

**Title 14 of the California Code of Regulations (14 CCR),**

**Division 1.5, Chapter 7**

**Subchapter 2, Articles 1-5**

**“State Fire Safe Regulations, 2021”**

Subchapter 2. ~~SRA~~ State Fire Safe Regulations

Article 1. Administration

§ 1270.00. Title.

These regulations shall be known as the “~~SRA~~ State Fire Safe Regulations,” and shall constitute the basic wildfire protection standards of the California Board of Forestry and Fire Protection.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4102, 4126, 4127 and 4290, Public Resources Code.

§ 1270.01. Purpose.

(a) These regulations have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with ~~building, construction and development~~ Building Construction in the State Responsibility Area (SRA) and Local Responsibility Area Very High Fire Hazard Severity Zones (LRA VHFHSZ).

(b) ~~The future design and construction of structures, subdivisions and developments~~ Building Construction in the SRA and LRA VHFHSZ shall provide for basic emergency access and

perimeter wildfire protection measures as specified in the following articles.

(c) These measures shall provide for emergency access and egress; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification. The fire protection standards which follow shall specify the minimums for such measures.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1270.02. Scope

(a) These regulations shall apply to ~~(1)~~ the perimeters and ~~a~~Access to all residential, commercial, and industrial ~~b~~Building ~~e~~Construction within the SRA approved after January 1, 1991, and within the LRA VHFHSZ approved after July 1, 2021, except as set forth below in subsections (b) and (c). ~~(b.) through (d), inclusive, and (f);~~  
~~(2) the siting of newly installed commercial modulars, manufactured homes, mobilehomes, and factory-built housing, as defined in Health and Safety Code sections 18001.8, 18007, 18008, and 19971, except where being sited or installed as an accessory or junior accessory dwelling unit as set forth in subsection (d) below;~~  
~~(3) all tentative and parcel maps or other developments approved after January 1, 1991; and~~

~~(4) applications for building permits on a parcel approved in a pre-1991 parcel or tentative map to the extent that conditions relating to the perimeters and access to the buildings were not imposed as part of the approval of the parcel or tentative map.~~

(b) These regulations do not apply where an application for a building permit in the SRA is filed after January 1, 1991 for ~~Building~~ Construction on a parcel that was formed from a parcel map or tentative map (if the final map for the tentative map is approved within the time prescribed by the local ordinance) approved prior to January 1, 1991, to the extent that conditions relating to the perimeters and access to the buildings were imposed by the parcel map or final tentative map approved prior to January 1, 1991.

(i) For this exemption to apply, the parcel map or tentative map that was approved prior to January 1, 1991, shall have imposed conditions relating to the perimeters and access to the Building Construction that is the subject of the building permit application filed after January 1, 1991.

(ii) These regulations apply to the Building Construction to the extent that conditions relating to the perimeters and access to the buildings were not imposed as part of the approval of the parcel map or tentative map.

~~(1) At the discretion of the local jurisdiction, and subject to any requirements imposed by the local jurisdiction to ensure reasonable ingress, egress, and capacity for evacuation and~~

~~emergency response during a wildfire, these regulations shall not apply to the reconstruction or repair of legally constructed residential, commercial, or industrial buildings due to a wildfire, to the extent that the reconstruction or repair does not:~~

~~(A) increase the square footage of the residential, commercial, or industrial building or buildings that previously existed; or~~

~~(B) change the use of the building or buildings that had existed previously; or~~

~~(C) construct a new building or buildings that did not previously exist on the site.~~

~~(2) Nothing in this subsection shall be construed to alter the extent to which these regulations apply to the reconstruction or repair of a legally constructed residential, commercial, or industrial building for reasons unrelated to a wildfire.~~

~~(d) These regulations do not apply to the creation of accessory or junior accessory dwelling units that comply with Government Code sections 65852.2 or 65852.22, or any local ordinances enacted thereunder, as applicable, including any local ordinances requiring provisions for fire and life safety.~~

~~(e) Unless otherwise exempt pursuant to this subchapter, affected activities include, but are not limited to:~~

~~(1) permitting or approval of new parcels, excluding lot line adjustments as specified in Government Code (GC) section 66412(d);~~

~~(2) application for a building permit for new building construction;~~

~~(3) application for a use permit; and~~

~~(4) road construction.~~

~~(f)c) EXEMPTION: Roads~~ These regulations shall not apply to Roads  
used solely for agricultural, mining, or the management and  
harvesting of wood products.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1270.03. Provisions for Application of These Regulations.

This ~~subchapter~~ shall be applied as follows:

(a) the local jurisdictions shall provide the Director, as  
defined in section §1271.00, of the California Department of  
Forestry and Fire Protection (CAL FIRE) or their designee with  
notice of applications for building permits, tentative parcel  
maps, tentative maps, and installation or use permits for  
Building Construction or development within the SRA or LRA  
VHFHSZ.

