

DATE October 8, 2026
 COMPANY SMC Design
 DESIGNED BY Steve Curtis
 REVIEWED BY
 PROJECT FILE 26-005 10 Moonflower

[CONTENTS ›](#)

Design Criteria

BUILDING CODE
 2018 International Residential Code

LOADS
 ASCE 7-16

WOOD
 2018 NDS, Allowable Stress Design

STEEL
 AISC 360-16, ASD

CONCRETE
 ACI 318-14

SITE CLASS / RISK CATEGORY
 Site Class D - Stiff soil / II

HEADERS
 NDS 3.2.1 span (the opening plus half the required bearing each end); trimmers outside the opening, 1 1/2 in each, the loads running over them to the king studs (the strip over each bearing into it); king studs IRC Table R602.7.5, < 140 mph Exp. B / < 130 mph Exp. C

LOAD COMBINATIONS (ASD)
 D, D+L, D+S, D+Lr, D+0.75L+0.75S, D+0.75L+0.75Lr

DEFLECTION
 per member (see each sheet). Floor live: the member's limit, never looser than L/360; roof live or snow alone: L/240 (IRC Table R301.7); dead plus live: the member's limit. A cantilever on twice its length.

SOIL BEARING
 1,500 psf allowable (as entered on the footings)

CONCRETE / REBAR
 $f'_c = 3,000$ psi, $F_y = 60$ ksi

SELF WEIGHT
 included on every member and footing

Summary

	Members	Pass	Fail	Not checked	Loads only
Beams	18	18	0	0	0
Girders	9	0	0	0	9
Headers	23	23	0	0	0
Trusses / Rafters	23	1	0	0	22
Joists	14	14	0	0	0
Other Members	1	1	0	0	0
Footings	89	89	0	0	0
Total	177	146	0	0	31

Load path: 50 of 50 beams, girders and headers trace to a footing or a marked wall.

Connections: 41 hung ends and 33 posts checked -- every hanger, cap and base specified passes.

Reading these calculations

- Each member sheet reads from the top: the verdict at the top right, the loads drawn over the member, Design Results with the location, allowable, percent used, load duration factor and governing combination, then the supports with the load each one hands on, the bracing and every load with where it came from.
- Percent = demand / capacity. A result within 1% of its limit prints with a decimal and in orange so a hair-thin pass reads as one.
- Everything is clickable: the contents, the load path boxes, the pink callouts on the plan sheets, and member names on the sheets (blue). BACK returns to the page you clicked from in PDF viewers that run JavaScript; in others it goes to the member's load path diagram.
- Calculated by the SMC Framework engine to the project's codes (2018 NDS, AISC 360-16, ACI 318-14, loads combined to ASCE 7-16) from the project file, with the load path solved at print time.

Plans	Diagrams	Beams	Girders	Headers	Trusses	Joists	Other	Footings	Connections	Simpson
-------	----------	-------	---------	---------	---------	--------	-------	----------	-------------	---------

Legend color & symbol key

KEY

3D Framing Model opens online

3D

Plans

A1 Foundation

PLAN

A2 Floor 1st Floor Layout - 1St Level

PLAN

A3 Floor 2nd Floor Layout - 2Nd Level

PLAN

A4 Roof 1st Roof Layout - 1St Level

PLAN

A5 Roof 2nd Roof Layout - 2Nd Level

PLAN

Beams

Beam #1

PASS

Beam #2

PASS

Beam #3

PASS

Beam #4

PASS

Beam #5

PASS

Beam #6

PASS

Beam #7

PASS

Beam #8

PASS

Beam #9

PASS

Beam #10

PASS

Beam #11

PASS

Beam #12

PASS

Beam #13

PASS

Beam #14

PASS

Beam #15

PASS

Beam #16

PASS

Beam #17

PASS

Beam #18

PASS

Girders

Girder #1

PASS

Girder #2

PASS

Girder #3

PASS

Girder #4

PASS

Girder #5

PASS

Girder #6

PASS

Girder #7

PASS

Girder #8

PASS

Girder #9

PASS

Headers

Header #1

PASS

Header #2

PASS

Headers (cont.)

Header #3

PASS

Header #4

PASS

Header #5

PASS

Header #6

PASS

Header #7

PASS

Header #8

PASS

Header #9

PASS

Header #10

PASS

Header #11

PASS

Header #12

PASS

Header #13

PASS

Header #14

PASS

Header #15

PASS

Header #16

PASS

Header #17

PASS

Header #18

PASS

Header #19

PASS

Header #20

PASS

Header #21

PASS

Header #22

PASS

Header #23

PASS

Trusses / Rafters

Rafters #1

PASS

Trusses #1

Trusses #2

Trusses #3

Trusses #4

Trusses #5

Trusses #6

Trusses #7

Trusses #8

Trusses #9

Trusses #10

Trusses #11

Trusses #12

Trusses #13

Trusses #14

Trusses #15

Trusses #16

Trusses #17

Trusses #18

Trusses #19

Trusses #20

Plans	Diagrams	Beams	Girders	Headers	Trusses	Joists	Other	Footings	Connections	Simpson
-------	----------	-------	---------	---------	---------	--------	-------	----------	-------------	---------

Trusses / Rafters (cont.)

Trusses #21

Trusses #22

Joists

Joist #1

PASS

Joist #2

PASS

Deck Joists #1

PASS

Deck Joists #2

PASS

Deck Joists #3

PASS

Joists #3

PASS

Deck Joists #4

PASS

Joists #4

PASS

Joists #5

PASS

Joists #6

PASS

Joists #7

PASS

Joists #8

PASS

Joists #9

PASS

Joists #10

PASS

Other Members

Outlookers

PASS

Footings

Footing #1

PASS

Footing #2

PASS

Footing #3

PASS

Footing #4

PASS

Footing #5

PASS

Footing #6

PASS

Footing - WD-#7

PASS

Footing - WD-#8

PASS

Footing #9

PASS

Footing - WD-#10

PASS

Footing #11

PASS

Footing #12

PASS

Footing - WD-#13

PASS

Footing - WD-#14

PASS

Footing #15

PASS

Footing - WD-#16

PASS

Footing #17

PASS

Footing #18

PASS

Footing - WD-#19

PASS

Footing #20

PASS

Footings (cont.)

Footing - WD-#21

PASS

Footing - WD-#22

PASS

Footing #23

PASS

Footing - WD-#24

PASS

Footing #25

PASS

Footing #26

PASS

Footing #27

PASS

Footing #28

PASS

Footing #29

PASS

Footing #30

PASS

Footing #31

PASS

SpotFtg Bm #1-1

PASS

SpotFtg Gdr #1-1

PASS

SpotFtg Bm #1-2

PASS

SpotFtg Gdr #1-2

PASS

SpotFtg Bm #1-3

PASS

SpotFtg Gdr #1-3

PASS

SpotFtg Bm #1-4

PASS

SpotFtg Bm #2-1

PASS

SpotFtg Gdr #2-1

PASS

SpotFtg Hdr #2-1

PASS

SpotFtg Bm #2-2

PASS

SpotFtg Gdr #2-2

PASS

SpotFtg Hdr #2-2

PASS

SpotFtg Bm #3-1

PASS

SpotFtg Gdr #3-1

PASS

SpotFtg Hdr #3-1

PASS

SpotFtg Bm #3-2

PASS

SpotFtg Hdr #3-2

PASS

SpotFtg Bm #4-1

PASS

SpotFtg Gdr #4-1

PASS

SpotFtg Hdr #4-1

PASS

SpotFtg Gdr #4-2

PASS

SpotFtg Hdr #4-2

PASS

SpotFtg Hdr #4-3

PASS

SpotFtg Hdr #4-4

PASS

SpotFtg Gdr #5-1

PASS

SpotFtg Gdr #5-2

PASS

SpotFtg Bm #6-1

PASS

SpotFtg Gdr #7-1

PASS

SpotFtg Hdr #7-1

PASS

SpotFtg Hdr #7-2

PASS

SpotFtg Gdr #8-1

PASS

SpotFtg Hdr #9-1

PASS

Plans	Diagrams	Beams	Girders	Headers	Trusses	Joists	Other	Footings	Connections	Simpson
-------	----------	-------	---------	---------	---------	--------	-------	----------	-------------	---------

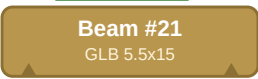
Footings (cont.)

SpotFtg Gdr #9-2	PASS
SpotFtg Hdr #9-2	PASS
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SpotFtg Bm #10-2	PASS
SpotFtg Bm #10-3	PASS
SpotFtg Bm #11-2	PASS
SpotFtg Bm #11-3	PASS
SpotFtg Hdr #12	PASS
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SpotFtg Bm #12-2	PASS
SpotFtg Bm #13-1	PASS
SpotFtg Hdr #13-1	PASS
SpotFtg Bm #13-2	PASS
SpotFtg Hdr #13-2	PASS
SpotFtg Bm #13-3	PASS
SpotFtg Bm #13-4	PASS
SpotFtg Hdr #14	PASS
SpotFtg Hdr #15-1	PASS
SpotFtg Hdr #15-2	PASS
SpotFtg Hdr #16-1	PASS
SpotFtg Hdr #16-2	PASS
SpotFtg Hdr #19-1	PASS
SpotFtg Hdr #19-2	PASS
SpotFtg Hdr #20-1	PASS
SpotFtg Hdr #21	PASS

Connections and Simpson sheets

Connections schedule	SHEET
Simpson hardware	SHEET
p. 76 ABA/ABU/ABW Adjustable and ·	SIMPSON
p. 77 ABA/ABU/ABW Adjustable and ·	SIMPSON
p. 87 CB Column Base	SIMPSON
p. 99 CCQ·/ECCQ· Column Caps	SIMPSON
p. 114 Face-Mount Hangers · Solid Sawn ·	SIMPSON
p. 117 Face-Mount Hangers · Solid Sawn ·	SIMPSON
p. 118 Face-Mount Hangers · Solid Sawn ·	SIMPSON
p. 158 Face-Mount Hangers · I-Joists, Glulam ·	SIMPSON
p. 159 Face-Mount Hangers · I-Joists, Glulam ·	SIMPSON
p. 161 Face-Mount Hangers · I-Joists, Glulam ·	SIMPSON
p. 203 Top-Flange Hangers · I-Joists, Glulam ·	SIMPSON

Load Path Diagrams



Beam #21
GLB 5.5x15

The member itself. Loads land on its top edge where they land on the member -- a bar is a uniform load over its length. Its reactions leave the bottom edge at the supports (ticks). Click it for its calc sheet.



Trusses #32 · B
2 × D 212 · S 1.9k plf

What bears on the member: which member and reaction, and what it delivers. "2 x" is the same load twice.



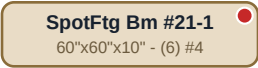
Beam #24
(3) LVL 1.75x11.25

Where the load goes next. The dot is that member's own design check: green passes, red fails. Every box is a link.



Column #4
6x6 DF-L #1

A column or post.



SpotFtg Bm #21-1
60"x60"x10" - (6) #4

A footing: the load is in the ground.



A · D 3.1k · S 31k

What a link delivers, by load case: D dead, L floor live, Lr roof live, S snow, W wind. A minus sign is uplift.



out of date

Out of date: the load on the member below no longer matches this reaction.



no load rows

Broken: the link delivers nothing, or points at a member that is gone.



B · bears on wall

Bears on a wall that is not modelled (the engineer's mark).



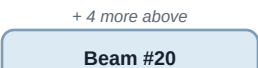
C · not linked below

Not linked: the load leaves the model here. Verify where it bears.



UP 1,405 lb

Uplift: net uplift at a support under 0.6D + W, and any link whose loads add up to a pull, are boxed in amber.



+ 4 more above
Beam #20

Footing sheets draw what loads the footing. A box stopped short says how many more feed it; click it for the rest.

Status Badges (TOC & sections)



PASS

Every reaction traces to a foundation.



NOT TRACED

At least one reaction unverified — including anywhere DOWN the member's support chain. A footing in this member's chain can't offset its uplift — treat as structural fail.



UPLIFT FAIL

A footing in this member's chain can't offset its uplift — treat as structural fail.



DESIGN FAIL

The member fails its own design check (see its calc sheet).



UPLIFT

Amber tag by a TOC name: uplift condition in this member's chain (own negative reaction or an uplift footing).

Navigation



HOME

Back to the table of contents.



DIAGRAMS

On plan sheets: jump to the flowcharts.



ON PLAN

Jump to this member's pink callout on the drawing, zoomed in.



Beam #31

On a calc sheet: a diagram page that references this member.



A2 Floor 1st

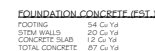
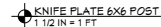
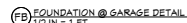
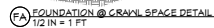
Small blue pills on diagram titles: the sheets this member is drawn on.

Joists #8

Pink callouts ON the plan sheets are clickable — straight to that member.

Nearly everything is clickable: TOC rows, member boxes, incoming-load boxes, footings, plan callouts, and the calc sheets cross-link each other.

In most PDF viewers, Alt+Left steps back a view.



CONTINUOUS FOOTING SCHEDULE (ALL FOOTINGS F1 3" UNO)		
CALCULAT	FOOTING SIZE	REINFORCEMENT
	16" X 10"	(2) #4 CONT. FEEDAR
	24" X 10"	(3) #4 CONT. FEEDAR
	30" X 10"	(4) #4 CONT. FEEDAR
	36" X 10"	(5) #4 CONT. FEEDAR
	42" X 10"	(5) #4 CONT. FEEDAR

CALLOUT	PAD FOOTING SCHEDULE	REINFORCEMENT	QT
	24" x 24" x 10"	(3) #4 REBAR, E.W.	2
	30" x 30" x 10"	(3) #4 REBAR, E.W.	3
	36" x 36" x 10"	(4) #4 REBAR, E.W.	4
	36" x 42" x 10"	(4) #4 REBAR, E.W.	1
	42" x 42" x 10"	(4) #4 REBAR, E.W.	7
	42" x 54" x 10" (5A2)	(4) #4 REBAR, GRID	1
	48" x 48" x 10"	(4) #4 REBAR, E.W.	2
	54" x 54" x 10"	(5) #4 REBAR, E.W.	6
	54" x 60" x 10"	(5) #4 REBAR, GRID	1
	114" x 42" x 10"	(5) #10 #4 REBAR, GRID	

APPROPRIATE EXTENSIONS		FALL SCHEDULE	
DATE:		STUDENT	FINAL TEST(S)
		PROB1	1 st CONCRETE STEM PRO
		PROB2	2 nd CONCRETE STEM PRO

FOUNDATION NOTES:
ALL ANGLE 45° UNO
6" THICK WALLS CONCRETE
FOUNDATION WALLS
ALL INTERIOR DIMENSIONS
ARE TO CENTER OF FOOTING

SHEET INDEX	
PAGE	TITLE
A1	FOUNDATION
A2	FLOOR LAYOUT - 1ST LEVEL
A3	FLOOR LAYOUT - 2ND LEVEL
A4	ROOF LAYOUT - 1ST LEVEL
A5	ROOF LAYOUT - 2ND LEVEL

FOUNDATION - WORK
1/4 IN = 1 FT



ENGINEER STAMP
AREA

PROJECT NO.
26-005

 BHOTR PHASE 3 LOT 105 4 BDRM WBUNK RM 5-1/2 BATH
10 MOONFLOWER COURT VALLEY CO.ID

30" x 42"

HEET SIZE

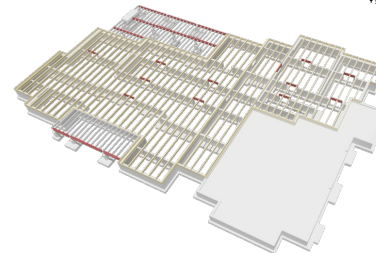
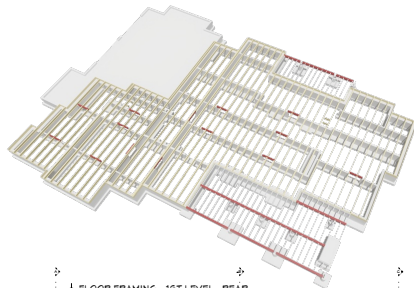
INITIAL DATE: 06/06/2026
PRINT DATE: 6/26/2026

FOUNDATION

Steve

SMC Design
SMC Design
208.249.7255
Nampa, ID

244 **A1**
PAGE 1 OF 5

PROJECT NO.
28-005BHOTR PHASE 3 LOT 105 4 BDRM INBUNK RM 5-1/2 BATH
10 MOONFLOWER COURT VALLEY CO. ID

CONTRACTOR TO VERIFY ALL DETAILS, DIMENSIONS, AND SPECIFICATIONS PRIOR TO CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY. NO PARTIAL CONSTRUCTION OR ANYTIME THEREAFTER FROM ANY CLAIM, LITIGATION OR SUITS THAT MAY ARISE DURING CONSTRUCTION OF ANYTIME THEREAFTER.

DESIGNER: S&C
INDICATOR: 06/10/2024
REVISION: 01/20/2025
SHEET SIZE: 30" x 42"

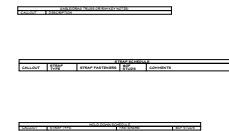
FLOOR LAYOUT - 1ST LEVEL

S&C DESIGN
844C Design
202.241.7289
Nampa, ID

SHEET NUMBER
244
PAGE 2 OF 5

FLOOR FRAMING - 1ST LEVEL - REAR

FLOOR FRAMING - 1ST LEVEL - FRONT



NO.	DESCRIPTION	DATE	BY	CHECKED
1	FOUNDATION	06/10/2024	S&C	S&C
2	FLOOR LAYOUT - 1ST LEVEL	06/10/2024	S&C	S&C
3	FLOOR LAYOUT - 2ND LEVEL	06/10/2024	S&C	S&C
4	ROOF LAYOUT - 1ST LEVEL	06/10/2024	S&C	S&C
5	ROOF LAYOUT - 2ND LEVEL	06/10/2024	S&C	S&C

NO.	DESCRIPTION	DATE	BY	CHECKED
1	FOUNDATION	06/10/2024	S&C	S&C
2	FLOOR LAYOUT - 1ST LEVEL	06/10/2024	S&C	S&C
3	FLOOR LAYOUT - 2ND LEVEL	06/10/2024	S&C	S&C
4	ROOF LAYOUT - 1ST LEVEL	06/10/2024	S&C	S&C
5	ROOF LAYOUT - 2ND LEVEL	06/10/2024	S&C	S&C

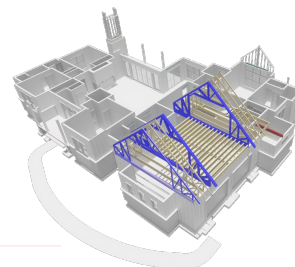
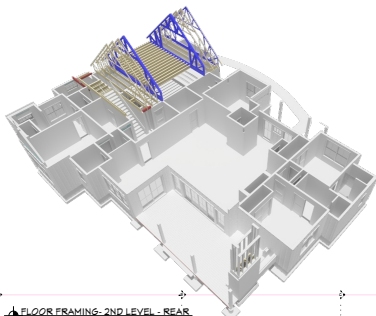
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1	FOUNDATION	06/10/2024	S&C	S&C
2	FLOOR LAYOUT - 1ST LEVEL	06/10/2024	S&C	S&C
3	FLOOR LAYOUT - 2ND LEVEL	06/10/2024	S&C	S&C
4	ROOF LAYOUT - 1ST LEVEL	06/10/2024	S&C	S&C
5	ROOF LAYOUT - 2ND LEVEL	06/10/2024	S&C	S&C

PAGE	TITLE	SHEET INDEX
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A2	FLOOR LAYOUT - 1ST LEVEL	2
A3	FLOOR LAYOUT - 2ND LEVEL	3
A4	ROOF LAYOUT - 1ST LEVEL	4
A5	ROOF LAYOUT - 2ND LEVEL	5

NO.	DESCRIPTION	DATE	BY	CHECKED
1	FOUNDATION	06/10/2024	S&C	S&C
2	FLOOR LAYOUT - 1ST LEVEL	06/10/2024	S&C	S&C
3	FLOOR LAYOUT - 2ND LEVEL	06/10/2024	S&C	S&C
4	ROOF LAYOUT - 1ST LEVEL	06/10/2024	S&C	S&C
5	ROOF LAYOUT - 2ND LEVEL	06/10/2024	S&C	S&C

NO.	DESCRIPTION	DATE	BY	CHECKED
1	FOUNDATION	06/10/2024	S&C	S&C
2	FLOOR LAYOUT - 1ST LEVEL	06/10/2024	S&C	S&C
3	FLOOR LAYOUT - 2ND LEVEL	06/10/2024	S&C	S&C
4	ROOF LAYOUT - 1ST LEVEL	06/10/2024	S&C	S&C
5	ROOF LAYOUT - 2ND LEVEL	06/10/2024	S&C	S&C

FLOOR FRAME SHEET - WORK
1/4 IN = 1 FT



SCAN FOR
ENGINEERED CALC.

PROJECT NO.
28-005

BHOKR PHASE 3 LOT 105 4 BDRM INBUNK RM 5-1/2 BATH
10 MOONFLOWER COURT VALLEY CO. ID

PROJECT NO.
28-005

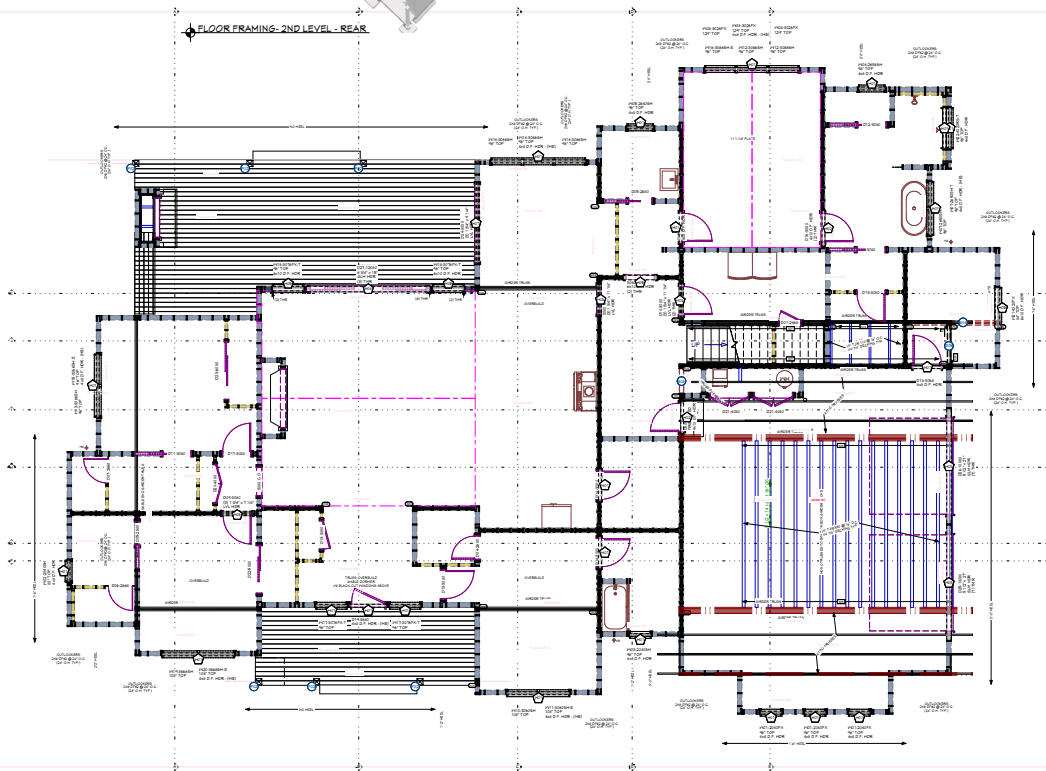
PROJECT NO.
28-005

PROJECT NO.
28-005

PROJECT NO.
28-005

FLOOR FRAMING-2ND LEVEL-REAR

FLOOR FRAMING-2ND LEVEL-FRONT



11\"/>

11\"/>

11\"/>

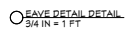
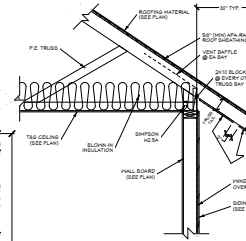
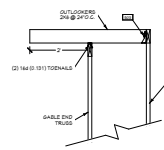
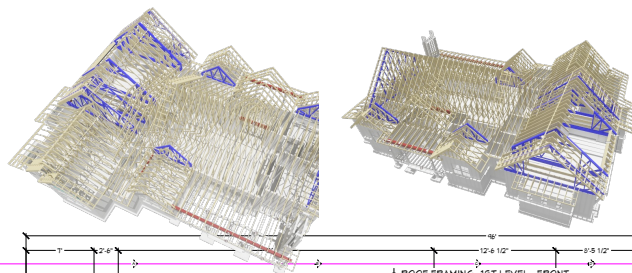
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2	FLOOR LAYOUT - 1ST LEVEL	06/10/2024	58676	
3	FLOOR LAYOUT - 2ND LEVEL	06/10/2024	58676	
4	ROOF LAYOUT - 1ST LEVEL	06/10/2024	58676	
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NO.	DESCRIPTION	DATE	BY	CHKD.
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2	FLOOR LAYOUT - 1ST LEVEL	06/10/2024	58676	
3	FLOOR LAYOUT - 2ND LEVEL	06/10/2024	58676	
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A5	ROOF LAYOUT - 2ND LEVEL	5

FLOOR FRAME SHEET - WORK
1/4 IN = 1 FT



BEST SCHEDULE									
SEC	DAY	EVENT	TIME	SEC	DAY	EVENT	TIME	SEC	DAY
001	1	12-21-2010 11:30 AM	11:30 AM	002	1	12-21-2010 11:30 AM	11:30 AM	003	1
004	1	12-21-2010 11:30 AM	11:30 AM	005	1	12-21-2010 11:30 AM	11:30 AM	006	1
007	1	12-21-2010 11:30 AM	11:30 AM	008	1	12-21-2010 11:30 AM	11:30 AM	009	1
010	1	12-21-2010 11:30 AM	11:30 AM	011	1	12-21-2010 11:30 AM	11:30 AM	012	1
013	1	12-21-2010 11:30 AM	11:30 AM	014	1	12-21-2010 11:30 AM	11:30 AM	015	1
016	1	12-21-2010 11:30 AM	11:30 AM	017	1	12-21-2010 11:30 AM	11:30 AM	018	1
019	1	12-21-2010 11:30 AM	11:30 AM	020	1	12-21-2010 11:30 AM	11:30 AM	021	1
022	1	12-21-2010 11:30 AM	11:30 AM	023	1	12-21-2010 11:30 AM	11:30 AM	024	1
025	1	12-21-2010 11:30 AM	11:30 AM	026	1	12-21-2010 11:30 AM	11:30 AM	027	1
028	1	12-21-2010 11:30 AM	11:30 AM	029	1	12-21-2010 11:30 AM	11:30 AM	030	1
031	1	12-21-2010 11:30 AM	11:30 AM	032	1	12-21-2010 11:30 AM	11:30 AM	033	1
034	1	12-21-2010 11:30 AM	11:30 AM	035	1	12-21-2010 11:30 AM	11:30 AM	036	1
037	1	12-21-2010 11:30 AM	11:30 AM	038	1	12-21-2010 11:30 AM	11:30 AM	039	1
040	1	12-21-2010 11:30 AM	11:30 AM	041	1	12-21-2010 11:30 AM	11:30 AM	042	1
043	1	12-21-2010 11:30 AM	11:30 AM	044	1	12-21-2010 11:30 AM	11:30 AM	045	1
046	1	12-21-2010 11:30 AM	11:30 AM	047	1	12-21-2010 11:30 AM	11:30 AM	048	1
049	1	12-21-2010 11:30 AM	11:30 AM	050	1	12-21-2010 11:30 AM	11:30 AM	051	1
052	1	12-21-2010 11:30 AM	11:30 AM	053	1	12-21-2010 11:30 AM	11:30 AM	054	1
055	1	12-21-2010 11:30 AM	11:30 AM	056	1	12-21-2010 11:30 AM	11:30 AM	057	1
058	1	12-21-2010 11:30 AM	11:30 AM	059	1	12-21-2010 11:30 AM	11:30 AM	060	1
061	1	12-21-2010 11:30 AM	11:30 AM	062	1	12-21-2010 11:30 AM	11:30 AM	063	1
064	1	12-21-2010 11:30 AM	11:30 AM	065	1	12-21-2010 11:30 AM	11:30 AM	066	1
067	1	12-21-2010 11:30 AM	11:30 AM	068	1	12-21-2010 11:30 AM	11:30 AM	069	1
070	1	12-21-2010 11:30 AM	11:30 AM	071	1	12-21-2010 11:30 AM	11:30 AM	072	1
073	1	12-21-2010 11:30 AM	11:30 AM	074	1	12-21-2010 11:30 AM	11:30 AM	075	1
076	1	12-21-2010 11:30 AM	11:30 AM	077	1	12-21-2010 11:30 AM	11:30 AM	078	1
079	1	12-21-2010 11:30 AM	11:30 AM	080	1	12-21-2010 11:30 AM	11:30 AM	081	1
082	1	12-21-2010 11:30 AM	11:30 AM	083	1	12-21-2010 11:30 AM	11:30 AM	084	1
085	1	12-21-2010 11:30 AM	11:30 AM	086	1	12-21-2010 11:30 AM	11:30 AM	087	1
088	1	12-21-2010 11:30 AM	11:30 AM	089	1	12-21-2010 11:30 AM	11:30 AM	090	1
091	1	12-21-2010 11:30 AM	11:30 AM	092	1	12-21-2010 11:30 AM	11:30 AM	093	1
094	1	12-21-2010 11:30 AM	11:30 AM	095	1	12-21-2010 11:30 AM	11:30 AM	0	

2018-2019			
Year	Q1	Q2	Q3
2018	10	15	20
2019	15	20	25

HEAVEN SCHEDULE	
DATE	NAME
12/21	12/21/2012
12/22	12/22/2012
12/23	12/23/2012
12/24	12/24/2012
12/25	12/25/2012
12/26	12/26/2012
12/27	12/27/2012
12/28	12/28/2012
12/29	12/29/2012
12/30	12/30/2012
12/31	12/31/2012

WHEELS INVENTORY						
CALCUT	MODEL	TOP WHEELS	START	WHEELER WHEELS	FACE WHEELS	
0001	2001-2002	2001	2001-2002	2001-2002	2001-2002	
0002	2003-2004	2003	2003-2004	2003-2004	2003-2004	
0003	2005-2006	2005	2005-2006	2005-2006	2005-2006	
0004	2007-2008	2007	2007-2008	2007-2008	2007-2008	
0005	2009-2010	2009	2009-2010	2009-2010	2009-2010	
0006	2011-2012	2011	2011-2012	2011-2012	2011-2012	
0007	2013-2014	2013	2013-2014	2013-2014	2013-2014	
0008	2015-2016	2015	2015-2016	2015-2016	2015-2016	
0009	2017-2018	2017	2017-2018	2017-2018	2017-2018	
0010	2019-2020	2019	2019-2020	2019-2020	2019-2020	

ROOF MATERIALS	
EDGE CAP	### F1
VALLEY FLASHING	### F1
90 DEG. FLASHING	### F1
BEND TO SLOPE FLASHING	### F1
EDGE VENT	### F1
SHINGLES	### Sq. Ft.
OSB	### Ea
GABLE FASCIA	### F1
EAVE FASCIA	### F1
DRIF EDGE	### F1

SHEET INDEX	
PAGE	TITLE
A1	FOUNDATION
A2	FLOOR LAYOUT - 1ST LEVEL
A3	FLOOR LAYOUT - 2ND LEVEL
A4	ROOF LAYOUT - 1ST LEVEL
A5	ROOF LAYOUT - 2ND LEVEL

ROOF FRAMING NOTES:
ALL EAVE OVERHANGS 24" UNO
ALL GABLE OVERHANGS 18" UNO

ROOF LAYOUT SHEET - WORK - WALL FRAMING
1/4" = 1 FT

PROJECT NO.
26-005

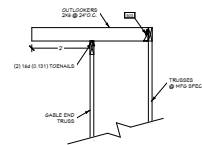
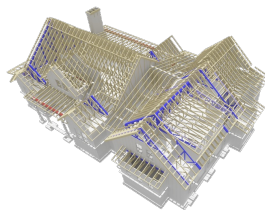
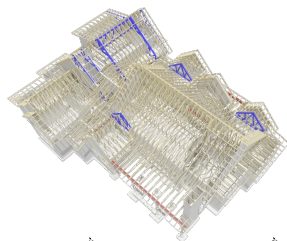
 BHOTR PHASE 3 LOT 105 4 BDRM W/BUNK RM 5-1/2 BATH
10 MOONFLOWER COURT VALLEY CO., ID

DRAWN BY: Steve	INITIAL DATE: 06/06/2026	SHEET SIZE 9" x 42"
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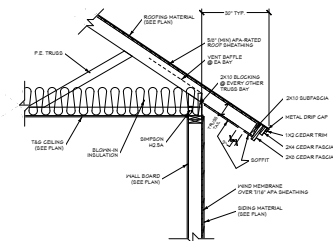
ROOF LAYOUT - 1ST LEVEL

SMC Design
SMC Design
208.249.7255
Nampa, ID

SHEET NUMBER
44 **A4**
PAGE 4 OF 5



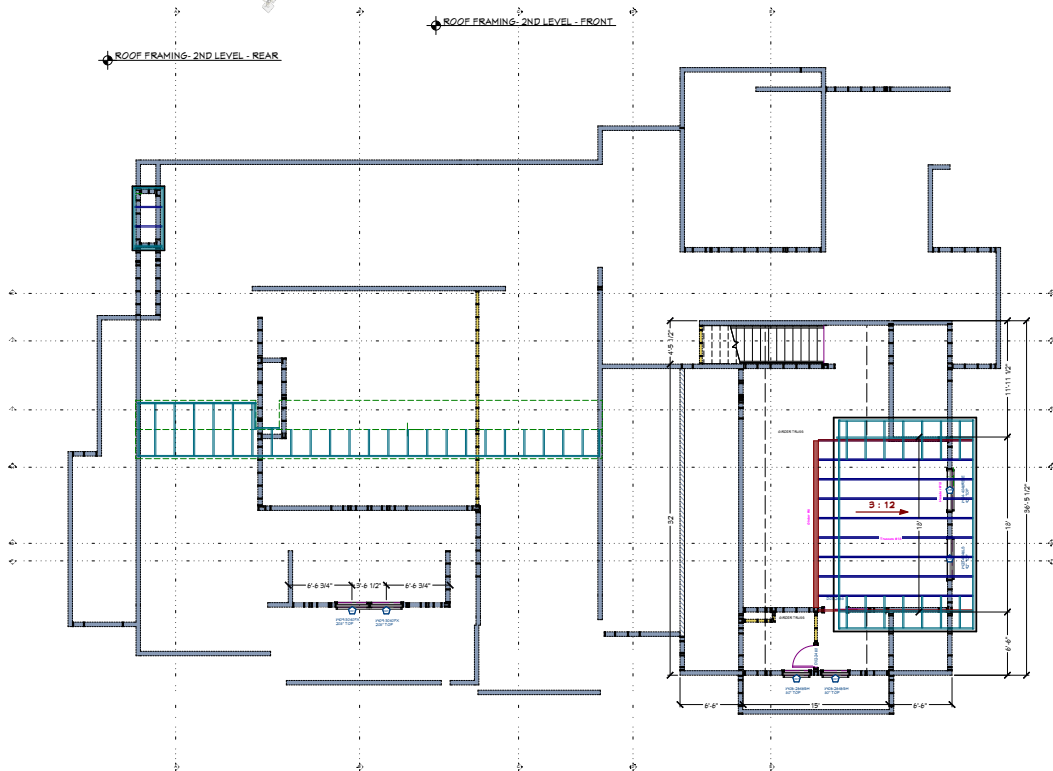
OUTLOOKER DETAIL
NTS



RAVE DETAIL DETAIL
3/4 IN = 1 FT

ROOF FRAMING-2ND LEVEL - REAR

ROOF FRAMING-2ND LEVEL - FRONT



ROOF LAYOUT SHEET - WORK - LOADS
1/4 IN = 1 FT

BOM - BUCHHEIM									
NO.	QTY	UNIT	DESCRIPTION	PRICE PER UNIT	QTY REQD	UNIT PRICE	TOTAL PRICE	QTY REQD	UNIT PRICE
1	1	EA	2x4 @ 24" x 8' x 12' 6" BUSHING	12.00	1	12.00	12.00	1	12.00
2	1	EA	2x4 @ 24" x 8' x 14" BUSHING	12.00	1	12.00	12.00	1	12.00
3	1	EA	2x4 @ 24" x 8' x 16" BUSHING	12.00	1	12.00	12.00	1	12.00
4	1	EA	2x4 @ 24" x 8' x 18" BUSHING	12.00	1	12.00	12.00	1	12.00
5	1	EA	2x4 @ 24" x 8' x 20" BUSHING	12.00	1	12.00	12.00	1	12.00
6	1	EA	2x4 @ 24" x 8' x 22" BUSHING	12.00	1	12.00	12.00	1	12.00
7	1	EA	2x4 @ 24" x 8' x 24" BUSHING	12.00	1	12.00	12.00	1	12.00
8	1	EA	2x4 @ 24" x 8' x 26" BUSHING	12.00	1	12.00	12.00	1	12.00
9	1	EA	2x4 @ 24" x 8' x 28" BUSHING	12.00	1	12.00	12.00	1	12.00
10	1	EA	2x4 @ 24" x 8' x 30" BUSHING	12.00	1	12.00	12.00	1	12.00
11	1	EA	2x4 @ 24" x 8' x 32" BUSHING	12.00	1	12.00	12.00	1	12.00
12	1	EA	2x4 @ 24" x 8' x 34" BUSHING	12.00	1	12.00	12.00	1	12.00
13	1	EA	2x4 @ 24" x 8' x 36" BUSHING	12.00	1	12.00	12.00	1	12.00
14	1	EA	2x4 @ 24" x 8' x 38" BUSHING	12.00	1	12.00	12.00	1	12.00
15	1	EA	2x4 @ 24" x 8' x 40" BUSHING	12.00	1	12.00	12.00	1	12.00
16	1	EA	2x4 @ 24" x 8' x 42" BUSHING	12.00	1	12.00	12.00	1	12.00
17	1	EA	2x4 @ 24" x 8' x 44" BUSHING	12.00	1	12.00	12.00	1	12.00
18	1	EA	2x4 @ 24" x 8' x 46" BUSHING	12.00	1	12.00	12.00	1	12.00
19	1	EA	2x4 @ 24" x 8' x 48" BUSHING	12.00	1	12.00	12.00	1	12.00
20	1	EA	2x4 @ 24" x 8' x 50" BUSHING	12.00	1	12.00	12.00	1	12.00
21	1	EA	2x4 @ 24" x 8' x 52" BUSHING	12.00	1	12.00	12.00	1	12.00
22	1	EA	2x4 @ 24" x 8' x 54" BUSHING	12.00	1	12.00	12.00	1	12.00
23	1	EA	2x4 @ 24" x 8' x 56" BUSHING	12.00	1	12.00	12.00	1	12.00
24	1	EA	2x4 @ 24" x 8' x 58" BUSHING	12.00	1	12.00	12.00	1	12.00
25	1	EA	2x4 @ 24" x 8' x 60" BUSHING	12.00	1	12.00	12.00	1	12.00
26	1	EA	2x4 @ 24" x 8' x 62" BUSHING	12.00	1	12.00	12.00	1	12.00
27	1	EA	2x4 @ 24" x 8' x 64" BUSHING	12.00	1	12.00	12.00	1	12.00
28	1	EA	2x4 @ 24" x 8' x 66" BUSHING	12.00	1	12.00	12.00	1	12.00
29	1	EA	2x4 @ 24" x 8' x 68" BUSHING	12.00	1	12.00	12.00	1	12.00
30	1	EA	2x4 @ 24" x 8' x 70" BUSHING	12.00	1	12.00	12.00	1	12.00
31	1	EA	2x4 @ 24" x 8' x 72" BUSHING	12.00	1	12.00	12.00	1	12.00
32	1	EA	2x4 @ 24" x 8' x 74" BUSHING	12.00	1	12.00	12.00	1	12.00
33	1	EA	2x4 @ 24" x 8' x 76" BUSHING	12.00	1	12.00	12.00	1	12.00
34	1	EA	2x4 @ 24" x 8' x 78" BUSHING	12.00	1	12.00	12.00	1	12.00
35	1	EA	2x4 @ 24" x 8' x 80" BUSHING	12.00	1	12.00	12.00	1	12.00
36	1	EA	2x4 @ 24" x 8' x 82" BUSHING	12.00	1	12.00	12.00	1	12.00
37	1	EA	2x4 @ 24" x 8' x 84" BUSHING	12.00	1	12.00	12.00	1	12.00
38	1	EA	2x4 @ 24" x 8' x 86" BUSHING	12.00	1	12.00	12.00	1	12.00
39	1	EA	2x4 @ 24" x 8' x 88" BUSHING	12.00	1	12.00	12.00	1	12.00
40	1	EA	2x4 @ 24" x 8' x 90" BUSHING	12.00	1	12.00	12.00	1	12.00
41	1	EA	2x4 @ 24" x 8' x 92" BUSHING	12.00	1	12.00	12.00	1	12.00
42	1	EA	2x4 @ 24" x 8' x 94" BUSHING	12.00	1	12.00	12.00	1	12.00
43	1	EA	2x4 @ 24" x 8' x 96" BUSHING	12.00	1	12.00	12.00	1	12.00
44	1	EA	2x4 @ 24" x 8' x 98" BUSHING	12.00	1	12.00	12.00	1	12.00
45	1	EA	2x4 @ 24" x 8' x 100" BUSHING	12.00	1	12.00	12.00	1	12.00
46	1	EA	2x4 @ 24" x 8' x 102" BUSHING	12.00	1	12.00	12.00	1	12.00
47	1	EA	2x4 @ 24" x 8' x 104" BUSHING	12.00	1	12.00	12.00	1	12.00
48	1	EA	2x4 @ 24" x 8' x 106" BUSHING	12.00	1	12.00	12.00	1	12.00
49	1	EA	2x4 @ 24" x 8' x 108" BUSHING	12.00	1	12.00	12.00	1	12.00
50	1	EA	2x4 @ 24" x 8' x 110" BUSHING	12.00	1	12.00	12.00	1	12.00
51	1	EA	2x4 @ 24" x 8' x 112" BUSHING	12.00	1	12.00	12.00	1	12.00
52	1	EA	2x4 @ 24" x 8' x 114" BUSHING	12.00	1	12.00	12.00	1	12.00
53	1	EA	2x4 @ 24" x 8' x 116" BUSHING	12.00	1	12.00	12.00	1	12.00
54	1	EA	2x4 @ 24" x 8' x 118" BUSHING	12.00	1	12.00	12.00	1	12.00
55	1	EA	2x4 @ 24" x 8' x 120" BUSHING	12.00	1	12.00	12.00	1	12.00
56	1	EA	2x4 @ 24" x 8' x 122" BUSHING	12.00	1	12.00	12.00	1	12.00
57	1	EA	2x4 @ 24" x 8' x 124" BUSHING	12.00	1	12.00	12.00	1	12.00
58	1	EA	2x4 @ 24" x 8' x 126" BUSHING	12.00	1	12.00	12.00	1	12.00
59	1	EA	2x4 @ 24" x 8' x 128" BUSHING	12.00	1	12.00	12.00	1	12.00
60	1	EA	2x4 @ 24" x 8' x 130" BUSHING	12.00	1	12.00	12.00	1	12.00
61	1	EA	2x4 @ 24" x 8' x 132" BUSHING	12.00	1	12.00	12.00	1	12.00
62	1	EA	2x4 @ 24" x 8' x 134" BUSHING	12.00	1	12.00	12.00	1	12.00
63	1	EA	2x4 @ 24" x 8' x 136" BUSHING	12.00	1	12.00	12.00	1	12.00
64	1	EA	2x4 @ 24" x 8' x 138" BUSHING	12.00	1	12.00	12.00	1	12.00
65	1	EA	2x4 @ 24" x 8' x 140" BUSHING	12.00	1	12.00	12.00	1	12.00
66	1	EA	2x4 @ 24" x 8' x 142" BUSHING	12.00	1	12.00	12.00	1	12.00
67	1	EA	2x4 @ 24" x 8' x 144" BUSHING	12.00	1	12.00	12.00	1	12.00
68	1	EA	2x4 @ 24" x 8' x 146" BUSHING	12.00	1	12.00	12.00	1	12.00
69	1	EA	2x4 @ 24" x 8' x 148" BUSHING	12.00	1	12.00	12.00	1	12.00
70	1	EA	2x4 @ 24" x 8' x 150" BUSHING	12.00	1	12.00	12.00	1	12.00
71	1	EA	2x4 @ 24" x 8' x 152" BUSHING	12.00	1	12.00	12.00	1	12.00
72	1	EA	2x4 @ 24" x 8' x 154" BUSHING	12.00	1	12.00	12.00	1	12.00
73	1	EA	2x4 @ 24" x 8' x 156" BUSHING	12.00	1	12.00	12.00	1	12.00
74	1	EA	2x4 @ 24" x 8' x 158" BUSHING	12.00	1	12.00	12.00	1	12.00
75	1	EA	2x4 @ 24" x 8' x 160" BUSHING	12.00	1	12.00	12.00	1	12.00
76	1	EA	2x4 @ 24" x 8' x 162" BUSHING	12.00	1	12.00	12.00	1	12.00
77	1	EA	2x4 @ 24" x 8' x 164" BUSHING	12.00	1	12.00	12.00	1	12.00
78	1	EA	2x4 @ 24" x 8' x 166" BUSHING	12.00	1	12.00	12.00	1	12.00
79	1	EA	2x4 @ 24" x 8' x 168" BUSHING	12.00	1	12.00	12.00	1	12.00
80	1	EA	2x4 @ 24" x 8' x 170" BUSHING	12.00	1	12.00	12.00	1	12.00
81	1	EA	2x4 @ 24" x 8' x 172" BUSHING	12.00	1	12.00	12.00	1	12.00
82	1	EA	2x4 @ 24" x 8' x 174" BUSHING	12.00	1	12.00	12.00	1	12.00
83	1	EA	2x4 @ 24" x 8' x 176" BUSHING	12.00	1	12.00	12.00	1	12.00
84	1	EA	2x4 @ 24" x 8' x 178" BUSHING	12.00	1	12.00	12.00	1	12.00
85	1	EA	2x4 @ 24" x 8' x 180" BUSHING	12.00	1	12.00	12.00	1	12.00
86	1	EA	2x4 @ 24" x 8' x 182" BUSHING	12.00	1	12.00	12.00	1	12.00
87	1	EA	2x4 @ 24" x 8' x 184" BUSHING	12.00	1	12.00	12.00	1	12.00
88	1	EA	2x4 @ 24" x 8' x 186" BUSHING	12.00	1	12.00	12.00	1	12.00
89	1	EA	2x4 @ 24" x 8' x 188" BUSHING	12.00	1	12.00	12.00	1	12.00
90	1	EA	2x4 @ 24" x 8' x 190" BUSHING	12.00	1	12.00	12.00	1	12.00
91	1	EA	2x4 @ 24" x 8' x 192" BUSHING	12.00	1	12.00	12.00	1	12.00
92	1	EA	2x4 @ 24" x 8' x 194" BUSHING	12.00	1	12.00	12.00	1	12.00
93	1	EA	2x4 @ 24" x 8' x 196" BUSHING	12.00	1	12.00	12.00	1	12.00
94	1	EA	2x4 @ 24" x 8' x 198" BUSHING	12.00	1	12.00	12.00	1	12.00
95	1	EA	2x4 @ 24" x 8' x 200" BUSHING	12.00	1	12.00	12.00	1	12.00
96	1	EA	2x4 @ 24" x 8' x 202" BUSHING	12.00	1	12.00	12.00	1	12.00
97	1	EA	2x4 @ 24" x 8' x 204" BUSHING	12.00	1	12.00	12.00	1	12.00
98	1	EA	2x4 @ 24" x 8' x 206" BUSHING	12.00	1	12.00	12.00	1	12.00
99	1	EA	2x4 @ 24" x 8' x 208" BUSHING	12.00	1	12.00	12.00	1	12.00
100	1	EA	2x4 @ 24" x 8' x 210" BUSHING	12.00	1	12.00	12.00	1	12.00
101	1	EA	2x4 @ 24" x 8' x 212" BUSHING	12.00	1	12.00	12.00	1	12.00
102	1	EA	2x4 @ 24" x 8' x 214" BUSHING	12.00	1	12.00	12.00	1	12.00
103	1	EA	2x4 @ 24" x 8' x 216" BUSHING	12.00	1	12.00	12.00	1	12.00
104	1	EA	2x4 @ 24" x 8' x 218" BUSHING	12.00	1	12.00	12.00	1	12.00
105	1	EA	2x4 @ 24" x 8' x 220" BUSHING	12.00	1	12.00	12.00	1	12.00
106	1	EA	2x4 @ 24" x 8' x 222" BUSHING	12.00	1	12.00	12.00	1	12.00
107	1	EA	2x4 @ 24" x 8' x 224" BUSHING	12.00	1	12.00	12.00	1	12.00
108	1	EA	2x4 @ 24" x 8' x 226" BUSHING	12.00	1	12.00	12.00	1	12.00
109	1	EA	2x4 @ 24" x 8' x 228" BUSHING	12.00	1	12.00	12.00	1	12.00
110	1	EA	2x4 @ 24" x 8' x 230" BUSHING	12.00	1	12.00	12.00	1	12.00
111	1	EA	2x4 @ 24" x 8' x 232" BUSHING	12.00	1	12.00	12.00	1	12.00
112	1	EA	2x4 @ 24" x 8' x 234" BUSHING	12.00	1	12.00	12.00	1	12.00
113	1	EA	2x4 @ 24" x 8' x 236" BUSHING	12.00	1	12.00	12.00	1	12.00
114	1	EA	2x4 @ 24" x 8' x 238" BUSHING	12.00	1	12.00	12.00	1	12.00
115	1	EA	2x4 @ 24" x 8' x 240" BUSHING	12.00	1	12.00	12.00	1	12.00
116	1	EA	2x4 @ 24" x 8' x 242" BUSHING	12.00	1	12.00	12.00	1	12.00
117	1	EA	2x4 @ 24" x 8' x 244" BUSHING	12.00	1	12.00	12.00	1	12.00
118	1	EA	2x4 @ 24" x 8' x 246" BUSHING	12.00	1	12.00	12.00	1	12.00
119	1	EA	2x4 @ 24" x 8' x 248" BUSHING	12.00	1	12.00	12.00	1	12.00
120	1	EA	2x4 @ 24" x 8' x 250" BUSHING	12.00	1	12.00	12.00	1	12.00
121	1	EA	2x4 @ 24" x 8' x 252" BUSHING	12.00	1	12.00	12.00	1	12.00
122	1	EA	2x4 @ 24" x 8' x 254" BUSHING	12.00	1	12.00	12.00	1	1

2x4 @ 24" O.C.			
NO.	DESCRIPTION	QTY	UNIT
1	2x4 @ 24" O.C.	1	100'00"
2	2x4 @ 24" O.C.	1	100'00"
3	2x4 @ 24" O.C.	1	100'00"

NO.	DESCRIPTION	QTY	UNIT
1	2x4 @ 24"		

2x4 @ 24" O.C. NAIL	
NO.	QTY
1001	112.000 N.P.
1002	112.000 N.P.
1003	112.000 N.P.
1004	112.000 N.P.
1005	112.000 N.P.
1006	112.000 N.P.
1007	112.000 N.P.
1008	112.000 N.P.
1009	112.000 N.P.
1010	112.000 N.P.

WEEKLY SCHEDULE					
CALLOUT	MODEL	TOP RAILS	SPACERS	MEMBER RAILS	FACE RAILS
201	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
202	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
203	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
204	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
205	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
206	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
207	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
208	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
209	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
210	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
211	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
212	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
213	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
214	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
215	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
216	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
217	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
218	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
219	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
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222	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
223	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
224	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
225	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
226	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
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299	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12
300	2x4x8x12	2x4	2x4	2x4x8x12x12	2x4x8x12x12

	Size	Unit
	Size	Unit
ALL BEARING TO HAVE BOLD BEARING TO FOUND		
TOTAL 2019-2020		
NO.	DESCRIPTION	QTY
101	2x4 @ 24"	100
102	2x4 @ 24"	100
103	2x4 @ 24"	100
104	2x4 @ 24"	100
105	2x4 @ 24"	100

ROOF MATERIALS

NO. MATERIAL		
EDGE CAP	###	PL
VALLEY FLASHING	###	PL
90 DEG. FLASHING	##	PL
BEND TO SLOPE FLASHING	##	PL
EDGE VENT	###	PL
SHINGLES	####	Sq.
COB	###	Ea
GABLE FASCIA	###	PL
EAVE FASCIA	###	PL
DROP EDGE	###	PL

ROOF FRAMING NOTES:
ALL RAVE OVERHANGS 24\"/>



SCALE FOR
ENGINEERED CALC

ENGINEERED CALC
2024

PROJECT NO.
28-005

BHOKR PHASE 3 LOT 105 4 BDRM INBUNK RM 5-1/2 BATH
10 MOONFLOWER COURT VALLEY CO. ID



CONTRACTOR TO VERIFY ALL DETAILS, DIMENSIONS, AND REIFICATIONS PRIOR TO CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY. NO PARTIAL PAYMENTS WILL BE MADE UNTIL ALL WORK IS COMPLETED AND ALL CLAIMS, LITIGATIONS OR SUITS HAVE BEEN RESOLVED.

DESIGNER: SAEVE
INDICATE: 06/01/2024
REVISION: 01/20/2024

SAEVE

844C
2024
Nampa, ID

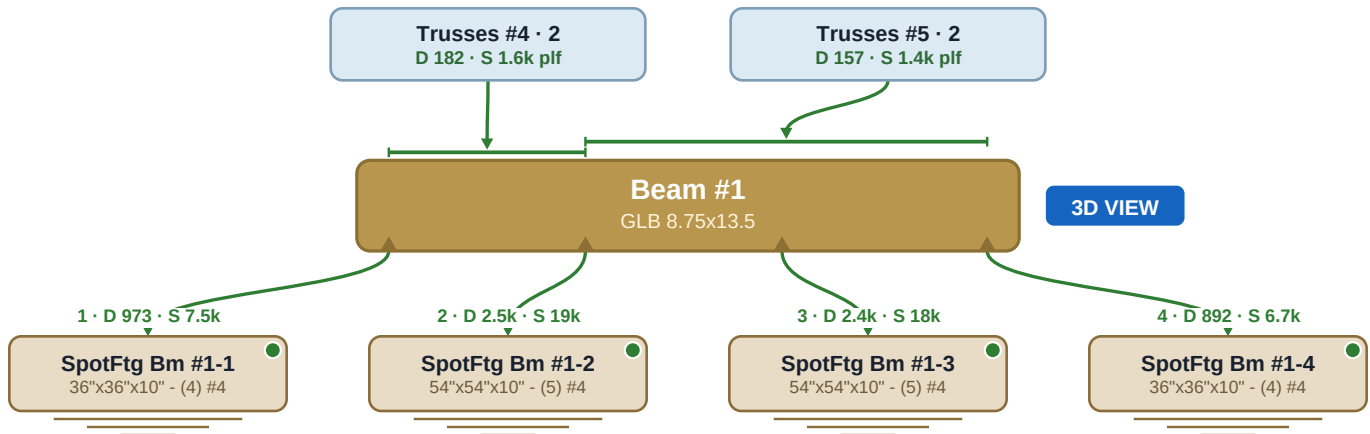
SHEET NUMBER
A5
PAGE 5 OF 5

Beam #1 | GLB 8.75x13.5

ON PLAN: [A3 Floor 2nd](#)

[A4 Roof 1st](#)

PASS

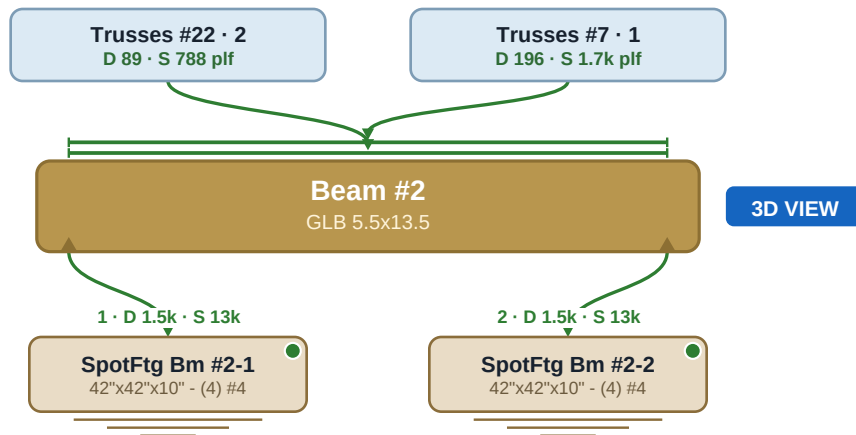


Beam #2 | GLB 5.5x13.5

ON PLAN: [A3 Floor 2nd](#)

[A4 Roof 1st](#)

PASS



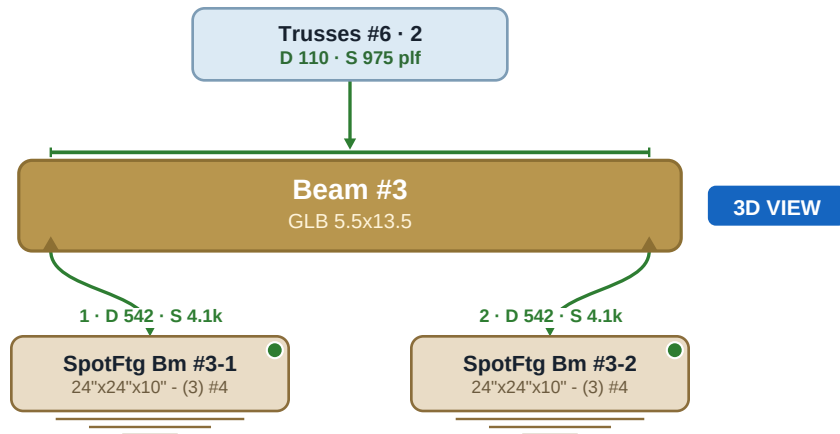
Beam #3 | GLB 5.5x13.5

ON PLAN:

A3 Floor 2nd

A4 Roof 1st

PASS



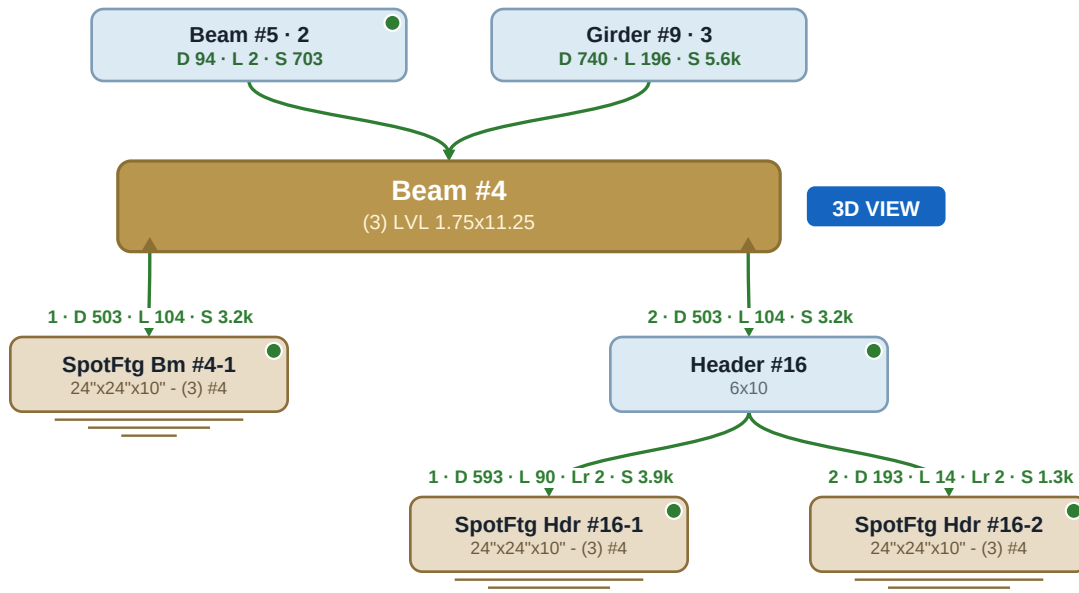
Beam #4 | (3) LVL 1.75x11.25

ON PLAN:

A3 Floor 2nd

A4 Roof 1st

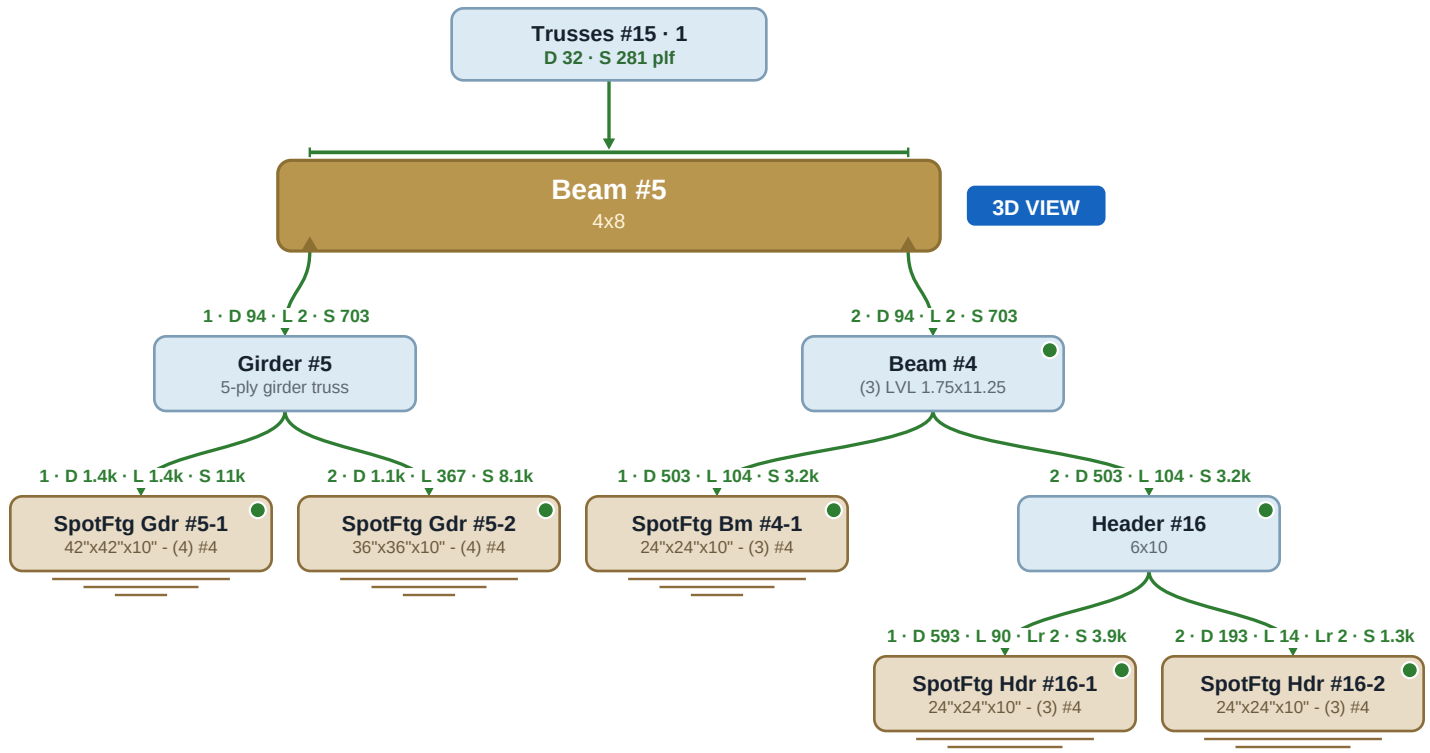
PASS



Beam #5 | 4x8

ON PLAN: [A3 Floor 2nd](#) [A4 Roof 1st](#)

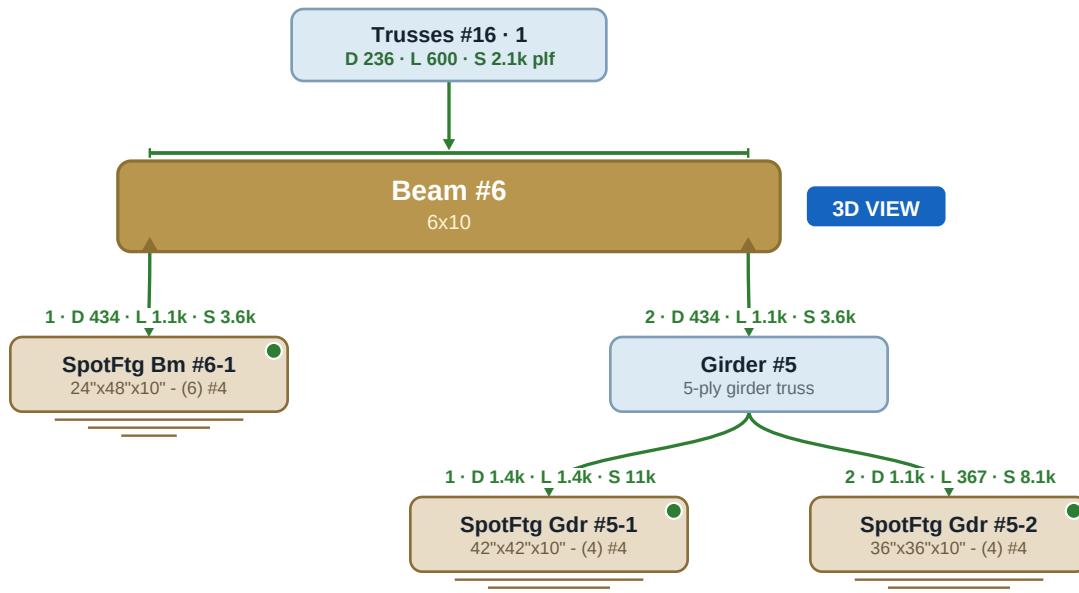
PASS



Beam #6 | 6x10

ON PLAN: [A3 Floor 2nd](#) [A4 Roof 1st](#)

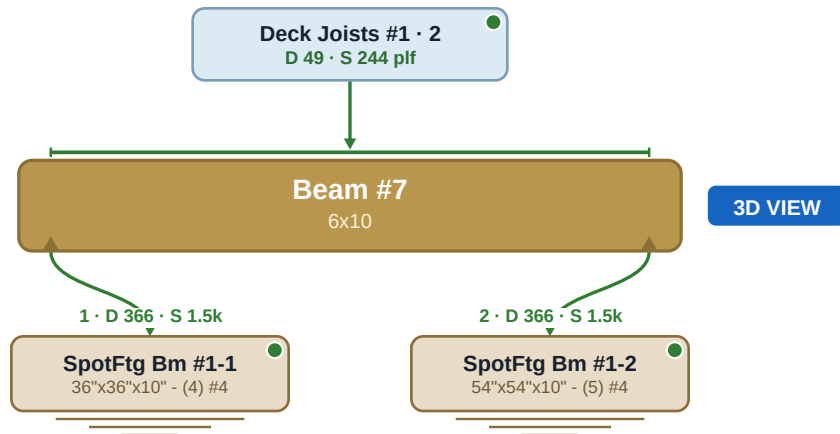
PASS



Beam #7 | 6x10

ON PLAN: [A2 Floor 1st](#)

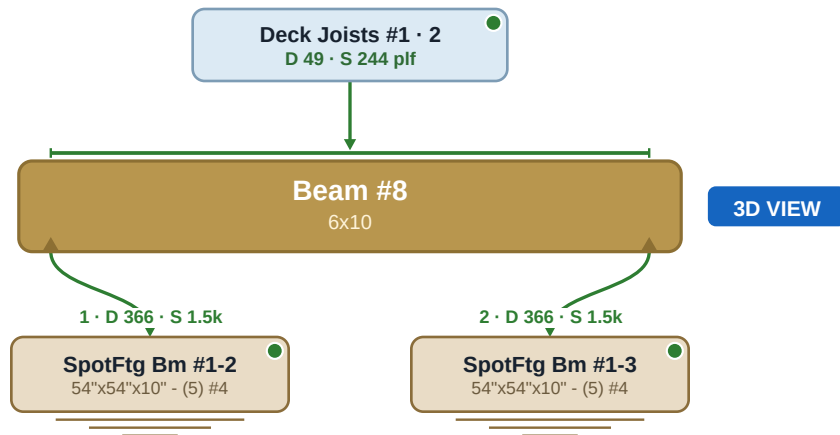
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Beam #8 | 6x10

ON PLAN: [A2 Floor 1st](#)

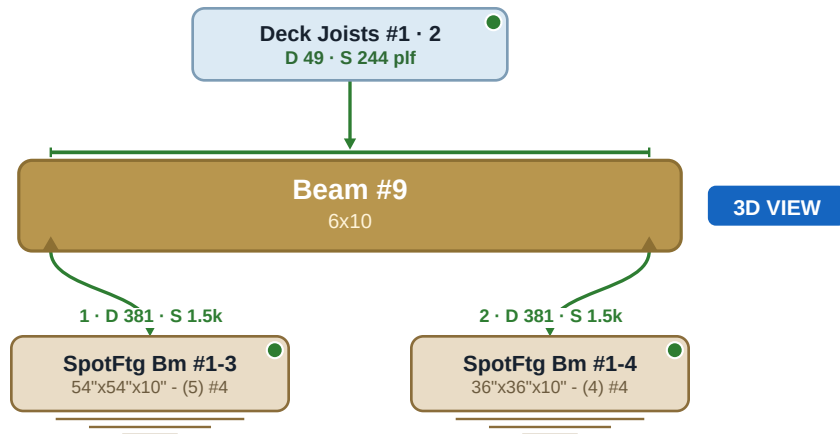
PASS



Beam #9 | 6x10

ON PLAN: [A2 Floor 1st](#)

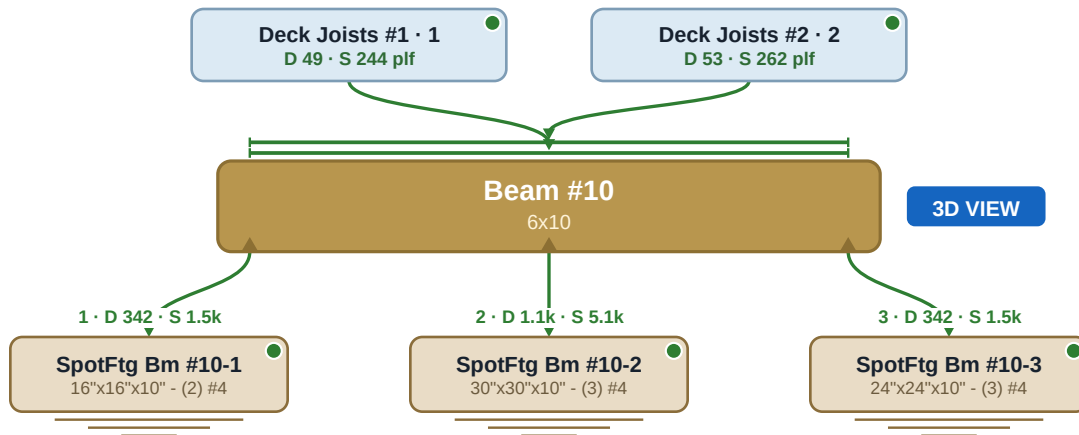
PASS



Beam #10 | 6x10

ON PLAN: [A2 Floor 1st](#)

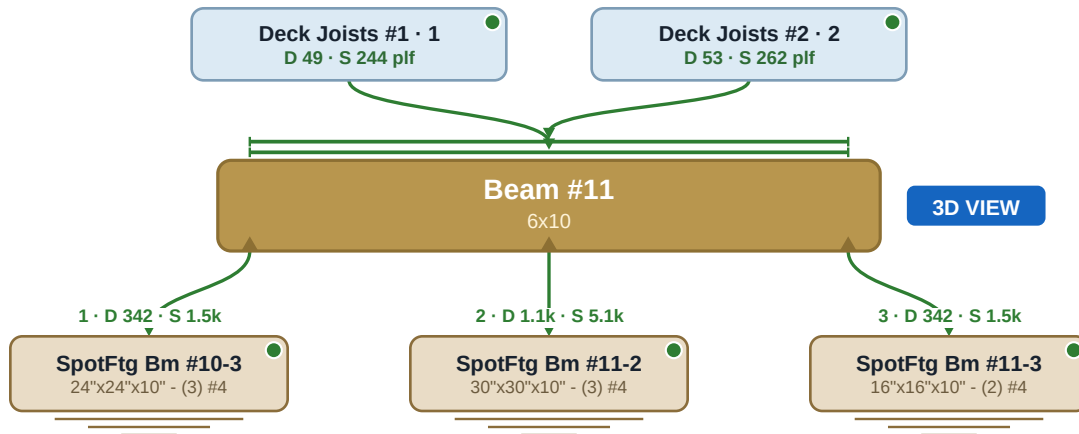
PASS



Beam #11 | 6x10

ON PLAN: [A2 Floor 1st](#)

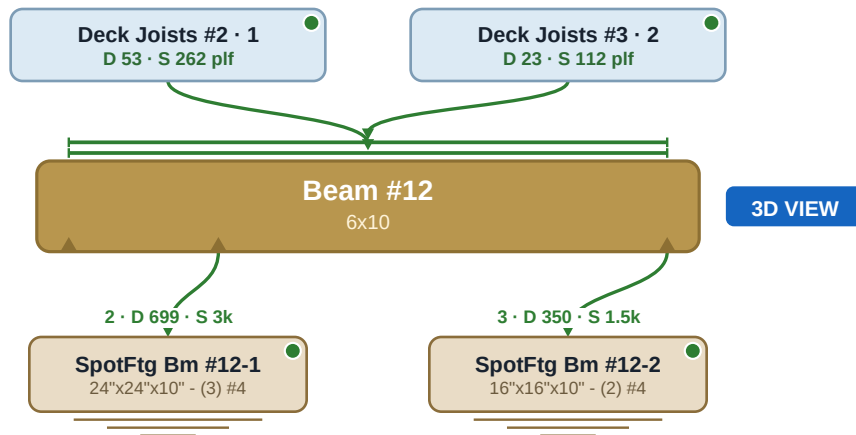
PASS



Beam #12 | 6x10

ON PLAN: [A2 Floor 1st](#)

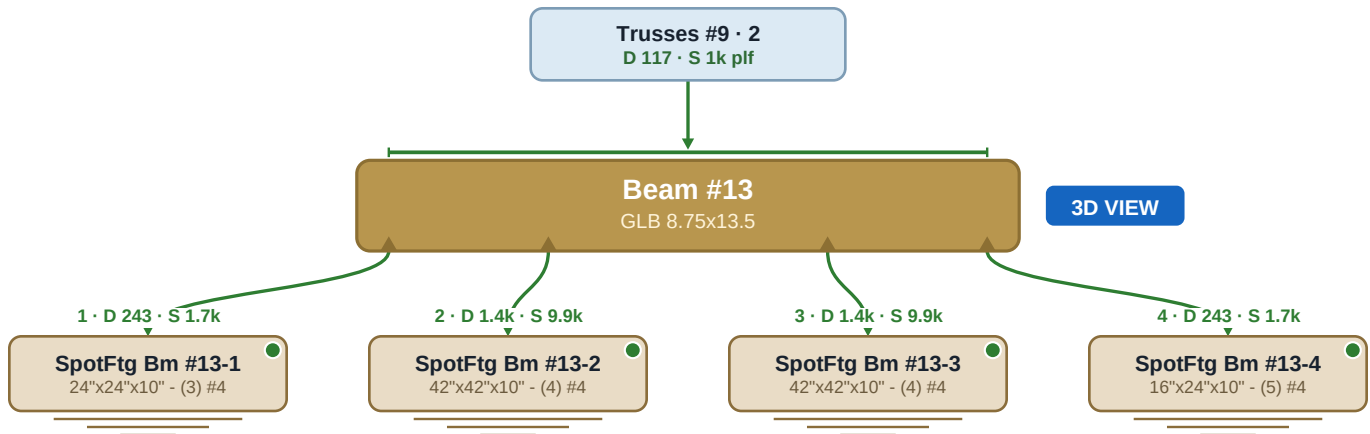
PASS



Beam #13 | GLB 8.75x13.5

ON PLAN: [A3 Floor 2nd](#) [A4 Roof 1st](#)

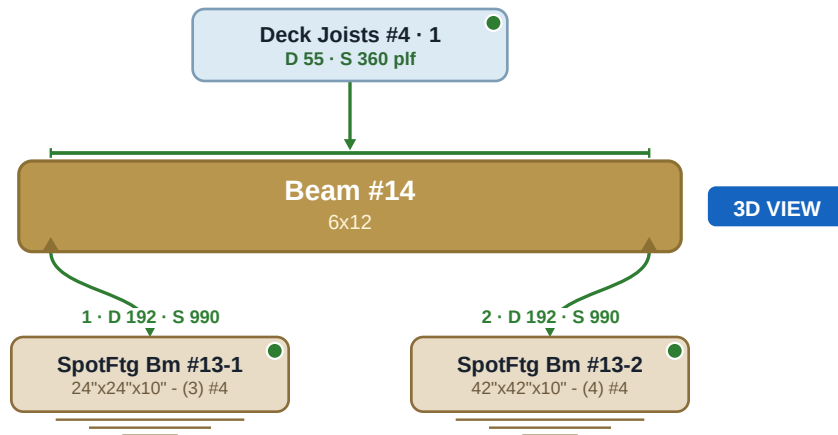
PASS



Beam #14 | 6x12

ON PLAN: [A2 Floor 1st](#)

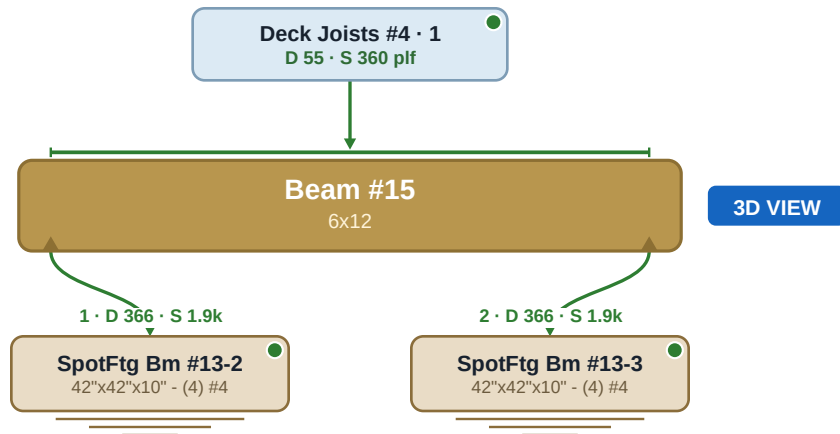
PASS



Beam #15 | 6x12

ON PLAN: [A2 Floor 1st](#)

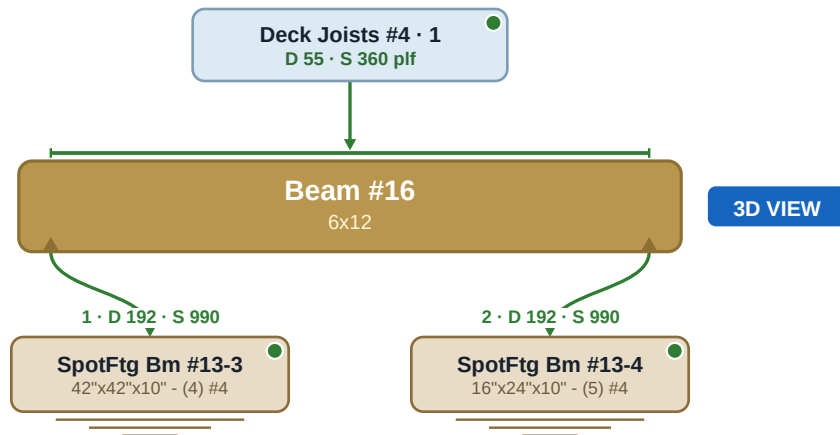
PASS



Beam #16 | 6x12

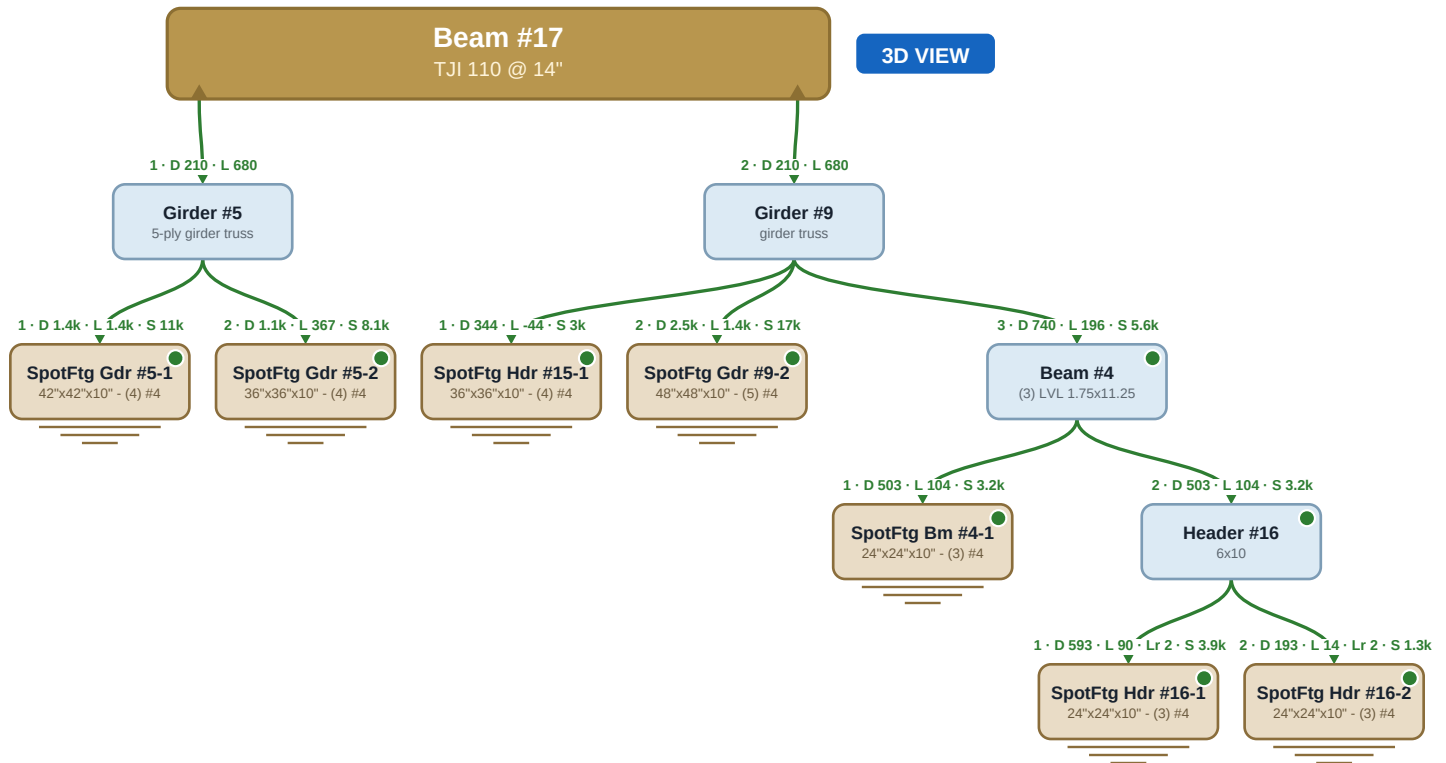
ON PLAN: [A2 Floor 1st](#)

PASS



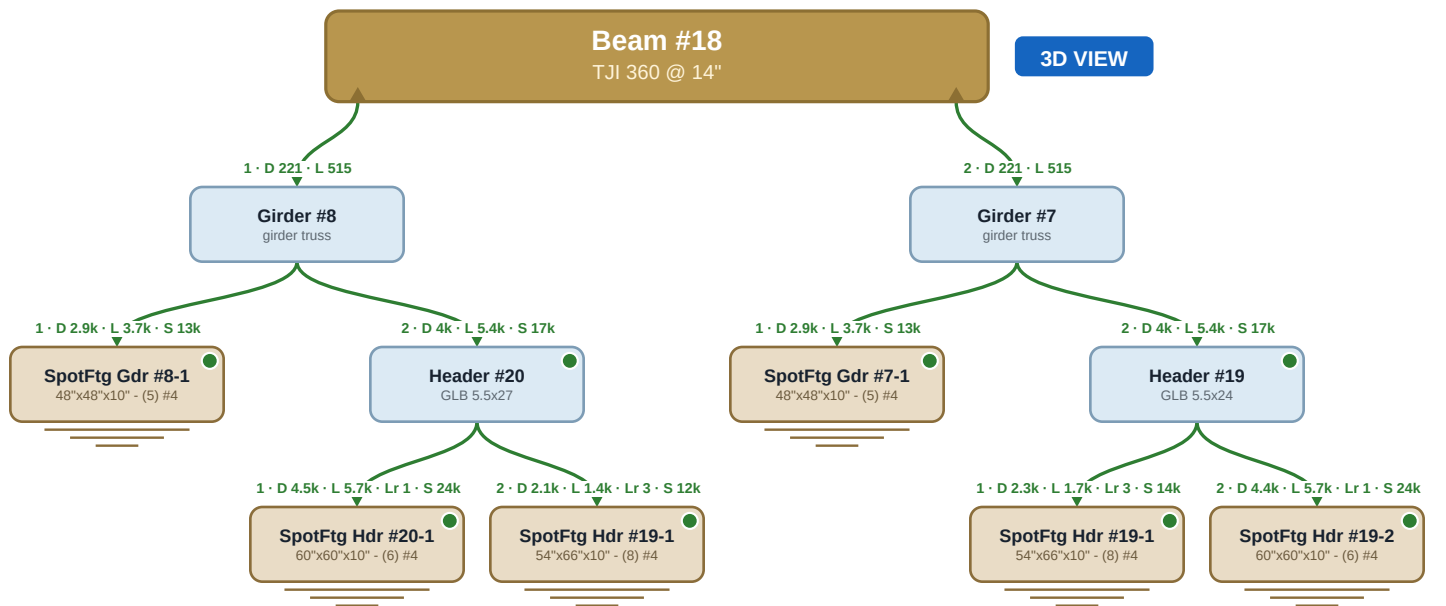
Beam #17 | TJI 110 @ 14"

PASS



Beam #18 | TJI 360 @ 14"

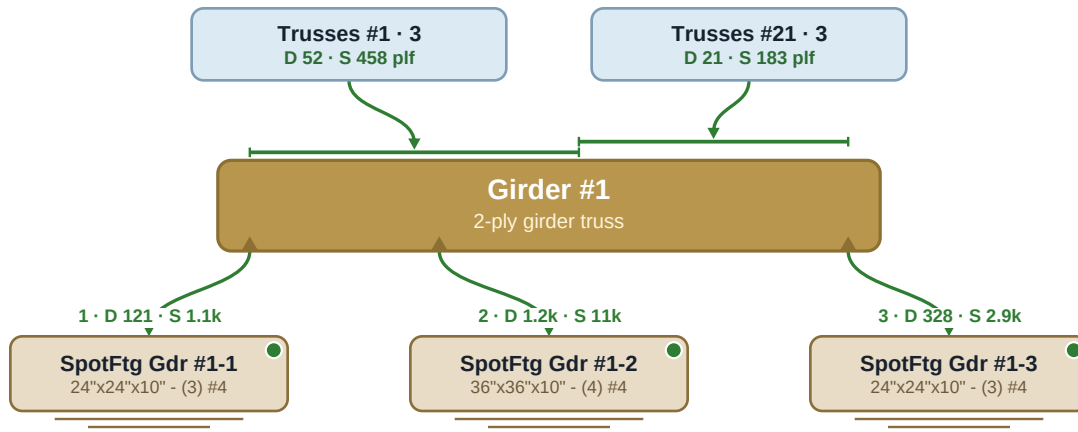
PASS



Girder #1 | 2-ply girder truss

ON PLAN: [A3 Floor 2nd](#) [A4 Roof 1st](#)

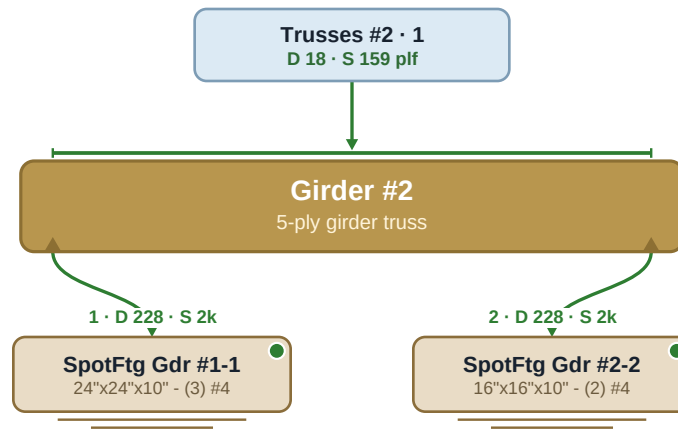
PASS



Girder #2 | 5-ply girder truss

ON PLAN: [A3 Floor 2nd](#) [A4 Roof 1st](#)

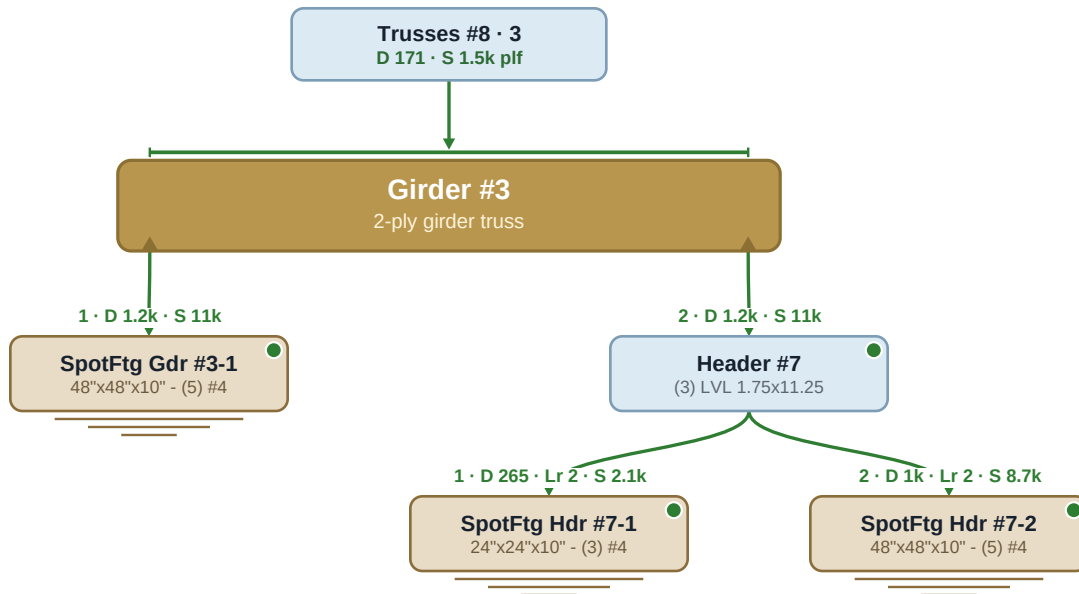
PASS



Girder #3 | 2-ply girder truss

ON PLAN: [A3 Floor 2nd](#) [A4 Roof 1st](#)

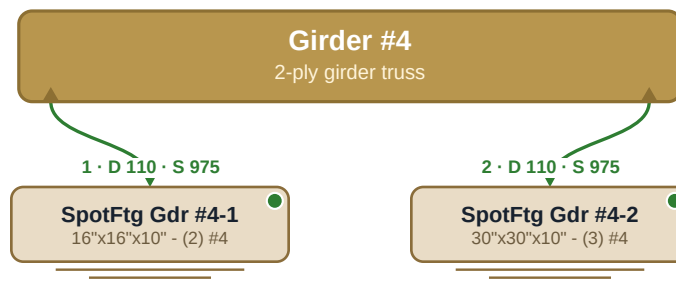
PASS



Girder #4 | 2-ply girder truss

ON PLAN: [A3 Floor 2nd](#) [A4 Roof 1st](#)

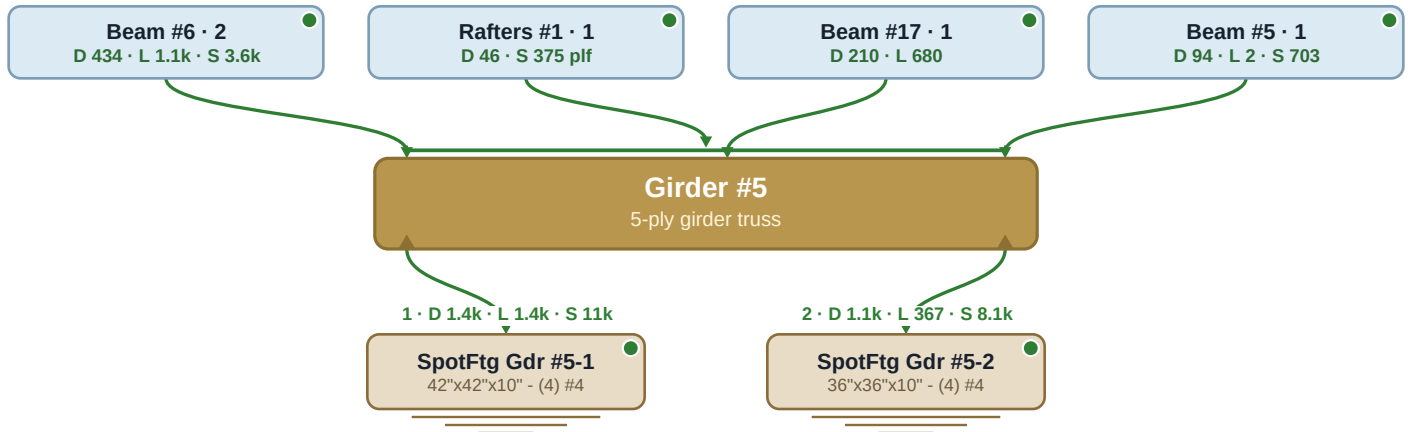
PASS



Girder #5 | 5-ply girder truss

ON PLAN: [A3 Floor 2nd](#) [A4 Roof 1st](#)

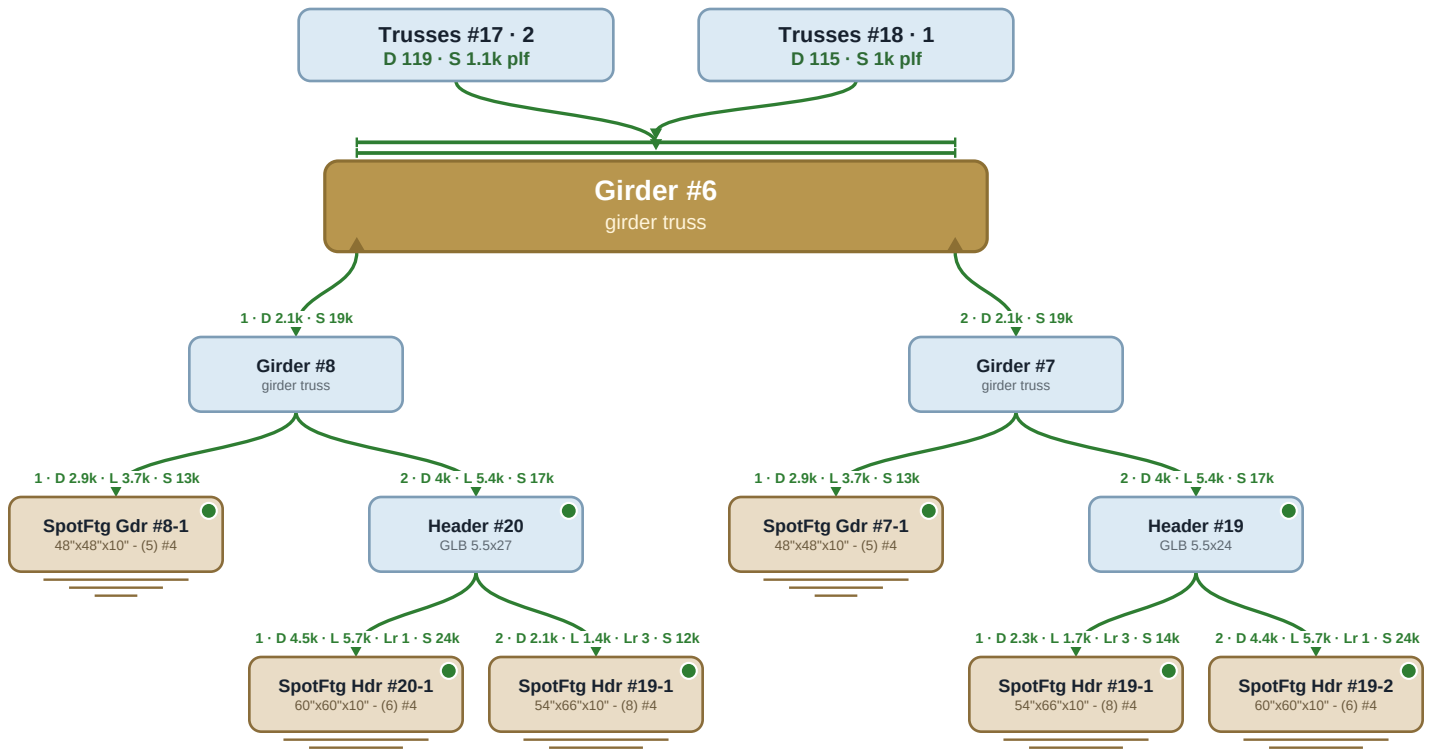
PASS



Girder #6 | girder truss

ON PLAN: [A5 Roof 2nd](#)

