Application #
BRES 1966 00 39
Robert Molar Job

893-2795

COMTECH
DIVISION OF CAPE FEAR SUPPLY CO.

TRUSSES & BEAMS
Reilly Road Industrial Park
P.O. Box 40408 – Fayetteville, North Carolina 28309
(910) 864-TRUS(8787) / 1-800-868-5295
Fax (910) 864-4444
http://www.comtechfay.com
sduncan@comtechfay.com

SCOT DUNCAN
Mobile (910) 237- 0358

DATE: June 26, 2019

TO: Jerry Edge

ATTENTION: Jerry Edge / 182 West Dove Ridge Lane Job

FAX #: 910-424-6250

Number of Pages including cover sheet: 8

FROM: Scot Duncan

NOTES:

Jerry here are the truss designs, layout, beam drawing and job quote for the job on 182 West Dove Ridge Lane. I will need you to sign off on the drawings and fax them back to me. I will also need to know when you would like these delivered. Once I get this back I will put the job in the shop and do our best to make your date. I cannot promise that we will make that date but we will do our best to get close. If you have any questions you can either call or email me.

Thanks
Scot Duncan

ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: J0619-2985
182 West Dove Ridge Ln.

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

Pages or sheets covered by this seal: E13203213 thru E13203214

My license renewal date for the state of North Carolina is December 31, 2019.

North Carolina COA: C-0844

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

June 25,2019

Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	182 West Dove Ridge Ln.
J0619-2986	A1	COMMON SUPPORTED GAB	2	1	E13203215
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309

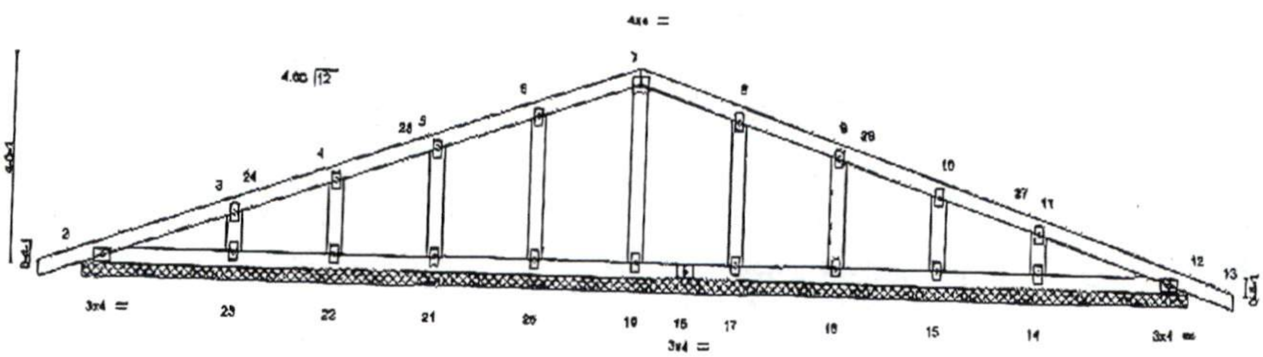
8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Jun 25 07:28:32 2019 Page 1

ID:gBeAdX2ZkXHCTygAkGaXKmz2qNI-scNPWTcp2Y32suEYIepJ8BGjM]51DJ5PerVy9z2pDH

-0-10-8 | 11-0-0 | 22-0-0 | 22-10-8

0-10-8 | 11-0-0 | 11-0-0 | 0-10-8

Scale = 1:38.1



22-0-0

22-0-0

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	0.00	12	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	13	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 97 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.3

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

REACTIONS. All bearings 22-0-0.
(lb) - Max Horz 2=80(LC 16)
Max Uplift All uplift 100 lb or less at joint(s) 2, 20, 21, 22, 23, 17, 16, 15, 14, 12
Max Grav All reactions 250 lb or less at joint(s) 2, 19, 20, 21, 22, 23, 17, 15, 16, 14, 12

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 3-6-5, Exterior(2) 3-6-5 to 11-0-0, Corner(3) 11-0-0 to 15-4-13 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 20, 21, 22, 23, 17, 16, 15, 14, 12.

