



RESIDENTIAL PATIO COVER Submittal/Permitting Guidelines

Residential Patio Cover installation & repairs require a building permit. This handout can be used as a guideline for a patio cover installation or repair in Laguna Hills. Patio Covers require compliance with the 2016 CBC, CRC, CEC, CGBS and the 2016 California Energy Code. Patio Covers will also need to comply with the City's Development Standards. Please reference the Planning Department's Accessory Structures handout at <http://lagunahillsca.gov/accessorystructures> for more information. You can also contact the Planning Department at (949) 707-2672.

Submittal Requirements

Patio covers that will be constructed per the attached City Standard drawings are generally reviewed and permitted over the counter. You will be required to fill in the blanks and information requested on these drawings and submit 2 copies along with 2 copies of a plot plan for the property. Instructions for the plot plan can be found on the City's Plot Plan Example handout.

Patio covers that deviate from the construction and/or design shown in the attached City Standard drawings are subject to the standard plan review procedures of 5 to 10 business days. Plan check submittals for the initial plan check require three (3) sets of scaled drawings with the following information included. **PLEASE NOTE:** If *all* items on this list are not with the plans at the time of submittal, the plans **may be rejected** by the Counter Technician as incomplete. Even if the plans are accepted by the Counter Technician, they **may still be rejected** by the Plan Checker as incomplete.

1. **Site Plan** – Show lot dimensions, setbacks to property lines, building dimensions, easements, & all existing structures. See Planning Department for zoning designation & development standards.
2. **Lot Coverage Calculation** – Lot Coverage is the percentage of the total lot that is covered by solid-roofed structures. Show calculation work; not just the percentage.
3. **For Attached Patio Covers: Section(s) cut through patio cover and existing structure** – Indicate a section cut through the patio cover to show the framing and relationship and attachment to the existing structure. Show the overall height of the patio cover.
4. **Structural Plan(s)** – Good, clear, enlarged details are required at all connections: post/beam, beam/wall, footing/post, etc.
5. **Engineer's Structural Calculations** – Two (2) sets may be required to justify lateral analysis, horizontal torsional moments, stability against overturning, anchorage, distribution of uniform loads and concentrated loads. Calculations are required for two (2) story room additions.
 - a. **Design Professional's Stamp** – Every page of each set of plans must be wet stamped and signed by the Design Professional prior to permit issuance. (Business and Professions Code Section 6735(a) - to view this code see: <http://www.leginfo.ca.gov/calaw.html> and check Business and Professions Code and click "Search").
6. **Soils Report** – Two (2) sets may be required. See attached matrix to determine if a soils report is required.

General Notes

1. A patio cover is a one story structure that does not exceed 12 feet in height above the adjacent grade.
2. Patio Covers shall be used for recreational, outdoor living purposes only and shall not be used as carports, garages, storage rooms or habitable space. Use of these structures as habitable space requires a building permit and alterations to both the patio cover and the house to comply with code requirements. Conversion to habitable space may require upgrades to your foundation system, roof framing, electrical, fire life safety and many other items. Also, you may need to provide vapor barrier under the slab, a reinforced slab and footing, new wall bracing, heating, energy forms and insulation for the space to be converted.
3. The longer side and one additional side of the patio shall be 65% open, below 6'8" above the floor. Openings may be enclosed with insect screening, approved translucent or transparent plastic not more than 1/8" thick or glass conforming to the provisions of Chapter 24 or any combination of the foregoing.
4. A one hour firewall is required when the exterior face of post/wall is located less than 5' 0" from the property line.
5. Unless a licensed engineer or architect provides structural calculations to justify it, no patio cover/ structure will attach to or rely upon the existing rafter tails or roof projection for the purposes of supporting the new structure.
6. These drawings are examples of the way an open patio cover may be installed. Other methods may be used provided they are approved by the Building Department prior to installation. All material types and sizes are subject to the approval of the Building Department.
7. Posts may be supported on a 3 1/2" thick reinforced concrete slab on grade when posts support a combined live and dead load less than 750 pounds per column. Approved connectors between post and concrete slab shall be capable of withstanding uplift and wind forces.

Typical Abbreviations

Conc. = Concrete	DL = Dead Load
Conn. = Connection	LL = Live Load
DFL = Douglas Fir Larch	psf = Pounds per Square Foot
Dia. = Diameter	psi = Pounds per Square Inch
Dim – Dimension	o.c. = on center (spacing)
Ga. – Gauge	stl. = Steel
Galv. = Galvanized	> = Greater Than

Required Inspections

1. FIRST INSPECTION shall be after excavation for the footing (before any concrete is poured) and verification of the solid wood backing for the ledger bolting.
2. SECOND INSPECTION shall be the framing inspection when all framing has been completed. The roof sheathing and nailing will be inspected at this time.
3. THIRD INSPECTION shall be the final inspection after the roof covering has been installed.

