

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

Re: 2523899

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: I45549914 thru I45549918

My license renewal date for the state of Missouri is December 31, 2021.

Missouri COA: Engineering 001193

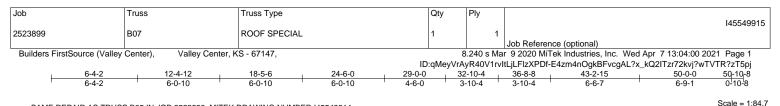


April 8,2021

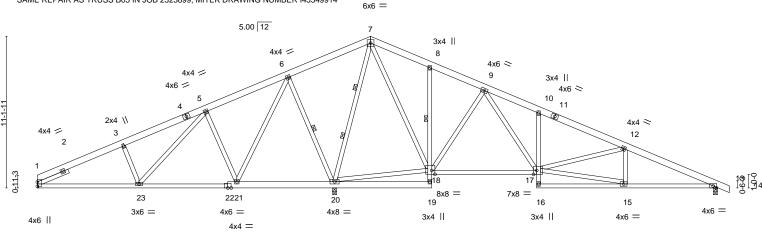
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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 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.

2523899 B05 ROOF SPECIAL 3 1 Job Reference (optional) Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.240 s Mar 9 2020 MiTek Industries, Inc. Wed Apr 7 13:03:59 2021 Page 1 ID:qMeyVrAyR40V1rvltLjLFlzXPDF-mtPOtRN2zu72_Wb9SETVtrlBzRhj?RnshplwvYzT5pk 6-4-2 12-4-12 18-5-6 24-6-0 29-0-0 32-5-9 35-11-1 39-11-1 43-2-4 47-2-8 50-00-50-10-8 6-4-2 6-0-10 6-0-10 4-6-0 32-5-9 35-11-1 39-11-1 43-2-4 47-2-8 50-00-50-10-8	Job	Truss	Truss Type	Qty	Ply			
Builder Fristikung Viellig Centry, Viellig Centry, Viellig Centry, KS - 1917, Singer Centry, Viellig	2523899	B05	ROOF SPECIAL	3	1			145549914
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				29-0-0 32	-5-9 3	5-11-1 39-11-1	43-2-4 47-2-8	50-0-0 50-10 ₀ 8
Image: construction of the construction of	REPAIR: RIP 1-1/	2" OFF RIGHT EDGE OF MEMBE	R 20-21	6x8 II CUT CLE	ANLY AND	ACCURATELY AND	THE REMAINING PLATE	Scale = 1:85.9
1 1			5.00 12	PLATES				
under the second sec	Ī							
25 24 23 22 21 1918 244 11 ability 244 11 ability 346 1 346	2	4x6 == 5 2x4 \\ 4 3				4x6 ≈	4x4 ≈ 11 2x4 12 2x4 12 2x4 17 6x8 =	
Links in the state of the s						3x6 =	^{2x4} _{3x6} =	$4x6 \equiv$
Bits String A CLUSTER OF (0) (131 X 3) NALLS SPACED 3 OC IN VERTICAL. 1 20-1	10x10		4x4 =		=			3,4 11
Total 14-90 21-04 28-09 35-11-1 38-83 39-20 47-24 47-24 40-90 25-11-1 38-83 39-20 43-24 47-24 50-0-1 29-04 29-04 33-04 40-44 29-04 29-04 33-04 40-44 29-04 29-04 33-04 40-44 29-04 29-04 33-04 40-44 29-04 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-44 29-04 33-04 40-04 20-04 33-04 40-04 20-04 33-04 40-04 20-04 33-04 40-44 29-04		TRUSS INTO BO	WITH A CLUSTER OF (3) (0.131" X 3") DTTOM CHORD AND ONE ROW OF N	NAILS				
LOADING (psf) TCLL SPACING- 2:00 C3L Plate Grip DOL 1:15 1:15 TC 0.78 Vert(CT) 0.43 1:15 PLATES GRIP MT20 197/144 ICOL 10.0 Rep Stress Incr YES WB 0.95 Horz(CT) 0.43 13:17 7:89 240 BCDL 10.0 Code IRC2018/TPI2014 Matrix-AS WB 0.95 Horz(CT) 0.14 14 n/a n/a BCDL 10.0 Code IRC2018/TPI2014 Matrix-AS BRACING- TOP CHORD Structural wood sheathing directly applied. Except: DOT CHORD 2x6 SPF No.2, 10:15: 2x6 SPF 2100F 1.8E BOT CHORD Structural wood sheathing directly applied. Except: BOT CHORD 2x4 SPF No.2, 2 Except' TOP CHORD Structural wood sheathing directly applied. Except: BOT CHORD structural wood sheathing directly applied. Except: 160× at midpt 6-22, 7-22, 20-22 WEBS 12:43 SPF No.2, 24-00 WEBS 1 Row at midpt 6-22, 7-22, 20-22 REACTIONS. (size) 1=Mechanical, 14=-0-34, 22=-0-3	7-5-	12 7-2-4	7-2-4			36-8-8 39-2-0	43-2-4 47-2-8	
LUMBER- LUMBER- TOP CHORD 2x6 SPF No.2 "Except" 1-4: zx4 SPF No.2, 10-15: zx6 SPF 2100F 1.8E BOT CHORD X4 SPF No.2 "Except" DT CHORD 2: 42 SPF No.2 "Except" DT 21-24: zx6 SP 2400F 2.0E WEBS 2: 24 SPF No.2 "Except" 7-22: zx4 SPF 1650F 1.5E SLIDER Left 2x6 SPF No.2 2-6-0 REACTIONS. (size) 1=Mechanical, 14=0-3-8, 22=0-3-8 Max Horz 1=-115(LC 9) Max Grav 1=627(LC 19), 14=725(LC 20), 22=37(LC 9) Max Grav 1=627(LC 19), 14=725(LC 20), 22=3759(LC 1) FORCES. (lb) - Max. Comp./Max. Ten All forces 250 (lb) or less except when shown. TOP CHORD 1:25=824/538, 23-25=-1289/2008, 15=4=-21763, 65=00/1035, 8-9=0/987, 11-12=-1570/148, 12-13=-1449/105, 13-14=-334/48 BOT CHORD 1:25=824/538, 23-25=-1289/2008, 22=23=-1596/199, 18-20=-449/95, 17-18=-13/687, 13-17=-38/1406 WEBS 3:25=-477/89, 5:25=-33/444, 5:23=-737/121, 6:23=-52/879, 6:22=-1021/139, 7:22=-25261, 20:22=-106/176, 7:20=-87/1063, 9:20=907/118, 11-18=-829/129, 9:18=-19/764, 12-17=-607/73, 11-17=-35/1025 NOTES 1) Unbalanced rool live loads have been considered for this design. 2) Winck ASCE 7-16; Will=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4 2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60 3) This truss has been designed for a 10.0 psf bottom chord live load noncourcertent with any other live loads. 4) Refer to gride(s) for truss to trus connections.	LOADING (psf) TCLL 25.0 TCDL 10.0 BCLL 0.0	SPACING- 2-0 Plate Grip DOL 1.1 Lumber DOL 1.1 Rep Stress Incr YE	-0 CSI. 15 TC 0.78 15 BC 0.83 25 WB 0.95	Vert(LL) -0.26 Vert(CT) -0.43	13-17 : 13-17 :	>999 240 >789 180	MT20	197/144
