FRONT ELEVATION

Scale: 1/4" = 1'0"

9'0" CEILING HEIGHT FIRST FLOOR
(HEADER HEIGHT 7'6")
8'0" CEILING HEIGHT SECOND FLOOR
(HEADER HEIGHT 7')

FRAME WINDOWS TO HEADER HEIGHT

LEFT ELEVATION

Scale: 1/8" = 1'0"

RIGHT ELEVATION

Scale: 1/8" = 1'0"

REAR ELEVATION

Scale: 1/8" = 1'0"

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.
APPROVED
Limited building only review
Permit holder responsible for full compliance with the code
11/14/2025
Harnett COUNTY NORTH CAROLINA

PLAN:
Sarah

SHEET TITLE:
ELEVATIONS

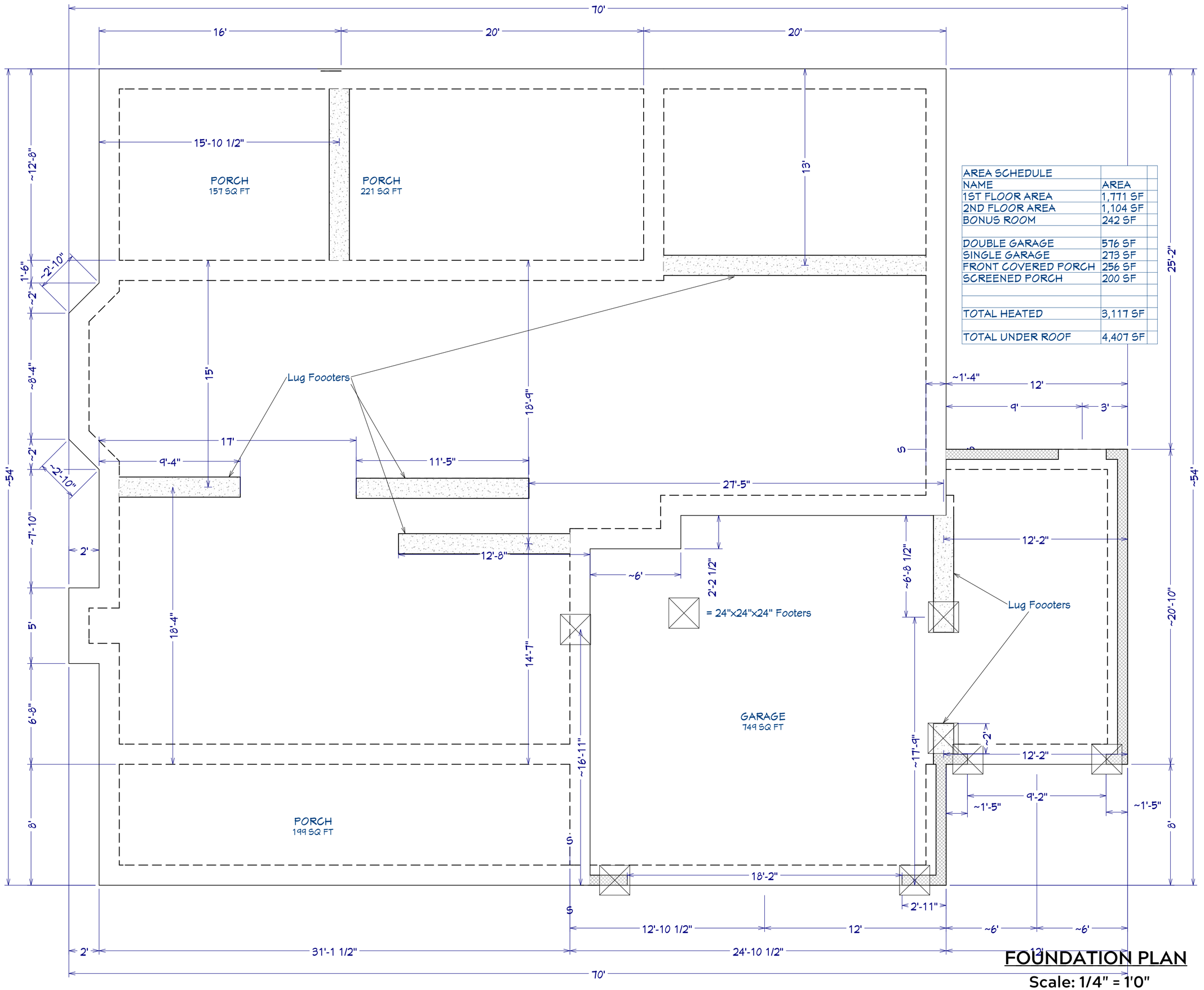
PROJECT ADDRESS:
223 Myrtle Oak Dr.
Magnolia Hills Dr. Lot 50

DESIGNED BY:
Precision Custom Homes
Raeford, NC
Shaun@PrecisionCustomHomesNC.com

DATE:
10/17/25

SCALE:
1/4" = 1'

SHEET:
A-1



AREA SCHEDULE	
NAME	AREA
1ST FLOOR AREA	1,771 SF
2ND FLOOR AREA	1,104 SF
BONUS ROOM	242 SF
DOUBLE GARAGE	576 SF
SINGLE GARAGE	273 SF
FRONT COVERED PORCH	256 SF
SCREENED PORCH	200 SF
TOTAL HEATED	3,117 SF
TOTAL UNDER ROOF	4,407 SF

FOUNDATION PLAN

Scale: 1/4" = 1'0"

PLAN:
Sarah

SHEET TITLE: FOUNDATION

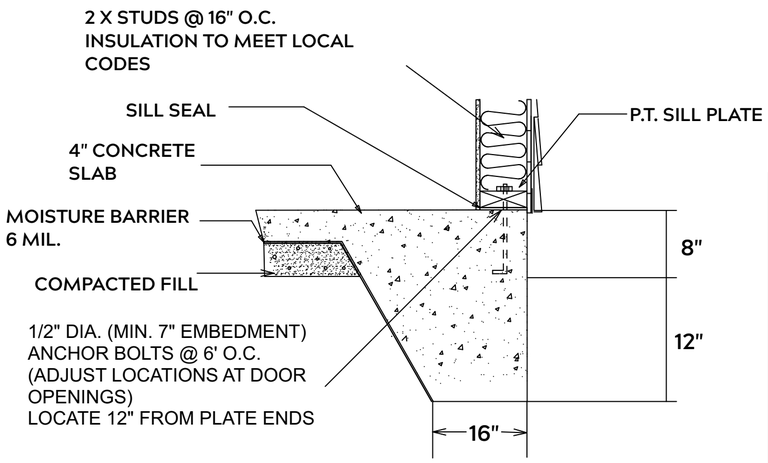
PROJECT ADDRESS:
223 Myrtle Oak Dr.
Magnolia Hills Dr. Lot 50

DESIGNED BY:
Precision Custom Homes
Raeford, NC
Shaun@PrecisionCustomHomesNC.com

DATE:
10/17/25

SCALE:
1/4" = 1'

SHEET:
A-2



MONOLITHIC SLAB

FOUNDATION NOTES:

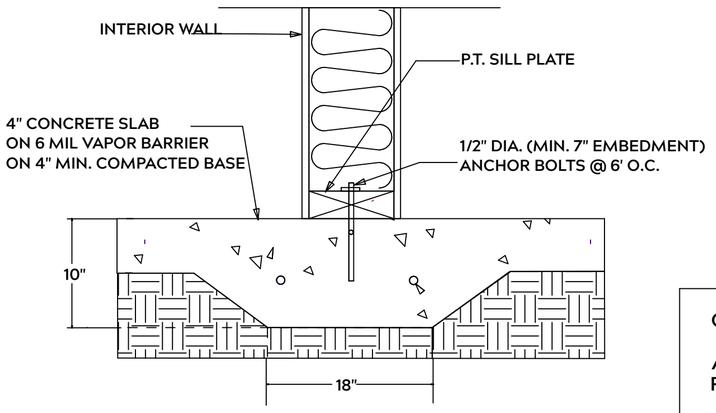
ALL FOOTINGS SHALL BEAR ON ORIGINAL UNDISTURBED SOIL
THE 28 DAY COMPRESSIVE STRENGTH OF ALL FOOTINGS IS 3000 PSI

PROVIDE WATER PROOFING AND PERIMTER DRAINS AS REQUIRED

FOOTING WIDTHS ARE BASED ON A LOAD BEARING SOIL CAPACITY OF 2000 PSI

PROVIDE 6 MIL POLY VAPOR BARRIER TO COVER GROUND IN CRAWL SPACE AND GROUND UNDER POURED CONCRETE

ALL ANCHOR BOLTS TO BE 1/2" X 12" LONG. ANCHOR BOLTS SHALL BE SPACED AT A MAXIMUM OF 6' ON CENTER AND NO MORE THEN 1' FROM EACH CORNER



LUG FOOTING

GENERAL FRAMING NOTES:

ALL LUMBER IN CONTACT WITH CONCRETE OR MASONRY SHALLE BE PRESSURE TREATED

FRAMING LUMBER SHALL BE SYP #2 GRADE AND / OR SPRUCE PINE FIR #1 AND / OR KILN DRIED

WHERE PRE-ENGINEERED JOISTS AND TRUSSES ARE USED, MANUFACTURER SHALL PROVIDE DRAWINGS / SCHEMATICS, WHICH SHALL BEAR OF A N.C. ENGINEER

STUDS AND JOISTS SHALL NOT BE CUT TO INSTALL PLUMBING OR WIRING WITHOUT ADDING METAL OR WOOD SIDE PANELS TO STRENGTHEN MEMBER TO ITS ORIGINAL CAPACITY

NAIL MULTIPLE MEMBERS WITH 2 ROWS OF 16d NAILS STAGGERED 32" O.C. AND USE 3 X 16d NAILS 2" IN AT EACH END.

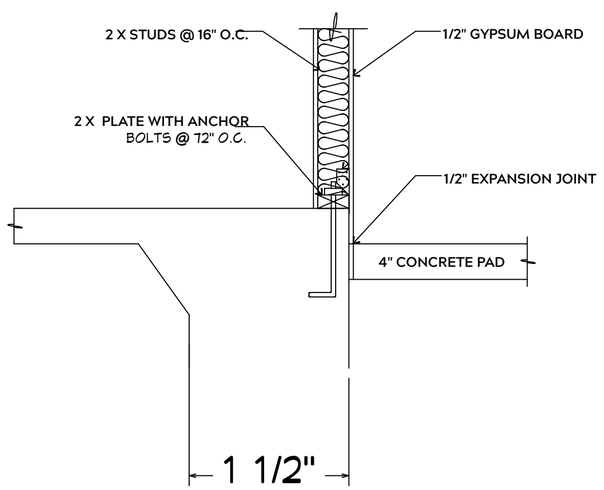
NAIL FLOOR JOISTS TO SILL PLATE WITH WITH 8d TOE NAILS

ALL EXPOSED FRAMING ON PORCHES OR DECKS SHALL BE PRESSURE TREATED

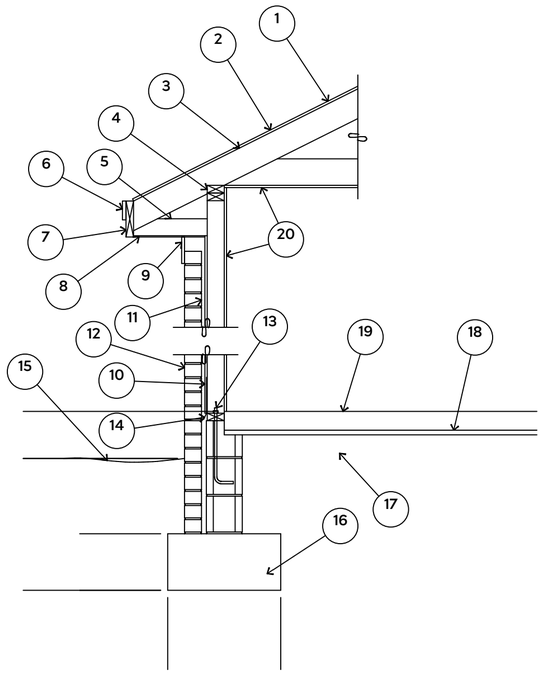
PROVIDE WATERPROOFING AND DRAINS AS REQUIRED

ALL FRAMING TO BE 16" O.C. WALL FRAMING DIMENSIONS ARE BASED ON 2X4 OR 2X6 EXTERIOR WALLS AND 2X4 INTERIOR WALLS. DOULBE / TRIPLE JACK STUDS AS NECESSARY UNDER HEADERS AS REQUIRED

LVL'S TO BE SIZED BY OTHERS (TRUSS MANUFACTURER)

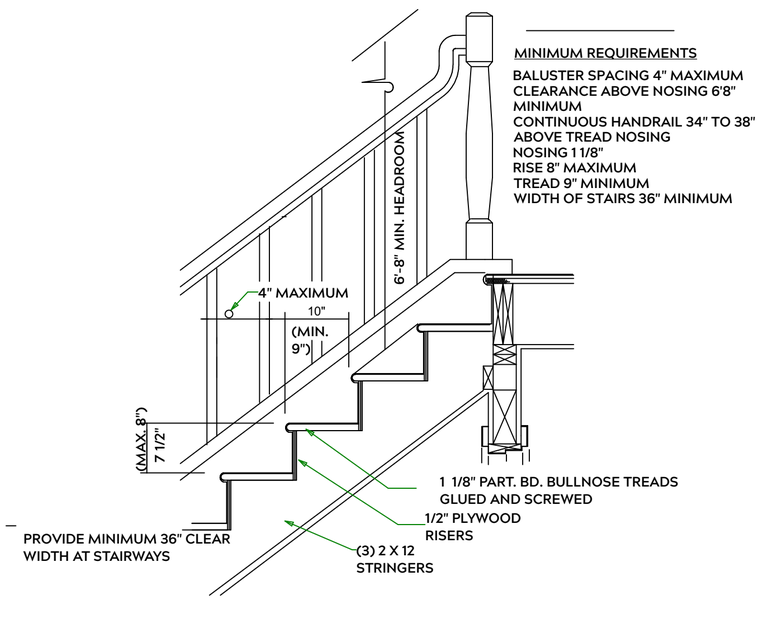


INTERIOR WALL @ GARAGE STEP DOWN



1. 15# FELT UNDERLAYMENT UNDER COMPOSITION SHINGLES.
2. ROOF DECKING.
3. 2 X RAFTERS / ENGINEERED TRUSSES
4. DOUBLE TOP PLATE.
5. 2 X 4 RETURN.
6. 3/4" FASCIA OR PVC TRIM COIL
7. 2 X FASCIA
8. 1/4" PLYWOOD OR VINYL SOFFIT
9. 1 X FREIZE BOARD (TO BE USED WITH BRICK VENEERS)
10. INSULATION BOARD OR HOUSE WRAP
11. AIR SPACE.
12. BRICK WITH BRICK TIES PER MANUFACTURER'S SPECIFICATIONS.
13. 1/2" X 12" ANCHOR BOLTS, 6'-0" O.C., 12" FROM CORNERS.
14. FLASHING WITH WEEP HOLES @ 48" O.C.
15. FINISHED GRADE.
16. FOOTING
17. COMPACTED EARTH FILL.
18. 6 MIL. VAPOR BARRIER
19. 4" CONCRETE SLAB, 3,000 P.S.I. WITH 6" X 6" 10 GA. X 10 GA. WELDED WIRE FABRIC.
20. 1/2" GYPSUM BOARD.

EXTERIOR WALL SECTION



STAIR DETAIL

PLAN:
Sarah

SHEET TITLE: DETAIL SHEETS

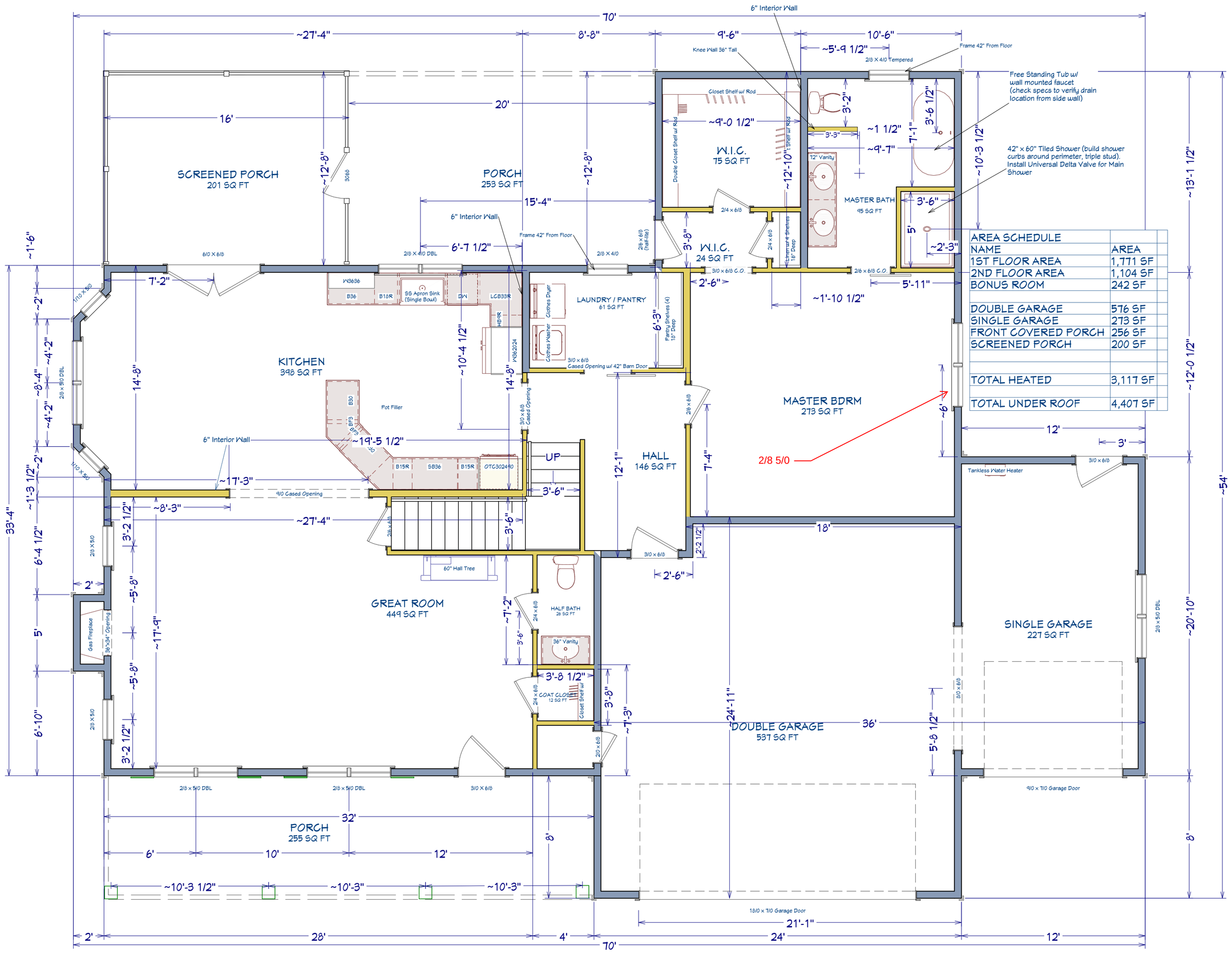
PROJECT ADDRESS:
223 Myrtle Oak Dr.
Magnolia Hills Dr. Lot 50

DESIGNED BY:
Precision Custom Homes
Raeford, NC
Shaun@PrecisionCustomHomesNC.com

DATE:
10/17/25

SCALE:
1/4" = 1'

SHEET:
A-3



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TOTAL HEATED	3,117 SF
TOTAL UNDER ROOF	4,407 SF

PLAN:
Sarah

SHEET TITLE:
1st FLOOR

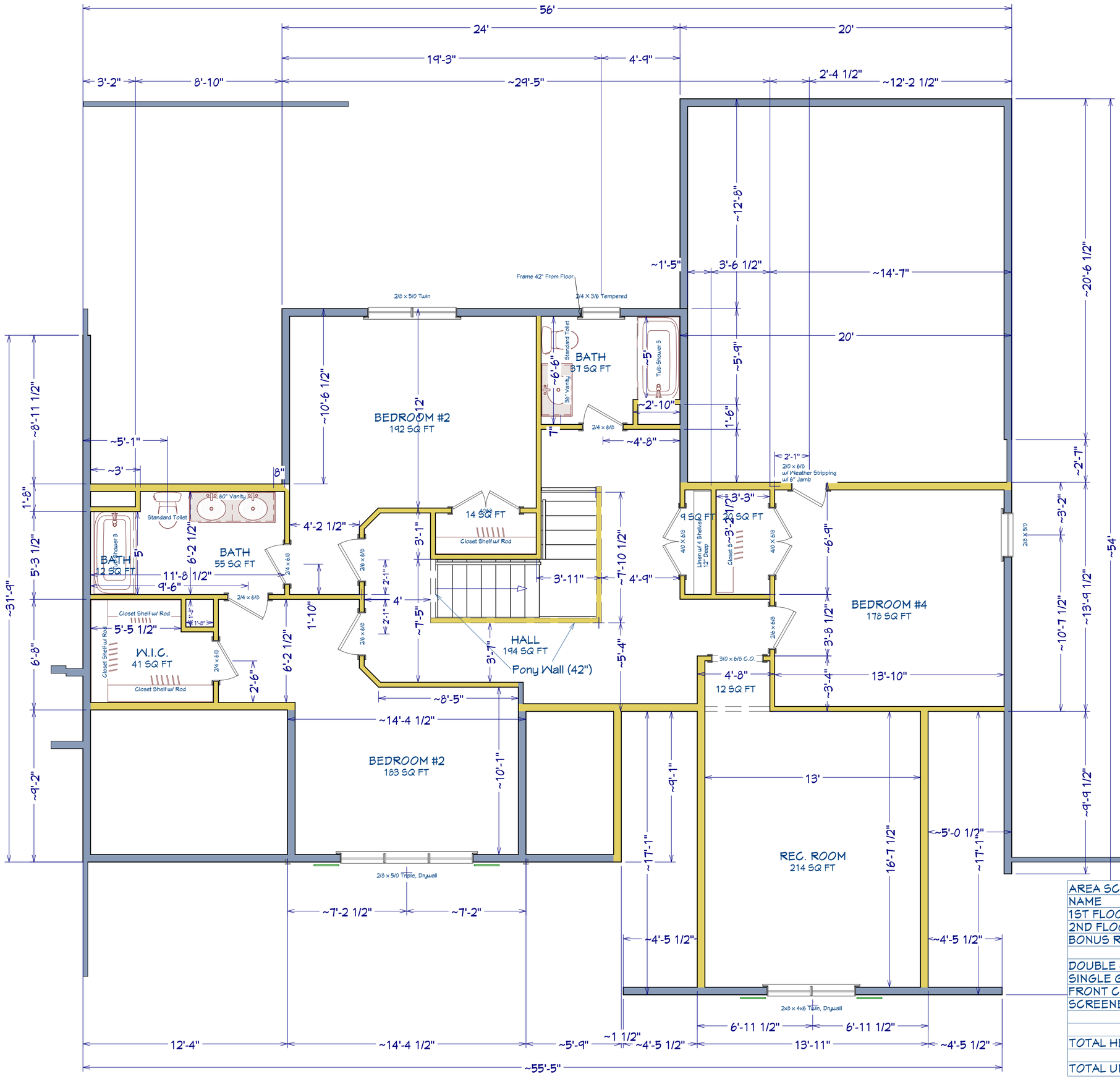
PROJECT ADDRESS:
223 Myrtle Oak Dr.
Magnolia Hills Dr. Lot 50

DESIGNED BY:
Precision Custom Homes
Raeford, NC
Shaun@PrecisionCustomHomesNC.com

DATE:
10/17/25

SCALE:
1/4" = 1'

SHEET:
A-4



AREA SCHEDULE	
NAME	AREA
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SCREENED PORCH	200 SF
TOTAL HEATED	3,117 SF
TOTAL UNDER ROOF	4,407 SF

PLAN:
Sarah

SHEET TITLE:
2nd FLOOR

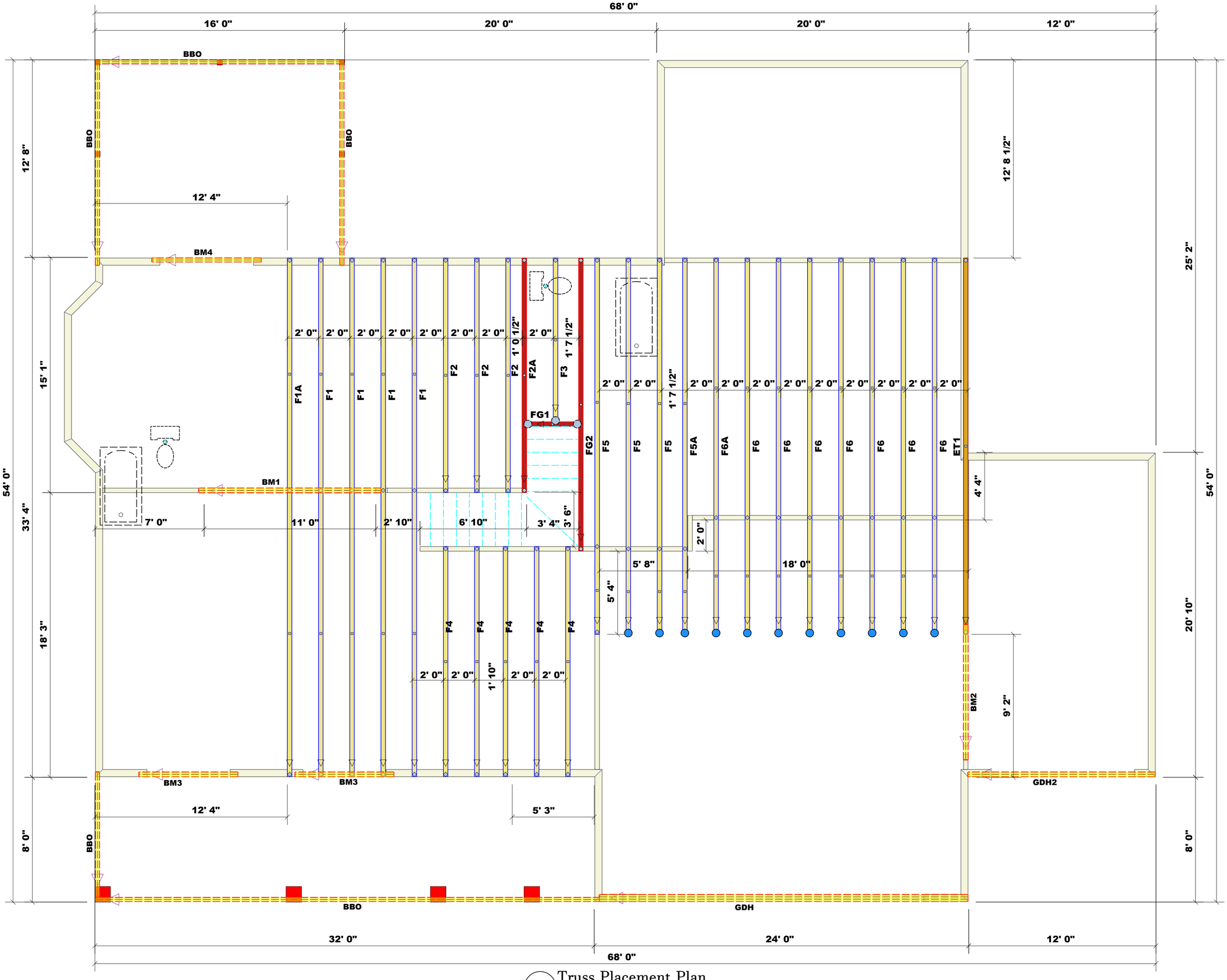
PROJECT ADDRESS:
223 Myrtle Oak Dr.
Magnolia Hills Dr. Lot 50

DESIGNED BY:
Precision Custom Homes
Raeford, NC
Shaun@PrecisionCustomHomesNC.com

DATE:
10/17/25

SCALE:
1/4" = 1'

SHEET:
A-5



1 Truss Placement Plan
Scale: 1/4"=1'

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
BM1	11' 8"	1-3/4"x 14" LVL Kerto-S	2	2	FF
BM2	8' 8"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
BM3	6' 4"	1-3/4"x 9-1/4" LVL Kerto-S	2	4	FF
BM4	7' 0"	2x10 SPF No.2	2	2	FF
GDH	23' 7 1/2"	1-3/4"x 11-7/8" LVL Kerto-S	3	3	FF
GDH2	12' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF

Plumbing Drop Notes

1. Plumbing drop locations shown are NOT exact.
2. Contractor to verify ALL plumbing drop locations prior to setting Floor Trusses.
3. Adjust spacing as needed not to exceed 24"oc.

