www.behmdesign.net

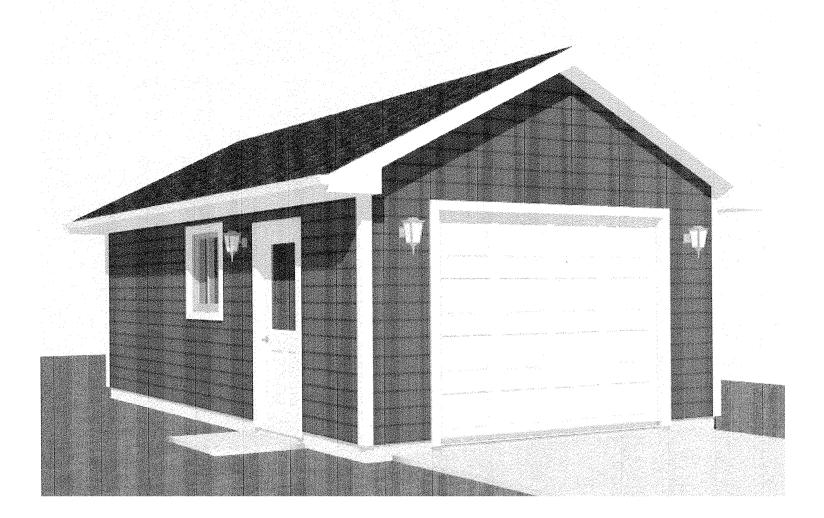
Rough Framing

1-800-210-6776

~ Local building code approved substitutions may be made to this list ~

Variations in construction methods and materials can require modification of this list. Every attempt is made for greatest accuracy, but typographical or human error is possible. Quantities verification by the materials supplier is recommended before materials package is finalized and/or shipped.

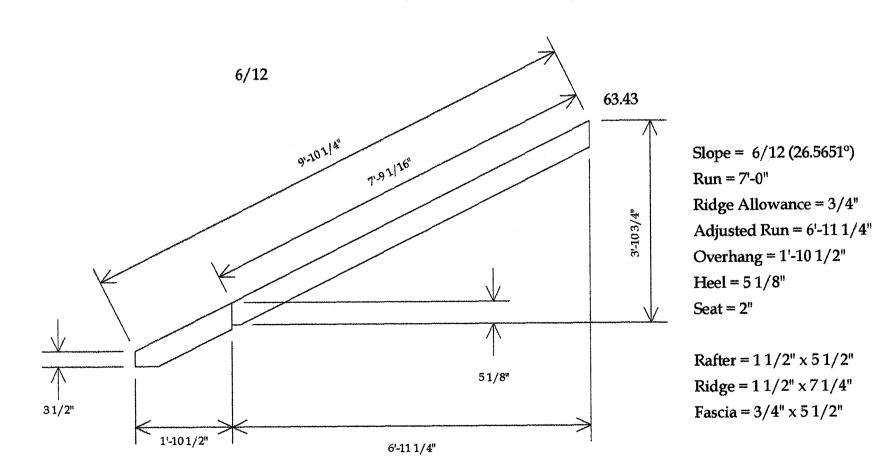
2 x 4 x 92-1/2" HF/DF exterior "stud" wall framing
Sheathing Materials 7/16" o.s.b. wall sheathing
Vapor Barrier Roof 15# bituminous felt paper in 36" wide roll
Siding Materials         8" textured 0.s.b.siding boards with 1" lap
Roofing Materials Composition Roofing Shingles
Window and Door Assemblies         3030 sliding window(s)
Metal Parts \$ Misc.  Anchor bolts: 1/2" dia. x 10" ASTM A-307 w/ hex nuts 17 pcs.  Flat washer for 1/2" dia: 2" square x 3/16" thick stl. pl 17 pcs.  Simpson H2.5 connectors 38 pcs.  Simpson STHD10 hold-down straps
~ To advise corrections, call 1-800-210-6776 Thank you.~.
(note: electrical components and finishing materials not included in this list)





#### GARAGE PLAN #364-1

14' x 26'



# Rafter Profile

#### **Building Categories and Data**

Occupancy Classification: "U"

Construction Type: "V"

Grade-To-Ridge Height: 13'-0"

Gross Building Area: 336 sf

#### **Building Code Compliance**

This planset was prepared to comply with the prescriptive requirements of the

International Residential Code (IRC)

#### Parameters For Design

Wind Speed: 120 mph - 3 sec. gust

Wind Exposure: "B"

Seismic Category: A, B and C

Snow Load: 30# / sq.ft.