Construction Notes

1. Roof Covering shall be Class A or better. Rafters shall be sized based on the table shown on page 2 of the City Standard drawings. Patio covers utilizing this sheet shall have roofing assemblies weighing less than 10 psf, including asphalt or fiberglass shingles, cap sheets, build-up roofs, hot mopped assemblies and some light weight roofs. Use of heavy weight roofs including concrete, clay or slate tile or stucco soffits require calculations and plans by a licensed engineer.
2. Rafters shall be marked Douglas Fir Grade #2 or better, beams shall be marked Douglas Fir Grade #1 or better.
3. Concrete shall have a minimum strength of 4500 psi in 28 days, and be Type II or V cement with a minimum w/c of 0.45.
4. Framing hardware shall be ICC approved for the intended use and installed per manufacturer's specifications using all recommended fasteners.
5. Roof sheathing shall be continuous over 2 or more rafters, face grain shall be perpendicular to supports and maximum span shall be as follows:

SHEATHING	SPAN RATING	MAXIMUM SPAN	NAILING
3/8" CDX Plywood	20/0	16" o.c.	6d common or deformed shank
1/2" CDX Plywood	24/0	24" o.c.	6d common or deformed shank
5/8" CDX Plywood	40/20	32" o.c.	8d common or deformed shank
3/4" CDX Plywood	48/24	36" o.c.	8d common or deformed shank
1 1/8" CDX Plywood	60/48	48" o.c.	10d common or deformed shank
1x Nominal Lumber		24" o.c.	2-8d at each lap
2x Decking		48" o.c.	2-16 d at each rafter

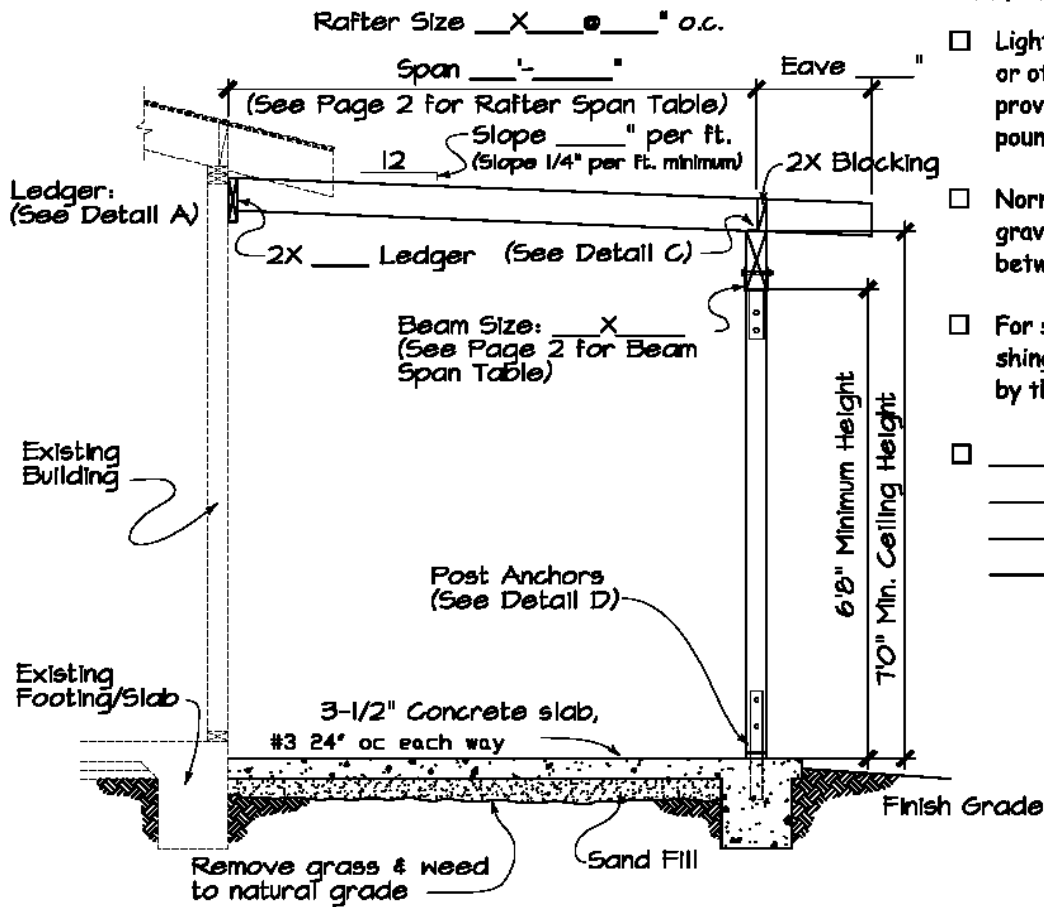
(all nail spacing for plywood sheathing shall be 6" on center (o.c.) at edges and 12" o.c. in the field)

