

Updated Workshop Plan

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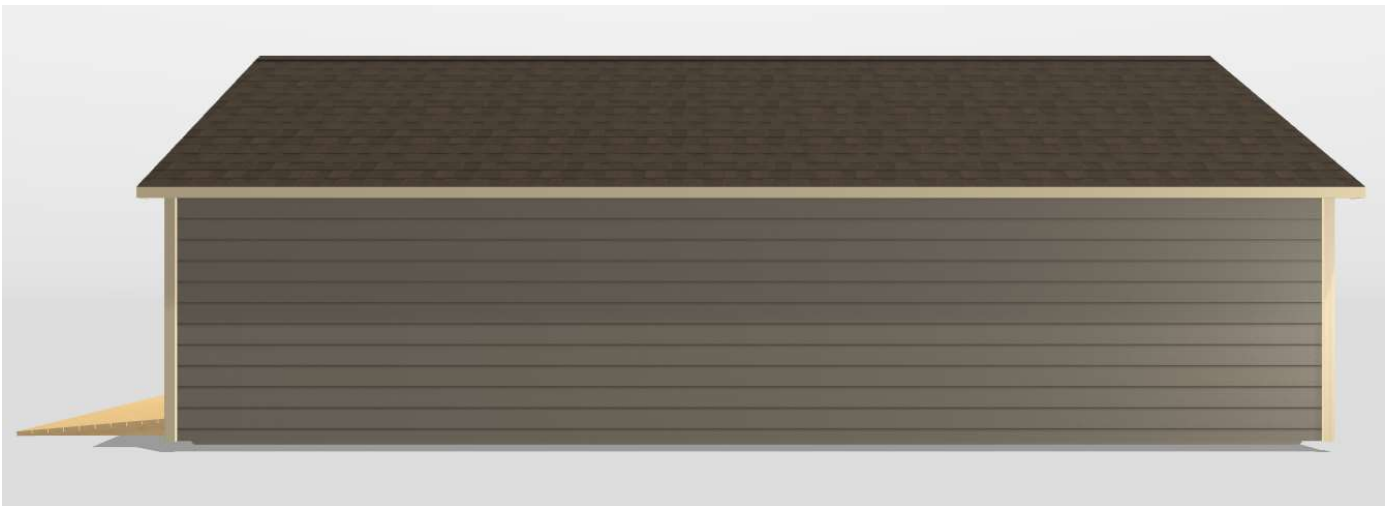


Building Size: 16' x 32'
Total Sq. Ft. 512 Sq.Ft.
Wall Height: 8' 4 ½"
Overall Height: 12'7"
Roof Style: Gable
Roof Pitch: 5.5/12
Garage Door: 9'x7' Wind Speed: < 120 mph
Side Door: 36" x 80"
Side windows (2): 24" x 36"
Framing: 2"x4" 16" OC
Foundation: Concrete Slab 6" above grade