(b) the Director ~~or their designee~~ may review and make fire  
protection recommendations on applicable Building Construction  
~~construction or development permits or maps~~ provided by the  
local jurisdiction.

(c) the local jurisdiction shall ensure that any applicable Building Construction complies with the applicable sections of this sSubchapter. ~~become a condition of approval of any applicable construction or development permit or map.~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1270.04. Local Ordinances.

(a) These regulations shall serve as the minimum standards applied in SRA and LRA VHFHSZ. However, these regulations do not supersede local regulations which equal or exceed the minimum standards of this Subchapter.

(b) A local regulation may equal or exceed a minimum standard of this Subchapter where the local regulation equals or exceeds the performance- or prescriptive-based standard in this Subchapter.

(c) A local regulation shall not equal or exceed a minimum standard adopted by the state where the local regulation does not meet the performance or prescriptive based standard in this Subchapter.

(d) A local regulation shall not equal or exceed the minimum standards of this Subchapter if such regulation includes exemptions or exceptions to Building Construction that are not enumerated in this Subchapter. Exceptions requested and approved in conformance with § 1270.06 may be granted on a case-by-case

1 basis. Exemptions not enumerated in these regulations shall not  
2 be granted.

3 (e) A local jurisdiction may determine that its local  
4 regulation, in whole or in part, equals or exceeds, and  
5 therefore supersedes, the minimum standards of this Subchapter  
6 shall be subject to the following conditions:

7 (1) The determination shall specifically identify and  
8 include a copy of each local regulation section or provision and  
9 the applicable minimum standard in this Subchapter that the  
10 respective local regulation section or provision equals or  
11 exceeds.

12 (2) The determination shall include findings supported by  
13 substantial evidence in light of the record that each local  
14 regulation section or provision equals or exceeds the applicable  
15 minimum standard in this Subchapter.

16 (3) The determination shall be made available to the  
17 public, posted on the local jurisdiction's internet website, and  
18 a copy shall be provided to both the Board and CAL FIRE.

19 (f) "Substantial evidence," as used in this Subchapter, means  
20 relevant evidence that a reasonable person might accept as  
21 adequate to support a conclusion in light of the whole record  
22 before them.

23 ~~Nothing contained in these regulations shall be considered as~~  
24 ~~abrogating the provisions of any ordinance, rule or regulation~~  
25 ~~of any state or local jurisdiction provided that such ordinance,~~

~~rule, or regulation is equal to or exceeds these minimum standards.~~

~~(b) Counties may submit their local ordinances for certification via email to the Board, and the Board may certify them as equaling or exceeding these regulations when they provide the same practical effect. If the Board determines that the local requirements do not equal or exceed these regulations, it shall not certify the local ordinance.~~

~~(c) When the Board grants certification, the local ordinances, in lieu of these regulations, shall be applied as described in 14 CCR § 1270.02 and used as the basis for inspections performed under 14 CCR § 1270.05.~~

~~(d) The Board's certification of local ordinances pursuant to this section is rendered invalid when previously certified ordinances are subsequently amended by local jurisdictions, or the regulations are amended by the Board, without Board re-certification of the amended ordinances. The Board's regulations supersede the amended local ordinance(s) when the amended local ordinance(s) are not re-certified by the Board. Amendments made by local jurisdictions to previously certified ordinances shall be submitted for re-certification.~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.



§ 1270.05. Inspections.

Inspections shall conform to the following requirements:

(a) Inspection shall be made by:

(1) the Director, or

(2) local jurisdictions that have assumed state fire protection responsibility on SRA lands, or

(3) local jurisdictions where the inspection duties have been formally delegated by ~~CAL FIRE~~ the Director to the local jurisdiction, pursuant to subsection (b).

(b) The Director may delegate inspection authority to a local jurisdiction subject to each of the following criteria:

(1) The local jurisdiction represents, to the Director's satisfaction, that the local jurisdiction has appropriate resources to responsibly perform the delegated inspection authority.

(2) The local jurisdiction acknowledges that CAL FIRE's authority under subsection (c) shall not be waived or restricted.

(3) The Director may impose additional criteria on a proposed delegation of inspection authority as the Director deems necessary and appropriate to ensure that the delegated inspection authority is performed responsibly.

(4) The local jurisdiction consents to the delegation of inspection authority.

(5) The Director may in their discretion revoke the delegation at any time.

1        (6) The delegation of inspection authority, and any  
2 subsequent revocation of the delegation, shall be documented in  
3 writing, a copy of which shall be retained on file at the CAL  
4 FIRE Unit headquarters that administers SRA fire protection in  
5 the local jurisdiction.