Fees for Patio Cover Permits:

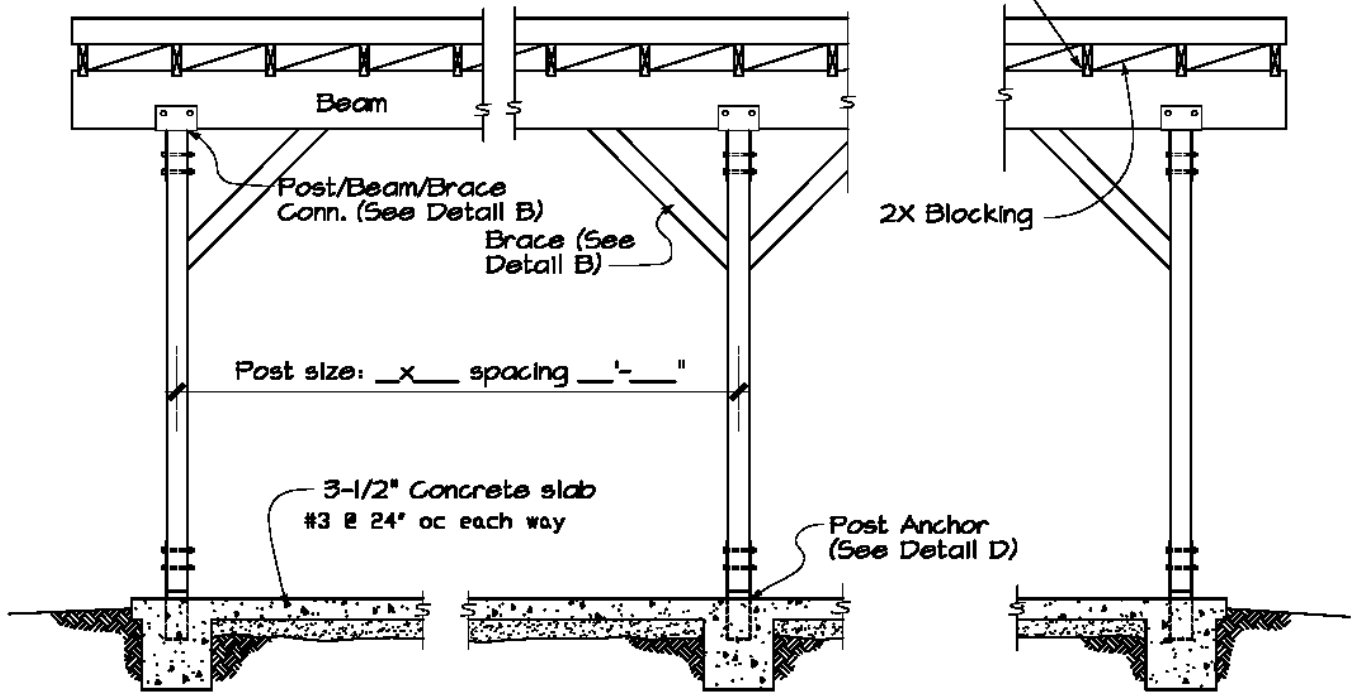
Patio Cover/Covered Porch/Greenhouse Plan Check Fee	\$181.78 for up to 300sf + \$29.78 for each additional 100sf or portion thereof
Patio Cover/Covered Porch/Greenhouse Fee	\$292.70 for up to 300sf + \$108.86 for each additional 100sf or portion thereof
Issuance Fee	\$82.16
SMIP Fee (Strong Motion Instrumentation and Seismic Hazard Mapping Fee)	\$0.00013 per \$1.00 of valuation with a minimum fee of \$0.50
State Title 24 Fee	\$1.00 per \$25,000 (or portion thereof) of valuation
Plans & Documents Fee	\$2.05 per page 11" x 17" or smaller & \$3.08 per page larger than 11" x 17"

