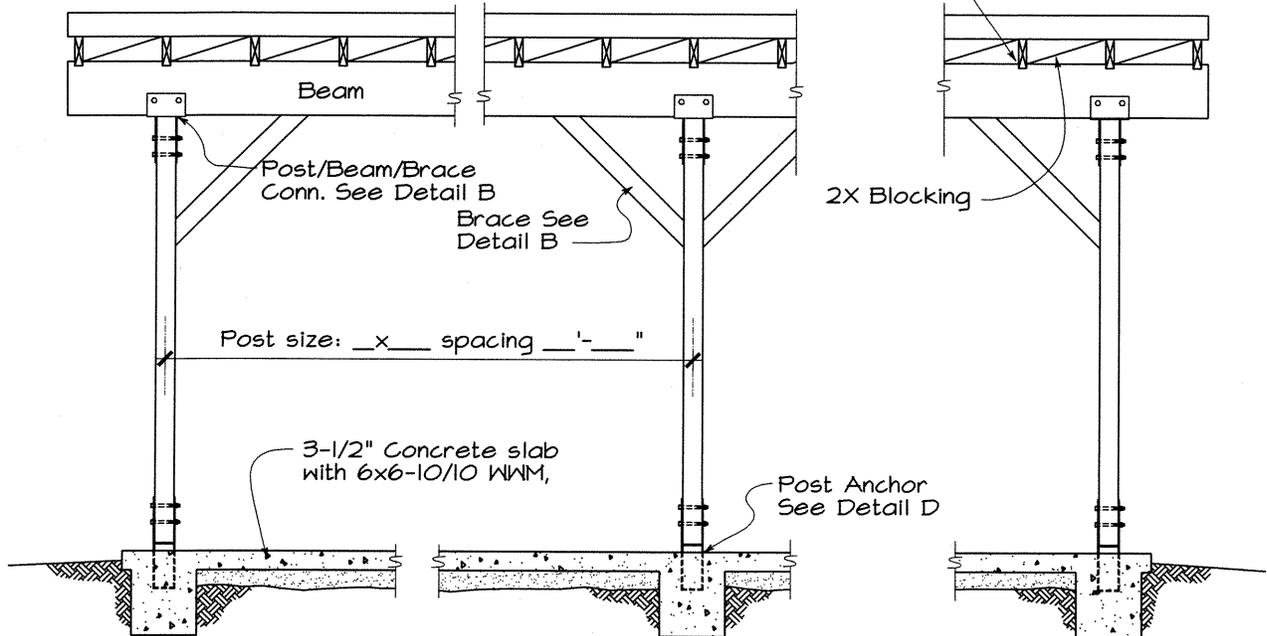


Roofing Material: (Check One)

- Light Weight Roof: Fiberglass, Lath or 2x2's or other spaced boards, other materials provided the material does not exceed 8 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
- _____

