



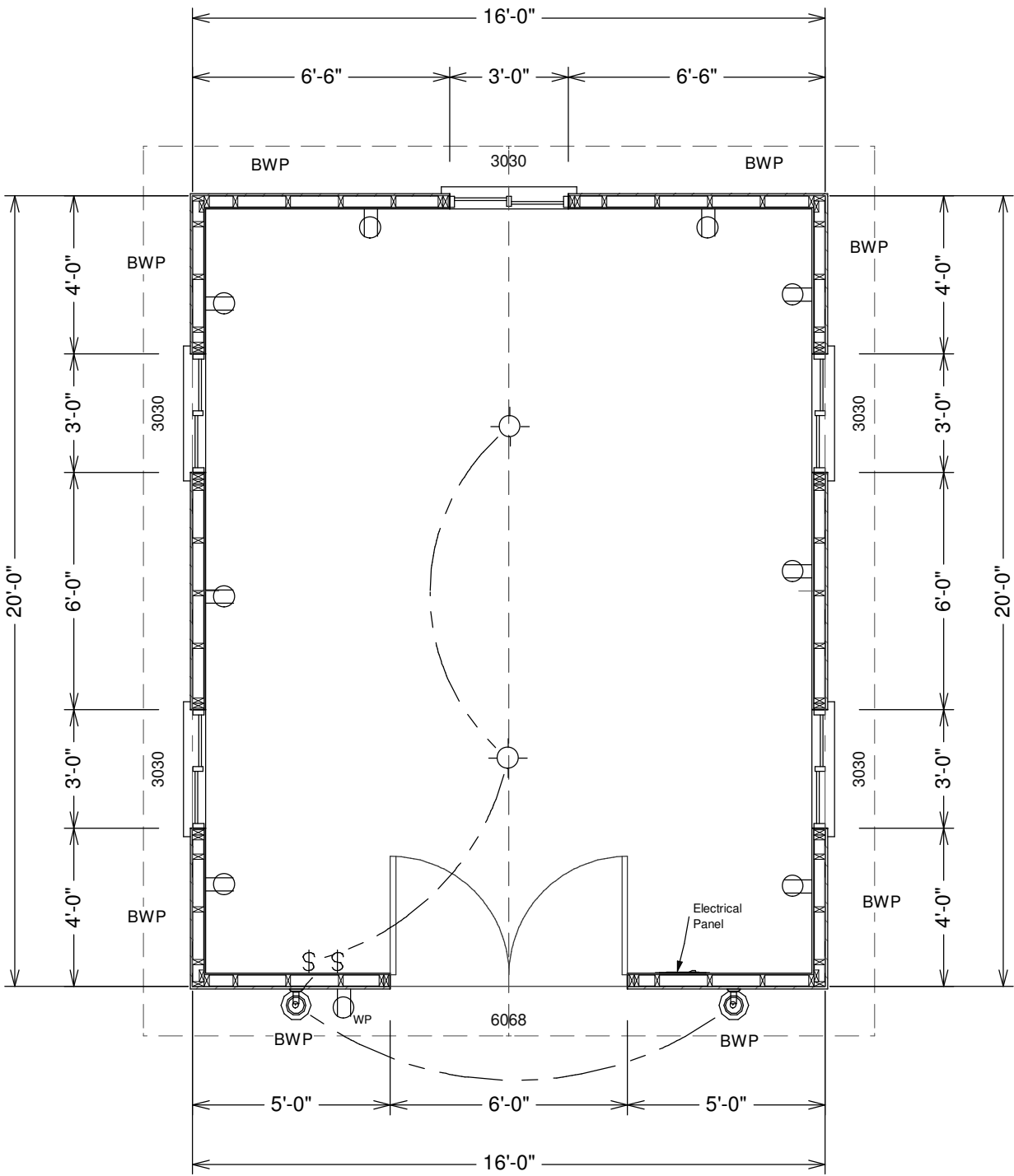
BUILDING CONTRACTOR/HOME OWNER
TO REVIEW AND VERIFY ALL DIMENSIONS,
SPECS, AND CONNECTIONS BEFORE
CONSTRUCTION BEGINS. GARAGE TO BE
BUILT AS PER IRC, UBC OR CURRENT LOCAL CODE

To the best of my knowledge these plans are drawn to comply with owner's and/ or builder's specifications and any changes made on them after prints are made will be done at the owner's and / or builder's expense and responsibility. The contractor shall verify all dimensions and enclosed drawing. SDSCAD is not liable for errors once construction has begun. While every effort has been made in the preparation of this plan to avoid mistakes, the maker can not guarantee against human error. The contractor of the job must check all dimensions and other details prior to construction and be solely responsible thereafter. All calculations and member sizing should be verified for your building by a certified building official.

#G391 16' X 20' X 8', detached garage
By SDS-CAD Specialized Design Systems

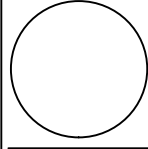
Page 1	Title Main Floor Plan
Page 2	Elevation Views
Page 3	Foundation Plan & Pictorials
Page 4	Framing and Details
Page 5	Detail Page

30 year dimensional shingles and horizontal
hardiplank siding over structural panel. Nailing
schedule is 6" on ends 12" on centers 6d nails.
Framing is 2" x 4" on 16" centers. 8' ceiling
height.