Front Elevation



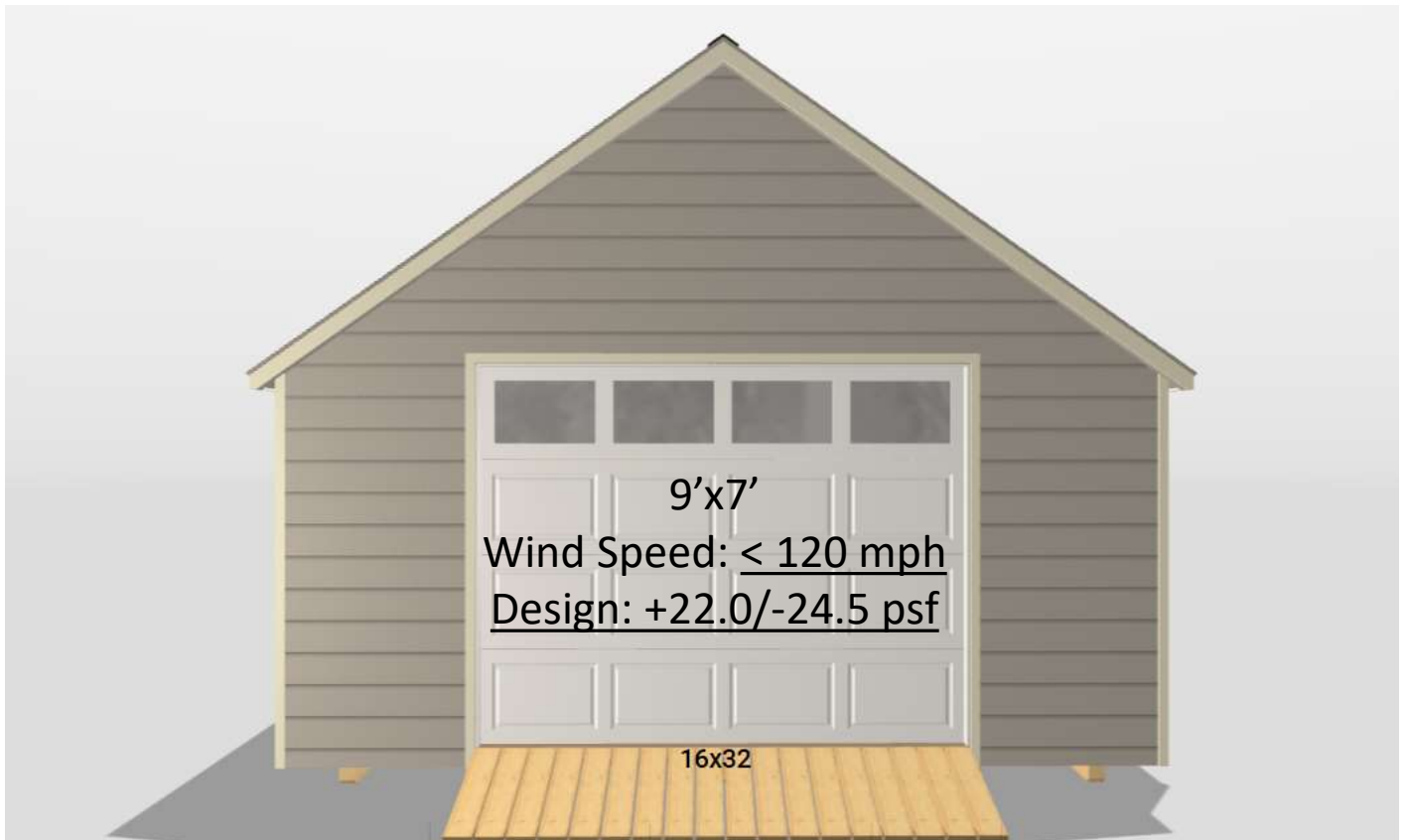
Rear Elevation



Back Wall



Garage Wall



Foundation

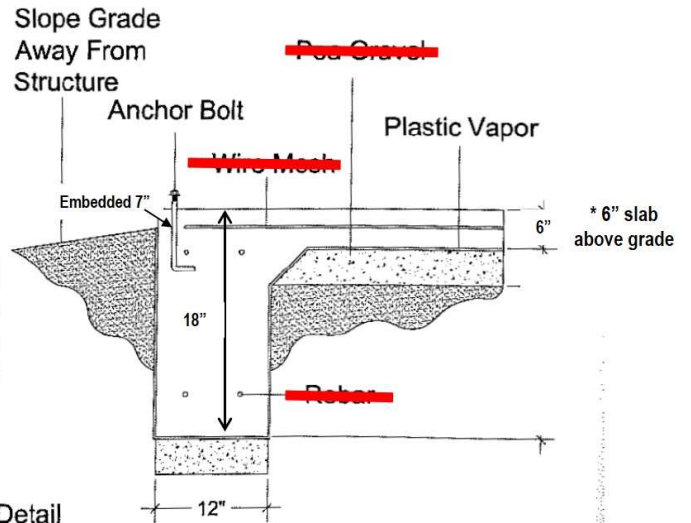
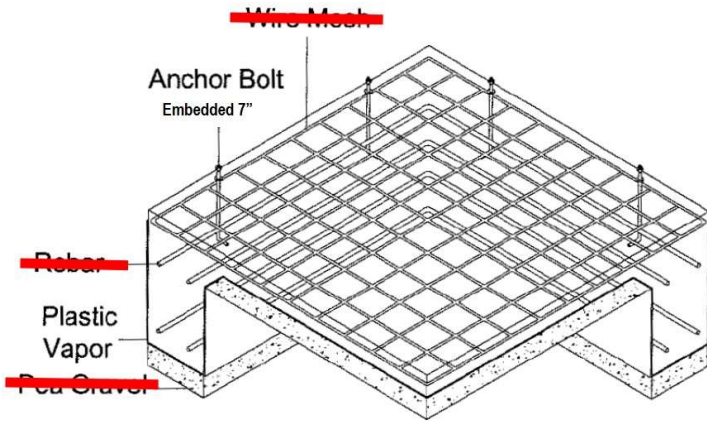
Material for Foundation