BEHM DESIGN BUILDING

F800-210-6776

QUESTIONS?...CALL

364-1

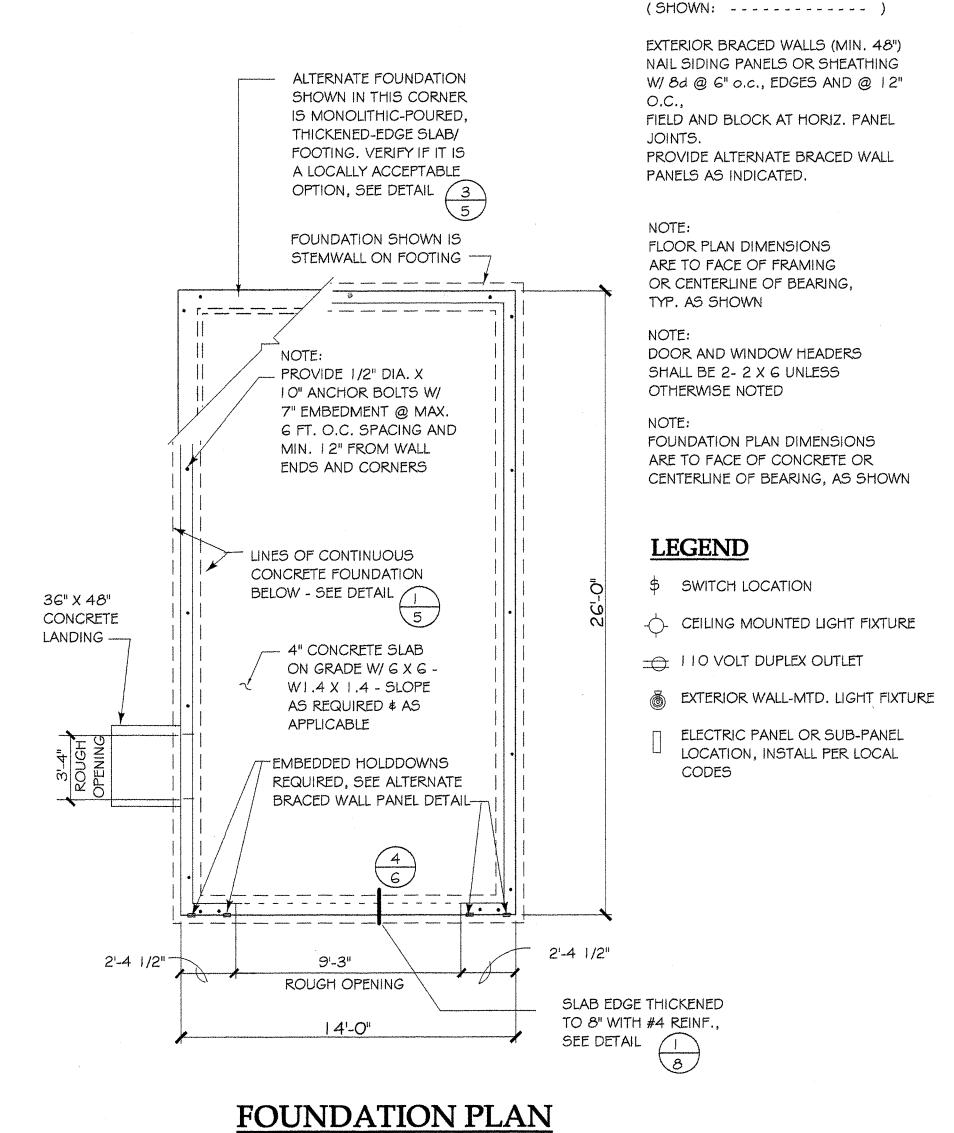
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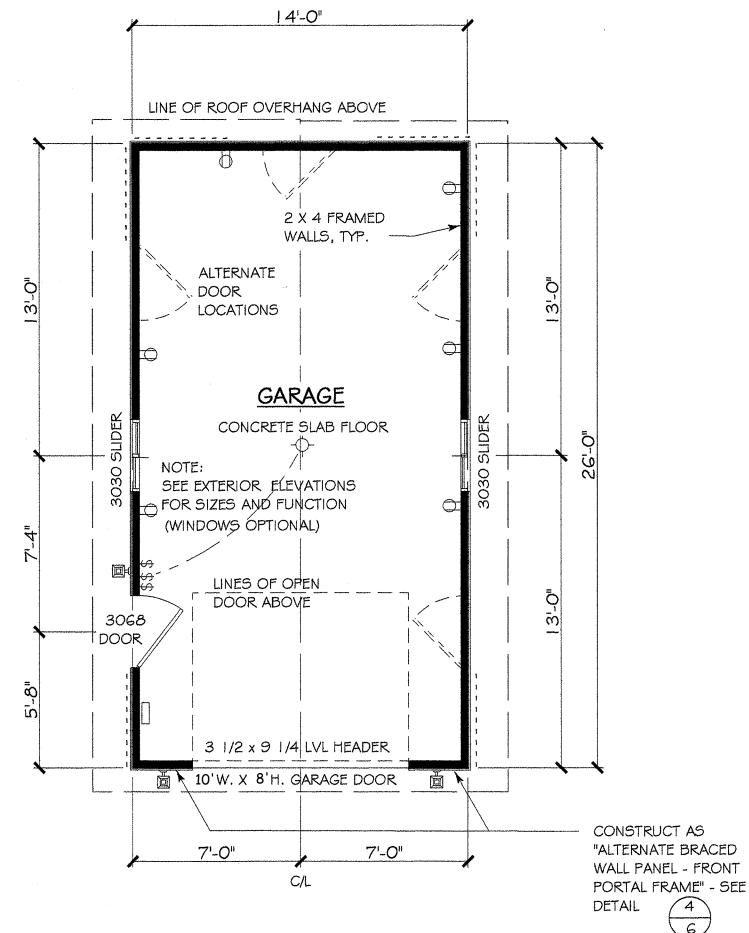
COPYRIGHT



SCALE: 1/4" = 1'-0"

BRACED WALLS AS PER IRC RG02.10, AS APPLICABLE

FOR LOCAL CODES



BUILDIN

BEHIM

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364-1

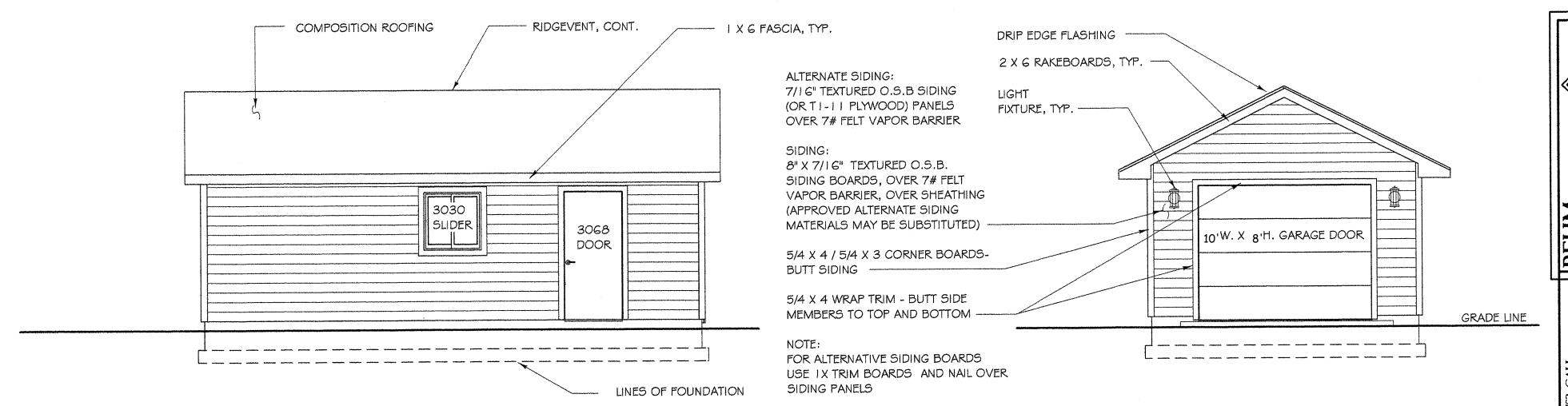
FLOOR PLAN FOUNDATION PLAN

OF **8** 

SHEET CONTENTS.

SHEET

FLOOR PLAN
SCALE: 1/4" = 1'-0"



## LEFT SIDE WALL ELEVATION

SCALE: 1/4" = 1'-0"

**ROOF FRAMING PLAN** 

SCALE: 1/4" = 1'-0"

# FRONT ELEVATION

SCALE: 1/4" = 1'-0"

NOTE:
NOMINAL WINDOW SIZES ARE
SHOWN: FEET/INCHES WIDE
X FEET/INCHES HIGH, TYP. VERIFY FRAMED OPENING
REQUIRED BY PRODUCT MFR.