Max Horz 1=-115(LC 9) Max Uplift 1=-344(LC 20), 14=-54(LC 9), 22=-31(LC 9) Max Grav 1=527(LC 19), 14=-725(LC 20), 22=3759(LC 1) FORCES. (lb) - Max. Comp./Max. Ten All forces 250 (lb) or less except when shown. TOP CHORD 1-3=-583/956, 3-5=-520/991, 5-6=-12/1553, 6-7=0/2173, 7-8=0/1035, 89=0/987, 11-12=-1570/148, 12-13=-1449/105, 13-14=-334/48 BOT CHORD 1-25=-824/538, 23-25=-1289/206, 22-23=-1596/199, 18-20=-449/95, 17-18=-13/687, 13-17=-38/1406 WEBS 3-25=-477/89, 5-25=-33/844, 5-23=-737/121, 6-23=-52/879, 6-22=-1021/139, 7-22=-2552/61, 20-22=-1166/176, 7-20=-87/1063, 9-20=-907/118, 11-18=-829/129, 9-18=-19/764, 12-17=-607/73, 11-17=-35/1025 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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; 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) Refer to girder(s) for truss to truss connections.	LUMBER- TOP CHORD 2x6 SF 1-4: 2x BOT CHORD 2x4 SF 21-24: WEBS 2x4 SF 7-22: 2	F No.2 *Except* 4 SPF No.2, 10-15: 2x6 SPF 2 F No.2 *Except* 2x6 SP 2400F 2.0E F No.2 *Except* x4 SPF 1650F 1.5E		TOP CHORD BOT CHORD	Rigid ceil 1 Row at	ing directly applied. midpt	rectly applied. Except: 3-20	11 - 2078
TOP CHORD 1-3=-583/956, 3-5=-520/991, 5-6=-12/1553, 6-7=0/2173, 7-8=0/1035, 8-9=0/987, 11-12=-1570/148, 12-13=-1449/105, 13-14=-334/48 BOT CHORD 1-25=-824/538, 23-25=-1289/206, 22-23=-1596/199, 18-20=-449/95, 17-18=-13/687, 13-17=-38/1406 WEBS 3-25=-477/89, 5-25=-33/844, 5-23=-737/121, 6-23=-52/879, 6-22=-1021/139, 7-22=-2552/61, 20-22=-1166/176, 7-20=-87/1063, 9-20=-907/118, 11-18=-829/129, 9-18=-19/764, 12-17=-607/73, 11-17=-35/1025 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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; 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) Refer to girder(s) for truss to truss connections.	Max H Max U	orz 1=-115(LC 9) plift 1=-344(LC 20), 14=-54(LC	\$ 9), 22=-31(LC 9)					
 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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; 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) Refer to girder(s) for truss to truss connections. 	TOP CHORD 1-3=- 11-12 BOT CHORD 1-25= 13-17 WEBS 3-25= 7-22=	583/956, 3-5=-520/991, 5-6=-1 2=-1570/148, 12-13=-1449/105 824/538, 23-25=-1289/206, 2 '=-38/1406 477/89, 5-25=-33/844, 5-23=- -2552/61, 20-22=-1166/176, 7	2/1553, 6-7=0/2173, 7-8=0/1035, 8 , 13-14=-334/48 2-23=-1596/199, 18-20=-449/95, 1 737/121, 6-23=-52/879, 6-22=-102 -20=-87/1063, 9-20=-907/118, 11-1	7-18=-13/687, 1/139,			10000	and the second
 (i) (i) (i) (i) (i) (i) (i) (i) (i) (i)	NOTES- 1) Unbalanced roof live 2) Wind: ASCE 7-16; V MWFRS (envelope) 3) This truss has been 4) Refer to girder(s) for 5) Provide mechanical (jt=lb) 1=344. 6) This truss is designed referenced standard 7) This truss design ref	e loads have been considered f ult=115mph (3-second gust) V cantilever left and right expose designed for a 10.0 psf bottom truss to truss connections. connection (by others) of truss and in accordance with the 2018 ANSI/TPI 1. quires that a minimum of 7/16"	or this design. asd=91mph; TCDL=6.0psf; BCDL= ed ; end vertical left and right expos chord live load nonconcurrent with to bearing plate capable of withsta International Residential Code sec	ed; Lumber DOL=1.60 ; any other live loads. nding 100 lb uplift at join tions R502.11.1 and R8	olate grip [ht(s) 14, 22 02.10.2 an	DOL=1.60 except d	SCO'SE'S SEV SEV PE-200 PE-200	TT M. VIER

