



18-02 Fire Resistant Construction – R-3 Exterior Walls

Background

The City of Carmel has many small lots that confine the area that a building may be built on. Requirements for the required fire separation distance (aka “fire setback”) are provided in Chapter 3 of the CA Residential Code for 1 and 2 family homes and Chapter 6 of the CA Building Code for all other projects. This SOG clarifies the fire separation distance and fire resistive construction requirements based on distance to property lines for RESIDENTIAL, 1 and 2 family (R-3) dwellings.

Citations

Carmel Municipal Code Title 15, Buildings and Construction
 CA Residential Code Sec. R302

Guidance

When the exterior walls of a proposed residential building, detached garage, or accessory building to an R-3 dwelling project (new or remodel) is located in close proximity to a property line additional fire resistive construction may be required in accordance with CRC Table R302.1.1 (unsprinklered building) or Table R302.1(2) (sprinklered buildings) extracted below.

Exterior wall element protection based on fire separation distance - Unsprinklered (from T. R302.1.(1))

Exterior Wall Element	Minimum Separation Distance	Minimum Fire-Resistance Rating
Walls	Less than 5'	1 hour – Exposure from both sides
	5' or greater	0 hours
Projections	Less than 2'	Not allowed
	2' to less than 5'	1 hour on underside ^{a,b}
	5' or more	0 hours
Openings in walls	Less than 3'	Not allowed
	3' to less than 5'	0 hours, Max. 25% of wall area
	5' or more	0 hours, unlimited area
Penetrations	Less than 3'	Comply with Sec. R 302.4
	3 feet or more	0 hours
a. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing. b. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable end vent openings are not installed.		

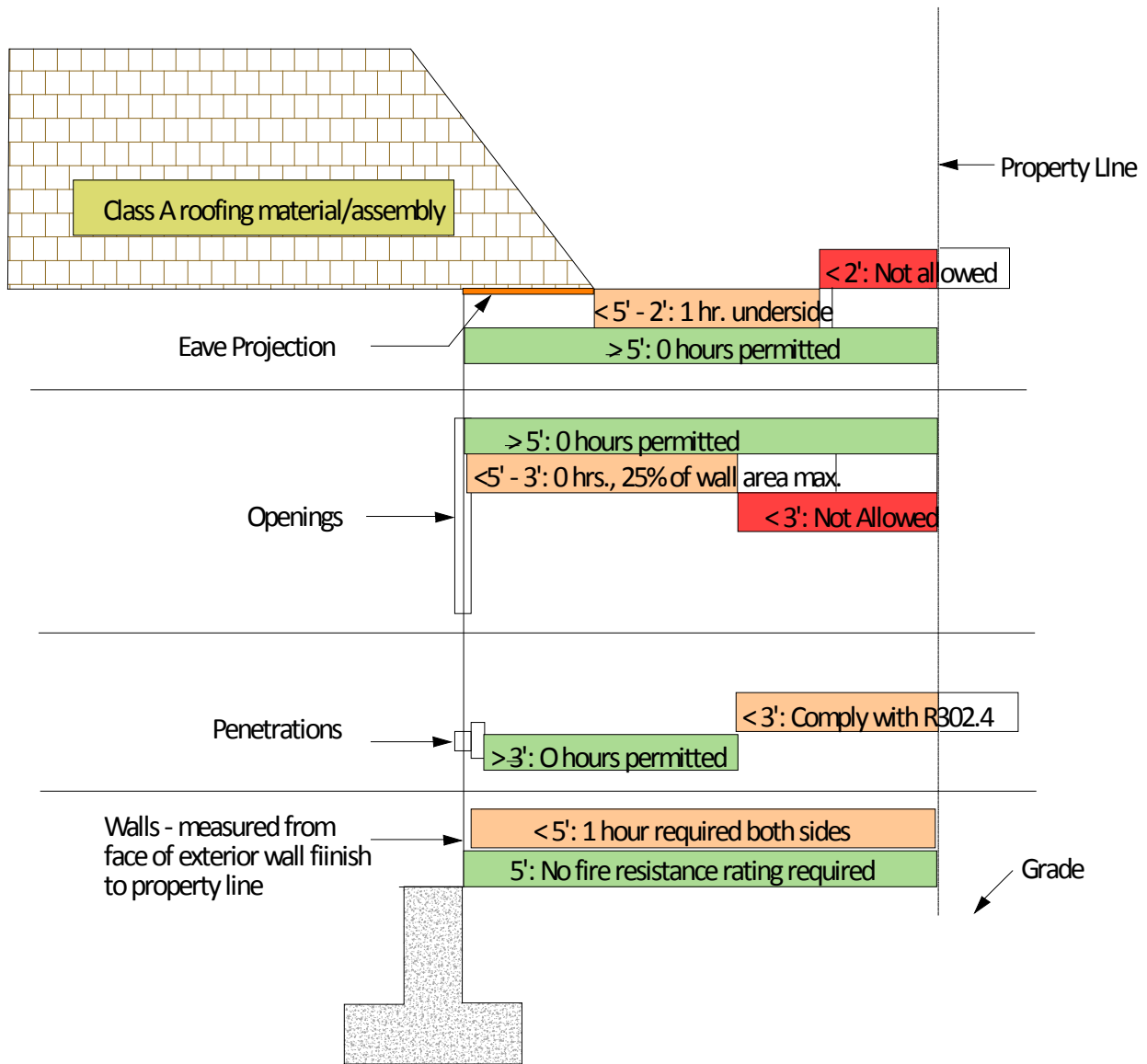
Exterior wall elements based on fire separation distance – sprinklered (From T. R302.1(2))