- Wire Mesh 10ft x 24ft
- Rebar 315 ft
- Pea Gravel 4.8 cubic yards*
- Premixed Concrete 12 cubic yards*
- 1/2" x 10" Anchor Bolt 40
- * 1 cubic yard = 27 cubic feet

Tools Needed for Concrete

Batter boards (2x2 stake and 1x4 batter board), 2x6 form boards, 2x2 stake, mason's line, spade or small shovel, concrete finishing trowel, hammer, level, measuring tape, pencil, carpenter's square, wheelbarrow, bucket.

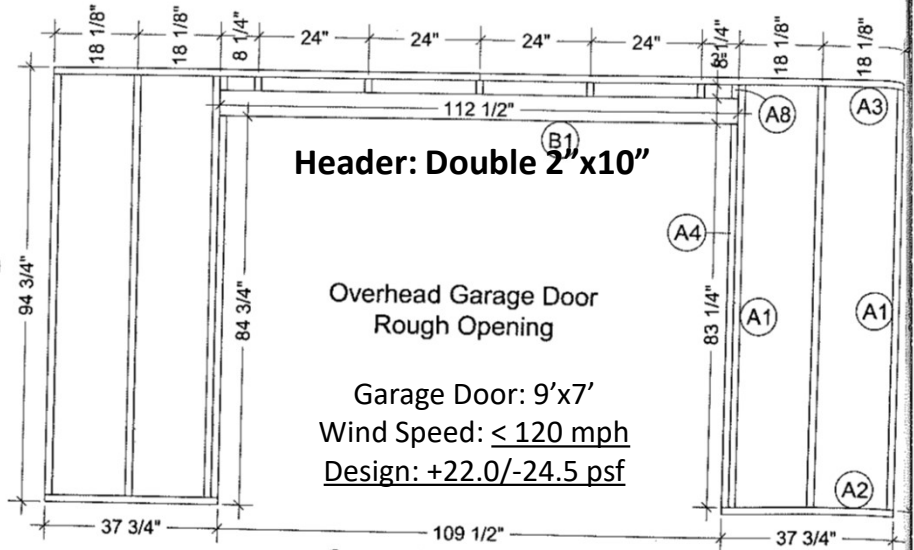
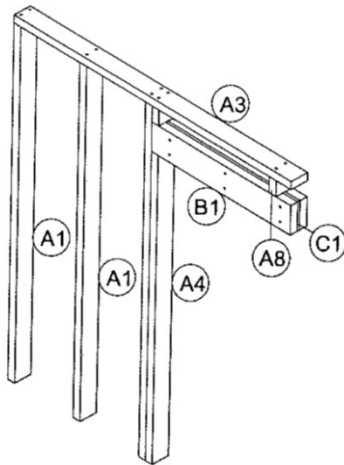
14.1



