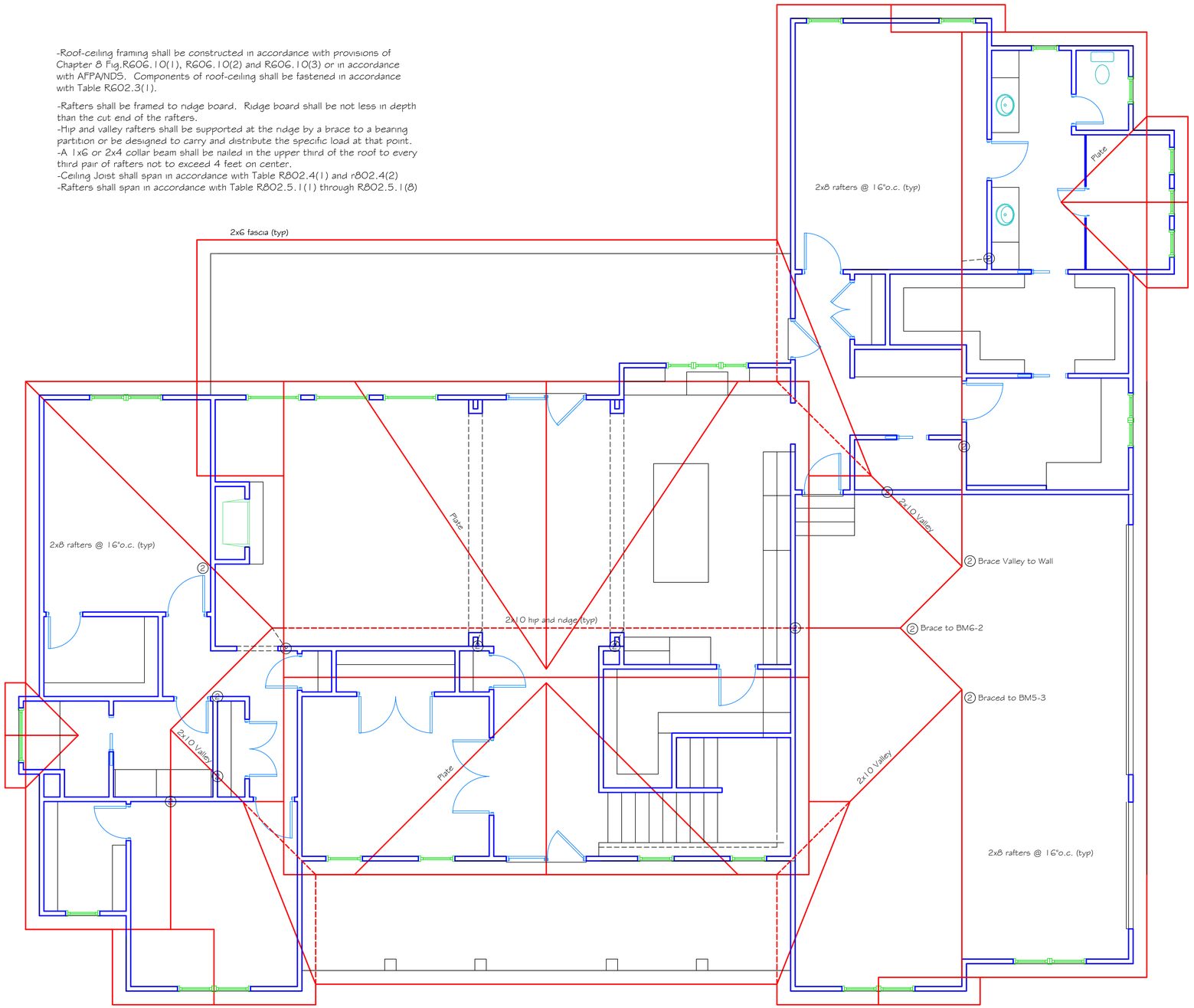
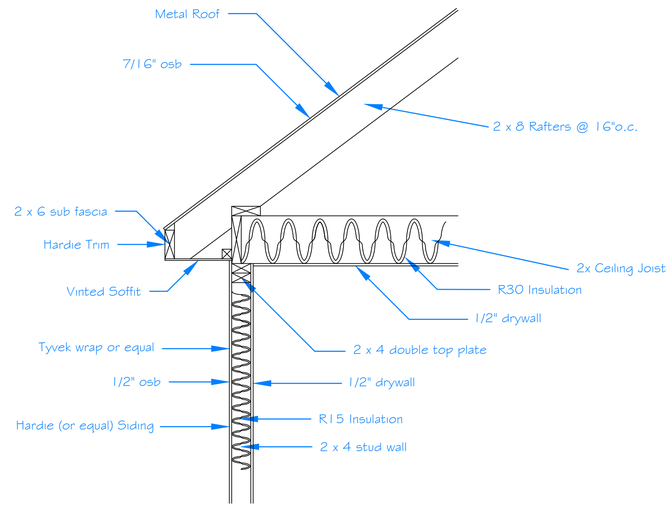
-Ceiling Joist shall span in accordance with Table R802.4(1) and r802.4(2)
-Rafters shall span in accordance with Table R802.5.1(1) through R802.5.1(8)



2 Support Columnt to Load Bearing Point Below. Qty of Studs Required

Roof Framing Plan



ROOF SECTION

-Framing design based on the following loading conditions R301.4)

Attic with Storage	-20psf
Rooms other than sleeping	-40psf
Sleeping Rooms	-30psf
Passenger Vehicle Garages	-50psf
Maximum wind speed	-100mph

Verify seismic requirements for your area.

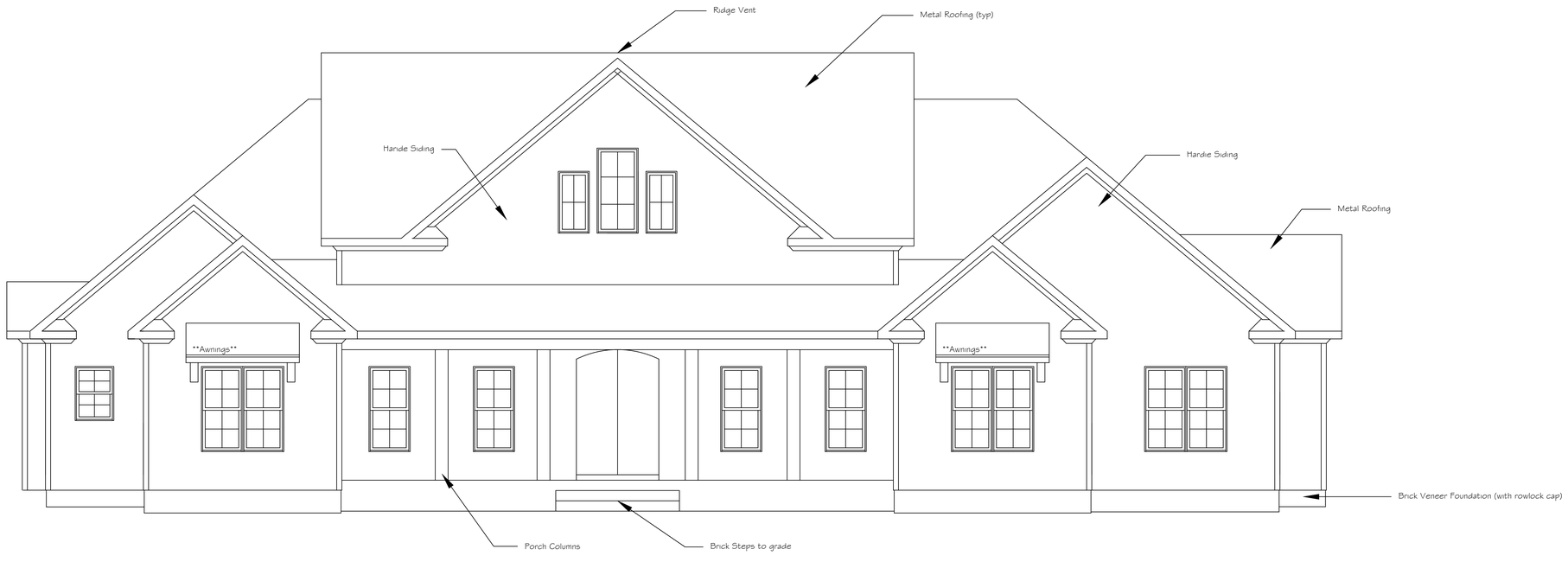
-All ceiling joist, rafters, girders, headers, sills, and beams shall be No.2 S.P.F. unless otherwise noted.

All floor joist are No. 1 SYP

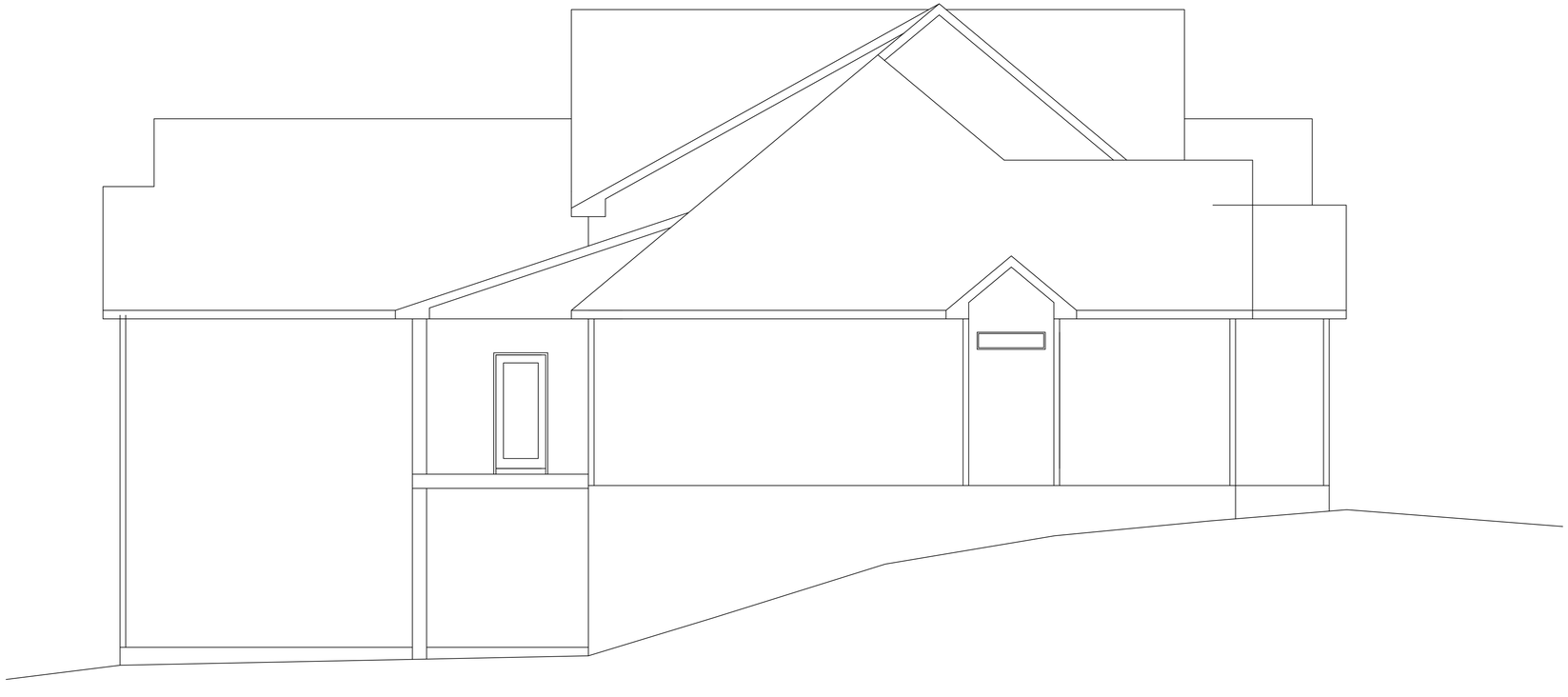
-All load bearing walls shall be No, 2 S.P.F. unless otherwise noted.
-Average dead loads shall not exceed 15 psf for roof/ceiling assemblies or 10 psf for floor assemblies.

