CAL FIRE
San Luis Obispo
County Fire Department

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Matt Jenkins, Fire Chief

RESIDENTIAL FIRE SAFETY PLAN REQUIREMENTS

A Fire Safety Plan is required for projects that require a permit from the County Planning/Building Department. The Fire Safety Plan is intended to indicate fire prevention measures that will minimize risks to life and property in the event of fire and medical/rescue emergencies. The Fire Safety Plan application must be submitted to our office, including a site plan and vicinity map prior to getting your County building permit and after you have received your County project number. Please allow a minimum of four weeks to receive your Fire Safety Plan after turning it in to the Fire Prevention Bureau. It will be mailed to your via postal service.

A final inspection by the CAL FIRE/SLO County Fire Department is required prior to occupancy. As soon as all fire/life safety improvements have been completed, please call for an inspection at (805) 543-4244, extension #2220. Inspections located south of the Cuesta Grade are done on Tuesdays and those located north of the Cuesta Grade are done on Thursdays. Please call a minimum of 24 hours prior to the inspection date.

2008 RESIDENTIAL FIRE SPRINKLER REQUIREMENTS

Definition: Floor Area, Gross For the purpose of calculating square footage for the application of fire sprinkler requirements and for fire flow requirements, the floor area shall include all combustible areas attached to the structure, including garages, patio covers, overhangs, covered walkways, etc..

Fire Sprinklers

Fire sprinklers are required for all buildings or structures as follows:

- Within all unincorporated areas of the County for all buildings over 1,000 square feet, and more than 2 stories in height. Exception: Agricultural accessory buildings exempted from land use permits and requirements in Title 22, Section 22.06.040 of the San Luis Obispo County Code.
- Avila Beach Community Services District for all buildings over 1,000 square feet and more than 2 stories in height.
- Los Osos Community Services District for all buildings over 1,000 square feet, more than 2 stories in height, and for any building with a fire flow of less than 750 gpm at 20 psi.
- Throughout existing and new sections of an existing building where the floor area is increased by 1,000 square feet or where alterations exceed 50 percent of the existing floor area.
- Throughout existing and new sections of an existing residence where an additional story is added and the building will exceed 2 stories in height at completion.

- In additions to existing buildings already equipped with an automatic fire sprinkler system.
- Sprinklers may also be required to mitigate other issues, such as road or driveway grades 16% or more, poor fire flow, etc.

Exceptions: Agricultural accessory buildings as defined in Title 22, Section 22.30.060 of the San Luis Obispo County Code.

- ✓ Ag 1-20 acres: Under 3,000 sq ft no sprinklers, over 3000 sq. ft. – sprinklers required.
- ✓ Ag 20 + acres: Over 5,000 sq ft sprinklers required.

WATER REQUIREMENTS

Emergency fire fighting water supplies shall meet one of the following requirements:

Community Water System

If the proposed project is served by a community water system, it shall provide a minimum of 1,000 gallons of water per minute for 120 minutes. The minimum water main size shall not be less than six (6) inches. Pressures may not be less than 20 psi, nor more than 150 psi.

A fire hydrant shall be located within 250 feet of all property frontage (vehicular travel) structures to be served and shall have two (2) two and one half inch (2 1/2") outlets and one (1) four inch (4") suction outlet with National Standard Fire Thread.

Each hydrant shall be identified by a blue reflector. On pavement or concrete, a flat blue road reflector shall be placed near the center of the road, just off center & towards the hydrant. (See Exhibit 3A).

A Community Water Verification Form from the water purveyor shall be submitted with the site plan verifying minimum fire flow and the distance of nearest fire hydrant to each structure. (See Exhibit 16).

Water Storage Tank

If a project is served by an on-site well(s), the applicant shall provide a water storage tank size to be determined by NFPA 1142 calculations. (See Standard 1). The tank shall be no less than a minimum of 2,500 gallons. Actual storage is based on the size of structure(s). Emergency water storage shall have an automatic fill, site gauge, venting system and a minimum of four (4) inch plumbing, Schedule 40 PVC or iron pipe for residential use. Gravity systems must drain to fire hydrant or water connection. (See Exhibit 2).

Water Supply Connection

Fire fighting water systems are to be provided with the following standards to enable connection by emergency fire equipment: (See Exhibit 3).

The residential fire connection shall be located on the approach to the structure(s). It shall be located between 8-10 feet of the driveway/road with the outlet 24"-36" above the finished grade. It shall face the driveway/road at a 90° angle.

The residential connection shall be a brass 2-1/2 inch National Standard male thread with a brass or plastic cap. It must be located not less than fifty (50) feet nor more than one hundred fifty (150) feet from the structures protected.

Each residential fire connection shall be identified by a blue reflector. (See Exhibit 3A).The reflector must be:

- Located within three (3) feet of the water connection and on a fire resistant sign/post.
- On a paved surface, the blue dot should be just off center of the roadway on the residential fire connection side.
- All blue reflectors must be clearly visible to approaching emergency vehicles.