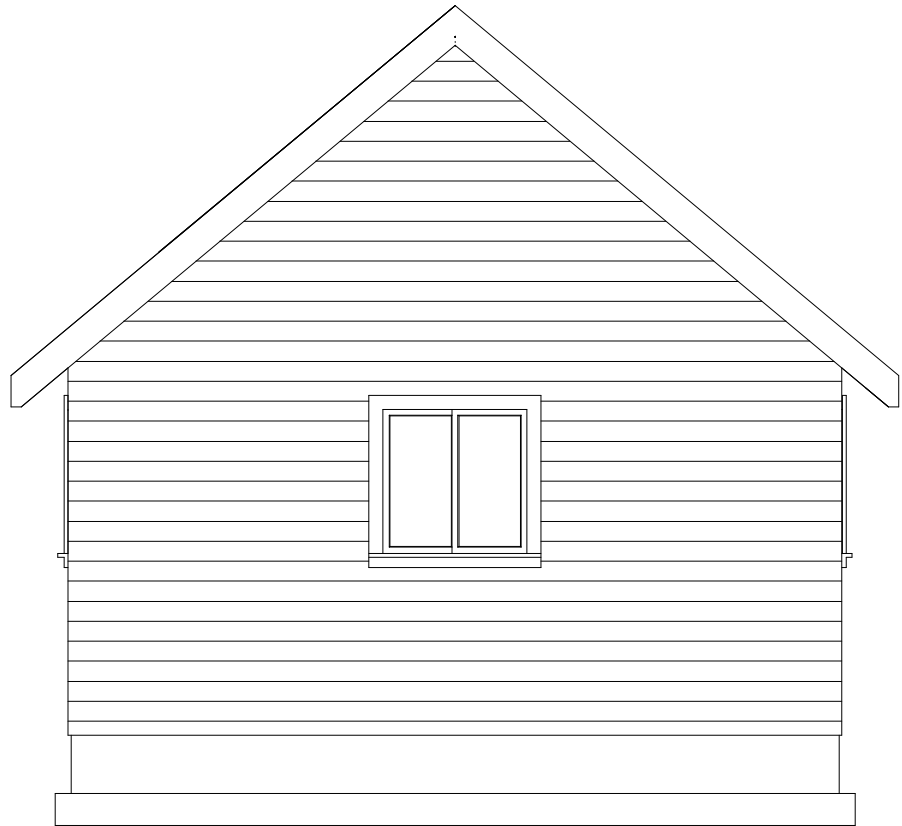


SCALE 1/4"=1'

