SHOP DRAWING SUBMITTAL

RedBUILT™ Engineered Wood Products

200 E. Mallard Drive Boise, Idaho 83706, www.RedBuilt.com

Project Number: 142840

Project Name: Chick-fil-A #05715

Project Address: SW CORNER HWY 50 & MO STATE RTE 291
LEE'S SUMMIT, MO 64081

Project Description: Roof Package

Joe Frogge Digitally signed by Joe Frogge DN: CN=Joe Frogge, OU=Development, OU=LS Users, DC=COLS, DC=LOC Date: 2025.12.05 09:30:20-06'00'

RELEASED FOR CONSTRUCTION
As Noted on Plans Review

Development Services Department
Lee's Summit, Missouri
12/05/2025

Date: 9/10/2025 9:26:43 AM

PROJECT INFORMATION:

Current Submittal: OUT FOR APPROVAL - NOT FOR PRODUCTION

REFERENCE DOCUMENTS:

DISCIPLINE	BY	DATE	REV#	TYPE	SHEET SET
Architectural	Chipman Design Architecture Inc.	7/18/25	1	Construction	Full Set
Structural	Britt, Peters & Associates	7/18/25	1	Construction	Full Set
Mechanical	Kurzynske & Associates	7/18/25	1	Construction	Full Set

PROJECT CONTACTS:

Your primary contact:

Project Manager:

Phil Hoover
(208) 364-1343
phoover@redbuilt.com

Your secondary contact:

Sales Representative:

Nick Wolff
(740) 513-4541
nwolff@RedBuilt.com

09/26/25: CDA's review of these documents is limited solely to the specific items on which comments are provided. See engineer's stamp and comments for additional requirements where applicable.

BRITT, PETERS AND ASSOCIATES INC. consulting engineers

This document has been reviewed for conformance with the design concepts and general compliance with the contract documents. The Contractor is responsible for confirming and correlating all quantities and dimensions, fabrication and construction methods, and coordinating this work with all other trades.

☐ NO EXCEPTIONS TAKEN
■ EXCEPTIONS NOTED
☐ RESUBMIT

Date: 09/24/2025
By: akmoore

COORDINATE TRUSS LAYOUT WITH UPDATED STUD PACK SIZES (REF WP LAYOUT).

SUBMIT FINAL SIGNED AND SEALED PACKAGE FOR RECORD.

-BPA

Material List and Calculation Pages: **1-27**
Shop Drawing Pages: **R001-R500**

Our responsibility is limited to the design of RedBuilt products in accordance with the above referenced documents based on design loads specified by the Engineer Of Record.

IMPORTANT (Please Read)

- Provide this RedBuilt Submittal Package to the contractor/installer and Design Professional(s) of Record.
- Ensure the RedBuilt Submittal Package is verified and/or corrected for accuracy, including all clouded items.
- Materials furnished by RedBuilt are limited to those included in the material list provided herein.
- Installation of the materials is the sole responsibility of the installer.

Please return reviewed drawings to your Project Manager with Engineer Of Record stamped instructions.

NOT REVIEWED BY CDA

RedBUILT™ Engineered Wood Products

Material List

RB Number	142840
Project Name	Chick-fil-A #5248
Location	Lee's Summit, MO
Delivery	D1: Roof
Plant	Delaware
Operator	Adam Stritenberger
Office	Delaware
Comment	Preliminary: Not For Production
Status	**Out For Approval**
Report Type	Customer

OFA

RedBuilt™ Open-Web Products — ***Trusses***

Quantity	Type	Series	Depth(s)	Appl.	Profile	Clear Span	Pr. Length	Pr. Load	Fastnrs. Left	Fastnrs. Right		Footage	Notes
23	S1	Red-S	28	115%	Parallel	39'-2.50"	40.0	144.2	8-SDS1/4x3	8-SDS1/4x3		920.0	
1	S1S	Red-S	28	115%	Parallel	39'-2.50"	40.0	144.2	8-SDS1/4x3	8-SDS1/4x3		40.0	
4	S1W	Red-S	28	115%	Parallel	39'-2.50"	40.0	144.2	8-SDS1/4x3	8-SDS1/4x3		160.0	
8	S2	Red-S	28	115%	Parallel	39'-8.50"	41.0	153.1	8-SDS1/4x3	8-SDS1/4x3		328.0	
3	S2S	Red-S	28	115%	Parallel	39'-8.50"	41.0	153.1	8-SDS1/4x3	8-SDS1/4x3		123.0	
16	S3	Red-S	28	115%	Parallel	42'-10.00"	44.0	166.6	8-SDS1/4x3	8-SDS1/4x3		704.0	
2	S3S	Red-S	28	115%	Parallel	42'-10.00"	44.0	166.6	8-SDS1/4x3	8-SDS1/4x3		88.0	
57		Red-S									*Total*	2363.0	

RedBuilt™ Open-Web Products — ***Bottom Chord Nailer***

Lineal Ft	Type	Size	Grade	Notes
384		2x4		

RedBuilt™ Open-Web Products — ***Strut Bracing***

Quantity	Type	Style	Spacing	Series	Notes
13		W5	16	Red-S	
1		W5	19.2	Red-S	
4		W5	24	Red-S	
28		W5	32	Red-S	

RedBuilt™ Open-Web Products — ***Cross Bracing***

Quantity	Type	Style	Length	Bend Profile	Uplift Application	Depth	Spacing	Notes
58		B2	39.000		Wind Uplift <30"	28		
18		B3R	41.000			28		

RedBuilt™ Open-Web Products — ***Load Transfer Blocks***

Quantity	Type	Series	Size	Depth	Material	Net Length	Notes
60		Red-S	Single	28	SS	23.40	

RedLam™ LVL Products — ***LVL Beams***

Quantity	Type	Size	Length	Grade	P.E.T.	Multi-Ply Substitution		Footage	Notes
1	RB01	5.25x20	20'-0.00"	2.0E	No	Allowed		20.0	
4	RB02	1.75x7.25	24'-0.00"	2.0E	No	N/A		96.0	
16	RB03	1.75x11.88	16'-0.00"	2.0E	No	N/A		256.0	
1		5.25x20					*Total*	20.0	
4		1.75x7.25					*Total*	96.0	
16		1.75x11.88					*Total*	256.0	

RedBuilt™ Products — ***Plywood Edge Blocking***

Quantity	Type	Size	Length	Z-Clips	Grade	Spacing	Series	Notes

117		2x4	12.438	Both Ends		16	Red-S			
27		2x4	20.438	One End		24	Red-S			
9		2x4	20.438	Both Ends		24	Red-S			
36		2x4	28.438	One End		32	Red-S			
45		2x4	28.438	Both Ends		32	Red-S			
9		2x4	44.438	One End		48	Red-S			

			Hardware		
Quantity	**Type**	**Description**			**Notes**
1.0 lb		8dx1.5" Nails (0.131"x1.5")			
10.0 lb		10dx1.5" Nails (0.148"x1.5")			
912		SDS1/4x3 Screw			
72		PEB Z-Clip (1.5")			
60		A34 Angle			
16		A35 Framing Anchor			

NOT REVIEWED BY CDA

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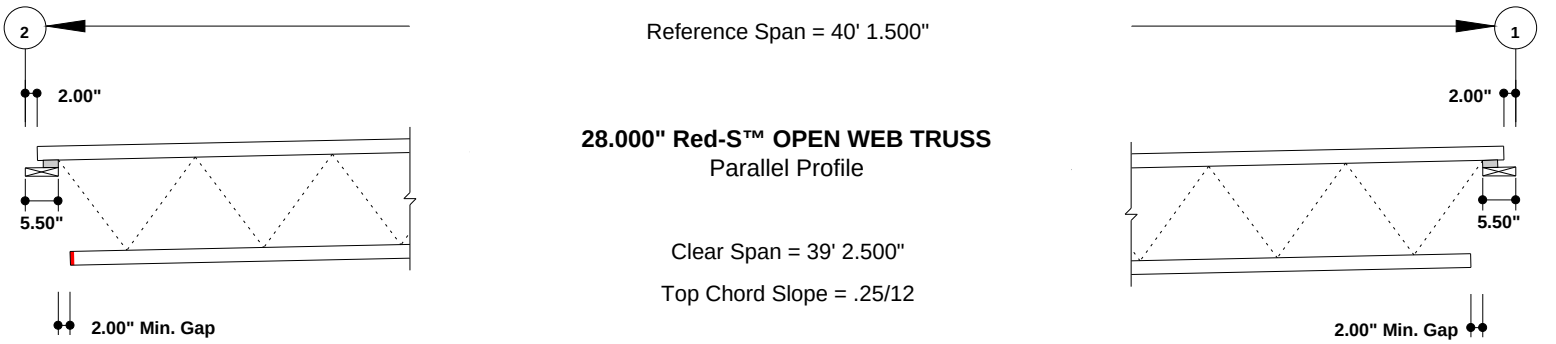
Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1
Qty: 23
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 32.000" O.C.-Wind Uplift

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)

LOAD GROUP #2 @ 17.750" O.C.-3rd-5th from LEFT - Soffit & Parallel Drift

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 11' 10.000"	Adds to	BC	Soffit
Uniform(psf)	S(1.15)	30.6	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift

LOAD GROUP #3 @ 28.000" O.C.-10th from LEFT - AC#3

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 11' 10.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	241	17' 10.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)
Point(lbs)	S(1.15)	0	241	24' 8.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)

NOT REVIEWED BY CDA

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1
Qty: 23
Project Number: 142840

LOAD GROUP #4 @ 28.500" O.C.-12th from Right - Condensers

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Parapet Brace - KN6

LOAD GROUP #5 @ 25.500" O.C.-10th from Right - AC#4 & Condensers

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	184	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	250	27' 5.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	250	34' 11.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)

LOAD GROUP #6 @ 22.500" O.C.-S1W - single of double truss

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	184	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	250	27' 5.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	250	34' 11.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	100	22' 8.500"	Adds to	TC, on chord(s)	Roof Hatch (200#/2)

LOAD GROUP #7 @ 32.000" O.C.-22 from LEFT - AC#2

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	19' 1.000" to 23' 5.500"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	319	11' 2.000"	Adds to	TC, on chord(s)	AC-2 (2552#/8)
Point(lbs)	S(1.15)	0	319	16' 5.500"	Adds to	TC, on chord(s)	AC-2 (2552#/8)

(1) Location is specified from left reference point unless noted otherwise.
(3) All wind (W) loads are Strength based.