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601 16023 Swingley Ridge Rd Chesterfield, MO 63017



SAME REPAIR AS TRUSS B05 IN JOB 2523899, MITEK DRAWING NUMBER I45549914



L	7-5-12							36-	8-8	1	43-2-15		50-0-0	_
	7-5-12	7-2-4	7-1-12	7-1-12 7-8-8				6-6-7 6-9-1						
Plate Offsets (X,Y) [17:0-2-12,Edge], [18:0-2-12,Edge]														
LOADING (psf TCLL 25.0 TCDL 10.0 BCLL 0.0 BCDL 10.0)))	SPACING- Plate Grip DOL Lumber DOL Rep Stress Incr Code IRC2018/TF	2-0-0 1.15 1.15 YES Pl2014	CSI. TC BC WB Matri	0.38 0.44 0.84 x-AS	DEFL. Vert(LL) Vert(CT) Horz(CT)	-0.12	(loc) 17-18 17-18 13	l/defl >999 >999 n/a	L/d 240 180 n/a		PLATES MT20 Weight: 295 lb	GRIP 197/144 FT = 209	%
LUMBER- TOP CHORD BRACING- TOP CHORD TOP CHORD 2x4 SPF No.2 *Except* 19-22: 2x6 SP 2400F 2.0E BOT CHORD Structural wood sheathing directly applied. Rigid ceiling directly applied. Except: 1 Row at midpt BACING- Second WEBS 2x4 SPF No.2 *Except* 19-22: 2x6 SP 2400F 2.0E BOT CHORD BOT CHORD Rigid ceiling directly applied. Rigid ceiling directly applied. Except: 1 Row at midpt 8-18 WEBS 2x4 SPF No.2 2-60 WEBS 1 Row at midpt 6-20 SLIDER Left 2x4 SPF No.2 2-6-0 2 Rows at 1/3 pts 7-20 REACTIONS. (size) 1=Mechanical, 13=0-3-8, 20=0-3-8 Max Horz Max Horiz 1=-114(LC 9) Max Uplift 1=-42(LC 8), 13=-72(LC 9), 20=-24(LC 8) Max Gray 1=650(LC 19), 13=-1012(LC 20), 20=3152(LC 1) SUBS SUBS SUBS SUBS SUBS														
FORCES. (Ib) TOP CHORD BOT CHORD WEBS	1-3=-854/ 9-10=-120 1-23=-145 10-17=-36 3-23=-416 7-20=-203	np./Max. Ten All for (198, 3-5=-788/241, 5 06/187, 10-12=-1234, 5/789, 21-23=-474/23 50/90, 13-15=-78/157 5/100, 5-23=-45/708, 35/24, 18-20=-548/15 22/81, 9-17=-77/1062	5-6=-53/651, 6- /139, 12-13=-1 39, 20-21=-779 78 5-21=-693/120 50, 7-18=-97/12	7=0/1326, 7 762/147 /146, 8-18=-), 6-21=-54/8	-8=-72/325, 8- 288/75, 17-18 352, 6-20=-100	=-80/487,)1/143,								