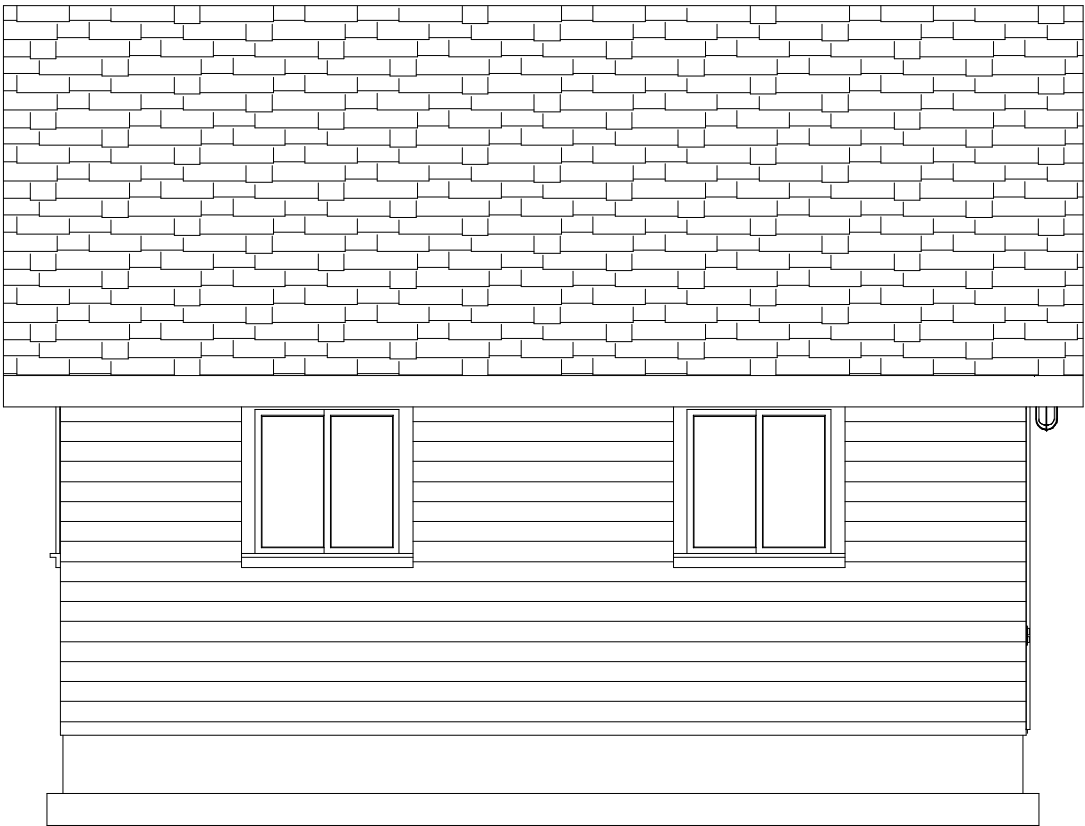
GARAGE MAIN FLOOR PLAN



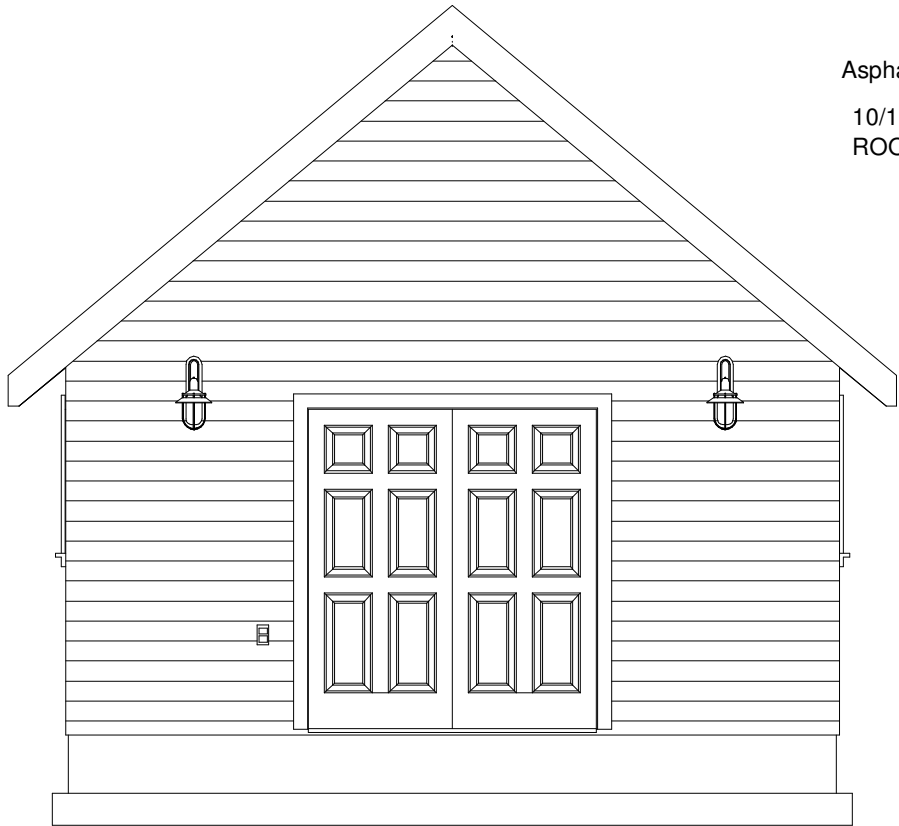
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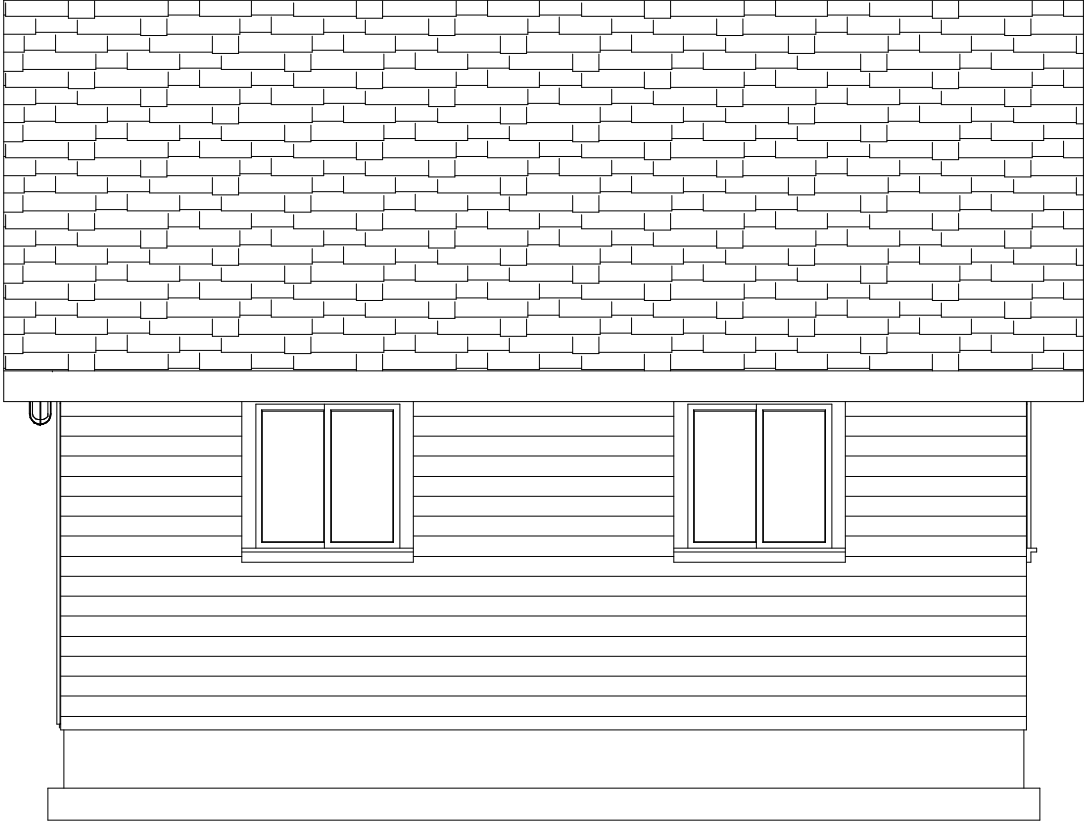
REAR ELEVATION



LEFT ELEVATION



FRONT ELEVATION



RIGHT ELEVATION

Asphalt Shingles
10/12 PITCH
ROOF

8' Tall 2 x 4
Walls
Horizontal
Hardiplank 6 1/4
Siding Over
Structural Panel

SCALE
1/4"=1'