Exterior light-frame wood walls	-15psf
Interior light-frame wood walls	-14psf
8-inch thick masonry walls	-80psf
Attics without storage	-10psf

-All girder joist and ends of girders shall rest on solid bearing. Fill cores to footing with concrete.
-Provide pressure treated lumber for sills, plates, bands, and any lumber in contact with masonry.

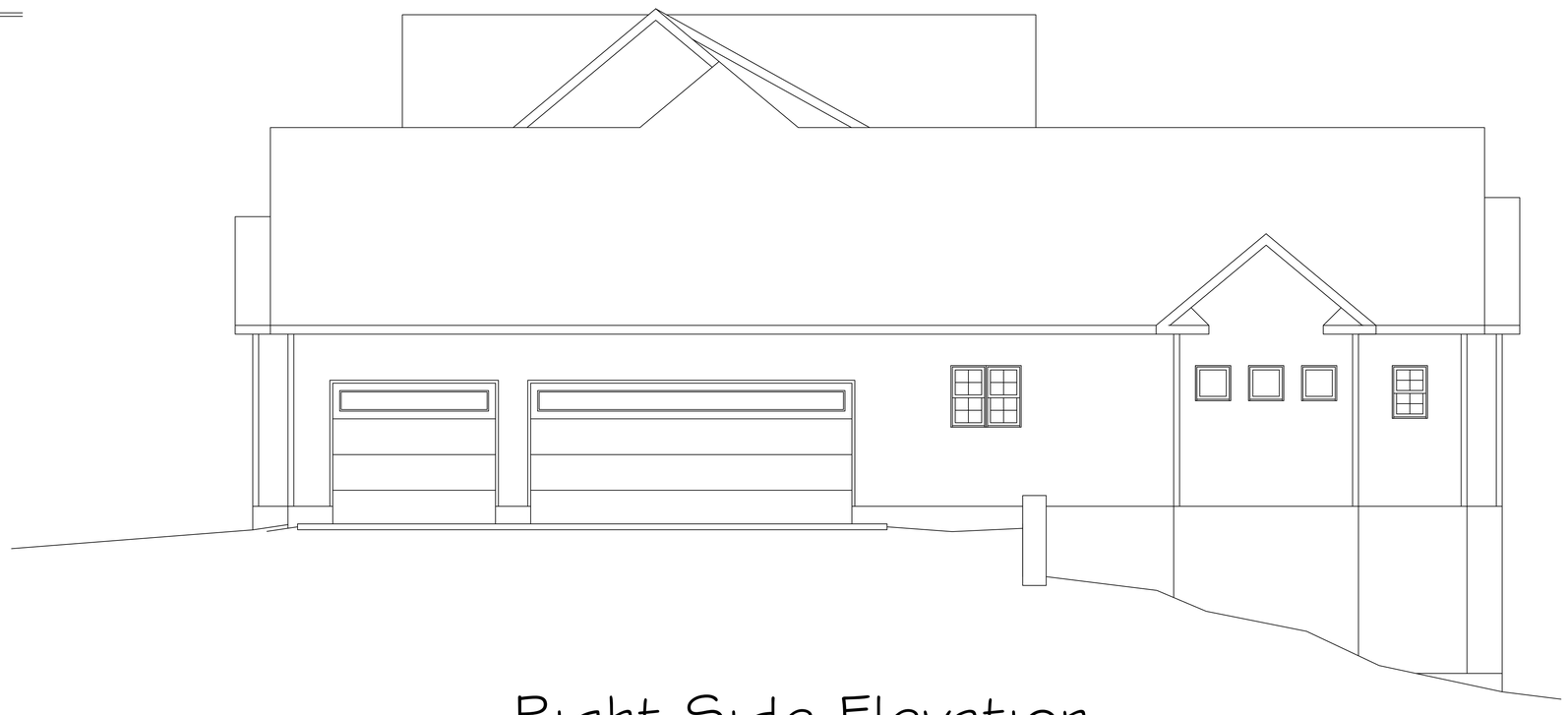


Front Elevation



Left Side Elevation

Rear Elevation



Right Side Elevation

SHOP DRAWING GENERAL INFORMATION PAGE

CODES & STANDARDS

Building Code:	2012/2015/2018/2019 IRC, 2012 IBC
ESR Report number:	ESR-1662 August 2018
3rd Party Inspection Agency:	PFS Corporation, Madison WI
Quality Assurance Manual:	Superior Walls of America 2005 Edition
Site Preparation Guide:	Superior Walls Builder Guideline Booklet Rev. June 2018
Fire Test Standards:	ASTM E119 ANSI/UL 1715

WALL MATERIALS

Concrete Compressive Strength:	Min. 5,000 PSI
water/cement Ratio:	<0.40
Reinforcing Steel:	No. 4 and larger - 60,000 PSI No. 3 and smaller - 40,000 PSI
Secondary Reinforcement:	Polypropylene Fiber
Embedded Wood Blocking	Preservatively Pressure Treated
EPS Foam Insulation:	Flame Spread: 20 Smoke Development: 240
XPS Foam Insulation:	Flame Spread: 5 Smoke Development: 165

SITE/WALL CONDITIONS

Frost Depth:	Min. 12 inches
assumed Soil Bearing Capacity:	2,000 PSF
Seismisc Category:	A, B, C
Basic Wind Speed:	155 maximum PSF
Wall Loading:	7,500 Pounds/LF (uniform) Maximum
Brickledge Loading:	2,900 Pounds/LF Maximum
Crushed Stone Footing Depth:	Min. 6 Inches thick or more (see table in Builder Guideline Booklet Table R403.4)
Crushed Stone Size:	$\frac{3}{8}$ Inch and smaller (cleaned)
Backfill Material:	100 LB/CF Equivalent Fluid Pressure Max (see Builder Guideline booklet for more information)
Beam Pocket(s) & Point Load(s):	38,000 Pound Maximum - Data supplied by Customer/Builder (see plan for location and sizes)

GENERAL NOTES

1. Jobsite shall be prepared by the builder in accordance with the Superior Walls of America builder Guideline Booklet - Site Preparation and Framing Attachment Requirements (Rev. January 2016).
2. Auxiliary drain pipe must be four (4) inch diameter perforated, covered with filter fabric and directed to a sump pit or daylight.
3. Builder shall establish the elevation benchmark (if necessary)
4. Builder shall insure proper site access for trucks and crane.

INSTALLATION NOTES

1. Installation shall be supervised by a Superior Walls certified installer. Certification is obtained through Superior Walls of America, Ltd.
2. Installation shall comply with Superior Walls of America's Installation Manual (Rev. July 2011).

DRAWING NOTES

1. All measurements for brick, stone, or support ledges are from Top Of Wall (TOW).
2. Drawings are not to scale.

DAMP PROOFING

Superior Walls are recognized by the ICC-ES as an alternative method of providing foundation wall damp proofing. No additional damp proofing is required. (See ESR-1662 & ICC-ES Legacy Report 21-72)

PLEASE NOTE

To comply with building code requirements, the framing/decking connections at the top of the Superior Walls and floor slab at the bottom of the Superior Wall MUST be completed PRIOR to backfilling.

CUSTOMER RELEASE

The attached drawing was created from information and dimensions provided by the customer/builder. Superior Walls of North Carolina, Inc. is not responsible for deviations from the Blue Print or information provided by the customer/builder.

I have reviewed the attached drawing & all of the dimensions and objects therein; I understand the Superior Walls will be custom manufactured per this drawing specifically for my project. By signing below I am certifying that I have reviewed the attached drawing and all of its listed dimensions and I accept FULL RESPONSIBILITY of any and all measurements and information provided by me/my associates/my company.

CUSTOMER MUST SIGN & DATE BELOW

Customer/Builder Signature & Date

PROJECT:

Job Number: -

Job Name: Keane

Job Address: ----

Lot #: ----

BUILDER:

Company: Brad Cummings Const

Contact:

Phone/Email: ----

MUNICIPALITY:

Harnett County

----, NC

Superior Walls of North Carolina

3570 S. Main Street
Salisbury, NC 28147
Phone: 704-636-6200
Toll-Free: 877-896-9255
www.superiorwallsnc.com

DRAWING DATA:

Job Number: -
Sales Rep: JOHN COBB

Drawn By: KM

Date Created: Jan. 31, 2022
Date Modified: Nov. 01, 2022
Revision: 3

Pages: 5

Superior Walls® FOUNDATION DRAWING

4' WALLS - TOTAL LENGTH: 39'-3 1/2"
10' WALLS - TOTAL LENGTH: 251'-1 1/2"

1/2" DIA. x 6" BOLTS FOR SILL PLATE

#	DESCRIPTION
31	BRICK LEDGE TOTALING 264'-2 1/4"
8	SLAB CONNECTOR
44	L.F. OF SHOE BLOCK TOP (24" H x 5" D)

ID	#	OBJECT	DESCRIPTION	WIDTH	HEIGHT	FROM TOP OF WALL	FROM BOT OF WALL	MAX HDR CAPACITY
A	1	DOOR	STYLE 1	38"	83"	33"	4"	5500 PLF
B	1	CUTOUT	SUPPORT CUT	6"	48"			
C	1	CUTOUT	GARAGE CUT	111"	24"			

ID	#	OBJECT	DESCRIPTION	WIDTH	HEIGHT	DEPTH
D	1	BEAM POCKET		8"	14"	6"
E	5	BEAM POCKET		6"	9 1/4"	6"

ID	#	OBJECT	LENGTH	WIDTH	THICKNESS	DESCRIPTION
F	1	FOOTER PAD	36"	36"	4 1/2"	

PLEASE NOTE:
Adjustments made after sign-offs may incur an additional $200 service charge

BUILDER CHECK LIST:
-RO's/DIMS/WALL HEIGHT CORRECT?
-OBJECT OPENINGS CORRECT?
-WOOD BUTTS IND./REQ'D?
-SUPPORT/BRICK LEDGES CORRECT?
-EXTRA SUPPORT IND. FOR PT. LOAD?

SIGNATURE: _____
DATE: _____

OWNER/BUILDER NOTIFICATION:
BY SIGNING THESE DRAWINGS YOU ARE ACKNOWLEDGING THAT THE WALLS WILL BE BUILT TO THE DIMENSIONS INDICATED ON THESE PLANS, AND THAT YOU ARE ASSUMING ANY AND ALL LIABILITY THAT MAY RESULT FROM THE WALLS BEING MANUFACTURED AS SHOWN

THESE DRAWINGS ARE APPROVED FOR FINAL PRODUCTION AS ILLUSTRATED AND NOT SUBJECT TO CHANGE.