Exterior Wall Element	Minimum Separation Distance	Minimum Fire-Resistance Rating
Walls	0 feet	1 hour – Exposure from both sides
	3 ^a	0 hours
Projections	Less than 2'	Not allowed
	2 feet ^a to less than 3'	1 hour on underside ^{b,c}
	3 feet	0 hours
Openings in walls	Less than 3'	Not Allowed
	3 feet ^a	0 hours
Penetrations	Less than 3'	Comply with Sec. R 302.4
	3 feet ^a	0 hours
a. For residential subdivisions where all dwellings are equipped throughout with an automatic sprinkler system installed in accordance with Section R313, the fire separation distance for nonrated exterior walls and rated projections shall be		

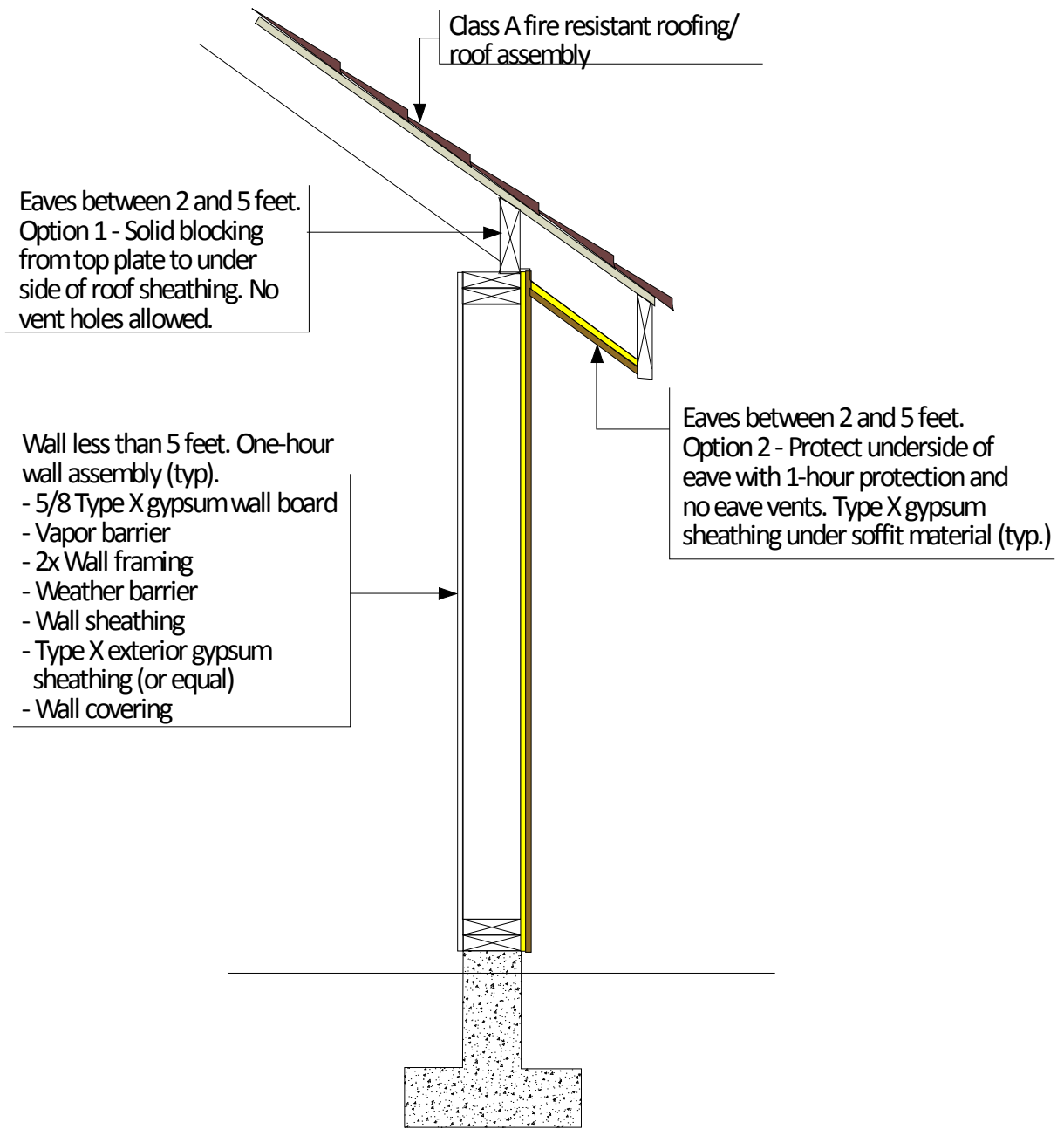
permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining lot provides an open setback yard that is 6 feet or more in width on the opposite side of the property line.

- b. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
- c. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable bent openings are not installed.

Note: Fire separation distance is measured from the property line to the exterior face of the wall covering NOT the face of studs, or face of foundation wall or footing. A survey is required prior to pouring footings/foundations to assure that the fire separation distance as measured to the future wall covering will be met.



Fire Resistance Requirements for Exterior Wall Elements Based on Separation Distance



Fire Resistant Exterior Wall and Eave Protection (typ)