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Residential Design

SDS-CAD
Specialized Design Systems

P O Box 374 Mendon, Utah - www.sdscad.com - 435-753-1614 - john@hplans.us

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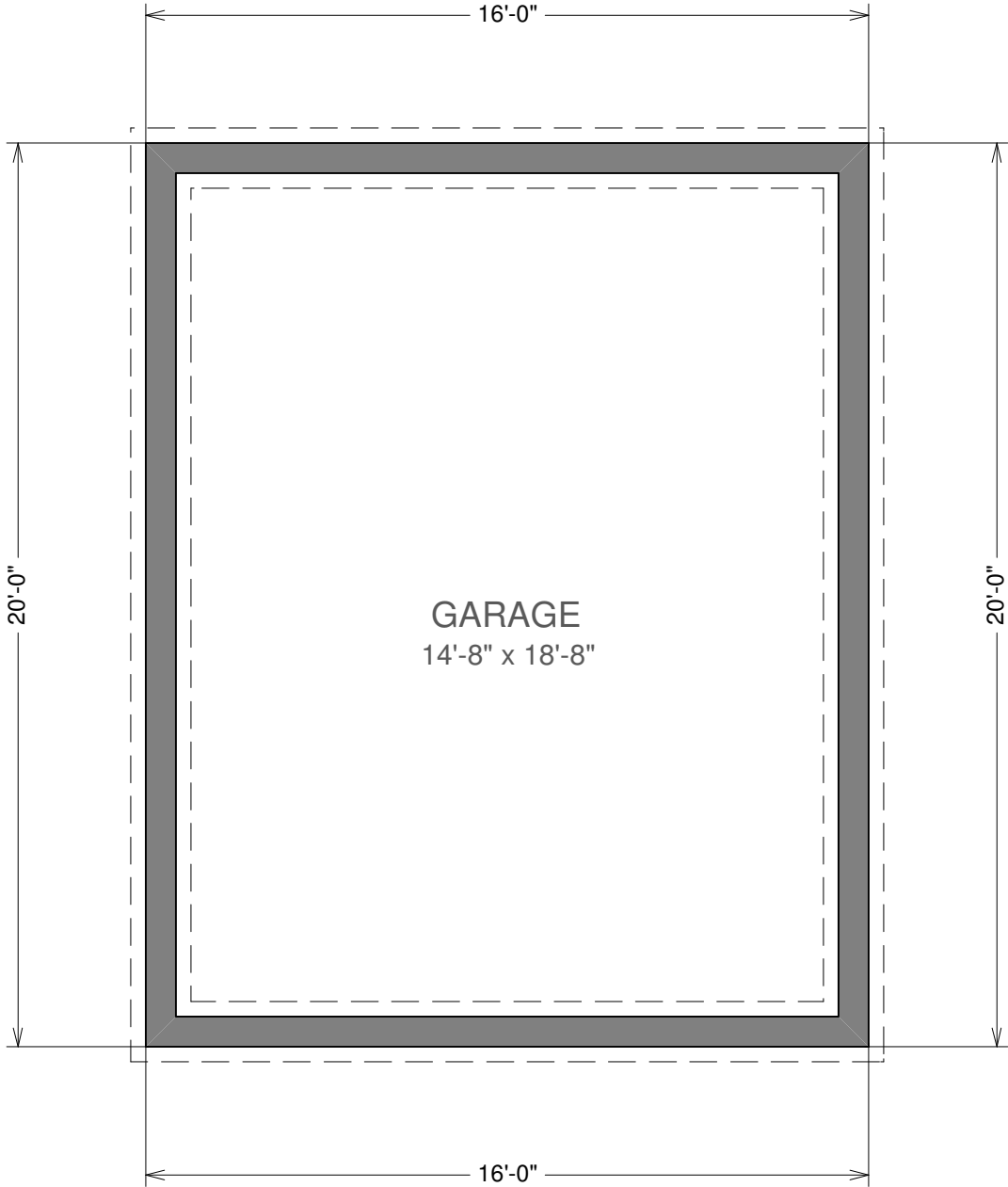
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General Notes

- 1. 16x20, 8 foot from finished floor to bottom of joists
- 2. standard exterior double doors instead of garage door on 16" side
- 3. Site consideration - 1 foot of elevation change on the site from the highest corner to the lowest corner (diagonally)
- 4. footing & stem wall (load bearing 1500 lb/sq ft) - 12" wide x 6" high
- 5. 2x6 treated mudsill bolted to top of stem wall. 2x4 bottom plate secured to 2x6 mudsill.
- 6. (2) 3x3 windows up high (just enough room for a header between window & top plate) on each of the long 20 ft sides and (1) 3x3 window in back also high - all (5) windows spaced evenly
- 7. 2x4 construction walls
- 8. no trusses - rafters and joists with storage but no occupancy above the joists (storage for future plan)
- 9. 10:12 slope roof
- 10. eaves with rake ends and fascia - 2x6 fascia
- 11. composite roof
- 12. hardiplank 6 1/4"
- 13. Sidewalk area in the front of the double doors . The door threshold should be equal with the outside sidewalk in order to roll equipment in and out. Cut out in the stem wall for the door so that it is at the same height as the inside floor?
- 14. Electrical panel will be ground to the encased in metal rods in the concrete.