SUPPORTS

	LEFT SUPPORT	(Angle: 0°)	RIGHT SUPPORT	(Angle: 0°)
	Material:	Plate(s)	Material:	Plate(s)
	Bearing Clip:	Heavy S-Clip Lateral	Bearing Clip:	Heavy S-Clip Lateral
	Reinforcement:	Chord(s) only	Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 99.3% (Design / Allowable)

NOT REVIEWED BY CDA

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1
Qty: 23
Project Number: 142840

Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	3081 W (1.60)	-1612 W (1.60)	2769 W (1.60)	-833 W (1.60)
Live Load (lbs)	1874	-2242	1461	-1465

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 1.895" (L/248)
Deflection (Live Load) Span: 0.947" (L/497)

Center Span Camber: 1.186", Matched to S3

ADDITIONAL NOTES

- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 144.2 plf

OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227

NOT REVIEWED BY CDA

DO NOT SCALE THIS TRUSS PROFILE

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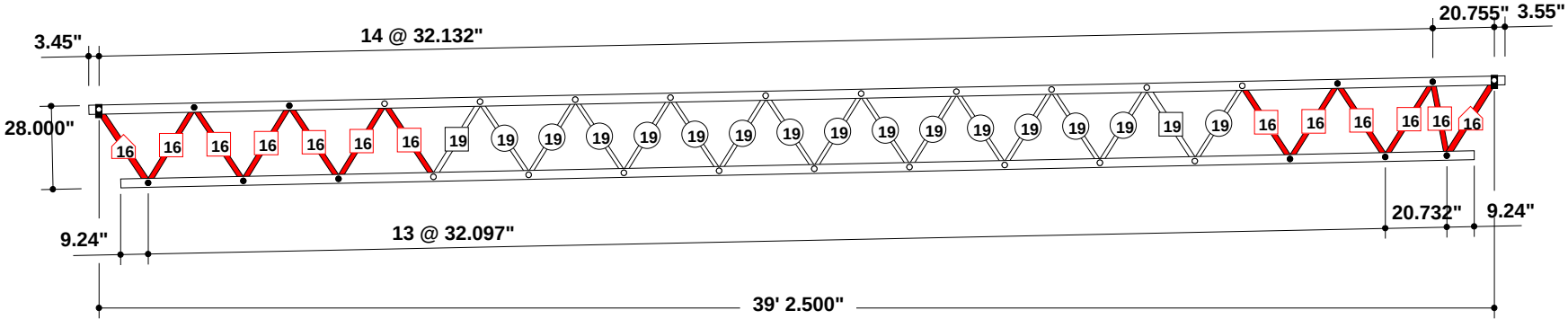

Left First Web Distance:	16.066"
Top Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Bottom Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Camber:	1.186"
Bottom Chord Slope:	0.250/12

Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
Heavy S-Clip Lateral @ RIGHT TOP PIN# 16.

3/4" DIA. PIN
WEB, 1" DIA. & WEB GAUGE
1 1/2" DIA.

1/2" DIA. PIN
1 1/4" DIA.

Project: Chick-fil-A #5248	Truss ID: S1
Location: Lee's Summit, MO	Quantity: 23
Delivery: R1	Project Number: 142840

NOT REVIEWED BY CDA

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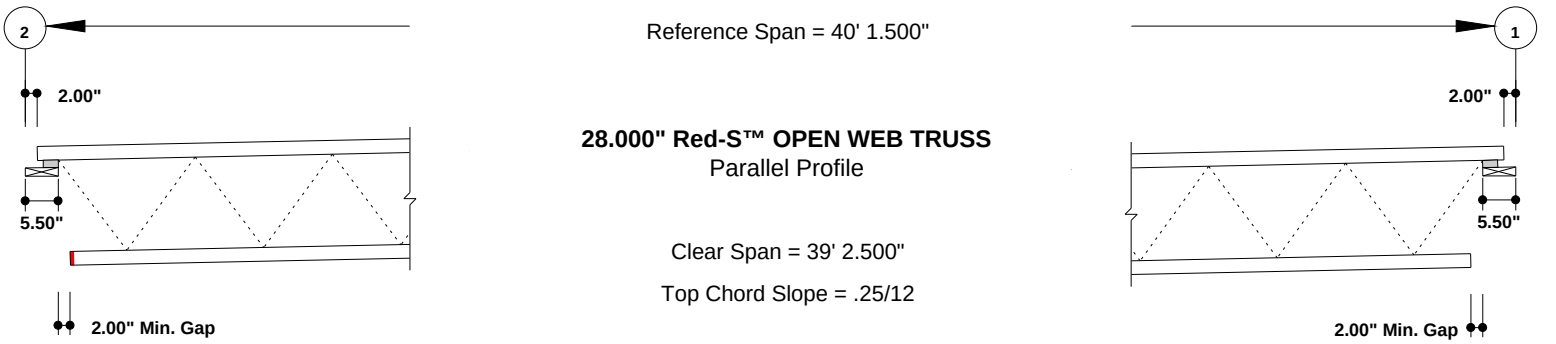
Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1S
Qty: 1
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 32.000" O.C.-Wind Uplift

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)

LOAD GROUP #2 @ 17.750" O.C.-3rd-5th from LEFT - Soffit & Parallel Drift

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 11' 10.000"	Adds to	BC	Soffit
Uniform(psf)	S(1.15)	30.6	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift

LOAD GROUP #3 @ 28.000" O.C.-10th from LEFT - AC#3

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 11' 10.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	241	17' 10.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)
Point(lbs)	S(1.15)	0	241	24' 8.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)

NOT REVIEWED BY CDA

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1S
Qty: 1
Project Number: 142840

LOAD GROUP #4 @ 28.500" O.C.-12th from Right - Condensers

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Parapet Brace - KN6

LOAD GROUP #5 @ 25.500" O.C.-10th from Right - AC#4 & Condensers

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	184	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	250	27' 5.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	250	34' 11.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)

LOAD GROUP #6 @ 22.500" O.C.-S1W - single of double truss

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	184	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	250	27' 5.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	250	34' 11.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	100	22' 8.500"	Adds to	TC, on chord(s)	Roof Hatch (200#/2)

LOAD GROUP #7 @ 32.000" O.C.-22 from LEFT - AC#2

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	19' 1.000" to 23' 5.500"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	319	11' 2.000"	Adds to	TC, on chord(s)	AC-2 (2552#/8)
Point(lbs)	S(1.15)	0	319	16' 5.500"	Adds to	TC, on chord(s)	AC-2 (2552#/8)

(1) Location is specified from left reference point unless noted otherwise.
(3) All wind (W) loads are Strength based.

SUPPORTS

LEFT SUPPORT	(Angle: 0°)		RIGHT SUPPORT	(Angle: 0°)	
Material:	Plate(s)		Material:	Plate(s)	
Bearing Clip:	Heavy S-Clip Lateral		Bearing Clip:	Heavy S-Clip Lateral	
Reinforcement:	Chord(s) only		Reinforcement:	Chord(s) only	

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 99.3% (Design / Allowable)

NOT REVIEWED BY CDA

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1S
Qty: 1
Project Number: 142840

Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	3081 W (1.60)	-1612 W (1.60)	2769 W (1.60)	-833 W (1.60)
Live Load (lbs)	1874	-2242	1461	-1465

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 1.895" (L/248)
Deflection (Live Load) Span: 0.947" (L/497)

Center Span Camber: 1.186", Matched to S1

ADDITIONAL NOTES

- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 144.2 plf

OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227

NOT REVIEWED BY CDA

DO NOT SCALE THIS TRUSS PROFILE

RedOpenWeb™ v5.0.33
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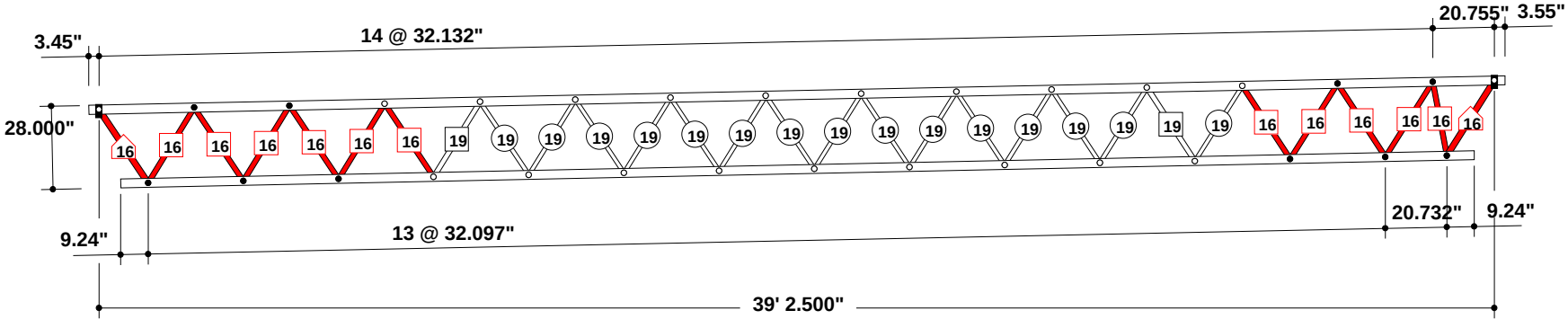


Left First Web Distance:	16.066"
Top Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Bottom Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Camber:	1.186"
Bottom Chord Slope:	0.250/12

Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
Heavy S-Clip Lateral @ RIGHT TOP PIN# 16.

3/4" DIA. PIN
WEB, 1" DIA. & WEB GAUGE
1 1/2" DIA.
1/2" DIA. PIN
1 1/4" DIA.

Project: Chick-fil-A #5248	Truss ID: S1S
Location: Lee's Summit, MO	Quantity: 1
Delivery: R1	Project Number: 142840

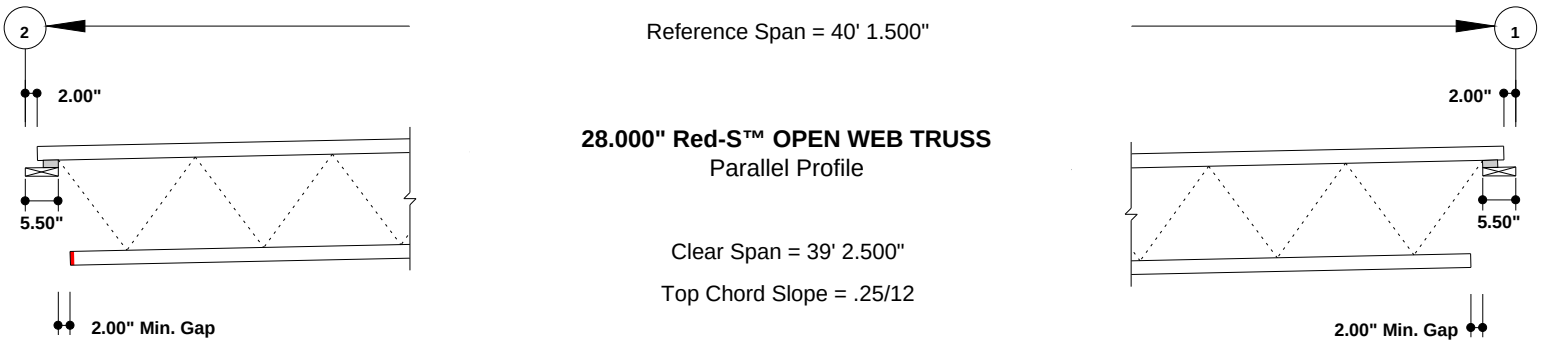
NOT REVIEWED BY CDA

RedOpenWeb™ v5.0.33
9/10/2025 8:56:57 AM PAGE 1

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1W
Qty: 4
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 32.000" O.C.-Wind Uplift

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)

LOAD GROUP #2 @ 17.750" O.C.-3rd-5th from LEFT - Soffit & Parallel Drift

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 11' 10.000"	Adds to	BC	Soffit
Uniform(psf)	S(1.15)	30.4	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift

LOAD GROUP #3 @ 28.000" O.C.-10th from LEFT - AC#3

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	6' 8.000" to 11' 10.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	241	17' 10.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)
Point(lbs)	S(1.15)	0	241	24' 8.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)

NOT REVIEWED BY CDA

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1W
Qty: 4
Project Number: 142840

LOAD GROUP #4 @ 28.500" O.C.-12th from Right - Condensers

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Parapet Brace - KN6

LOAD GROUP #5 @ 25.500" O.C.-10th from Right - AC#4 & Condensers

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	184	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	250	27' 5.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	250	34' 11.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)

LOAD GROUP #6 @ 22.500" O.C.-S1W - single of double truss

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	184	6' 7.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 2.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	250	27' 5.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	250	34' 11.000"	Adds to	TC, on chord(s)	AC-4 (999#/4)
Point(lbs)	S(1.15)	0	100	22' 8.500"	Adds to	TC, on chord(s)	Roof Hatch (200#/2)

LOAD GROUP #7 @ 32.000" O.C.-22 from LEFT - AC#2

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	19' 1.000" to 23' 5.500"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	319	11' 2.000"	Adds to	TC, on chord(s)	AC-2 (2552#/8)
Point(lbs)	S(1.15)	0	319	16' 5.500"	Adds to	TC, on chord(s)	AC-2 (2552#/8)

(1) Location is specified from left reference point unless noted otherwise.
(3) All wind (W) loads are Strength based.