NOTES-

1) Unbalanced roof live loads have been considered for this design.

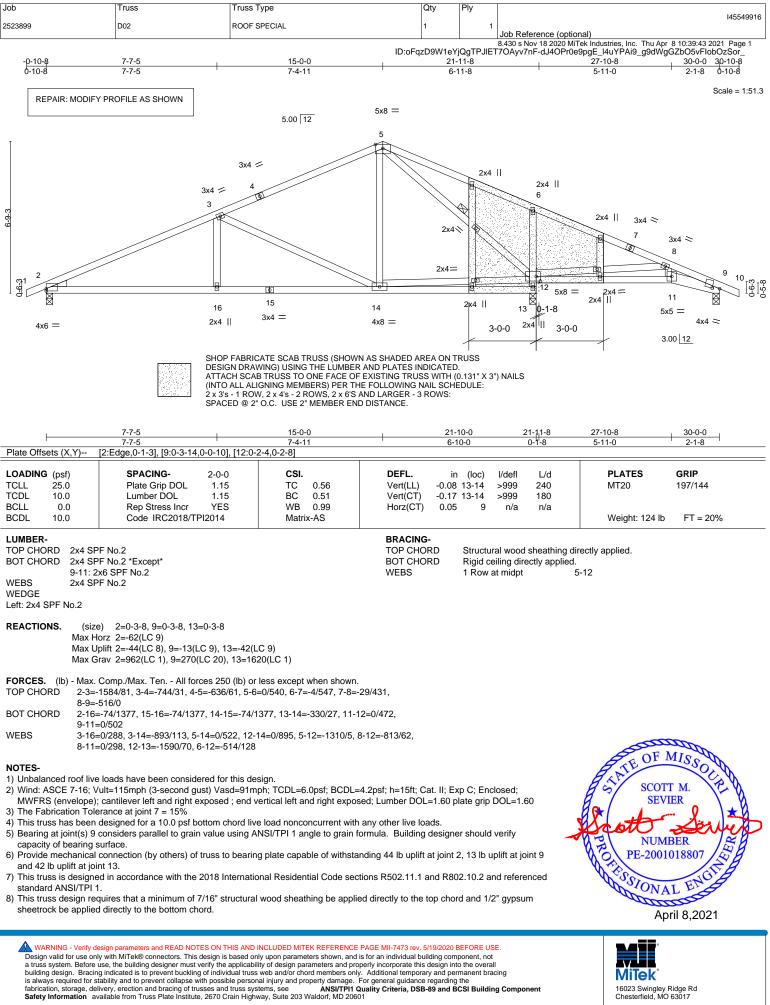
 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 13, 20.
- 6) 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.
- 7) 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.