PICTORIAL VIEW



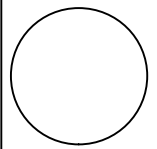

FOUNDATION PLAN

SCALE 1/4"=1'

- Concrete:
- 1. All slabs are to be 4" concrete over 4" gravel unless otherwise noted on the plans.
 - 2. Concrete to be ACI 301-66, Type II cement, 2500 psi at 28 days, 5" maximum slump.
 - 3. If required reinforcing to be ASTM A615-Bars with Fy=60 ksi lap 30 diameter minimum at splices or weld per ACI Std.
 - 4. Concrete design based on Fc 1500 psf, Fc 2500 psi for quality only.
 - 5. Anchor bolts shall be A-307 embedded 7" minimum into concrete or masonry grout.

Residential Design

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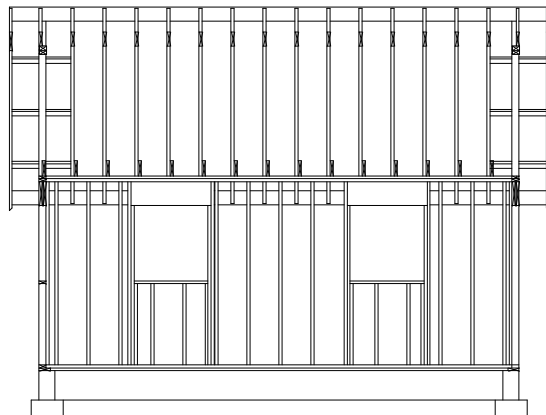
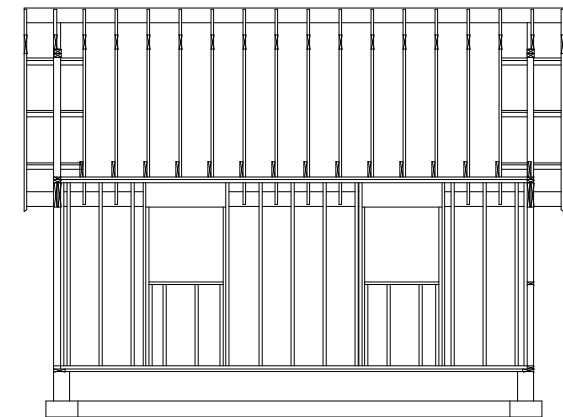
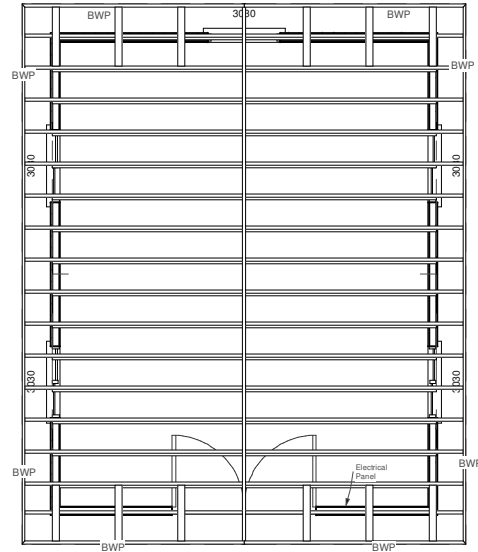
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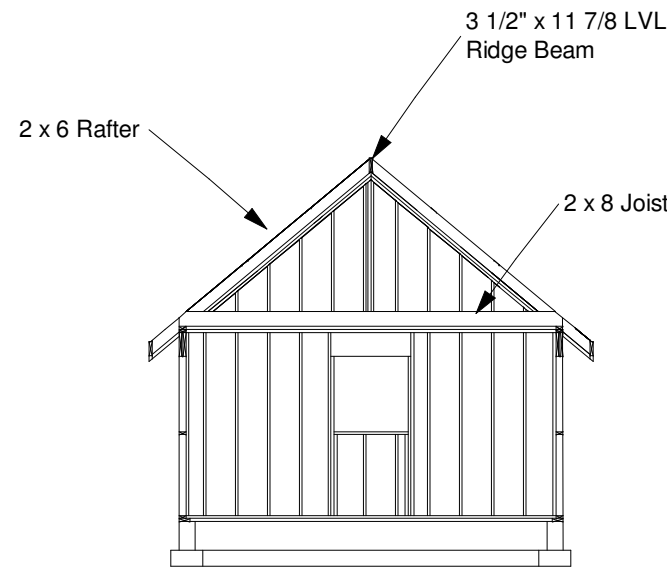
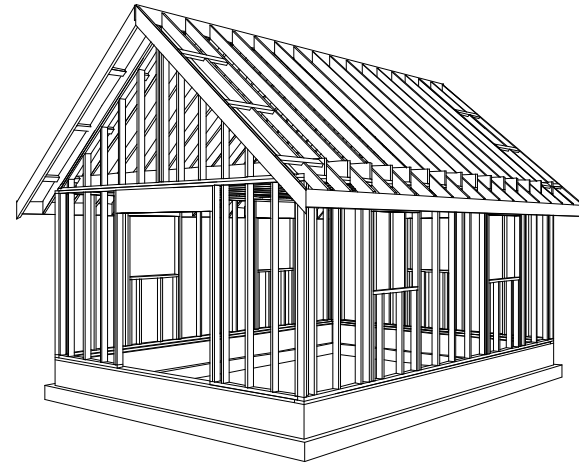
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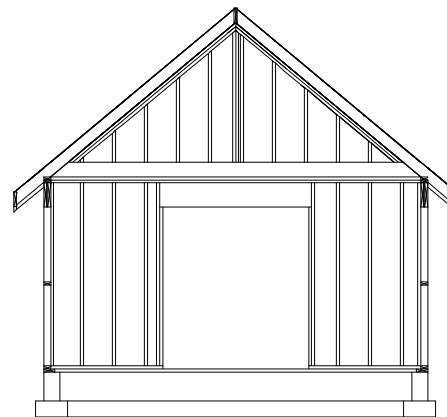
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Cross Section



