City of Elk Grove
Development Services • Building Safety & Inspection
8401 Laguna Palms Way • Elk Grove, California 95758
Phone (916) 478-2235 Email Bldonline@elkgrovecity.org
www.elkgrovecity.org

Conventionally Built Patio Covers

January 2023

General

Purpose

The sample illustrations show how an attached unenclosed patio structure may be built utilizing the California Residential Code (CRC) & California Building Code (CBC) "Conventional Light Wood-Frame Construction Guidelines". The conventional method allows "repetitive" members in the designs of walls, floors and ceiling, are prescriptive, and ordinarily do not require a structural design to comply with the code. For information regarding plan submittals and specific design limitations for residential patio covers refer to Policy & Procedure No. B-04-04 "Plan Submittal for Patio Covers and Similar Accessory Buildings" (Sheds • Arbors • Trellises).

Design Provisions

Patio Cover Limitations

The following patio cover illustrations are only applicable in residential dwellings classified as R-3 Occupancies.

Patio covers are **not** designed or intended to be used as room additions which require compliance with code provisions such as heating, waterproofing, and normal live and wind loads. Furthermore, patio covers cannot always be converted to complying room additions.

Plan Submittal Guidelines:

Online Electronic Submittal Required. Please refer to the Plan Submittal – Patio Covers and Accessory Building Policy (B-04-04) for submittal guidelines.

What information is needed to obtain a building permit?

Included in the plan submittal should be the following information which clearly depicts the proposed patio cover construction and its relationship to the entire lot. Information such as the size and spacing of all framing members; attachment detail to the exterior wall; roof covering material, connection specifications for beam to post, and for post to footing, etc.

If the patio structure consists of a simple design, please see the **site plan** on page 2. You may refer to the tables on pages 4 and 5 and **highlight** proposed structural members for allowable size & spacing. Otherwise, a structural analysis/evaluation may be required by a professional engineer licensed in the State of California for the design of structures of unusual shape and/or structures supporting tile roofing materials (i.e., cellulose, cement).

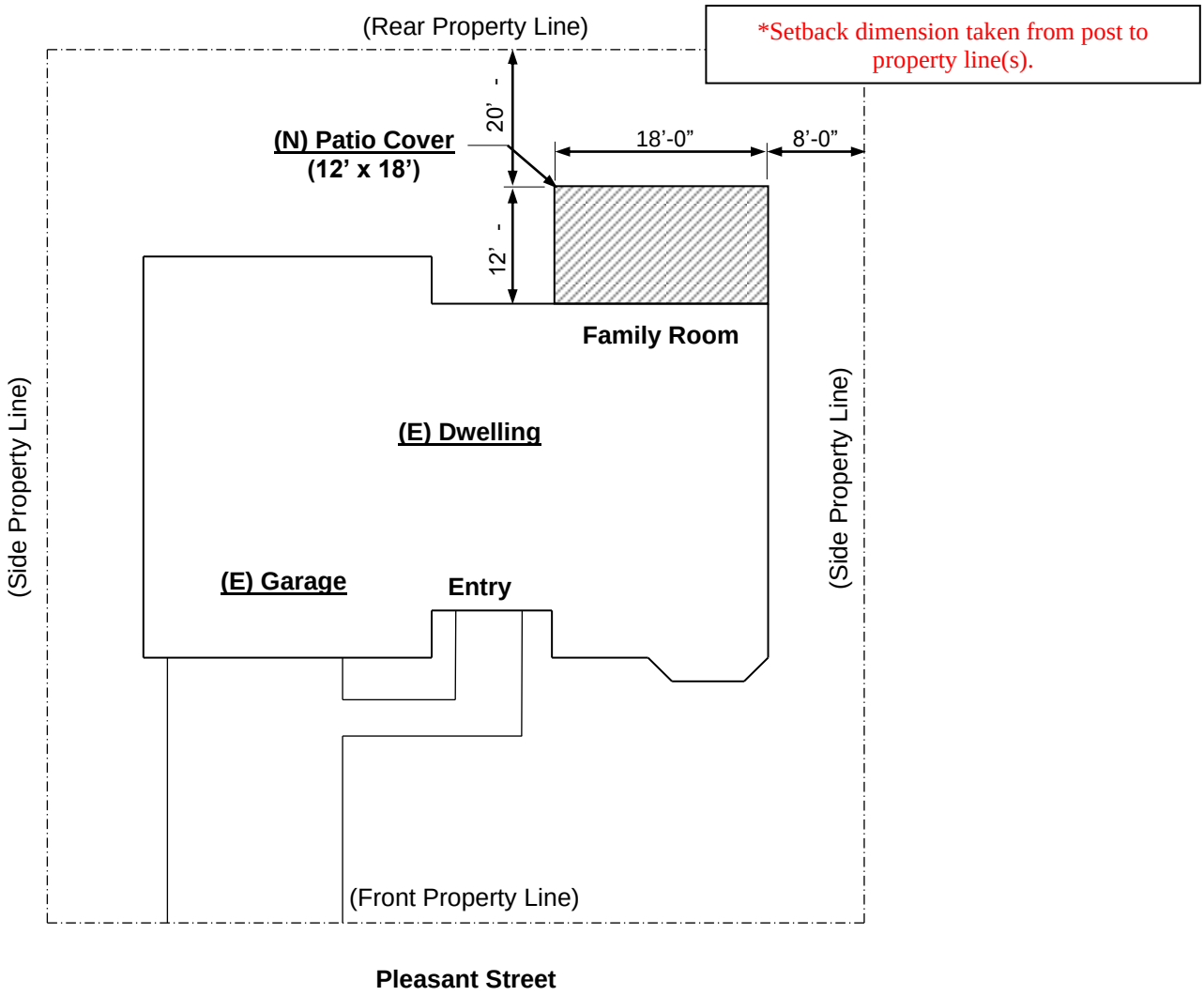
- Site Plan
- Elevation(s)
- Roof Framing
- Cross-Section
- Framing Details