CUSTOMER SIGNATURE: _____ DATE: _____

Superior Walls of North Carolina
3570 S. Main Street
Salisbury, NC 28147
Phone: 704-636-6200
Toll-Free: 877-896-9255

REV.	DATE	BY
1	10-05-22	KM
2	10-28-22	BS
3	11-01-22	BS

PROJECT: Keane
BUILDER: Brad Cummings Const

STATUS: ISSUED FOR APPROVAL
SALESMAN: John Cobb
FILENAME: Keane
SHEET TITLE: SUMMARY
SHEET NO. 2 of 5

JOHN COBB
BRAD CUMMINGS CONST

10' Walls
4' Walls

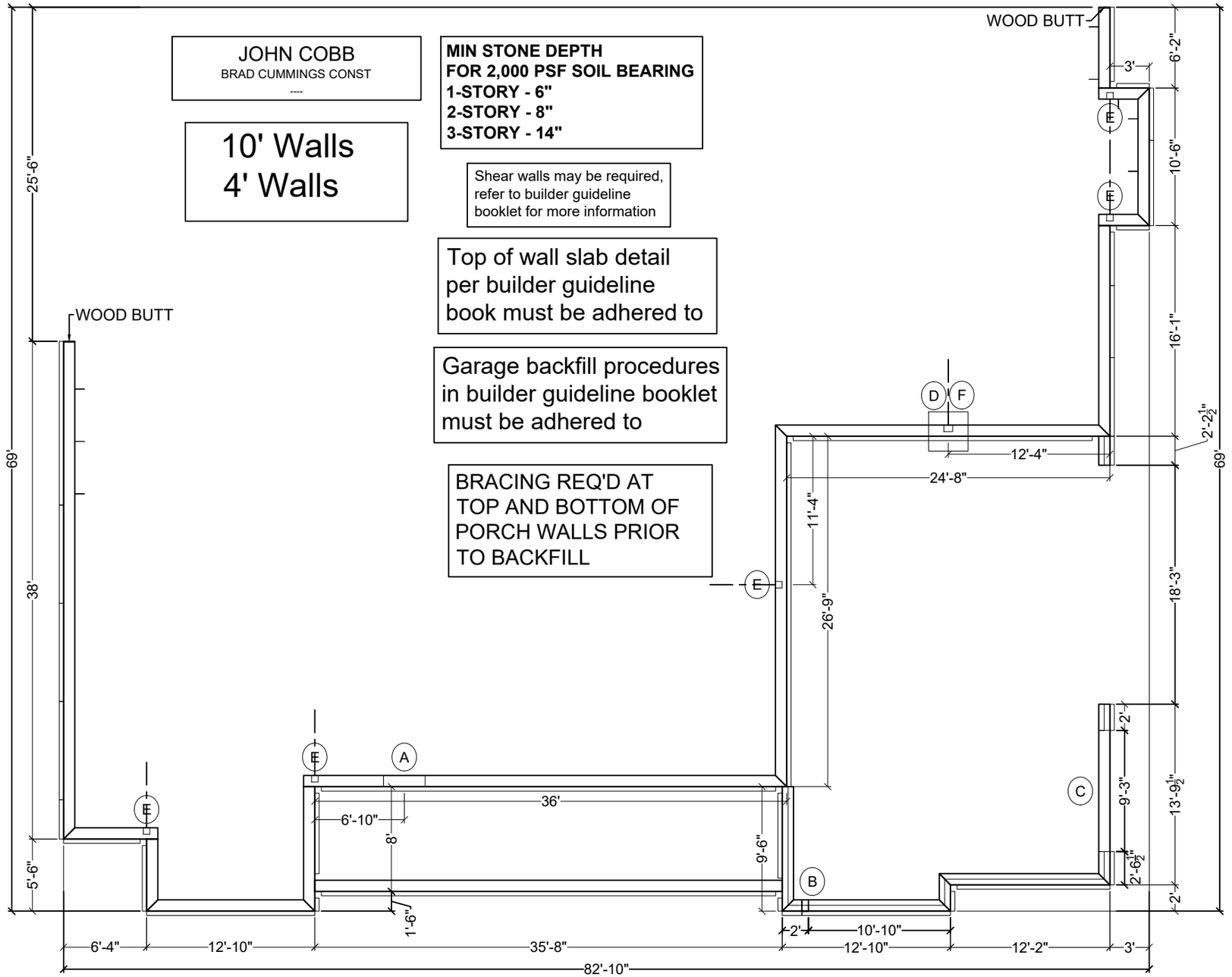
MIN STONE DEPTH
FOR 2,000 PSF SOIL BEARING
1-STORY - 6"
2-STORY - 8"
3-STORY - 14"

Shear walls may be required, refer to builder guideline booklet for more information

Top of wall slab detail per builder guideline book must be adhered to

Garage backfill procedures in builder guideline booklet must be adhered to

BRACING REQ'D AT TOP AND BOTTOM OF PORCH WALLS PRIOR TO BACKFILL



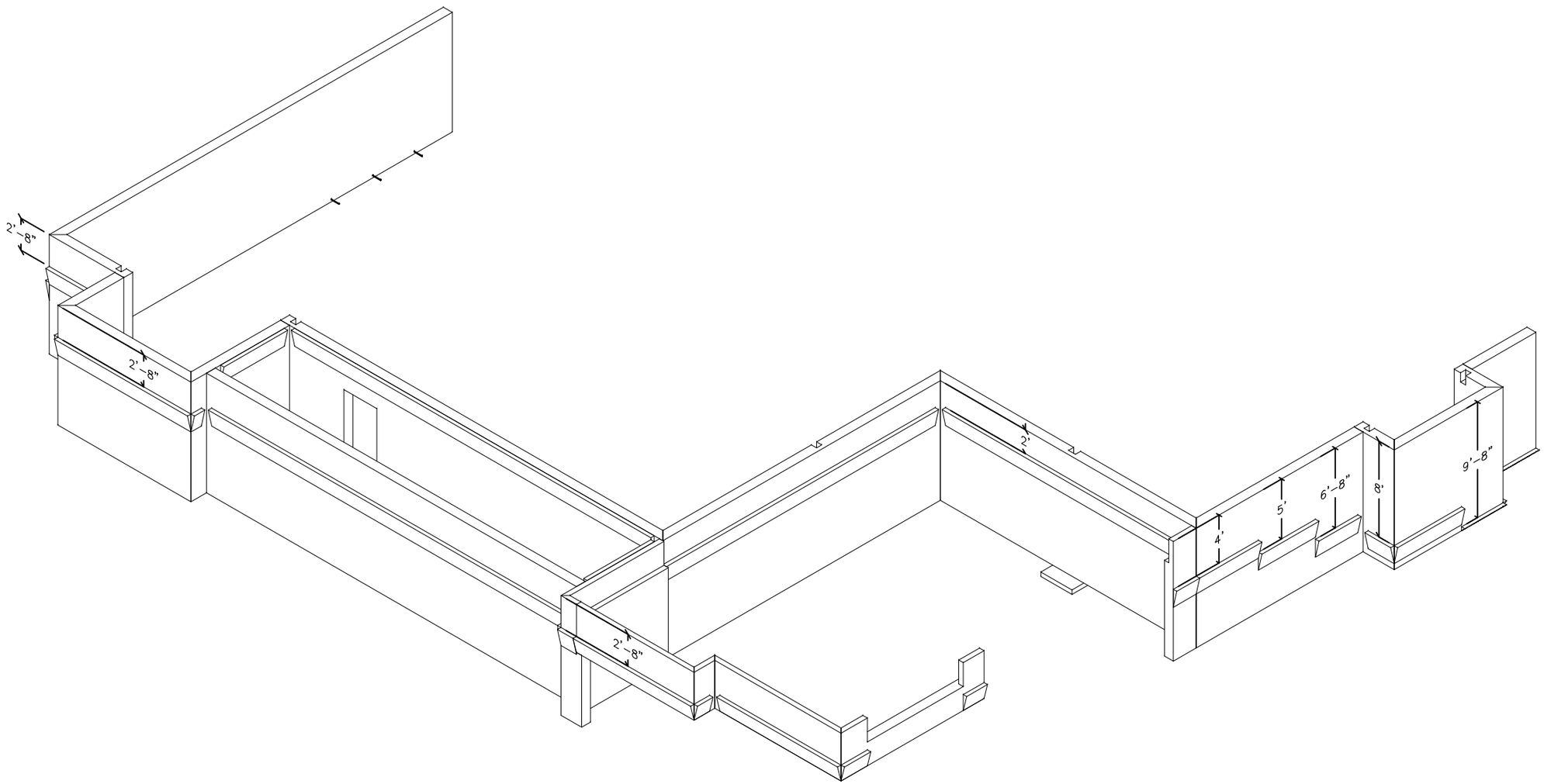
CUSTOMER SIGNATURE: _____ DATE: _____

Superior Walls of North Carolina
3570 S. Main Street
Salisbury, NC 28147
Phone: 704-636-6200
Toll-Free: 877-896-9255

REV.	DATE	BY
1	10-05-22	KM
2	10-28-22	BS
3	11-01-22	BS

PROJECT: Keane
BUILDER: Brad Cummings Const

STATUS: ISSUED FOR APPROVAL
SALESMAN: John Cobb
FILENAME: Keane
SHEET TITLE: PLAN W/O DIMS
SHEET NO. 3 of 5



CUSTOMER SIGNATURE: _____ DATE: _____

Superior Walls of North Carolina
3570 S. Main Street
Salisbury, NC 28147
Phone: 704-636-6200
Toll-Free: 877-896-9255

REV.	DATE	BY
1	10-05-22	KM
2	10-28-22	BS
3	11-01-22	BS

PROJECT: Keane

BUILDER: Brad Cummings Const

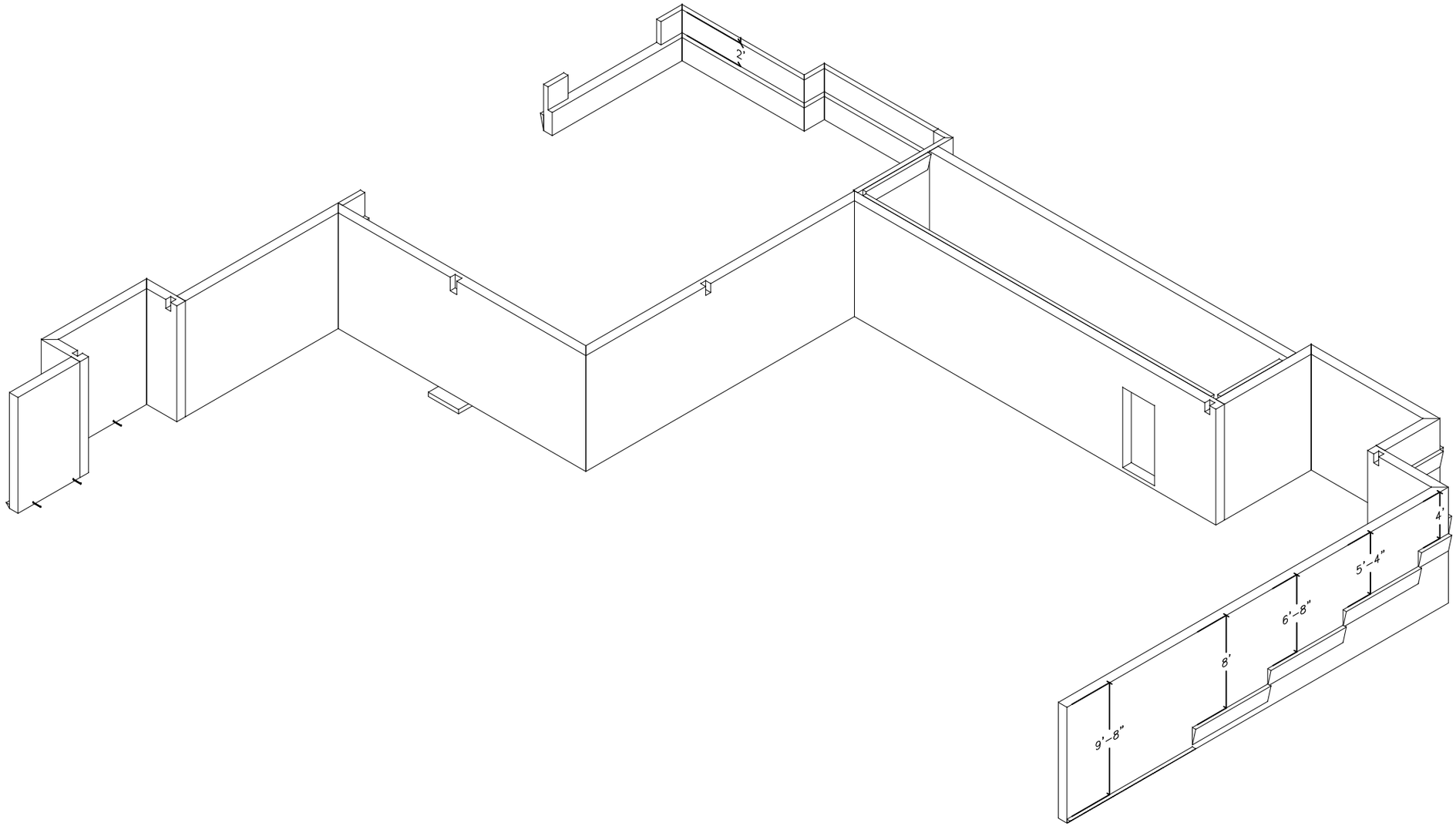
STATUS: ISSUED FOR APPROVAL

SALESMAN: John Cobb

FILENAME: Keane

SHEET TITLE: ISOMETRIC 1

SHEET NO. 4 of 5



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Phone: 704-636-6200
Toll-Free: 877-896-9255