BUILDING PLANS

DESIGN

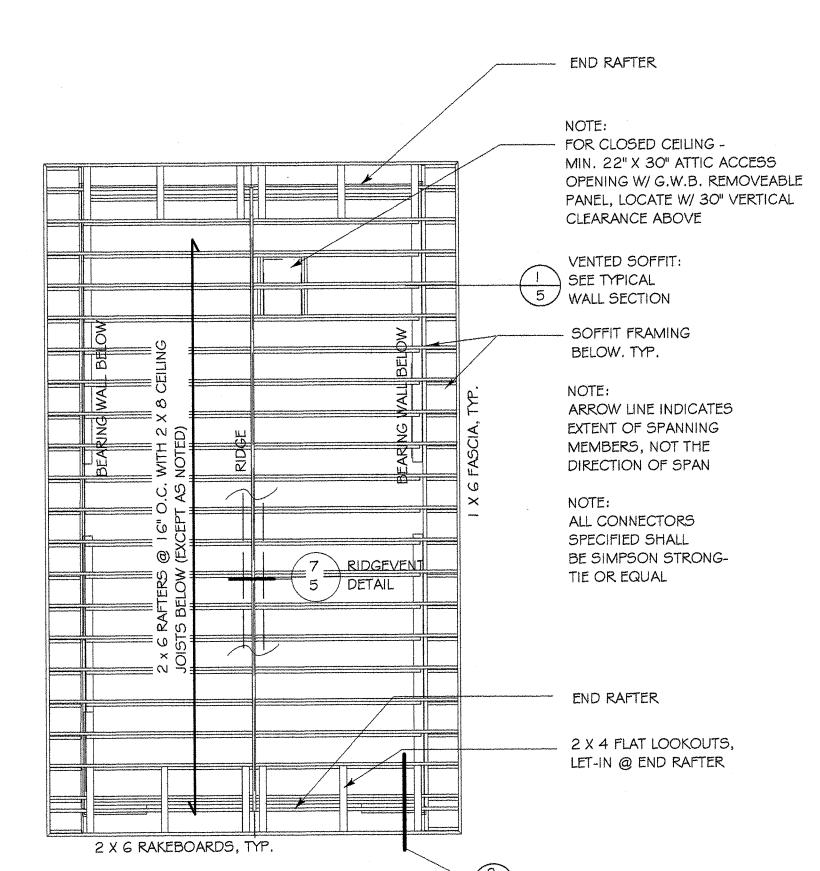
PLAN NO.

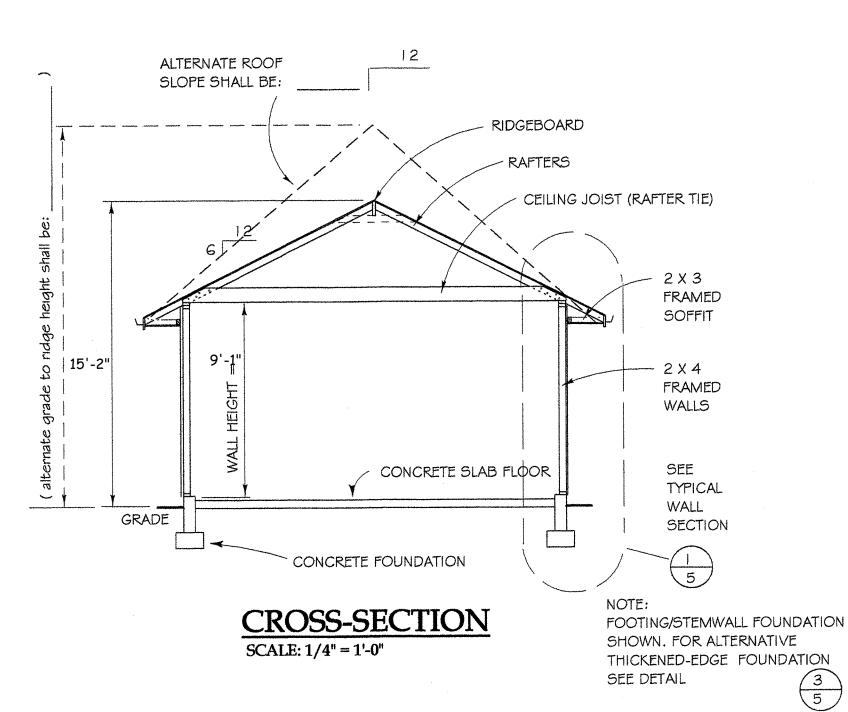
SHEET

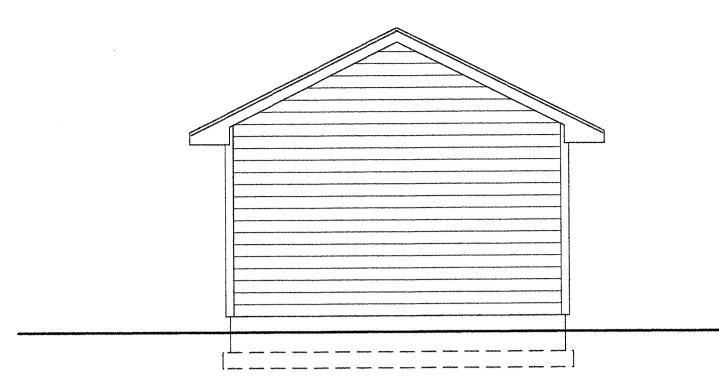
OF **8** 

NOTE:
FLASH OPENINGS AND PROVIDE
WEATHERSTRIPPING AS REQUIRED
BY LOCAL CODES

NOTE:
NOTES AND MATERIALS INDICATED
IN THIS ELEVATION ARE TYPICAL
FOR ENTIRE BUILDING AS APPLIC.

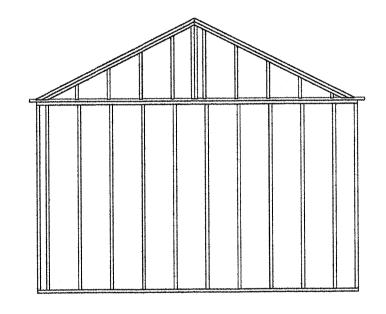




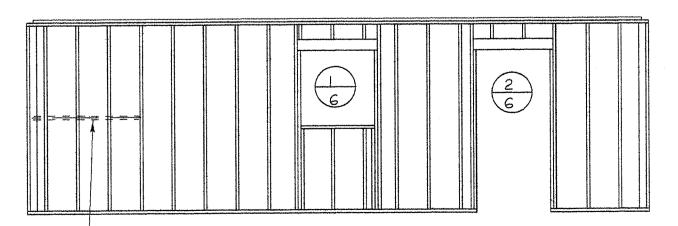


**REAR ELEVATION** 

SCALE: 1/4" = 1'-0"

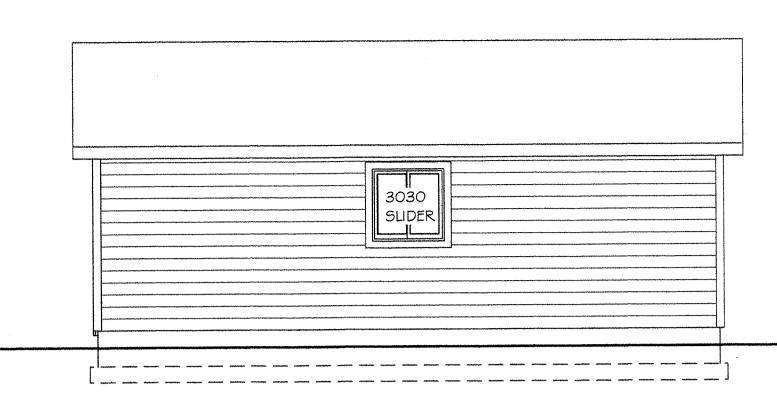


REAR WALL FRAMING ELEVATION
SCALE: 1/4" = 1'-0"

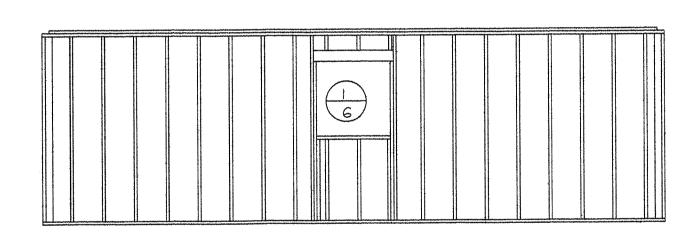


NOTE: FOR HORIZONTALLY APPLIED WALL SHEATHING PROVIDE 2 X 4 HORIZONTAL BLOCKING BETWEEN STUDS FOR PANEL EDGE NAILING AT BRACED WALLS