SUPPORTS

	LEFT SUPPORT	(Angle: 0°)	RIGHT SUPPORT	(Angle: 0°)
	Material:	Plate(s)	Material:	Plate(s)
	Bearing Clip:	Heavy S-Clip Lateral	Bearing Clip:	Heavy S-Clip Lateral
	Reinforcement:	Chord(s) only	Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 99.3% (Design / Allowable)

NOT REVIEWED BY CDA

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S1W
Qty: 4
Project Number: 142840

Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	3081 W (1.60)	-1612 W (1.60)	2769 W (1.60)	-833 W (1.60)
Live Load (lbs)	1874	-2242	1461	-1465

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 1.895" (L/248)
Deflection (Live Load) Span: 0.943" (L/499)

Center Span Camber: 1.186", Matched to S1

ADDITIONAL NOTES

- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 144.2 plf

OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227

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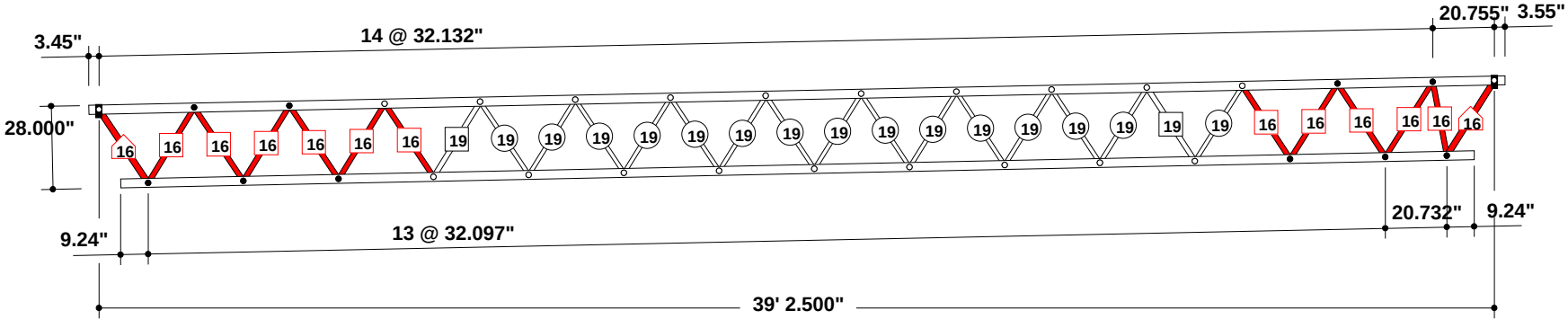
DO NOT SCALE THIS TRUSS PROFILE



Left First Web Distance:	16.066"
Top Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Bottom Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Camber:	1.186"
Bottom Chord Slope:	0.250/12

Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
Heavy S-Clip Lateral @ RIGHT TOP PIN# 16.

3/4" DIA. PIN
WEB, 1" DIA. & WEB GAUGE
1 1/2" DIA.
1/2" DIA. PIN
1 1/4" DIA.

Project: Chick-fil-A #5248	**Truss ID:** S1W
Location: Lee's Summit, MO	**Quantity:** 4
Delivery: R1	**Project Number:** 142840

NOT REVIEWED BY CDA

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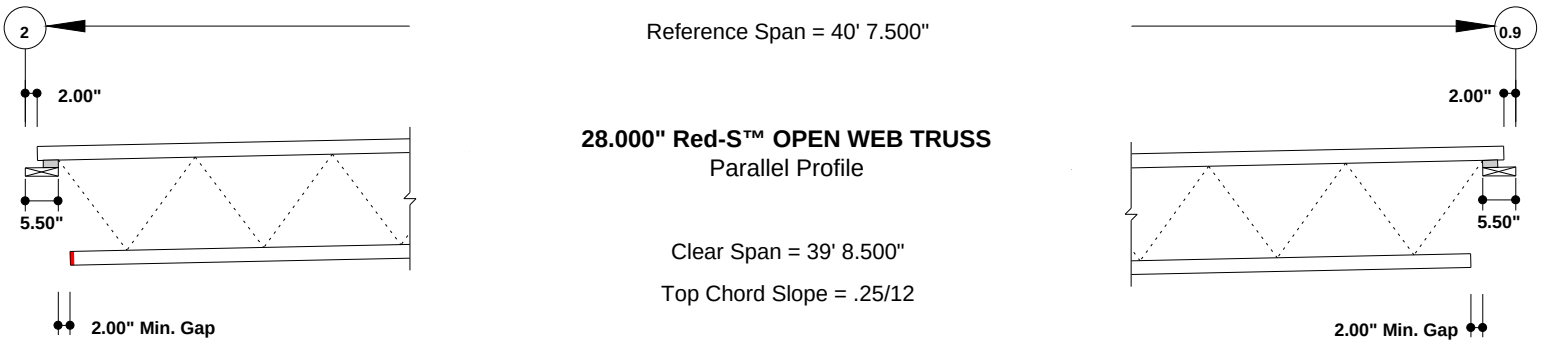
Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S2
Qty: 8
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



28.000" Red-S™ OPEN WEB TRUSS
Parallel Profile

Clear Span = 39' 8.500"

Top Chord Slope = .25/12

All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 32.000" O.C.-Wind Uplift

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)

LOAD GROUP #2 @ 32.000" O.C.-16/17th from Left - Condensers, Soffit

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	7.500" to 23' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	5' 9.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 9.000"	Adds to	TC, on chord(s)	Condenser (340#/2)

LOAD GROUP #3 @ 33.500" O.C.-11th from LEFT - AC#3

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	7.500" to 23' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	241	17' 10.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)
Point(lbs)	S(1.15)	0	241	24' 8.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)

NOT REVIEWED BY CDA

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S2
Qty: 8
Project Number: 142840

LOAD GROUP #4 @ 32.000" O.C.-21st from LEFT - AC#2

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	19' 1.000" to 23' 5.500"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	319	11' 2.000"	Adds to	TC, on chord(s)	AC-2 (2552#/8)
Point(lbs)	S(1.15)	0	319	16' 5.500"	Adds to	TC, on chord(s)	AC-2 (2552#/8)

(1) Location is specified from left reference point unless noted otherwise.
(3) All wind (W) loads are Strength based.

SUPPORTS

	LEFT SUPPORT	(Angle: 0°)	RIGHT SUPPORT	(Angle: 0°)
	Material:	Plate(s)	Material:	Plate(s)
	Bearing Clip:	Heavy S-Clip Lateral	Bearing Clip:	Heavy S-Clip Lateral
	Reinforcement:	Chord(s) only	Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 99.6% (Design / Allowable)
Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	3155 W (1.60)	-1624 W (1.60)	3016 W (1.60)	-806 W (1.60)
Live Load (lbs)	1551	-2260	1532	-1447

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 2.111" (L/226)
Deflection (Live Load) Span: 0.977" (L/487)

Center Span Camber: 1.217", Matched to S1

ADDITIONAL NOTES

- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 153.1 plf

OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227

NOT REVIEWED BY CDA

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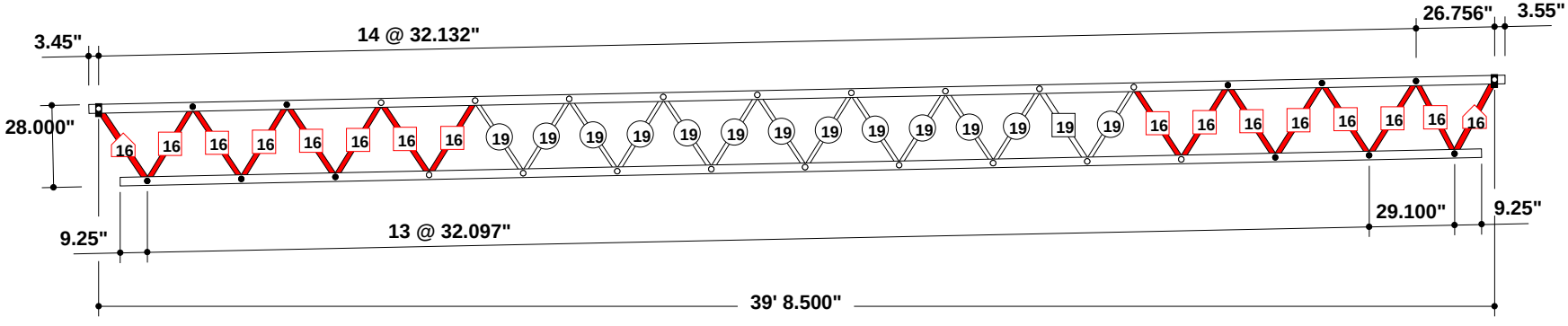
DO NOT SCALE THIS TRUSS PROFILE



Left First Web Distance:	**16.066"**
Top Chord Material:	**2- 1.50X 2.3" RedLam™ LVL**
Bottom Chord Material:	**2- 1.50X 2.3" RedLam™ LVL**
Camber:	**1.217"**
Bottom Chord Slope:	**0.250/12**

Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
Heavy S-Clip Lateral @ RIGHT TOP PIN# 16.

3/4" DIA. PIN
WEB, 1" DIA. & WEB GAUGE
1 1/2" DIA.
1/2" DIA. PIN
1 1/4" DIA.