If your project includes adding any electrical an Electrical permit will also be required: Attached patio covers with electrical will be regulated by the CA Energy Code

Fixtures Fee	\$17.46 per 100sf or \$17.46 per fixture
Issuance Fee	\$82.16
Plans & Documents	\$2.05



CONSTRUCTION SECTION



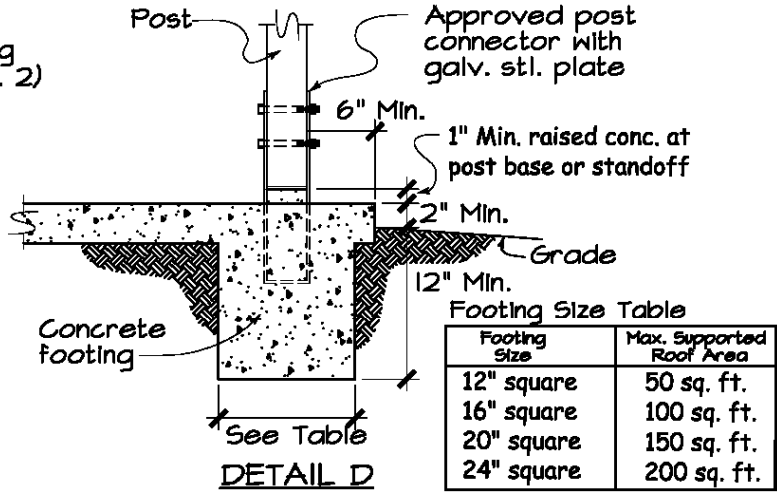
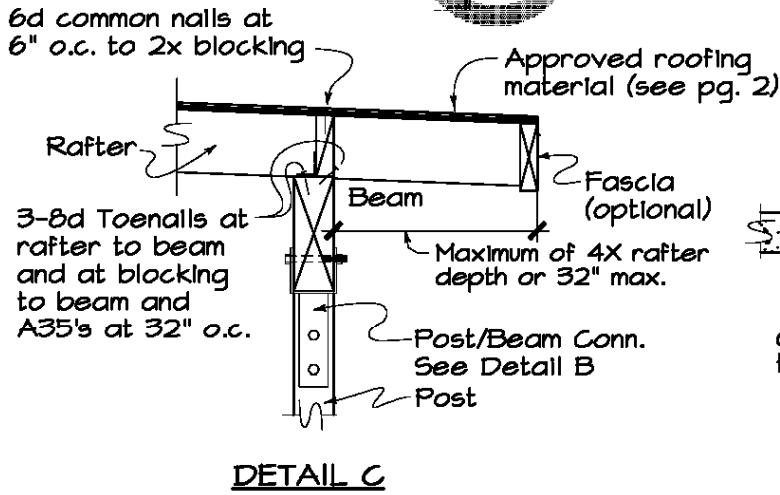
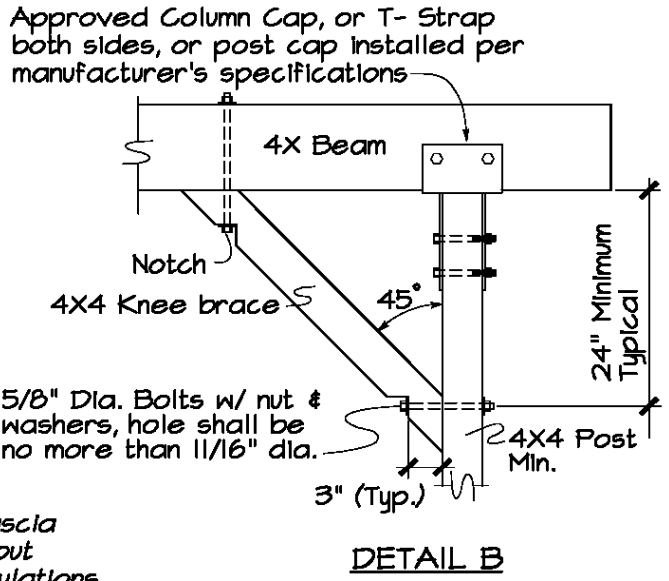
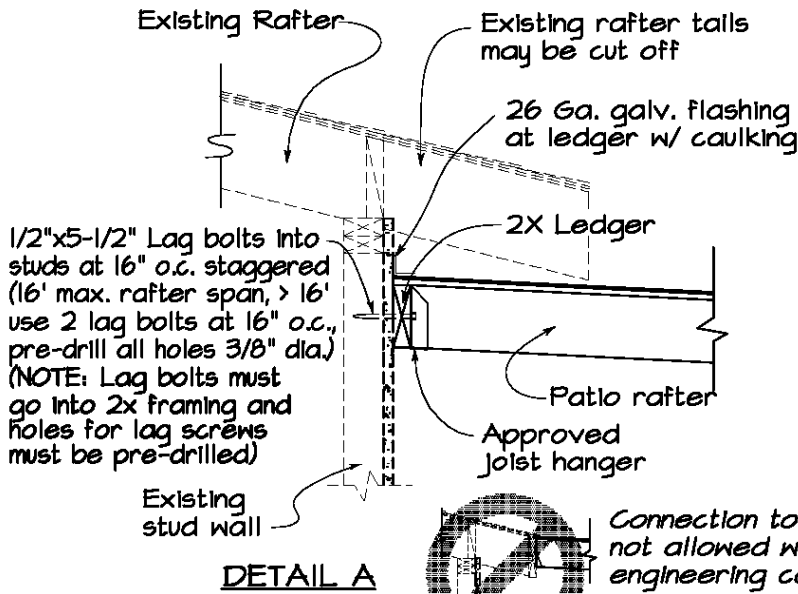
ELEVATION