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

June 25,2019

Job	Truss	Truss Type	Qty	Ply	182 West Dove Ridge Ln.
J0619-2965	A2	Common	14	1	E13203214
					Job Reference (optional)

Comtech, Inc., Fayetteville, NC 28309

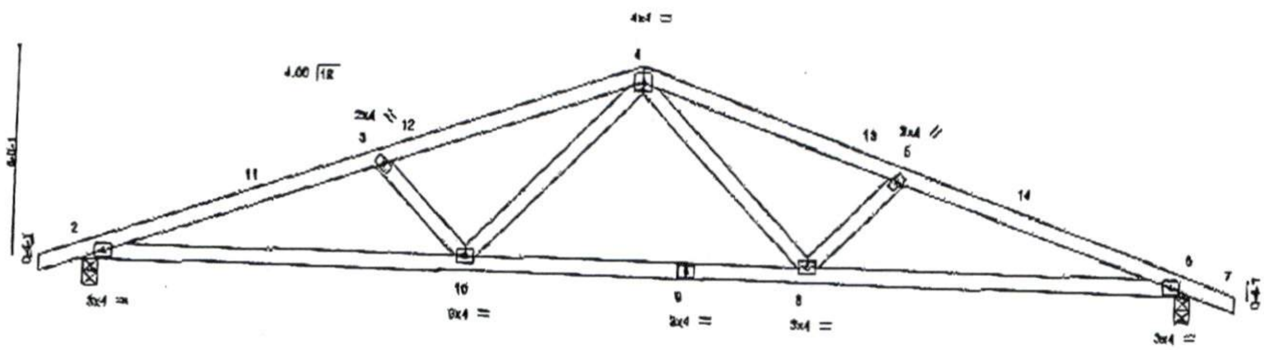
8.130 s Mar 11 2018 MiTek Industries, Inc. Tue Jun 25 07:28:33 2019 Page 1

ID:gBcA0X2Z0XHCTygAI0BXKmz2qNI-KoxmjpdlprBvC2pkJWKYPOepRvyHmdmEUobZUbz2pDG

-0-10-8 | 5-10-11 | 11-0-0 | 16-1-5 | 22-0-0 | 22-10-8

0-10-8 | 5-10-11 | 5-1-5 | 5-1-5 | 5-10-11 | 0-10-8

Scale = 1:38.1



7-7-2 | 14-4-14 | 22-0-0

7-7-2 | 6-9-12 | 7-7-2

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.09	8-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.22	8-8	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.06	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.06	6-10	>999	240	Weight: 92 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-11-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-8-11 oc bracing.

REACTIONS. (lb/size) 2=930/0-3-8, 6=930/0-3-8
Max Horz 2=47(LC 18)
Max Uplift 2=-106(LC 8), 6=-106(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2039/492, 3-4=-1787/427, 4-5=-1787/427, 5-6=-2039/492
BOT CHORD 2-10=-404/1690, 8-10=-212/1273, 6-8=-413/1690
WEBS 4-8=-88/574, 5-8=-365/209, 4-10=-88/574, 3-10=-365/209

NOTES-

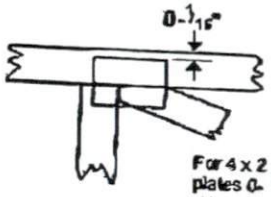
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-8-5, Interior(1) 3-8-5 to 11-0-0, Exterior(2) 11-0-0 to 15-4-13 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=106, 6=106.