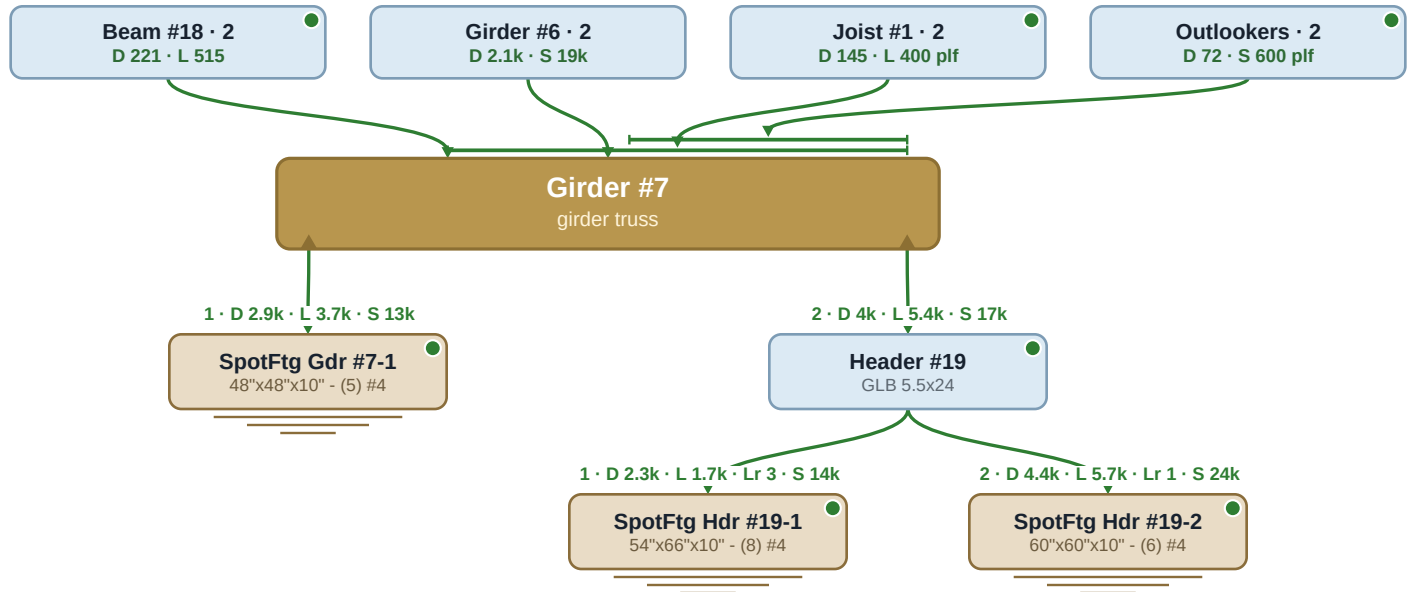
PASS



Girder #7 | girder truss

ON PLAN: A3 Floor 2nd A4 Roof 1st

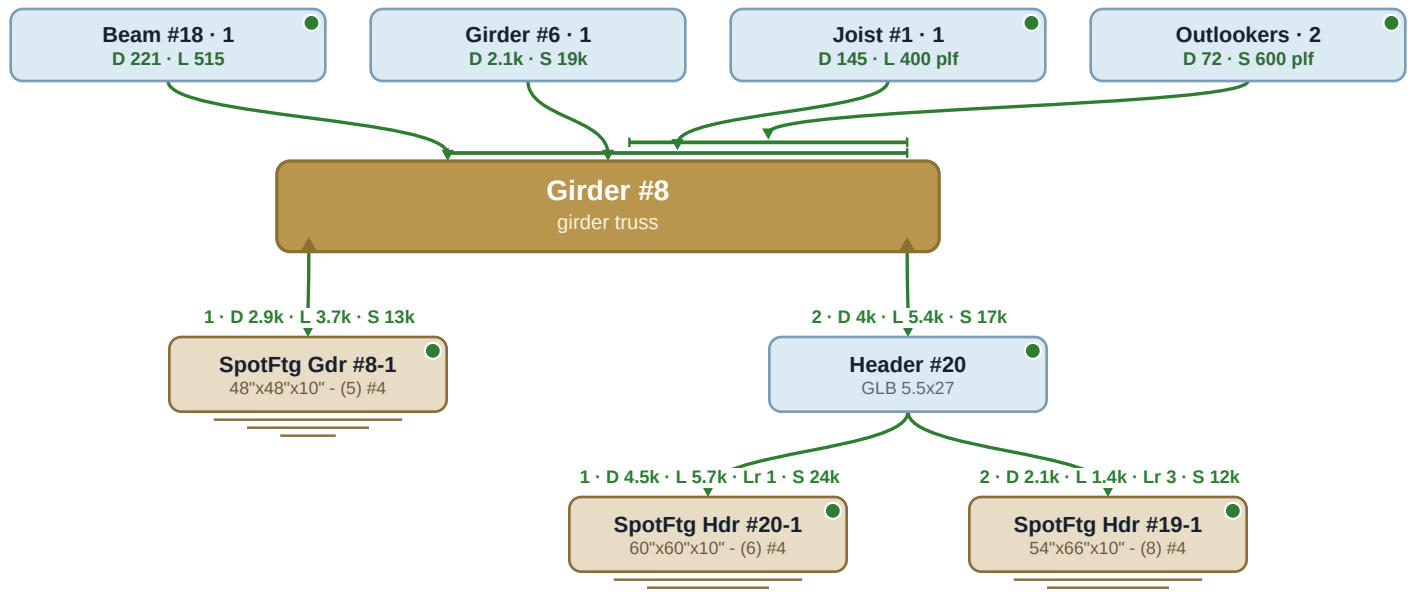
PASS



Girder #8 | girder truss

ON PLAN: A3 Floor 2nd A4 Roof 1st

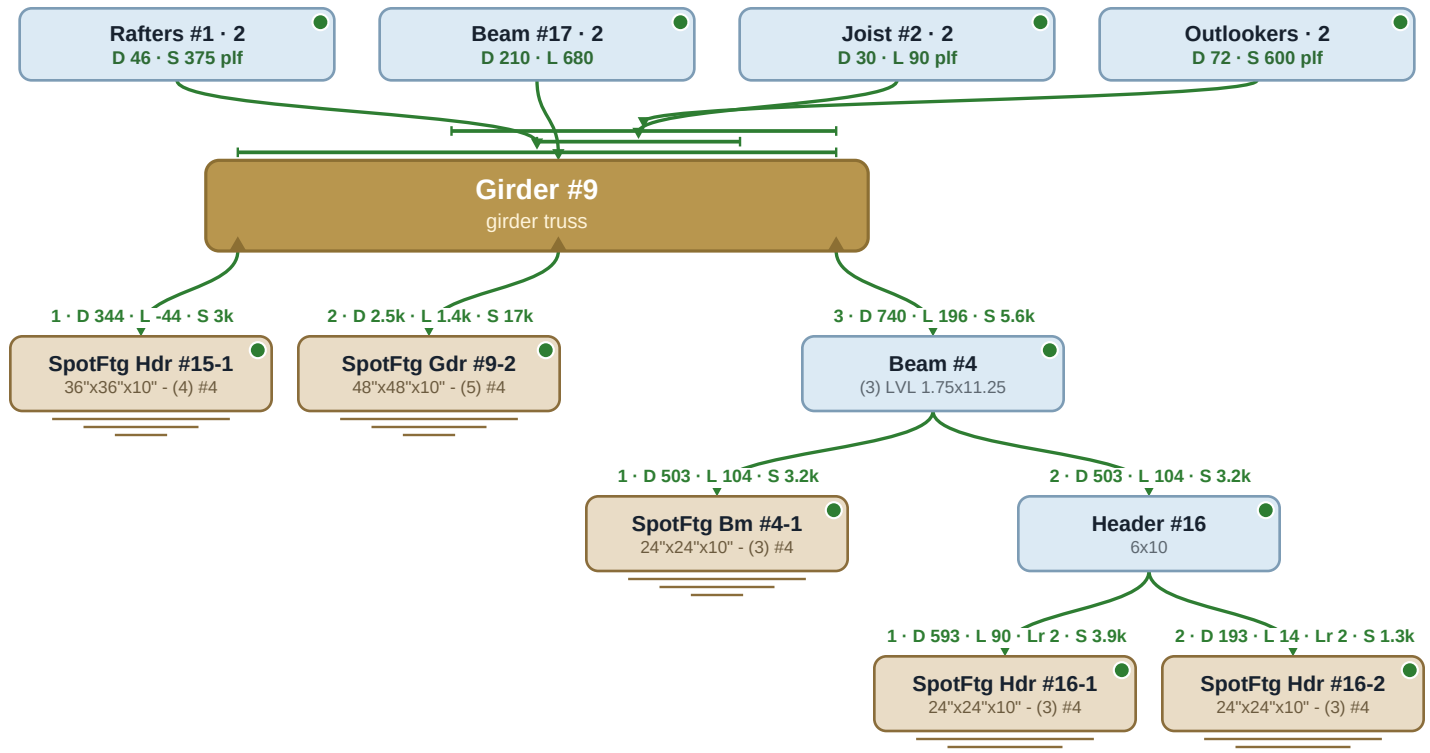
PASS



Girder #9 | girder truss

ON PLAN: [A3 Floor 2nd](#) [A4 Roof 1st](#)

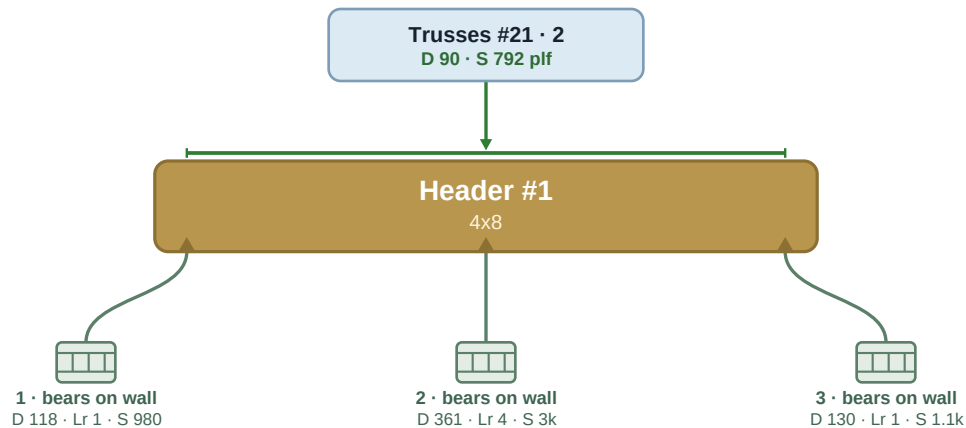
PASS



Header #1 | 4x8

ON PLAN: [A3 Floor 2nd](#) [A4 Roof 1st](#)

PASS

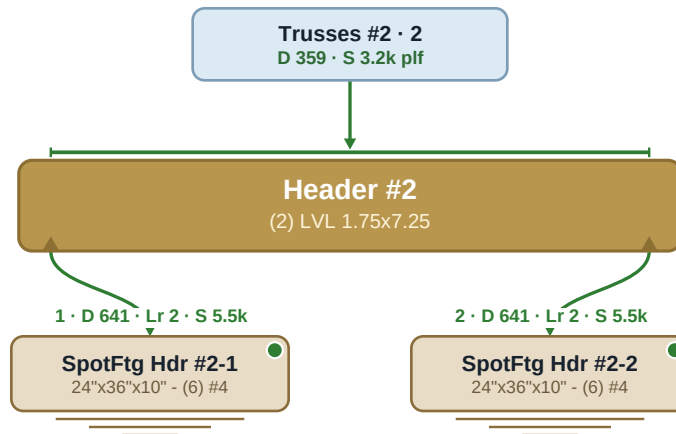


Header #2 | (2) LVL 1.75x7.25

ON PLAN: [A3 Floor 2nd](#)

[A4 Roof 1st](#)

PASS

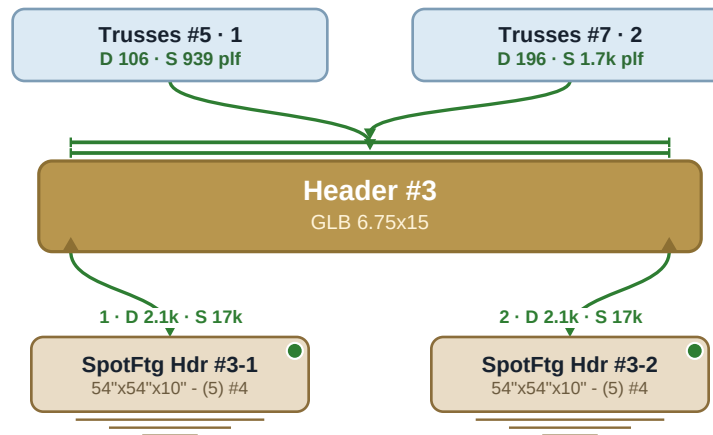


Header #3 | GLB 6.75x15

ON PLAN: [A3 Floor 2nd](#)

[A4 Roof 1st](#)

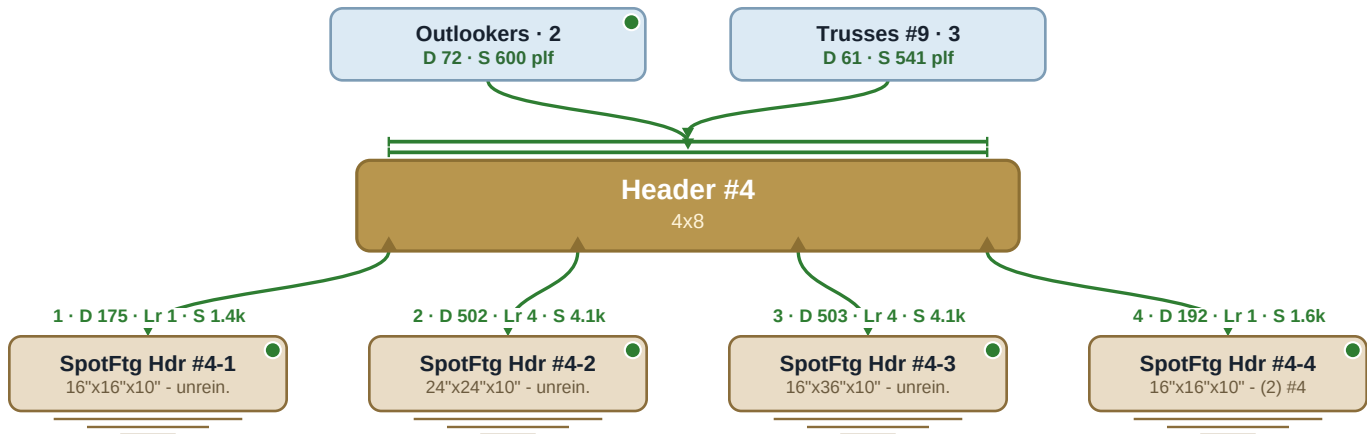
PASS



Header #4 | 4x8

ON PLAN: A3 Floor 2nd A4 Roof 1st

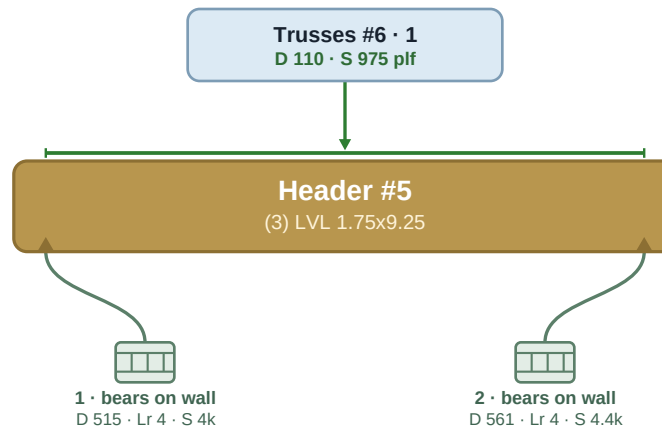
PASS



Header #5 | (3) LVL 1.75x9.25

ON PLAN: A3 Floor 2nd A4 Roof 1st

PASS



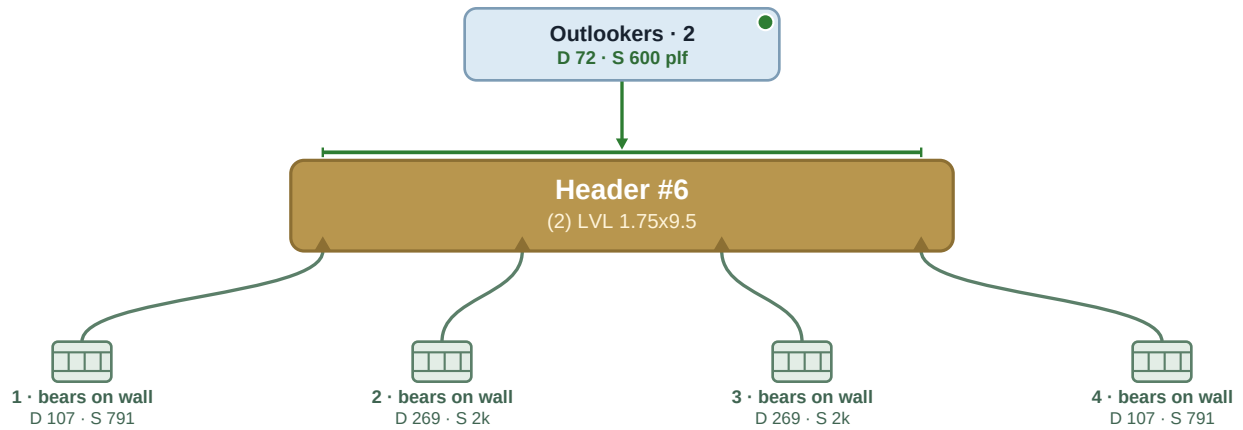
Header #6 | (2) LVL 1.75x9.5

ON PLAN:

A3 Floor 2nd

A4 Roof 1st

PASS



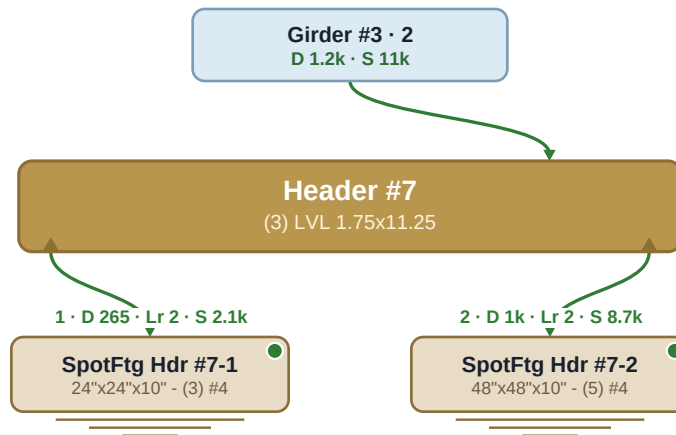
Header #7 | (3) LVL 1.75x11.25

ON PLAN:

A3 Floor 2nd

A4 Roof 1st

PASS



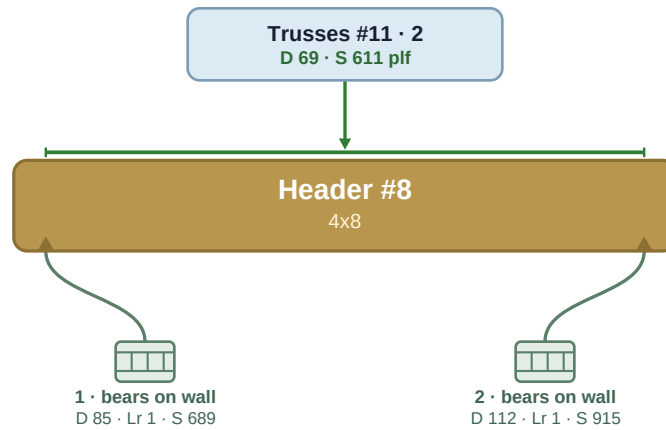
Header #8 | 4x8

ON PLAN:

A3 Floor 2nd

A4 Roof 1st

PASS



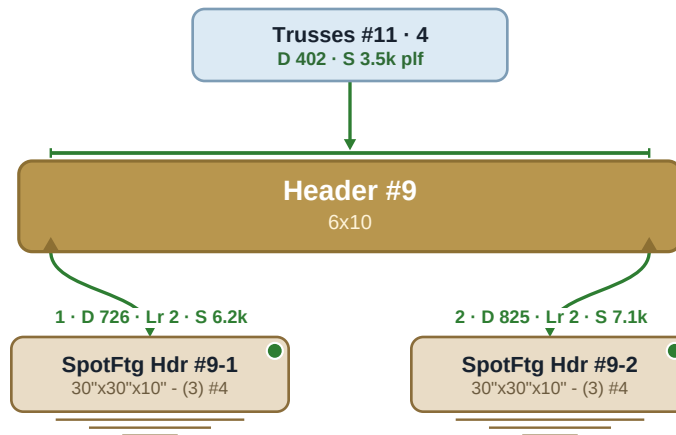
Header #9 | 6x10

ON PLAN:

A3 Floor 2nd

A4 Roof 1st

PASS

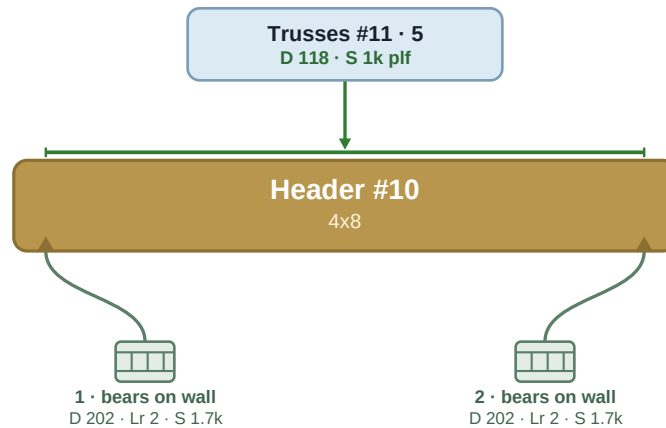


Header #10 | 4x8

ON PLAN:

[A3 Floor 2nd](#)
[A4 Roof 1st](#)

PASS

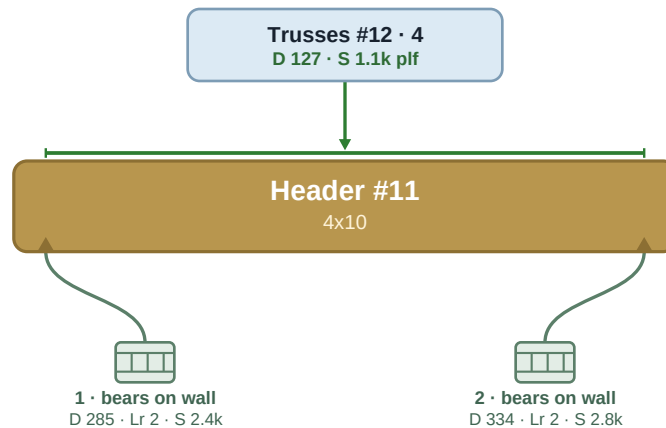


Header #11 | 4x10

ON PLAN:

[A3 Floor 2nd](#)
[A4 Roof 1st](#)

PASS

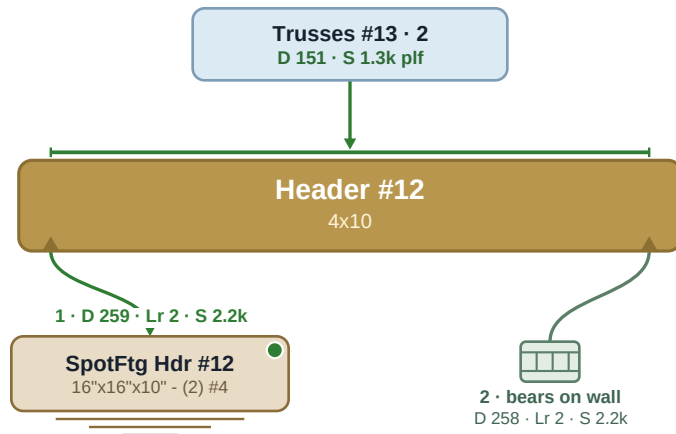


Header #12 | 4x10

ON PLAN:

[A3 Floor 2nd](#)
[A4 Roof 1st](#)

PASS

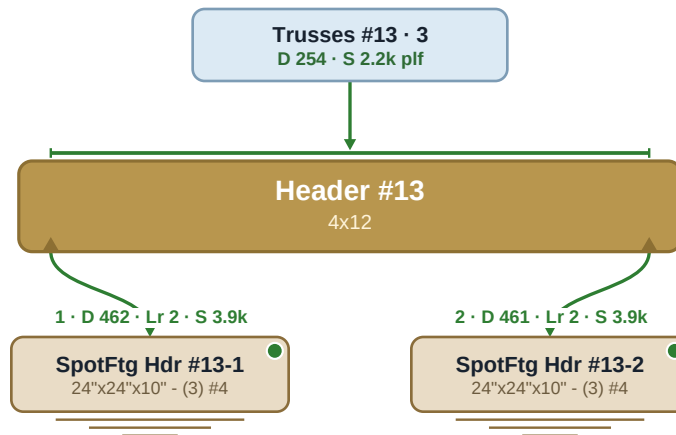


Header #13 | 4x12

ON PLAN:

[A3 Floor 2nd](#)
[A4 Roof 1st](#)

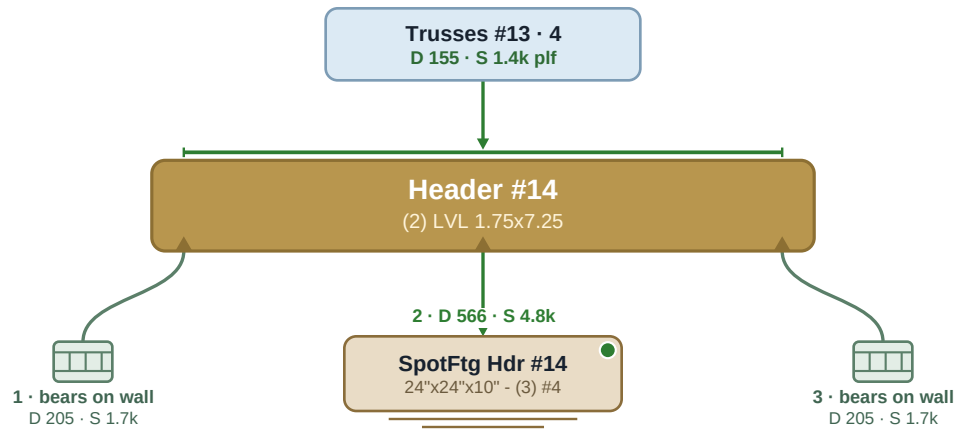
PASS



Header #14 | (2) LVL 1.75x7.25

ON PLAN: A3 Floor 2nd A4 Roof 1st

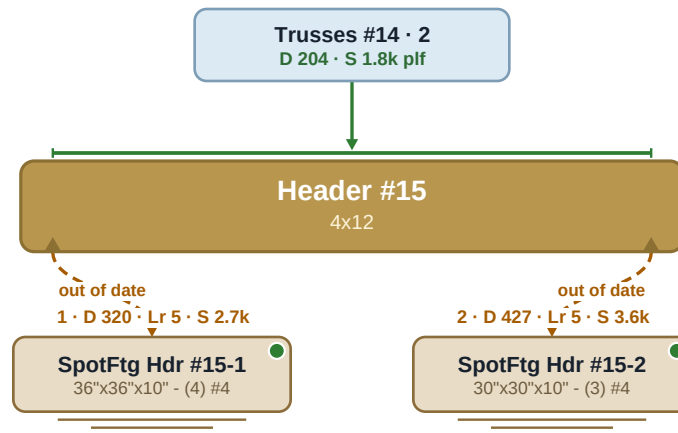
PASS



Header #15 | 4x12

ON PLAN: A3 Floor 2nd A4 Roof 1st

PASS

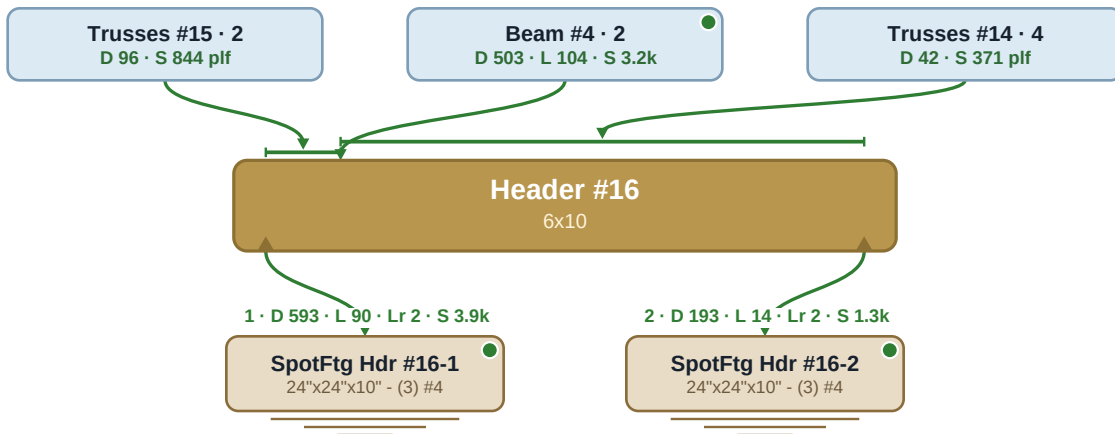


Header #16 | 6x10

ON PLAN:

[A3 Floor 2nd](#)
[A4 Roof 1st](#)

PASS

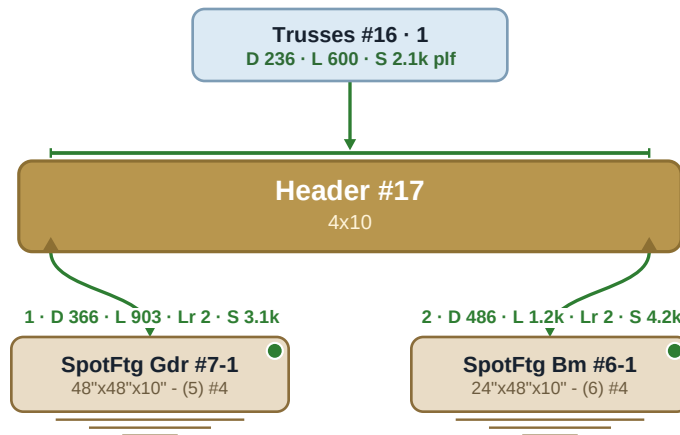


Header #17 | 4x10

ON PLAN:

[A3 Floor 2nd](#)
[A4 Roof 1st](#)

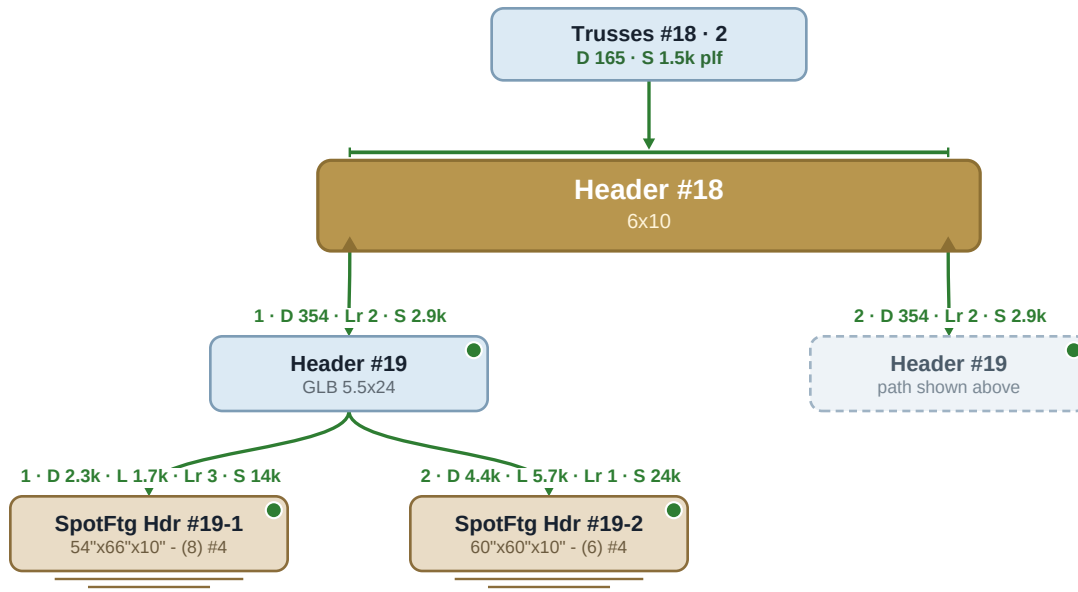
PASS



Header #18 | 6x10

ON PLAN: A5 Roof 2nd

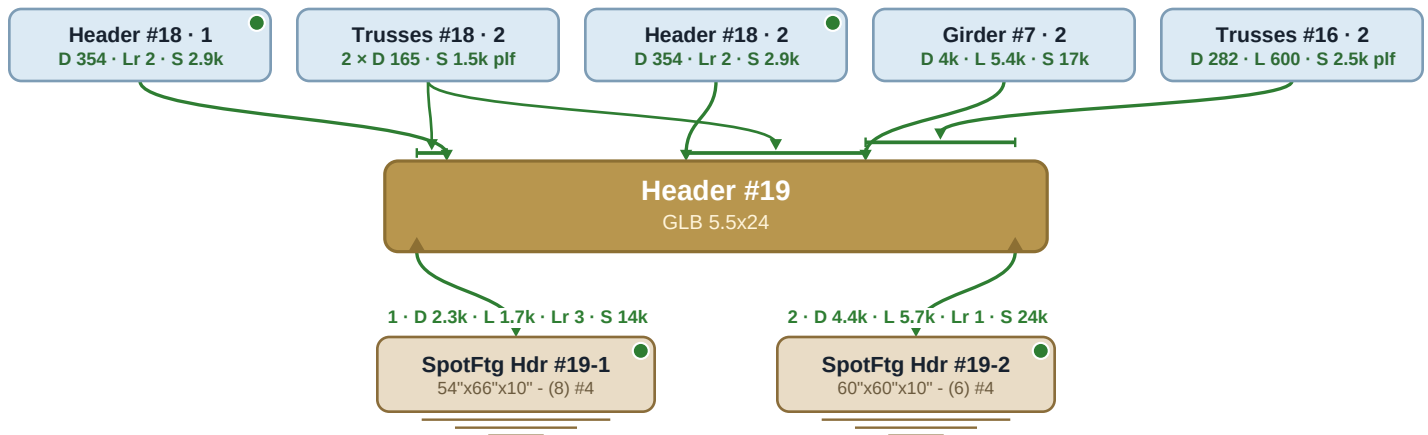
PASS



Header #19 | GLB 5.5x24

ON PLAN: A3 Floor 2nd A4 Roof 1st

PASS



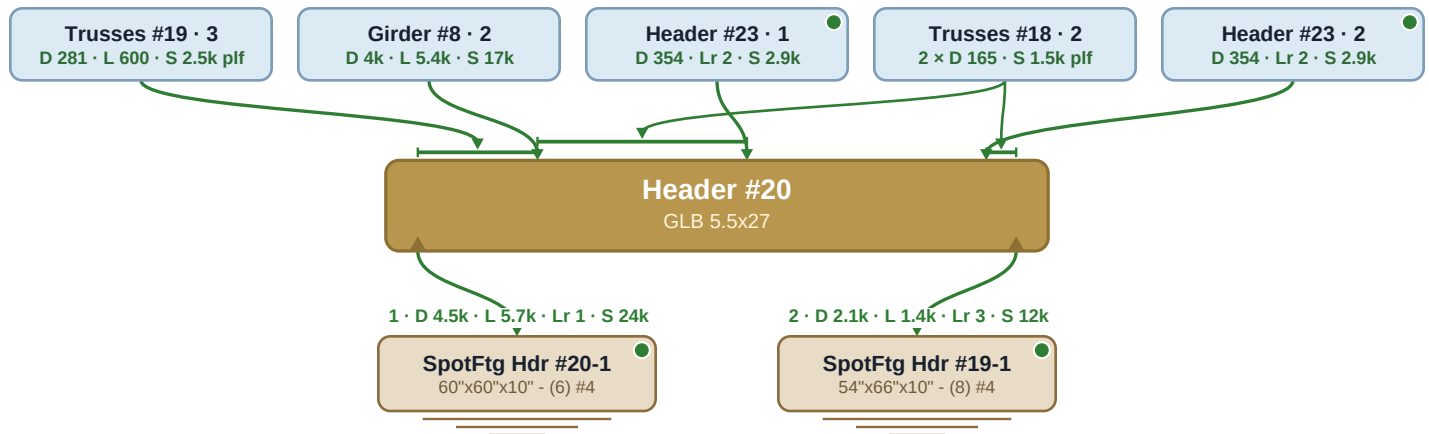
Header #20 | GLB 5.5x27

ON PLAN:

A3 Floor 2nd

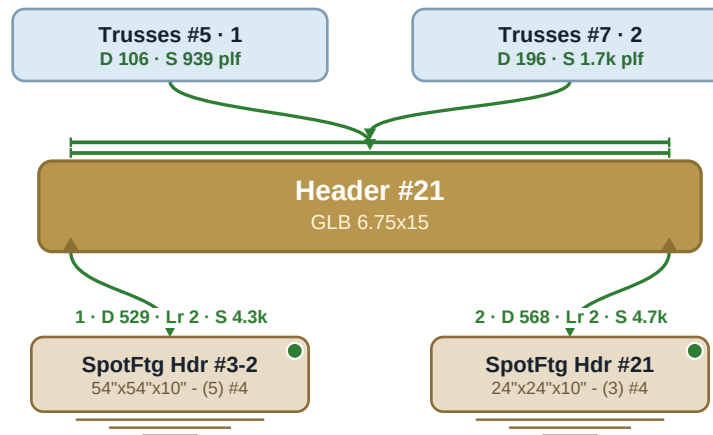
A4 Roof 1st

PASS



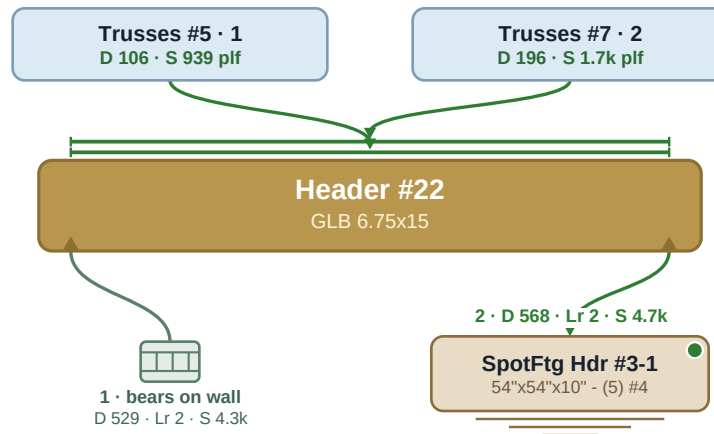
Header #21 | GLB 6.75x15

PASS



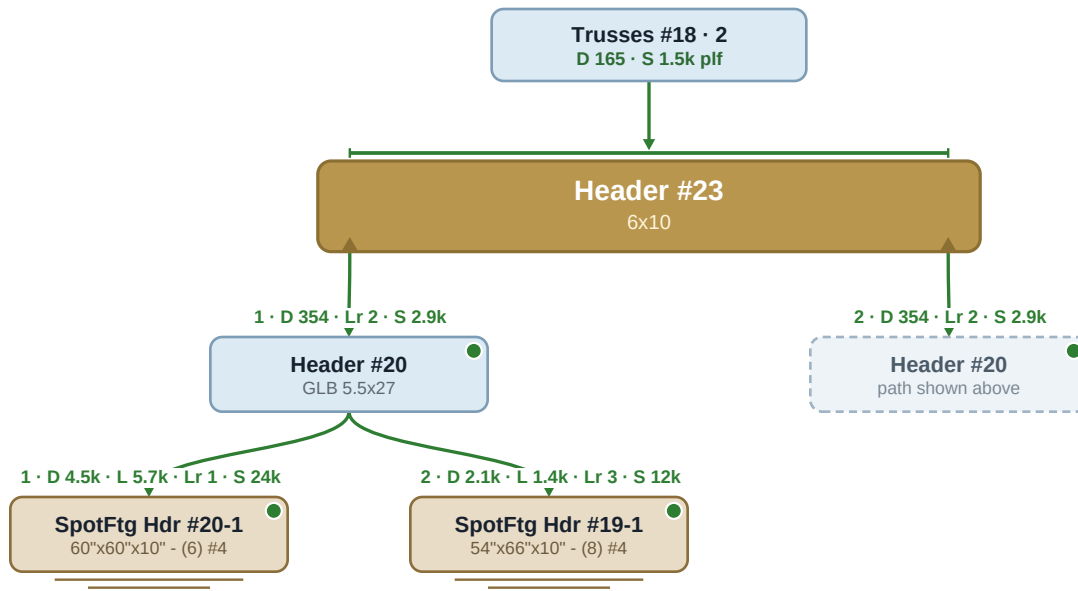
Header #22 | GLB 6.75x15

PASS



Header #23 | 6x10

PASS



Beam #1

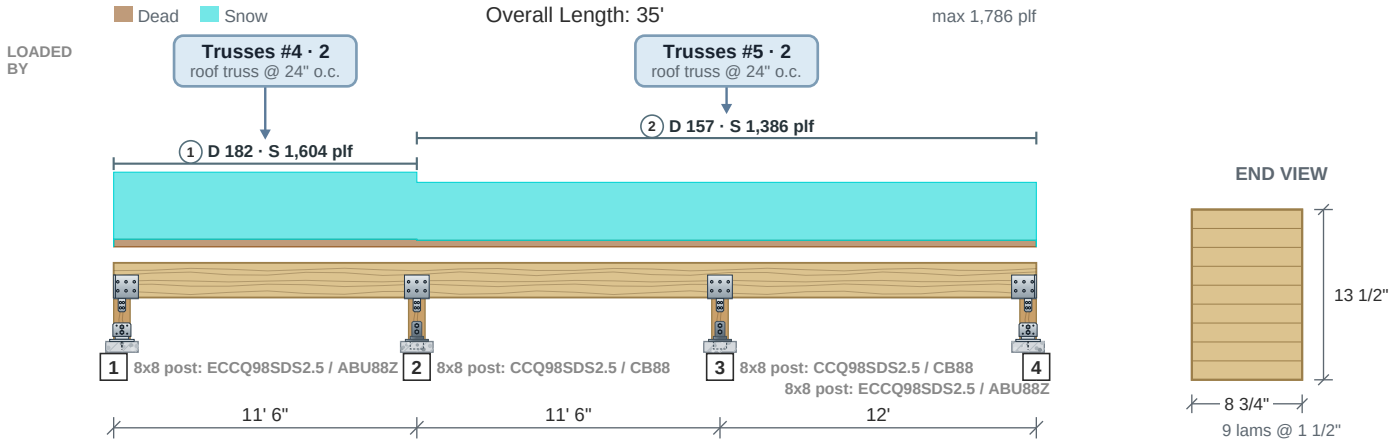
(1) 8 3/4" x 13 1/2" 24F-1.8E 24F-V4 DF/DF Glulam

Level: Roof | Member type: Beam (Roof Beam) | Length: 35' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Moment 54% used

Section adequacy 46.2% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	21,497 @ 11' 6"	62,562 (11")	Passed (34%)	--	
Shear (lbs)	12,387 @ 11' 6"	24,003	Passed (52%)	1.15	D+S
Neg Moment (Ft-lbs)	-22,560 @ 11' 6"	41,945	Passed (54%)	1.15	D+S
Live Load Defl. (in)	0.108 @ 4' 11 1/8"	0.575	Passed (L/1,273)	--	S
Total Load Defl. (in)	0.122 @ 4' 11 1/8"	0.767	Passed (L/1,127)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CV = 0.89, CL = 0.995 (D+S).
- Beam stability (NDS 3.3.3) governs bending: negative moment 22560 lbf-ft, 0.00-11.50 ft, CL 0.995 (unbraced 11.5 ft).
- Unbalanced glulam layup: install with the tension laminations at the bottom, proper side up as marked by the manufacturer.
- Member self weight of 26.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

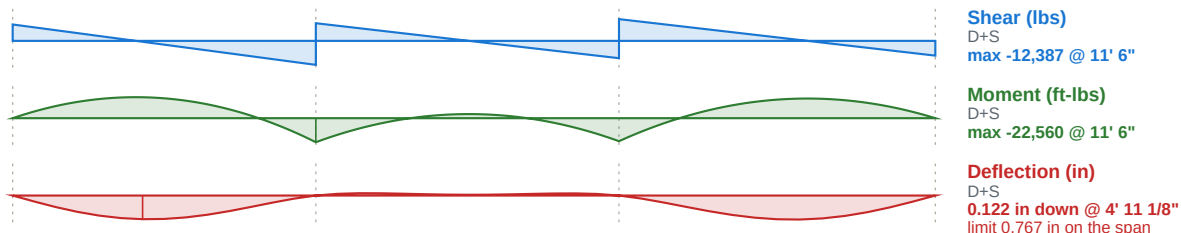
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	8 1/2" seat	1 1/2"	973	7,490	8,463	SpotFtg Bm #1-1 (8x8 post (max 10 ft, 73%): ECCQ98SDS2.5 / ABU88Z)
2 @ 11' 6"	11" seat	3 3/8"	2,491	19,006	21,497	SpotFtg Bm #1-2 (8x8 post (max 10 ft, 35%): CCQ98SDS2.5 / CB88)
3 @ 23'	11" seat	3 3/16"	2,368	17,799	20,167	SpotFtg Bm #1-3 (8x8 post (max 10 ft, 38%): CCQ98SDS2.5 / CB88)
4 @ 35'	8 1/2" seat	1 5/16"	892	6,727	7,619	SpotFtg Bm #1-4 (8x8 post (max 10 ft, 75%): ECCQ98SDS2.5 / ABU88Z)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	12' o/c	governs C_L here: the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 35'	N/A	26.9	--	
1 - Uniform (PLF)	0 to 11' 6"	N/A	181.8	1,604	Linked from: Trusses #4 , Support 2
2 - Uniform (PLF)	11' 6" to 35'	N/A	157.1	1,386	Linked from: Trusses #5 , Support 2

Shear, Moment and Deflection



Beam #2

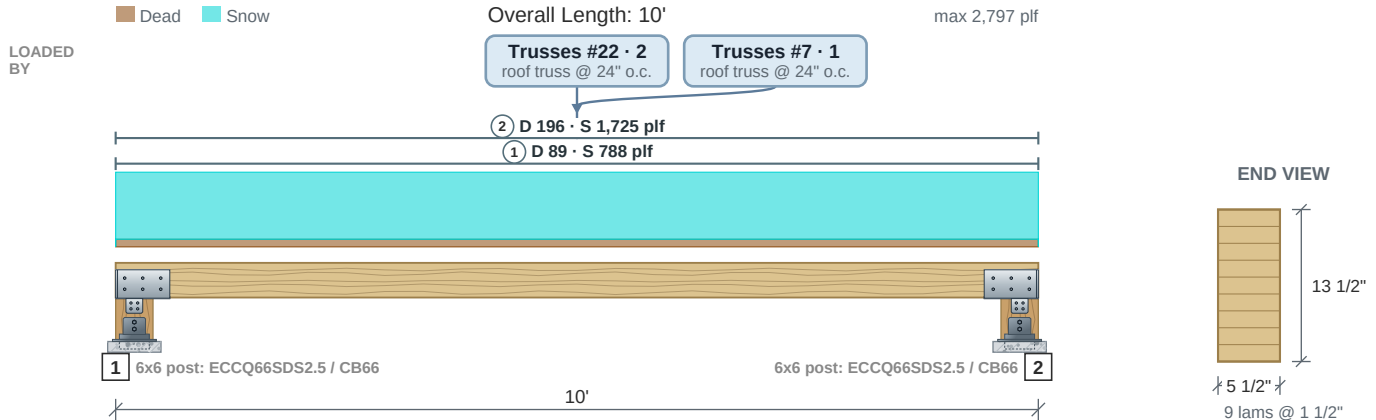
(1) 5 1/2" x 13 1/2" 24F-1.8E 24F-V4 DF/DF Glulam

Level: Roof | Member type: Beam (Roof Beam) | Length: 10' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 93% used

Section adequacy 6.7% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	14,071 @ 0	30,388 (8 1/2")	Passed (46%)	--	
Shear (lbs)	14,071 @ 0	15,088	Passed (93%)	1.15	D+S
Moment (Ft-lbs)	35,176 @ 5'	38,424	Passed (92%)	1.15	D+S
Live Load Defl. (in)	0.279 @ 5'	0.5	Passed (L/431)	--	S
Total Load Defl. (in)	0.312 @ 5'	0.667	Passed (L/385)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/480; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Unbalanced glulam layup: install with the tension laminations at the bottom, proper side up as marked by the manufacturer.
- Member self weight of 16.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

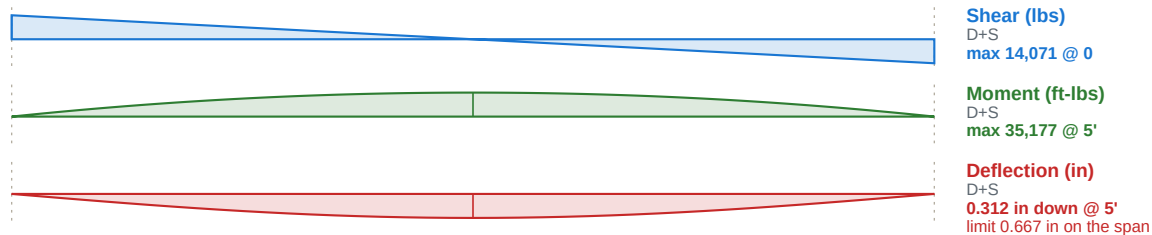
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	8 1/2" seat	3 15/16"	1,508	12,562	14,071	SpotFtg Bm #2-1 (6x6 post (max 10 ft, 16%): ECCQ66SDS2.5 / CB66)
2 @ 10'	8 1/2" seat	3 15/16"	1,508	12,562	14,071	SpotFtg Bm #2-2 (6x6 post (max 10 ft, 16%): ECCQ66SDS2.5 / CB66)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	10' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 10'	N/A	16.9	--	
1 - Uniform (PLF)	0 to 10'	N/A	89.2	787.5	Linked from: Trusses #22, Support 2
2 - Uniform (PLF)	0 to 10'	N/A	195.5	1,725	Linked from: Trusses #7, Support 1

Shear, Moment and Deflection



Beam #3

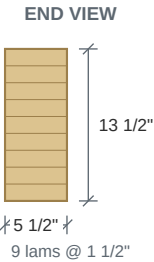
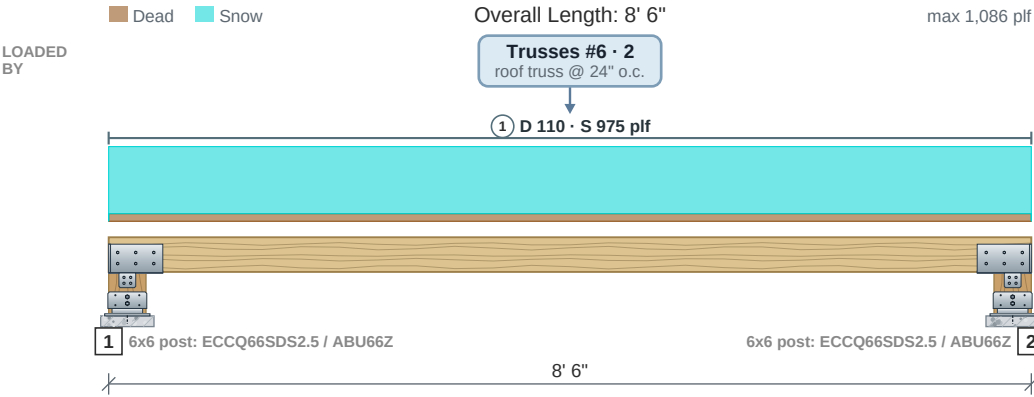
(1) 5 1/2" x 13 1/2" 24F-1.8E 24F-V4 DF/DF Glulam

Level: Roof | Member type: Beam (Roof Beam) | Length: 8' 6" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 31% used

Section adequacy 68.9% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	4,685 @ 0	30,388 (8 1/2")	Passed (15%)	--	
Shear (lbs)	4,685 @ 0	15,088	Passed (31%)	1.15	D+S
Moment (Ft-lbs)	9,956 @ 4' 3"	38,424	Passed (26%)	1.15	D+S
Live Load Defl. (in)	0.056 @ 4' 3"	0.425	Passed (L/1,808)	--	S
Total Load Defl. (in)	0.064 @ 4' 3"	0.567	Passed (L/1,599)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Unbalanced glulam layup: install with the tension laminations at the bottom, proper side up as marked by the manufacturer.
- Member self weight of 16.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

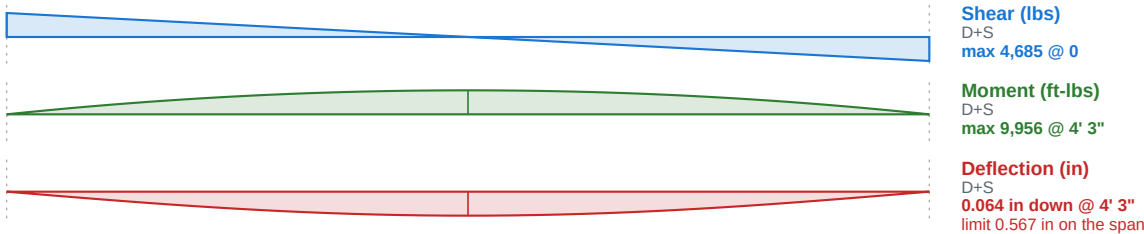
	Bearing Length		Loads to Supports (lbs)			
Supports	Provided	Required	Dead	Snow	Total	Load goes to
1 @ 0	8 1/2" seat	1 5/16"	542	4,144	4,685	SpotFtg Bm #3-1 (6x6 post (max 10 ft, 72%): ECCQ66SDS2.5 / ABU66Z)
2 @ 8' 6"	8 1/2" seat	1 5/16"	542	4,144	4,685	SpotFtg Bm #3-2 (6x6 post (max 10 ft, 72%): ECCQ66SDS2.5 / ABU66Z)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	8' 6" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 8' 6"	N/A	16.9	--	
1 - Uniform (PLF)	0 to 8' 6"	N/A	110.5	975	Linked from: Trusses #6, Support 2

Shear, Moment and Deflection



Beam #4

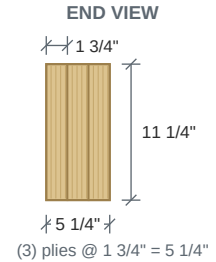
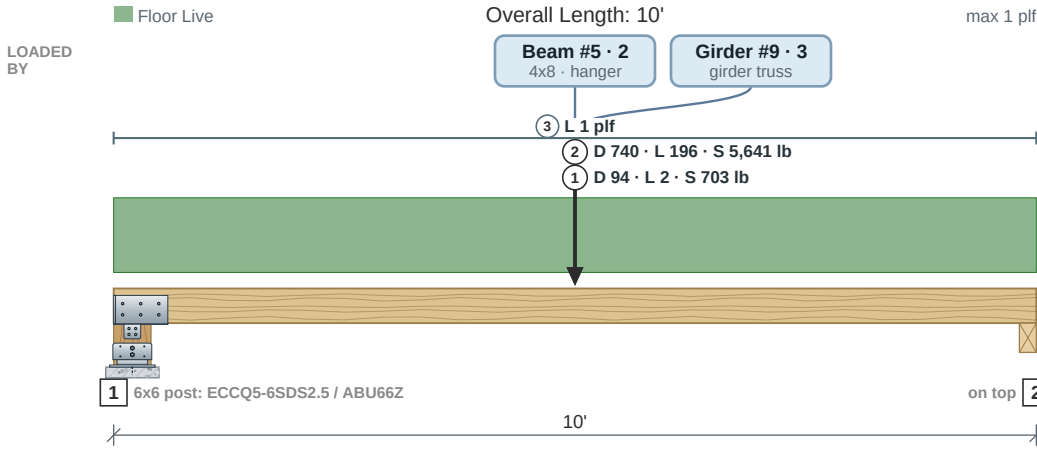
(3) 1 3/4" x 11 1/4" 2.0E Microlam LVL (Weyerhaeuser)

Level: Floor - 2nd Level | Member type: Beam (Roof Beam) | Length: 10' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Moment 65% used

Section adequacy 34.8% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	3,675 @ 10'	21,656 (5 1/2")	Passed (17%)	--	
Shear (lbs)	3,675 @ 0	12,907	Passed (28%)	1.15	D+S
Moment (Ft-lbs)	18,160 @ 5'	27,837	Passed (65%)	1.15	D+S
Live Load Defl. (in)	0.214 @ 5'	0.5	Passed (L/560)	--	S
Total Load Defl. (in)	0.246 @ 5'	0.667	Passed (L/488)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CV = 1.009, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 17.2 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser ICC-ES ESR-1387, ASD, every load combination with its own load duration factor.

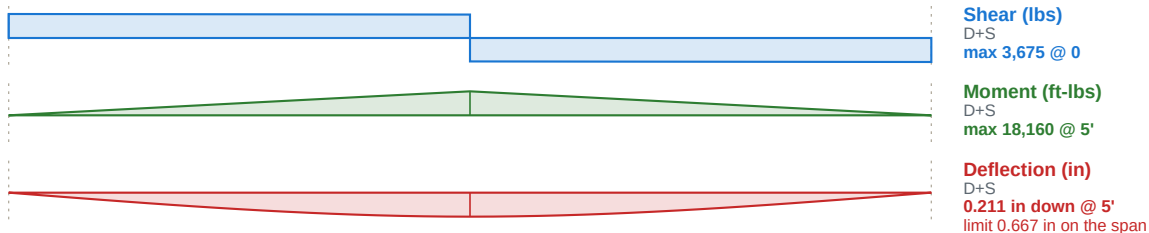
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Floor Live	Snow	Total	
1 @ 0	8 1/2" seat	15/16"	503	104	3,172	3,675	SpotFtg Bm #4-1 (6x6 post (max 10 ft, 78%): ECCQ5-6SDS2.5 / ABU66Z)
2 @ 10'	5 1/2"	15/16"	503	104	3,172	3,675	Header #16 (bears on top)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	10' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 10'	N/A	17.2	--	--	
1 - Point (lb)	5'	N/A	94.1	2.5	703.1	Linked from: Beam #5, Support 2
2 - Point (lb)	5'	N/A	740	195.8	5,641	Linked from: Girder #9, Support 3
3 - Uniform (PLF)	0 to 10'	N/A	--	1	--	

Shear, Moment and Deflection



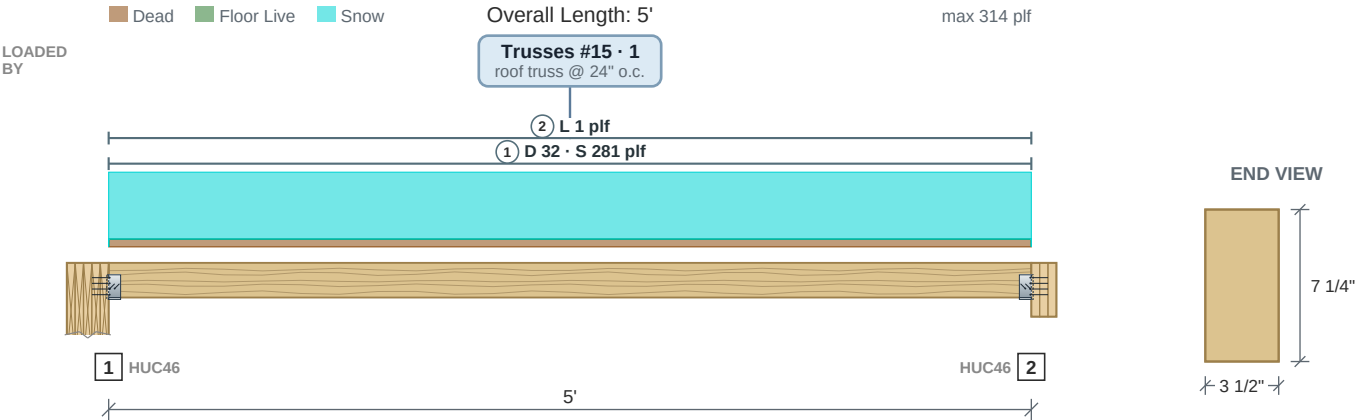
Beam #5

(1) 4x8 DF-L No. 2 (3 1/2" x 7 1/4")

Level: Floor - 2nd Level | Member type: Beam (Roof Beam) | Length: 5' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Moment 29% used
Section adequacy 71% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	797 @ 0	5,469 (2 1/2")	Passed (15%)	--	
Shear (lbs)	797 @ 0	3,502	Passed (23%)	1.15	D+S
Moment (Ft-lbs)	996 @ 2' 6"	3,438	Passed (29%)	1.15	D+S
Live Load Defl. (in)	0.022 @ 2' 6"	0.25	Passed (L/2,698)	--	S
Total Load Defl. (in)	0.025 @ 2' 6"	0.333	Passed (L/2,379)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CF = 1.30, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 5.8 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

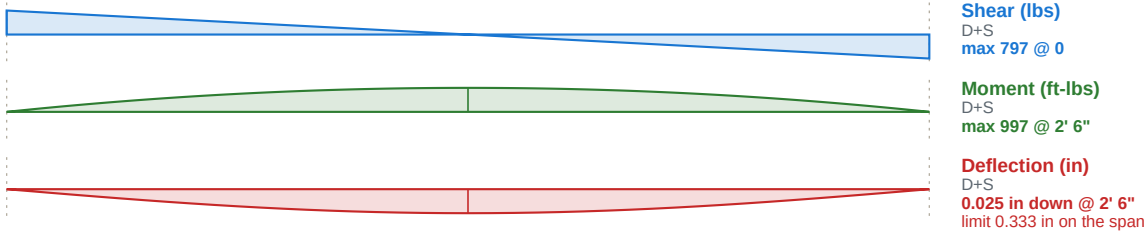
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Floor Live	Snow	Total	
1 @ 0	2 1/2" seat	3/8"	94	2	703	797	Girder #5 (flush, in an HUC46 concealed flanges, 59%)
2 @ 5'	2 1/2" seat	3/8"	94	2	703	797	Beam #4 (flush, in an HUC46 concealed flanges, 59%)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	5' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 5'	N/A	5.8	--	--	
1 - Uniform (PLF)	0 to 5'	N/A	31.9	--	281.2	Linked from: Trusses #15, Support 1
2 - Uniform (PLF)	0 to 5'	N/A	--	1	--	

Shear, Moment and Deflection



Beam #6

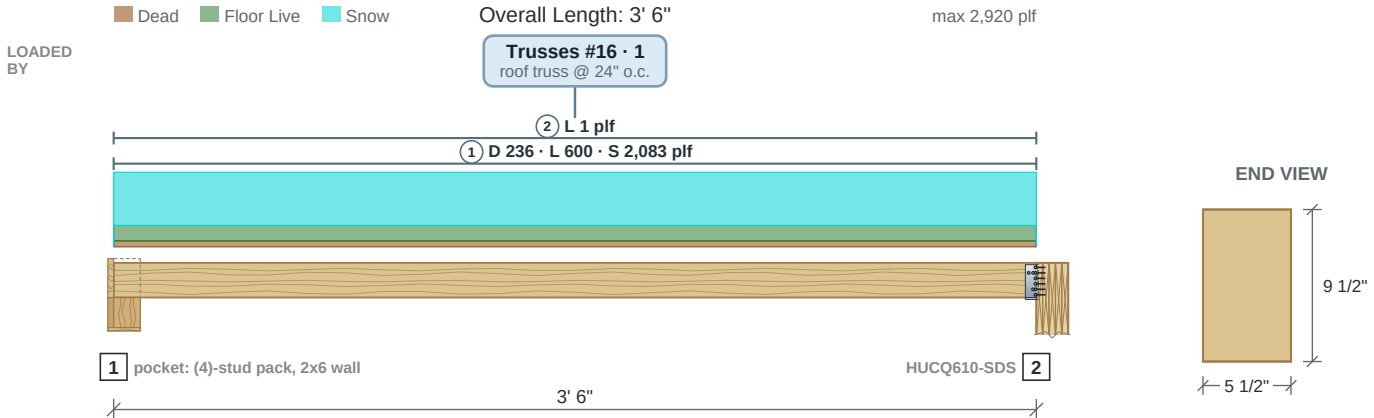
(1) 6x10 DF-L No. 2 (5 1/2" x 9 1/2")

Level: Floor - 2nd Level | Member type: Beam (Roof Beam) | Length: 3' 6" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 60% used

Section adequacy 40.1% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	4,080 @ 3' 6"	10,312 (3")	Passed (40%)	--	
Plate Bearing (psi)	135 @ 0	668 (2x6 wall, DF-L #2)	Passed (20%)	--	
Shear (lbs)	4,080 @ 0	6,810	Passed (60%)	1.15	D+S
Moment (Ft-lbs)	3,570 @ 1' 9"	6,937	Passed (51%)	1.15	D+S
Live Load Defl. (in)	0.014 @ 1' 9"	0.175	Passed (L/3,050)	--	S
Total Load Defl. (in)	0.015 @ 1' 9"	0.233	Passed (L/2,726)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 11.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

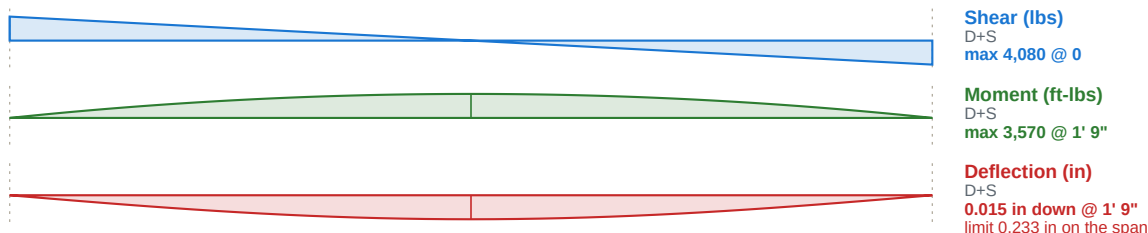
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Floor Live	Snow	Total	
1 @ 0	5 1/2"	1 3/16"	434	1,052	3,646	4,080	SpotFtg Bm #6-1 (in a beam pocket in a 2x6 stud wall 10 ft tall (the default), on a (4)-stud pack -- no post cap)
2 @ 3' 6"	3" seat	1 3/16"	434	1,052	3,646	4,080	Girder #5 (flush, in an HUCQ610-SDS concealed flanges, 79%)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' 6" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3' 6"	N/A	11.9	--	--	
1 - Uniform (PLF)	0 to 3' 6"	N/A	236.1	600	2,083	Linked from: Trusses #16, Support 1
2 - Uniform (PLF)	0 to 3' 6"	N/A	--	1	--	

Shear, Moment and Deflection



Beam #7

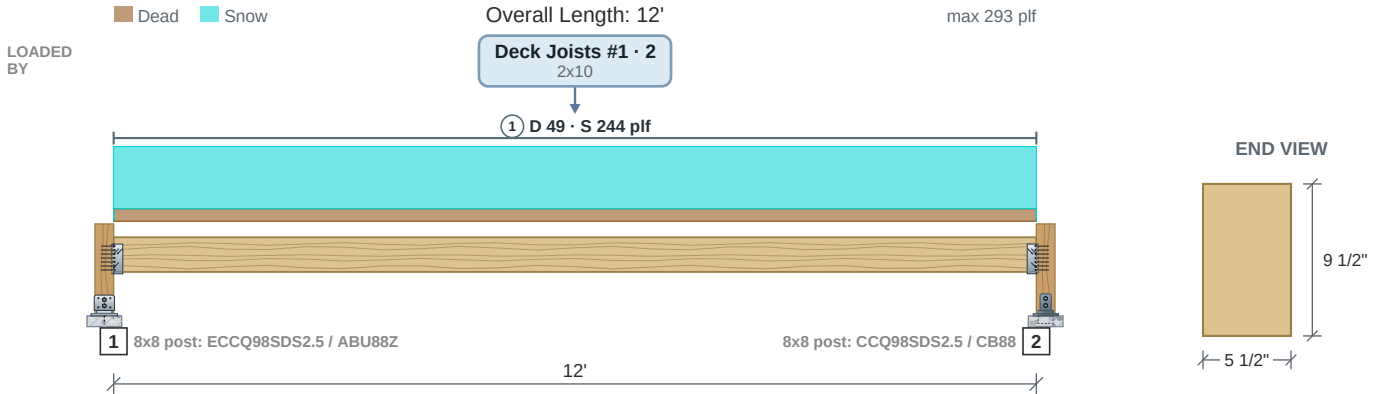
(1) 6x10 DF-L No. 2 (5 1/2" x 9 1/2")

Level: Floor - 1st Level | Member type: Beam (Roof Beam) | Length: 12' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Moment 79% used

Section adequacy 20.9% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,828 @ 0	8,594 (2 1/2")	Passed (21%)	--	
Shear (lbs)	1,828 @ 0	6,810	Passed (27%)	1.15	D+S
Moment (Ft-lbs)	5,486 @ 6'	6,937	Passed (79%)	1.15	D+S
Live Load Defl. (in)	0.223 @ 6'	0.6	Passed (L/647)	--	S
Total Load Defl. (in)	0.278 @ 6'	0.8	Passed (L/517)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 11.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

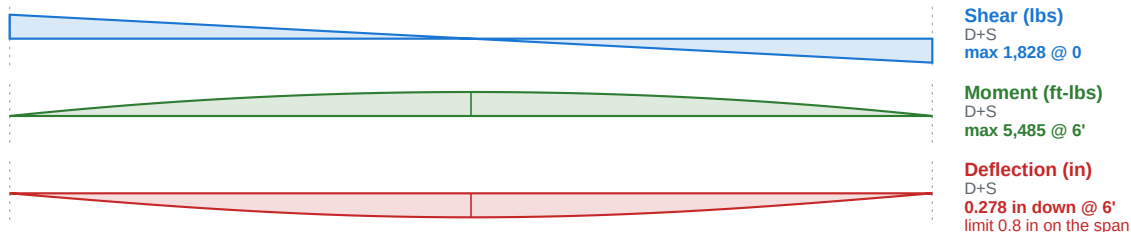
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	2 1/2" seat	1/2"	366	1,462	1,828	SpotFtg Bm #1-1 (hung on the post's face, in an HUC610 concealed flanges, 78%)
2 @ 12'	2 1/2" seat	1/2"	366	1,462	1,828	SpotFtg Bm #1-2 (hung on the post's face, in an HUC610 concealed flanges, 78%)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	12' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 12'	N/A	11.9	--	
1 - Uniform (PLF)	0 to 12'	N/A	49.1	243.8	Linked from: Deck Joists #1 , Support 2

Shear, Moment and Deflection



Beam #8

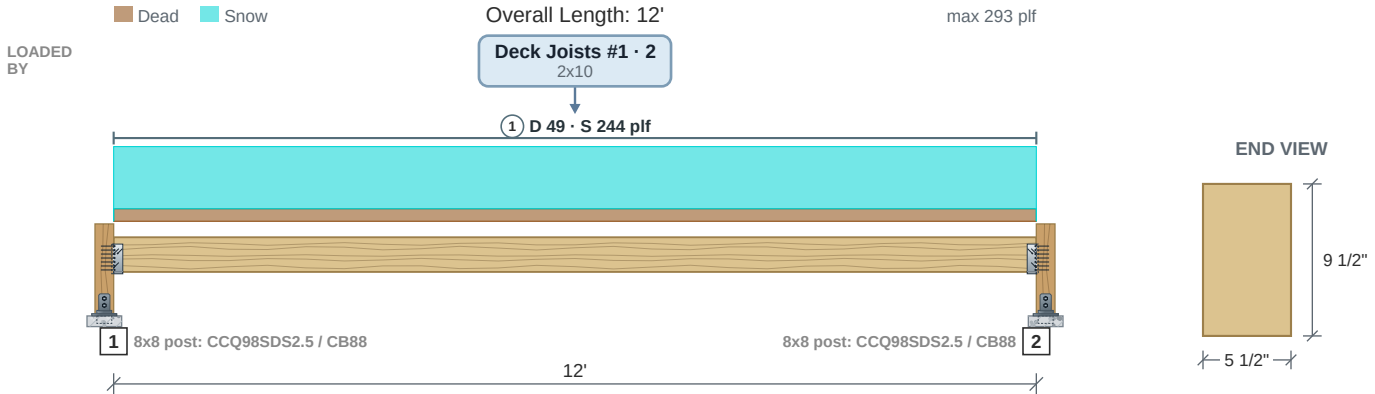
(1) 6x10 DF-L No. 2 (5 1/2" x 9 1/2")

Level: Floor - 1st Level | Member type: Beam (Roof Beam) | Length: 12' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Moment 79% used

Section adequacy 20.9% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,828 @ 0	8,594 (2 1/2")	Passed (21%)	--	
Shear (lbs)	1,828 @ 0	6,810	Passed (27%)	1.15	D+S
Moment (Ft-lbs)	5,486 @ 6'	6,937	Passed (79%)	1.15	D+S
Live Load Defl. (in)	0.223 @ 6'	0.6	Passed (L/647)	--	S
Total Load Defl. (in)	0.278 @ 6'	0.8	Passed (L/517)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 11.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

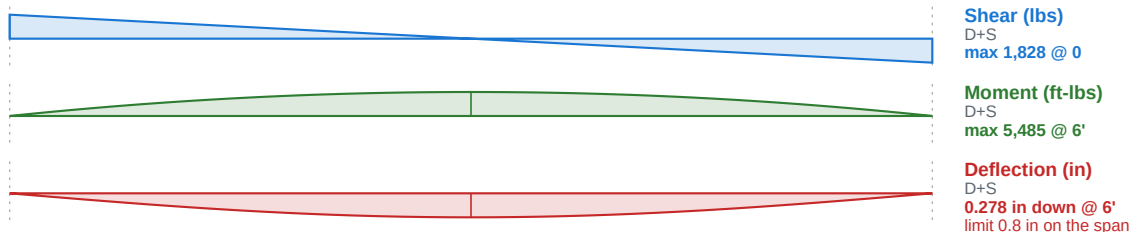
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	2 1/2" seat	1/2"	366	1,462	1,828	SpotFtg Bm #1-2 (hung on the post's face, in an HUC610 concealed flanges, 78%)
2 @ 12'	2 1/2" seat	1/2"	366	1,462	1,828	SpotFtg Bm #1-3 (hung on the post's face, in an HUC610 concealed flanges, 78%)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	12' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 12'	N/A	11.9	--	
1 - Uniform (PLF)	0 to 12'	N/A	49.1	243.8	Linked from: Deck Joists #1, Support 2

Shear, Moment and Deflection



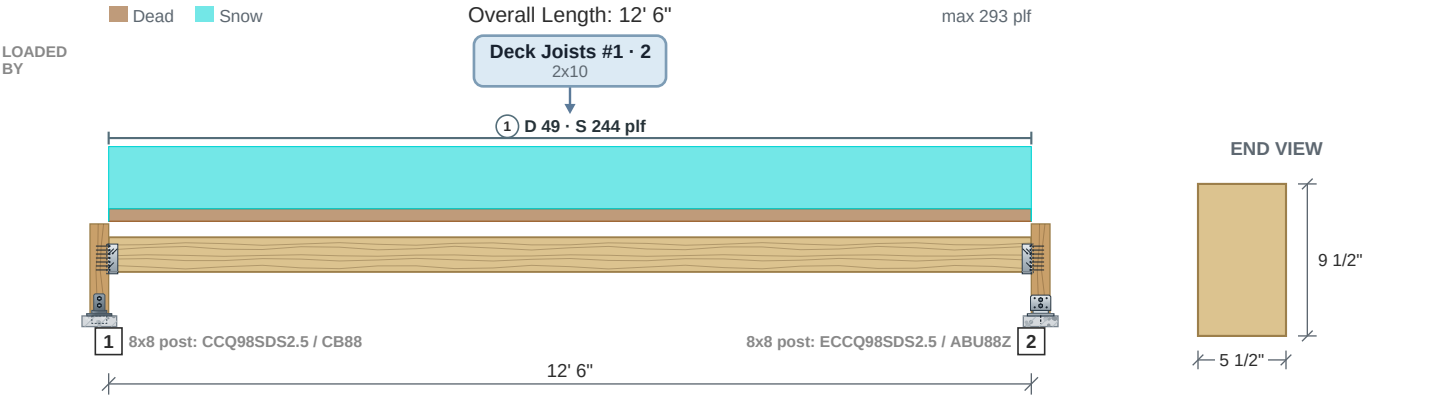
Beam #9

(1) 6x10 DF-L No. 2 (5 1/2" x 9 1/2")

Level: Floor - 1st Level | Member type: Beam (Roof Beam) | Length: 12' 6" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Moment 86% used
Section adequacy 14.2% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,905 @ 0	8,594 (2 1/2")	Passed (22%)	--	
Shear (lbs)	1,905 @ 0	6,810	Passed (28%)	1.15	D+S
Moment (Ft-lbs)	5,952 @ 6' 3"	6,937	Passed (86%)	1.15	D+S
Live Load Defl. (in)	0.262 @ 6' 3"	0.625	Passed (L/572)	--	S
Total Load Defl. (in)	0.328 @ 6' 3"	0.833	Passed (L/458)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 11.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

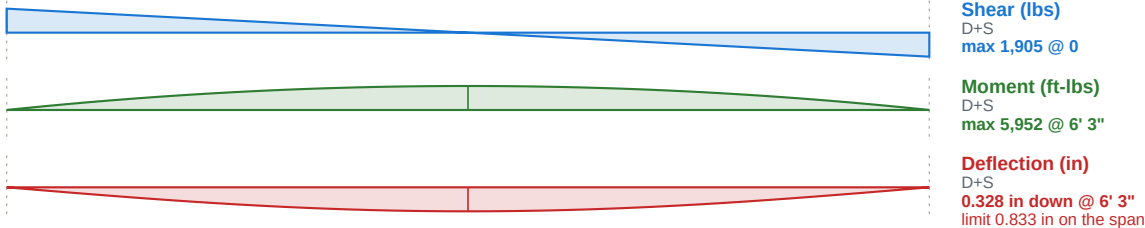
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	2 1/2" seat	9/16"	381	1,523	1,905	SpotFtg Bm #1-3 (hung on the post's face, in an HUC610 concealed flanges, 81%)
2 @ 12' 6"	2 1/2" seat	9/16"	381	1,523	1,905	SpotFtg Bm #1-4 (hung on the post's face, in an HUC610 concealed flanges, 81%)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	12' 6" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 12' 6"	N/A	11.9	--	
1 - Uniform (PLF)	0 to 12' 6"	N/A	49.1	243.8	Linked from: Deck Joists #1, Support 2

Shear, Moment and Deflection



Beam #10

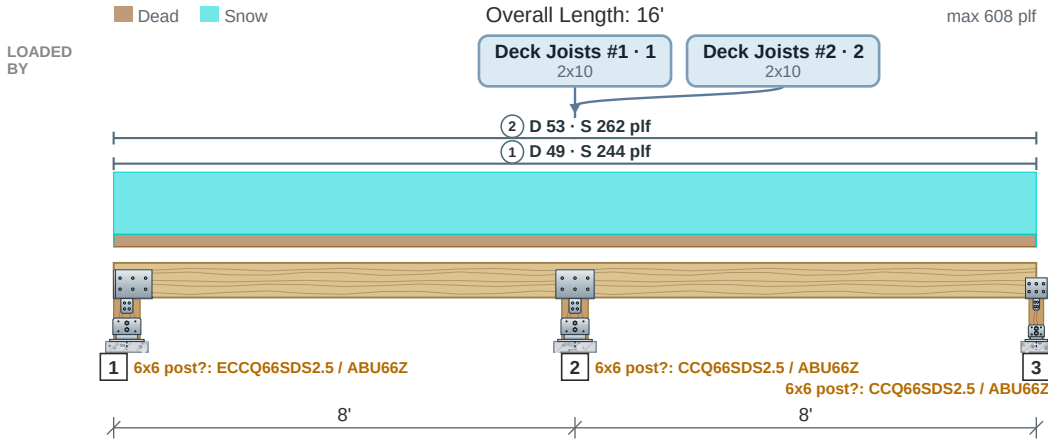
(1) 6x10 DF-L No. 2 (5 1/2" x 9 1/2")

Level: Floor - 1st Level | Member type: Beam (Roof Beam) | Length: 16' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Moment 72% used

Section adequacy 28.1% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	6,201 @ 8'	37,812 (11")	Passed (16%)	--	
Shear (lbs)	3,101 @ 8'	6,810	Passed (46%)	1.15	D+S
Neg Moment (Ft-lbs)	-4,961 @ 8'	6,898	Passed (72%)	1.15	D+S
Live Load Defl. (in)	0.038 @ 12' 9 5/8"	0.4	Passed (L/2,535)	--	S
Total Load Defl. (in)	0.046 @ 12' 9 5/8"	0.533	Passed (L/2,069)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 0.994 (D+S).
- Beam stability (NDS 3.3.3) governs bending: negative moment 4961 lbf-ft, 0.00-8.00 ft, CL 0.994 (unbraced 8.0 ft).
- Member self weight of 11.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

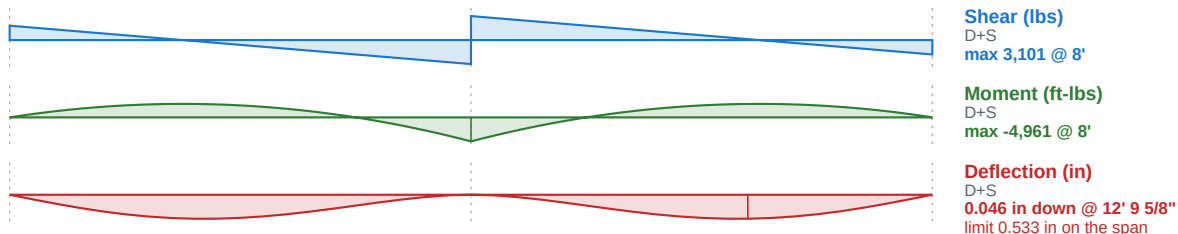
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	8 1/2" seat	9/16"	342	1,519	1,860	SpotFtg Bm #10-1 (6x6 post? (max 10 ft, 89%): ECCQ66SDS2.5 / ABU66Z)
2 @ 8'	11" seat	1 7/16"	1,139	5,062	6,201	SpotFtg Bm #10-2 (6x6 post? (max 10 ft, 63%): CCQ66SDS2.5 / ABU66Z)
3 @ 16'	5 1/2" seat	9/16"	342	1,519	1,860	SpotFtg Bm #10-3 (6x6 post? (max 10 ft, 78%): CCQ66SDS2.5 / ABU66Z)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	8' o/c	governs C_L here: the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 16'	N/A	11.9	--	
1 - Uniform (PLF)	0 to 16'	N/A	49.1	243.8	Linked from: Deck Joists #1, Support 1
2 - Uniform (PLF)	0 to 16'	N/A	52.9	262.5	Linked from: Deck Joists #2, Support 2

Shear, Moment and Deflection



Beam #11

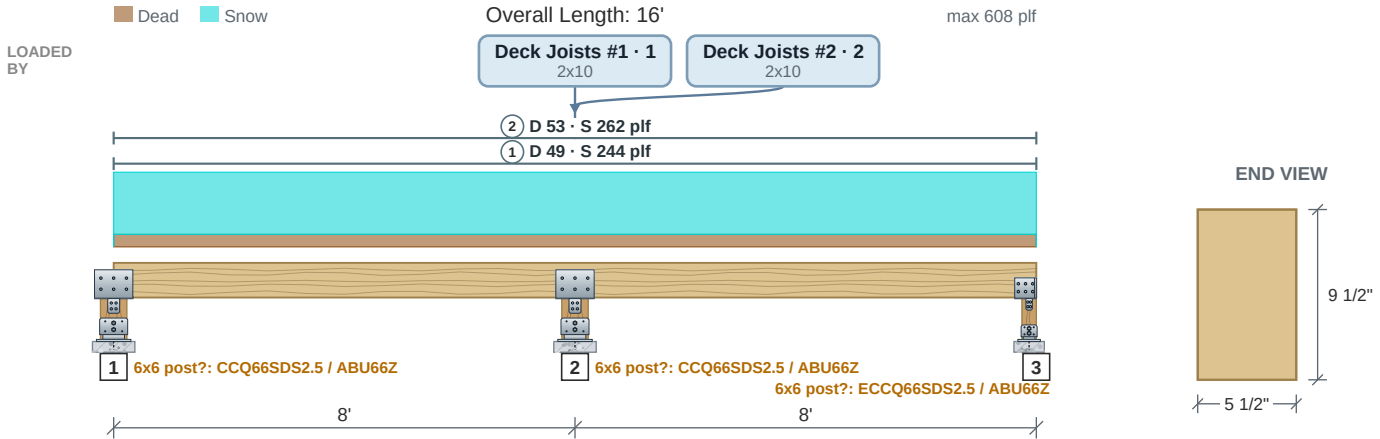
(1) 6x10 DF-L No. 2 (5 1/2" x 9 1/2")

Level: Floor - 1st Level | Member type: Beam (Roof Beam) | Length: 16' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Moment 72% used

Section adequacy 28.1% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	6,201 @ 8'	37,812 (11")	Passed (16%)	--	
Shear (lbs)	3,101 @ 8'	6,810	Passed (46%)	1.15	D+S
Neg Moment (Ft-lbs)	-4,961 @ 8'	6,898	Passed (72%)	1.15	D+S
Live Load Defl. (in)	0.038 @ 12' 9 5/8"	0.4	Passed (L/2,535)	--	S
Total Load Defl. (in)	0.046 @ 12' 9 5/8"	0.533	Passed (L/2,069)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 0.994 (D+S).
- Beam stability (NDS 3.3.3) governs bending: negative moment 4961 lbf-ft, 0.00-8.00 ft, CL 0.994 (unbraced 8.0 ft).
- Member self weight of 11.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

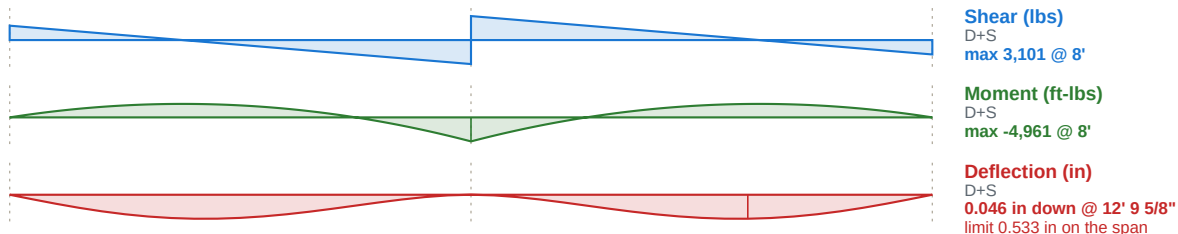
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	5 1/2" seat	9/16"	342	1,519	1,860	SpotFtg Bm #10-3 (6x6 post? (max 10 ft, 78%): CCQ66SDS2.5 / ABU66Z)
2 @ 8'	11" seat	1 7/16"	1,139	5,062	6,201	SpotFtg Bm #11-2 (6x6 post? (max 10 ft, 63%): CCQ66SDS2.5 / ABU66Z)
3 @ 16'	8 1/2" seat	9/16"	342	1,519	1,860	SpotFtg Bm #11-3 (6x6 post? (max 10 ft, 89%): ECCQ66SDS2.5 / ABU66Z)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	8' o/c	governs C_L here: the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 16'	N/A	11.9	--	
1 - Uniform (PLF)	0 to 16'	N/A	49.1	243.8	Linked from: Deck Joists #1, Support 1
2 - Uniform (PLF)	0 to 16'	N/A	52.9	262.5	Linked from: Deck Joists #2, Support 2

Shear, Moment and Deflection



Beam #12

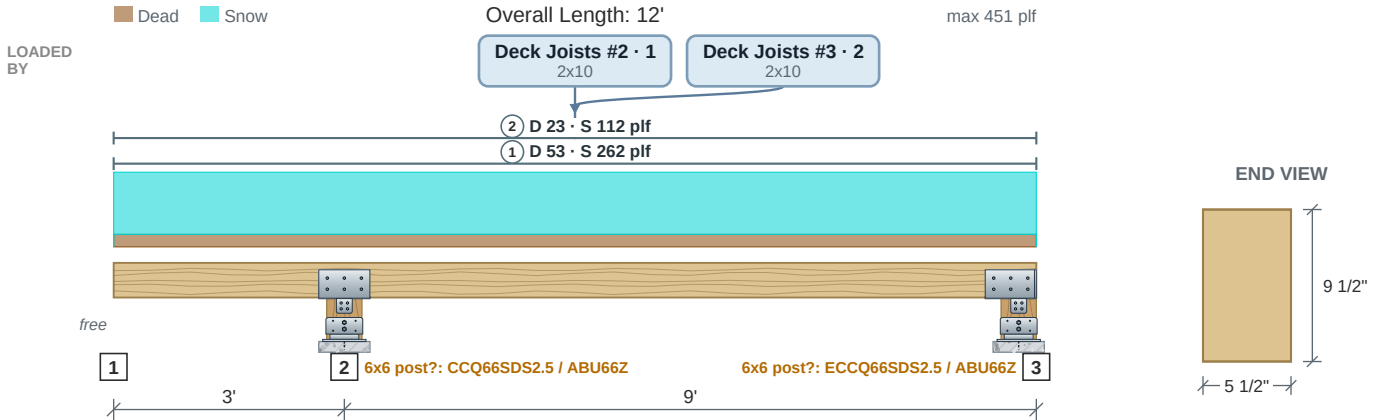
(1) 6x10 DF-L No. 2 (5 1/2" x 9 1/2")

Level: Floor - 1st Level | Member type: Beam (Roof Beam) | Length: 12' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Moment 53% used

Section adequacy 46.7% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	3,699 @ 3'	37,812 (11")	Passed (10%)	--	
Shear (lbs)	2,312 @ 3'	6,810	Passed (34%)	1.15	D+S
Moment (Ft-lbs)	3,699 @ 7' 11 3/4"	6,937	Passed (53%)	1.15	D+S
Live Load Defl. (in)	0.08 @ 7' 9 5/8"	0.45	Passed (L/1,356)	--	S
Total Load Defl. (in)	0.098 @ 7' 9 5/8"	0.6	Passed (L/1,099)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Overhang deflection criteria: LL (2L/360) and TL (2L/180) -- a cantilever is limited on twice its length.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 11.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

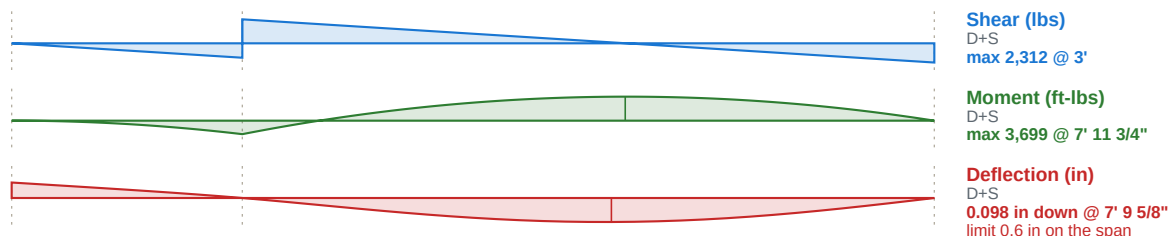
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	--	--	--	--	--	free end (cantilever tip)
2 @ 3'	11" seat	11/16"	699	3,000	3,699	SpotFtg Bm #12-1 (6x6 post? (max 10 ft, 78%): CCQ66SDS2.5 / ABU66Z)
3 @ 12'	8 1/2" seat	9/16"	350	1,500	1,850	SpotFtg Bm #12-2 (6x6 post? (max 10 ft, 89%): ECCQ66SDS2.5 / ABU66Z)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	9' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 12'	N/A	11.9	--	
1 - Uniform (PLF)	0 to 12'	N/A	52.9	262.5	Linked from: Deck Joists #2, Support 1
2 - Uniform (PLF)	0 to 12'	N/A	22.7	112.5	Linked from: Deck Joists #3, Support 2

Shear, Moment and Deflection



Beam #13

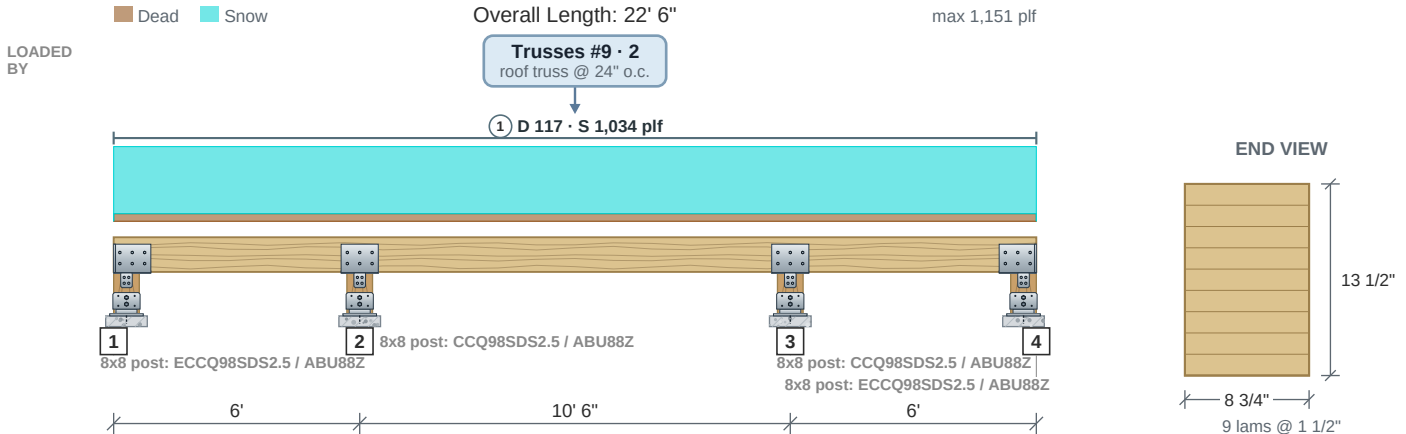
(1) 8 3/4" x 13 1/2" 24F-1.8E 24F-V4 DF/DF Glulam

Level: Roof | Member type: Beam (Roof Beam) | Length: 22' 6" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 26% used

Section adequacy 74.2% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	11,265 @ 6'	62,562 (11")	Passed (18%)	--	
Shear (lbs)	6,183 @ 6'	24,003	Passed (26%)	1.15	D+S
Neg Moment (Ft-lbs)	-9,296 @ 6'	43,841	Passed (21%)	1.15	D+S
Live Load Defl. (in)	0.027 @ 11' 6 5/16"	0.525	Passed (L/4,626)	--	S
Total Load Defl. (in)	0.031 @ 11' 6 5/16"	0.7	Passed (L/4,060)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CV = 0.93, CL = 0.997 (D+S).
- Beam stability (NDS 3.3.3) governs bending: negative moment 9297 lbf-ft, 0.00-6.00 ft, CL 0.997 (unbraced 6.0 ft).
- Unbalanced glulam layup: install with the tension laminations at the bottom, proper side up as marked by the manufacturer.
- Member self weight of 26.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

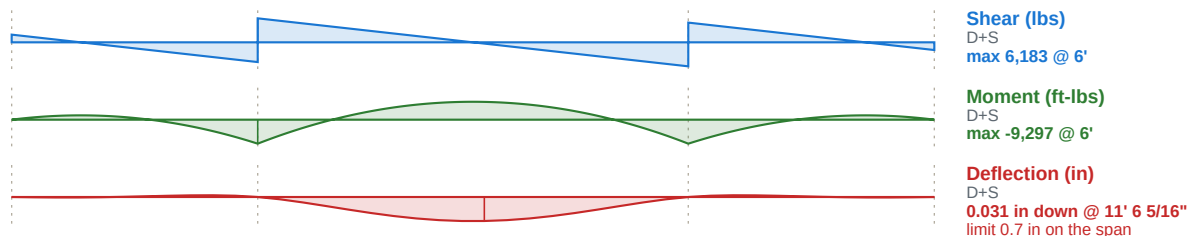
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	8 1/2" seat	3/8"	243	1,741	1,983	SpotFtg Bm #13-1 (8x8 post (max 10 ft, 91%): ECCQ98SDS2.5 / ABU88Z)
2 @ 6'	11" seat	1 5/8"	1,378	9,887	11,265	SpotFtg Bm #13-2 (8x8 post (max 10 ft, 62%): CCQ98SDS2.5 / ABU88Z)
3 @ 16' 6"	11" seat	1 5/8"	1,378	9,887	11,265	SpotFtg Bm #13-3 (8x8 post (max 10 ft, 62%): CCQ98SDS2.5 / ABU88Z)
4 @ 22' 6"	8 1/2" seat	3/8"	243	1,741	1,983	SpotFtg Bm #13-4 (8x8 post (max 10 ft, 91%): ECCQ98SDS2.5 / ABU88Z)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	10' 6" o/c	governs C_L here: the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 22' 6"	N/A	26.9	--	
1 - Uniform (PLF)	0 to 22' 6"	N/A	117.1	1,034	Linked from: Trusses #9, Support 2

