

Specifications of Work

Residence for Thomas Kisko
 426 Caddy Circle
 Pagosa Springs, CO 81147
 Parcel # 569916416011
 Pagosa Lakes, Pagosa in the Pines, Lot 11, Block 14
 7/8/09

Wall Bracing (R602.10)

All walls except the garage door wall will use R602.10.3 Method 3: 48" brace panels. The garage door wall will use the continuous wood structural sheathing exception in R610.10.5

Optionally, all walls may use continuous wood structural sheathing.

Bracing percentages from Table R602.10.1 are applied as follows:

25% bracing for 27'10 walls supporting roof plus 2 stories, equates to minimum of 2 48" panels

29% bracing for 39'5 walls supporting roof plus 2 stories, equates to minimum of 3 48" panels

16% bracing for 27'10 walls supporting roof plus 1 story, equates to minimum of 2 48" panels

18% bracing for 39'5 walls supporting roof plus 1 story, equates to minimum of 2 48" panels

Garage door wall - continuous wood structural sheathing

$(40"+38"+40")/27'10" = 35.33\%$ braced wall, 25% required.

Insulation Plan/REScheck

The insulation plan consists of:

R-30 batts in main floor joists / garage ceiling.

R-38 batts in the cathedral ceiling rafters, 12" batts in 14" rafter with vent in ridge and eave

R-19 batts in the exterior walls. 1/2" to 1" EPS insulation may optionally be applied to exterior walls.

The upper half of the stairwell from the garage to the mail level will be insulates with R-19 in walls and R-30 in the ceiling.

The envelope of the insulation plan does not include the garage, however some garage insulation will be installed.

REScheck area data is as follows:

Floor 1	Floor inc cantileiver & stair slope	1143	$=27.83*39.5+18.58*0.83+12.58*0.83+11*0.83+3.5*(9.66*\text{SQRT}(10*10+7.66*7.66))/10-9.66)$
Wall 1	Front\west	436	$=27.83*9.08+27.83*13.17/2$
	12 windows	120	$=2*4*4+4*4*1.5+2*4*4+4*4*4/2$
Wall 2	Rear\east	436	$=27.83*9.08+27.83*13.17/2$
	10 windows	88	$:=4*4*1.5+2*4*4+4*4*4/2$
	2 double doors	80	$=2*6*6.66$
Wall 3	Left\north	482	$=39.5*8.92+18.5*7$
	3 windows	24	$=2*2.5*1.5+4*4$
Wall 4	Right\south	440	$=39.5*8.92+12.5*7$
	4 windows	60	$=3*4*4+4*3$

Wall 5	Dorm sides	136	$=4*11.66*5.83/2$
Wall 6	Stairs	118	$:=2*10.17*8.08/2+4.5*8.06$
	1 door	20	$=3*6.66$
Wall 7	Cantilever 10" sides	50	$=0.83*10.25*4+0.83*9.33*2$
Ceiling	Ceiling	1350	$[c18]:=18.92*(38.5*2-11.5-17.5)+15.25*(11.5+17.5)$

REScheck results:

Compliance: Passes on UA

Compliance: 2.1% Better Than Code

Maximum UA: 312

Your UA: 306

The REScheck Compliance Certificate is attached.

Framing

2x6 walls 16" oc

2x10 floor joist 16" oc spanning 13'8 [Table R502.3.1(2)]

14" RFP1 40 I-beam roof rafters 24" oc spanning 13'8 horizontal, 12-12 and 6-12 pitch, beam calculation attached

5 1/2 x 11 1/4 Glulam floor 1 beam, 39'6, beam calculation attached

5 1/2 x 11 1/4 Glulam floor 2 beam, 39'6, beam calculation attached

5 1/2 x 11 1/4 Glulam ridge beam, 43'6, beam calculation attached

6x6 posts supporting beams and deck

2x8 deck joist spanning 7'4

2-2x10 deck beams spanning 6'4

2-2x12 garage door headers spanning 9'0

2-2x8 headers for 6'0 deck doors

2-2x8 headers for 3'0 garage entrance doors

2-2x8 headers for 4'0 windows (2x10 on garage north & south wall 4'0 windows)

3-2x10 header for 6'0 dining room window

2-2x6 headers for 3'0 bath windows

Roof Framing Details

The following details are from: Roseburg Framing System Design Guide

2c RFPI®-JOISTS ABOVE RIDGE SUPPORT BEAM

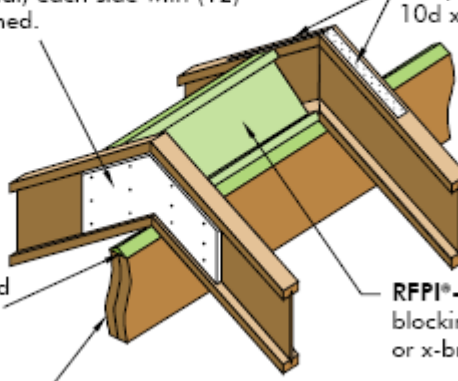
¾" x 2'-0" plywood gusset (face grain horizontal) each side with (12) 8d nails clinched.

-OR- Simpson LSTA21 strap* with (16) 10d x 1½" nails
* Strap required for members with slope greater than 3/12.

Double beveled wood plate

RigidLAM® LVL support beam

RFPI®-Joist blocking panel or x-bracing



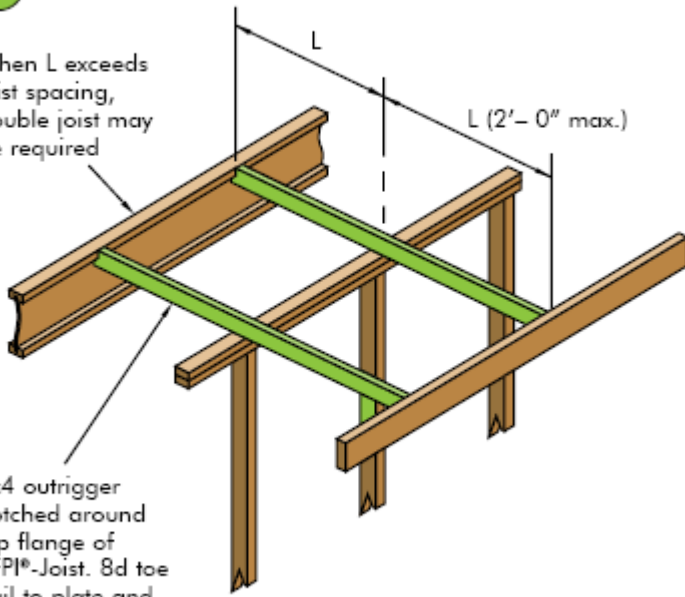
Simpson straps and x-bracing will be used.

2m OVERHANG PARALLEL TO RFPI®-JOIST

When L exceeds joist spacing, double joist may be required

L
L (2'-0" max.)

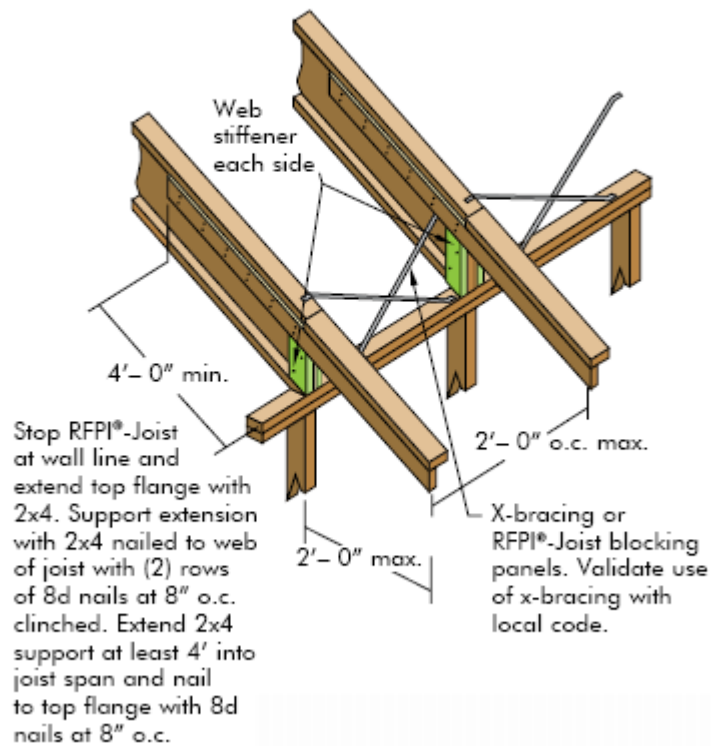
2x4 outrigger notched around top flange of RFPI®-Joist. 8d toe nail to plate and top flange



2x6 outriggers will be used. L = 2'0.

2k

OPTIONAL OVERHANG EXTENSIONS



2x6 extensions will be used.

Stairs

garage to main

$$2 + 13 = 15 \text{ risers}$$

$$9'6.25" / 15 = 7.62" \text{ riser}$$

10" run;

main to loft

$$3 + 11 = 14 \text{ risers}$$

$$8'11.25" / 14 = 7.66" \text{ riser}$$

10" run

porch slab to deck

13 risers

$$8'3" / 13 = 7.61" \text{ riser}$$

All stairs will have hand rails per [311.5.6]

Deck Details

The following details are from: Prescriptive Residential Wood Deck Construction Guide,
Based on the 2006 International Residential Code,
American Wood Council

The deck will be constructed as detailed in the following pictures.

Deck parameters:

31'10" wide and protrude 8' to 10' from the home

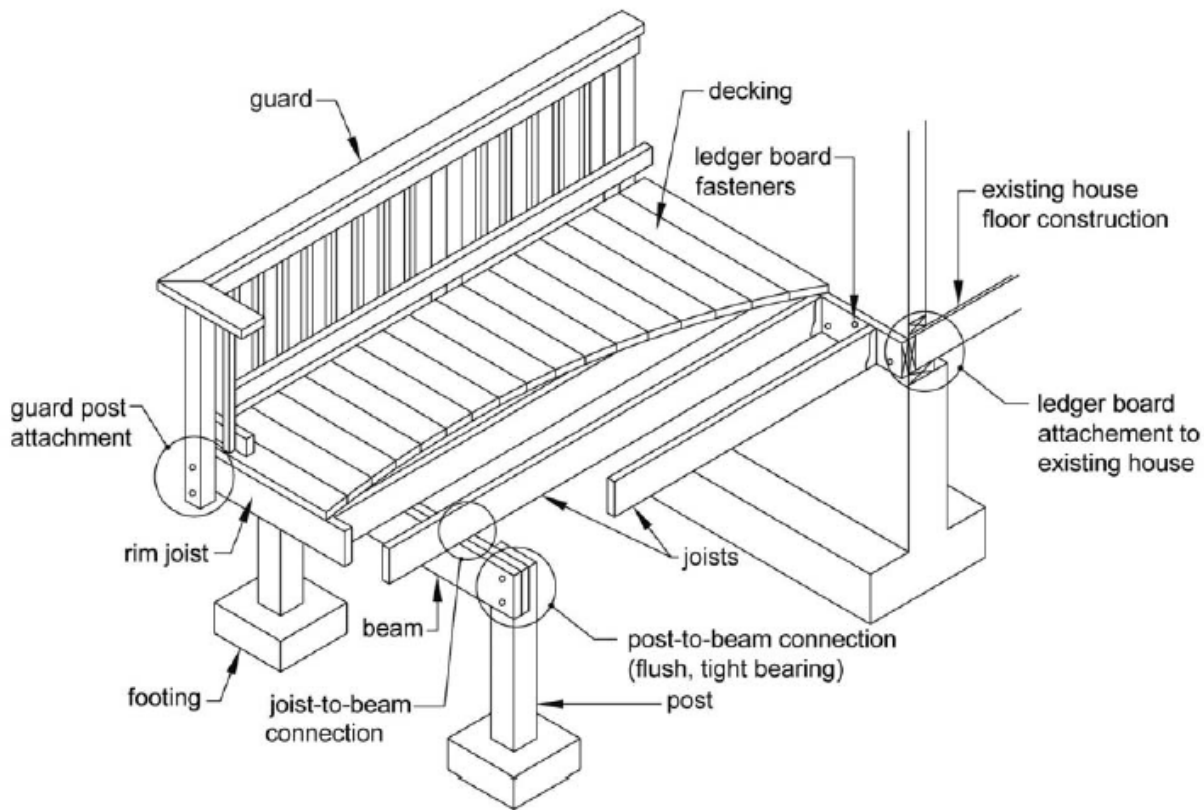
2x8 deck joist spanning 7'8"

2-2x10 deck beams spanning 6'3.5"

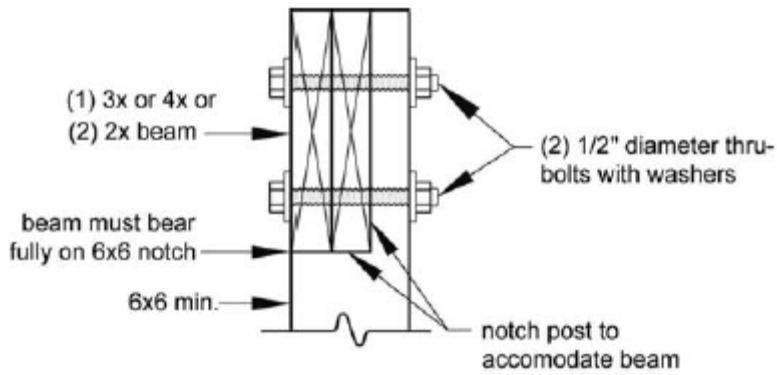
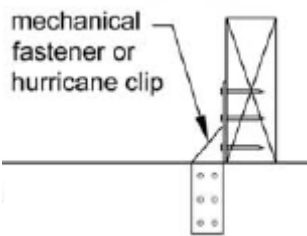
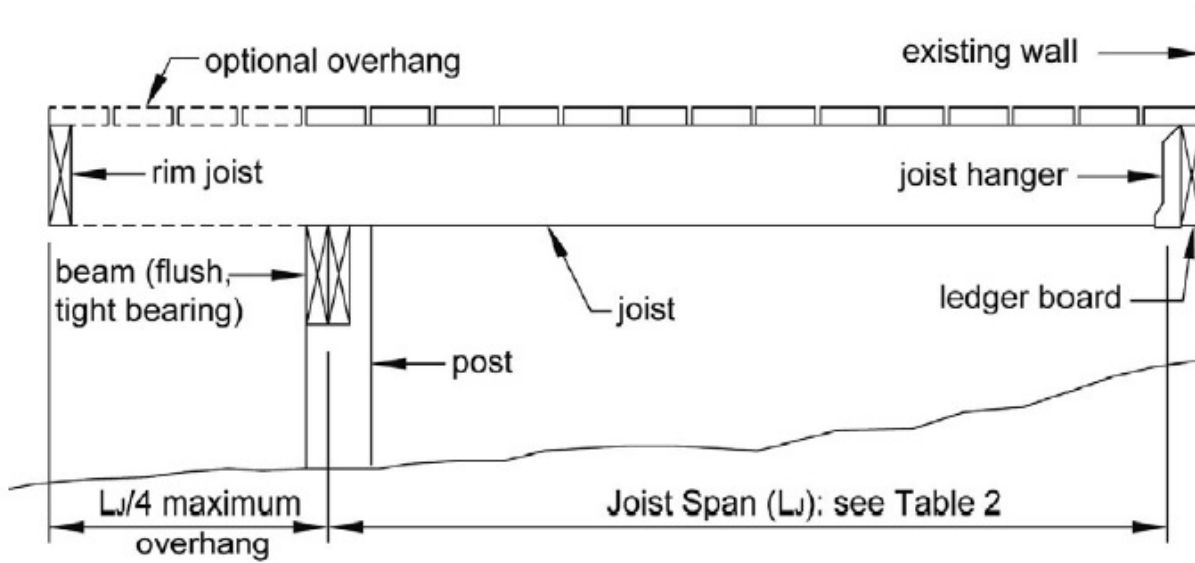
17" dia x 6" thick footings

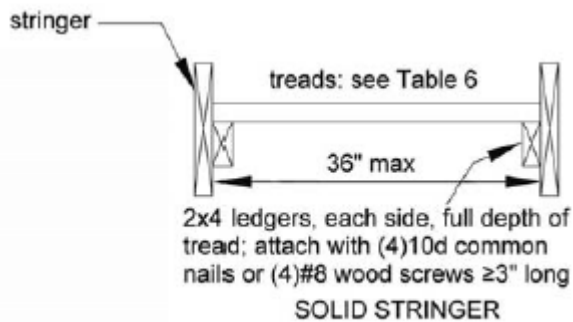
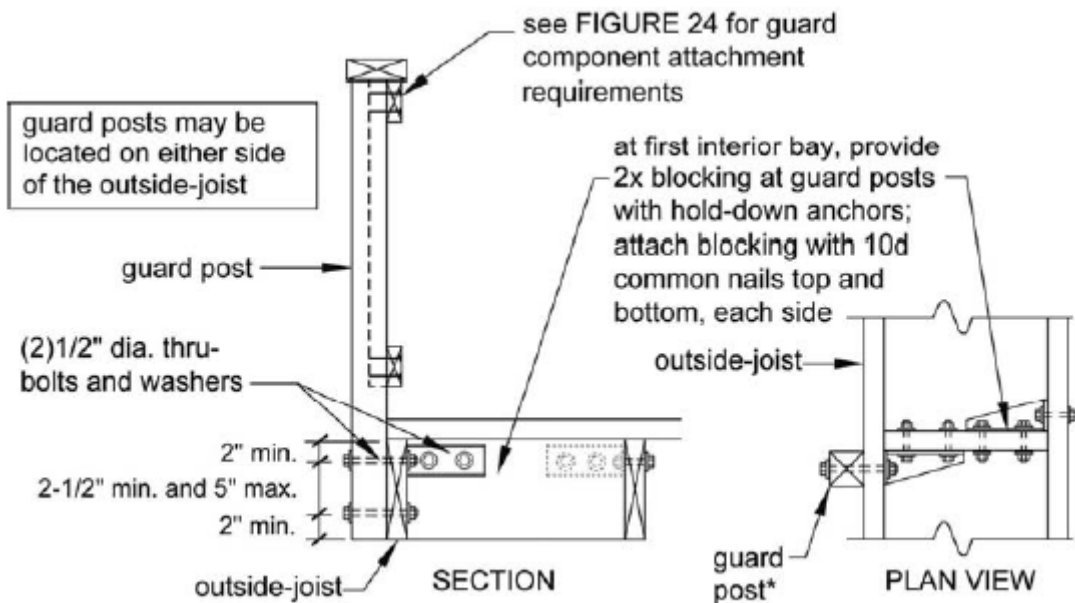
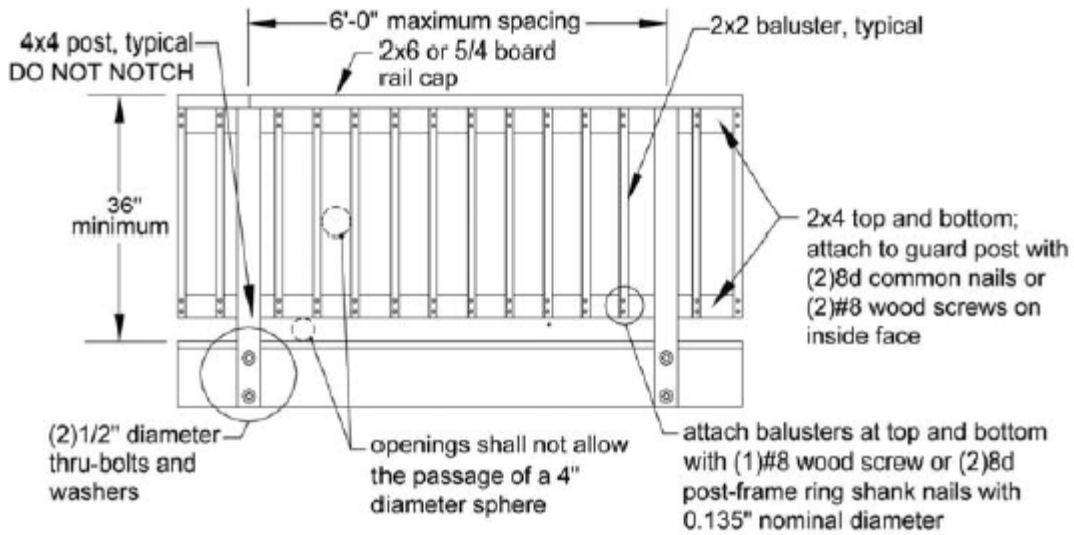
10" sono tube piers to surface

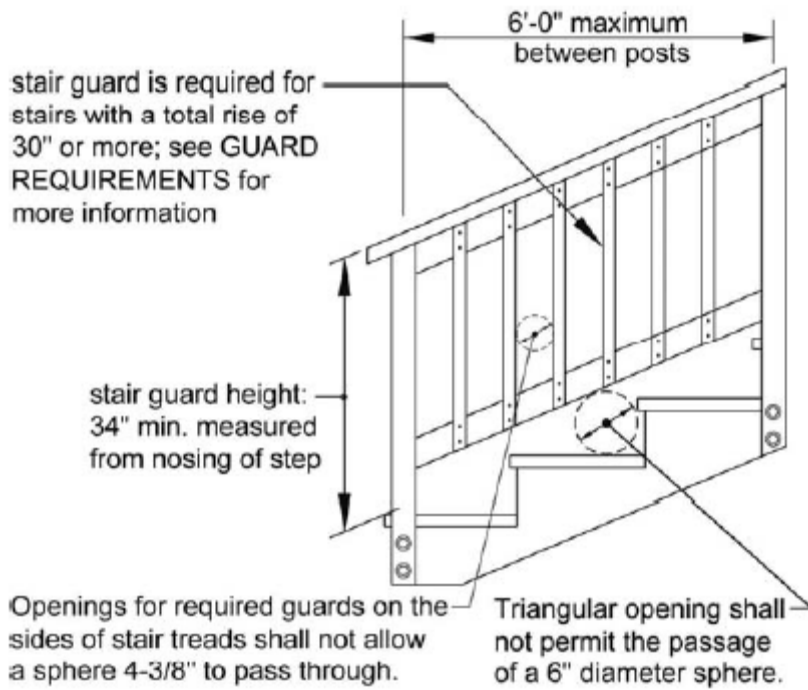
6x6 posts



The overhang will vary from 0" to 24" with 8' to 10' joists.







Radon Mitigation Plan

A passive subslab depressurization system will be implemented.

4" of gravel (no fines) covered by 6 mil Polyethylene under the garage floor slab.

A 3" vent shaft with a "T" in the gravel will terminate at least 12" above the roof near the ridge.

Heating Plan

A direct vent gas furnace will provide most of the BTUs:

Reagency model C34, 32000 BTU, 84% Efficiency (or similar), no hearth required

Electric baseboard, ceiling and in-floor radiant heat will supplement/backup:

Q-Mark 2543W Electric Baseboard Heaters, 750 watt (or similar) 2 in each bedroom

WarmlyYours radiant floor heating system (or similar) in master bathroom, possibly more

Broan Two-Bulb Ceiling Heater Model 163 (or similar) in each bathroom

There are no plans for air conditioning.

Other Mechanical

Water heater, electric, 50 gallon, 7600 watts

Standard clothes washer, electric

Standard clothes dryer, electric

Standard refrigerator, electric

Standard range, electric

Window Schedule

Garage Floor

North wall

1 - 48x36 slider

East wall

2 - 48x36 slider

Main Floor

North wall

1 - 30x18 slider

South wall

1-48x48 slider

1-48x36 slider

1-96x48 3-wide slider

West wall

2-48x48 slider

Loft Floor

North wall

1 - 30x18 slider

East wall

4 - 48x18 awning

2 - 48x48 fixed

4 - 48x48 triangle fixed

South wall

1-48x48 slider

West wall

4 - 48x18 awning

2 - 48x48 fixed

4 - 48x48 triangle fixed

Door Schedule

Garage Floor

North wall

1 - 36 exterior with partial glazing, RH

South wall

1 - 36 exterior with partial glazing, LH

West Wall

2 - 9'x7' garage doors

Interior

1 - 32 fire rated, RH

1 - 32 interior, LH

1 - 28 interior, LH

Main Floor

East Wall

2 - 48 double with full glazing

Interior

1 - 36 interior

1 - 32 interior, RH

3 - 30 interior, 2 RH, 1 LH

1 - 24 interior, RH

Loft Floor

Interior

5 - 32 interior, 3 RH, 2 LH

1 - 24 interior, LH