Back Wall



Front Wall

WALL FRAMING SECTIONS

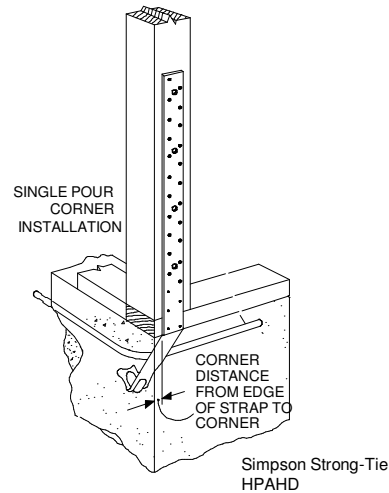
SCALE 1/8"=1'

General framing: (Douglas Fir)

1. Minimum header sizes shall be according to the following table unless otherwise noted. Header sizes (single story construction)
2'-0" to 4'-0" Span 2-2x4's
4' + to 6'-0" Span 2-2x6's
6' + to 8'-0" Span 2-2x8's
8' + to 10'-0" Span 2-2x10's
10' + to 12'-0" Span 2-2x12's or as noted on plan
2. Brace all exterior walls and cross-stud partitions at each end of building and at least every 25' of length by one of the following:
 - a. Simpson WB 126 wall bracing with 3-16d nails at each end and 1-8d nails at each stud.
 - b. Plywood sheathing of a minimum thickness of 7/16 inch.
3. Fire stopping:
 - a. Fireblock stud spaces over 10' in height, furred spaces, soffits, drop ceilings, cove ceilings, stair stringers at top and bottom of run, bearing walls and ceiling joist lines, etc. Firestopping shall consist of 2" nominal lumber.
 - b. Firestop openings around vents, pipes, ducts, chimneys, and fireplaces at ceiling and floor levels with approved noncombustible materials.
4. CDX plywood is not approved where exposed to weather, i.e., roof overhangs.
5. Exterior wall framing to be 2"x4" studs at 16" o.c. Interior wall, framing at non-bearing walls to be 2"x4" studs at 24" o.c. and at bearing walls 2"x4" studs at 16" o.c. with double top plate.
6. Shear wall to be 7/16" Sheathing, see detail.
7. All stress grade lumber shall comply with WCLA specs and bear approval stamp on all pieces in place.
8. Framing lumber shall be Douglas Fir construction grade Fb 1450 or better unless otherwise noted.
9. Nailing to be per current U.B.C. unless otherwise noted.
10. All bearing partitions shall have double top plates.
11. Structural glued laminated timbers to be stamped by an approved agency.
12. Use redwood or pressure treated sole plates at all exterior walls.

Roof Framing:

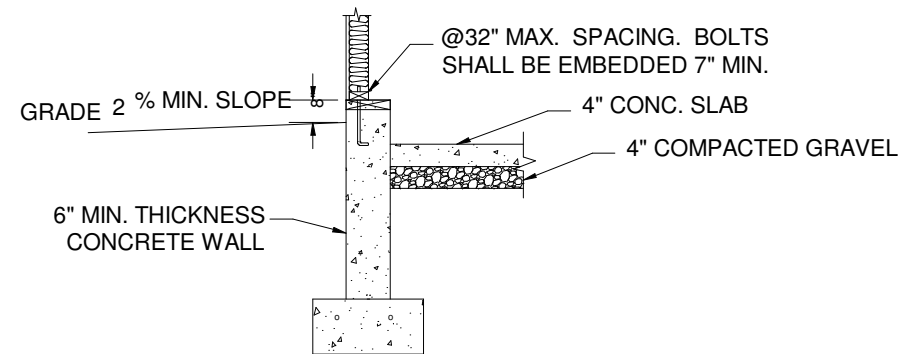
1. Fascia to be 2"x Douglas Fir.
2. For soffit size see details.
3. For spans and dimensions refer to floor plans.
4. Use Simpson H-1 hurricane anchors at each truss or rafter to wall connection.
5. Solid blocking required between joists, rafters, and trusses over all bearing walls. Such blocking shall be 1 1/2" minimum thickness and full depth of joists, rafters, or trusses.
6. Minimum header sizes shall be according to the header size table unless otherwise noted.
7. Basis of design roof live/snow load of 20 psf, and roof dead load of 15 psf.
8. Plywood roof decking to be Min 1/2" thick, 24/0, CDX or 5/8 wafer.
9. 2 x 6 DF Rafters 16" o.c.
10. 2 x 6 DF Ceiling Joists 16" o.c. (No Storage)
11. 2 x 8 DF Ceiling Joists 16" o.c. (Light Storage)
12. 3 1/2" x 11 7/8 LVL Ridge Beam
13. Engineered Attic Trusses may also be used