6        ~~(b)~~ Nothing in this section abrogates CAL FIRE's authority to  
7 inspect and enforce state forest and fire laws even when the  
8 inspection duties have been delegated pursuant to this section.

9        ~~(e)~~ Reports of violations shall be provided to the CAL FIRE  
10 Unit headquarters that administers SRA fire protection in the  
11 local jurisdiction or in the county in which the local  
12 jurisdiction is located.

13        ~~(d)~~ When inspections are conducted, they shall occur prior to:  
14 the issuance of the use permit or certificate of occupancy; the  
15 recordation of the parcel map or final map; the filing of a  
16 notice of completion; or the final inspection of any project or  
17 building permit.

18 Note: Authority cited: Section 4290, Public Resources Code.

19 Reference: Sections 4290 and 4291, Public Resources Code.

20 § 1270.06. Exceptions to Standards.

21        (a) The requirements in this section apply to requests for  
22 Exceptions from the standards in the State Fire Safe Regulations  
23 and from standards in local regulations that equal or exceed the  
24 standards in this Subchapter in accordance with 14 CCR §  
25 1270.04.

(b) Upon request by the applicant, ~~an eException~~ to a standards within this ~~Subchapter~~ or to a local regulation jurisdiction ~~certified ordinances~~ that equals or exceeds the standards in this Subchapter may be granted ~~allowed~~ by the inspection entity listed in 14 CCR § 1270.05. ~~where the exceptions provide the same practical effect as these regulations towards providing defensible space.~~

(1) Exceptions shall only be granted where the Exception provides for substantial compliance with the minimum standards provided in this Subchapter.

(2) Exceptions granted by the inspection entity listed in 14 CCR § 1270.05 shall be made on a case-by-case basis only, shall made be in writing, and shall be supported by substantial evidence in the light of the whole record. Exceptions granted by the inspection entity listed in 14 CCR § 1270.05 shall be made available to the public, posted on the local jurisdiction's internet website, and forwarded to the Board and the appropriate CAL FIRE Unit Office that administers SRA fire protection in that county. Exceptions shall be retained on file at both offices for a period of no less than five (5) years. ~~and shall be retained on file at the Unit Office.~~

(~~b~~c) Requests for an ~~e~~Exception shall be made in writing to the inspection entity listed in 14 CCR § 1270.05 by the applicant or the applicant's authorized representative.

(1) ~~At a minimum, the~~ Exception requests shall state

1           (i) the specific section(s) for which an eException is  
2           requested;

3           (ii) material facts supporting the necessity for an  
4           Exception contentment of the applicant;

5           (iii) material facts demonstrating the proposed  
6           alternative mean(s) substantially complies with the  
7           performance- or prescriptive-based standard for which the  
8           Exception is requested; the details of the exception  
9           proposed, and

10           (iv) a map showing the proposed location and siting of  
11           the eException, including address or parcel number, as  
12           applicable.

13           (2) Local jurisdictions acting as inspection entities  
14           pursuant to listed in 14 CCR section 1270.05 may establish  
15           additional procedures or requirements for eException  
16           requests.

17           (ed) Where an exception is not granted by the inspection entity,  
18           the applicant may appeal such denial to the local jurisdiction.  
19           The local jurisdiction may establish or utilize an appeal  
20           process consistent with existing local building or planning  
21           department appeal processes to adjudicate any appeals of  
22           Exceptions that have been denied.

23           (1) In addition to local requirements, the local  
24           jurisdiction shall Before the local jurisdiction makes consult  
25

with the inspection authority prior to making a determination on an appeal., ~~the inspection authority shall be consulted~~

(2) ~~The inspection authority and shall provide to that local jurisdiction documentation demonstrating how the requested Exception does not substantially comply with the standards in this Subchapter. -outlining the effects of the requested exception on wildfire protection.~~

(e) If an appeal is granted, the local jurisdiction shall make written findings supported by substantial evidence in the light of the whole record that the Exception decision substantially complies with~~meets~~ the minimum standards in this Subchapter. ~~intent of providing defensible space consistent with these regulations.~~ Such findings shall include a written statement of reasons for overriding the decision of the inspector. A written copy of these findings shall be posted on the jurisdiction's internet website, and shall be provided to the Board and the CAL FIRE Unit headquarters that administers SRA fire protection in that local jurisdiction or in the county the local jurisdiction resides.

(f) "Substantial compliance," as used in this Subchapter, means that the Exception satisfies the purpose of the minimum standards even though the formal requirements are not satisfied.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1271.00. Definitions

(a) Access: The ability or means to enter or approach a Structure subject to this Subchapter, including all Roads that provide fire apparatus ingress and egress from a fire station to the Structure.

(b) Agriculture: Land used for agricultural purposes as defined in a local jurisdiction's zoning ordinances.