Roofing Material: (Check One)

- Light Weight Roof: Fiberglass, lath or 2x2's or other spaced boards, other materials provided the material does not exceed 6 pounds per square foot.
or
- Normal Weight roofing < 2:12, 300# rock or gravel over 3 layers of 15 lb felt hot mopped between or approved built-up roof.
or
- For slopes greater than 2:12, composition shingles may be used with assemblies specified by the manufacturer.
or
- _____



ATTACHED PATIO COVER
 City Standard Drawing



Footings Size Table

Footings Size	Max. Supported Roof Area
12" square	50 sq. ft.
16" square	100 sq. ft.
20" square	150 sq. ft.
24" square	200 sq. ft.

RAFTER SPANS (DFL #2)

Rafter Size	Rafter Spacing				
	12"	16"	24"	32"	48"
2x4	7'-9"	7'-1"	6'-2"		
2x6	12'-3"	11'-1"	9'-3"	8'-0"	6'-6"
2x8	16'-2"	14'-8"	11'-8"	10'-2"	8'-3"
2x10	20'-0"	18'-9"	14'-4"	12'-5"	10'-1"
2x12	20'-0"	20'-0"	16'-7"	14'-4"	11'-9"
4x6	16'-3"	14'-9"	12'-11"	11'-6"	10'-0"
4x8	20'-0"	19'-5"	17'-0"	15'-3"	12'-8"
4x10		20'-0"	20'-0"	18'-11"	15'-5"
4x12				20'-0"	17'-11"
4x14					20'-0"

BEAM SPANS or COLUMN SPACING (DFL #1)

Rafter Span	Beam Span										
	4x6	4x8	4x10	4x12	4x14	4x16	6x8	6x10	6x12	6x14	
8'	10'-5"	13'-9"	16'-9"	19'-7"	20'-0"		16'-7"	20'-0"			
10'	9'-8"	12'-4"	15'-1"	17'-6"	19'-7"	20'-0"	15'-4"	18'-6"	20'-0"		
12'	8'-11"	11'-3"	13'-9"	16'-0"	17'-10"	20'-0"	14'-0"	16'-9"	19'-5"		
14'	8'-3"	10'-5"	12'-9"	14'-9"	16'-6"	19'-0"	12'-11"	15'-8"	18'-0"	20'-0"	
16'	7'-8"	9'-9"	11'-11"	13'-9"	15'-5"	17'-10"	12'-1"	14'-8"	16'-10"	19'-9"	
18'	7'-3"	9'-2"	11'-3"	13'-0"	14'-7"	16'-9"	11'-5"	13'-9"	15'-9"	18'-7"	
20'	6'-11"	8'-9"	10'-8"	12'-4"	13'-10"	15'-11"	10'-9"	13'-1"	15'-0"	17'-8"	

Loading: DL = 10 psf. (Roofing Material = 6 psf max.)
LL = 10 psf

Loading assumes 3/4" ply for spans <24" and 2x decking for spans >24". Other designs are possible but evidence must be submitted to establish their adequacy. No stucco finishes or roofing material exceeding 6 psf w/o engineering. Footing bearing pressures account for load duration and allowable bearing pressures of 1500 psf.