Project: Chick-fil-A #5248	**Truss ID: S2**
Location: Lee's Summit, MO	**Quantity: 8**
Delivery: R1	**Project Number: 142840**

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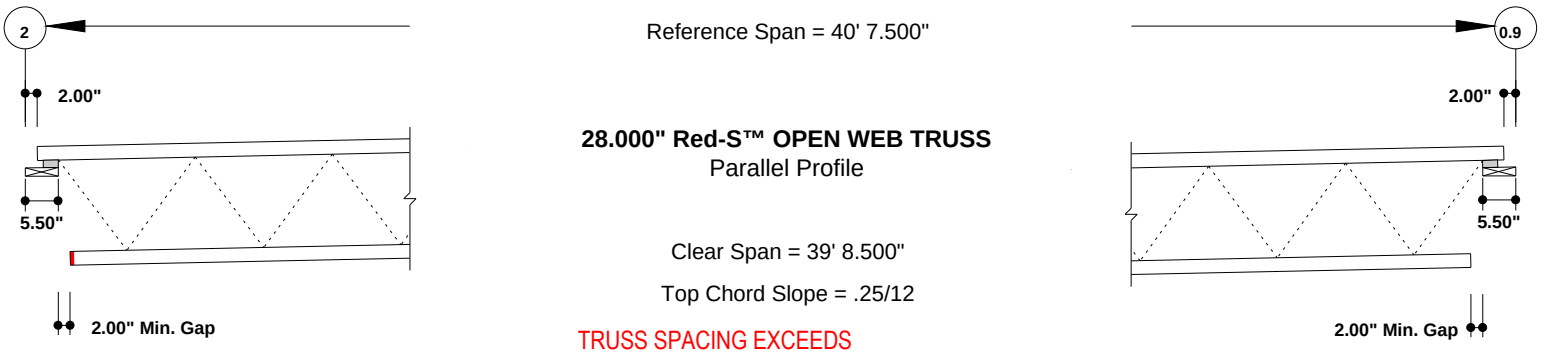
Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S2S
Qty: 3
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



28.000" Red-S™ OPEN WEB TRUSS
Parallel Profile

Clear Span = 39' 8.500"

Top Chord Slope = .25/12

TRUSS SPACING EXCEEDS 32" OC (PER RB ROOF PLAN).
-BPA

All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 32.000" O.C.-Wind Uplift

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)

LOAD GROUP #2 @ 32.000" O.C.-16/17th from Left - Condensers, Soffit

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	7.500" to 23' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	170	5' 9.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	170	10' 9.000"	Adds to	TC, on chord(s)	Condenser (340#/2)

LOAD GROUP #3 @ 33.500" O.C.-11th from LEFT - AC#3

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	7.500" to 23' 6.000"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	241	17' 10.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)
Point(lbs)	S(1.15)	0	241	24' 8.000"	Adds to	TC, on chord(s)	AC-3 (2402#/10)

NOT REVIEWED BY CDA

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S2S
Qty: 3
Project Number: 142840

LOAD GROUP #4 @ 32.000" O.C.-21st from LEFT - AC#2

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 39' 11.000"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	39' 8.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	39' 2.670"	Adds to	TC, on chord(s)	Eccentric Load ULT
Uniform(psf)	S(1.15)	0	6	19' 1.000" to 23' 5.500"	Adds to	BC	Soffit
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	33' 0.000" to 39' 6.000"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	319	11' 2.000"	Adds to	TC, on chord(s)	AC-2 (2552#/8)
Point(lbs)	S(1.15)	0	319	16' 5.500"	Adds to	TC, on chord(s)	AC-2 (2552#/8)

(1) Location is specified from left reference point unless noted otherwise.
(3) All wind (W) loads are Strength based.

SUPPORTS

LEFT SUPPORT	(Angle: 0°)		RIGHT SUPPORT	(Angle: 0°)
Material:	Plate(s)		Material:	Plate(s)
Bearing Clip:	Heavy S-Clip Lateral		Bearing Clip:	Heavy S-Clip Lateral
Reinforcement:	Chord(s) only		Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 99.6% (Design / Allowable)
Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	3155 W (1.60)	-1624 W (1.60)	3016 W (1.60)	-806 W (1.60)
Live Load (lbs)	1551	-2260	1532	-1447

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 2.111" (L/226)
Deflection (Live Load) Span: 0.977" (L/487)

Center Span Camber: 1.217", Matched to S2

ADDITIONAL NOTES

- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 153.1 plf

OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227

NOT REVIEWED BY CDA

DO NOT SCALE THIS TRUSS PROFILE

RedOpenWeb™ v5.0.33
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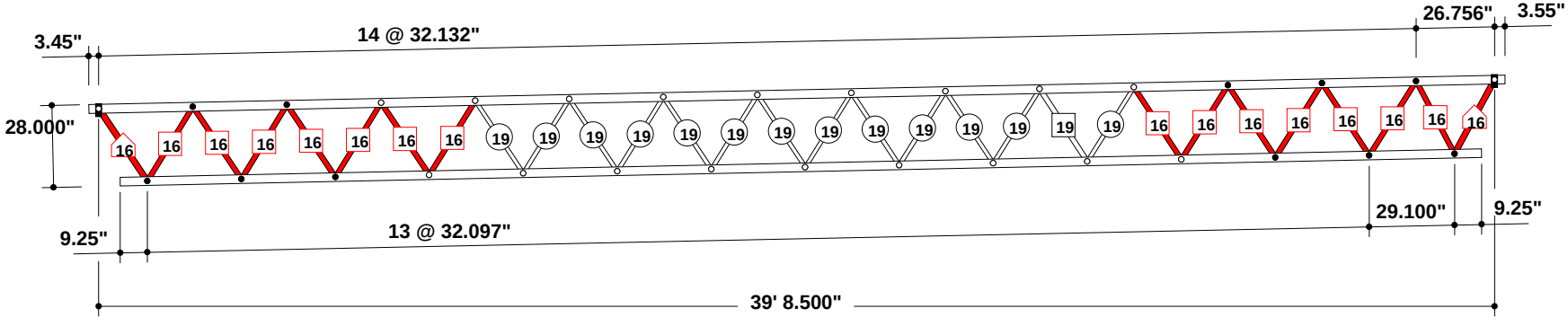

Left First Web Distance:	16.066"
Top Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Bottom Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Camber:	1.217"
Bottom Chord Slope:	0.250/12

Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
Heavy S-Clip Lateral @ RIGHT TOP PIN# 16.

3/4" DIA. PIN
WEB, 1" DIA. & WEB GAUGE
1 1/2" DIA.
1/2" DIA. PIN
1 1/4" DIA.

Project: Chick-fil-A #5248	Truss ID: S2S
Location: Lee's Summit, MO	Quantity: 3
Delivery: R1	Project Number: 142840

NOT REVIEWED BY CDA

RedOpenWeb™ v5.0.33
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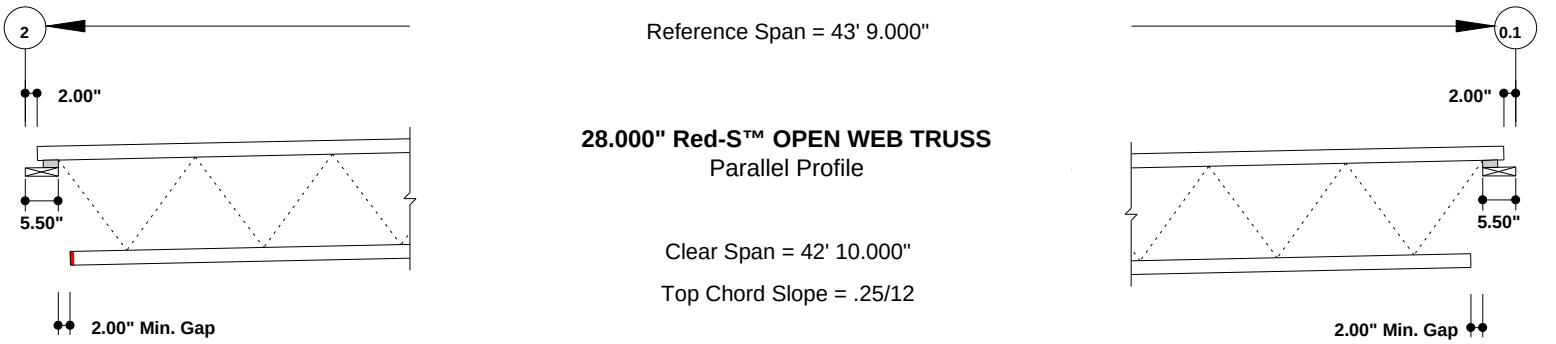
Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S3
Qty: 16
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



All dimensions are horizontal.

Product diagram is conceptual.

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 32.000" O.C.-Wind Uplift (ULT)

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN8 (ULT)

LOAD GROUP #2 @ 33.000" O.C.-30th from LEFT - Hood#2 - Hood#3, EF, Condenser

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	S(1.15)	0	38	13' 9.000"	Adds to	BC, on chord(s)	Hood#3 (150#/4)
Point(lbs)	S(1.15)	0	38	17' 4.000"	Adds to	BC, on chord(s)	Hood#3 (150#/4)
Point(lbs)	S(1.15)	0	66	7.625"	Adds to	BC, on chord(s)	Hood#2 (262#/4)
Point(lbs)	S(1.15)	0	66	3' 10.000"	Adds to	BC, on chord(s)	Hood#2 (262#/4)
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	36' 7.500" to 43' 1.500"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	255	11' 5.000"	Adds to	TC, on chord(s)	EF (510#/2)
Point(lbs)	S(1.15)	0	170	20' 6.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Uniform(plf)	S(1.15)	0	6	19' 1.000" to 21' 1.000"	Adds to	BC	Soffit

LOAD GROUP #3 @ 32.000" O.C.-15th-20th from Right - AC-1, Hoods

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	S(1.15)	0	282	7.625"	Adds to	BC, on chord(s)	Hood#1R/L (996#/6+462#/4)
Point(lbs)	S(1.15)	0	282	3' 2.000"	Adds to	BC, on chord(s)	Hood#1R/L (996#/6+462#/4)
Point(plf)	W(1.60)	584	0	4' 0.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	36' 7.500" to 43' 1.500"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	256	13' 8.000"	Adds to	TC, on chord(s)	AC-1 (2552#/10)
Point(lbs)	S(1.15)	0	256	20' 9.000"	Adds to	TC, on chord(s)	AC-1 (2552#/10)

(1) Location is specified from left reference point unless noted otherwise.

NOT REVIEWED BY CDA

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S3
Qty: 16
Project Number: 142840

(3) All wind (W) loads are Strength based.

SUPPORTS

LEFT SUPPORT	(Angle: 0°)		RIGHT SUPPORT	(Angle: 0°)
Material:	Plate(s)		Material:	Plate(s)
Bearing Clip:	Heavy S-Clip Lateral		Bearing Clip:	Heavy S-Clip Lateral
Reinforcement:	Chord(s) only		Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 99.3% (Design / Allowable)
Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	4227 W (1.60)	-1687 W (1.60)	3053 W (1.60)	-895 W (1.60)
Live Load (lbs)	2224	-2375	1685	-1585

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 2.652" (L/194)
Deflection (Live Load) Span: 1.376" (L/374)

Center Span Camber: 1.416", Recommended

ADDITIONAL NOTES

- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 166.6 plf

OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227

NOT REVIEWED BY CDA

DO NOT SCALE THIS TRUSS PROFILE

RedOpenWeb™ v5.0.33
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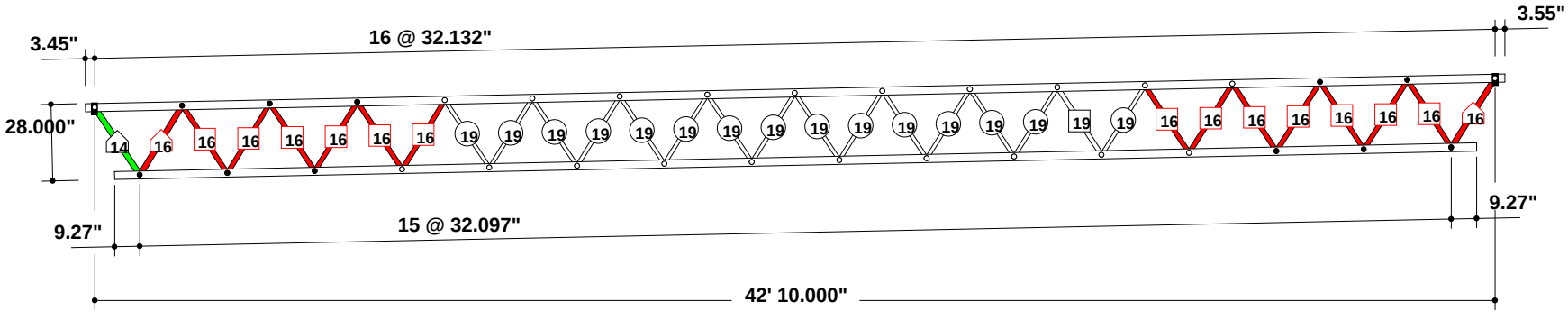

Left First Web Distance:	16.066"
Top Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Bottom Chord Material:	2- 1.50X 2.3" RedLam™ LVL
Camber:	1.416"
Bottom Chord Slope:	0.250/12

Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
Heavy S-Clip Lateral @ RIGHT TOP PIN# 17.

3/4" DIA. PIN
WEB, 1" DIA. & WEB GAUGE
1 1/2" DIA.
1/2" DIA. PIN
1 1/4" DIA.

Project: Chick-fil-A #5248	Truss ID: S3
Location: Lee's Summit, MO	Quantity: 16
Delivery: R1	Project Number: 142840

NOT REVIEWED BY CDA

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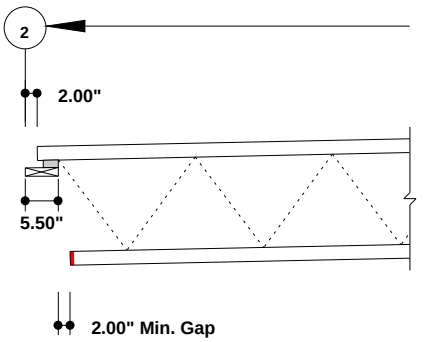
9/10/2025 8:56:08 AM PAGE 1

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S3S
Qty: 2
Project Number: 142840

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



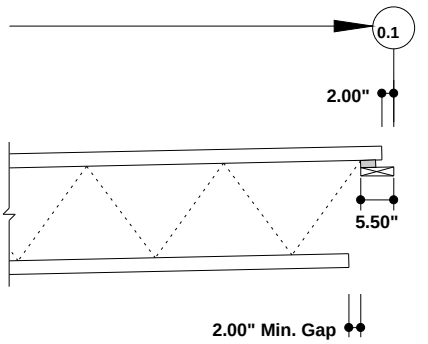
Reference Span = 43' 9.000"

28.000" Red-S™ OPEN WEB TRUSS
Parallel Profile

Clear Span = 42' 10.000"

Top Chord Slope = .25/12

TRUSS SPACING EXCEEDS 32" OC (PER RB ROOF PLAN).
-BPA



All dimensions are horizontal.

Product diagram is conceptual.

NOT REVIEWED BY CDA

LOADS

Analysis for Open-web Member Supporting SNOW Structural Classification.
Loads (psf): 20 Snow at 115% duration, 8 Dead (top chord), 12 Dead (bottom chord), @ 32.000" O.C. and:

LOAD GROUP #1 @ 33.000" O.C.-Wind Uplift (ULT)

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	-43.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Uplift ULT
Strap(lbs)	W(1.60)	1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	-672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(plf)	W(1.60)	-584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN8 (ULT)

LOAD GROUP #2 @ 33.000" O.C.-30th from LEFT - Hood#2 - Hood#3, EF, Condenser

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	S(1.15)	0	38	13' 9.000"	Adds to	BC, on chord(s)	Hood#3 (150#/4)
Point(lbs)	S(1.15)	0	38	17' 4.000"	Adds to	BC, on chord(s)	Hood#3 (150#/4)
Point(lbs)	S(1.15)	0	66	7.625"	Adds to	BC, on chord(s)	Hood#2 (262#/4)
Point(lbs)	S(1.15)	0	66	3' 10.000"	Adds to	BC, on chord(s)	Hood#2 (262#/4)
Point(plf)	W(1.60)	584	0	3' 10.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	36' 7.500" to 43' 1.500"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	255	11' 5.000"	Adds to	TC, on chord(s)	EF (510#/2)
Point(lbs)	S(1.15)	0	170	20' 6.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Uniform(plf)	S(1.15)	0	6	19' 1.000" to 21' 1.000"	Adds to	BC	Soffit

LOAD GROUP #3 @ 32.000" O.C.-15th-20th from Right - AC-1, Hoods

TYPE	CLASS	LIVE	DEAD	LOCATION(1)	APPL	APPLIED TO	COMMENT
Uniform(psf)	W(1.60)	20.6	0	2.000" to 43' 6.500"	Adds to	TC	Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	0	Right End	Adds to	TC	Axial Load ULT
Point(lbs)	W(1.60)	672	0	5.500"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	672	0	43' 4.000"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	11.330"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	W(1.60)	-672	0	42' 10.170"	Adds to	TC, on chord(s)	Eccentric Load ULT
Point(lbs)	S(1.15)	0	282	7.625"	Adds to	BC, on chord(s)	Hood#1R/L (996#/6+462#/4)
Point(lbs)	S(1.15)	0	282	3' 2.000"	Adds to	BC, on chord(s)	Hood#1R/L (996#/6+462#/4)
Point(plf)	W(1.60)	584	0	4' 0.000"	Adds to	TC, on chord(s)	Brace KN6 (ULT)
Tapered(psf)	S(1.15)	27 to 0	0 to 0	5.500" to 6' 11.500"	Adds to	TC	Tapered Drift (Left)
Tapered(psf)	S(1.15)	0 to 27	0 to 0	36' 7.500" to 43' 1.500"	Adds to	TC	Tapered Drift (Right)
Point(lbs)	S(1.15)	0	256	13' 8.000"	Adds to	TC, on chord(s)	AC-1 (2552#/10)
Point(lbs)	S(1.15)	0	256	20' 9.000"	Adds to	TC, on chord(s)	AC-1 (2552#/10)

(1) Location is specified from left reference point unless noted otherwise.

Project: Chick-fil-A #5248
Location: Lee's Summit, MO
Delivery: R1
Del. Desc.: Roof

Type: S3S
Qty: 2
Project Number: 142840

(3) All wind (W) loads are Strength based.

SUPPORTS

	LEFT SUPPORT	(Angle: 0°)	RIGHT SUPPORT	(Angle: 0°)
	Material:	Plate(s)	Material:	Plate(s)
	Bearing Clip:	Heavy S-Clip Lateral	Bearing Clip:	Heavy S-Clip Lateral
	Reinforcement:	Chord(s) only	Reinforcement:	Chord(s) only

DESIGN CONTROLS

Truss Member's Critical Design Component Value: 99.3% (Design / Allowable)
Truss design includes consideration for partial span application live load.

REACTIONS

	LEFT MAXIMUM	LEFT MINIMUM	RIGHT MAXIMUM	RIGHT MINIMUM
Total Load (lbs)	4227 W (1.60)	-1740 W (1.60)	3053 W (1.60)	-923 W (1.60)
Live Load (lbs)	2224	-2449	1685	-1635

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 2.652" (L/194)
Deflection (Live Load) Span: 1.376" (L/374)

Center Span Camber: 1.416", Matched to S3

ADDITIONAL NOTES

- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided by others and must be verified and approved for the specific application by the design professional for the project. Truss design values have been accepted by the following agencies: ICC ES Report No. ESR-1774 and LABC/LARC Supplement, DSA.
- Allowable Stress Design methodology was used for Code IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 166.6 plf

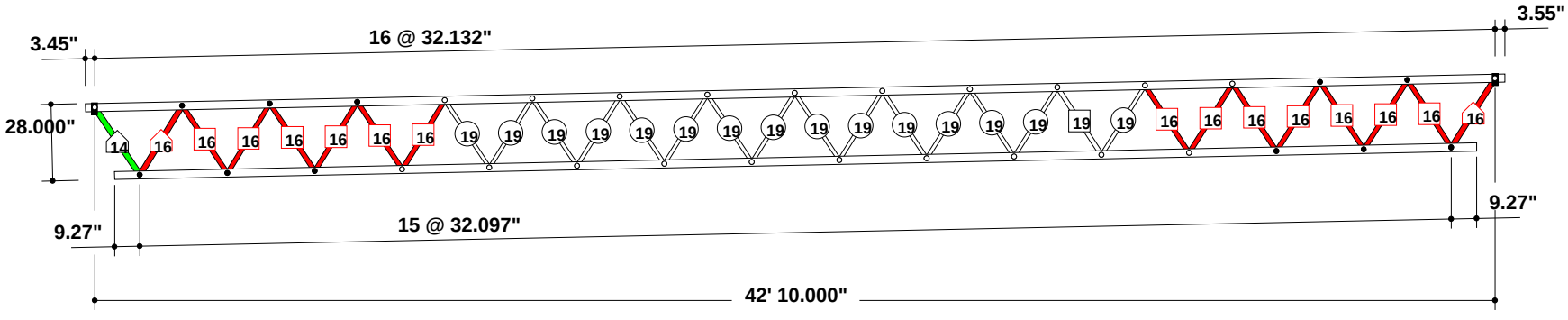
OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227

NOT REVIEWED BY CDA

RedOpenWeb™ v5.0.33
9/10/2025 8:56:08 AM

DO NOT SCALE THIS TRUSS PROFILE



Left First Web Distance:	**16.066"**
Top Chord Material:	**2- 1.50X 2.3" RedLam™ LVL**
Bottom Chord Material:	**2- 1.50X 2.3" RedLam™ LVL**
Camber:	**1.416"**
Bottom Chord Slope:	**0.250/12**

Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1.
Heavy S-Clip Lateral @ RIGHT TOP PIN# 17.

3/4" DIA. PIN
WEB, 1" DIA. & WEB GAUGE
1 1/2" DIA.
1/2" DIA. PIN
1 1/4" DIA.

Project: Chick-fil-A #5248	**Truss ID: S3S**
Location: Lee's Summit, MO	**Quantity: 2**
Delivery: R1	**Project Number: 142840**

NOT REVIEWED BY CDA

OPEN-WEB TRUSS INSTALLATION INFORMATION

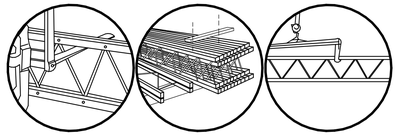
ATTENTION BUILDER

Enclosed is IMPORTANT information on how to safely and properly install RedBuilt™ Joists. Personal injury or death may result from failure to read and follow this information.

RedBUILT™ Engineered Wood Products

1 PRODUCT HANDLING

THIS



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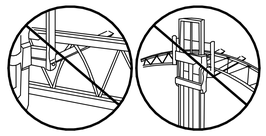


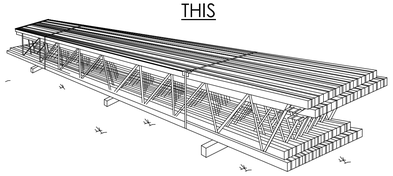
WARNING
Workers should stay clear when cutting the banding to avoid possible injury from flying banding or toppling trusses.

CAUTION
DO NOT hit webs with forklift forks. Bent or dented webs must be replaced.

- Trusses will be delivered to the jobsite in bundles of twenty or fewer, banded together for handling and shipment. To avoid damage they should be left in these bundles until they are ready to be installed in the structure.
- Miscellaneous hardware such as bearing angles, lag screws, bolts and nails as required for each specific job will be shipped in bags or boxes with the trusses.
- Bridging material and pre-cut blocking items, if supplied by RedBuilt ™, will be bundled and banded.

2 PRODUCT STORAGE

THIS



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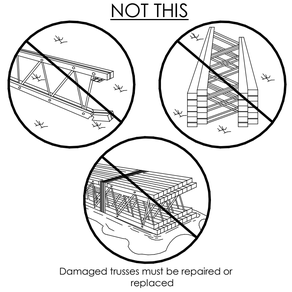


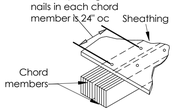
Damaged trusses must be repaired or replaced

- Always set truss bundles on stickers placed at the truss pin locations. Never store trusses flat or set trusses directly on the ground or in contact with standing water.
- Cover truss bundles with paper wrap or canvas tarps to protect them from the weather. Do not use plastic covers as they will cause moisture to accumulate on the trusses. Prolonged exposure to the elements harms the appearance and strength of the trusses.

3 NAILING OF SHEATHING TO TOP CHORD MEMBERS

Maximum Nail Spacing

Widest spacing for nails in each chord member is 24" oc



Nailing pattern per plans and specifications. nail spacing should never exceed 24" on-center in either chord member. do not use nails smaller than 8dx21/2" or larger than 16dx31/2".

Minimum Nail Spacing

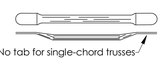
Nail Size	Red-L™ Red-W™	Red-S™	Red-M™ Red-H™	RedLam™ LVL Narrow Face
.113" x 2 1/2"	4"	4"	2"	3"
.131" x 2 1/2"	6"	6"	2"	3"
.128" x 3"	6"	6"	2"	3"
.148" x 3"	6"	6"	2 1/2"	4" (2)
.128" x 3 1/4"	6"	6"	2"	3"
.148" x 3 1/4"	6"	6"	2 1/2"	4" (2)
.135" x 3 1/2"	6"	6"	2 1/2"	3"
.148" x 3 1/4"	6"	6"	2 1/2"	4" (2)
.162" x 3 1/2"	6"	8"	4"	8" (3)

(1) 14 gauge staples may be a direct substitute for 8dx2 1/2" nails if a minimum penetration of 1" into the flange is maintained.
(2) Minimum spacing must be 5" for 4 rows of nails.
(3) Spacing may be reduced to 5" where nail penetration does not exceed 1 3/8".
If more than one row of nails is used, offset rows at least 1/2" and stagger. Maintain 3/8" minimum edge distance.

IMPORTANT
Nailing closer than specified may cause the chords to split.

4 MATERIAL IDENTIFICATION

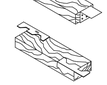
A.



No tab for single-chord trusses

B.

C.



D.

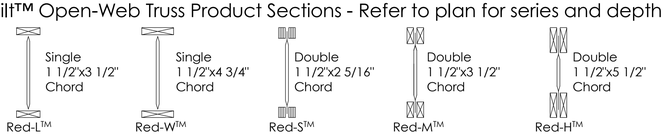
A. *Strut Bracing* is tubular steel with flattened ends supplied with all open-web trusses (Simpson HRS12 supplied for 12" OC systems). Strut bracing to be installed as each truss is set. See sections 5A - 5D.

B. *Plywood Edge Blocking* is provided by RedBuilt™ on some projects and used for nailing sheathing edges. Edge blocking does not take the place of strut bracing and will not prevent trusses from bowing. Install edge blocking after strut bracing (installation bracing) is in place and immediately prior to laying sheathing.

C. *2x4 Starter Struts* supplied by contractor with framing anchors each end (shipped loose) supplied by RedBuilt™. Flatten speed prong and fold portion of vertical tab around end of 2x4. Attach with 6-8dx2 1/2"x1 1/2" nails each end. See sections 5A and 5D.

D. *Cross Bracing* is provided for most bottom-bearing locations. Cross bracing to be installed as each truss is set. Contractor to bend ends prior to installation.

RedBuilt™ Open-Web Truss Product Sections - Refer to plan for series and depth

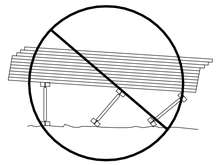


5 INSTALLATION BRACING

DO NOT walk on the trusses until all truss bearings and bracing have been permanently attached. Injury may result.

WARNING
Without correctly installed bracing, trusses can bow and roll over, causing death, serious personal injury, or property damage.

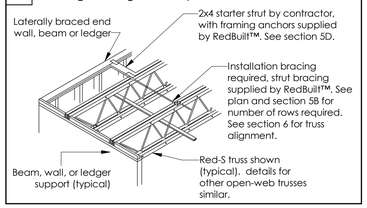
NOTICE
Installation bracing and procedures, as well as the safety of workers, are the responsibility of the installer. The installer should make sure that this installation information is understood by all persons involved in the truss installation.



DO NOT stack building materials on trusses before all truss bearings and bracing have been permanently attached. See section 7

Brace EACH truss as it is placed

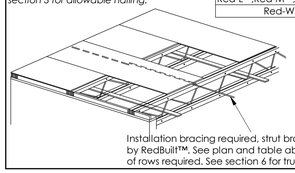
5A Starting Bracing: Laterally braced end wall or beam



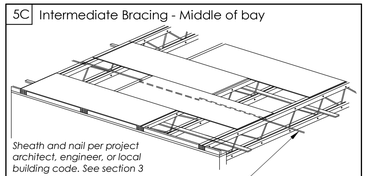
5B Starting Bracing - No laterally braced end wall or beam

Sheath and nail per project architect, engineer, or local building code. See section 3 for allowable nailing.

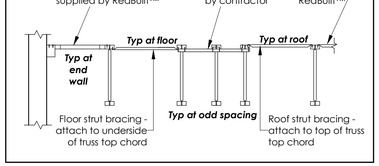
Strut Bracing Row Spacing	
Red-S™	10' OC
Red-L™,Red-M™,Red-H™	12' OC
Red-W™	14' OC



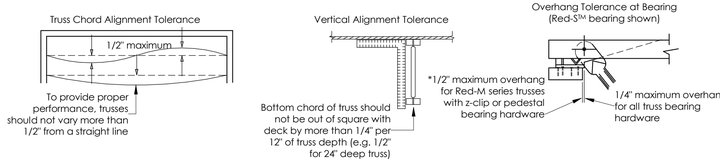
5C Intermediate Bracing - Middle of bay



5D Typical strut brace conditions



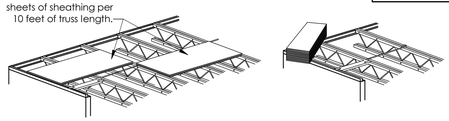
6 INSTALLATION TOLERANCES PERMITTED



7 STACKING MATERIAL

WARNING
DO NOT allow workers or materials on the trusses until all truss bearings and bracing have been permanently attached. See section 5.

CAUTION: Maximum of 3 sheets of sheathing per 10 feet of truss length.



THIS

NOT THIS

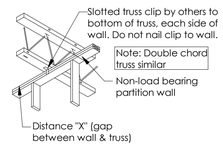
FIELD MODIFICATION OF TRUSSES NOT PERMITTED

- *DO NOT cut, drill or damage the chords or webs.*
- *DO NOT remove steel pins or webs (even temporarily).*
- *DO NOT make field modifications to trusses without written approval of RedBuilt™.*

Rev 03/21

8 STANDARD INSTALLATION DETAILS

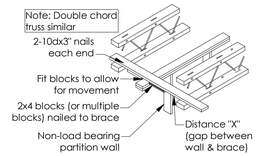
8A



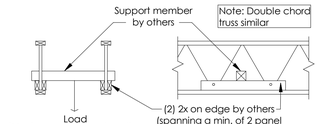
Spacing of clips and blocks per EOR

Distance "X"			
Under Roof		Under Floor	
Span	"X"	Span	"X"
0'-20'	1 1/4"	0'-20'	3/4"
20'-40'	2 1/2"	20'-40'	1 1/4"
40'-60'	4"	40'-60'	2"

Recommended Attachment for Non-load Bearing Partitions

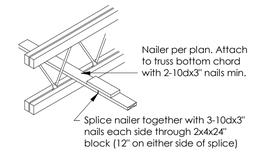


8B



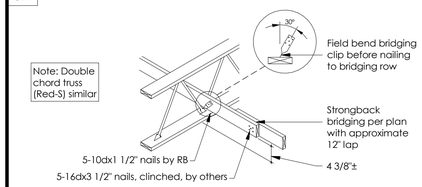
Support Detail for Loads Supported from Bottom Chord

8C



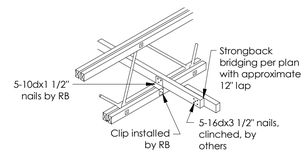
Bottom Chord Nailer

8D



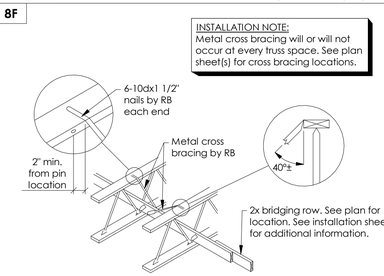
Red-L™, Red-W™ and Red-S™ Strongback Bridging

8E



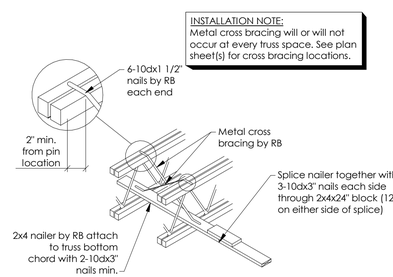
Red-M™ and Red-H™ Strongback Bridging

8F



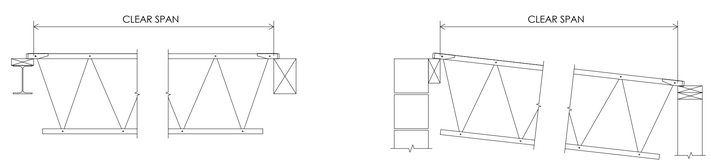
Red-L™ and Red-W™ Cross Bracing (Truss to Bridging)

8G



Red-S™, Red-M™ and Red-H™ Cross Bracing (Truss to Nailer)

8H



CLEAR SPAN IS THE HORIZONTAL DISTANCE BETWEEN THE INSIDE FACE OF BEARING SURFACES. (ACTUAL BEARING CONDITION AND TRUSS SERIES MAY V.ARY)

NOT REVIEWED BY CDA

Guidelines for Open Web "Clear Spans"

For allowable holes and fasteners information please scan the QR code or use the link below to access page number 3 of sprinkler system installation guide

https://www.redbuilt.com/SprinklerSystemInstallationGuide

For product warranty information please scan the QR code or use the link below to access the form

https://www.redbuilt.com/ProductWarranty

If you have questions or concerns:
Call your RedBuilt™ Representative directly, or for general customer service call (866) 859-6757

Sheet R001

GENERAL INFORMATION

- ALL NAILS SPECIFIED IN FRAMING PACKAGE TO BE "COMMON" NAILS UNLESS NOTED OTHERWISE. USE PROPER SIZE NAILS TO FILL ALL NAILS HOLES IN BEARING CLIPS, BRIDGING CLIPS. BRACING, ETC.
- DO NOT SCALE DRAWINGS: WRITTEN DIMENSIONS TAKE PRECEDENCE.
- MANUFACTURER'S RESPONSIBILITY IS ONLY FOR THE DESIGN OF THE REDBUILT™ PRODUCTS AND NOT FOR ANY SUPPORTING STRUCTURE OR LOADS OTHER THAN INDICATED HEREIN. ALL MATERIALS SHALL BE SUPPLIED BY OTHERS, UNLESS SPECIFICALLY NOTED AS "BY RB" OR "BY REDBUILT™" HEREIN.
- STRAPS, ANCHORS, CLIPS, AND OTHER HARDWARE NOT SHOWN ARE TO BE PROVIDED BY OTHERS. HARDWARE SHOWN IS TO BE PROVIDED BY OTHERS UNLESS MARKED 'BY RB'. REFER TO THE CONTRACT DOCUMENTS FOR HARDWARE SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.
- REFER TO CURRENT SIMPSON STRONG TIE® LITERATURE FOR HANGER SPECIFIC INSTALLATION INSTRUCTIONS.
- FOR BEAMS SUPPLIED BY OTHERS, SEE CONTRACT DOCUMENTS FOR SPECIFICATIONS AND OTHER INFORMATION NOT SHOWN HEREIN.
- SEE I-JOIST INSTALLATION SHEET FOR WEB STIFFENER NAILING

FASTENER SIZES

FASTENER TYPE	FASTENER SIZE	FASTENER TYPE	FASTENER SIZE	FASTENER TYPE	FASTENER SIZE
8d (1)	.131" x 2.5"	N8	.131" x 1.5"	#9SD (2)	.131" x 1.5" .131" x 2.5"
10d	.148" x 3"	N10	.148" x 1.5"	#10SD (2)	.162" x 1.5" .162" x 2.5"
12d	.148" x 3.25"	N16	.162" x 2.5"		
16d	.162" x 3.5"				

NOTE: ALL NAILS ARE COMMON UNO

(1) 14 GAUGE STAPLES MAY BE A DIRECT SUBSTITUTE FOR 8d X 2.5" NAILS *FOR WEB STIFFENERS ONLY*
(2) SD SCREWS PROVIDED BY SIMPSON STRONG-TIE® COMPANY

ABBREVIATIONS

ABBREVIATION	TERMS
AFP	APPROVED FOR PRODUCTION
AOR	ARCHITECT OF RECORD
BLK/BLKG	BLOCKING
BBO	BEAM BY OTHERS
CL	CENTERLINE
COL	COLUMN
DBL	DOUBLE
DL	DEAD LOAD
EOR	ENGINEER OF RECORD
FBO	FRAMING BY OTHERS
FOB	FACE OF BEAM
FOC	FACE OF CONCRETE/CMU
FOS	FACE OF STUD
FOSH	FACE OF SHEATING
GC	GENERAL CONTRACTOR
HDG	HOT-DIPPED GALVANIZED
IBC	INTERNATIONAL BUILDING CODE
LBS	POUNDS
LL	LIVE LOADS
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
OFA	OUT FOR APPROVAL
OW	OPEN-WEB TRUSSES BY REDBUILT™
PL	PARTITION LOAD
PLF	POUNDS PER LINEAL FOOT
PLT	PLATE
PSF	POUNDS PER SQUARE FOOT
PSL	PARALLEL STRANDED LUMBER
RB	REDBUILT™
SIM	SIMILAR
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
WF	WIDE FLANGE

PLAN SYMBOLS

??/??? REDBUILT BEARING DETAIL

??/??? ARCHITECT, STRUCTURAL, MEP DETAIL

FBO FRAMING BY OTHERS

STEP IN FRAMING

??:12 SLOPE IN FRAMING

FOR ALLOWABLE HOLES, FASTENER INFORMATION OR ATTACHMENT OF SPRINKLER LINES, MECHANICAL DUCTS, ETC. TO REDBUILT JOIST OR TRUSSES,
SCAN THE QR CODE OR USE THE LINK BELOW TO DOWNLOAD A COPY OF OUR "SPRINKLER SYSTEM INSTALLATION GUIDE".

https://www.redbuilt.com/SprinklerSystemInstallationGuide

FOR PRODUCT WARRANTY INFORMATION PLEASE SCAN THE QR CODE OR USE THE LINK BELOW TO ACCESS THE FORM

https://www.redbuilt.com/ProductWarranty

DRAWING NOTES & LEGEND

←XX(##)→ PRODUCT CALLOUT AND QUANTITY ON PLAN.
"XX" - STRUCTURAL MEMBER TYPE CALLOUT
(##) - QUANTITY OF STRUCTURAL MEMBERS IN BAY

ALL DIMENSIONS ARE FROM FACE-OF-STUD, FACE-OF-CONCRETE OR CENTER-OF COLUMN/BEAM UNLESS NOTED OTHERWISE.

THE DESIGN OF REDBUILT PRODUCTS FOR THIS PROJECT IS BASED ON DRY SERVICE CONDITIONS . (AVERAGE EQUILIBRIUM MOISTURE CONTENT OVER A YEAR IS 15% OR LESS AND DOES NOT EXCEED 19%).

OPEN-WEB NOTES & LEGEND

NO MORE THAN ***18*** TRUSSES PER BAY ARE TO BE INSTALLED BEFORE TOP CHORD SHEATHING IS REQUIRED.

2x4 STARTER STRUT BY OTHERS, REQUIRED DURING TRUSS INSTALLATION. SEE SECTION 5 OF THE OPEN WEB INSTALLATION SHEET.

CONTINUOUS ROW OF METAL STRUT BRACING BY RB, REQUIRED FOR LATERAL SUPPORT DURING TRUSS INSTALLATION. SEE SECTION 5 OF THE OPEN WEB INSTALLATION SHEET.

CONTINUOUS ROW OF 2x4 FLAT BOTTOM CHORD NAILER RB. FOR ADDITIONAL INFORMATION, SEE MATERIAL LIST AND DETAIL 8C ON OPEN WEB INSTALLATION SHEET.

#.#" INTERMITTENT ROW(S) OF METAL CROSS BRACING BY RB. FOR ADDITIONAL INFORMATION, SEE MATERIAL LIST AND DETAILS 8F & 8G ON OPEN WEB INSTALLATION SHEET. "#.#" - METAL BRACE LENGTH FROM TIP TO TIP.

RECTANGULAR SECTIONS

R# LOCATION OF BEAM OR COLUMN BY RB. SEE MATERIAL LIST FOR MORE INFORMATION.

ALL REDLAM LVL MATERIAL AND ANY ASSOCIATED HARDWARE PROVIDED BY REDBUILT IS AS SPECIFIED ON THE CONTRACT DRAWINGS. SPECIFICATIONS AND SIZE HAVE NOT BEEN VERIFIED BY REDBUILT ENGINEERING, UNLESS OTHERWISE NOTED.

DESIGN INFORMATION

PROJECT ASSUMPTIONS

ALL MISCELLANEOUS ITEMS (SPRINKLER LINES, SOFFIT, DUCTWORK, ELECTRICAL CONDUITS, ETC.) ARE ASSUMED TO BE INCLUDED IN THE UNIFORM DESIGN DEAD LOAD SHOWN, UNLESS SPECIFICALLY SHOWN OTHERWISE ON THESE SHOP DRAWINGS.

ALL OPENINGS (HATCHES, DUCTWORK, SKYLIGHTS, ETC.) ARE ASSUMED TO FIT BETWEEN REGULAR ON-CENTER SPACING AS SHOWN, UNLESS SPECIFICALLY SHOWN OTHERWISE ON THESE SHOP DRAWINGS.

DESIGN CONSIDERATIONS

BUILDING CODE: 2018 IBC

ROOF DESIGN

ROOF LIVE LOAD (@ 125%):	20.0 PSF
GROUND SNOW LOAD:	20.0 PSF
FLAT-ROOF SNOW LOAD (@ 115%):	20.0 PSF
DEAD LOAD:	
	TC: 8 PSF
	BC: 12 PSF

DESIGN WIND PRESSURE (ULT @ 160%):

ZONE 1	+16.0/-32.8 PSF
ZONE 1'	+16.0/-24.1 PSF
ZONE 2	+20.6/-43.6 PSF
ZONE 3	+20.6/-43.6 PSF

ZONE WIDTH: A = 4.8 FT

WIND LOADS BASED ON 109 MPH, EXP. C (ULT)

- SPRINKLER LINES ARE ASSUMED TO BE INCLUDED IN DESIGN DEAD LOAD UNLESS NOTED OTHERWISE.

ADDITIONAL LOADING

XX -SNOW DRIFT MAGNITUDE IN PSF

X'-XX" -SNOW DRIFT LENGTH

XXX# -MECHANICAL WEIGHT

-SUSPENDED SOFFIT: 6PSF

PRODUCT CALLOUT LEGEND

RED-I JOISTS:
- A# - I45
- B# - I45L
- C# - I53
- D# - I58
- E# - I65
- F# - I90
- J# - I90H
- K# - I90HS

TAPERED RED-I JOISTS:
- X# - TAPERED I45
- Y# - TAPERED I65
- Z# - TAPERED I90

RED-I JOIST SUB-TYPE CALLOUTS (I.E. F4***D***):
- D - FACTORY ASSEMBLED DOUBLE JOIST

OPENWEB TRUSSES:
- H# - RED-H
- L# - RED-L
- M# - RED-M
- S# - RED-S
- W# - RED-W

OPENWEB TRUSS SUB-TYPE CALLOUTS (I.E. L3***W***):
- D - FACTORY ASSEMBLED DOUBLE TRUSS WITH LTBs
- H - SINGLE TRUSS WITH FACTORY INSTALLED HEADER CLIPS
- S - SINGLE TRUSS WITH FACTORY INSTALLED LTBs
- W - FACTORY ASSEMBLED WIDE DOUBLE TRUSS WITH LTBs

RECTANGULAR SECTION PRODUCTS:
- G# - GLULAM BEAMS
- P# - PARALLAM BEAMS
- R# - REDLAM BEAMS

ACCESSORIES:
- WS# - WEB STIFFENERS
- BP# - BEVELED BEARING PLATES
- # - HANGERS
- TB## - TENSION BRIDGING
- ##.##" - OPENWEB X-BRACING

PROJECT 3D VIEW

NOT REVIEWED BY CDA

- SEE SHEET R010 "PROJECT INFORMATION" FOR SYMBOLS SHOWN ON PLANS, ADDITIONAL INFORMATION, AND GENERAL NOTES.
- SEE "MATERIAL LISTS" & "CALCULATION PACKAGE" FOR DETAILED INFORMATION ON MATERIALS SUPPLIED BY REDBUILT.

OUT FOR APPROVAL - NOT FOR PRODUCTION

RedBUILT™ Engineered Wood Products
200 E. Mallard Drive Boise, Idaho 83706 Phone: (866) 859-6757
www.RedBuilt.com

PROJECT
Chick-fil-A #5248

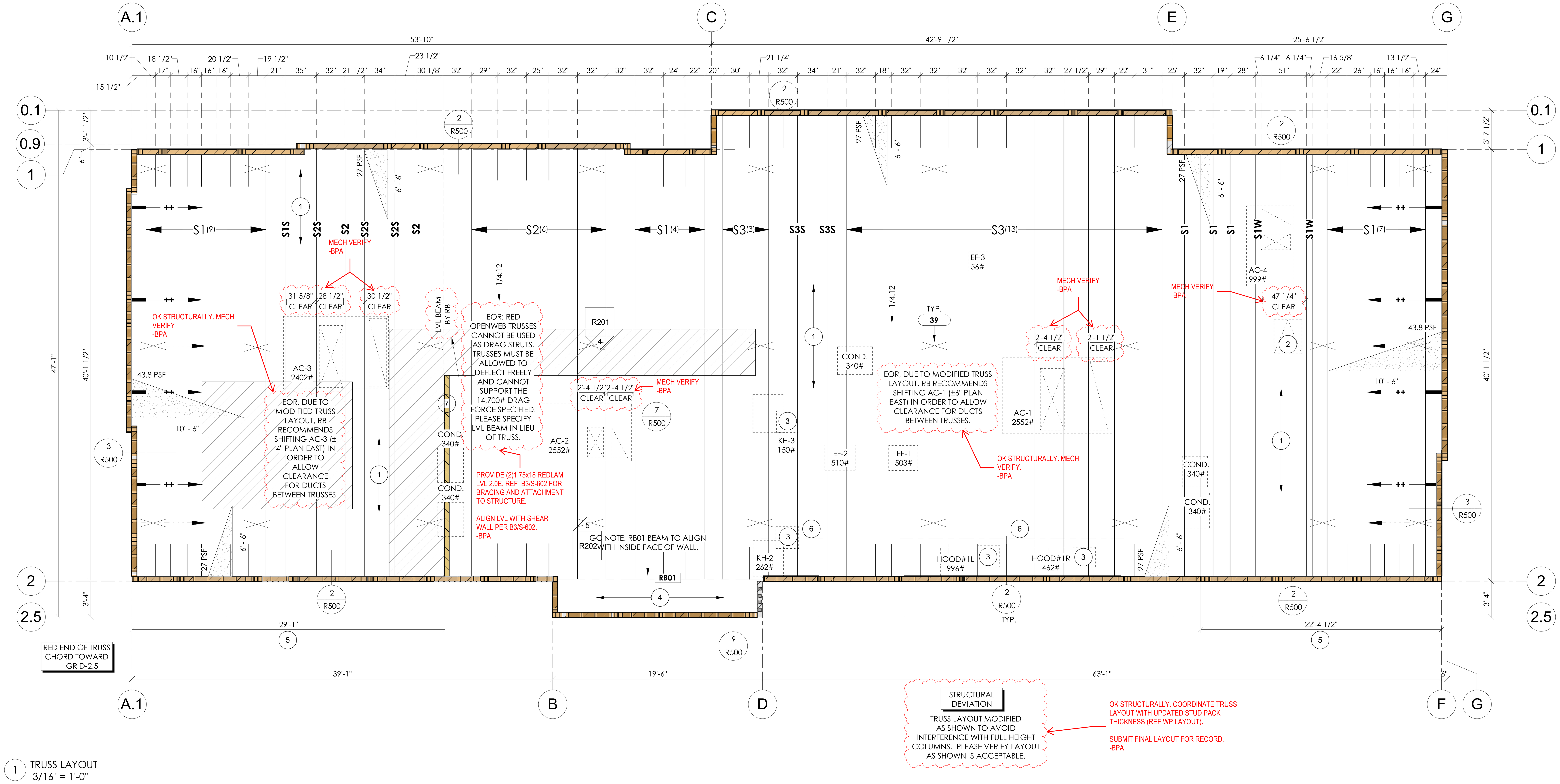
LOCATION
1025 SW Jefferson Street
LEE'S SUMMIT, MO 64081

#	by	Description	Date

Revisions

DRAWN BY: ARS DATE: 9/17/25
CHECK BY: JBL DATE: 9/17/25
REDBUILT PROJECT # 142840
SHEET NAME: PROJECT INFORMATION
SHEET # R010

THINK SAFETY –READ INSTALLATION INFORMATION BEFORE PROCEEDING



1 TRUSS LAYOUT
3/16" = 1'-0"

KEYNOTES:

1. DENOTES 2x LADDER FRAMING BY OTHERS REQUIRED TO SUPPORT SHEATHING AT LARGE TRUSS SPACING, SEE DETAIL 4/R500.
2. DENOTES 200# ROOF HATCH BY OTHERS.
3. DENOTES HOOD DUCT OPENING.
4. DENOTES FRAMING BY OTHERS.
5. DENOTES PLYWOOD EDGE BLOCKING BY RB.
6. DENOTES WALL BRACE LOAD: ±584# @ 160% (ULT). SEE DETAIL A3/S-501 FOR MORE INFO.
7. DENOTES SHEAR WALL BELLOW. SEE DETAIL B3/S-602 FOR MORE INFO.

CLEAR SPAN IS THE HORIZONTAL DISTANCE BETWEEN THE INSIDE FACE OF BEARING SURFACES

RedBuilt™ Open Web - Trusses

Quantity	Type	OW Description	Clear Span
23	S1	28" Parallel Red-S	39' - 2 1/2"
1	S1S	28" Parallel Red-S	39' - 2 1/2"
4	S1W	28" Parallel Red-S	39' - 2 1/2"
8	S2	28" Parallel Red-S	39' - 8 1/2"
3	S2S	28" Parallel Red-S	39' - 8 1/2"
16	S3	28" Parallel Red-S	42' - 10"
2	S3S	28" Parallel Red-S	42' - 10"

RedLam™ Products - LVL Beams

Quantity	Type	Description	Cut Length
1	RB01	5 1/4"x20" 2.0E RedLam LVL	20' - 0"
4	RB02*	1 3/4"x7 1/4" 2.0E RedLam LVL	24' - 0"
16	RB03*	1 3/4"x11 7/8" 2.0E RedLam LVL	16' - 0"

* NOT SHOWN ON PLAN, SEE RB DETAILS 2 & 3/R500 FOR MORE INFO.

KURZYNSKE RESPONSE:
AC#1 and AC#3 moved per the RedBuilt notes. Please note, that AC#1 has a slight conflict with one of the trusses due to the truss spacing. It may be able to be overcome in the field with an offset, but wanted to let it be known.

- SEE SHEET R010 "PROJECT INFORMATION" FOR SYMBOLS SHOWN ON PLANS, ADDITIONAL INFORMATION, AND GENERAL NOTES.
- SEE "MATERIAL LISTS" & "CALCULATION PACKAGE" FOR DETAILED INFORMATION ON MATERIALS SUPPLIED BY REDBUILT.

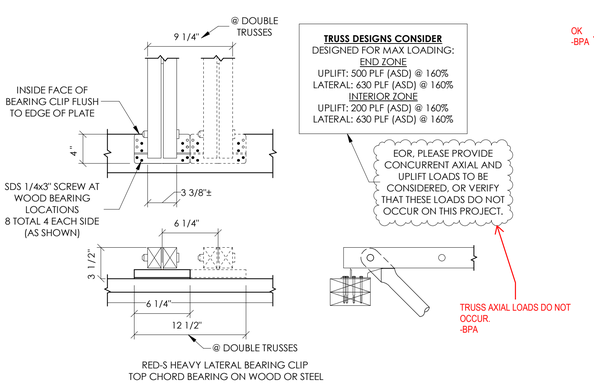
OUT FOR APPROVAL - NOT FOR PRODUCTION

RedBUILT™ Engineered Wood Products
200 E. Mallard Drive Boise, Idaho 83706 Phone: (866) 859-6757 www.RedBuilt.com

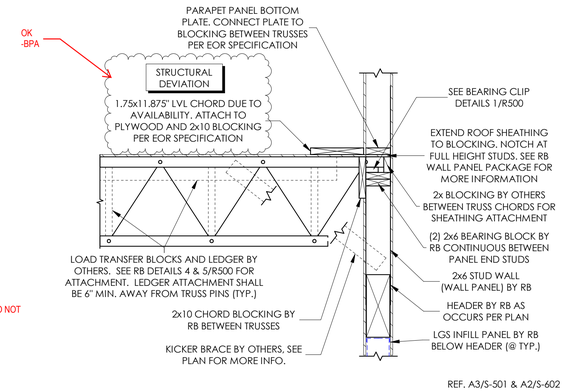
PROJECT: Chick-fil-A #5248
LOCATION: 1025 SW Jefferson Street, LEE'S SUMMIT, MO 64081

#	by	Description	Date
1			

DRAWN BY: ARS DATE: 9/17/25
CHECK BY: JBL DATE: 9/17/25
REDBUILT PROJECT #: 142840
SHEET NAME: ROOF PLACEMENT PLAN
SHEET #: R130

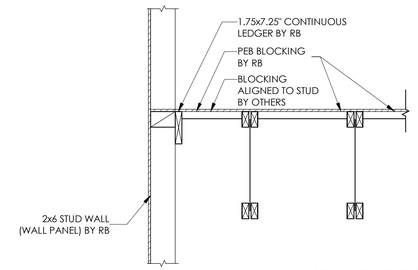


1 Lateral Heavy S-Clip (Wood Bearing) DBL



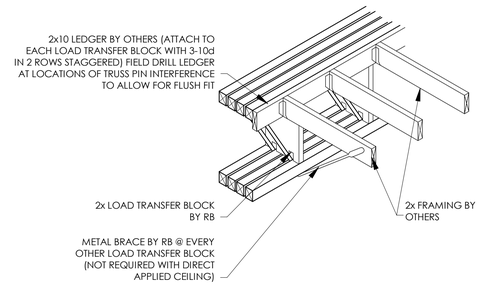
REF. A3/S-501 & A2/S-602

2 Red-S Wood Bearing Detail

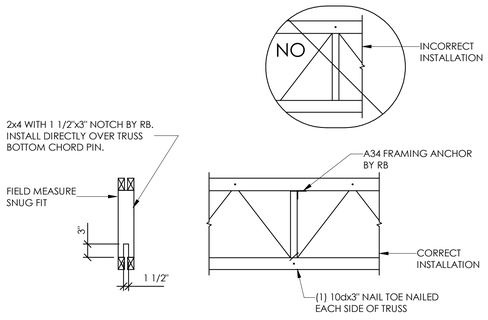


REF. A3/S-602 & B1/S-602

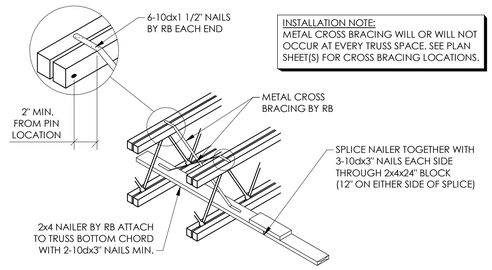
3 Red-S Perpendicular Truss Section



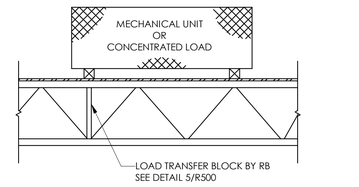
4 OW Ladder



5 Load Transfer Block

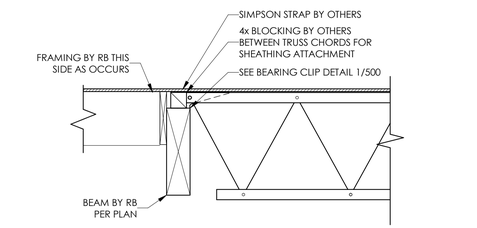


6 OW Cross Bracing



NOTE: WEIGHT OF MECH. UNIT TO BEAR DIRECTLY OVER PINS ON TOP CHORD OR DIRECTLY OVER LOAD TRANSFER BLOCKS, AS SHOWN. (MAXIMUM LOAD AND LOCATION SHALL BE IN ACCORDANCE WITH APPROVED TRUSS CALCULATIONS)

7 Mech Unit Red-S



REF. B4/S-610

9 Red-S Beam Bearing

NOT REVIEWED BY CDA

- SEE SHEET R010 FOR SYMBOLOGY, TAG CALLOUTS AND GENERAL NOTES NOT SHOWN HEREIN.
- SEE "MATERIAL LISTS" & "CALCULATION PACKAGE" FOR DETAILED INFORMATION ON MATERIALS HEREIN SUPPLIED BY REDBUILT.

OUT FOR APPROVAL - NOT FOR PRODUCTION

RedBuilt™
Engineered Wood Products
200 E. Mallard Drive Boise, Idaho 83706 Phone: (866) 859-6757
www.RedBuilt.com

PROJECT: Chick-fil-A #5248

LOCATION: 1025 SW Jefferson Street
LEE'S SUMMIT, MO 64081

#	by	Description	Date
1			

DRAWN BY: ARS DATE: 9/17/25
CHECK BY: JBL DATE: 9/17/25
REDBUILT PROJECT #: 142840
SHEET NAME: DETAILS
SHEET #: R500

THINK SAFETY -READ INSTALLATION INFORMATION BEFORE PROCEEDING