REV.	DATE	BY
1	10-05-22	KM
2	10-28-22	BS
3	11-01-22	BS

PROJECT: Keane

BUILDER: Brad Cummings Const

STATUS: ISSUED FOR APPROVAL

SALESMAN: John Cobb

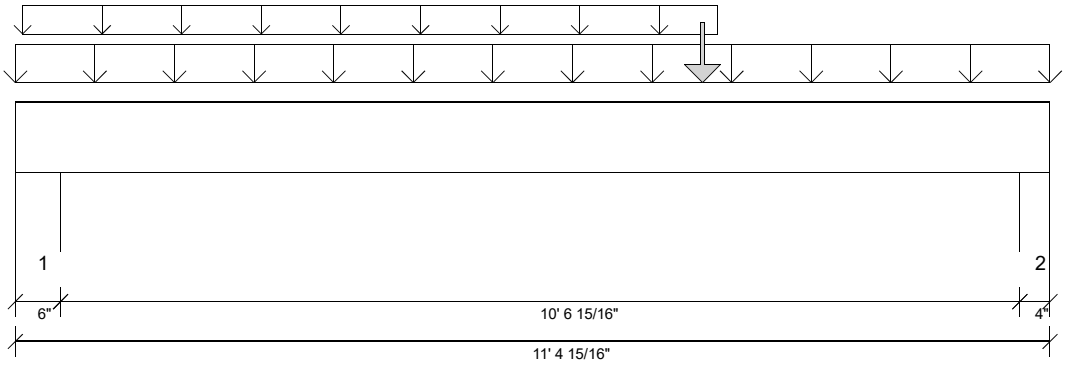
FILENAME: Keane

SHEET TITLE: ISOMETRIC 2

SHEET NO. 5 of 5

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **Crawl** Label: **BM3-2 - i117** Type: **Beam**	**2 Ply Member** **1-3/4X9-1/4 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 — Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 — Report Version: 2021.03.26 12/29/2022 13:18



DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 5"
- 725 psi Wall @ 11'- 1 15/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	5'- 9 1/2"	D + L	1.00	10875 lb ft	12416 lb ft	Passed - 88%
Max Shear:	1'- 3 1/4"	D + L	1.00	3421 lb	6151 lb	Passed - 56%
Live Load (LL) Pos. Defl.:	5'- 9 5/16"	L		0.310"	L/360	Passed - L/409
Total Load (TL) Pos. Defl.:	5'- 9 5/16"	D + L		0.500"	L/240	Passed - L/253

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	6"	D + L	1.00	4361 lb		15750 lb	15225 lb	Passed - 29%
2	4"	D + L	1.00	3692 lb		10500 lb	10150 lb	Passed - 36%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	11'- 4 15/16"	Self Weight	Top	9 lb/ft	-	-	-	-
Uniform	0'	11'- 4 15/16"	User Load	Top	95 lb/ft	380 lb/ft	-	-	-
Uniform	0'- 15/16"	7'- 8 15/16"	21(i79)	Top	177 lb/ft	95 lb/ft	-	-	-
Point	7'- 6 15/16"	7'- 6 15/16"	BM3-2(i124)	Front	348 lb	89 lb	-	355 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6"	14(i44)	1648 lb	2729 lb	-	118 lb	-
2	11'- 15/16"	11'- 4 15/16"	E9(i50)	1250 lb	2426 lb	-	237 lb	-

DESIGN NOTES

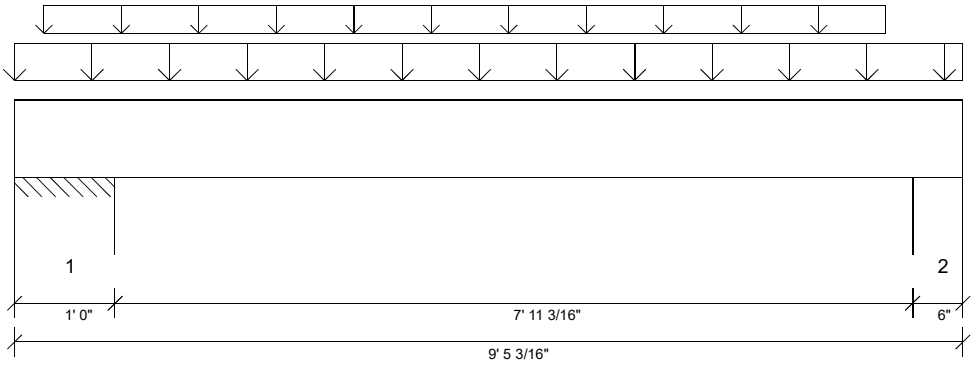
- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **Crawl** Label: **BM4-2 - i118** Type: **Beam**	**2 Ply Member** **1-3/4X9-1/4 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 | Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 | Report Version: 2021.03.26 12/29/2022 13:18



DESIGN INFORMATION

Building Code: IRC 2018
Design Methodology: ASD
Risk Category: II (General Construction) Residential
Service Condition: Dry
LL Deflection Limit: L/360, 1.00" (absolute)
TL Deflection Limit: L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 875 psi Wall @ 0'- 11"
- 725 psi Wall @ 9'- 3/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	4'- 11 5/8"	D + L	1.00	6137 lb ft	12416 lb ft	Passed - 49%
Max Neg. Moment:	0'- 11"	D + L	1.00	257 lb ft	12416 lb ft	Passed - 2%
Max Shear:	1'- 9 1/4"	D + L	1.00	2443 lb	6151 lb	Passed - 40%
Live Load (LL) Pos. Defl.:	4'- 11 9/16"	L		0.102"	L/360	Passed - L/933
Total Load (TL) Pos. Defl.:	4'- 11 5/8"	D + L		0.161"	L/240	Passed - L/590

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1' 0"	D + L	1.00	3703 lb		31500 lb	36750 lb	Passed - 12%
2	6"	D + L	1.00	3168 lb		15750 lb	15225 lb	Passed - 21%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	9'- 5 3/16"	Self Weight	Top	9 lb/ft	-	-	-	-
Uniform	0'	9'- 5 3/16"	User Load	Top	95 lb/ft	380 lb/ft	-	-	-
Uniform	0'- 3 1/2"	8'- 8"	20(i78)	Top	177 lb/ft	95 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	1'	W13(i9)	1357 lb	2350 lb	-	-	-
2	8'- 11 3/16"	9'- 5 3/16"	15(i45)	1113 lb	2053/-23 lb	-	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

Customer: **BRAD CUMMINGS CONSTRUC...**	Job Name: **3303534_KEANE**	**2 Ply Member**	Status:
Job Name: **KEANE RESIDENCE**	Level: **Crawl**	**1-3/4X9-1/4 LP-LVL**	**Design**
Appwright N... **3303534**	Label: **BM4-2 - i119**	**2900Fb-2.0E**	**Passed**
Customer P...	Type: **Beam**		

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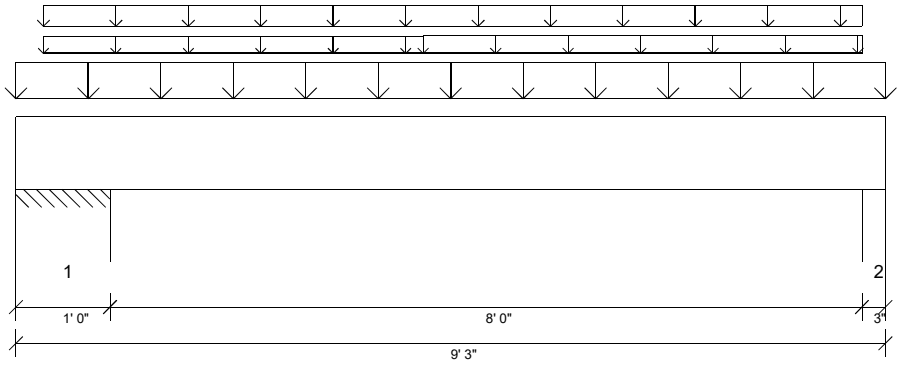


DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 875 psi Wall @ 0'- 11"
- 725 psi Wall @ 9'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	5'- 5/16"	D + L	1.00	8818 lb ft	12416 lb ft	Passed - 71%
Max Neg. Moment:	0'- 11"	D + L	1.00	365 lb ft	12416 lb ft	Passed - 3%
Max Shear:	1'- 9 1/4"	D + L	1.00	3467 lb	6151 lb	Passed - 56%
Live Load (LL) Pos. Defl.:	5'	L		0.155"	L/360	Passed - L/618
Total Load (TL) Pos. Defl.:	5'- 1/16"	D + L		0.236"	L/240	Passed - L/407

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1' 0"	D + L	1.00	5229 lb		31500 lb	36750 lb	Passed - 17%
2	3"	D + L	1.00	4485 lb		7875 lb	7613 lb	Passed - 59%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	9'- 3"	Self Weight	Top	9 lb/ft	-	-	-	-
Uniform	0'	9'- 3"	User Load	Top	140 lb/ft	560 lb/ft	-	-	-
Uniform	0'- 3 1/2"	9'	19(i77)	Top	152 lb/ft	70 lb/ft	-	-	-
Uniform	0'- 3 1/2"	4'- 4"	19(i77)	Top	60 lb/ft	60 lb/ft	-	-	-
Uniform	4'- 4"	9'	19(i77)	Top	70 lb/ft	70 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	1'	W9(i13)	1770 lb	3455 lb	-	-	-
2	9'	9'- 3"	7(i37)	1535 lb	2955/-33 lb	-	-	-

