

SHOP DRAWING SUBMITTAL

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

Project Number: 142840 Date:10/8/2025
10:36:43 AM

Project Name: Chick-fil-A #5248

Project Address: 1025 SW Jefferson Street

LEE'S SUMMIT, MO 64081

Project Description: Roof Package

PROJECT INFORMATION:

Current Submittal: APPROVED FOR PRODUCTION

REFERENCE DOC	REFERENCE DOCUMENTS:										
DISCIPLINE	ВҮ	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:

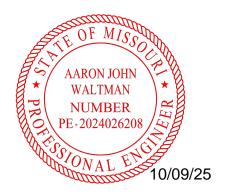
Project Manager:

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

Your secondary contact:

Sales Representative:

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



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.





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
Status Approved For Production
Report Type Customer

RedBuil	t™ Ope	en-Web Prod	ucts	Trusses									
Quantity	Туре	Series	Depth(s)	Appl.	Profile	Clear Span	Pr. Length	Pr. Load	Fastnrs. Left	Fastnrs. Right		Footage	Notes
16	S1	Red-S	28	115%	Parallel	39'-2.50"	40.0	149.8	8-SDS1/4x3	8-SDS1/4x3		640.0	
7	S1S	Red-S	28	115%	Parallel	39'-2.50"	40.0	149.8	8-SDS1/4x3	8-SDS1/4x3		280.0	
4	S1W	Red-S	28	115%	Parallel	39'-2.50"	40.0	149.8	8-SDS1/4x3	8-SDS1/4x3		160.0	
6	S2	Red-S	28	115%	Parallel	39'-8.50"	41.0	162.8	8-SDS1/4x3	8-SDS1/4x3		246.0	
5	S2S	Red-S	28	115%	Parallel	39'-8.50"	41.0	162.8	8-SDS1/4x3	8-SDS1/4x3		205.0	
14	S3	Red-S	28	115%	Parallel	42'-10.00"	44.0	167.2	8-SDS1/4x3	8-SDS1/4x3		616.0	
4	S3S	Red-S	28	115%	Parallel	42'-10.00"	44.0	167.2	8-SDS1/4x3	8-SDS1/4x3		176.0	
56		Red-S									Total	2323.0	

RedBuil	t™ Ope	n-Web Produ	ıcts	Bottom Chord Nailer	
Lineal Ft	Туре	Size	Grade		Notes
384		2x4			

RedBuilt	RedBuilt™ Open-Web Products Strut Bracing			Strut Brac	ing	
Quantity	Туре	Style	Spacing	Series		Notes
8		W5	16	Red-S		
4		W5	19.2	Red-S		
4		W5	24	Red-S		
40		W5	32	Red-S		

RedBuil	t™ Ope	n-Web Produ	ucts	Cross Bracing							
Quantity	Туре	Style	Length	Bend Profile	Uplift Application	Depth	Spacing			Notes	
58		B2	39.000		Wind Uplift <30"	28					
144		B3R	41.000			28					

RedBuilt	RedBuilt™ Open-Web Products				sfer Blocks				
Quantity	Туре	Series	Size	Depth		Material	Net Length		Notes
60		Red-S	Single	28		SS	23.40		

RedLam	™ LVL	Products		LVL Beams							
Quantity	Туре	Size	Length	Grade	P.E.T.	Multi-Ply Substi	titution	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			
2	RB06	1.75x18	41'-0.00"	2.0E	No	N/A		82.0			
1	• • • •	5.25x20	• • • • • • • •	• • • • • • •	• • • • • • • • •		· · · · · · Total	20.0			
4	• • • •	1.75x7.25	• • • • • • • •	• • • • • • •	• • • • • • • • •		· · · · · · Total	96.0			
16	• • • •	1.75x11.88		• • • • • •	• • • • • • • • •		Total	256.0			
2		1.75x18		• • • • • •			Total	82.0			

RedBuilt	t™ Pro	ducts		Plywood Edge Blocking						
Quantity	Туре	Size	Length	Z-Clips	Grade	Spacing	Series		Notes	
50		2x4	12.438	One End		16	Red-S			
20		2x4	12.438	Both Ends		16	Red-S			
30		2x4	15.625	One End		19.2	Red-S			
20		2x4	20.438	One End		24	Red-S			
30		2x4	28.438	One End		32	Red-S			
20		2x4	28.438	Both Ends		32	Red-S			
50		2x4	44.438	One End		48	Red-S			

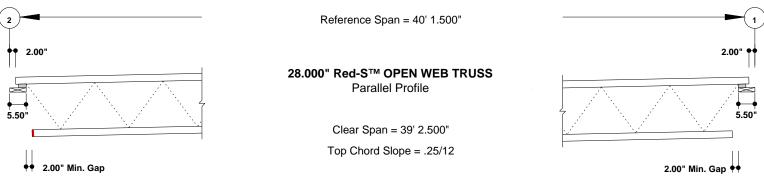
			Hardware	
Quantity	Туре	Description		Notes
1.0 lb		8dx1.5" Nails (0.131"x1.5")		
25.0 lb		10dx1.5" Nails (0.148"x1.5")		
896		SDS1/4x3 Screw		
180		PEB Z-Clip (1.5")		
60		A34 Angle		
16		A35 Framing Anchor		



Delivery: R1 Del. Desc.: Roof Type: S1 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 @ 32.500" 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 @ 23.375" O.C.-2nd from LEFT - 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 18' 6.000"	Adds to	BC	Soffit
Uniform(psf)	S(1.15)	34.4	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift

LOAD GROUP #3 @ 25.375" 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 18' 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)



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Project: Chick-fil-A #5248 Location: Lee's Summit, MO

Delivery: R1 Del. Desc.: Roof Type: S1 Qty: 16

Project Number: 142840

LOAD GROUP #4 @ 19.500" 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 @ 32.500" 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 @ 24.125" 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	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 @ 31.125" O.C.-21 from LEFT - AC#2

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

LOAD GROUP #8 @ 26.750" O.C.-7th-8th 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 18' 6.000"	Adds to	ВС	Soffit
Uniform(psf)	S(1.15)	2.9	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift



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Delivery: R1 Del. Desc.: Roof Type: S1 Qty: 16

Project Number: 142840

DEAD APPL APPLIED TO COMMENT **TYPE** CLASS LIVE LOCATION (1) Tapered(psf) S(1.15) 24.1 to 0 0 to 0 5.500" to 6' 3.500" Adds to Tapered Drift (Left) TC 33' 8.000" to 39' 6.000" Tapered Drift (Right) 0 to 0 TC Tapered(psf) S(1.15) 0 to 24.1 Adds to

(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: Material: Plate(s) 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: 97.2% (Design / Allowable) Truss design includes consideration for partial span application live load.