ROOF, WALL & DECKING REQUIREMENTS

All roofs shall comply with the requirements of Chapter 47 of the California Fire Code and Chapter 7A of the California Building Code.

- A **Class A** non-combustible roof covering is required for homes located in very high fire severity zones.
- A **Class B** non-combustible roof covering is required for homes located in State Responsibility Areas (SRA's). Exception: Areas designated as moderate fire severity zones.
- A **Class C** non-combustible roof covering is required for homes located in all other areas.

Roof Coverings

- Where the roof profile allows a space between roof covering & roof decking, the spaces must be constructed to prevent the intrusion of flames & embers, be fire-stopped with approved materials or have 1 layer of No. 72 ASTM cap sheet installed over the combustible decking.

Roof Valleys

- When provided, valley flashings shall not be less than 0.016-inch (0.41 mm) (No. 28 galvanized sheet gage) corrosion–resistant metal installed over a minimum 36" wide underlayment of 1 layer of No. 72 ASTM cap sheet running the full length of valley.

Roof Gutters

- Roof gutters shall be provided with a means to prevent the accumulation of leaves & debris.

Attic Ventilation

- Roof attics and vents shall resist the intrusion of flame & embers into the attic area or shall be protected by corrosion resistant, non-combustible wire mesh with ¼ inch (6mm) openings.
- Vents shall not be installed in eaves or cornices, unless designed to prevent the intrusion of flame & burning embers into the attic area of the structure.

Additional Exterior Fire Protection Measures

- Boxed eaves and non-combustible siding may be required for homes built in High or Very High Fire Severity Zones or as required by Tract/Development plans.

- Exterior walls shall be of approved non-combustible or ignition-resistant materials and shall provide protection from the intrusion of flames & embers.
- Exterior wall coverings shall extend from the top of the foundation to the roof & terminate at 2"nominal solid wood blocking between rafters at all roof overhangs or at the enclosure of enclosed eaves Exterior wall vents shall resist intrusion of flame & ember into the structure or shall be protected by corrosion resistant, non-combustible wire mesh with ¼ inch openings
- Exterior windows, window walls, glazed doors and glazed opening within exterior doors shall be insulating-glass units with a minimum of one tempered pane or glass block units or have a fire-resistance rating of not less than 20 minutes
- Exterior doors assemblies shall be of approved non-combustible construction, or solid core wood having stiles & rails not less than 1 3/8 inches thick with interior field panel thickness no less than 1 ¼ inches thick, or shall have a fire-resistance rating of not less than 20 minutes or conform to the performance requirements of standard SFM 12-7A-1.

  ** Exception: Non-combustible or exterior fire-retardant treated wood for garage doors.
- Decking, surfaces, stair treads, riser and landings of decks, porches & balconies where any portion of such surface is within 10 feet of the primary structure shall be constructed of either ignition-resistant materials or with heavy timber, exterior fire-retardant-treated wood or approved non-combustible materials or shall pass the performance requirements of SFM Exterior wall coverings attached to decking and within 10 feet of the deck shall be made of approved non-combustible or ignition-resistant materials.

  **Exception: Walls are not required to comply with this section if the decking surface material conforms to ASTME-84 Class B flame-spread.
- The use of paints, coatings, stains or other surface treatments are **NOT** an approved method of fire protection. Underside of cantilevered & overhanging projections shall maintain the ignition-resistant integrity of the exterior walls or the projection shall be enclosed to the grade. All underfloor areas shall be enclosed to grade.

  ** Exception: The complete enclosure of under floor areas may be omitted if the underside of all exposed floors, structural columns, beams and supporting walls are protected with exterior ignition-resistant materials or heavy timber.
- Ancillary buildings & structures and detached accessory structures shall meet all fire-resistive construction requirements as listed above.

SITE ACCESS AND DRIVEWAY REQUIREMENTS

Access Roads

All access roads shall be constructed to CAL FIRE/County Fire standards when serving more than one parcel; access to any industrial or commercial occupancy, or vehicular access to a single parcel with more than two (2) buildings or four (4) or more dwelling units. (PRC 4290/4291)

Residential Access Road

- The road must be named.
- The access road must be 20 feet in width for two way traffic.
- The access road must be 10 feet in width for one way traffic (allowed only in limited circumstances).

- Parking is only allowed where an additional eight (8) feet in width is added for each side of the road that has parking.
- "No Parking - Fire Lane" signs may be required.
- Access road must be able to maintain a 95% compaction.
- All roads must have an all-weather surface.
- If the road has a 12% to 15% grade, it shall have a non-skid paved surface.
- Roads may not exceed 16% grade unless designed by a Registered Civil Engineer. Roads over 16% must have a non-skid paved surface. Special mitigations also apply, generally fire sprinklers will be required for all structures.
- Roads shall not exceed 20% grade.
- A vertical clearance of 13'6" is required. (See Exhibit 14).
- All roads must be able to support a 20 ton fire engine.
- Access road shall also provide for a 10 foot fuel modification zone on both sides (See Exhibit 14).

Driveways

A driveway is permitted when it serves no more than two buildings, with no more than three (3) dwelling units or a single legal parcel, and any number of accessory buildings.