DESIGN NOTES

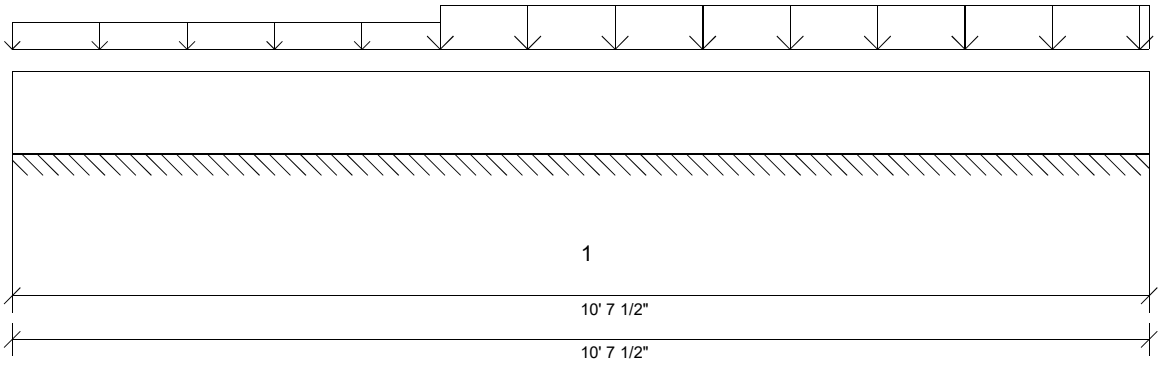
- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **Crawl** Label: **BM3-2 - i120** Type: **Beam**	**2 Ply Member** **1-3/4X9-1/4 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 — Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 — Report Version: 2021.03.26 12/29/2022 13:18



DESIGN INFORMATION

Building Code: IRC 2018
Design Methodology: ASD
Risk Category: II (General Construction) Residential
Service Condition: Dry
LL Deflection Limit: ,
TL Deflection Limit: ,

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
	N/A	D + L	1.00	559 lb/ft		9000 lb/ft	-	Passed - 6%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	10'- 7 1/2"	Self Weight	Top	9 lb/ft	-	-	-	-
Uniform	0'	4'	User Load	Top	40 lb/ft	160 lb/ft	-	-	-
Uniform	4'	10'- 7 1/2"	User Load	Top	110 lb/ft	440 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	10'- 7 1/2"	24(i82)	988 lb	3555 lb	-	-	-
==>	0'	4'	24(i82)	40 lb/ft	160 lb/ft	-	-	-
==>	0'	10'- 7 1/2"	24(i82)	9 lb/ft	-	-	-	-
==>	4'	10'- 7 1/2"	24(i82)	110 lb/ft	440 lb/ft	-	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
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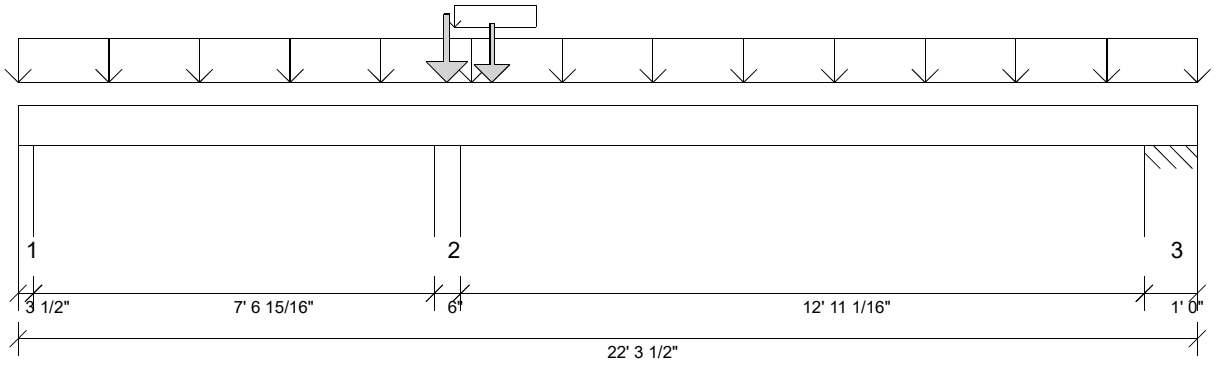
PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **Crawl** Label: **BM1-2 - i135** Type: **Beam**	**2 Ply Member** **1-3/4X9-1/4 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 — Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 — Report Version: 2021.03.26 12/29/2022 13:18



DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 2 1/2"
- 725 psi Wall @ 8'- 1 7/16"
- 875 psi Wall @ 21'- 4 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	15'- 8 3/16"	D + L	1.00	7798 lb ft	12416 lb ft	Passed - 63%
Max Neg. Moment:	8'- 1 7/16"	D + L	1.00	9265 lb ft	12416 lb ft	Passed - 75%
Max Shear:	9'- 1 11/16"	D + L	1.00	5106 lb	6151 lb	Passed - 83%
Live Load (LL) Pos. Defl.:	15'- 2 5/16"	L		0.387"	L/360	Passed - L/401
Live Load (LL) Neg. Defl.:	4'- 9 5/16"	L		0.089"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	15'- 2 3/16"	D + L		0.494"	L/240	Passed - L/313
Total Load (TL) Neg. Defl.:	4'- 10 13/16"	D + L		0.106"	L/240	Passed - L/857

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	3 1/2"	D + L	1.00	1587 lb		9187 lb	8881 lb	Passed - 18%
1	3 1/2"	D + L	1.00		-592 lb	-	-	
2	6"	D + L	1.00	12152 lb		16734 lb	15225 lb	Passed - 80%
3	1' 0"	D + L	1.00	3216 lb		31500 lb	36750 lb	Passed - 10%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	22'- 3 1/2"	Self Weight	Top	9 lb/ft	-	-	-	-
Uniform	0'	22'- 3 1/2"	User Load	Top	95 lb/ft	380 lb/ft	-	-	-
Uniform	8'- 3"	9'- 9 1/2"	30(i89)	Top	82 lb/ft	-	-	-	-
Point	8'- 1 1/4"	8'- 1 1/4"	24(i82)	Top	1033 lb	1822 lb	-	-	-
Point	8'- 11 1/2"	8'- 11 1/2"	30(i89)	Top	1248 lb	1118 lb	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	6(i36)	134 lb	1450/-727 lb	-	-	-
2	7'- 10 7/16"	8'- 4 7/16"	13(i43)	3901 lb	8276 lb	-	-	-
3	21'- 3 1/2"	22'- 3 1/2"	W7(i5)	697 lb	2519 lb	-	-	-

DESIGN NOTES

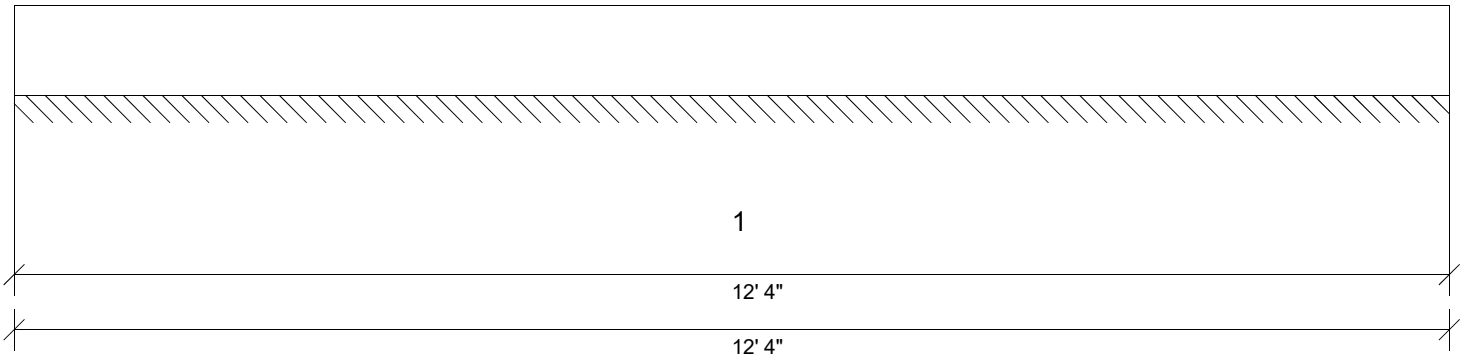
- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **Crawl** Label: **BM2-2 - i123** Type: **Beam**	**2 Ply Member** **1-3/4X9-1/4 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 — Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 — Report Version: 2021.03.26 12/29/2022 13:18



DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	,
TL Deflection Limit:	,

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
	N/A	D	0.90	9 lb/ft		9000 lb/ft	-	Passed - 0%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	12'- 4"	Self Weight	Top	9 lb/ft	-	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	12'- 4"	-	19 lb	-	-	-	-
++>	0'	0'- 3 1/2"	22(i80)	9 lb/ft	-	-	-	-
++>	0'- 3 1/2"	12'- 4"	34(i94)	9 lb/ft	-	-	-	-

DESIGN NOTES

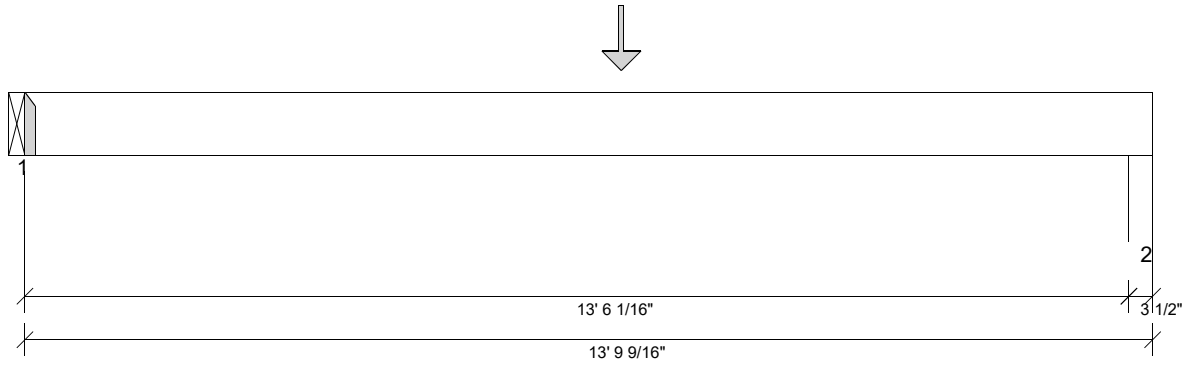
- CAUTION: This member didn't transfer any live load reactions to any of its supports. Verify load transfer is occurring as expected for this member.
- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **Crawl** Label: **BM2-2 - i124** Type: **Beam**	**2 Ply Member** **1-3/4X9-1/4 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 — Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 — Report Version: 2021.03.26 12/29/2022 13:18



DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 405 psi Beam @ 0'
- 725 psi Wall @ 13'- 7 1/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	7'- 3 9/16"	D + Lr	1.25	4884 lb ft	15519 lb ft	Passed - 31%
Max Shear:	12'- 8 13/16"	D + Lr	1.25	798 lb	7689 lb	Passed - 10%
Live Load (LL) Pos. Defl.:	6'- 11 7/16"	Lr		0.153"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 11 5/16"	D + Lr		0.292"	L/240	Passed - L/554

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1 1/2"	D + Lr	1.25	703 lb		3937 lb	-	Passed - 18%
2	3 1/2"	D + Lr	1.25	807 lb		9187 lb	8881 lb	Passed - 9%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	HHUS410	Simpson	-	-	-	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	13'- 9 9/16"	Self Weight	Top	9 lb/ft	-	-	-	-
Point	7'- 3 9/16"	7'- 3 9/16"	32(i91)	Top	616 lb	192 lb	-	767 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'	BM3-2(i117)	348 lb	89 lb	-	355 lb	-
2	13'- 6 1/16"	13'- 9 9/16"	7(i37)	396 lb	103 lb	-	412 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
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- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **Crawl** Label: **BM6-3 - i151** Type: **Beam**	**3 Ply Member** **1-3/4X11-7/8 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