LEFT MAXIMUM LEFT MINIMUM **RIGHT MINIMUM REACTIONS** RIGHT MAXIMUM

> Total Load (lbs) 2951 S (1.15) -1637 W (1.60) 3016 W (1.60) -847 W (1.60)

Live Load (lbs) 2088 -2277 1484 -1488

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 1.889" (L/249) Deflection (Live Load) Span: 1.335" (L/352) Center Span Camber: 1.186", 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.

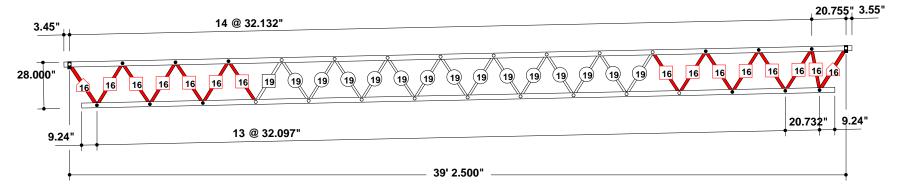
- Allowable Stress Design methodology was used for Code 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords

analyzed using RedBuilt™ analysis.

- Pricing Load = 149.8 plf

OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227



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 1/2" DIA.

Project: Chick-fil-A #5248 Truss ID: S1
Location: Lee's Summit, MO Quantity: 16

Delivery: R1 Project Number: 142840

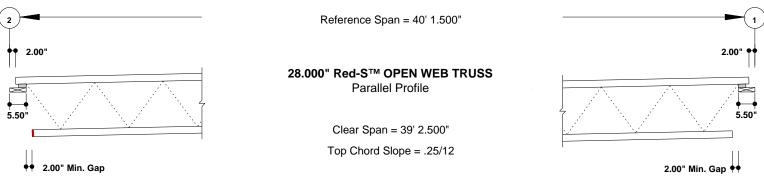
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RedLam™, RedBuilt™ is a trademark of RedBuilt LLC, Boise, Idaho, USA.



Delivery: R1 Del. Desc.: Roof Type: S1S Qty: 7

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 @ 32.500" 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 @ 23.375" O.C.-2nd from LEFT - 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 18' 6.000"	Adds to	BC	Soffit
Uniform(psf)	S(1.15)	34.4	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift

LOAD GROUP #3 @ 25.375" 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 18' 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)



Delivery: R1 Del. Desc.: Roof Type: S1S Qty: 7

Project Number: 142840

LOAD GROUP #4 @ 19.500" 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 @ 32.500" 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 @ 24.125" 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	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 @ 31.125" O.C.-21 from LEFT - AC#2

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

LOAD GROUP #8 @ 26.750" O.C.-7th-8th 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 18' 6.000"	Adds to	ВС	Soffit
Uniform(psf)	S(1.15)	2.9	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift



10/8/2025 9:56:18 AM PAGE 3 Project: Chick-fil-A #5248 Location: Lee's Summit, MO

Delivery: R1 Del. Desc.: Roof Type: S1S Qty: 7

Project Number: 142840

DEAD APPL APPLIED TO **TYPE** CLASS LIVE LOCATION (1) COMMENT Tapered(psf) S(1.15) 24.1 to 0 0 to 0 5.500" to 6' 3.500" Adds to TC Tapered Drift (Left) 33' 8.000" to 39' 6.000" Tapered Drift (Right) TC Tapered(psf) S(1.15) 0 to 24.1 0 to 0 Adds to

(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: Material: Plate(s) 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: 97.2% (Design / Allowable) Truss design includes consideration for partial span application live load.

LEFT MAXIMUM LEFT MINIMUM **RIGHT MINIMUM REACTIONS** RIGHT MAXIMUM

> Total Load (lbs) 2951 S (1.15) -1637 W (1.60) 3016 W (1.60) -847 W (1.60) 2088 -2277 1484 -1488

Live Load (lbs)

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 1.889" (L/249) Deflection (Live Load) Span: 1.335" (L/352) Center Span Camber: 1.186", Matched to S1

ADDITIONAL NOTES

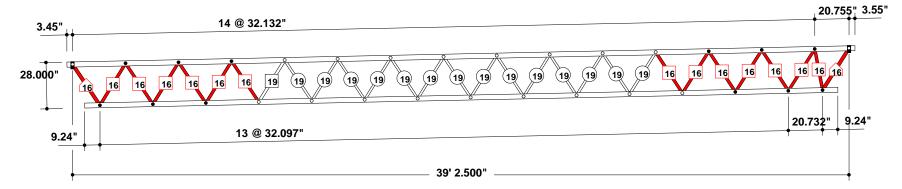
- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided 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 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords

analyzed using RedBuilt™ analysis. - Pricing Load = 149.8 plf

OPERATOR INFORMATION

<Program User's Name>, <Program User's Phone Number>



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.

1/2" DIA. PIN

WEB, 1" DIA. & WEB GAUGE

1 1/2" DIA.