Exemption: (CBC, Section [A] 105.2)

One story Detached Accessory Structures used as tool and storage sheds, playhouses, etc. 120 sq. ft. in floor area or smaller, with not more than 12-inches of overhang extending beyond the exterior wall of the structure do not require a building permit.

Allowed Locations:

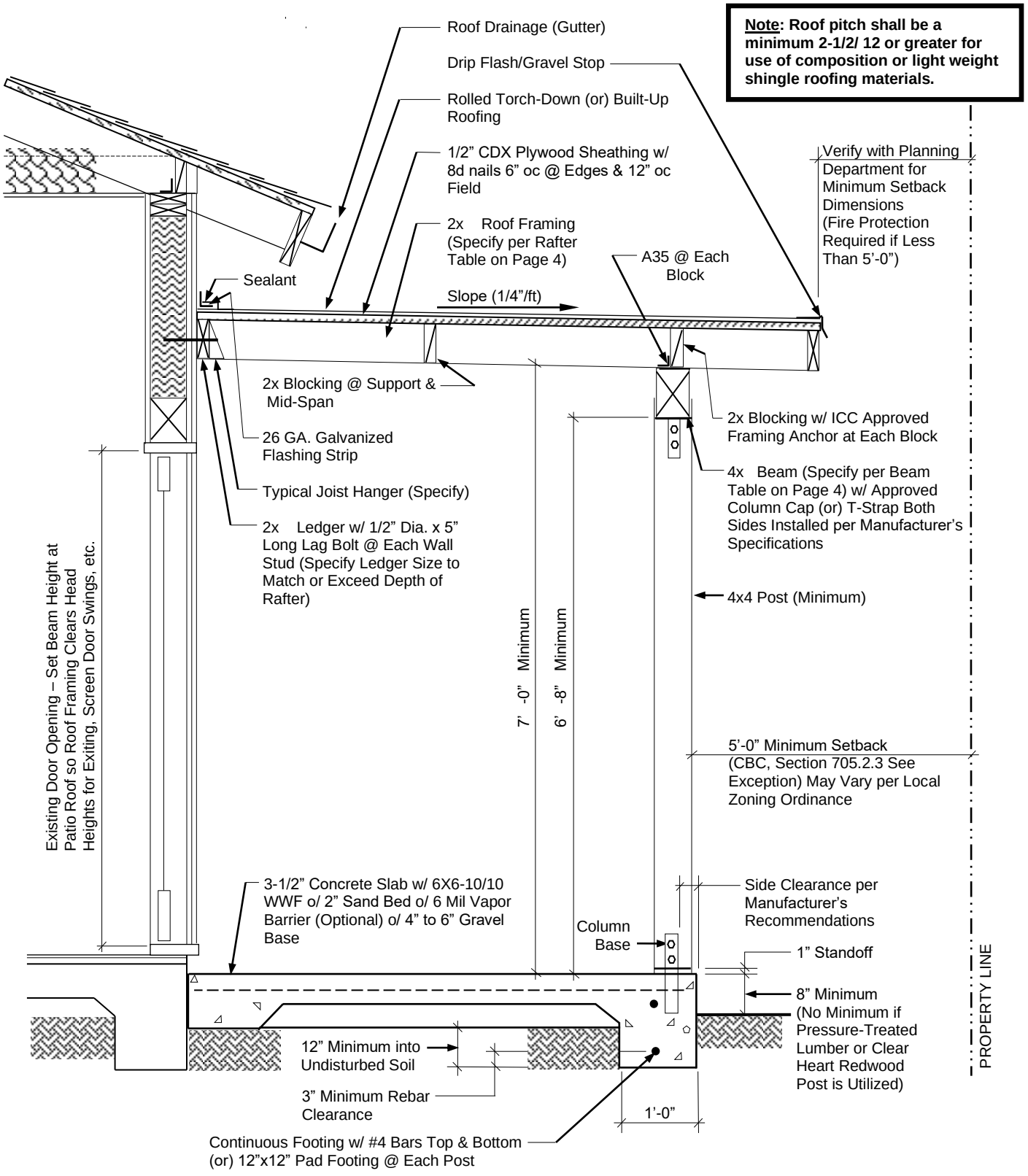
Submitted design plans shall require review and approval by the City of Elk Grove Planning Department staff to review the Zoning Code restrictions for maximum building coverage allowed, height limitations, property line setbacks and maintenance/public utility easement setback distances prior to submitting plans.