June 25,2019

Symbols

PLATE LOCATION AND ORIENTATION

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



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

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

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

PLATE SIZE

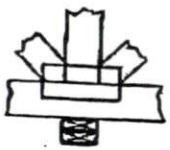
4 x 4

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

LATERAL BRACING LOCATION

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

BEARING

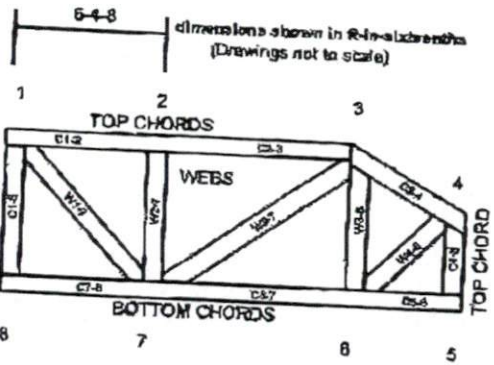


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

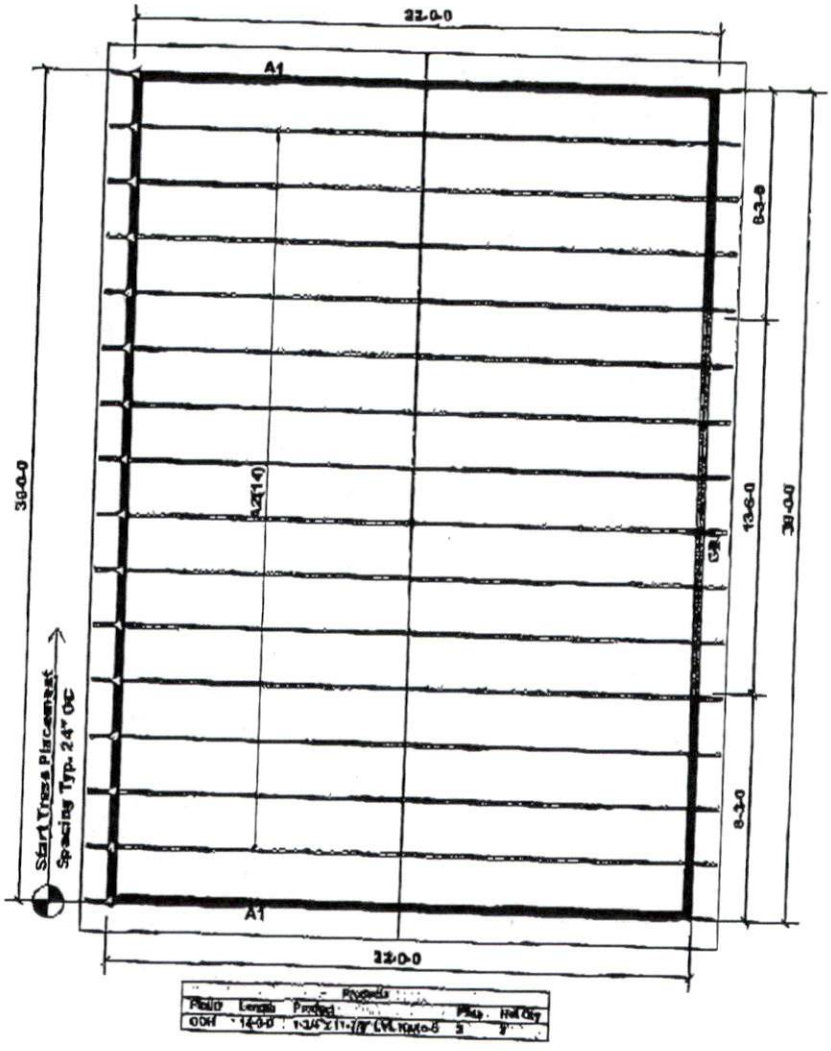
Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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



Pieces					
Piece	Length	Profile		Plies	Hot Qty
ODH	14-0-0	1-3/4" x 11-7/8" LVL Kerto-S		3	3

▲ = Indicates Left End of Truss
(Reference Engineered Truss Drawing)
Do NOT Erect Truss Backwards