CONSTRUCTION SECTION



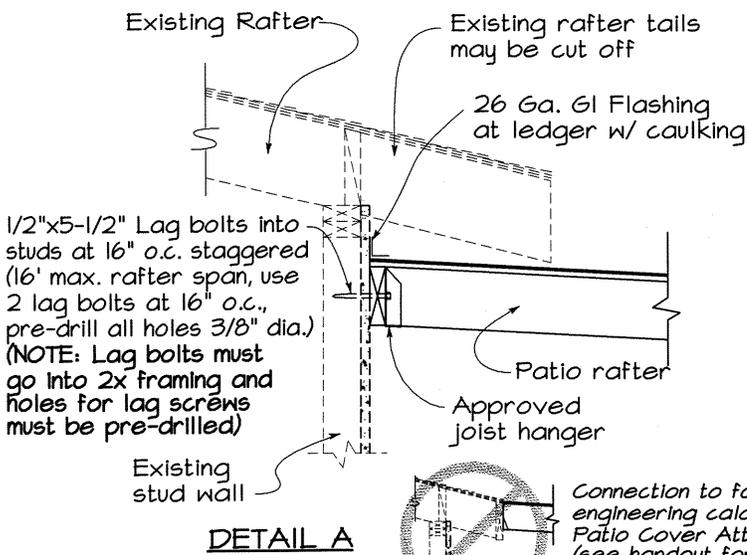
ELEVATION



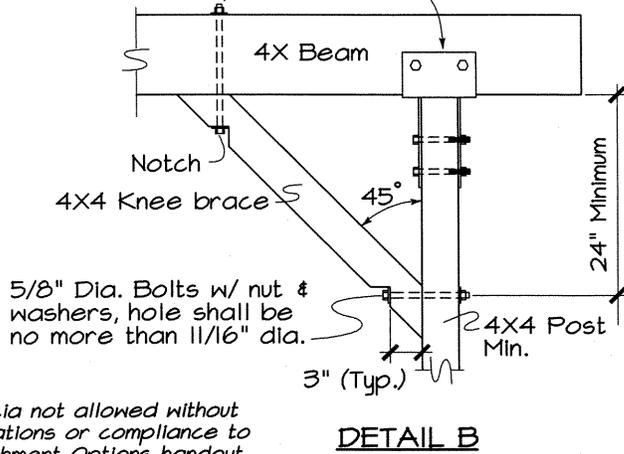
PATIO COVER - ATTACHED

HELP FOR THE HOMEOWNER
CITY OF SANTA PAULA, BUILDING AND SAFETY

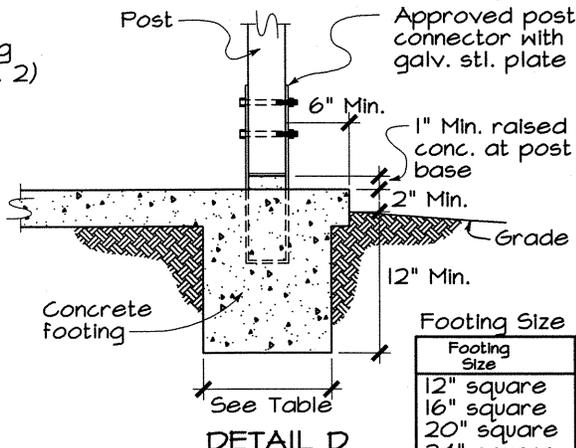
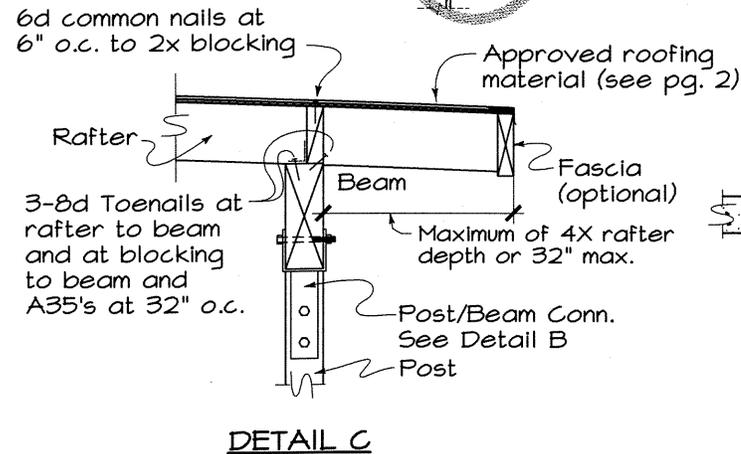
[Signature] 9/4/03
Approved By: _____ Date
Date: 9/3/03 Sheet 1 of 3 C-1



ICBO Approved Column Cap, or T- Strap both sides, or post cap installed per manufacture's specifications



Connection to fascia not allowed without engineering calculations or compliance to Patio Cover Attachment Options handout (see handout for limitations and details)



| Footing Size Table | |
|--------------------|--------------------------|
| Footing Size | Max. Supported Roof Area |
| 12" square | 34 sqft. |
| 16" square | 60 sqft. |
| 20" square | 96 sqft. |
| 24" square | 140 sqft. |

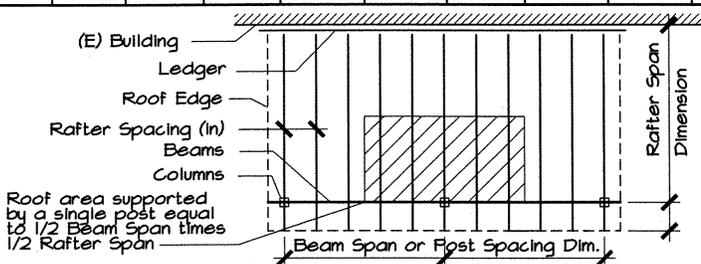
RAFTER SPANS (DFL #2)

| 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 = 16 psf. (Roofing Material = 6 psf max.)
 LL = 20 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 allow bearing pressures of 1000 psf.