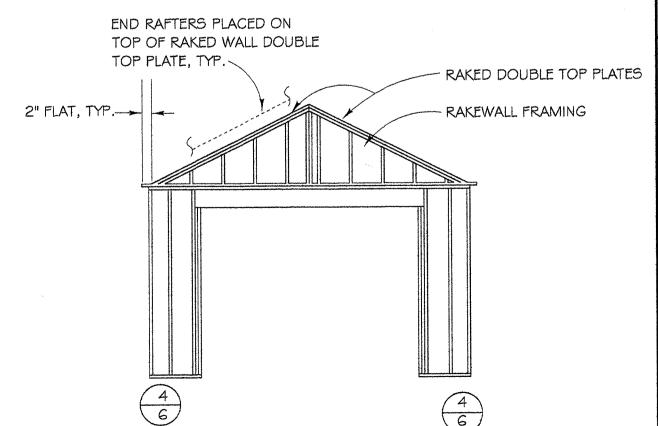
LEFT SIDE WALL FRAMING ELEVATION



#### **RIGHT SIDE ELEVATION** SCALE: 1/4" = 1'-0"



# RIGHT SIDE WALL FRAMING ELEVATION SCALE: 1/4" = 1'-0"

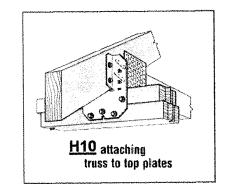


FRONT WALL FRAMING **ELEVATION** 

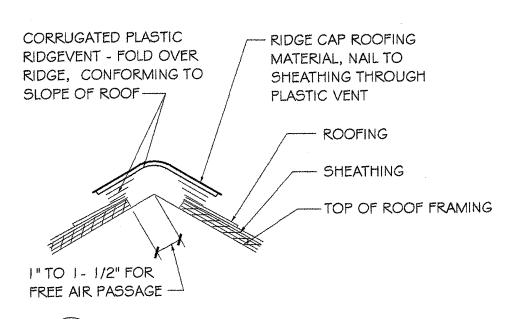
BUILDIP PLANS

PLAN NO.

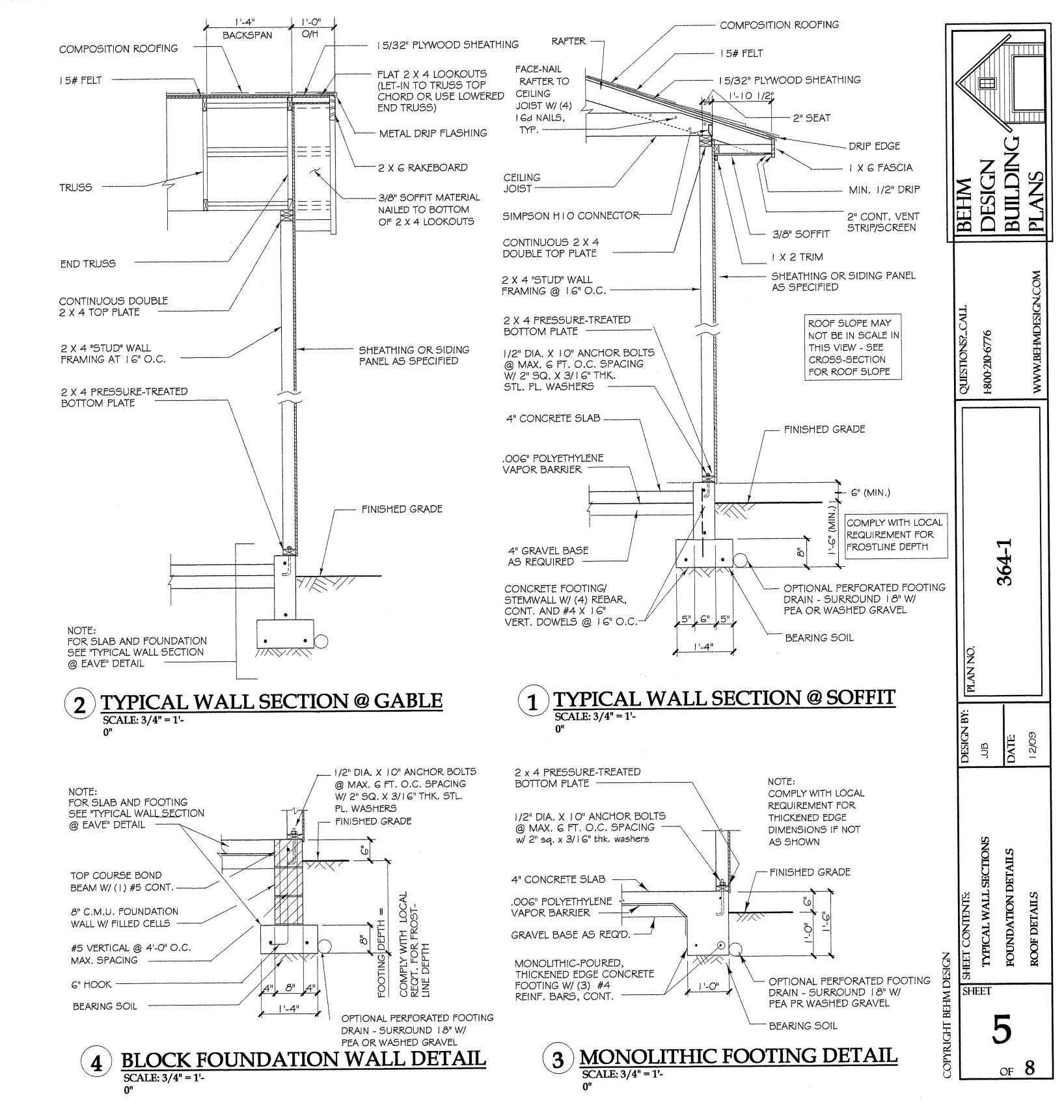
SHEET CONTENTS.