Dimension Notes

1. All exterior wall to wall dimensions are to face of sheathing unless noted otherwise
2. All interior wall dimensions are to face of frame wall unless noted otherwise
3. All exterior wall to truss dimensions are to face of frame wall unless noted otherwise

Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
	HUS410	USP	11	Varies	16d/3-1/2"	16d/3-1/2"
	MSH422	USP	3	Varies	10d/3"	10d/3"

COMTECH
ROOF & FLOOR TRUSSES & BEAMS
Reilly Road Industrial Park
Fayetteville, N.C. 28309
Phone: (910) 864-8787
Fax: (910) 864-4444

Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables (derived from the prescriptive Code requirements) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature_____

Sales Area

LOAD CHART FOR JACK STUDS

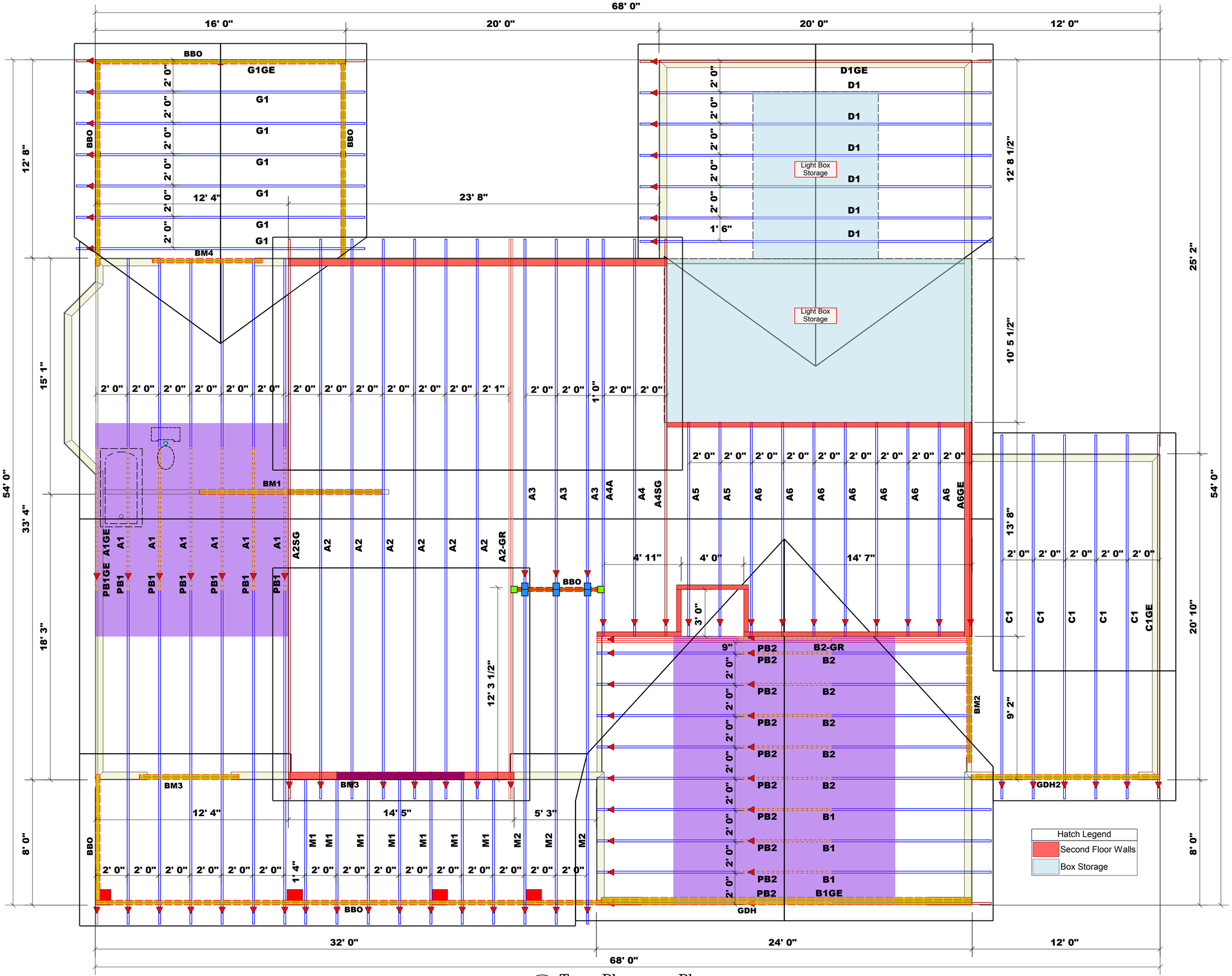
(BASED ON TABLES R502.5(1) & (b))

NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (3P TO)	REQ'D STUDS FOR (2) PLY HEADER	END REACTION (4P TO)	REQ'D STUDS FOR (3) PLY HEADER	END REACTION (5P TO)	REQ'D STUDS FOR (4) PLY HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	Precision Custom Homes
JOB NAME	Lot 50 Magnolia Hills
PLAN	Sarah
SEAL DATE	Seal Date
QUOTE #	
JOB #	252130 - B
COUNTY	Cameron / Cumberland
ADDRESS	385 Alder Drive
MODEL	Floor
DATE REV.	11/7/25
DRAWN BY	Johnnie Baggett
SALESMAN	Neil Baggett

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY.
These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult BCSI-B1 and BCSI-B3 provided with the truss delivery package or online @ sbcindustry.com



Truss Placement Plan

1 Scale: 1/4"=1'

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
BM1	11' 8"	1-3/4"x 14" LVL Kerto-S	2	2	FF
BM2	8' 8"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
BM3	6' 4"	1-3/4"x 9-1/4" LVL Kerto-S	2	4	FF
BM4	7' 0"	2x10 SPF No.2	2	2	FF
GDH	23' 7 1/2"	1-3/4"x 11-7/8" LVL Kerto-S	3	3	FF
GDH2	12' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF

Plumbing Drop Notes

1. Plumbing drop locations shown are NOT exact.
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Dimension Notes

1. All exterior wall to wall dimensions are to face of sheathing unless noted otherwise
2. All interior wall dimensions are to face of frame wall unless noted otherwise
3. All exterior wall to truss dimensions are to face of frame wall unless noted otherwise

Roof Area	= 4234.58 sq.ft.
Ridge Line	= 134.13 ft.
Hip Line	= 0 ft.
Horiz. OH	= 224.39 ft.
Raked OH	= 311.89 ft.
Decking	= 146 sheets

Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
	HUS26	USP	6	Varies	16d/3-1/2"	16d/3-1/2"
	THD26-2	USP	2	Varies	16d/3-1/2"	10d/3"

COMTECH
ROOF & FLOOR TRUSSES & BEAMS
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Phone: (910) 864-8787
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Signature_____

Sales Area

LOAD CHART FOR JACK STUDS

(BASED ON TABLES R502.5(1) & (b))

NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (3# TO)	REQ'D # STUDS FOR (2) PLY HEADER	END REACTION (6# TO)	REQ'D # STUDS FOR (3) PLY HEADER	END REACTION (3# TO)	REQ'D # STUDS FOR (4) PLY HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	Precision Custom Homes
JOB NAME	Lot 50 Magnolia Hills
PLAN	Sarah
SEAL DATE	Seal Date
QUOTE #	
JOB #	252130 - A
COUNTY	Cameron / Cumberland
ADDRESS	223 Myrtle Oak Drive
MODEL	Roof
DATE REV.	11/7/25
DRAWN BY	Johnnie Baggett
SALESMAN	Neil Baggett

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult BCSI-B1 and BCSI-B3 provided with the truss delivery package or online @ sbcindustry.com

ENGINEERING BY TRENCO
A MiTek Affiliate

RE: 252130-A
Lot 50 Magnolia Hills

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Precision Custom Homes and Renovations Project Name: 252130-A
Lot/Block: 50 Model:
Address: 223 Myrtle Oak Drive Subdivision: Magnolia Hills
City: Cameron State: NC

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2021/TPI2014 Design Program: MiTek 20/20 25.3
Wind Code: ASCE 7-16 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 27 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I76525545	A1	9/23/2025	21	I76525565	G1	9/23/2025
2	I76525546	A1GE	9/23/2025	22	I76525566	G1GE	9/23/2025
3	I76525547	A2	9/23/2025	23	I76525567	M1	9/23/2025
4	I76525548	A2-GR	9/23/2025	24	I76525568	M2	9/23/2025
5	I76525549	A2SG	9/23/2025	25	I76525569	PB1	9/23/2025
6	I76525550	A3	9/23/2025	26	I76525570	PB1GE	9/23/2025
7	I76525551	A4	9/23/2025	27	I76525571	PB2	9/23/2025
8	I76525552	A4A	9/23/2025				
9	I76525553	A4SG	9/23/2025				
10	I76525554	A5	9/23/2025				
11	I76525555	A6	9/23/2025				
12	I76525556	A6GE	9/23/2025				
13	I76525557	B1	9/23/2025				
14	I76525558	B1GE	9/23/2025				
15	I76525559	B2	9/23/2025				
16	I76525560	B2-GR	9/23/2025				
17	I76525561	C1	9/23/2025				
18	I76525562	C1GE	9/23/2025				
19	I76525563	D1	9/23/2025				
20	I76525564	D1GE	9/23/2025				

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville.

Truss Design Engineer's Name: Gilbert, Eric

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

September 23, 2025

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	A1	Attic	6	1	I76525545
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:02 Page: 1
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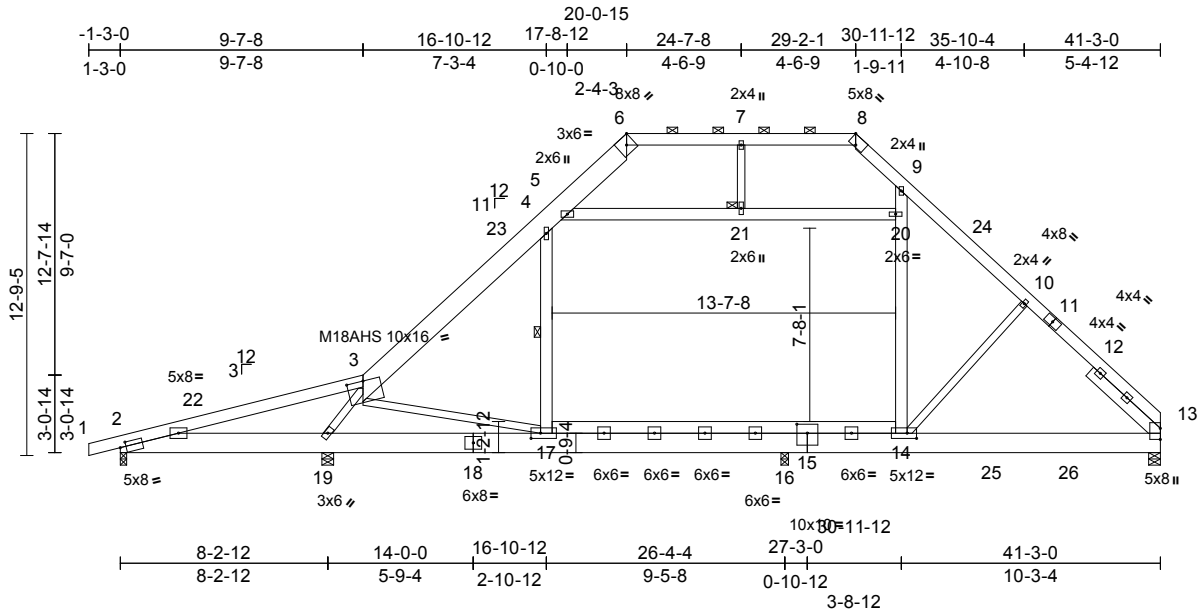

Scale = 1:91.4

Plate Offsets (X, Y): [2:0-2-12,0-2-1], [3:0-8-0,Edge], [6:0-3-11,Edge], [8:Edge,0-4-1], [14:0-4-8,0-2-8], [15:0-5-0,0-4-4], [17:0-4-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.07	13-14	>999	360	M18AHS	186/179
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.13	17-19	>999	240	MT20	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.01	13	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.06	13-14	>999	240	Weight: 449 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1 *Except* 3-6:2x10 SP No.1
BOT CHORD 2x10 SP No.1 *Except* 17-14:2x6 SP No.1
WEBS 2x4 SP No.2 *Except* 4-17,9-14:2x6 SP No.1, 5-20:2x6 SP No.2
SLIDER Right 2x6 SP No.2 -- 3-8-9

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-19.
WEBS 1 Row at midpt 4-17
JOINTS 1 Brace at Jt(s): 21
This truss requires both edges of the bottom chord be sheathed in the room area.

REACTIONS (size) 2=0-3-0, 13=0-5-8, 16=0-3-8, 19=0-5-8
Max Horiz 2=294 (LC 11)
Max Uplift 2=-330 (LC 8)
Max Grav 2=151 (LC 25), 13=1360 (LC 2), 16=1508 (LC 25), 19=2483 (LC 32)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-328/1451, 3-4=-1445/143, 4-5=-1046/293, 5-6=-792/263, 6-7=-606/248, 7-8=-606/248, 8-9=-734/269, 9-10=-1293/261, 10-13=-1477/219
BOT CHORD 2-19=-1176/190, 17-19=-232/414, 16-17=0/996, 14-16=0/1094, 13-14=0/965
WEBS 3-19=-2243/277, 3-17=-34/1003, 4-17=-255/259, 14-20=-53/336, 9-20=0/389, 10-14=-243/324, 5-21=-371/111, 20-21=-370/111, 7-21=0/168

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-3-0 to 3-1-13, Interior (1) 3-1-13 to 20-0-15, Exterior(2R) 20-0-15 to 24-7-8, Interior (1) 24-7-8 to 29-2-1, Exterior(2R) 29-2-1 to 33-6-14, Interior (1) 33-6-14 to 41-3-0 zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) N/A
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Ceiling dead load (10.0 psf) on member(s). 3-4, 4-5, 5-21, 20-21; Wall dead load (5.0psf) on member (s).4-17, 14-20
9) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 16-17, 14-16
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 330 lb uplift at joint 2.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills	
252130-A	A1GE	Attic	1	1	Job Reference (optional)	I76525546

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:03 Page: 1
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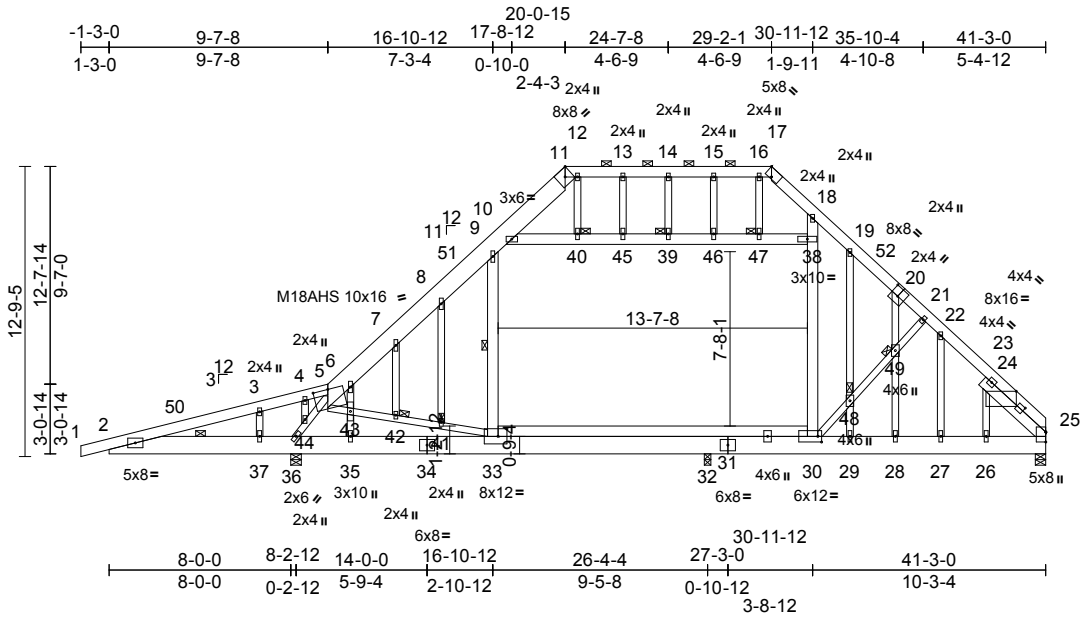

Scale = 1:101.5

Plate Offsets (X, Y): [5:0-8-0,Edge], [11:0-3-11,Edge], [17:Edge,0-4-1], [20:0-4-0,0-4-8], [24:1-3-10,1-9-9], [25:1-4-8,0-2-0], [30:0-2-0,0-3-0], [33:0-4-12,0-4-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.27	30-33	>829	360	M18AHS	186/179
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.39	30-33	>563	240	MT20	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.01	25	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	-0.10	33-35	>999	240	Weight: 515 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.1 *Except* 5-11:2x10 SP No.1
BOT CHORD 2x10 SP No.1 *Except* 33-30:2x6 SP 2400F 2.0E
WEBS 2x4 SP No.2 *Except* 9-33,18-30:2x6 SP No.1, 10-38:2x6 SP No.2
OTHERS 2x4 SP No.2
SLIDER Right 2x6 SP No.2 -- 3-8-9

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 11-17.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-37,36-37
9-5-9 oc bracing: 29-30.
WEBS 1 Row at midpt 9-33
JOINTS 1 Brace at Jt(s): 39, 40, 41, 42, 47, 48, 49
This truss requires both edges of the bottom chord be sheathed in the room area.

REACTIONS (size) 25=0-5-8, 32=0-3-8, 36=0-5-8
Max Horiz 36=294 (LC 9)
Max Uplift 36=-89 (LC 12)
Max Grav 25=1378 (LC 24), 32=1808 (LC 18), 36=2226 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/16, 2-3=-743/958, 3-4=-673/896, 4-5=-671/931, 5-6=-1447/0, 6-7=-1845/0, 7-8=-1778/0, 8-9=-1670/0, 9-10=-1211/244, 10-11=-940/272, 11-12=-751/251, 12-13=-751/251, 13-14=-751/251, 14-15=-751/251, 15-16=-751/251, 16-17=-751/251, 17-18=-943/268, 18-19=-1696/245, 19-21=-1661/163, 21-22=-1584/152, 22-24=-1479/269, 24-25=-1691/124
BOT CHORD 2-37=-879/771, 36-37=-879/771, 35-36=-25/866, 33-35=-25/866, 32-33=0/763, 30-33=0/1330, 29-30=0/1057, 28-29=0/1057, 27-28=0/1057, 26-27=0/1058, 25-26=0/1046
WEBS 36-44=-1850/248, 5-44=-1982/261, 5-43=-424/1249, 42-43=-307/900, 41-42=-304/897, 33-41=-321/941, 9-33=-86/824, 30-38=-56/713, 18-38=0/584, 30-48=-294/477, 48-49=-276/443, 21-49=-277/451, 10-40=-537/53, 40-45=-536/53, 39-45=-536/53, 39-46=-536/53, 46-47=-536/53, 38-47=-536/53, 14-39=-17/45, 12-40=-53/262, 8-41=-79/161, 7-42=-15/13, 6-43=-904/325, 35-43=-322/119, 4-44=-37/214, 3-37=-359/203, 13-45=-66/65, 15-46=-133/71, 16-47=-37/400, 19-48=-165/111, 29-48=-220/70, 20-49=-227/47, 28-49=-184/42, 22-27=-288/185, 24-26=0/210

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-3-0 to 3-1-13, Interior (1) 3-1-13 to 20-0-15, Exterior(2R) 20-0-15 to 24-7-8, Interior (1) 24-7-8 to 29-2-1, Exterior(2R) 29-2-1 to 33-6-14, Interior (1) 33-6-14 to 41-3-0 zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
6) All plates are 2x6 (||) MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

September 23,2025

Continued on page 2

ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

10) Ceiling dead load (10.0 psf) on member(s). 9-10, 10-40, 40-45, 39-45, 39-46, 46-47, 38-47; Wall dead load (5.0psf) on member(s).9-33, 30-38
11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 32-33, 30-33
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 36.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	A2	ROOF SPECIAL	6	1	I76525547
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

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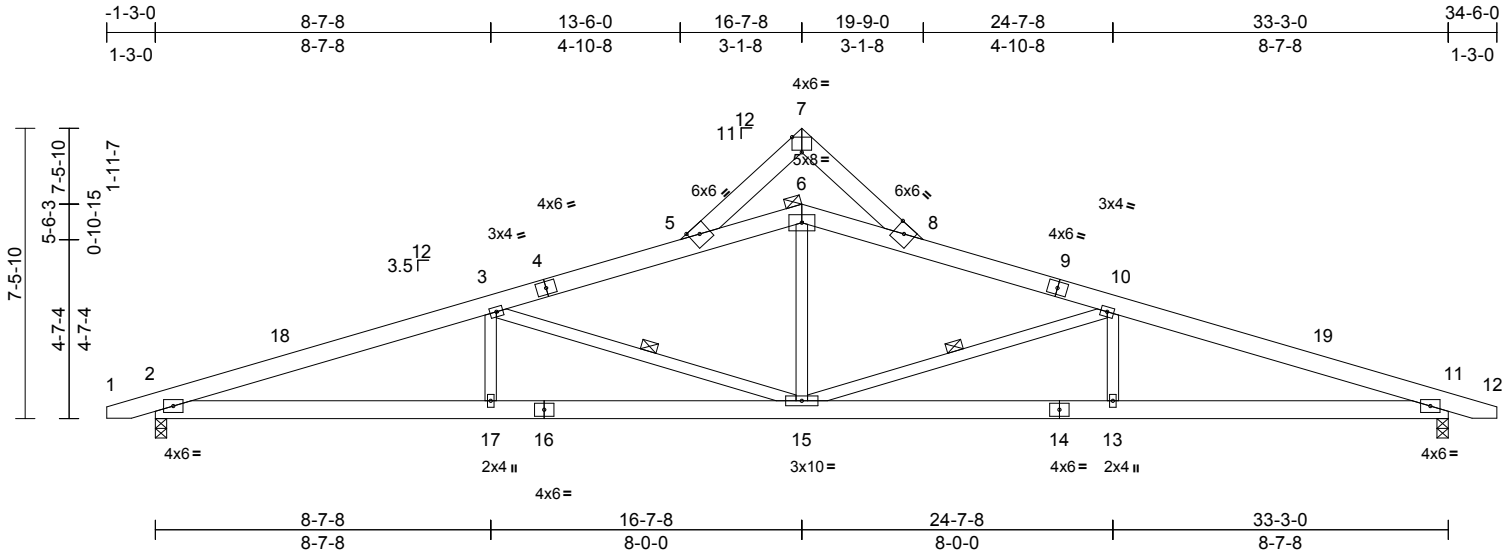


Scale = 1:59.3

Plate Offsets (X, Y): [7:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	-0.15	15-17	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.32	15-17	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.10	11	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.12	15-17	>999	240	Weight: 222 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

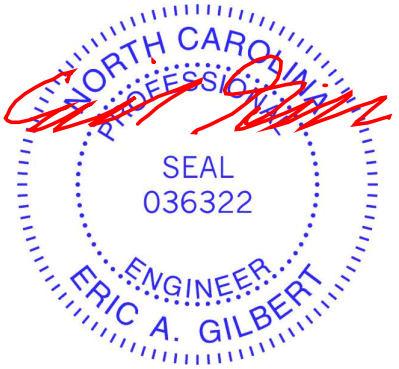
BRACING
TOP CHORD Structural wood sheathing directly applied or 3-9-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-8-1 oc bracing.
WEBS 1 Row at midpt 3-15, 10-15
JOINTS 1 Brace at Jt(s): 6

REACTIONS (lb/size) 2=1383/0-3-8, 11=1383/0-3-8
Max Horiz 2=-84 (LC 17)
Max Uplift 2=-99 (LC 12), 11=-99 (LC 13)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-18=-3408/895, 3-18=-3339/913, 3-4=-2368/663, 4-5=-2295/677, 5-6=-2122/657, 6-8=-2122/659, 8-9=-2295/707, 9-10=-2368/693, 10-19=-3339/934, 11-19=-3408/916
BOT CHORD 2-17=-821/3180, 16-17=-821/3180, 15-16=-821/3180, 14-15=-810/3180, 13-14=-810/3180, 11-13=-810/3180
WEBS 6-15=-137/848, 3-15=-1084/349, 3-17=0/341, 10-15=-1084/343, 10-13=0/341

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-3 to 3-5-10, Interior (1) 3-5-10 to 16-7-8, Exterior(2E) 16-7-8 to 19-7-10, Interior (1) 19-7-10 to 34-2-3 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 99 lb uplift at joint 2 and 99 lb uplift at joint 11.
6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	A2-GR	ROOF SPECIAL	1	**2**	I76525548 Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

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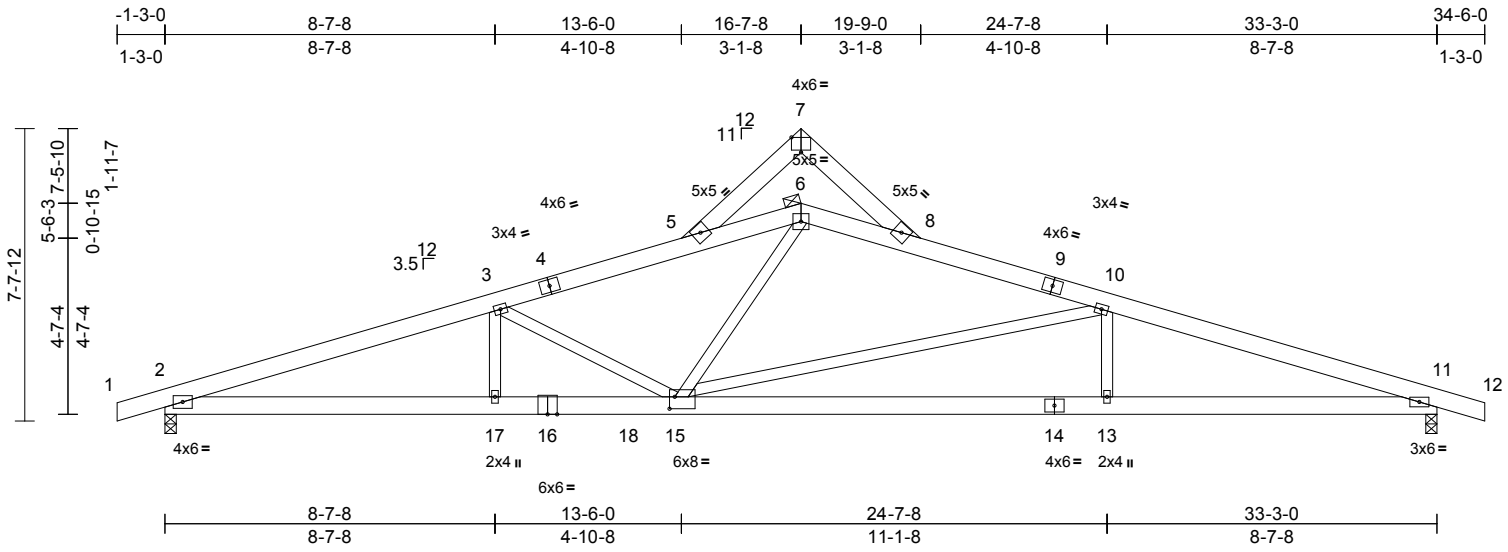

Scale = 1:60.2

Plate Offsets (X, Y): [7:0-3-0,Edge], [15:0-1-10,0-3-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.17	15-17	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.34	15-17	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.62	Horz(CT)	0.08	11	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.13	15-17	>999	240	Weight: 449 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1 *Except* 14-16:2x6 SP 2400F 2.0E
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-9-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 6

REACTIONS (lb/size) 2=2675/0-3-8, 11=2129/0-3-8
Max Horiz 2=-85 (LC 9)
Max Uplift 2=-238 (LC 4), 11=-183 (LC 5)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-7577/631, 3-4=-6460/476, 4-5=-6393/490, 5-6=-6196/501, 6-8=-4429/400, 8-9=-4625/421, 9-10=-4693/407, 10-11=-5705/414
BOT CHORD 2-17=-624/7144, 16-17=-624/7144, 16-18=-624/7144, 15-18=-624/7144, 14-15=-333/5363, 13-14=-333/5363, 11-13=-333/5363
WEBS 3-17=0/578, 10-13=0/365, 6-15=-185/3114, 3-15=-1161/237, 10-15=-1304/137

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 3 rows staggered at 0-8-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 238 lb uplift at joint 2 and 183 lb uplift at joint 11.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 2000 lb down and 204 lb up at 12-1-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-60, 5-7=-60, 7-8=-60, 8-12=-60, 2-11=-20
Concentrated Loads (lb)
Vert: 18=-2000 (F)

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	A2SG	GABLE	1	1	I76525549
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

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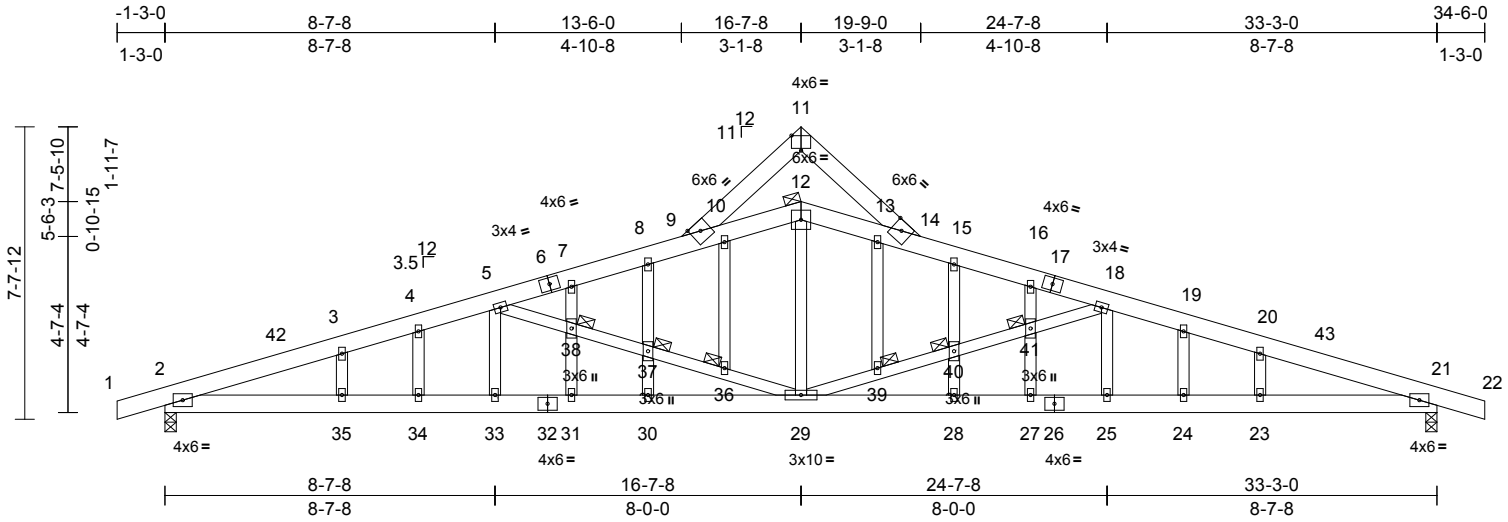