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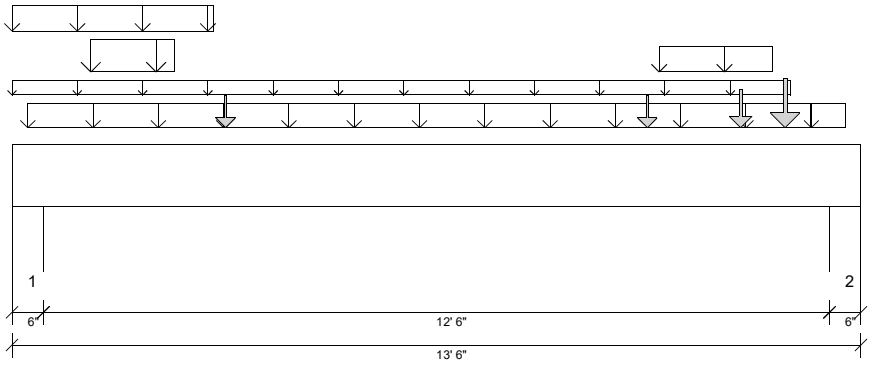

DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 5"
- 725 psi Wall @ 13'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	7'- 1 1/2"	D + L	1.00	17445 lb ft	29850 lb ft	Passed - 58%
Max Shear:	12'- 1/8"	D + L	1.00	7024 lb	11845 lb	Passed - 59%
Live Load (LL) Pos. Defl.:	6'- 10 1/16"	0.75(L + Lr)		0.235"	L/360	Passed - L/637
Total Load (TL) Pos. Defl.:	6'- 10 3/16"	D + 0.75(L + Lr)		0.423"	L/240	Passed - L/354

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	6"	D + L	1.00	6334 lb		23625 lb	22837 lb	Passed - 28%
2	6"	D + 0.75(L + Lr)	1.25	10044 lb		23625 lb	22837 lb	Passed - 44%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	13'- 6"	Self Weight	Top	18 lb/ft	-	-	-	-
Uniform	0'	12'- 4 9/16"	E15(i52)	Top	102 lb/ft	-	-	-	-
Uniform	0'	3'- 2 1/2"	E15(i52)	Top	170 lb/ft	-	-	340 lb/ft	-
Uniform	0'- 3"	13'- 3"	User Load	Top	95 lb/ft	380 lb/ft	-	-	-
Uniform	1'- 3 1/16"	2'- 7 1/16"	E15(i52)	Top	432 lb/ft	350 lb/ft	-	-	-
Uniform	10'- 3 1/2"	12'- 1 1/16"	E15(i52)	Top	170 lb/ft	-	-	340 lb/ft	-
Point	3'- 4 3/4"	3'- 4 3/4"	E15(i52)	Top	630 lb	-	-	1204 lb	-
Point	10'- 1 1/4"	10'- 1 1/4"	E15(i52)	Top	630 lb	-	-	1204 lb	-
Point	11'- 7 1/16"	11'- 7 1/16"	E15(i52)	Top	1248 lb	1118 lb	-	-	-
Point	12'- 3 9/16"	12'- 3 9/16"	E15(i52)	Top	1163 lb	-	-	2174 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6"	E1(i24)	3311 lb	3013 lb	-	2398 lb	-
2	13'	13'- 6"	E3(i25)	4523 lb	3511 lb	-	3885 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
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- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

Customer: **BRAD CUMMINGS CONSTRUC...**	Job Name: **3303534_KEANE**	**2 Ply Member**	Status:
Job Name: **KEANE RESIDENCE**	Level: **Crawl**	**1-3/4X9-1/4 LP-LVL**	**Design**
Appwright N... **3303534**	Label: **BM5-2 - i126**	**2900Fb-2.0E**	**Passed**
Customer P...	Type: **Beam**		

Illustration Not to Scale. Pitch: 0/12

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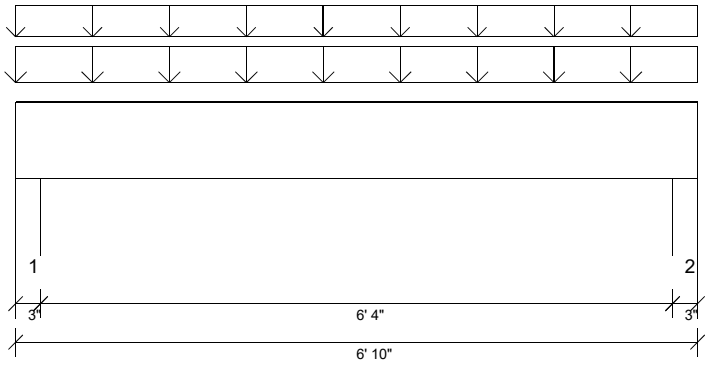

DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 2"
- 725 psi Wall @ 6'- 8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	3'- 5"	D + L	1.00	3535 lb ft	12416 lb ft	Passed - 28%
Max Shear:	1'- 1/4"	D + L	1.00	1608 lb	6151 lb	Passed - 26%
Live Load (LL) Pos. Defl.:	3'- 5"	0.75(L + Lr)		0.033"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 5"	D + 0.75(L + Lr)		0.062"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	3"	D + L	1.00	2293 lb		7875 lb	7613 lb	Passed - 30%
2	3"	D + L	1.00	2293 lb		7875 lb	7613 lb	Passed - 30%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	6'- 10"	Self Weight	Top	9 lb/ft	-	-	-	-
Uniform	-0'	6'- 10"	E18(i59)	Top	242 lb/ft	70 lb/ft	-	140 lb/ft	-
Uniform	0'	6'- 10"	User Load	Top	70 lb/ft	280 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3"	E4(i29)	1097 lb	1196 lb	-	478 lb	-
2	6'- 7"	6'- 10"	E5(i49)	1097 lb	1196 lb	-	478 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
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- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
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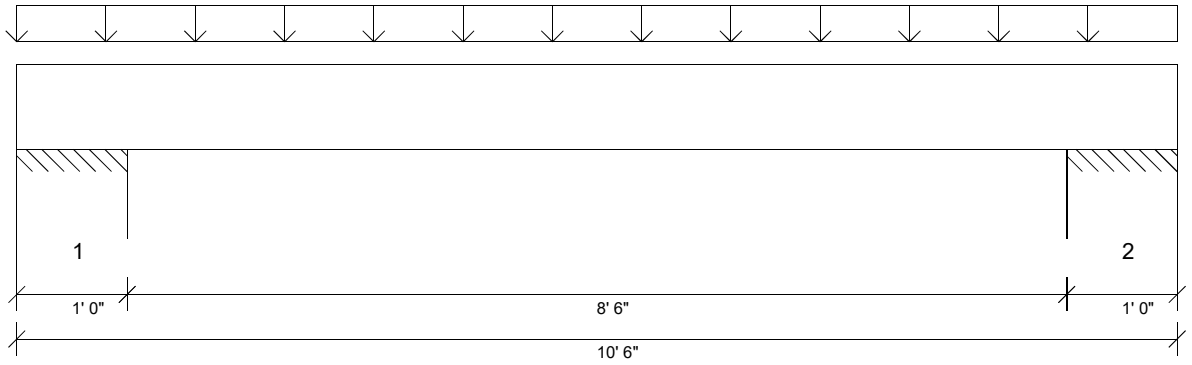
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **Crawl** Label: **BM3-2 - i127** Type: **Beam**	**2 Ply Member** **1-3/4X9-1/4 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 — Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 — Report Version: 2021.03.26 12/29/2022 13:18



DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 875 psi Wall @ 0'- 11"
- 875 psi Wall @ 9'- 7"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	5'- 3"	D + L	1.00	3340 lb ft	12416 lb ft	Passed - 27%
Max Neg. Moment:	0'- 11"	D + L	1.00	151 lb ft	12416 lb ft	Passed - 1%
Max Shear:	1'- 9 1/4"	D + L	1.00	1264 lb	6151 lb	Passed - 21%
Live Load (LL) Pos. Defl.:	5'- 3"	L		0.079"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	5'- 3"	D + L		0.101"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1' 0"	D + L	1.00	1886 lb		31501 lb	36751 lb	Passed - 6%
2	1' 0"	D + L	1.00	1900 lb		31501 lb	36751 lb	Passed - 6%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	10'- 6"	Self Weight	Top	9 lb/ft	-	-	-	-
Uniform	0'	10'- 6"	User Load	Top	70 lb/ft	280 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	1'	W4(i2)	416 lb	1484 lb	-	-	-
2	9'- 6"	10'- 6"	W2(i1)	416 lb	1484 lb	-	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
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- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

Customer: **BRAD CUMMINGS CONSTRUC...**	Job Name: **3303534_KEANE**	**3 Ply Member**	Status:
Job Name: **KEANE RESIDENCE**	Level: **Crawl**	**1-3/4X14 LP-LVL**	**Design**
Appwright N... **3303534**	Label: **BM7-3 - i141**	**2900Fb-2.0E**	**Passed**
Customer P...	Type: **Beam**		

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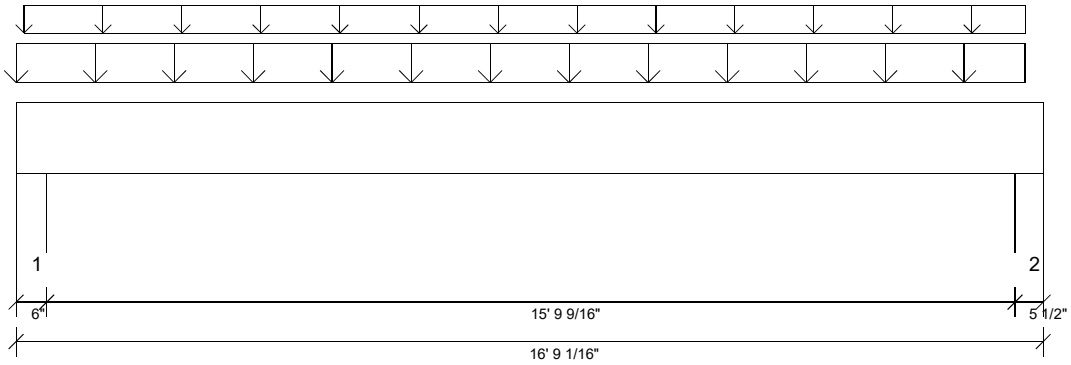

DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 5"
- 725 psi Wall @ 16'- 4 9/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	8'- 4 13/16"	D + L	1.00	30804 lb ft	40546 lb ft	Passed - 76%
Max Shear:	1'- 8"	D + L	1.00	6522 lb	13965 lb	Passed - 47%
Live Load (LL) Pos. Defl.:	8'- 4 13/16"	L		0.388"	L/360	Passed - L/488
Total Load (TL) Pos. Defl.:	8'- 4 13/16"	D + L		0.606"	L/240	Passed - L/312

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	6"	D + L	1.00	8095 lb		23625 lb	22838 lb	Passed - 35%
2	5 1/2"	D + L	1.00	7812 lb		21657 lb	20935 lb	Passed - 37%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	16'- 9 1/16"	Self Weight	Top	21 lb/ft	-	-	-	-
Uniform	0'	16'- 5 9/16"	User Load	Top	125 lb/ft	500 lb/ft	-	-	-
Uniform	0'- 1 9/16"	16'- 5 9/16"	28(i86)	Top	202 lb/ft	120 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6"	17(i48)	2915 lb	5220 lb	-	-	-
2	16'- 3 9/16"	16'- 9 1/16"	E8(i28)	2801 lb	4971 lb	-	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
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PLY TO PLY CONNECTION

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MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **Crawl** Label: **BM7-3 - i140** Type: **Beam**	**3 Ply Member** **1-3/4X14 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