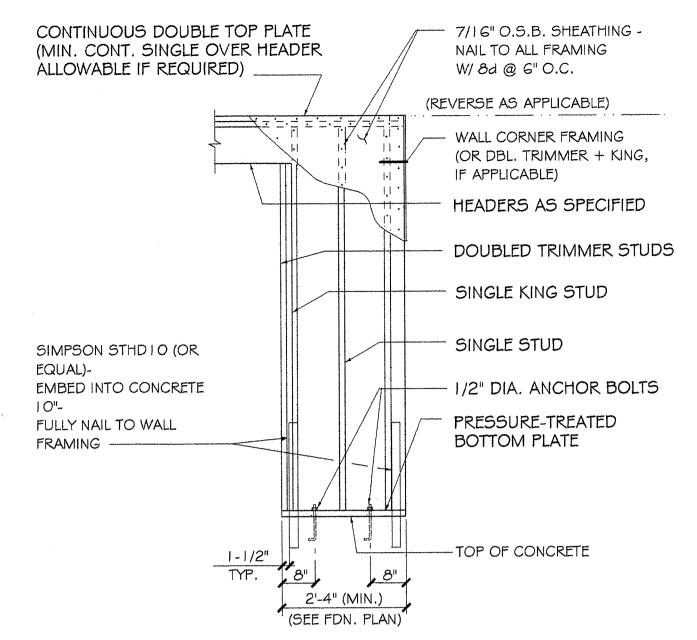


# **SIMPSON CONNECTORS**

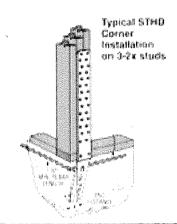


# 7 RIDGEVENT DETAIL

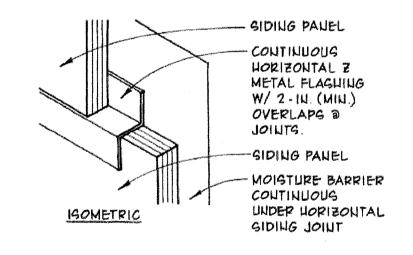




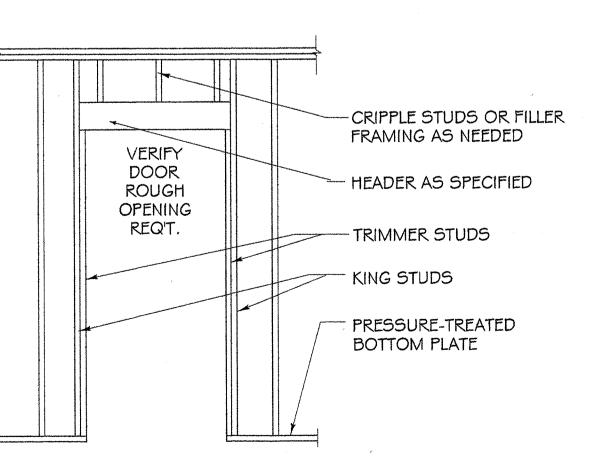
# 4 ALTERNATE BRACED WALL PANEL DETAIL SCALE: 3/4" = 1'-



## STHD10 HOLDDOWN



5 FLASHING DETAIL
(ALTERNATE PANEL SIDING ONLY)

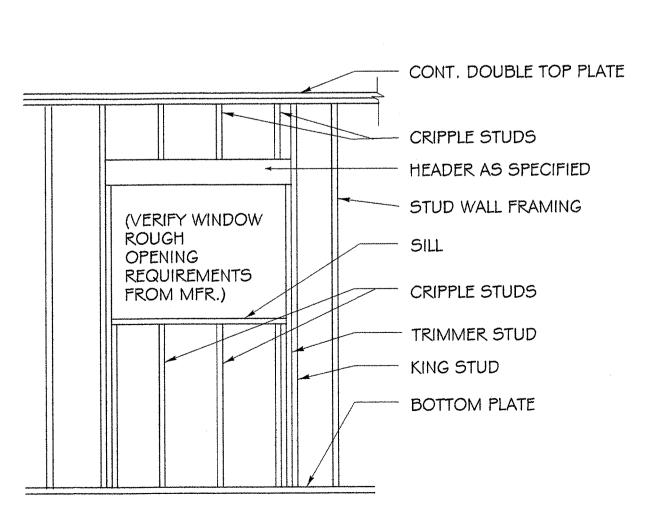


BOTTOM PLATES BELOW

STUDS @ CORNER

(PLAN VIEW)

2 DOOR OPENING DETAIL



1 WINDOW OPENING DETAIL

CALL
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BUILDING

BUILDING

PLANS

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364-1

PLAN NO.

LL FRAMING DETAILS
ERNATE BRACED WALL PANEL
AIL

SHEET

#### STRUCTURAL/GENERAL NOTES & SPECIFICATIONS

#### A. General

The following notes shall clarify and supplement the working drawings.

B. Codes & Standards

International Residential Code (IRC) -

ACI-318; ACI SP-15 / M.B.M.A Manual

(and comply with all local applicable codes as required by Building Official)

C. Live Loads

Earth Pressure ......30lbs/cf equiv. Fluid pressure

D. Soil & Foundation Data

- 1. Soil bearing data not available. Assumed soil bearing capacity = 1500 lbs/sf
- 2. Extend all footings down to undisturbed soil of the specified strength with a minimum depth of 1'-6" below adjacent grade, or as required by local building official, based on local frost line depth.
- 3. Center all footings on columns and walls unless specifically dimensioned otherwise.
- 4. Compacted fill to be well graded and granular with not more than 5% passing a 200 sieve. Place in 8-inch loose lifts and compact to 95% modified AASHO density at optimum moisture.

#### E. Cast-In-Place Concrete and Reinforcing Steel

- 1. Concrete of the following 28-day strength: 5 sack cement/cy (min. 2500 psi); max. 6 gal water/sack for all structural concrete, including foundations and slabs on grade. Maximum sized aggregate 3/4". Maximum slump 4". Add Master Builders Pozzolith per manufacturer's recommendations to all concrete except footings. Concrete for exterior walks to be air entrained (5% air).
- 2. Reinforcing steel ASTM A-615 grade 40/60. Use grade 40 for temperature steel, stirrups and dowels. Detail, fabricate and place in accordance with the latest edition of A.C.I. "Manual Of Standard Practice".

3. Concrete cover on reinforcing steel (clear dimensions):

- 4. Lap all field splices 24 diameters with minimum of 12". Bend outer wall footing bars 12 inches or use corner bars at all corners and wall intersections.
- 5. Provide min. one continuous #4 bar at top and bottom of foundation walls w/#4 at 12" o.c. where wall height exceed two feet. Provide min. two continuous #4 bars in footings. Dowel foundation walls to footings  $w/\#4 \times 1'$ -6" long @ 16" o.c. Embedded 6" into footing. (No shear keys required)
- 6. Reinforce around wall and slab openings, with sides of 12" or greater, with two #5 bars extending 24" beyond corners on all four sides. Provide one extra #5 diagonal bar, 4'-0" long, at each corner.
- 7. Slabs-on-grade: Roll sub grade and moisten before pour. Saw cut crack control joints within 24 hours of pour or install Zip-Strip, with maximum of 12'-0" for 4" non-reinforced slabs and 40'-0" for reinforced slabs. (min. reinforcing: w6 x 6 w1.4 x 1.4, supported)
- 8. Vibrate all concrete. Segregation of materials to be prevented. Test cylinders not required.
- 9. Place no fill against foundation or basement walls until floors are in place or walls have been adequately shored to resist lateral earth pressures.
- F. Masonry (as applicable)
- 1. Hollow masonry units: F'M=1350 (half & half c.m.u.)
  Mortar type S: 1 pc, ½ lime putty, 4 sand
  Grout: 2000 psi pea gravel concrete (7 sack)
- 2. Reinforcing steel: ASTM A-615, grade 40.
- 3. Place grout in lifts no greater than 4'-0" height.
- 4. Wall reinforcing:
- .....6" walls: #4 vertical @ 48" o.c. w/ #9 wire horiz. Joint reinf. @ 8" o.c. .....8" walls: #5 vertical @ 48" o.c. w/ 3/16" dia. wire horiz. Joint reinf. @ 8"

Install two bars in corners, wall intersections, wall endings and around openings. Lap all bars 20 inches and joint reinforcing, 12 inches. Use corner bars for outer bars in bond beams and at intersecting walls.