Scale = 1:60.2

Plate Offsets (X, Y): [11:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	-0.16	30-31	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.32	30-31	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.09	21	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.13	30-31	>999	240	Weight: 259 lb	FT = 20%

LUMBER

TOP CHORD	2x6 SP No.1
BOT CHORD	2x6 SP No.1
WEBS	2x4 SP No.2
OTHERS	2x4 SP No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-1-10 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 8-9-4 oc bracing.
JOINTS	1 Brace at Jt(s): 12, 36, 37, 38, 39, 40, 41

REACTIONS (lb/size) 2=1402/0-3-8, 21=1402/0-3-8
Max Horiz 2=85 (LC 12)
Max Uplift 2=-109 (LC 8), 21=-109 (LC 9)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD	2-42=-3348/862, 3-42=-3289/868, 3-4=-3258/899, 4-5=-3230/913, 5-6=-2355/640, 6-7=-2325/646, 7-8=-2315/656, 8-9=-2312/691, 9-10=-2144/672, 10-12=-2157/679, 12-13=-2157/680, 13-14=-2144/675, 14-15=-2312/721, 15-16=-2315/688, 16-17=-2325/677, 17-18=-2355/671, 18-19=-3230/928, 19-20=-3258/914, 20-43=-3289/883, 21-43=-3348/878
BOT CHORD	2-35=-790/3113, 34-35=-790/3113, 33-34=-790/3113, 32-33=-790/3113, 31-32=-790/3113, 30-31=-790/3113, 29-30=-790/3113, 28-29=-773/3113, 27-28=-773/3113, 26-27=-773/3113, 25-26=-773/3113, 24-25=-773/3113, 23-24=-773/3113, 21-23=-773/3113
WEBS	12-29=-266/986, 5-33=-39/253, 18-25=-38/253, 5-38=-1028/325, 37-38=-1006/318, 36-37=-1017/321, 29-36=-1036/329, 29-39=-1036/324, 39-40=-1017/316, 40-41=-1006/314, 18-41=-1028/320

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-3-0 to 3-1-13, Interior (1) 3-1-13 to 16-7-8, Exterior(2E) 16-7-8 to 19-7-10, Interior (1) 19-7-10 to 34-6-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 (||) MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 109 lb uplift at joint 2 and 109 lb uplift at joint 21.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills	I76525550
252130-A	A3	Roof Special	3	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

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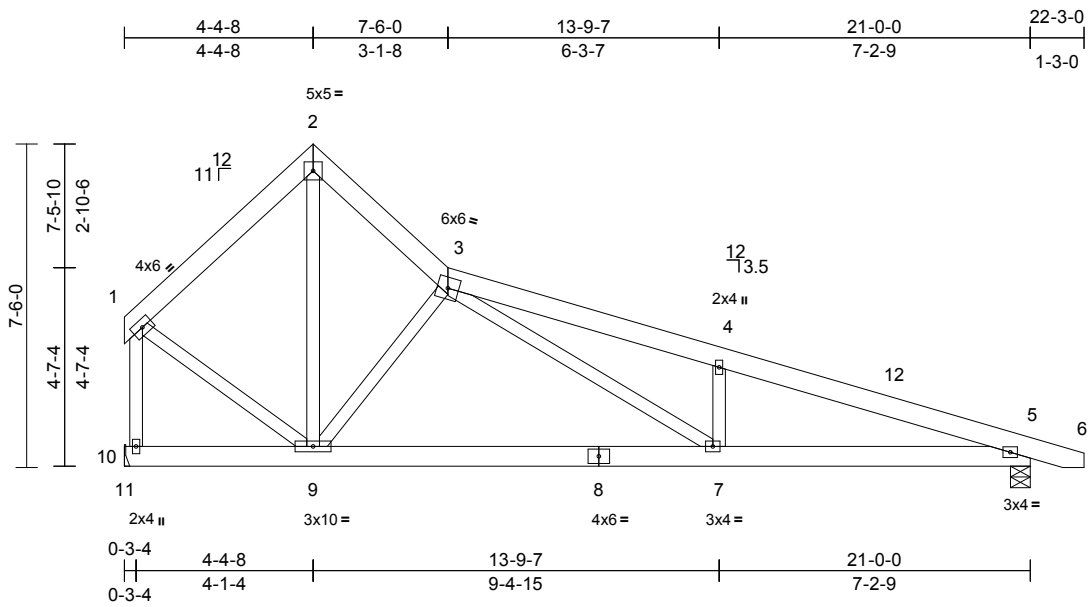

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	-0.06	7-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.14	7-9	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.04	7-9	>999	240	Weight: 152 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-4-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 9-10.

REACTIONS (size) 5=0-5-8, 10= Mechanical
Max Horiz 10=-168 (LC 8)
Max Uplift 5=-109 (LC 9), 10=-59 (LC 13)
Max Grav 5=896 (LC 1), 10=824 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-621/229, 2-3=-618/290, 3-4=-1878/592, 4-5=-1900/496, 5-6=0/6, 1-10=-806/265
BOT CHORD 10-11=0/0, 9-10=-53/169, 7-9=-179/921, 5-7=-397/1747
WEBS 2-9=-165/541, 3-7=-262/991, 4-7=-368/251, 1-9=-72/514, 3-9=-839/371

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 2-3-11 to 9-6-12, Interior (1) 9-6-12 to 24-0-9 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 59 lb uplift at joint 10 and 109 lb uplift at joint 5.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	A4	ROOF SPECIAL	1	1	I76525551
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:04 Page: 1
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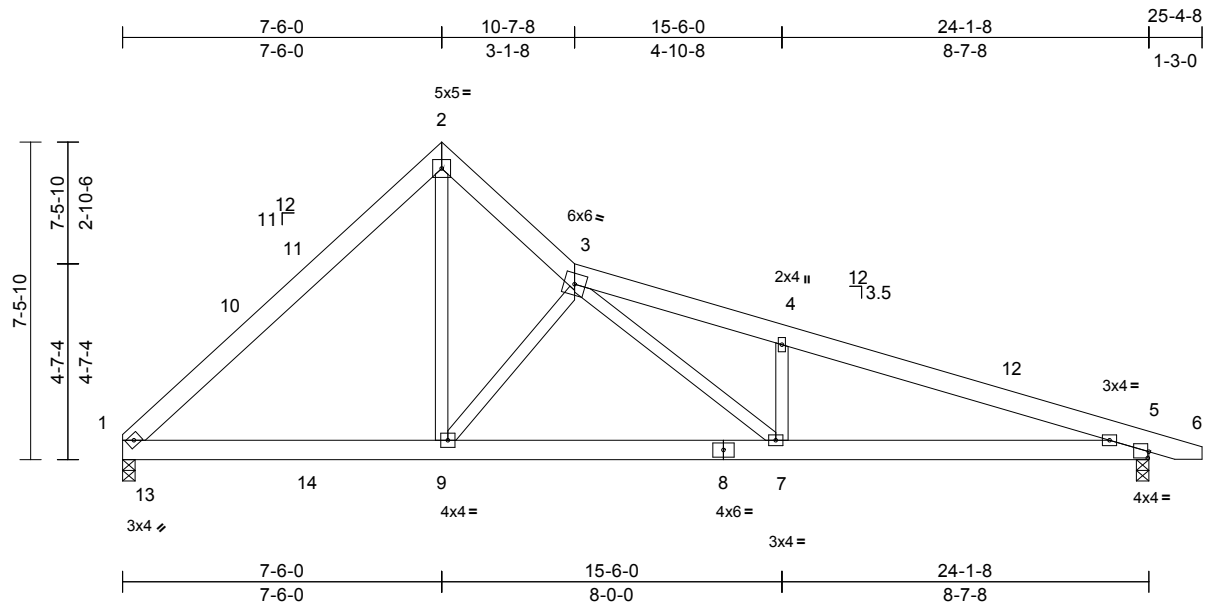


Scale = 1:54.2

Plate Offsets (X, Y): [5:0-0-5,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.10	5-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.19	5-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.04	5	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.06	5-7	>999	240	Weight: 156 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 5=0-3-8
Max Horiz 1=-171 (LC 8)
Max Uplift 1=-40 (LC 13), 5=-104 (LC 9)
Max Grav 1=1085 (LC 19), 5=1091 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1261/326, 2-3=-1183/427, 3-4=-2386/717, 4-5=-2407/625, 5-6=0/4
BOT CHORD 1-9=-90/917, 7-9=-317/1520, 5-7=-513/2249
WEBS 2-9=-230/1243, 3-9=-1073/375, 3-7=-257/982, 4-7=-412/269

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 4-6-9, Interior (1) 4-6-9 to 7-6-0, Exterior(2E) 7-6-0 to 10-7-8, Interior (1) 10-7-8 to 25-0-11 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 1 and 104 lb uplift at joint 5.

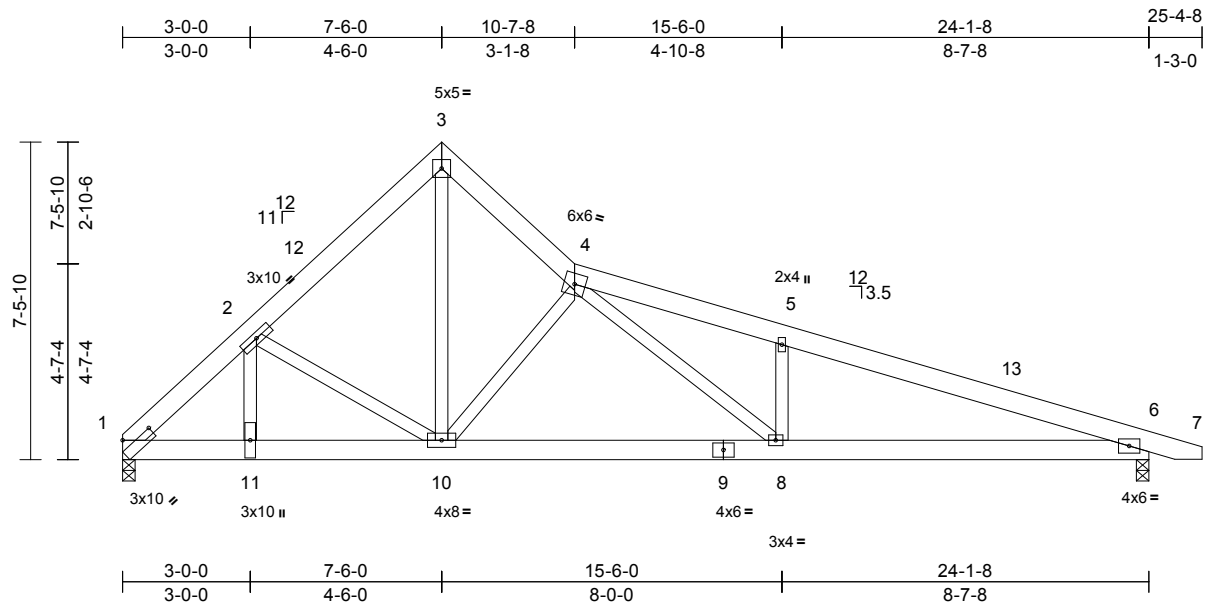
LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	A4A	ROOF SPECIAL	1	1	I76525552
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:04 Page: 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:54.2

Plate Offsets (X, Y): [1:0-7-12,0-2-7]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.09	8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.19	8-10	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.62	Horz(CT)	0.05	6	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.09	8-10	>999	240	Weight: 167 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-1-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-11-14 oc bracing.

REACTIONS (size) 1=0-3-8, 6=0-3-8
Max Horiz 1=-171 (LC 10)
Max Uplift 1=-200 (LC 13), 6=-126 (LC 9)
Max Grav 1=2448 (LC 1), 6=1223 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3288/1087, 2-3=-1698/616, 3-4=-1657/657, 4-5=-2833/940, 5-6=-2876/851, 6-7=0/4
BOT CHORD 1-11=-762/2336, 10-11=-763/2341, 8-10=-548/2003, 6-8=-728/2671
WEBS 3-10=-671/1908, 4-10=-1304/511, 4-8=-241/881, 5-8=-386/259, 2-11=-510/1675, 2-10=-1359/617

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 4-6-9, Interior (1) 4-6-9 to 7-6-0, Exterior(2E) 7-6-0 to 10-7-8, Interior (1) 10-7-8 to 25-0-11 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 200 lb uplift at joint 1 and 126 lb uplift at joint 6.
6) Load case(s) 18 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1720 lb down and 589 lb up at 3-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-4=-60, 4-7=-60, 1-6=-20
Concentrated Loads (lb)
Vert: 11=-1700 (B)
18) Dead: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90
Uniform Loads (lb/ft)
Vert: 3-6=-20, 3-4=-20, 4-7=-20
Concentrated Loads (lb)
Vert: 11=-850 (B)

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	A4SG	GABLE	1	1	I76525553
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:04 Page: 1
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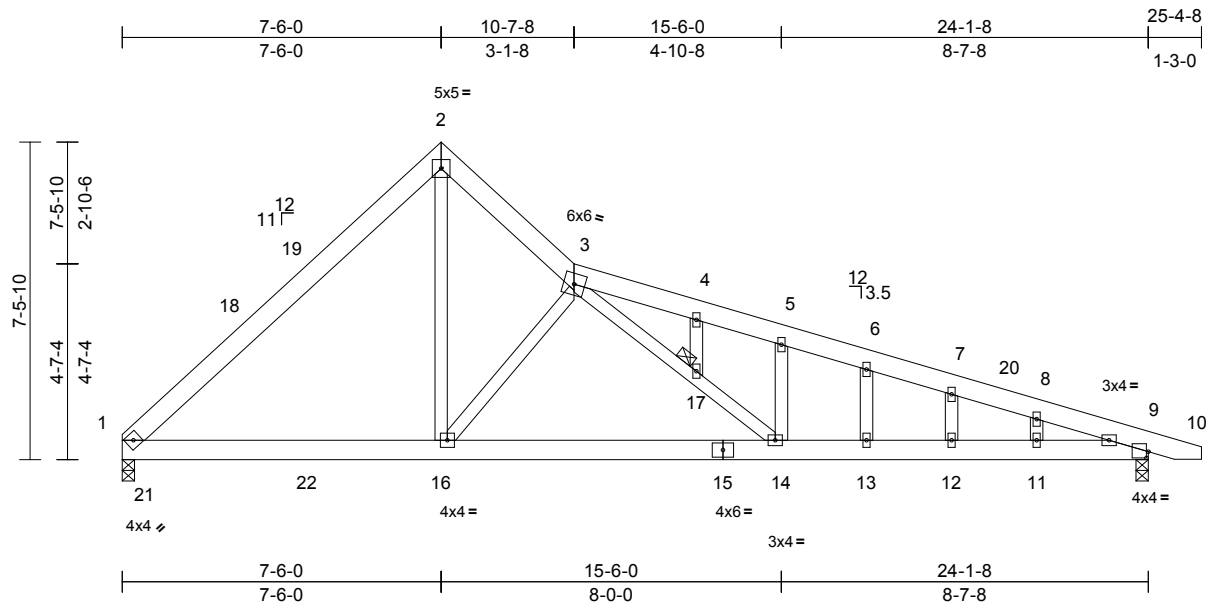

Scale = 1:54.2

Plate Offsets (X, Y): [9:0-0-9,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.08	12-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.15	12-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.03	9	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.06	12-13	>999	240	Weight: 163 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 17

REACTIONS (size) 1=0-3-8, 9=0-3-8
Max Horiz 1=-171 (LC 8)
Max Uplift 1=-40 (LC 13), 9=-104 (LC 9)
Max Grav 1=1085 (LC 19), 9=1091 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1263/324, 2-3=-1185/427, 3-4=-2291/695, 4-5=-2318/685, 5-6=-2270/621, 6-7=-2285/612, 7-8=-2311/591, 8-9=-2389/574, 9-10=0/4
BOT CHORD 1-16=-88/918, 14-16=-322/1518, 13-14=-494/2194, 12-13=-494/2194, 11-12=-494/2194, 9-11=-494/2194
WEBS 2-16=-232/1248, 3-16=-1072/387, 3-17=-231/917, 14-17=-226/906, 5-14=-322/202, 4-17=-19/9, 6-13=-44/6, 7-12=-34/54, 8-11=0/93

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 4-6-9, Interior (1) 4-6-9 to 7-6-0, Exterior(2E) 7-6-0 to 10-7-8, Interior (1) 10-7-8 to 25-0-11 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 (||) MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 1 and 104 lb uplift at joint 9.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	A5	COMMON	2	1	I76525554
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 E Sep 7 2025 Print: 25.3.0 E Sep 7 2025 MiTek Industries, Inc. Tue Sep 23 14:51:19 Page: 1
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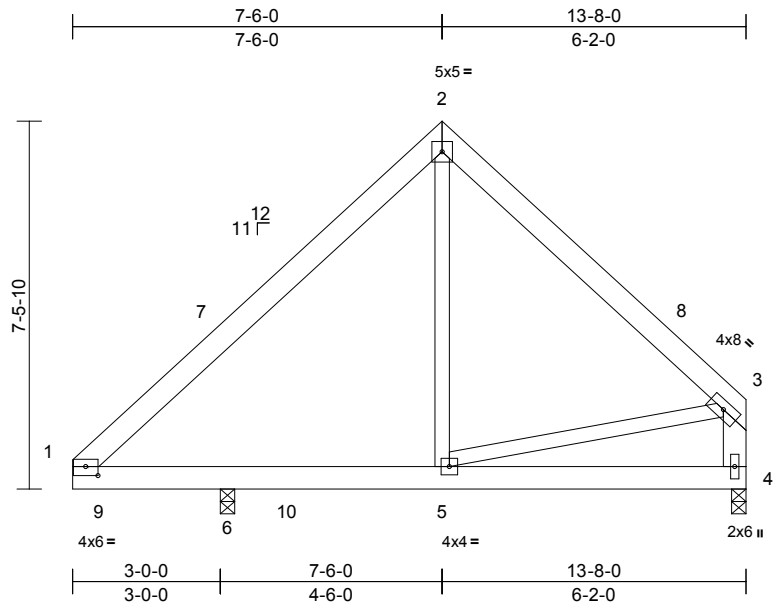

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Plate Offsets (X, Y): [1:0-3-0,0-2-3]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	-0.06	4-5	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.10	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.05	4-5	>999	240	Weight: 97 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except* 4-3:2x6 SP No.1

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 4=373/0-3-8, 6=702/0-3-8
Max Horiz 6=164 (LC 9)
Max Uplift 4=-20 (LC 12), 6=-25 (LC 12)
Max Grav 4=449 (LC 19), 6=814 (LC 20)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-7=-354/39, 3-8=-315/69, 3-4=-280/108

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 4-4-13, Interior (1) 4-4-13 to 7-6-0, Exterior(2R) 7-6-0 to 11-10-13, Interior (1) 11-10-13 to 13-5-4 zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 4 and 25 lb uplift at joint 6.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills	I76525555
252130-A	A6	COMMON	7	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:04 Page: 1
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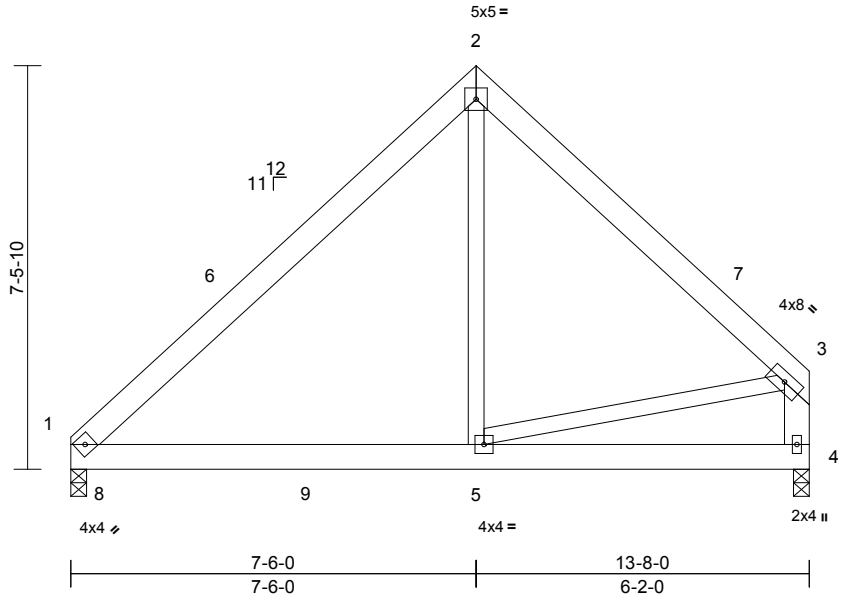

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.04	1-5	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.06	1-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.02	1-5	>999	240	Weight: 97 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except* 4-3:2x6 SP No.1

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 4=0-3-8
Max Horiz 1=164 (LC 9)
Max Uplift 1=-18 (LC 12), 4=-25 (LC 12)
Max Grav 1=630 (LC 19), 4=628 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-629/178, 2-3=-624/208, 3-4=-562/202
BOT CHORD 1-5=-25/416, 4-5=-72/99
WEBS 2-5=0/378, 3-5=-40/380

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 4-6-9, Interior (1) 4-6-9 to 7-6-0, Exterior(2R) 7-6-0 to 11-10-13, Interior (1) 11-10-13 to 13-5-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1 and 25 lb uplift at joint 4.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	A6GE	COMMON SUPPORTED GAB	1	1	I76525556
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:05 Page: 1
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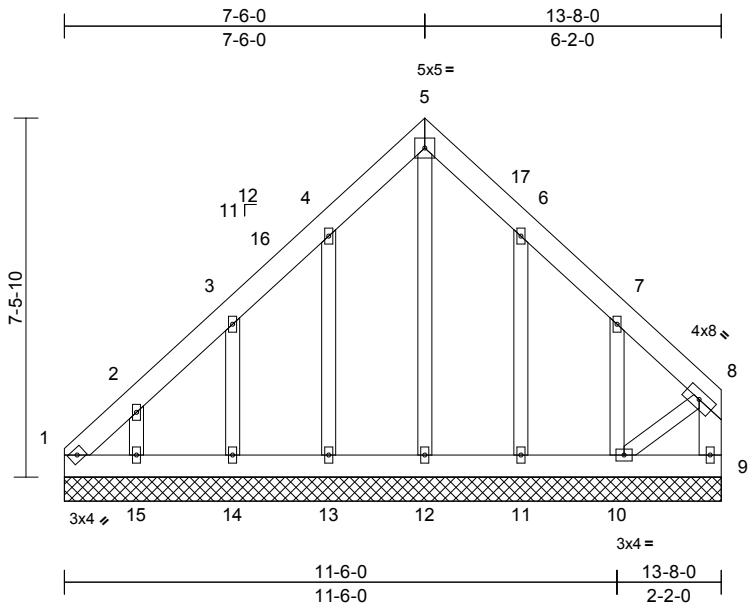

Scale = 1:47.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 115 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1 *Except* 10-8:2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=13-8-0, 9=13-8-0, 10=13-8-0, 11=13-8-0, 12=13-8-0, 13=13-8-0, 14=13-8-0, 15=13-8-0
Max Horiz 1=186 (LC 11)
Max Uplift 1=-67 (LC 10), 9=-36 (LC 11), 10=-147 (LC 13), 11=-60 (LC 13), 13=-61 (LC 12), 14=-79 (LC 12), 15=-84 (LC 12)
Max Grav 1=137 (LC 9), 9=145 (LC 19), 10=221 (LC 20), 11=179 (LC 20), 12=115 (LC 22), 13=184 (LC 19), 14=184 (LC 19), 15=174 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-300/139, 2-3=-136/100, 3-4=-120/78, 4-5=-128/204, 5-6=-128/203, 6-7=-86/77, 7-8=-164/70, 8-9=-174/49
BOT CHORD 1-15=-105/199, 14-15=-106/200, 13-14=-106/201, 12-13=-107/201, 11-12=-107/201, 10-11=-106/201, 9-10=-28/43
WEBS 5-12=-151/48, 4-13=-144/167, 3-14=-155/249, 2-15=-140/235, 6-11=-140/194, 7-10=-156/257, 8-10=-99/199

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3E) 0-1-12 to 4-6-9, Exterior(2N) 4-6-9 to 7-6-0, Corner(3R) 7-6-0 to 11-10-13, Exterior(2N) 11-10-13 to 13-5-4 zone; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 (||) MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 1, 36 lb uplift at joint 9, 61 lb uplift at joint 13, 79 lb uplift at joint 14, 84 lb uplift at joint 15, 60 lb uplift at joint 11 and 147 lb uplift at joint 10.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	B1	ATTIC	3	1	I76525557 Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:05 Page: 1
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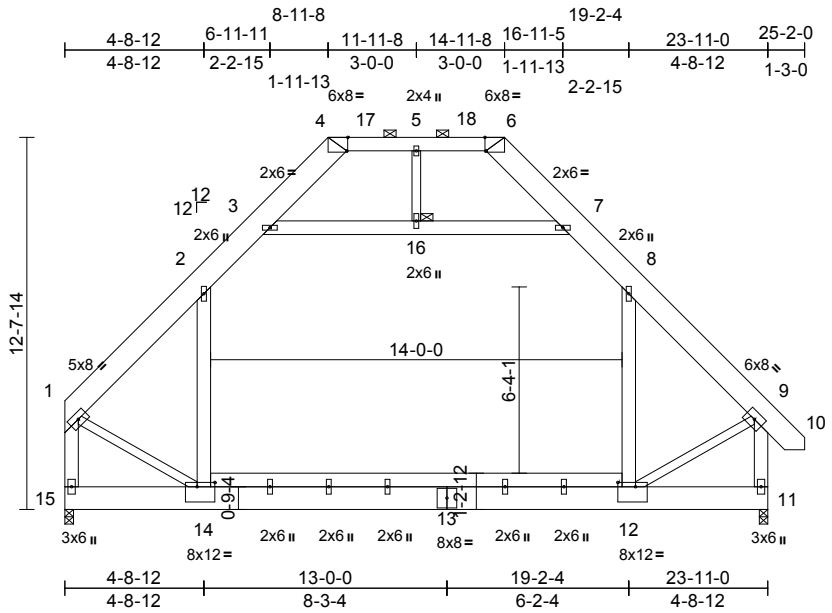

Scale = 1:78.4

Plate Offsets (X, Y): [4:0-0-7,Edge], [6:0-0-7,Edge], [12:0-7-4,0-1-12], [14:0-7-4,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	-0.20	12-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.31	12-14	>903	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.01	11	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.06	12-14	>999	240	Weight: 337 lb	FT = 20%

LUMBER
TOP CHORD 2x10 SP No.1 *Except* 4-6:2x6 SP No.1
BOT CHORD 2x10 SP No.1 *Except* 14-12:2x6 SP No.1
WEBS 2x6 SP No.1 *Except* 5-16:2x4 SP No.3, 14-1,12-9:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 16

REACTIONS (size) 11=0-3-8, 15=0-3-8
Max Horiz 15=-338 (LC 10)
Max Grav 11=1678 (LC 2), 15=1620 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1627/0, 2-3=-1068/159, 3-4=-484/140, 6-7=-484/137, 7-8=-1067/159, 8-9=-1626/0, 9-10=0/47, 1-15=-1949/0, 9-11=-1998/0, 4-5=-292/134, 5-6=-292/134
BOT CHORD 14-15=-337/333, 12-14=0/1088, 11-12=-49/60
WEBS 8-12=-35/747, 2-14=-40/742, 3-16=-954/89, 7-16=-954/89, 5-16=0/142, 1-14=0/1296, 9-12=0/1309

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-2-4 to 4-8-4, Interior (1) 4-8-4 to 9-3-5, Exterior(2R) 9-3-5 to 13-8-1, Interior (1) 13-8-1 to 14-7-11, Exterior(2R) 14-7-11 to 19-2-12, Interior (1) 19-2-12 to 24-9-15 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) N/A
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Ceiling dead load (10.0 psf) on member(s). 2-3, 7-8, 3-16, 7-16; Wall dead load (5.0psf) on member(s).8-12, 2-14
8) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	B1GE	GABLE	1	1	I76525558 Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:05 Page: 1
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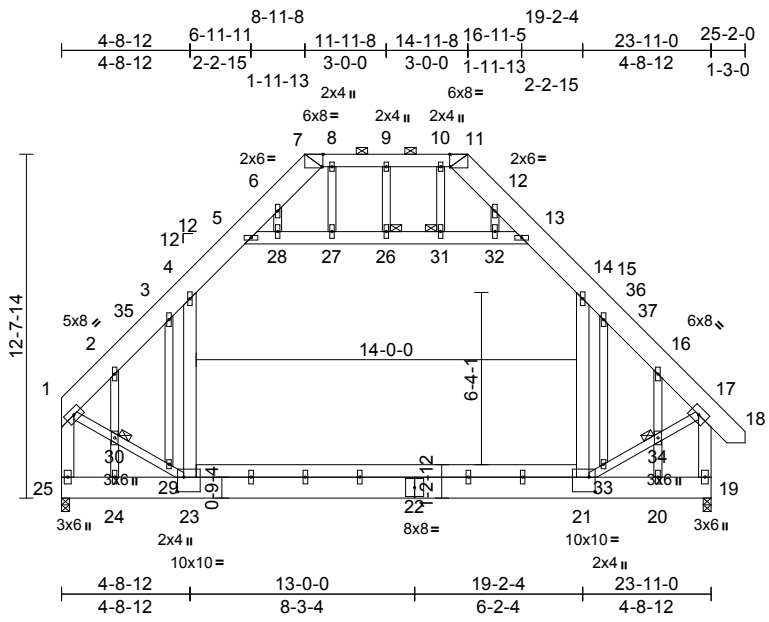