PATIO COVER - ATTACHED

HELP FOR THE HOMEOWNER
 CITY OF SANTA PAULA, BUILDING AND SAFETY

Approved By: *[Signature]* Date: 9/3/03
 Date: 9/3/03 Sheet 2 of 3 C-1

INSTRUCTIONS:

1. A building permit for a patio cover may be obtained using these City standard drawings. Simply fill in the blanks and information requested on these plans.
2. Draw a plot plan, instructions can be found on the City's "Sample Plot/Site Plan" handout, and obtain Planning approval (Administrative Clearance) and bring three copies of the completed drawing to Building and Safety where it can be reviewed and a permit issued. (Show any openings in wall below patio cover, to ensure additional support is not required.)
3. Deviations from the construction and designs shown in these drawings will require complete plans and details and must be reviewed by a plan check engineer prior to obtaining a building permit.

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 rooms.
3. 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 or readily removable plastic (translucent or transparent) up to 1/8-inch thick. Framed windows are not permitted.
4. One hour fire wall required when exterior face of post/wall is located less than 3'0" from the property line. Eaves over openings cannot be located within 30" of 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 purpose of supporting the new existing structure.
6. If, in the future, you are considering converting your patio cover, trellis, porch or patio enclosure into a habitable room you must comply with the Building Code for new room additions. Room conversions may require an upgrade to your roof framing. Also you may need to provide a vapor barrier under slab, a reinforced slab and footing, new wall bracing, heating, electrical outlets, energy forms, and insulation for the new space.
7. These drawings are examples of the way an open patio cover may be installed. Other methods may be used provided they are approved by this Department prior to installation. All material types and sizes are subjected to the approval of this Department.
8. Post 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 connector between post and concrete slab shall be capable to withstand uplift wind forces.

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: will be the final inspection after the roof covering has been installed.

CONSTRUCTION NOTES

1. Roof Covering shall be Class A. Rafters shall be sized based on the table shown on page 2. Patio covers utilizing this sheet shall have roofing assemblies weighing less than 6 psf, including asphalt or fiberglass shingles, cap sheets, built-up roofs, hot mopped assemblies and some light weight tile 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 2000 psi in 28 days.
4. Framing hardware shall be ICBO approved for the intended use and installed per manufacture's specifications using all recommended fasteners.
5. Roof Sheathing shall be continuous over 2 or more rafter spans, face grain shall be perpendicular to supports and maximum span shall be as follows:

| SHEATHING | SPAN RATING | MAX. 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. | 2-16d at each rafter |

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

PLEASE READ AND SIGN:

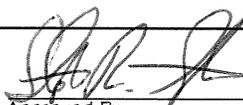
The owner and/or contractor, as the applicant for this permit, has read and understands the information on these pages and agrees to construct the proposed patio cover as shown on these plans. Note these plans will be reviewed for compliance to the design assumptions of this handout and for code compliance.

Signature of applicant: _____ Position: _____ Date: _____



PATIO COVER - ATTACHED

HELP FOR THE HOMEOWNER
 CITY OF SANTA PAULA, BUILDING AND SAFETY



 Approved By: _____ Date: 9/3/03

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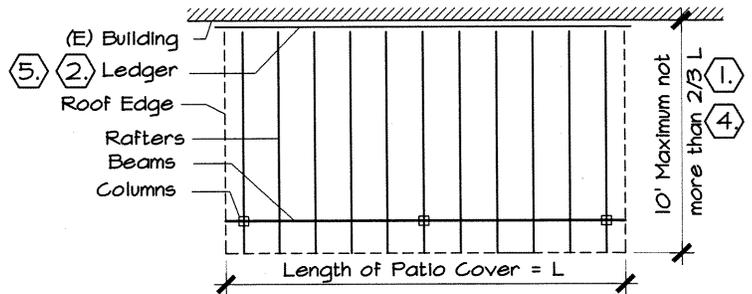
GENERAL NOTES:

- A. Knee Braces must be provided for all patio covers unless the construction of the patio cover meets one of the details and the related conditions shown on this handout.
- B. All conditions for use of the details shown on this sheet must be followed.
- C. ANY DEVIATIONS FROM THIS OR THE STANDARD PLAN REQUIRES COMPLETE PLANS BE SUBMITTED WHICH FULLY DETAILS ALL CONSTRUCTION AND SHOWS FULL CODE COMPLIANCE.