5. Anchor brick veneer to wood framed wall as detailed with 22 ga. X 7/8" x 7" galvanized corrugated wall ties @ 16" o.c. ea. Way with one Simpson n20a nail.

- G. Timber and Wood Framing
- 1. Substitution of wood species identified herein may be as approved by local Building Official and material strength and capacities shall equal or exceed that of the species identified herein.
- 2. All lumber to be graded per book 16 of the West Coast Lumber Inspection Bureau:

HF/DF no. 2 for joists, rafters, light framing, plates and bracing DF no. 1 for posts and beams

HF/DF "stud" for stud wall framing

- 4. Joists and rafters (lumber) shall have 2" nominal thick solid blocking at supports.
- 3. Comply with the latest edition of the NFPA "National Design Specification" as modified by the applicable code for all structural timber requirements.
- 5. Spike laminated members together w/ 10d nails @ 12" o.c., staggered. Splice laminations at supports only.
- 6. Provide cut washers for all bolts bearing on wood.
- 7. All nails shall be common wire nails.
- 8. Glue-laminated timbers, Douglas Fir, A.I.T.C. grading: combination 24F-V3 for simple spans: 24F-V8 for cantilevered spans. Dry conditions of use. Architectural appearance grade where exposed to view. Fabrication plant A.I.T.C. inspected./ Wrap individual members.
- 9. Plywood: Roof sheathing to be 15/32"" C-D int-apa plywood with exterior glue, P.I. 24/0 (use 5-ply for panelized roofs) Nailing 8d @ 6" o.c. at panel edges and 8d @ 12" o.c. at intermediate supports. Sub-flooring to be 3/4" C-D-apa plywood with exterior glue, P.I. 32/16. Use T&G if no underlayment. Glue and nail with 10d @ 6" o.c. at panel edges and @ 10" at intermediate supports.
- 10. Pre-fabricated trussed members to be designed by applicable state licensed engineer in accordance with requirements shown in the drawings. Contractor shall verify as-framed dimensions and conditions prior to truss fabrication and coordinate as required. All engineering data shall be made available for submittal to the Building Official as required.

#### H. Structural Steel

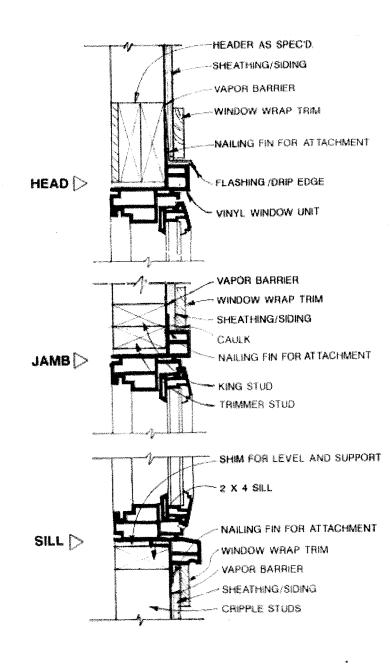
- 1. All steel, except tubing: ASTM A-36. Pipe: ASTM A-53, Type E or S, grade B. Tubular section: ASTM A500, grade B. All bolts: ASTM A-307.
- 2. All fabrication, erection and detailing shall be in accordance with the latest edition of the "Manual Of Steel Construction" of the American Institute Of Steel Construction.
- 3. All welding by WABO certified welders in accordance with the "Welding Handbook" by the American Welding Society.
- 4. All welds 3/16" min. continuous fillet welds using ASWA5, E70XX electrodes.
- 5. Provide washers on all bolted connections.
- 6. All steel not embedded in concrete or masonry shall receive one shop coat of an approved primer paint. Apply two coats of heavy asphaltic paint to all steel exposed to earth.
- 7. Furnish complete shop drawings prior to fabrication.

#### I. Miscellaneous

- 1. Contractor shall verify all site conditions and dimensions in field.
- 2. Provide temporary bracing as required until all permanent connections and stiffening have been installed.
- 3. Verify size and locations of all openings in floor, roof and walls and coordinate with electrical and mechanical work.
- 4. Pre-fabricated items shall be handled and installed in accordance with manufacturers' recommendations. Pre-fabricated

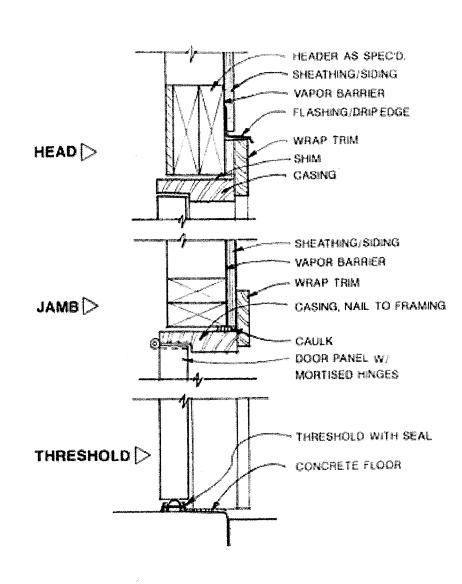
assemblies shall be coordinated with any as-built conditions by the contractor regarding dimensions, clearance and applicable building code requirements.

- 5. All HVAV equipment shall be determined by owner and/or contractor specific to this project and comply with all applicable codes. Performance data and distribution layout shall be provided by mechanical subcontractor. Submittals shall be coordinated by the contractor as required by the Building Official.
- 6. It is the intent of these drawings and specifications to comply with the requirements of the applicable Building Code and all other relevant codes and ordinances. Any discrepancies, omissions or errors shall be brought to the attention of the designer for clarification or correction before beginning the work. It is the responsibility of the general contractor to seek clarification or correction if needed.

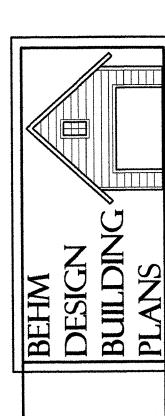


# **WINDOW DETAILS**

(NOT TO SCALE)



DOOR DETAILS
(NOT TO SCALE)



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DATE

STRUCTURAL/GENERAL
WINDOW DETAILS
DOOR DETAILS

SHEET

7

# TABLE R602.3(3) REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES TO RESIST WIND PRESSU

MINIMUM	MAIL.	MINIMUM COOW	NOMINAL PANEL AN THICKNESS	MAXIMUM	PANEL NAIL SPACING		MAXIMUM WIND SPEED (mph)		
	Penetration	STRUCTURAL PANEL SPAN RATING			Edges (Inches o.c.)	Field (inches o.c.)	Wind exposure category		
Size	(inches)			(inches)				С	D
6d Common (2.0"×0.113")	1.5	24/0	3/8	16	6	12	110	90	85
8d Common	. ~~	24.4	7/16	16	6	12	130	110	105
(2.5"×0.131")	1.75	24/16		24	6	12	110	90	85

For SI: 1 inch = 25.4 mm. 1 mile per hour = 0.447 m/s.

a. Panel strength axis parallel or perpendicular to supports. Three-ply plywood sheathing with stude spaced more than 16 inches on center shall be applied with panel strength axis perpendicular to supports.
 b. Table is based on wind pressures acting toward and away from building surfaces per Section R301.2. Lateral bracing requirements shall be in accordance with Section R301.2.

c. Wood Structural Panels with span ratings of Wall-16 or Wall-24 shall be permitted as an alternate to panels with a 24/0 span rating. Plywood siding rated 16 oc or 24 oc shall be permitted as an alternate to panels with a 24/16 span rating. Wall-16 and Plywood siding 16 oc shall be used with stude spaced a maximum of 16 inches on center.