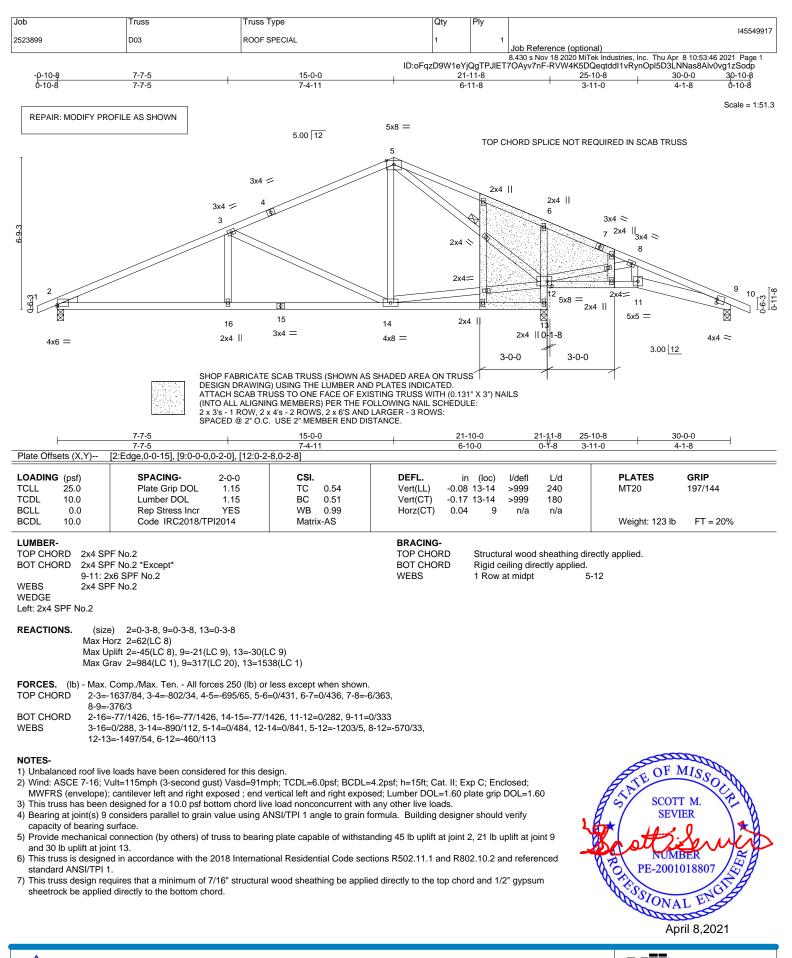


WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE. Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



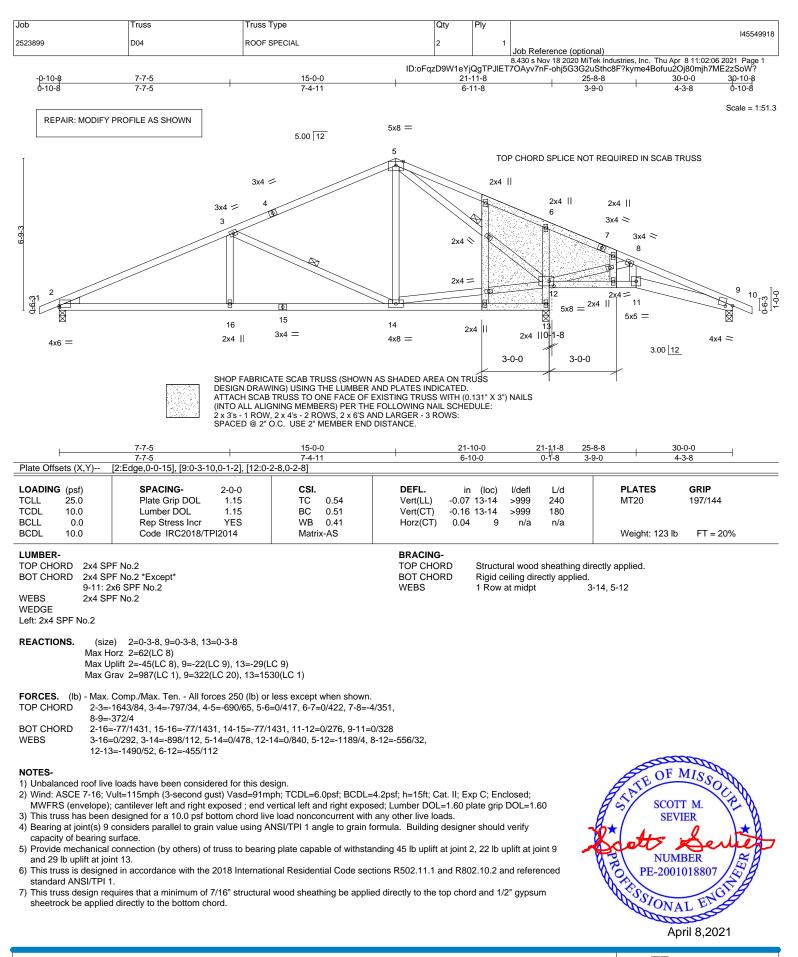


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