Project: Chick-fil-A #5248 Truss ID: S1S Location: Lee's Summit, MO Quantity: 7

Delivery: R1 Project Number: 142840

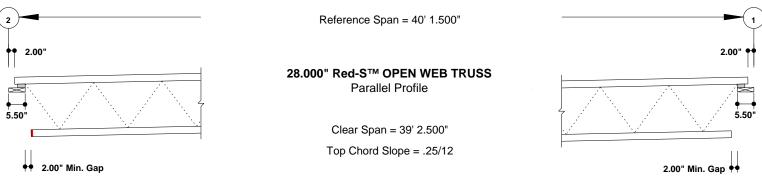
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Delivery: R1 Del. Desc.: Roof Type: S1W Qty: 4

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 @ 32.500" 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 @ 23.375" O.C.-2nd from LEFT - 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 18' 6.000"	Adds to	BC	Soffit
Uniform(psf)	S(1.15)	34.4	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift
\(\(\)	,	-	0				

LOAD GROUP #3 @ 25.375" 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 18' 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)



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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 @ 19.500" 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 @ 32.500" 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 @ 24.125" 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	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 @ 31.125" O.C.-21 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 ¹ 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	ВС	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)

LOAD GROUP #8 @ 26.750" O.C.-7th-8th 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 18' 6.000"	Adds to	ВС	Soffit
Uniform(psf)	S(1.15)	2.9	0	5.500" to 39' 5.500"	Adds to	TC	Parallel Drift



Delivery: R1 Del. Desc.: Roof Type: S1W Qty: 4

Project Number: 142840

DEAD APPL APPLIED TO **TYPE** CLASS LIVE LOCATION (1) COMMENT Tapered(psf) S(1.15) 24.1 to 0 0 to 0 5.500" to 6' 3.500" Adds to TC Tapered Drift (Left) 33' 8.000" to 39' 6.000" Tapered Drift (Right) TC Tapered(psf) S(1.15) 0 to 24.1 0 to 0 Adds to

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

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

SUPPORTSLEFT 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: 97.2% (Design / Allowable) Truss design includes consideration for partial span application live load.

REACTIONS LEFT MAXIMUM LEFT MINIMUM RIGHT MAXIMUM RIGHT MINIMUM

Total Load (lbs) 2951 S (1.15) -1637 W (1.60) 3016 W (1.60) -847 W (1.60) Live Load (lbs) 2088 -2277 1484 -1488

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 1.889" (L/249)
Deflection (Live Load) Span: 1.335" (L/352)
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.

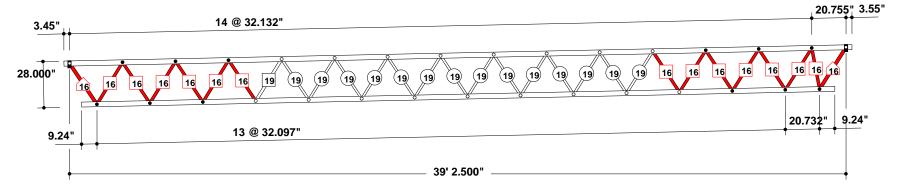
- Allowable Stress Design methodology was used for Code 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords

analyzed using RedBuilt™ analysis.

- Pricing Load = 149.8 plf

OPERATOR INFORMATION

<Program User's Name>, <Program User's Phone Number>



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.

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

Delivery: R1 Project Number: 142840

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Delivery: R1 Del. Desc.: Roof Type: S2 Qty: 6

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 @ 36.625" 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 @ 36.625" O.C.-15/16th 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 @ 35.250" 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' 8.500" 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)



Delivery: R1 Del. Desc.: Roof Type: S2 Qty: 6

Project Number: 142840

LOAD GROUP #4 @ 32.000" O.C.-19th 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)

LOAD GROUP #5 @ 30.375" O.C.-12th 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)

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

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

SUPPORTSLEFT SUPPORT
Material:(Angle: 0°)RIGHT SUPPORT
Material:(Angle: 0°)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% (Design / Allowable) Truss design includes consideration for partial span application live load.

REACTIONS LEFT MAXIMUM LEFT MINIMUM RIGHT MAXIMUM RIGHT MINIMUM

Total Load (lbs) 3471 W (1.60) -1858 W (1.60) 3152 W (1.60) -922 W (1.60)

Live Load (lbs) 1696 -2587 1612 -1657

DEFLECTIONS & CAMBER

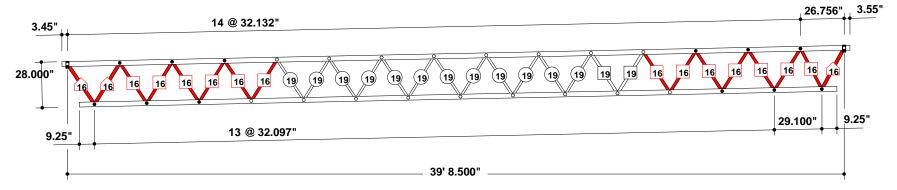
Deflection (Total Load) Span: 2.189" (L/218)
Deflection (Live Load) Span: 1.063" (L/448)
Center Span Camber: 1.216", Matched to S3

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 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 162.8 plf

OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227



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: 1.216" Bottom Chord Slope: 0.250/12

Red-S™ SERIES LEGEND

Project: Chick-fil-A #5248 Truss ID: S2 Location: Lee's Summit, MO Quantity: 6

Delivery: R1 Project Number: 142840

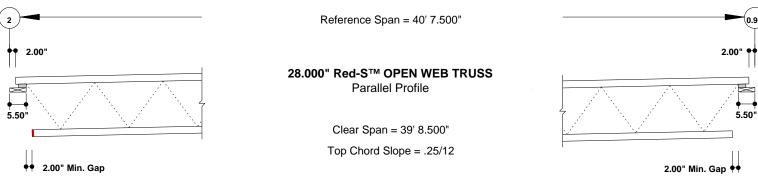
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Delivery: R1 Del. Desc.: Roof Type: S2S Qty: 5

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 @ 36.625" 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 @ 36.625" O.C.-15/16th 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 @ 35.250" O.C.-10th from LEFT - AC#3

TYPE Uniform(psf)	CLASS W(1.60)	LIVE 20.6	DEAD 0	LOCATION (1) 2.000" to 39' 11.000"	APPL Adds to	APPLIED TO TC	COMMENT Wind Down ULT
Strap(lbs)	W(1.60)	-1680	0	Left End	Adds to	TC	Axial Load ULT
Strap(lbs)	W(1.60)	-1680	Ö	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' 8.500" 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)



10/8/2025 9:59:59 AM

Project: Chick-fil-A #5248 Location: Lee's Summit, MO

Delivery: R1 Del. Desc.: Roof Type: S2S Qty: 5

Project Number: 142840

LOAD GROUP #4 @ 32.000" O.C.-19th 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)

LOAD GROUP #5 @ 30.375" O.C.-12th 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)

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

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

LEFT SUPPORT **SUPPORTS** RIGHT SUPPORT (Angle: 0°) (Angle: 0°) Plate(s) Material: 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% (Design / Allowable) Truss design includes consideration for partial span application live load.