#### TABLE R602.3(4) ALLOWABLE SPANS FOR PARTICLEBOARD WALL SHEATHING\*

THICKNESS		STUD SPACING (Inches)			
(inch)	GRADE	When siding is nalled to stude	When alding is nalled to aheathing		
3/ <sub>8</sub>	M l Exterior glue	16			
1/2	M-2 Exterior glue	16	16		
m m 41 4 40 4		And the state of t	**************************************		

a. Wall sheathing not exposed to the weather. If the panels are applied horizontally, the end joints of the panel shall be offset so that four panels corners will not meet All panel edges must be supported. Leave a 1/16-inch gap between panels and nall no closer than 3/18 inch from panel edges.

## - FASTENING REQUIREMENTS -

	FASTENER SCHEDULE FOR STRUCTU	<del></del>	
ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER <sup>4, b, c</sup>	SPACING OF FASTENERS
	Roof		
1	Blocking between joists or rafters to top plate, toe nail	$3-8d (2^{1}/2^{n} \times 0.113^{n})$	
2	Ceiling joists to plate, toe nail	$3-8d (2^{1}/_{2}" \times 0.113")$	
3	Ceiling joists not attached to parallel rafter, laps over partitions, face nail	3-10d	
4	Collar tie rafter, face nail or 11/4" × 20 gage ridge strap	3-10d (3" × 0.128")	
5	Rafter to plate, toe nail	2-16d (3 <sup>1</sup> / <sub>2</sub> " × 0.135")	
6	Roof rafters to ridge, valley or hip rafters: toe nail face nail	4-16d (3 <sup>1</sup> / <sub>2</sub> " × 0.135") 3-16d (3 <sup>1</sup> / <sub>2</sub> " × 0.135")	Galleria Gal
,	Wali		
7	Built-up corner studs	10d (3" × 0.128")	24" o.c.
8	Built-up header, two pieces with 1/2" spacer	$16d (3^{1}/_{2}" \times 0.135")$	16" o.c. along each edge
9	Continued header, two pieces	16d (3 <sup>1</sup> / <sub>2</sub> " × 0.135")	16" o.c. along each edg
10	Continuous header to stud, toe nail	$4-8d (2^{1}/_{2}^{n} \times 0.113^{n})$	
11	Double studs, face nail	10d (3" × 0.128")	24" o.c.
12	Double top plates, face nail	10d (3" × 0.128")	24" o.c.
13	Double top plates, minimum 48-inch offset of end joints, face nail in lapped area	8-16d (3 <sup>1</sup> / <sub>2</sub> " × 0.135")	
14	Sole plate to joist or blocking, face nail	$16d (3^1/_2'' \times 0.135'')$	16" o.c.
15	Sole plate to joist or blocking at braced wall panels	$3-16d (3^1/2^n \times 0.135^n)$	16" o.c.
16	Stud to sole plate, toe nail	3-8d $(2^{1}/_{2}" \times 0.113")$ or 2-16d $3^{1}/_{2}" \times 0.135")$	
17	Top or sole plate to stud, end nail	2-16d (3 <sup>1</sup> / <sub>2</sub> " × 0.135")	b
18	Top plates, laps at corners and intersections, face nail	2-10d (3" × 0.128")	
19	1" brace to each stud and plate, face nail	2-8d (2 <sup>1</sup> / <sub>2</sub> " × 0.113") 2 staples 1 <sup>3</sup> / <sub>4</sub> "	Manager Service Control of the Contr
20	1" × 6" sheathing to each bearing, face nail	2-8d (2 <sup>1</sup> / <sub>2</sub> " × 0.113") 2 staples 1 <sup>3</sup> / <sub>4</sub> "	
21	1" × 8" sheathing to each bearing, face nail	2-8d $(2^{1}/_{2}" \times 0.113")$ 3 staples $1^{3}/_{4}"$	
22	Wider than $1'' \times 8''$ sheathing to each bearing, face nail	3-8d $(2^{1}/2'' \times 0.113'')$ 4 staples $1^{3}/4''$	######################################
, of the transfer of the trans	Floor		
23	Joist to sill or girder, toe nail	$3-8d (2^3/3'' \times 0.113'')$	
24	1" × 6" subfloor or less to each joist, face nail	2-8d (2 <sup>1</sup> / <sub>2</sub> " × 0.113") 2 staples 1 <sup>3</sup> / <sub>4</sub> "	
25	2" subfloor to joist or girder, blind and face nail	$2-16d (3^{1}/_{2}" \times 0.135")$	
26	Rim joist to top plate, toe nail (roof applications also)	8d (2 <sup>1</sup> / <sub>2</sub> " × 0.113")	6" o.c.
27	2" planks (plank & beam - floor & roof)	$2-16d (3^1/2'' \times 0.135'')$	at each bearing
28	Built-up girders and beams, 2-inch lumber layers	10d (3" × 0.128")	Nail each layer as follow 32" o.c. at top and bottom staggered. Two nails at e and at each splice.
29	Ledger strip supporting joists or rafters	$3-16d (3^1/2" \times 0.135")$	At each joist or rafter

			SPACING OF	FASTENERS
ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER <sup>5, c, s</sup>	Edges (Inches) <sup>i</sup>	intermediate supports <sup>c, e</sup> (inches)
И	/ood structural panels, subfloor, re	pof and interior wall sheathing to framing and particlebo	pard wall sheathing to	framing
30	<sup>3</sup> / <sub>8</sub> " - <sup>1</sup> / <sub>2</sub> "	6d common (2" × 0.113") nail (subfloor wall) <sup>j</sup> 8d common (2 <sup>1</sup> / <sub>2</sub> " × 0.131") nail (roof)	6	12 <sup>g</sup>
31	<sup>5</sup> / <sub>16</sub> " - <sup>1</sup> / <sub>2</sub> "	6d common (2" × 0.113") nail (subfloor, wall) 8d common (2 <sup>1</sup> / <sub>2</sub> " × 0.131") nail (roof) <sup>f</sup>	6	128
32	19/32" - 1"	8d common nail (21/2" × 0.131")	6	128
33	11/8" - 11/4"	10d common (3" × 0.148") nail or 8d (2½" × 0.131") deformed nail	6	12
		Other wall sheathing <sup>h</sup>		
34	1/2" structural cellulosic fiberboard sheathing	1/2" galvanized roofing nail, 7/16" crown or 1" crown staple 16 ga., 1 1/4" long	3	6
35	<sup>25</sup> / <sub>32</sub> " structural cellulosic fiberboard sheathing	13/4" galvanized roofing nail, 7/16" crown or 1" crown staple 16 ga., 11/2" long	3	6
36	<sup>1</sup> / <sub>2</sub> " gypsum sheathing <sup>d</sup>	1½" galvanized roofing nail; staple galvanized, 1½" long; 1½ screws, Type W or S	7	7
37	5/8" gypsum sheathing <sup>a</sup>	13/4" glavanized roofing nail; staple galvanized, 15/8" long; 15/8" screws, Type W or S	7	7
		Wood structural panels, combination subfloor underlay	rment to framing	
38	3/4" and less	6d deformed (2" × 0.120") nail or 8d common (2½" × 0.131") nail	6	12
39	<sup>7</sup> / <sub>8</sub> " - 1"	8d common $(2^{1}/_{2}'' \times 0.131'')$ nail or 8d deformed $(2^{1}/_{2}'' \times 0.120'')$ nail	6	12
40	11/8" - 11/4"	10d common (3" × 0.148") nail or 8d deformed (21/2" × 0.120") nail	б	12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s; 1ksi = 6.895 MPa.