LOAD CHART FOR JACK STUDS

BUILDER	Yarbrough Builders	CITY / CO.	Spring Lake / Harnett		
JOB NAME	148 West Deer Ridge Ln.	ADDRESS	148 West Deer Ridge Ln.		
PLAN	RANGE Garage	MODEL	Roof		
SEAL DATE	N/A	DATE REV.	06/19/17		
QUOTE #	Spec'd #	DRAWN BY	Marshall Snyder		
JOB #	20618-2966	SALES REP.	Matt Duncan		

Truss Placement Plan
SCALE: NTS

COMTECH
ROOF & FLOOR TRUSSES & BEAMS
Reilly Road Industrial Park
Fayetteville, N.C. 28309
Phone: (910) 864-9787
Fax: (910) 864-4444

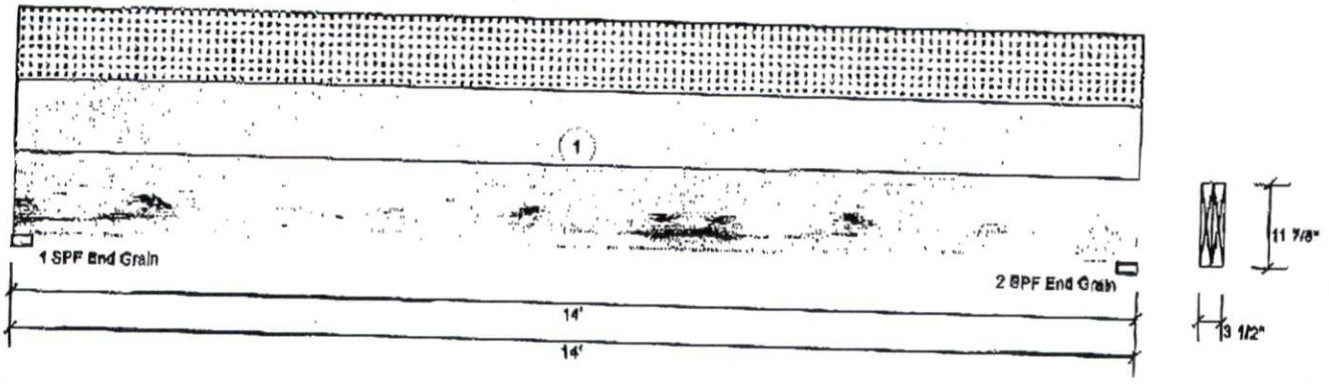
isDesign™

Client: Terheel Builders
Project:
Address:

Date: 6/26/2019
Designer: Marshall Naylor
Job Name: 182 West Dove Ridge Ln.
Project #:

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

Level: Level



Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal
Temperature:	Temp <= 100°F

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	1745	1680	0	0
2	0	1745	1680	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	37%	1745 / 1680	3425	L	D+S
2 - SPF End Grain	3.000"	37%	1745 / 1680	3425	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11383 ft-lb	7'	22887 ft-lb	0.496 (50%)	D+S	L
Unbraced	11383 ft-lb	7'	11367 ft-lb	0.999 (100%)	D+S	L
Shear	3849 lb	1'2 1/8"	10197 lb	0.378 (38%)	D+S	L
LL Defl inch	0.206 (L/794)	7' 1/16"	0.341 (L/480)	0.600 (60%)	S	L
TL Defl inch	0.420 (L/389)	7' 1/16"	0.454 (L/360)	0.920 (92%)	D+S	L

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Multiple plies must be fastened together as per manufacturer's details.
3 Top loads must be supported equally by all plies.
4 Top must be laterally braced at a maximum of 7'9 3/8" o.c.
5 Bottom braced at bearings.
6 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	240 PLF	0 PLF	240 PLF	0 PLF	0 PLF	A2
	Self Weight				9 PLF					

Notes

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

Lumber

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

Handling & Installation

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

Manufacturer Info

Metsä Wood
3071 Commerce Dr, Suite E
Fort Gratiot, MI 48059
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

Comtech, Inc
1001 S. Rolling Road, Suite #539
Baltimore, MD
USA
21214
910-864-0805