REMOVAL OF KNEE BRACES FOR SMALL COVERS:

A. Knee Braces must be provided for all patio covers. Small patio covers meeting the following conditions may be constructed without the installation of knee braces.

- ①. The patio cover must be attached to a main structure complying to conventional construction requirements of Chapter 23 Division IV of the UBC. The total span of the rafter cannot exceed $\frac{2}{3}$ of the length of the patio cover along the wall of the structure.
- ②. The patio cover cannot be connected to the fascia of the structure.
- ③. The patio cover must have a solid sheathed roof structure. (plywood)
- ④. The total span of the patio cover from house cannot exceed 10 feet from the structure.
- ⑤. Tension ties shall be provided between the dwelling and rafters of patio cover. Provide details for this connection during the plan review process.
- ⑥. The connection point for knee braces for lattice patio covers, meeting the above conditions, may be reduced from the 24" shown standard plan detail to 16".
- ⑦. Post to beam connections shall be a minimum of CC46, with 4x6 columns.



REMOVAL OF KNEE BRACES FOR CONTINUOUS ROOF DIAPHRAGMS:

Where the roof diaphragm from the dwelling and patio cover are structurally continuous and will act as one element this distance can be increased based on the construction of the dwelling. Consult Building Official for options, structural calculations from a licensed engineer may be required.

USE OF STEEL COLUMNS EMBEDDED IN CONCRETE FOOTING IN LIEU OF KNEE BRACES

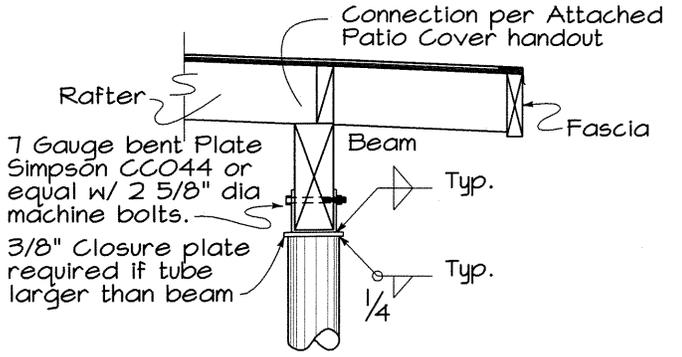
Wood columns and knee braces may be replaced by steel columns and concrete footings provided columns of sufficient size and number are provided. All construction shall meet the details on page two of this handout.



PATIO COVER - ALTERNATES TO KNEE BRACES
HELP FOR THE HOMEOWNER
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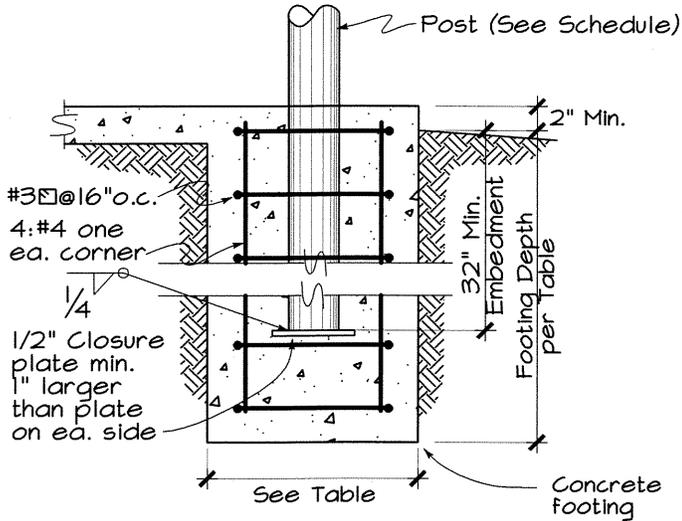
Approved By:  9/3/03
Date: 9/3/03