Property Owner
100 Pleasant Street, Elk Grove, CA
A.P.N. 00-100-2000
Scope of Work: New Attached 12'x18' Patio Cover
Designed by *Ideal Patios*

Site Plan

Scale: 1" = 20'-0"



Cross-Section

(Refer to Tables on Page 4 for Member Sizes)

ALLOWABLE SPANS FOR DOUGLAS FIR #2 ROOF RAFTERS (Table R802.4.1(1))

Dead Load = **10** psf & Includes Maximum Roofing Material
Live Load = **20** psf, L / △ = 180

RAFTER SIZE	SPACING	ALLOWABLE SPAN
2x6	24” 16” 12”	11’-11” 14’-7” 16’-10”
2x8	24” 16” 12”	15’-1” 18’-5” 21’-4”
2x10	24” 16” 12”	18’-5” 22’-6” 26’-0”
2x12	24” 16” 12”	21’-4” 26’-0” Spans 26’ or greater require engineering.

ALLOWABLE SPANS FOR DOUGLAS FIR #2 CEILING JOISTS (Table R802.5.1(2))

Dead Load = **5** psf
Live Load = **10** psf, L /△ = 240

JOIST SIZE	SPACING	ALLOWABLE SPAN
2x4	24” 16” 12”	9’-10” 11’-3” 12’-5”
2x6	24” 16” 12”	15’-0” 17’-8” 19’-6”
2x8	24” 16” 12”	19’-1” 23’-4” 25’-8”
2x10	24” 16” 12”	23’-3” Spans 26’ or greater require engineering.

Type V construction is a classification of buildings by construction materials and methods. It is the least restrictive permitted by the California Residential Code (CRC) and includes light wood-frame construction. This sheet is for information and reference only and is not a substitute for accurate drawings prepared for each proposed construction project.

ALLOWABLE SPANS FOR BEAMS w/o CEILING

Based on Maximum Tributary = **10’-0”** (Span = 20’-0”)

SPAN	BEAM SIZE
Up to 5’-4”	4x4
5’-5” to 7’-9”	4x6
7’-10” to 10’-6”	4x 8
10’-7” to 12’-9”	4x10
11’-10” to 15’-0”	4x12*****

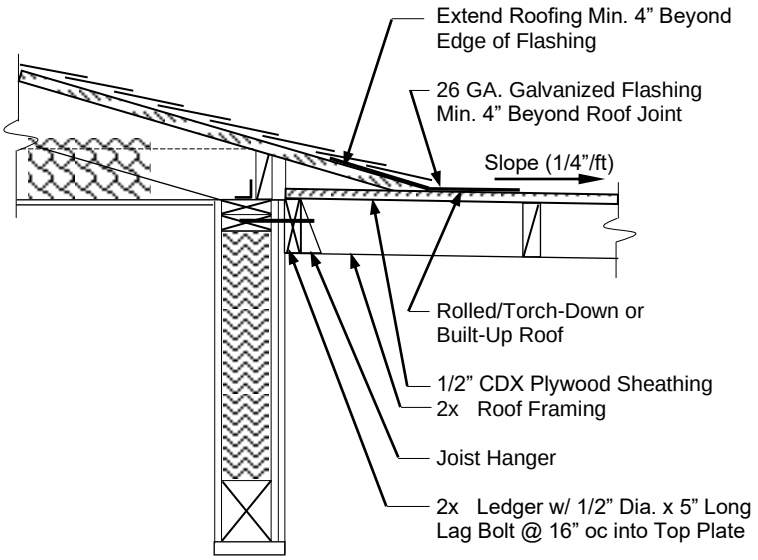
*****4x12 DF #1 may be used over a 16’-0” garage door in one-story open patio or carport structures.

