RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/23/2022 4:40:38

MiTek USA, Inc.
16023 Swingley Ridge Rd
Chesterfield, MO 63017
314-434-1200

Re: 3008827
C&H/154 Cobey Creek

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Builders FirstSource (Valley Center).

Pages or sheets covered by this seal: I52089639 thru I52089640

My license renewal date for the state of Missouri is December 31, 2023.

Missouri COA: Engineering 001193

May 23,2022

Sevier, Scott ,Engineer

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 MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or 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.

Job	Truss	Truss Type	Qty	Ply	C&H/154 Cobey Creek
3008827	A9	Common	7	1	I52089639

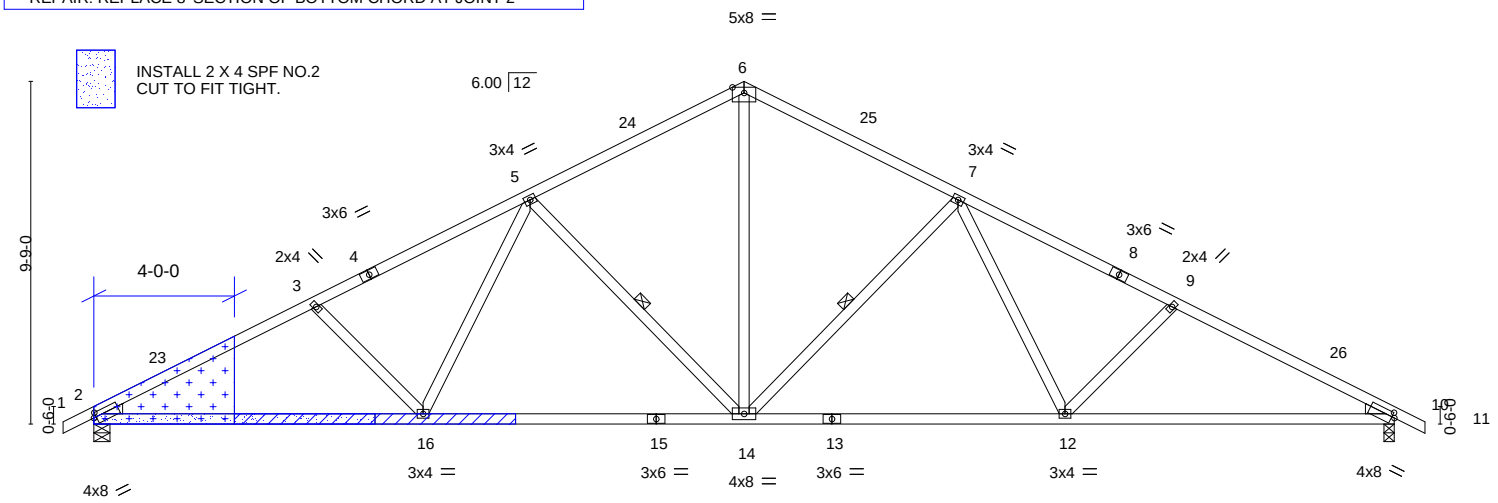
Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri May 20 15:28:50 2022 Page 1
ID:N2YErRAi_NDqpoFerk7lxdzajL2-5yoGMEbi6rCROogADfKytRzvmuW46waMmNXJuozEZZx

0-10-8	6-3-14	12-4-15	18-6-0	24-7-1	30-8-2	37-0-0	37-10-8
0-10-8	6-3-14	6-1-1	6-1-1	6-1-1	6-1-1	6-3-14	0-10-8

REPAIR: REPLACE 8' SECTION OF BOTTOM CHORD AT JOINT 2

Scale = 1:65.6



ATTACH 1/2" PLYWOOD OR OSB GUSSET (15/32" RATED SHEATHING 32/16 EXP 1)
TO EACH FACE OF TRUSS WITH (0.131" X 2.5" MIN.) NAILS PER THE FOLLOWING NAIL SCHEDULE:
2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 4" O.C.
NAILS TO BE DRIVEN FROM BOTH FACES. STAGGER SPACING FROM FRONT TO BACK FACE
FOR A NET 2" O.C. SPACING IN EACH COVERED TRUSS MEMBER. USE 2" MEMBER END DISTANCE.