Foundation Detail

Concrete Slab Foundation

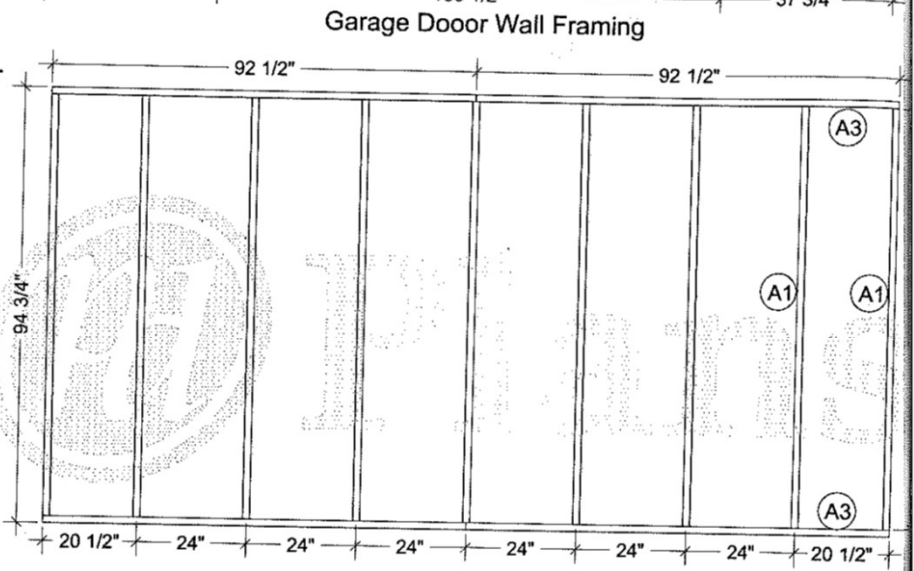
Typically a slab 4 inches thick lay over a sub base of 4 inches of gravel or crushed rock is sufficient but may vary depending on your geographic location. Using either mix your own concrete or having it delivered by truck, ready to pour, depends on how much time and effort you have to dedicate to the project.



Rough Opening

The rough opening of door and window should be $\frac{1}{2}$ " to $\frac{3}{4}$ " larger than actual sizes (consult the manufacturer's instruction sheet for the recommended gap before frame the wall). This extra space lets you wedge in shims to adjust the unit for level and plumb.

Most of garage door rough opening is the same size as actual size. Add $\frac{3}{4}$ " spaces for trimmers.



Wall Frame Cutting List

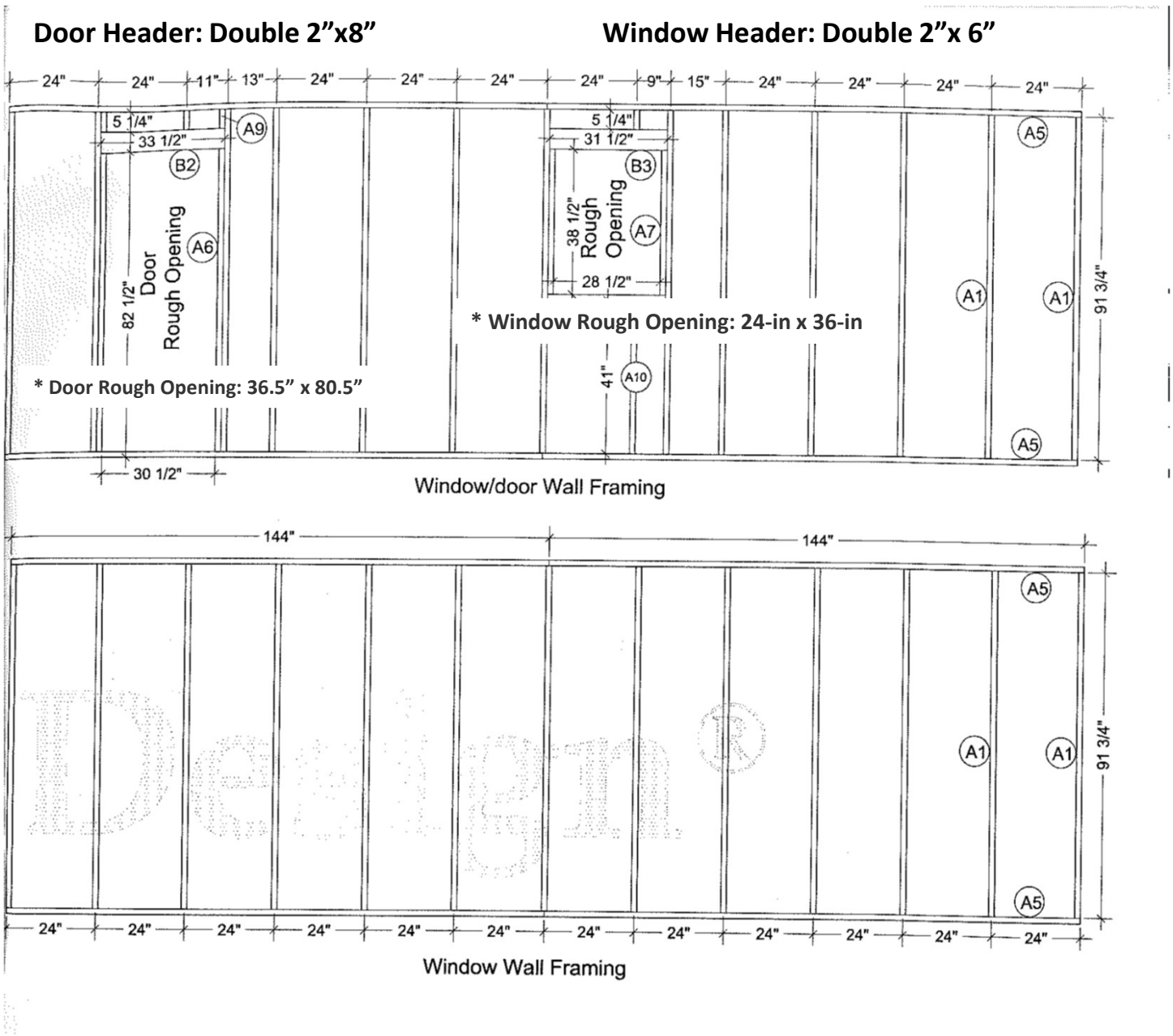
Code	Descriptions	Dimension	Qty
A1	Stud	91 $\frac{3}{4}$ "	41
A2	37 $\frac{3}{4}$ " Plate	37 $\frac{3}{4}$ "	2
A3	92 $\frac{1}{2}$ " Plate	92 $\frac{1}{2}$ "	6
A4	83 $\frac{1}{4}$ " Door Stud	83 $\frac{1}{4}$ "	2
A5	144" Plate	144"	8
A6	81" Door Stud	81"	2
A7	38 $\frac{1}{2}$ " Win. Stud	38 $\frac{1}{2}$ "	2
A8	3" Jack Stud	3"	7
A9	5 $\frac{1}{4}$ " Jack Stud	5 $\frac{1}{4}$ "	4
A10	41" Jack Stud	41"	1
B1	112 $\frac{1}{2}$ " Header	112 $\frac{1}{2}$ "	2
B2	33 $\frac{1}{2}$ " Header	33 $\frac{1}{2}$ "	2
B3	31 $\frac{1}{2}$ " Header	31 $\frac{1}{2}$ "	2
C1	112 $\frac{1}{2}$ " Spacer	5 $\frac{1}{2}$ "x112 $\frac{1}{2}$ "	1
C2	33 $\frac{1}{2}$ " Spacer	5 $\frac{1}{2}$ x 33 $\frac{1}{2}$ "	1
C3	31 $\frac{1}{2}$ " Spacer	5 $\frac{1}{2}$ x 31 $\frac{1}{2}$ "	1