REACTIONS LEFT MAXIMUM LEFT MINIMUM **RIGHT MINIMUM** RIGHT MAXIMUM

Total Load (lbs) 3471 W (1.60) -1858 W (1.60) 3152 W (1.60) -922 W (1.60)

Live Load (lbs) 1696 -2587 1612 -1657

DEFLECTIONS & CAMBER

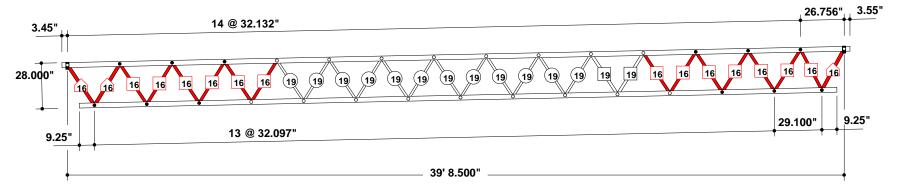
Deflection (Total Load) Span: 2.189" (L/218) Deflection (Live Load) Span: 1.063" (L/448) Center Span Camber: 1.216", Matched to S2

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 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 162.8 plf

OPERATOR INFORMATION

<Program User's Name>, <Program User's Phone Number>



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: 1.216" **Bottom Chord Slope:** 0.250/12

Red-S™ SERIES LEGEND

Heavy S-Clip Lateral @ LEFT TOP PIN# 1. Project: Chick-fil-A #5248 Truss ID: S2S Heavy S-Clip Lateral @ RIGHT TOP PIN# 16. Location: Lee's Summit, MO Quantity: 5 3/4" DIA. PIN Delivery: R1 Project Number: 142840 1/2" DIA. PIN WEB, 1" DIA. & WEB GAUGE 1 1/4" DIA. 1 1/2" DIA.

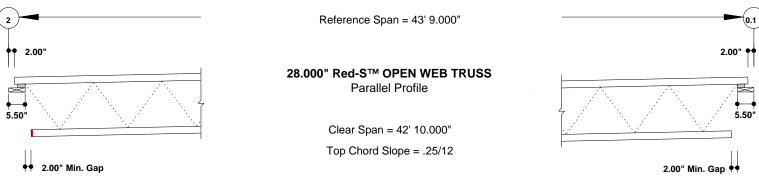
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Delivery: R1 Del. Desc.: Roof Type: S3 Qty: 14

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 @ 34.125" 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 KN6 (ULT)

LOAD GROUP #2 @ 30.125" O.C.-26th from LEFT - Hood#2, EF, Condenser

TVDE	01.400		DEAD	LOCATION (4)	A DDI	ADDI IED TO	COMMENT
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)
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)
Point(lbs)	S(1.15)	0	28	29' 8.000"	Adds to	TC, on chord(s)	EF-1 (56#/2)



10/8/2025 9:57:47 AM PAGE 2 Project: Chick-fil-A #5248 Location: Lee's Summit, MO

Delivery: R1 Del. Desc.: Roof Type: S3 Qty: 14

Project Number: 142840

LOAD GROUP #4 @ 34.125" O.C.-29th from LEFT - Overspace & Mech

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(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	170	20' 6.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	255	11' 5.000"	Adds to	TC, on chord(s)	EF (510#/2)

LOAD GROUP #5 @ 34.000" O.C.-31st from LEFT - Overspace & Mech

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(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	170	20' 6.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	252	11' 5.000"	Adds to	TC, on chord(s)	EF (503#/2)

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

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

LEFT SUPPORT **SUPPORTS** RIGHT SUPPORT (Angle: 0°) (Angle: 0°) Plate(s) Material: 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: 99.9% (Design / Allowable) Truss design includes consideration for partial span application live load.

REACTIONS LEFT MAXIMUM LEFT MINIMUM RIGHT MINIMUM RIGHT MAXIMUM

Total Load (lbs) 4236 W (1.60) -1799 W (1.60) 3114 W (1.60) -955 W (1.60)

Live Load (lbs) 2224 -2533 1743 -1690

DEFLECTIONS & CAMBER

Deflection (Total Load) Span: 2.666" (L/193) Deflection (Live Load) Span: 1.420" (L/362) Center Span Camber: 1.415", Recommended

ADDITIONAL NOTES

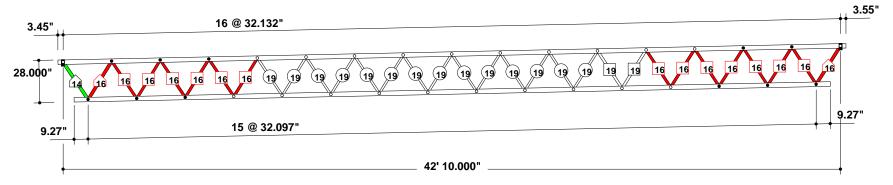
- IMPORTANT! The analysis presented is output from software developed by RedBuilt LLC. Allowable product values shown are in accordance with current RedBuilt™ materials and code accepted design values. RedBuilt™ Engineering has verified the analysis. The input loads and dimensions have been provided 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 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 167.2 plf

OPERATOR INFORMATION

Adam Stritenberger, (740) 368-4227

10/8/2025 9:57:47 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: 1.415" 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.

1 1/2" DIA.