Shear, Moment and Deflection



Beam #14

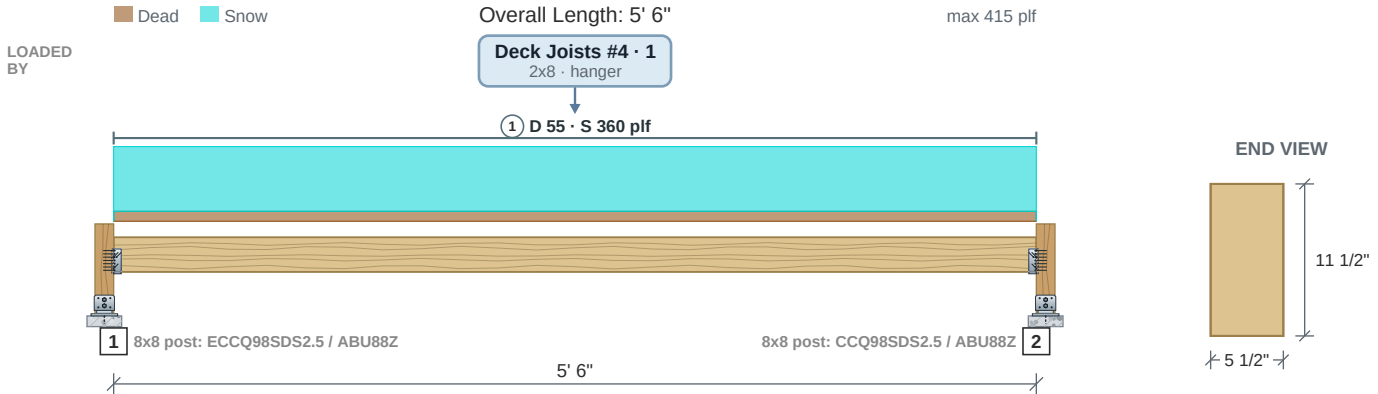
(1) 6x12 DF-L No. 2 (5 1/2" x 11 1/2")

Level: Floor - 1st Level | Member type: Beam (Roof Beam) | Length: 5' 6" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Moment 16% used

Section adequacy 84% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,182 @ 0	8,594 (2 1/2")	Passed (14%)	--	
Shear (lbs)	1,182 @ 0	8,244	Passed (14%)	1.15	D+S
Moment (Ft-lbs)	1,624 @ 2' 9"	10,165	Passed (16%)	1.15	D+S
Live Load Defl. (in)	0.008 @ 2' 9"	0.275	Passed (L/8,069)	--	S
Total Load Defl. (in)	0.01 @ 2' 9"	0.367	Passed (L/6,760)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 14.4 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

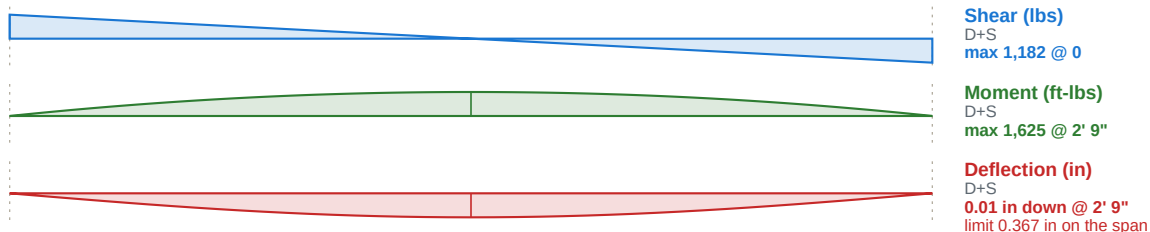
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	2 1/2" seat	5/16"	192	990	1,182	SpotFtg Bm #13-1 (hung on the post's face, in an HUC610 concealed flanges, 50%)
2 @ 5' 6"	2 1/2" seat	5/16"	192	990	1,182	SpotFtg Bm #13-2 (hung on the post's face, in an HUC610 concealed flanges, 50%)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	5' 6" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 5' 6"	N/A	14.4	--	
1 - Uniform (PLF)	0 to 5' 6"	N/A	55.3	360	Linked from: Deck Joists #4, Support 1

Shear, Moment and Deflection



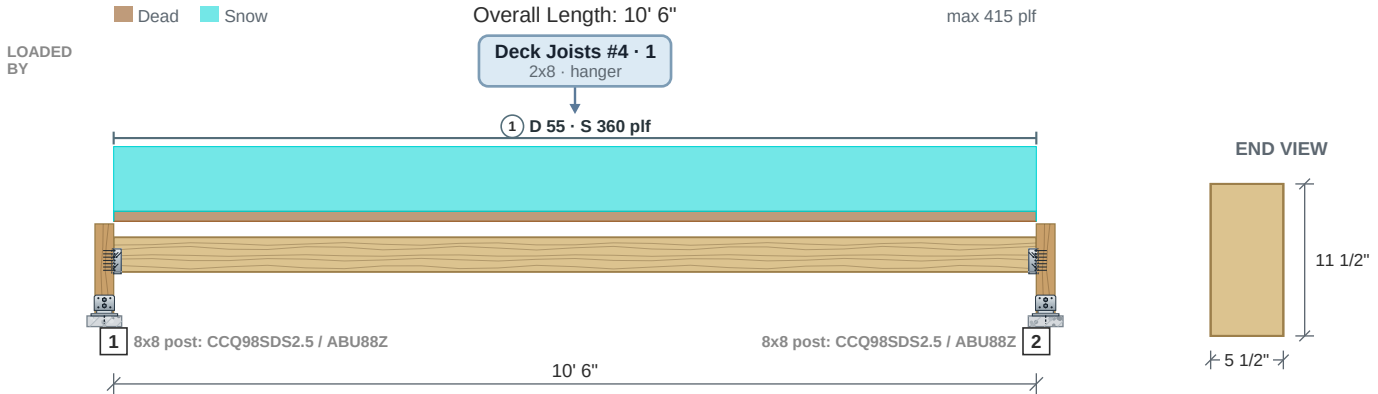
Beam #15

(1) 6x12 DF-L No. 2 (5 1/2" x 11 1/2")

Level: Floor - 1st Level | Member type: Beam (Roof Beam) | Length: 10' 6" | 2018 IRC | 2018 NDS | ASD

PASSED
Controls: Moment 58% used

Section adequacy 41.7% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	2,256 @ 0	8,594 (2 1/2")	Passed (26%)	--	
Shear (lbs)	2,256 @ 0	8,244	Passed (27%)	1.15	D+S
Moment (Ft-lbs)	5,922 @ 5' 3"	10,165	Passed (58%)	1.15	D+S
Live Load Defl. (in)	0.109 @ 5' 3"	0.525	Passed (L/1,160)	--	S
Total Load Defl. (in)	0.13 @ 5' 3"	0.7	Passed (L/972)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 14.4 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

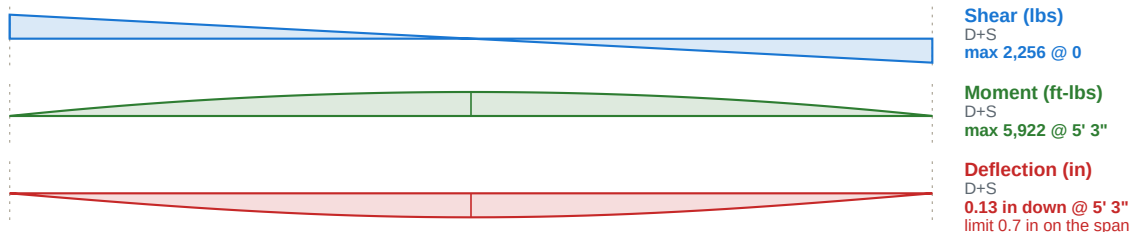
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	2 1/2" seat	11/16"	366	1,890	2,256	SpotFtg Bm #13-2 (hung on the post's face, in an HUC610 concealed flanges, 96%)
2 @ 10' 6"	2 1/2" seat	11/16"	366	1,890	2,256	SpotFtg Bm #13-3 (hung on the post's face, in an HUC610 concealed flanges, 96%)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	10' 6" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 10' 6"	N/A	14.4	--	
1 - Uniform (PLF)	0 to 10' 6"	N/A	55.3	360	Linked from: Deck Joists #4 , Support 1

Shear, Moment and Deflection

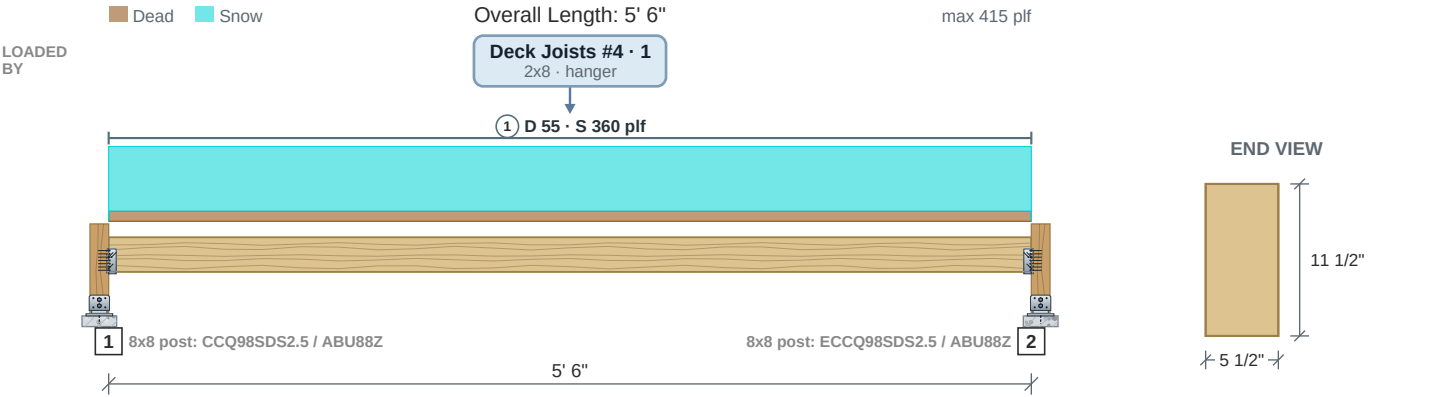


Beam #16

(1) 6x12 DF-L No. 2 (5 1/2" x 11 1/2")

Level: Floor - 1st Level | Member type: Beam (Roof Beam) | Length: 5' 6" | 2018 IRC | 2018 NDS | ASD

Controls: Moment 16% used
Section adequacy 84% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,182 @ 0	8,594 (2 1/2")	Passed (14%)	--	
Shear (lbs)	1,182 @ 0	8,244	Passed (14%)	1.15	D+S
Moment (Ft-lbs)	1,624 @ 2' 9"	10,165	Passed (16%)	1.15	D+S
Live Load Defl. (in)	0.008 @ 2' 9"	0.275	Passed (L/8,069)	--	S
Total Load Defl. (in)	0.01 @ 2' 9"	0.367	Passed (L/6,760)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 14.4 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

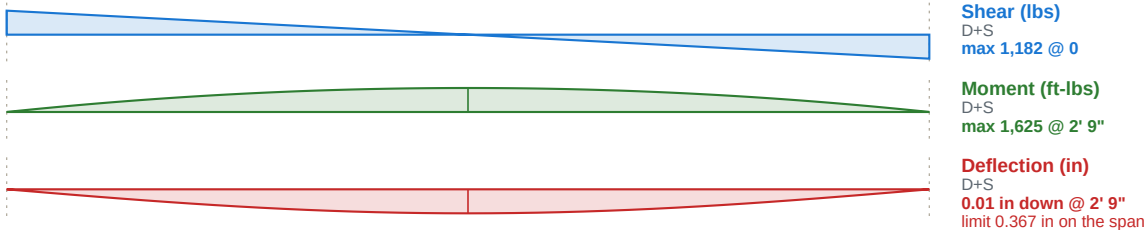
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	2 1/2" seat	5/16"	192	990	1,182	SpotFtg Bm #13-3 (hung on the post's face, in an HUC610 concealed flanges, 50%)
2 @ 5' 6"	2 1/2" seat	5/16"	192	990	1,182	SpotFtg Bm #13-4 (hung on the post's face, in an HUC610 concealed flanges, 50%)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	5' 6" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 5' 6"	N/A	14.4	--	
1 - Uniform (PLF)	0 to 5' 6"	N/A	55.3	360	Linked from: Deck Joists #4, Support 1

Shear, Moment and Deflection



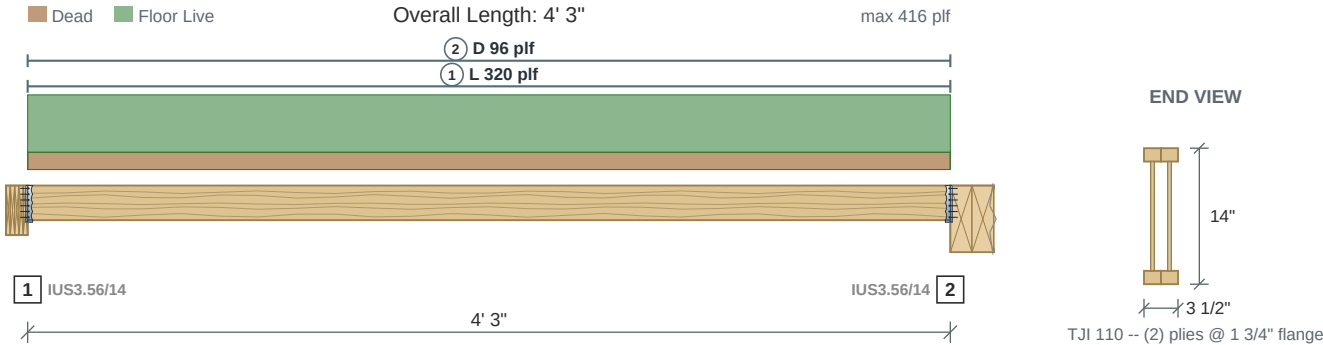
Beam #17

(2) 14" Weyerhaeuser TJI 110

Level: Floor - 2nd Level | Member type: Beam (Roof Beam) | Length: 4' 3" | 2018 IRC | 2018 NDS | ASD

Controls: Bearing 46% used
Section adequacy 59.9% (capacity to spare)

PASSED



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	890 @ 0	1,953 (2")	Passed (46%)	--	D+L
Shear (lbs)	890 @ 0	3,720	Passed (24%)	1.00	D+L
Moment (Ft-lbs)	946 @ 2' 1 1/2"	7,480	Passed (13%)	1.00	D+L
Live Load Defl. (in)	0.009 @ 2' 1 1/2"	0.142	Passed (L/5,999)	--	L
Total Load Defl. (in)	0.011 @ 2' 1 1/2"	0.283	Passed (L/4,584)	--	D+L

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Member self weight of 2.8 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser TJ-4000 / ICC-ES ESR-1153, ASD, every load combination with its own load duration factor.

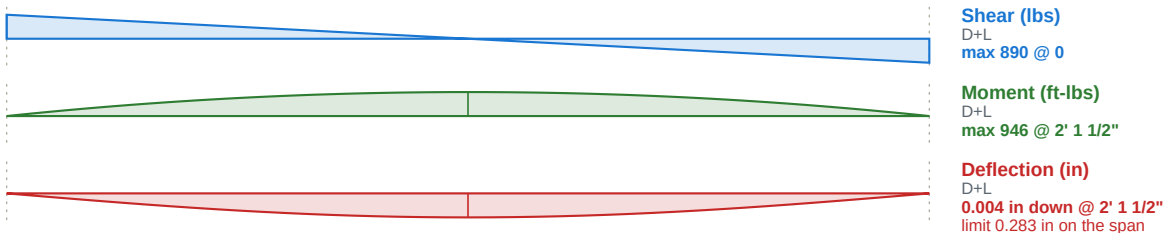
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Floor Live	Total	
1 @ 0	2" seat	--	210	680	890	Girder #5 (flush, in an IUS3.56/14 face mount, 63%)
2 @ 4' 3"	2" seat	--	210	680	890	Girder #9 (flush, in an IUS3.56/14 face mount, 63%)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	4' 3" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 4' 3"	N/A	2.8	--	
1 - Uniform (PLF)	0 to 4' 3"	N/A	--	320	Tributary Width Calculator
2 - Uniform (PLF)	0 to 4' 3"	N/A	96	--	Dead Load Calculator

Shear, Moment and Deflection



Beam #18

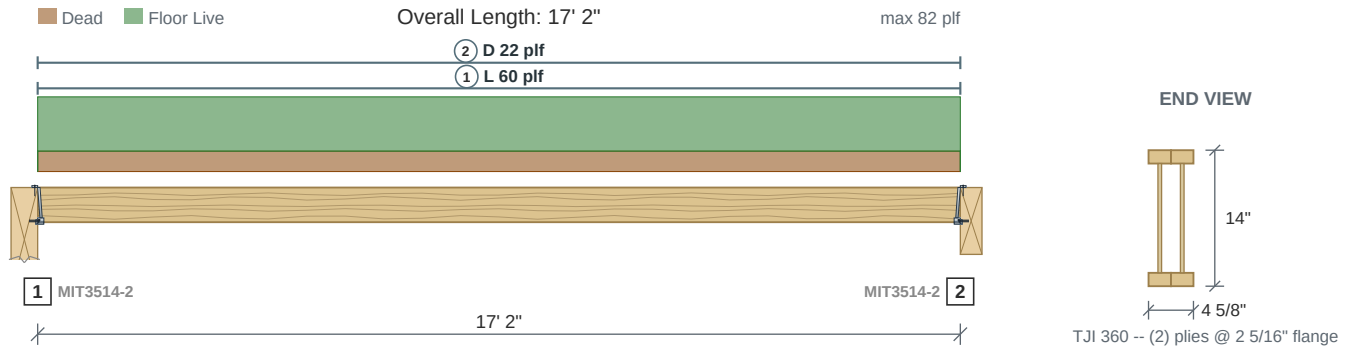
(2) 14" Weyerhaeuser TJI 360

Level: Floor - 2nd Level | Member type: Beam (Roof Beam) | Length: 17' 2" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 29% used

Section adequacy 70.8% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	736 @ 0	2,524 (2 1/2")	Passed (29%)	--	D+L
Shear (lbs)	736 @ 0	3,910	Passed (19%)	1.00	D+L
Moment (Ft-lbs)	3,161 @ 8' 7"	14,670	Passed (22%)	1.00	D+L
Live Load Defl. (in)	0.113 @ 8' 7"	0.572	Passed (L/1,829)	--	L
Total Load Defl. (in)	0.161 @ 8' 7"	1.144	Passed (L/1,279)	--	D+L

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Member self weight of 3.3 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser TJ-4000 / ICC-ES ESR-1153, ASD, every load combination with its own load duration factor.

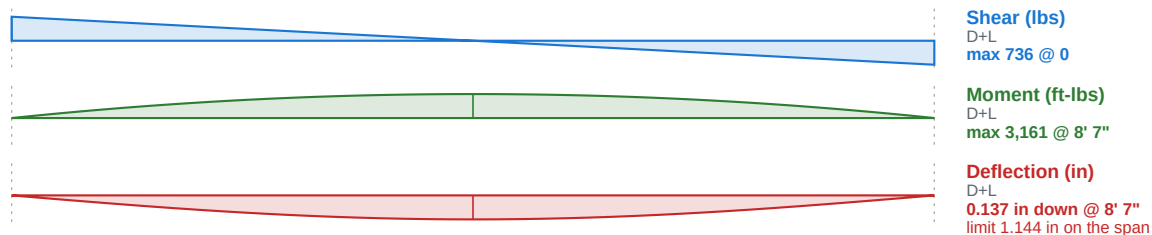
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Floor Live	Total	
1 @ 0	2 1/2" seat	--	221	515	736	Girder #8 (flush, in an MIT3514-2 top flange, 44%)
2 @ 17' 2"	2 1/2" seat	--	221	515	736	Girder #7 (flush, in an MIT3514-2 top flange, 44%)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	17' 2" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 17' 2"	N/A	3.3	--	
1 - Uniform (PLF)	0 to 17' 2"	N/A	--	60	Tributary Width Calculator
2 - Uniform (PLF)	0 to 17' 2"	N/A	22.5	--	Dead Load Calculator

Shear, Moment and Deflection



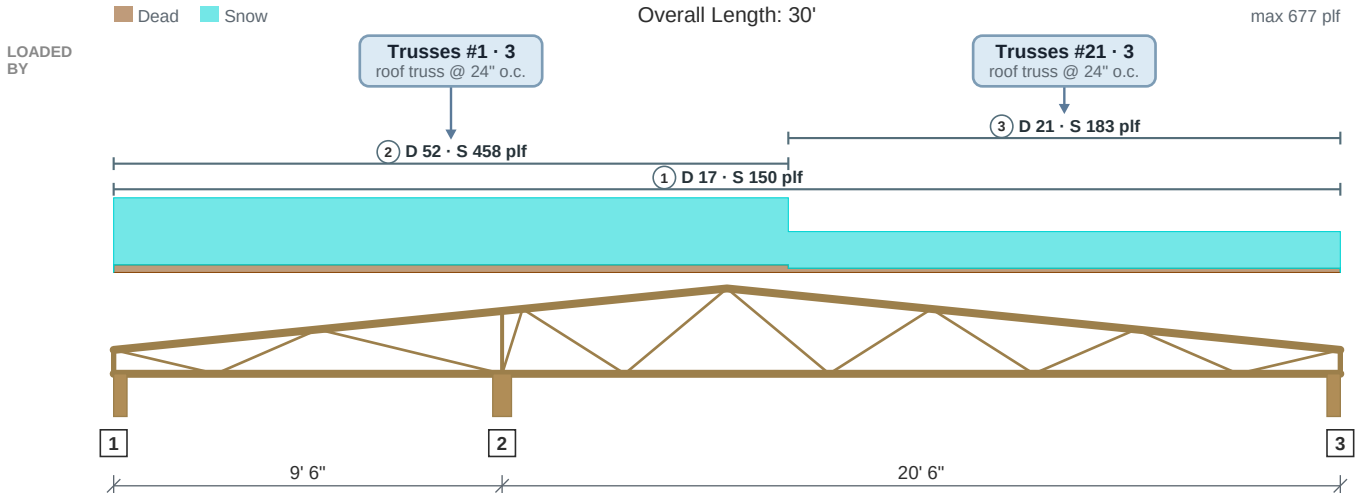
Girder #1

2-ply roof girder truss (generic)

Level: Roof | Length: 30' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- A generic 2-ply roof girder truss, modeled so the loads it carries reach the members and walls that support it as linked loads. The size in the model is a placeholder, so no size or design check is shown; the girder truss itself is designed by the truss manufacturer.

Loads to Supports (lbs)				Load goes to
Supports	Dead	Snow	Total	
1 @ 0	121	1,068	1,190	SpotFtg Gdr #1-1 (6x6 post (max 10 ft, 79%): truss layout / ABU66Z)
2 @ 9' 6"	1,197	10,560	11,757	SpotFtg Gdr #1-2 (6x6 post (max 10 ft, 30%): truss layout / ABU66Z)
3 @ 30'	328	2,897	3,225	SpotFtg Gdr #1-3 (6x6 post? (max 10 ft, 80%): truss layout / ABU66Z)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	0 to 30'	N/A	17	150	
2 - Uniform (PLF)	0 to 16' 6"	N/A	51.9	458	Linked from: Trusses #1 , Support 3
3 - Uniform (PLF)	16' 6" to 30'	N/A	20.7	182.8	Linked from: Trusses #21 , Support 3

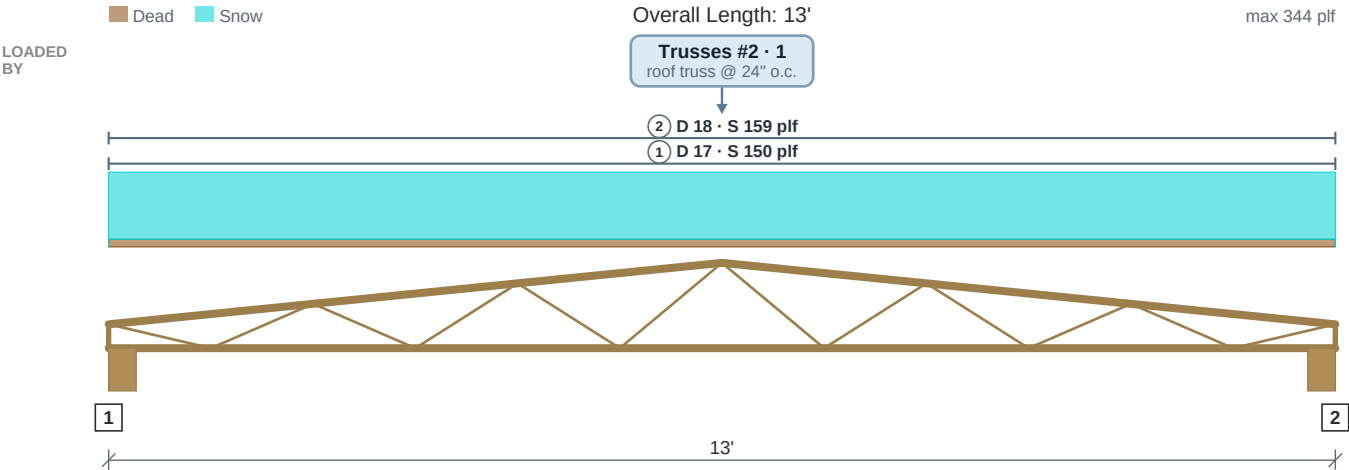
Girder #2

5-ply roof girder truss (generic)

Level: Roof | Length: 13' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- A generic 5-ply roof girder truss, modeled so the loads it carries reach the members and walls that support it as linked loads. The size in the model is a placeholder, so no size or design check is shown; the girder truss itself is designed by the truss manufacturer.

Supports	Loads to Supports (lbs)			Load goes to
	Dead	Snow	Total	
1 @ 0	228	2,009	2,237	SpotFtg Gdr #1-1 (6x6 post (max 10 ft, 79%): truss layout / ABU66Z)
2 @ 13'	228	2,009	2,237	SpotFtg Gdr #2-2 (6x6 post? (max 10 ft, 86%): truss layout / ABU66Z)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	0 to 13'	N/A	17	150	
2 - Uniform (PLF)	0 to 13'	N/A	18	159.1	Linked from: Trusses #2 , Support 1

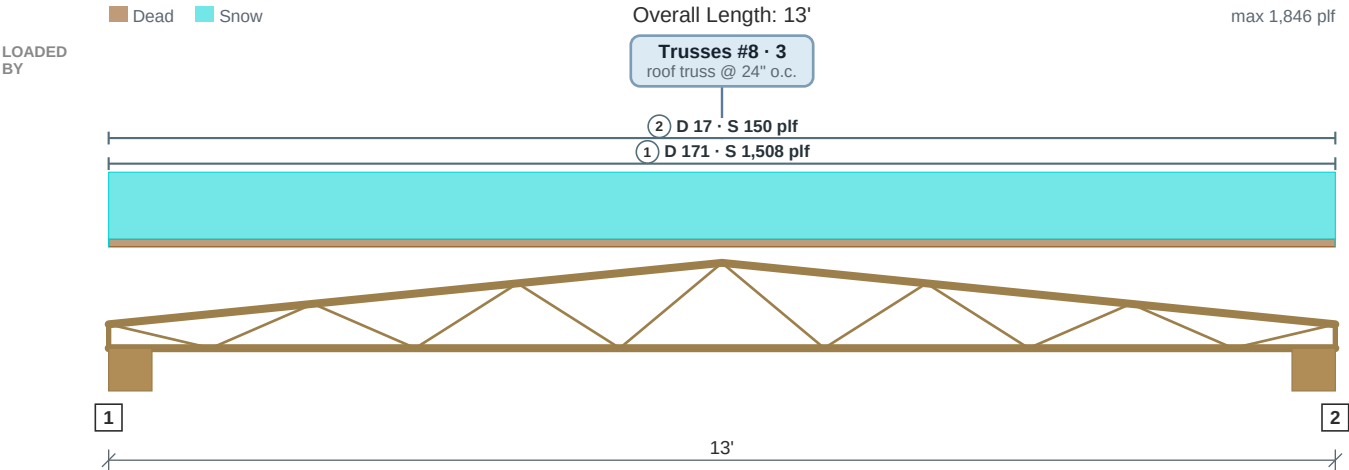
Girder #3

2-ply roof girder truss (generic)

Level: Roof | Length: 13' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- A generic 2-ply roof girder truss, modeled so the loads it carries reach the members and walls that support it as linked loads. The size in the model is a placeholder, so no size or design check is shown; the girder truss itself is designed by the truss manufacturer.

Supports	Loads to Supports (lbs)			Load goes to
	Dead	Snow	Total	
1 @ 0	1,222	10,779	12,001	SpotFtg Gdr #3-1 (6x6 post? (max 10 ft, 29%): truss layout / ABU66Z)
2 @ 13'	1,222	10,779	12,001	Header #7 (bears on top)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	0 to 13'	N/A	170.9	1,508	Linked from: Trusses #8, Support 3
2 - Uniform (PLF)	0 to 13'	N/A	17	150	

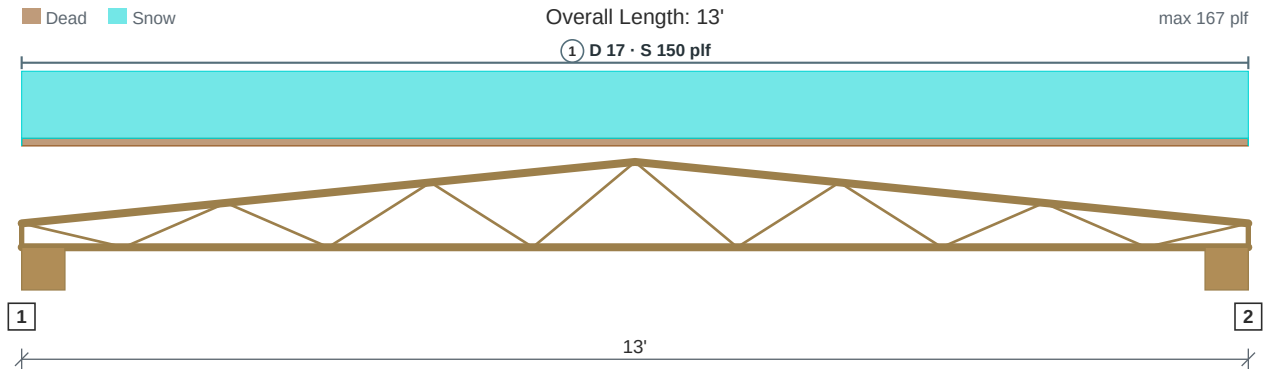
Girder #4

2-ply roof girder truss (generic)

Level: Roof | Length: 13' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- A generic 2-ply roof girder truss, modeled so the loads it carries reach the members and walls that support it as linked loads. The size in the model is a placeholder, so no size or design check is shown; the girder truss itself is designed by the truss manufacturer.

Loads to Supports (lbs)					
Supports	Dead	Snow	Total	Load goes to	
1 @ 0	110	975	1,086	SpotFtg Gdr #4-1 (6x6 post? (max 10 ft, 93%): truss layout / ABU66Z)	
2 @ 13'	110	975	1,086	SpotFtg Gdr #4-2 (6x6 post (max 10 ft, 93%): truss layout / ABU66Z)	

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	0 to 13'	N/A	17	150	

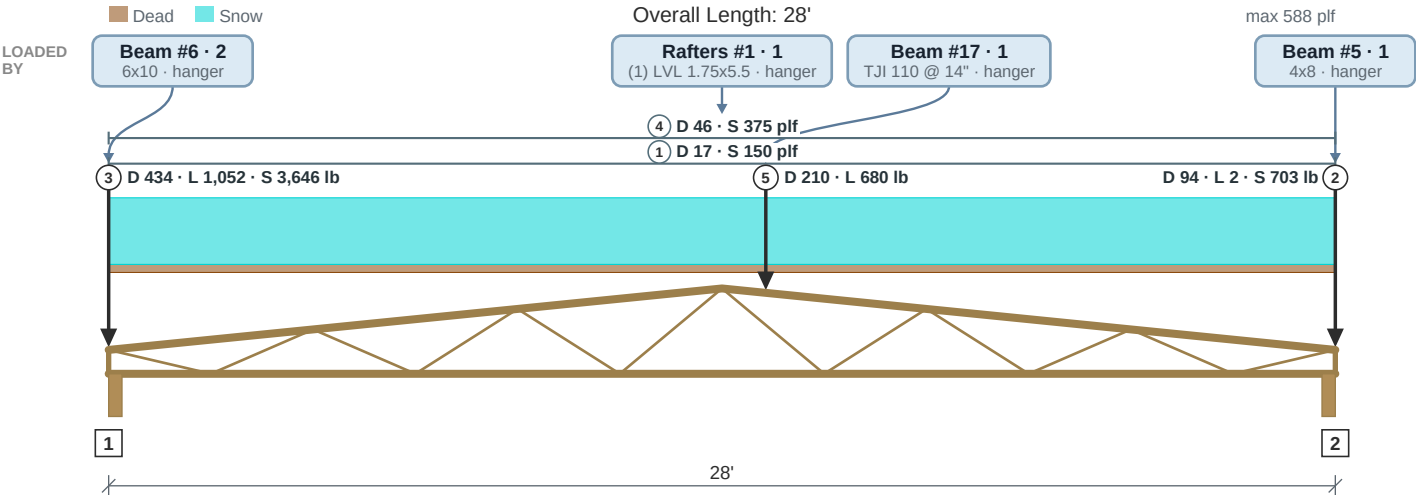
Girder #5

5-ply roof girder truss (generic)

Level: Floor - 2nd Level | Length: 28' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- A generic 5-ply roof girder truss, modeled so the loads it carries reach the members and walls that support it as linked loads. The size in the model is a placeholder, so no size or design check is shown; the girder truss itself is designed by the truss manufacturer.

Supports	Loads to Supports (lbs)				Load goes to
	Dead	Floor Live	Snow	Total	
1 @ 0	1,414	1,367	10,996	12,409	SpotFtg Gdr #5-1 (6x6 post (max 10 ft, 26%): truss layout / ABU66Z)
2 @ 28'	1,089	367	8,053	9,142	SpotFtg Gdr #5-2 (6x6 post? (max 10 ft, 45%): truss layout / ABU66Z)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	0 to 28'	N/A	17	--	150	
2 - Point (lb)	28'	N/A	94.1	2.5	703.1	Linked from: Beam #5, Support 1
3 - Point (lb)	0	N/A	434	1,052	3,646	Linked from: Beam #6, Support 2
4 - Uniform (PLF)	0 to 28'	N/A	46	--	375	Linked from: Rafters #1, Support 1
5 - Point (lb)	15'	N/A	209.9	680	--	Linked from: Beam #17, Support 1

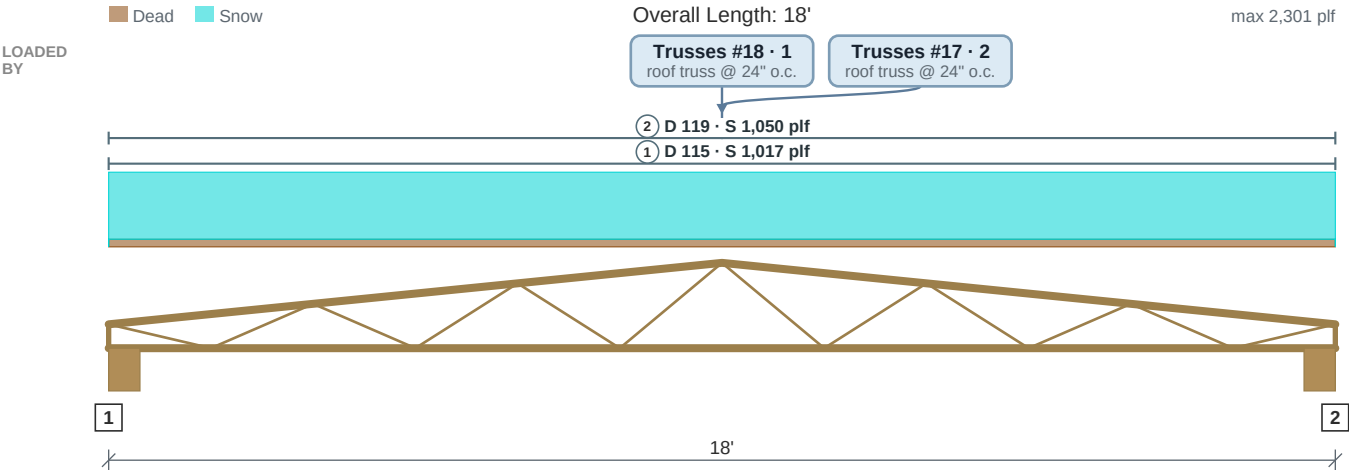
Girder #6

Roof girder truss (generic)

Level: Roof | Length: 18' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- A generic roof girder truss, modeled so the loads it carries reach the members and walls that support it as linked loads. The size in the model is a placeholder, so no size or design check is shown; the girder truss itself is designed by the truss manufacturer.

Supports	Loads to Supports (lbs)			Load goes to
	Dead	Snow	Total	
1 @ 0	2,108	18,599	20,707	Girder #8 (on top or in a hanger? not set)
2 @ 18'	2,108	18,599	20,707	Girder #7 (on top or in a hanger? not set)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	0 to 18'	N/A	115.2	1,017	Linked from: Trusses #18, Support 1
2 - Uniform (PLF)	0 to 18'	N/A	119	1,050	Linked from: Trusses #17, Support 2

Girder #7

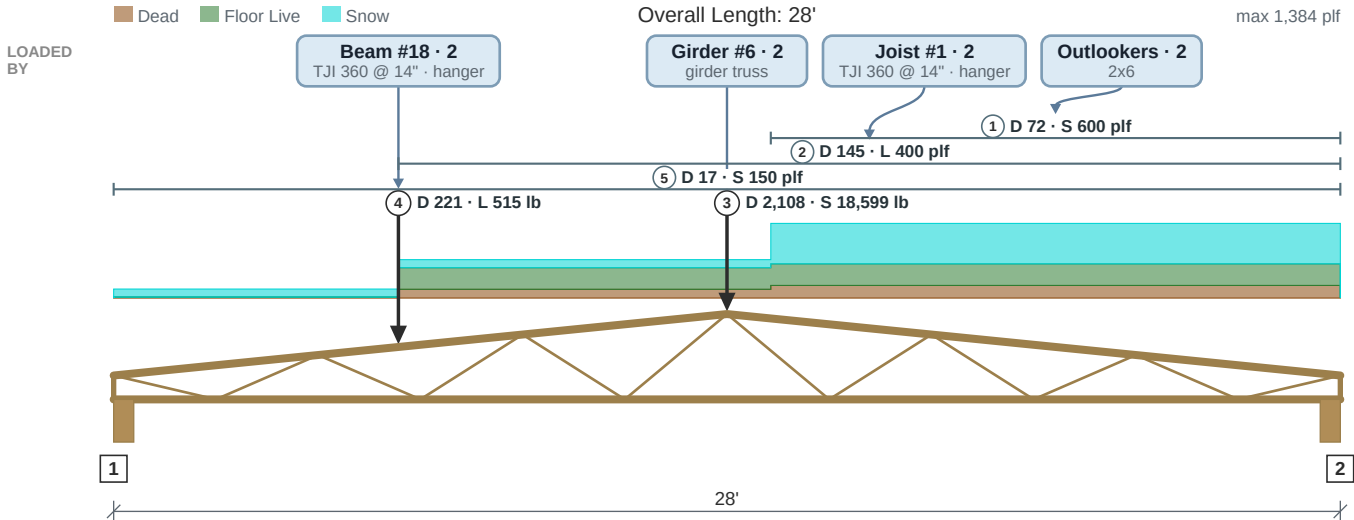
Roof girder truss (generic)

Level: Floor - 2nd Level | Length: 28' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads

no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- A generic roof girder truss, modeled so the loads it carries reach the members and walls that support it as linked loads. The size in the model is a placeholder, so no size or design check is shown; the girder truss itself is designed by the truss manufacturer.

Supports	Loads to Supports (lbs)				Load goes to
	Dead	Floor Live	Snow	Total	
1 @ 0	2,873	3,697	13,210	16,083	SpotFtg Gdr #7-1 (6x8 post (max 10 ft, 15%): truss layout / CB6-7)
2 @ 28'	3,977	5,418	17,389	21,366	Header #19 (bears on top)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	15' to 28'	N/A	71.8	--	600	Linked from: Outlookers, Support 2
2 - Uniform (PLF)	6' 6" to 28'	N/A	144.8	400	--	Linked from: Joist #1, Support 2
3 - Point (lb)	14'	N/A	2,108	--	18,599	Linked from: Girder #6, Support 2
4 - Point (lb)	6' 6"	N/A	221.5	515	--	Linked from: Beam #18, Support 2
5 - Uniform (PLF)	0 to 28'	N/A	17	--	150	

Girder #8

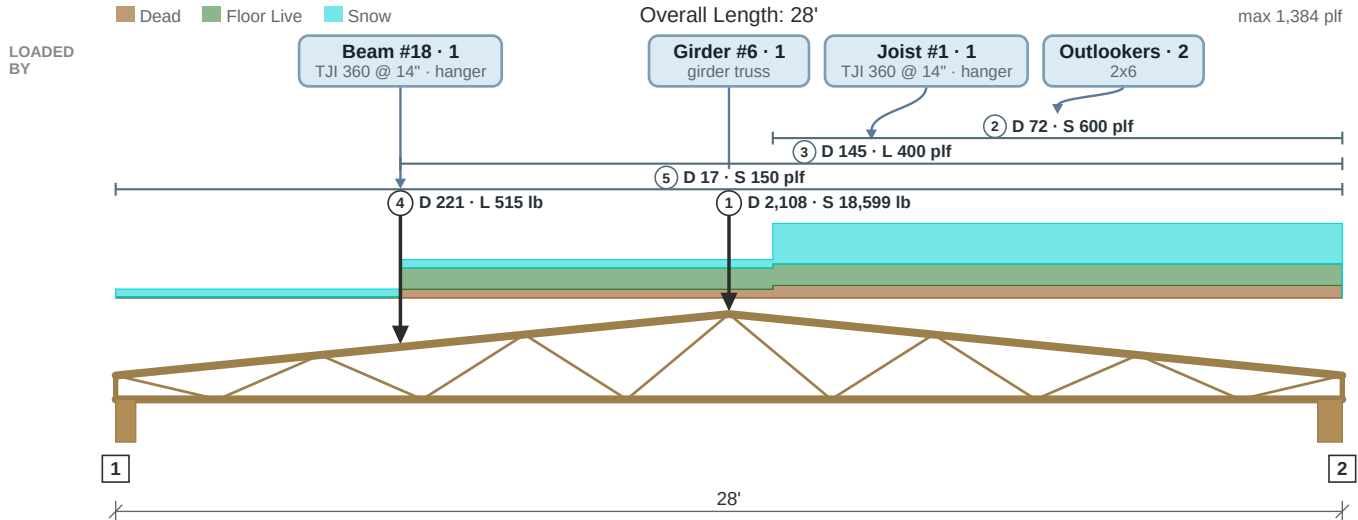
Roof girder truss (generic)

Level: Floor - 2nd Level | Length: 28' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads

no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- A generic roof girder truss, modeled so the loads it carries reach the members and walls that support it as linked loads. The size in the model is a placeholder, so no size or design check is shown; the girder truss itself is designed by the truss manufacturer.

Supports	Loads to Supports (lbs)				Load goes to
	Dead	Floor Live	Snow	Total	
1 @ 0	2,873	3,697	13,210	16,083	SpotFtg Gdr #8-1 (6x8 post (max 10 ft, 30%): truss layout / CB6-7)
2 @ 28'	3,977	5,418	17,389	21,366	Header #20 (bears on top)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Point (lb)	14'	N/A	2,108	--	18,599	Linked from: Girder #6, Support 1
2 - Uniform (PLF)	15' to 28'	N/A	71.8	--	600	Linked from: Outlookers, Support 2
3 - Uniform (PLF)	6' 6" to 28'	N/A	144.8	400	--	Linked from: Joist #1, Support 1
4 - Point (lb)	6' 6"	N/A	221.5	515	--	Linked from: Beam #18, Support 1
5 - Uniform (PLF)	0 to 28'	N/A	17	--	150	

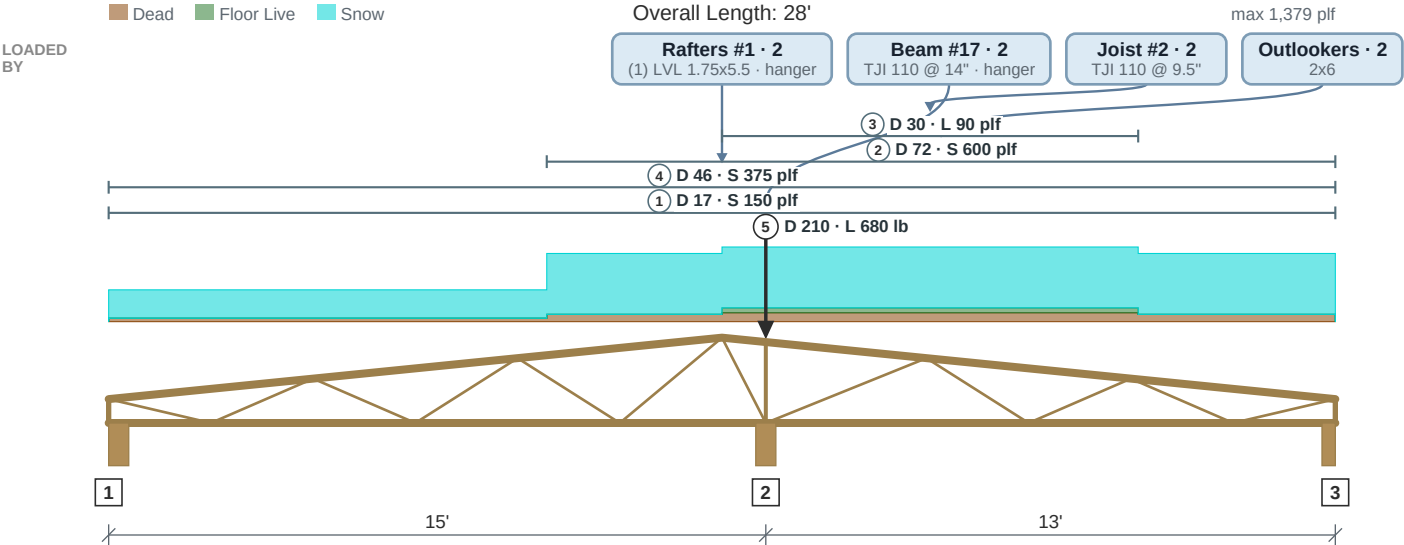
Girder #9

Roof girder truss (generic)

Level: Floor - 2nd Level | Length: 28' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Header #1

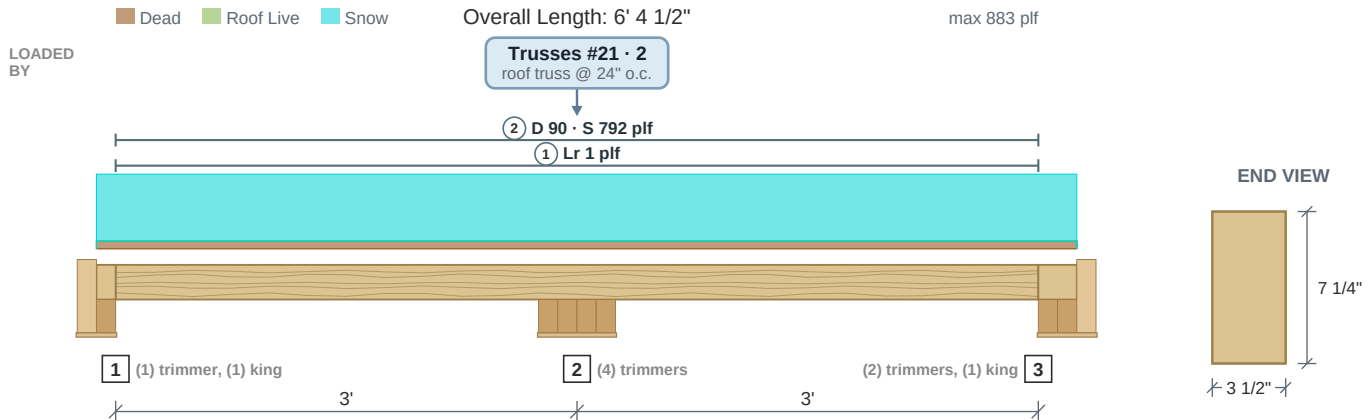
(1) 4x8 DF-L No. 2 (3 1/2" x 7 1/4")

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 6' 4 1/2" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 48% used

Section adequacy 52.1% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	987 @ 0	3,281 (1 1/2")	Passed (30%)	--	
Shear (lbs)	1,677 @ 3'	3,502	Passed (48%)	1.15	D+S
Neg Moment (Ft-lbs)	-1,013 @ 3'	3,422	Passed (30%)	1.15	D+S
Live Load Defl. (in)	0.003 @ 4' 9 5/8"	0.151	Passed (2L/9999+)	--	S
Total Load Defl. (in)	0.004 @ 4' 9 5/8"	0.202	Passed (2L/9,306)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CF = 1.30, CL = 0.995 (D+S).
- Beam stability (NDS 3.3.3) governs bending: negative moment 1013 lbf-ft, 0.00-3.00 ft, CL 0.995 (unbraced 3.0 ft).
- Member self weight of 5.8 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

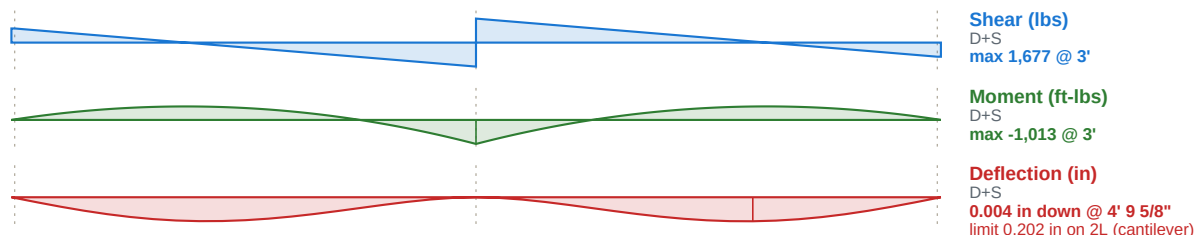
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	1 1/2"	7/16"	118	1	980	1,098	Bearing wall (marked, trimmers) -- on (1) trimmer, (1) king stud
2 @ 3'	6"	1 3/16"	361	4	2,992	3,353	Bearing wall (marked, trimmers) -- on (4) trimmers
3 @ 6'	3"	7/16"	130	1	1,078	1,208	Bearing wall (marked, trimmers) -- on (2) trimmers, (1) king stud

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	governs C_L here: the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 6'	N/A	5.8	--	--	
1 - Uniform (PLF)	0 to 6'	N/A	--	1	--	
2 - Uniform (PLF)	0 to 6'	N/A	89.8	--	792.2	Linked from: Trusses #21, Support 2

Shear, Moment and Deflection



Header #2

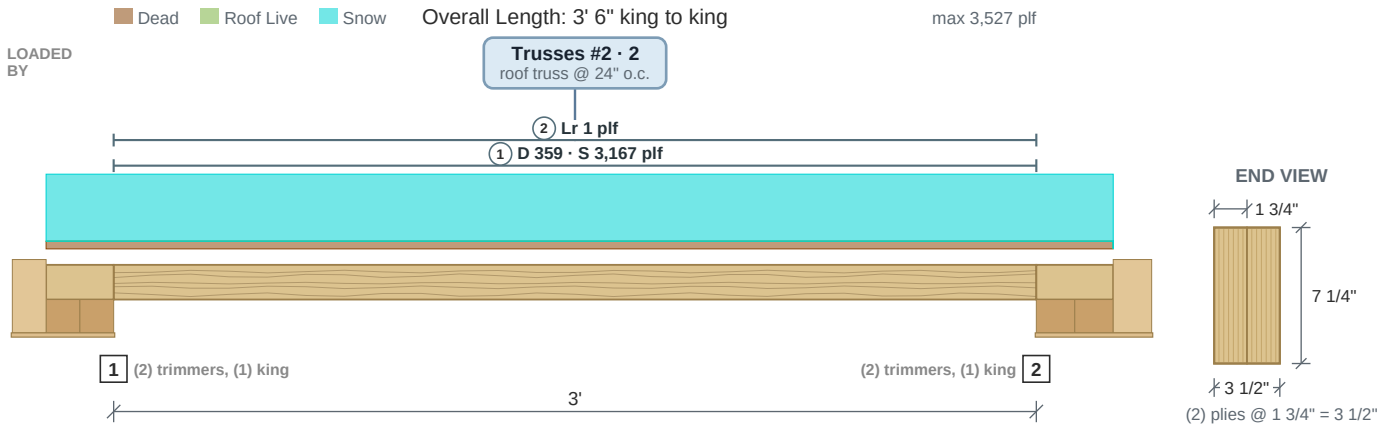
(2) 1 3/4" x 7 1/4" 2.0E Microlam LVL (Weyerhaeuser)

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 3' 6" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 96% used

Section adequacy 4.4% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	5,300 @ 0	7,875 (3")	Passed (67%)	--	
Shear (lbs)	5,300 @ 3'	5,545	Passed (96%)	1.15	D+S
Moment (Ft-lbs)	4,495 @ 1' 6"	8,182	Passed (55%)	1.15	D+S
Live Load Defl. (in)	0.052 @ 1' 6"	0.16	Passed (2L/743)	--	S
Total Load Defl. (in)	0.058 @ 1' 6"	0.213	Passed (2L/666)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CV = 1.071, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 7.4 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser ICC-ES ESR-1387, ASD, every load combination with its own load duration factor.

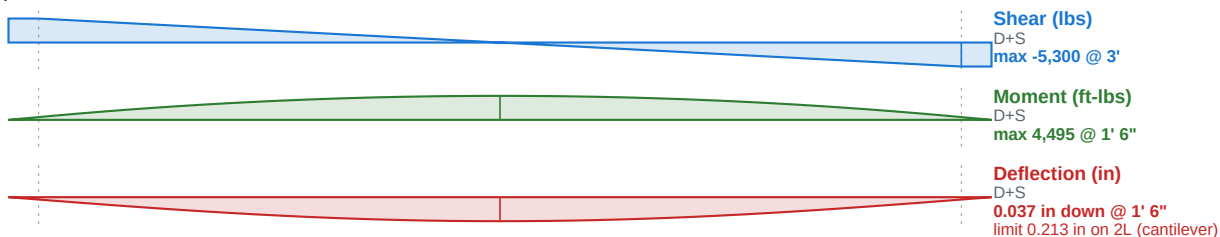
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	3"	2"	641	2	5,542	6,183	SpotFtg Hdr #2-1 (on (2) trimmers, (1) king stud)
2 @ 3'	3"	2"	641	2	5,542	6,183	SpotFtg Hdr #2-2 (on (2) trimmers, (1) king stud)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3'	N/A	7.4	--	--	
1 - Uniform (PLF)	0 to 3'	N/A	358.9	--	3,167	Linked from: Trusses #2, Support 2
2 - Uniform (PLF)	0 to 3'	N/A	--	1	--	

Shear, Moment and Deflection



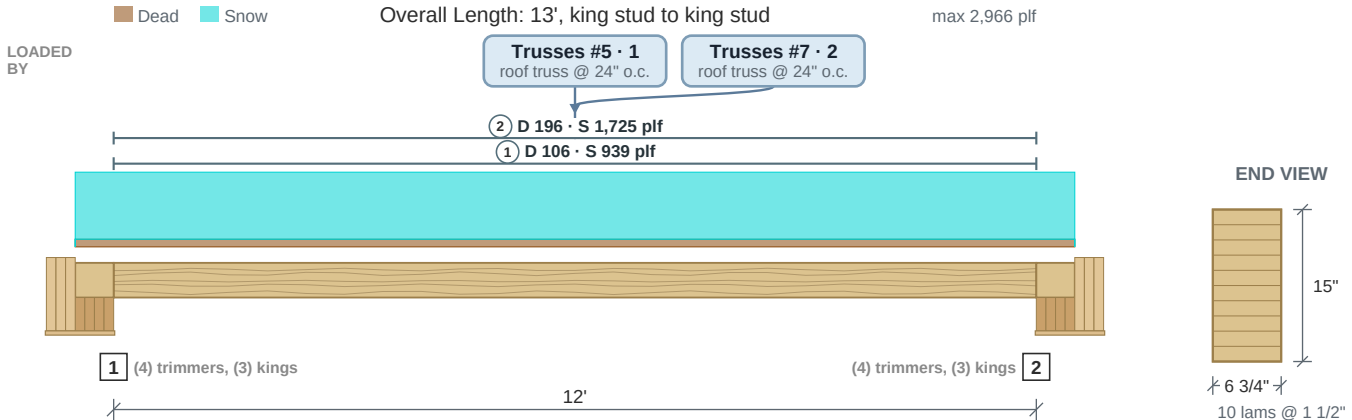
Header #3

(1) 6 3/4" x 15" 24F-1.8E 24F-V4 DF/DF Glulam

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 13' | 2018 IRC | 2018 NDS | ASD

PASSED
Controls: Moment 98% used

Section adequacy 1.9% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	17,934 @ 0	26,325 (6")	Passed (68%)	--	
Shear (lbs)	17,934 @ -1 1/2"	20,574	Passed (87%)	1.15	D+S
Moment (Ft-lbs)	57,109 @ 6'	58,219	Passed (98%)	1.15	D+S
Live Load Defl. (in)	0.41 @ 6' 1 7/8"	0.618	Passed (2L/362)	--	S
Total Load Defl. (in)	0.46 @ 6' 1 7/8"	0.825	Passed (2L/323)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Unbalanced glulam layup: install with the tension laminations at the bottom, proper side up as marked by the manufacturer.
- Member self weight of 23.1 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

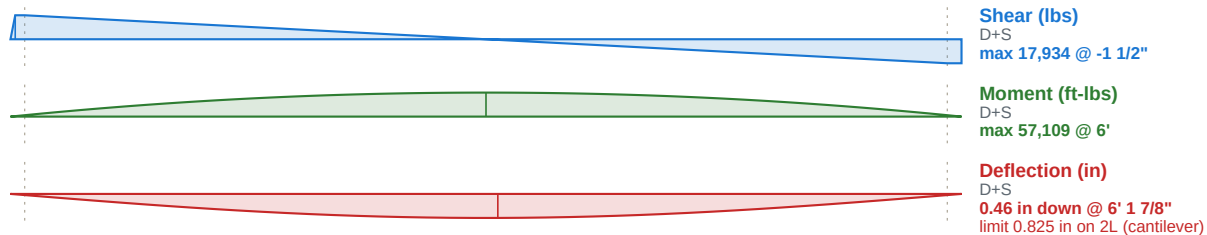
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	6"	4 1/16"	2,112	17,316	19,428	SpotFtg Hdr #3-1 (on (4) trimmers, (3) king studs)
2 @ 12'	6"	4 1/16"	2,112	17,316	19,428	SpotFtg Hdr #3-2 (on (4) trimmers, (3) king studs)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	12' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 12'	N/A	23.1	--	
1 - Uniform (PLF)	0 to 12'	N/A	106.4	938.9	Linked from: Trusses #5 , Support 1
2 - Uniform (PLF)	0 to 12'	N/A	195.5	1,725	Linked from: Trusses #7 , Support 2

Shear, Moment and Deflection



Header #4

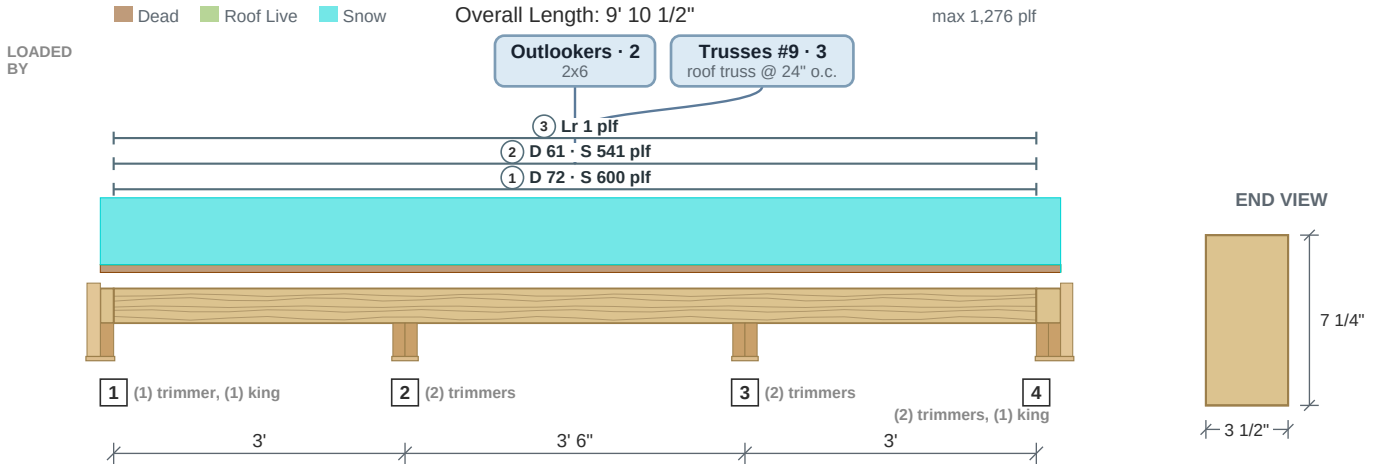
(1) 4x8 DF-L No. 2 (3 1/2" x 7 1/4")

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 9' 10 1/2" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 68% used

Section adequacy 31.6% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	4,634 @ 6' 6"	7,383 (3")	Passed (63%)	--	
Shear (lbs)	2,393 @ 6' 6"	3,502	Passed (68%)	1.15	D+S
Neg Moment (Ft-lbs)	-1,368 @ 6' 6"	3,419	Passed (40%)	1.15	D+S
Live Load Defl. (in)	0.006 @ 8' 1 3/8"	0.152	Passed (2L/6,585)	--	S
Total Load Defl. (in)	0.006 @ 8' 1 3/8"	0.202	Passed (2L/5,871)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CF = 1.30, CL = 0.995 (D+S).
- Beam stability (NDS 3.3.3) governs bending: negative moment 1368 lbf-ft, 3.00-6.50 ft, CL 0.995 (unbraced 3.5 ft).
- Member self weight of 5.8 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

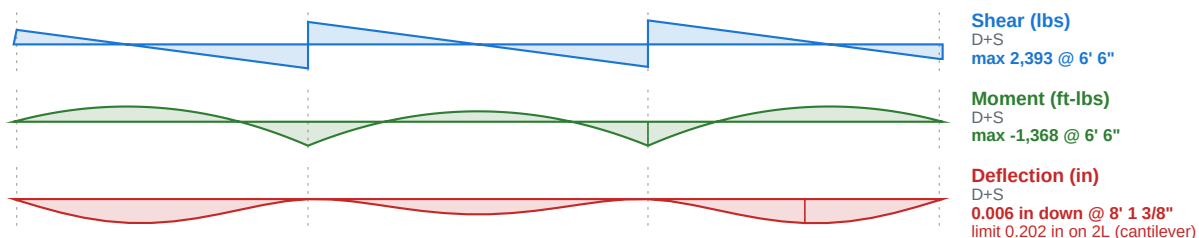
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	1 1/2"	11/16"	175	1	1,435	1,610	SpotFtg Hdr #4-1 (on (1) trimmer, (1) king stud)
2 @ 3'	3"	1 3/4"	502	4	4,128	4,631	SpotFtg Hdr #4-2 (on (2) trimmers)
3 @ 6' 6"	3"	1 3/4"	503	4	4,131	4,634	SpotFtg Hdr #4-3 (on (2) trimmers)
4 @ 9' 6"	3"	11/16"	192	1	1,576	1,768	SpotFtg Hdr #4-4 (on (2) trimmers, (1) king stud)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' 6" o/c	governs C_L here: the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 9' 6"	N/A	5.8	--	--	
1 - Uniform (PLF)	0 to 9' 6"	N/A	71.8	--	600	Linked from: Outlookers, Support 2
2 - Uniform (PLF)	0 to 9' 6"	N/A	61.4	--	541.4	Linked from: Trusses #9, Support 3
3 - Uniform (PLF)	0 to 9' 6"	N/A	--	1	--	

Shear, Moment and Deflection



Header #5

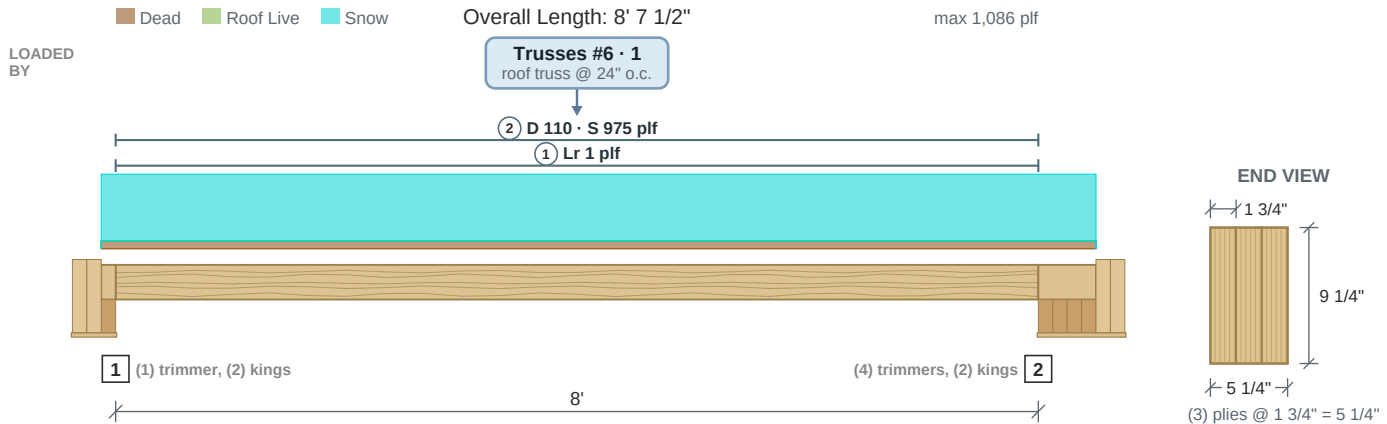
(3) 1 3/4" x 9 1/4" 2.0E Microlam LVL (Weyerhaeuser)

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 8' 7 1/2" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 75% used

Section adequacy 25.5% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	4,401 @ 0	5,906 (1 1/2")	Passed (75%)	--	
Shear (lbs)	4,401 @ -1/16"	10,613	Passed (41%)	1.15	D+S
Moment (Ft-lbs)	9,018 @ 4'	19,326	Passed (47%)	1.15	D+S
Live Load Defl. (in)	0.155 @ 4'	0.405	Passed (2L/626)	--	S
Total Load Defl. (in)	0.175 @ 4'	0.54	Passed (2L/555)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CV = 1.036, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 14.2 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser ICC-ES ESR-1387, ASD, every load combination with its own load duration factor.

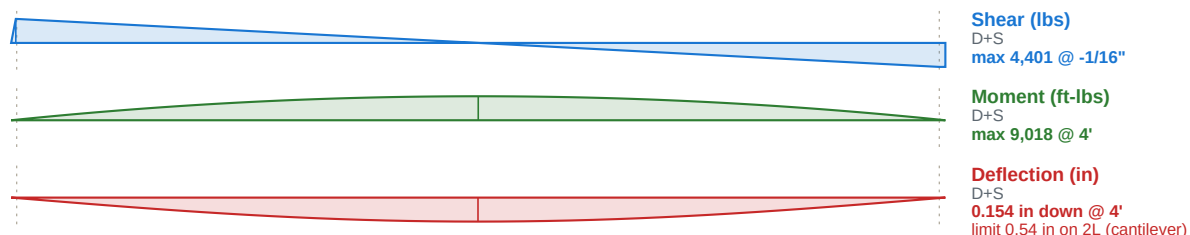
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	1 1/2"	1 1/8"	515	4	4,024	4,538	Bearing wall (marked, trimmers) -- on (1) trimmer, (2) king studs
2 @ 8'	6"	1 1/8"	561	4	4,385	4,946	Bearing wall (marked, trimmers) -- on (4) trimmers, (2) king studs

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	8' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 8'	N/A	14.2	--	--	
1 - Uniform (PLF)	0 to 8'	N/A	--	1	--	
2 - Uniform (PLF)	0 to 8'	N/A	110.5	--	975	Linked from: Trusses #6, Support 1

Shear, Moment and Deflection

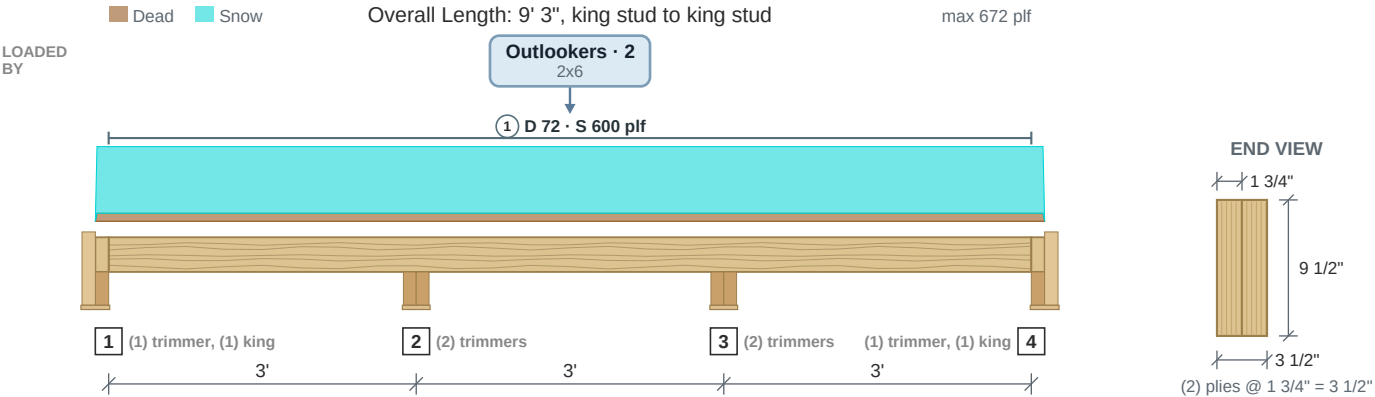


Header #6

(2) 1 3/4" x 9 1/2" 2.0E Microlam LVL (Weyerhaeuser)

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 9' 3" | 2018 IRC | 2018 NDS | ASD

Controls: Bearing 25% used
Section adequacy 74.6% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	2,254 @ 3'	8,860 (3")	Passed (25%)	--	
Shear (lbs)	1,232 @ 6'	7,266	Passed (17%)	1.15	D+S
Neg Moment (Ft-lbs)	-616 @ 6'	13,428	Passed (5%)	1.15	D+S
Live Load Defl. (in)	0.003 @ 1' 3 7/16"	0.151	Passed (2L/9999+)	--	S
Total Load Defl. (in)	0.003 @ 1' 3 7/16"	0.201	Passed (2L/9999+)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CV = 1.032, CL = 0.992 (D+S).
- Beam stability (NDS 3.3.3) governs bending: negative moment 617 lbf-ft, 3.00-6.00 ft, CL 0.992 (unbraced 3.0 ft).
- Member self weight of 9.7 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser ICC-ES ESR-1387, ASD, every load combination with its own load duration factor.

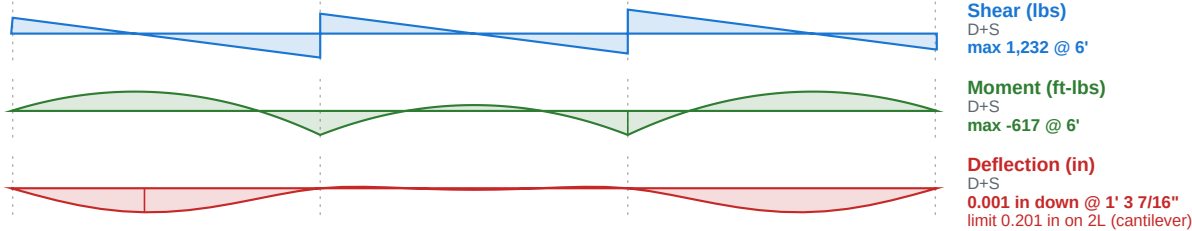
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	1 1/2"	5/16"	107	791	898	Bearing wall (marked, trimmers) -- on (1) trimmer, (1) king stud
2 @ 3'	3"	1/2"	269	1,984	2,254	Bearing wall (marked, trimmers) -- on (2) trimmers
3 @ 6'	3"	1/2"	269	1,984	2,254	Bearing wall (marked, trimmers) -- on (2) trimmers
4 @ 9'	1 1/2"	5/16"	107	791	898	Bearing wall (marked, trimmers) -- on (1) trimmer, (1) king stud

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	governs C_L here: the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 9'	N/A	9.7	--	
1 - Uniform (PLF)	0 to 9'	N/A	71.8	600	Linked from: Outlookers, Support 2

Shear, Moment and Deflection



Header #7

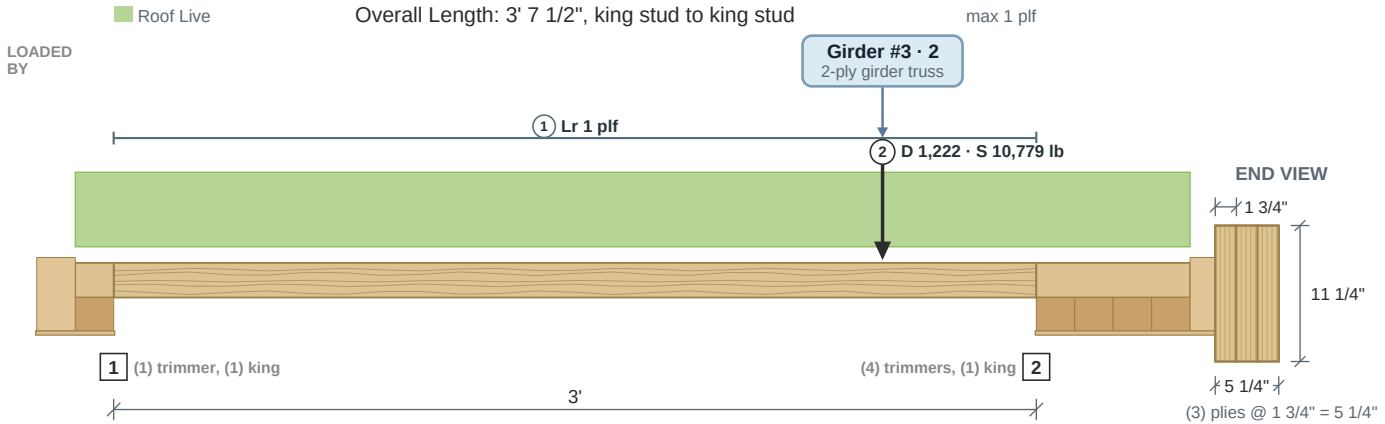
(3) 1 3/4" x 11 1/4" 2.0E Microlam LVL (Weyerhaeuser)

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 3' 7 1/2" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 75% used

Section adequacy 24.9% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	9,700 @ 3'	23,625 (6")	Passed (41%)	--	
Shear (lbs)	9,700 @ 3'	12,907	Passed (75%)	1.15	D+S
Moment (Ft-lbs)	5,878 @ 2' 6"	27,837	Passed (21%)	1.15	D+S
Live Load Defl. (in)	0.016 @ 1' 8 13/16"	0.156	Passed (2L/2,399)	--	S
Total Load Defl. (in)	0.017 @ 1' 8 5/8"	0.209	Passed (2L/2,148)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CV = 1.009, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 17.2 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser ICC-ES ESR-1387, ASD, every load combination with its own load duration factor.

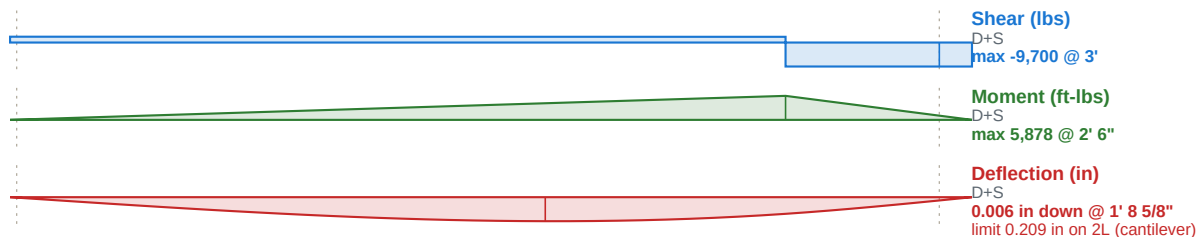
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	1 1/2"	5/8"	265	2	2,089	2,355	SpotFtg Hdr #7-1 (on (1) trimmer, (1) king stud)
2 @ 3'	6"	2 7/16"	1,019	2	8,690	9,709	SpotFtg Hdr #7-2 (on (4) trimmers, (1) king stud)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3'	N/A	17.2	--	--	
1 - Uniform (PLF)	0 to 3'	N/A	--	1	--	
2 - Point (lb)	2' 6"	N/A	1,222	--	10,779	Linked from: Girder #3, Support 2

Shear, Moment and Deflection



Header #8

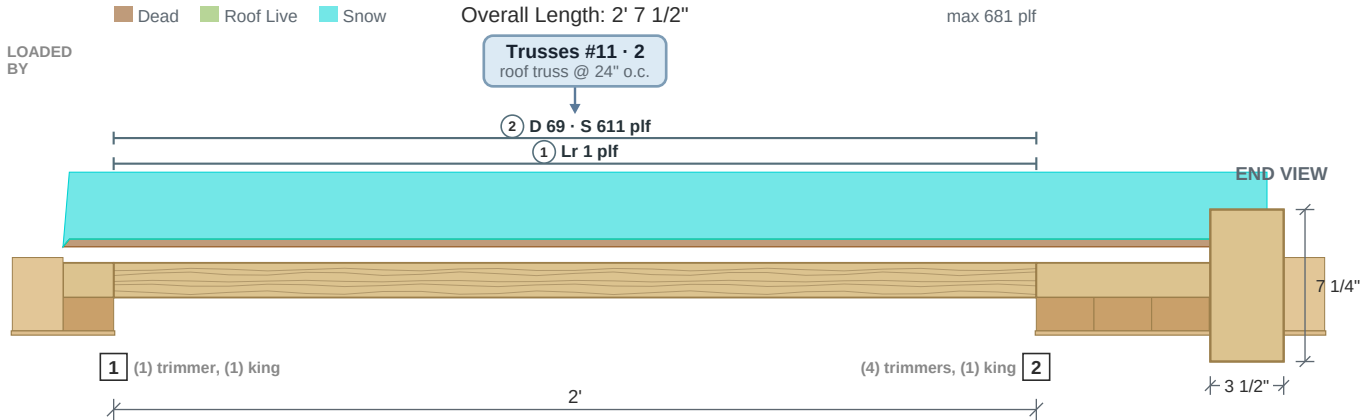
(1) 4x8 DF-L No. 2 (3 1/2" x 7 1/4")

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 2' 7 1/2" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 21% used

Section adequacy 79% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	688 @ 0	3,281 (1 1/2")	Passed (21%)	--	
Shear (lbs)	688 @ -1/16"	3,502	Passed (20%)	1.15	D+S
Moment (Ft-lbs)	355 @ 1'	3,438	Passed (10%)	1.15	D+S
Live Load Defl. (in)	0.001 @ 1'	0.102	Passed (2L/9999+)	--	S
Total Load Defl. (in)	0.001 @ 1'	0.136	Passed (2L/9999+)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CF = 1.30, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 5.8 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

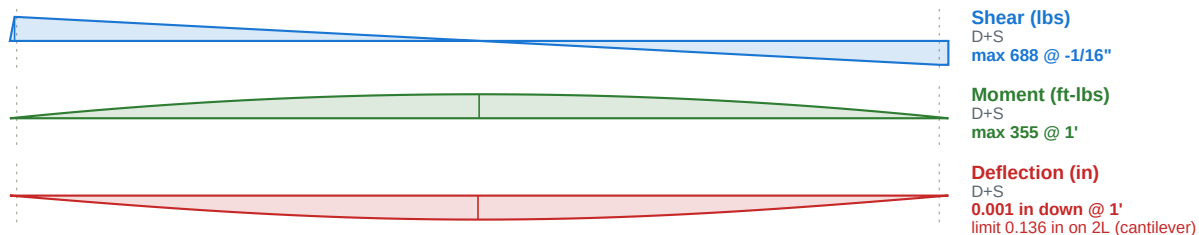
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	1 1/2"	5/16"	85	1	689	773	Bearing wall (marked, trimmers) -- on (1) trimmer, (1) king stud
2 @ 2'	6"	5/16"	112	2	915	1,027	Bearing wall (marked, trimmers) -- on (4) trimmers, (1) king stud

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	2' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 2'	N/A	5.8	--	--	
1 - Uniform (PLF)	0 to 2'	N/A	--	1	--	
2 - Uniform (PLF)	0 to 2'	N/A	69.2	--	610.9	Linked from: Trusses #11, Support 2

Shear, Moment and Deflection



Header #9

(1) 6x10 DF-L No. 2 (5 1/2" x 9 1/2")

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 3' 9" | 2018 IRC | 2018 NDS | ASD

Controls: Shear 87% used

Section adequacy 12.5% (capacity to spare)

Dead

Roof Live

Snow

Overall Length: 3' 9" king to king

max 3,946 plf

LOADED BY

Trusses #11 - 4

roof truss @ 24" o.c.

(2) D 402 · S 3,543 plf

(1) Lr 1 plf

END VIEW

9 1/2"

5 1/2"

1 (2) trimmers, (1) king

3'

(4) trimmers, (1) king 2

Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	5,957 @ 0	10,312 (3")	Passed (58%)	--	
Shear (lbs)	5,957 @ -13/16"	6,810	Passed (87%)	1.15	D+S
Moment (Ft-lbs)	4,984 @ 1' 6 1/16"	6,937	Passed (72%)	1.15	D+S
Live Load Defl. (in)	0.016 @ 1' 6"	0.159	Passed (2L/2,401)	--	S
Total Load Defl. (in)	0.018 @ 1' 6"	0.212	Passed (2L/2,150)	--	D+S

Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.

Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).

Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).

Member self weight of 11.9 plf is included.

Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

	Bearing Length		Loads to Supports (lbs)				
Supports	Provided	Required	Dead	Roof Live	Snow	Total	Load goes to
1 @ 0	3"	1 3/4"	726	2	6,220	6,946	SpotFtg Hdr #9-1 (on (2) trimmers, (1) king stud)
2 @ 3'	6"	1 3/4"	825	2	7,066	7,890	SpotFtg Hdr #9-2 (on (4) trimmers, (1) king stud)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3'	N/A	11.9	--	--	
1 - Uniform (PLF)	0 to 3'	N/A	--	1	--	
2 - Uniform (PLF)	0 to 3'	N/A	401.5	--	3,543	Linked from: Trusses #11, Support 4

Shear, Moment and Deflection

Shear (lbs)

D+S

max 5,957 @ -13/16"

Moment (ft-lbs)

D+S

max 4,985 @ 1' 6 1/16"

Deflection (in)

D+S

0.018 in down @ 1' 6"

limit 0.212 in on 2L (cantilever)

26-005 10 Moonflower | SMC Design | designed by Steve Curtis

printed 10/08/2026 10:37 AM

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Header #10

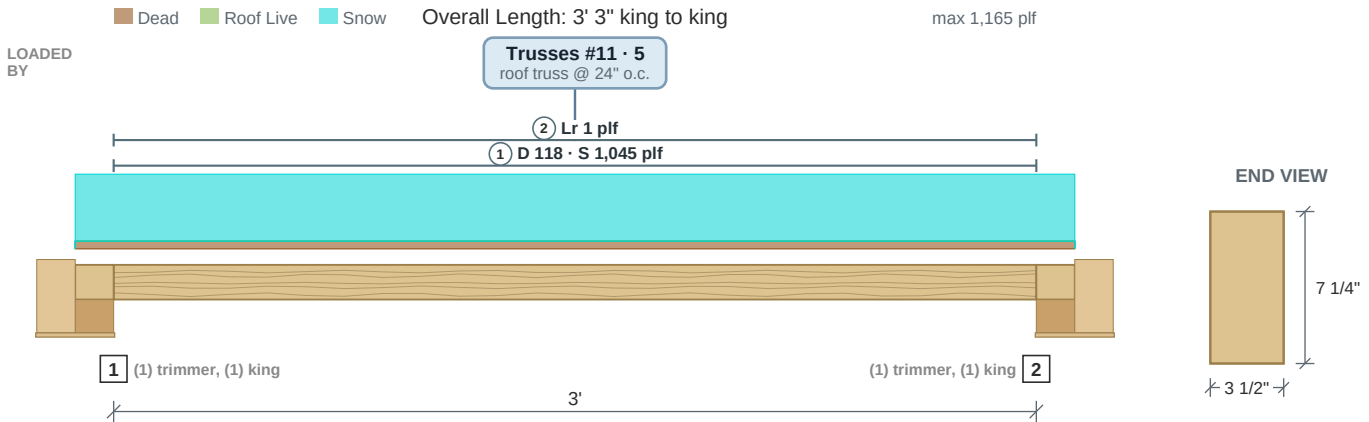
(1) 4x8 DF-L No. 2 (3 1/2" x 7 1/4")

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 3' 3" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 53% used

Section adequacy 46.5% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,754 @ 0	3,281 (1 1/2")	Passed (53%)	--	
Shear (lbs)	1,754 @ 3'	3,502	Passed (50%)	1.15	D+S
Moment (Ft-lbs)	1,379 @ 1' 6"	3,438	Passed (40%)	1.15	D+S
Live Load Defl. (in)	0.012 @ 1' 6"	0.154	Passed (2L/3,131)	--	S
Total Load Defl. (in)	0.013 @ 1' 6"	0.205	Passed (2L/2,798)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CF = 1.30, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 5.8 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

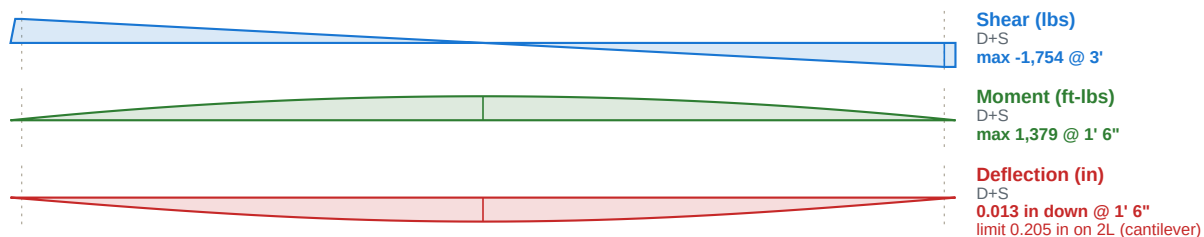
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	1 1/2"	13/16"	202	2	1,698	1,900	Bearing wall (marked, trimmers) -- on (1) trimmer, (1) king stud
2 @ 3'	1 1/2"	13/16"	202	2	1,698	1,900	Bearing wall (marked, trimmers) -- on (1) trimmer, (1) king stud

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3'	N/A	5.8	--	--	
1 - Uniform (PLF)	0 to 3'	N/A	118.5	--	1,045	Linked from: Trusses #11, Support 5
2 - Uniform (PLF)	0 to 3'	N/A	--	1	--	

Shear, Moment and Deflection

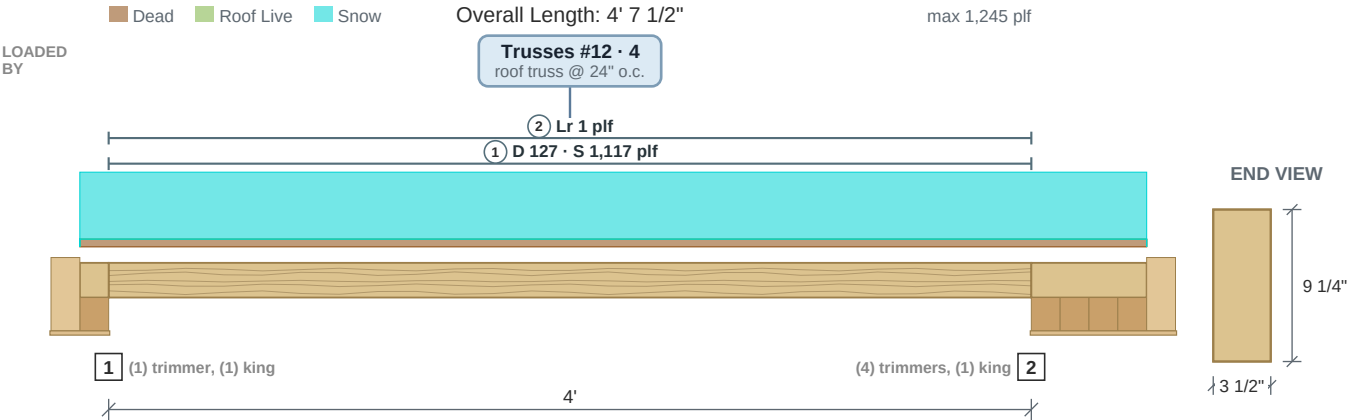


Header #11

(1) 4x10 DF-L No. 2 (3 1/2" x 9 1/4")

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 4' 7 1/2" | 2018 IRC | 2018 NDS | ASD

Controls: Bearing 76% used
Section adequacy 23.6% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	2,508 @ 0	3,281 (1 1/2")	Passed (76%)	--	
Shear (lbs)	2,508 @ -5/8"	4,468	Passed (56%)	1.15	D+S
Moment (Ft-lbs)	2,640 @ 2' 1/16"	5,166	Passed (51%)	1.15	D+S
Live Load Defl. (in)	0.019 @ 2' 5/8"	0.206	Passed (2L/2,543)	--	S
Total Load Defl. (in)	0.022 @ 2' 5/8"	0.274	Passed (2L/2,271)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CF = 1.20, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 7.4 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

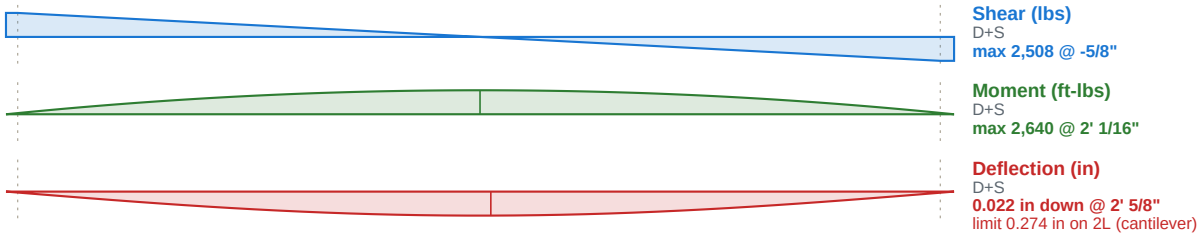
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	1 1/2"	1 1/8"	285	2	2,379	2,664	Bearing wall (marked, trimmers) -- on (1) trimmer, (1) king stud
2 @ 4'	6"	1 1/8"	334	2	2,788	3,122	Bearing wall (marked, trimmers) -- on (4) trimmers, (1) king stud

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	4' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 4'	N/A	7.4	--	--	
1 - Uniform (PLF)	0 to 4'	N/A	126.6	--	1,117	Linked from: Trusses #12, Support 4
2 - Uniform (PLF)	0 to 4'	N/A	--	1	--	

Shear, Moment and Deflection



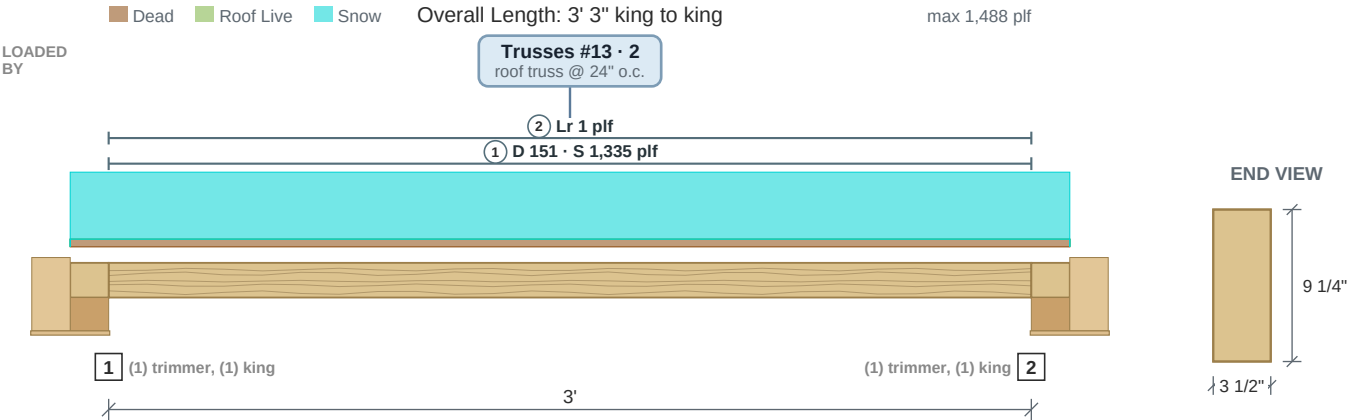
Header #12

(1) 4x10 DF-L No. 2 (3 1/2" x 9 1/4")

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 3' 3" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 68% used
Section adequacy 31.7% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	2,241 @ 0	3,281 (1 1/2")	Passed (68%)	--	
Shear (lbs)	2,241 @ -9/16"	4,468	Passed (50%)	1.15	D+S
Moment (Ft-lbs)	1,785 @ 1' 6"	5,166	Passed (35%)	1.15	D+S
Live Load Defl. (in)	0.007 @ 1' 6 7/16"	0.155	Passed (2L/4,996)	--	S
Total Load Defl. (in)	0.008 @ 1' 6 7/16"	0.206	Passed (2L/4,466)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CF = 1.20, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 7.4 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

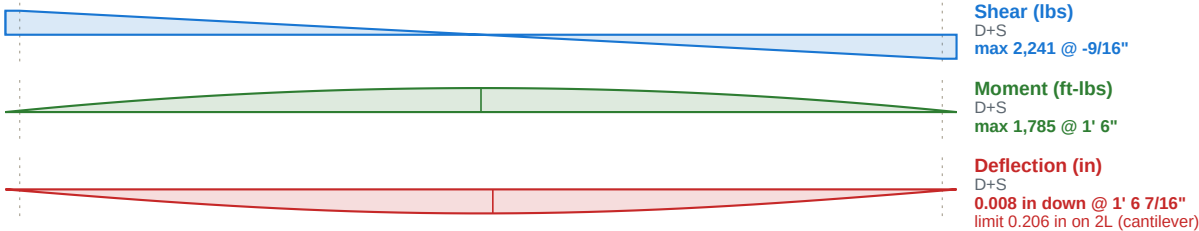
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	1 1/2"	1"	258	2	2,170	2,428	SpotFtg Hdr #12 (on (1) trimmer, (1) king stud)
2 @ 3'	1 1/2"	1"	258	2	2,170	2,428	Bearing wall (marked, trimmers) -- on (1) trimmer, (1) king stud

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3'	N/A	7.4	--	--	
1 - Uniform (PLF)	0 to 3'	N/A	151.4	--	1,335	Linked from: Trusses #13, Support 2
2 - Uniform (PLF)	0 to 3'	N/A	--	1	--	

Shear, Moment and Deflection



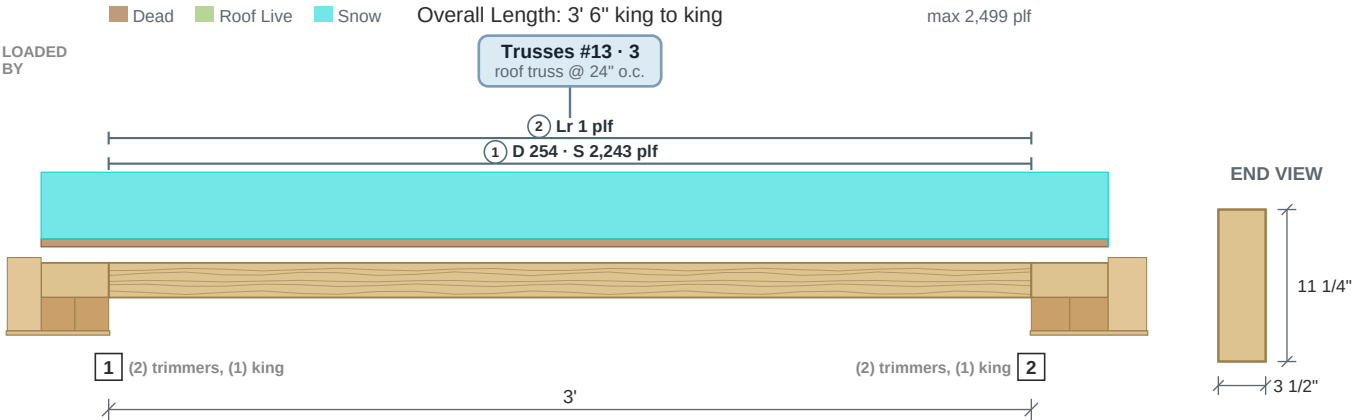
Header #13

(1) 4x12 DF-L No. 2 (3 1/2" x 11 1/4")

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 3' 6" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 69% used
Section adequacy 30.8% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	3,760 @ 0	6,562 (3")	Passed (57%)	--	
Shear (lbs)	3,760 @ -1"	5,434	Passed (69%)	1.15	D+S
Moment (Ft-lbs)	3,134 @ 1' 6"	7,004	Passed (45%)	1.15	D+S
Live Load Defl. (in)	0.008 @ 1' 6"	0.158	Passed (2L/4,989)	--	S
Total Load Defl. (in)	0.009 @ 1' 6"	0.211	Passed (2L/4,465)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CF = 1.10, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

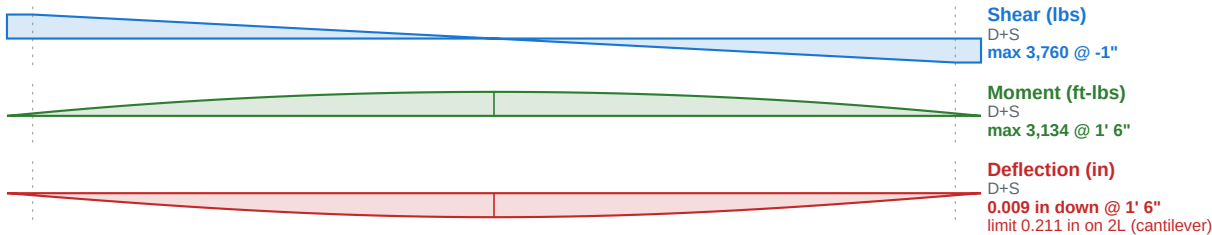
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	3"	1 3/4"	461	2	3,926	4,387	SpotFtg Hdr #13-1 (on (2) trimmers, (1) king stud)
2 @ 3'	3"	1 3/4"	461	2	3,926	4,387	SpotFtg Hdr #13-2 (on (2) trimmers, (1) king stud)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3'	N/A	9	--	--	
1 - Uniform (PLF)	0 to 3'	N/A	254.3	--	2,243	Linked from: Trusses #13, Support 3
2 - Uniform (PLF)	0 to 3'	N/A	--	1	--	

Shear, Moment and Deflection



Header #14

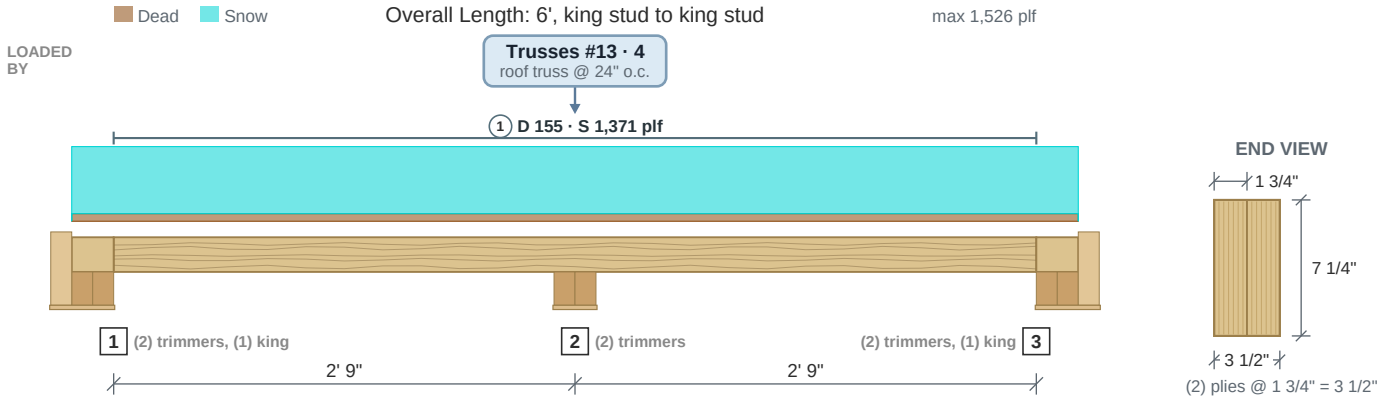
(2) 1 3/4" x 7 1/4" 2.0E Microlam LVL (Weyerhaeuser)

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 6' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 60% used

Section adequacy 39.8% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	5,332 @ 2' 9"	8,860 (3")	Passed (60%)	--	
Shear (lbs)	2,666 @ 2' 9"	5,545	Passed (48%)	1.15	D+S
Neg Moment (Ft-lbs)	-1,483 @ 2' 9"	8,134	Passed (18%)	1.15	D+S
Live Load Defl. (in)	0.009 @ 1' 1 3/16"	0.139	Passed (2L/3,526)	--	S
Total Load Defl. (in)	0.011 @ 1' 1 3/16"	0.185	Passed (2L/3,152)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CV = 1.071, CL = 0.994 (D+S).
- Beam stability (NDS 3.3.3) governs bending: negative moment 1483 lbf-ft, 0.00-2.75 ft, CL 0.994 (unbraced 2.8 ft).
- Member self weight of 7.4 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser ICC-ES ESR-1387, ASD, every load combination with its own load duration factor.