Sheet 1 of 2 C-2



GENERAL NOTES:

1. Ultimate compressive strength of concrete at 28 days shall be $f'c = 2500$ psi. Concrete shall be a 5 sack ready-mix or machine mixed with 1 part cement, 1 part sand and not more than 4 parts $3/4$ " gravel, water content shall not exceed 7.5 gallons per sack of cement.
2. Steel Pipe Column $FY = 36$ KSI, ASTM A53
3. All reinforcing steel shall be ASTM A615 minimum Grade 40.
4. Structural Steel Tubes $FY = 46$ KSI, ASTM A500
5. All welding shall be done in the shop of a licensed fabricator or shall be done by a certified welder with special inspection approved by the Building Official. Written certification shall be provided to the City Inspector prior to or at the time of inspection.



MINIMUM COLUMN AND FOOTING SIZE

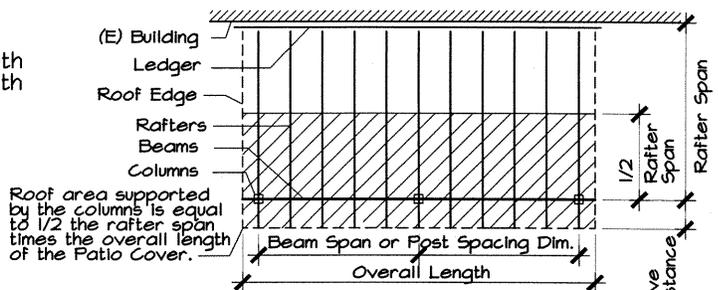
| Max. Column Height | Average Roof Area Supported by Each Column 40 sqft. (276 lbs) | 50 sqft. (345 lbs) | 60 sqft. (414 lbs) | 70 sqft. (483 lbs) | 80 sqft. (552 lbs) | 100 sqft. (690 lbs) | 125 sqft. (863 lbs) |
|--------------------|--|--|---|---|---|---|---|
| 8'-0" | TS 3.5x3.5x5/16 4" STD Pipe 2' SQ.x4'-0" D 3' SQ.x3'-6" D | TS 4x4x1/4 4" STD Pipe 2' SQ.x4'-6" D 3' SQ.x3'-9" D | TS 4x4x5/16 5" STD Pipe 2' SQ.x4'-4" D 3' SQ.x4'-0" D | TS 4.5x4.5x1/4 5" STD Pipe 2' SQ.x5'-0" D 3' SQ.x4'-3" D | TS 4.5x4.5x1/4 5" STD Pipe 2' SQ.x5'-3" D 3' SQ.x4'-6" D | TS 5x5x1/4 6" STD Pipe 2' SQ.x5'-4" D 3' SQ.x4'-9" D | TS 6x6x1/4 6" STD Pipe 2' SQ.x6'-3" D 3' SQ.x5'-3" D |
| 9'-0" | TS 4x4x1/4 4" STD Pipe 2' SQ.x4'-3" D 3' SQ.x3'-9" D | TS 4x4x5/16 5" STD Pipe 2' SQ.x4'-6" D 3' SQ.x4'-0" D | TS 4.5x4.5x1/4 5" STD Pipe 2' SQ.x4'-4" D 3' SQ.x4'-0" D | TS 5x5x1/4 6" STD Pipe 2' SQ.x5'-0" D 3' SQ.x4'-3" D | TS 5x5x1/4 6" STD Pipe 2' SQ.x5'-3" D 3' SQ.x4'-6" D | TS 6x6x1/4 6" STD Pipe 2' SQ.x5'-4" D 3' SQ.x5'-0" D | TS 6x6x1/4 6" STD Pipe 2' SQ.x6'-3" D 3' SQ.x5'-6" D |
| 10'-0" | TS 4x4x5/16 5" STD Pipe 2' SQ.x4'-3" D 3' SQ.x3'-9" D | TS 5x5x1/4 6" STD Pipe 2' SQ.x4'-4" D 3' SQ.x4'-0" D | TS 6x6x1/4 6" STD Pipe 2' SQ.x5'-0" D 3' SQ.x4'-3" D | TS 6x6x1/4 6" STD Pipe 2' SQ.x5'-3" D 3' SQ.x4'-6" D | TS 6x6x1/4 6" STD Pipe 2' SQ.x5'-3" D 3' SQ.x4'-9" D | TS 6x6x3/8 6" STD Pipe 2' SQ.x6'-0" D 3' SQ.x5'-3" D | TS 6x6x3/8 6" STD Pipe 2' SQ.x6'-6" D 3' SQ.x5'-6" D |