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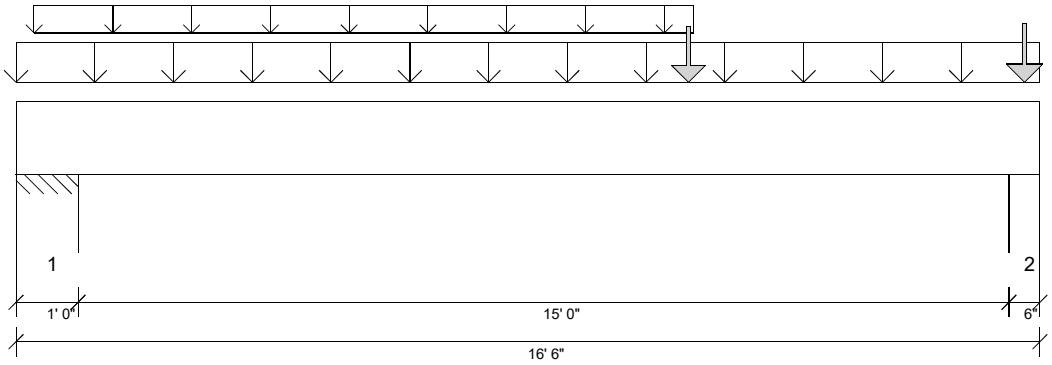


DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 875 psi Wall @ 0'- 11"
- 725 psi Wall @ 16'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	8'- 5 7/16"	D + L	1.00	27397 lb ft	40546 lb ft	Passed - 68%
Max Neg. Moment:	0'- 11"	D + L	1.00	334 lb ft	40546 lb ft	Passed - 1%
Max Shear:	2'- 2"	D + L	1.00	6103 lb	13965 lb	Passed - 44%
Live Load (LL) Pos. Defl.:	8'- 5 13/16"	L		0.316"	L/360	Passed - L/569
Total Load (TL) Pos. Defl.:	8'- 5 5/8"	D + L		0.482"	L/240	Passed - L/373

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	1' 0"	D + L	1.00	8107 lb		47251 lb	55126 lb	Passed - 17%
2	6"	D + L	1.00	7446 lb		23625 lb	22838 lb	Passed - 33%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	16'- 6"	Self Weight	Top	21 lb/ft	-	-	-	-
Uniform	0'	16'- 6"	User Load	Top	125 lb/ft	500 lb/ft	-	-	-
Uniform	0'- 3 1/2"	10'- 11 1/16"	27(i85)	Top	202 lb/ft	120 lb/ft	-	-	-
Point	10'- 10 1/16"	10'- 10 1/16"	27(i85)	Top	362 lb	340 lb	-	-	-
Point	16'- 3 1/16"	16'- 3 1/16"	29(i87)	Top	400 lb	350 lb	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	1'	W6(i6)	2863 lb	5264 lb	-	-	-
2	16'	16'- 6"	16(i47)	2460 lb	4968/-16 lb	-	-	-

DESIGN NOTES

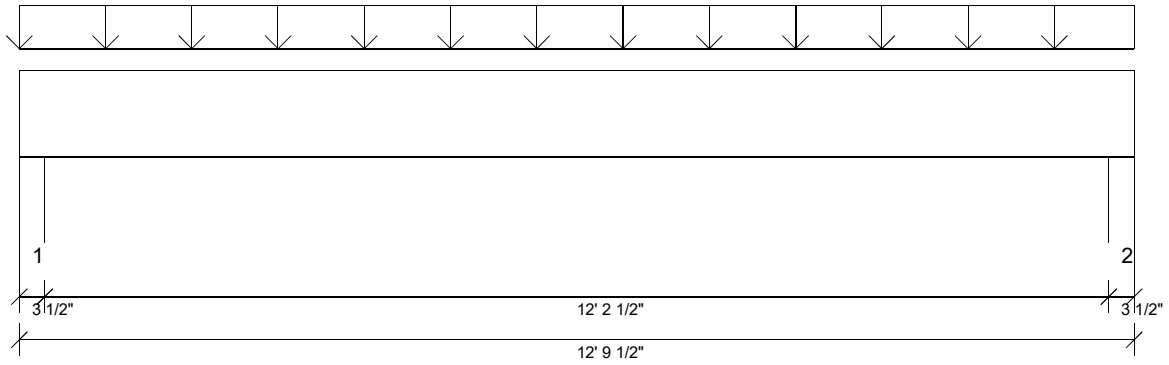
- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **1st Floor** Label: **BM3-2 - i145** Type: **Beam**	**2 Ply Member** **1-3/4X11-7/8 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 — Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 — Report Version: 2021.03.26 12/29/2022 13:23



DESIGN INFORMATION

Building Code: IRC 2018
Design Methodology: ASD
Risk Category: II (General Construction) Residential
Service Condition: Dry
LL Deflection Limit: L/360, 1.00" (absolute)
TL Deflection Limit: L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 2 1/2"
- 725 psi Wall @ 12'- 7"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	6'- 4 3/4"	D + Lr	1.25	9979 lb ft	24875 lb ft	Passed - 40%
Max Shear:	11'- 6 1/8"	D + Lr	1.25	2669 lb	9871 lb	Passed - 27%
Live Load (LL) Pos. Defl.:	6'- 4 3/4"	Lr		0.189"	L/360	Passed - L/775
Total Load (TL) Pos. Defl.:	6'- 4 3/4"	D + Lr		0.290"	L/240	Passed - L/505

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	3 1/2"	D + Lr	1.25	3338 lb		9187 lb	8881 lb	Passed - 38%
2	3 1/2"	D + Lr	1.25	3338 lb		9187 lb	8881 lb	Passed - 38%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	12'- 9 1/2"	Self Weight	Top	12 lb/ft	-	-	-	-
Uniform	0'	12'- 9 1/2"	User Load	Top	170 lb/ft	-	-	340 lb/ft	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	E15(i52)	1163 lb	-	-	2174 lb	-
2	12'- 6"	12'- 9 1/2"	26(i84)	1163 lb	-	-	2175 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

Customer: **BRAD CUMMINGS CONSTRUC...**	Job Name: **3303534_KEANE**	**2 Ply Member**	Status:
Job Name: **KEANE RESIDENCE**	Level: **1st Floor**	**1-3/4X11-7/8 LP-LVL**	**Design**
Appwright N... **3303534**	Label: **BM2-2 - i133**	**2900Fb-2.0E**	**Passed**
Customer P...	Type: **Beam**		

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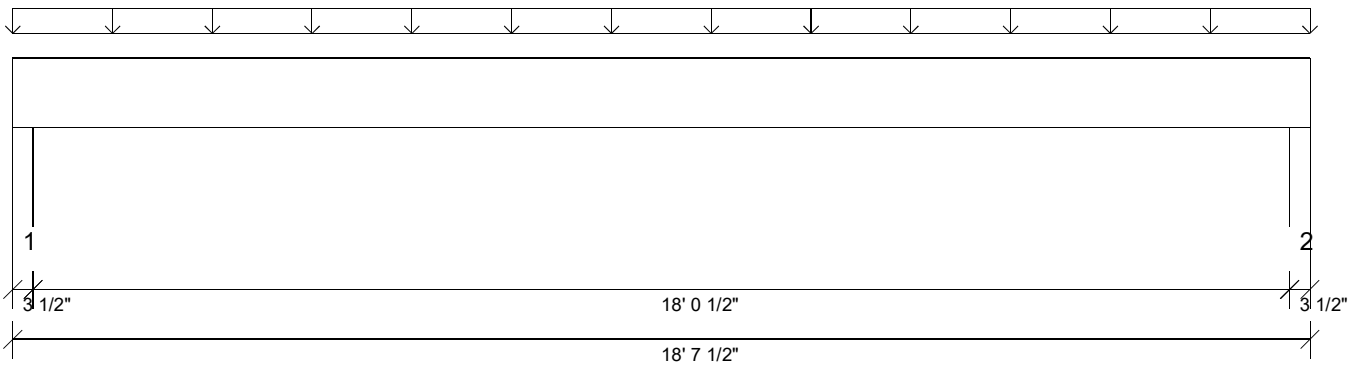

DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 18'- 5"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 3 3/4"	D + L	1.00	4635 lb ft	19900 lb ft	Passed - 23%
Max Shear:	17'- 4 1/8"	D + L	1.00	899 lb	7897 lb	Passed - 11%
Live Load (LL) Pos. Defl.:	9'- 3 3/4"	L		0.130"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	9'- 3 3/4"	D + L		0.292"	L/240	Passed - L/742

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	3 1/2"	D + L	1.00	1042 lb		9188 lb	5206 lb	Passed - 20%
2	3 1/2"	D + L	1.00	1042 lb		9188 lb	5206 lb	Passed - 20%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	18'- 7 1/2"	Self Weight	Top	12 lb/ft	-	-	-	-
Uniform	0'	18'- 7 1/2"	User Load	Top	50 lb/ft	50 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	34(i94)	576 lb	466 lb	-	-	-
2	18'- 4"	18'- 7 1/2"	E15(i52)	576 lb	466 lb	-	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
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- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **1st Floor** Label: **BM4-2 - i134** Type: **Beam**	**2 Ply Member** **1-3/4X14 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

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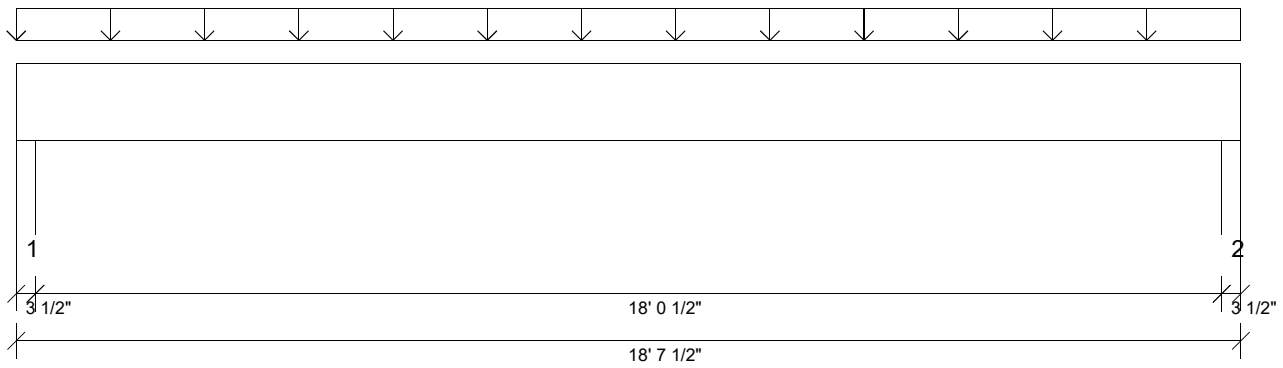

DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 18'- 5"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 3 3/4"	D + L	1.00	10522 lb ft	27030 lb ft	Passed - 39%
Max Shear:	1'- 5 1/2"	D + L	1.00	1995 lb	9310 lb	Passed - 21%
Live Load (LL) Pos. Defl.:	9'- 3 3/4"	L		0.191"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	9'- 3 3/4"	D + L		0.404"	L/240	Passed - L/535