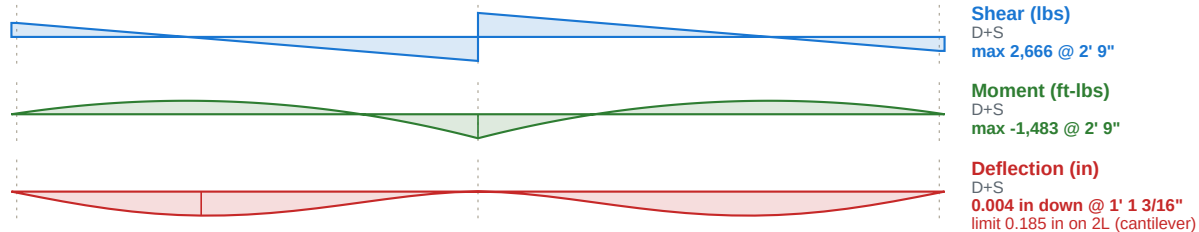
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	3"	9/16"	205	1,730	1,936	Bearing wall (marked, trimmers) -- on (2) trimmers, (1) king stud
2 @ 2' 9"	3"	1 11/16"	566	4,766	5,332	SpotFtg Hdr #14 (on (2) trimmers)
3 @ 5' 6"	3"	9/16"	205	1,730	1,936	Bearing wall (marked, trimmers) -- on (2) trimmers, (1) king stud

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	2' 9" o/c	governs C_L here: the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 5' 6"	N/A	7.4	--	
1 - Uniform (PLF)	0 to 5' 6"	N/A	155.4	1,371	Linked from: Trusses #13, Support 4

Shear, Moment and Deflection

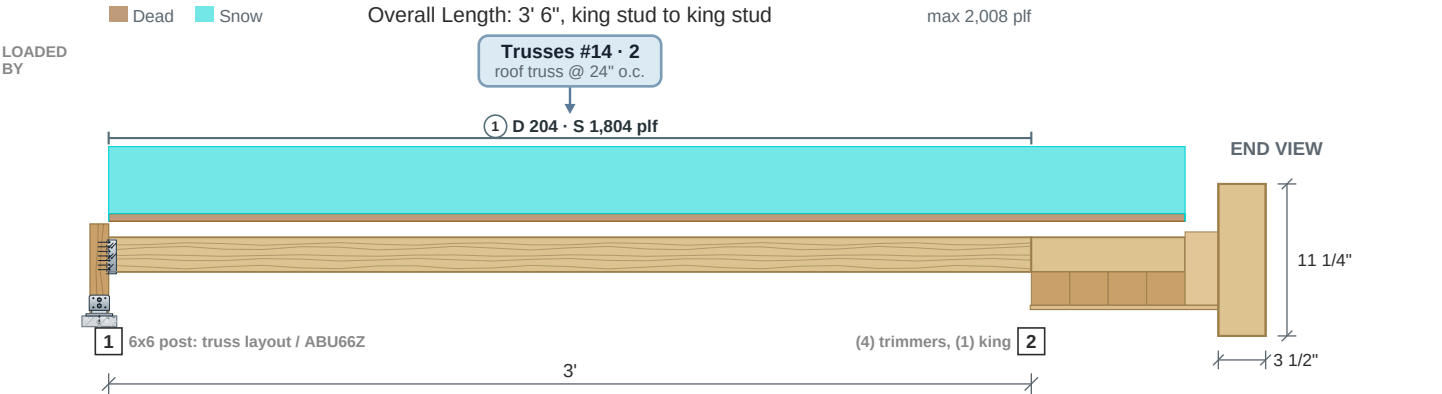


Header #15

(1) 4x12 DF-L No. 2 (3 1/2" x 11 1/4")

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 3' 6" | 2018 IRC | 2018 NDS | ASD

Controls: Shear 56% used
Section adequacy 44.1% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	3,037 @ 0	5,469 (2 1/2")	Passed (56%)	--	
Shear (lbs)	3,037 @ -5/8"	5,434	Passed (56%)	1.15	D+S
Moment (Ft-lbs)	2,485 @ 1' 6 1/16"	7,004	Passed (35%)	1.15	D+S
Live Load Defl. (in)	0.006 @ 1' 6 7/16"	0.157	Passed (2L/6,349)	--	S
Total Load Defl. (in)	0.007 @ 1' 6 7/16"	0.209	Passed (2L/5,678)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CF = 1.10, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

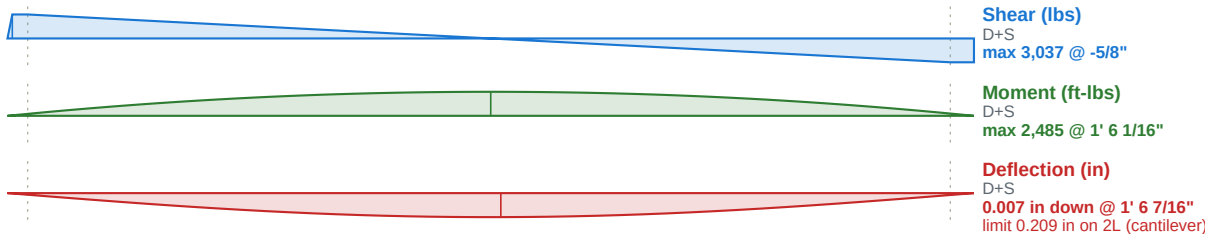
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	2 1/2" seat	1 3/8"	321	2,716	3,037	SpotFtg Hdr #15-1 (hung on the post's face, in an HUC412 concealed flanges, 82%)
2 @ 3'	6"	1 3/8"	426	3,598	4,024	SpotFtg Hdr #15-2 (on (4) trimmers, (1) king stud)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3'	N/A	9	--	
1 - Uniform (PLF)	0 to 3'	N/A	204.4	1,804	Linked from: Trusses #14, Support 2

Shear, Moment and Deflection



Header #16

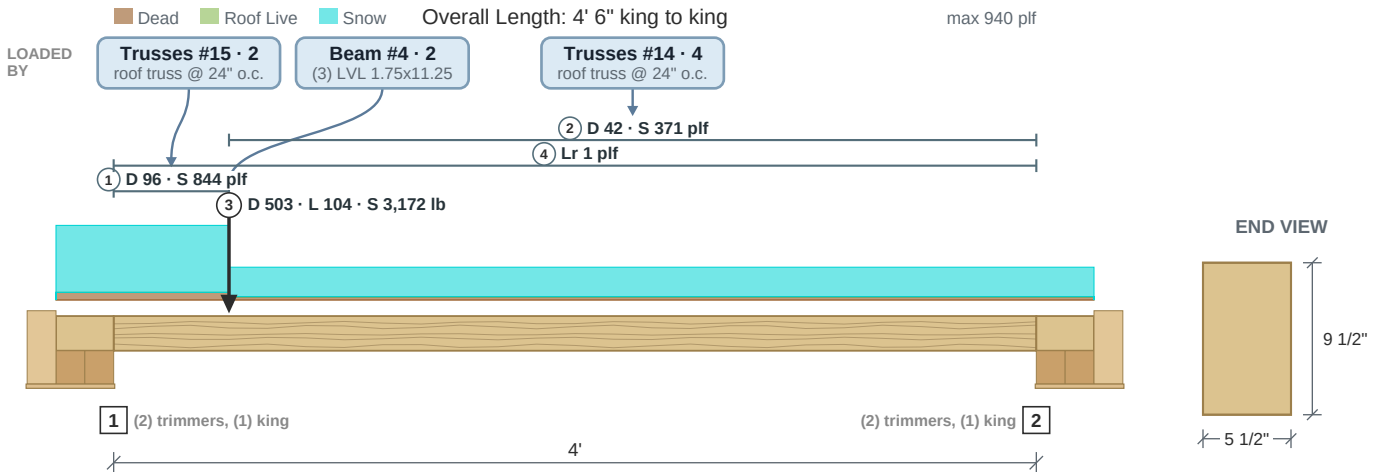
(1) 6x10 DF-L No. 2 (5 1/2" x 9 1/2")

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 4' 6" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 63% used

Section adequacy 37.4% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	4,259 @ 0	10,312 (3")	Passed (41%)	--	
Shear (lbs)	4,259 @ -11/16"	6,810	Passed (63%)	1.15	D+S
Moment (Ft-lbs)	2,259 @ 1' 9 5/8"	6,937	Passed (33%)	1.15	D+S
Live Load Defl. (in)	0.011 @ 1' 9 5/8"	0.204	Passed (2L/4,507)	--	S
Total Load Defl. (in)	0.012 @ 1' 9 5/8"	0.271	Passed (2L/3,912)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 11.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

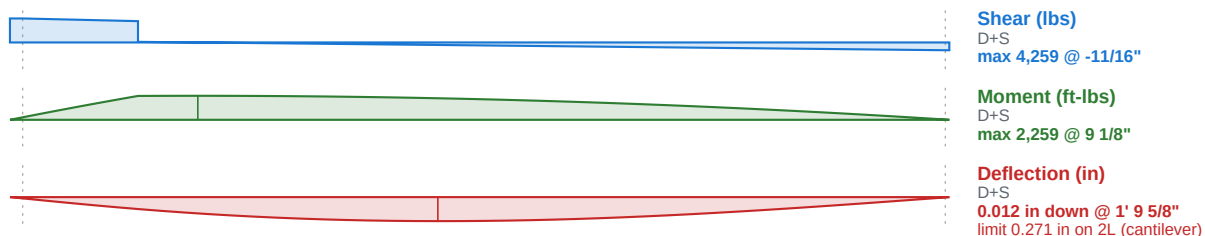
Supports	Bearing Length		Loads to Supports (lbs)					Load goes to
	Provided	Required	Dead	Floor Live	Roof Live	Snow	Total	
1 @ 0	3"	1 1/4"	593	90	2	3,904	4,497	SpotFtg Hdr #16-1 (on (2) trimmers, (1) king stud)
2 @ 4'	3"	3/8"	193	14	2	1,291	1,484	SpotFtg Hdr #16-2 (on (2) trimmers, (1) king stud)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	4' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 4'	N/A	11.9	--	--	--	
1 - Uniform (PLF)	0 to 6"	N/A	95.6	--	--	843.7	Linked from: Trusses #15, Support 2
2 - Uniform (PLF)	6" to 4'	N/A	42	--	--	370.7	Linked from: Trusses #14, Support 4
3 - Point (lb)	6"	N/A	503.2	104.1	--	3,172	Linked from: Beam #4, Support 2
4 - Uniform (PLF)	0 to 4'	N/A	--	--	1	--	

Shear, Moment and Deflection



Header #17

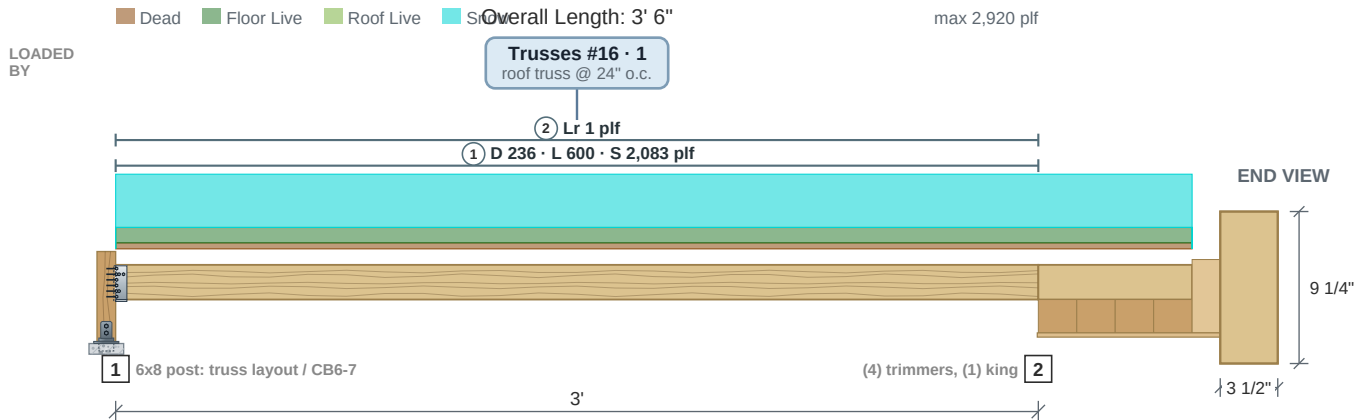
(1) 4x10 DF-L Select Structural (3 1/2" x 9 1/4")

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 3' 6" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 78% used

Section adequacy 21.6% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	3,502 @ 0	6,562 (3")	Passed (53%)	--	
Shear (lbs)	3,502 @ -15/16"	4,468	Passed (78%)	1.15	D+S
Moment (Ft-lbs)	2,908 @ 1' 6 1/16"	8,610	Passed (34%)	1.15	D+S
Live Load Defl. (in)	0.011 @ 1' 6"	0.158	Passed (2L/3,549)	--	S
Total Load Defl. (in)	0.012 @ 1' 6"	0.211	Passed (2L/3,178)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CF = 1.20, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 7.4 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

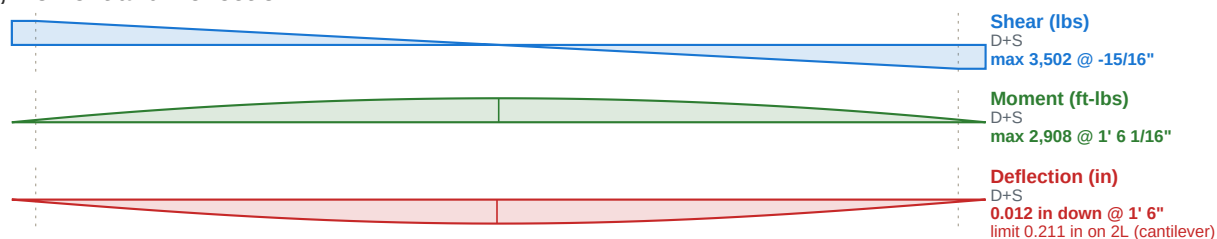
Supports	Bearing Length		Loads to Supports (lbs)					Load goes to
	Provided	Required	Dead	Floor Live	Roof Live	Snow	Total	
1 @ 0	3" seat	1 5/8"	366	903	2	3,136	3,502	SpotFtg Gdr #7-1 (hung on the post's face, in an HUCQ410-SDS concealed flanges, 78%)
2 @ 3'	6"	1 9/16"	486	1,197	2	4,156	4,641	SpotFtg Bm #6-1 (on (4) trimmers, (1) king stud)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3'	N/A	7.4	--	--	--	
1 - Uniform (PLF)	0 to 3'	N/A	236.1	600	--	2,083	Linked from: Trusses #16, Support 1
2 - Uniform (PLF)	0 to 3'	N/A	--	--	1	--	

Shear, Moment and Deflection



Header #18

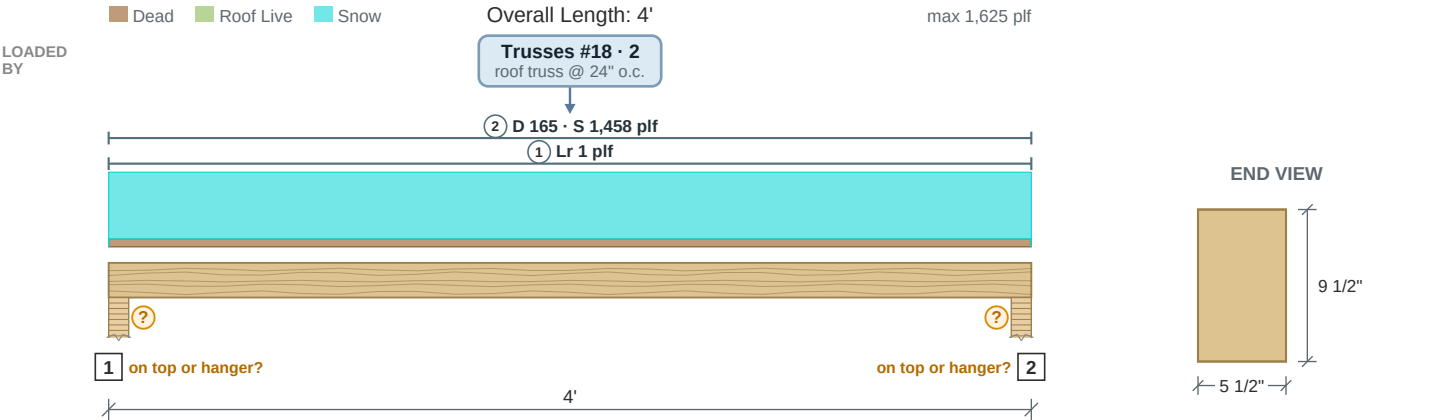
(1) 6x10 DF-L No. 2 (5 1/2" x 9 1/2")

Level: Headers - 2nd Level | Member type: Header (Roof Beam) | Length: 4' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 64% used

Section adequacy 36.4% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	3,277 @ 0	5,156 (1 1/2")	Passed (64%)	--	
Shear (lbs)	3,277 @ -1/4"	6,810	Passed (48%)	1.15	D+S
Moment (Ft-lbs)	3,422 @ 2' 1/16"	6,937	Passed (49%)	1.15	D+S
Live Load Defl. (in)	0.018 @ 2'	0.205	Passed (2L/2,729)	--	S
Total Load Defl. (in)	0.02 @ 2'	0.273	Passed (2L/2,433)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 11.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

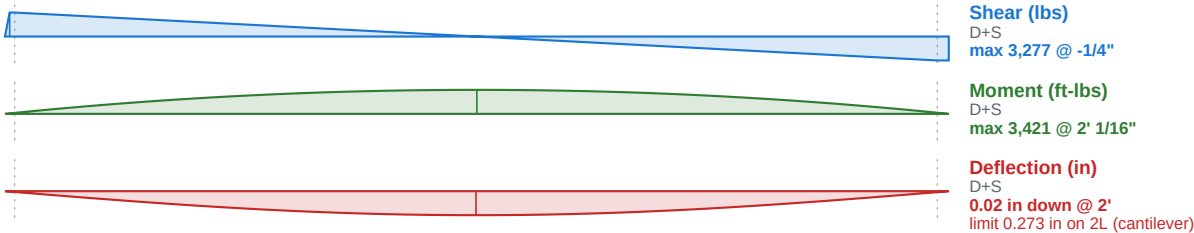
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	1 1/2"	15/16"	355	2	2,922	3,277	Header #19 (on top or in a hanger? not set)
2 @ 4'	6"	15/16"	354	2	2,912	3,265	Header #19 (on top or in a hanger? not set)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	4' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 4'	N/A	11.9	--	--	
1 - Uniform (PLF)	0 to 4'	N/A	--	1	--	
2 - Uniform (PLF)	0 to 4'	N/A	165.3	--	1,458	Linked from: Trusses #18, Support 2

Shear, Moment and Deflection



Header #19

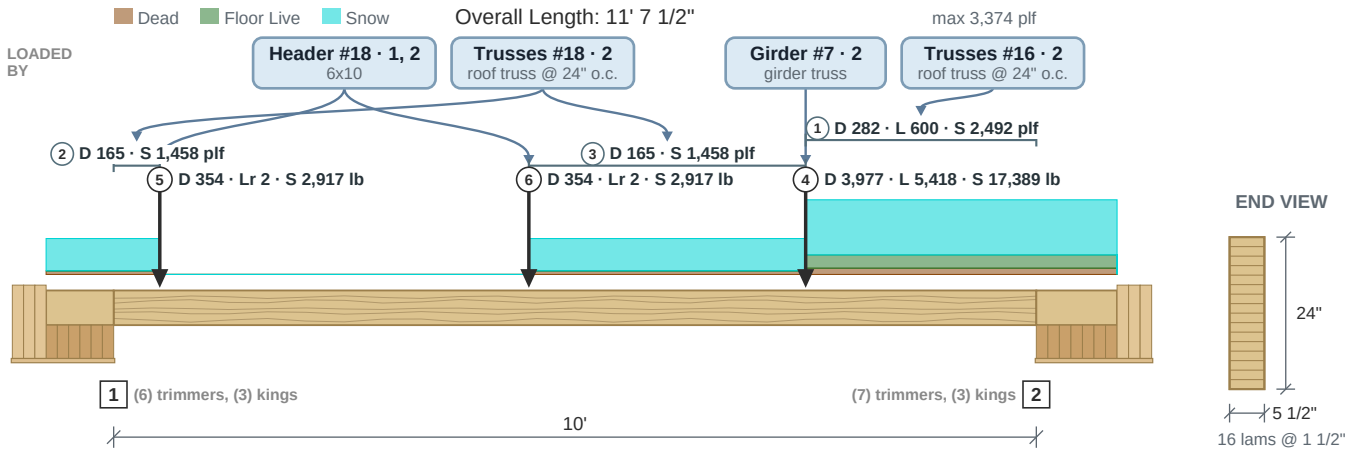
(1) 5 1/2" x 24" 24F-1.8E 24F-V4 DF/DF Glulam

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 11' 7 1/2" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 98% used

Section adequacy 2.4% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	26,188 @ 10'	37,538 (10 1/2")	Passed (70%)	--	
Shear (lbs)	26,188 @ 10'	26,822	Passed (98%)	1.15	D+S
Moment (Ft-lbs)	65,644 @ 7' 6"	121,176	Passed (54%)	1.15	D+S
Live Load Defl. (in)	0.085 @ 5' 6"	0.526	Passed (2L/1,486)	--	S
Total Load Defl. (in)	0.101 @ 5' 6"	0.701	Passed (2L/1,252)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CV = 0.998, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Unbalanced glulam layout: install with the tension laminations at the bottom, proper side up as marked by the manufacturer.
- Member self weight of 30.1 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

Supports	Bearing Length		Loads to Supports (lbs)					Load goes to
	Provided	Required	Dead	Floor Live	Roof Live	Snow	Total	
1 @ 0	9"	4 1/16"	2,293	1,690	3	13,587	15,880	SpotFtg Hdr #19-1 (on (6) trimmers, (3) king studs)
2 @ 10'	10 1/2"	7 5/16"	4,398	5,752	1	24,244	28,642	SpotFtg Hdr #19-2 (on (7) trimmers, (3) king studs)

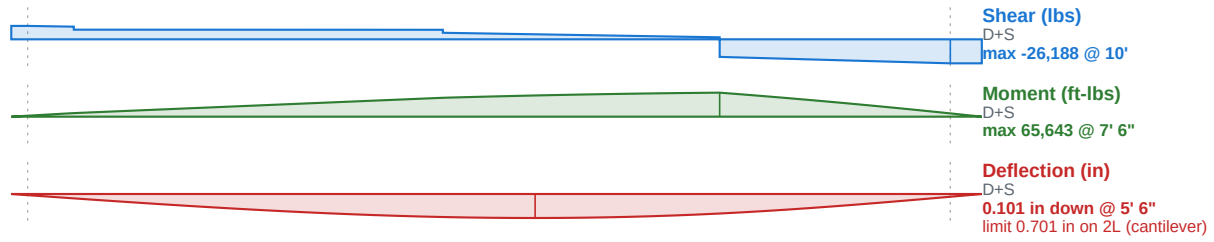
Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	10' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 10'	N/A	30.1	--	--	--	
1 - Uniform (PLF)	7' 6" to 10'	N/A	282.4	600	--	2,492	Linked from: Trusses #16 , Support 2
2 - Uniform (PLF)	0 to 6"	N/A	165.3	--	--	1,458	Linked from: Trusses #18 , Support 2
3 - Uniform (PLF)	4' 6" to 7' 6"	N/A	165.3	--	--	1,458	Linked from: Trusses #18 , Support 2
4 - Point (lb)	7' 6"	N/A	3,977	5,418	--	17,389	Linked from: Girder #7 , Support 2
5 - Point (lb)	6"	N/A	354.4	--	2	2,917	Linked from: Header #18 , Support 1
6 - Point (lb)	4' 6"	N/A	354.4	--	2	2,917	Linked from: Header #18 , Support 2

Header #19 (continued) Roof Beam | (1) 5 1/2" x 24" 24F-1.8E 24F-V4 DF/DF Glulam

Shear, Moment and Deflection



Header #20

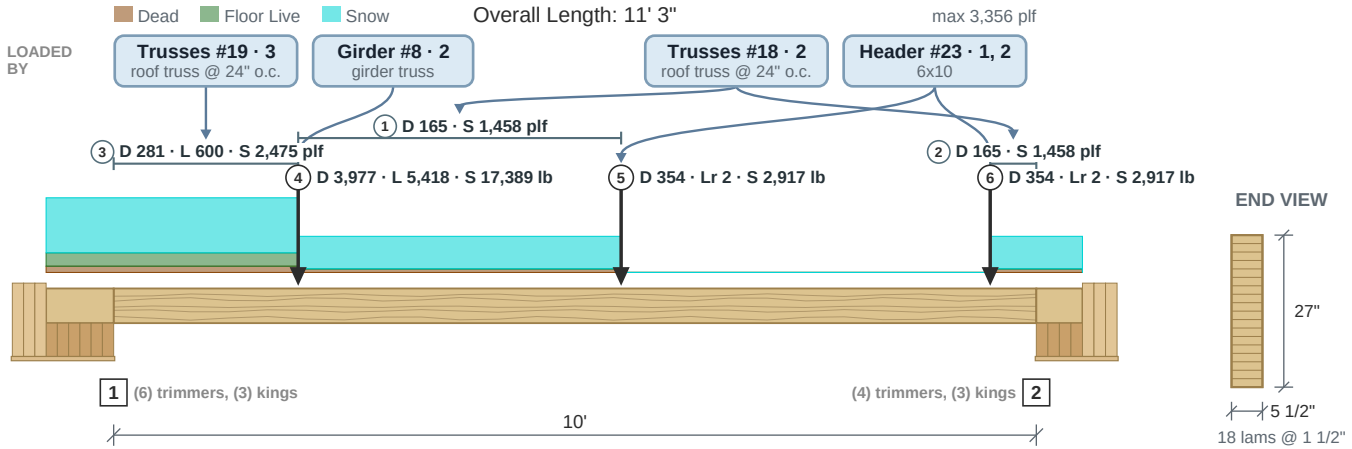
(1) 5 1/2" x 27" 24F-1.8E 24F-V4 DF/DF Glulam

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 11' 3" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 89% used

Section adequacy 11.4% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	26,725 @ 0	32,175 (9")	Passed (83%)	--	
Shear (lbs)	26,725 @ -3 1/2"	30,175	Passed (89%)	1.15	D+S
Moment (Ft-lbs)	57,069 @ 2'	151,565	Passed (38%)	1.15	D+S
Live Load Defl. (in)	0.054 @ 4' 6"	0.525	Passed (2L/2,349)	--	S
Total Load Defl. (in)	0.064 @ 4' 6"	0.525	Passed (2L/1,981)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Bending adjustment factors: CD = 1.15, CV = 0.986, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Unbalanced glulam layout: install with the tension laminations at the bottom, proper side up as marked by the manufacturer.
- Member self weight of 33.8 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

Supports	Bearing Length		Loads to Supports (lbs)					Load goes to
	Provided	Required	Dead	Floor Live	Roof Live	Snow	Total	
1 @ 0	9"	7 1/2"	4,516	5,705	1	24,301	28,817	SpotFtg Hdr #20-1 (on (6) trimmers, (3) king studs)
2 @ 10'	6"	3 3/4"	2,065	1,363	3	12,291	14,356	SpotFtg Hdr #19-1 (on (4) trimmers, (3) king studs)

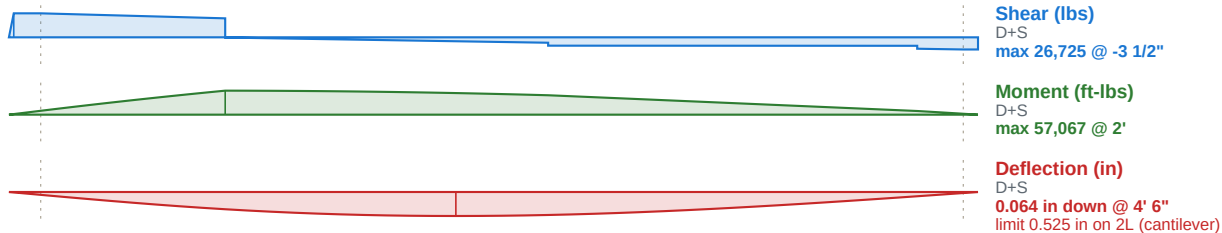
Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	10' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 10'	N/A	33.8	--	--	--	
1 - Uniform (PLF)	2' to 5' 6"	N/A	165.3	--	--	1,458	Linked from: Trusses #18 , Support 2
2 - Uniform (PLF)	9' 6" to 10'	N/A	165.3	--	--	1,458	Linked from: Trusses #18 , Support 2
3 - Uniform (PLF)	0 to 2'	N/A	280.5	600	--	2,475	Linked from: Trusses #19 , Support 3
4 - Point (lb)	2'	N/A	3,977	5,418	--	17,389	Linked from: Girder #8 , Support 2
5 - Point (lb)	5' 6"	N/A	354.4	--	2	2,917	Linked from: Header #23 , Support 1
6 - Point (lb)	9' 6"	N/A	354.4	--	2	2,917	Linked from: Header #23 , Support 2

Header #20 (continued) Roof Beam | (1) 5 1/2" x 27" 24F-1.8E 24F-V4 DF/DF Glulam

Shear, Moment and Deflection



Header #21

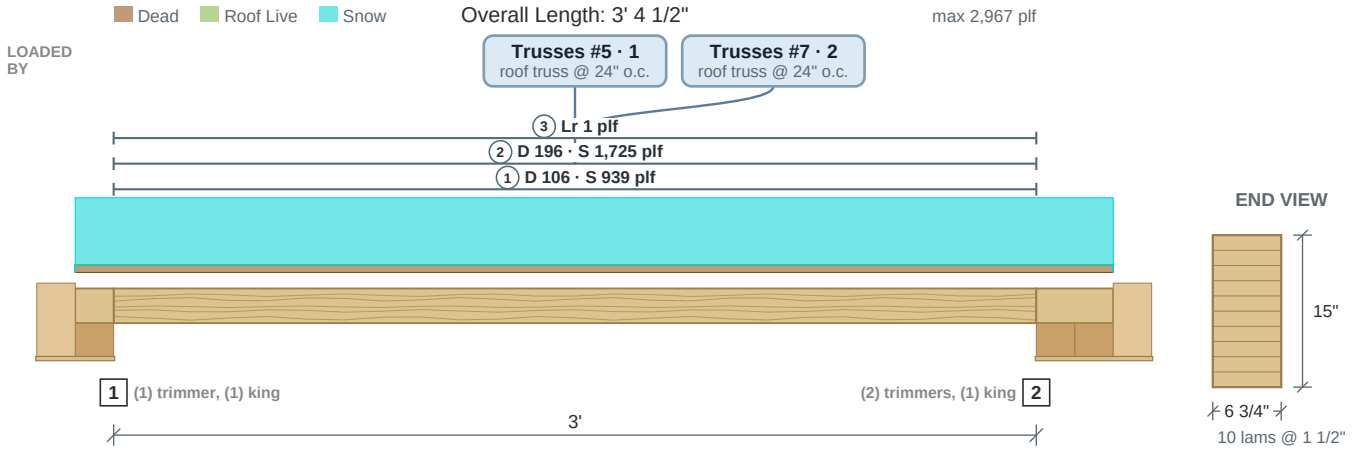
(1) 6 3/4" x 15" 24F-1.8E 24F-V4 DF/DF Glulam

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 3' 4 1/2" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 68% used

Section adequacy 31.8% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	4,488 @ 0	6,581 (1 1/2")	Passed (68%)	--	
Shear (lbs)	4,489 @ -3/8"	20,574	Passed (22%)	1.15	D+S
Moment (Ft-lbs)	3,578 @ 1' 6"	58,219	Passed (6%)	1.15	D+S
Live Load Defl. (in)	0.002 @ 1' 6 7/16"	0.155	Passed (2L/9999+)	--	S
Total Load Defl. (in)	0.002 @ 1' 6 7/16"	0.206	Passed (2L/9999+)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Unbalanced glulam layout: install with the tension laminations at the bottom, proper side up as marked by the manufacturer.
- Member self weight of 23.1 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

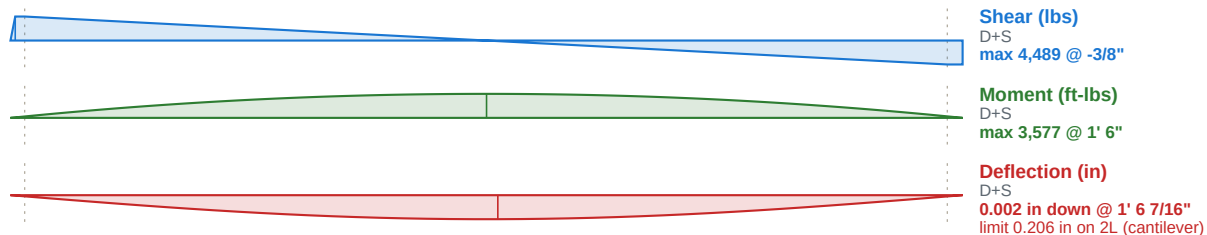
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	1 1/2"	1"	529	2	4,333	4,862	SpotFtg Hdr #3-2 (on (1) trimmer, (1) king stud)
2 @ 3'	3"	1"	568	2	4,657	5,225	SpotFtg Hdr #21 (on (2) trimmers, (1) king stud)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3'	N/A	23.1	--	--	
1 - Uniform (PLF)	0 to 3'	N/A	106.4	--	938.9	Linked from: Trusses #5, Support 1
2 - Uniform (PLF)	0 to 3'	N/A	195.5	--	1,725	Linked from: Trusses #7, Support 2
3 - Uniform (PLF)	0 to 3'	N/A	--	1	--	

Shear, Moment and Deflection



Header #22

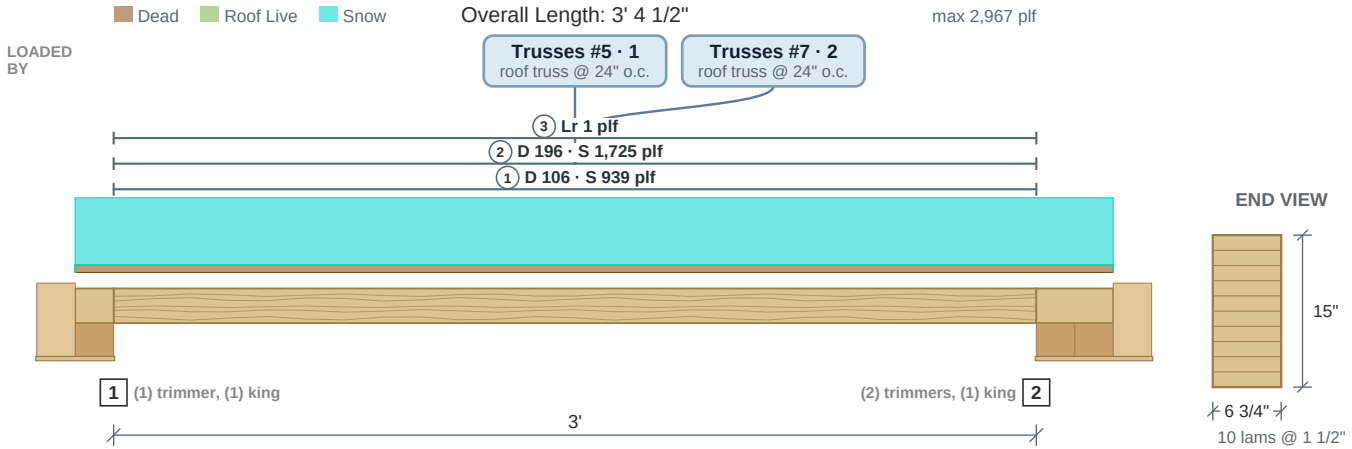
(1) 6 3/4" x 15" 24F-1.8E 24F-V4 DF/DF Glulam

Level: Headers - 1st Level | Member type: Header (Roof Beam) | Length: 3' 4 1/2" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 68% used

Section adequacy 31.8% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	4,488 @ 0	6,581 (1 1/2")	Passed (68%)	--	
Shear (lbs)	4,489 @ -3/8"	20,574	Passed (22%)	1.15	D+S
Moment (Ft-lbs)	3,578 @ 1' 6"	58,219	Passed (6%)	1.15	D+S
Live Load Defl. (in)	0.002 @ 1' 6 7/16"	0.155	Passed (2L/9999+)	--	S
Total Load Defl. (in)	0.002 @ 1' 6 7/16"	0.206	Passed (2L/9999+)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Unbalanced glulam layout: install with the tension laminations at the bottom, proper side up as marked by the manufacturer.
- Member self weight of 23.1 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

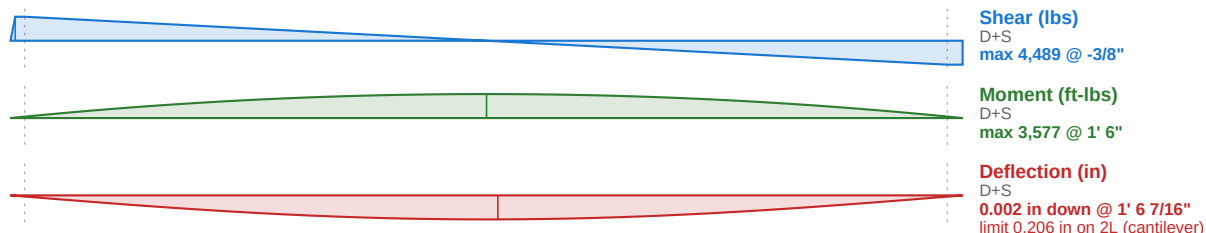
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	1 1/2"	1"	529	2	4,333	4,862	Bearing wall (marked, trimmers) -- on (1) trimmer, (1) king stud
2 @ 3'	3"	1"	568	2	4,657	5,225	SpotFtg Hdr #3-1 (on (2) trimmers, (1) king stud)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3'	N/A	23.1	--	--	
1 - Uniform (PLF)	0 to 3'	N/A	106.4	--	938.9	Linked from: Trusses #5, Support 1
2 - Uniform (PLF)	0 to 3'	N/A	195.5	--	1,725	Linked from: Trusses #7, Support 2
3 - Uniform (PLF)	0 to 3'	N/A	--	1	--	

Shear, Moment and Deflection

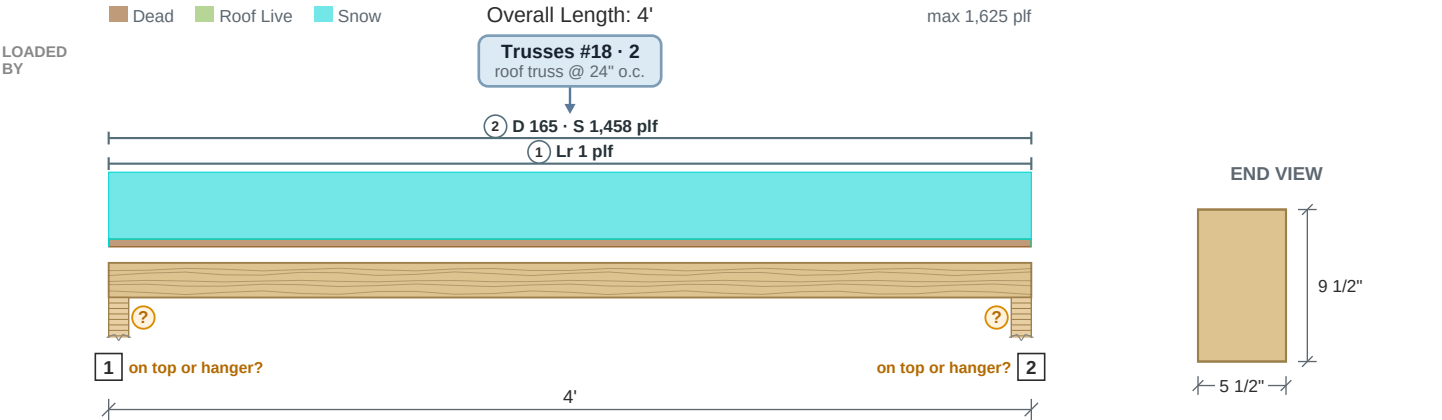


Header #23

(1) 6x10 DF-L No. 2 (5 1/2" x 9 1/2")

Level: Headers - 2nd Level | Member type: Header (Roof Beam) | Length: 4' | 2018 IRC | 2018 NDS | ASD

Controls: Bearing 64% used
Section adequacy 36.4% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	3,277 @ 0	5,156 (1 1/2")	Passed (64%)	--	
Shear (lbs)	3,277 @ -1/4"	6,810	Passed (48%)	1.15	D+S
Moment (Ft-lbs)	3,422 @ 2' 1/16"	6,937	Passed (49%)	1.15	D+S
Live Load Defl. (in)	0.018 @ 2'	0.205	Passed (2L/2,729)	--	S
Total Load Defl. (in)	0.02 @ 2'	0.273	Passed (2L/2,433)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 11.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

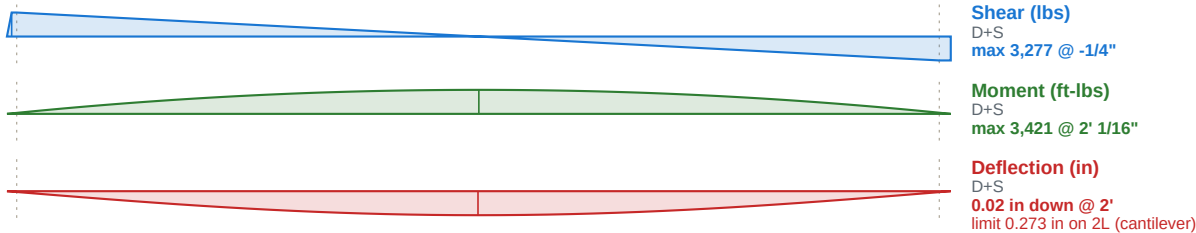
Supports	Bearing Length		Loads to Supports (lbs)				Load goes to
	Provided	Required	Dead	Roof Live	Snow	Total	
1 @ 0	1 1/2"	15/16"	355	2	2,922	3,277	Header #20 (on top or in a hanger? not set)
2 @ 4'	6"	15/16"	354	2	2,912	3,265	Header #20 (on top or in a hanger? not set)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	4' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 4'	N/A	11.9	--	--	
1 - Uniform (PLF)	0 to 4'	N/A	--	1	--	
2 - Uniform (PLF)	0 to 4'	N/A	165.3	--	1,458	Linked from: Trusses #18, Support 2

Shear, Moment and Deflection



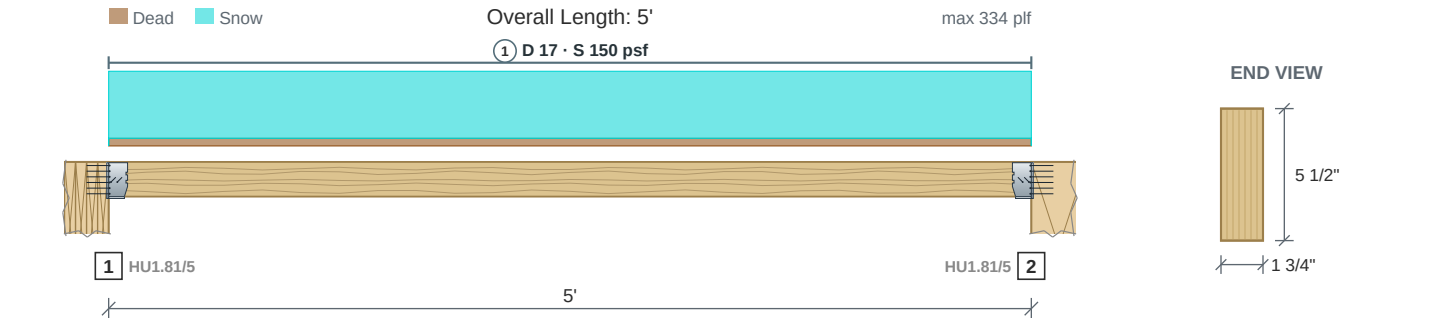
Rafters #1

(1) 1 3/4" x 5 1/2" 2.0E Microlam LVL (Weyerhaeuser) @ 24" o.c.

Level: Roof | Member type: Rafter (Roof Rafter) | Length: 5' | 2018 IRC | 2018 NDS | ASD

Controls: Moment 43% used
Section adequacy 56.9% (capacity to spare)

PASSED



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	842 @ 0	3,281 (2 1/2")	Passed (26%)	--	
Shear (lbs)	842 @ 0	2,103	Passed (40%)	1.15	D+S
Moment (Ft-lbs)	1,053 @ 2' 6"	2,444	Passed (43%)	1.15	D+S
Live Load Defl. (in)	0.098 @ 2' 6"	0.25	Passed (L/611)	--	S
Total Load Defl. (in)	0.11 @ 2' 6"	0.333	Passed (L/544)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Bending adjustment factors: CD = 1.15, CV = 1.112, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 2.8 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser ICC-ES ESR-1387, ASD, every load combination with its own load duration factor.

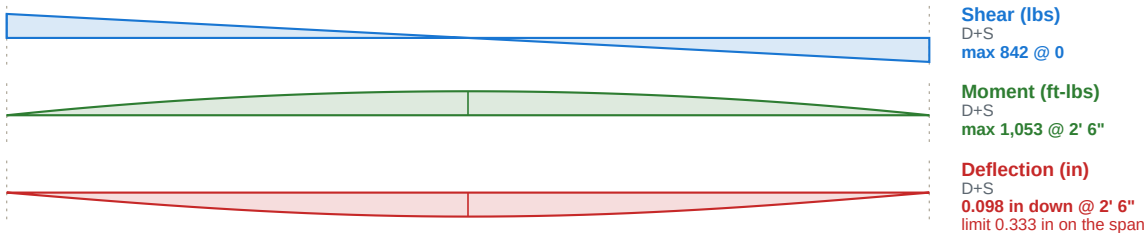
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	2 1/2" seat	5/8"	92	750	842	Girder #5 (flush, in an HU1.81/5 face mount, 42%)
2 @ 5'	2 1/2" seat	5/8"	92	750	842	Girder #9 (flush, in an HU1.81/5 face mount, 42%)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	5' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 5'	N/A	2.8	--	
1 - Uniform (PSF)	0 to 5'	24"	17	150	

Shear, Moment and Deflection



Trusses #1

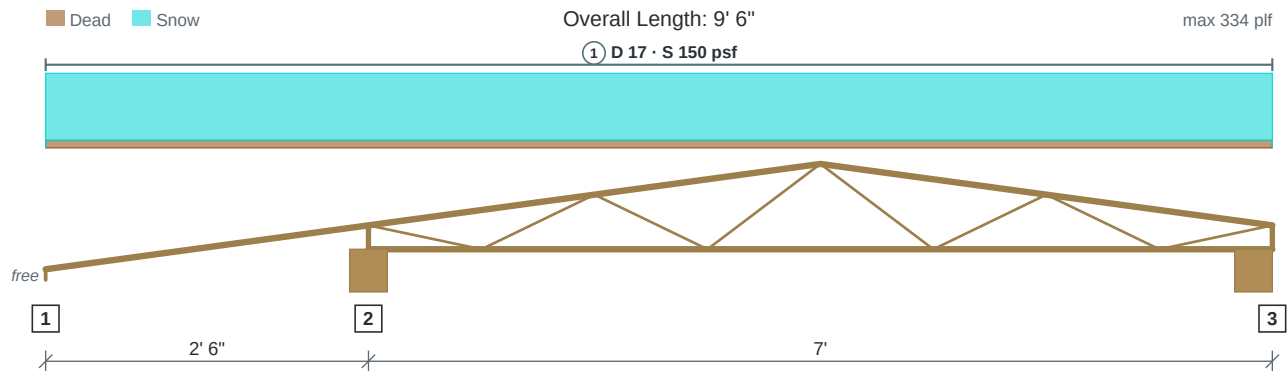
Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 9' 6" | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads

no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Supports	Loads to Supports (lbs)			Load goes to
	Dead	Snow	Total	
1 @ 0	--	--	--	free end (cantilever tip)
2 @ 2' 6"	219	1,934	2,153	Footing #1 (a framed wall down to the foundation)
3 @ 9' 6"	104	916	1,020	Girder #1 (on top or in a hanger? not set)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 9' 6"	24"	17	150	

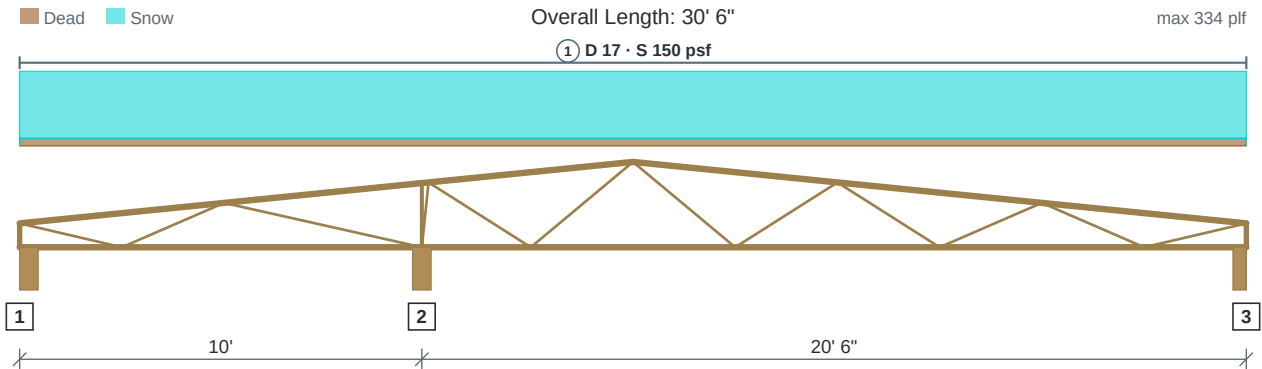
Trusses #2

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 30' 6" | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				
Supports	Dead	Snow	Total	Load goes to
1 @ 0	36	318	354	Girder #2 (bears on top)
2 @ 10'	718	6,334	7,052	Header #2, Footing - WD-#8 (a framed wall down to the foundation)
3 @ 30' 6"	283	2,498	2,781	Footing #4 (a framed wall down to the foundation)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 30' 6"	24"	17	150	

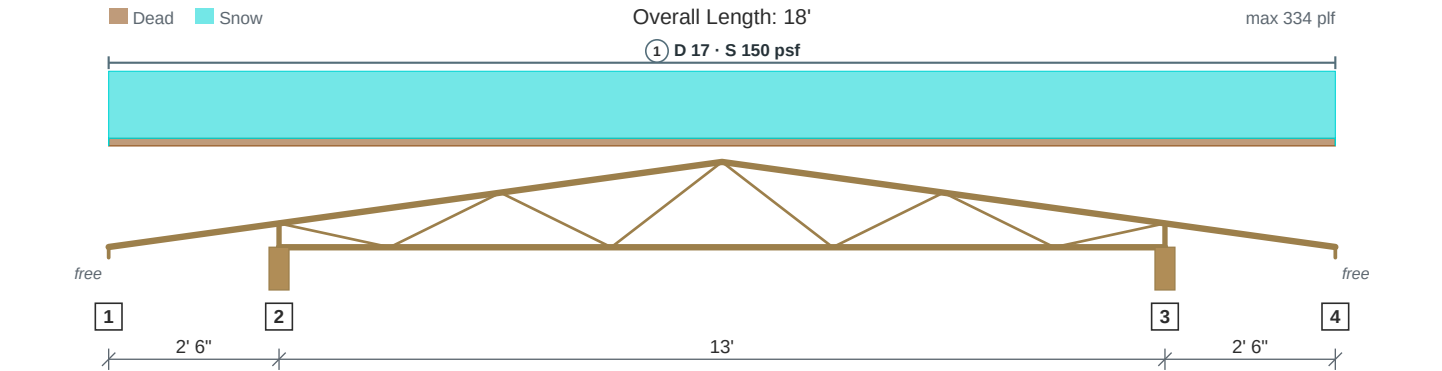
Trusses #3

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 18' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				
Supports	Dead	Snow	Total	Load goes to
1 @ 0	--	--	--	free end (cantilever tip)
2 @ 2' 6"	306	2,700	3,006	Footing #2 (a framed wall down to the foundation)
3 @ 15' 6"	306	2,700	3,006	Footing #4, Footing #3 (a framed wall down to the foundation)
4 @ 18'	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 18'	24"	17	150	

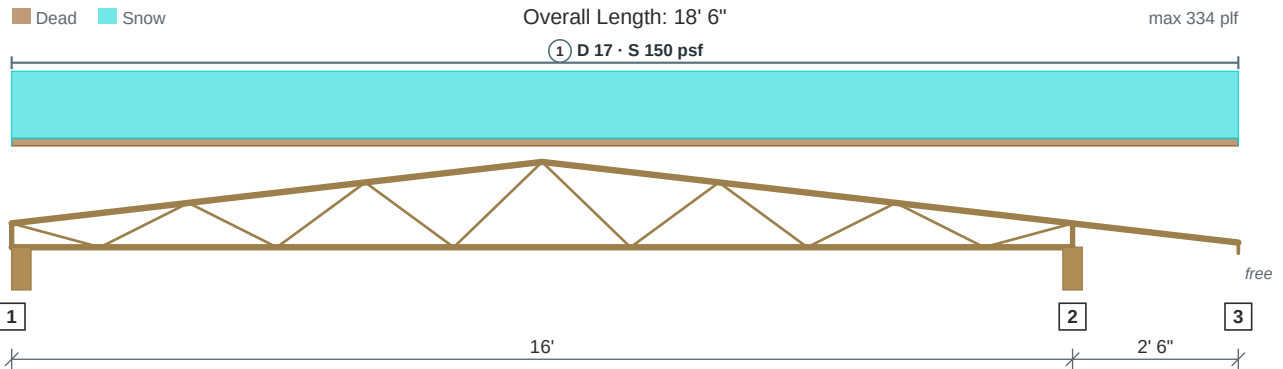
Trusses #4

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 18' 6" | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Supports	Loads to Supports (lbs)			Load goes to
	Dead	Snow	Total	
1 @ 0	265	2,341	2,607	Footing #4 (a framed wall down to the foundation)
2 @ 16'	364	3,209	3,572	Beam #1 (on top or in a hanger? not set)
3 @ 18' 6"	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 18' 6"	24"	17	150	

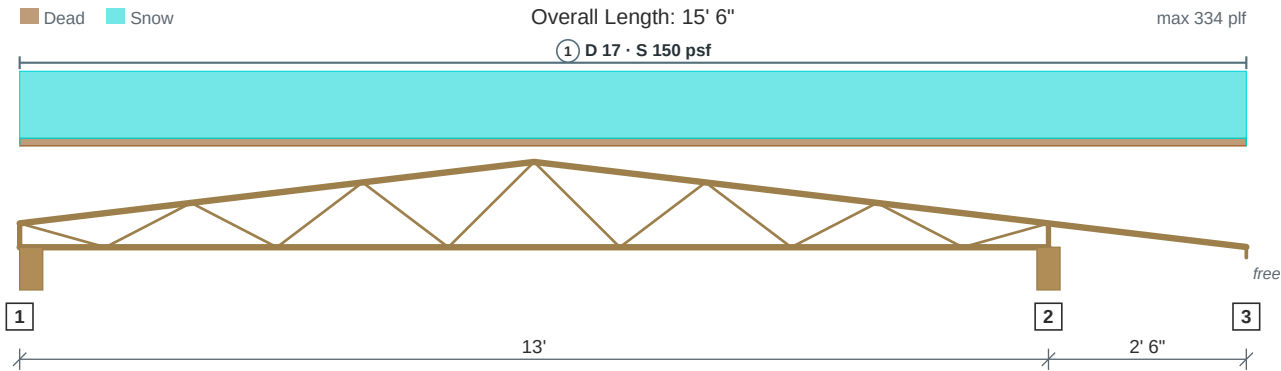
Trusses #5

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 15' 6" | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				Load goes to
Supports	Dead	Snow	Total	
1 @ 0	213	1,878	2,091	Footing #5, Header #3, Header #21, Header #22 (a framed wall down to the foundation)
2 @ 13'	314	2,772	3,086	Beam #1 (on top or in a hanger? not set)
3 @ 15' 6"	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 15' 6"	24"	17	150	

Trusses #6

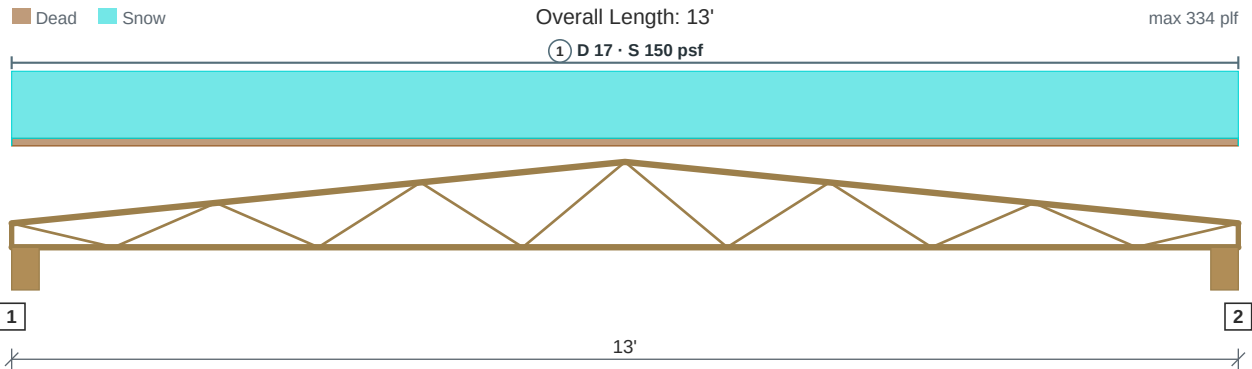
Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 13' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads

no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Supports	Loads to Supports (lbs)			Load goes to
	Dead	Snow	Total	
1 @ 0	221	1,950	2,171	Header #5, Footing #6 (a framed wall down to the foundation)
2 @ 13'	221	1,950	2,171	Beam #3, Footing - WD-#7 (a framed wall down to the foundation)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 13'	24"	17	150	

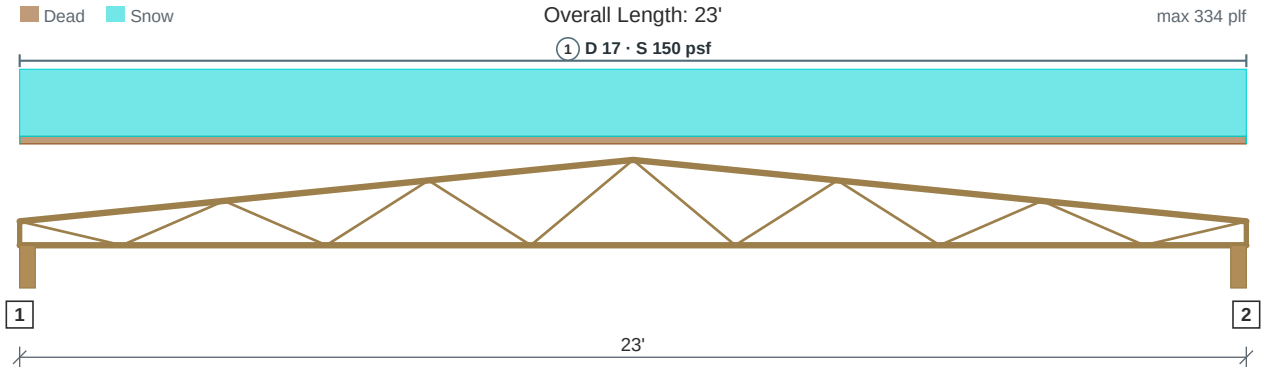
Trusses #7

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 23' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				Load goes to
Supports	Dead	Snow	Total	
1 @ 0	391	3,450	3,841	Beam #2, Footing - WD-#10 (a framed wall down to the foundation)
2 @ 23'	391	3,450	3,841	Header #3, Header #21, Header #22, Footing #5 (a framed wall down to the foundation)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 23'	24"	17	150	

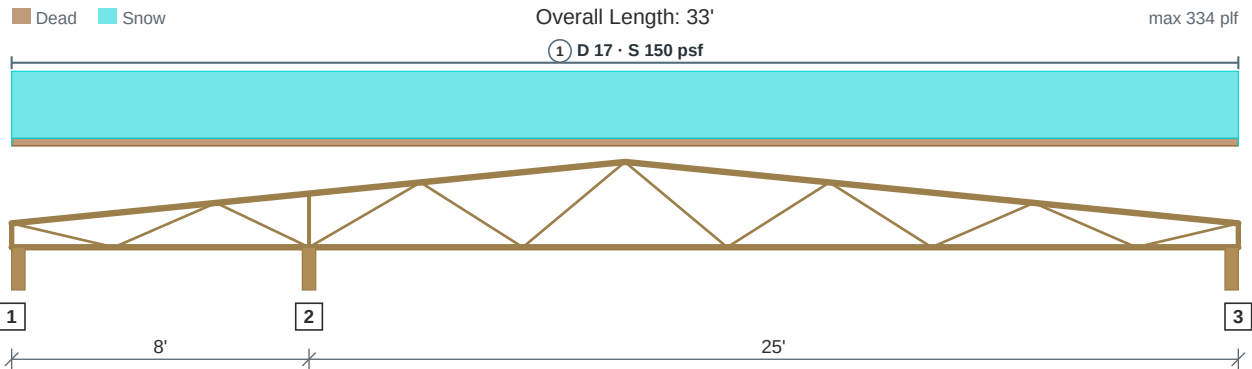
Trusses #8

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 33' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				
Supports	Dead	Snow	Total	Load goes to
1 @ 0	-124	-1,092	-1,216	not linked
2 @ 8'	904	7,976	8,880	Footing - WD-#13 (a framed wall down to the foundation)
3 @ 33'	342	3,016	3,358	Girder #3 (on top or in a hanger? not set)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 33'	24"	17	150	

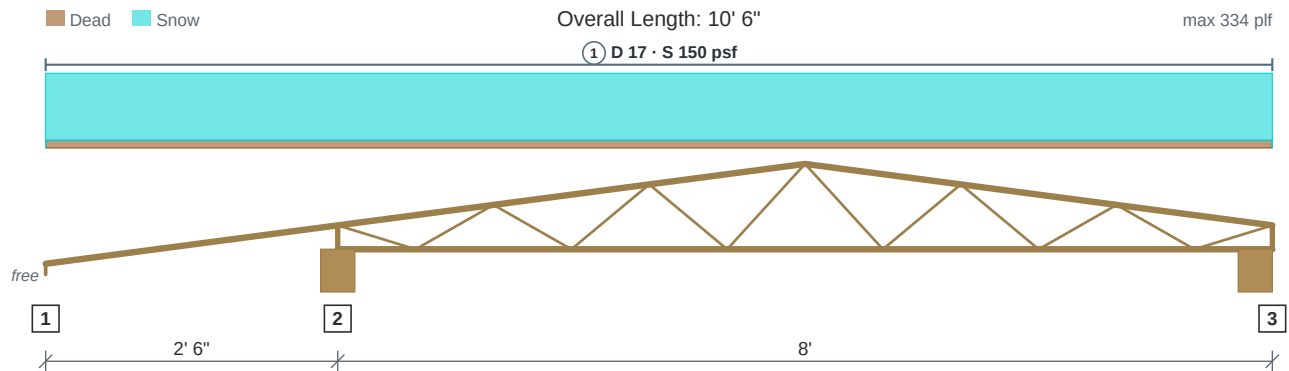
Trusses #9

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 10' 6" | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Supports	Loads to Supports (lbs)			Load goes to
	Dead	Snow	Total	
1 @ 0	--	--	--	free end (cantilever tip)
2 @ 2' 6"	234	2,067	2,301	Beam #13 (on top or in a hanger? not set)
3 @ 10' 6"	123	1,083	1,206	Header #4, Footing #9 (a framed wall down to the foundation)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 10' 6"	24"	17	150	

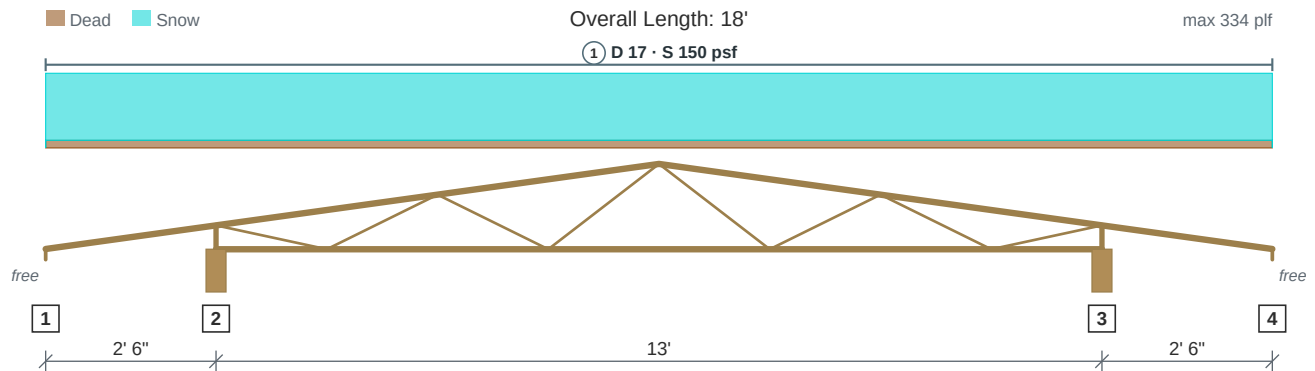
Trusses #10

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 18' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				Load goes to
Supports	Dead	Snow	Total	
1 @ 0	--	--	--	free end (cantilever tip)
2 @ 2' 6"	306	2,700	3,006	Footing #11 (a framed wall down to the foundation)
3 @ 15' 6"	306	2,700	3,006	Footing #12 (a framed wall down to the foundation)
4 @ 18'	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 18'	24"	17	150	

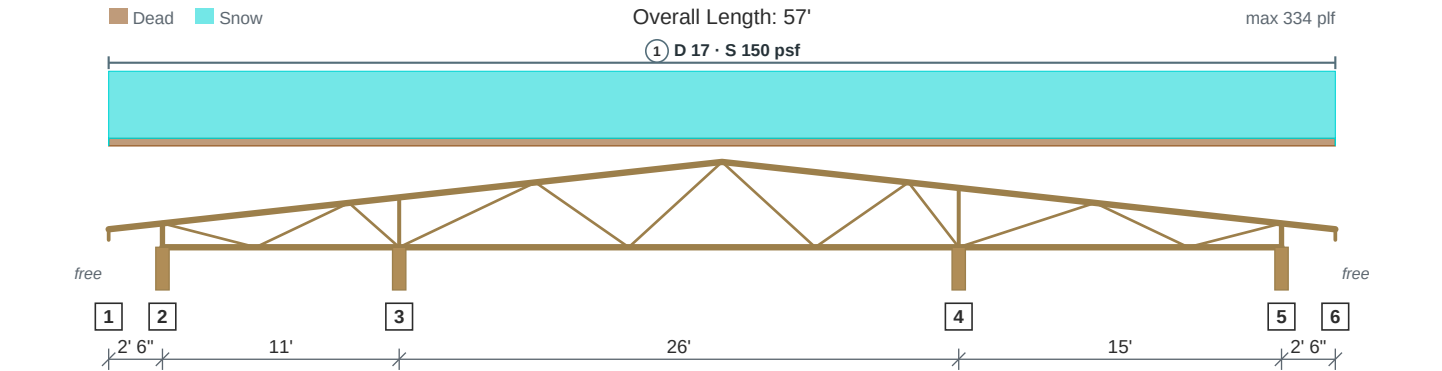
Trusses #11

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 57' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				Load goes to
Supports	Dead	Snow	Total	
1 @ 0	--	--	--	free end (cantilever tip)
2 @ 2' 6"	138	1,222	1,360	Header #8, Footing #15 (a framed wall down to the foundation)
3 @ 13' 6"	760	6,702	7,462	Footing - WD-#14 (a framed wall down to the foundation)
4 @ 39' 6"	803	7,086	7,889	Header #9, Footing - WD-#16 (a framed wall down to the foundation)
5 @ 54' 6"	237	2,090	2,327	Header #10, Footing #17 (a framed wall down to the foundation)
6 @ 57'	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 57'	24"	17	150	

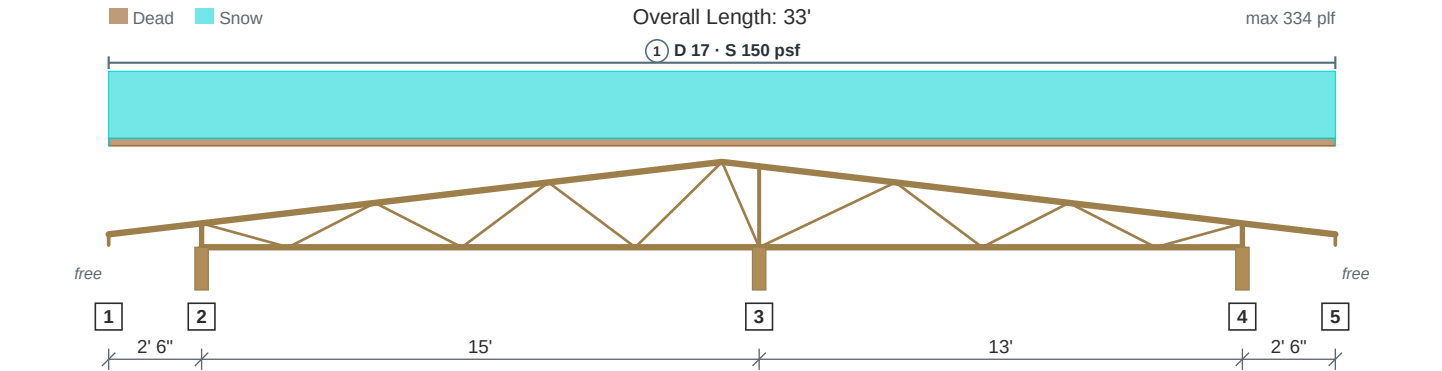
Trusses #12

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 33' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				
Supports	Dead	Snow	Total	Load goes to
1 @ 0	--	--	--	free end (cantilever tip)
2 @ 2' 6"	294	2,596	2,890	Footing #18 (a framed wall down to the foundation)
3 @ 17' 6"	575	5,070	5,644	Footing - WD-#19 (a framed wall down to the foundation)
4 @ 30' 6"	253	2,234	2,487	Header #11, Footing #20 (a framed wall down to the foundation)
5 @ 33'	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 33'	24"	17	150	

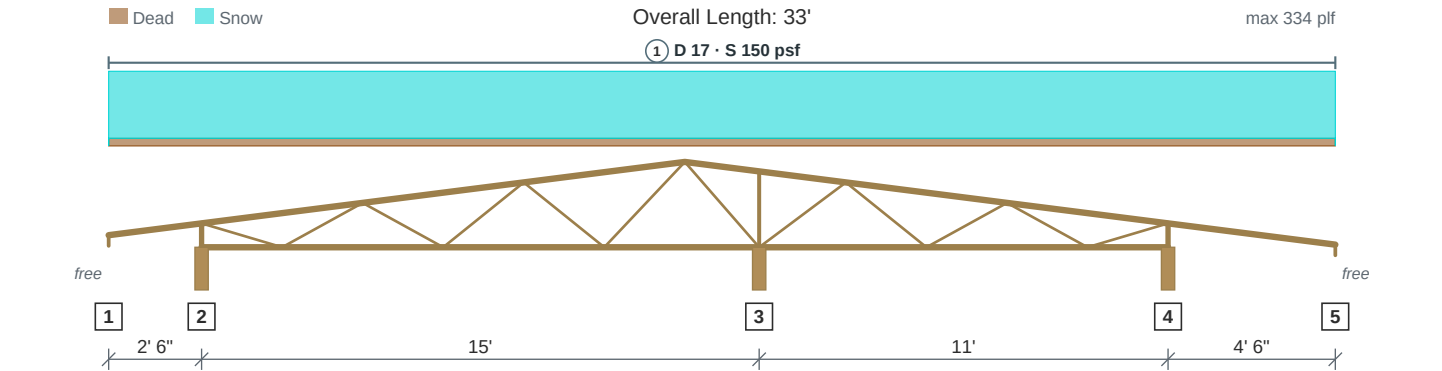
Trusses #13

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 33' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				Load goes to
Supports	Dead	Snow	Total	
1 @ 0	--	--	--	free end (cantilever tip)
2 @ 2' 6"	303	2,671	2,974	Header #12, Footing - WD-#21 (a framed wall down to the foundation)
3 @ 17' 6"	509	4,487	4,996	Header #13, Footing - WD-#22 (a framed wall down to the foundation)
4 @ 28' 6"	311	2,742	3,053	Header #14, Footing #23 (a framed wall down to the foundation)
5 @ 33'	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 33'	24"	17	150	

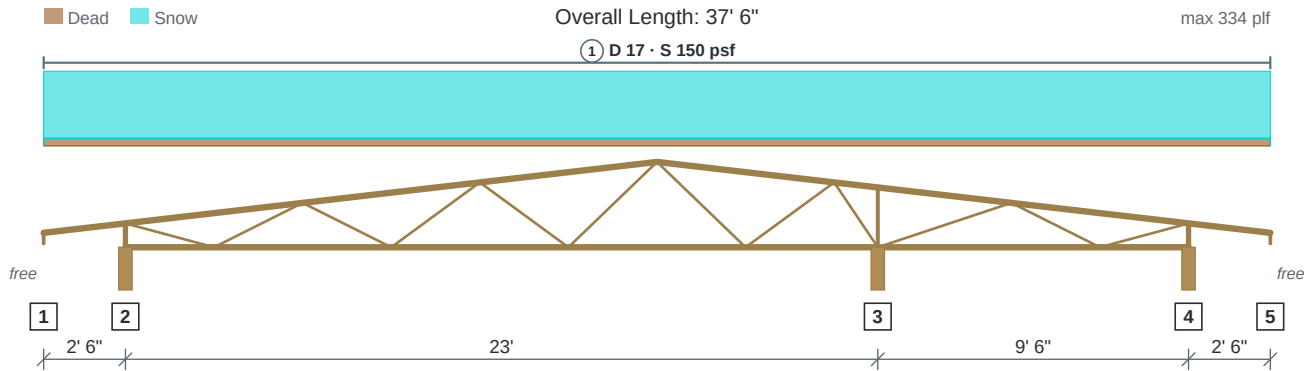
Trusses #14

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 37' 6" | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				
Supports	Dead	Snow	Total	Load goes to
1 @ 0	--	--	--	free end (cantilever tip)
2 @ 2' 6"	409	3,608	4,017	Header #15 , Footing - WD-#24 (a framed wall down to the foundation)
3 @ 25' 6"	782	6,901	7,683	Footing #25 (a framed wall down to the foundation)
4 @ 35'	84	741	825	Footing #26 , Header #16 (a framed wall down to the foundation)
5 @ 37' 6"	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 37' 6"	24"	17	150	

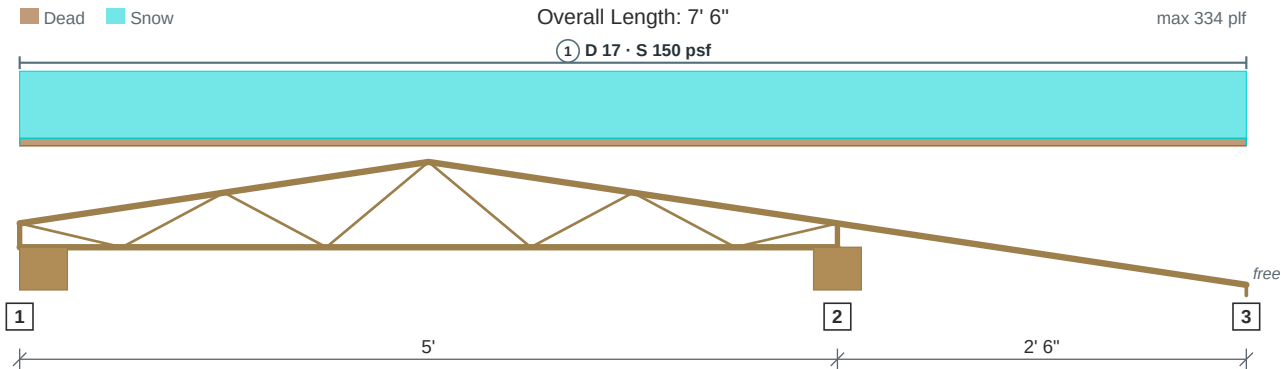
Trusses #15

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 7' 6" | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				Load goes to
Supports	Dead	Snow	Total	
1 @ 0	64	562	626	Beam #5 (on top or in a hanger? not set)
2 @ 5'	191	1,688	1,879	Header #16 (on top or in a hanger? not set)
3 @ 7' 6"	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 7' 6"	24"	17	150	

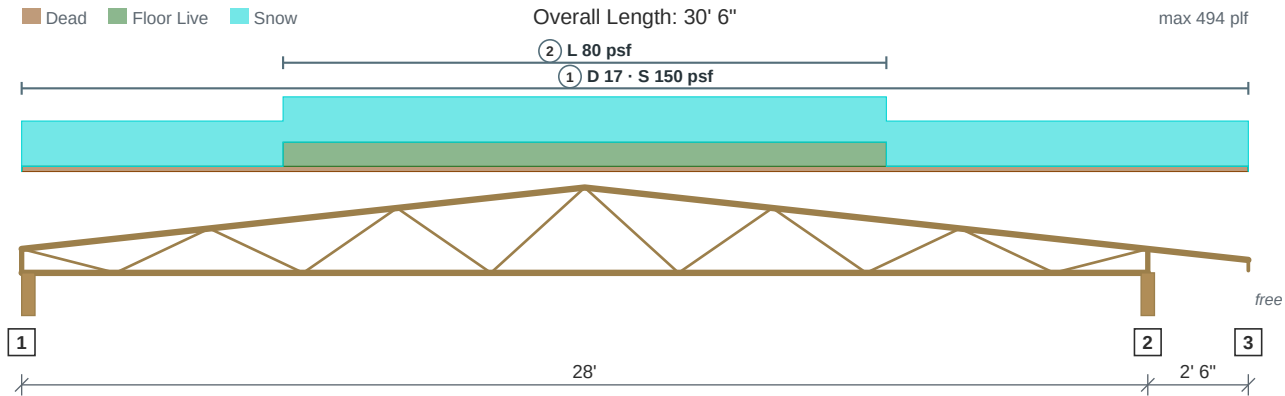
Trusses #16

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 30' 6" | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Supports	Loads to Supports (lbs)				Load goes to
	Dead	Floor Live	Snow	Total	
1 @ 0	472	1,200	4,167	4,639	Header #17, Beam #6, Footing #27 (a framed wall down to the foundation)
2 @ 28'	565	1,200	4,983	5,548	Header #19, Footing #28 (a framed wall down to the foundation)
3 @ 30' 6"	--	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 30' 6"	24"	17	--	150	
2 - Uniform (PSF)	6' 6" to 21' 6"	24"	--	80	--	

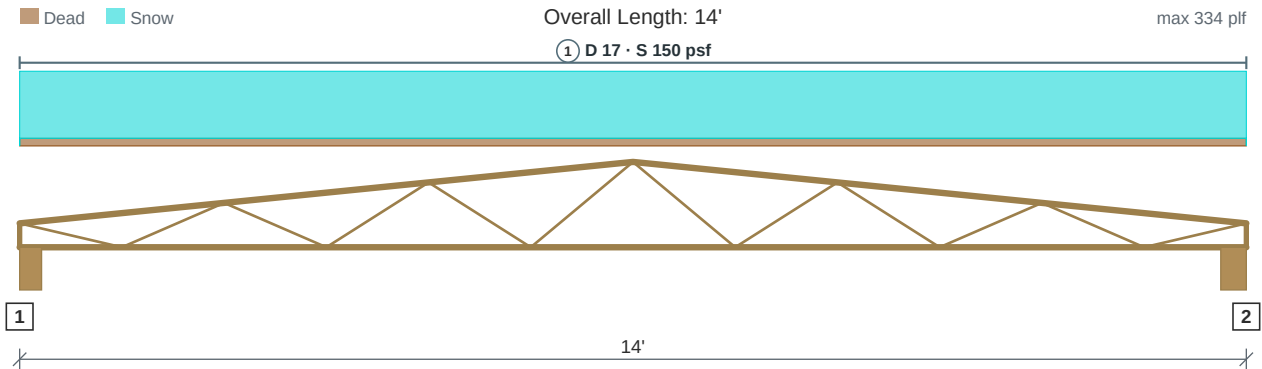
Trusses #17

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 14' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				
Supports	Dead	Snow	Total	Load goes to
1 @ 0	238	2,100	2,338	not linked (framed wall)
2 @ 14'	238	2,100	2,338	Girder #6 (on top or in a hanger? not set)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 14'	24"	17	150	Uniform

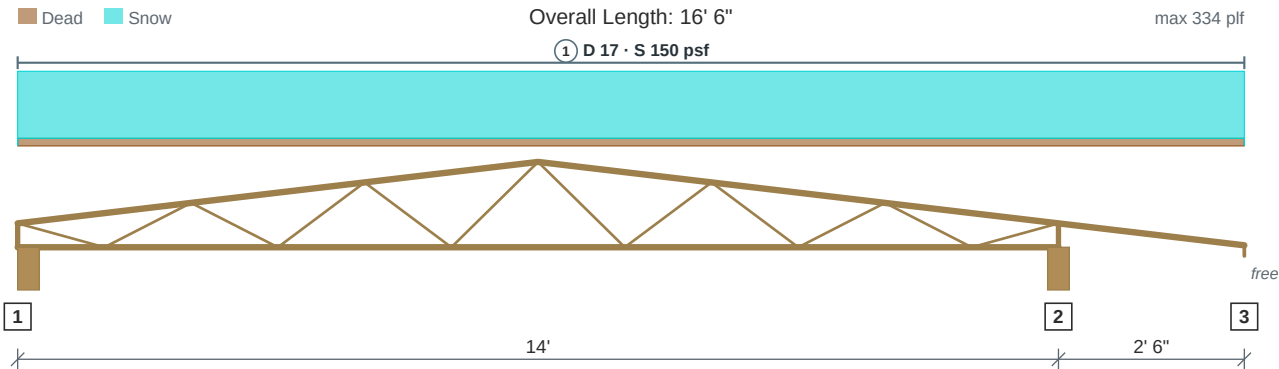
Trusses #18

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 16' 6" | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Loads to Supports (lbs)				Load goes to
Supports	Dead	Snow	Total	
1 @ 0	230	2,033	2,263	Girder #6 (on top or in a hanger? not set)
2 @ 14'	331	2,917	3,248	Header #18, Header #19, Header #19, Header #20, Header #20, Header #23 (on top or in a hanger? not set)
3 @ 16' 6"	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 16' 6"	24"	17	150	

Trusses #19

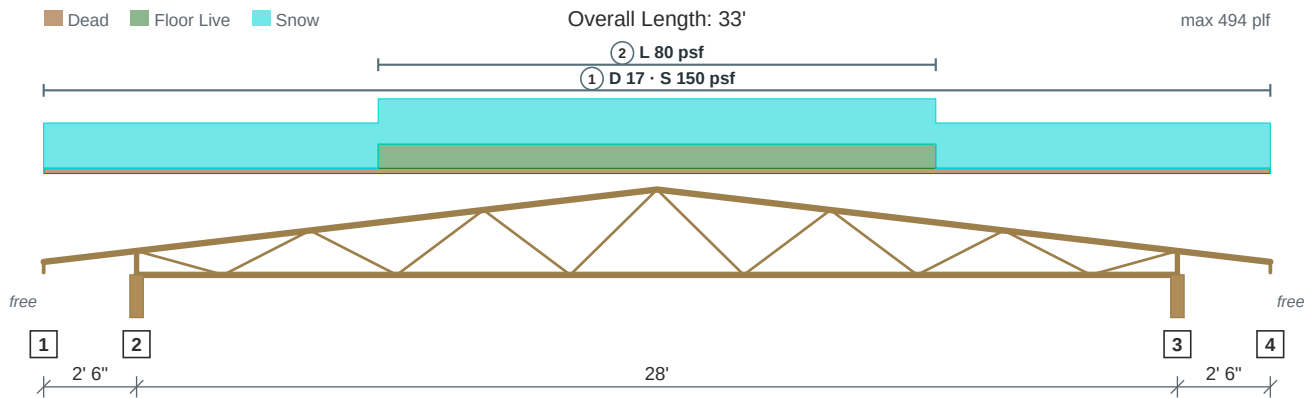
Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 33' | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads

no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

	Loads to Supports (lbs)				
Supports	Dead	Floor Live	Snow	Total	Load goes to
1 @ 0	--	--	--	--	free end (cantilever tip)
2 @ 2' 6"	561	1,200	4,950	5,511	Footing #30 (a framed wall down to the foundation)
3 @ 30' 6"	561	1,200	4,950	5,511	Header #20 , Footing #31 (a framed wall down to the foundation)
4 @ 33'	--	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 33'	24"	17	--	150	
2 - Uniform (PSF)	9' to 24'	24"	--	80	--	

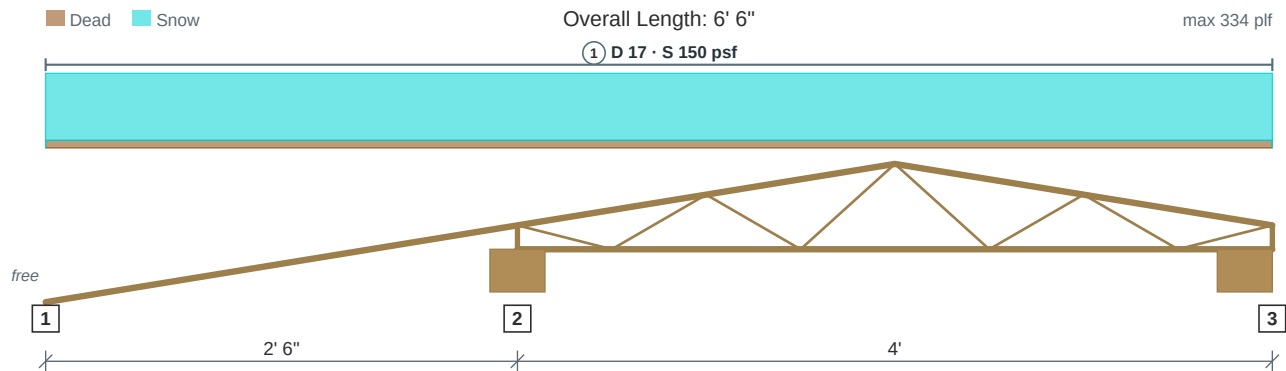
Trusses #20

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 6' 6" | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Supports	Loads to Supports (lbs)			Load goes to
	Dead	Snow	Total	
1 @ 0	--	--	--	free end (cantilever tip)
2 @ 2' 6"	180	1,584	1,764	not linked
3 @ 6' 6"	41	366	407	not linked

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 6' 6"	24"	17	150	

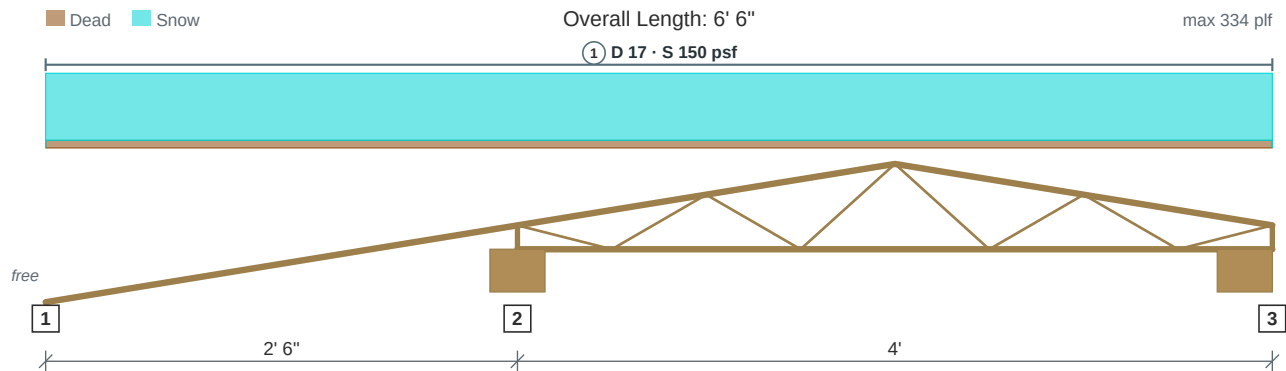
Trusses #21

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 6' 6" | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Supports	Loads to Supports (lbs)			Load goes to
	Dead	Snow	Total	
1 @ 0	--	--	--	free end (cantilever tip)
2 @ 2' 6"	180	1,584	1,764	Header #1 (on top or in a hanger? not set)
3 @ 6' 6"	41	366	407	Girder #1 (on top or in a hanger? not set)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 6' 6"	24"	17	150	

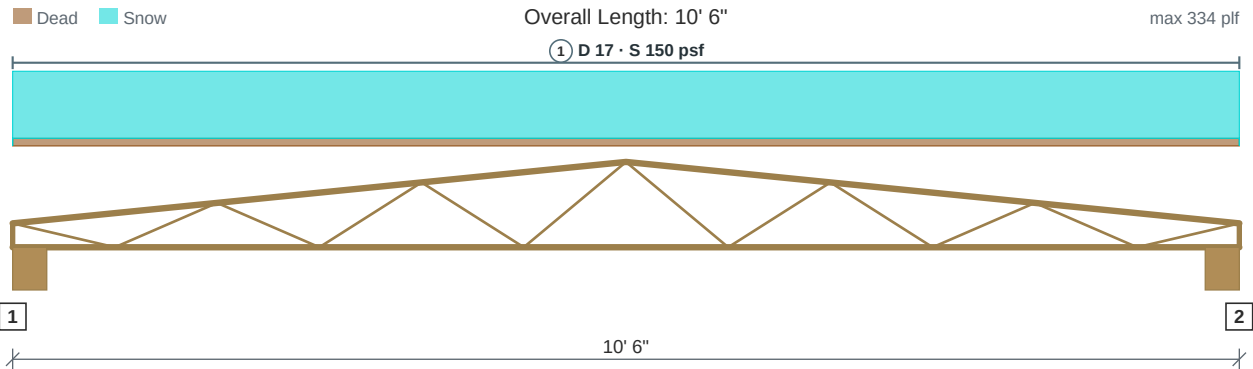
Trusses #22

Roof truss (generic) @ 24" o.c.

Level: Roof | Length: 10' 6" | 2018 IRC | 2018 NDS | ASD

LOADS ONLY

Generic member for linked loads
no member size or design check



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

- Generic roof trusses @ 24" o.c., modeled so the loads they carry reach the members and walls that support them as linked loads. The size in the model is a placeholder, so no size or design check is shown; the trusses themselves are designed by the truss manufacturer.

Supports	Loads to Supports (lbs)			Load goes to
	Dead	Snow	Total	
1 @ 0	178	1,575	1,754	Footing #9 (a framed wall down to the foundation)
2 @ 10' 6"	178	1,575	1,754	Beam #2, Footing - WD-#10 (a framed wall down to the foundation)

Total = the governing ASD combination at that support; the category columns are service loads.

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 10' 6"	24"	17	150	

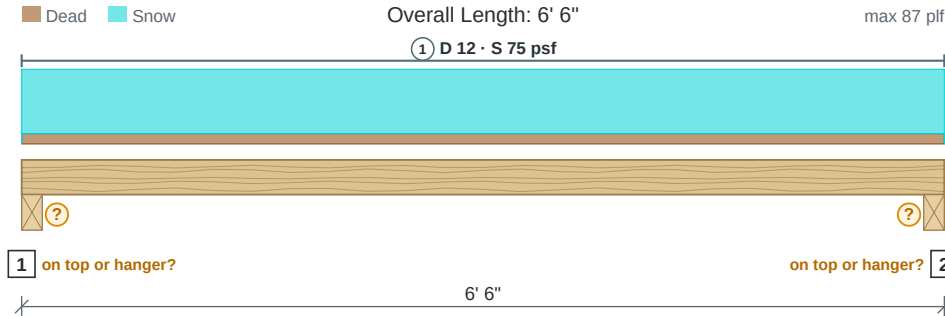
Deck Joists #1

(1) 2x10 DF-L(N) No. 2 (1 1/2" x 9 1/4") @ 12" o.c.