ALLOWABLE SPANS FOR BEAMS w/ CEILING

Based on Maximum Tributary = **10’-0”** (Span = 20’-0”)

SPAN	BEAM SIZE
Up to 4’-8”	4x4
4’-9” to 6’-10”	4x6
6’-11” to 9’-0”	4x 8
9’-1” to 11’-0”	4x10
11’-1” to 13’-0”	4x12*****

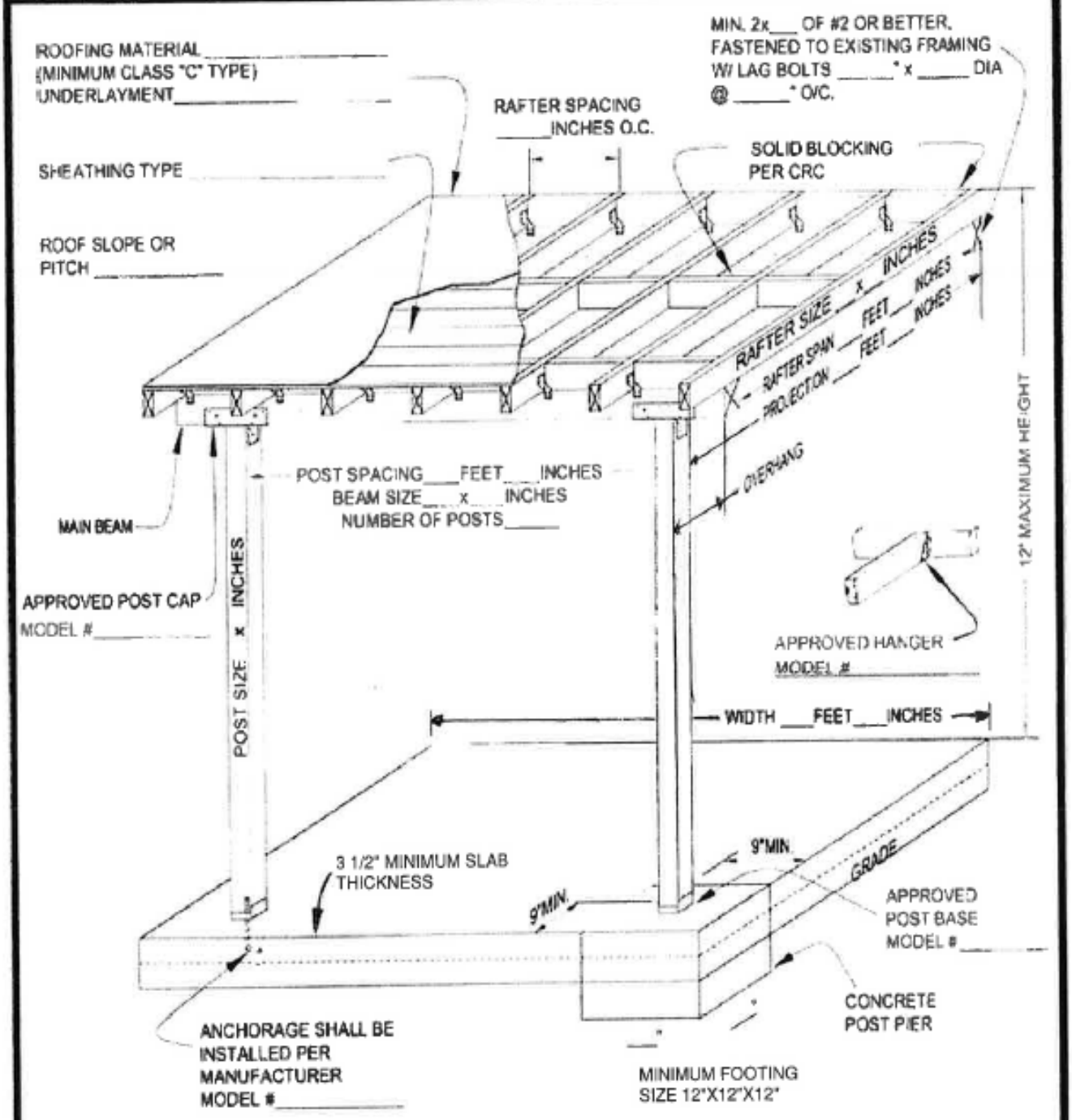
*****For spans greater than the table values, engineered calculations are required.



Alternate Connection Detail

(Typical for Patio Covers)

Conventional Patio Cover



- REFER TO CRC FOR TYPICAL NAILING REQUIREMENTS.
- REFER TO CRC FOR ALLOWABLE PATIO ENCLOSURE CRITERIA.
- ALL CONNECTIONS TO RESIST 10 POUNDS PER SQUARE FOOT UPLIFT.
- DECAY AND/OR TERMITE PROTECTION PER CRC.
- POSTS TO BE PRESSURE TREATED OR SHALL CONFORM TO CRC.