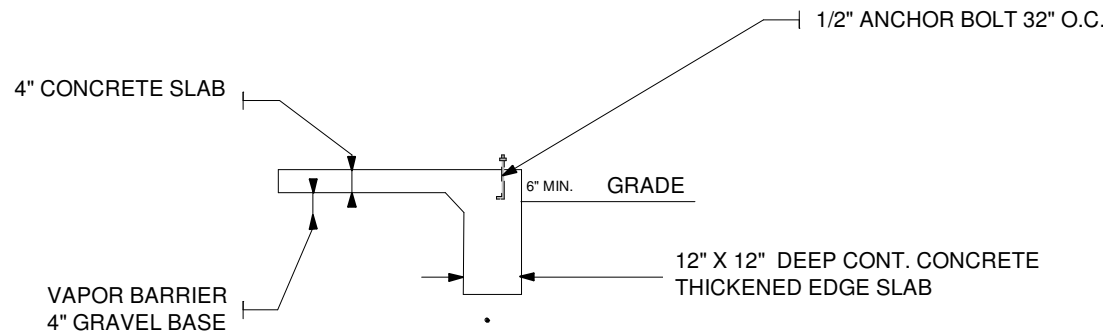
HPAHD straps for all (ABWP) Alternate Braced Wall Panels
See additional detail for all (BWP) Braced Wall Panels

TYPICAL ALTERNATE BRACED WALL PANEL (ABWP)

NOTE: TYPICAL DETAILS FOR CONSTRUCTION TO MEET BUILDING REQUIREMENTS. GARAGES TO BE BUILT AS PER LOCAL CODE REQUIREMENTS



Footing and concrete wall option



Monolithic slab foundation option

CDX PLYWOOD SHEAR WALL INSTALLED W/ LONG DIMENSION ACROSS STUDS. STAGGER VERTICAL JOINTS

PANEL SHEATHING USED AS CORNER BRACING W/ LONG DIMENSION PARALLEL TO STUDS

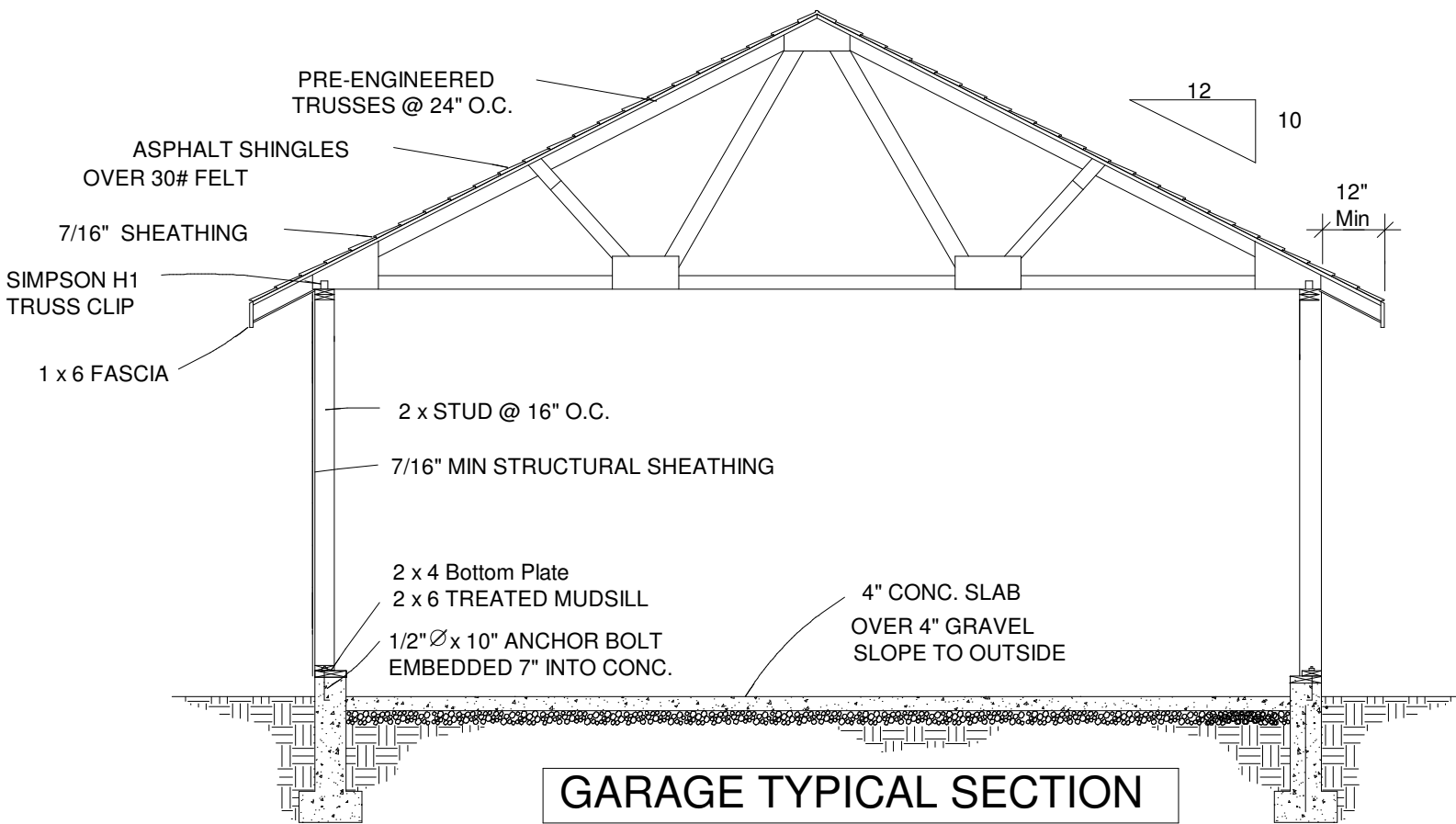
LEAVE 1/4" GAP @ EDGES & 1/8" GAP @ ENDS UNLESS OTHERWISE RECOMMENDED BY MANUFACTURER