Scale = 1:84.8

Plate Offsets (X, Y): [7:0-0-7,Edge], [11:0-0-7,Edge], [21:0-2-12,0-6-8], [23:0-2-12,0-6-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	-0.18	21-23	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.28	21-23	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.01	19	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.05	21-23	>999	240	Weight: 374 lb	FT = 20%

LUMBER
TOP CHORD 2x10 SP No.1 *Except* 7-11:2x6 SP No.1
BOT CHORD 2x10 SP No.1 *Except* 23-21:2x6 SP No.1
WEBS 2x6 SP No.1 *Except* 9-26,23-1,21-17:2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-11.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
9-5-9 oc bracing: 21-23.
JOINTS 1 Brace at Jt(s): 26, 30, 31, 34

REACTIONS (size) 19=0-3-8, 25=0-3-8
Max Horiz 25=-338 (LC 8)
Max Grav 19=1678 (LC 2), 25=1620 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1379/0, 2-3=-1774/0, 3-4=-1517/0, 4-5=-1072/139, 5-6=-551/106, 6-7=-433/123, 11-12=-434/156, 12-13=-553/138, 13-14=-1071/161, 14-15=-1511/0, 15-16=-1770/0, 16-17=-1377/0, 17-18=0/47, 1-25=-1554/0, 17-19=-1604/0, 7-8=-323/139, 8-9=-323/139, 9-10=-323/139, 10-11=-323/139
BOT CHORD 24-25=-335/336, 23-24=-335/336, 21-23=0/1089, 20-21=-50/59, 19-20=-50/59
WEBS 14-21=-16/828, 4-23=-14/829, 5-28=-926/90, 27-28=-910/89, 26-27=-910/89, 26-31=-910/89, 31-32=-910/89, 13-32=-926/84, 9-26=-69/54, 1-30=0/1301, 29-30=0/1262, 23-29=0/1421, 21-33=0/1441, 33-34=0/1279, 17-34=0/1318, 8-27=-22/105, 6-28=-8/171, 3-29=-6/264, 2-30=-693/14, 24-30=-672/14, 10-31=-21/105, 12-32=-6/172, 15-33=-2/269, 16-34=-690/0, 20-34=-669/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-2-4 to 4-8-4, Interior (1) 4-8-4 to 9-3-5, Exterior(2E) 9-3-5 to 14-7-11, Exterior(2R) 14-7-11 to 20-10-6, Interior (1) 20-10-6 to 24-9-15 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) N/A
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x6 (||) MT20 unless otherwise indicated.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Ceiling dead load (10.0 psf) on member(s). 4-5, 13-14, 5-28, 27-28, 26-27, 26-31, 31-32, 13-32; Wall dead load (5.0psf) on member(s).14-21, 4-23
12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 21-23
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	B2	ATTIC	5	1	I76525559
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:05 Page: 1
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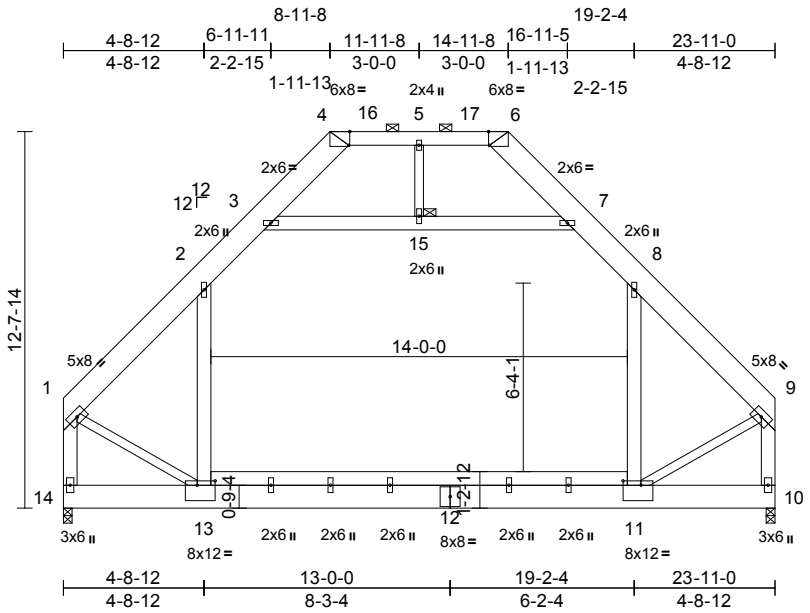

Scale = 1:77.4

Plate Offsets (X, Y): [4:0-0-7,Edge], [6:0-0-7,Edge], [11:0-7-4,0-1-12], [13:0-7-4,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	-0.20	11-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.31	11-13	>903	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.01	10	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.06	11-13	>999	240	Weight: 331 lb	FT = 20%

LUMBER
TOP CHORD 2x10 SP No.1 *Except* 4-6:2x6 SP No.1
BOT CHORD 2x10 SP No.1 *Except* 13-11:2x6 SP No.1
WEBS 2x6 SP No.1 *Except* 5-15,13-1,11-9:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 15

REACTIONS (size) 10=0-3-8, 14=0-3-8
Max Horiz 14=321 (LC 9)
Max Grav 10=1622 (LC 2), 14=1622 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1629/0, 2-3=-1069/156, 3-4=-483/139, 6-7=-483/140, 7-8=-1069/155, 8-9=-1628/0, 1-14=-1951/0, 9-10=-1952/0, 4-5=-290/135, 5-6=-290/135
BOT CHORD 13-14=-328/315, 11-13=0/1079, 10-11=-55/60
WEBS 8-11=-40/743, 2-13=-40/743, 3-15=-956/82, 7-15=-956/82, 5-15=0/142, 1-13=0/1298, 9-11=0/1300

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-2-4 to 4-8-4, Interior (1) 4-8-4 to 9-3-5, Exterior(2R) 9-3-5 to 13-8-1, Interior (1) 13-8-1 to 14-7-11, Exterior(2R) 14-7-11 to 19-2-12, Interior (1) 19-2-12 to 23-8-12 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) N/A
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Ceiling dead load (10.0 psf) on member(s). 2-3, 7-8, 3-15, 7-15; Wall dead load (5.0psf) on member(s).8-11, 2-13
8) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 11-13
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	B2-GR	ATTIC	1	3	I76525560
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:05 Page: 1
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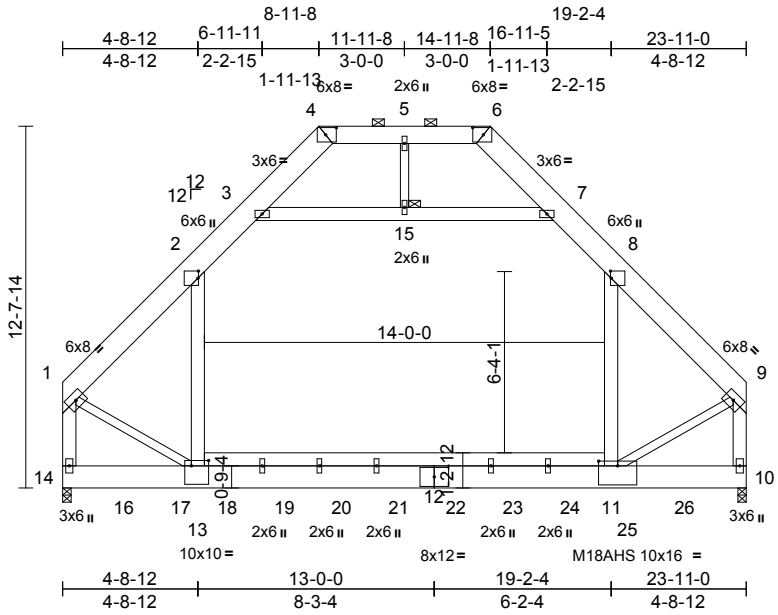

Scale = 1:80.6

Plate Offsets (X, Y): [2:0-3-0,0-0-4], [4:0-4-7,0-3-0], [6:0-4-7,0-3-0], [8:0-3-0,0-0-4], [11:0-8-0,0-2-0], [13:0-7-4,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.36	11-13	>778	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.47	11-13	>601	240	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	NO	WB	0.53	Horz(CT)	0.01	10	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.01	11-13	>999	240	Weight: 1004 lb	FT = 20%

LUMBER
TOP CHORD 2x10 SP 2400F 2.0E *Except* 4-6:2x8 SP No.1
BOT CHORD 2x10 SP 2400F 2.0E *Except* 13-11:2x6 SP No.1
WEBS 2x6 SP No.1 *Except* 5-15:2x4 SP No.3, 13-1,11-9:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 15

REACTIONS (size) 10=0-3-8, 14=0-3-8
Max Horiz 14=216 (LC 5)
Max Grav 10=7698 (LC 14), 14=8042 (LC 14)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-7471/0, 2-3=-3592/0, 3-4=-419/695, 6-7=-465/709, 7-8=-3577/0, 8-9=-7494/0, 1-14=-8898/0, 9-10=-8948/0, 4-5=-227/1173, 5-6=-227/1173
BOT CHORD 13-14=-230/242, 11-13=0/4778, 10-11=-19/21
WEBS 8-11=0/5473, 2-13=0/5420, 3-15=-5952/0, 7-15=-5952/0, 5-15=0/239, 1-13=0/5651, 9-11=0/5683

NOTES
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x10 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 3 rows staggered at 0-4-0 oc.
Web connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Ceiling dead load (10.0 psf) on member(s). 2-3, 7-8, 3-15, 7-15; Wall dead load (5.0psf) on member(s).8-11, 2-13
10) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 11-13
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1666 lb down at 2-1-12, 1666 lb down at 4-1-12, 456 lb down and 388 lb up at 5-9-4, 831 lb down and 326 lb up at 7-9-4, 1185 lb down and 77 lb up at 9-9-4, 1185 lb down and 77 lb up at 11-9-4, 1185 lb down and 77 lb up at 13-9-4, 1185 lb down and 77 lb up at 15-9-4, 1185 lb down and 77 lb up at 17-9-4, and 1185 lb down and 77 lb up at 19-9-4, and 1185 lb down and 77 lb up at 21-9-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
13) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-60, 2-3=-80, 3-4=-60, 6-7=-60, 7-8=-80, 8-9=-60, 13-14=-20, 11-13=-40, 10-11=-20, 3-15=-20, 7-15=-20, 4-6=-60
Drag: 8-11=-10, 2-13=-10
Concentrated Loads (lb)
Vert: 16=-401 (B), 17=-401 (B), 18=-10 (B), 19=-120 (B), 20=-249 (B), 21=-249 (B), 22=-249 (B), 23=-249 (B), 24=-249 (B), 25=-249 (B), 26=-249 (B)

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills	I76525561
252130-A	C1	ROOF SPECIAL	5	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:05 Page: 1
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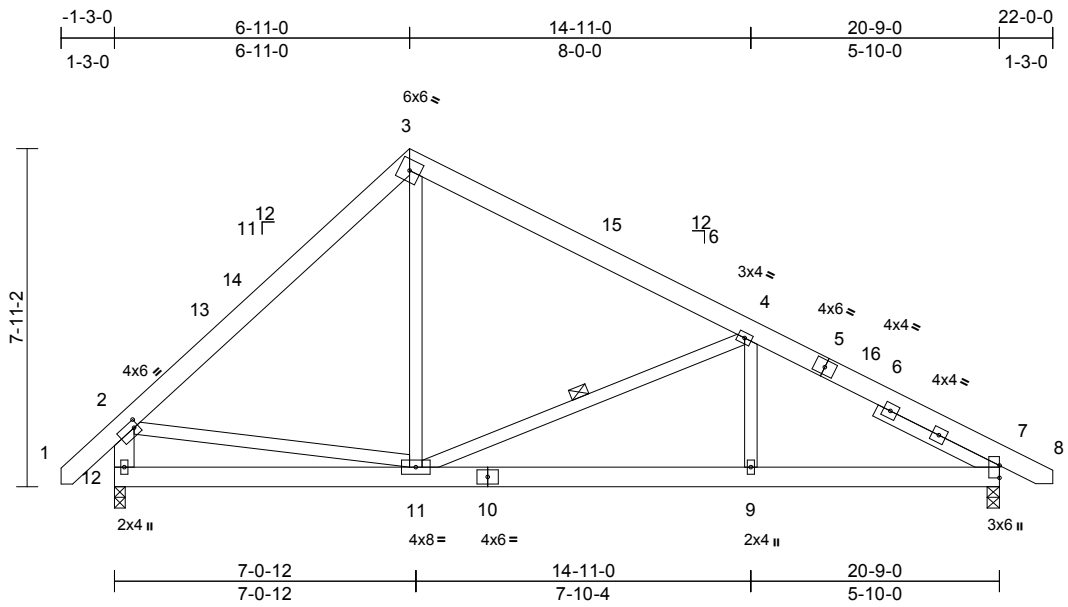


Scale = 1:54

Plate Offsets (X, Y): [2:0-1-4,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.03	9-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.06	9-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.01	7	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.02	9-11	>999	240	Weight: 158 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except* 12-2:2x6 SP No.1
SLIDER Right 2x4 SP No.2 -- 3-2-6

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-11

REACTIONS (size) 7=0-3-8, 12=0-3-0
Max Horiz 12=-174 (LC 10)
Max Uplift 7=-74 (LC 13), 12=-40 (LC 13)
Max Grav 7=883 (LC 1), 12=903 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/55, 2-3=-862/295, 3-4=-708/295, 4-7=-1288/372, 7-8=0/0, 2-12=-843/366
BOT CHORD 11-12=-190/331, 9-11=-232/1060, 7-9=-232/1060
WEBS 3-11=-46/433, 4-11=-591/271, 4-9=0/275, 2-11=-26/390

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-6 to 3-3-7, Interior (1) 3-3-7 to 6-11-0, Exterior(2R) 6-11-0 to 11-3-13, Interior (1) 11-3-13 to 21-9-10 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 12 and 74 lb uplift at joint 7.

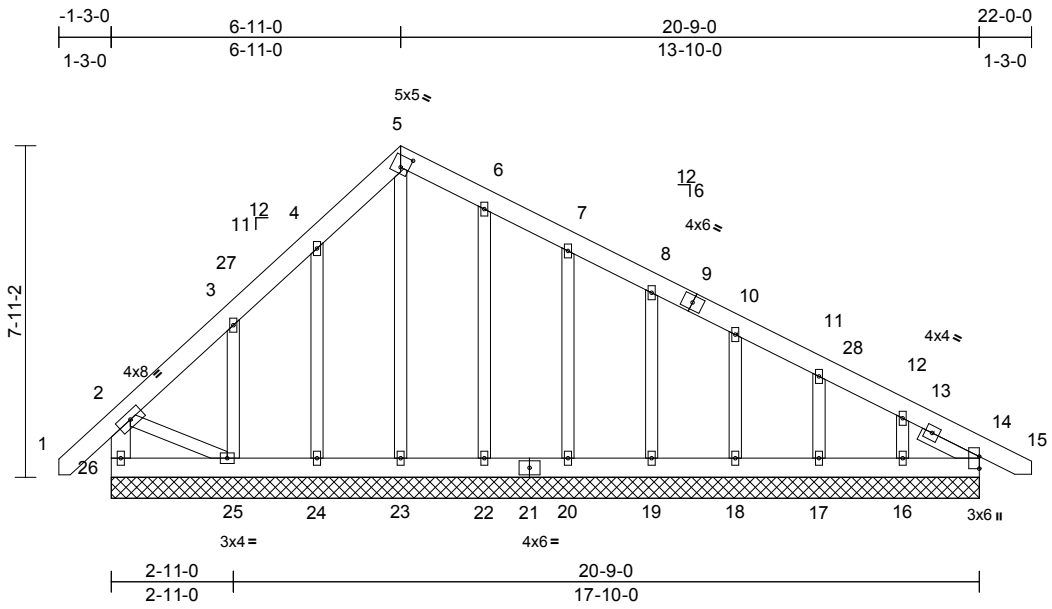
LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	C1GE	ROOF SPECIAL SUPPORT	1	1	I76525562 Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:05 Page: 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:55.1

Plate Offsets (X, Y): [5:0-2-6,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 177 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1 *Except* 2-25:2x4 SP No.2
OTHERS 2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 1-6-6

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 14=20-9-0, 16=20-9-0, 17=20-9-0, 18=20-9-0, 19=20-9-0, 20=20-9-0, 22=20-9-0, 23=20-9-0, 24=20-9-0, 25=20-9-0, 26=20-9-0
Max Horiz 26=-174 (LC 10)
Max Uplift 16=-69 (LC 13), 17=-31 (LC 13), 18=-34 (LC 13), 19=-33 (LC 13), 20=-40 (LC 13), 22=-16 (LC 13), 24=-59 (LC 12), 25=-147 (LC 12), 26=-59 (LC 8)
Max Grav 14=159 (LC 1), 16=139 (LC 26), 17=164 (LC 1), 18=159 (LC 26), 19=160 (LC 1), 20=162 (LC 26), 22=162 (LC 26), 23=142 (LC 22), 24=176 (LC 19), 25=243 (LC 19), 26=224 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-26=-200/72, 1-2=0/55, 2-3=-119/110, 3-4=-79/133, 4-5=-102/244, 5-6=-90/223, 6-7=-75/180, 7-8=-59/117, 8-10=-68/58, 10-11=-76/23, 11-12=-85/26, 12-14=-187/51, 14-15=0/0
BOT CHORD 25-26=-82/169, 24-25=-49/207, 23-24=-49/207, 22-23=-49/207, 20-22=-49/207, 19-20=-49/207, 18-19=-49/207, 17-18=-49/207, 16-17=-49/207, 14-16=-49/207
WEBS 5-23=-148/20, 4-24=-141/139, 3-25=-161/263, 6-22=-122/72, 7-20=-122/119, 8-19=-120/107, 10-18=-120/107, 11-17=-124/123, 12-16=-100/197, 2-25=-100/246

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3E) -1-1-6 to 3-3-7, Exterior(2N) 3-3-7 to 6-11-0, Corner(3R) 6-11-0 to 11-3-13, Exterior(2N) 11-3-13 to 21-9-10 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 (||) MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 59 lb uplift at joint 26, 59 lb uplift at joint 24, 147 lb uplift at joint 25, 16 lb uplift at joint 22, 40 lb uplift at joint 20, 33 lb uplift at joint 19, 34 lb uplift at joint 18, 31 lb uplift at joint 17 and 69 lb uplift at joint 16.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	D1	COMMON	6	1	I76525563 Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:06 Page: 1
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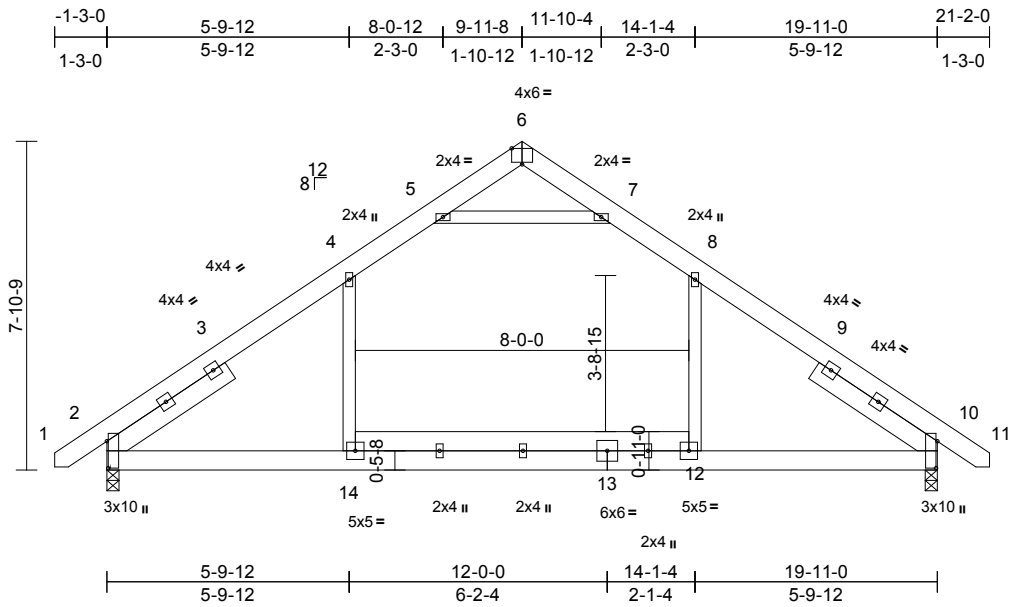

Scale = 1:55.3

Plate Offsets (X, Y): [2:0-7-12,0-0-6], [6:0-3-0,Edge], [10:0-7-12,0-0-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.12	12-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.17	12-14	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.02	10	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.08	2-14	>999	240	Weight: 164 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 3-6-6, Right 2x6 SP No.2 -- 3-6-6

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=177 (LC 9)
Max Uplift 2=-55 (LC 12), 10=-55 (LC 13)
Max Grav 2=1072 (LC 19), 10=1072 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1/0, 2-4=-1345/193, 4-5=-896/253, 5-6=-28/247, 6-7=-28/248, 7-8=-896/253, 8-10=-1345/194, 10-11=-1/0
BOT CHORD 2-14=-42/963, 12-14=-42/963, 10-12=-42/963
WEBS 4-14=0/509, 8-12=0/509, 5-7=-1183/319

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-1 to 3-3-12, Interior (1) 3-3-12 to 9-11-8, Exterior(2R) 9-11-8 to 14-1-4, Interior (1) 14-1-4 to 21-0-1 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 2 and 55 lb uplift at joint 10.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	D1GE	GABLE	1	1	I76525564
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:06 Page: 1
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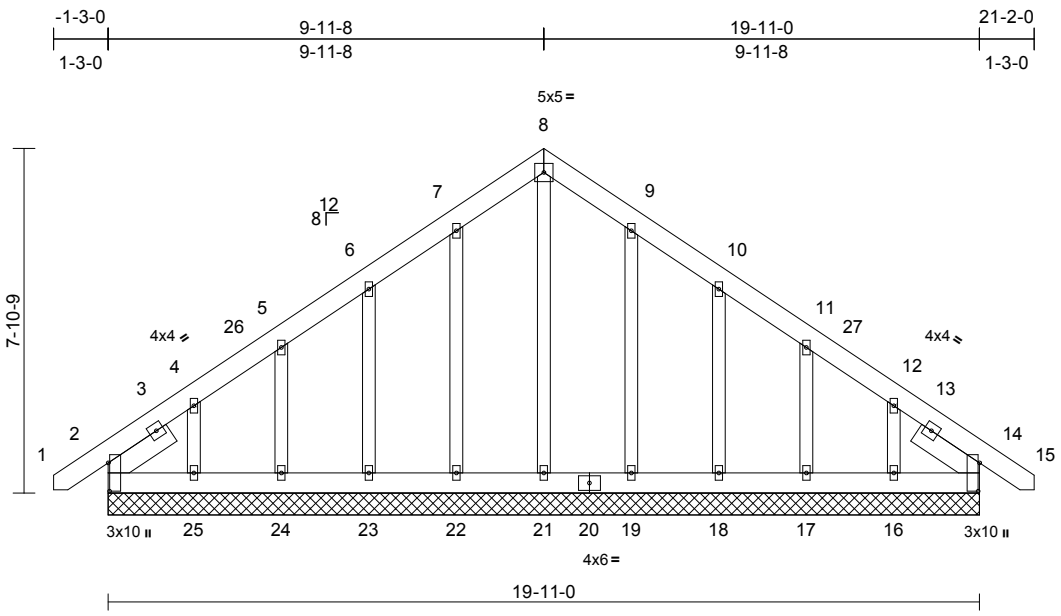

Scale = 1:52.7

Plate Offsets (X, Y): [2:0-7-12,0-0-6], [14:0-7-12,0-0-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 172 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 1-8-9, Right 2x6 SP No.2 -- 1-8-9

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=19-11-0, 14=19-11-0, 16=19-11-0, 17=19-11-0, 18=19-11-0, 19=19-11-0, 21=19-11-0, 22=19-11-0, 23=19-11-0, 24=19-11-0, 25=19-11-0
Max Horiz 2=177 (LC 9)
Max Uplift 2=-61 (LC 8), 14=-13 (LC 9), 16=-91 (LC 13), 17=-42 (LC 13), 18=-54 (LC 13), 19=-30 (LC 13), 22=-33 (LC 12), 23=-53 (LC 12), 24=-41 (LC 12), 25=-101 (LC 12)
Max Grav 2=206 (LC 20), 14=180 (LC 1), 16=177 (LC 20), 17=172 (LC 20), 18=175 (LC 20), 19=170 (LC 20), 21=138 (LC 22), 22=175 (LC 19), 23=173 (LC 19), 24=170 (LC 19), 25=192 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1/0, 2-4=-185/137, 4-5=-124/93, 5-6=-115/89, 6-7=-104/159, 7-8=-136/223, 8-9=-136/223, 9-10=-103/159, 10-11=-75/75, 11-12=-84/40, 12-14=-145/74, 14-15=-1/0
BOT CHORD 2-25=-64/166, 24-25=-64/166, 23-24=-64/166, 22-23=-64/166, 21-22=-64/166, 19-21=-64/166, 18-19=-64/166, 17-18=-64/166, 16-17=-64/166, 14-16=-64/166
WEBS 8-21=-140/36, 7-22=-135/91, 6-23=-133/130, 5-24=-132/122, 4-25=-145/185, 9-19=-130/91, 10-18=-134/130, 11-17=-133/122, 12-16=-140/183

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3E) -1-1-1 to 3-3-12, Exterior(2N) 3-3-12 to 9-11-8, Corner(3R) 9-11-8 to 14-4-5, Exterior(2N) 14-4-5 to 21-0-1 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 (||) MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 2, 13 lb uplift at joint 14, 33 lb uplift at joint 22, 53 lb uplift at joint 23, 41 lb uplift at joint 24, 101 lb uplift at joint 25, 30 lb uplift at joint 19, 54 lb uplift at joint 18, 42 lb uplift at joint 17 and 91 lb uplift at joint 16.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	G1	COMMON	6	1	I76525565
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:06 Page: 1
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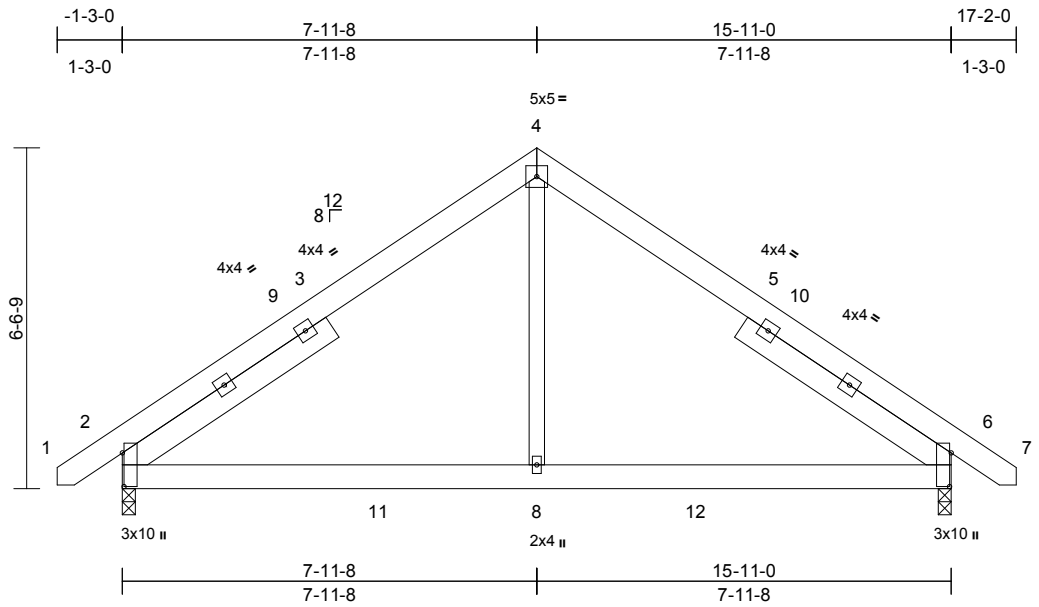

Scale = 1:44.2

Plate Offsets (X, Y): [2:0-7-12,0-0-6], [6:0-7-12,0-0-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	-0.03	2-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.05	6-8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.03	2-8	>999	240	Weight: 121 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 4-9-14, Right 2x6 SP No.2 -- 4-9-14

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 6=0-3-0
Max Horiz 2=145 (LC 9)
Max Uplift 2=-98 (LC 9), 6=-98 (LC 8)
Max Grav 2=822 (LC 2), 6=822 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1/0, 2-4=-861/426, 4-6=-861/426, 6-7=-1/0
BOT CHORD 2-8=-195/612, 6-8=-195/612
WEBS 4-8=-204/582

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-1-1 to 3-3-12, Interior (1) 3-3-12 to 7-11-8, Exterior(2R) 7-11-8 to 12-4-5, Interior (1) 12-4-5 to 17-0-1 zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 98 lb uplift at joint 2 and 98 lb uplift at joint 6.

LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills	
252130-A	G1GE	COMMON SUPPORTED GAB	1	1	Job Reference (optional)	I76525566

Comtech, Inc, Fayetteville, NC - 28314, Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:06 Page: 1
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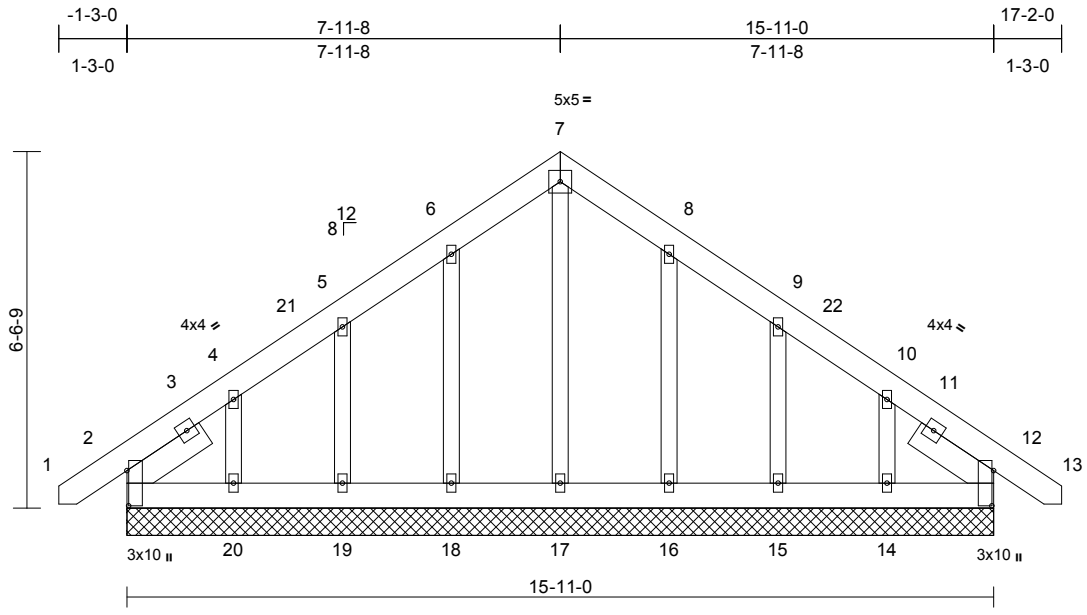


Scale = 1:42.3

Plate Offsets (X, Y): [2:0-7-12,0-0-6], [12:0-7-12,0-0-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 132 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 1-8-9, Right 2x6 SP No.2 -- 1-8-9

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=15-11-0, 12=15-11-0, 14=15-11-0, 15=15-11-0, 16=15-11-0, 17=15-11-0, 18=15-11-0, 19=15-11-0, 20=15-11-0
Max Horiz 2=145 (LC 9)
Max Uplift 2=-46 (LC 8), 12=-8 (LC 9), 14=-80 (LC 13), 15=-49 (LC 13), 16=-36 (LC 13), 18=-38 (LC 12), 19=-47 (LC 12), 20=-88 (LC 12)
Max Grav 2=191 (LC 20), 12=180 (LC 1), 14=172 (LC 20), 15=175 (LC 20), 16=172 (LC 20), 17=128 (LC 22), 18=176 (LC 19), 19=172 (LC 19), 20=184 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1/0, 2-4=-156/105, 4-5=-107/73, 5-6=-99/133, 6-7=-122/208, 7-8=-122/208, 8-9=-84/133, 9-10=-76/36, 10-12=-118/55, 12-13=-1/0
BOT CHORD 2-20=-50/150, 19-20=-50/150, 18-19=-50/150, 17-18=-50/150, 16-17=-50/150, 15-16=-50/150, 14-15=-50/150, 12-14=-50/150
WEBS 7-17=-119/22, 6-18=-136/112, 5-19=-134/150, 4-20=-138/197, 8-16=-132/113, 9-15=-136/151, 10-14=-137/194

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3E) -1-1-1 to 3-3-12, Exterior(2N) 3-3-12 to 7-11-8, Corner(3R) 7-11-8 to 12-4-5, Exterior(2N) 12-4-5 to 17-0-1 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 (||) MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 2, 8 lb uplift at joint 12, 38 lb uplift at joint 18, 47 lb uplift at joint 19, 88 lb uplift at joint 20, 36 lb uplift at joint 16, 49 lb uplift at joint 15 and 80 lb uplift at joint 14.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 12.

LOAD CASE(S) Standard

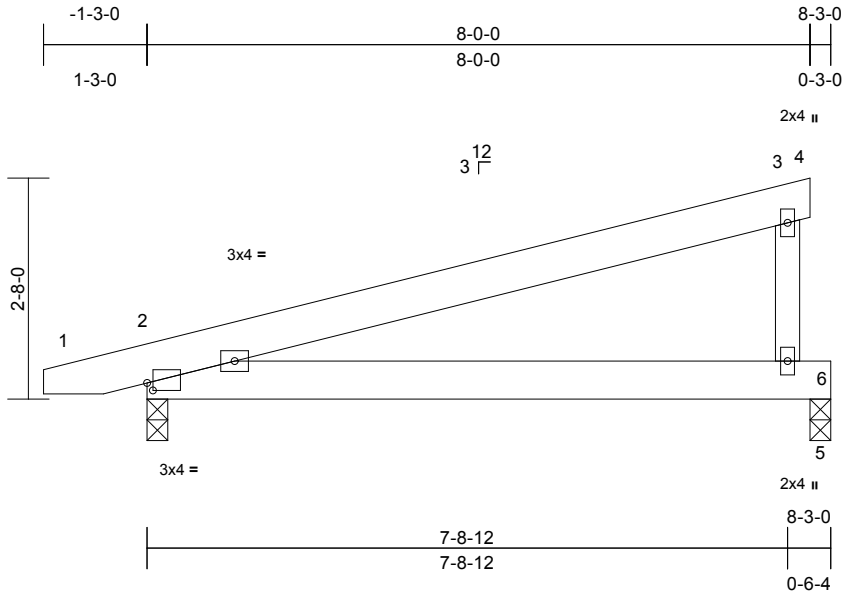
September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills	
252130-A	M1	MONOPITCH	7	1	Job Reference (optional)	I76525567

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:06 Page: 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:27.8

Plate Offsets (X, Y): [2:0-0-13,0-1-1]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	-0.06	2-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.12	2-6	>818	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Wind(LL)	0.09	2-6	>999	240		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-P							Weight: 44 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 5=0-3-0
Max Horiz 2=72 (LC 8)
Max Uplift 2=-153 (LC 8), 5=-127 (LC 8)
Max Grav 2=384 (LC 1), 5=298 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/1, 2-3=-102/48, 3-4=-1/0, 3-6=-230/294
BOT CHORD 2-6=0/0, 5-6=0/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-11 to 3-6-2, Interior (1) 3-6-2 to 8-0-0 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 153 lb uplift at joint 2 and 127 lb uplift at joint 5.

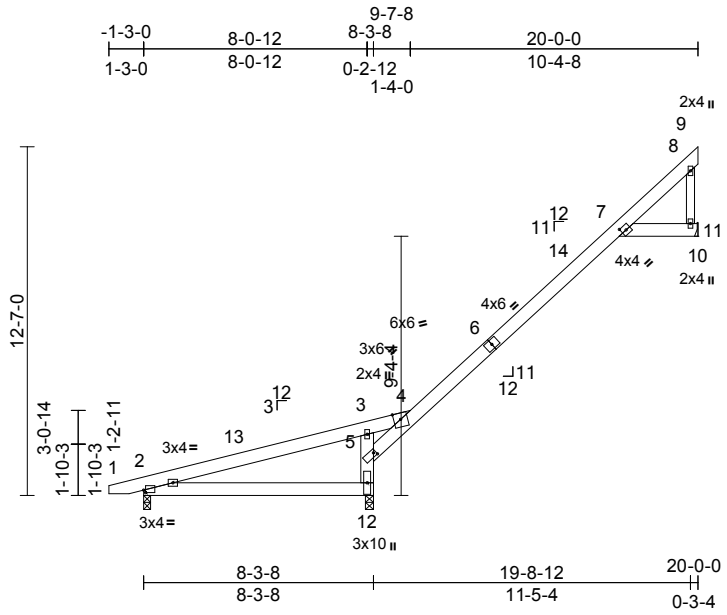
LOAD CASE(S) Standard

September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	M2	ROOF SPECIAL	3	1	I76525568
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:06 Page: 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:83.1

Plate Offsets (X, Y): [2:0-0-13,0-1-1], [5:0-1-0,0-1-8], [7:0-2-0,0-2-2]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	-0.14	7	>966	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.23	7	>611	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.42	Horz(CT)	0.19	11	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.21	7	>666	240	Weight: 98 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.3 *Except* 8-11:2x4 SP No.2, 12-3:2x6 SP No.1

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 11= Mechanical, 12=0-3-8
Max Horiz 2=454 (LC 12)
Max Uplift 2=-180 (LC 8), 11=-172 (LC 12), 12=-327 (LC 12)
Max Grav 2=194 (LC 21), 11=338 (LC 19), 12=1206 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/1, 2-3=-977/747, 3-4=-1216/1265, 4-5=-1349/751, 4-7=-314/97, 7-8=-154/112, 8-9=-4/0, 8-11=-198/218
BOT CHORD 2-12=-553/328, 7-11=-26/28, 10-11=0/0
WEBS 5-12=-1123/584, 3-5=-439/271

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-11 to 3-6-2, Interior (1) 3-6-2 to 20-0-0 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 172 lb uplift at joint 11, 180 lb uplift at joint 2 and 327 lb uplift at joint 12.
7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

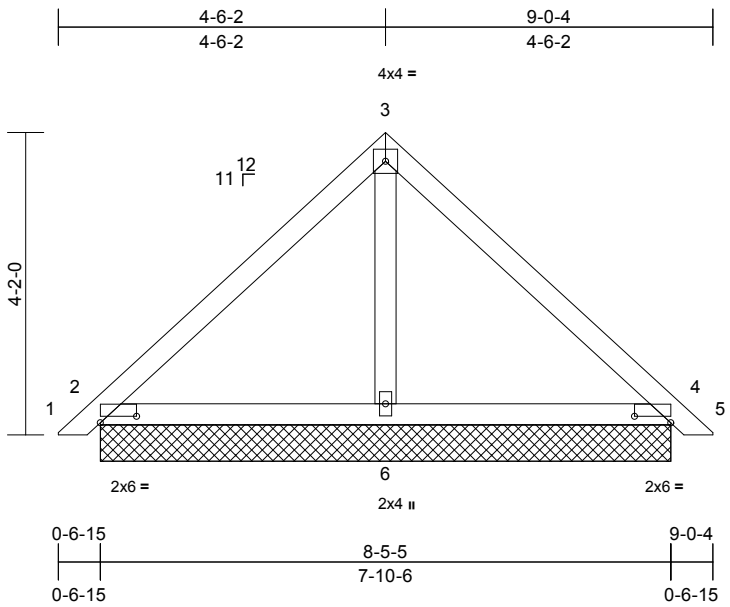
September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	PB1	Piggyback	6	1	I76525569 Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:06 ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:31.8

Plate Offsets (X, Y): [2:0-6-0,0-1-1], [4:0-6-0,0-1-1]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 35 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=7-10-6, 4=7-10-6, 6=7-10-6
Max Horiz 2=95 (LC 11)
Max Uplift 2=-22 (LC 13), 4=-29 (LC 13)
Max Grav 2=196 (LC 1), 4=196 (LC 1), 6=282 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-149/92, 3-4=-141/109, 4-5=0/13
BOT CHORD 2-6=-23/67, 4-6=-23/67
WEBS 3-6=-158/93

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 2 and 29 lb uplift at joint 4.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

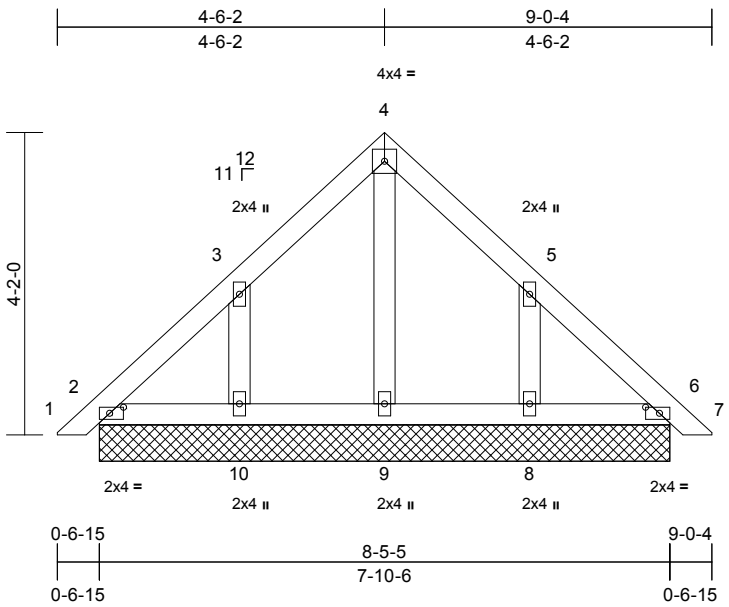
September 23,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	PB1GE	Piggyback	1	1	I76525570 Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:06 ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:31.8

Plate Offsets (X, Y): [2:0-2-5,0-1-0], [6:0-2-5,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 40 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=7-10-6, 6=7-10-6, 8=7-10-6, 9=7-10-6, 10=7-10-6
Max Horiz 2=-95 (LC 10)
Max Uplift 2=-14 (LC 8), 8=-86 (LC 13), 10=-87 (LC 12)
Max Grav 2=110 (LC 20), 6=105 (LC 1), 8=207 (LC 20), 9=109 (LC 22), 10=208 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-95/69, 3-4=-90/115, 4-5=-89/125, 5-6=-77/45, 6-7=0/13
BOT CHORD 2-10=-49/101, 9-10=-49/101, 8-9=-49/101, 6-8=-49/101
WEBS 4-9=-72/4, 3-10=-184/251, 5-8=-184/206

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 2, 87 lb uplift at joint 10 and 86 lb uplift at joint 8.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

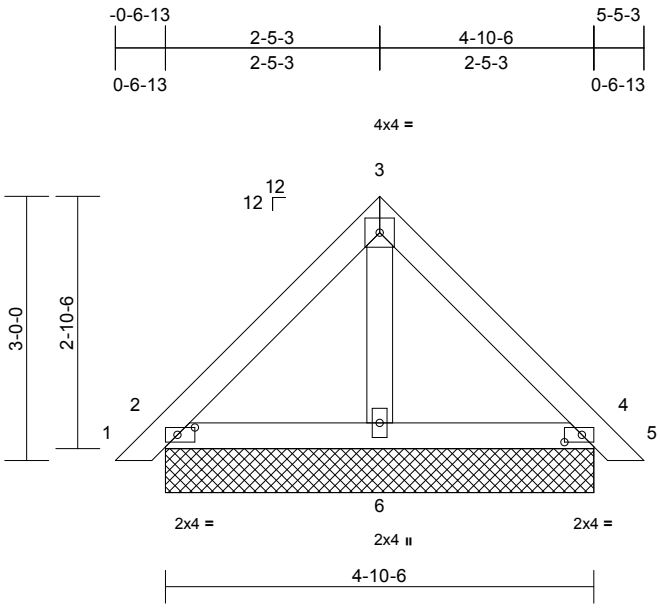
September 23,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-A	PB2	Piggyback	10	1	I76525571 Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Sep 7 2025 Print: 25.3.0 S Sep 7 2025 MiTek Industries, Inc. Mon Sep 22 11:55:06 ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.2

Plate Offsets (X, Y): [2:0-2-6,0-1-0], [4:0-2-6,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-P							Weight: 23 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=4-10-6, 4=4-10-6, 6=4-10-6
Max Horiz 2=67 (LC 11)
Max Uplift 2=-24 (LC 13), 4=-28 (LC 13)
Max Grav 2=142 (LC 1), 4=142 (LC 1), 6=151 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-91/76, 3-4=-81/97, 4-5=0/13
BOT CHORD 2-6=-24/70, 4-6=-24/70
WEBS 3-6=-88/70

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 6-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 2 and 28 lb uplift at joint 4.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

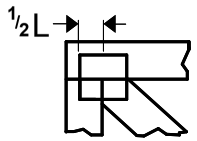
LOAD CASE(S) Standard

September 23,2025

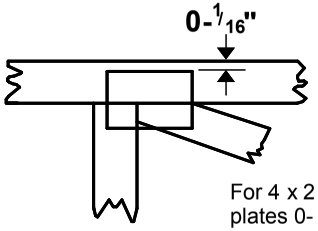
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

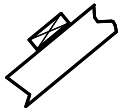
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

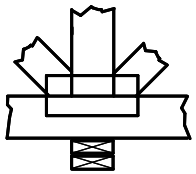
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

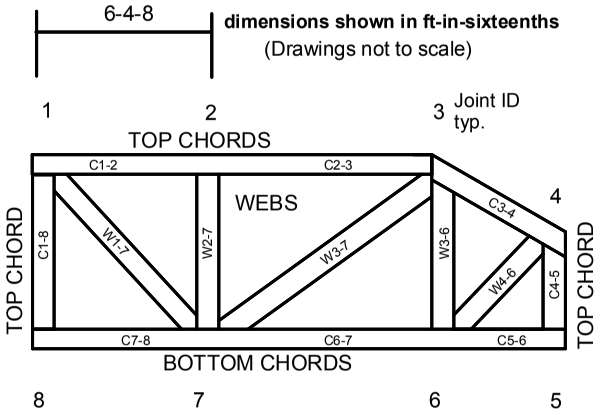


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

ENGINEERING BY TRENCO
A MiTek Affiliate

RE: 252130-B
Lot 50 Magnolia Hills

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Precision Custom Homes and Renovations Project Name: 252130-B
Lot/Block: Model:
Address: 223 Myrtle Oak Dr. Subdivision:
City: Cameron State: NC

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2021/TPI2014 Design Program: MiTek 20/20 25.3
Wind Code: ASCE 7-16 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 13 individual, dated Truss Design Drawings and 0 Additional Drawings.

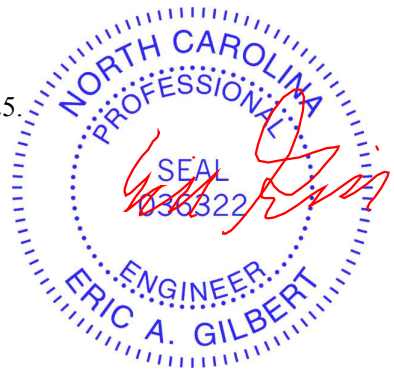
No.	Seal#	Truss Name	Date
1	I75911624	ET1	8/26/2025
2	I75911625	F1	8/26/2025
3	I75911626	F1A	8/26/2025
4	I75911627	F2	8/26/2025
5	I75911628	F2A	8/26/2025
6	I75911629	F3	8/26/2025
7	I75911630	F4	8/26/2025
8	I75911631	F5	8/26/2025
9	I75911632	F5A	8/26/2025
10	I75911633	F6	8/26/2025
11	I75911634	F6A	8/26/2025
12	I75911635	FG1	8/26/2025
13	I75911636	FG2	8/26/2025

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville.

Truss Design Engineer's Name: Gilbert, Eric

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844



IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

August 26, 2025

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-B	ET1	GABLE	1	1	I75911624
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Aug 20 2025 Print: 25.3.0 S Aug 20 2025 MiTek Industries, Inc. Tue Aug 26 10:18:43 Page: 1
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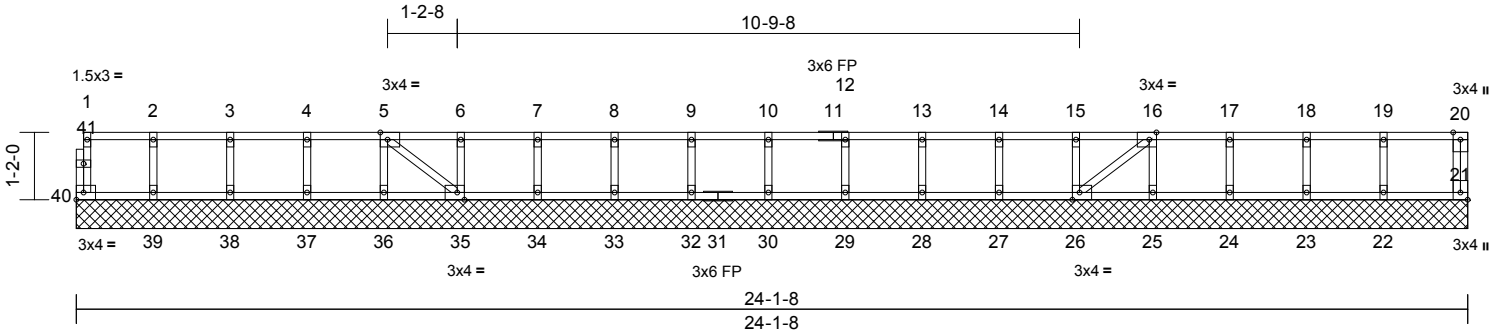


Scale = 1:40

Plate Offsets (X, Y): [5:0-1-8,Edge], [16:0-1-8,Edge], [21:Edge,0-1-8], [26:0-1-8,Edge], [35:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	21	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 104 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 21=24-1-8, 22=24-1-8, 23=24-1-8, 24=24-1-8, 25=24-1-8, 26=24-1-8, 27=24-1-8, 28=24-1-8, 29=24-1-8, 30=24-1-8, 32=24-1-8, 33=24-1-8, 34=24-1-8, 35=24-1-8, 36=24-1-8, 37=24-1-8, 38=24-1-8, 39=24-1-8, 40=24-1-8
Max Grav 21=58 (LC 1), 22=166 (LC 1), 23=142 (LC 1), 24=148 (LC 1), 25=140 (LC 1), 26=153 (LC 1), 27=147 (LC 1), 28=147 (LC 1), 29=147 (LC 1), 30=147 (LC 1), 32=147 (LC 1), 33=147 (LC 1), 34=147 (LC 1), 35=155 (LC 1), 36=138 (LC 1), 37=147 (LC 1), 38=146 (LC 1), 39=152 (LC 1), 40=49 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-40=-44/0, 20-21=-53/0, 1-2=-3/0, 2-3=-3/0, 3-4=-3/0, 4-5=-3/0, 5-6=0/8, 6-7=0/8, 7-8=0/8, 8-9=0/8, 9-10=0/8, 10-12=0/8, 12-13=0/8, 13-14=0/8, 14-15=0/8, 15-16=0/8, 16-17=0/0, 17-18=0/0, 18-19=0/0, 19-20=0/0
BOT CHORD 39-40=0/3, 38-39=0/3, 37-38=0/3, 36-37=0/3, 35-36=0/3, 34-35=-8/0, 33-34=-8/0, 32-33=-8/0, 30-32=-8/0, 29-30=-8/0, 28-29=-8/0, 27-28=-8/0, 26-27=-8/0, 25-26=0/0, 24-25=0/0, 23-24=0/0, 22-23=0/0, 21-22=0/0
WEBS 2-39=-138/0, 3-38=-133/0, 4-37=-133/0, 5-36=-125/0, 6-35=-133/0, 7-34=-133/0, 8-33=-133/0, 9-32=-133/0, 10-30=-133/0, 12-29=-133/0, 13-28=-133/0, 14-27=-133/0, 15-26=-133/0, 16-25=-127/0, 17-24=-134/0, 18-23=-129/0, 19-22=-151/0, 5-35=-13/0, 16-26=-10/0

NOTES
1) All plates are 1.5x3 (||) MT20 unless otherwise indicated.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

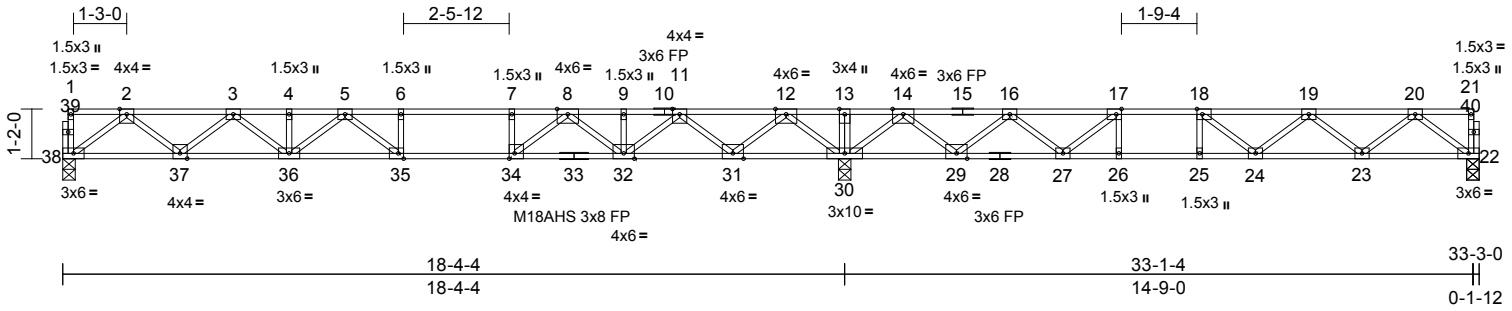
August 26,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-B	F1	Floor	4	1	I75911625
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Aug 20 2025 Print: 25.3.0 S Aug 20 2025 MiTek Industries, Inc. Tue Aug 26 10:18:44 Page: 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:54.1

Plate Offsets (X, Y): [17:0-1-8,Edge], [18:0-1-8,Edge], [34:0-1-8,Edge], [35:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.75	Vert(LL)	-0.28	35-36	>780	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	1.00	Vert(CT)	-0.38	35-36	>569	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.05	22	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 165 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 22=0-3-8, 30=0-3-8, 38=0-3-8
Max Grav 22=704 (LC 4), 30=2166 (LC 1), 38=879 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-38=-36/0, 21-22=-46/0, 1-2=-2/0, 2-3=-1826/0, 3-4=-2993/0, 4-5=-2993/0, 5-6=-3302/0, 6-7=-3302/0, 7-8=-3302/0, 8-9=-2097/60, 9-11=-2097/60, 11-12=-373/647, 12-13=0/2712, 13-14=0/2712, 14-16=-464/1230, 16-17=-1636/622, 17-18=-2137/245, 18-19=-2064/14, 19-20=-1398/0, 20-21=-3/0
BOT CHORD 37-38=0/1097, 36-37=0/2531, 35-36=0/3283, 34-35=0/3302, 32-34=0/2687, 31-32=-336/1342, 30-31=-1353/0, 29-30=-1582/0, 27-29=-917/1195, 26-27=-245/2137, 25-26=-245/2137, 24-25=-245/2137, 23-24=0/1910, 22-23=0/859
WEBS 2-38=-1374/0, 2-37=0/949, 3-37=-917/0, 3-36=0/591, 4-36=-80/0, 5-36=-370/0, 5-35=-371/279, 6-35=-157/117, 12-30=-1802/0, 20-22=-1075/0, 20-23=0/702, 19-23=-665/0, 19-24=-145/201, 14-30=-1551/0, 14-29=0/1132, 16-29=-1081/0, 16-27=0/742, 13-30=-113/0, 12-31=0/1373, 11-31=-1321/0, 11-32=0/1025, 9-32=-146/0, 8-32=-820/0, 8-34=0/1108, 7-34=-524/0, 17-27=-961/0, 17-26=0/298, 18-24=-93/370, 18-25=-270/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 3x4 (=) MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

August 26,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-B	F1A	Floor	1	1	I75911626
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

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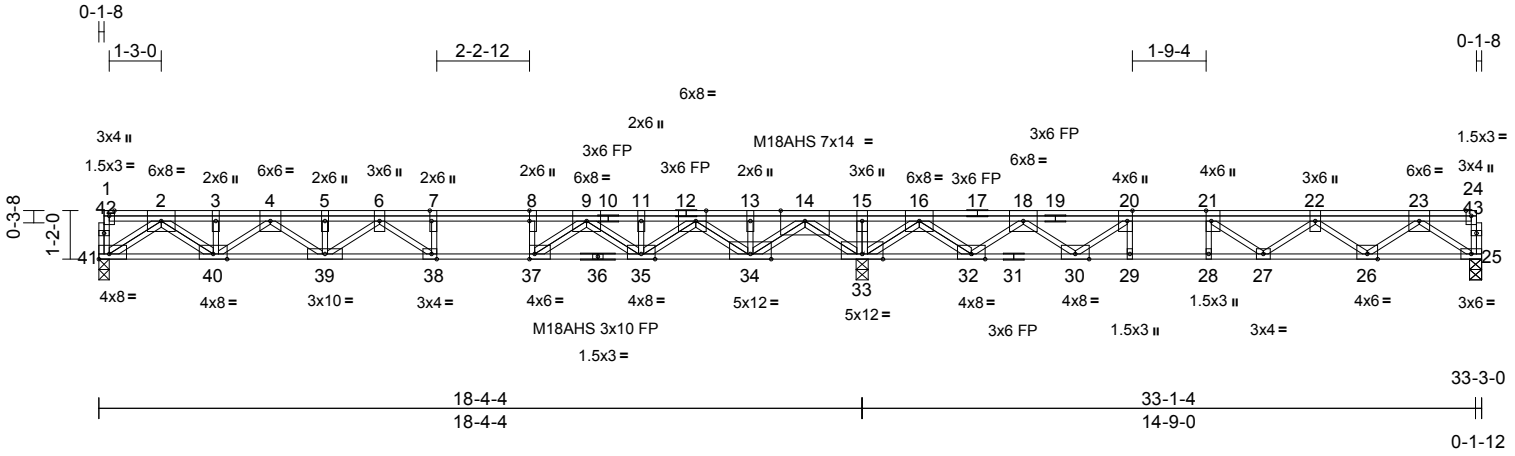

Scale = 1:55.4

Plate Offsets (X, Y): [7:0-3-0,Edge], [8:0-3-0,Edge], [12:0-3-0,Edge], [20:0-3-0,Edge], [21:0-3-0,Edge], [37:0-1-8,Edge], [38:0-1-8,Edge], [41:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.98	Vert(LL)	-0.19	38-39	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.91	Vert(CT)	-0.50	38-39	>440	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	NO	WB	0.88	Horz(CT)	0.08	25	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 234 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 25=1207/0-3-8, 33=4660/0-3-8, 41=1695/0-3-0
Max Grav 25=1315 (LC 4), 33=4660 (LC 1), 41=1742 (LC 3)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3918/0, 3-4=-3939/0, 4-5=-6200/0, 5-6=-6200/0, 6-7=-6452/0, 7-8=-6452/0, 8-9=-6452/0, 9-10=-3582/226, 10-11=-3582/226, 11-12=-3582/226, 12-13=-180/1512, 13-14=-180/1512, 14-15=0/7049, 15-16=0/7049, 16-17=-225/2860, 17-18=-225/2860, 18-19=-2141/880, 19-20=-2141/880, 20-21=-3554/449, 21-22=-3682/172, 22-23=-2673/0
BOT CHORD 40-41=0/2233, 39-40=0/5244, 38-39=0/6694, 37-38=0/6452, 36-37=0/4888, 35-36=0/4888, 34-35=-486/2068, 33-34=-3873/0, 32-33=-4251/0, 31-32=-1424/1052, 30-31=-1424/1052, 29-30=-449/3554, 28-29=-449/3554, 27-28=-449/3554, 26-27=0/3655, 25-26=0/1671
WEBS 2-41=-2731/0, 2-40=0/2138, 3-40=-363/0, 4-40=-1603/0, 4-39=0/1192, 5-39=-285/0, 6-39=-617/3, 6-38=-762/231, 7-38=-119/365, 14-33=-3899/0, 14-34=0/3358, 13-34=-340/0, 12-34=-3062/0, 12-35=0/2105, 11-35=-410/0, 9-35=-1704/0, 9-37=0/2330, 8-37=-1254/0, 23-25=-2043/0, 23-26=0/1274, 22-26=-1247/33, 22-27=-360/145, 18-32=-2518/0, 18-30=0/1840, 20-30=-2105/0, 21-27=-65/650, 21-28=-277/0, 20-29=0/301, 15-33=-351/0, 16-33=-3476/0, 16-32=0/2432

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) The Fabrication Tolerance at joint 36 = 11%
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Load case(s) 1, 3, 4, 7, 8, 9, 10 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-24=-220, 25-41=-10
3) 1st Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-15=-220, 15-24=-140, 25-41=-10
4) 2nd Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-15=-140, 15-24=-220, 25-41=-10
7) 1st chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-8=-220, 8-15=-140, 15-24=-220, 25-41=-10
8) 2nd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-7=-140, 7-24=-220, 25-41=-10
9) 3rd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-21=-220, 21-24=-140, 25-41=-10
10) 4th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-15=-220, 15-20=-140, 20-24=-220, 25-41=-10

August 26,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-B	F2	FLOOR	3	1	I75911627
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Aug 20 2025 Print: 25.3.0 S Aug 20 2025 MiTek Industries, Inc. Tue Aug 26 10:18:44 Page: 1
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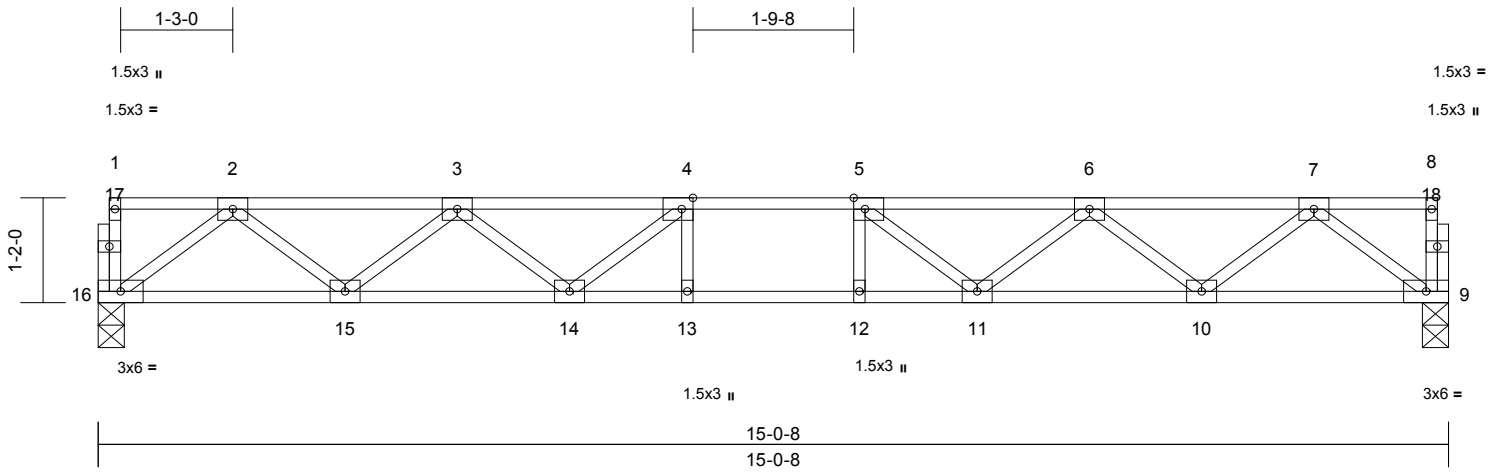


Scale = 1:25.7

Plate Offsets (X, Y): [4:0-1-8,Edge], [5:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.34	Vert(LL)	-0.15	12-13	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.72	Vert(CT)	-0.20	12-13	>886	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.04	9	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 75 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 9=0-3-8, 16=0-3-8
Max Grav 9=807 (LC 1), 16=807 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-16=-42/0, 8-9=-42/0, 1-2=-2/0, 2-3=-1656/0, 3-4=-2575/0, 4-5=-2865/0, 5-6=-2575/0, 6-7=-1656/0, 7-8=-2/0
BOT CHORD 15-16=0/1000, 14-15=0/2277, 13-14=0/2865, 12-13=0/2865, 11-12=0/2865, 10-11=0/2277, 9-10=0/1000
WEBS 2-16=-1252/0, 2-15=0/853, 3-15=-809/0, 3-14=0/447, 4-14=-545/0, 4-13=-126/155, 7-9=-1252/0, 7-10=0/853, 6-10=-809/0, 6-11=0/447, 5-11=-545/0, 5-12=-126/155

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x4 (=) MT20 unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

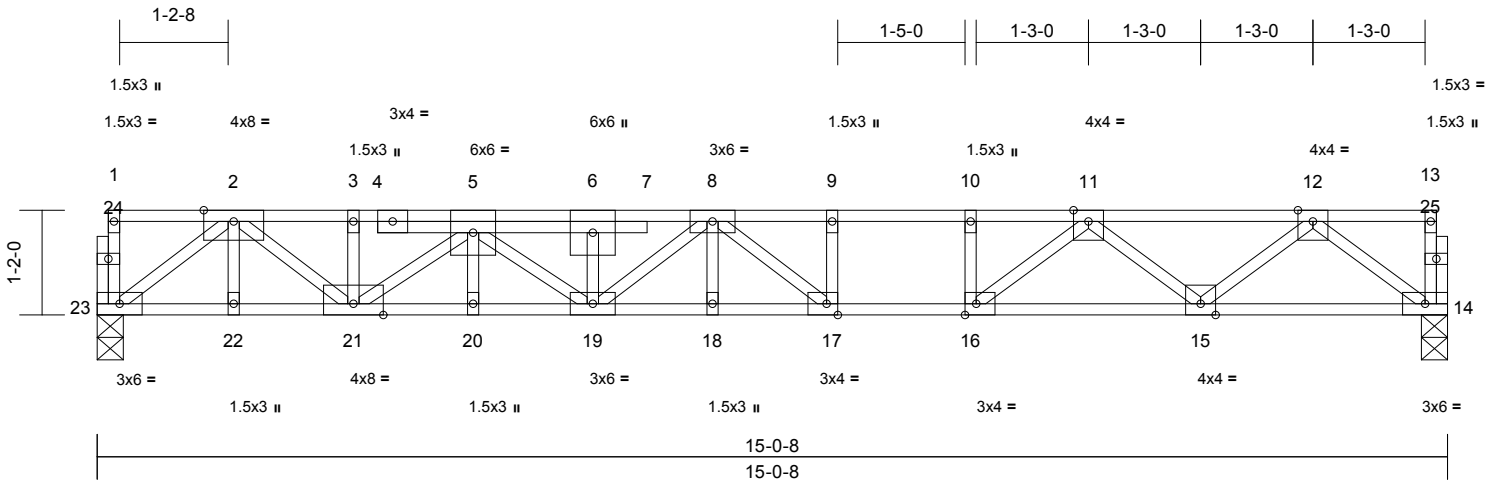
NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

August 26,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-B	F2A	FLOOR GIRDER	1	1	I75911628
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314, Run: 25.30 S Aug 20 2025 Print: 25.3.0 S Aug 20 2025 MiTek Industries, Inc. Tue Aug 26 10:18:44 Page: 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.7

Plate Offsets (X, Y): [16:0-1-8,Edge], [17:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.76	Vert(LL)	-0.20	17-18	>893	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.81	Vert(CT)	-0.27	17-18	>648	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.61	Horz(CT)	0.04	14	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 85 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 14=0-3-8, 23=0-3-8
Max Grav 14=888 (LC 1), 23=1021 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-23=-54/0, 13-14=-34/0, 1-2=-3/0, 2-3=-2295/0, 3-5=-2300/0, 5-6=-3511/0, 6-8=-3511/0, 8-9=-3199/0, 9-10=-3199/0, 10-11=-3199/0, 11-12=-1829/0, 12-13=-2/0
BOT CHORD 22-23=0/1287, 21-22=0/1287, 20-21=0/3293, 19-20=0/3293, 18-19=0/3520, 17-18=0/3520, 16-17=0/3199, 15-16=0/2572, 14-15=0/1107
WEBS 12-14=-1387/0, 12-15=0/939, 11-15=-968/0, 11-16=0/987, 10-16=-366/0, 2-23=-1601/0, 2-22=0/14, 2-21=0/1280, 3-21=-39/12, 5-21=-1238/0, 5-20=0/9, 5-19=0/270, 6-19=-164/0, 8-19=-140/101, 8-18=0/187, 8-17=-679/178, 9-17=-106/116

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
4) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 375 lb down at 4-4-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
5) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 14-23=-10, 1-13=-100
Concentrated Loads (lb)
Vert: 5=-295 (F)

August 26,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-B	F3	Floor	1	1	I75911629
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Aug 20 2025 Print: 25.3.0 S Aug 20 2025 MiTek Industries, Inc. Tue Aug 26 10:18:44 Page: 1
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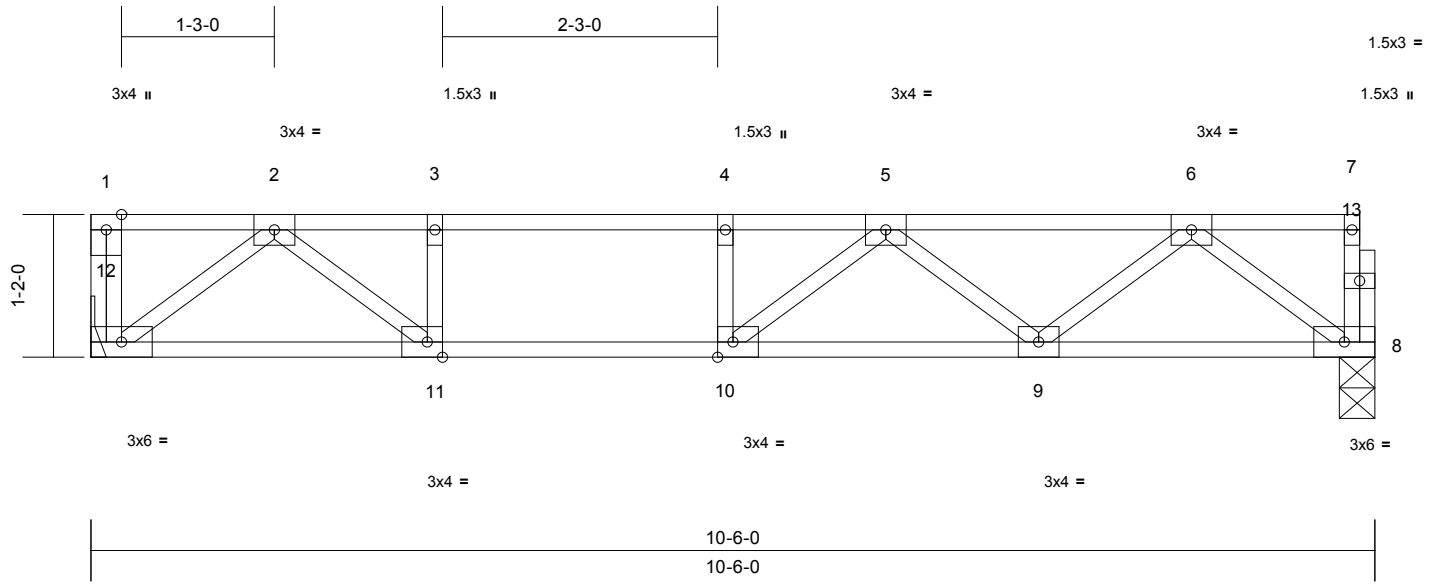


Scale = 1:18.8

Plate Offsets (X, Y): [10:0-1-8,Edge], [11:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.66	Vert(LL)	-0.14	9-10	>904	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.61	Vert(CT)	-0.18	9-10	>684	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.01	8	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 53 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

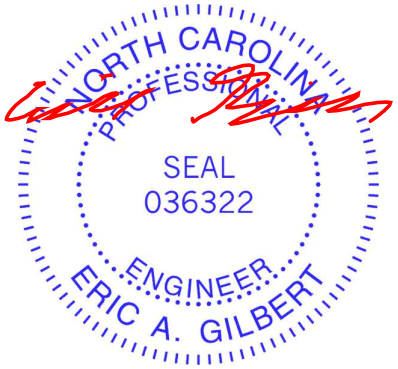
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-3-8, 12= Mechanical
Max Grav 8=558 (LC 1), 12=564 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-77/0, 7-8=-38/0, 1-2=0/0, 2-3=-1261/0, 3-4=-1261/0, 4-5=-1261/0, 5-6=-1043/0, 6-7=-2/0
BOT CHORD 11-12=0/656, 10-11=0/1261, 9-10=0/1325, 8-9=0/682
WEBS 2-12=-822/0, 2-11=0/791, 6-8=-852/0, 6-9=0/471, 5-9=-367/0, 5-10=-168/192, 4-10=-116/23, 3-11=-377/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Refer to girder(s) for truss to truss connections.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard



August 26,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-B	F4	FLOOR	5	1	I75911630
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Aug 20 2025 Print: 25.3.0 S Aug 20 2025 MiTek Industries, Inc. Tue Aug 26 10:18:44 Page: 1
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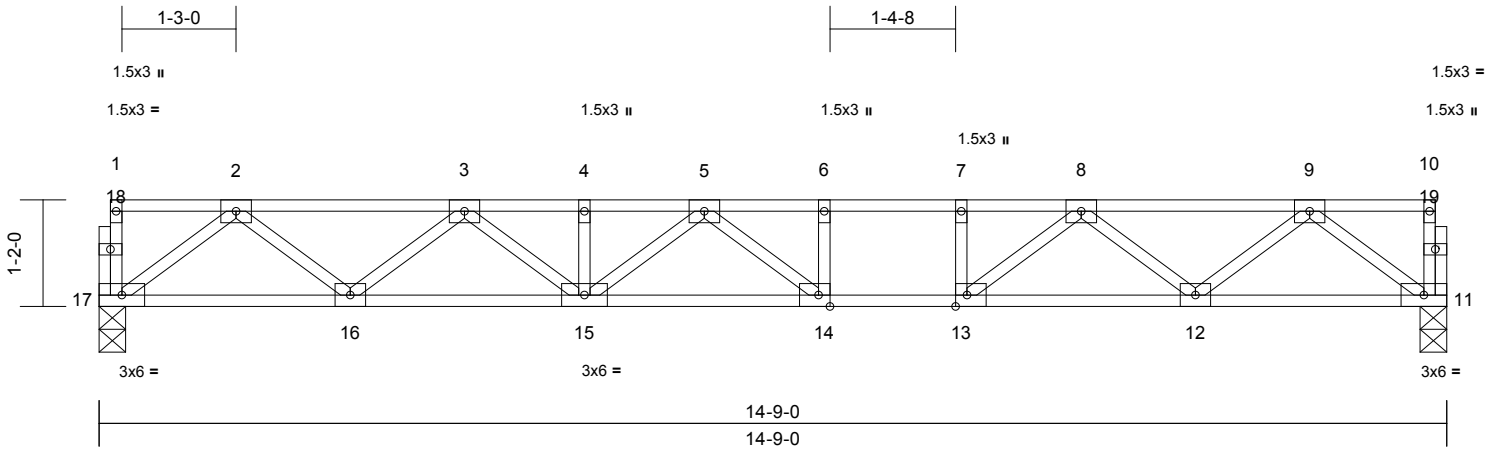

Scale = 1:25.2

Plate Offsets (X, Y): [13:0-1-8,Edge], [14:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.51	Vert(LL)	-0.17	14-15	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.73	Vert(CT)	-0.24	14-15	>732	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.04	11	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 76 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 11=0-3-8, 17=0-3-8
Max Grav 11=791 (LC 1), 17=791 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-17=-35/0, 10-11=-34/0, 1-2=-2/0, 2-3=-1607/0, 3-4=-2556/0, 4-5=-2556/0, 5-6=-2657/0, 6-7=-2657/0, 7-8=-2657/0, 8-9=-1596/0, 9-10=-2/0
BOT CHORD 16-17=0/983, 15-16=0/2207, 14-15=0/2744, 13-14=0/2657, 12-13=0/2204, 11-12=0/984
WEBS 2-17=-1230/0, 2-16=0/813, 3-16=-780/0, 3-15=0/446, 4-15=-75/0, 5-15=-253/0, 5-14=-298/246, 6-14=-121/86, 9-11=-1232/0, 9-12=0/797, 8-12=-791/0, 8-13=0/722, 7-13=-312/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x4 (=) MT20 unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

August 26,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-B	F5	Floor	3	1	I75911631
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Aug 20 2025 Print: 25.3.0 S Aug 20 2025 MiTek Industries, Inc. Tue Aug 26 10:18:44 Page: 1
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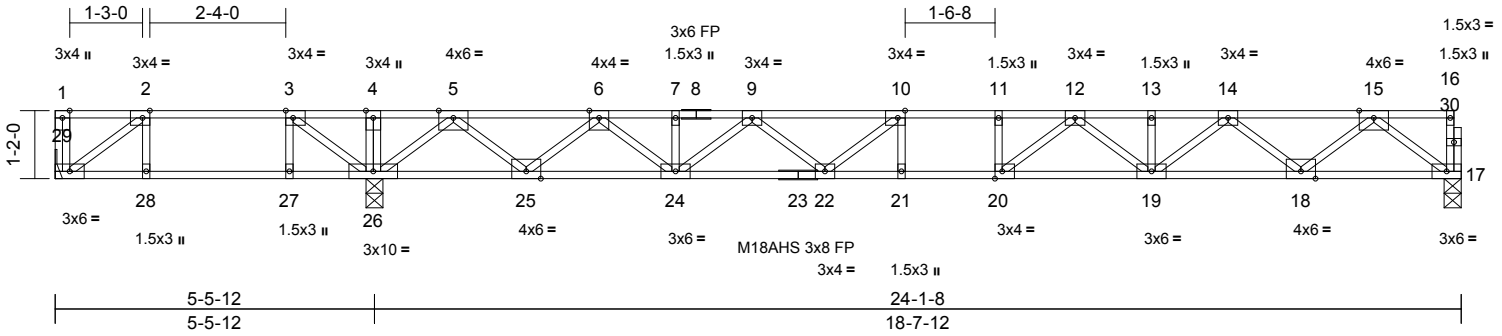

Scale = 1:39.5

Plate Offsets (X, Y): [2:0-1-8,Edge], [3:0-1-8,Edge], [10:0-1-8,Edge], [20:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.67	Vert(LL)	-0.28	21	>784	480	M18AHS	186/179
TCDL	10.0	Lumber DOL	1.00	BC	0.94	Vert(CT)	-0.39	21	>574	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.60	Horz(CT)	0.07	17	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 122 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 28-29,27-28,26-27.

REACTIONS (size) 17=0-3-8, 26=0-3-8, 29= Mechanical
Max Grav 17=960 (LC 7), 26=1573 (LC 8), 29=1686 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-29=-1588/0, 16-17=-36/0, 1-2=0/0, 2-3=-193/410, 3-4=0/1116, 4-5=0/1116, 5-6=-1352/0, 6-7=-2954/0, 7-9=-2954/0, 9-10=-3806/0, 10-11=-4043/0, 11-12=-4043/0, 12-13=-3383/0, 13-14=-3383/0, 14-15=-2032/0, 15-16=-2/0
BOT CHORD 28-29=-410/193, 27-28=-410/193, 26-27=-410/193, 25-26=0/394, 24-25=0/2268, 22-24=0/3536, 21-22=0/4043, 20-21=0/4043, 19-20=0/3787, 18-19=0/2823, 17-18=0/1206
WEBS 4-26=-20/115, 3-26=-1086/0, 3-27=0/198, 2-29=-238/506, 2-28=-147/0, 5-26=-1742/0, 5-25=0/1259, 6-25=-1206/0, 6-24=0/888, 7-24=-62/0, 9-24=-753/0, 9-22=0/487, 10-22=-557/48, 10-21=-132/123, 15-17=-1510/0, 15-18=0/1076, 14-18=-1029/0, 14-19=0/715, 13-19=-105/0, 12-19=-516/0, 12-20=-93/621, 11-20=-260/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Refer to girder(s) for truss to truss connections.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 17-29=-10, 1-16=-100
Concentrated Loads (lb)
Vert: 1=-1450

August 26,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-B	F5A	Floor	1	1	I75911632
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Aug 20 2025 Print: 25.3.0 S Aug 20 2025 MiTek Industries, Inc. Tue Aug 26 10:18:44 Page: 1
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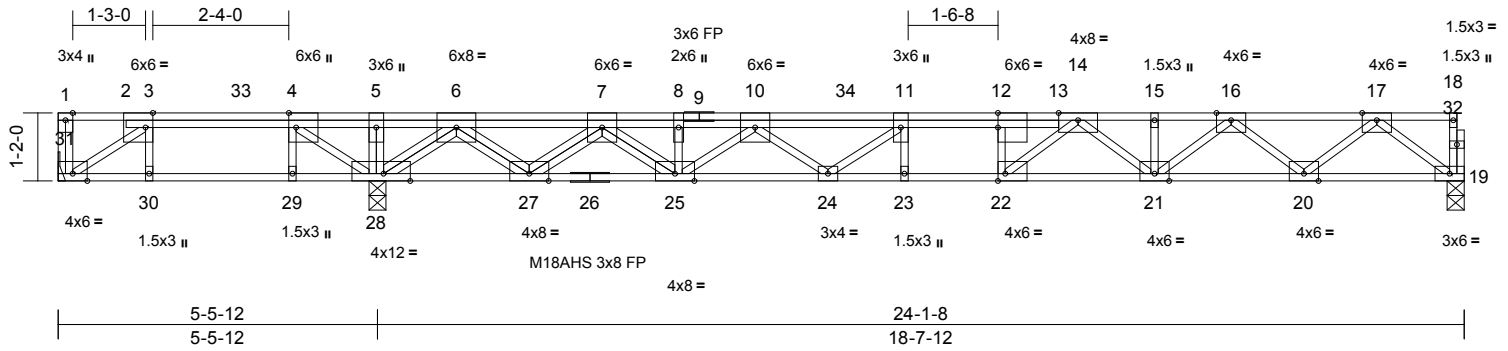

Scale = 1:39.5

Plate Offsets (X, Y): [3:0-1-8,Edge], [4:0-3-0,Edge], [22:0-1-8,Edge], [28:0-5-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.95	Vert(LL)	-0.35	23-24	>632	480	M18AHS	186/179
TCDL	10.0	Lumber DOL	1.00	BC	0.96	Vert(CT)	-0.48	23-24	>466	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.84	Horz(CT)	0.07	19	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 153 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-8-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 19=0-3-8, 28=0-3-8, 31= Mechanical
Max Uplift 31=-335 (LC 4)
Max Grav 19=1210 (LC 4), 28=3059 (LC 8), 31=476 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-31=-258/0, 18-19=-36/0, 1-3=-16/36, 3-4=-603/1007, 4-5=0/3329, 5-6=0/3329, 6-7=-1061/84, 7-8=-4111/0, 8-10=-4106/0, 10-11=-6189/0, 11-12=-6524/0, 12-14=-6547/0, 14-15=-4621/0, 15-16=-4621/0, 16-17=-2663/0, 17-18=-2/0
BOT CHORD 30-31=-1007/603, 29-30=-1007/603, 28-29=-1007/603, 27-28=-1013/0, 25-27=0/2710, 24-25=0/5739, 23-24=0/6524, 22-23=0/6524, 21-22=0/5319, 20-21=0/3745, 19-20=0/1537
WEBS 5-28=0/614, 3-31=-730/1218, 4-28=-3566/0, 4-29=0/220, 3-30=-171/0, 6-28=-2854/0, 6-27=0/2180, 7-27=-2132/0, 7-25=0/1815, 8-25=-120/129, 10-25=-2038/0, 10-24=0/656, 11-24=-648/0, 11-23=-193/52, 17-19=-1925/0, 17-20=0/1466, 16-20=-1408/0, 16-21=0/1119, 15-21=-154/0, 14-21=-891/0, 14-22=0/1730, 12-22=-907/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 335 lb uplift at joint 31.
6) Load case(s) 3, 4, 10 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
8) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 19-31=-10, 1-18=-100
Concentrated Loads (lb)
Vert: 33=-940, 34=-800
3) 1st Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 19-31=-10, 1-5=-100, 5-18=-20
Concentrated Loads (lb)
Vert: 33=-940, 34=-218
4) 2nd Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 19-31=-10, 1-5=-20, 5-18=-100
Concentrated Loads (lb)
Vert: 33=-256, 34=-800
10) 4th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 19-31=-10, 1-5=-100, 5-11=-20, 11-18=-100
Concentrated Loads (lb)
Vert: 33=-940, 34=-218

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

August 26,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-B	F6	Floor	7	1	I75911633
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Aug 20 2025 Print: 25.3.0 S Aug 20 2025 MiTek Industries, Inc. Tue Aug 26 10:18:45 Page: 1
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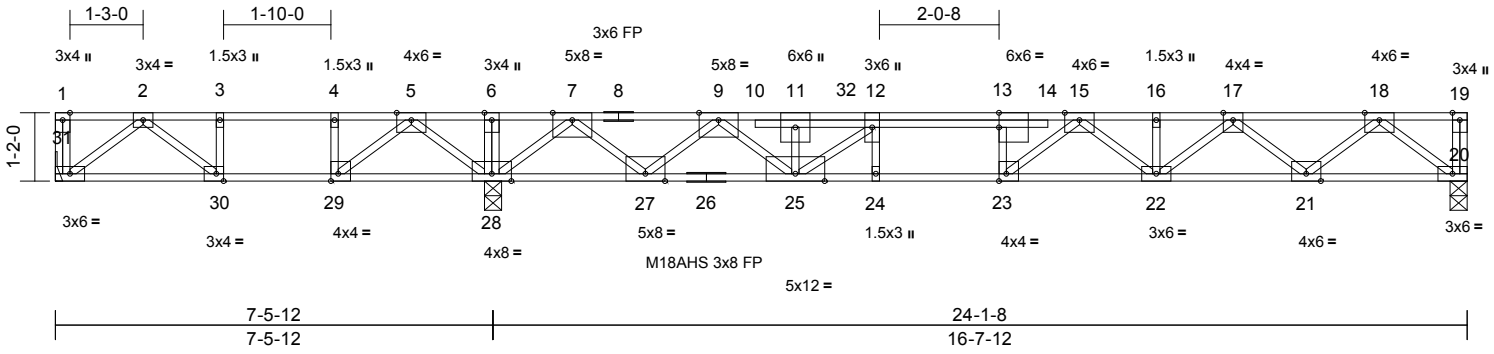


Scale = 1:39.4

Plate Offsets (X, Y): [23:0-1-8,Edge], [29:0-1-8,Edge], [30:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.80	Vert(LL)	-0.23	23-24	>854	480	M18AHS	186/179
TCDL	10.0	Lumber DOL	1.00	BC	0.67	Vert(CT)	-0.32	23-24	>625	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.05	20	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 129 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 20=0-3-8, 28=0-3-8, 31= Mechanical
Max Uplift 31=-57 (LC 6)
Max Grav 20=1071 (LC 7), 28=2281 (LC 1), 31=1205 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-31=-947/6, 19-20=-39/0, 1-2=0/0, 2-3=-475/888, 3-4=-475/888, 4-5=-475/888, 5-6=0/2320, 6-7=0/2320, 7-9=-1403/0, 9-11=-4413/0, 11-12=-4411/0, 12-13=-5183/0, 13-15=-5196/0, 15-16=-3908/0, 16-17=-3908/0, 17-18=-2297/0, 18-19=0/0
BOT CHORD 30-31=-303/358, 29-30=-888/475, 28-29=-1640/98, 27-28=-357/120, 25-27=0/2880, 24-25=0/5183, 23-24=0/5183, 22-23=0/4409, 21-22=0/3210, 20-21=0/1346
WEBS 6-28=-199/0, 2-31=-450/380, 2-30=-747/149, 3-30=-98/333, 7-28=-2463/0, 7-27=0/2006, 9-27=-1952/0, 9-25=0/1966, 11-25=-738/174, 18-20=-1688/0, 18-21=0/1238, 17-21=-1188/0, 17-22=0/892, 16-22=-149/0, 15-22=-639/0, 5-28=-1047/0, 5-29=0/1213, 4-29=-560/0, 15-23=-176/1297, 13-23=-705/87, 12-25=-1064/0, 12-24=-91/78

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 57 lb uplift at joint 31.
6) Load case(s) 3, 4, 8, 10 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
8) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 20-31=-10, 1-19=-100
Concentrated Loads (lb)
Vert: 1=-900, 32=-800
3) 1st Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 20-31=-10, 1-6=-100, 6-19=-20
Concentrated Loads (lb)
Vert: 1=-900, 32=-218
4) 2nd Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 20-31=-10, 1-6=-20, 6-19=-100
Concentrated Loads (lb)
Vert: 1=-245, 32=-800
8) 2nd chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 20-31=-10, 1-3=-20, 3-19=-100
Concentrated Loads (lb)
Vert: 1=-245, 32=-800
10) 4th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 20-31=-10, 1-6=-100, 6-12=-20, 12-19=-100
Concentrated Loads (lb)
Vert: 1=-900, 32=-218