Back Wall Framing

Build The Wall

1. On bottom plates (A2), (A3) & (A5) mark the center of anchor locations, drill $\varnothing\frac{3}{8}$ " through holes. Test-fit bottom plates making sure all anchor bolts are into the plate holes. The plates are flush to the outside of the concrete edges.
2. *Garage door wall framing:* Layout plates (A2) & (A3) and studs (A1) as shown.
3. Using 3" 10d nails, nail twice through each (A2) & (A3) into each end of each (A1), keeping pieces flush at top and ends, and maintain dimension spacing as shown.
4. Then layout the garage door rough opening, door studs (A4), jack studs (A8) and door double headers (B1) with plywood spacer (C1).
5. Using 3" 10d nails, nail twice through each of them into each end.
6. Repeat steps 2-6, build remaining wall framing according to the diagram.

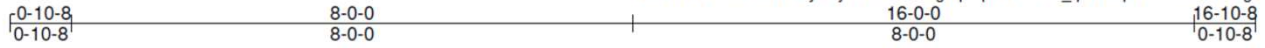
Common: 36-in x 80-in



Wall Bracing: CWP

Job B0320-1097	Truss A1	Truss Type COMMON	Qty 15	Ply 1	Tim Sain / Harnett Co.
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Comtech, Inc., Fayetteville, NC 28309, Dwayne Naylor Run: 8.300 s Mar 22 2019 Print: 8.300 s Mar 22 2019 MiTek Industries, Inc. Tue Mar 10 16:47:34 2020 Page 1
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Scale = 1:29.3

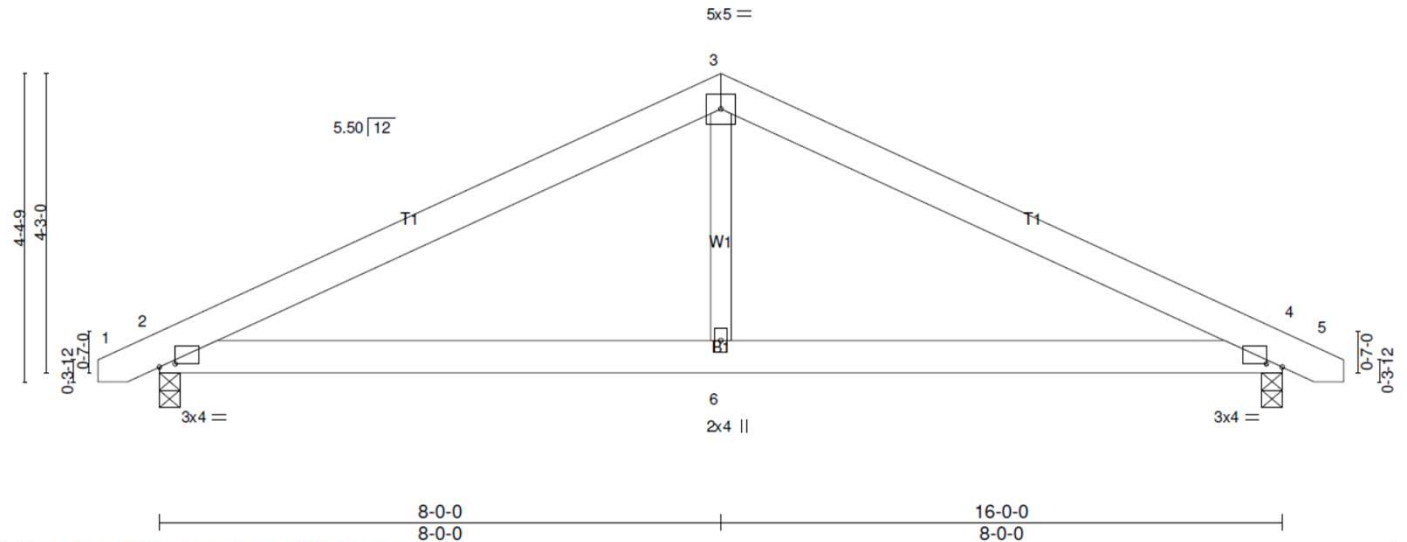


Plate Offsets (X,Y)-- [2:0-2-11,0-0-9], [4:0-2-11,0-0-9]					
LOADING (psf)	SPACING 2-0-0	CSI.	DEFL. in (loc) l/defl L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.29	Vert(LL) -0.02 2-6 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.24	Vert(CT) -0.06 4-6 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.09	Horz(CT) 0.01 4 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.02 2-6 >999 240		
				Weight: 88 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

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.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS. (size) 2=0-3-8 (min. 0-1-8), 4=0-3-8 (min. 0-1-8)
Max Horz 2=-48(LC 17)
Max Uplift 2=-50(LC 12), 4=-50(LC 13)
Max Grav 2=677(LC 1), 4=677(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - all forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-934/250, 3-4=-934/247
BOT CHORD 2-6=-104/755, 4-6=-104/755
WEBS 3-6=0/380

- 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) -0-8-0 to 3-8-13, Interior(1) 3-8-13 to 8-0-0, Exterior(2) 8-0-0 to 12-4-13, Interior(1) 12-4-13 to 16-8-0 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.
 - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 2 and 50 lb uplift at joint 4.
 - 6) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