WALL FRAMING

SIDING MATERIAL STRUCTURAL PANEL CAN ACT AS SIDING IF OF EXTERIOR GRADE

10d NAILS @ 6" O.C. AT EDGES & SEAMS AND 10d NAILS @ 12" O.C. IN FIELD U.N.O. ON SHEAR WALL SCHEDULE

TYPICAL BRACED WALL PANEL (BWP)



GARAGE TYPICAL SECTION

Computer Generated Materials List

General								
GN1		0	14 1/2 high wall	8" Concrete Stem Wall	69	0	ft	
GN2		1	96 high wall	Siding-4	71	0	ft	
GN3		1		heated ceiling area	320.00	0.00	sq ft	
GN4		2	77 1/4 high wall	Siding-4	30	0	ft	
								Subtotal:
Foundation								
FO1		0	8" thick	Concrete Grey	2.08	0.00	cu yd	
FO2		0	1/2x6"	foam sill seal	69	0	ft	
FO3		0		foundation bolts	16	0		
FO4		0	16x8"h	concrete footing	2.28	0.00	cu yd	
FO5		0	no. 4	rebar (footing)	155	0	ft	
FO6		0	no. 4	horiz. rebar (wall)	309	0	ft	
FO7		0	no. 4	vert. rebar (wall)	87	0	ft	
FO8		0	274 sq ft	concrete slab	3.37	0.00	cu yd	
FO9		0	274 sq ft	steel mesh for slab	273.00	0.00	sq ft	
								Subtotal:
Subfloor								
SF1		1	2x6"-16'+	mudsill - lumber	70	0	ft	
SF2		1	2x8"-16'	ceiling joists - lumber	15	0		
								Subtotal:
Framing								
F1		1	2x4-16ft+	fir plate	228	0	ft	
F2		1	2x4-16ft+	fir stud stock	147	0	ft	
F3		1	2x4"-91 1/2"	fir stud	58	0		
F4		1	2x12-16ft+	header - lumber	46	0	ft	
F5		2	2x4-16ft+	fir plate	78	0	ft	
F6		2	2x4-16ft+	fir stud stock	92	0	ft	
								Subtotal:
Siding								
S1		1	7" wide	Siding Wood White	1152	0	ft	
S2		1		house wrap	565.00	0.00	sq ft	
S3		2	7" wide	Siding Wood White	239	0	ft	
								Subtotal:
Ext Trim								
EX1		1	1x4-16ft+	exterior sill	18	0	ft	
EX2		1	1x4-16ft+	ext. window casing	51	0	ft	
EX3		1	1x4-16ft+	ext. door casing	20	0	ft	
EX4		1	5 in	ext. door jamb	20	0	ft	
EX5		1	1x5-72"	door threshold	1	0		
								Subtotal:
Roofing								
R1		1	2x8"-16'+	ridge board - lumber	22	0	ft	
R2		1	2x6"-14'	rafters - lumber	32	0		
R3		1	2x8"-24'	rafters - lumber	2	0		
R4		1	2x8"-14'	rafters - lumber	4	0		
R5		1	2x4"-16'+	rafters - lumber	29	0	ft	
R6		1		ridge cap	22	0	ft	
R7		1		Roofing Dimensional Comp.	542.00	0.00	sq ft	
R8		1	4x8' sheets	roof sheathing	17	0		
R9		1	2x8"	gable fascia	48	0	ft	
R10		1	2x8"	eave fascia	45	0	ft	
R11		1		metal drip edge	93	0	ft	
								Subtotal:
Insulation								
IN1		1	12x16x48" batts	ceiling insulation	60	0		
Wall Brd								
WB1		0		Color Bone White	274.00	0.00	sq ft	
WB2		0	4'x8'x3/4"	Sheet Sheetrock	9	0		
WB3		1	4'x8'x1/2"	Sheet Sheetrock	18	0		
WB4		1		Color Bone White	296.00	0.00	sq ft	
WB5		1	4'x8'x3/4"	Sheet Sheetrock	9	0		
WB6		2	4'x8'x1/2"	Sheet Sheetrock	4	0		
								Subtotal:
Windows								
W1		1	36x36	right sliding	5	0		
Doors								
D1		1		handle: Lever (decorative)	2	0		
D2		1		handle: Exterior Handle (ext.)	2	0		
D3		1		lock: Dead Bolt (interior)	2	0		
D4		1		lock: Dead Bolt (exterior)	2	0		
D5		1		hinge: hidden	6	0		
D6		1	36x80x1 3/4R	ext. 6-Panel - color white	1	0		
D7		1	36x80x1 3/4L	ext. 6-Panel - color white	1	0		
								Subtotal:
Int Trim								
T1		1	1x4-16ft+	window apron	18	0	ft	
T2		1	1x4-16ft+	sill	18	0	ft	
T3		1	1x4-16ft+	interior casing	71	0	ft	
								Subtotal:
Electrical								
E1		1	wall mount	Duplex	8	0		
E2		1	wall mount	Duplex (weatherproof) - color light gra	1	0		
E3		1	wall mount	Single Pole	2	0		
E4		1	wall mount	Caged Lantern	2	0		
E5		1	wall mount	Electrical Panel	1	0		
E6		1	ceiling mount	Half Dome Light - lighting grey	2	0		
								Subtotal:
								Total: