



SPECIFICATIONS FOR  
**Patio Covers**

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INFORMATION  
BULLETIN

**006**

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This information bulletin describes the minimum requirements for obtaining patio cover permits for residential buildings using Pinal County standard plans, ICBO approved plans, or other plans for conventional framing.

### I. DEFINITION

A. Patio covers are one-story, roofed structures not more than 12 feet above grade and used only for recreational, outdoor living purposes.

B. Patio covers may be attached or detached and are permitted only as accessory to one- or two-family dwellings or lodging houses or to individual dwelling units in multiple dwelling unit buildings. Patio covers cannot be used as storage structures.

C. Patio covers must be open on two or more sides.

1. Enclosure walls must have clear height of not less than 6'8" measured from the floor to the soffit of the supporting members.

2. Enclosure walls may have any configuration, provided at least 65 percent of the total wall area of the longer wall and one additional wall is open. Note that sliding glass doors may not be included in the open area. The openings must not be covered with any permanent materials which obstruct the free passage of light and air except insect screening having a mesh not finer than  $\frac{1}{16}$ " by  $\frac{1}{16}$ ", or **readily removable** transparent or translucent plastic of not more than  $\frac{1}{8}$ " maximum thickness.

### II. WHEN IS A PERMIT REQUIRED?

If the patio cover is open and has 120 sq. ft or less of roof area, a building permit is not required, provided the cover is constructed within the following limits.

- A. Maximum depth of 8 ft.
- B. Rafter size according to Table B. (Attached)
- C. Beam sized according to Table C. (Attached)
- D. Built only as an addition.

Even though a building permit may not be required, a zoning permit may be necessary. Call (520) 866-6442 for information about Zoning requirements.

A building permit is required for any new patio cover not meeting this exemption, or repair or enclosure of an existing patio cover. A final inspection must be passed before the work is considered completed by Pinal County.

### III. YOUR OPTIONS FOR SERVICE

Patio cover permits may be obtained "over the counter" when using ICBO approved plans, provided setbacks are not altered. Plans not meeting the criteria for over the counter plan check must be submitted for plan review and zoning clearance.

### IV. DRAWINGS TO PROVIDE & FORMS TO COMPLETE

Plans must be drawn to scale and must be of sufficient clarity to indicate the location, nature and extent of the work proposed. Be sure to clearly label all existing and proposed construction.

Plans must show, in detail that the proposed work will conform to the provisions of the International Building Code, Zoning Ordinances and all other relevant laws, ordinances, rules and regulations.

Two sets of plans are required and must include:

**A. Plot Plan**

See figure 5 for requirements.

**B. Foundation and Framing Plans**

Provide one of the following:

1. One copy of Pinal County standard plan (specifications in this bulletin ) with the proposed footing sizes, rafter sizes and beam sizes highlighted, *or*,
2. One copy of an International Conference of Building Officials (ICBO)-approved plan available from your supplier, *or*,
3. Two copies of any other plan. These plans should include a foundation plan, a roof framing plan, elevations, cross sections and connection details.

**C. Permit Application**

All projects must be submitted with a completed Permit Application accompanied by any required plan check fee. (Fees are determined based on square footage.)

### V. CONSTRUCTION SPECIFICATIONS

Following are the minimum construction specifications for patio covers.

A. Lumber must be Douglas fir-larch No.2 or better. All lumber must be grade marked. Joists, girders and posts may be required to be protected against termites. (See Section R320 of the International Residential Code (IRC) for details.) All posts must be at least 4x4.

B. The post anchorage and bracing details shown on the following sheets have been approved by Pinal County for unenclosed patio covers.

1. Posts must be anchored at the lower end and must be braced at the upper end using any of the details shown in Figure 2. Decorative-type bracing may be substituted if the same resistance to lateral loading is provided.

2. Post anchorage to slabs may be accomplished with a standard approved post base installed per manufacturers instructions. The footing must be adequate for the load

applied. See section VII below and Table A. When the load on the supporting post does not exceed 750 pounds per post, a minimum 3 ½ inch thick concrete slab on grade may be substituted for the pad footings shown on the typical framing details

3. Patio covers with roofing and/or enclosed walls must be designed in accordance with the requirements of IRC Section R305.1 and Chapter 16 of the International Building Code.

C. When it is desired to connect and support one side of the patio structure by attaching it directly to the house, the rafter spacing and beam sizes may be as shown in Tables B and C. The main beam may be replaced on the side attached to the dwelling unit with a ledger the same size as the rafters and fastened to the studs with 1/2" x 5" lag screws spaced at 32" maximum on center for up to a 10' rafter span. Lag screws may be spaced at 16" on center when the rafter span does not exceed 20'. Attaching the rafters to existing dwelling unit rafters is not recommended. If a ledger beam is not used, patio cover rafters should be notched and placed directly on the double top plate of the dwelling unit wall.

D. Specify roof covering (shingles, shakes, tile, etc) when submitting plans. If nominal 1/2" thick roof sheathing is used, the roof may have rafters spaced not more than 24" on center. If plastic roof covering is used, installation must be according to manufacturer's recommendations and the corrugations must be place perpendicular to and across the supports. Roof systems shall be sloped a minimum of ¼ inch in 12 inches for drainage.

## VI. Inspections

An Inspection Record Card is issued at the time the permit is obtained. The inspector signs this card as the construction is inspected and approved. The approved plans, the Inspection Record Card and the permit must be available on the job site. These documents are important records and should be retained.

A permit is active for 180 days. Each inspection scheduled and **passed** extends the permit 180 days. Permits approaching expiration can be extended under special circumstances. Refer to Information Bulletin 008, "Regulations Covering Permit Expiration, Extension" for more information.

Inspections are required at the following times:

A. When footings have been excavated but before concrete is placed,

B. When ledger beams are attached to an existing structure and roof sheathing is fastened, and

C. When work is complete. *Note that the project is not legally complete until there is an approved final inspection.* Call (520) 866-6299 to schedule inspections.

## VII. TABLES

Tables A, B and C make the following assumptions:

Roof live load is 20 psf.

Roof dead load is 10 psf

All lumber is to be Douglas fir-larch No.2 or better:

$F_b = 875$  psi

$F_v = 90$  psi

$E = 1,300,000$  psi

Load duration: Normal,  $L/\Delta = 240$

All posts are to be 4x4 minimum.

Soil bearing pressure is 1,000 psf minimum.

If the above information differs, values in the tables must be adjusted.

**FOOTING**

**Table A** Minimum Square Footing Sizes (inches)\*  
(4x4 or 4x6 POST)

Post Spacing (Feet)	Rafter Span (feet)							
	6	8	10	12	14	16	18	20
6	12	12	12	12	14	14	15	16
8	12	12	12	14	15	16	18	18
10	12	12	14	16	18	18	18	20
12	12	14	16	18	18	20	20	22
14	14	15	16	18	20	22	24	24
16	14	16	18	20	22	24	26	27
18	15	16	18	20	22	24	26	27
20	16	18	20	22	24	26	27	29

\*See dimension "A" on "Figure 2, Case 4."

**RAFTER SPAN**

**Table B** Minimum Rafter Sizes (inches)

**NOTE: 2X4 Rafters must bear no concentrated load**

Rafter Span (Feet)	Rafter Spacing Center- to- Center (Inches)		
	12 (½" plywood sheathing)	16 (½" plywood sheathing)	24 (½" plywood sheathing)
6	2x4	2x4	2x4
7	2x4	2x4	2x4
8	2x4	2x6	2x6
9	2x4	2x6	2x6
10	2x6	2x6	2x6
11	2x6	2x6	2x6
12	2x6	2x6	2x8
13	2x6	2x6	2x8
14	2x6	2x6	2x8
15	2x6	2x8	2x10
16	2x8	2x8	2x10
17	2x8	2x8	2x10
18	2x8	2x8	2x10
19	2x8	2x10	2x12
20	2x8	2x10	2x12

**BEAM**

**Table C** Minimum Beam Sizes (inches)

Post Spacing (Feet)	Rafter Span ( In Feet )								
	4	6	8	10	12	14	16	18	20
6	4x4	4x4	4x4	4x4	4x6	4x6	4x6	4x6	4x6
8	4x4	4x4	4x6	4x6	4x6	4x6	4x6	4x8	4x8
10	4x6	4x6	4x6	4x8	4x8	4x8	4x8	4x10	4x10
12	4x6	4x8	4x8	4x8	4x10	4x10	4x10	4x10	4x12
14	4x8	4x8	4x10	4x10	4x10	4x12	4x12	4x12	6x10
16	4x8	4x10	4x10	4x10	4x12	4x12	4x14	6x12	6x12
18	4x10	4x10	4x12	4x12	4x14	GLB	31/8x12	31/8x12	31/8x13.5
20	4x10	4x12	4x12	4x14	GLB	31/8x12	31/8x13.5	31/8x13.5	31/8x13.5

GLB = Glue Lam Beam

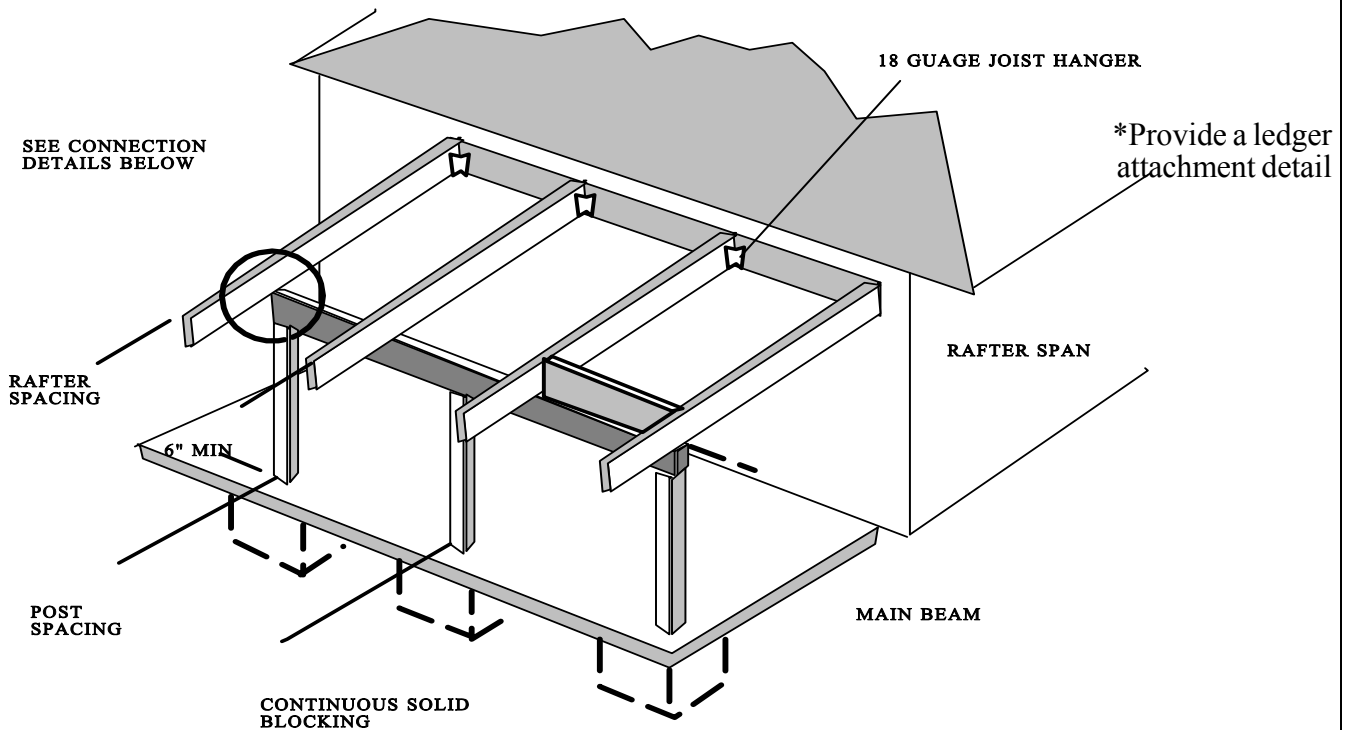
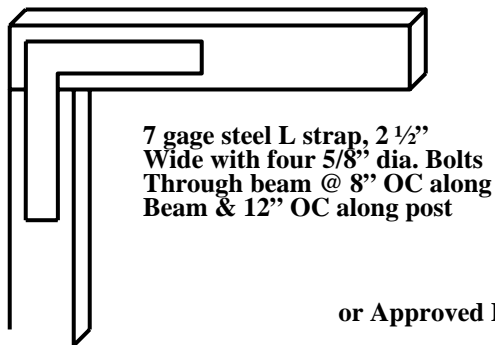


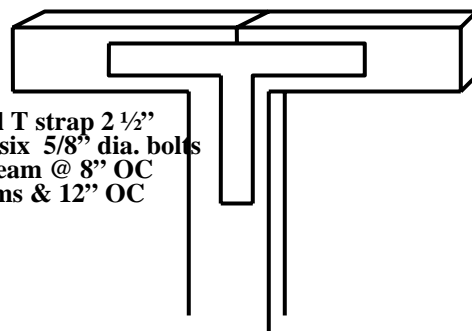
FIGURE 2 SEE FOOTING DETAILS BELOW

Connection, anchor and footing details.

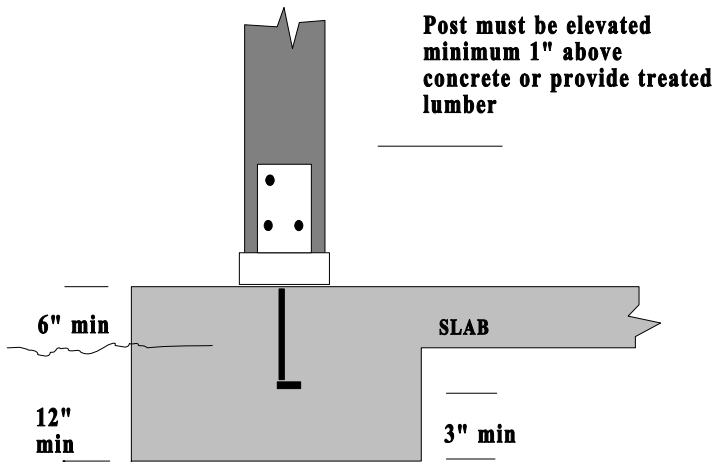
Case 1: Connection, Outside corner



Case 2: Connection, Interior condition



Case 3: Anchor and footing detail, integrated slab



Case 4: Anchor and footing detail, isolated pier.

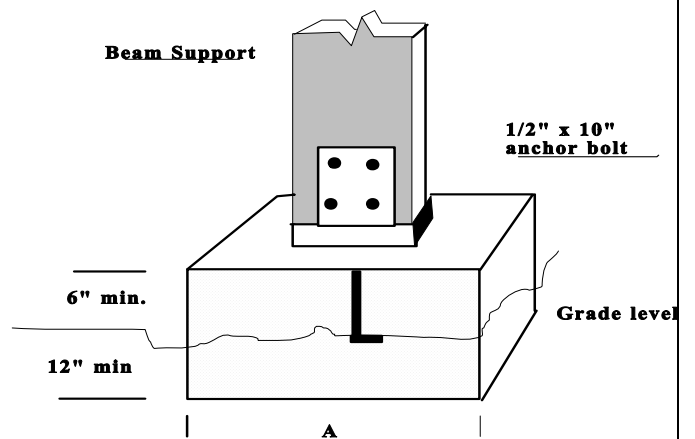


Figure 3. Enclosed patio section

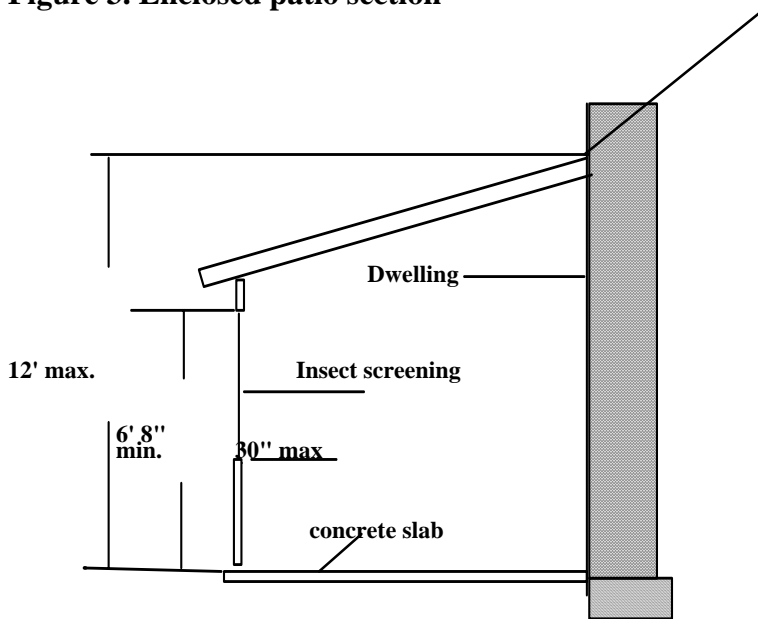
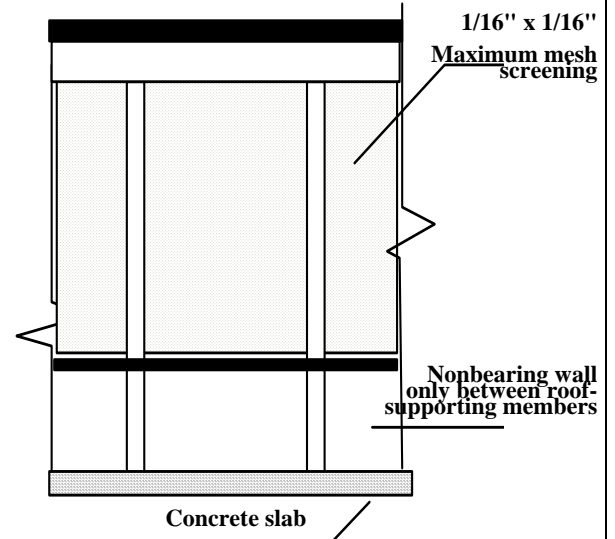


Figure 4. Enclosed patio interior elevation



Three copies of a plot plan are required for a permit. You must include information on each of the following items on the plot plan:

1. Name of owner.
2. Address and Accessor's Parcel number where patio is to be built.
3. Legal description of property.
4. North arrow and scale. Suggested scale: 1 inch equals 20 feet.
5. Boundaries and dimensions of property.
6. Names of bordering streets.
7. Width of alley(s), if any.
8. Location and width of easements. Private easements should be shown on the property's deed.
9. Location and dimensions of existing buildings, structures, retaining walls, paved parking and driveways. Include distance from property line.
10. Location and dimensions of proposed patio. Include distance to property line.
11. Location and spacing of all posts supporting patio.
12. Existing survey hubs, pipes and similar permanently installed property line identification.

Figure 5. Sample patio plot plan