Project: Chick-fil-A #5248 Truss ID: S3 Location: Lee's Summit, MO Quantity: 14

Delivery: R1 Project Number: 142840

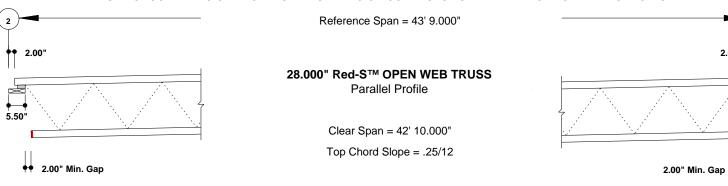
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Delivery: R1 Del. Desc.: Roof Type: S3S Qty: 4

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 @ 34.125" 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 KN6 (ULT)

LOAD GROUP #2 @ 30.125" O.C.-26th from LEFT - Hood#2, EF, Condenser

TVDE	01.400		DEAD	LOCATION (4)	A DDI	ADDI IED TO	COMMENT
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)
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)
Point(lbs)	S(1.15)	0	28	29' 8.000"	Adds to	TC, on chord(s)	EF-1 (56#/2)



10/8/2025 10:00:28 AM

Project: Chick-fil-A #5248 Location: Lee's Summit, MO

Delivery: R1 Del. Desc.: Roof Type: S3S Qty: 4

Project Number: 142840

LOAD GROUP #4 @ 34.125" O.C.-29th from LEFT - Overspace & Mech

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(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	170	20' 6.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	255	11' 5.000"	Adds to	TC, on chord(s)	FF (510#/2)

LOAD GROUP #5 @ 34.000" O.C.-31st from LEFT - Overspace & Mech

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(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	170	20' 6.000"	Adds to	TC, on chord(s)	Condenser (340#/2)
Point(lbs)	S(1.15)	0	252	11' 5.000"	Adds to	TC, on chord(s)	EF (503#/2)

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

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

LEFT SUPPORT **SUPPORTS** RIGHT SUPPORT (Angle: 0°) (Angle: 0°) Plate(s) Material: 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: 99.9% (Design / Allowable) Truss design includes consideration for partial span application live load.

REACTIONS LEFT MAXIMUM LEFT MINIMUM RIGHT MINIMUM RIGHT MAXIMUM

Total Load (lbs) 4236 W (1.60) -1799 W (1.60) 3114 W (1.60) -955 W (1.60)

Live Load (lbs) 2224 -2533 1743 -1690

DEFLECTIONS & CAMBER

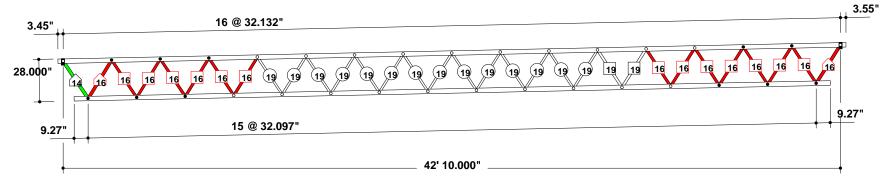
Deflection (Total Load) Span: 2.666" (L/193) Deflection (Live Load) Span: 1.420" (L/362) Center Span Camber: 1.415", Matched to S3

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 2012-2021 IBC analyzing the RedBuilt™ custom products listed above with chords analyzed using RedBuilt™ analysis.
- Pricing Load = 167.2 plf

OPERATOR INFORMATION

<Program User's Name>, <Program User's Phone Number>



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

1.415" Camber: **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

1/2" DIA. PIN

1 1/4" DIA.

1 1/2" DIA.

Project: Chick-fil-A #5248 Truss ID: S3S Location: Lee's Summit, MO Quantity: 4

Delivery: R1 Project Number: 142840

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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.



Note: Double chord

2-10dx3" nails

each end-

2x4 blocks (or multipleolocks) nailed to brace

Fit blocks to allow—

Non-load bearing-

partition wall

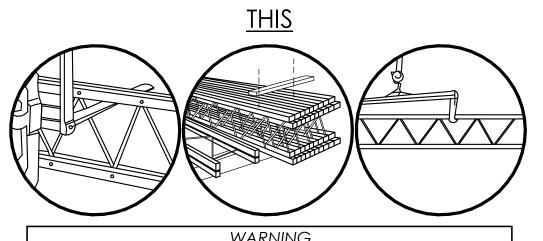
(gap between

wall & brace)

for movement

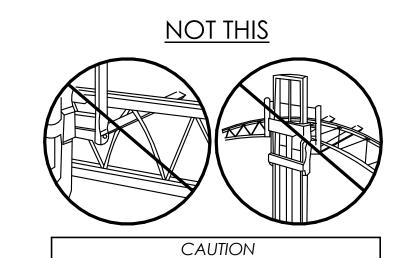
truss similar





Workers should stay clear when cutting the banding to

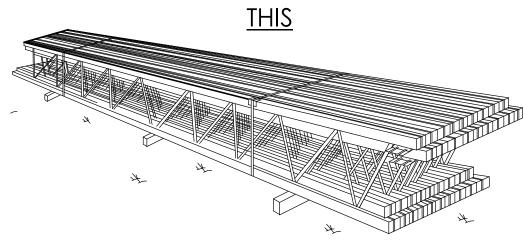
avoid possible injury from flying banding or toppling trusses



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

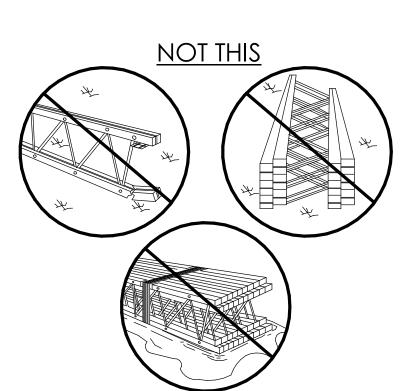
- Trusses will be delivered to the jobsite in bundles of twenty or fewer, banded together for handling and shipment. To avoid damage they should be left in these bundles until they are ready to be installed in the structure.
- Miscellaneous hardware such as bearing angles, lag screws, bolts and nails 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 TM, will be bundled and banded.

PRODUCT STORAGE





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



Damaged trusses must be repaired or

3 NAILING OF SHEATHING TO TOP CHORD MEMBERS

sheathing.