APPLY 2 X 4 X 8' SPF NO.2 SCAB(S) TO EACH FACE OF TRUSS CENTERED
ON SPLICE. ATTACH WITH (0.131" X 3") NAILS PER THE FOLLOWING NAIL
SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS, 2 x 6'S AND LARGER - 3 ROWS:
SPACED @ 4" O.C. STAGGER NAIL SPACING FROM FRONT FACE AND BACK FACE
FOR A NET 2" O.C SPACING IN THE TRUSS. USE 2" MEMBER END DISTANCE.

9-4-7	18-6-0	27-7-9	37-0-0
9-4-7	9-1-9	9-1-9	9-4-7

Plate Offsets (X,Y)-- [2:0-0-15,0-1-9], [10:0-0-15,0-1-9]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.20	12-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.43	14-16	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.14	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 149 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 7-14, 5-14

REACTIONS. (size) 2=0-5-8, 10=0-3-8
Max Horz 2=171(LC 12)
Max Uplift 2=-295(LC 12), 10=-295(LC 13)
Max Grav 2=1726(LC 1), 10=1726(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3046/509, 3-5=-2750/479, 5-6=-1958/418, 6-7=-1958/418, 7-9=-2750/479, 9-10=-3046/510
BOT CHORD 2-16=-530/2632, 14-16=-343/2170, 12-14=-220/2170, 10-12=-360/2632
WEBS 6-14=-209/1262, 7-14=-758/297, 7-12=-87/500, 9-12=-380/217, 5-14=-758/296, 5-16=-87/500, 3-16=-380/217

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 18-6-0, Exterior(2R) 18-6-0 to 21-6-0, Interior(1) 21-6-0 to 37-10-8 zone; cantilever left and right exposed ; 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=295, 10=295.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER
May 23,2022

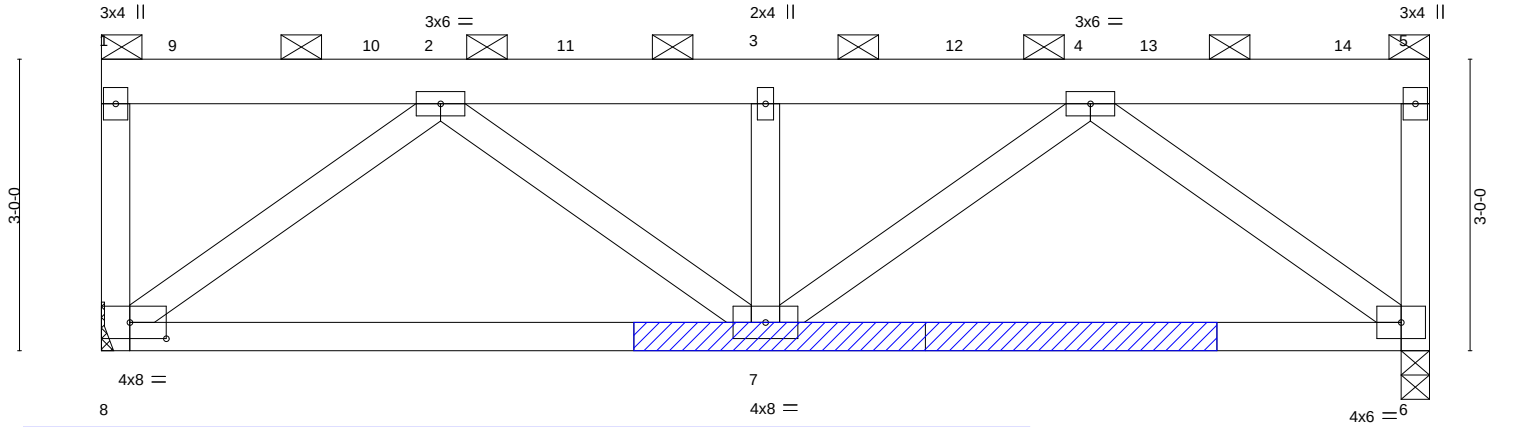
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	C&H/154 Cobey Creek
3008827	B4	FLAT	1	2	I52089640