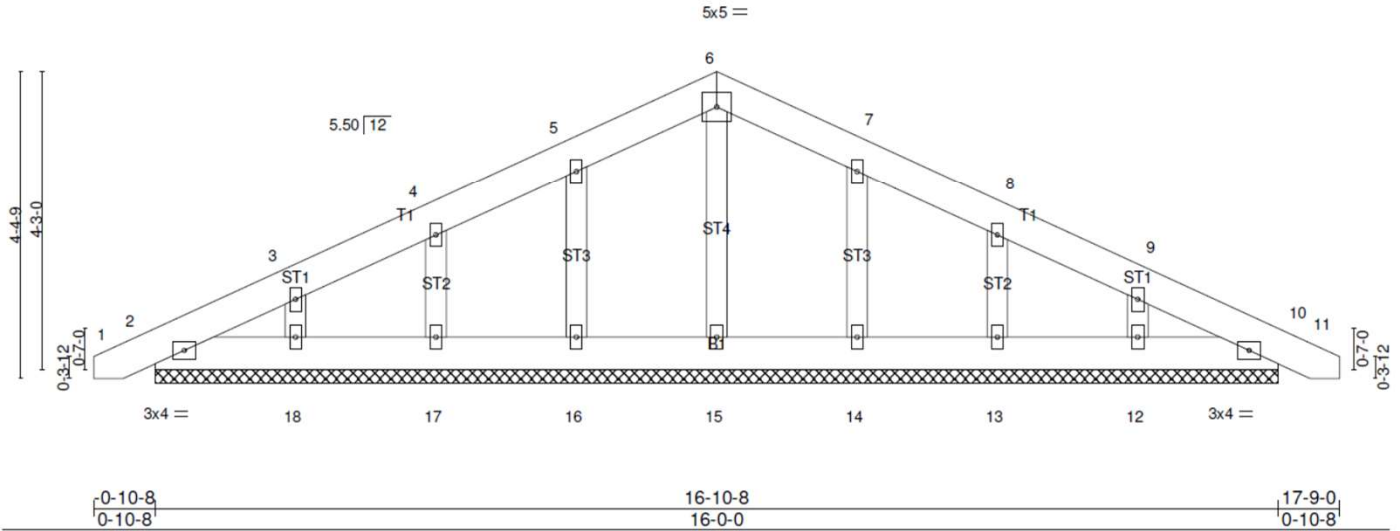
LOAD CASE(S) Standard

Job B0320-1097	Truss A1GE	Truss Type COMMON SUPPORTED GAB	Qty 2	Ply 1	Tim Sain / Harnett Co.
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Comtech, Inc., Fayetteville, NC 28309, Dwayne Naylor Run: 8.300 s Mar 22 2019 Print: 8.300 s Mar 22 2019 MiTek Industries, Inc. Tue Mar 10 16:47:35 2020 Page 1
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Scale = 1:29.3



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.03	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.01	Vert(LL) 0.00 10 n/r 120		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.03	Vert(CT) 0.00 10 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 10 n/a n/a		
	Code IRC2015/TPI2014			Weight: 102 lb	FT = 20%

LUMBER-

TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2

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.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS.

All bearings 16-0-0.
(lb) - Max Horz 2=80(LC 17)
Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 16, 17, 18, 14, 13, 12
Max Grav All reactions 250 lb or less at joint(s) 2, 10, 15, 16, 17, 18, 14, 13, 12