Level: Floor - 1st Level | Member type: Joist (Floor Joist) | Length: 6' 6" | 2018 IRC | 2018 NDS | ASD

Controls: Moment 22% used
Section adequacy 78.4% (capacity to spare)

PASSED



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	293 @ 0	3,281 (3 1/2")	Passed (9%)	--	
Shear (lbs)	293 @ 0	1,915	Passed (15%)	1.15	D+S
Moment (Ft-lbs)	476 @ 3' 3"	2,204	Passed (22%)	1.15	D+S
Live Load Defl. (in)	0.019 @ 3' 3"	0.325	Passed (L/4,099)	--	S
Total Load Defl. (in)	0.023 @ 3' 3"	0.325	Passed (L/3,410)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Bending adjustment factors: CD = 1.15, CF = 1.10, Cr = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 3.2 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

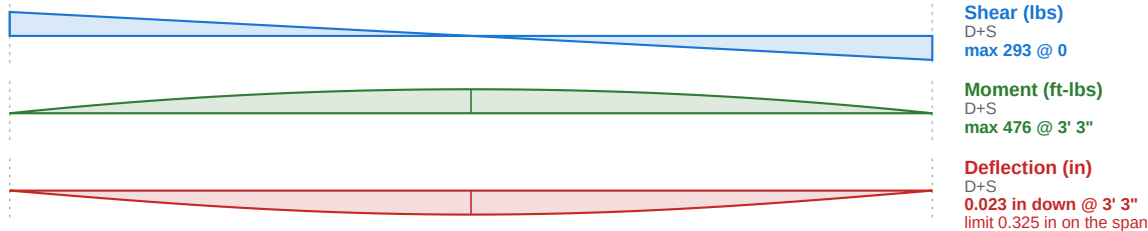
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	3 1/2"	5/16"	49	244	293	Beam #11, Beam #10 (on top or in a hanger? not set)
2 @ 6' 6"	3 1/2"	5/16"	49	244	293	Beam #9, Beam #7, Beam #8 (on top or in a hanger? not set)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	6' 6" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 6' 6"	N/A	3.2	--	
1 - Uniform (PSF)	0 to 6' 6"	12"	12	75	

Shear, Moment and Deflection



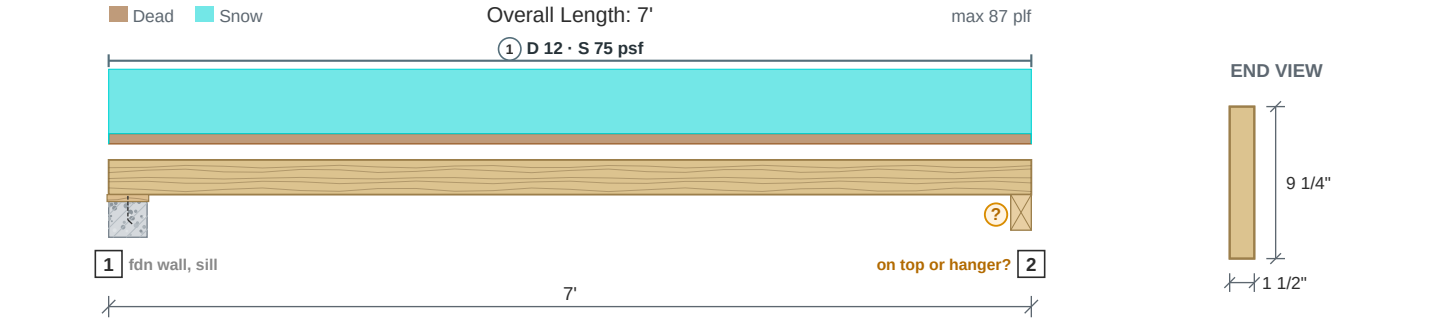
Deck Joists #2

(1 2x10 DF-L(N) No. 2 (1 1/2" x 9 1/4")) @ 12" o.c.

Level: Floor - 1st Level | Member type: Joist (Floor Joist) | Length: 7' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Moment 25% used
Section adequacy 74.9% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	316 @ 0	3,281 (3 1/2")	Passed (10%)	--	
Shear (lbs)	316 @ 0	1,915	Passed (16%)	1.15	D+S
Moment (Ft-lbs)	552 @ 3' 6"	2,204	Passed (25%)	1.15	D+S
Live Load Defl. (in)	0.026 @ 3' 6"	0.35	Passed (L/3,282)	--	S
Total Load Defl. (in)	0.031 @ 3' 6"	0.35	Passed (L/2,730)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Bending adjustment factors: CD = 1.15, CF = 1.10, Cr = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 3.2 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

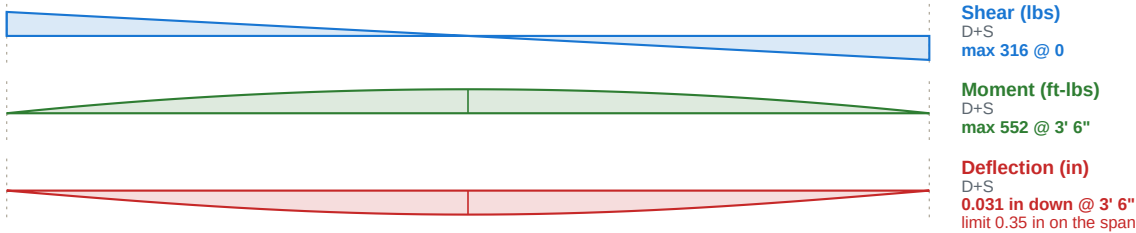
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	3 1/2"	5/16"	53	262	316	Footing #5, Beam #12 (on the foundation wall, on its mud sill)
2 @ 7"	3 1/2"	5/16"	53	262	316	Beam #11, Beam #10 (on top or in a hanger? not set)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	7' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 7'	N/A	3.2	--	
1 - Uniform (PSF)	0 to 7'	12"	12	75	

Shear, Moment and Deflection



Deck Joists #3

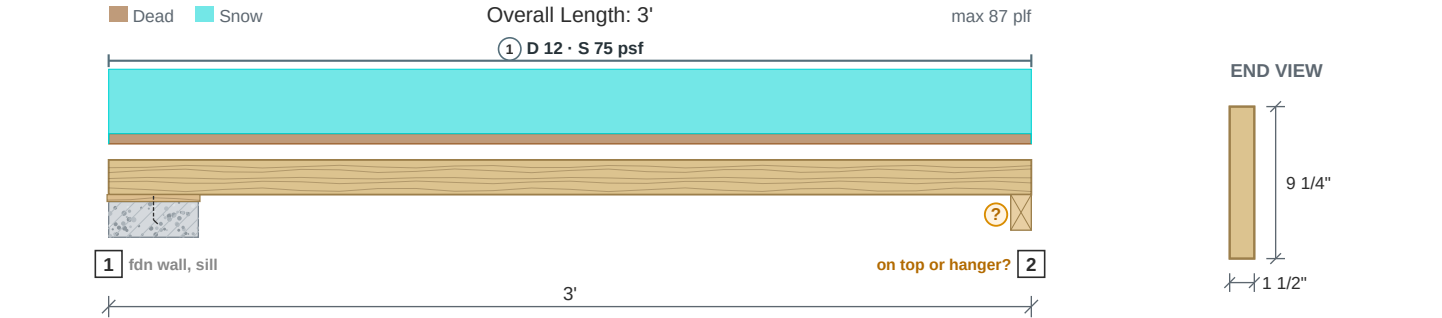
(1 2x10 DF-L(N) No. 2 (1 1/2" x 9 1/4")) @ 12" o.c.

Level: Floor - 1st Level | Member type: Joist (Floor Joist) | Length: 3' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 7% used

Section adequacy 92.9% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	135 @ 0	3,281 (3 1/2")	Passed (4%)	--	
Shear (lbs)	135 @ 0	1,915	Passed (7%)	1.15	D+S
Moment (Ft-lbs)	101 @ 1' 6"	2,204	Passed (5%)	1.15	D+S
Live Load Defl. (in)	0.001 @ 1' 6"	0.15	Passed (L/9999+)	--	S
Total Load Defl. (in)	0.001 @ 1' 6"	0.15	Passed (L/9999+)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Bending adjustment factors: CD = 1.15, CF = 1.10, Cr = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 3.2 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

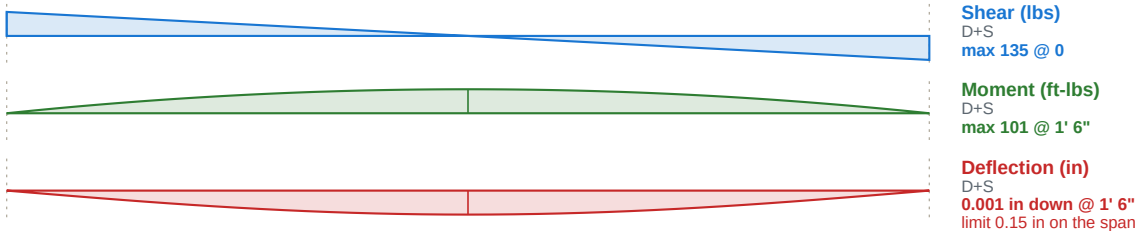
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	3 1/2"	1/8"	23	112	135	Footing #4 (on the foundation wall, on its mud sill)
2 @ 3'	3 1/2"	1/8"	23	112	135	Beam #12 (on top or in a hanger? not set)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	3' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3'	N/A	3.2	--	
1 - Uniform (PSF)	0 to 3'	12"	12	75	

Shear, Moment and Deflection



Deck Joists #4

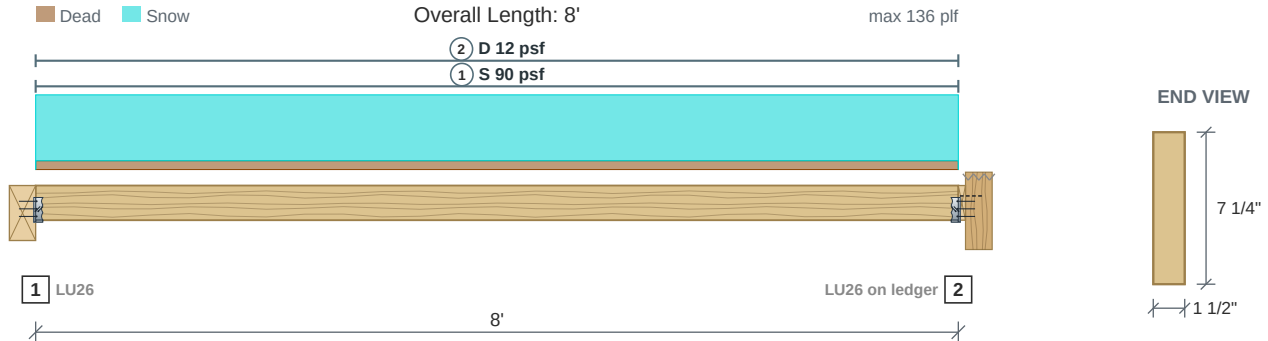
(1) 2x8 DF-L(N) No. 2 (1 1/2" x 7 1/4") @ 16" o.c.

Level: Floor - 1st Level | Member type: Joist (Floor Joist) | Length: 8' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Moment 75% used

Section adequacy 25% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	554 @ 0	1,406 (1 1/2")	Passed (39%)	--	
Shear (lbs)	554 @ 0	1,501	Passed (37%)	1.15	D+S
Moment (Ft-lbs)	1,108 @ 4'	1,477	Passed (75%)	1.15	D+S
Live Load Defl. (in)	0.145 @ 4'	0.4	Passed (L/662)	--	S
Total Load Defl. (in)	0.167 @ 4'	0.4	Passed (L/573)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Bending adjustment factors: CD = 1.15, CF = 1.20, Cr = 1.15, CL = 1.00 (D+S).
- Beam stability: each moment checked against the bracing of its compression edge (CL = 1.00 where braced).
- Member self weight of 2.5 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	1 1/2" seat	9/16"	74	480	554	Beam #15, Beam #16, Beam #14 (flush, in an LU26 face mount, 58%)
2 @ 8'	1 1/2" seat	9/16"	74	480	554	not linked (hung on the 2x8 HF No. 2 ledger, in an LU26 face mount, 68%)

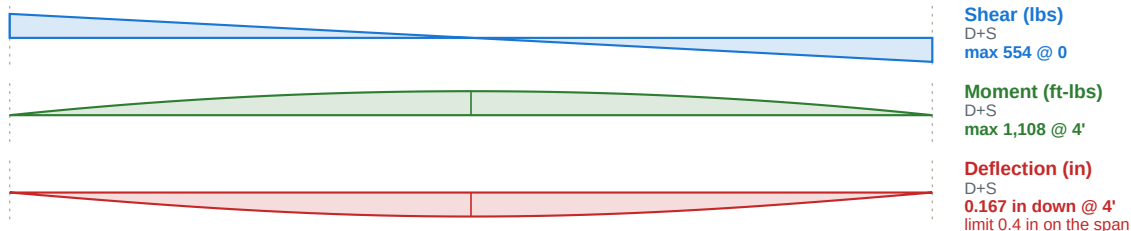
Total = the governing ASD combination at that support; the category columns are service loads.

Ledger at support 2: the 2x8 HF No. 2 ledger on a 2x SPF rim board, 1/2" sheathing between, wet service: 5/8 through-bolts, 2 rows staggered @ 7 in. o.c., 2 1/2" and 4 3/4" below the ledger's top, 2 1/2" from its ends; 3% to spare at D+S (NDS 12.3, across the gap per AWC TR12; 11.3, C_M 0.7). IRC Table R507.9.1.3(1): 36 in. at a 6'1" to 8' joist span -- not this deck: the table is for 1/2 in. lags and bolts; its loads (dead 12 psf, snow 90 psf) are past the table's 40 psf live, 10 psf dead, 40 psf snow. Not checked here: The deck's lateral load connection (IRC R507.9.2: hold-downs at the ledger).

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	8' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 8'	N/A	2.5	--	
1 - Uniform (PSF)	0 to 8'	16"	--	90	Uniform
2 - Uniform (PSF)	0 to 8'	16"	12	--	

Shear, Moment and Deflection



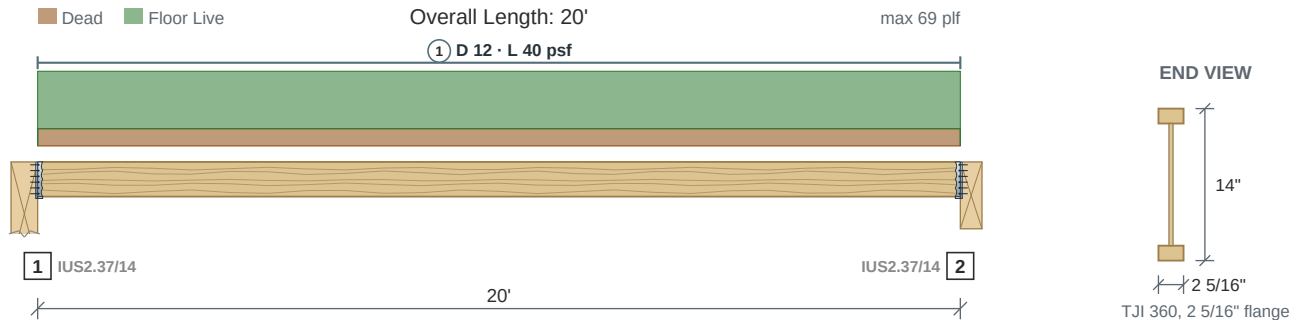
Joist #1

(1) 14" Weyerhaeuser TJI 360 @ 16" o.c.

Level: Floor - 2nd Level | Member type: Joist (Floor Joist) | Length: 20' | 2018 IRC | 2018 NDS | ASD

PASSED
Controls: Deflection 97% used

Section adequacy 3.5% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	726 @ 0	1,141 (2")	Passed (64%)	--	D+L
Shear (lbs)	726 @ 0	1,955	Passed (37%)	1.00	D+L
Moment (Ft-lbs)	3,632 @ 10'	7,335	Passed (50%)	1.00	D+L
Live Load Defl. (in)	0.354 @ 10'	0.5	Passed (L/677)	--	L
Total Load Defl. (in)	0.483 @ 10'	0.5	Passed (L/497)	--	D+L

- Deflection criteria (IRC Table R301.7): floor live alone L/480; roof live or snow alone L/240; dead plus live L/480.
- Member self weight of 3.3 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser TJ-4000 / ICC-ES ESR-1153, ASD, every load combination with its own load duration factor.

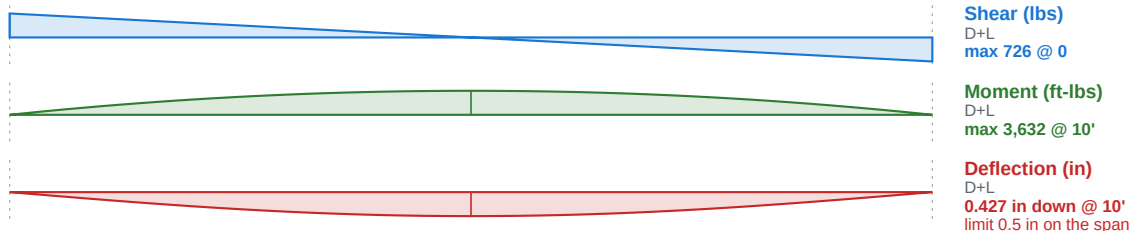
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Floor Live	Total	
1 @ 0	2" seat	--	193	533	726	Girder #8 (flush, in an IUS2.37/14 face mount, 51%)
2 @ 20'	2" seat	--	193	533	726	Girder #7 (flush, in an IUS2.37/14 face mount, 51%)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	20' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 20'	N/A	3.3	--	
1 - Uniform (PSF)	0 to 20'	16"	12	40	

Shear, Moment and Deflection



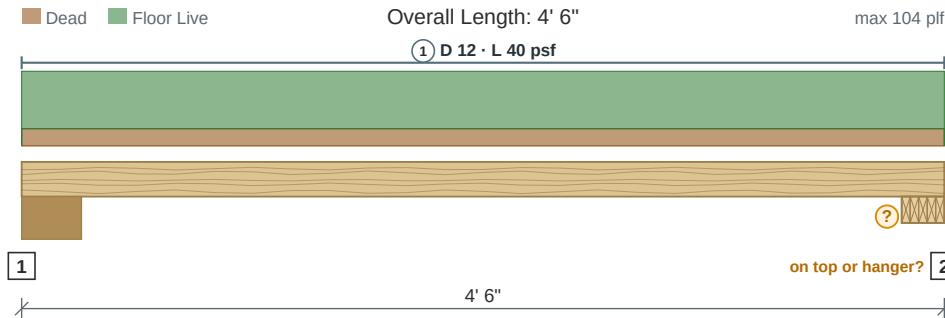
Joist #2

(1) 9 1/2" Weyerhaeuser TJI 110 @ 24" o.c.

Level: Floor - 2nd Level | Member type: Joist (Floor Joist) | Length: 4' 6" | 2018 IRC | 2018 NDS | ASD

Controls: Bearing 20% used
Section adequacy 80.4% (capacity to spare)

PASSED



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	239 @ 0	1,220 (3 1/2")	Passed (20%)	--	D+L
Shear (lbs)	239 @ 0	1,220	Passed (20%)	1.00	D+L
Moment (Ft-lbs)	269 @ 2' 3"	2,500	Passed (11%)	1.00	D+L
Live Load Defl. (in)	0.009 @ 2' 3"	0.15	Passed (L/5,839)	--	L
Total Load Defl. (in)	0.012 @ 2' 3"	0.225	Passed (L/4,394)	--	D+L

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Member self weight of 2.3 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser TJ-4000 / ICC-ES ESR-1153, ASD, every load combination with its own load duration factor.

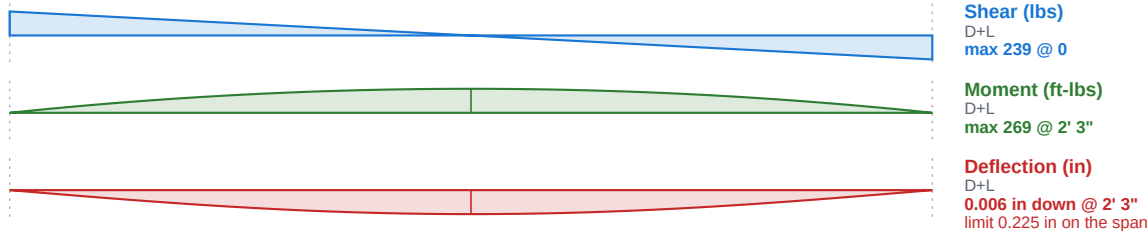
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Floor Live	Total	
1 @ 0	3 1/2"	--	59	180	239	not linked
2 @ 4' 6"	3 1/2"	--	59	180	239	Girder #9 (on top or in a hanger? not set)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	4' 6" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 4' 6"	N/A	2.3	--	
1 - Uniform (PSF)	0 to 4' 6"	24"	12	40	

Shear, Moment and Deflection



Joists #3

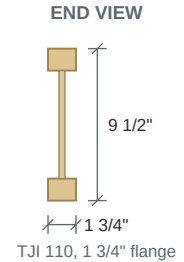
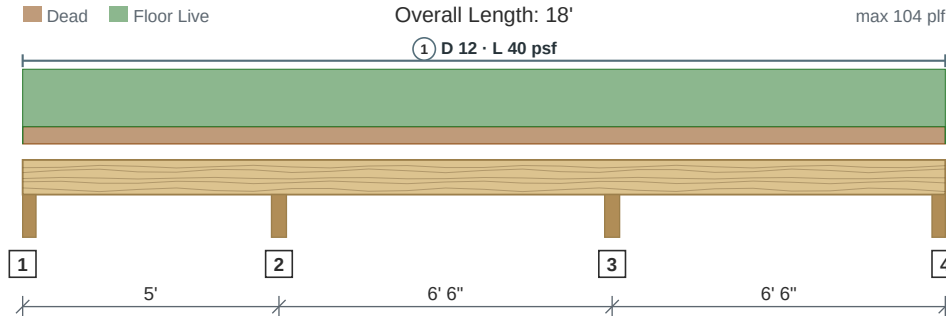
(1) 9 1/2" Weyerhaeuser TJI 110 @ 24" o.c.

Level: Floor - 1st Level | Member type: Joist (Floor Joist) | Length: 18' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 41% used

Section adequacy 59.3% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	788 @ 11' 6"	1,935 (3 1/2")	Passed (41%)	--	D+L
Shear (lbs)	419 @ 11' 6"	1,220	Passed (34%)	1.00	D+L
Moment (Ft-lbs)	480 @ 15' 5 3/4"	2,500	Passed (19%)	1.00	D+L
Live Load Defl. (in)	0.018 @ 14' 11 5/8"	0.217	Passed (L/4,274)	--	L
Total Load Defl. (in)	0.024 @ 14' 11 5/8"	0.325	Passed (L/3,217)	--	D+L

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Member self weight of 2.3 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser TJ-4000 / ICC-ES ESR-1153, ASD, every load combination with its own load duration factor.

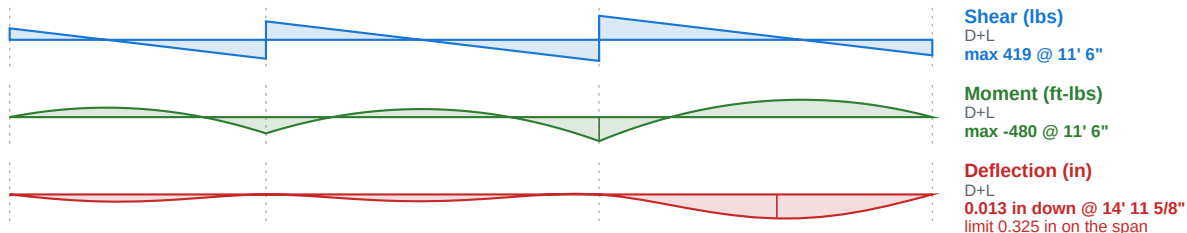
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Floor Live	Total	
1 @ 0	3"	--	50	151	201	not linked
2 @ 5'	3 1/2"	--	162	491	653	not linked
3 @ 11' 6"	3 1/2"	--	195	593	788	not linked
4 @ 18'	3"	--	67	204	272	not linked

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	6' 6" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 18'	N/A	2.3	--	
1 - Uniform (PSF)	0 to 18'	24"	12	40	

Shear, Moment and Deflection



Joists #4

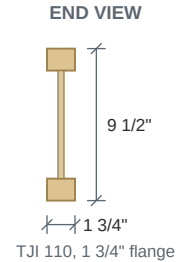
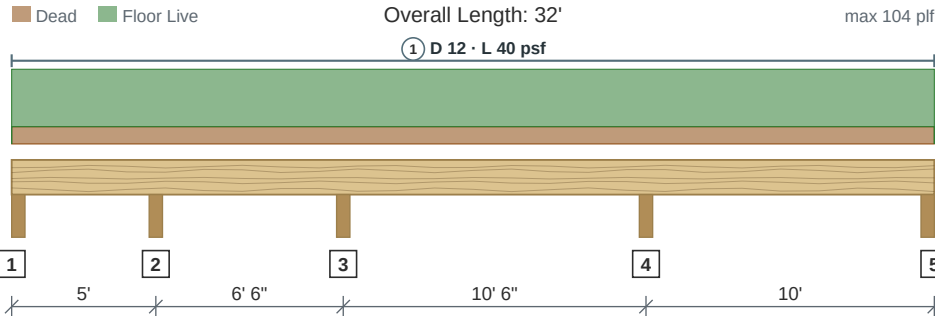
(1) 9 1/2" Weyerhaeuser TJI 110 @ 24" o.c.

Level: Floor - 1st Level | Member type: Joist (Floor Joist) | Length: 32' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 65% used

Section adequacy 34.8% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,262 @ 22'	1,935 (3 1/2")	Passed (65%)	--	D+L
Shear (lbs)	654 @ 22'	1,220	Passed (54%)	1.00	D+L
Moment (Ft-lbs)	1,222 @ 28' 1 15/16"	2,500	Passed (49%)	1.00	D+L
Live Load Defl. (in)	0.073 @ 27' 4 5/8"	0.333	Passed (L/1,639)	--	L
Total Load Defl. (in)	0.097 @ 27' 4 5/8"	0.5	Passed (L/1,233)	--	D+L

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Member self weight of 2.3 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser TJ-4000 / ICC-ES ESR-1153, ASD, every load combination with its own load duration factor.

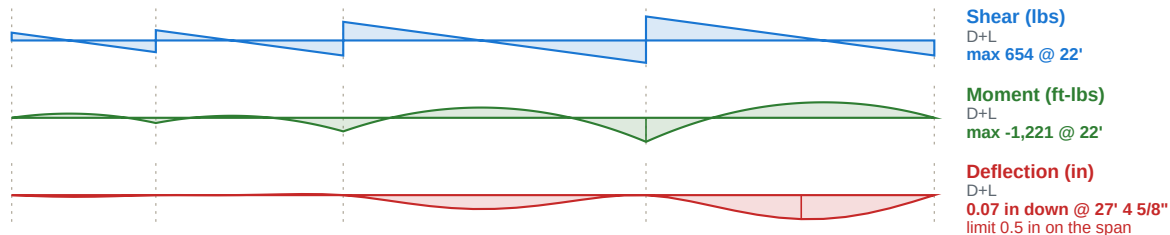
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Floor Live	Total	
1 @ 0	3 1/2"	--	53	160	212	not linked
2 @ 5'	3 1/2"	--	148	451	599	not linked
3 @ 11' 6"	3 1/2"	--	227	691	918	not linked
4 @ 22'	3 1/2"	--	312	950	1,262	not linked
5 @ 32'	3 1/2"	--	101	308	409	not linked

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	10' 6" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 32'	N/A	2.3	--	
1 - Uniform (PSF)	0 to 32'	24"	12	40	

Shear, Moment and Deflection



Joists #5

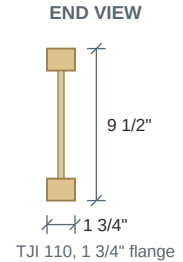
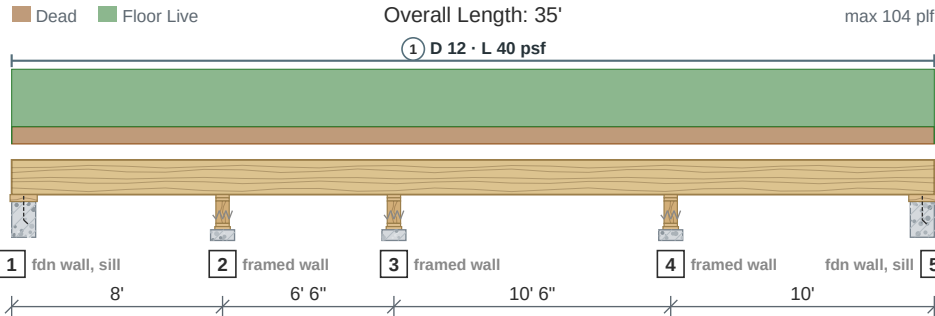
(1) 9 1/2" Weyerhaeuser TJI 110 @ 24" o.c.

Level: Floor - 1st Level | Member type: Joist (Floor Joist) | Length: 35' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 66% used

Section adequacy 34.3% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,272 @ 25'	1,935 (3 1/2")	Passed (66%)	--	D+L
Shear (lbs)	655 @ 25'	1,220	Passed (54%)	1.00	D+L
Moment (Ft-lbs)	1,238 @ 31' 1 13/16"	2,500	Passed (50%)	1.00	D+L
Live Load Defl. (in)	0.073 @ 30' 10"	0.333	Passed (L/1,646)	--	L
Total Load Defl. (in)	0.097 @ 30' 10"	0.5	Passed (L/1,239)	--	D+L

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Member self weight of 2.3 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser TJ-4000 / ICC-ES ESR-1153, ASD, every load combination with its own load duration factor.

Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Floor Live	Total	
1 @ 0	5 1/2"	--	87	265	353	not linked (fdn wall, sill)
2 @ 8'	3 1/2"	--	207	629	836	not linked (framed wall)
3 @ 14' 6"	3 1/2"	--	211	641	852	Footing - WD-#8 (a framed wall down to the foundation)
4 @ 25'	3 1/2"	--	315	957	1,272	not linked (framed wall)
5 @ 35'	5 1/2"	--	101	307	408	Footing #4 (on the foundation wall, on its mud sill)

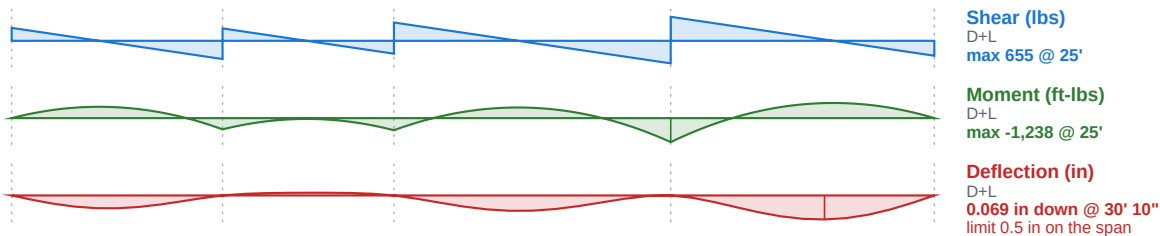
Total = the governing ASD combination at that support; the category columns are service loads.

Hanger J5-X4, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 4, 5 1/2 x 9 1/2 sawn, for 532 lb D+L on each (support 4 with the member cut there: the right side, the worse; the left side 460 lb D+L).

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	10' 6" o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 35'	N/A	2.3	--	
1 - Uniform (PSF)	0 to 35'	24"	12	40	

Shear, Moment and Deflection



Joists #6

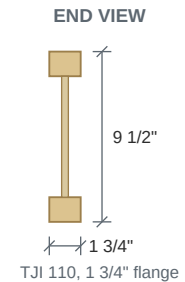
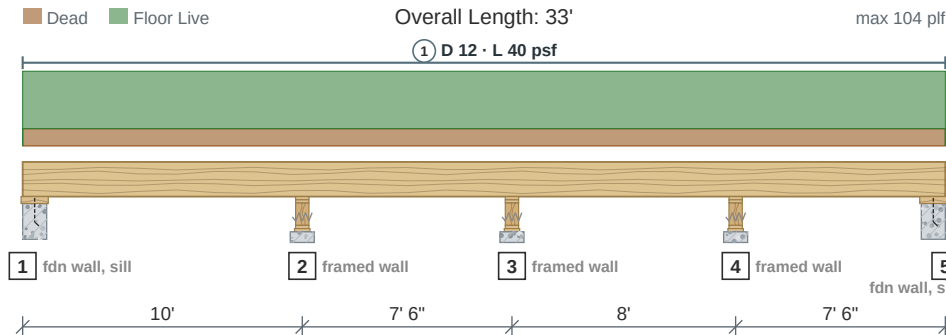
(1) 9 1/2" Weyerhaeuser TJI 110 @ 24" o.c.

Level: Floor - 1st Level | Member type: Joist (Floor Joist) | Length: 33' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 58% used

Section adequacy 42.5% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,113 @ 10'	1,935 (3 1/2")	Passed (58%)	--	D+L
Shear (lbs)	631 @ 10'	1,220	Passed (52%)	1.00	D+L
Moment (Ft-lbs)	999 @ 4' 1 1/2"	2,500	Passed (40%)	1.00	D+L
Live Load Defl. (in)	0.081 @ 4' 7 3/8"	0.333	Passed (L/1,488)	--	L
Total Load Defl. (in)	0.107 @ 4' 7 3/8"	0.5	Passed (L/1,120)	--	D+L

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Member self weight of 2.3 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser TJ-4000 / ICC-ES ESR-1153, ASD, every load combination with its own load duration factor.

Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Floor Live	Total	
1 @ 0	3 1/2"	--	107	325	432	not linked (fdn wall, sill)
2 @ 10'	3 1/2"	--	275	838	1,113	Footings - WD-#10 (a framed wall down to the foundation)
3 @ 17' 6"	3 1/2"	--	173	527	700	not linked (framed wall)
4 @ 25' 6"	3 1/2"	--	237	721	958	not linked (framed wall)
5 @ 33'	3 1/2"	--	75	229	305	Footings #5 (on the foundation wall, on its mud sill)

Total = the governing ASD combination at that support; the category columns are service loads.

Hanger J6-X2, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 2, 3 1/2 x 9 1/2 sawn, for 532 lb D+L on each (support 2 with the member cut there: the left side, the worse; the right side 314 lb D+L).

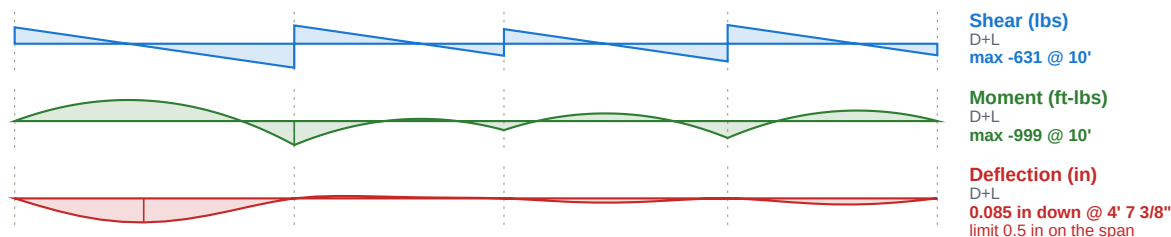
Hanger J6-X3, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 3, 3 1/2 x 9 1/2 sawn, for 325 lb D+L on each (support 3 with the member cut there: the right side, the worse; the left side 255 lb D+L).

Hanger J6-X4, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 4, 3 1/2 x 9 1/2 sawn, for 399 lb D+L on each (support 4 with the member cut there: the right side, the worse; the left side 354 lb D+L).

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	10' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 33'	N/A	2.3	--	
1 - Uniform (PSF)	0 to 33'	24"	12	40	

Shear, Moment and Deflection



Joists #7

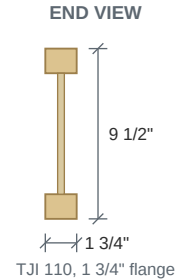
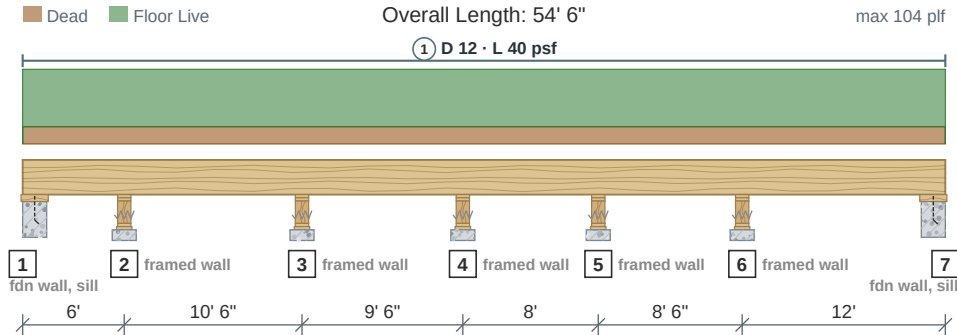
(1) 9 1/2" Weyerhaeuser TJI 110 @ 24" o.c.

Level: Floor - 1st Level | Member type: Joist (Floor Joist) | Length: 54' 6" | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Shear 62% used

Section adequacy 37.9% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,336 @ 42' 6"	2,350 (5 1/2")	Passed (57%)	--	D+L
Shear (lbs)	758 @ 42' 6"	1,220	Passed (62%)	1.00	D+L
Moment (Ft-lbs)	1,442 @ 49' 7 1/8"	2,500	Passed (58%)	1.00	D+L
Live Load Defl. (in)	0.156 @ 49' 2"	0.4	Passed (L/921)	--	L
Total Load Defl. (in)	0.208 @ 49' 2"	0.6	Passed (L/693)	--	D+L

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Member self weight of 2.3 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser TJ-4000 / ICC-ES ESR-1153, ASD, every load combination with its own load duration factor.

Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Floor Live	Total	
1 @ 0	3 1/2"	--	46	140	186	not linked (fdn wall, sill)
2 @ 6'	3 1/2"	--	246	748	995	not linked (framed wall)
3 @ 16' 6"	5 1/2"	--	274	833	1,107	Footing - WD-#13 (a framed wall down to the foundation)
4 @ 26'	3 1/2"	--	233	709	943	not linked (framed wall)
5 @ 34'	3 1/2"	--	176	534	710	not linked (framed wall)
6 @ 42' 6"	5 1/2"	--	331	1,006	1,336	not linked (framed wall)
7 @ 54' 6"	3"	--	128	390	518	not linked (fdn wall, sill)

Total = the governing ASD combination at that support; the category columns are service loads.

Hanger J7-X2, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 2, 3 1/2 x 9 1/2 sawn, for 445 lb D+L on each (support 2 with the member cut there: the right side, the worse; the left side 319 lb D+L).

Hanger J7-X4, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 4, 3 1/2 x 9 1/2 sawn, for 385 lb D+L on each (support 4 with the member cut there: the left side, the worse; the right side 357 lb D+L).

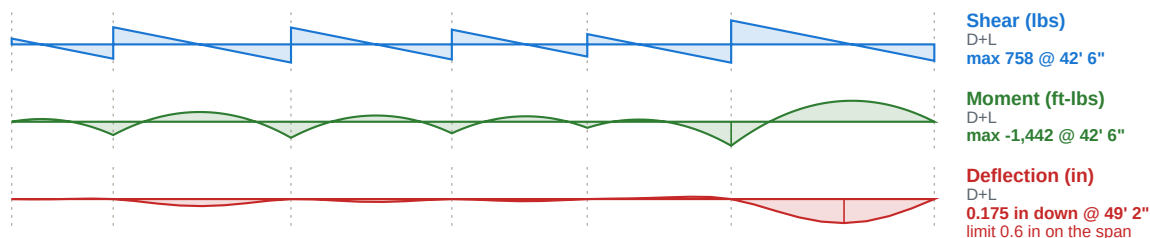
Hanger J7-X5, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 5, 3 1/2 x 9 1/2 sawn, for 327 lb D+L on each (support 5 with the member cut there: the left side, the worse; the right side 273 lb D+L).

Hanger J7-X6, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 6, 3 1/2 x 9 1/2 sawn, for 638 lb D+L on each (support 6 with the member cut there: the right side, the worse; the left side 362 lb D+L).

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	12' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 54' 6"	N/A	2.3	--	
1 - Uniform (PSF)	0 to 54' 6"	24"	12	40	

Shear, Moment and Deflection



Joists #8

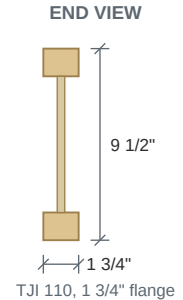
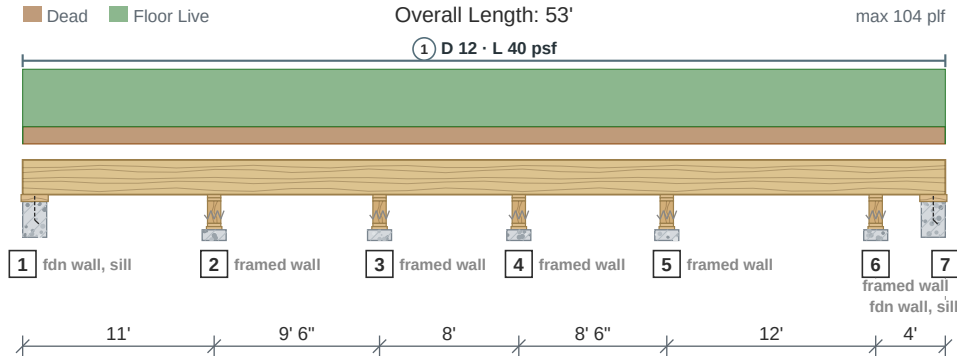
(1) 9 1/2" Weyerhaeuser TJI 110 @ 24" o.c.

Level: Floor - 1st Level | Member type: Joist (Floor Joist) | Length: 53' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 66% used

Section adequacy 33.8% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,280 @ 11'	1,935 (3 1/2")	Passed (66%)	--	D+L
Shear (lbs)	701 @ 11'	1,220	Passed (57%)	1.00	D+L
Moment (Ft-lbs)	1,284 @ 4' 6 1/16"	2,500	Passed (51%)	1.00	D+L
Live Load Defl. (in)	0.111 @ 4' 10 11/16"	0.367	Passed (L/1,194)	--	L
Total Load Defl. (in)	0.147 @ 4' 10 11/16"	0.55	Passed (L/898)	--	D+L

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Member self weight of 2.3 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser TJ-4000 / ICC-ES ESR-1153, ASD, every load combination with its own load duration factor.

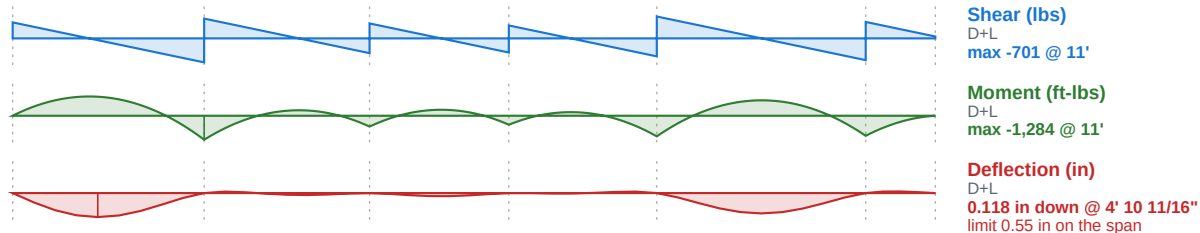
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Floor Live	Total	
1 @ 0	3 1/2"	--	116	352	468	Footing #15 (on the foundation wall, on its mud sill)
2 @ 11'	3 1/2"	--	317	963	1,280	Footing - WD-#14 (a framed wall down to the foundation)
3 @ 20' 6"	3 1/2"	--	215	654	869	not linked (framed wall)
4 @ 28' 6"	3 1/2"	--	196	596	791	not linked (framed wall)
5 @ 37'	3 1/2"	--	288	877	1,165	Footing - WD-#16 (a framed wall down to the foundation)
6 @ 49'	3 1/2"	--	276	840	1,117	not linked (framed wall)
7 @ 53'	3 1/2"	--	-14	-42	-56	Footing #17 (on the foundation wall, on its mud sill)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	12' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 53'	N/A	2.3	--	
1 - Uniform (PSF)	0 to 53'	24"	12	40	

Shear, Moment and Deflection



Joists #9

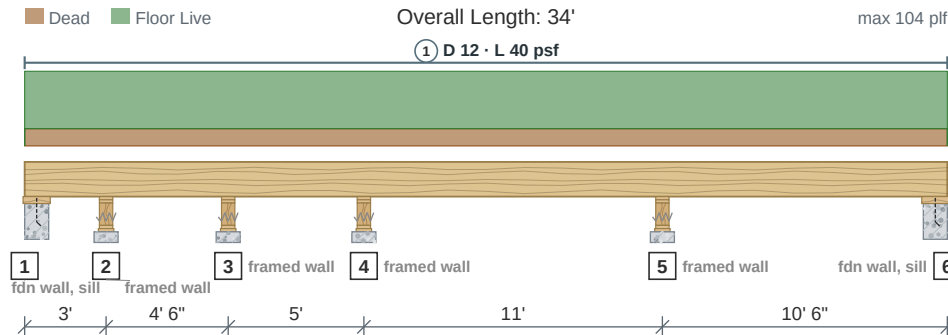
(1) 9 1/2" Weyerhaeuser TJI 110 @ 24" o.c.

Level: Floor - 1st Level | Member type: Joist (Floor Joist) | Length: 34' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 69% used

Section adequacy 31.4% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,327 @ 23' 6"	1,935 (3 1/2")	Passed (69%)	--	D+L
Shear (lbs)	687 @ 23' 6"	1,220	Passed (56%)	1.00	D+L
Moment (Ft-lbs)	1,350 @ 29' 11 1/16"	2,500	Passed (54%)	1.00	D+L
Live Load Defl. (in)	0.087 @ 29' 1 7/8"	0.35	Passed (L/1,456)	--	L
Total Load Defl. (in)	0.115 @ 29' 1 7/8"	0.525	Passed (L/1,096)	--	D+L

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Member self weight of 2.3 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser TJ-4000 / ICC-ES ESR-1153, ASD, every load combination with its own load duration factor.

Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Floor Live	Total	
1 @ 0	5 1/2"	--	24	72	96	not linked (fdn wall, sill)
2 @ 3'	3 1/2"	--	121	369	490	not linked (framed wall)
3 @ 7' 6"	5 1/2"	--	85	258	343	not linked (framed wall)
4 @ 12' 6"	3 1/2"	--	230	699	929	not linked (framed wall)
5 @ 23' 6"	3 1/2"	--	328	999	1,327	not linked (framed wall)
6 @ 34'	5 1/2"	--	106	323	430	not linked (fdn wall, sill)

Total = the governing ASD combination at that support; the category columns are service loads.

Hanger J9-X2, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 2, 3 1/2 x 9 1/2 sawn, for 215 lb D+L on each (support 2 with the member cut there: the right side, the worse; the left side 159 lb D+L).

Hanger J9-X3, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 3, 3 1/2 x 9 1/2 sawn, for 193 lb D+L on each (support 3 with the member cut there: the left side, the worse; the right side 117 lb D+L).

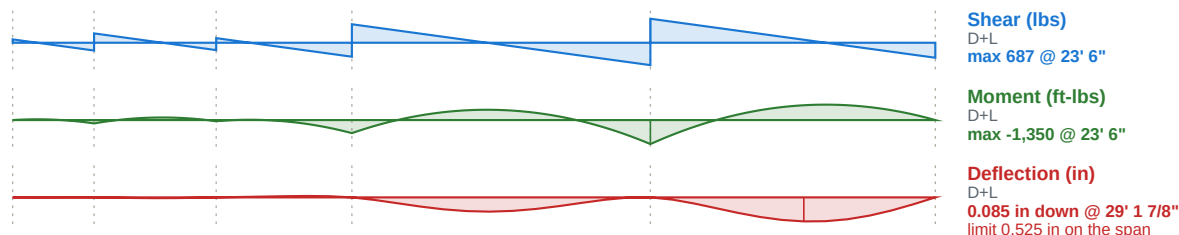
Hanger J9-X4, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 4, 3 1/2 x 9 1/2 sawn, for 445 lb D+L on each (support 4 with the member cut there: the right side, the worse; the left side 211 lb D+L).

Hanger J9-X5, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 5, 3 1/2 x 9 1/2 sawn, for 558 lb D+L on each (support 5 with the member cut there: the right side, the worse; the left side 474 lb D+L).

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	11' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 34'	N/A	2.3	--	
1 - Uniform (PSF)	0 to 34'	24"	12	40	

Shear, Moment and Deflection



Joists #10

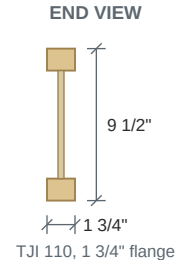
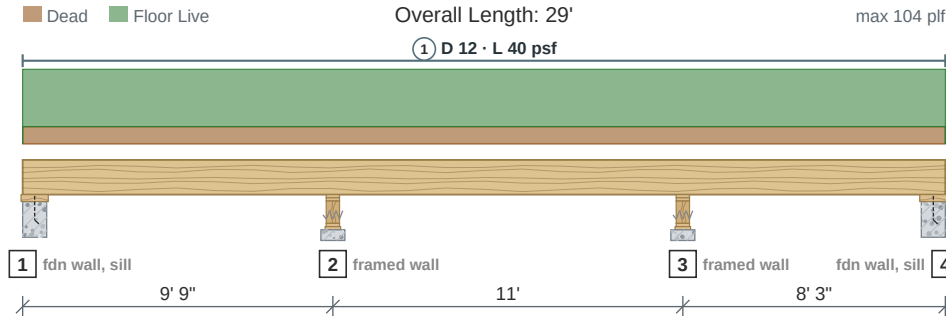
(1) 9 1/2" Weyerhaeuser TJI 110 @ 24" o.c.

Level: Floor - 1st Level | Member type: Joist (Floor Joist) | Length: 29' | 2018 IRC | 2018 NDS | ASD

PASSED

Controls: Bearing 64% used

Section adequacy 35.6% (capacity to spare)



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,245 @ 9' 9"	1,935 (3 1/2")	Passed (64%)	--	D+L
Shear (lbs)	640 @ 9' 9"	1,220	Passed (52%)	1.00	D+L
Moment (Ft-lbs)	1,190 @ 3' 9 1/4"	2,500	Passed (48%)	1.00	D+L
Live Load Defl. (in)	0.067 @ 4' 2 1/8"	0.325	Passed (L/1,758)	--	L
Total Load Defl. (in)	0.088 @ 4' 2 1/8"	0.487	Passed (L/1,323)	--	D+L

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/240.
- Member self weight of 2.3 plf is included.
- Calculations per NDS 2018 and Weyerhaeuser TJ-4000 / ICC-ES ESR-1153, ASD, every load combination with its own load duration factor.

Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Floor Live	Total	
1 @ 0	5 1/2"	--	98	298	396	not linked (fdn wall, sill)
2 @ 9' 9"	3 1/2"	--	308	937	1,245	not linked (framed wall)
3 @ 20' 9"	3 1/2"	--	277	843	1,120	not linked (framed wall)
4 @ 29'	5 1/2"	--	80	242	321	not linked (fdn wall, sill)

Total = the governing ASD combination at that support; the category columns are service loads.

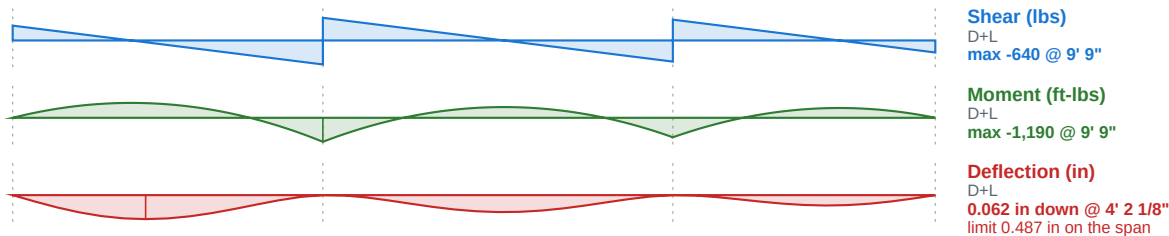
Hanger J10-X2, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 2, 3 1/2 x 9 1/2 sawn, for 518 lb D+L on each (support 2 with the member cut there: the left side, the worse; the right side 466 lb D+L).

Hanger J10-X3, off a member not in the model: (2) IUS1.81/9.5 face mount, 1 on each side on Crawl space header at support 3, 3 1/2 x 9 1/2 sawn, for 453 lb D+L on each (support 3 with the member cut there: the left side, the worse; the right side 438 lb D+L).

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	11' o/c	used for C_L only where the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 29'	N/A	2.3	--	
1 - Uniform (PSF)	0 to 29'	24"	12	40	

Shear, Moment and Deflection



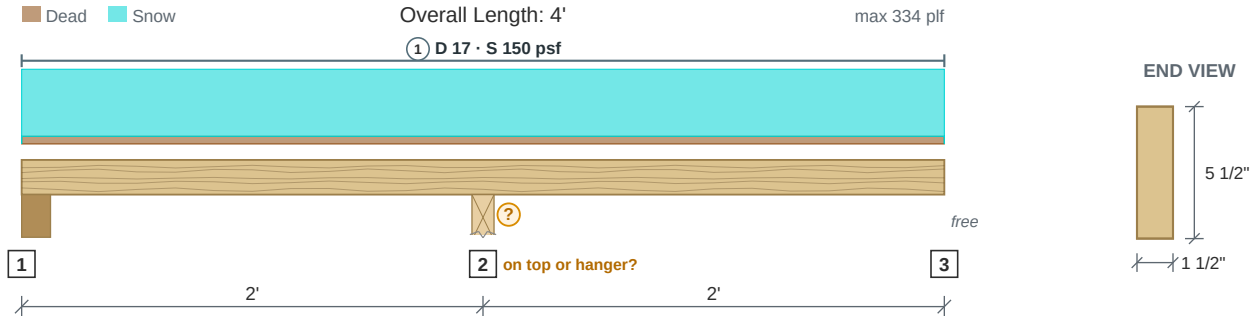
Outlookers

(1) 2x6 DF-L No. 2 (1 1/2" x 5 1/2") @ 24" o.c.

Level: Roof | Member type: Outlooker (Roof Rafter) | Length: 4' | 2018 IRC | 2018 NDS | ASD

Controls: Moment 70% used
Section adequacy 29.9% (capacity to spare)

PASSED



Drawing is conceptual. Locations are measured from the left end of the member; all dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load Combination
Member Reaction (lbs)	1,344 @ 2'	5,508 (5 1/2")	Passed (24%)	--	
Shear (lbs)	672 @ 2'	1,138	Passed (59%)	1.15	D+S
Neg Moment (Ft-lbs)	-672 @ 2'	958	Passed (70%)	1.15	D+S
Live Load Defl. (in)	0.062 @ 4'	0.2	Passed (2L/770)	--	S
Total Load Defl. (in)	0.07 @ 4'	0.267	Passed (2L/688)	--	D+S

- Deflection criteria (IRC Table R301.7): floor live alone L/360; roof live or snow alone L/240; dead plus live L/180.
- Overhang deflection criteria: LL (2L/360) and TL (2L/180) -- a cantilever is limited on twice its length.
- Bending adjustment factors: CD = 1.15, CF = 1.30, Cr = 1.15, CL = 0.982 (D+S).
- Beam stability (NDS 3.3.3) governs bending: negative moment 672 lbf-ft, 0.00-2.00 ft, CL 0.982 (unbraced 2.0 ft).
- Member self weight of 1.9 plf is included.
- Calculations per NDS 2018, ASD, every load combination with its own load duration factor.

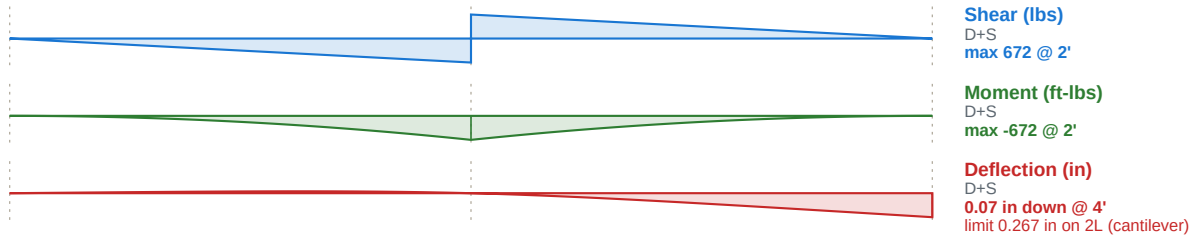
Supports	Bearing Length		Loads to Supports (lbs)			Load goes to
	Provided	Required	Dead	Snow	Total	
1 @ 0	1 1/2"	--	--	--	0	not linked
2 @ 2'	5 1/2"	1 1/16"	144	1,200	1,344	Header #4, Header #6, Girder #7, Girder #9, Girder #8 (on top or in a hanger? not set)
3 @ 4'	--	--	--	--	--	free end (cantilever tip)

Total = the governing ASD combination at that support; the category columns are service loads.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	continuous	braced by the sheathing
Bottom Edge (Lu)	2' o/c	governs C_L here: the bottom edge is in compression

Vertical Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 4'	N/A	1.9	--	
1 - Uniform (PSF)	0 to 4'	24"	17	150	

Shear, Moment and Deflection



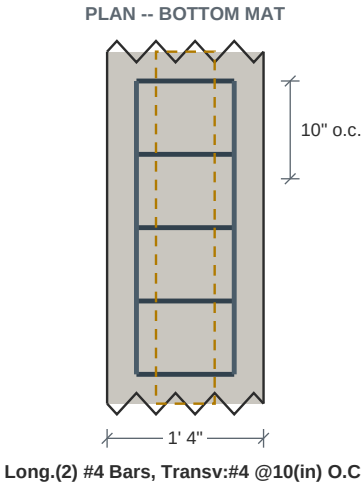
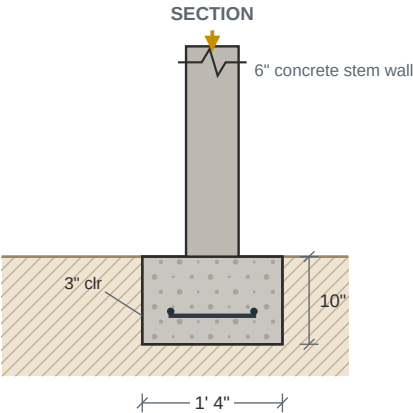
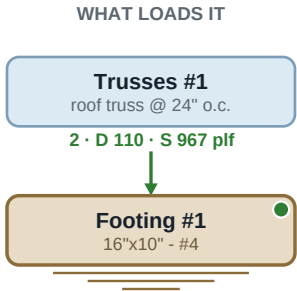
Footing #1

Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

PASSED

Controls: Depth Above Bars 89% used
Adequacy 30.9% (capacity to spare)



Carrying: Dead 110 plf Snow 967 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,037	1,500	Passed (69%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	109	7,036	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry	Footing Properties
Stem wall type Footing width Footing depth Stem wall width Stem wall height Stem wall density Stem wall offset	Concrete 1' 4" 10" 6" 24" 145 pcf 0
Steel yield strength Concrete strength Soil bearing pressure Concrete density Top reinf. cover Bottom reinf. cover Side reinf. cover Aggregate diameter	60,000 psi 3,000 psi 1,500 psf 145 pcf 3" 3" 3" 3/4"
Soil Properties	Reinforcement
Soil depth above footing Soil density Soil cohesion Friction angle Water level	0 140 pcf 0 psf 30° 20'
Bottom mat Transverse Longitudinal Selected for Dowels Plain concrete (no reinforcing) Override rebar Include water level Allow bearing pressure increase	Long.(2) #4 Bars, Transv:#4 @10(in) O.C. #4 @ 10" o.c. (2) #4 moment and minimum steel (3), bar size not set No No No No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	109.6	967	Linked from: Trusses #1 , Support 2

Footing #2

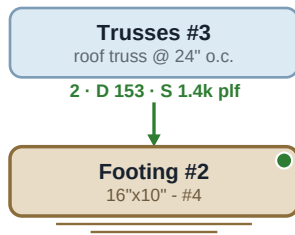
Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

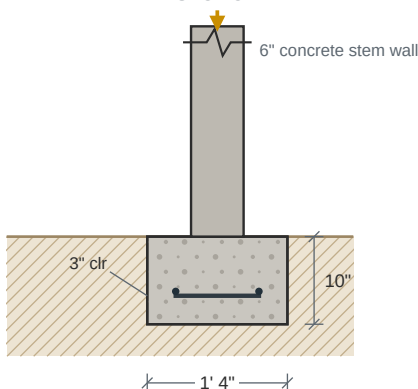
PASSED

Controls: Soil Bearing Pressure 90% used
Adequacy 9.5% (capacity to spare)

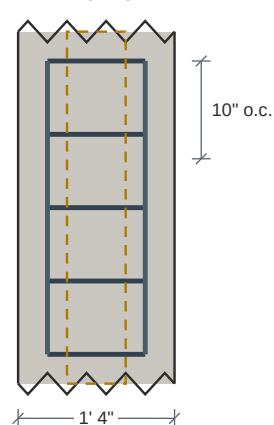
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 153 plf Snow 1,350 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,357	1,500	Passed (90%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	153	7,036	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	153	1,350	Linked from: Trusses #3 , Support 2

Footing #3

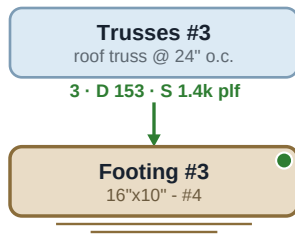
Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

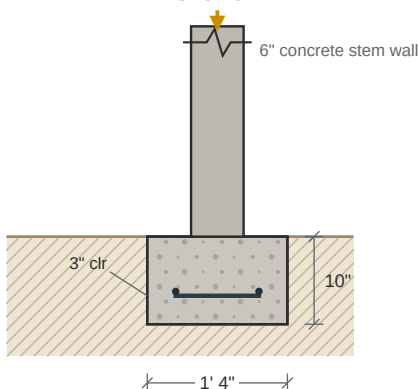
PASSED

Controls: Soil Bearing Pressure 90% used
Adequacy 9.5% (capacity to spare)

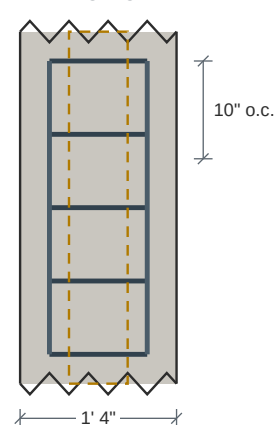
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 153 plf Snow 1,350 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,357	1,500	Passed (90%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	153	7,036	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	153	1,350	Linked from: Trusses #3 , Support 3

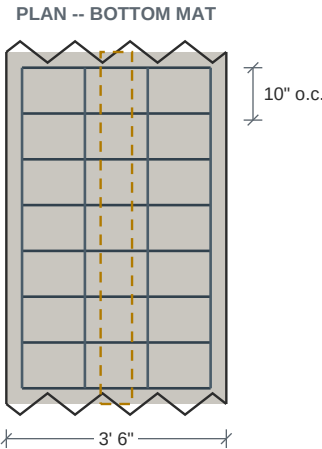
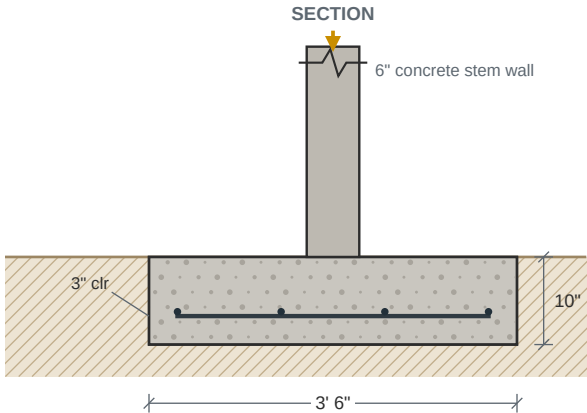
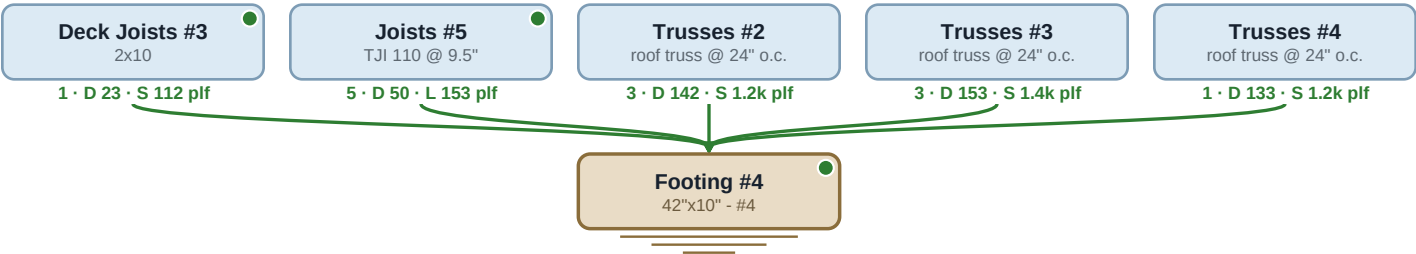
Footing #4

PASSED

Continuous Footing 3' 6" wide x 10" deep -- Long.(4) #4 Bars, Transv:#4 @10(in) O.C.
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

Controls: Soil Bearing Pressure 94% used
Adequacy 5.7% (capacity to spare)

What Loads It [click a box to go to that member](#)



Carrying: Dead 500 plf Snow 3,882 plf Floor Live 153 plf

Long.(4) #4 Bars, Transv:#4 @10(in) O.C.

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,414	1,500	Passed (94%)	ASD	D+S
One-Way Shear (lbs)	1,866	6,655	Passed (28%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	2,239	7,036	Passed (32%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry	Footing Properties
Stem wall type Concrete	Steel yield strength 60,000 psi
Footing width 3' 6"	Concrete strength 3,000 psi
Footing depth 10"	Soil bearing pressure 1,500 psf
Stem wall width 6"	Concrete density 145 pcf
Stem wall height 24"	Top reinf. cover 3"
Stem wall density 145 pcf	Bottom reinf. cover 3"
Stem wall offset 0	Side reinf. cover 3"
	Aggregate diameter 3/4"
Soil Properties	Reinforcement
Soil depth above footing 0	Bottom mat Long.(4) #4 Bars, Transv:#4 @10(in) O.C.
Soil density 140 pcf	Transverse #4 @ 10" o.c.
Soil cohesion 0 psf	Longitudinal (4) #4
Friction angle 30°	Selected for moment and minimum steel
Water level 20'	Dowels (3), bar size not set
	Plain concrete (no reinforcing) No
	Override rebar No
	Include water level No
	Allow bearing pressure increase No

Footings #4 (continued) Continuous Footing | 3' 6" wide x 10" deep -- Long.(4) #4 Bars, Transv:#4 @10(in) O.C.

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: $0.0018 A_g$ for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	141.6	--	1,249	Linked from: Trusses #2 , Support 3
2 - Uniform (PLF)	--	N/A	153	--	1,350	Linked from: Trusses #3 , Support 3
3 - Uniform (PLF)	--	N/A	132.7	--	1,171	Linked from: Trusses #4 , Support 1
4 - Uniform (PLF)	--	N/A	50.4	153.4	--	Linked from: Joists #5 , Support 5
5 - Uniform (PLF)	--	N/A	22.7	--	112.5	Linked from: Deck Joists #3 , Support 1

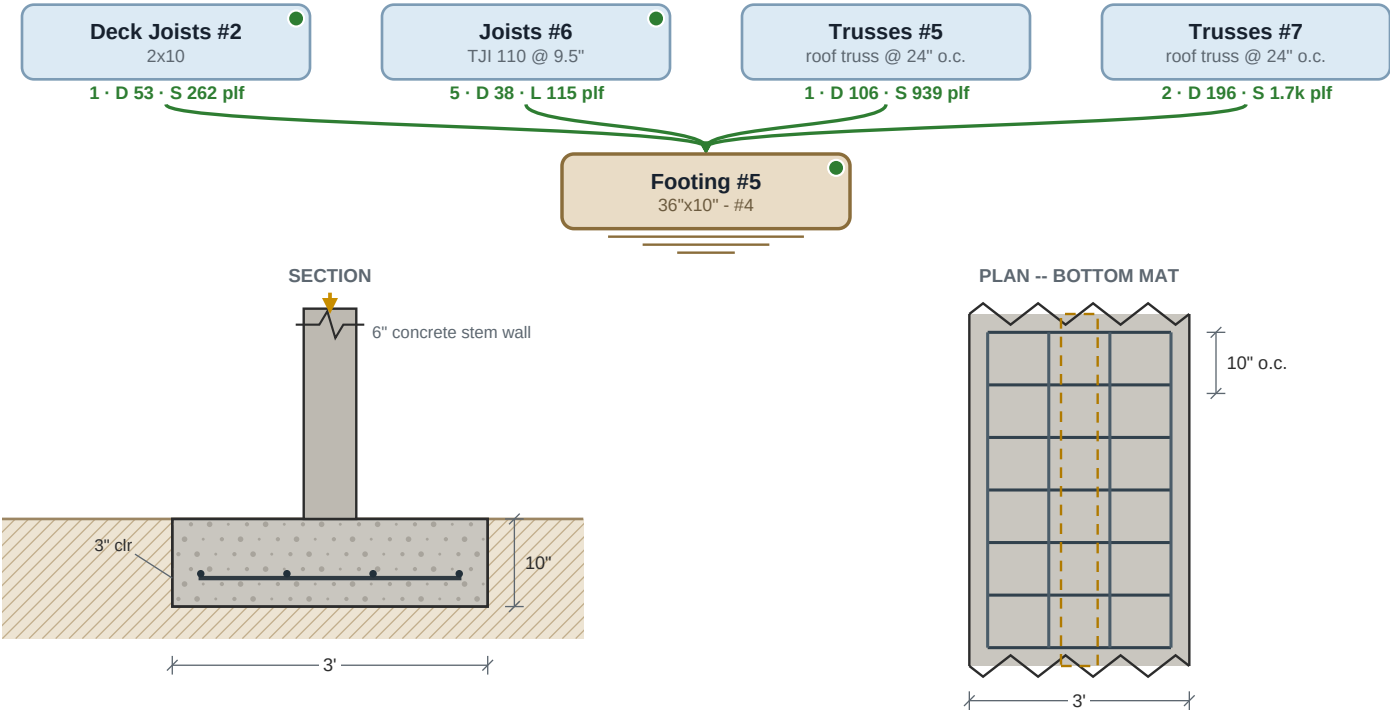
Footing #5

PASSED

Continuous Footing 3' wide x 10" deep -- Long.(4) #4 Bars, Transv:#4 @10(in) O.C.
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

Controls: Depth Above Bars 89% used
Adequacy 15% (capacity to spare)

What Loads It [click a box to go to that member](#)



Long.(4) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 392 plf Snow 2,926 plf Floor Live 115 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,275	1,500	Passed (85%)	ASD	D+S
One-Way Shear (lbs)	1,207	6,655	Passed (18%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	1,372	7,036	Passed (19%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry	Footing Properties
Stem wall type Concrete	Steel yield strength 60,000 psi
Footing width 3'	Concrete strength 3,000 psi
Footing depth 10"	Soil bearing pressure 1,500 psf
Stem wall width 6"	Concrete density 145 pcf
Stem wall height 24"	Top reinf. cover 3"
Stem wall density 145 pcf	Bottom reinf. cover 3"
Stem wall offset 0	Side reinf. cover 3"
	Aggregate diameter 3/4"
Soil Properties	Reinforcement
Soil depth above footing 0	Bottom mat Long.(4) #4 Bars, Transv:#4 @10(in) O.C.
Soil density 140 pcf	Transverse #4 @ 10" o.c.
Soil cohesion 0 psf	Longitudinal (4) #4
Friction angle 30°	Selected for moment and minimum steel
Water level 20'	Dowels (3), bar size not set
	Plain concrete (no reinforcing) No
	Override rebar No
	Include water level No
	Allow bearing pressure increase No

Footing #6

Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

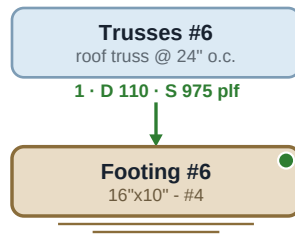
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

PASSED

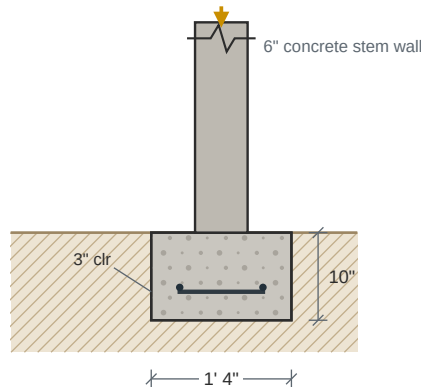
Controls: Depth Above Bars 89% used

Adequacy 30.4% (capacity to spare)

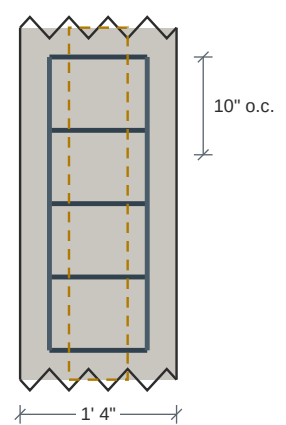
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 110 plf Snow 975 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,044	1,500	Passed (70%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	110	7,036	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	110.5	975	Linked from: Trusses #6 , Support 1

Footing #9

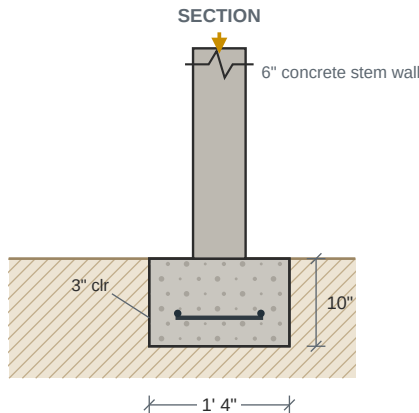
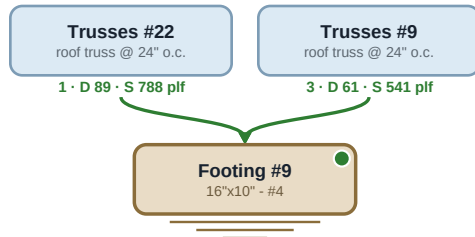
PASSED
Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

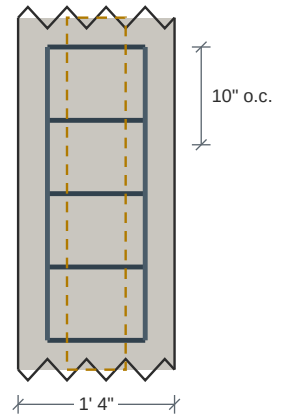
Controls: Soil Bearing Pressure 89% used

Adequacy 10.7% (capacity to spare)

WHAT LOADS IT



PLAN -- BOTTOM MAT


Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 151 plf Snow 1,329 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,339	1,500	Passed (89%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	150	7,036	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	61.4	541.4	Linked from: Trusses #9 , Support 3
2 - Uniform (PLF)	--	N/A	89.2	787.5	Linked from: Trusses #22 , Support 1

Footing #11

Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

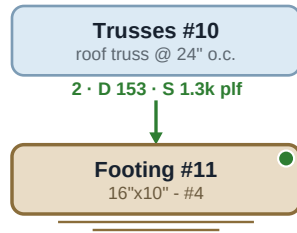
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

PASSED

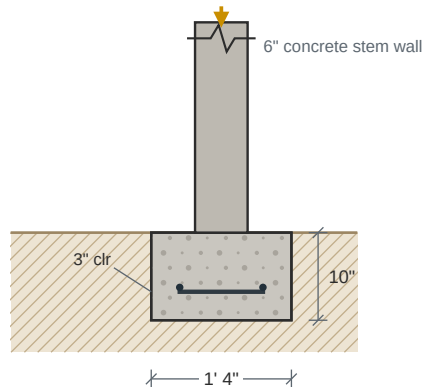
Controls: Soil Bearing Pressure 90% used

Adequacy 9.5% (capacity to spare)

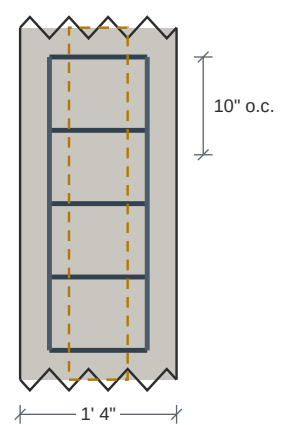
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 153 plf Snow 1,350 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,357	1,500	Passed (90%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	153	7,036	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	153	1,350	Linked from: Trusses #10 , Support 2

Footing #12

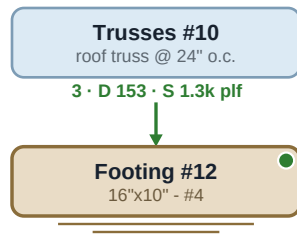
PASSED
Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

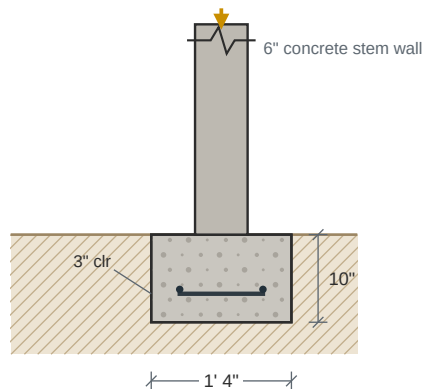
Controls: Soil Bearing Pressure 90% used

Adequacy 9.5% (capacity to spare)

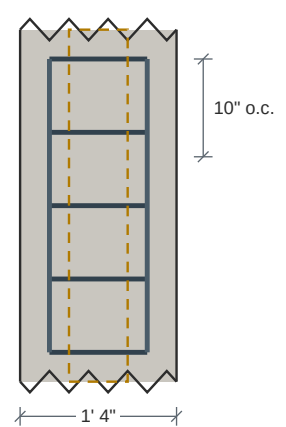
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT


Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 153 plf Snow 1,350 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,357	1,500	Passed (90%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	153	7,036	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	153	1,350	Linked from: Trusses #10 , Support 3

Footing #15

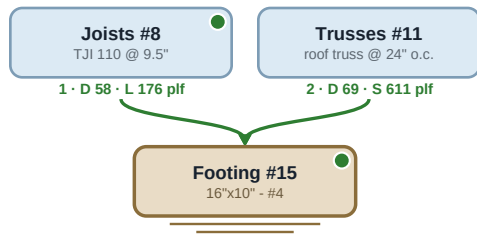
PASSED

Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

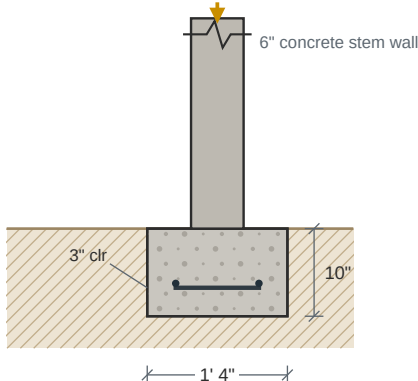
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

Controls: Depth Above Bars 89% used
Adequacy 47.8% (capacity to spare)

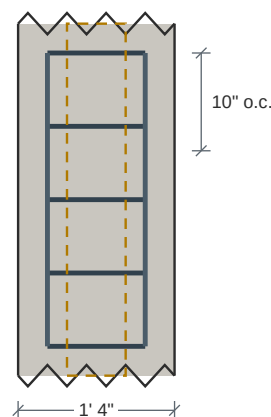
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 127 plf Snow 611 plf Floor Live 176 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	783	1,500	Passed (52%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	85	7,036	Passed (1%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	69.2	--	610.9	Linked from: Trusses #11 , Support 2
2 - Uniform (PLF)	--	N/A	57.9	176.1	--	Linked from: Joists #8 , Support 1

Footing #17

Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

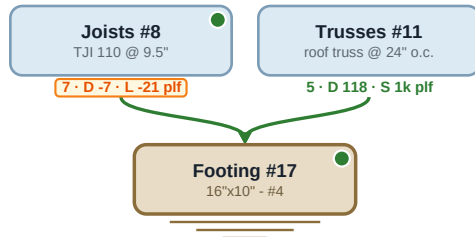
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

PASSED

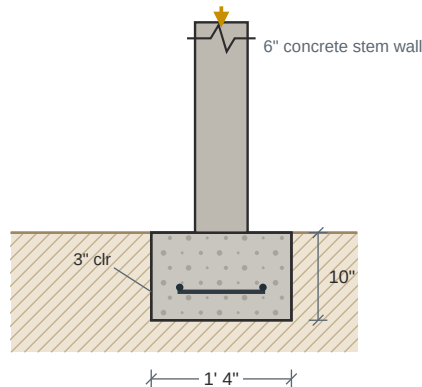
Controls: Depth Above Bars 89% used

Adequacy 26.9% (capacity to spare)

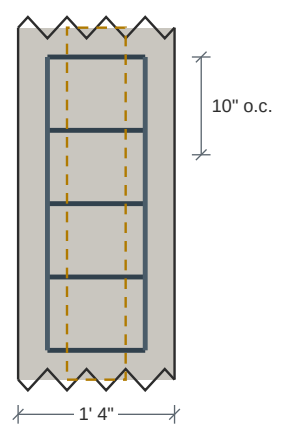
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 112 plf Snow 1,045 plf Floor Live -21 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,097	1,500	Passed (73%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	118	7,036	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	118.5	--	1,045	Linked from: Trusses #11 , Support 5
2 - Uniform (PLF)	--	N/A	-6.9	-21.1	--	Linked from: Joists #8 , Support 7

Footing #18

Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

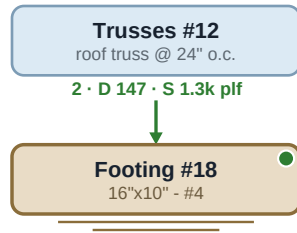
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

PASSED

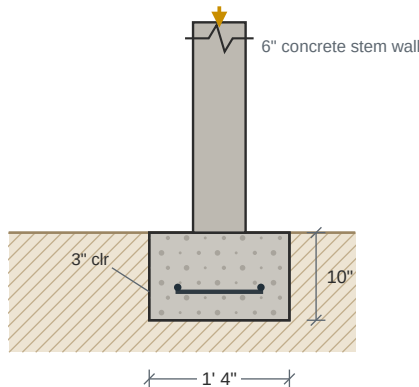
Controls: Depth Above Bars 89% used

Adequacy 12.4% (capacity to spare)

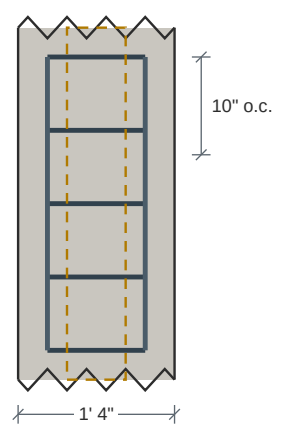
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 147 plf Snow 1,298 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,314	1,500	Passed (88%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	147	7,036	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	147.1	1,298	Linked from: Trusses #12 , Support 2

Footing #20

Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

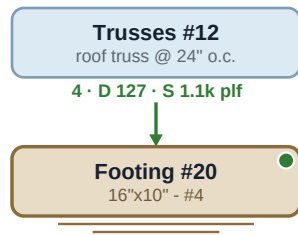
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

PASSED

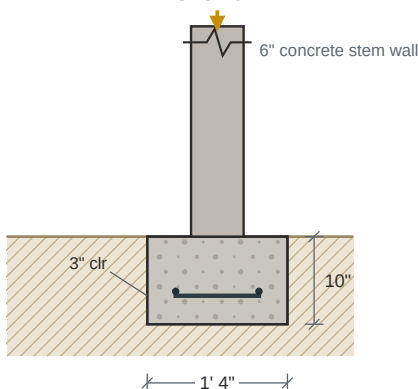
Controls: Depth Above Bars 89% used

Adequacy 22.5% (capacity to spare)

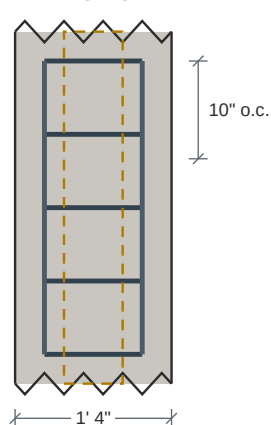
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 127 plf Snow 1,117 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,162	1,500	Passed (77%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	126	7,036	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	126.6	1,117	Linked from: Trusses #12 , Support 4

Footing #23

PASSED

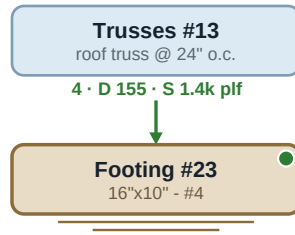
Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

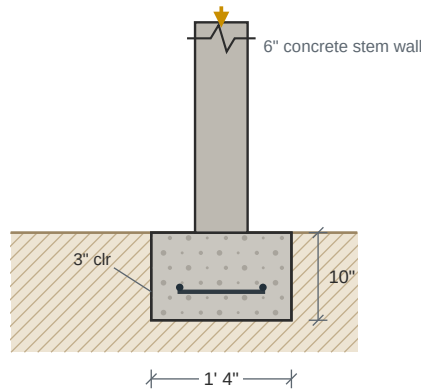
Controls: Soil Bearing Pressure 92% used

Adequacy 8.4% (capacity to spare)

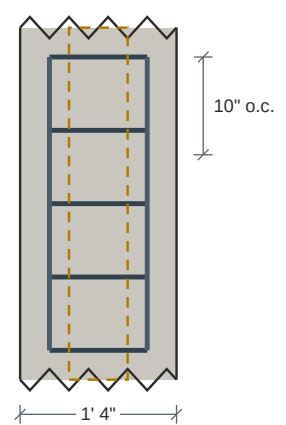
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 155 plf Snow 1,371 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,374	1,500	Passed (92%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	155	7,036	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	155.4	1,371	Linked from: Trusses #13 , Support 4

Footing #25

PASSED

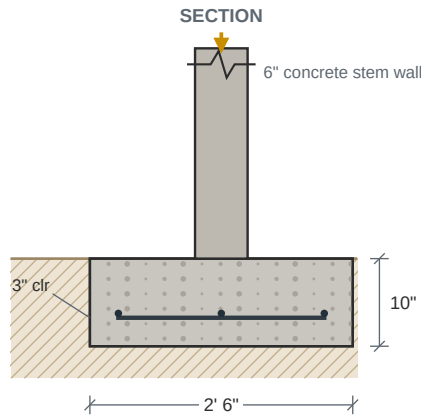
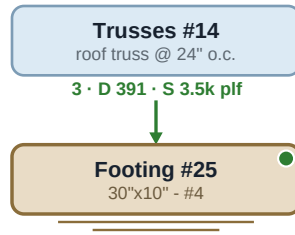
Continuous Footing 2' 6" wide x 10" deep -- Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,750 psf | Concrete stem wall 6" | ACI 318-14

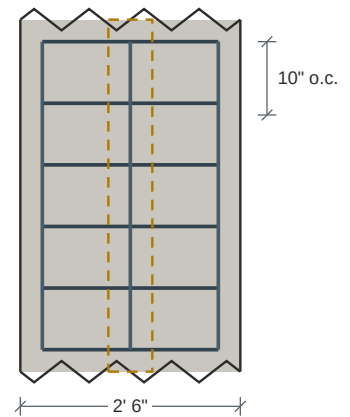
Controls: Soil Bearing Pressure 98% used

Adequacy 2% (capacity to spare)

WHAT LOADS IT



PLAN -- BOTTOM MAT



Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 391 plf Snow 3,450 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,715	1,750	Passed (98%)	ASD	D+S
One-Way Shear (lbs)	1,048	6,655	Passed (16%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	1,198	7,036	Passed (17%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	2' 6"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,750 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(3) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	391	3,450	Linked from: Trusses #14 , Support 3

Footing #26

Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

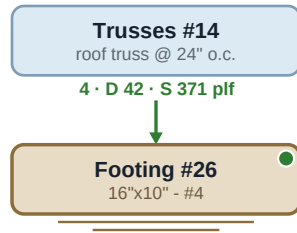
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

PASSED

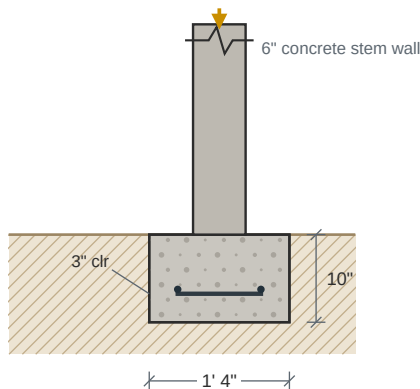
Controls: Depth Above Bars 89% used

Adequacy 64.1% (capacity to spare)

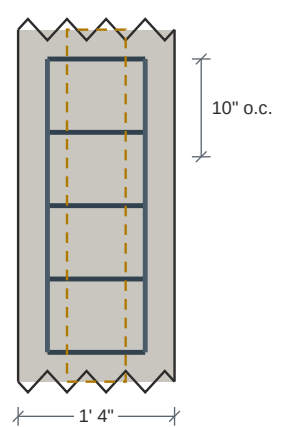
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	539	1,500	Passed (36%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	42	7,036	Passed (1%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	42	370.7	Linked from: Trusses #14 , Support 4

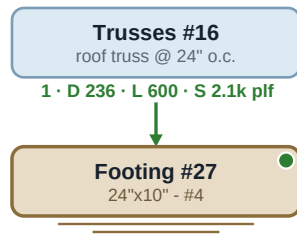
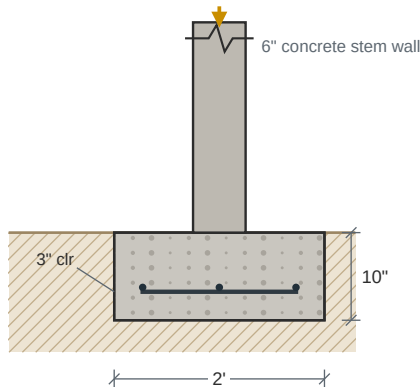
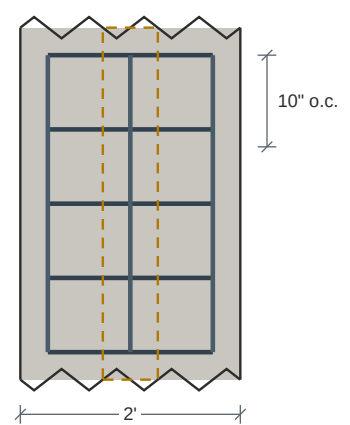
Footing #27

Continuous Footing 2' wide x 10" deep -- Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

PASSED**Controls: Soil Bearing Pressure 90% used**

Adequacy 9.8% (capacity to spare)

WHAT LOADS IT**SECTION****PLAN -- BOTTOM MAT****Long.(3) #4 Bars, Transv:#4 @10(in) O.C.**

Carrying: Dead 236 plf Floor Live 600 plf Snow 2,083 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,353	1,500	Passed (90%)	ASD	D+S
One-Way Shear (lbs)	395	6,655	Passed (6%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	593	7,036	Passed (8%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	2'	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(3) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	236.1	600	2,083	Linked from: Trusses #16 , Support 1

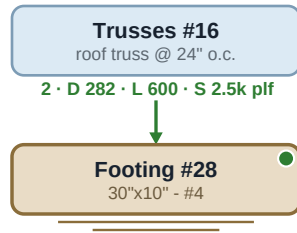
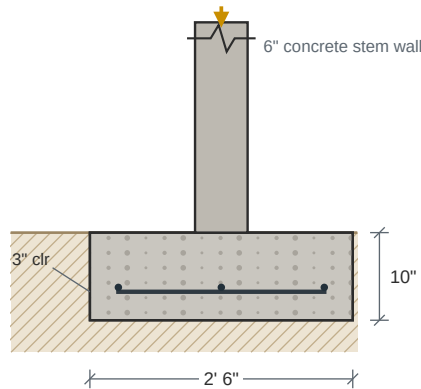
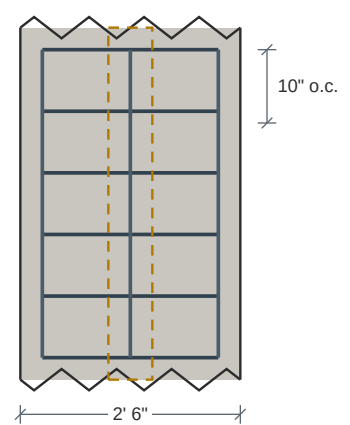
Footing #28

PASSED**Continuous Footing 2' 6" wide x 10" deep -- Long.(3) #4 Bars, Transv:#4 @10(in) O.C.**

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

Controls: Depth Above Bars 89% used

Adequacy 14.1% (capacity to spare)

WHAT LOADS IT**SECTION****PLAN -- BOTTOM MAT****Long.(3) #4 Bars, Transv:#4 @10(in) O.C.**

Carrying: Dead 282 plf Floor Live 600 plf Snow 2,492 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,288	1,500	Passed (86%)	ASD	D+S
One-Way Shear (lbs)	862	6,655	Passed (13%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	985	7,036	Passed (14%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	2' 6"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(3) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	282.4	600	2,492	Linked from: Trusses #16 , Support 2

Footing #29

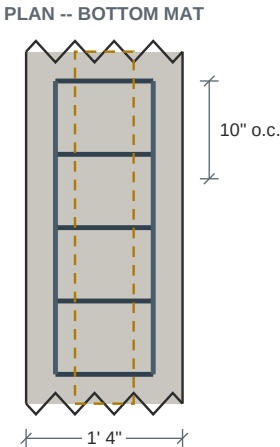
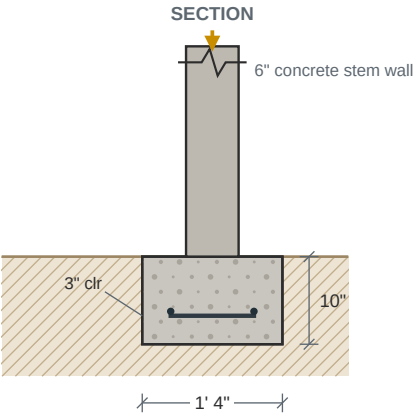
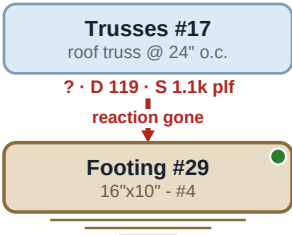
Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

PASSED

Controls: Depth Above Bars 89% used
Adequacy 26.2% (capacity to spare)

WHAT LOADS IT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 119 plf Snow 1,050 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,106	1,500	Passed (74%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	119	7,036	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	119	1,050	Linked from: Trusses #17 , Support ?