- The minimum driveway width for moderate fire severity zones is 10 feet
- The minimum driveway width for high and very high fire severity zones is:
  - ✓ 0-49 feet, 10 feet is required.
  - ✓ 50-199 feet, 12 feet is required.
  - ✓ Greater than 200 feet, 16 feet is required.
- All driveways must be able to maintain a 95% compaction.
- All driveways must have an all-weather surface throughout the year.
- If the driveway has 12%-15% grade it must have a non-skid paved surface.
- Driveways may not exceed 16% grade unless designed by a Registered Civil Engineer. Driveways over 16% must have a non-skid paved surface. Special mitigations also apply, generally fire sprinklers will be required for all structures.
- Driveways shall not exceed 20% grade.
- If the driveway exceeds 300 feet in length, a turnaround is required within 50 feet of the building.
- Driveways with less than 16 feet of width and exceeding 800 feet in length will require turnouts at the mid point or every 400 feet.
- A vertical clearance of 13'6" is required. (See Exhibit 14).
- All driveways must be able to support a 20 ton fire engine.
- Driveways shall also provide for a 10 foot fuel modification zone on both sides. (See Exhibit 14).

Dead-End Roads

The maximum length of a dead-end road, including all dead-end roads accessed from that dead-end road, shall not exceed the following cumulative lengths regardless of the number of parcels served:

- Less than 1 acre 800 feet
- 1 acre to 4.99 acres 1320 feet
- 5 acres to 19.99 acres 2640 feet
- 20 acres or larger 5280 feet

All lengths are measured from the edge of the roadway surface at the intersection that begins from the road to the end of the road surface at its farthest point.

Where a dead-end road crosses areas of differing zones, the shortest allowable length shall apply. Each dead-end road shall have a turnaround constructed at its terminus (CFC 503.2.5, PRC 4290).

Bridges

All private bridges shall be identified on the site plan. Applicants shall provide a letter of certification from a licensed engineer verifying the minimum load design. Signs with load and vertical clearance limits shall be clearly posted at bridge entrances. A one-lane bridge shall be a minimum of ten (10) feet in width, have turn-outs at each end, one-way signs and clear visibility. (See Exhibit 4).

Gates

The gate entrance shall be two (2) feet wider than width of traffic lane and located thirty (30) feet from the roadway. The center line of lane turning radius must be at least 25 feet. Electric gates shall be maintained operational at all times and shall provide for Fire Department emergency access via a Knox switch.* (CFC 503.6) Non-electric gates may be secured by a padlock. (See Exhibits 11 & 12A).

**An official order form for a Knox gate switch can be requested from the Fire Prevention Bureau. The Knox Company will only accept order forms with an "original" signature from one of the approved fire inspectors. On-line orders at the Knox Company website are not allowed for SLO County, Los Osos CSD, City of Pismo Beach and Avila Beach CSD jurisdictions. The owner/agent is responsible for the payment and installation of the Knox switch.*

SETBACKS AND ADDRESSES

Structure/Building Setbacks

All new and existing structures shall be identified by use, total square footage and height. New structures on parcels of one (1) acre and larger shall provide a minimum 30-foot setback from property lines. All setbacks are subject to County Planning Department approval.

Location of Liquified Petroleum Gas Tank - Above Ground Storage

Minimum separation between containers and buildings, public ways, or lines of adjoining property that can be built upon is: 10 feet for containers 125 gallons to 500 gallons; 25 feet for containers 501 to 2,000 gallons. Weeds, grass, shrubs, overhanging tree branches, trash, and other combustible materials shall be kept a minimum of 10 feet away from LP gas tanks or containers.

Fuel Modification

All structures shall have a minimum 100 feet of vegetation defensible space to reduce the threat of a wildland fire. Tree limbs located within ten (10) feet of a chimney shall be removed. Additionally, any dead/dying limbs that overhang the roof must be trimmed.

Addressing

All projects shall comply with County road naming/address ordinances (See Standard 2).

1. All roads shall be named and posted using County standard signage.
2. Address numbers shall be a minimum of six (6) inches tall and of a contrasting color to the background. Reflectorized numbers are highly recommended at the entrance to the driveway.
3. Addresses shall be located at the driveway entrance, on the residence(s) in a highly visible location, and at each "Y" and "T" of the driveway.
4. Each dwelling unit requires a separate address. Identifying units with A, B, C, 1, 2, 3, etc… is no longer allowed.
5. All address numbers and street names are assigned & approved by the SLO County Planning Department. The Address Unit can be reached at (805) 781-5157.
6. Street signs shall meet the SLO County road sign specification M-6, available from the County Engineering Department at (805) 781-5252.
7. If the road is maintained by the county, the signs will be maintained by the county.
8. If the road is maintained by another agency (road maintenance agreement, homeowner's association, community services district, etc) the signs shall be maintained by that entity.
9. If the road is not maintained by either the county or another agency, the road signs shall be maintained by the party(ies) who requested the road name or the construction permit.
10. All signs not maintained by the county shall have green lettering on a white background and can be obtained from any sign vendor.