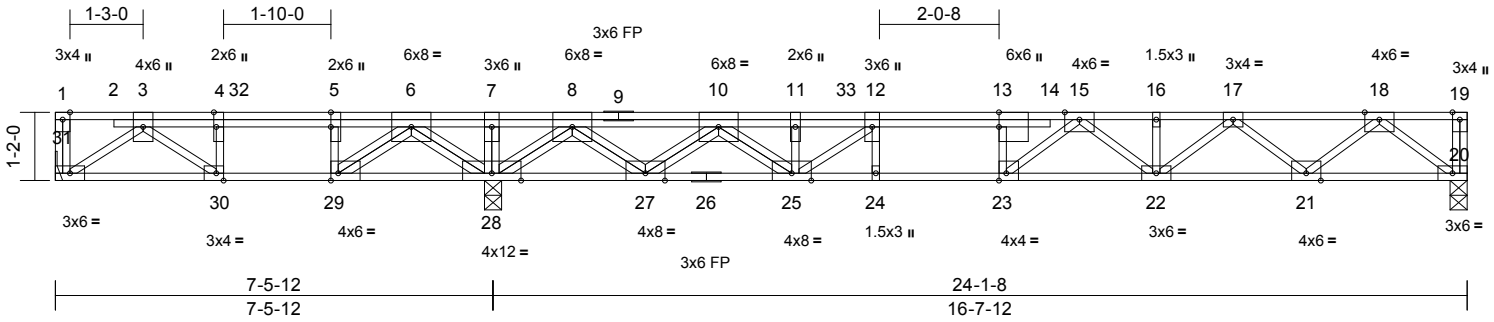
August 26,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-B	F6A	Floor	1	1	I75911634
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Aug 20 2025 Print: 25.3.0 S Aug 20 2025 MiTek Industries, Inc. Tue Aug 26 10:18:45 Page: 1
ID:oZsdJhAH7sgso7cS4ggLwVyqezV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:39.4

Plate Offsets (X, Y): [4:0-3-0,Edge], [5:0-3-0,Edge], [13:0-3-0,Edge], [23:0-1-8,Edge], [29:0-1-8,Edge], [30:0-1-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.75	Vert(LL)	-0.21	23-24	>964	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.98	Vert(CT)	-0.28	23-24	>703	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.70	Horz(CT)	0.05	20	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 157 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 20=0-3-8, 28=0-3-8, 31= Mechanical
Max Uplift 31=-200 (LC 4)
Max Grav 20=997 (LC 7), 28=2925 (LC 1), 31=851 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-31=-46/34, 19-20=-39/0, 1-3=-17/0, 3-4=-1646/1142, 4-5=-1646/1142, 5-6=-1646/1142, 6-7=0/3508, 7-8=0/3508, 8-10=-431/34, 10-11=-3614/0, 11-12=-3649/0, 12-13=-4508/0, 13-15=-4517/0, 15-16=-3542/0, 16-17=-3542/0, 17-18=-2109/0, 18-19=0/0
BOT CHORD 30-31=-275/1106, 29-30=-1142/1646, 28-29=-2620/108, 27-28=-1386/0, 25-27=0/2081, 24-25=0/4508, 23-24=0/4508, 22-23=0/3953, 21-22=0/2935, 20-21=0/1247
WEBS 7-28=-352/0, 3-31=-1357/337, 3-30=-1083/674, 4-30=-434/601, 8-28=-2633/0, 8-27=0/2161, 10-27=-2111/0, 10-25=0/1955, 11-25=-725/221, 12-25=-1132/0, 12-24=-51/74, 18-20=-1565/0, 18-21=0/1122, 17-21=-1076/0, 17-22=0/775, 16-22=-137/0, 15-22=-525/0, 15-23=-297/1070, 13-23=-593/164, 6-28=-1850/0, 6-29=0/2954, 5-29=-1637/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 200 lb uplift at joint 31.
5) Load case(s) 3, 4, 10 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 20-31=-10, 1-19=-100
Concentrated Loads (lb)
Vert: 32=-1000, 33=-800
3) 1st Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 20-31=-10, 1-7=-100, 7-19=-20
Concentrated Loads (lb)
Vert: 32=-1000, 33=-218
4) 2nd Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 20-31=-10, 1-7=-20, 7-19=-100
Concentrated Loads (lb)
Vert: 32=-273, 33=-800
10) 4th chase Dead + Floor Live (unbalanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 20-31=-10, 1-7=-100, 7-12=-20, 12-19=-100
Concentrated Loads (lb)
Vert: 32=-1000, 33=-218

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

August 26,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills	
252130-B	FG1	Floor Girder	1	1	Job Reference (optional)	I75911635

Comtech, Inc, Fayetteville, NC - 28314,

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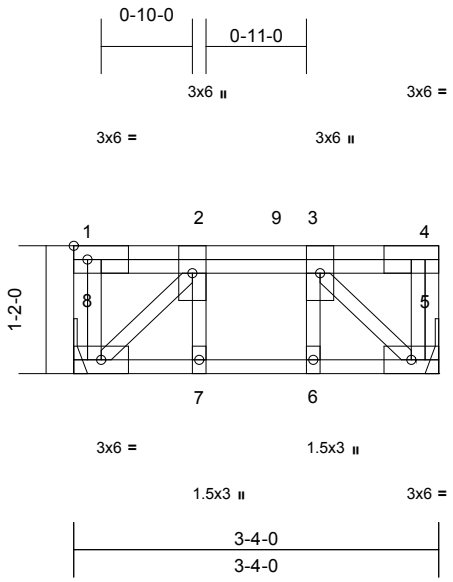

Scale = 1:21

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.18	Vert(LL)	0.00	6	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.13	Vert(CT)	0.00	6	>999	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.00	5	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 25 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 8= Mechanical
Max Grav 5=461 (LC 4), 8=395 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-1/51, 4-5=-53/0, 1-2=0/0, 2-3=-409/0, 3-4=0/0
BOT CHORD 7-8=0/409, 6-7=0/409, 5-6=0/409
WEBS 2-8=-567/0, 2-7=0/34, 3-5=-567/0, 3-6=-17/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Refer to girder(s) for truss to truss connections.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 544 lb down at 1-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
6) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 5-8=-10, 1-4=-100
Concentrated Loads (lb)
Vert: 9=-464 (B)

August 26,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 50 Magnolia Hills
252130-B	FG2	FLOOR GIRDER	1	1	I75911636
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Aug 20 2025 Print: 25.3.0 S Aug 20 2025 MiTek Industries, Inc. Tue Aug 26 10:18:45 Page: 1
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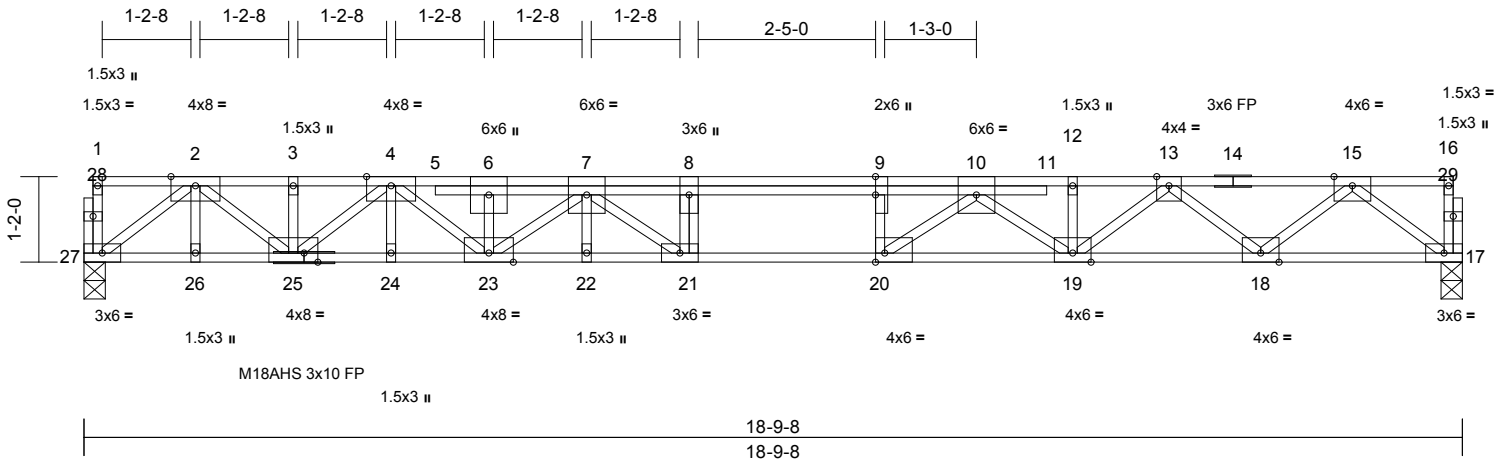


Scale = 1:31.4

Plate Offsets (X, Y): [9:0-3-0,Edge], [20:0-1-8,Edge], [25:0-2-4,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.74	Vert(LL)	-0.37	21	>600	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.84	Vert(CT)	-0.51	21	>436	360	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	NO	WB	0.77	Horz(CT)	0.08	17	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 111 lb	FT = 20%F, 11%E

LUMBER
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 17=0-3-8, 27=0-3-8
Max Grav 17=1172 (LC 1), 27=1216 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-27=-57/0, 16-17=-36/0, 1-2=-3/0, 2-3=-2812/0, 3-4=-2812/0, 4-6=-4977/0, 6-7=-4976/0, 7-8=-6186/0, 8-9=-6186/0, 9-10=-6186/0, 10-12=-4419/0, 12-13=-4416/0, 13-15=-2567/0, 15-16=-2/0
BOT CHORD 26-27=0/1545, 24-26=0/3872, 23-24=0/3872, 22-23=0/5851, 21-22=0/5851, 20-21=0/6186, 19-20=0/5317, 18-19=0/3610, 17-18=0/1484
WEBS 15-17=-1859/0, 15-18=0/1409, 13-18=-1358/0, 13-19=0/1029, 12-19=0/41, 10-19=-1124/0, 10-20=0/1569, 9-20=-816/0, 2-27=-1924/0, 2-26=0/17, 2-25=0/1607, 3-25=-155/0, 4-25=-1346/0, 4-24=0/21, 4-23=0/1400, 6-23=-212/0, 7-23=-1086/0, 7-22=-16/95, 7-21=-73/826, 8-21=-416/0

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 441 lb down at 8-1-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
6) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

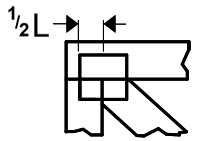
LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-16=-100, 17-27=-10
Concentrated Loads (lb)
Vert: 8=-361 (B)

August 26,2025

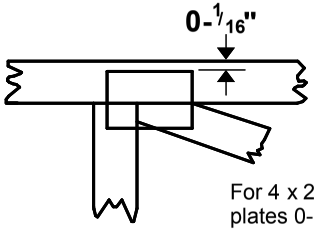
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

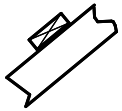
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

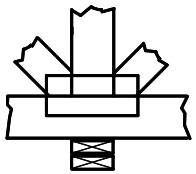
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

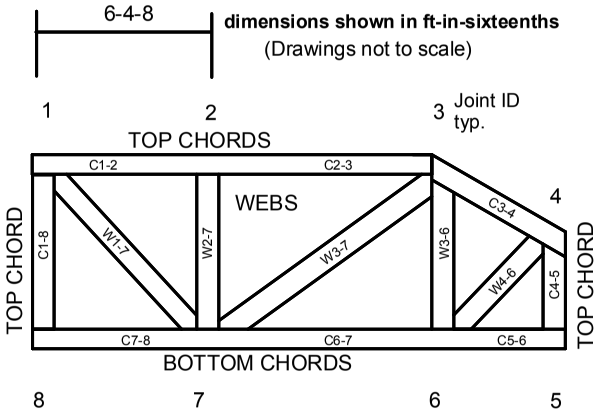


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

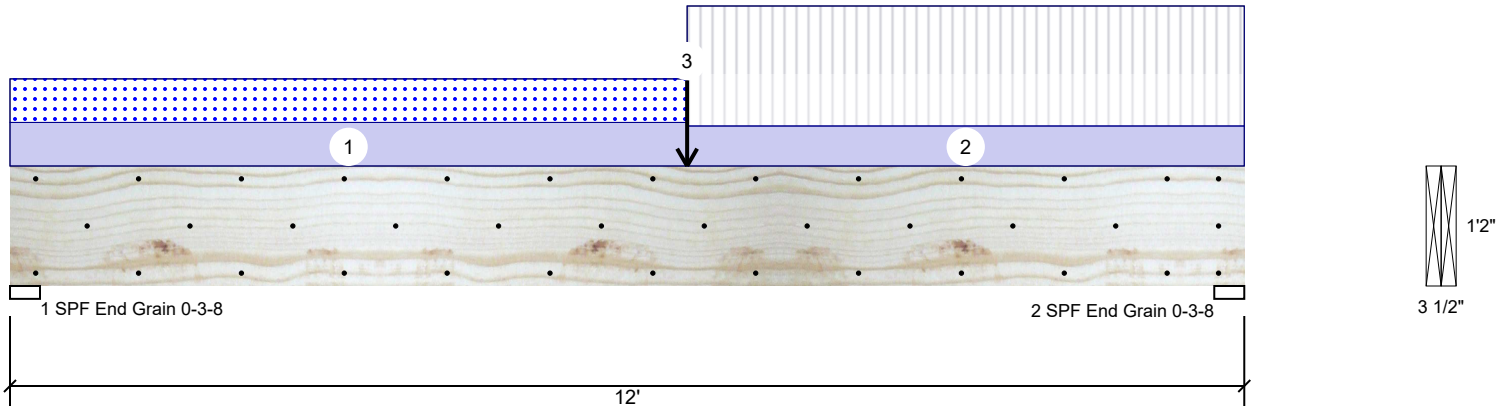
Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

Client:	Precision Custom Homes	Date:	11/7/2025
Project:	Sarah	Input by:	Johnnie Baggett
Address:		Job Name:	Lot 50 Magnolia Hills
		Project #:	252130

BM1 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2515	2325	1421	0	0
2	Vertical	5367	2369	514	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	51%	2325 / 2952	5277	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	Vert	75%	2369 / 5367	7736	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	24155 ft-lb	6'7"	26999 ft-lb	89%	D+L	L
Unbraced	24155 ft-lb	6'7"	24188 ft-lb	100%	D+L	L
Shear	6145 lb	10'6 1/2"	10453 lb	59%	D+L	L
LL Defl inch	0.242 (L/573)	6'7"	0.289 (L/480)	84%	L	L
TL Defl inch	0.373 (L/371)	6'6"	0.385 (L/360)	97%	D+L	L

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings.
2 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Girders are designed to be supported on bottom edge only and across their full width.
5 Top loads must be supported equally by all plies.
6 Top must be laterally braced at a maximum of 3'3 1/4" o.c.
7 Bottom must be laterally braced at end bearings.
8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 6-7-0		Top	294 PLF	0 PLF	294 PLF	0 PLF	0 PLF	A1
2	Part. Uniform	6-7-0 to 12-0-0		Top	270 PLF	810 PLF	0 PLF	0 PLF	0 PLF	F1
3	Point	6-7-0		Top	1165 lb	3495 lb	0 lb	0 lb	0 lb	F1A
	Bearing Length	0-3-8								
	Self Weight				11 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/28/2028

Manufacturer Info

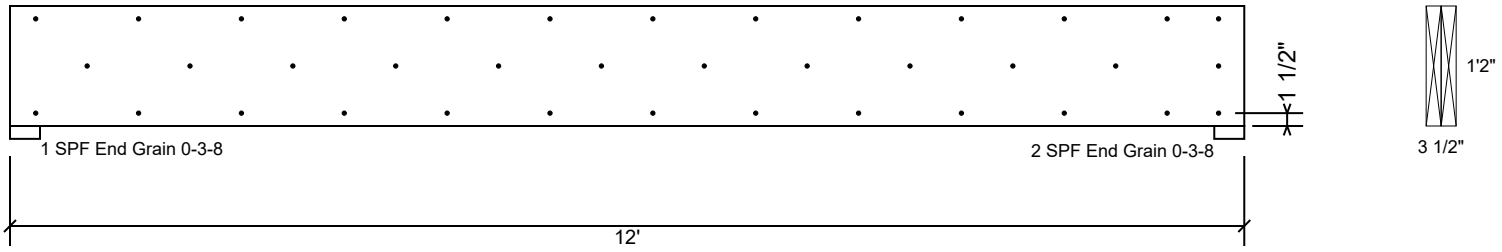
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Precision Custom Homes	Date:	11/7/2025
Project:	Sarah	Input by:	Johnnie Baggett
Address:		Job Name:	Lot 50 Magnolia Hills
		Project #:	252130

BM1 Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/28/2028

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Fayetteville, NC
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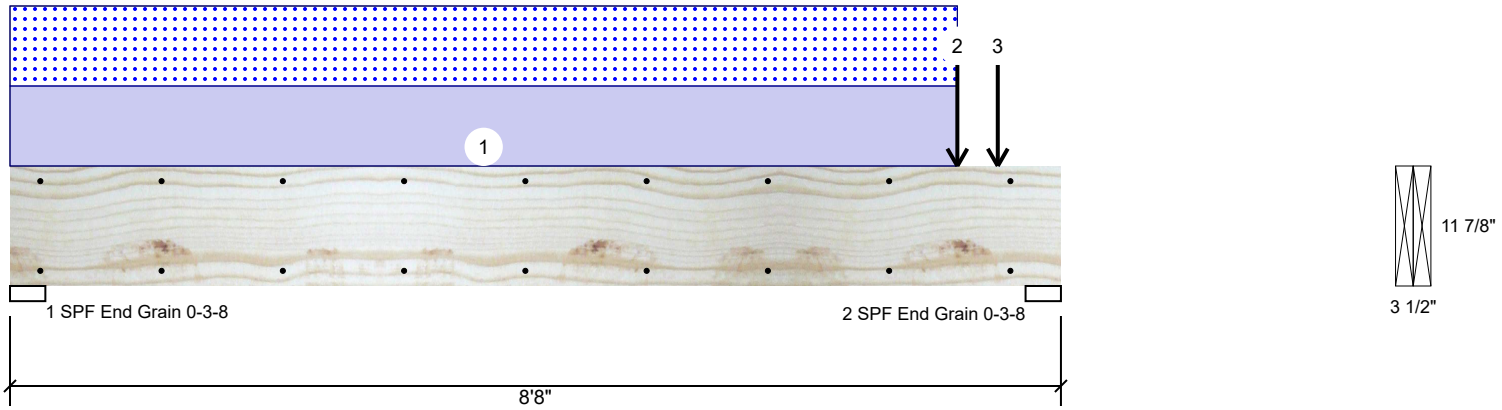
28314
910-864-TRUS

Client:	Precision Custom Homes	Date:	11/7/2025
Project:	Sarah	Input by:	Johnnie Baggett
Address:		Job Name:	Lot 50 Magnolia Hills
		Project #:	252130

BM2 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Member Information

Type:	Header	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Header Supports Glass:	No
Importance:	Normal - II	Deck:	Not Checked
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	2091	2042	0	0
2	Vertical	0	5243	4972	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	40%	2091 / 2042	4133	L	D+S
2 - SPF End Grain	3.500"	Vert	99%	5243 / 4972	10215	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	9474 ft-lb	5' 3/8"	22897 ft-lb	41%	D+S	L
Unbraced	9474 ft-lb	5' 3/8"	22897 ft-lb	41%	D+S	L
Shear	6356 lb	7'4 5/8"	10197 lb	62%	D+S	L
LL Defl inch	0.073 (L/1357)	4'6 13/16"	0.274 (L/360)	27%	S	L
TL Defl inch	0.147 (L/670)	4'6 13/16"	0.410 (L/240)	36%	D+S	L

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings.
2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Headers are designed to be supported on bottom edge only and across their full width.
5 Top loads must be supported equally by all plies.
6 Top must be continuously laterally braced.
7 Bottom must be laterally braced at bearings.
8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 7-9-12		Top	406 PLF	0 PLF	406 PLF	0 PLF	0 PLF	B2
2	Point	7-9-12		Top	3842 lb	0 lb	3842 lb	0 lb	0 lb	B2-GR
	Bearing Length	0-3-8								
3	Point	8-1-12		Top	240 lb	0 lb	0 lb	0 lb	0 lb	Wall Above
	Bearing Length	0-3-8								
	Self Weight				9 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/28/2028

Manufacturer Info

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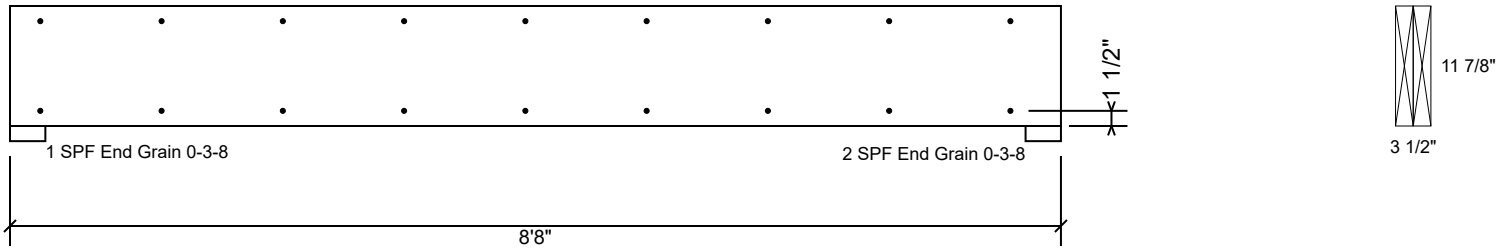
Client:	Precision Custom Homes	Date:	11/7/2025
Project:	Sarah	Input by:	Johnnie Baggett
Address:		Job Name:	Lot 50 Magnolia Hills
		Project #:	252130

BM2 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

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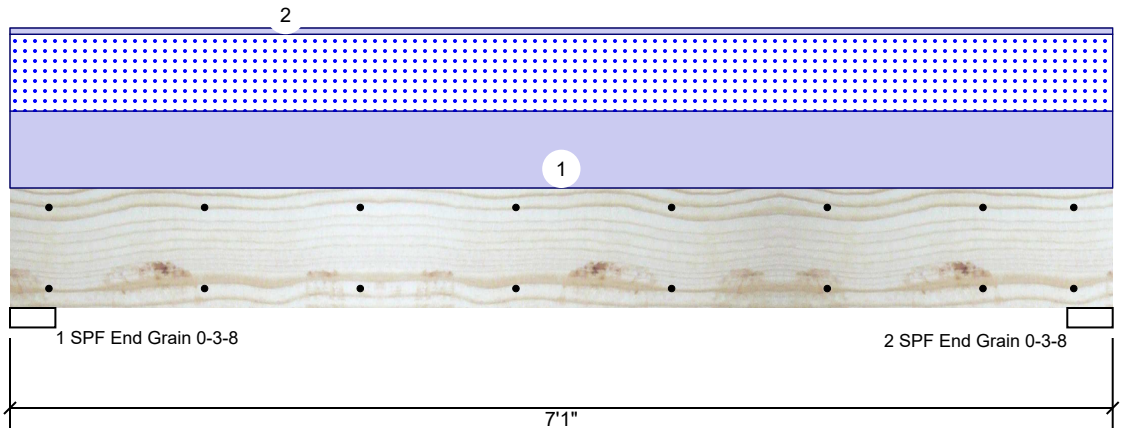
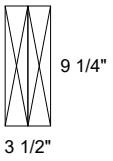
Client:	Precision Custom Homes	Date:	11/7/2025
Project:	Sarah	Input by:	Johnnie Baggett
Address:		Job Name:	Lot 50 Magnolia Hills
		Project #:	252130

BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level





Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	2150	1966	0	0
2	Vertical	0	2150	1966	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	40%	2150 / 1966	4116	L	D+S
2 - SPF End Grain	3.500"	Vert	40%	2150 / 1966	4116	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6376 ft-lb	3'6 1/2"	14423 ft-lb	44%	D+S	L
Unbraced	6376 ft-lb	3'6 1/2"	9973 ft-lb	64%	D+S	L
Shear	2881 lb	1' 3/4"	7943 lb	36%	D+S	L
LL Defl inch	0.063 (L/1263)	3'6 1/2"	0.221 (L/360)	29%	S	L
TL Defl inch	0.132 (L/603)	3'6 1/2"	0.331 (L/240)	40%	D+S	L

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings.
2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Girders are designed to be supported on bottom edge only and across their full width.
5 Top loads must be supported equally by all plies.
6 Top must be laterally braced at end bearings.
7 Bottom must be laterally braced at end bearings.
8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	555 PLF	0 PLF	555 PLF	0 PLF	0 PLF	A1
2	Uniform			Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
	Self Weight				7 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/28/2028

Manufacturer Info

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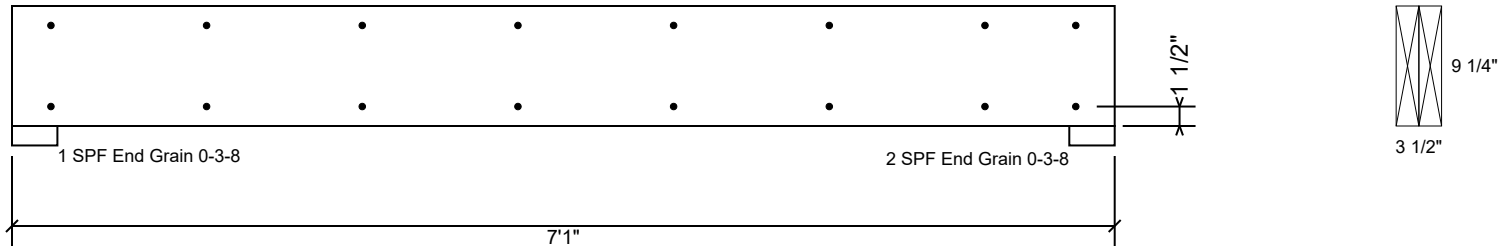
www.metsawood.com/us

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Precision Custom Homes	Date:	11/7/2025
Project:	Sarah	Input by:	Johnnie Baggett
Address:		Job Name:	Lot 50 Magnolia Hills
		Project #:	252130

BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/28/2028

Manufacturer Info

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(800) 622-5850
www.metsawood.com/us

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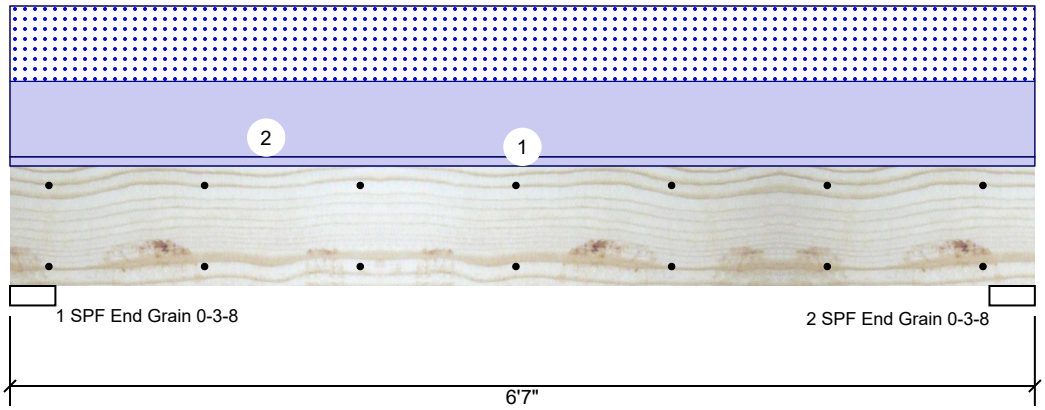
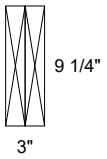
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Precision Custom Homes	Date:	11/7/2025
Project:	Sarah	Input by:	Johnnie Baggett
Address:		Job Name:	Lot 50 Magnolia Hills
		Project #:	252130

BM4 S-P-F #2 2.000" X 10.000" 2-Ply - PASSED

Level: Level





Member Information

Type:	Header	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Header Supports Glass:	No
Importance:	Normal - II	Deck:	Not Checked
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1380	1205	0	0
2	Vertical	0	1380	1205	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	58%	1380 / 1205	2584	L	D+S
2 - SPF End Grain	3.500"	Vert	58%	1380 / 1205	2584	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3682 ft-lb	3'3 1/2"	3946 ft-lb	93%	D+S	L
Unbraced	3682 ft-lb	3'3 1/2"	3946 ft-lb	93%	D+S	L
Shear	1750 lb	5'6 1/4"	2872 lb	61%	D+S	L
LL Defl inch	0.042 (L/1757)	3'3 1/2"	0.153 (L/480)	27%	S	L
TL Defl inch	0.090 (L/819)	3'3 1/2"	0.204 (L/360)	44%	D+S	L

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings.
2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Headers are designed to be supported on bottom edge only and across their full width.
5 Top loads must be supported equally by all plies.
6 Top must be continuously laterally braced.
7 Bottom must be laterally braced at bearings.
8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
2	Uniform			Top	366 PLF	0 PLF	366 PLF	0 PLF	0 PLF	A1
	Self Weight				8 PLF					