Footing #30

Continuous Footing 2' 6" wide x 10" deep -- Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

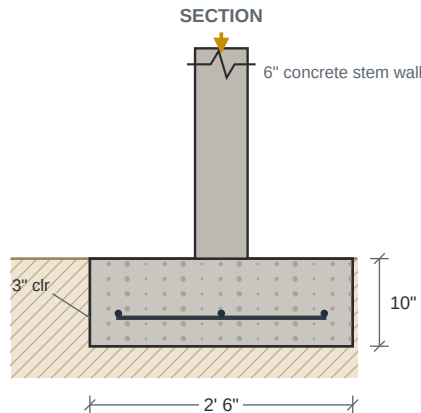
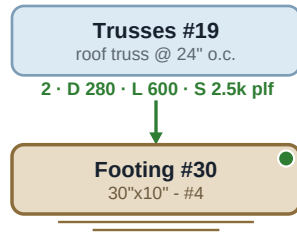
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

PASSED

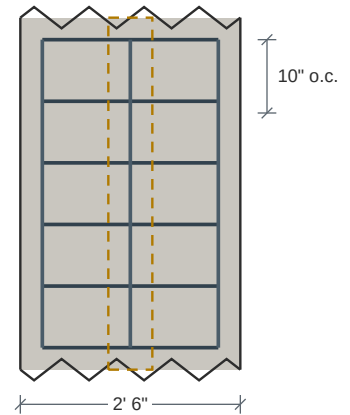
Controls: Depth Above Bars 89% used

Adequacy 14.6% (capacity to spare)

WHAT LOADS IT



PLAN -- BOTTOM MAT



Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 280 plf Floor Live 600 plf Snow 2,475 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,281	1,500	Passed (85%)	ASD	D+S
One-Way Shear (lbs)	857	6,655	Passed (13%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	979	7,036	Passed (14%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	2' 6"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(3) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	280.5	600	2,475	Linked from: Trusses #19 , Support 2

Footing #31

Continuous Footing 2' 6" wide x 10" deep -- Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

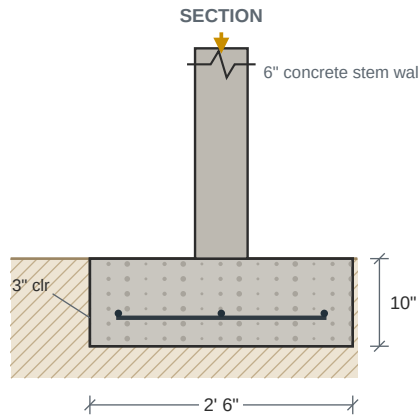
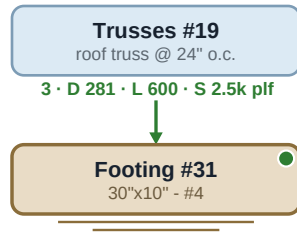
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete stem wall 6" | ACI 318-14

PASSED

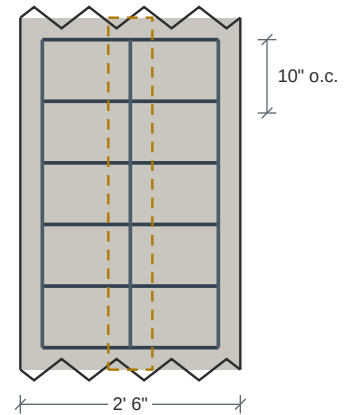
Controls: Depth Above Bars 89% used

Adequacy 14.6% (capacity to spare)

WHAT LOADS IT



PLAN -- BOTTOM MAT



Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 281 plf Floor Live 600 plf Snow 2,475 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,281	1,500	Passed (85%)	ASD	D+S
One-Way Shear (lbs)	857	6,655	Passed (13%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	979	7,036	Passed (14%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Concrete	Steel yield strength	60,000 psi
Footing width	2' 6"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	6"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(3) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	280.5	600	2,475	Linked from: Trusses #19 , Support 3

Footing - WD-#7

Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

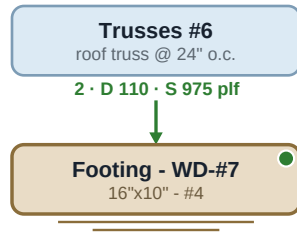
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood stem wall 3 1/2" | ACI 318-14

PASSED

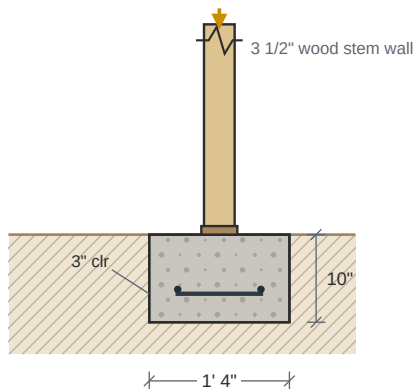
Controls: Depth Above Bars 89% used

Adequacy 33.4% (capacity to spare)

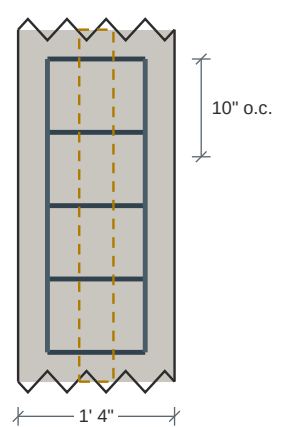
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 110 plf Snow 975 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	998	1,500	Passed (67%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	224	7,036	Passed (3%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Wood	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	3 1/2"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	110.5	975	Linked from: Trusses #6 , Support 2

Footing - WD-#8

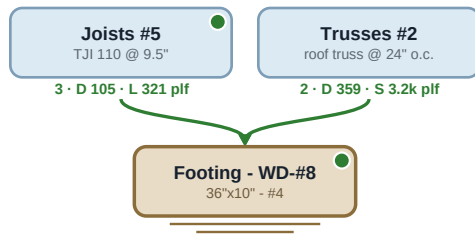
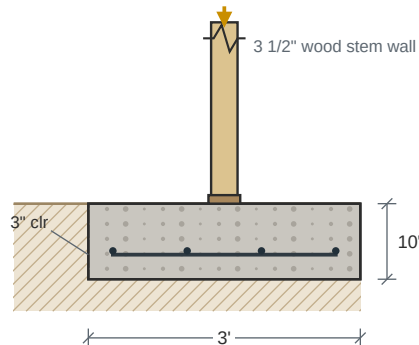
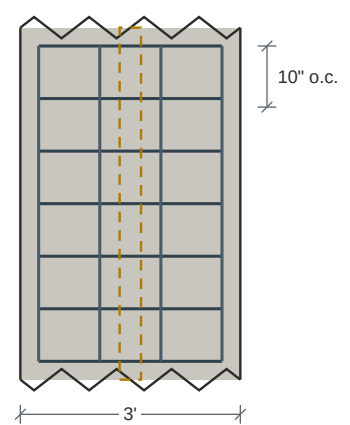
PASSED

Continuous Footing 3' wide x 10" deep -- Long.(4) #4 Bars, Transv:#4 @10(in) O.C.

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood stem wall 3 1/2" | ACI 318-14

Controls: Soil Bearing Pressure 91% used

Adequacy 9.4% (capacity to spare)

WHAT LOADS IT**SECTION****PLAN -- BOTTOM MAT**

Long.(4) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 464 plf Snow 3,167 plf Floor Live 321 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,359	1,500	Passed (91%)	ASD	D+S
One-Way Shear (lbs)	1,569	6,655	Passed (24%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	2,018	7,036	Passed (29%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Wood	Steel yield strength	60,000 psi
Footing width	3'	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	3 1/2"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(4) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(4) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	358.9	--	3,167	Linked from: Trusses #2 , Support 2
2 - Uniform (PLF)	--	N/A	105.4	320.7	--	Linked from: Joists #5 , Support 3

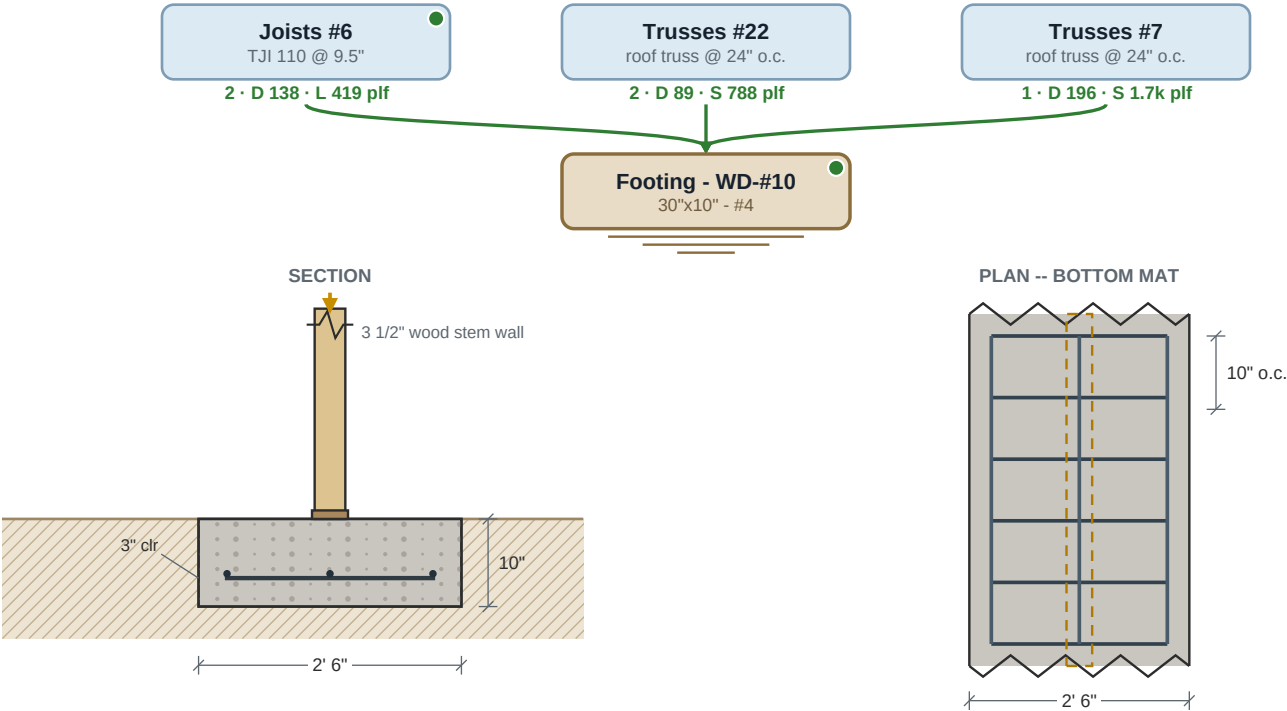
Footing - WD-#10

PASSED

Continuous Footing 2' 6" wide x 10" deep -- Long.(3) #4 Bars, Transv:#4 @10(in) O.C.
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood stem wall 3 1/2" | ACI 318-14

Controls: Depth Above Bars 89% used
Adequacy 11.4% (capacity to spare)

What Loads It [click a box to go to that member](#)



Carrying: Dead 422 plf Floor Live 419 plf Snow 2,512 plf
Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,329	1,500	Passed (89%)	ASD	D+S
One-Way Shear (lbs)	1,072	6,655	Passed (16%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	1,370	7,036	Passed (19%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry	Footing Properties
Stem wall type: Wood	Steel yield strength: 60,000 psi
Footing width: 2' 6"	Concrete strength: 3,000 psi
Footing depth: 10"	Soil bearing pressure: 1,500 psf
Stem wall width: 3 1/2"	Concrete density: 145 pcf
Stem wall height: 24"	Top reinf. cover: 3"
Stem wall density: 145 pcf	Bottom reinf. cover: 3"
Stem wall offset: 0	Side reinf. cover: 3"
	Aggregate diameter: 3/4"
Soil Properties	Reinforcement
Soil depth above footing: 0	Bottom mat: Long.(3) #4 Bars, Transv:#4 @10(in) O.C.
Soil density: 140 pcf	Transverse: #4 @ 10" o.c.
Soil cohesion: 0 psf	Longitudinal: (3) #4
Friction angle: 30°	Selected for: moment and minimum steel
Water level: 20'	Dowels: (3), bar size not set
	Plain concrete (no reinforcing): No
	Override rebar: No
	Include water level: No
	Allow bearing pressure increase: No

Footing - WD-#10 (continued) Continuous Footing | 2' 6" wide x 10" deep -- Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	137.7	418.7	--	Linked from: Joists #6 , Support 2
2 - Uniform (PLF)	--	N/A	89.2	--	787.5	Linked from: Trusses #22 , Support 2
3 - Uniform (PLF)	--	N/A	195.5	--	1,725	Linked from: Trusses #7 , Support 1

Footing - WD-#13

PASSED

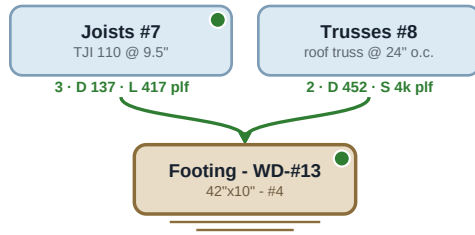
Continuous Footing 3' 6" wide x 10" deep -- Long.(4) #4 Bars, Transv:#4 @10(in) O.C.

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood stem wall 3 1/2" | ACI 318-14

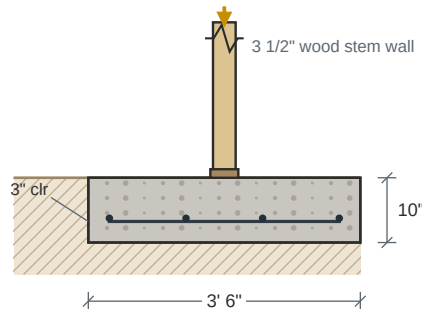
Controls: Soil Bearing Pressure 97% used

Adequacy 3.2% (capacity to spare)

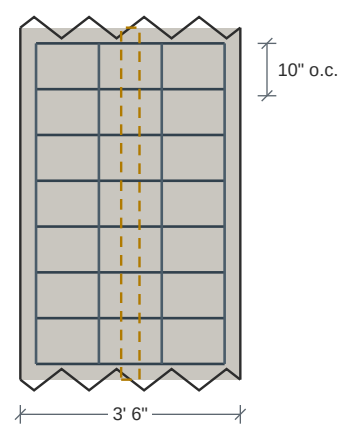
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(4) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 589 plf Snow 3,987 plf Floor Live 417 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,453	1,500	Passed (97%)	ASD	D+S
One-Way Shear (lbs)	2,233	6,655	Passed (34%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	3,015	7,036	Passed (43%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry	Footing Properties
Stem wall type	Wood
Footing width	3' 6"
Footing depth	10"
Stem wall width	3 1/2"
Stem wall height	24"
Stem wall density	145 pcf
Stem wall offset	0
Steel yield strength	60,000 psi
Concrete strength	3,000 psi
Soil bearing pressure	1,500 psf
Concrete density	145 pcf
Top reinf. cover	3"
Bottom reinf. cover	3"
Side reinf. cover	3"
Aggregate diameter	3/4"
Soil Properties	Reinforcement
Soil depth above footing	0
Soil density	140 pcf
Soil cohesion	0 psf
Friction angle	30°
Water level	20'
Bottom mat	Long.(4) #4 Bars, Transv:#4 @10(in) O.C.
Transverse	#4 @ 10" o.c.
Longitudinal	(4) #4
Selected for	moment and minimum steel
Dowels	(3), bar size not set
Plain concrete (no reinforcing)	No
Override rebar	No
Include water level	No
Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	451.9	--	3,987	Linked from: Trusses #8 , Support 2
2 - Uniform (PLF)	--	N/A	137	416.6	--	Linked from: Joists #7 , Support 3

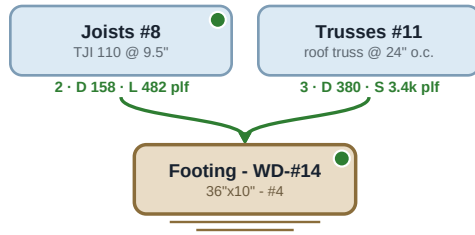
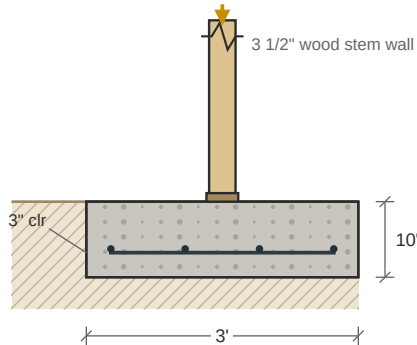
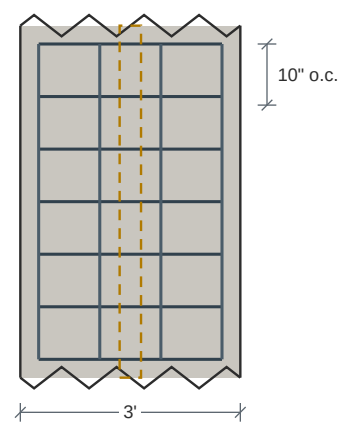
Footing - WD-#14

PASSED**Continuous Footing 3' wide x 10" deep -- Long.(4) #4 Bars, Transv:#4 @10(in) O.C.**

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood stem wall 3 1/2" | ACI 318-14

Controls: Soil Bearing Pressure 96% used

Adequacy 3.6% (capacity to spare)

WHAT LOADS IT**SECTION****PLAN -- BOTTOM MAT****Long.(4) #4 Bars, Transv:#4 @10(in) O.C.**

Carrying: Dead 538 plf Snow 3,351 plf Floor Live 482 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,445	1,500	Passed (96%)	ASD	D+S
One-Way Shear (lbs)	1,712	6,655	Passed (26%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	2,203	7,036	Passed (31%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Wood	Steel yield strength	60,000 psi
Footing width	3'	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	3 1/2"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(4) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(4) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	379.8	--	3,351	Linked from: Trusses #11 , Support 3
2 - Uniform (PLF)	--	N/A	158.4	481.7	--	Linked from: Joists #8 , Support 2

Footing - WD-#16

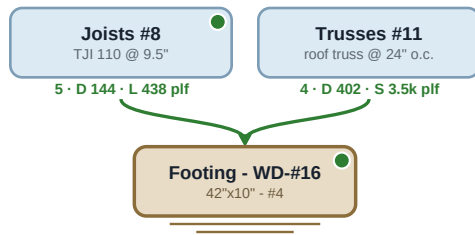
PASSED

Continuous Footing 3' 6" wide x 10" deep -- Long.(4) #4 Bars, Transv:#4 @10(in) O.C.

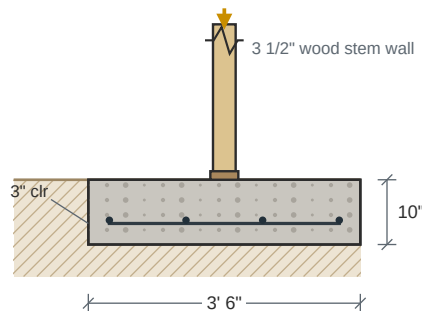
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood stem wall 3 1/2" | ACI 318-14

Controls: Depth Above Bars 89% used
Adequacy 12.5% (capacity to spare)

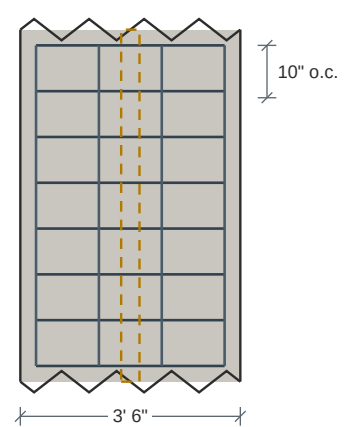
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(4) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 546 plf Snow 3,543 plf Floor Live 438 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,313	1,500	Passed (88%)	ASD	D+S
One-Way Shear (lbs)	2,013	6,655	Passed (30%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	2,717	7,036	Passed (39%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry	Footing Properties
Stem wall type	Wood
Footing width	3' 6"
Footing depth	10"
Stem wall width	3 1/2"
Stem wall height	24"
Stem wall density	145 pcf
Stem wall offset	0
Steel yield strength	60,000 psi
Concrete strength	3,000 psi
Soil bearing pressure	1,500 psf
Concrete density	145 pcf
Top reinf. cover	3"
Bottom reinf. cover	3"
Side reinf. cover	3"
Aggregate diameter	3/4"
Soil Properties	Reinforcement
Soil depth above footing	0
Soil density	140 pcf
Soil cohesion	0 psf
Friction angle	30°
Water level	20'
Bottom mat	Long.(4) #4 Bars, Transv:#4 @10(in) O.C.
Transverse	#4 @ 10" o.c.
Longitudinal	(4) #4
Selected for	moment and minimum steel
Dowels	(3), bar size not set
Plain concrete (no reinforcing)	No
Override rebar	No
Include water level	No
Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	401.5	--	3,543	Linked from: Trusses #11 , Support 4
2 - Uniform (PLF)	--	N/A	144.1	438.5	--	Linked from: Joists #8 , Support 5

Footing - WD-#19

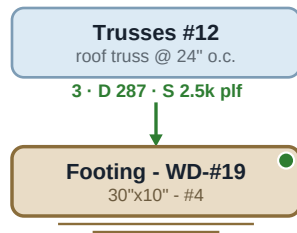
PASSED

Continuous Footing 2' 6" wide x 10" deep -- Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

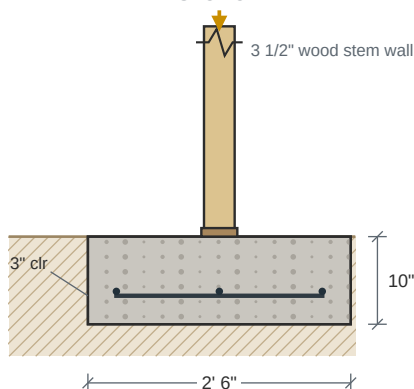
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood stem wall 3 1/2" | ACI 318-14

Controls: Depth Above Bars 89% used
Adequacy 14.4% (capacity to spare)

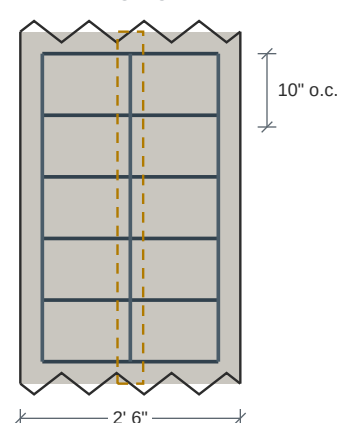
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 287 plf Snow 2,535 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,283	1,500	Passed (86%)	ASD	D+S
One-Way Shear (lbs)	953	6,655	Passed (14%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	1,219	7,036	Passed (17%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Wood	Steel yield strength	60,000 psi
Footing width	2' 6"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	3 1/2"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(3) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	287.3	2,535	Linked from: Trusses #12 , Support 3

Footing - WD-#21

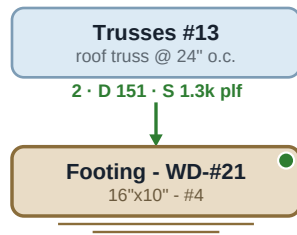
PASSED

Continuous Footing 1' 4" wide x 10" deep -- Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

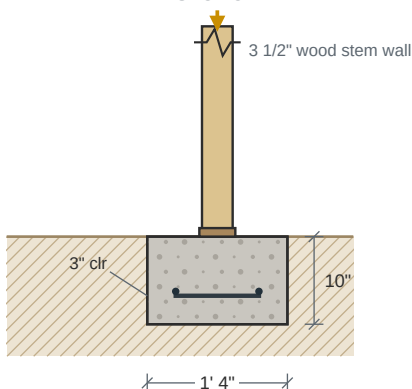
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood stem wall 3 1/2" | ACI 318-14

Controls: Depth Above Bars 89% used
Adequacy 13.4% (capacity to spare)

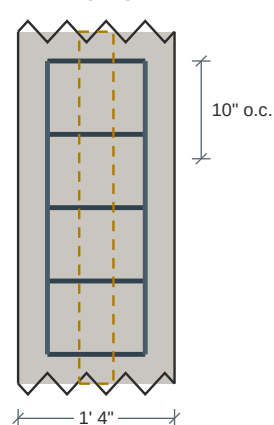
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(2) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 151 plf Snow 1,335 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,299	1,500	Passed (87%)	ASD	D+S
One-Way Shear (lbs)	0	6,655	Passed (0%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	306	7,036	Passed (4%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Wood	Steel yield strength	60,000 psi
Footing width	1' 4"	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	3 1/2"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(2) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	151.4	1,335	Linked from: Trusses #13 , Support 2

Footing - WD-#22

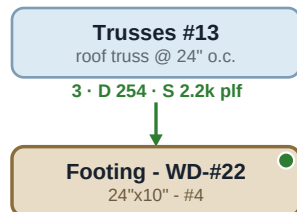
PASSED

Continuous Footing 2' wide x 10" deep -- Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

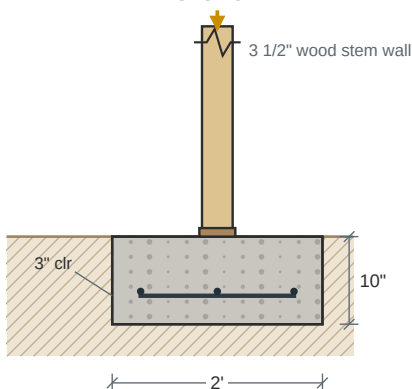
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood stem wall 3 1/2" | ACI 318-14

Controls: Soil Bearing Pressure 94% used
Adequacy 5.9% (capacity to spare)

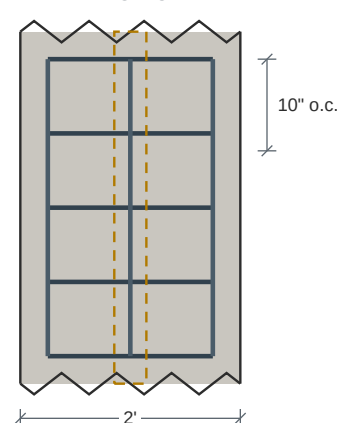
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 254 plf Snow 2,243 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,412	1,500	Passed (94%)	ASD	D+S
One-Way Shear (lbs)	568	6,655	Passed (9%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	837	7,036	Passed (12%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Stem wall type	Wood	Steel yield strength	60,000 psi
Footing width	2'	Concrete strength	3,000 psi
Footing depth	10"	Soil bearing pressure	1,500 psf
Stem wall width	3 1/2"	Concrete density	145 pcf
Stem wall height	24"	Top reinf. cover	3"
Stem wall density	145 pcf	Bottom reinf. cover	3"
Stem wall offset	0	Side reinf. cover	3"
		Aggregate diameter	3/4"
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Long.(3) #4 Bars, Transv:#4 @10(in) O.C.
Soil density	140 pcf	Transverse	#4 @ 10" o.c.
Soil cohesion	0 psf	Longitudinal	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Dowels	(3), bar size not set
		Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	254.3	2,243	Linked from: Trusses #13 , Support 3

Footing - WD-#24

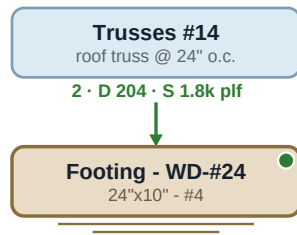
Continuous Footing 2' wide x 10" deep -- Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood stem wall 3 1/2" | ACI 318-14

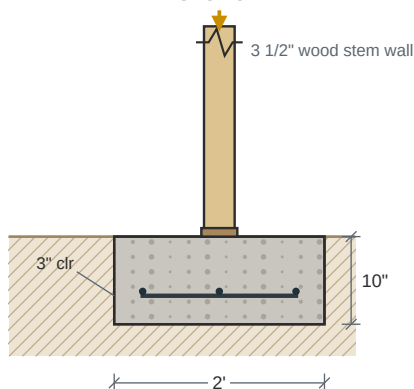
PASSED

Controls: Depth Above Bars 89% used
Adequacy 22.2% (capacity to spare)

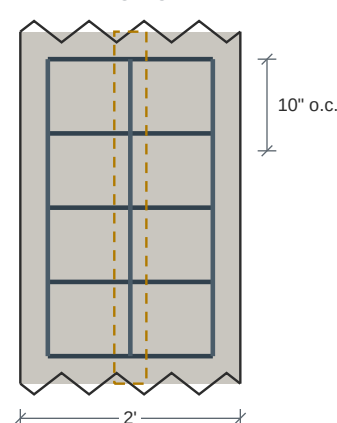
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Long.(3) #4 Bars, Transv:#4 @10(in) O.C.

Carrying: Dead 204 plf Snow 1,804 plf

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,167	1,500	Passed (78%)	ASD	D+S
One-Way Shear (lbs)	457	6,655	Passed (7%)	LRFD	1.2D+1.6S+L
Moment (ft-lbs)	673	7,036	Passed (10%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry	Footing Properties
Stem wall type	Wood
Footing width	2'
Footing depth	10"
Stem wall width	3 1/2"
Stem wall height	24"
Stem wall density	145 pcf
Stem wall offset	0
Steel yield strength	60,000 psi
Concrete strength	3,000 psi
Soil bearing pressure	1,500 psf
Concrete density	145 pcf
Top reinf. cover	3"
Bottom reinf. cover	3"
Side reinf. cover	3"
Aggregate diameter	3/4"
Soil Properties	Reinforcement
Soil depth above footing	0
Soil density	140 pcf
Soil cohesion	0 psf
Friction angle	30°
Water level	20'
Bottom mat	Long.(3) #4 Bars, Transv:#4 @10(in) O.C.
Transverse	#4 @ 10" o.c.
Longitudinal	(3) #4
Selected for	moment and minimum steel
Dowels	(3), bar size not set
Plain concrete (no reinforcing)	No
Override rebar	No
Include water level	No
Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	--	N/A	204.4	1,804	Linked from: Trusses #14 , Support 2

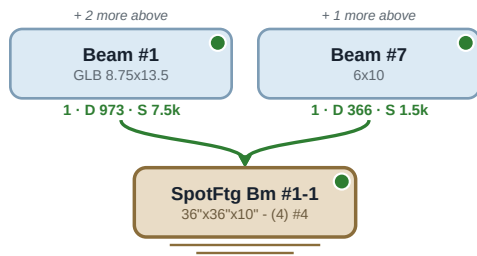
SpotFtg Bm #1-1

Spot Footing 3' x 3' x 10" deep -- Bot.(4) #4 Long, (4) #4 Short

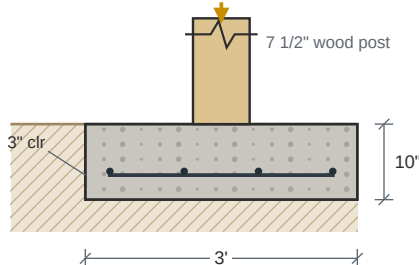
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 7 1/2" x 7 1/2" | ACI 318-14

PASSEDControls: Depth Above Bars 89% used
Adequacy 15.7% (capacity to spare)

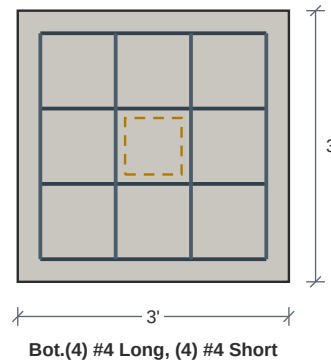
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 1,339 lb Snow 8,953 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,264	1,500	Passed (84%)	ASD	D+S
One-Way Shear X (lbs)	3,540	18,486	Passed (19%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	3,540	18,486	Passed (19%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	13,522	59,811	Passed (23%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	4,794	21,559	Passed (22%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	4,794	21,559	Passed (22%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	15,931	186,469	Passed (9%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	3'	Soil bearing pressure	1,500 psf
Footing length	3'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	7 1/2"	Bottom reinf. cover	3"
Column length	7 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(4) #4 Long, (4) #4 Short
Soil density	140 pcf	Bars the long way	(4) #4
Soil cohesion	0 psf	Bars the short way	(4) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	8x8 post	Override rebar	No
Post base	ABU88Z, p. 77	Include water level	No
Cap	ECCQ98SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	973.3	7,490	Linked from: Beam #1 , Support 1
2 - Point (lb)	--	N/A	366	1,462	Linked from: Beam #7 , Support 1

SpotFtg Bm #1-2

Spot Footing 4' 6" x 4' 6" x 10" deep -- Bot.(5) #4 Long, (5) #4 Short

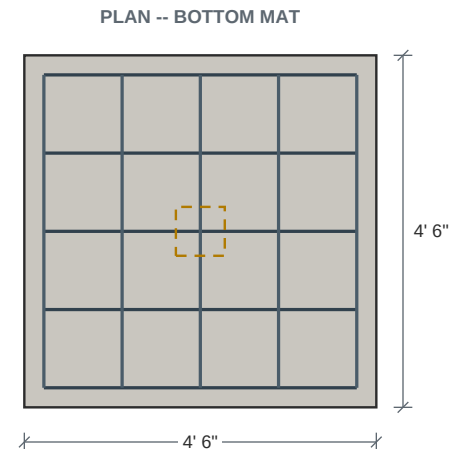
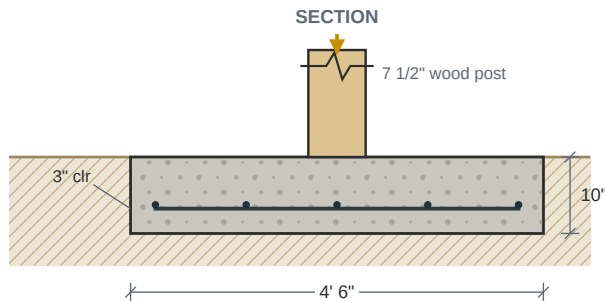
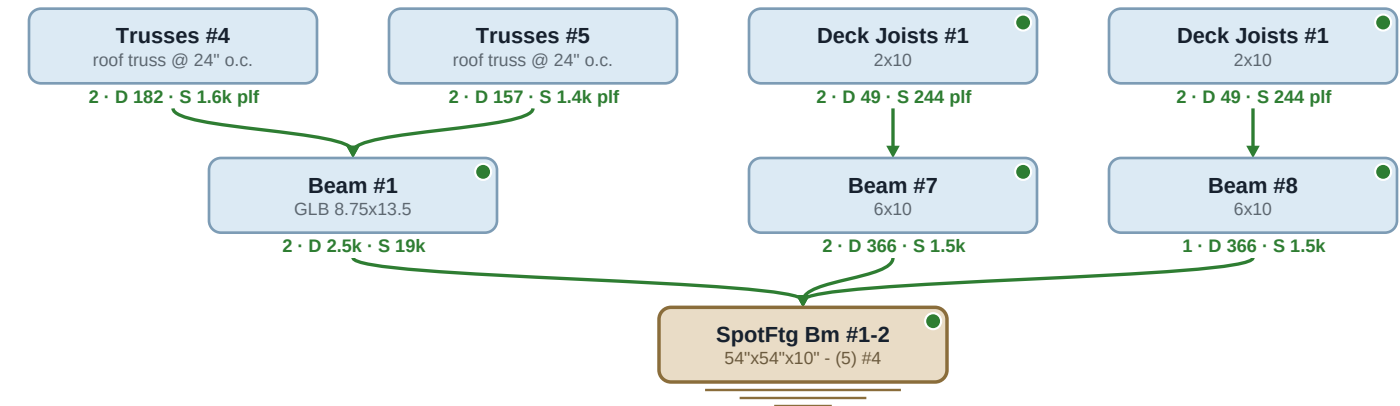
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 7 1/2" x 7 1/2" | ACI 318-14

PASSED

Controls: Soil Bearing Pressure 91% used

Adequacy 9.1% (capacity to spare)

What Loads It [click a box to go to that member](#)



Carrying: Dead 3,224 lb Snow 21,930 lb

Bot.(5) #4 Long, (5) #4 Short

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,363	1,500	Passed (91%)	ASD	D+S
One-Way Shear X (lbs)	12,264	27,728	Passed (44%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	12,264	27,728	Passed (44%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	36,338	59,811	Passed (61%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	18,975	27,145	Passed (70%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	18,975	27,145	Passed (70%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	38,957	186,469	Passed (21%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

SpotFtg Bm #1-2 (continued) Spot Footing | 4' 6" x 4' 6" x 10" deep -- Bot.(5) #4 Long, (5) #4 Short

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	4' 6"	Soil bearing pressure	1,500 psf
Footing length	4' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	7 1/2"	Bottom reinf. cover	3"
Column length	7 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(5) #4 Long, (5) #4 Short
Soil density	140 pcf	Bars the long way	(5) #4
Soil cohesion	0 psf	Bars the short way	(5) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	8x8 post	Override rebar	No
Post base	CB88, p. 87	Include water level	No
Cap	CCQ98SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	2,492	19,005	Linked from: Beam #1 , Support 2
2 - Point (lb)	--	N/A	366	1,462	Linked from: Beam #7 , Support 2
3 - Point (lb)	--	N/A	366	1,462	Linked from: Beam #8 , Support 1

SpotFtg Bm #1-3

Spot Footing 4' 6" x 4' 6" x 10" deep -- Bot.(5) #4 Long, (5) #4 Short

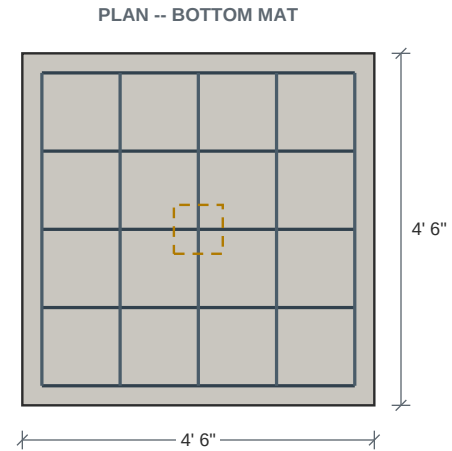
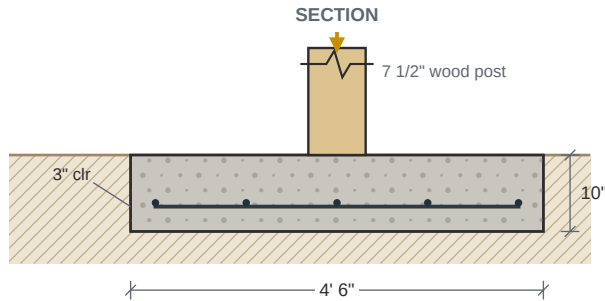
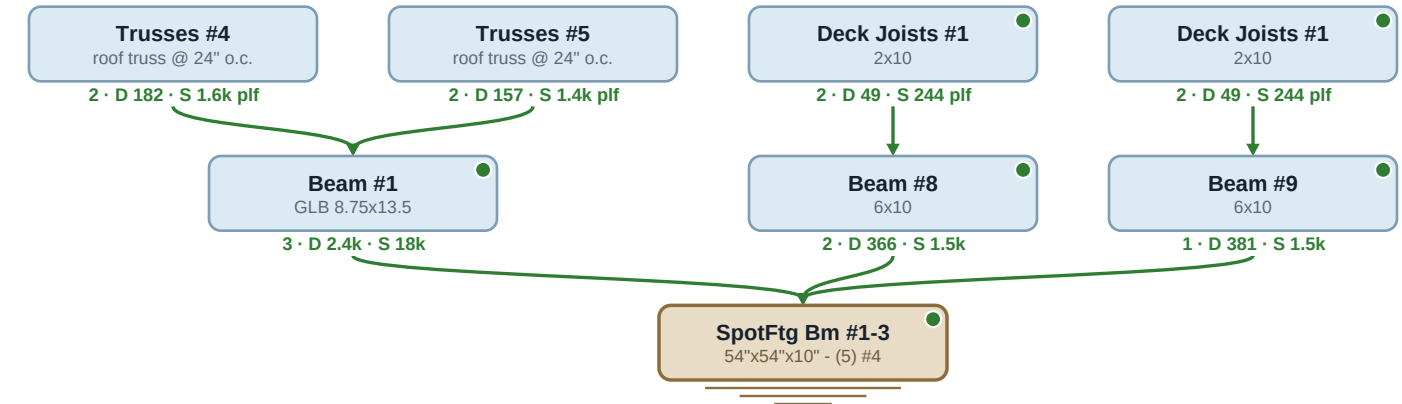
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 7 1/2" x 7 1/2" | ACI 318-14

PASSED

Controls: Depth Above Bars 89% used

Adequacy 13.3% (capacity to spare)

What Loads It [click a box to go to that member](#)



Carrying: Dead 3,115 lb Snow 20,785 lb

Bot.(5) #4 Long, (5) #4 Short

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,301	1,500	Passed (87%)	ASD	D+S
One-Way Shear X (lbs)	11,646	27,728	Passed (42%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	11,646	27,728	Passed (42%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	34,508	59,811	Passed (58%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	18,019	27,145	Passed (66%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	18,019	27,145	Passed (66%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	36,994	186,469	Passed (20%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

SpotFtg Bm #1-3 (continued) Spot Footing | 4' 6" x 4' 6" x 10" deep -- Bot.(5) #4 Long, (5) #4 Short

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	4' 6"	Soil bearing pressure	1,500 psf
Footing length	4' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	7 1/2"	Bottom reinf. cover	3"
Column length	7 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(5) #4 Long, (5) #4 Short
Soil density	140 pcf	Bars the long way	(5) #4
Soil cohesion	0 psf	Bars the short way	(5) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	8x8 post	Override rebar	No
Post base	CB88, p. 87	Include water level	No
Cap	CCQ98SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	2,368	17,799	Linked from: Beam #1 , Support 3
2 - Point (lb)	--	N/A	366	1,462	Linked from: Beam #8 , Support 2
3 - Point (lb)	--	N/A	381.3	1,523	Linked from: Beam #9 , Support 1

SpotFtg Bm #1-4

Spot Footing 3' x 3' x 10" deep -- Bot.(4) #4 Long, (4) #4 Short

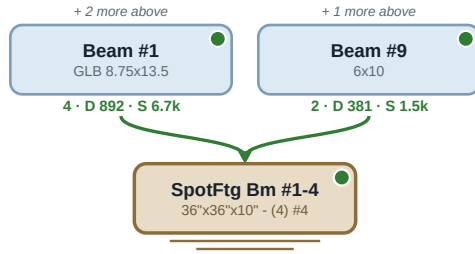
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 7 1/2" x 7 1/2" | ACI 318-14

PASSED

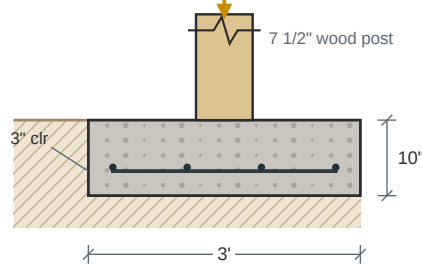
Controls: Depth Above Bars 89% used

Adequacy 21.4% (capacity to spare)

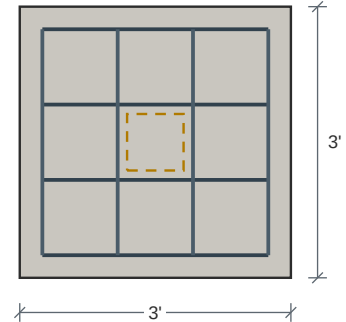
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Bot.(4) #4 Long, (4) #4 Short

Carrying: Dead 1,274 lb Snow 8,251 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,179	1,500	Passed (79%)	ASD	D+S
One-Way Shear X (lbs)	3,273	18,486	Passed (18%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	3,273	18,486	Passed (18%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	12,502	59,811	Passed (21%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	4,433	21,559	Passed (21%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	4,433	21,559	Passed (21%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	14,729	186,469	Passed (8%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	3'	Soil bearing pressure	1,500 psf
Footing length	3'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	7 1/2"	Bottom reinf. cover	3"
Column length	7 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(4) #4 Long, (4) #4 Short
Soil density	140 pcf	Bars the long way	(4) #4
Soil cohesion	0 psf	Bars the short way	(4) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	8x8 post	Override rebar	No
Post base	ABU88Z, p. 77	Include water level	No
Cap	ECCQ98SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	892.4	6,727	Linked from: Beam #1 , Support 4
2 - Point (lb)	--	N/A	381.3	1,523	Linked from: Beam #9 , Support 2

SpotFtg Bm #2-1

Spot Footing 3' 6" x 3' 6" x 10" deep -- Bot.(4) #4 Long, (4) #4 Short

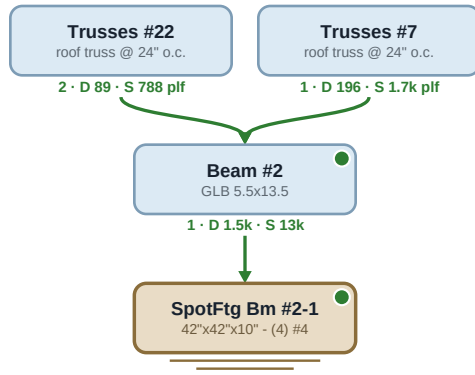
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

PASSED

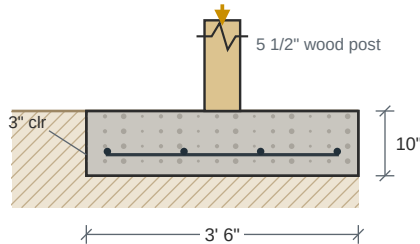
Controls: Depth Above Bars 89% used

Adequacy 15.4% (capacity to spare)

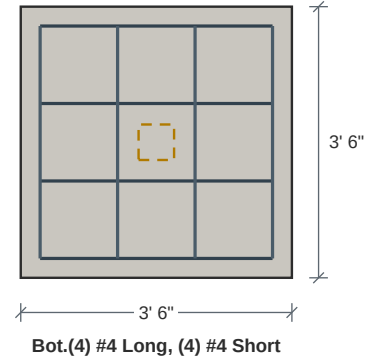
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 1,508 lb Snow 12,562 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,269	1,500	Passed (85%)	ASD	D+S
One-Way Shear X (lbs)	6,260	21,567	Passed (29%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	6,260	21,567	Passed (29%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	20,121	51,267	Passed (39%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	8,371	21,693	Passed (39%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	8,371	21,693	Passed (39%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	21,910	100,279	Passed (22%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	3' 6"	Soil bearing pressure	1,500 psf
Footing length	3' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(4) #4 Long, (4) #4 Short
Soil density	140 pcf	Bars the long way	(4) #4
Soil cohesion	0 psf	Bars the short way	(4) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post	Override rebar	No
Post base	CB66, p. 87	Include water level	No
Cap	ECCQ66SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	1,508	12,562	Linked from: Beam #2 , Support 1

SpotFtg Bm #2-2

Spot Footing 3' 6" x 3' 6" x 10" deep -- Bot.(4) #4 Long, (4) #4 Short

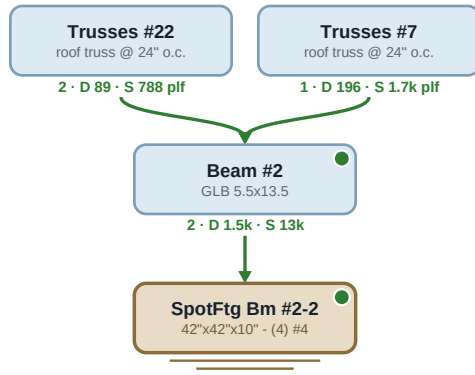
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

PASSED

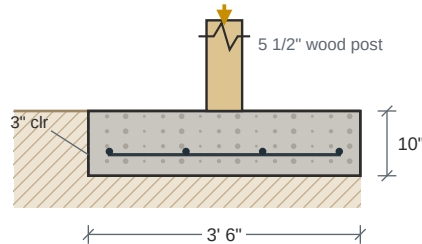
Controls: Depth Above Bars 89% used

Adequacy 15.4% (capacity to spare)

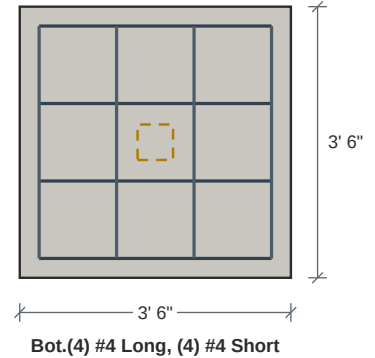
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 1,508 lb Snow 12,562 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,269	1,500	Passed (85%)	ASD	D+S
One-Way Shear X (lbs)	6,260	21,567	Passed (29%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	6,260	21,567	Passed (29%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	20,121	51,267	Passed (39%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	8,371	21,693	Passed (39%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	8,371	21,693	Passed (39%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	21,910	100,279	Passed (22%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	3' 6"	Soil bearing pressure	1,500 psf
Footing length	3' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(4) #4 Long, (4) #4 Short
Soil density	140 pcf	Bars the long way	(4) #4
Soil cohesion	0 psf	Bars the short way	(4) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post	Override rebar	No
Post base	CB66, p. 87	Include water level	No
Cap	ECCQ66SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	1,508	12,562	Linked from: Beam #2 , Support 2

SpotFtg Bm #3-1

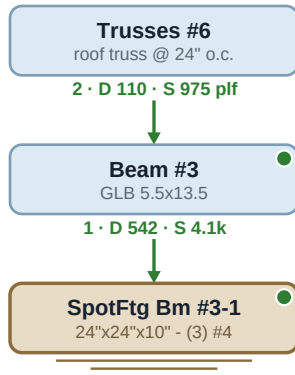
Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

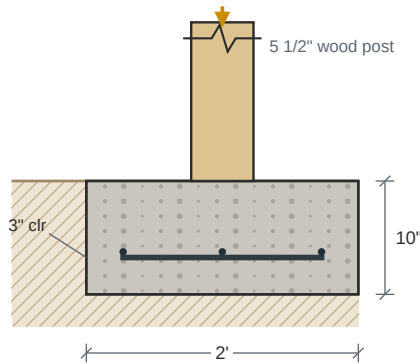
PASSED

Controls: Depth Above Bars 89% used
Adequacy 13.9% (capacity to spare)

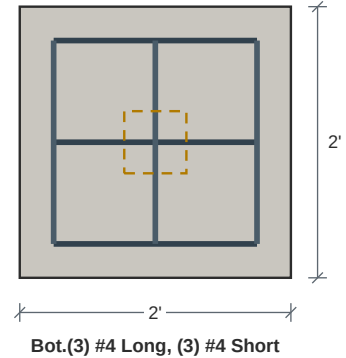
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 542 lb Snow 4,144 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,292	1,500	Passed (86%)	ASD	D+S
One-Way Shear X (lbs)	910	12,324	Passed (7%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	910	12,324	Passed (7%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	5,460	51,267	Passed (11%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	1,427	16,081	Passed (9%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	1,427	16,081	Passed (9%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	7,280	100,279	Passed (7%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	ECCQ66SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	541.5	4,144	Linked from: Beam #3 , Support 1

SpotFtg Bm #3-2

Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

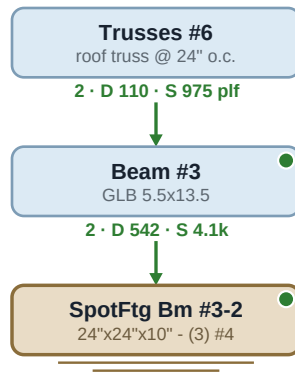
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

PASSED

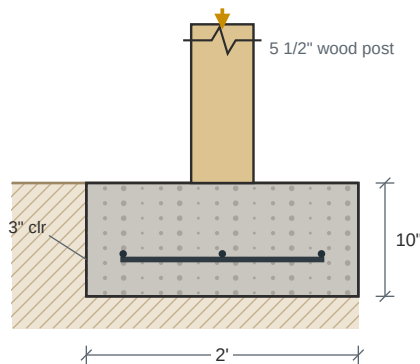
Controls: Depth Above Bars 89% used

Adequacy 13.9% (capacity to spare)

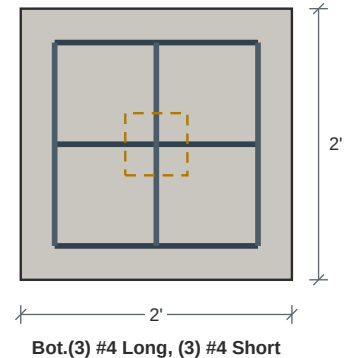
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 542 lb Snow 4,144 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,292	1,500	Passed (86%)	ASD	D+S
One-Way Shear X (lbs)	910	12,324	Passed (7%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	910	12,324	Passed (7%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	5,460	51,267	Passed (11%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	1,427	16,081	Passed (9%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	1,427	16,081	Passed (9%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	7,280	100,279	Passed (7%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	ECCQ66SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	541.5	4,144	Linked from: Beam #3 , Support 2

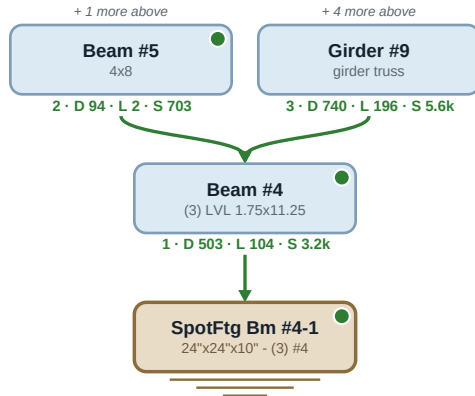
SpotFtg Bm #4-1

Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

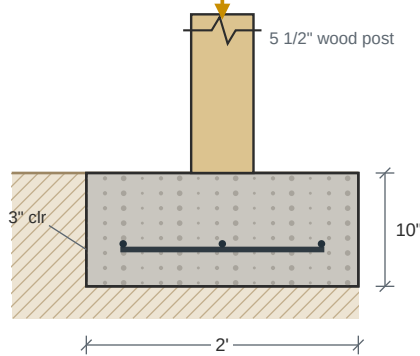
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

PASSEDControls: Depth Above Bars 89% used
Adequacy 30.7% (capacity to spare)

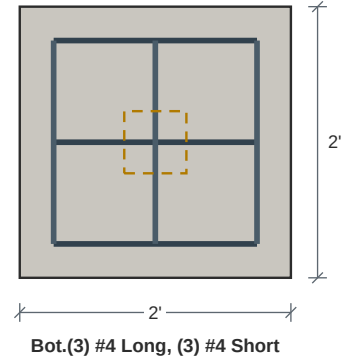
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 503 lb Floor Live 104 lb Snow 3,172 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,040	1,500	Passed (69%)	ASD	D+S
One-Way Shear X (lbs)	723	12,324	Passed (6%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	723	12,324	Passed (6%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	4,337	51,267	Passed (8%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	1,133	16,081	Passed (7%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	1,133	16,081	Passed (7%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	5,783	100,279	Passed (6%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry	Footing Properties
Shape: Square	Steel yield strength: 60,000 psi
Column type: Wood	Concrete strength: 3,000 psi
Footing width: 2'	Soil bearing pressure: 1,500 psf
Footing length: 2'	Concrete density: 145 pcf
Footing depth: 10"	Top reinf. cover: 3"
Column width: 5 1/2"	Bottom reinf. cover: 3"
Column length: 5 1/2"	Side reinf. cover: 3"
Pedestal height: 4"	Aggregate diameter: 3/4"
Pedestal width: 4"	
Pedestal length: 4"	

Soil Properties and Post	Reinforcement
Soil depth above footing: 0	Bottom mat: Bot.(3) #4 Long, (3) #4 Short
Soil density: 140 pcf	Bars the long way: (3) #4
Soil cohesion: 0 psf	Bars the short way: (3) #4
Friction angle: 30°	Selected for: moment and minimum steel
Water level: 20'	Plain concrete (no reinforcing): No
Post: 6x6 post	Override rebar: No
Post base: ABU66Z, p. 76	Include water level: No
Cap: ECCQ5-6SDS2.5, p. 99	Allow bearing pressure increase: No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

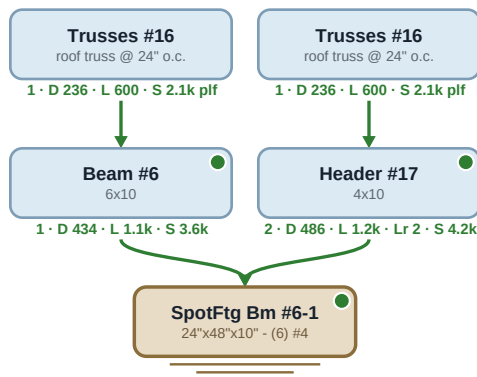
Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	503.2	104.1	3,172	Linked from: Beam #4 , Support 1

SpotFtg Bm #6-1

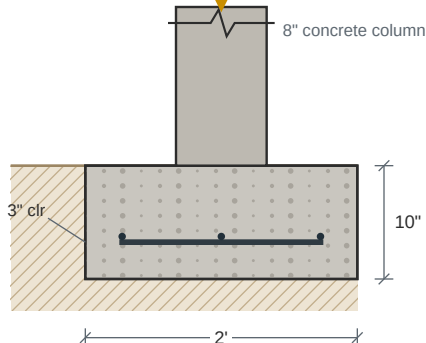
PASSED

Spot Footing 2' x 4' x 10" deep -- Bot.(6) #4 Long, (3) #4 Short - 4 of the Long in the center
2 ftControls: Depth Above Bars 89% used
Adequacy 19.2% (capacity to spare)Level: Basement | f'_c 3,000 psi | rebar F_y 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

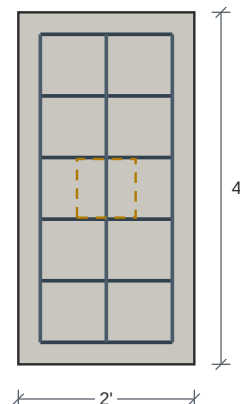
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Bot.(6) #4 Long, (3) #4 Short - 4 of the Long in the center 2 ft

Carrying: Dead 920 lb Floor Live 2,250 lb Snow 7,807 lb Roof Live 2 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,212	1,500	Passed (81%)	ASD	D+S
One-Way Shear X (lbs)	4,539	12,324	Passed (37%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	1,155	24,648	Passed (5%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	12,953	61,947	Passed (21%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	5,502	16,081	Passed (34%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	1,761	32,162	Passed (5%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	15,845	212,160	Passed (7%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	4'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(6) #4 Long, (3) #4 Short - 4 of the Long in
Soil density	140 pcf	Bars the long way	(6) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 A_g for Grade 60), at no more than 3h or 18 in.



SpotFtg Bm #6-1 (continued) Spot Footing | 2' x 4' x 10" deep -- Bot.(6) #4 Long, (3) #4 Short - 4 of the Long in the center 2 ft

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	486.3	1,198	2	4,161	Linked from: Header #17 , Support 2
2 - Point (lb)	--	N/A	434	1,052	--	3,646	Linked from: Beam #6 , Support 1

SpotFtg Bm #10-1

Spot Footing 1' 4" x 1' 4" x 10" deep -- Bot.(2) #4 Long, (2) #4 Short

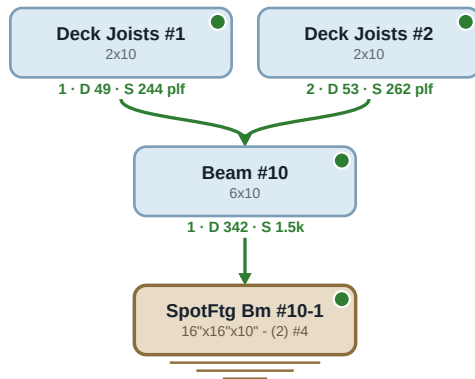
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSED

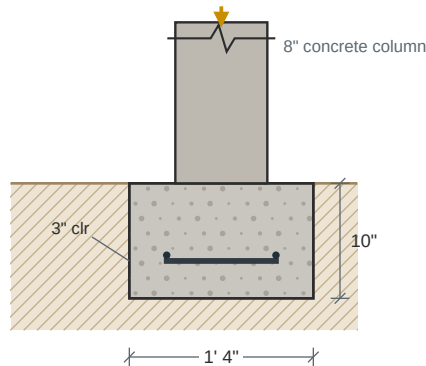
Controls: Depth Above Bars 89% used

Adequacy 22.2% (capacity to spare)

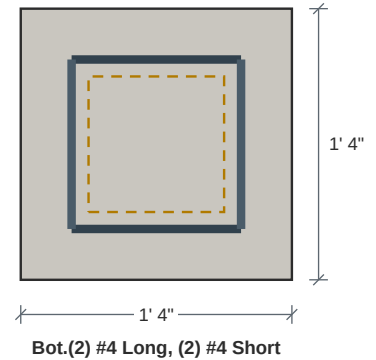
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 342 lb Snow 1,519 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,167	1,500	Passed (78%)	ASD	D+S
One-Way Shear X (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	508	61,947	Passed (1%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	118	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	118	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	2,840	212,160	Passed (1%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	1' 4"	Soil bearing pressure	1,500 psf
Footing length	1' 4"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(2) #4 Long, (2) #4 Short
Soil density	140 pcf	Bars the long way	(2) #4
Soil cohesion	0 psf	Bars the short way	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post (assumed)	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	ECCQ66SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	341.6	1,519	Linked from: Beam #10 , Support 1

SpotFtg Bm #10-2

Spot Footing 2' 6" x 2' 6" x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

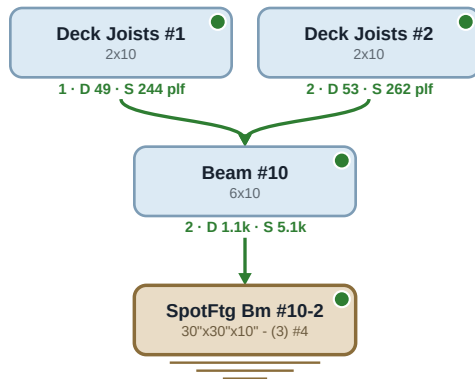
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSED

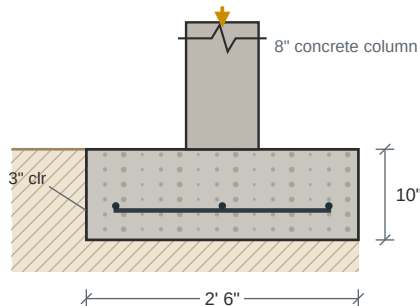
Controls: Depth Above Bars 89% used

Adequacy 25.8% (capacity to spare)

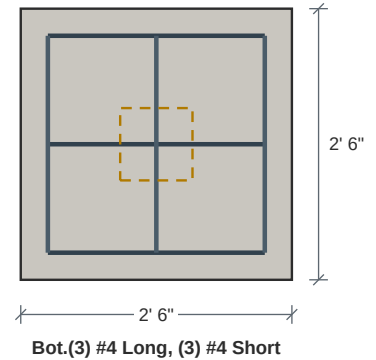
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 1,139 lb Snow 5,062 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,113	1,500	Passed (74%)	ASD	D+S
One-Way Shear X (lbs)	1,499	15,405	Passed (10%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	1,499	15,405	Passed (10%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	7,255	61,947	Passed (12%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	1,591	16,240	Passed (10%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	1,591	16,240	Passed (10%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	9,466	212,160	Passed (4%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	2' 6"	Soil bearing pressure	1,500 psf
Footing length	2' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post (assumed)	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	CCQ66SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	1,139	5,062	Linked from: Beam #10 , Support 2

SpotFtg Bm #10-3

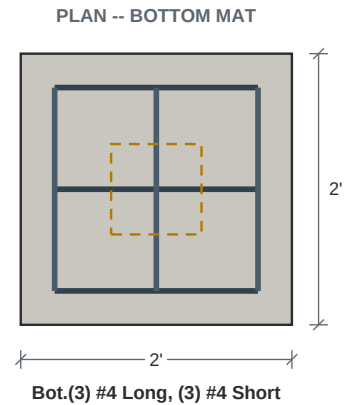
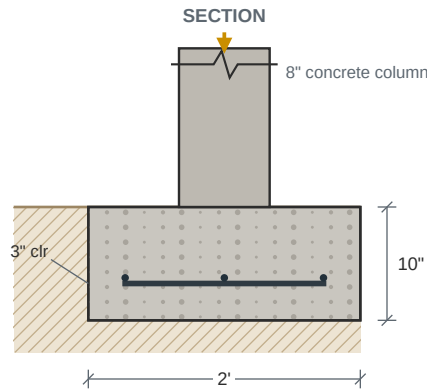
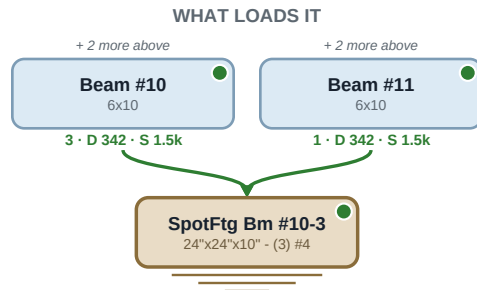
Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSED

Controls: Depth Above Bars 89% used

Adequacy 29.9% (capacity to spare)



Carrying: Dead 683 lb Snow 3,038 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,051	1,500	Passed (70%)	ASD	D+S
One-Way Shear X (lbs)	414	12,324	Passed (3%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	414	12,324	Passed (3%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	3,607	61,947	Passed (6%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	631	16,081	Passed (4%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	631	16,081	Passed (4%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	5,680	212,160	Passed (3%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification

 as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post (assumed)	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	CCQ66SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	341.6	1,519	Linked from: Beam #10 , Support 3
2 - Point (lb)	--	N/A	341.6	1,519	Linked from: Beam #11 , Support 1

SpotFtg Bm #11-2

Spot Footing 2' 6" x 2' 6" x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

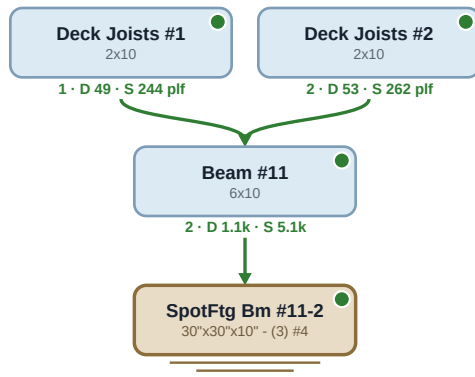
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSED

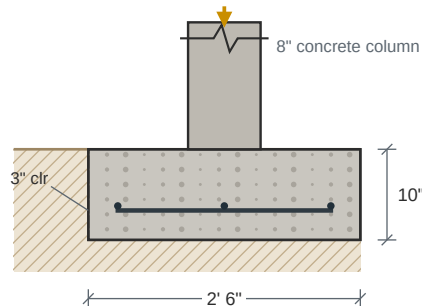
Controls: Depth Above Bars 89% used

Adequacy 25.8% (capacity to spare)

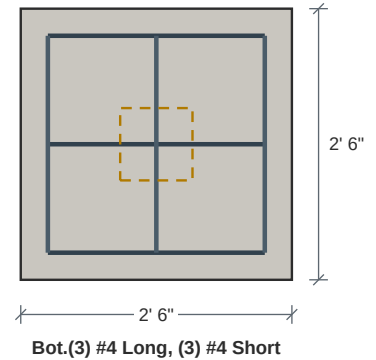
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 1,139 lb Snow 5,062 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,113	1,500	Passed (74%)	ASD	D+S
One-Way Shear X (lbs)	1,499	15,405	Passed (10%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	1,499	15,405	Passed (10%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	7,255	61,947	Passed (12%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	1,591	16,240	Passed (10%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	1,591	16,240	Passed (10%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	9,466	212,160	Passed (4%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	2' 6"	Soil bearing pressure	1,500 psf
Footing length	2' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post (assumed)	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	CCQ66SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	1,139	5,062	Linked from: Beam #11 , Support 2

SpotFtg Bm #11-3

Spot Footing 1' 4" x 1' 4" x 10" deep -- Bot.(2) #4 Long, (2) #4 Short

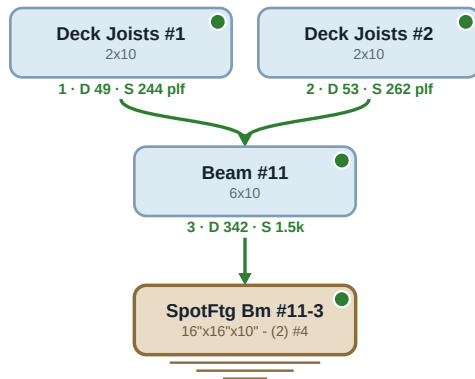
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSED

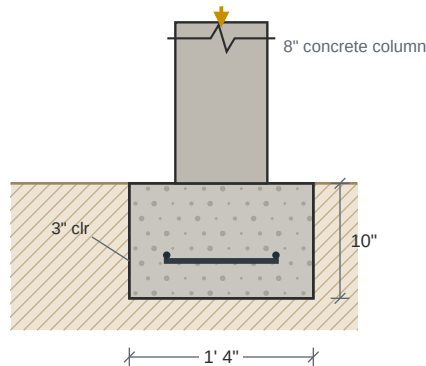
Controls: Depth Above Bars 89% used

Adequacy 22.2% (capacity to spare)

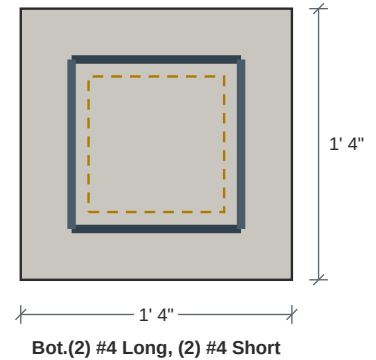
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 342 lb Snow 1,519 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,167	1,500	Passed (78%)	ASD	D+S
One-Way Shear X (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	508	61,947	Passed (1%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	118	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	118	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	2,840	212,160	Passed (1%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	1' 4"	Soil bearing pressure	1,500 psf
Footing length	1' 4"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(2) #4 Long, (2) #4 Short
Soil density	140 pcf	Bars the long way	(2) #4
Soil cohesion	0 psf	Bars the short way	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post (assumed)	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	ECCQ66SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	341.6	1,519	Linked from: Beam #11 , Support 3

SpotFtg Bm #12-1

Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

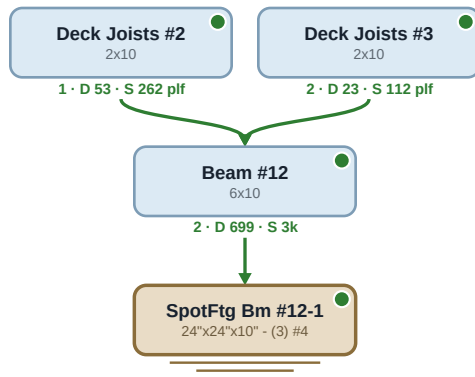
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSED

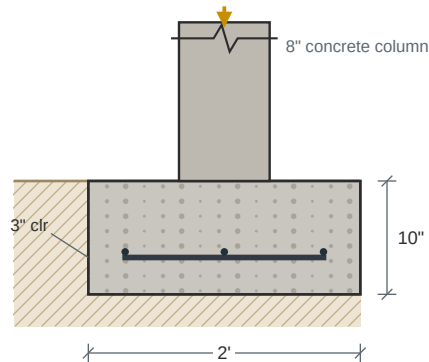
Controls: Depth Above Bars 89% used

Adequacy 30.3% (capacity to spare)

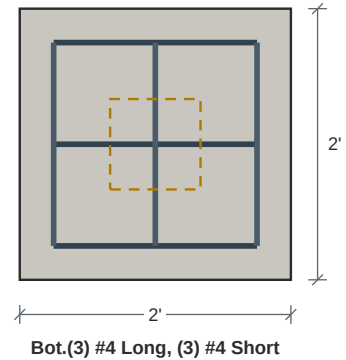
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 699 lb Snow 3,000 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,046	1,500	Passed (70%)	ASD	D+S
One-Way Shear X (lbs)	411	12,324	Passed (3%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	411	12,324	Passed (3%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	3,581	61,947	Passed (6%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	627	16,081	Passed (4%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	627	16,081	Passed (4%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	5,639	212,160	Passed (3%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post (assumed)	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	CCQ66SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	699.5	3,000	Linked from: Beam #12 , Support 2

SpotFtg Bm #12-2

Spot Footing 1' 4" x 1' 4" x 10" deep -- Bot.(2) #4 Long, (2) #4 Short

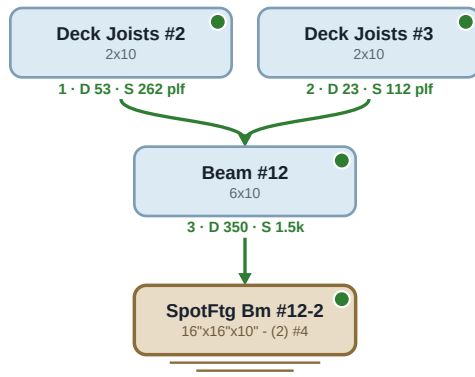
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSED

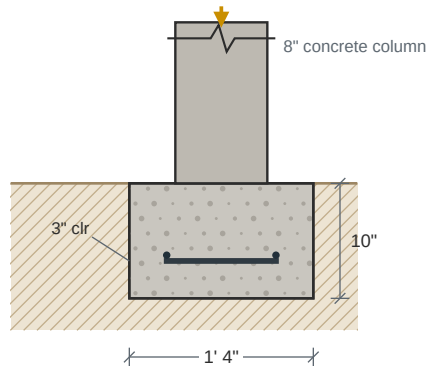
Controls: Depth Above Bars 89% used

Adequacy 22.6% (capacity to spare)

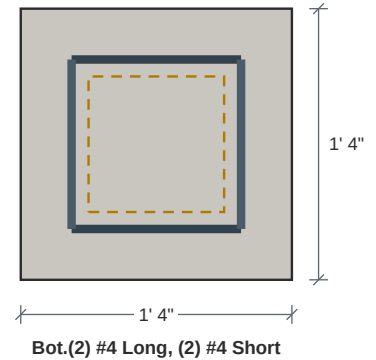
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 350 lb Snow 1,500 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,161	1,500	Passed (77%)	ASD	D+S
One-Way Shear X (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	504	61,947	Passed (1%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	117	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	117	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	2,820	212,160	Passed (1%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	1' 4"	Soil bearing pressure	1,500 psf
Footing length	1' 4"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(2) #4 Long, (2) #4 Short
Soil density	140 pcf	Bars the long way	(2) #4
Soil cohesion	0 psf	Bars the short way	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post (assumed)	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	ECCQ66SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	349.7	1,500	Linked from: Beam #12 , Support 3

SpotFtg Bm #13-1

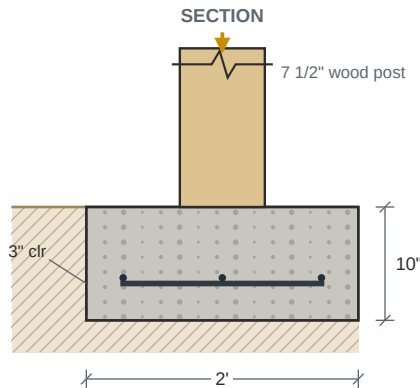
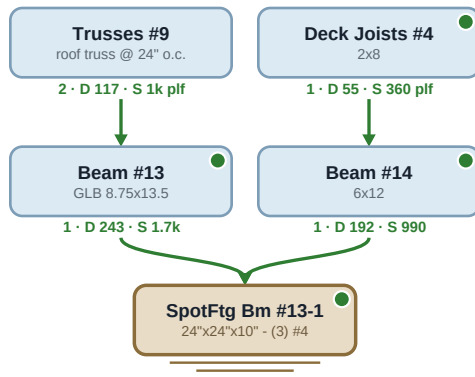
Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 7 1/2" x 7 1/2" | ACI 318-14

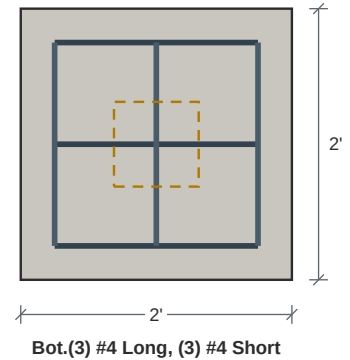
PASSED

Controls: Depth Above Bars 89% used
Adequacy 39.2% (capacity to spare)

WHAT LOADS IT



PLAN -- BOTTOM MAT



Carrying: Dead 434 lb Snow 2,731 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	912	1,500	Passed (61%)	ASD	D+S
One-Way Shear X (lbs)	408	12,324	Passed (3%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	408	12,324	Passed (3%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	3,227	59,811	Passed (5%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	870	16,081	Passed (5%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	870	16,081	Passed (5%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	4,891	186,469	Passed (3%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	7 1/2"	Bottom reinf. cover	3"
Column length	7 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	8x8 post	Override rebar	No
Post base	ABU88Z, p. 77	Include water level	No
Cap	ECCQ98SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	242.7	1,741	Linked from: Beam #13 , Support 1



SpotFtg Bm #13-1 (continued)

Spot Footing | 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
2 - Point (lb)	--	N/A	191.7	990	Linked from: Beam #14 , Support 1

SpotFtg Bm #13-2

PASSED

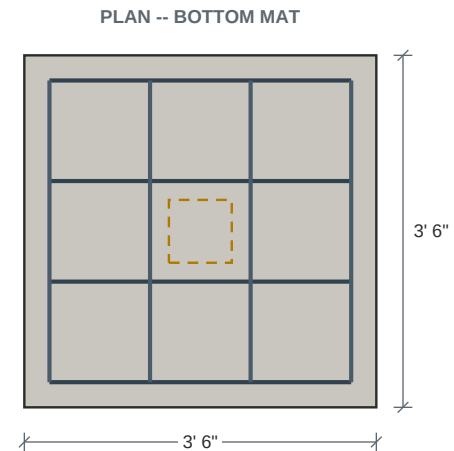
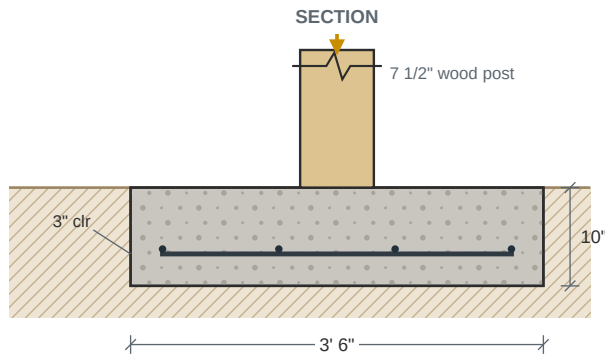
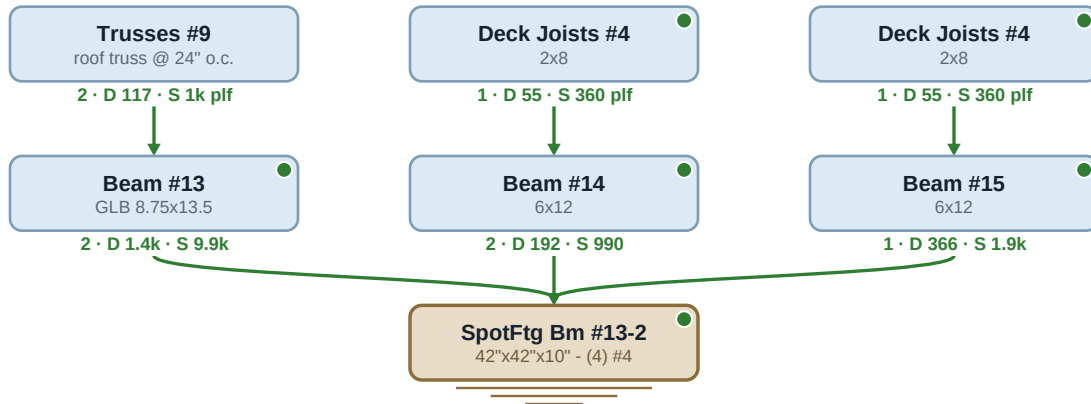
Spot Footing 3' 6" x 3' 6" x 10" deep -- Bot.(4) #4 Long, (4) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 7 1/2" x 7 1/2" | ACI 318-14

Controls: Depth Above Bars 89% used

Adequacy 11.9% (capacity to spare)

What Loads It [click a box to go to that member](#)



Bot.(4) #4 Long, (4) #4 Short

Carrying: Dead 1,936 lb Snow 12,767 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,321	1,500	Passed (88%)	ASD	D+S
One-Way Shear X (lbs)	5,958	21,567	Passed (28%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	5,958	21,567	Passed (28%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	20,222	59,811	Passed (34%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	8,255	21,693	Passed (38%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	8,255	21,693	Passed (38%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	22,750	186,469	Passed (12%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

SpotFtg Bm #13-2 (continued) Spot Footing | 3' 6" x 3' 6" x 10" deep -- Bot.(4) #4 Long, (4) #4 Short

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	3' 6"	Soil bearing pressure	1,500 psf
Footing length	3' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	7 1/2"	Bottom reinf. cover	3"
Column length	7 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(4) #4 Long, (4) #4 Short
Soil density	140 pcf	Bars the long way	(4) #4
Soil cohesion	0 psf	Bars the short way	(4) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	8x8 post	Override rebar	No
Post base	ABU88Z, p. 77	Include water level	No
Cap	CCQ98SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	1,378	9,887	Linked from: Beam #13 , Support 2
2 - Point (lb)	--	N/A	366	1,890	Linked from: Beam #15 , Support 1
3 - Point (lb)	--	N/A	191.7	990	Linked from: Beam #14 , Support 2

SpotFtg Bm #13-3

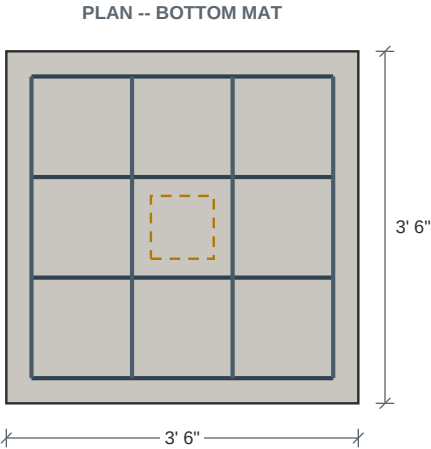
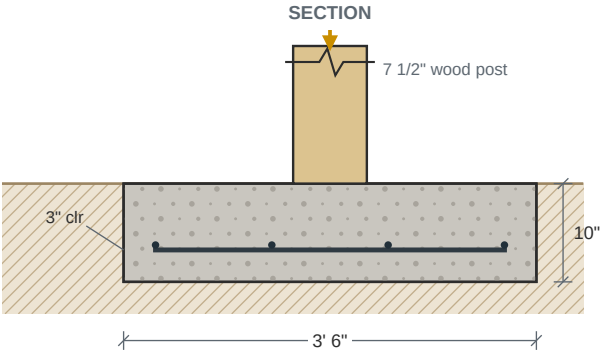
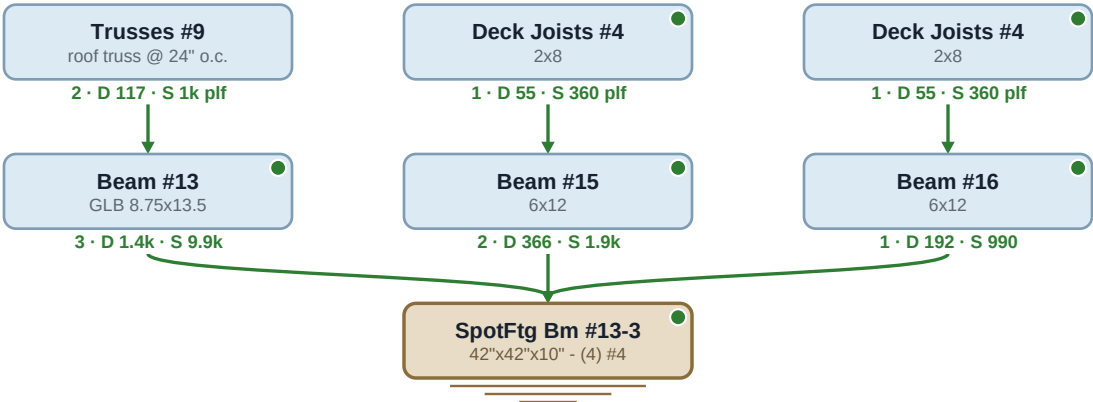
PASSED

Spot Footing 3' 6" x 3' 6" x 10" deep -- Bot.(4) #4 Long, (4) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 7 1/2" x 7 1/2" | ACI 318-14

Controls: Depth Above Bars 89% used
Adequacy 11.9% (capacity to spare)

What Loads It [click a box to go to that member](#)



Carrying: Dead 1,936 lb Snow 12,767 lb

Bot.(4) #4 Long, (4) #4 Short

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,321	1,500	Passed (88%)	ASD	D+S
One-Way Shear X (lbs)	5,958	21,567	Passed (28%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	5,958	21,567	Passed (28%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	20,222	59,811	Passed (34%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	8,255	21,693	Passed (38%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	8,255	21,693	Passed (38%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	22,750	186,469	Passed (12%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

SpotFtg Bm #13-3 (continued)

Spot Footing | 3' 6" x 3' 6" x 10" deep -- Bot.(4) #4 Long, (4) #4 Short

Footing Specification

as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	3' 6"	Soil bearing pressure	1,500 psf
Footing length	3' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	7 1/2"	Bottom reinf. cover	3"
Column length	7 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(4) #4 Long, (4) #4 Short
Soil density	140 pcf	Bars the long way	(4) #4
Soil cohesion	0 psf	Bars the short way	(4) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	8x8 post	Override rebar	No
Post base	ABU88Z, p. 77	Include water level	No
Cap	CCQ98SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	1,378	9,887	Linked from: Beam #13 , Support 3
2 - Point (lb)	--	N/A	366	1,890	Linked from: Beam #15 , Support 2
3 - Point (lb)	--	N/A	191.7	990	Linked from: Beam #16 , Support 1

SpotFtg Bm #13-4

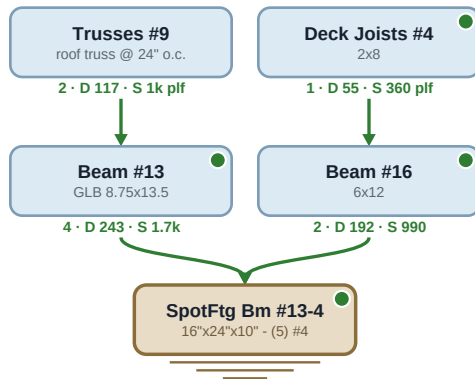
PASSED

Spot Footing 1' 4" x 2' x 10" deep -- Bot.(5) #4 Long, (2) #4 Short - 3 of the Long in the center 1.33 ft

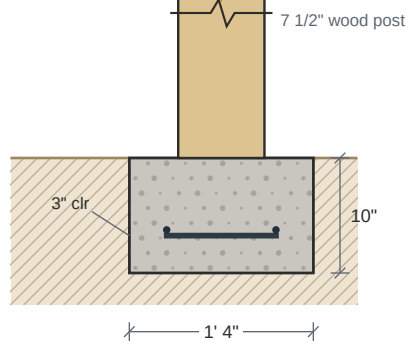
Controls: Depth Above Bars 89% used
Adequacy 12.8% (capacity to spare)

Level: Basement | f_c 3,000 psi | rebar F_y 60 ksi | soil 1,500 psf | Wood column 7 1/2" x 7 1/2" | ACI 318-14

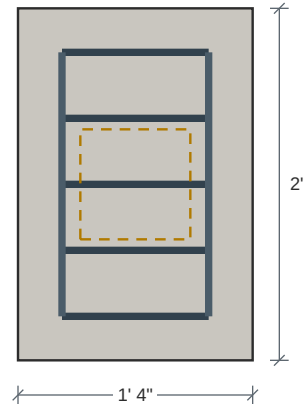
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 434 lb Snow 2,731 lb

Bot.(5) #4 Long, (2) #4 Short - 3 of the Long in the center 1.33 ft

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,308	1,500	Passed (87%)	ASD	D+S
One-Way Shear X (lbs)	408	8,216	Passed (5%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	0	12,324	Passed (0%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	2,394	59,811	Passed (4%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	870	10,721	Passed (8%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	478	25,919	Passed (2%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	4,891	186,469	Passed (3%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	1' 4"	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	7 1/2"	Bottom reinf. cover	3"
Column length	7 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(5) #4 Long, (2) #4 Short - 3 of the Long in
Soil density	140 pcf	Bars the long way	(5) #4
Soil cohesion	0 psf	Bars the short way	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	8x8 post	Override rebar	No
Post base	ABU88Z, p. 77	Include water level	No
Cap	ECCQ98SDS2.5, p. 99	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 A_g for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its F_c-perp can govern below the concrete value.