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Fri May 20 15:28:51 2022 Page 1
ID:N2YErRAi_NDqpoFerk7lxdzajL2-Z8MfZacKt9KI0yFMnMrBQeW8aIzXrMkV?1GtRFzEZZw

3-5-14	6-10-0	10-2-2	13-8-0
3-5-14	3-4-2	3-4-2	3-5-14

Scale = 1:23.7



REPAIR: BOTTOM CHORD HAS 3/4" HOLE VERTICALLY THROUGH 1-1/2" FACE IN FRONT PLY ONLY 18" RIGHT OF JOINT 7

APPLY 2 X 4 X 6' SPF NO.2 SCAB TO FRONT FACE OF TRUSS CENTERED ON HOLE. ATTACH WITH (0.131" X 3") NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS, 2 x 6'S AND LARGER - 3 ROWS: SPACED @ 2" O.C. USE 2" MEMBER END DISTANCE.

REMOVE OBSTRUCTION FROM HOLE
DO NOT DRILL THROUGH SCAB

6-10-0	13-8-0
6-10-0	6-10-0

Plate Offsets (X,Y)-- [8:0-4-8,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	-0.04	7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.08	7	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 131 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x4 SPF No.2
OTHERS	2x4 SPF No.2

BRACING-

TOP CHORD	2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS. (size) 8=Mechanical, 6=0-3-8
Max Horz 8=-100(LC 29)
Max Uplift 8=-705(LC 8), 6=-698(LC 9)
Max Grav 8=3770(LC 1), 6=3814(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-8=-909/217, 2-3=-4771/1057, 3-4=-4771/1057, 5-6=-955/213
BOT CHORD 7-8=-913/3642, 6-7=-876/3641
WEBS 3-7=-1652/416, 2-8=-4514/1074, 2-7=-297/1435, 4-7=-304/1436, 4-6=-4511/1068

NOTES-

1) 2-ply truss to be connected together with 10d (0.120"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Webs 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) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed ; 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
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) Refer to girder(s) for truss to truss connections.
7) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=705, 6=698.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
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) 914 lb down and 217 lb up at 0-10-4, 904 lb down and 222 lb up at 2-10-4, 904 lb down and 222 lb up at 4-10-4, 904 lb down and 222 lb up at 6-10-4, 904 lb down and 222 lb up at 8-10-4, and 904 lb down and 222 lb up at 10-10-4, and 945 lb down and 202 lb up at 12-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.

Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	C&H/154 Cobey Creek
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Job Reference (optional)

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-5=-70, 6-8=-20
   Concentrated Loads (lb)
   Vert: 3=-904 9=-914 10=-904 11=-904 12=-904 13=-904 14=-945

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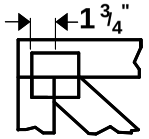
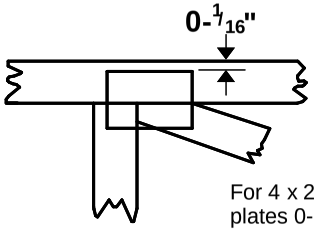
Symbols

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.

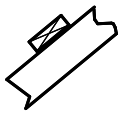
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

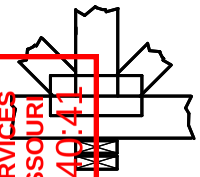
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

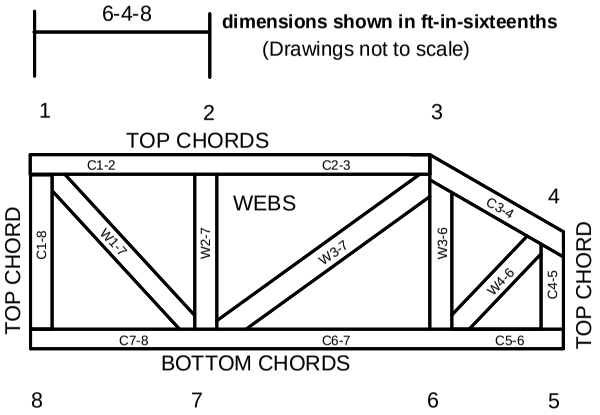


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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 Reference Sheet: MII-7473 rev. 5/19/2020

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.