This design is valid until 2/28/2028

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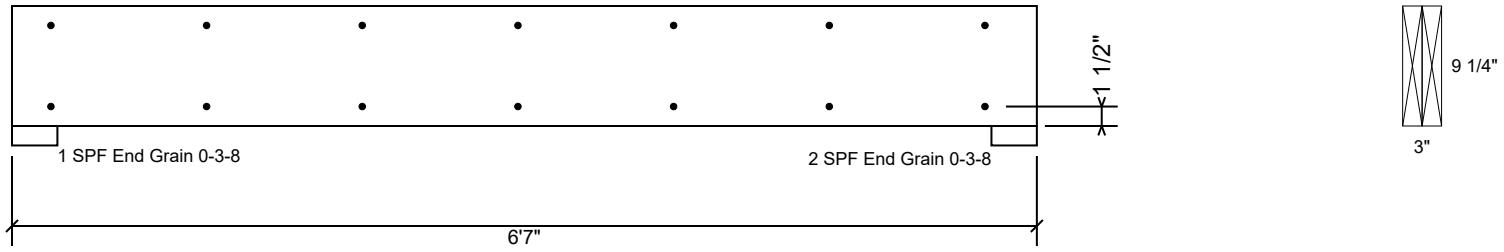
910-864-TRUS

Client:	Precision Custom Homes	Date:	11/7/2025
Project:	Sarah	Input by:	Johnnie Baggett
Address:		Job Name:	Lot 50 Magnolia Hills
		Project #:	252130

BM4 S-P-F #2 2.000" X 10.000" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	157.4 PLF
Yield Limit per Fastener	78.7 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

This design is valid until 2/28/2028

Manufacturer Info

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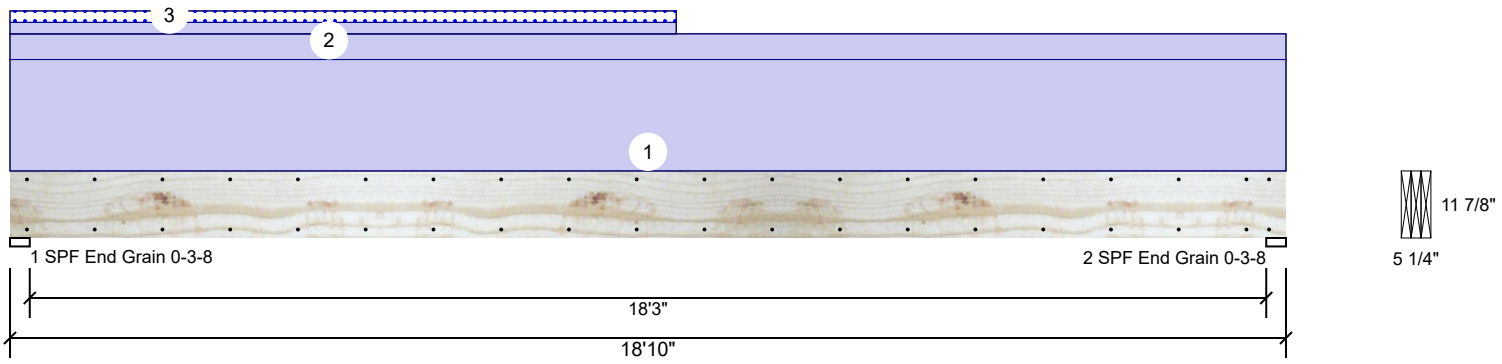
28314
910-864-TRUS

Client:	Precision Custom Homes	Date:	11/7/2025
Project:	Sarah	Input by:	Johnnie Baggett
Address:		Job Name:	Lot 50 Magnolia Hills
		Project #:	252130

GDH Kerto-S LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Level



Member Information

Type:	Header	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	360	Load Sharing:	Yes
Deflection TL:	240	Header Supports Glass:	No
Importance:	Normal - II	Deck:	Not Checked
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	2537	146	0	0
2	Vertical	0	2441	50	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	17%	2537 / 146	2683	L	D+S
2 - SPF End Grain	3.500"	Vert	16%	2441 / 50	2491	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11177 ft-lb	9'3 3/16"	27954 ft-lb	40%	D	Uniform
Unbraced	11177 ft-lb	9'3 3/16"	27954 ft-lb	40%	D	Uniform
Shear	2186 lb	1'3 3/8"	11970 lb	18%	D	Uniform
LL Defl inch	0.020 (L/11137)	8'7 13/16"	0.612 (L/360)	3%	S	L
TL Defl inch	0.503 (L/438)	9'4 1/4"	0.919 (L/240)	55%	D+S	L

Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings.
2. Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6". Nail from both sides.
3. Refer to last page of calculations for fasteners required for specified loads.
4. Headers are designed to be supported on bottom edge only and across their full width.
5. Top loads must be supported equally by all plies.
6. Top must be continuously laterally braced.
7. Bottom must be laterally braced at bearings.
8. Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	195 PLF	0 PLF	0 PLF	0 PLF	0 PLF	B1GE
2	Uniform			Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
3	Tie-In	0-0-0 to 9-10-0	1-0-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	Roof Load
	Self Weight				14 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/28/2028

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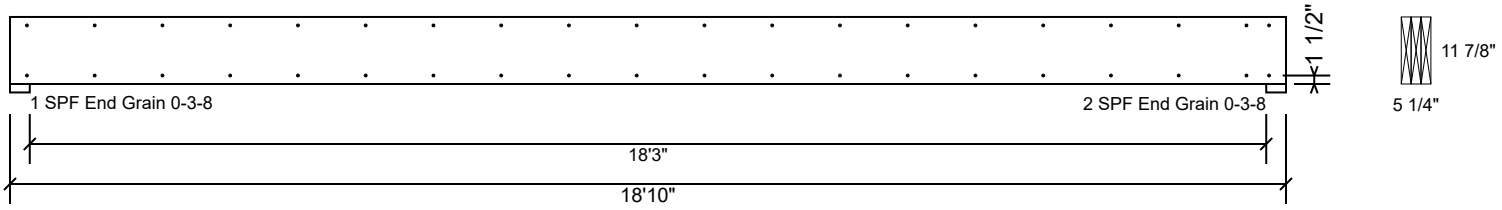
Project:	Sarah	Input by:	Johnnie Baggett
Address:		Job Name:	Lot 50 Magnolia Hills
		Project #:	252130

GDH Kerto-S LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
C_M	1
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/28/2028

Manufacturer Info

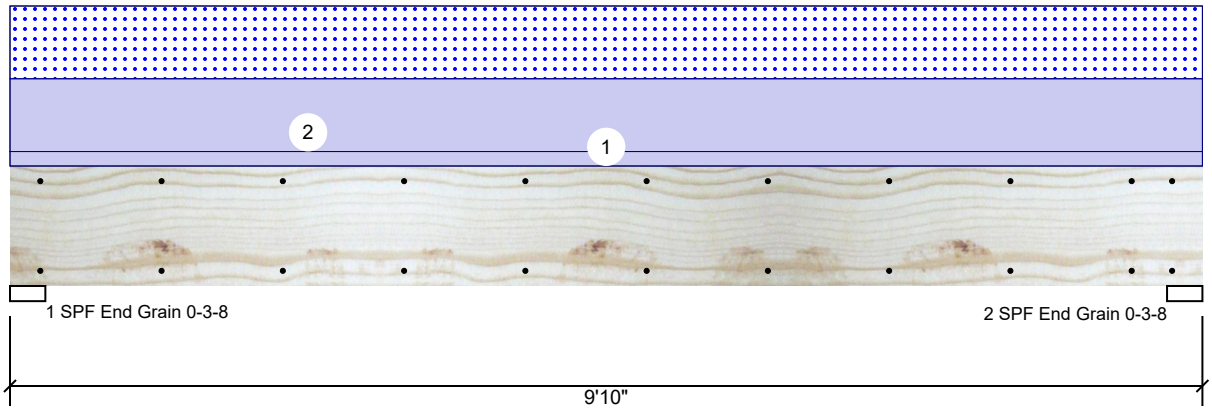
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

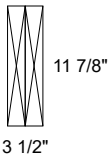
Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Precision Custom Homes	Date:	11/7/2025
Project:	Sarah	Input by:	Johnnie Baggett
Address:		Job Name:	Lot 50 Magnolia Hills
		Project #:	252130

GDH2 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level





Member Information

Type:	Header	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Header Supports Glass:	No
Importance:	Normal - II	Deck:	Not Checked
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1378	1111	0	0
2	Vertical	0	1378	1111	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	24%	1378 / 1111	2489	L	D+S
2 - SPF End Grain	3.500"	Vert	24%	1378 / 1111	2489	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5562 ft-lb	4'11"	22897 ft-lb	24%	D+S	L
Unbraced	5562 ft-lb	4'11"	22897 ft-lb	24%	D+S	L
Shear	1840 lb	1'3 3/8"	10197 lb	18%	D+S	L
LL Defl inch	0.047 (L/2389)	4'11"	0.312 (L/360)	15%	S	L
TL Defl inch	0.105 (L/1066)	4'11"	0.469 (L/240)	23%	D+S	L

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings.
2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Headers are designed to be supported on bottom edge only and across their full width.
5 Top loads must be supported equally by all plies.
6 Top must be continuously laterally braced.
7 Bottom must be laterally braced at bearings.
8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Above
2	Uniform			Top	226 PLF	0 PLF	226 PLF	0 PLF	0 PLF	C1
	Self Weight				9 PLF					

Notes

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Address:		Job Name:	Lot 50 Magnolia Hills
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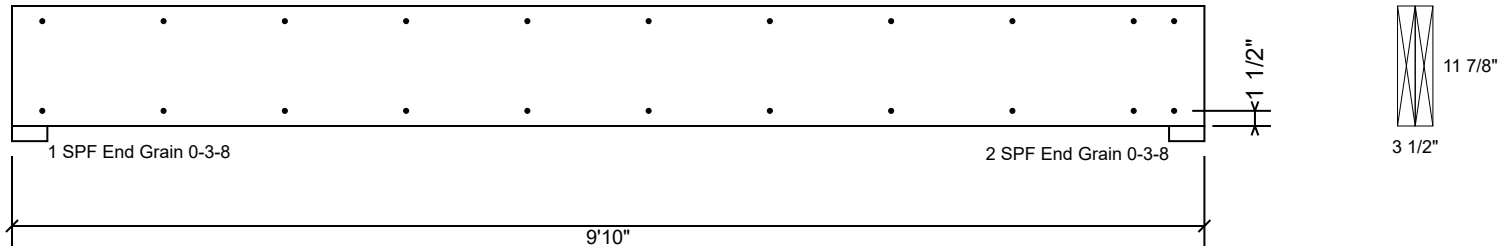

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Load Combination	
Duration Factor	1.00

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Fayetteville, NC
USA
28314
910-864-TRUS

North Carolina 2018 - R402.1.5 Total UA

Property
Cameron, NC 28326
Model: Taggart
Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows lot 15 - CZ 3 slab - Liberty Meadows lot 15

Organization
Southern Energy Manager
Justin Smith

Builder
SMG Precision Properties

Inspection Status
Results are projected

This report is based on a proposed design and does not confirm field enforcement of design elements.

Building UA

Elements	NC Reference	As Designed
Ceilings	48.2	45.8
Above-Grade Walls	195.8	145.4
Windows, Doors and Skylights	122.8	110.6
Slab Floor:	76.0	99.0
Framed Floors	17.5	19.1
Foundation Walls	0.0	0.0
Rim Joists	8.8	7.1
Overall UA (Design must be equal or lower):	**469.1**	**427.0**

Requirements

✓	402.1.5	Total UA alternative compliance passes by 9.0%.	
✓	402.3.2	Average SHGC: 0.28 Max SHGC: 0.30	
✓	R402.4.2.2	Air Leakage Testing	Air sealing is 4.80 ACH at 50 Pa. It must not exceed 5.00 ACH at 50 Pa.
✓	R402.5	Area-weighted average fenestration SHGC	
✓	R402.5	Area-weighted average fenestration U-Factor	
✓	R404.1	Lighting Equipment Efficiency	
✓	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.	
✓	R403.3.1	Duct Insulation	
✓	403.3.3	Duct Testing	

Design exceeds requirements for North Carolina 2018 Prescriptive compliance by 9%.

Name: Justin Smith
Signature: Justin Smith
Organization: Southern Energy Management
Digitally signed: 8/9/22 at 11:22 AM

Building Summary

Property
Cameron, NC 28326
Model: Taggart
Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows lot 15 - CZ 3 slab - ecoSelect
Liberty Meadows lot 15

Organization
Southern Energy Management
Justin Smith

Builder
SMG Precision Properties

Inspection Status
Results are projected

General Building Information

Number Of Bedrooms	3
Number Of Floors	2
Conditioned Floor Area [sq. ft.]	2,776
Has Electric Vehicle Ready Space	No
Unconditioned, attached garage?	Yes
Conditioned Volume [cu. ft.]	24,676
Total Units in Building	1
Residence Type	Single family detached
Number of Floors in Building	-
Floor Number	-
Model	Taggart
Community	Liberty Meadows
RESNET/IECC 2006 Climate Zone	4A
IECC 2021 Climate Zone	3A

Foundation Wall

None Present

Foundation Wall Library List

None Present

Slab

Name	Library Type	Perimeter	Floor Grade	Carpet R	Exposed Masonry Area	Surface Area	Location	Enclosing
slab	Uninsulated	158	On Grade	1	0	1,234.0 ft²	Exposed Exterior	Conditioned Space

Slab Library List

Name	Wall Construction Type	Slab Completely Insulated?	Underslab Insulation Width [ft]	Perimeter Insulation Depth [ft]	Perimeter Insulation R Value	Thermal Break	Effective R-value
Uninsulated	Wood Frame / Other	No	0	0	0	No	0.00

Building Summary

Property
Cameron, NC 28326
Model: Taggart
Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows lot 15 - CZ 3 slab - ecoSelect
Liberty Meadows lot 15

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SMG Precision Properties

Inspection Status
Results are projected

Framed Floor

Name	Library Type	Carpet R	Floor Grade	Surface Area	Location
over ambiant	R 19, 16"OC G1 Carpet	0	Above Grade	242.0 ft²	Exposed Exterior
over garage	R 19, 16"OC G1 Carpet	0	Above Grade	131.0 ft²	Unconditioned, attached garage

Framed Floor Library List

Name	Effective R-value
R 19, 16"OC G1 Carpet	19.566

Rim Joist

Name	Library Type	Surface Area	Location
1st floor ambient	R 19 G1, 16"OC	131.0 ft²	Exposed Exterior
1st floor garage	R 19 G1, 16"OC	27.0 ft²	Unconditioned, attached garage

Rim Joist Library List

Name	Effective Insulation R-value
R 19 G1, 16"OC	17.30

Wall

Name	Library Type	Surface Color	Surface Area	Location
1st floor ambient	R 19 Adv. Framing G1 16" O.C	Medium	1,179.0 ft²	Exposed Exterior
1st floor garage	R 19 Adv. Framing G1 16" O.C	Medium	243.0 ft²	Unconditioned, attached garage
2nd floor ambient	R 19 Adv. Framing G1 16" O.C	Medium	1,472.0 ft²	Exposed Exterior

Building Summary

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Liberty Meadows lot 15

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SMG Precision Properties

Inspection Status
Results are projected

Wall Library List

Name	Effective R-value
R 19 Adv. Framing G1 16" O.C	17.492

Glazing

Name	Library Type	Wall Assignment	Foundation Wall Assignment	Is Operable	Overhang Depth	Overhang Ft To Top	Overhang Ft To Bottom	Orientation	Surface Area
front 2nd unshaded	33/28	2nd floor ambient		Yes	0	0	0	West	50.7 ft²
front shaded	33/28	1st floor ambient		Yes	6	2	6	West	10.5 ft²
front unshaded	33/28	1st floor ambient		Yes	0	0	0	West	26.7 ft²
left 2nd unshaded	33/28	2nd floor ambient		Yes	0	0	0	North	26.7 ft²
left unshaded	33/28	1st floor ambient		Yes	0	0	0	North	13.4 ft²
rear 2nd unshaded	33/28	2nd floor ambient		Yes	0	0	0	East	63.9 ft²
rear unshaded	33/28	1st floor ambient		Yes	0	0	0	East	72.1 ft²
right shaded	33/28	1st floor ambient		Yes	13.5	2	9	South	33.4 ft²
right unshaded	33/28	2nd floor ambient		Yes	0	0	0	South	13.4 ft²

Glazing Library List

Name	Shgc	U-factor
33/28	0.28	0.330

Skylight

None Present

Skylight Library List

None Present

Building Summary

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Model: Taggart
Community: Liberty Meadows

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Liberty Meadows lot 15

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SMG Precision Properties

Inspection Status
Results are projected

Opaque Door

Name	Library Type	Wall Assignment	Foundation Wall Assignment	Emittance	Solar Absorptance	Surface Color	Surface Area	Location
front entry	Fiberglass R-5	1st floor ambient		0.9	0.75	Medium	20.0 ft²	Exposed Exterior
garage entry	Fiberglass R-5	1st floor garage		0.9	0.75	Medium	20.0 ft²	Unconditioned, attached garage

Opaque Door Library List

Name	Effective U-factor
Fiberglass R-5	0.200

Roof Insulation

Name	Library Type	Attic Exterior Area [ft²]	Clay or Concrete Roof Tiles	Surface Color	Surface Area	Location
attic	R 38 Attic BLOWN FG G1 2x10 24"OC NO Radiant Barrier	2,362.29	No	Dark	1,607.0 ft²	Attic

Roof Insulation Library List

Name	Has Radiant Barrier	Effective R-value
R 38 Attic BLOWN FG G1 2x10 24"OC NO Radiant Barrier	No	35.115

Whole House Infiltration

Infiltration	Measurement Type	Shelter Class
1974 CFM at 50 Pa	Blower-door tested	4

Mechanical Ventilation

None Present

Building Summary

Property
Cameron, NC 28326
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Template - SMG Precision - Liberty Meadows lot 15 - CZ 3 slab - ecoSelect
Liberty Meadows lot 15

Organization
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Justin Smith

Builder
SMG Precision Properties

Inspection Status
Results are projected

Lighting

% Interior Fluorescent Lighting	% Interior LED Lighting	% Exterior Fluorescent Lighting	% Exterior LED Lighting	% Garage Fluorescent Lighting	% Garage LED Lighting
0	90	0	0	0	0

Onsite Generation

None Present

Onsite Generation Library List

None Present

Solar Generation

None Present

Dehumidifier

None Present

Dehumidifier Library List

None Present

Whole House Fan

None Present

Building Summary

Property
Cameron, NC 28326
Model: Taggart
Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows lot 15 - CZ 3 slab - ecoSelect
Liberty Meadows lot 15

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Inspection Status
Results are projected

Whole House Fan Library List

None Present

Conditioning Equipment

Name	Library Type	Serial Number	Heating Percent Load	Cooling Percent Load	Hot Water Percent Load	Location
1st floor heat pump	z 24k 14 SEER 8.2hspf		44%	44%	0%	Attic
2nd floor heat pump	z 24k 14 SEER 8.2hspf		56%	56%	0%	Attic
Water Heating	z 50 gal. 0.95 EF Elec		0%	0%	100%	Unconditioned Garage

Equipment Type: z 24k 14 SEER 8.2hspf

Equipment Type	Air Source Heat Pump
Fuel Type	Electric
Distribution Type	Forced Air
Motor Type	PSC (Single Speed)
Heating Efficiency	8.2 HSPF
Heating Capacity [kBtu/h]	24
Backup Fuel Type	Electric
Switchover Temperature [°F]	0
Backup Heating Efficiency	1 COP
Use default Supplemental Heat	Yes
Cooling Efficiency	14 SEER
Cooling Capacity [kBtu/h]	24

Equipment Type: z 50 gal. 0.95 EF Elec

Equipment Type	Residential Water Heater
Fuel Type	Electric
Distribution Type	Hydronic Delivery (Radiant)
Hot Water Efficiency	0.95 Energy Factor
Tank Capacity (gal.)	50
Hot Water Capacity [kBtu/h]	40
Recovery Efficiency	0.98

Building Summary

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Cameron, NC 28326
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Template - SMG Precision - Liberty Meadows lot 15 - CZ 3 slab - ecoSelect
Liberty Meadows lot 15

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SMG Precision Properties

Inspection Status
Results are projected

Distribution System

Distribution Type	Forced Air
Heating Equipment	1st floor heat pump
Cooling Equipment	1st floor heat pump
Sq. Feet Served	1,234
# Return Grilles	2
Supply Duct R Value	8
Return Duct R Value	8
Supply Duct Area [ft²]	333.18
Return Duct Area [ft²]	123.4
Leakage to Outdoors	49 CFM @ 25Pa (3.97 / 100 ft²)
Total Leakage	49 CFM25
Total Leakage Duct Test Conditions	Post-Construction
Use Default Flow Rate	Yes
Duct 1	
Duct Location	Attic (well vented)
Percent Supply Area	70
Percent Return Area	70
Duct 2	
Duct Location	Conditioned Space
Percent Supply Area	30
Percent Return Area	30
Duct 3	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 4	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 5	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 6	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0

Building Summary

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Liberty Meadows lot 15

Organization
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SMG Precision Properties

Inspection Status
Results are projected

Distribution System

Distribution Type	Forced Air
Heating Equipment	2nd floor heat pump
Cooling Equipment	2nd floor heat pump
Sq. Feet Served	1,542
# Return Grilles	2
Supply Duct R Value	8
Return Duct R Value	8
Supply Duct Area [ft²]	416.34
Return Duct Area [ft²]	154.2
Leakage to Outdoors	61 CFM @ 25Pa (3.96 / 100 ft²)
Total Leakage	61 CFM25
Total Leakage Duct Test Conditions	Post-Construction
Use Default Flow Rate	Yes
Duct 1	
Duct Location	Attic (well vented)
Percent Supply Area	100
Percent Return Area	100
Duct 2	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 3	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 4	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 5	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 6	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0

HVAC Grading

HVAC Grading Not Conducted

Ceiling Fan

Has Ceiling Fan	No
Cfm Per Watt	100

Building Summary

Property
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Template - SMG Precision - Liberty Meadows lot 15 - CZ 3 slab - ecoSelect
Liberty Meadows lot 15

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Inspection Status
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Water Distribution

Water Fixture Type	Low-flow
Use Default Hot Water Pipe Length	No
Hot Water Pipe Length [ft]	92
At Least R3 Pipe Insulation?	No
Hot Water Recirculation System?	No
Recirculation System Pipe Loop Length [ft]	20
Drain Water Heat Recovery?	No

Clothes Dryer

Cef	3.01
Fuel Type	Electric
Field Utilization	Timer Controls
Is Outside Conditioned Space	No
Clothes Dryer Available	Yes
Defaults Type	HERS Reference

Clothes Washer

Label Energy Rating	153 kWh/Year
Annual Gas Cost	$12.00
Electric Rate	$0.11/kWh
Gas Rate	$1.22/Therm
Capacity	3.31
Imef	2.1547
Defaults Type	Custom
Load Type	Front-load
Loads Per Week	6
Is Outside Conditioned Space	No
Clothes Washer Available	Yes

Dishwasher

Dishwasher Efficiency	270 kWh
Dishwasher Size	Standard
Annual Gas Cost	$22.23
Electric Rate	$0.12/kWh
Gas Rate	$1.09/Therm
Is Outside Conditioned Space	No

Building Summary

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Liberty Meadows lot 15

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SMG Precision Properties

Inspection Status
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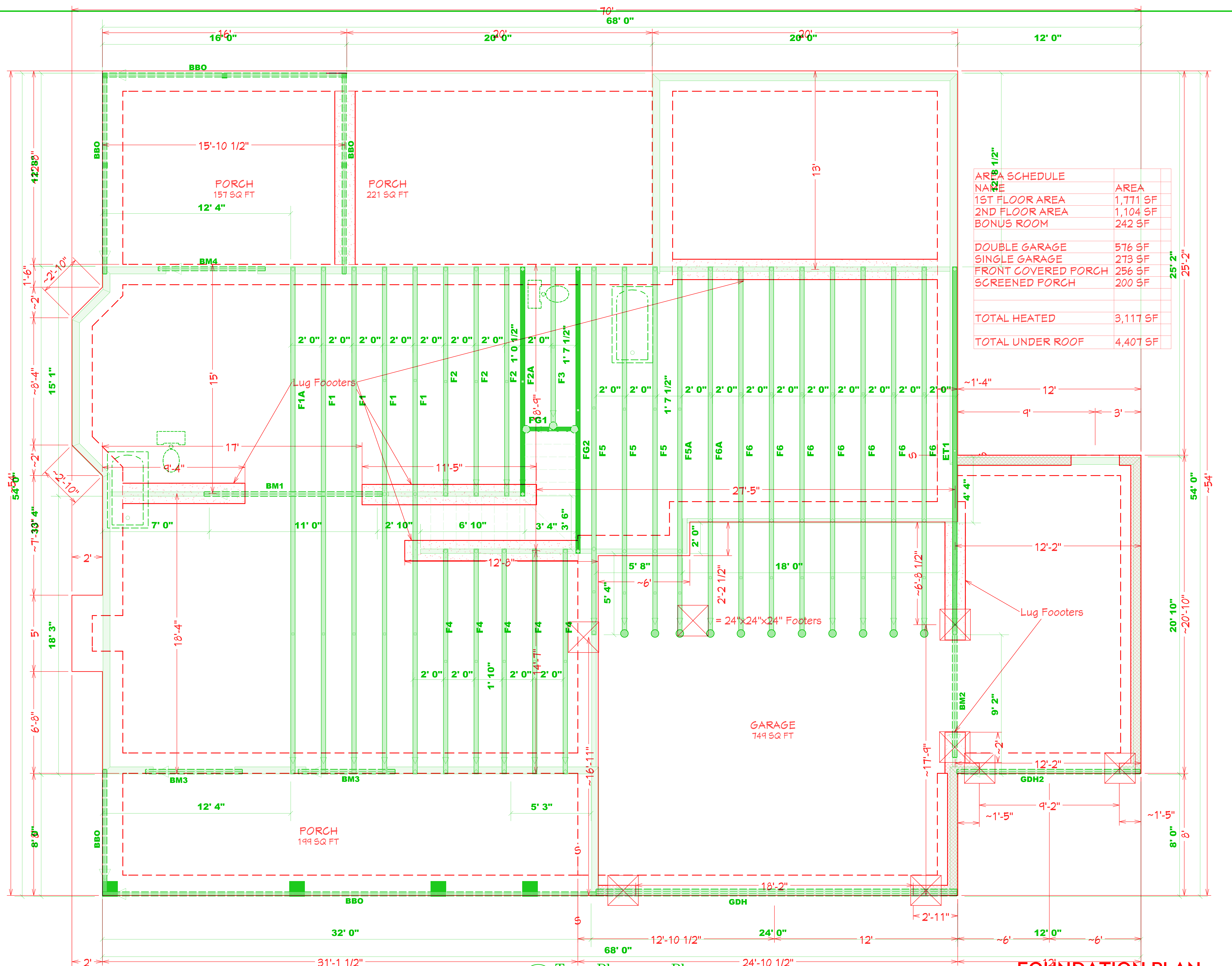
Appliances and Controls

Thermostat Cooling Setpoint	* * * * 75.0
Thermostat Heating Setpoint	* * * * 70.0
Range/Oven Fuel	Electric
Convection Oven?	No
Induction Range?	No
Range/Oven Outside Conditioned Space?	No
Refrigerator Consumption	538 kWh/Year
Refrigerator Outside Conditioned Space?	No

Notes

Initial Inputs _____MS 07/05/22_____

-confirm HVAC specs
-confirm water heater specs
-confirm ventilation entry, modeled as air cycler
-modeled to worst case orientation
-confirm cfl lighting %



AREA SCHEDULE	
NAME	AREA
1ST FLOOR AREA	1,771 SF
2ND FLOOR AREA	1,104 SF
BONUS ROOM	242 SF
DOUBLE GARAGE	576 SF
SINGLE GARAGE	273 SF
FRONT COVERED PORCH	256 SF
SCREENED PORCH	200 SF
TOTAL HEATED	3,117 SF
TOTAL UNDER ROOF	4,407 SF

Truss Placement Plan

Scale: 1/4"=1'

FOUNDATION PLAN

Scale: 1/4" = 1'0"

Products

PlotID	Length	Product	Plies	Net Qty	Fab Type
BM1	11' 8"	1-3/4"x 14" LVL Kerto-S	2	2	FF
BM2	8' 8"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
BM3	6' 4"	1-3/4"x 9-1/4" LVL Kerto-S	2	4	FF
BM4	7' 0"	2x10 SPF No.2	2	2	FF
GDH	23' 7 1/2"	1-3/4"x 11-7/8" LVL Kerto-S	3	3	FF
GDH2	12' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF

Plumbing Drop Notes

1. Plumbing drop locations shown are NOT exact.
2. Contractor to verify ALL plumbing drop locations prior to setting Floor Trusses.
3. Adjust spacing as needed not to exceed 24"oc.

Dimension Notes

1. All exterior wall to wall dimensions are to face of sheathing unless noted otherwise
2. All interior wall dimensions are to face of frame wall unless noted otherwise
3. All exterior wall to truss dimensions are to

Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
●	HUS410	USP	11	Varies	16d/3-1/2"	16d/3-1/2"
◌	MSH422	USP	3	Varies	10d/3"	10d/3"

PLAN: Sarah

ROOF & FL[...]
TRUSSES & B[...]

Reilly Road Industr[...]
Fayetteville, N.C.
Phone: (910) 864[...]
Fax: (910) 864-4[...]

LOAD CHART FOR JAC[...]

FOUNDATION

PROJECT ADDRESS: 223 Myrtle Oak Dr. Magnolia Hills Dr. Lot 50

Cameron · 385 Alder Drive · Floor

DESIGNED BY: Precision Custom Homes, Raeford, NC, Shaun@PrecisionCustomHomesNC.com

COUNTY · ADDRESS · MODEL

DATE REV. 11/7/25

DATE: 10/17/25

SCALE: 1/4" = 1'

SHEET: A-2

BUILDER: Precision Custom Homes · JOB NAME: Lot 50 Magnolia Hills · PLAN: Sarah

Seal Date · SEAL DATE

THIS IS A TRUSS PLACEMENT DIAG[...]
These trusses are designed as indiv[...] components to be incorporated into[...] design at the specification of the bu[...] See individual design sheets for ea[...] identified on the placement drawing[...] designer is responsible for tempora[...] permanent bracing of the roof and f[...] for the overall structure. The design[...] support structure including headers[...]