SpotFtg Bm #13-4 (continued)

Spot Footing | 1' 4" x 2' x 10" deep -- Bot.(5) #4 Long, (2) #4 Short - 3 of the Long in the center 1.33 ft

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	242.7	1,741	Linked from: Beam #13 , Support 4
2 - Point (lb)	--	N/A	191.7	990	Linked from: Beam #16 , Support 2

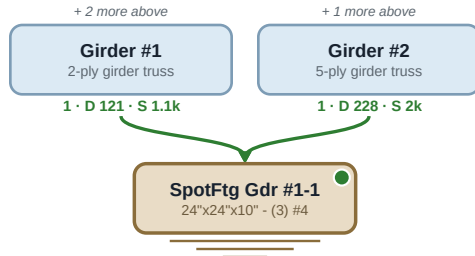
SpotFtg Gdr #1-1

Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

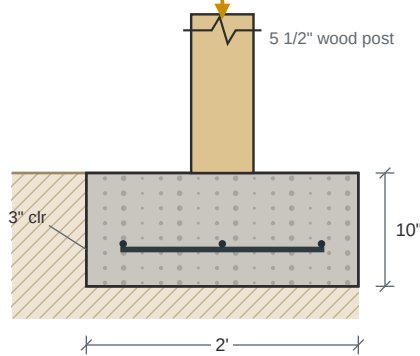
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

PASSEDControls: Depth Above Bars 89% used
Adequacy 34.8% (capacity to spare)

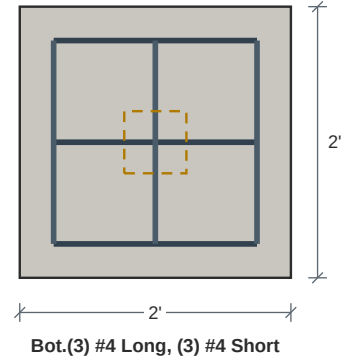
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 349 lb Snow 3,077 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	977	1,500	Passed (65%)	ASD	D+S
One-Way Shear X (lbs)	668	12,324	Passed (5%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	668	12,324	Passed (5%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	4,007	51,267	Passed (8%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	1,047	16,081	Passed (7%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	1,047	16,081	Passed (7%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	5,342	100,279	Passed (5%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification

 as entered on the footing, and the mat the check selected

Geometry	Footing Properties
Shape	Square
Column type	Wood
Footing width	2'
Footing length	2'
Footing depth	10"
Column width	5 1/2"
Column length	5 1/2"
Pedestal height	4"
Pedestal width	4"
Pedestal length	4"
Steel yield strength	60,000 psi
Concrete strength	3,000 psi
Soil bearing pressure	1,500 psf
Concrete density	145 pcf
Top reinf. cover	3"
Bottom reinf. cover	3"
Side reinf. cover	3"
Aggregate diameter	3/4"
Soil Properties and Post	Reinforcement
Soil depth above footing	0
Soil density	140 pcf
Soil cohesion	0 psf
Friction angle	30°
Water level	20'
Post	6x6 post
Post base	ABU66Z, p. 76
Cap	truss layout
Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Bars the long way	(3) #4
Bars the short way	(3) #4
Selected for	moment and minimum steel
Plain concrete (no reinforcing)	No
Override rebar	No
Include water level	No
Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	121.1	1,069	Linked from: Girder #1 , Support 1
2 - Point (lb)	--	N/A	227.7	2,009	Linked from: Girder #2 , Support 1

SpotFtg Gdr #1-2

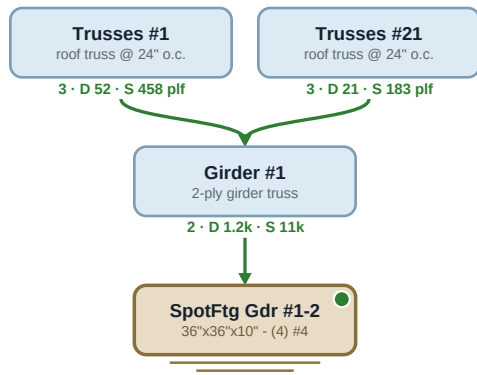
Spot Footing 3' x 3' x 10" deep -- Bot.(4) #4 Long, (4) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

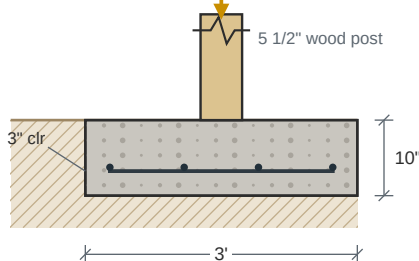
PASSED

Controls: Soil Bearing Pressure 95% used
Adequacy 4.9% (capacity to spare)

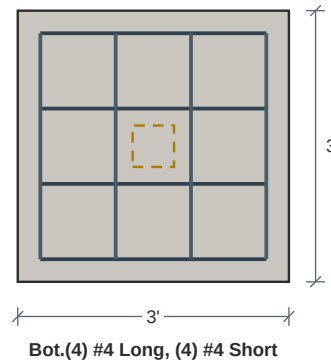
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 1,197 lb Snow 10,560 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,427	1,500	Passed (95%)	ASD	D+S
One-Way Shear X (lbs)	4,583	18,486	Passed (25%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	4,583	18,486	Passed (25%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	16,295	51,267	Passed (32%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	5,864	21,559	Passed (27%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	5,864	21,559	Passed (27%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	18,332	100,279	Passed (18%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	3'	Soil bearing pressure	1,500 psf
Footing length	3'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(4) #4 Long, (4) #4 Short
Soil density	140 pcf	Bars the long way	(4) #4
Soil cohesion	0 psf	Bars the short way	(4) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	truss layout	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	1,197	10,560	Linked from: Girder #1 , Support 2

SpotFtg Gdr #1-3

Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

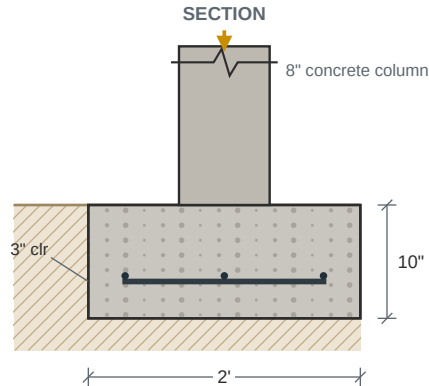
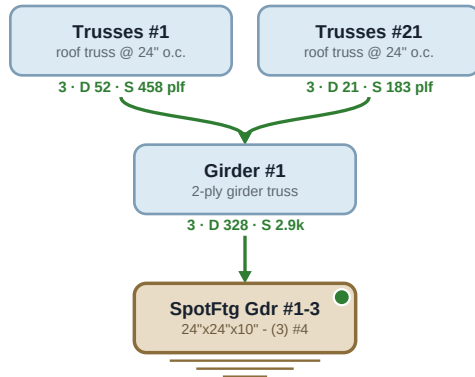
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSED

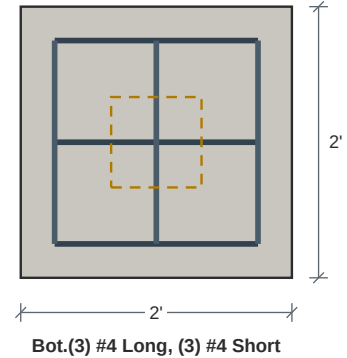
Controls: Depth Above Bars 89% used

Adequacy 38.2% (capacity to spare)

WHAT LOADS IT



PLAN -- BOTTOM MAT



Carrying: Dead 328 lb Snow 2,897 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	927	1,500	Passed (62%)	ASD	D+S
One-Way Shear X (lbs)	367	12,324	Passed (3%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	367	12,324	Passed (3%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	3,193	61,947	Passed (5%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	559	16,081	Passed (3%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	559	16,081	Passed (3%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	5,029	212,160	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post (assumed)	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	truss layout	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	328.3	2,897	Linked from: Girder #1 , Support 3

SpotFtg Gdr #2-1

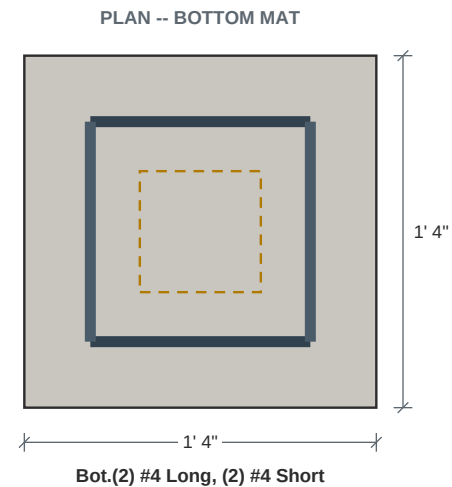
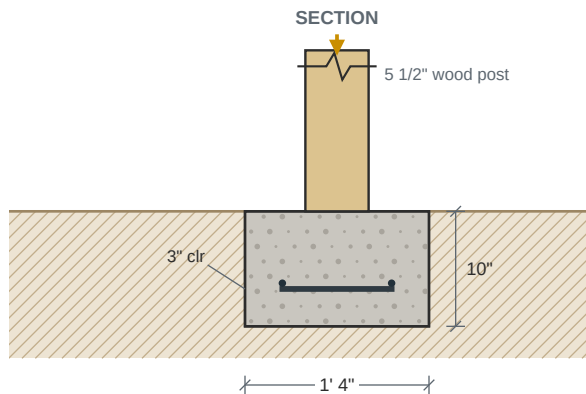
Spot Footing 1' 4" x 1' 4" x 10" deep -- Bot.(2) #4 Long, (2) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

PASSED

Controls: Depth Above Bars 89% used

Adequacy 91.9% (capacity to spare)



Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	121	1,500	Passed (8%)	ASD	D
One-Way Shear X (lbs)	0	8,216	Passed (0%)	LRFD	1.4D
One-Way Shear Y (lbs)	0	8,216	Passed (0%)	LRFD	1.4D
Two-Way Shear (lbs)	0	51,267	Passed (0%)	LRFD	1.4D
Moment X (ft-lbs)	0	10,721	Passed (0%)	LRFD	1.4D
Moment Y (ft-lbs)	0	10,721	Passed (0%)	LRFD	1.4D
Crushing (lbs)	0	100,279	Passed (0%)	LRFD	1.4D
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	1' 4"	Soil bearing pressure	1,500 psf
Footing length	1' 4"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(2) #4 Long, (2) #4 Short
Soil density	140 pcf	Bars the long way	(2) #4
Soil cohesion	0 psf	Bars the short way	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

SpotFtg Gdr #2-2

Spot Footing 1' 4" x 1' 4" x 10" deep -- Bot.(2) #4 Long, (2) #4 Short

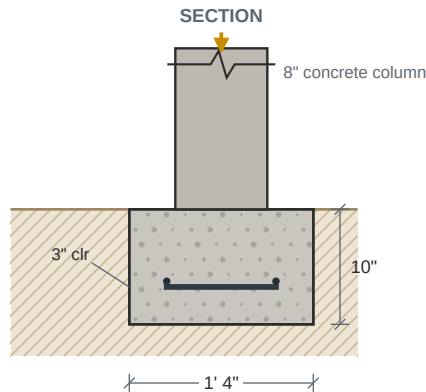
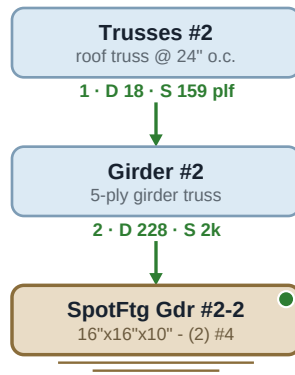
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSED

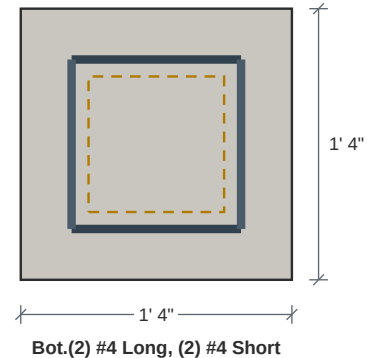
Controls: Soil Bearing Pressure 92% used

Adequacy 8.1% (capacity to spare)

WHAT LOADS IT



PLAN -- BOTTOM MAT



Carrying: Dead 228 lb Snow 2,009 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,379	1,500	Passed (92%)	ASD	D+S
One-Way Shear X (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	623	61,947	Passed (1%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	145	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	145	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	3,487	212,160	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	1' 4"	Soil bearing pressure	1,500 psf
Footing length	1' 4"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(2) #4 Long, (2) #4 Short
Soil density	140 pcf	Bars the long way	(2) #4
Soil cohesion	0 psf	Bars the short way	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post (assumed)	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	truss layout	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	227.7	2,009	Linked from: Girder #2 , Support 2

SpotFtg Gdr #3-1

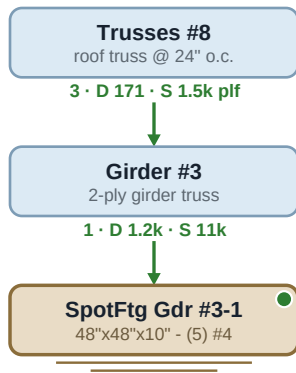
Spot Footing 4' x 4' x 10" deep -- Bot.(5) #4 Long, (5) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

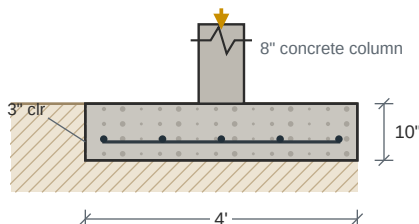
PASSED

Controls: Depth Above Bars 89% used
Adequacy 41.9% (capacity to spare)

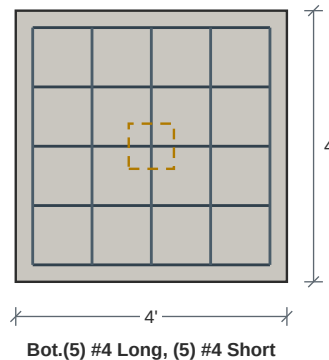
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 1,222 lb Snow 10,779 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	871	1,500	Passed (58%)	ASD	D+S
One-Way Shear X (lbs)	5,360	24,648	Passed (22%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	5,360	24,648	Passed (22%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	17,005	61,947	Passed (27%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	6,497	27,022	Passed (24%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	6,497	27,022	Passed (24%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	18,713	212,160	Passed (9%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	4'	Soil bearing pressure	1,500 psf
Footing length	4'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(5) #4 Long, (5) #4 Short
Soil density	140 pcf	Bars the long way	(5) #4
Soil cohesion	0 psf	Bars the short way	(5) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post (assumed)	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	truss layout	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	1,222	10,779	Linked from: Girder #3 , Support 1

SpotFtg Gdr #4-1

Spot Footing 1' 4" x 1' 4" x 10" deep -- Bot.(2) #4 Long, (2) #4 Short

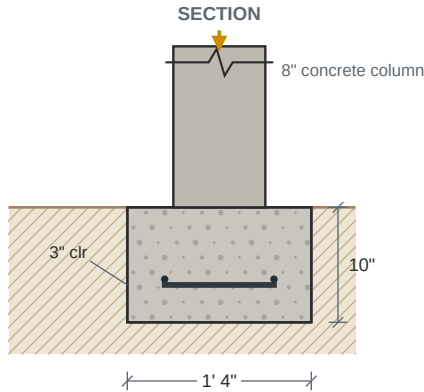
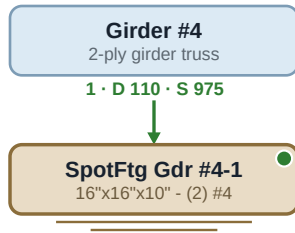
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSED

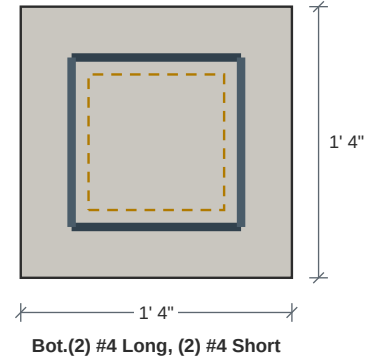
Controls: Depth Above Bars 89% used

Adequacy 51.2% (capacity to spare)

WHAT LOADS IT



PLAN -- BOTTOM MAT



Carrying: Dead 110 lb Snow 975 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	731	1,500	Passed (49%)	ASD	D+S
One-Way Shear X (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	302	61,947	Passed (0%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	71	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	71	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	1,693	212,160	Passed (1%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry	Footing Properties
Shape: Square	Steel yield strength: 60,000 psi
Column type: Concrete	Concrete strength: 3,000 psi
Footing width: 1' 4"	Soil bearing pressure: 1,500 psf
Footing length: 1' 4"	Concrete density: 145 pcf
Footing depth: 10"	Top reinf. cover: 3"
Column width: 8"	Bottom reinf. cover: 3"
Column length: 8"	Side reinf. cover: 3"
Pedestal height: 4"	Aggregate diameter: 3/4"
Pedestal width: 4"	
Pedestal length: 4"	

Soil Properties and Post	Reinforcement
Soil depth above footing: 0	Bottom mat: Bot.(2) #4 Long, (2) #4 Short
Soil density: 140 pcf	Bars the long way: (2) #4
Soil cohesion: 0 psf	Bars the short way: (2) #4
Friction angle: 30°	Selected for: moment and minimum steel
Water level: 20'	Plain concrete (no reinforcing): No
Post: 6x6 post (assumed)	Override rebar: No
Post base: ABU66Z, p. 76	Include water level: No
Cap: truss layout	Allow bearing pressure increase: No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	110.5	975	Linked from: Girder #4 , Support 1

SpotFtg Gdr #4-2

Spot Footing 2' 6" x 2' 6" x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

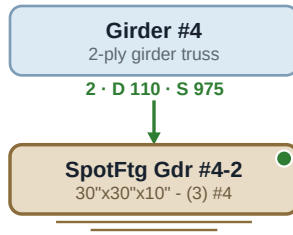
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

PASSED

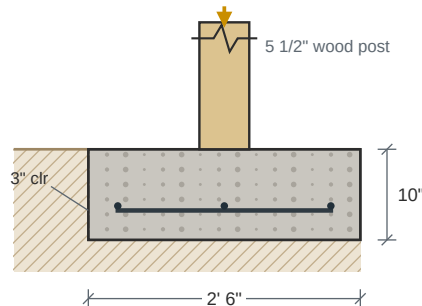
Controls: Depth Above Bars 89% used

Adequacy 80.4% (capacity to spare)

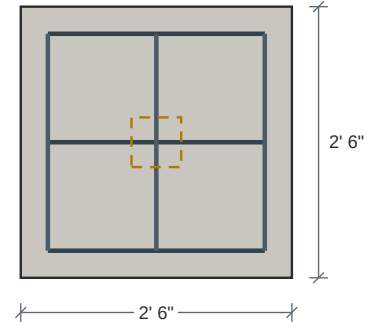
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Bot.(3) #4 Long, (3) #4 Short

Carrying: Dead 110 lb Snow 975 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	295	1,500	Passed (20%)	ASD	D+S
One-Way Shear X (lbs)	339	15,405	Passed (2%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	339	15,405	Passed (2%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	1,422	51,267	Passed (3%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	436	16,240	Passed (3%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	436	16,240	Passed (3%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	1,693	100,279	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	2' 6"	Soil bearing pressure	1,500 psf
Footing length	2' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	truss layout	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	110.5	975	Linked from: Girder #4 , Support 2

SpotFtg Gdr #5-1

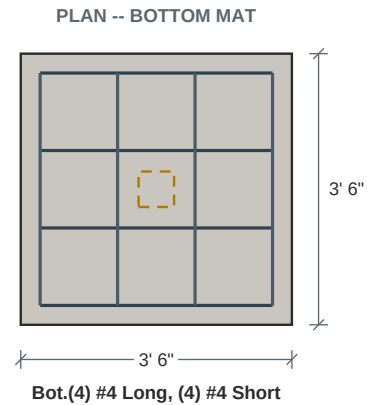
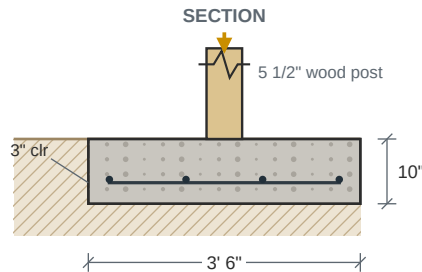
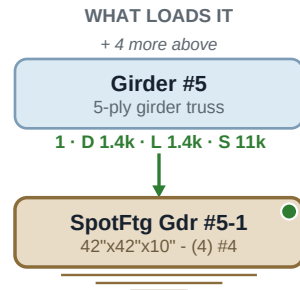
Spot Footing 3' 6" x 3' 6" x 10" deep -- Bot.(4) #4 Long, (4) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

PASSED

Controls: Depth Above Bars 89% used

Adequacy 24.4% (capacity to spare)



Carrying: Dead 1,414 lb Floor Live 1,367 lb Snow 10,996 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,134	1,500	Passed (76%)	ASD	D+S
One-Way Shear X (lbs)	5,902	21,567	Passed (27%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	5,902	21,567	Passed (27%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	18,971	51,267	Passed (37%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	7,893	21,693	Passed (36%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	7,893	21,693	Passed (36%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	20,657	100,279	Passed (21%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification

 as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	3' 6"	Soil bearing pressure	1,500 psf
Footing length	3' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(4) #4 Long, (4) #4 Short
Soil density	140 pcf	Bars the long way	(4) #4
Soil cohesion	0 psf	Bars the short way	(4) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	truss layout	Allow bearing pressure increase	No

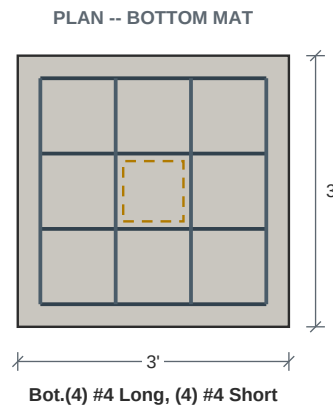
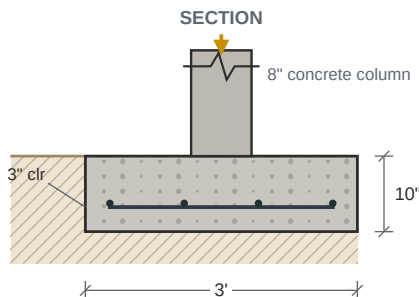
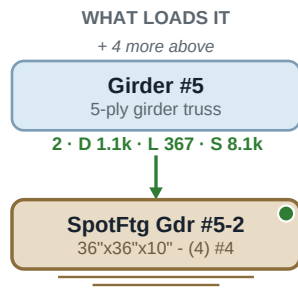
- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	1,414	1,367	10,996	Linked from: Girder #5 , Support 1

SpotFtg Gdr #5-2

Spot Footing 3' x 3' x 10" deep -- Bot.(4) #4 Long, (4) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSEDControls: Depth Above Bars 89% used
Adequacy 24.2% (capacity to spare)

Carrying: Dead 1,089 lb Floor Live 367 lb Snow 8,053 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,137	1,500	Passed (76%)	ASD	D+S
One-Way Shear X (lbs)	3,134	18,486	Passed (17%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	3,134	18,486	Passed (17%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	12,196	61,947	Passed (20%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	3,303	21,559	Passed (15%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	3,303	21,559	Passed (15%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	14,558	212,160	Passed (7%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry	Footing Properties
Shape Column type Footing width Footing length Footing depth Column width Column length Pedestal height Pedestal width Pedestal length	Square Concrete 3' 3' 10" 8" 8" 4" 4" 4"
Steel yield strength Concrete strength Soil bearing pressure Concrete density Top reinf. cover Bottom reinf. cover Side reinf. cover Aggregate diameter	60,000 psi 3,000 psi 1,500 psf 145 pcf 3" 3" 3" 3/4"
Soil Properties and Post	Reinforcement
Soil depth above footing Soil density Soil cohesion Friction angle Water level Post Post base Cap	0 140 pcf 0 psf 30° 20' 6x6 post (assumed) ABU66Z, p. 76 truss layout
Bottom mat Bars the long way Bars the short way Selected for Plain concrete (no reinforcing) Override rebar Include water level Allow bearing pressure increase	Bot.(4) #4 Long, (4) #4 Short (4) #4 (4) #4 moment and minimum steel No No No No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	1,089	366.8	8,053	Linked from: Girder #5 , Support 2

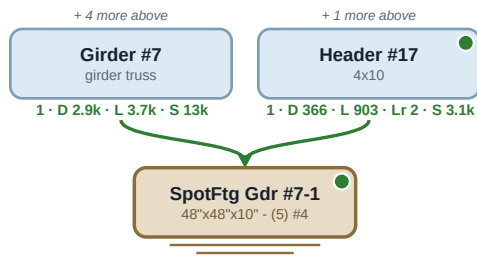
SpotFtg Gdr #7-1

Spot Footing 4' x 4' x 10" deep -- Bot.(5) #4 Long, (5) #4 Short

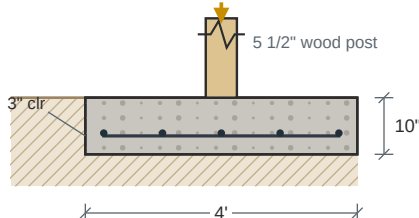
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 7 1/2" | ACI 318-14

PASSEDControls: Soil Bearing Pressure 90% used
Adequacy 10.3% (capacity to spare)

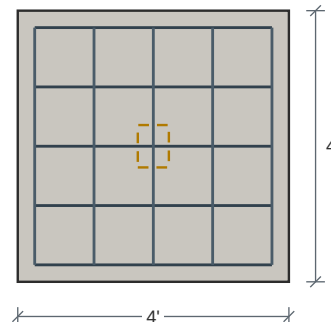
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Bot.(5) #4 Long, (5) #4 Short

Carrying: Dead 3,240 lb Floor Live 4,600 lb Snow 16,346 lb Roof Live 2 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,345	1,500	Passed (90%)	ASD	D+S
One-Way Shear X (lbs)	10,104	24,648	Passed (41%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	10,826	24,648	Passed (44%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	32,116	55,539	Passed (58%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	14,720	27,022	Passed (54%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	15,393	27,022	Passed (57%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	34,642	136,744	Passed (25%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry	Footing Properties
Shape: Square	Steel yield strength: 60,000 psi
Column type: Wood	Concrete strength: 3,000 psi
Footing width: 4'	Soil bearing pressure: 1,500 psf
Footing length: 4'	Concrete density: 145 pcf
Footing depth: 10"	Top reinf. cover: 3"
Column width: 5 1/2"	Bottom reinf. cover: 3"
Column length: 7 1/2"	Side reinf. cover: 3"
Pedestal height: 4"	Aggregate diameter: 3/4"
Pedestal width: 4"	
Pedestal length: 4"	

Soil Properties and Post	Reinforcement
Soil depth above footing: 0	Bottom mat: Bot.(5) #4 Long, (5) #4 Short
Soil density: 140 pcf	Bars the long way: (5) #4
Soil cohesion: 0 psf	Bars the short way: (5) #4
Friction angle: 30°	Selected for: moment and minimum steel
Water level: 20'	Plain concrete (no reinforcing): No
Post: 6x8 post	Override rebar: No
Post base: CB6-7, p. 87	Include water level: No
Cap: truss layout	Allow bearing pressure increase: No

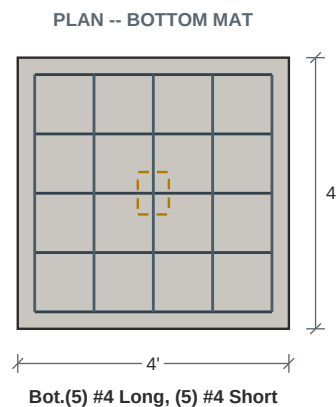
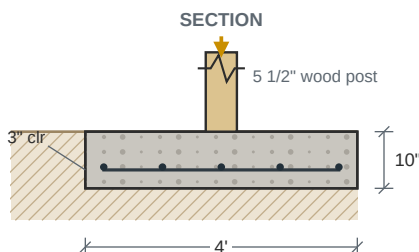
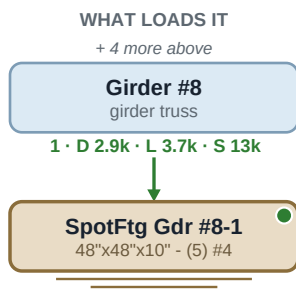
- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	2,873	3,697	--	13,210	Linked from: Girder #7 , Support 1
2 - Point (lb)	--	N/A	366.5	903.1	1.9	3,136	Linked from: Header #17 , Support 1

SpotFtg Gdr #8-1

Spot Footing 4' x 4' x 10" deep -- Bot.(5) #4 Long, (5) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 7 1/2" | ACI 318-14

PASSEDControls: Depth Above Bars 89% used
Adequacy 24.9% (capacity to spare)

Carrying: Dead 2,873 lb Floor Live 3,697 lb Snow 13,210 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,126	1,500	Passed (75%)	ASD	D+S
One-Way Shear X (lbs)	8,249	24,648	Passed (33%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	8,838	24,648	Passed (36%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	26,219	55,539	Passed (47%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	12,017	27,022	Passed (44%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	12,567	27,022	Passed (47%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	28,281	136,744	Passed (21%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification

 as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	4'	Soil bearing pressure	1,500 psf
Footing length	4'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	7 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(5) #4 Long, (5) #4 Short
Soil density	140 pcf	Bars the long way	(5) #4
Soil cohesion	0 psf	Bars the short way	(5) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x8 post	Override rebar	No
Post base	CB6-7, p. 87	Include water level	No
Cap	truss layout	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	2,873	3,697	13,210	Linked from: Girder #8 , Support 1

SpotFtg Gdr #9-2

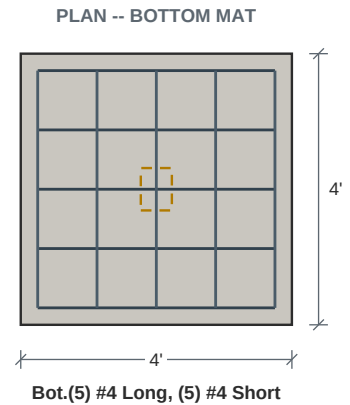
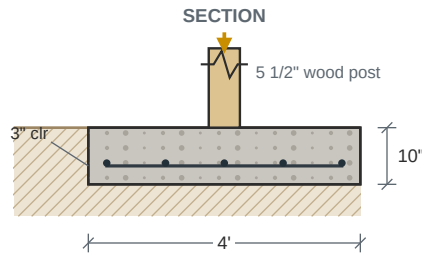
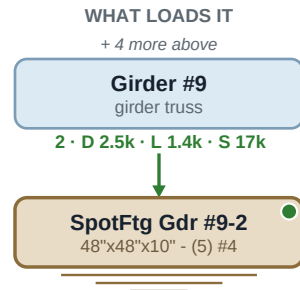
Spot Footing 4' x 4' x 10" deep -- Bot.(5) #4 Long, (5) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 7 1/2" | ACI 318-14

PASSED

Controls: Depth Above Bars 89% used

Adequacy 11.4% (capacity to spare)



Carrying: Dead 2,463 lb Floor Live 1,383 lb Snow 16,871 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,329	1,500	Passed (89%)	ASD	D+S
One-Way Shear X (lbs)	9,138	24,648	Passed (37%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	9,791	24,648	Passed (40%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	29,047	55,539	Passed (52%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	13,314	27,022	Passed (49%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	13,922	27,022	Passed (52%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	31,332	136,744	Passed (23%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	4'	Soil bearing pressure	1,500 psf
Footing length	4'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	7 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(5) #4 Long, (5) #4 Short
Soil density	140 pcf	Bars the long way	(5) #4
Soil cohesion	0 psf	Bars the short way	(5) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x8 post	Override rebar	No
Post base	CB6-7, p. 87	Include water level	No
Cap	truss layout	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	2,463	1,383	16,871	Linked from: Girder #9 , Support 2

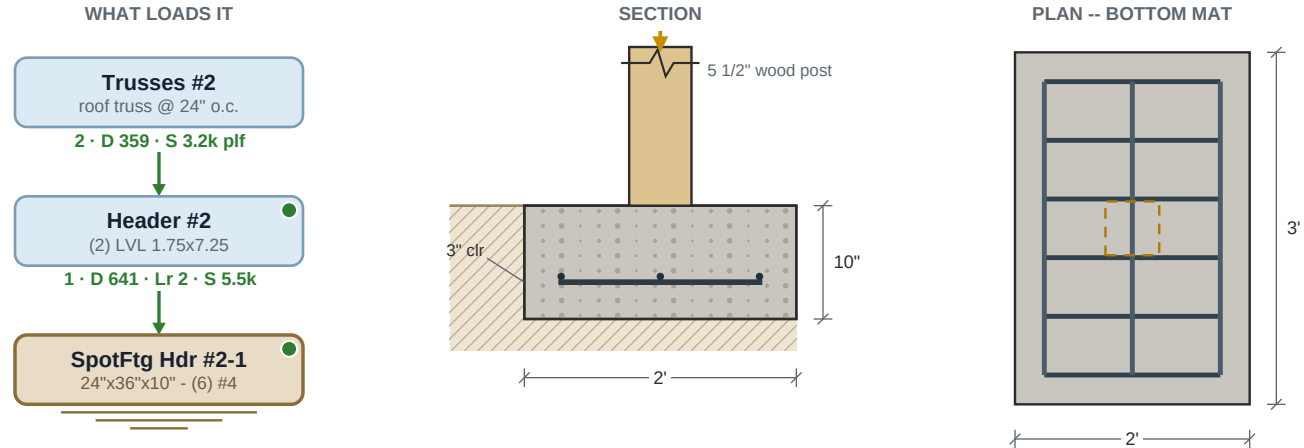
SpotFtg Hdr #2-1

PASSED

Spot Footing 2' x 3' x 10" deep -- Bot.(6) #4 Long, (3) #4 Short - 4 of the Long in the center 2 ft

Controls: Depth Above Bars 89% used
Adequacy 23.2% (capacity to spare)

Level: Basement | f'_c 3,000 psi | rebar F_y 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14



Carrying: Dead 641 lb Snow 5,542 lb Roof Live 2 lb

Bot.(6) #4 Long, (3) #4 Short - 4 of the Long in the center 2 ft

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,151	1,500	Passed (77%)	ASD	D+S
One-Way Shear X (lbs)	2,409	12,324	Passed (20%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	1,205	18,486	Passed (7%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	8,030	51,267	Passed (16%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	3,083	16,081	Passed (19%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	1,889	31,632	Passed (6%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	9,636	100,279	Passed (10%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	3'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(6) #4 Long, (3) #4 Short - 4 of the Long in
Soil density	140 pcf	Bars the long way	(6) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 A_g for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its F_c -perp can govern below the concrete value.



SpotFtg Hdr #2-1 (continued)

Spot Footing | 2' x 3' x 10" deep -- Bot.(6) #4 Long, (3) #4 Short - 4 of the Long in the center 2 ft

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	641	1.6	5,542	Linked from: Header #2 , Support 1

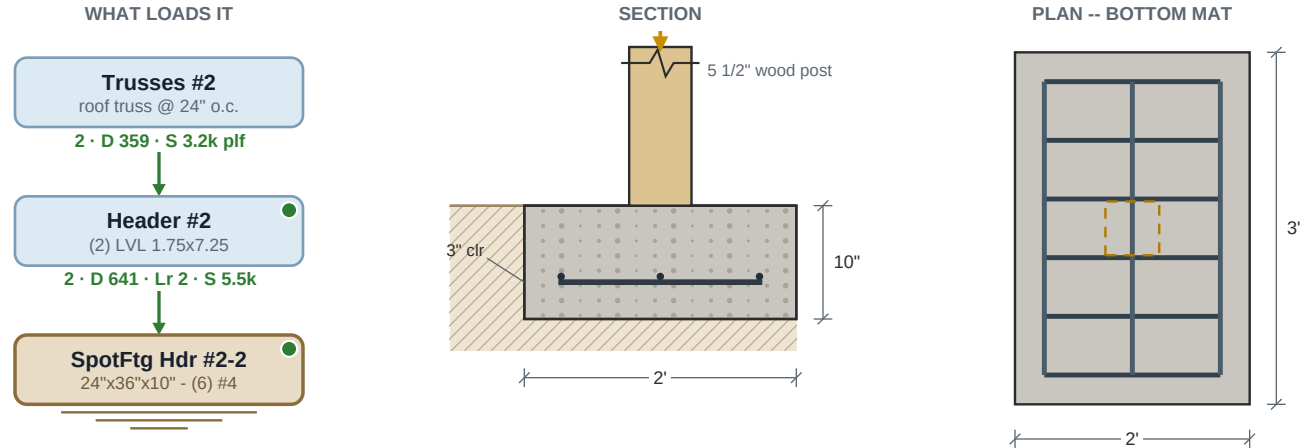
SpotFtg Hdr #2-2

PASSED

Spot Footing 2' x 3' x 10" deep -- Bot.(6) #4 Long, (3) #4 Short - 4 of the Long in the center
2 ft

Controls: Depth Above Bars 89% used
Adequacy 23.2% (capacity to spare)

Level: Basement | f'_c 3,000 psi | rebar F_y 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14



Carrying: Dead 641 lb Roof Live 2 lb Snow 5,542 lb **Bot.(6) #4 Long, (3) #4 Short - 4 of the Long in the center 2 ft**

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,151	1,500	Passed (77%)	ASD	D+S
One-Way Shear X (lbs)	2,409	12,324	Passed (20%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	1,205	18,486	Passed (7%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	8,030	51,267	Passed (16%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	3,083	16,081	Passed (19%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	1,889	31,632	Passed (6%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	9,636	100,279	Passed (10%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	3'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(6) #4 Long, (3) #4 Short - 4 of the Long in
Soil density	140 pcf	Bars the long way	(6) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 A_g for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its F_c -perp can govern below the concrete value.



SpotFtg Hdr #2-2 (continued) Spot Footing | 2' x 3' x 10" deep -- Bot.(6) #4 Long, (3) #4 Short - 4 of the Long in the center 2 ft

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	641	1.5	5,542	Linked from: Header #2 , Support 2

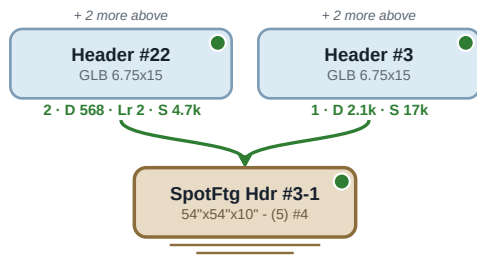
SpotFtg Hdr #3-1

Spot Footing 4' 6" x 4' 6" x 10" deep -- Bot.(5) #4 Long, (5) #4 Short

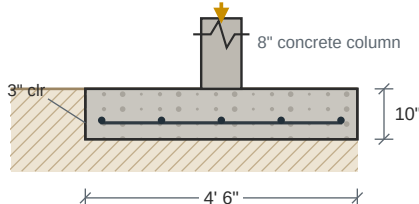
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSEDControls: Soil Bearing Pressure 89% used
Adequacy 10.8% (capacity to spare)

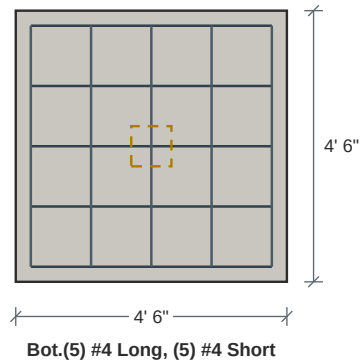
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 2,680 lb Snow 21,972 lb Roof Live 2 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,338	1,500	Passed (89%)	ASD	D+S
One-Way Shear X (lbs)	11,902	27,728	Passed (43%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	11,902	27,728	Passed (43%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	35,605	61,947	Passed (57%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	15,662	27,145	Passed (58%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	15,662	27,145	Passed (58%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	38,371	212,160	Passed (18%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification

 as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	4' 6"	Soil bearing pressure	1,500 psf
Footing length	4' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(5) #4 Long, (5) #4 Short
Soil density	140 pcf	Bars the long way	(5) #4
Soil cohesion	0 psf	Bars the short way	(5) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	2,112	--	17,316	Linked from: Header #3 , Support 1
2 - Point (lb)	--	N/A	568.1	1.7	4,656	Linked from: Header #22 , Support 2

SpotFtg Hdr #3-2

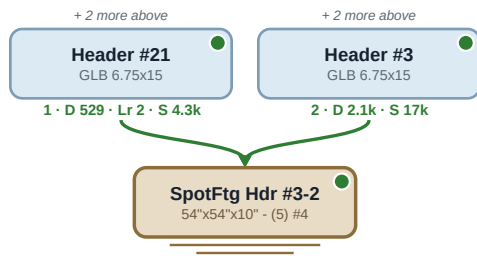
Spot Footing 4' 6" x 4' 6" x 10" deep -- Bot.(5) #4 Long, (5) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

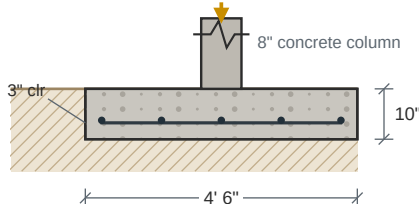
PASSED

Controls: Depth Above Bars 89% used
Adequacy 11.9% (capacity to spare)

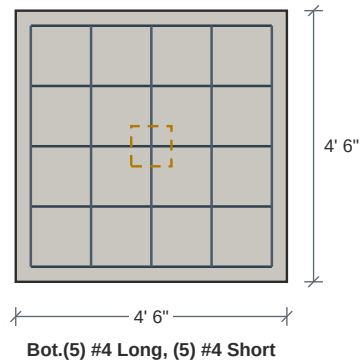
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 2,641 lb Snow 21,662 lb Roof Live 2 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,321	1,500	Passed (88%)	ASD	D+S
One-Way Shear X (lbs)	11,734	27,728	Passed (42%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	11,734	27,728	Passed (42%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	35,101	61,947	Passed (57%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	15,441	27,145	Passed (57%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	15,441	27,145	Passed (57%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	37,828	212,160	Passed (18%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	4' 6"	Soil bearing pressure	1,500 psf
Footing length	4' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(5) #4 Long, (5) #4 Short
Soil density	140 pcf	Bars the long way	(5) #4
Soil cohesion	0 psf	Bars the short way	(5) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	2,112	--	17,316	Linked from: Header #3 , Support 2
2 - Point (lb)	--	N/A	528.6	1.6	4,346	Linked from: Header #21 , Support 1

SpotFtg Hdr #4-1

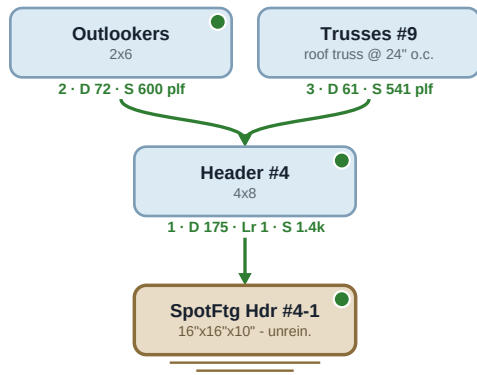
Spot Footing 1' 4" x 1' 4" x 10" deep -- Unreinforced (Plain)

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

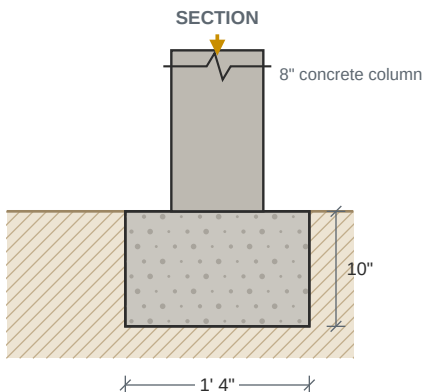
PASSED

Controls: Minimum Thickness 80% used
Adequacy 31.6% (capacity to spare)

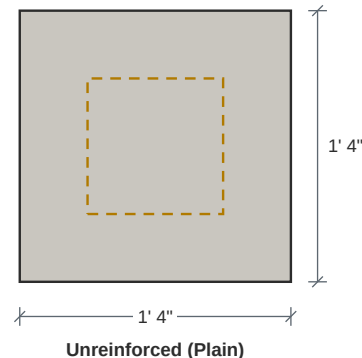
WHAT LOADS IT



SECTION



PLAN -- PLAIN CONCRETE, NO REINFORCING



Carrying: Dead 175 lb Snow 1,435 lb Roof Live 1 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,027	1,500	Passed (68%)	ASD	D+S
Moment X (ft-lbs)	104	2,337	Passed (4%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	104	2,337	Passed (4%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	2,506	195,840	Passed (1%)	LRFD	1.2D+1.6S+L
Minimum Thickness (in)	8	10	Passed (80%)	code	ACI 318-14 Ch. 14

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	1' 4"	Soil bearing pressure	1,500 psf
Footing length	1' 4"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Reinforcing	none -- plain concrete
Soil density	140 pcf	Plain concrete (no reinforcing)	Yes
Soil cohesion	0 psf	Override rebar	No
Friction angle	30°	Include water level	No
Water level	20'	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	174.7	1.3	1,435	Linked from: Header #4 , Support 1

SpotFtg Hdr #4-2

Spot Footing 2' x 2' x 10" deep -- Unreinforced (Plain)

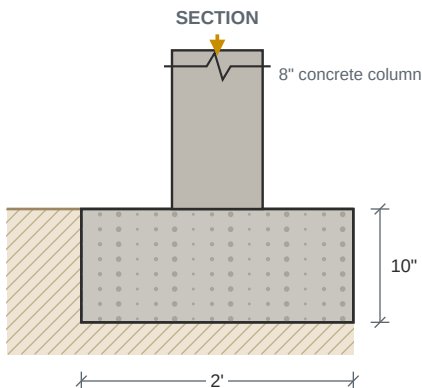
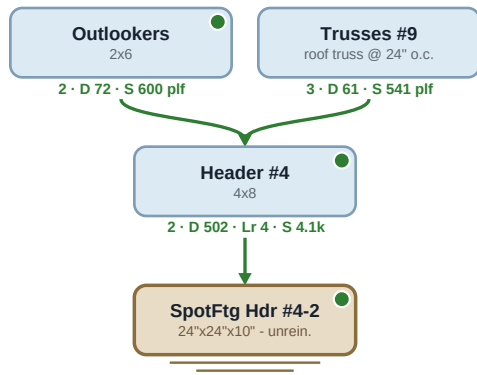
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSED

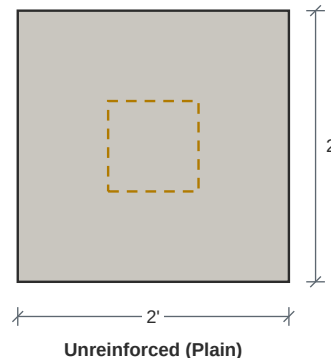
Controls: Soil Bearing Pressure 85% used

Adequacy 15% (capacity to spare)

WHAT LOADS IT



PLAN -- PLAIN CONCRETE, NO REINFORCING



Carrying: Dead 502 lb Snow 4,112 lb Roof Live 4 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,275	1,500	Passed (85%)	ASD	D+S
Two-Way Shear (lbs)	3,990	44,757	Passed (9%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	798	3,505	Passed (23%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	798	3,505	Passed (23%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	7,183	195,840	Passed (4%)	LRFD	1.2D+1.6S+L
Minimum Thickness (in)	8	10	Passed (80%)	code	ACI 318-14 Ch. 14

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Reinforcing	none -- plain concrete
Soil density	140 pcf	Plain concrete (no reinforcing)	Yes
Soil cohesion	0 psf	Override rebar	No
Friction angle	30°	Include water level	No
Water level	20'	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	502.4	3.6	4,112	Linked from: Header #4 , Support 2

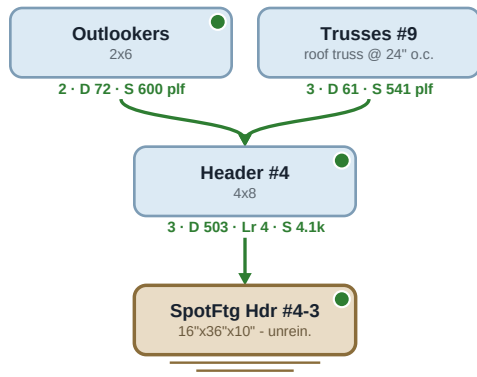
SpotFtg Hdr #4-3

Spot Footing 1' 4" x 3' x 10" deep -- Unreinforced (Plain)

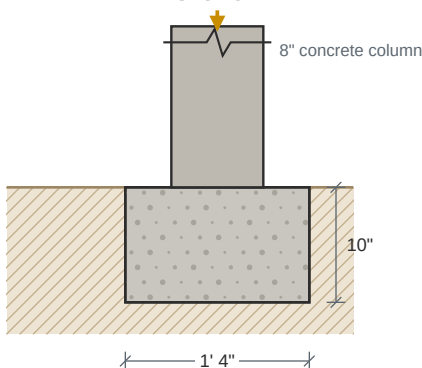
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSEDControls: Soil Bearing Pressure 85% used
Adequacy 15% (capacity to spare)

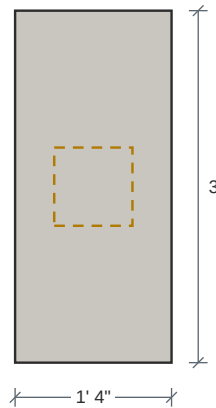
WHAT LOADS IT



SECTION



PLAN -- PLAIN CONCRETE, NO REINFORCING



Unreinforced (Plain)

Carrying: Dead 503 lb Snow 4,112 lb Roof Live 4 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,275	1,500	Passed (85%)	ASD	D+S
One-Way Shear X (lbs)	1,197	5,609	Passed (21%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	1,629	2,337	Passed (70%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	299	5,258	Passed (6%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	7,183	195,840	Passed (4%)	LRFD	1.2D+1.6S+L
Minimum Thickness (in)	8	10	Passed (80%)	code	ACI 318-14 Ch. 14

Footing Specification

 as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	1' 4"	Soil bearing pressure	1,500 psf
Footing length	3'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Reinforcing	none -- plain concrete
Soil density	140 pcf	Plain concrete (no reinforcing)	Yes
Soil cohesion	0 psf	Override rebar	No
Friction angle	30°	Include water level	No
Water level	20'	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	502.7	3.6	4,112	Linked from: Header #4 , Support 3

SpotFtg Hdr #4-4

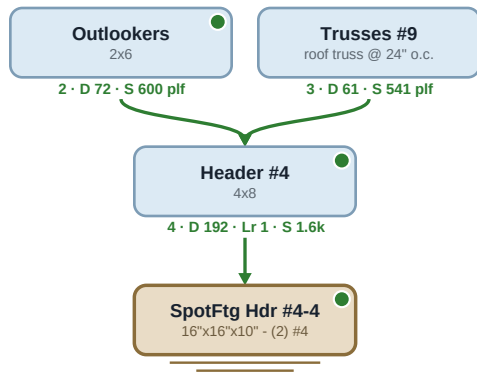
Spot Footing 1' 4" x 1' 4" x 10" deep -- Bot.(2) #4 Long, (2) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

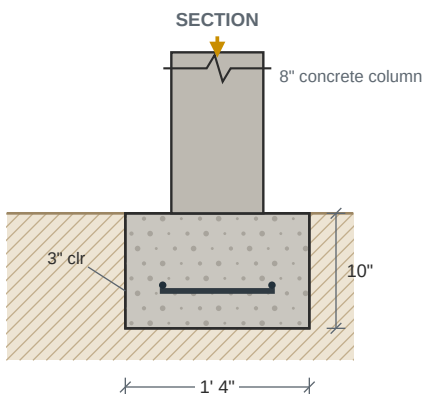
PASSED

Controls: Depth Above Bars 89% used
Adequacy 25.6% (capacity to spare)

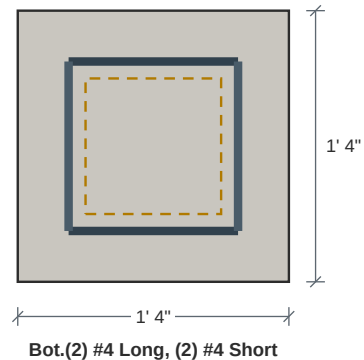
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 192 lb Roof Live 1 lb Snow 1,576 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,115	1,500	Passed (74%)	ASD	D+S
One-Way Shear X (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	492	61,947	Passed (1%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	115	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	115	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	2,752	212,160	Passed (1%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	1' 4"	Soil bearing pressure	1,500 psf
Footing length	1' 4"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(2) #4 Long, (2) #4 Short
Soil density	140 pcf	Bars the long way	(2) #4
Soil cohesion	0 psf	Bars the short way	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	191.8	1.4	1,576	Linked from: Header #4 , Support 4

SpotFtg Hdr #7-1

Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

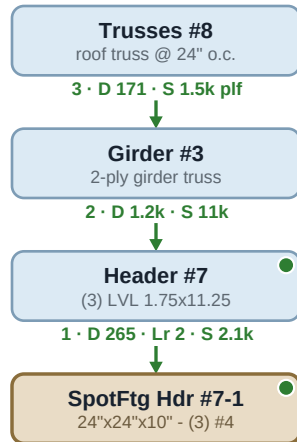
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

PASSED

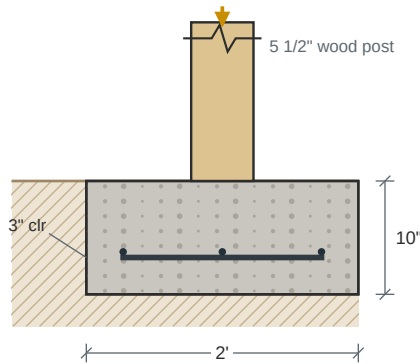
Controls: Depth Above Bars 89% used

Adequacy 52.7% (capacity to spare)

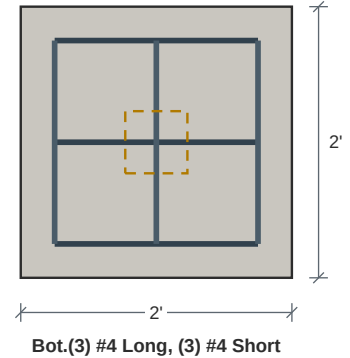
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 265 lb Snow 2,089 lb Roof Live 2 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	709	1,500	Passed (47%)	ASD	D+S
One-Way Shear X (lbs)	458	12,324	Passed (4%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	458	12,324	Passed (4%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	2,746	51,267	Passed (5%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	718	16,081	Passed (4%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	718	16,081	Passed (4%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	3,661	100,279	Passed (4%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.



SpotFtg Hdr #7-1 (continued) Spot Footing | 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	265.5	1.7	2,089	Linked from: Header #7 , Support 1

SpotFtg Hdr #7-2

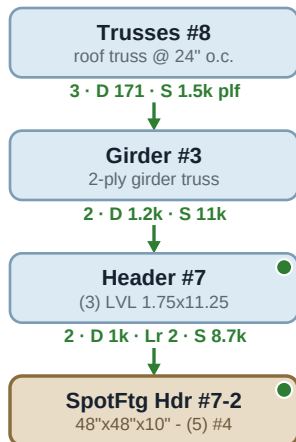
Spot Footing 4' x 4' x 10" deep -- Bot.(5) #4 Long, (5) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

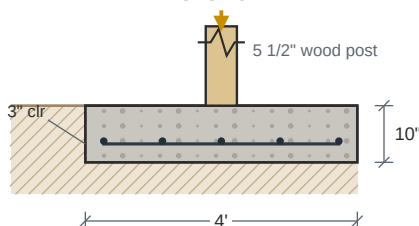
PASSED

Controls: Depth Above Bars 89% used
Adequacy 51.5% (capacity to spare)

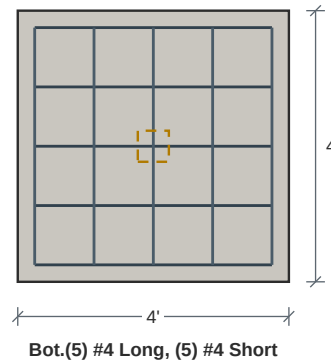
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 1,019 lb Snow 8,690 lb Roof Live 2 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	728	1,500	Passed (49%)	ASD	D+S
One-Way Shear X (lbs)	4,727	24,648	Passed (19%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	4,727	24,648	Passed (19%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	14,181	51,267	Passed (28%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	6,721	27,022	Passed (25%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	6,721	27,022	Passed (25%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	15,126	100,279	Passed (15%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	4'	Soil bearing pressure	1,500 psf
Footing length	4'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(5) #4 Long, (5) #4 Short
Soil density	140 pcf	Bars the long way	(5) #4
Soil cohesion	0 psf	Bars the short way	(5) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.



SpotFtg Hdr #7-2 (continued)

Spot Footing | 4' x 4' x 10" deep -- Bot.(5) #4 Long, (5) #4 Short

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	1,019	2	8,690	Linked from: Header #7 , Support 2

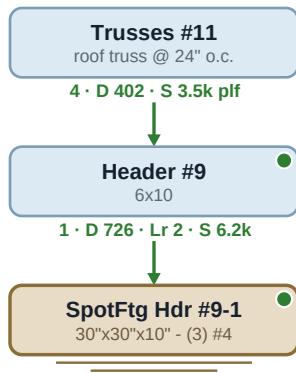
SpotFtg Hdr #9-1

Spot Footing 2' 6" x 2' 6" x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

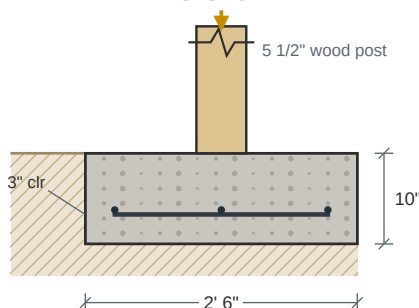
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

PASSEDControls: Depth Above Bars 89% used
Adequacy 17.9% (capacity to spare)

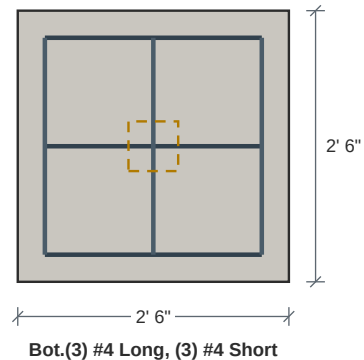
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 726 lb Snow 6,220 lb Roof Live 2 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,232	1,500	Passed (82%)	ASD	D+S
One-Way Shear X (lbs)	2,165	15,405	Passed (14%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	2,165	15,405	Passed (14%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	9,092	51,267	Passed (18%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	2,791	16,240	Passed (17%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	2,791	16,240	Passed (17%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	10,823	100,279	Passed (11%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification

 as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	2' 6"	Soil bearing pressure	1,500 psf
Footing length	2' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	725.9	1.8	6,220	Linked from: Header #9 , Support 1

SpotFtg Hdr #9-2

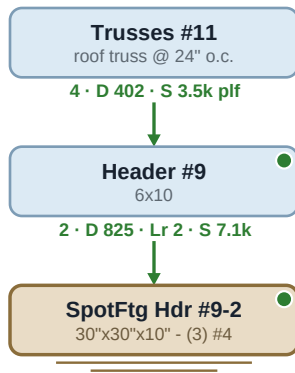
Spot Footing 2' 6" x 2' 6" x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

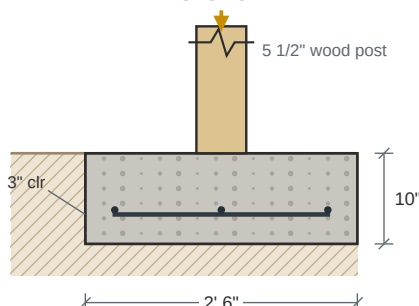
PASSED

Controls: Soil Bearing Pressure 92% used
Adequacy 7.8% (capacity to spare)

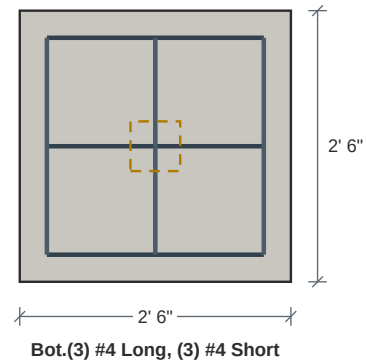
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 825 lb Roof Live 2 lb Snow 7,066 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,383	1,500	Passed (92%)	ASD	D+S
One-Way Shear X (lbs)	2,459	15,405	Passed (16%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	2,459	15,405	Passed (16%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	10,328	51,267	Passed (20%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	3,170	16,240	Passed (20%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	3,170	16,240	Passed (20%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	12,295	100,279	Passed (12%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	2' 6"	Soil bearing pressure	1,500 psf
Footing length	2' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	824.5	1.5	7,066	Linked from: Header #9 , Support 2

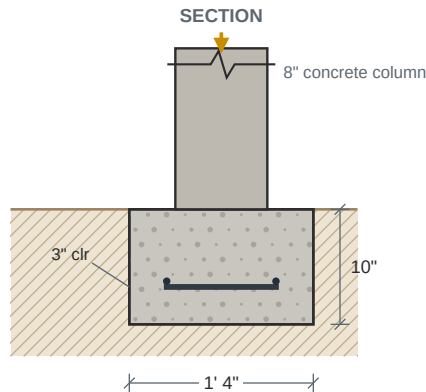
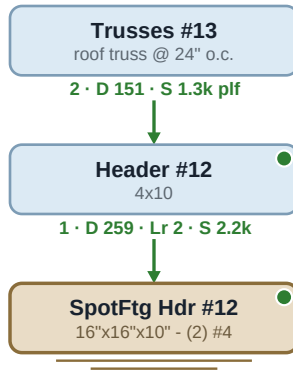
SpotFtg Hdr #12

Spot Footing 1' 4" x 1' 4" x 10" deep -- Bot.(2) #4 Long, (2) #4 Short

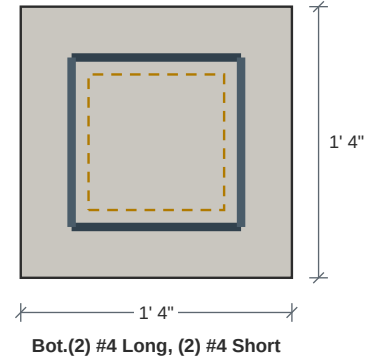
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSEDControls: Soil Bearing Pressure 99.4% used
Adequacy 0.6% (capacity to spare)

WHAT LOADS IT



PLAN -- BOTTOM MAT



Carrying: Dead 259 lb Snow 2,177 lb Roof Live 2 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,491	1,500	Passed (99.4%)	ASD	D+S
One-Way Shear X (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	0	8,216	Passed (0%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	678	61,947	Passed (1%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	158	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	158	10,721	Passed (1%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	3,794	212,160	Passed (2%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	1' 4"	Soil bearing pressure	1,500 psf
Footing length	1' 4"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(2) #4 Long, (2) #4 Short
Soil density	140 pcf	Bars the long way	(2) #4
Soil cohesion	0 psf	Bars the short way	(2) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	258.8	1.6	2,177	Linked from: Header #12 , Support 1

SpotFtg Hdr #13-1

Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

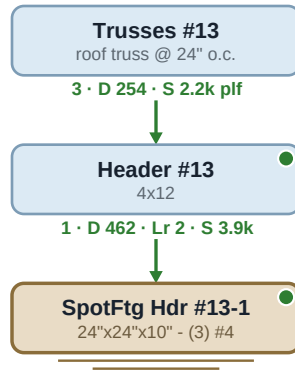
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

PASSED

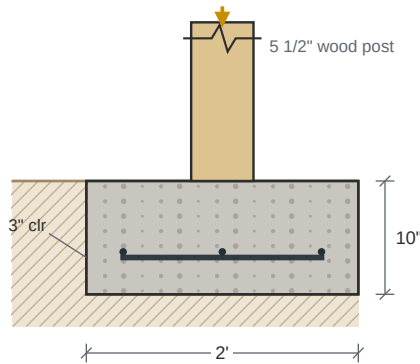
Controls: Depth Above Bars 89% used

Adequacy 18.6% (capacity to spare)

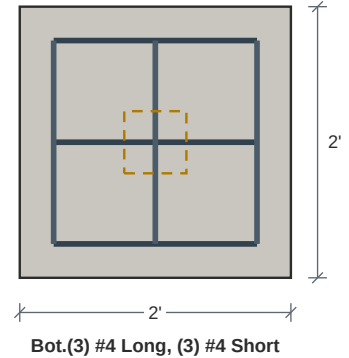
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 462 lb Snow 3,939 lb Roof Live 2 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,221	1,500	Passed (81%)	ASD	D+S
One-Way Shear X (lbs)	857	12,324	Passed (7%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	857	12,324	Passed (7%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	5,142	51,267	Passed (10%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	1,344	16,081	Passed (8%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	1,344	16,081	Passed (8%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	6,856	100,279	Passed (7%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification

 as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	462.1	1.8	3,939	Linked from: Header #13 , Support 1

SpotFtg Hdr #13-2

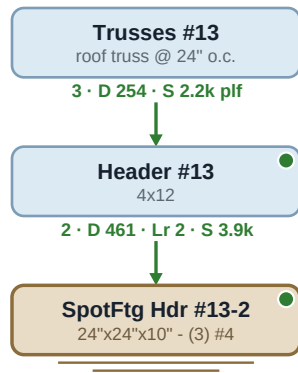
Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

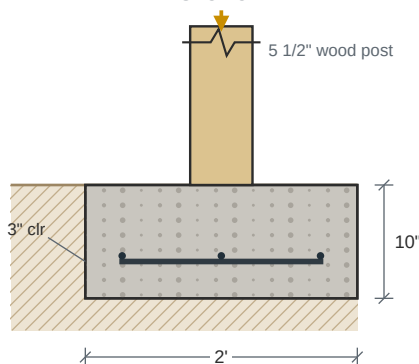
PASSED

Controls: Depth Above Bars 89% used
Adequacy 18.8% (capacity to spare)

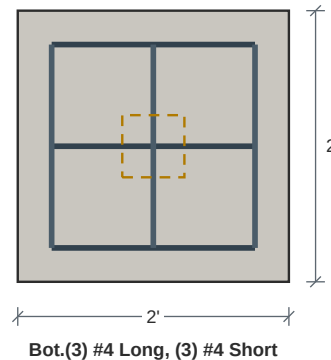
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 461 lb Roof Live 2 lb Snow 3,926 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,218	1,500	Passed (81%)	ASD	D+S
One-Way Shear X (lbs)	854	12,324	Passed (7%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	854	12,324	Passed (7%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	5,126	51,267	Passed (10%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	1,339	16,081	Passed (8%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	1,339	16,081	Passed (8%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	6,834	100,279	Passed (7%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	460.6	1.5	3,926	Linked from: Header #13 , Support 2

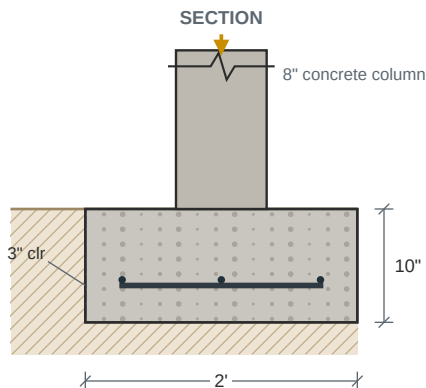
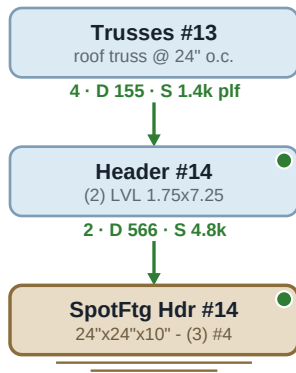
SpotFtg Hdr #14

Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

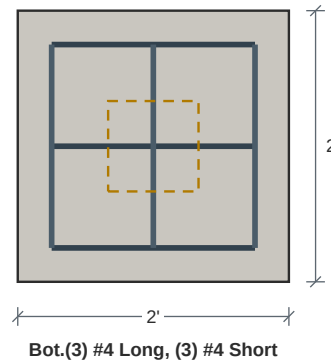
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSEDControls: Soil Bearing Pressure 97% used
Adequacy 3% (capacity to spare)

WHAT LOADS IT



PLAN -- BOTTOM MAT



Carrying: Dead 566 lb Snow 4,773 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,456	1,500	Passed (97%)	ASD	D+S
One-Way Shear X (lbs)	606	12,324	Passed (5%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	606	12,324	Passed (5%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	5,280	61,947	Passed (9%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	924	16,081	Passed (6%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	924	16,081	Passed (6%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	8,316	212,160	Passed (4%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	565.6	4,773	Linked from: Header #14 , Support 2

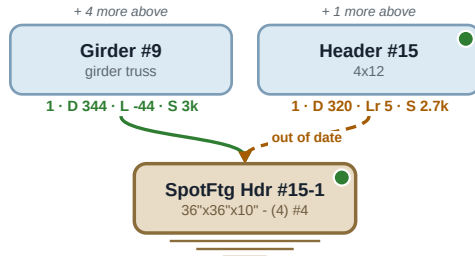
SpotFtg Hdr #15-1

Spot Footing 3' x 3' x 10" deep -- Bot.(4) #4 Long, (4) #4 Short

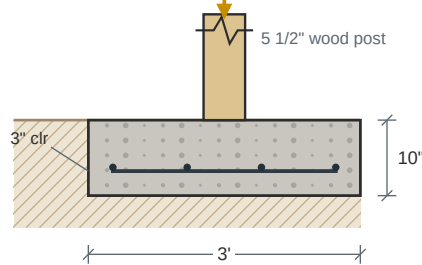
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

PASSEDControls: Depth Above Bars 89% used
Adequacy 44.8% (capacity to spare)

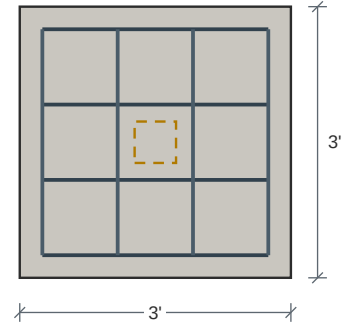
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Bot.(4) #4 Long, (4) #4 Short

Carrying: Dead 664 lb Snow 5,696 lb Floor Live -44 lb Roof Live 5 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	828	1,500	Passed (55%)	ASD	D+S
One-Way Shear X (lbs)	2,478	18,486	Passed (13%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	2,478	18,486	Passed (13%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	8,810	51,267	Passed (17%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	3,170	21,559	Passed (15%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	3,170	21,559	Passed (15%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	9,911	100,279	Passed (10%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	3'	Soil bearing pressure	1,500 psf
Footing length	3'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties and Post		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(4) #4 Long, (4) #4 Short
Soil density	140 pcf	Bars the long way	(4) #4
Soil cohesion	0 psf	Bars the short way	(4) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
Post	6x6 post	Override rebar	No
Post base	ABU66Z, p. 76	Include water level	No
Cap	truss layout	Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	320.3	--	5.3	2,707	Linked from: Header #15 , Support 1
2 - Point (lb)	--	N/A	344.2	-44.1	--	2,989	Linked from: Girder #9 , Support 1

SpotFtg Hdr #15-2

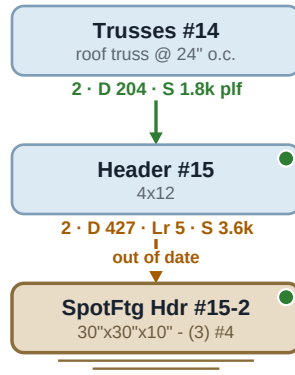
Spot Footing 2' 6" x 2' 6" x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Wood column 5 1/2" x 5 1/2" | ACI 318-14

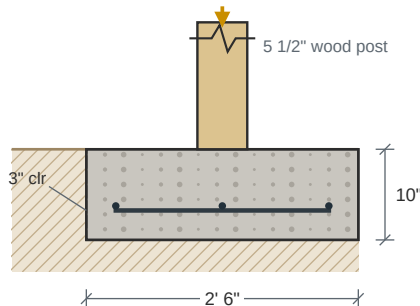
PASSED

Controls: Depth Above Bars 89% used
Adequacy 48.9% (capacity to spare)

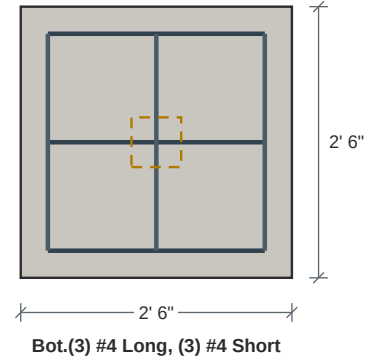
WHAT LOADS IT



SECTION



PLAN -- BOTTOM MAT



Carrying: Dead 427 lb Snow 3,607 lb Roof Live 5 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	766	1,500	Passed (51%)	ASD	D+S
One-Way Shear X (lbs)	1,256	15,405	Passed (8%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	1,256	15,405	Passed (8%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	5,277	51,267	Passed (10%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	1,620	16,240	Passed (10%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	1,620	16,240	Passed (10%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	6,282	100,279	Passed (6%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Wood	Concrete strength	3,000 psi
Footing width	2' 6"	Soil bearing pressure	1,500 psf
Footing length	2' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	5 1/2"	Bottom reinf. cover	3"
Column length	5 1/2"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

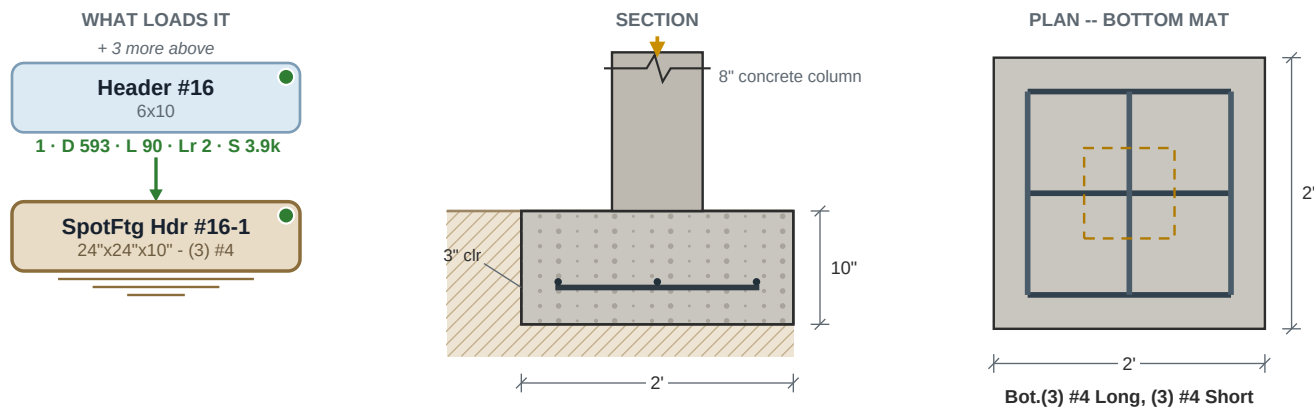
- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.
- Wood post: check bearing on the post itself, its Fc-perp can govern below the concrete value.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	426.7	5.5	3,607	Linked from: Header #15 , Support 2

SpotFtg Hdr #16-1

Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSEDControls: Depth Above Bars 89% used
Adequacy 17% (capacity to spare)

Carrying: Dead 593 lb Floor Live 90 lb Snow 3,904 lb Roof Live 2 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,245	1,500	Passed (83%)	ASD	D+S
One-Way Shear X (lbs)	514	12,324	Passed (4%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	514	12,324	Passed (4%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	4,475	61,947	Passed (7%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	783	16,081	Passed (5%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	783	16,081	Passed (5%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	7,048	212,160	Passed (3%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification

 as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

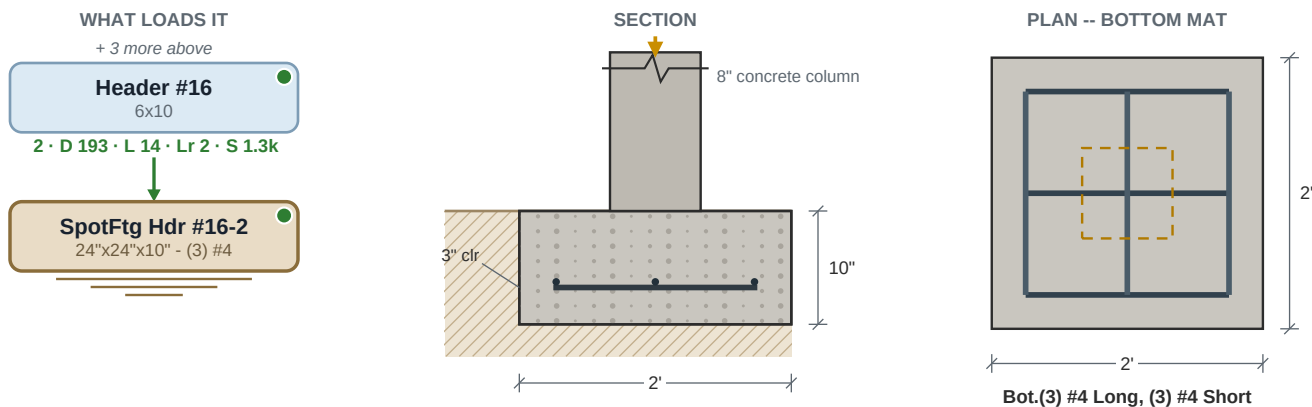
- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	593.1	89.9	2.2	3,904	Linked from: Header #16 , Support 1

SpotFtg Hdr #16-2

Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSEDControls: Depth Above Bars 89% used
Adequacy 67.2% (capacity to spare)

Carrying: Dead 193 lb Floor Live 14 lb Snow 1,291 lb Roof Live 2 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	492	1,500	Passed (33%)	ASD	D+S
One-Way Shear X (lbs)	169	12,324	Passed (1%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	169	12,324	Passed (1%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	1,468	61,947	Passed (2%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	257	16,081	Passed (2%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	257	16,081	Passed (2%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	2,312	212,160	Passed (1%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	192.9	14.2	2.3	1,291	Linked from: Header #16 , Support 2

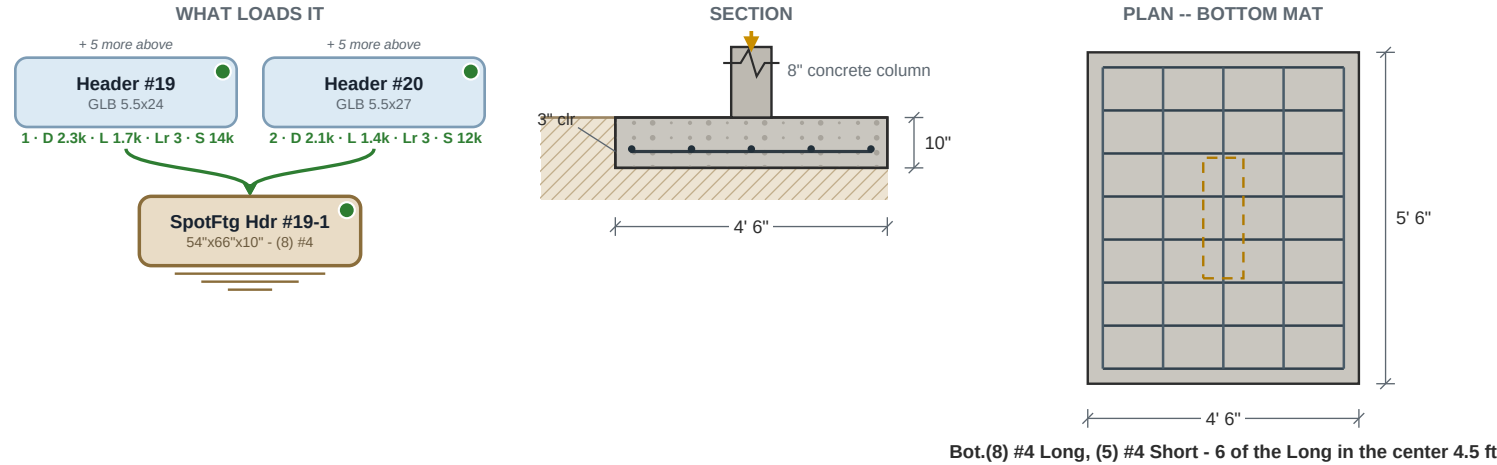
SpotFtg Hdr #19-1

PASSED

Spot Footing 4' 6" x 5' 6" x 10" deep -- Bot.(8) #4 Long, (5) #4 Short - 6 of the Long in the center 4.5 ft

Controls: Soil Bearing Pressure 90% used
Adequacy 10.5% (capacity to spare)

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 24" | ACI 318-14



Carrying: Dead 4,360 lb Floor Live 3,058 lb Snow 25,887 lb Roof Live 6 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,343	1,500	Passed (90%)	ASD	D+S
One-Way Shear X (lbs)	11,109	27,728	Passed (40%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	15,419	33,890	Passed (45%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	43,540	80,104	Passed (54%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	13,839	27,145	Passed (51%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	20,290	42,947	Passed (47%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	49,708	636,480	Passed (8%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	4' 6"	Soil bearing pressure	1,500 psf
Footing length	5' 6"	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	24"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(8) #4 Long, (5) #4 Short - 6 of the Long in
Soil density	140 pcf	Bars the long way	(8) #4
Soil cohesion	0 psf	Bars the short way	(5) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.



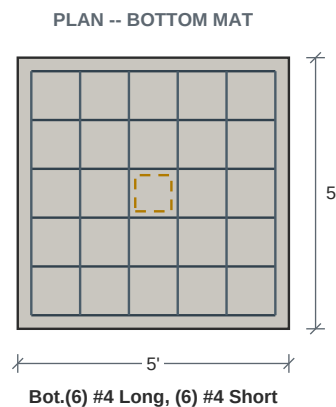
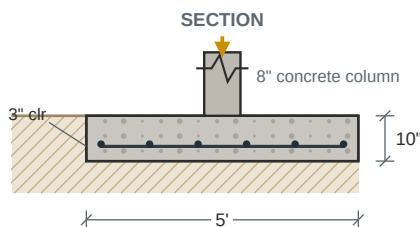
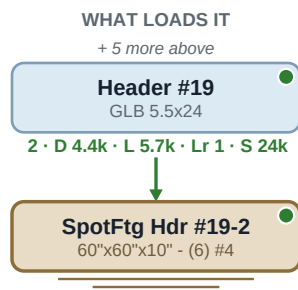
SpotFtg Hdr #19-1 (continued) Spot Footing | 4' 6" x 5' 6" x 10" deep -- Bot.(8) #4 Long, (5) #4 Short - 6 of the Long in the center 4.5 ft

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	2,293	1,693	3	13,587	Linked from: Header #19 , Support 1
2 - Point (lb)	--	N/A	2,067	1,365	3	12,300	Linked from: Header #20 , Support 2

SpotFtg Hdr #19-2

Spot Footing 5' x 5' x 10" deep -- Bot.(6) #4 Long, (6) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSEDControls: Depth Above Bars 89% used
Adequacy 15.6% (capacity to spare)

Carrying: Dead 4,398 lb Floor Live 5,750 lb Roof Live 1 lb Snow 24,246 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,267	1,500	Passed (84%)	ASD	D+S
One-Way Shear X (lbs)	16,400	30,809	Passed (53%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	16,400	30,809	Passed (53%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	46,912	61,947	Passed (76%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	23,389	32,479	Passed (72%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	23,389	32,479	Passed (72%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	49,822	212,160	Passed (23%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification

 as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	5'	Soil bearing pressure	1,500 psf
Footing length	5'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		
Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(6) #4 Long, (6) #4 Short
Soil density	140 pcf	Bars the long way	(6) #4
Soil cohesion	0 psf	Bars the short way	(6) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

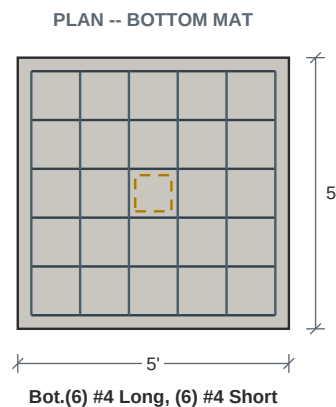
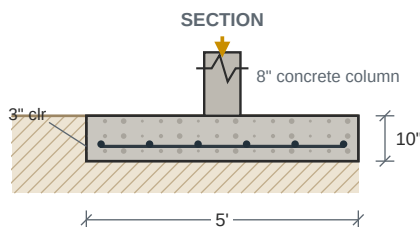
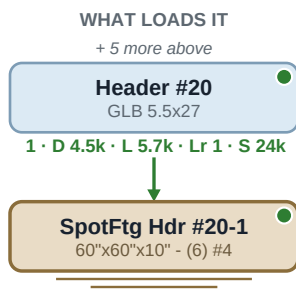
- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	4,398	5,750	1	24,246	Linked from: Header #19 , Support 2

SpotFtg Hdr #20-1

Spot Footing 5' x 5' x 10" deep -- Bot.(6) #4 Long, (6) #4 Short

Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSEDControls: Depth Above Bars 89% used
Adequacy 15.1% (capacity to spare)

Carrying: Dead 4,516 lb Floor Live 5,705 lb Snow 24,301 lb Roof Live 1 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,274	1,500	Passed (85%)	ASD	D+S
One-Way Shear X (lbs)	16,460	30,809	Passed (53%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	16,460	30,809	Passed (53%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	47,086	61,947	Passed (76%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	23,475	32,479	Passed (72%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	23,475	32,479	Passed (72%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	50,006	212,160	Passed (24%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification

 as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	5'	Soil bearing pressure	1,500 psf
Footing length	5'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(6) #4 Long, (6) #4 Short
Soil density	140 pcf	Bars the long way	(6) #4
Soil cohesion	0 psf	Bars the short way	(6) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Floor Live (1.00)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	4,516	5,705	1	24,301	Linked from: Header #20 , Support 1

SpotFtg Hdr #21

Spot Footing 2' x 2' x 10" deep -- Bot.(3) #4 Long, (3) #4 Short

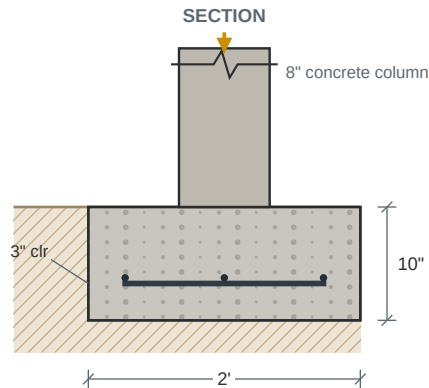
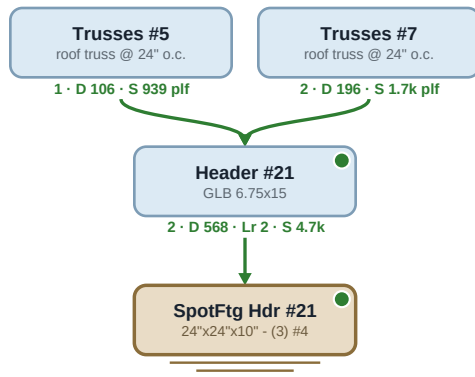
Level: Basement | f'c 3,000 psi | rebar Fy 60 ksi | soil 1,500 psf | Concrete column 8" x 8" | ACI 318-14

PASSED

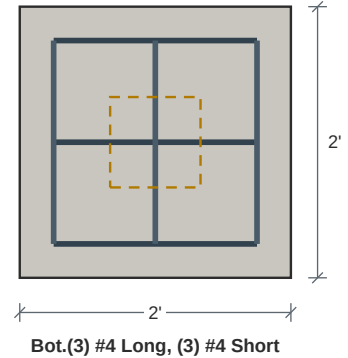
Controls: Soil Bearing Pressure 95% used

Adequacy 4.9% (capacity to spare)

WHAT LOADS IT



PLAN -- BOTTOM MAT



Carrying: Dead 568 lb Roof Live 2 lb Snow 4,656 lb

Design Results	Actual	Allowed	Result	Method	Load Combination
Soil Bearing Pressure (psf)	1,427	1,500	Passed (95%)	ASD	D+S
One-Way Shear X (lbs)	593	12,324	Passed (5%)	LRFD	1.2D+1.6S+L
One-Way Shear Y (lbs)	593	12,324	Passed (5%)	LRFD	1.2D+1.6S+L
Two-Way Shear (lbs)	5,163	61,947	Passed (8%)	LRFD	1.2D+1.6S+L
Moment X (ft-lbs)	904	16,081	Passed (6%)	LRFD	1.2D+1.6S+L
Moment Y (ft-lbs)	904	16,081	Passed (6%)	LRFD	1.2D+1.6S+L
Crushing (lbs)	8,132	212,160	Passed (4%)	LRFD	1.2D+1.6S+L
Depth Above Bars (in)	6	7	Passed (89%)	code	ACI 318-14 13.3.1.2

Footing Specification as entered on the footing, and the mat the check selected

Geometry		Footing Properties	
Shape	Square	Steel yield strength	60,000 psi
Column type	Concrete	Concrete strength	3,000 psi
Footing width	2'	Soil bearing pressure	1,500 psf
Footing length	2'	Concrete density	145 pcf
Footing depth	10"	Top reinf. cover	3"
Column width	8"	Bottom reinf. cover	3"
Column length	8"	Side reinf. cover	3"
Pedestal height	4"	Aggregate diameter	3/4"
Pedestal width	4"		
Pedestal length	4"		

Soil Properties		Reinforcement	
Soil depth above footing	0	Bottom mat	Bot.(3) #4 Long, (3) #4 Short
Soil density	140 pcf	Bars the long way	(3) #4
Soil cohesion	0 psf	Bars the short way	(3) #4
Friction angle	30°	Selected for	moment and minimum steel
Water level	20'	Plain concrete (no reinforcing)	No
		Override rebar	No
		Include water level	No
		Allow bearing pressure increase	No

- Soil bearing is checked at service level (ASD) and includes the footing's own weight; shear, moment and crushing at strength level (LRFD), ACI 318-14, loads combined to ASCE 7-16.
- Reinforcement is selected for the moment and for minimum steel (ACI 318-14: 0.0018 Ag for Grade 60), at no more than 3h or 18 in.

Applied Loads	Location	Trib. Width	Dead (0.90)	Roof Live (1.25)	Snow (1.15)	Comments
1 - Point (lb)	--	N/A	568.1	1.7	4,656	Linked from: Header #21 , Support 2

Hangers for every member end set flush in a hanger, or hung from a foundation wall's mud sill; a cap and a base for every post -- from Simpson Strong-Tie's Wood Construction Connectors catalog C-C-2026. Each is checked at every ASD load combination against the catalog's allowable load for that load duration (hangers: floor 100, snow 115, roof 125; caps and bases: as printed, no increase; uplift 160, reduced where gravity governs), for the lower specific gravity of the members. Use = the governing demand over that allowable. Fabricated: nothing in the catalog carries it (or chosen so); it is designed here as a steel plate hanger -- face plate, seat, side plates, fasteners and welds to the 2018 NDS and AISC 360-16, for its reactions and the ASCE 7 1.4.4 tie -- and listed under Fasteners, Use being the governing check; where it can't be, design it to the load shown. Each fabricated hanger's design sheet follows this schedule; one locked as drawn is checked as built. A hanger off a member that is not in the model, a crawl space header for one, is listed under the member it carries by its note key, with how many; its load is on each. A ledger's fastening to what it hangs on is designed to the 2018 NDS -- the 12.3 yield model, across any sheathing gap per AWC TR12, and the 11.3 factors -- its spacing for the load per foot its joists put on it; listed under Ledgers.

41 hung ends: 41 Simpson, 0 fabricated.

Member	End	Hanger	Hangs on	Design load (ASD)	Use	Fasteners
Beam #5	1	HUC46 face mount, concealed flanges, p. 117 (first that works)	Girder #5, truss	797 lb D+S	59%	(8) 0.162 x 3 1/2 header + (4) 0.148 x 3 joist
Beam #5	2	HUC46 face mount, concealed flanges, p. 117 (first that works)	Beam #4, 3-ply 1 3/4 x 11 1/4 LVL	797 lb D+S	59%	(8) 0.162 x 3 1/2 header + (4) 0.148 x 3 joist
Beam #6	2	HUCQ610-SDS face mount, concealed flanges, p. 118 (first that works)	Girder #5, truss	4,080 lb D+S	79%	(12) 1/4 x 2 1/2 SDS header + (6) 1/4 x 2 1/2 SDS joist
Beam #7	1	HUC610 face mount, concealed flanges, p. 118	SpotFtg Bm #1-1, 8x8 post	1,828 lb D+S	78%	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist
Beam #7	2	HUC610 face mount, concealed flanges, p. 118	SpotFtg Bm #1-2, 8x8 post	1,828 lb D+S	78%	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist
Beam #8	1	HUC610 face mount, concealed flanges, p. 118	SpotFtg Bm #1-2, 8x8 post	1,828 lb D+S	78%	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist
Beam #8	2	HUC610 face mount, concealed flanges, p. 118	SpotFtg Bm #1-3, 8x8 post	1,828 lb D+S	78%	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist
Beam #9	1	HUC610 face mount, concealed flanges, p. 118	SpotFtg Bm #1-3, 8x8 post	1,905 lb D+S	81%	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist
Beam #9	2	HUC610 face mount, concealed flanges, p. 118	SpotFtg Bm #1-4, 8x8 post	1,905 lb D+S	81%	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist
Beam #14	1	HUC610 face mount, concealed flanges, p. 118 (first that works)	SpotFtg Bm #13-1, 8x8 post	1,182 lb D+S	50%	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist
Beam #14	2	HUC610 face mount, concealed flanges, p. 118 (first that works)	SpotFtg Bm #13-2, 8x8 post	1,182 lb D+S	50%	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist
Beam #15	1	HUC610 face mount, concealed flanges, p. 118 (first that works)	SpotFtg Bm #13-2, 8x8 post	2,256 lb D+S	96%	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist
Beam #15	2	HUC610 face mount, concealed flanges, p. 118 (first that works)	SpotFtg Bm #13-3, 8x8 post	2,256 lb D+S	96%	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist
Beam #16	1	HUC610 face mount, concealed flanges, p. 118 (first that works)	SpotFtg Bm #13-3, 8x8 post	1,182 lb D+S	50%	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist
Beam #16	2	HUC610 face mount, concealed flanges, p. 118 (first that works)	SpotFtg Bm #13-4, 8x8 post	1,182 lb D+S	50%	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist
Beam #17	1	IUS3.56/14 face mount, p. 161 (first that works)	Girder #5, truss	890 lb D+L	63%	(12) 0.148 x 3 face
Beam #17	2	IUS3.56/14 face mount, p. 161 (first that works)	Girder #9, truss	890 lb D+L	63%	(12) 0.148 x 3 face
Beam #18	1	MIT3514-2 top flange, p. 203 (first that works)	Girder #8, truss	736 lb D+L	44%	(8) 0.162 x 3 1/2 header + (2) 0.148 x 1 1/2 joist
Beam #18	2	MIT3514-2 top flange, p. 203 (first that works)	Girder #7, truss	736 lb D+L	44%	(8) 0.162 x 3 1/2 header + (2) 0.148 x 1 1/2 joist
Deck Joists #4	1	LU26 face mount, p. 114 (first that works)	Beam #15, 5 1/2 x 11 1/2 sawn	554 lb D+S	58%	(6) 0.162 x 3 1/2 header + (4) 0.148 x 1 1/2 joist
Deck Joists #4	2	LU26 face mount, p. 119	2x8 HF No. 2 ledger	554 lb D+S	68%	(6) 0.162 x 3 1/2 header + (4) 0.148 x 1 1/2 joist
Header #15	1	HUC412 face mount, concealed flanges, p. 117 (first that works)	SpotFtg Hdr #15-1, 6x6 post	3,037 lb D+S	82%	(22) 0.162 x 3 1/2 header + (10) 0.148 x 3 joist
Header #17	1	HUCQ410-SDS face mount, concealed flanges, p. 117	SpotFtg Gdr #7-1, 6x8 post	3,502 lb D+S	78%	(12) 1/4 x 2 1/2 SDS header + (6) 1/4 x 2 1/2 SDS joist
Joist #1	1	IUS2.37/14 face mount, p. 159 (first that works)	Girder #8, truss	726 lb D+L	51%	(12) 0.148 x 3 face
Joist #1	2	IUS2.37/14 face mount, p. 159 (first that works)	Girder #7, truss	726 lb D+L	51%	(12) 0.148 x 3 face
Joists #5	X4	(2) IUS1.81/9.5 face mount, p. 158, 1 each side	Crawl space header at support 4, 5 1/2 x 9 1/2 sawn	532 lb D+L	56%	(8) 0.148 x 3 face
Joists #6	X2	(2) IUS1.81/9.5 face mount, p. 158, 1 each side	Crawl space header at support 2, 3 1/2 x 9 1/2 sawn	532 lb D+L	56%	(8) 0.148 x 3 face

Hangers (continued)

Member	End	Hanger	Hangs on	Design load (ASD)	Use	Fasteners
Joists #6	X3	(2) IUS1.81/9.5 face mount, p. 158, 1 each side	Crawl space header at support 3, 3 1/2 x 9 1/2 sawn	325 lb D+L	34%	(8) 0.148 x 3 face
Joists #6	X4	(2) IUS1.81/9.5 face mount, p. 158, 1 each side	Crawl space header at support 4, 3 1/2 x 9 1/2 sawn	399 lb D+L	42%	(8) 0.148 x 3 face
Joists #7	X2	(2) IUS1.81/9.5 face mount, p. 158 (first that works), 1 each side	Crawl space header at support 2, 3 1/2 x 9 1/2 sawn	445 lb D+L	47%	(8) 0.148 x 3 face
Joists #7	X4	(2) IUS1.81/9.5 face mount, p. 158, 1 each side	Crawl space header at support 4, 3 1/2 x 9 1/2 sawn	385 lb D+L	40%	(8) 0.148 x 3 face
Joists #7	X5	(2) IUS1.81/9.5 face mount, p. 158 (first that works), 1 each side	Crawl space header at support 5, 3 1/2 x 9 1/2 sawn	327 lb D+L	34%	(8) 0.148 x 3 face
Joists #7	X6	(2) IUS1.81/9.5 face mount, p. 158, 1 each side	Crawl space header at support 6, 3 1/2 x 9 1/2 sawn	638 lb D+L	67%	(8) 0.148 x 3 face
Joists #9	X2	(2) IUS1.81/9.5 face mount, p. 158, 1 each side	Crawl space header at support 2, 3 1/2 x 9 1/2 sawn	215 lb D+L	23%	(8) 0.148 x 3 face
Joists #9	X3	(2) IUS1.81/9.5 face mount, p. 158, 1 each side	Crawl space header at support 3, 3 1/2 x 9 1/2 sawn	193 lb D+L	20%	(8) 0.148 x 3 face
Joists #9	X4	(2) IUS1.81/9.5 face mount, p. 158 (first that works), 1 each side	Crawl space header at support 4, 3 1/2 x 9 1/2 sawn	445 lb D+L	47%	(8) 0.148 x 3 face
Joists #9	X5	(2) IUS1.81/9.5 face mount, p. 158 (first that works), 1 each side	Crawl space header at support 5, 3 1/2 x 9 1/2 sawn	558 lb D+L	59%	(8) 0.148 x 3 face
Joists #10	X2	(2) IUS1.81/9.5 face mount, p. 158 (first that works), 1 each side	Crawl space header at support 2, 3 1/2 x 9 1/2 sawn	518 lb D+L	55%	(8) 0.148 x 3 face
Joists #10	X3	(2) IUS1.81/9.5 face mount, p. 158 (first that works), 1 each side	Crawl space header at support 3, 3 1/2 x 9 1/2 sawn	453 lb D+L	48%	(8) 0.148 x 3 face
Rafters #1	1	HU1.81/5 face mount, p. 158 (first that works)	Girder #5 , truss	842 lb D+S	42%	(12) 0.162 x 3 1/2 face + (4) 0.148 x 1 1/2 joist
Rafters #1	2	HU1.81/5 face mount, p. 158 (first that works)	Girder #9 , truss	842 lb D+S	42%	(12) 0.162 x 3 1/2 face + (4) 0.148 x 1 1/2 joist

Ledgers -- each one's fastening to what it hangs on

Member	End	Ledger	Fastened to	Fastening	Use
Deck Joists #4	2	2x8 HF No. 2 ledger	a 2x SPF rim board	5/8 through-bolts, 2 rows staggered @ 7 in. o.c.	97%

33 posts, 12 of them assumed 6x6. A post is a spot footing with beams on it, or a column; its size is the job's, else the pad's column, else an assumed 6x6 (the p

Post	Size	On it	Cap	Base	Design load (ASD)
SpotFtg Bm #1-1	8x8 post	Beam #1 1	ECCQ98SDS2.5, p. 99 24%	ABU88Z, p. 77 46%	10,292 lb D+S
SpotFtg Bm #1-2	8x8 post	Beam #1 2	CCQ98SDS2.5, p. 99 40%	CB88, p. 87 45%	25,154 lb D+S
SpotFtg Bm #1-3	8x8 post	Beam #1 3	CCQ98SDS2.5, p. 99 38%	CB88, p. 87 42%	23,900 lb D+S
SpotFtg Bm #1-4	8x8 post	Beam #1 4	ECCQ98SDS2.5, p. 99 22%	ABU88Z, p. 77 43%	9,524 lb D+S
SpotFtg Bm #2-1	6x6 post	Beam #2 1	ECCQ66SDS2.5, p. 99 74%	CB66, p. 87 47%	14,071 lb D+S
SpotFtg Bm #2-2	6x6 post	Beam #2 2	ECCQ66SDS2.5, p. 99 74%	CB66, p. 87 47%	14,071 lb D+S
SpotFtg Bm #3-1	6x6 post	Beam #3 1	ECCQ66SDS2.5, p. 99 25%	ABU66Z, p. 76 36%	4,685 lb D+S
SpotFtg Bm #3-2	6x6 post	Beam #3 2	ECCQ66SDS2.5, p. 99 25%	ABU66Z, p. 76 36%	4,685 lb D+S
SpotFtg Bm #4-1	6x6 post	Beam #4 1	ECCQ5-6SDS2.5, p. 99 21%	ABU66Z, p. 76 28%	3,675 lb D+S
SpotFtg Bm #10-1	6x6 post (assumed)	Beam #10 1	ECCQ66SDS2.5, p. 99 10%	ABU66Z, p. 76 14%	1,860 lb D+S
SpotFtg Bm #10-2	6x6 post (assumed)	Beam #10 2	CCQ66SDS2.5, p. 99 20%	ABU66Z, p. 76 48%	6,201 lb D+S
SpotFtg Bm #10-3	6x6 post (assumed)	Beam #10 3, Beam #11 1	CCQ66SDS2.5, p. 99 12%	ABU66Z, p. 76 29%	3,721 lb D+S
SpotFtg Bm #11-2	6x6 post (assumed)	Beam #11 2	CCQ66SDS2.5, p. 99 20%	ABU66Z, p. 76 48%	6,201 lb D+S
SpotFtg Bm #11-3	6x6 post (assumed)	Beam #11 3	ECCQ66SDS2.5, p. 99 10%	ABU66Z, p. 76 14%	1,860 lb D+S
SpotFtg Bm #12-1	6x6 post (assumed)	Beam #12 2	CCQ66SDS2.5, p. 99 12%	ABU66Z, p. 76 29%	3,699 lb D+S
SpotFtg Bm #12-2	6x6 post (assumed)	Beam #12 3	ECCQ66SDS2.5, p. 99 10%	ABU66Z, p. 76 14%	1,850 lb D+S
SpotFtg Bm #13-1	8x8 post	Beam #13 1	ECCQ98SDS2.5, p. 99 7%	ABU88Z, p. 77 14%	3,165 lb D+S
SpotFtg Bm #13-2	8x8 post	Beam #13 2	CCQ98SDS2.5, p. 99 24%	ABU88Z, p. 77 66%	14,703 lb D+S
SpotFtg Bm #13-3	8x8 post	Beam #13 3	CCQ98SDS2.5, p. 99 24%	ABU88Z, p. 77 66%	14,703 lb D+S
SpotFtg Bm #13-4	8x8 post	Beam #13 4	ECCQ98SDS2.5, p. 99 7%	ABU88Z, p. 77 14%	3,165 lb D+S
SpotFtg Gdr #1-1	6x6 post	Girder #1 1, Girder #2 1	by the truss layout	ABU66Z, p. 76 27%	3,426 lb D+S
SpotFtg Gdr #1-2	6x6 post	Girder #1 2	by the truss layout	ABU66Z, p. 76 91%	11,757 lb D+S
SpotFtg Gdr #1-3	6x6 post (assumed)	Girder #1 3	by the truss layout	ABU66Z, p. 76 25%	3,225 lb D+S

Posts (continued)

Post	Size	On it	Cap	Base	Design load (ASD)
SpotFtg Gdr #2-2	6x6 post (assumed)	Girder #2 2	by the truss layout	ABU66Z, p. 76 17%	2,237 lb D+S
SpotFtg Gdr #3-1	6x6 post (assumed)	Girder #3 1	by the truss layout	ABU66Z, p. 76 93%	12,001 lb D+S
SpotFtg Gdr #4-1	6x6 post (assumed)	Girder #4 1	by the truss layout	ABU66Z, p. 76 8%	1,086 lb D+S
SpotFtg Gdr #4-2	6x6 post	Girder #4 2	by the truss layout	ABU66Z, p. 76 8%	1,086 lb D+S
SpotFtg Gdr #5-1	6x6 post	Girder #5 1	by the truss layout	ABU66Z, p. 76 96%	12,409 lb D+S
SpotFtg Gdr #5-2	6x6 post (assumed)	Girder #5 2	by the truss layout	ABU66Z, p. 76 71%	9,142 lb D+S
SpotFtg Gdr #7-1	6x8 post	Girder #7 1	by the truss layout	CB6-7, p. 87 51%	19,586 lb D+S
SpotFtg Gdr #8-1	6x8 post	Girder #8 1	by the truss layout	CB6-7, p. 87 42%	16,083 lb D+S
SpotFtg Gdr #9-2	6x8 post	Girder #9 2	by the truss layout	CB6-7, p. 87 50%	19,334 lb D+S
SpotFtg Hdr #15-1	6x6 post	Girder #9 1	by the truss layout	ABU66Z, p. 76 49%	6,370 lb D+S

Simpson hardware

Every Simpson Strong-Tie part the job uses, by model: how many, where each goes, its fasteners and its worst use. The catalog page each is on is printed at the back of this package; a model named anywhere in the package links to its page.