a. All nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.

b. Staples are 16 gage wire and have a minimum  $\frac{7}{10}$  inch on diameter crown width.

c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.

d. Pour-foot-by-8-foot or 4-foot-by-9-foot panels shall be applied vertically. e. Spacing of fasteners not included in this table shall be based on Table R602,3(2).

f. For regions having basic wind speed of 110 mph or greater, 8d deformed (2½," × 0.120) nails shall be used for attaching ply wood and wood structural panel roof sheathing to framing within minimum 48-inch distance from gable end walls, if mean roof height is more than 25 feet, up to 35 feet maximum.

g. For regions having basic wind speed of 100 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. When basic wind speed is greater than 100 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing.

n. Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C 208. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at all floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.

		SPACING® OF FASTENERS			
NOMINAL MATERIAL THICKNESS (inches)	DESCRIPTION <sup>A, b</sup> OF FASTENER AND LENGTH (inches)	Edges (inches)	intermediate supports (inches)		
Wood structural pa	nels subtloor, roof and wall sheathing to framing and particle	board wall sheathing to	framing <sup>f</sup>		
	Staple 15 ga. 13/4	4	8		
up to 1/2	0.097 - 0.099 Nail 2 <sup>1</sup> / <sub>4</sub>	3	6		
	Staple 16 ga. 1 <sup>3</sup> / <sub>4</sub>	3	6		
	0.113 Nail 2	3	6		
19/ <sub>32</sub> and 5/ <sub>8</sub>	Staple 15 and 16 ga. 2	4	8		
	0.097 - 0.099 Nail 2 <sup>1</sup> / <sub>4</sub>	44	8		
	Staple 14 ga. 2	4	8		
a demonstration	Staple 15 ga. 1 <sup>3</sup> / <sub>4</sub>	3	6		
<sup>23</sup> / <sub>32</sub> and <sup>3</sup> / <sub>4</sub>	0.097 - 0.099 Nail 2 <sup>1</sup> / <sub>4</sub>	4	8		
manufaged (	Staple 16 ga. 2	4	8		
	Staple 14 ga. 2 <sup>1</sup> / <sub>4</sub>	4	8		
, m	0.113 Nail 2 <sup>1</sup> / <sub>4</sub>	3	6		
1	Staple 15 ga. 2 <sup>1</sup> / <sub>4</sub>	4	8		
	0.097 - 0.099 Nail 2 <sup>1</sup> / <sub>2</sub>	4	8		
	0.071 - 0.077 Part 2 - 7	SPACING® OF FASTENERS			
NOMINAL MATERIAL THICKNESS	DESCRIPTION <sup>e,b</sup> OF FASTENER AND LENGTH (Inches)	Edges (inches)	Body of panei <sup>d</sup> (Inches)		
And the second s	Floor underlayment; plywood-hardboard-particleb	oard .	and the second s		
	Plywood				
1/4 and 5/16	1 <sup>1</sup> / <sub>4</sub> ring or screw shank nail—minimum 12 <sup>1</sup> / <sub>2</sub> ga. (0.099") shank diameter	3	6		
	Staple 18 ga., <sup>7</sup> / <sub>8</sub> , <sup>3</sup> / <sub>16</sub> crown width	2	5		
11/ <sub>32</sub> , 3/ <sub>8</sub> , 15/ <sub>32</sub> , and 1/ <sub>2</sub>	1 <sup>1</sup> / <sub>4</sub> ring or screw shank nail—minimum 12 <sup>1</sup> / <sub>2</sub> ga. (0.099") shank diameter	6	8e		
19/ <sub>32</sub> , 5/ <sub>8</sub> , <sup>23/</sup> <sub>32</sub> and <sup>3</sup> / <sub>4</sub>	$1^{1}/_{2}$ ring or screw shank nail—minimum $12^{1}/_{2}$ ga. (0.099") shank diameter	6	8		
7321 787 732	Staple 16 ga. 1 <sup>1</sup> / <sub>2</sub>	6	8		
	Hardboard <sup>4</sup>				
	11/2 long ring-grooved underlayment nail	6	6		
0.200	4d cement-coated sinker nail	6	6		
	Staple 18 ga., 7/8 long (plastic coated)	3	6		
	Particleboard				
14	4d ring-grooved underlayment nail	3	6		
1/4	Staple 18 ga., <sup>7</sup> / <sub>8</sub> long, <sup>3</sup> / <sub>16</sub> crown	3	6		
3/	6d ring-grooved underlayment nail	6	10		
3/8	Staple 16 ga., 1 1/8 long, 3/8 crown	3	6		
	6d ring-grooved underlayment nail	6	10		
1/2.5/	Of the grooved discordy months.				

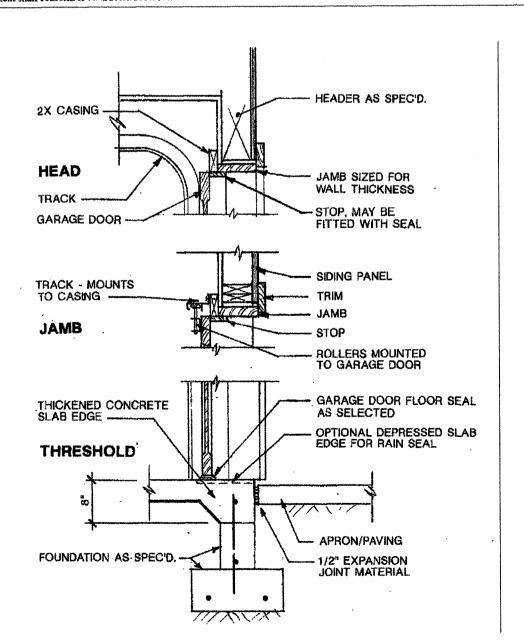
a. Nail is a general description and may be Thead, modified round head or round head.

b. Staples shall have a minimum crown width of 7/16-inch on diameter except as noted. c. Nails or staples shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater. Nails or staples shall be spaced at not more

than 12 inches on center at intermediate supports for floors. d. Fasteners shall be placed in a grid pattern throughout the body of the panel.

e. For 5-ply panels, intermediate nails shall be spaced not more than 12 inches on center each way.

f. Hardboard underlayment shall conform to ANSI/AHA A135.4.



**GARAGE DOOR DETAILS** 

QUESTIONS?\_CALI 1-800-210-6776

DESIGN BY: JJB
DATE:
04/1

CODE REQUIREMENTS FOR FASTENINGS AND SHEATHING GARAGE DOOR DETAILS

SHEET

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