COMTECH

Job Estimate

DATE 06/25/19 PAGE 1

ComTech
ROOF & FLOOR TRUSSES & BEAMS
Reilly Road Industrial Park P.O. Box 40408
Fayetteville, N.C. 28309 (910) 864-TRUS
Cary Office: (919) 816-0105

REQ. QUOTE DATE	/ /	ORDER #	J0619-2966
ORDER DATE	06/25/19	QUOTE #	
DELIVERY DATE	/ /	CUSTOMER ACCT #	000049
DATE OF INVOICE	/ /	CUSTOMER PO #	
ORDERED BY		INVOICE #	
SUPERINTENDANT		SALES REP	Scot Duncan
JOBSITE PHONE #	(910) 624-6545		
DESIGNER		TRACKING	Marshall Naylor

BILL TO
Tarheel Builders
4001 Cumberland Rd
Fayetteville, NC 28306
(910) 624-6545

SHIP TO
Tarheel Builders
182 West Dove Ridge Ln.
Spring Lake, NC

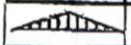
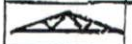
JOB NAME: 182 West Dove Ridge Ln. LOT # - SUBDIV:-
MODEL: Roof TAG: 22'x30' Garage JOB CATEGORY: Residential - Roof

DELIVERY INSTRUCTIONS:

SPECIAL INSTRUCTIONS:

PLAN SEAL DATE: N/A

ROOF TRUSSES

PROFILE	QTY / PLY	PITCH TOP	PITCH BOT	ID	SPAN FT-IN-16	LUMBER TOP	LUMBER BOT	OVERHANG LEFT	OVERHANG RIGHT	CANTILEVER LEFT	CANTILEVER RIGHT	NOTES
	2	4.00	0.00	A1	22-00-00	2 X 4	2 X 4	00-10-08	00-10-08			
	14	4.00	0.00	A2	22-00-00	2 X 4	2 X 4	00-10-08	00-10-08			
	1	Truss Drawings With B-1 and B-3 Bracing And Handling Instructions (Included in truss price)										

ROOF SUB-TOTAL: $ 1,009.52

ITEMS

QTY	ITEM TYPE	SIZE	LENGTH FT-IN-16	PART NUMBER	NOTES
2	LVL Beams (Sized)	LVL, 1-3/4" x 11-7/8" (5)	14-00-00		GDH

ITEMS SUB-TOTAL: $ 140.28

Please examine this quote, as we agree to furnish at the price herein specified only the articles named and described herein. Prices quoted are valid for thirty days unless otherwise specified. Additional design time made necessary by incorrect foundation installation or plan changes may require additional charges. This estimate includes sealed engineering of individual truss drawings only. Any requirement for additional engineering services will be billed in quarter hour increments as costs are incurred.

SUB-TOTAL	$1,149.80
SALES TAX 7.00%	$80.48
GRAND TOTAL	$1230.28

ACCEPTED BY SELLER

BY: _____

TITLE: _____

DATE OF ACCEPTANCE: _____

ACCEPTED BY BUYER

PURCHASER: _____

BY: _____ TITLE: _____

ADDRESS: _____

_____

PHONE: _____ DATE: _____

WARNING: As part of this proposal, we warn that trusses can be dangerous and cause property damage or personal injury if improperly installed and / or braced. Customer acceptance hereof shall constitute his affirmative representation to us that he is trained in the proper and safe methods of truss installation and bracing, and will use such methods. Customer acknowledges receipt of instructional pamphlet entitle: 'Bracing Wood Trusses: Commentary and recommendations', HIB-91, as published by the Truss Plate Institute, Inc., and also the engineering drawings showing the required lateral bracing. By his acceptance, Customer agrees, for himself, his agents and employees, to hold Comtech Inc. harmless from any and all actions for property damage, personal injury, or wrongful death resulting from improper installation and / or bracing during erection of the trusses comprehended hereby.