Hangers -- 11 models, 55 pieces

Model	Qty	Where	Fasteners	Use	Catalog
HU1.81/5	2	Rafters #1 1 on Girder #5; Rafters #1 2 on Girder #9	(12) 0.162 x 3 1/2 face + (4) 0.148 x 1 1/2 joist	42%	p. 158
HUC46	2	Beam #5 1 on Girder #5; Beam #5 2 on Beam #4	(8) 0.162 x 3 1/2 header + (4) 0.148 x 3 joist	59%	p. 117
HUC412	1	Header #15 1 on SpotFtg Hdr #15-1	(22) 0.162 x 3 1/2 header + (10) 0.148 x 3 joist	82%	p. 117
HUC610	12	Beam #7 1 on SpotFtg Bm #1-1; Beam #7 2 on SpotFtg Bm #1-2; Beam #8 1 on SpotFtg Bm #1-2; Beam #8 2 on SpotFtg Bm #1-3; Beam #9 1 on SpotFtg Bm #1-3; Beam #9 2 on SpotFtg Bm #1-4; Beam #14 1 on SpotFtg Bm #13-1; Beam #14 2 on SpotFtg Bm #13-2; Beam #15 1 on SpotFtg Bm #13-2; Beam #15 2 on SpotFtg Bm #13-3; Beam #16 1 on SpotFtg Bm #13-3; Beam #16 2 on SpotFtg Bm #13-4	(14) 0.162 x 3 1/2 header + (6) 0.162 x 3 1/2 joist	96%	p. 118
HUCQ410-SDS	1	Header #17 1 on SpotFtg Gdr #7-1	(12) 1/4 x 2 1/2 SDS header + (6) 1/4 x 2 1/2 SDS joist	78%	p. 117
HUCQ610-SDS	1	Beam #6 2 on Girder #5	(12) 1/4 x 2 1/2 SDS header + (6) 1/4 x 2 1/2 SDS joist	79%	p. 118
IUS1.81/9.5	28	Joists #5 X4 on Crawl space header at support 4; Joists #6 X2 on Crawl space header at support 2; Joists #6 X3 on Crawl space header at support 3; Joists #6 X4 on Crawl space header at support 4; Joists #7 X2 on Crawl space header at support 2; Joists #7 X4 on Crawl space header at support 4; Joists #7 X5 on Crawl space header at support 5; Joists #7 X6 on Crawl space header at support 6; Joists #9 X2 on Crawl space header at support 2; Joists #9 X3 on Crawl space header at support 3; Joists #9 X4 on Crawl space header at support 4; Joists #9 X5 on Crawl space header at support 5; Joists #10 X2 on Crawl space header at support 2; Joists #10 X3 on Crawl space header at support 3	(8) 0.148 x 3 face	67%	p. 158
IUS2.37/14	2	Joist #1 1 on Girder #8; Joist #1 2 on Girder #7	(12) 0.148 x 3 face	51%	p. 159
IUS3.56/14	2	Beam #17 1 on Girder #5; Beam #17 2 on Girder #9	(12) 0.148 x 3 face	63%	p. 161
LU26	2	Deck Joists #4 1 on Beam #15; Deck Joists #4 2 on ledger	(6) 0.162 x 3 1/2 header + (4) 0.148 x 1 1/2 joist	68%	p. 114
MIT3514-2	2	Beam #18 1 on Girder #8; Beam #18 2 on Girder #7	(8) 0.162 x 3 1/2 header + (2) 0.148 x 1 1/2 joist	44%	p. 203

Post caps -- 5 models, 20 pieces

Model	Qty	Where	Fasteners	Use	Catalog
CCQ66SDS2.5	4	SpotFtg Bm #10-2 (Beam #10 2); SpotFtg Bm #10-3 (Beam #10 3, Beam #11 1); SpotFtg Bm #11-2 (Beam #11 2); SpotFtg Bm #12-1 (Beam #12 2)	16 beam / ccq + 14 beam / eccq + 14 post	20%	p. 99
CCQ98SDS2.5	4	SpotFtg Bm #1-2 (Beam #1 2); SpotFtg Bm #1-3 (Beam #1 3); SpotFtg Bm #13-2 (Beam #13 2); SpotFtg Bm #13-3 (Beam #13 3)	16 beam / ccq + 14 beam / eccq + 14 post	40%	p. 99
ECCQ5-6SDS2.5	1	SpotFtg Bm #4-1 (Beam #4 1)	16 beam / ccq + 14 beam / eccq + 14 post	21%	p. 99
ECCQ66SDS2.5	7	SpotFtg Bm #2-1 (Beam #2 1); SpotFtg Bm #2-2 (Beam #2 2); SpotFtg Bm #3-1 (Beam #3 1); SpotFtg Bm #3-2 (Beam #3 2); SpotFtg Bm #10-1 (Beam #10 1); SpotFtg Bm #11-3 (Beam #11 3); SpotFtg Bm #12-2 (Beam #12 3)	16 beam / ccq + 14 beam / eccq + 14 post	74%	p. 99
ECCQ98SDS2.5	4	SpotFtg Bm #1-1 (Beam #1 1); SpotFtg Bm #1-4 (Beam #1 4); SpotFtg Bm #13-1 (Beam #13 1); SpotFtg Bm #13-4 (Beam #13 4)	16 beam / ccq + 14 beam / eccq + 14 post	24%	p. 99

Simpson hardware (continued)

Post bases -- 5 models, 33 pieces

Model	Qty	Where	Fasteners	Use	Catalog
ABU66Z	20	SpotFtg Bm #3-1 (Beam #3 1); SpotFtg Bm #3-2 (Beam #3 2); SpotFtg Bm #4-1 (Beam #4 1); SpotFtg Bm #10-1 (Beam #10 1); SpotFtg Bm #10-2 (Beam #10 2); SpotFtg Bm #10-3 (Beam #10 3, Beam #11 1); SpotFtg Bm #11-2 (Beam #11 2); SpotFtg Bm #11-3 (Beam #11 3); SpotFtg Bm #12-1 (Beam #12 2); SpotFtg Bm #12-2 (Beam #12 3); SpotFtg Gdr #1-1 (Girder #1 1, Girder #2 1); SpotFtg Gdr #1-2 (Girder #1 2); SpotFtg Gdr #1-3 (Girder #1 3); SpotFtg Gdr #2-2 (Girder #2 2); SpotFtg Gdr #3-1 (Girder #3 1); SpotFtg Gdr #4-1 (Girder #4 1); SpotFtg Gdr #4-2 (Girder #4 2); SpotFtg Gdr #5-1 (Girder #5 1); SpotFtg Gdr #5-2 (Girder #5 2); SpotFtg Hdr #15-1 (Girder #9 1)	5/8 anchor dia. + (12) 0.162 x 3 1/2 nails	96%	p. 76
ABU88Z	6	SpotFtg Bm #1-1 (Beam #1 1); SpotFtg Bm #1-4 (Beam #1 4); SpotFtg Bm #13-1 (Beam #13 1); SpotFtg Bm #13-2 (Beam #13 2); SpotFtg Bm #13-3 (Beam #13 3); SpotFtg Bm #13-4 (Beam #13 4)	(2) 5/8 anchor dia. (in.) + (18) 0.162 x 3 1/2 nails (in.)	66%	p. 77
CB6-7	3	SpotFtg Gdr #7-1 (Girder #7 1); SpotFtg Gdr #8-1 (Girder #8 1); SpotFtg Gdr #9-2 (Girder #9 2)	2 bolts / qty. + 5/8 bolts / dia. (in.)	51%	p. 87
CB66	2	SpotFtg Bm #2-1 (Beam #2 1); SpotFtg Bm #2-2 (Beam #2 2)	2 bolts / qty. + 5/8 bolts / dia. (in.)	47%	p. 87
CB88	2	SpotFtg Bm #1-2 (Beam #1 2); SpotFtg Bm #1-3 (Beam #1 3)	2 bolts / qty. + 3/4 bolts / dia. (in.)	45%	p. 87

ABA/ABU/ABW

SIMPSON
Strong-Tie

Adjustable and Standoff Post Bases

Additional standoff bases are on p. 360.

The AB series of retrofit adjustable post bases provide a 1" standoff for the post, are slotted for adjustability and can be installed with nails, Strong-Drive® SD Connector screws or bolts (ABU). Depending on the application needs, these adjustable standoff post bases are designed for versatility, cost-effectiveness and maximum uplift performance.

Features:

- The slot in the base enables flexible positioning around the anchor bolt, making precise post placement easier
- The 1" standoff helps prevent rot at the end of the post and meets code requirements for structural posts installed in basements or exposed to weather or water splash

Material: Varies (see table)**Finish:** ZMAX® coating and some in stainless steel**Installation:**

- Use all specified fasteners; see General Notes.
- See our *Anchoring, Fastening, Restoration and Strengthening Systems for Concrete and Masonry* catalog, or visit strongtie.com for retrofit anchor options, such as Titen HD®, Stainless-Steel Titen HD or SET-3G®.
- Post bases do not provide adequate resistance to prevent members from rotating about the base and therefore are not recommended for non-top-supported installations (such as fences or unbraced carports).
- Place the base, cut washer(s) or load transfer plate(s) and nut(s) on the anchor bolt(s). Make any necessary adjustments to post placement and tighten the nut securely on the anchor bolt.
- Base anchors must extend less than 1" from concrete to avoid interference with standoff.
- See strongtie.com for information on hollow column installation.

ABW

Place the standoff base and then the post in the ABW and fasten on three vertical sides, using nails or Strong-Drive SD Connector screws

- Bend up the fourth side of the ABW and fasten using the correct fasteners

ABU

Place the standoff base and then the post in the ABU

- Fasten using nails or Strong-Drive SD Connector screws or bolts (ABU88Z, ABU1010Z, ABU1212Z – SDS optional)

ABA

Place the post in the ABA

- Fasten using nails or Strong-Drive SD Connector screws

Codes: See p. 12 for Code Reference Key Chart

Web Applications: Visit app.strongtie.com/pfd to access our Post-to-Foundation Designer web application.

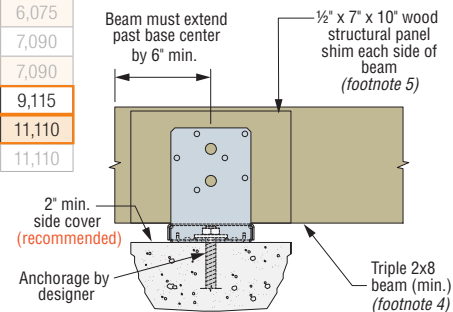
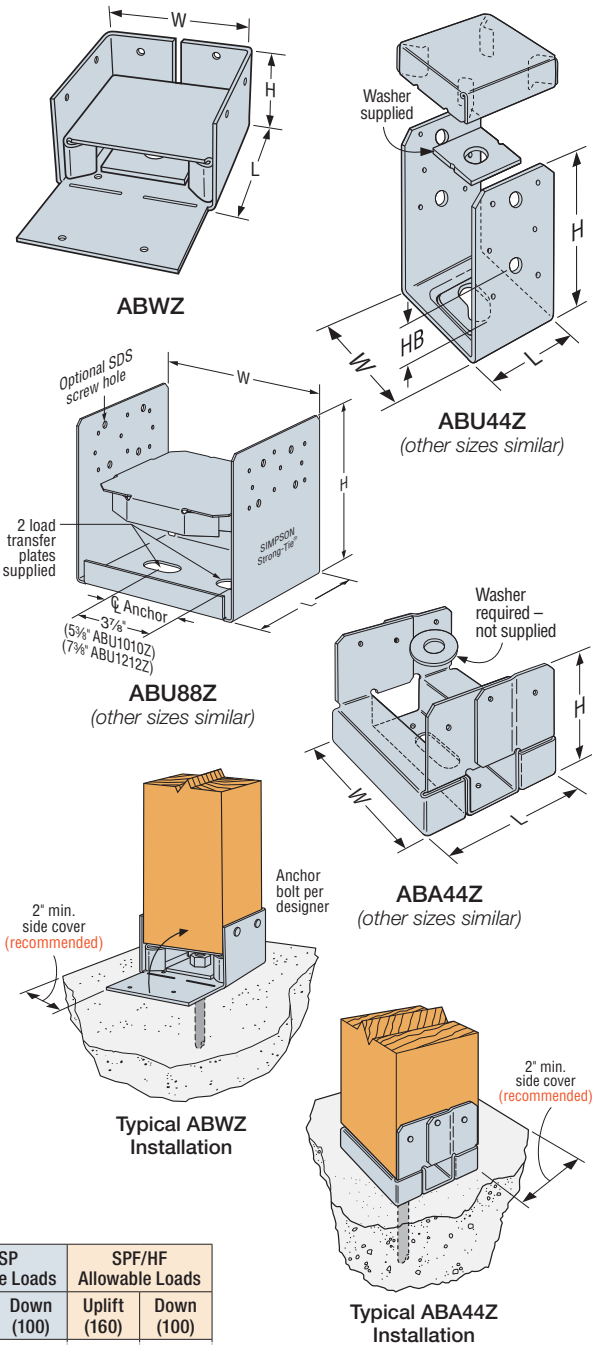


SD Many of these products are approved for installation with Strong-Drive SD Connector screws. See pp. 380–382 for more information.

Allowable Loads — Beam Installation

Model No.	Nominal Beam Size	Material (ga.)		Dimensions (in.)			Fasteners (in.)		DF/SP Allowable Loads		SPF/HF Allowable Loads	
		Base	Strap	W	L	H	Anchor Dia.	Nails	Uplift (160)	Down (100)	Uplift (160)	Down (100)
ABA24-ZZ	Double 2x	16	16	3 1/8	3 3/8	3 3/8	1/2	(6) 0.148 x 2 1/2	640	4,425	585	3,140
ABU46Z	Double 2x	12	12	3 3/8	5	7	5/8	(12) 0.162 x 3 1/2	2,030	8,475	1,820	6,075
ABU46Z	4x	12	12	3 3/8	5	7	5/8	(12) 0.162 x 3 1/2	2,155	9,890	1,850	7,090
ABU46RZ	Rough 4x	12	12	4 1/8	5	6 3/4	5/8	(12) 0.162 x 3 1/2	2,155	9,890	1,850	7,090
ABU66Z	Triple 2x	12	10	5 1/2	5	6 1/8	5/8	(12) 0.162 x 3 1/2	1,405	12,715	1,165	9,115
ABU66Z	6x	12	10	5 1/2	5	6 1/8	5/8	(12) 0.162 x 3 1/2	1,905	12,920	1,640	11,110
ABU66RZ	Rough 6x	12	10	6 1/8	5	5 1/8	5/8	(12) 0.162 x 3 1/2	1,905	12,920	1,640	11,110

- Uplift loads have been increased for earthquake or wind loading with no further increase allowed. Reduce where other loads govern.
- Downloads may not be increased for short-term loading.
- Specifier is to design concrete and anchorage for uplift capacity.
- Beam depth must be a minimum of 7 1/4".
- Shims are required for ABU46Z double 2x (1 shim) and ABU66Z triple 2x (2 shims) installations as shown in the illustration. Additional fastening of shim to beam is not required.
- Fasteners:** Nail dimensions are listed diameter by length. See pp. 25–26 for fastener information.



ABU66Z Beam Installation

Simpson Strong-Tie® Wood Construction Connectors

ABA/ABU/ABW



Adjustable and Standoff Post Bases (cont.)

These products are available with additional corrosion protection. For more information, see pp. 13–19.

SS For stainless-steel fasteners, see p. 25.

SD Many of these products are approved for installation with Strong-Drive® SD Connector screws. See pp. 380–382 for more information.

Allowable Loads — Post Installation

	Model No.	Nominal Post Size	Material (ga.)		Dimensions (in.)				Fasteners				DF/SP Allowable Loads			Code Ref.
			Base	Strap	W	L	H	HB	Anchor Dia. (in.)	Nails (in.)	Bolts		Uplift		Down (100)	
											Qty.	Dia. (in.)	Nails	Bolts		
🔩	ABA24-2Z	Double 2x4	16	16	3½	3¾	3½	—	½	(6) 0.148 x 2½	—	—	630	—	5,925	IBC, FL, LA
🔩	ABA44Z	4x4	16	16	3¾	3¾	3½	—	½	(6) 0.148 x 3	—	—	690	—	5,925	
🔩	ABW44Z	4x4	16	16	3¾	3¾	2¼	—	½	(8) 0.148 x 3	—	—	1,005	—	7,180	
SS	ABU44Z	4x4	16	12	3¾	3	5½	1¾	¾	(12) 0.162 x 3½	2	½	1,900	2,300	7,570	
🔩	ABA44RZ	Rough 4x4	16	16	4½	3¾	2¾	—	½	(6) 0.148 x 3	—	—	655	—	7,215	
🔩	ABW44RZ	Rough 4x4	16	16	4	4½	1¾	—	½	(8) 0.148 x 3	—	—	835	—	7,180	
🔩	ABU44RZ	Rough 4x4	16	12	4½	3	5¼	1½	¾	(12) 0.162 x 3½	2	½	1,900	2,300	7,570	
🔩	ABA46Z	4x6	14	14	3¾	5¾	3½	—	¾	(8) 0.162 x 3½	—	—	870	—	10,500	
🔩	ABW46Z	4x6	12	16	5¾	3¾	3	—	½	(10) 0.148 x 3	—	—	845	—	4,590	
SS	ABU46Z	4x6	12	12	3¾	5	7	2¾	¾	(12) 0.162 x 3½	2	½	2,405	2,265	12,520	
🔩	ABA46RZ	Rough 4x6	14	14	4½	5¾	2¾	—	¾	(8) 0.162 x 3½	—	—	870	—	10,695	
🔩	ABW46RZ	Rough 4x6	12	16	4	6	2¾	—	½	(10) 0.148 x 3	—	—	780	—	4,590	
🔩	ABU46RZ	Rough 4x6	12	12	4½	5	6¾	2¾	¾	(12) 0.162 x 3½	2	½	2,405	2,265	12,520	
🔩	ABU5-5Z	5½ x 5½	12	10	5¼	5	6½	1¾	¾	(12) 0.162 x 3½	2	½	2,235	2,235	10,570	
🔩	ABU5-6Z	5½ x 6	12	10	6½	5	6½	1¾	¾	(12) 0.162 x 3½	2	½	2,235	2,235	10,570	
🔩	ABU65Z	5½ x 5	12	10	5½	5	6½	1¾	¾	(12) 0.162 x 3½	—	—	2,475	—	10,960	
🔩	ABA66Z	6x6	14	14	5½	5¾	3½	—	¾	(8) 0.162 x 3½	—	—	920	—	11,415	
🔩	ABW66Z	6x6	12	14	5½	5¾	3	—	½	(12) 0.148 x 3	—	—	1,190	—	12,935	
SS	ABU66Z	6x6	12	10	5½	5	6½	1¾	¾	(12) 0.162 x 3½	2	½	2,475	2,190	18,205	
🔩	ABA66RZ	Rough 6x6	14	14	6	5¾	2¾	—	¾	(8) 0.162 x 3½	—	—	920	—	11,415	
🔩	ABW66RZ	Rough 6x6	12	14	6	6	2¾	—	½	(12) 0.148 x 3	—	—	1,190	—	12,935	
🔩	ABU66RZ	Rough 6x6	12	10	6½	5	5¾	1½	¾	(12) 0.162 x 3½	2	½	2,475	2,190	18,205	
🔩	ABW7-7Z	7½ x 7½	12	14	7¾	7¾	3	—	½	(12) 0.148 x 3	—	—	840	—	16,685	
SS	ABU88Z	8x8	14	12	7½	7	7	—	(2) ¾	(18) 0.162 x 3½	—	—	4,120	—	22,405	
🔩	ABU88RZ	Rough 8x8	14	12	8	7	6¾	—	(2) ¾	(18) 0.162 x 3½	—	—	4,045	—	19,870	
🔩	ABU1010Z	10x10	14	12	9½	9	7¼	—	(2) ¾	(22) 0.162 x 3½	—	—	2,270	—	32,020	
🔩	ABU1010RZ	Rough 10x10	14	12	10	9	7	—	(2) ¾	(22) 0.162 x 3½	—	—	1,830	—	31,650	
🔩	ABU1212Z	12x12	12	12	11½	11	7¼	—	(2) ¾	(22) 0.162 x 3½	—	—	3,000	—	34,745	
🔩	ABU1212RZ	Rough 12x12	12	12	12	11	7	—	(2) ¾	(22) 0.162 x 3½	—	—	3,000	—	34,745	

- Uplift loads have been increased for earthquake or wind loading with no further increase allowed. Reduce where other loads govern.
- Downloads may not be increased for short-term loading.
- Specifier is to design concrete and anchorage for uplift loads.
- Some ABU products may be installed with either bolts or nails (not both) to achieve table loads. ABU88Z, ABU88RZ, ABU1010Z, ABU1010RZ, ABU1212Z and ABU1212RZ may be installed with eight ¼" x 3" Strong-Drive SDS Heavy-Duty Connector screws (sold separately) for the same table load.
- All references to bolts are for structural-quality through bolts (not lag screws or carriage bolts) equal to or better than ASTM A307, Grade A.
- For higher downloads, pack grout solid under 1" standoff plate before installation. Base download on column or concrete, according to the code.
- HB dimension is the distance from the bottom of the post up to the first bolt hole.
- Structural composite lumber columns have sides that show either the wide face or the edges of the lumber strands/veneers. For SCL columns, the fasteners for these products should always be installed in the wide face. See technical bulletin T-C-SCLCLM at strongtie.com for more information.
- Downloads shall be reduced where limited by allowable loads of the post.
- Fasteners:** Nail dimensions are listed diameter by length. See pp. 25–26 for fastener information.

Simpson Strong-Tie® Wood Construction Connectors

CB



Column Base (cont.)

These products are available with additional corrosion protection. For more information, see pp. 13–19.

For stainless-steel fasteners, see p. 25.

	Model No.	Nominal Column Size	Dimensions (in.)		Column Fasteners		DF/SP/SPF/HF Allowable Uplift Loads (160)				Download (100)	Code Ref.
			W ₁	W ₂	Bolts		Wind and SDC A&B		SDC C–F			
					Qty.	Dia. (in.)	Uncracked	Cracked	Uncracked	Cracked		
SS	CB44	4x4	3⅞	3⅞	2	⅝	6,110	4,510	5,640	3,945	19,020	IBC, FL, LA
SS	CB46	4x6	3⅞	5½	2	⅝	6,110	4,510	5,640	3,945	28,585	
	CB48	4x8	3⅞	7½	2	⅝	6,110	4,510	5,640	3,945	35,970	
	CB5-4.5	Glulam	4½	5⅞	2	⅝	6110	4,510	5,640	3,945	38,055	—
	CB5-6	Glulam	6	5⅞	2	⅝	6110	4,510	5,640	3,945	50,740	
	CB64	6x4	5½	3⅞	2	⅝	6,110	4,510	5,640	3,945	28,585	
SS	CB66	6x6	5½	5½	2	⅝	6,110	4,510	5,640	3,945	30,250	IBC, FL, LA
	CB6-7	6x	5½	7	2	⅝	6,110	4,510	5,640	3,945	38,500	—
	CB68	6x8	5½	7½	2	⅝	6,110	4,510	5,640	3,945	41,250	IBC, FL, LA
	CB610	6x10	5½	9½	2	⅝	6,445	4,510	5,640	3,945	52,250	
	CB612	6x12	5½	11½	2	⅝	6,445	4,510	5,640	3,945	63,250	
	CB7 1/8-4	PSL	7⅞	3½	2	¾	6,445	4,510	5,640	3,945	41,145	
	CB7 1/8-6	PSL	7⅞	5½	2	¾	6,445	4,510	5,640	3,945	64,660	
	CB7 1/8-7	PSL	7⅞	7	2	¾	6,445	4,510	5,640	3,945	78,410	
	CB7-6	Glulam	6	6¾	2	¾	6,445	4,510	5,640	3,945	66,825	
	CB7-7.5	Glulam	7½	6¾	2	¾	6,445	4,510	5,640	3,945	79,345	
	CB7-9	Glulam	9	6¾	2	¾	6,445	4,510	5,640	3,945	91,620	
	CB7-10.5	Glulam	10½	6¾	2	¾	6,445	4,510	5,640	3,945	103,790	
	CB86	8x6	7½	5½	2	¾	6,110	4,510	5,640	3,945	41,250	
	CB88	8x8	7½	7½	2	¾	6,445	4,510	5,640	3,945	56,250	
	CB810	8x10	7½	9½	2	¾	6,445	4,510	5,640	3,945	71,250	
	CB812	8x12	7½	11½	2	¾	6,445	4,510	5,640	3,945	86,250	
	CB9-6	Glulam	6	8¾	2	¾	6,445	4,510	5,640	3,945	81,940	
	CB9-7.5	Glulam	7½	8¾	2	¾	6,445	4,510	5,640	3,945	97,165	
	CB9-9	Glulam	9	8¾	2	¾	6,445	4,510	5,640	3,945	112,200	
	CB9-10.5	Glulam	10½	8¾	2	¾	6,445	4,510	5,640	3,945	127,105	
	CB1010	10x10	9½	9½	2	¾	6,445	4,510	5,640	3,945	90,250	
	CB1012	10x12	9½	11½	2	¾	6,445	4,510	5,640	3,945	109,250	
	CB1212	12x12	11½	11½	2	¾	6,445	4,510	5,640	3,945	132,250	

1. Uplift loads may not be increased for duration of load.
2. Concrete shall have a minimum compressive strength of $f'_c = 2,500$ psi.
3. Multiply seismic and wind ASD uplift and lateral load values by 1.43 or 1.67, respectively, to obtain LRFD capacities.
4. In accordance with IBC, Section 1613.1, detached one- and two-family dwellings in Seismic Design Category (SDC) C may use "Wind and SDC A&B" allowable loads.
5. Downloads shall be reduced where limited by capacity of the post.
6. Designer is responsible for concrete design.
7. All references to bolts are for structural quality through bolts (not lag screws or carriage bolts) equal to or better than ASTM A307, Grade A.
8. Tabulated allowable download is based on capacity determined from following compression-parallel-to-grain stress (F_{all}) for wood post: 1,650 psi for glulam, 1,350 psi for 4"-wide sawn lumber, and 1,000 psi for 5"-wide or wider sawn lumber, as applicable.

Simpson Strong-Tie® Wood Construction Connectors

CCQ™/ECCQ™



Column Caps (cont.)

These products are available with additional corrosion protection. For more information, see pp. 13–19.

For stainless-steel fasteners, see p. 25.

	Model No.	Beam Width (in.)	Dimensions (in.)					No. of 1/4" x 2 1/2" SDS Screws			DF/SP Allowable Loads				Code Ref.	CCOQ/ECCOQ Model No. (No Legs)
			W ₁	W ₂	L		H				Beam		Post	CCQ		
					CCQ	ECCQ		Uplift (160)	Down (100)	Uplift (160)	Down (100)					
SS	CCQ3-4SDS2.5	3½	3¼	3%	11	8½	7	16	14	14	5,370	16,980	3,465	6,125		CCOQ3-SDS2.5 ECCOQ3-SDS2.5
SS	CCQ3-6SDS2.5	3½	3¼	5½	11	8½	7	16	14	14	5,370	21,485	3,465	10,740		
SS	CCQ44SDS2.5	3½	3%	3%	11	8½	7	16	14	14	5,370	19,020	3,785	7,655		CCOQ4-SDS2.5 ECCOQ4-SDS2.5
SS	CCQ46SDS2.5	3½	3%	5½	11	8½	7	16	14	14	6,785	24,065	3,785	12,030		
SS	CCQ48SDS2.5	3½	3%	7½	11	8½	7	16	14	14	6,785	24,065	3,785	16,405		CCOQ4.62-SDS2.5 ECCOQ4.62-SDS2.5
SS	CCQ4.62-3.62SDS	4½	4%	3%	11	8½	7	16	14	14	5,370	23,390	3,785	9,845		
SS	CCQ4.62-4.62SDS	4½	4%	4%	11	8½	7	16	14	14	5,370	30,070	3,785	12,655		
SS	CCQ4.62-5.50SDS	4½	4%	5½	11	8½	7	16	14	14	6,785	30,940	3,785	15,470		
SS	CCQ5-4SDS2.5	5%	5¼	3%	11	8½	7	16	14	14	5,370	26,635	3,785	11,210		CCOQ5-SDS2.5 ECCOQ5-SDS2.5
SS	CCQ5-6SDS2.5	5%	5¼	5½	11	8½	7	16	14	14	6,785	28,190	5,355	17,615		
SS	CCQ5-8SDS2.5	5%	5¼	7½	11	8½	7	16	14	14	6,785	35,235	5,355	24,025		
SS	CCQ64SDS2.5	5¼, 5½	5½	3%	11	8½	7	16	14	14	5,370	28,585	3,785	12,030		
SS	CCQ66SDS2.5	5¼, 5½	5½	5½	11	8½	7	16	14	14	6,785	30,250	3,785	18,905		CCOQ6-SDS2.5
SS	CCQ68SDS2.5	5¼, 5½	5½	7½	11	8½	7	16	14	14	6,785	37,815	3,785	25,780	IBC, FL, LA	ECCOQ6-SDS2.5
SS	CCQ6-7.13SDS2.5	5¼, 5½	5½	7½	11	8½	7	16	14	14	6,785	37,815	3,785	24,490		CCOQ7-SDS2.5 ECCOQ7-SDS2.5
SS	CCQ74SDS2.5	6¾	6%	3%	11	8½	7	16	14	14	5,370	33,490	3,785	15,355		
SS	CCQ76SDS2.5	6¾	6%	5½	11	8½	7	16	14	14	6,785	37,125	5,355	24,130		
SS	CCQ77SDS2.5	6¾	6%	6%	11	8½	7	16	14	14	6,785	48,265	5,355	29,615		
SS	CCQ78SDS2.5	6¾	6%	7½	11	8½	7	16	14	14	6,785	48,265	5,355	32,905		CCOQ7.12-SDS2.5 ECCOQ7.12-SDS2.5
SS	CCQ7.1-4SDS2.5	7	7%	3%	11	8½	7	16	14	14	5,370	34,730	3,785	18,375		
SS	CCQ7.1-6SDS2.5	7	7%	5½	11	8½	7	16	14	14	6,785	38,500	5,355	28,875		
SS	CCQ7.1-7.1SDS2.5	7	7%	7½	11	8½	7	16	14	14	6,785	57,750	5,355	36,750		
SS	CCQ7.1-8SDS2.5	7	7%	7½	11	8½	7	16	14	14	6,785	52,500	5,355	39,375		CCOQ8-SDS2.5 ECCOQ8-SDS2.5
SS	CCQ84SDS2.5	7½	7½	3%	11	8½	7	16	14	14	6,785	37,210	5,355	16,405		
SS	CCQ86SDS2.5	7½	7½	5½	11	8½	7	16	14	14	6,785	41,250	5,355	25,780		
SS	CCQ88SDS2.5	7½	7½	7½	11	8½	7	16	14	14	6,785	51,565	5,355	35,155		
SS	CCQ94SDS2.5	8¾	8%	3%	11	8½	7	16	14	14	6,785	47,545	5,355	19,905	CCOQ9-SDS2.5 ECCOQ9-SDS2.5	
SS	CCQ96SDS2.5	8¾	8%	5½	11	8½	7	16	14	14	6,785	48,125	5,355	31,280		
SS	CCQ98SDS2.5	8¾	8%	7½	11	8½	7	16	14	14	6,785	62,565	5,355	42,655		
SS	CCQ106SDS2.5	9¼	9½	5½	11	8½	7	16	14	14	6,785	52,250	5,355	32,655		CCOQ10-SDS2.5 ECCOQ10-SDS2.5

1. Uplift loads have been increased for earthquake or wind loading with no further increase allowed. Reduce where other loads govern.
2. Downloads shall be reduced where limited by capacity of the post.
3. Uplift loads do not apply to spliced conditions. Spliced conditions must be detailed by the designer to transfer tension loads between spliced members by means other than the post cap.
4. Spliced conditions must be detailed by the designer to transfer tension loads between spliced members by means other than the column cap.
5. Column sides are assumed to be aligned in the same vertical plane as the beam sides. CCQ4.62 models assume a minimum 3½"-wide post.
6. Structural composite lumber columns have sides that show either the wide face or the edges of the lumber strands/veneers known as the narrow face. Values in the tables reflect installation into the wide face. See technical bulletin T-C-SCLCLM at strongtie.com for load reductions resulting from narrow-face installations.
7. Beam depth must be a minimum of 7".
8. For 5¼" engineered lumber, use 5½" models.
9. CCOQ and ECCOQ welded to a steel column will achieve maximum load listed for the beam and the post cap as CCQ and ECCQ. The steel column width shall match the beam width. Weld by designer.

Simpson Strong-Tie® Wood Construction Connectors

Face-Mount Hangers — Solid Sawn Lumber (DF/SP)

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The Simpson Strong-Tie Hanger Selector enables you to select the most optimum product for your project. Visit app.strongtie.com/hs to access our Hanger Selector web application that takes into consideration all the characteristics seen in this catalog.



These products are available with additional corrosion protection. For more information, see pp. 13–19.

SS For stainless-steel fasteners, see p. 25.

SD Many of these products are approved for installation with Strong-Drive® SD Connector screws. See pp. 380–382 for more information.

Solid Sawn Joist Hangers

Joist Size	Model No.	Ga.	Dimensions (in.)			Min./Max.	Fasteners (in.)		DF/SP Allowable Loads (lb.)				Installed Cost Index (ICI)	Code Ref.
			W	H	B		Header	Joist	Uplift (160)	Floor (100)	Snow (115)	Roof (125)		
Sawn Lumber Sizes														
2X4	LU24	20	1 5⁄8	3 3⁄8	1 1⁄2	—	(4) 0.162 x 3 1⁄2	(2) 0.148 x 1 1⁄2	240	555	630	655	Lowest	IBC, FL, LA
	LUS24	18	1 5⁄8	3 3⁄8	1 3⁄4	—	(4) 0.148 x 3	(2) 0.148 x 3	435	670	765	820	3%	
	U24	16	1 5⁄8	3 3⁄8	1 1⁄2	—	(4) 0.162 x 3 1⁄2	(2) 0.148 x 1 1⁄2	240	575	650	705	67%	
	HU26	14	1 5⁄8	3 1⁄8	2 1⁄4	—	(4) 0.162 x 3 1⁄2	(2) 0.148 x 1 1⁄2	305	595	670	720	295%	
DBL 2X4	LUS24-2	18	3 3⁄8	3 3⁄8	2	—	(4) 0.162 x 3 1⁄2	(2) 0.162 x 3 1⁄2	410	800	905	980	Lowest	
	U24-2	16	3 3⁄8	3	2	—	(4) 0.162 x 3 1⁄2	(2) 0.148 x 3	240	575	650	705	33%	
	HU24-2 / HUC24-2	14	3 3⁄8	3 1⁄8	2 1⁄2	—	(4) 0.162 x 3 1⁄2	(2) 0.148 x 3	380	595	670	720	240%	
	LUS26	18	1 5⁄8	4 3⁄4	1 3⁄4	—	(4) 0.148 x 3	(4) 0.148 x 3	1,165	865	990	1,060	Lowest	
	LU26	20	1 5⁄8	4 3⁄4	1 1⁄2	—	(6) 0.162 x 3 1⁄2	(4) 0.148 x 1 1⁄2	540	835	950	1,030	6%	
2x6	U26	16	1 5⁄8	4 3⁄4	2	—	(6) 0.162 x 3 1⁄2	(4) 0.148 x 1 1⁄2	535	865	980	1,055	43%	
	LUC26Z	18	1 5⁄8	4 3⁄4	1 3⁄4	—	(6) 0.162 x 3 1⁄2	(4) 0.148 x 1 1⁄2	730	845	965	1,040	160%	
	HU26	14	1 5⁄8	3 1⁄8	2 1⁄4	—	(4) 0.162 x 3 1⁄2	(2) 0.148 x 1 1⁄2	305	595	670	720	179%	
	HUS26	16	1 5⁄8	5 3⁄8	3	—	(14) 0.162 x 3 1⁄2	(6) 0.162 x 3 1⁄2	1,320	2,735	3,095	3,230	276%	
DBL 2X6	LUS26-2	18	3 3⁄8	4 7⁄8	2	—	(4) 0.162 x 3 1⁄2	(4) 0.162 x 3 1⁄2	1,060	1,030	1,170	1,265	Lowest	
	U26-2	16	3 3⁄8	5	2	—	(8) 0.162 x 3 1⁄2	(4) 0.148 x 3	535	1,150	1,305	1,410	65%	
	HUS26-2	14	3 3⁄8	5 3⁄8	2	—	(4) 0.162 x 3 1⁄2	(4) 0.162 x 3 1⁄2	1,165	1,090	1,225	1,320	172%	
	HU26-2 / HUC26-2	14	3 3⁄8	4 15⁄16	2 1⁄2	Min.	(8) 0.162 x 3 1⁄2	(4) 0.148 x 3	755	1,190	1,345	1,440	233%	
		14	3 3⁄8	4 15⁄16	2 1⁄2	Max.	(12) 0.162 x 3 1⁄2	(6) 0.148 x 3	1,135	1,785	2,015	2,165	254%	
TPL 2x6	LUS26-3	18	4 5⁄8	4 1⁄8	2	—	(4) 0.162 x 3 1⁄2	(4) 0.162 x 3 1⁄2	1,060	1,030	1,170	1,265	*	
	U26-3	16	4 5⁄8	4 1⁄4	2	—	(8) 0.162 x 3 1⁄2	(4) 0.148 x 3	535	1,150	1,305	1,410	*	
	HU26-3 / HUC26-3	14	4 11⁄16	4 5⁄8	2 1⁄2	Min.	(8) 0.162 x 3 1⁄2	(4) 0.148 x 3	755	1,190	1,345	1,440	*	
		14	4 11⁄16	4 5⁄8	2 1⁄2	Max.	(12) 0.162 x 3 1⁄2	(6) 0.148 x 3	1,135	1,785	2,015	2,165	*	
	LUS26	18	1 5⁄8	4 3⁄4	1 3⁄4	—	(4) 0.148 x 3	(4) 0.148 x 3	1,165	865	990	1,060	Lowest	
	LU26	20	1 5⁄8	4 3⁄4	1 1⁄2	—	(6) 0.162 x 3 1⁄2	(4) 0.148 x 1 1⁄2	540	835	950	1,030	6%	
2x8	LUS28	18	1 5⁄8	6 3⁄8	1 3⁄4	—	(6) 0.148 x 3	(4) 0.148 x 3	1,165	1,100	1,260	1,350	23%	
	LU28	20	1 5⁄8	6 3⁄8	1 1⁄2	—	(8) 0.162 x 3 1⁄2	(6) 0.148 x 1 1⁄2	850	1,110	1,180	1,180	39%	
	U26	16	1 5⁄8	4 3⁄4	2	—	(6) 0.162 x 3 1⁄2	(4) 0.148 x 1 1⁄2	535	865	980	1,055	43%	
	LUC26Z	18	1 5⁄8	4 3⁄4	1 3⁄4	—	(6) 0.162 x 3 1⁄2	(4) 0.148 x 1 1⁄2	730	845	965	1,040	160%	
	HU28	14	1 5⁄8	5 1⁄4	2 1⁄4	—	(6) 0.162 x 3 1⁄2	(4) 0.148 x 1 1⁄2	605	895	1,010	1,080	251%	
	HUS26	16	1 5⁄8	5 3⁄8	3	—	(14) 0.162 x 3 1⁄2	(6) 0.162 x 3 1⁄2	1,320	2,735	3,095	3,230	276%	
	HUS28	16	1 5⁄8	7 1⁄8	3	—	(22) 0.162 x 3 1⁄2	(8) 0.162 x 3 1⁄2	1,760	4,095	4,095	4,095	409%	
DBL 2x8	LUS26-2	18	3 3⁄8	4 7⁄8	2	—	(4) 0.162 x 3 1⁄2	(4) 0.162 x 3 1⁄2	1,060	1,030	1,170	1,265	Lowest	
	LUS28-2	18	3 3⁄8	7	2	—	(6) 0.162 x 3 1⁄2	(4) 0.162 x 3 1⁄2	1,060	1,315	1,490	1,610	8%	
	U26-2	16	3 3⁄8	5	2	—	(8) 0.162 x 3 1⁄2	(4) 0.148 x 3	535	1,150	1,305	1,410	65%	
	HUS28-2	14	3 3⁄8	7 3⁄8	2	—	(6) 0.162 x 3 1⁄2	(6) 0.162 x 3 1⁄2	1,320	1,630	1,840	1,980	188%	
		HU28-2 / HUC28-2	14	3 3⁄8	6 5⁄8	2 1⁄2	Min.	(10) 0.162 x 3 1⁄2	(4) 0.148 x 3	755	1,490	1,680	1,800	397%
			14	3 3⁄8	6 5⁄8	2 1⁄2	Max.	(14) 0.162 x 3 1⁄2	(6) 0.148 x 3	1,135	2,085	2,350	2,530	418%
TPL 2X8	LUS28-3	18	4 5⁄8	6 1⁄4	2	—	(6) 0.162 x 3 1⁄2	(4) 0.162 x 3 1⁄2	1,060	1,315	1,490	1,610	*	
	U26-3	16	4 5⁄8	4 1⁄4	2	—	(8) 0.162 x 3 1⁄2	(4) 0.148 x 3	535	1,150	1,305	1,410	*	
	HU26-3 / HUC26-3	14	4 11⁄16	4 5⁄8	2 1⁄2	Min.	(8) 0.162 x 3 1⁄2	(4) 0.148 x 3	755	1,190	1,345	1,440	*	
		14	4 11⁄16	4 5⁄8	2 1⁄2	Max.	(12) 0.162 x 3 1⁄2	(6) 0.148 x 3	1,135	1,785	2,015	2,165	*	
QUAD 2X8	HU28-4 / HUC28-4	14	6 1⁄8	7	2 1⁄2	Min.	(10) 0.162 x 3 1⁄2	(4) 0.162 x 3 1⁄2	755	1,490	1,680	1,800	*	
		14	6 1⁄8	7	2 1⁄2	Max.	(14) 0.162 x 3 1⁄2	(6) 0.162 x 3 1⁄2	1,135	2,085	2,350	2,530	*	

See footnotes on p. 118.

Codes: See p. 12 for Code Reference Key Chart

Simpson Strong-Tie® Wood Construction Connectors

Face-Mount Hangers — Solid Sawn Lumber (DF/SP)

SIMPSON
Strong-Tie®

These products are available with additional corrosion protection. For more information, see pp. 13–19.

SS For stainless-steel fasteners, see p. 25.**SD** Many of these products are approved for installation with Strong-Drive® SD Connector screws. See pp. 380–382 for more information.

Joist Size	Model No.	Ga.	Dimensions (in.)			Min./Max.	Fasteners (in.)		DF/SP Allowable Loads (lb.)				Installed Cost Index (ICI)	Code Ref.	
			W	H	B		Header	Joist	Uplift (160)	Floor (100)	Snow (115)	Roof (125)			
Sawn Lumber Sizes															
	U314	16	2⅞	10½	2	—	(16) 0.162 x 3½	(6) 0.148 x 1½	990	2,305	2,610	2,815	*		
SS	3x14	HU314 / HUC314	14	2⅞	12⅞	2½	—	(18) 0.162 x 3½	(8) 0.148 x 1½	1,510	2,680	3,025	3,240	*	
		HUCQ310-SDS	14	2⅞	9	3	—	(8) ¼ x 2½ SDS	(4) ¼ x 2½ SDS	1,350	3,120	3,590	3,860	*	
	3x16	U314	16	2⅞	10½	2	—	(16) 0.162 x 3½	(6) 0.148 x 1½	990	2,305	2,610	2,815	*	
		HU316 / HUC316	14	2⅞	14⅜	2½	—	(20) 0.162 x 3½	(8) 0.148 x 1½	1,510	2,980	3,360	3,600	*	
SS	4x4	LUS44	18	3⅞	3	2	—	(4) 0.162 x 3½	(2) 0.162 x 3½	410	800	905	980	Lowest	
		U44	16	3⅞	2⅞	2	—	(4) 0.162 x 3½	(2) 0.148 x 3	240	575	650	705	20%	
		HU44 / HUC44	14	3⅞	2⅞	2½	—	(4) 0.162 x 3½	(2) 0.148 x 3	380	595	670	720	161%	
SS	4x6	LUS46	18	3⅞	4¾	2	—	(4) 0.162 x 3½	(4) 0.162 x 3½	1,060	1,030	1,170	1,265	Lowest	
		U46	16	3⅞	4⅞	2	—	(8) 0.162 x 3½	(4) 0.148 x 3	535	1,150	1,305	1,410	37%	
		HUS46	14	3⅞	4⅞	2	—	(4) 0.162 x 3½	(4) 0.162 x 3½	1,165	1,090	1,225	1,320	152%	
SS		HU46 / HUC46	14	3⅞	4¾	2½	Min.	(8) 0.162 x 3½	(4) 0.148 x 3	755	1,190	1,345	1,440	163%	
			14	3⅞	4¾	2½	Max.	(12) 0.162 x 3½	(6) 0.148 x 3	1,135	1,785	2,015	2,165	185%	
SS	4x8	LUS46	18	3⅞	4¾	2	—	(4) 0.162 x 3½	(4) 0.162 x 3½	1,060	1,030	1,170	1,265	Lowest	
		U46	16	3⅞	4⅞	2	—	(8) 0.162 x 3½	(4) 0.148 x 3	535	1,150	1,305	1,410	37%	
		LUS48	18	3⅞	6¾	2	—	(6) 0.162 x 3½	(4) 0.162 x 3½	1,060	1,315	1,490	1,610	40%	
		HUS48	14	3⅞	6⅞	2	—	(6) 0.162 x 3½	(6) 0.162 x 3½	1,320	1,630	1,840	1,980	203%	
		HU48 / HUC48	14	3⅞	6⅞	2½	Min.	(10) 0.162 x 3½	(4) 0.148 x 3	755	1,490	1,680	1,800	213%	
			14	3⅞	6⅞	2½	Max.	(14) 0.162 x 3½	(6) 0.148 x 3	1,135	2,085	2,350	2,530	235%	
SS	4x10	LUS48	18	3⅞	6¾	2	—	(6) 0.162 x 3½	(4) 0.162 x 3½	1,060	1,315	1,490	1,610	Lowest	
		LUS410	18	3⅞	8¾	2	—	(8) 0.162 x 3½	(6) 0.162 x 3½	1,445	1,830	2,075	2,245	19%	
		U410	16	3⅞	8¾	2	—	(14) 0.162 x 3½	(6) 0.148 x 3	990	2,015	2,280	2,465	74%	
		HUS410	14	3⅞	8⅞	2	—	(8) 0.162 x 3½	(8) 0.162 x 3½	3,285	2,175	2,455	2,640	154%	
		HU410 / HUC410	14	3⅞	8¾	2½	Min.	(14) 0.162 x 3½	(6) 0.148 x 3	1,135	2,085	2,350	2,520	232%	
SS			14	3⅞	8¾	2½	Max.	(18) 0.162 x 3½	(10) 0.148 x 3	1,795	2,680	3,020	3,250	253%	
		HUCQ410-SDS	14	3⅞	9	3	—	(12) ¼ x 2½ SDS	(6) ¼ x 2½ SDS	2,265	4,500	4,500	4,500	*	
SS	4x12	LUS410	18	3⅞	8¾	2	—	(8) 0.162 x 3½	(6) 0.162 x 3½	1,445	1,830	2,075	2,245	Lowest	
		LUS414	18	3⅞	10¾	2	—	(10) 0.162 x 3½	(6) 0.162 x 3½	1,445	2,110	2,395	2,590	33%	
		U410	16	3⅞	8¾	2	—	(14) 0.162 x 3½	(6) 0.148 x 3	990	2,015	2,280	2,465	46%	
		HUS410	14	3⅞	8⅞	2	—	(8) 0.162 x 3½	(8) 0.162 x 3½	3,220	2,110	2,385	2,575	114%	
		HUS412	14	3⅞	10¾	2	—	(10) 0.162 x 3½	(10) 0.162 x 3½	3,435	2,720	3,070	3,300	129%	
SS		HU412 / HUC412	14	3⅞	10¾	2½	Min.	(16) 0.162 x 3½	(6) 0.148 x 3	1,135	2,385	2,690	2,880	268%	
			14	3⅞	10¾	2½	Max.	(22) 0.162 x 3½	(10) 0.148 x 3	1,795	3,275	3,695	3,970	290%	
SS		HUCQ410-SDS	14	3⅞	9	3	—	(12) ¼ x 2½ SDS	(6) ¼ x 2½ SDS	2,265	4,500	4,500	4,500	*	
SS		HUCQ412-SDS	14	3⅞	11	3	—	(14) ¼ x 2½ SDS	(6) ¼ x 2½ SDS	2,265	5,045	5,045	5,045	*	
SS	4x14	LUS410	18	3⅞	8¾	2	—	(8) 0.162 x 3½	(6) 0.162 x 3½	1,445	1,830	2,075	2,245	Lowest	
		LUS414	18	3⅞	10¾	2	—	(10) 0.162 x 3½	(6) 0.162 x 3½	1,445	2,110	2,395	2,590	33%	
		U414	16	3⅞	10	2	—	(16) 0.162 x 3½	(6) 0.148 x 3	990	2,305	2,610	2,815	93%	
		HUS412	14	3⅞	10¾	2	—	(10) 0.162 x 3½	(10) 0.162 x 3½	3,435	2,720	3,070	3,300	129%	
		HU414 / HUC414	14	3⅞	11⅞	2½	Min.	(18) 0.162 x 3½	(8) 0.148 x 3	1,510	2,680	3,025	3,240	333%	
			14	3⅞	11⅞	2½	Max.	(24) 0.162 x 3½	(12) 0.148 x 3	2,015	3,570	4,030	4,335	355%	
		HUCQ412-SDS	14	3⅞	11	3	—	(14) ¼ x 2½ SDS	(6) ¼ x 2½ SDS	2,265	5,045	5,045	5,045	*	

Solid Sawn Joist Hangers

IBC,
FL, LA

See footnotes on p. 118.

Codes: See p. 12 for Code Reference Key Chart

Simpson Strong-Tie® Wood Construction Connectors

Face-Mount Hangers — Solid Sawn Lumber (DF/SP)

SIMPSON
Strong-Tie

These products are available with additional corrosion protection. For more information, see pp. 13–19.

SS For stainless-steel fasteners, see p. 25.

SD Many of these products are approved for installation with Strong-Drive® SD Connector screws. See pp. 380–382 for more information.

Solid Sawn Joist Hangers

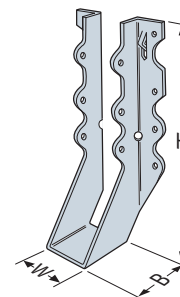
Joist Size	Model No.	Ga.	Dimensions (in.)			Min./Max.	Fasteners (in.)		DF/SP Allowable Loads (lb.)				Installed Cost Index (ICI)	Code Ref.
			W	H	B		Header	Joist	Uplift (160)	Floor (100)	Snow (115)	Roof (125)		
Sawn Lumber Sizes														
4x16	U414	16	3 ³ / ₈	10	2	—	(16) 0.162 x 3 1/2	(6) 0.148 x 3	990	2,305	2,610	2,815	Lowest	
	HUS412	14	3 ³ / ₈	10 ³ / ₄	2	—	(10) 0.162 x 3 1/2	(10) 0.162 x 3 1/2	3,435	2,720	3,070	3,300	19%	
	HU416 / HUC416	14	3 ³ / ₈	13 ¹ / ₄	2 1/2	Min.	(20) 0.162 x 3 1/2	(8) 0.148 x 3	1,510	2,980	3,360	3,600	167%	
		14	3 ³ / ₈	13 ¹ / ₄	2 1/2	Max.	(26) 0.162 x 3 1/2	(12) 0.148 x 3	2,015	3,870	4,365	4,695	178%	
6x6	U66	16	5 1/2	5	2	—	(8) 0.162 x 3 1/2	(4) 0.148 x 3	535	1,150	1,305	1,410	*	
	HU66 / HUC66	14	5 1/2	4 ³ / ₈	2 1/2	Min.	(8) 0.162 x 3 1/2	(4) 0.162 x 3 1/2	895	1,190	1,345	1,440	*	
		14	5 1/2	4 ³ / ₈	2 1/2	Max.	(12) 0.162 x 3 1/2	(6) 0.162 x 3 1/2	1,345	1,785	2,015	2,165	*	
6x8	U66	16	5 1/2	5	2	—	(8) 0.162 x 3 1/2	(4) 0.148 x 3	535	1,150	1,305	1,410	*	
	HU68 / HUC68	14	5 1/2	5 ¹ / ₈	2 1/2	Min.	(10) 0.162 x 3 1/2	(4) 0.162 x 3 1/2	895	1,490	1,680	1,800	*	
		14	5 1/2	5 ¹ / ₈	2 1/2	Max.	(14) 0.162 x 3 1/2	(6) 0.162 x 3 1/2	1,345	2,085	2,350	2,530	*	
	U610	16	5 1/2	8 1/2	2	—	(14) 0.162 x 3 1/2	(6) 0.148 x 3	990	2,015	2,280	2,465	*	
6x10	HU610 / HUC610	14	5 1/2	7 ⁵ / ₈	2 1/2	Min.	(14) 0.162 x 3 1/2	(6) 0.162 x 3 1/2	1,345	2,085	2,350	2,520	*	
		14	5 1/2	7 ⁵ / ₈	2 1/2	Max.	(18) 0.162 x 3 1/2	(8) 0.162 x 3 1/2	1,795	2,680	3,020	3,250	*	
	HUCQ610-SDS	14	5 1/2	9	3	—	(12) 1/4 x 2 1/2 SDS	(6) 1/4 x 2 1/2 SDS	2,325	4,680	5,185	5,185	*	
6x12	HU612 / HUC612	14	5 1/2	9 ³ / ₈	2 1/2	Min.	(16) 0.162 x 3 1/2	(6) 0.162 x 3 1/2	1,345	2,385	2,690	2,880	*	
		14	5 1/2	9 ³ / ₈	2 1/2	Max.	(22) 0.162 x 3 1/2	(8) 0.162 x 3 1/2	1,795	3,275	3,695	3,970	*	
	HUCQ610-SDS	14	5 1/2	9	3	—	(12) 1/4 x 2 1/2 SDS	(6) 1/4 x 2 1/2 SDS	2,325	4,680	5,185	5,185	*	
	HUCQ612-SDS	14	5 1/2	11	3	—	(14) 1/4 x 2 1/2 SDS	(6) 1/4 x 2 1/2 SDS	2,325	5,185	5,185	5,185	*	IBC, FL, LA
6x14	HU614 / HUC614	14	5 1/2	11 ³ / ₈	2 1/2	Min.	(18) 0.162 x 3 1/2	(8) 0.162 x 3 1/2	1,780	2,680	3,025	3,240	*	
		14	5 1/2	11 ³ / ₈	2 1/2	Max.	(24) 0.162 x 3 1/2	(12) 0.162 x 3 1/2	2,695	3,570	4,030	4,335	*	
	HUCQ610-SDS	14	5 1/2	9	3	—	(12) 1/4 x 2 1/2 SDS	(6) 1/4 x 2 1/2 SDS	2,325	4,680	5,185	5,185	*	
	HUCQ612-SDS	14	5 1/2	11	3	—	(14) 1/4 x 2 1/2 SDS	(6) 1/4 x 2 1/2 SDS	2,325	5,185	5,185	5,185	*	
6x16	HU616 / HUC616	14	5 1/2	13 ³ / ₈	2 1/2	Min.	(20) 0.162 x 3 1/2	(8) 0.162 x 3 1/2	1,780	2,980	3,360	3,600	*	
		14	5 1/2	13 ³ / ₈	2 1/2	Max.	(26) 0.162 x 3 1/2	(12) 0.162 x 3 1/2	2,695	3,870	4,365	4,695	*	
	HUCQ612-SDS	14	5 1/2	11	3	—	(14) 1/4 x 2 1/2 SDS	(6) 1/4 x 2 1/2 SDS	2,325	5,185	5,185	5,185	*	
8x8	HU88 / HUC88	14	7 1/2	6 ³ / ₈	2 1/2	Min.	(10) 0.162 x 3 1/2	(4) 0.162 x 3 1/2	895	1,490	1,680	1,800	*	
		14	7 1/2	6 ³ / ₈	2 1/2	Max.	(14) 0.162 x 3 1/2	(6) 0.162 x 3 1/2	1,345	2,085	2,350	2,530	*	
8x10	HU810 / HUC810	14	7 1/2	8 ³ / ₈	2 1/2	Min.	(14) 0.162 x 3 1/2	(6) 0.162 x 3 1/2	1,345	2,085	2,350	2,520	*	
		14	7 1/2	8 ³ / ₈	2 1/2	Max.	(18) 0.162 x 3 1/2	(8) 0.162 x 3 1/2	1,795	2,680	3,020	3,250	*	
8x12	HU812 / HUC812	14	7 1/2	10 ³ / ₈	2 1/2	Min.	(16) 0.162 x 3 1/2	(6) 0.162 x 3 1/2	1,345	2,385	2,690	2,880	*	
		14	7 1/2	10 ³ / ₈	2 1/2	Max.	(22) 0.162 x 3 1/2	(8) 0.162 x 3 1/2	1,795	3,275	3,695	3,970	*	
8x14	HU814 / HUC814	14	7 1/2	11 ³ / ₈	2 1/2	Min.	(18) 0.162 x 3 1/2	(8) 0.162 x 3 1/2	1,780	2,680	3,025	3,240	*	
		14	7 1/2	11 ³ / ₈	2 1/2	Max.	(24) 0.162 x 3 1/2	(12) 0.162 x 3 1/2	2,695	3,570	4,030	4,335	*	
8x16	HU816 / HUC816	14	7 1/2	13 ³ / ₈	2 1/2	Min.	(20) 0.162 x 3 1/2	(8) 0.162 x 3 1/2	1,780	2,980	3,360	3,600	*	
		14	7 1/2	13 ³ / ₈	2 1/2	Max.	(26) 0.162 x 3 1/2	(12) 0.162 x 3 1/2	2,695	3,870	4,365	4,695	*	

- Uplift loads have been increased for earthquake or wind loading with no further increase allowed. Reduce where other loads govern.
- For minimum nailing quantity and load values, fill all round holes; for maximum nailing quantity and load values, fill all round and triangular holes.
- DF/SP loads can be used for SCL with an equivalent specific gravity of 0.50 or greater.
- Truss chord cross-grain tension may limit allowable loads in accordance with ANSI/TPI 1-2014. Simpson Strong-Tie Hanger Selector web application includes the evaluation of cross-grain tension in its hanger allowable loads. For additional information, contact Simpson Strong-Tie.
- Fasteners:** Nail dimensions are listed diameter by length. **SDS screws are Simpson Strong-Tie Strong-Drive SDS Heavy-Duty Connector screws.** See pp. 25–26 for fastener information.
- Hangers with an “*” do not have an Installed Cost Index.

Codes: See p. 12 for Code Reference Key Chart



Specify joist-to-beam connections by visiting app.strongtie.com/hs to access our Hanger Selector web application.



Simpson Strong-Tie® Wood Construction Connectors

Face-Mount Hangers — I-Joists, Glulam and SCL

SIMPSON

Strong-Tie®



Web Applications:

Visit app.strongtie.com/hs to access our Hanger Selector web application.

Codes: See p. 12 for Code Reference Key Chart.

I-Joist, Glulam and Structural Composite Lumber Connectors

Actual Joist Size (in.)	Model No.	Ga.	I-Joist Compatible	Web Stiff Req'd.	Dimensions (in.)			Min./Max.	Fasteners (in.)		Allowable Loads							Code Ref.
					W	H	B		Face	Joist	DF/SP Species Header				SPF/HF Species Header			
											Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Floor (100)	Snow (115)	Roof (125)	
1½ x 9½	U210	16	•	✓	1⅞	7⅞	2	—	(6) 0.148 x 3	(6) 0.148 x 1½	990	1,220	1,380	1,480	1,050	1,185	1,275	IBC, FL, LA
	MIU1.56/9	16	•	—	1⅞	8⅞	2½	—	(16) 0.162 x 3½	(2) 0.148 x 1½	230	2,305	2,615	2,820	1,980	2,245	2,425	
1½ x 11⅞	U210	16	•	✓	1⅞	7⅞	2	—	(6) 0.148 x 3	(6) 0.148 x 1½	990	1,220	1,380	1,480	1,050	1,185	1,275	
	MIU1.56/11	16	•	—	1⅞	11⅞	2½	—	(20) 0.162 x 3½	(2) 0.148 x 1½	230	2,880	3,135	3,135	2,475	2,695	2,695	
1¾ x 5½	HU1.81/5	14	•	—	1⅞	5¾	2½	Min. (12) 0.162 x 3½ Max. (16) 0.162 x 3½	(4) 0.148 x 1½ (6) 0.148 x 1½	610 915	1,785 2,380	2,015 2,685	2,165 2,890	1,540 2,050	1,735 2,315	1,865 2,490		
	HU7	14	•	—	1⅞	6⅞	2½	Min. (12) 0.162 x 3½ Max. (16) 0.162 x 3½	(4) 0.148 x 1½ (8) 0.148 x 1½	610 1515	1,785 2,380	2,015 2,685	2,165 2,890	1,540 2,050	1,735 2,315	1,865 2,490		
1¾ x 9½	IUS1.81/9.5	18	•	—	1⅞	9½	2	—	(8) 0.148 x 3	—	70	950	1,080	1,165	815	925	1,000	
	HU9	14	•	✓	1⅞	9¾	2½	Min. (18) 0.162 x 3½ Max. (24) 0.162 x 3½	(6) 0.148 x 1½ (10) 0.148 x 1½	915 1,795	2,680 3,570	3,020 4,030	3,250 4,335	2,305 3,075	2,605 3,470	2,800 3,735		
	HUS1.81/10	16	•	—	1⅞	8¾	3	—	(30) 0.162 x 3½	(10) 0.162 x 3½	2,635	5,515	5,830	5,830	4,360	4,675	4,885	
	HUCQ1.81/9-SDS	14	•	—	1⅞	9	3	—	(8) ¼ x 1¾ SDS	(4) ¼ x 1¾ SDS	1,310	2,000	2,300	2,500	1,440	1,655	1,800	
	MIU1.81/9	16	•	—	1⅞	8⅞	2½	—	(16) 0.162 x 3½	(2) 0.148 x 1½	230	2,305	2,615	2,820	1,980	2,245	2,425	
1¾ x 11⅞	IUS1.81/11.88	18	•	—	1⅞	11⅞	2	—	(10) 0.148 x 3	—	70	1,185	1,345	1,455	1,020	1,160	1,250	
	MIU1.81/11	16	•	—	1⅞	11⅞	2½	—	(20) 0.162 x 3½	(2) 0.148 x 1½	230	2,880	3,135	3,135	2,475	2,695	2,695	
	HUS1.81/10	16	•	—	1⅞	8¾	3	—	(30) 0.162 x 3½	(10) 0.162 x 3½	2,635	5,515	5,830	5,830	4,360	4,675	4,885	
	HU11	14	•	✓	1⅞	11⅞	2½	Min. (22) 0.162 x 3½ Max. (30) 0.162 x 3½	(6) 0.148 x 1½ (10) 0.148 x 1½	915 1,795	3,275 4,465	3,695 4,705	3,970 4,810	2,820 3,845	3,180 4,340	3,425 4,600		
	HUCQ1.81/11-SDS	14	•	—	1⅞	11	3	—	(10) ¼ x 1¾ SDS	(4) ¼ x 1¾ SDS	1,310	2,500	2,875	3,125	1,800	2,070	2,250	
1¾ x 14	IUS1.81/14	18	•	—	1⅞	14	2	Min. (12) 0.148 x 3 Max. (14) 0.148 x 3	— —	70 70	1,420 1,660	1,615 1,805	1,745 1,805	1,220 1,425	1,390 1,550	1,500 1,550		
	MIU1.81/14	16	•	—	1⅞	13¾	2½	—	(22) 0.162 x 3½	(2) 0.148 x 1½	230	3,170	3,595	3,875	2,725	3,090	3,335	
	HUS1.81/10	16	•	—	1⅞	8¾	3	—	(30) 0.162 x 3½	(10) 0.162 x 3½	2,635	5,515	5,830	5,830	4,360	4,675	4,885	
	U14	16	•	✓	1⅞	10¼	2	—	(14) 0.162 x 3½	(6) 0.148 x 1½	970	2,015	2,285	2,465	1,735	1,965	2,120	
	HU14	14	•	✓	1⅞	13⅞	2½	Min. (28) 0.162 x 3½ Max. (36) 0.162 x 3½	(8) 0.148 x 1½ (14) 0.148 x 1½	1,515 1,795	4,165 5,055	4,420 5,275	4,505 5,420	3,590 4,615	4,050 5,000	4,335 5,130		
	HUCQ1.81/11-SDS	14	•	—	1⅞	11	3	—	(10) ¼ x 1¾ SDS	(4) ¼ x 1¾ SDS	1,310	2,500	2,875	3,125	1,800	2,070	2,250	
1¾ x 16	IUS1.81/16	18	•	—	1⅞	16	2	Min. (14) 0.148 x 3 Max. (16) 0.148 x 3	— —	70 70	1,660 1,805	1,805 1,805	1,805 1,805	1,425 1,555	1,555 1,555	1,555 1,555		
	MIU1.81/16	16	•	—	1⅞	15¾	2½	—	(24) 0.162 x 3½	(2) 0.148 x 1½	230	3,455	3,920	4,045	2,970	3,370	3,480	
1¾ x 18	MIU1.81/18	16	•	—	1⅞	17¾	2½	—	(26) 0.162 x 3½	(2) 0.148 x 1½	230	3,745	4,020	4,045	3,220	3,460	3,480	
2 x 9½	IUS2.06/9.5	18	•	—	2⅞	9½	2	—	(8) 0.148 x 3	—	70	950	1,080	1,165	815	925	1,000	
	HU2.1/9	14	•	✓	2⅞	9¾	2½	—	(14) 0.162 x 3½	(6) 0.148 x 1½	915	2,085	2,350	2,530	1,795	2,025	2,180	
2 x 11⅞	IUS2.06/11.88	18	•	—	2⅞	11⅞	2	—	(10) 0.148 x 3	—	70	1,185	1,345	1,455	1,020	1,160	1,250	
	MIU2.1/11	16	•	✓	2⅞	11⅞	2½	—	(20) 0.162 x 3½	(2) 0.148 x 1½	230	2,880	3,135	3,135	2,475	2,695	2,695	
	HU2.1/11	14	•	✓	2⅞	11	2½	—	(16) 0.162 x 3½	(6) 0.148 x 1½	915	2,380	2,685	2,890	2,050	2,315	2,490	
2 x 14	IUS2.06/14	18	•	—	2⅞	14	2	Min. (12) 0.148 x 3 Max. (14) 0.148 x 3	— —	70 70	1,420 1,660	1,615 1,805	1,745 1,805	1,220 1,425	1,390 1,555	1,500 1,555		
	MIU2.1/11	16	•	✓	2⅞	11⅞	2½	—	(20) 0.162 x 3½	(2) 0.148 x 1½	230	2,880	3,135	3,135	2,475	2,695	2,695	
	HU2.1/11	14	•	✓	2⅞	11	2½	—	(16) 0.162 x 3½	(6) 0.148 x 1½	915	2,380	2,685	2,890	2,050	2,315	2,490	
	IUS2.06/16	18	•	—	2⅞	16	2	Min. (14) 0.148 x 3 Max. (16) 0.148 x 3	— —	70 70	1,660 1,805	1,805 1,805	1,805 1,805	1,425 1,555	1,555 1,555	1,555 1,555		
2 x 16	HU2.1/11	14	•	✓	2⅞	11	2½	—	(16) 0.162 x 3½	(6) 0.148 x 1½	915	2,380	2,685	2,890	2,050	2,315	2,490	
	IUS2.06/9.5	18	•	—	2⅞	9½	2	—	(8) 0.148 x 3	—	70	950	1,080	1,165	815	925	1,000	
2⅞ x 9½	HU2.1/9	14	•	✓	2⅞	9¾	2½	—	(14) 0.162 x 3½	(6) 0.148 x 1½	915	2,085	2,350	2,530	1,795	2,025	2,180	
	IUS2.06/11.88	18	•	—	2⅞	11⅞	2	—	(10) 0.148 x 3	—	70	1,185	1,345	1,455	1,020	1,160	1,250	
2⅞ x 11⅞	MIU2.1/11	16	•	✓	2⅞	11⅞	2½	—	(20) 0.162 x 3½	(2) 0.148 x 1½	230	2,880	3,135	3,135	2,475	2,695	2,695	
	HU2.1/11	14	•	✓	2⅞	11	2½	—	(16) 0.162 x 3½	(6) 0.148 x 1½	915	2,380	2,685	2,890	2,050	2,315	2,490	

See footnotes on p. 164.

Simpson Strong-Tie® Wood Construction Connectors

Face-Mount Hangers — I-Joists, Glulam and SCL

SIMPSON

Strong-Tie®

Codes: See p. 12 for Code Reference Key Chart.

Actual Joist Size (in.)	Model No.	Ga.	I-Joist Compatible	Web Stiff Req'd.	Dimensions (in.)			Min./Max.	Fasteners (in.)		Allowable Loads							Code Ref.
					W	H	B		Face	Joist	DF/SP Species Header				SPF/HF Species Header			
											Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Floor (100)	Snow (115)	Roof (125)	
2 1/8 x 14	IUS2.06/14	18	•	—	2 1/8	14	2	—	(12) 0.148 x 3	—	70	1,420	1,615	1,745	1,220	1,390	1,500	IBC, FL, LA
	MIU2.1/11	16	•	✓	2 1/8	11 1/8	2 1/2	—	(20) 0.162 x 3 1/2	(2) 0.148 x 1 1/2	230	2,880	3,135	3,135	2,475	2,695	2,695	
	HU2.1/11	14	•	✓	2 1/8	11	2 1/2	—	(16) 0.162 x 3 1/2	(6) 0.148 x 1 1/2	915	2,380	2,685	2,890	2,050	2,315	2,490	
2 1/8 x 16	IUS2.06/16	18	•	—	2 1/8	16	2	—	(14) 0.148 x 3	—	70	1,660	1,805	1,805	1,425	1,555	1,555	
	MIU2.1/11	16	•	✓	2 1/8	11 1/8	2 1/2	—	(20) 0.162 x 3 1/2	(2) 0.148 x 1 1/2	230	2,880	3,135	3,135	2,475	2,695	2,695	
	HU2.1/11	14	•	✓	2 1/8	11	2 1/2	—	(16) 0.162 x 3 1/2	(6) 0.148 x 1 1/2	915	2,380	2,685	2,890	2,050	2,315	2,490	
2 1/4 x 9 1/2 to 20	2 1/4"-wide joists use the same hangers as 2 1/8"-wide joists with the following load adjustments to the table loads: IUS download is the lesser of the table load or 1,400 lb.; IUS uplift is 55 lb.; MIU and U downloads are the lesser of the table load or 2,140 lb.																	
2 3/8 x 9 1/2	IUS2.37/9.5	18	•	—	2 3/8	9 1/2	2	—	(8) 0.148 x 3	—	70	950	1,080	1,165	815	925	1,000	
	MIU2.37/9	16	•	—	2 3/8	9	2 1/2	—	(16) 0.162 x 3 1/2	(2) 0.148 x 1 1/2	230	2,305	2,615	2,820	1,980	2,245	2,425	
	U3510/14	16	•	✓	2 3/8	9	2	—	(14) 0.162 x 3 1/2	(6) 0.148 x 1 1/2	970	2,015	2,285	2,465	1,735	1,965	2,120	
	HU359 / HUC359	14	•	✓	2 3/8	9	2 1/2	Min. Max.	(14) 0.162 x 3 1/2 (18) 0.162 x 3 1/2	(6) 0.148 x 1 1/2 (10) 0.148 x 1 1/2	915 1,795	2,085 2,680	2,350 3,020	2,530 3,250	1,795 2,305	2,025 2,605	2,180 2,800	
2 3/8 x 11 1/8	IUS2.37/11.88	18	•	—	2 3/8	11 1/8	2	—	(10) 0.148 x 3	—	70	1,185	1,345	1,455	1,020	1,160	1,250	
	MIU2.37/11	16	•	—	2 3/8	11 1/8	2 1/2	—	(20) 0.162 x 3 1/2	(2) 0.148 x 1 1/2	230	2,880	3,135	3,135	2,475	2,695	2,695	
	U3516/20	16	•	✓	2 3/8	10 3/8	2	—	(16) 0.162 x 3 1/2	(6) 0.148 x 1 1/2	970	2,305	2,615	2,820	1,980	2,245	2,425	
	HU3511 / HUC3511	14	•	✓	2 3/8	10 3/8	2 1/2	Min. Max.	(16) 0.162 x 3 1/2 (22) 0.162 x 3 1/2	(6) 0.148 x 1 1/2 (10) 0.148 x 1 1/2	915 1,795	2,380 3,275	2,685 3,695	2,890 3,970	2,050 2,820	2,315 3,180	2,490 3,425	
2 3/8 x 14	IUS2.37/14	18	•	—	2 3/8	14	2	Min. Max.	(12) 0.148 x 3 (14) 0.148 x 3	— —	70 70	1,420 1,660	1,615 1,805	1,745 1,805	1,220 1,425	1,390 1,555	1,500 1,555	
	MIU2.37/14	16	•	—	2 3/8	13 1/2	2 1/2	—	(22) 0.162 x 3 1/2	(2) 0.148 x 1 1/2	230	3,170	3,595	3,875	2,725	3,090	3,335	
	U3516/20	16	•	✓	2 3/8	10 3/8	2	—	(16) 0.162 x 3 1/2	(6) 0.148 x 1 1/2	970	2,305	2,615	2,820	1,980	2,245	2,425	
	HU3514 / HUC3514	14	•	✓	2 3/8	12 1/2	2 1/2	Min. Max.	(18) 0.162 x 3 1/2 (24) 0.162 x 3 1/2	(8) 0.148 x 1 1/2 (12) 0.148 x 1 1/2	1,515 1,795	2,680 3,570	3,020 4,030	3,250 4,335	2,305 3,075	2,605 3,470	2,800 3,735	
2 3/8 x 16	IUS2.37/16	18	•	—	2 3/8	16	2	Min. Max.	(14) 0.148 x 3 (16) 0.148 x 3	— —	70 70	1,660 1,805	1,805 1,805	1,805 1,805	1,425 1,555	1,555 1,555	1,555	IBC, FL, LA
	MIU2.37/16	16	•	—	2 3/8	15 1/2	2 1/2	—	(24) 0.162 x 3 1/2	(2) 0.148 x 1 1/2	230	3,455	3,920	4,045	2,970	3,370	3,480	
	U3516/20	16	•	✓	2 3/8	10 3/8	2	—	(16) 0.162 x 3 1/2	(6) 0.148 x 1 1/2	970	2,305	2,615	2,820	1,980	2,245	2,425	
	HU3516/22 / HUC3516/22	14	•	✓	2 3/8	14 1/4	2 1/2	—	(20) 0.162 x 3 1/2	(8) 0.148 x 1 1/2	1,515	2,975	3,360	3,610	2,565	2,895	3,110	
2 3/8 x 18	MIU2.37/18	16	•	—	2 3/8	17 1/2	2 1/2	—	(26) 0.162 x 3 1/2	(2) 0.148 x 1 1/2	230	3,745	4,045	4,045	3,220	3,480	3,480	
	HU3524/30	14	•	✓	2 3/8	18	2 1/2	Min. Max.	(18) 0.162 x 3 1/2 (24) 0.162 x 3 1/2	(8) 0.148 x 1 1/2 (14) 0.148 x 1 1/2	1,515 1,795	2,680 3,570	3,020 4,030	3,250 4,335	2,305 3,075	2,605 3,470	2,800 3,735	
2 3/8 x 20	MIU2.37/20	16	•	—	2 3/8	19 1/2	2 1/2	—	(28) 0.162 x 3 1/2	(2) 0.148 x 1 1/2	230	4,030	4,060	4,060	3,465	3,495	3,495	
2 3/8 x 22 to 30	MIU2.37/20	16	•	✓	2 3/8	19 1/2	2 1/2	—	(28) 0.162 x 3 1/2	(2) 0.148 x 1 1/2	230	4,030	4,060	4,060	3,465	3,495	3,495	
	HU3524/30	14	•	✓	2 3/8	18	2 1/2	Min. Max.	(18) 0.162 x 3 1/2 (24) 0.162 x 3 1/2	(8) 0.148 x 1 1/2 (14) 0.148 x 1 1/2	1,515 1,795	2,680 3,570	3,020 4,030	3,250 4,335	2,305 3,075	2,605 3,470	2,800 3,735	
2 1/2 x 9 1/2	IUS2.56/9.5	18	•	—	2 1/2	9 1/2	2	—	(8) 0.148 x 3	—	70	950	1,080	1,165	815	925	1,000	
	MIU2.56/9	16	•	—	2 1/2	8 15/16	2 1/2	—	(16) 0.162 x 3 1/2	(2) 0.148 x 1 1/2	230	2,305	2,615	2,820	1,980	2,245	2,425	
	U310	16	•	✓	2 1/2	8 7/8	2	—	(14) 0.162 x 3 1/2	(6) 0.148 x 1 1/2	970	1,705	1,930	2,075	1,465	1,660	1,785	
	HU310 / HUC310	14	•	✓	2 1/2	8 7/8	2 1/2	—	(14) 0.162 x 3 1/2	(6) 0.148 x 1 1/2	915	2,085	2,350	2,520	1,795	2,025	2,170	
2 1/2 x 11 1/8	IUS2.56/11.88	18	•	—	2 1/2	11 1/8	2	—	(10) 0.148 x 3	—	70	1,185	1,345	1,455	1,020	1,160	1,250	
	MIU2.56/11	16	•	—	2 1/2	11 1/8	2 1/2	—	(20) 0.162 x 3 1/2	(2) 0.148 x 1 1/2	230	2,880	3,135	3,135	2,475	2,695	2,695	
	U314	16	•	✓	2 1/2	10 1/2	2	—	(16) 0.162 x 3 1/2	(6) 0.148 x 1 1/2	970	1,945	2,205	2,375	1,675	1,895	2,045	
	HU312 / HUC312	14	•	✓	2 1/2	10 3/8	2 1/2	—	(16) 0.162 x 3 1/2	(6) 0.148 x 1 1/2	915	2,380	2,685	2,890	2,050	2,315	2,490	
2 1/2 x 14	IUS2.56/14	18	•	—	2 1/2	14	2	Min. Max.	(12) 0.148 x 3 (14) 0.148 x 3	— —	70 70	1,420 1,660	1,615 1,805	1,745 1,805	1,220 1,425	1,390 1,555	1,500 1,555	
	MIU2.56/14	16	•	—	2 1/2	13 1/8	2 1/2	—	(22) 0.162 x 3 1/2	(2) 0.148 x 1 1/2	230	3,170	3,595	3,875	2,725	3,090	3,335	
	U314	16	•	✓	2 1/2	10 1/2	2	—	(16) 0.162 x 3 1/2	(6) 0.148 x 1 1/2	970	1,945	2,205	2,375	1,675	1,895	2,045	
	HU314 / HUC314	14	•	✓	2 1/2	12 3/8	2 1/2	—	(18) 0.162 x 3 1/2	(8) 0.148 x 1 1/2	1,515	2,680	3,020	3,250	2,305	2,605	2,800	

I-Joist, Glulam and Structural Composite Lumber Connectors

See footnotes on p. 164.

Simpson Strong-Tie® Wood Construction Connectors

Face-Mount Hangers — I-Joists, Glulam and SCL

SIMPSON

Strong-Tie®

These products are available with additional corrosion protection. For more information, see pp. 13–19.

SS For stainless-steel fasteners, see p. 25.

Codes: See p. 12 for Code Reference Key Chart.

Actual Joist Size (in.)	Model No.	Ga.	I-Joist Compatible	Web Stiff Reqd.	Dimensions (in.)			Min./Max.	Fasteners (in.)		Allowable Loads							Code Ref.
					W	H	B		Face	Joist	DF/SP Species Header				SPF/HF Species Header			
											Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Floor (100)	Snow (115)	Roof (125)	
3½ x 14	IUS3.56/14	18	•	—	3%	14	2	Min.	(12) 0.148 x 3	—	70	1,420	1,615	1,745	1,220	1,390	1,500	IBC, FL, LA
								Max.	(14) 0.148 x 3	—	70	1,660	1,805	1,805	1,425	1,555	1,555	
	MIU3.56/14	16	•	—	3%	13½	2½	—	(22) 0.162 x 3½	(2) 0.148 x 1½	210	3,170	3,595	3,875	2,725	3,090	3,335	
	U414	16	•	✓	3%	10	2	—	(16) 0.162 x 3½	(6) 0.148 x 3	970	2,305	2,615	2,820	1,980	2,245	2,425	
	HHUS410	14	—	—	3%	9	3	—	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635	6,380	6,445	4,845	5,486	5,545	
	HUS412	14	—	—	3%	10½	2	—	(10) 0.162 x 3½	(10) 0.162 x 3½	3,635	2,660	3,025	3,265	2,275	2,590	2,795	
	HU414	14	•	✓	3%	12%	2½	Max.	(24) 0.162 x 3½	(12) 0.148 x 3	1,795	3,570	4,030	4,335	3,075	3,470	3,735	
	HU416 / HUC416	14	•	✓	3%	13%	2½	Min.	(20) 0.162 x 3½	(8) 0.148 x 3	1,515	2,975	3,360	3,610	2,565	2,895	3,110	
								Max.	(26) 0.162 x 3½	(12) 0.148 x 3	1,795	3,870	4,365	4,695	3,330	3,760	4,045	
	HUCQ412-SDS	14	—	—	3%	11	3	—	(14) ¼ x 2½ SDS	(6) ¼ x 2½ SDS	2,265	5,045	5,045	5,045	3,630	3,630	3,630	
	HGUS414	12	—	—	3%	12½	4	—	(66) 0.162 x 3½	(22) 0.162 x 3½	5,360	13,860	14,350	14,350	11,115	12,420	12,420	
	LGU3.63-SDS	10	—	—	3%	8 to 30	4½	—	(16) ¼ x 2½ SDS	(12) ¼ x 2½ SDS	5,555	6,720	6,720	6,720	4,840	4,840	4,840	
MGU3.63-SDS	10	—	—	3%	9¼ to 30	4½	—	(24) ¼ x 2½ SDS	(16) ¼ x 2½ SDS	7,260	9,450	9,450	9,450	6,805	6,805	6,805		
HGU3.63-SDS	7	—	—	3%	11 to 30	5¼	—	(36) ¼ x 2½ SDS	(24) ¼ x 2½ SDS	9,460	13,160	13,160	13,160	9,475	9,475	9,475		
3½ x 16	IUS3.56/16	18	•	—	3%	16	2	Min.	(14) 0.148 x 3	—	70	1,660	1,805	1,805	1,425	1,555	1,555	
								Max.	(16) 0.148 x 3	—	70	1,805	1,805	1,805	1,555	1,555	1,555	
	MIU3.56/16	16	•	—	3%	15½	2½	—	(24) 0.162 x 3½	(2) 0.148 x 1½	210	3,455	3,920	4,045	2,970	3,370	3,480	
	HU416 / HUC416	14	•	✓	3%	13%	2½	Min.	(20) 0.162 x 3½	(8) 0.148 x 3	1,515	2,975	3,360	3,610	2,565	2,895	3,110	
								Max.	(26) 0.162 x 3½	(12) 0.148 x 3	1,795	3,870	4,365	4,695	3,330	3,760	4,045	
	HGUS414	12	—	—	3%	12½	4	—	(66) 0.162 x 3½	(22) 0.162 x 3½	5,360	13,860	14,350	14,350	11,115	12,420	12,420	
	HUCQ412-SDS	14	—	—	3%	11	3	—	(14) ¼ x 2½ SDS	(6) ¼ x 2½ SDS	2,265	5,045	5,045	5,045	3,630	3,630	3,630	
	LGU3.63-SDS	10	—	—	3%	8 to 30	4½	—	(16) ¼ x 2½ SDS	(12) ¼ x 2½ SDS	5,555	6,720	6,720	6,720	4,840	4,840	4,840	
MGU3.63-SDS	10	—	—	3%	9¼ to 30	4½	—	(24) ¼ x 2½ SDS	(16) ¼ x 2½ SDS	7,260	9,450	9,450	9,450	6,805	6,805	6,805		
HGU3.63-SDS	7	—	—	3%	11 to 30	5¼	—	(36) ¼ x 2½ SDS	(24) ¼ x 2½ SDS	9,895	14,145	14,145	14,145	10,185	10,185	10,185		
3½ x 18	MIU3.56/18	16	•	—	3%	17½	2½	—	(26) 0.162 x 3½	(2) 0.148 x 1½	210	3,745	4,045	4,045	3,220	3,480	3,480	
	HU416 / HUC416	14	•	✓	3%	13%	2½	Min.	(20) 0.162 x 3½	(8) 0.148 x 3	1,515	2,975	3,360	3,610	2,565	2,895	3,110	
	HGUS414	12	—	—	3%	12½	4	—	(66) 0.162 x 3½	(22) 0.162 x 3½	5,360	13,860	14,350	14,350	11,115	12,420	12,420	
	HUCQ412-SDS	14	—	—	3%	11	3	—	(14) ¼ x 2½ SDS	(6) ¼ x 2½ SDS	2,265	5,045	5,045	5,045	3,630	3,630	3,630	
	LGU3.63-SDS	10	—	—	3%	8 to 30	4½	—	(16) ¼ x 2½ SDS	(12) ¼ x 2½ SDS	5,555	6,720	6,720	6,720	4,840	4,840	4,840	
	MGU3.63-SDS	10	—	—	3%	9¼ to 30	4½	—	(24) ¼ x 2½ SDS	(16) ¼ x 2½ SDS	7,260	9,450	9,450	9,450	6,805	6,805	6,805	
	HGU3.63-SDS	7	—	—	3%	11 to 30	5¼	—	(36) ¼ x 2½ SDS	(24) ¼ x 2½ SDS	9,460	13,160	13,160	13,160	9,475	9,475	9,475	
3½ x 20	MIU3.56/20	16	•	—	3%	19½	2½	—	(28) 0.162 x 3½	(2) 0.148 x 1½	210	4,030	4,060	4,060	3,465	3,495	3,495	
3½ x 21 to 30	MIU3.56/20	16	•	✓	3%	19½	2½	—	(28) 0.162 x 3½	(2) 0.148 x 1½	210	4,030	4,060	4,060	3,465	3,495	3,495	
	LGU3.63-SDS	10	—	—	3%	8 to 30	4½	—	(16) ¼ x 2½ SDS	(12) ¼ x 2½ SDS	5,555	6,720	6,720	6,720	4,840	4,840	4,840	
	MGU3.63-SDS	10	—	—	3%	9¼ to 30	4½	—	(24) ¼ x 2½ SDS	(16) ¼ x 2½ SDS	7,260	9,450	9,450	9,450	6,805	6,805	6,805	
	HGU3.63-SDS	7	—	—	3%	11 to 30	5¼	—	(36) ¼ x 2½ SDS	(24) ¼ x 2½ SDS	9,460	13,160	13,160	13,160	9,475	9,475	9,475	
4 x 9½	MIU4.12/9	16	•	—	4½	9½	2½	—	(16) 0.162 x 3½	(2) 0.148 x 1½	210	2,305	2,615	2,820	1,980	2,245	2,425	
	HU4.12/9 / HUC4.12/9	14	•	✓	4½	8½	2½	Max.	(18) 0.162 x 3½	(10) 0.148 x 3	1,795	2,680	3,020	3,250	2,305	2,605	2,800	
4 x 11½	MIU4.12/11	16	•	—	4½	11½	2½	—	(20) 0.162 x 3½	(2) 0.148 x 1½	210	2,880	3,135	3,135	2,475	2,695	2,695	
	HU4.12/11 / HUC4.12/11	14	•	✓	4½	10½	2½	Max.	(22) 0.162 x 3½	(10) 0.148 x 3	1,795	3,275	3,695	3,970	2,820	3,180	3,425	
4 x 14	MIU4.12/14	16	•	—	4½	13½	2½	—	(22) 0.162 x 3½	(2) 0.148 x 1½	210	3,170	3,595	3,875	2,725	3,090	3,335	
	HU4.12/11 / HUC4.12/11	14	•	✓	4½	10½	2½	Max.	(22) 0.162 x 3½	(10) 0.148 x 3	1,795	3,275	3,695	3,970	2,820	3,180	3,425	
4 x 16	MIU4.12/16	16	•	—	4½	15½	2½	—	(24) 0.162 x 3½	(2) 0.148 x 1½	210	3,455	3,920	4,045	2,970	3,370	3,480	
	HU4.12/11 / HUC4.12/11	14	•	✓	4½	10½	2½	Max.	(22) 0.162 x 3½	(10) 0.148 x 3	1,795	3,275	3,695	3,970	2,820	3,180	3,425	
4½ x 9½	MIU4.28/9	16	•	—	4¾	9	2½	—	(16) 0.162 x 3½	(2) 0.148 x 1½	210	2,305	2,615	2,820	1,980	2,245	2,425	
	HU4.28/9 / HUC4.28/9	14	•	✓	4¾	9	2½	—	(18) 0.162 x 3½	(8) 0.148 x 3	1,515	2,680	3,020	3,250	2,305	2,605	2,800	
4½ x 11½	MIU4.28/11	16	•	—	4¾	11½	2½	—	(20) 0.162 x 3½	(2) 0.148 x 1½	210	2,880	3,135	3,135	2,475	2,695	2,695	
	HU4.28/11 / HUC4.28/11	14	•	✓	4¾	11	2½	—	(22) 0.162 x 3½	(8) 0.148 x 3	1,515	3,275	3,695	3,970	2,820	3,180	3,425	
4½ x 14	MIU4.28/14	16	•	—	4¾	13½	2½	—	(22) 0.162 x 3½	(2) 0.148 x 1½	210	3,170	3,595	3,875	2,725	3,090	3,335	
4½ x 16	MIU4.28/16	16	•	—	4¾	15½	2½	—	(24) 0.162 x 3½	(2) 0.148 x 1½	210	3,455	3,920	4,045	2,970	3,370	3,480	

See footnotes on p. 164.

I-Joist, Glulam and Structural Composite Lumber Connectors

Simpson Strong-Tie® Wood Construction Connectors

SIMPSON

Strong-Tie®

Top-Flange Hangers – I-Joists, Glulam and SCL

Actual Joist Size (in.)	Model No.	Ga.	I-Joist Compatible	Web Stiff Req'd ⁷	Dimensions (in.)				Fasteners (in.)		Allowable Loads Header Type						
					W	H	B	TF	Header	Joist	Uplift (160)	LVL	PSL	LSL	DF/SP	SPF/HF	DF/SCL I-Joist ⁴
Double 2½" x 11½"	MIT4.28/11.88	16	•	—	4½"	11½"	2½"	2½"	(8) 0.162 x 3½"	(2) 0.148 x 1½"	—	1,675	1,675	1,675	1,675	1,665	1,230
	BA4.28/11.88 (Min.)	12	•	—	4½"	11½"	3	2½"	(16) 0.162 x 3½"	(2) 0.148 x 1½"	215	2,550	2,140	2,115	2,575	1,665	1,230
	BA4.28/11.88 (Max.)	12	•	✓	4½"	11½"	3	2½"	(16) 0.162 x 3½"	(8) 0.148 x 1½"	1,275	4,715	4,320	4,500	4,720	4,005	1,495
	WP4.28X H=11.875	⅞	•	✓	4½"	5½" to 30"	2½"	2½"	(4) 0.162 x 2½"	(2) 0.148 x 1½"	—	3,095	3,605	3,605	2,985	2,230	2,030
Double 2½" x 14"	MIT4.28/14	16	•	—	4½"	14"	2½"	2½"	(8) 0.162 x 3½"	(2) 0.148 x 1½"	—	1,675	1,675	1,675	1,675	1,665	1,230
	BA4.28/14 (Min.)	12	•	—	4½"	14"	3	2½"	(16) 0.162 x 3½"	(2) 0.148 x 1½"	215	2,550	2,140	2,115	2,575	1,665	1,230
	BA4.28/14 (Max.)	12	•	✓	4½"	14"	3	2½"	(16) 0.162 x 3½"	(8) 0.148 x 1½"	1,275	4,715	4,320	4,500	4,720	4,005	1,495
	WP4.28X H=14	⅞	•	✓	4½"	5½" to 30"	2½"	2½"	(4) 0.162 x 2½"	(2) 0.148 x 1½"	—	3,095	3,605	3,605	2,985	2,230	2,030
Double 2½" x 16"	BA4.28/16 (Min.)	12	•	—	4½"	16"	3	2½"	(16) 0.162 x 3½"	(2) 0.148 x 1½"	255	4,015	3,705	4,005	3,780	3,095	1,495
	BA4.28/16 (Max.)	12	•	✓	4½"	16"	3	2½"	(16) 0.162 x 3½"	(8) 0.148 x 1½"	1,275	4,715	4,320	4,500	4,720	4,005	1,495
	WP4.28X H=16	⅞	•	✓	4½"	5½" to 30"	2½"	2½"	(4) 0.162 x 2½"	(2) 0.148 x 1½"	—	3,095	3,605	3,605	2,985	2,230	2,030
Double 2¼" x 9½" to 20"	Double 2¼"-wide joists use the same hangers as double 2½"-wide joists with the following loads adjustments: MIT downloads are the lesser of the table load or 2,140 lb.																
Double 2½" x 9½"	MIT359.5-2	16	•	—	4½"	9½"	2½"	2½"	(8) 0.162 x 3½"	(2) 0.148 x 1½"	—	1,675	1,675	1,675	1,675	1,665	1,230
	BA4.75/9.5 (Min.)	12	•	—	4½"	9½"	3	2½"	(16) 0.162 x 3½"	(2) 0.148 x 1½"	215	2,550	2,140	2,115	2,575	1,665	1,230
	BA4.75/9.5 (Max.)	12	•	✓	4½"	9½"	3	2½"	(16) 0.162 x 3½"	(8) 0.148 x 1½"	1,275	4,715	4,320	4,500	4,720	4,005	1,495
	WP4.75 H=9.5	⅞	•	✓	4½"	5½" to 30"	2½"	2½"	(4) 0.162 x 2½"	(2) 0.148 x 3"	—	3,095	3,605	3,605	2,985	2,230	2,030
Double 2½" x 11½"	MIT3511.88-2	16	•	—	4½"	11½"	2½"	2½"	(8) 0.162 x 3½"	(2) 0.148 x 1½"	—	1,675	1,675	1,675	1,675	1,665	1,230
	BA4.75/11.88 (Min.)	12	•	—	4½"	11½"	3	2½"	(16) 0.162 x 3½"	(2) 0.148 x 1½"	215	2,550	2,140	2,115	2,575	1,665	1,230
	BA4.75/11.88 (Max.)	12	•	✓	4½"	11½"	3	2½"	(16) 0.162 x 3½"	(8) 0.148 x 1½"	1,275	4,715	4,320	4,500	4,720	4,005	1,495
	WP4.75 H=11.875	⅞	•	✓	4½"	5½" to 30"	2½"	2½"	(4) 0.162 x 2½"	(2) 0.148 x 1½"	—	3,095	3,605	3,605	2,985	2,230	2,030
Double 2½" x 14"	MIT3514-2	16	•	—	4½"	14"	2½"	2½"	(8) 0.162 x 3½"	(2) 0.148 x 1½"	—	1,675	1,675	1,675	1,675	1,665	1,230
	BA4.75/14 (Min.)	12	•	—	4½"	14"	3	2½"	(16) 0.162 x 3½"	(2) 0.148 x 1½"	215	2,550	2,140	2,115	2,575	1,665	1,230
	BA4.75/14 (Max.)	12	•	✓	4½"	14"	3	2½"	(16) 0.162 x 3½"	(8) 0.148 x 1½"	1,275	4,715	4,320	4,500	4,720	4,005	1,495
	WP4.75 H=14	⅞	•	✓	4½"	5½" to 30"	2½"	2½"	(4) 0.162 x 2½"	(2) 0.148 x 1½"	—	3,095	3,605	3,605	2,985	2,230	2,030
Double 2½" x 16"	MIT4.75/16	16	•	—	4½"	16"	2½"	2½"	(8) 0.162 x 3½"	(2) 0.148 x 1½"	—	1,675	1,675	1,675	1,675	1,665	1,230
	BA4.75/16 (Min.)	12	•	—	4½"	16"	3	2½"	(16) 0.162 x 3½"	(2) 0.148 x 1½"	215	2,550	2,140	2,115	2,575	1,665	1,230
	BA4.75/16 (Max.)	12	•	✓	4½"	16"	3	2½"	(16) 0.162 x 3½"	(8) 0.148 x 1½"	1,275	4,715	4,320	4,500	4,720	4,005	1,495
	WP4.75 H=16	⅞	•	✓	4½"	5½" to 30"	2½"	2½"	(4) 0.162 x 2½"	(2) 0.148 x 1½"	—	3,095	3,605	3,605	2,985	2,230	2,030
Double 2½" x 18"	BA4.75/18 (Min.)	12	•	—	4½"	18"	3	2½"	(16) 0.162 x 3½"	(2) 0.148 x 1½"	255	4,015	3,705	4,005	3,780	3,095	1,495
	BA4.75/18 (Max.)	12	•	✓	4½"	18"	3	2½"	(16) 0.162 x 3½"	(8) 0.148 x 1½"	1,275	4,715	4,320	4,500	4,720	4,005	1,495
	WP4.75 H=18	⅞	•	✓	4½"	5½" to 30"	2½"	2½"	(4) 0.162 x 2½"	(2) 0.148 x 1½"	—	3,095	3,605	3,605	2,985	2,230	2,030
Double 2½" x 20"	BA4.75/20 (Min.)	12	•	—	4½"	18"	3	2½"	(16) 0.162 x 3½"	(2) 0.148 x 1½"	255	4,015	3,705	4,005	3,780	3,095	1,495
	BA4.75/20 (Max.)	12	•	✓	4½"	18"	3	2½"	(16) 0.162 x 3½"	(8) 0.148 x 1½"	1,275	4,715	4,320	4,500	4,720	4,005	1,495
	WP4.75 H=20	⅞	•	✓	4½"	5½" to 30"	2½"	2½"	(4) 0.162 x 2½"	(2) 0.148 x 1½"	—	3,095	3,605	3,605	2,985	2,230	2,030
Double 2½" x 9¼"	BA5.12 H=9.25 (Min.)	12	•	—	5½"	9¼"	3	2½"	(16) 0.162 x 3½"	(2) 0.148 x 1½"	255	4,015	3,705	4,005	3,205	2,660	1,495
	BA5.12 H=9.25 (Max.)	12	•	✓	5½"	9¼"	3	2½"	(16) 0.162 x 3½"	(8) 0.148 x 1½"	1,275	4,715	4,320	4,500	4,720	4,005	1,495
	WP5.12 H=9.25	⅞	•	✓	5½"	5½" to 30"	2½"	2½"	(4) 0.162 x 2½"	(2) 0.148 x 1½"	—	3,095	3,605	3,605	2,985	2,230	2,030
Double 2½" x 9½"	MIT39.5-2	16	•	—	5½"	9½"	2½"	2½"	(8) 0.162 x 3½"	(2) 0.148 x 1½"	—	1,675	1,675	1,675	1,675	1,665	1,230
	BA5.12/9.5 (Min.)	12	•	—	5½"	9½"	3	2½"	(16) 0.162 x 3½"	(2) 0.148 x 1½"	215	2,550	2,140	2,115	2,575	1,665	1,230
	BA5.12/9.5 (Max.)	12	•	✓	5½"	9½"	3	2½"	(16) 0.162 x 3½"	(8) 0.148 x 1½"	1,275	4,715	4,320	4,500	4,720	4,005	1,495
	WP5.12 H=9.5	⅞	•	✓	5½"	5½" to 30"	2½"	2½"	(4) 0.162 x 2½"	(2) 0.148 x 1½"	—	3,095	3,605	3,605	2,985	2,230	2,030
Double 2½" x 11½"	MIT311.88-2	16	•	—	5½"	11½"	2½"	2½"	(8) 0.162 x 3½"	(2) 0.148 x 1½"	—	1,675	1,675	1,675	1,675	1,665	1,230
	BA5.12/11.88 (Min.)	12	•	—	5½"	11½"	3	2½"	(16) 0.162 x 3½"	(2) 0.148 x 1½"	215	2,550	2,140	2,115	2,575	1,665	1,230
	BA5.12/11.88 (Max.)	12	•	✓	5½"	11½"	3	2½"	(16) 0.162 x 3½"	(8) 0.148 x 1½"	1,275	4,715	4,320	4,500	4,720	4,005	1,495
	HB5.12/11.88	10	•	✓	5½"	11½"	3½"	3	(22) 0.162 x 3½"	(10) 0.162 x 3½"	2,075	5,815	5,640	6,395	5,395	3,820	—
	WP5.12 H=11.875	⅞	•	✓	5½"	5½" to 30"	2½"	2½"	(4) 0.162 x 2½"	(2) 0.148 x 1½"	—	3,095	3,605	3,605	2,985	2,230	2,030

See footnotes on p. 206.

I-Joist, Glulam and Structural Composite Lumber Connectors