Legend: TS 6x6x1/4 ← Steel Tube Size
 6" STD Pipe ← Round Pipe Size
 2' SQ.x6'-3" D ← 2' Sq. or Round footing Depth
 3' SQ.x5'-3" D ← 3' Sq. or Round footing Depth

Roof Area per Column is calculated by taking the total roof area supported by the columns divided by the number of steel columns.

A continuous footing can be used in lieu of the pier footing for the size and column shown below:

- TS 4x4x5/16 12"W 12"D w/2#4 T&B
- TS 5x5x1/4 15"W 15"D w/2#4 T&B
- TS 6x6x3/8 18"W 24"D w/3#4 T&B



Note: For average area per steel columns take the number of steel columns and divide by the area.

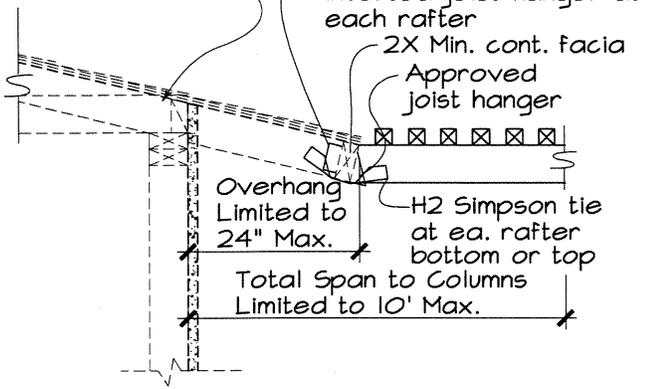


PATIO COVER - ALTERNATES TO KNEE BRACES

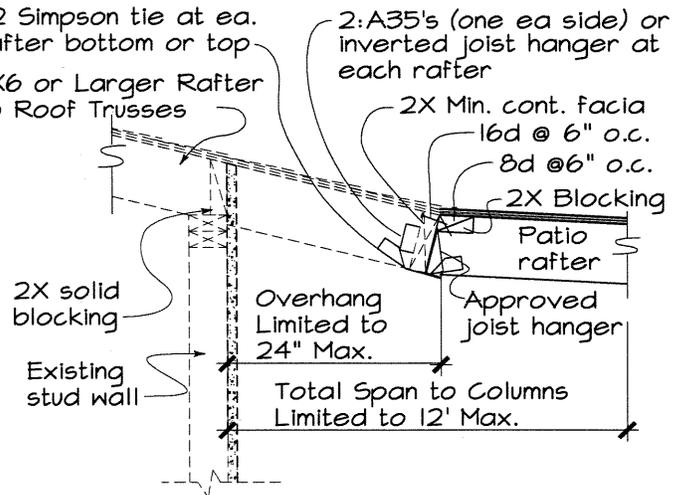
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 CITY OF SANTA PAULA, BUILDING AND SAFETY

Approved By: *[Signature]* Date: 9/3/03
 Date: 9/3/03 Sheet 2 of 2 C-2

2X4 (Ex) Rafter
No Roof Trusses



H2 Simpson tie at ea. rafter bottom or top
2X6 or Larger Rafter
No Roof Trusses



CONDITIONS FOR USE

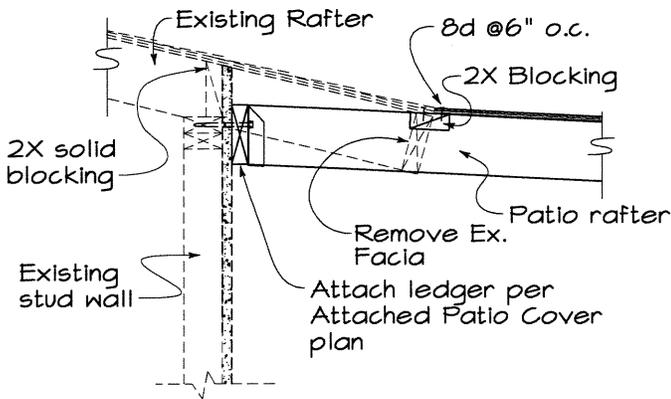
1. Lattice patio covers only, with zero slope.
2. Patio Rafters cannot exceed the depth of the house rafter.
3. No connection to the tails of roof trusses
4. Existing rafter shall be free from decay and the facia board shall be 2X min.