Single

Chord

Red-W™

1 1/2"x4 3/4"

See sections 5A and 5D.

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

Double

Chord

Red-S™

1 1/2"x2 5/16"

Maximum Nail Spacing Widest spacing for nails in each chord member is 24" oc Sheathing Chord members-

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

ailing pattern per plans and specifications. no pacing should never exceed 24" on-center in ther chord member. do not use nails smaller han 8dx21/2" or larger than 16dx31/2"

No tab for single-chord trusses-

4 MATERIAL IDENTIFICATION

Minimum Nail Spacing (1) 14 gauge staples may be a direct substitute for 8dx2 1/2 nails if a minimum penetration of 1" into the flange is

A. Strut Bracing is tubular steel with flattened ends supplied with all open-web

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

(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.

C. 2x4 Starter Struts supplied by contractor with framing anchors each end

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.

Double

Chord

Red-M™

1 1/2"x3 1/2"

trusses (Simpson HRS12 supplied for 12" OC systems). Strut bracing to be

installed as each truss is set. See sections 5A - 5D.

(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, and stagger. Maintain 3/8" minimum edge distance.

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

> > Double

Chord

Red-H™

1 1/2"x5 1/2"

5 INSTALLATION BRACING



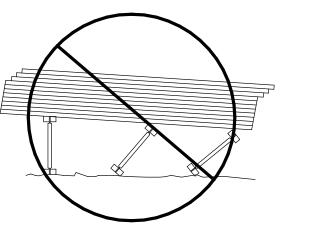
DO NOT walk on the trusses until all truss bearings and bracing have been permanently attached. Injury may result.

WARNING

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

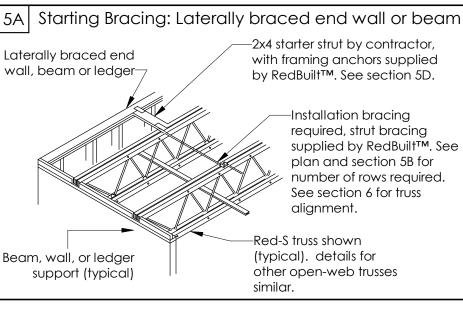
NOTICE

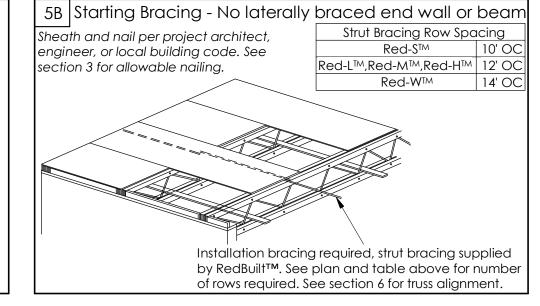
nstallation bracing and procedures as well as the safety of workers, are the responsibility of the installer. The installer should make sure that this installation information is understood by all persons involved in the truss installation.

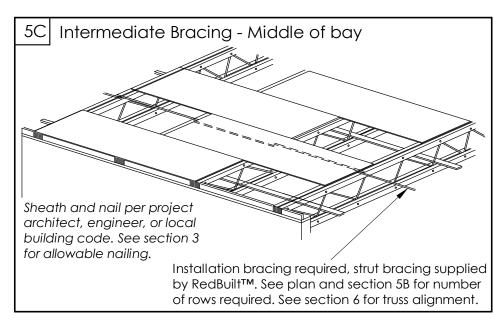


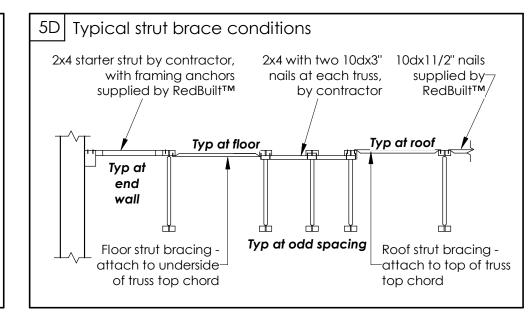
DO NOT stack building materials on trusses before all truss bearings and bracing have been permanently attached. See section 7