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	3 1/2"	D + L	1.00	2366 lb		9188 lb	5206 lb	Passed - 45%
2	3 1/2"	D + L	1.00	2366 lb		9188 lb	5207 lb	Passed - 45%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	18'- 7 1/2"	Self Weight	Top	14 lb/ft	-	-	-	-
Uniform	0'	18'- 7 1/2"	User Load	Top	120 lb/ft	120 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	30(i89)	1248 lb	1118 lb	-	-	-
2	18'- 4"	18'- 7 1/2"	E15(i52)	1248 lb	1118 lb	-	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
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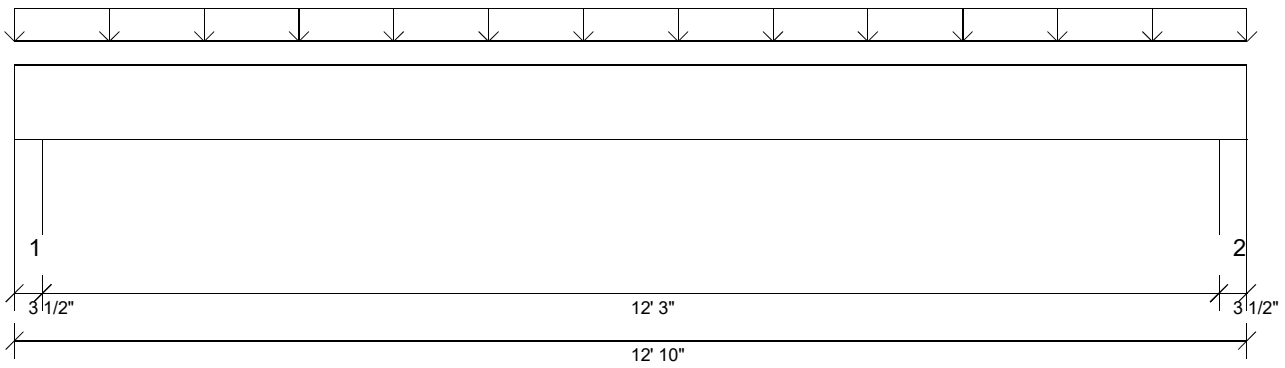
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **1st Floor** Label: **BM1-2 - i147** Type: **Beam**	**2 Ply Member** **1-3/4X9-1/4 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 — Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 — Report Version: 2021.03.26 12/29/2022 13:23



DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 2 1/2"
- 725 psi Wall @ 12'- 7 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	6'- 5"	D + L	1.00	5087 lb ft	12416 lb ft	Passed - 41%
Max Shear:	1'- 3/4"	D + L	1.00	1415 lb	6151 lb	Passed - 23%
Live Load (LL) Pos. Defl.:	6'- 5"	L		0.203"	L/360	Passed - L/725
Total Load (TL) Pos. Defl.:	6'- 5"	D + L		0.315"	L/240	Passed - L/466

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	3 1/2"	D + L	1.00	1696 lb		9188 lb	8881 lb	Passed - 19%
2	3 1/2"	D + L	1.00	1696 lb		9187 lb	8881 lb	Passed - 19%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	12'- 10"	Self Weight	Top	9 lb/ft	-	-	-	-
Uniform	0'	12'- 10"	User Load	Top	85 lb/ft	170 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	E30(i63)	605 lb	1091 lb	-	-	-
2	12'- 6 1/2"	12'- 10"	E27(i60)	605 lb	1091 lb	-	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
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- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **1st Floor** Label: **BM5-3 - i138** Type: **Beam**	**3 Ply Member** **1-3/4X18 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

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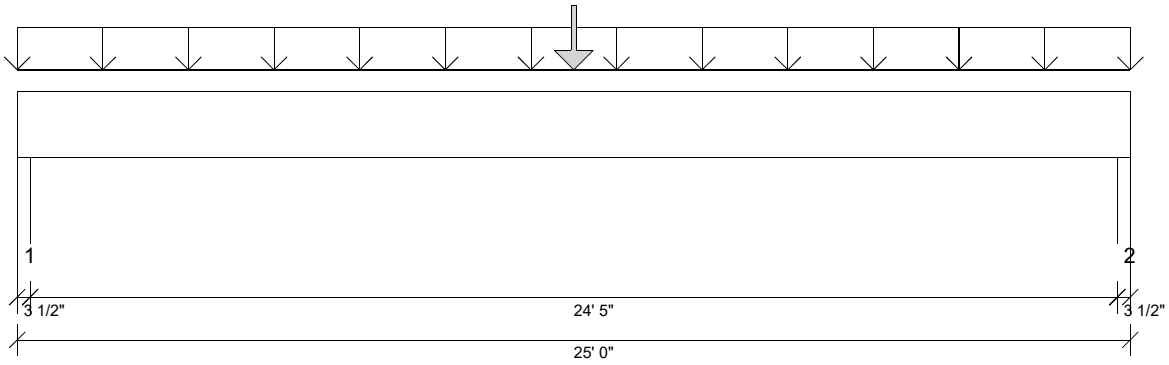

DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 24'- 9 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	12'- 6"	D + L	1.00	43158 lb ft	64662 lb ft	Passed - 67%
Max Shear:	1'- 9 1/2"	D + L	1.00	5962 lb	17955 lb	Passed - 33%
Live Load (LL) Pos. Defl.:	12'- 6"	L		0.564"	L/360	Passed - L/519
Total Load (TL) Pos. Defl.:	12'- 6"	D + L		0.936"	L/240	Passed - L/312

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	3 1/2"	D + L	1.00	6924 lb		13781 lb	7809 lb	Passed - 89%
2	3 1/2"	D + L	1.00	6924 lb		13781 lb	7809 lb	Passed - 89%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	25'	Self Weight	Top	27 lb/ft	-	-	-	-
Uniform	0'	25'	User Load	Top	170 lb/ft	340 lb/ft	-	-	-
Point	12'- 6"	12'- 6"	User Load	Top	423 lb	-	-	845 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	26(i84)	2674 lb	4250 lb	-	422 lb	-
2	24'- 8 1/2"	25'	E26(i69)	2674 lb	4250 lb	-	422 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
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- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **1st Floor** Label: **E26_Hdr1 - i137** Type: **HeaderAsDroppedBeam**	**2 Ply Member** **1-3/4X18 LP-LVL** **2900Fb-2.0E**	Status: **Design Passed**

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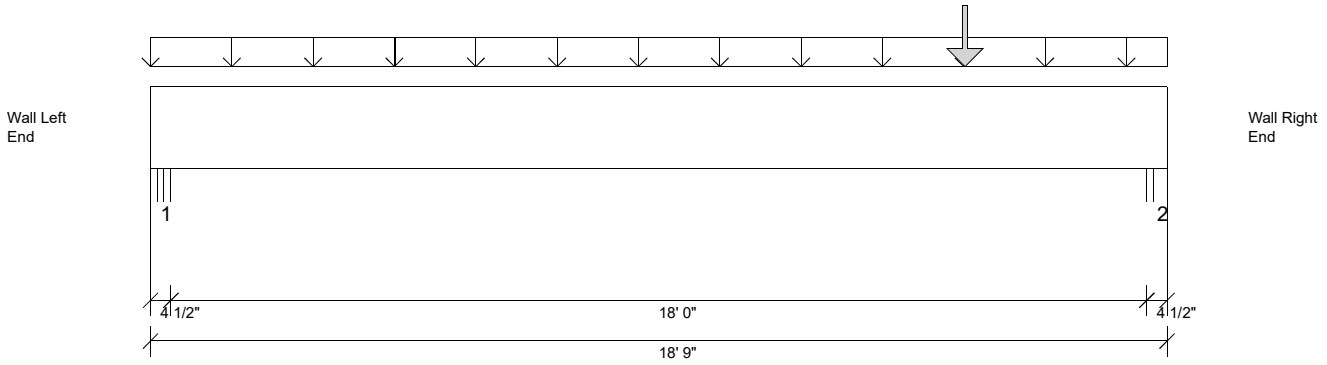


DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 3 1/2"
- 725 psi Wall @ 18'- 5 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	15'- 1/4"	D + L	1.00	22020 lb ft	43108 lb ft	Passed - 51%
Max Shear:	16'- 10 1/2"	D + L	1.00	6425 lb	11970 lb	Passed - 54%
Live Load (LL) Pos. Defl.:	10'- 7/16"	0.75(L + Lr)		0.225"	L/360	Passed - L/959
Total Load (TL) Pos. Defl.:	10'- 3/8"	D + 0.75(L + Lr)		0.401"	L/240	Passed - L/539

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	4 1/2"	D + 0.75(L + Lr)	1.25	3447 lb		11813 lb	11419 lb	Passed - 30%
2	4 1/2"	D + L	1.00	6627 lb		11813 lb	11419 lb	Passed - 58%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	18'- 9"	Self Weight	Top	18 lb/ft	-	-	-	-
Uniform	0'	18'- 9"	User Load	Top	90 lb/ft	-	-	180 lb/ft	-
Point	15'- 1/4"	15'- 1/4"	BM4-3(i138)	Top	2674 lb	4250 lb	-	422 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 4 1/2"	Trimmer	1518 lb	804 lb	-	1767 lb	-
2	18'- 4 1/2"	18'- 9"	Trimmer	3181 lb	3446 lb	-	2030 lb	-

DESIGN NOTES

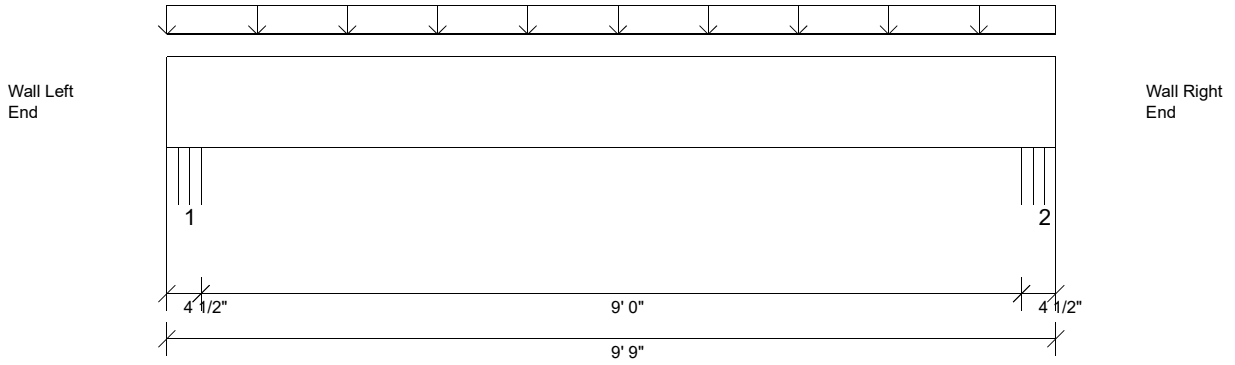
- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: **BRAD CUMMINGS CONSTRUC...** Job Name: **KEANE RESIDENCE** Appwright N... **3303534** Customer P...	Job Name: **3303534_KEANE** Level: **1st Floor** Label: **E26_Hdr2 - i136** Type: **HeaderAsDroppedBeam**	**2 Ply Member** **1-3/4X11-7/8 LP-LVL 2900Fb-2.0E**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 | Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 | Report Version: 2021.03.26 12/29/2022 13:23



DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 1.00" (absolute)
TL Deflection Limit:	L/240, 1.50" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 3 1/2"
- 725 psi Wall @ 9'- 5 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	4'- 10 1/2"	D + Lr	1.25	2321 lb ft	24875 lb ft	Passed - 9%
Max Shear:	8'- 4 5/8"	D + Lr	1.25	779 lb	9871 lb	Passed - 8%
Live Load (LL) Pos. Defl.:	4'- 10 1/2"	Lr		0.023"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 10 1/2"	D + Lr		0.037"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	4 1/2"	D + Lr	1.25	1082 lb		11813 lb	11419 lb	Passed - 9%
2	4 1/2"	D + Lr	1.25	1082 lb		11813 lb	11419 lb	Passed - 9%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	9'- 9"	Self Weight	Top	12 lb/ft	-	-	-	-
Uniform	0'	9'- 9"	User Load	Top	70 lb/ft	-	-	140 lb/ft	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 4 1/2"	Trimmer	399 lb	-	-	683 lb	-
2	9'- 4 1/2"	9'- 9"	Trimmer	399 lb	-	-	682 lb	-

DESIGN NOTES

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