CONDITIONS FOR USE

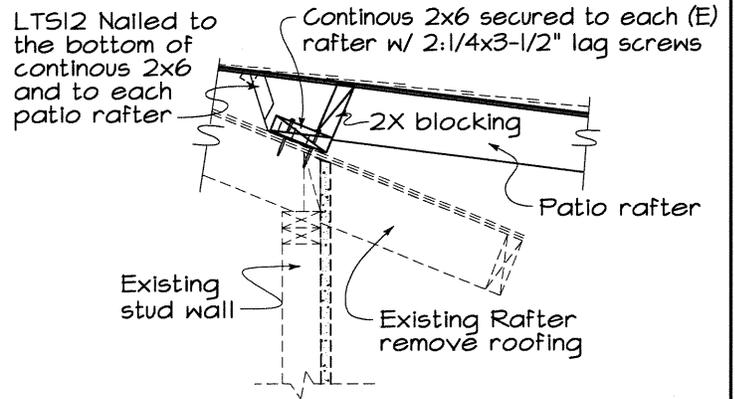
1. Dwelling rafter shall be 2X6 or larger.
2. No connection to the tails of roof trusses
3. Existing rafter shall be free from decay and the facia board shall be 2X min.

FACIA ATTACHMENT ALT. 1 (2X4 Ex. Rafters)

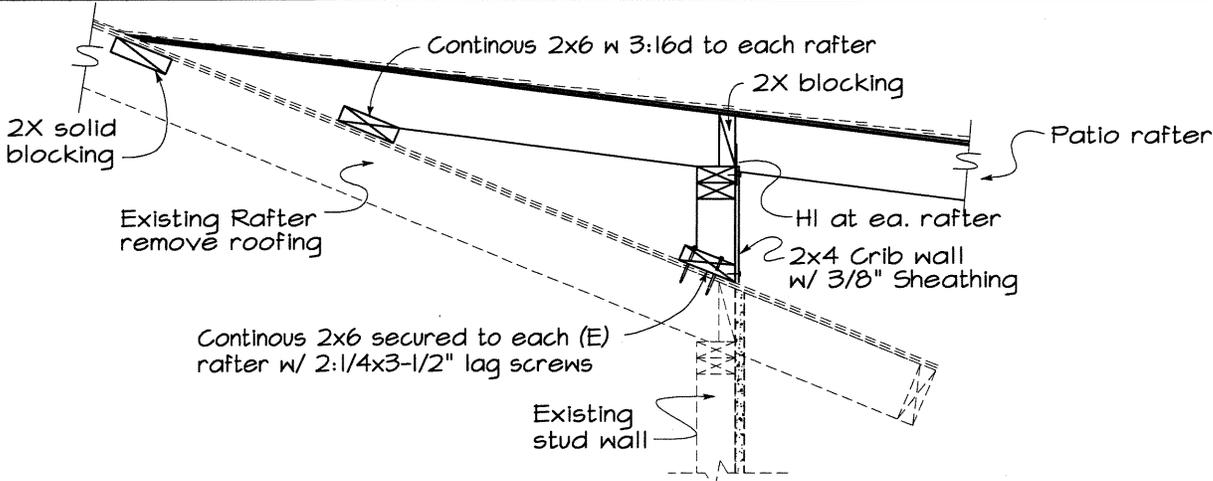
FACIA ATTACHMENT ALT. 2 (2X6 Ex. Rafters)



ALTERNATE TO STD. CONNECTION 1



ALTERNATE TO STD. CONNECTION 2



ALTERNATE TO STD. CONNECTION 3



PATIO COVER - ATTACHMENT OPTIONS

HELP FOR THE HOMEOWNER
CITY OF SANTA PAULA, BUILDING AND SAFETY

Approved By: *[Signature]* Date: 8/1/03
Date: 3/1/03 Sheet 1 of 1 C-3