Brace EACH truss as it is placed

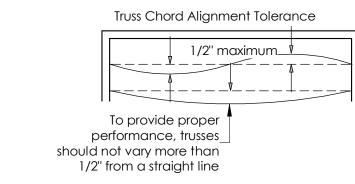


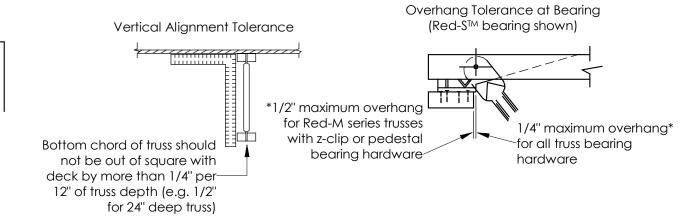






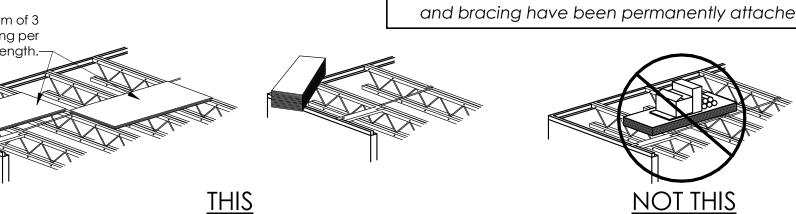
6 INSTALLATION TOLERANCES PERMITTED





7 STACKING MATERIAL **CAUTION**: Maximum of 3 sheets of sheathing per 10 feet of truss length.-

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

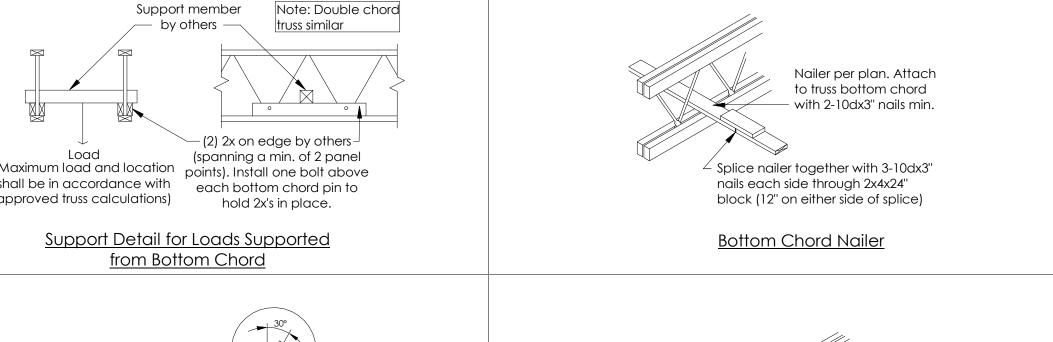


FIELD MODIFICATION OF TRUSSES

- DO NOT cut, drill or damage the chords or webs.
- DO NOT make field modifications to trusses without

-Slotted truss clip by others to bottom of truss, each side of wall. Do not nail clip to wall. Note: Double chord Non-load bearing partition wall -Distance "X" (gap between wall & truss) Support member (Maximum load and location shall be in accordance with from Bottom Chord

8 STANDARD INSTALLATION DETAILS



Spacing of clips and blocks per EOR

Distance "X"

Non-load Bearing Partitions

0'-20'

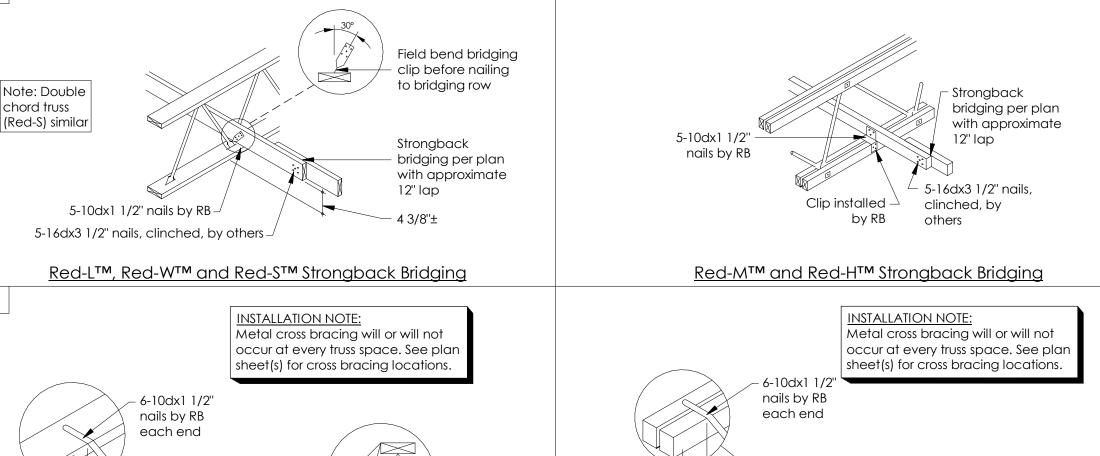
20'-40'

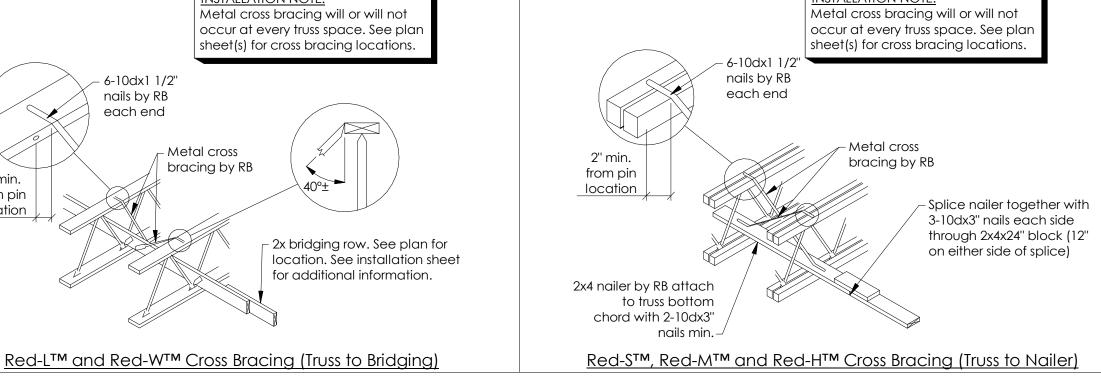
40'-60'

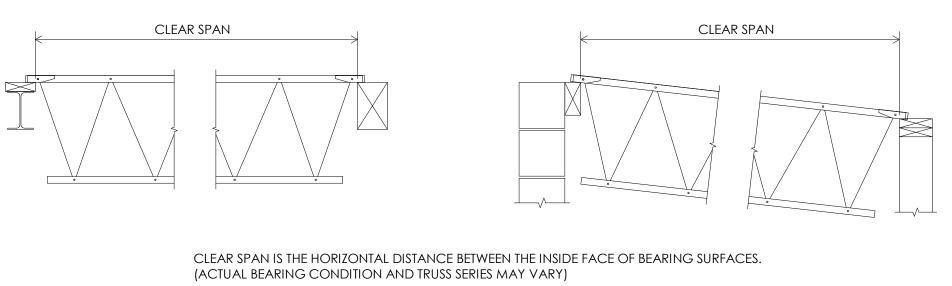
1 1/4"

1 1/4"

2 1/2"







Guidelines for Open Web "Clear Spans"

- **NOT PERMITTED**
- DO NOT remove steel pins or webs (even temporarily).
- written approval of RedBuilt™.