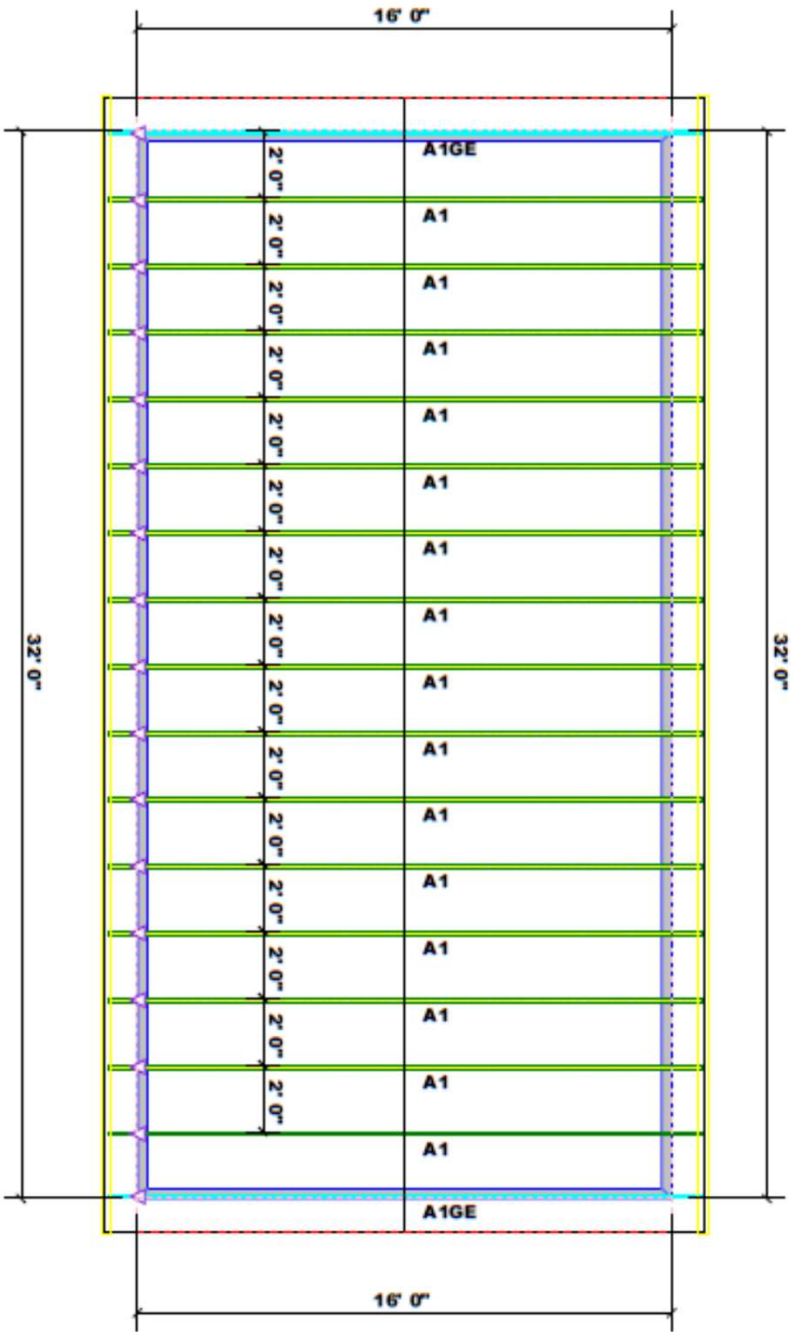
FORCES.

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

NOTES-

- Unbalanced roof live loads have been considered for this design.
- 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) 0-8-0 to 4-0-0, Exterior(2) 4-0-0 to 8-0-0, Corner(3) 8-0-0 to 12-4-13, Exterior(2) 12-4-13 to 16-8-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 16, 17, 18, 14, 13, 12.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables (derived from the prescriptive Code requirements) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature: Dwayne Naylor
Dwayne Naylor

TRUSS PLACEMENT PLAN
SCALE: 3/16" = 1'-0"

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY.

These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult ICC-301 and ICC-303 provided with the truss delivery package or online @ stccindustry.com

BUILDER	Cash Tim San	CITY / CO.	Hamett Co. / Hamett
JOB NAME	Tim San / Hamett Co.	ADDRESS	16x32 Bldg.
PLAN	16x32 bldg.	MODEL	Roof
SEAL DATE	Seal Date	DATE REV.	03/10/20
QUOTE #	80320-1097	DRAWN BY	Dwayne Naylor
JOB #		SALES REP.	Dwayne Naylor

1100	1	2500	2	5000	2
1400	2	3000	2	6000	2
1800	2	4000	2	8000	2
2200	2	5000	2	10000	2
2600	2	6000	2	12000	2
3000	2	7000	2	14000	2
3400	2	8000	2	16000	2
3800	2	9000	2	18000	2
4200	2	10000	2	20000	2
4600	2	11000	2	22000	2
5000	2	12000	2	24000	2
5400	2	13000	2	26000	2
5800	2	14000	2	28000	2
6200	2	15000	2	30000	2
6600	2	16000	2	32000	2
7000	2	17000	2	34000	2
7400	2	18000	2	36000	2
7800	2	19000	2	38000	2
8200	2	20000	2	40000	2
8600	2	21000	2	42000	2
9000	2	22000	2	44000	2
9400	2	23000	2	46000	2
9800	2	24000	2	48000	2
10200	2	25000	2	50000	2
10600	2	26000	2	52000	2
11000	2	27000	2	54000	2
11400	2	28000	2	56000	2
11800	2	29000	2	58000	2
12200	2	30000	2	60000	2

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