2" min.

from pin

location

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 TM Representative directly, or for general customer service call (866) 859-6757

Sheet R001

Single

Chord

1 1/2"x3 1/2"

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

	,	<u>FASTEN</u>	ER SIZES	<u> </u>	
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

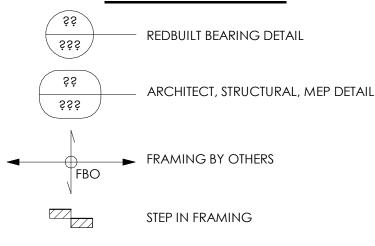
(1) 14 GAUGE STAPLES MAY BE A DIRECT SUBSTITUTE FOR 8d X 2.5" NAILS FOR WEB STIFFENERS ONLY

(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 LSL	LIVE LOADS LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
OFA	OUT FOR APPROVAL
OW	OPEN-WEB TRUSSES BY REDBUILT™
PI	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



SLOPE IN FRAMING



FOR ALLOWABLE HOLES, FASTENER INFORMATION OR ATTACHMENT OF SPRINKLER LINES, MECHANICAL DUCTS, ETC. TO REDBUILT JOIST OR 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

PRODUCT CALLOUT AND QUANTITY ON PLAN. ¬XX(##)→

"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

ADDITIONAL LOADING

-SNOW DRIFT MAGNITUDE IN PSF X'-XX'' -SNOW DRIFT LENGTH

XXX# -MECHANICAL WEIGHT

-SUSPENDED SOFFIT: 6PSF

PRODUCT CALLOUT LEGEND

A# - 145 B# - I45L C# - 153 D# - 158 E# - 165 F# - 190 J# - 190H K# - 190HS

TAPERED RED-I JOISTS: • X# - TAPERED 145

Y# - TAPERED 165 Z# - TAPERED 190

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

 D - FACTORY ASSEMBLED DOUBLE JOIST **OPENWEB TRUSSES:** H# - RED-H

W# - RED-W

L# - RED-L M# - RED-M S# - RED-S

OPENWEB TRUSS SUB-TYPE CALLOUTS (I.E. L3W):

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

AARON JOHN WALTMAN NUMBER \ PE-2024026208

025 EE'S

REDBUILT PROJECT # 142840

PROJECT INFORMATION

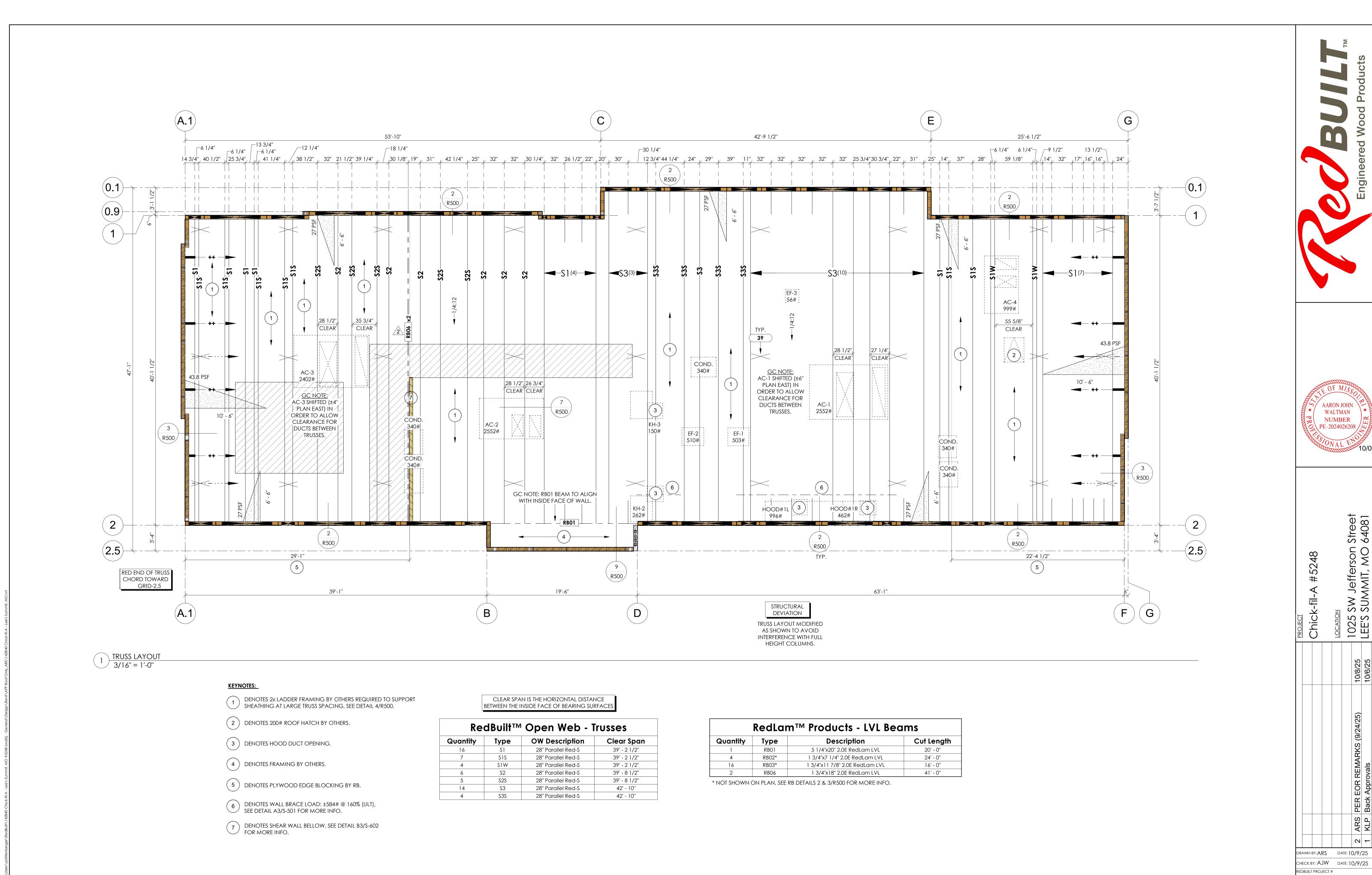
CHECK BY: AJW DATE: 10/9/25

R010

PROJECT 3D VIEW

 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.

APPROVED FOR PRODUCTION



 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.

Street 64081

SW Jefferson (SUMMIT, MO

1025 LEE'S

4 7 10

142840

ROOF PLACEMENT

PLAN

R130

APPROVED FOR PRODUCTION