~~Building: Any structure used or intended for supporting or sheltering any use or occupancy, except Utility and Miscellaneous Group U buildings.~~

(c) Board: California Board of Forestry and Fire Protection.

(d) Building Construction: any modification to a parcel(s), road(s), driveway(s), or structure(s) that increases the number of residential units; increases the service capacity of a commercial enterprise or commercial use; or increases the number of persons on the premises of an industrial site. "Building Construction" does not include the replacement of lost structures due to disaster, to the degree that replacement does not increase site intensity as described.

(e) CAL FIRE: California Department of Forestry and Fire Protection.

(f) Dead-end road: A road that has only one point of vehicular ingress/egress, including cul-de-sacs and looped roads.

(g) Defensible space: an area where mitigation actions are undertaken to reduce structure loss from wildfire. ~~The area within the perimeter of a parcel, development, neighborhood or~~

~~community where basic wildland fire protection practices and measures are implemented, providing the key point of defense from an approaching wildfire or defense against encroaching wildfires or escaping structure fires. The perimeter as used in this regulation is the area encompassing the parcel or parcels proposed for construction and/or development, excluding the physical structure itself. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, road names and building identification, and fuel modification measures.~~

(h) Development: As defined in section 66418.1 of the California Government Code.

(i) Director: Director of the Department of Forestry and Fire Protection or their designee.

(j) Driveway: A vehicular access that serves up to two (2) parcels with no more than two (2) residential units and any number of non-commercial or industrial buildings on each parcel.

(k) Distance Measurements: All specified or referenced distances are measured along the ground, unless otherwise stated.

(l) Exception: An alternative method to achieve a to the specified standard requested by the applicant subject to section 1270.06. ~~that may be necessary due to health, safety, environmental conditions, physical site limitations or other limiting conditions, such as recorded historical sites, that provides mitigation of the problem.~~

1 (m) Fire Apparatus: A vehicle designed to be used under  
2 emergency conditions to transport personnel and equipment or to  
3 support the suppression of fires or mitigation of other  
4 hazardous situations.

5 (n) Fire Hydrant: A valved connection on a water supply or  
6 storage system, having a minimum of either one two and a half (2  
7 1/2) inch outlet for gravity feed systems or one four and a half  
8 (4 1/2) inch outlet for drafting systems, with male American  
9 National Fire Hose Screw Threads (NH), used to supply fire  
10 apparatus and hoses with water.

11 (o) Fire valve: see Fire hydrant.

12 (p) Fuel break: A strategically located area where the volume  
13 and arrangement of vegetation has been managed to limit fire  
14 intensity, fire severity, rate of spread, crown fire potential  
15 and/or ember production.

16 ~~(p) Fuel modification area: An area where the volume of~~  
17 ~~flammable vegetation has been reduced, providing reduced fire~~  
18 ~~intensity and duration.~~

19 (q) Greenbelts: A land use designation intended to protect  
20 agricultural lands, open space, parks, wildlands, or a  
21 combination thereof, which surround a city or urbanized area,  
22 and restrict or prohibit development. A facility or land-use,  
23 designed for a use other than fire protection, which will slow  
24 or resist the spread of a wildfire. Includes parking lots,  
25 irrigated or landscaped areas, golf courses, parks, playgrounds,



~~maintained vineyards, orchards or annual crops that do not cure in the field.~~

(r) Hammerhead/T: A road or driveway that provides a "T" shaped, three-point turnaround space for emergency equipment, being no narrower than the ~~Road~~ that serves it.

(s) Hazardous Land Use: Any type of land use that may potentially ignite a wildfire, prolong its duration, or increase its intensity, such as power-generation land uses, warehouses with hazardous materials, and shooting ranges.

(t) Local Jurisdiction: Any county, city/county agency or department, or any locally authorized district that issues or approves building permits, use permits, tentative maps or tentative parcel maps, or has authority to regulate development and construction activity.

(u) Local Responsibility Area (LRA): Those areas of land classified by the Board of Forestry and Fire Protection (Board) where the financial responsibility of preventing and suppressing wildfires is not that of the state or federal government, pursuant to Public Resources Code (PRC) section 4125.

(v) Occupancy: The purpose for which a building, or part thereof, is used or intended to be used.

(w) One-way road: A minimum of one traffic lane width designed for traffic flow in one direction only.

(x) Residential unit: Any building or portion thereof which contains living facilities, including provisions for sleeping,

1 eating, cooking and/or sanitation for one or more persons.  
2 Manufactured homes, mobilehomes, and factory-built housing are  
3 considered residential units. ~~for the purposes of mandatory~~  
4 ~~measures required in 14 CCR § 1270.01(c), unless being sited or~~  
5 ~~installed as an accessory or junior accessory dwelling unit in~~  
6 ~~accordance with 14 CCR § 1270.02(d).~~

7 (y) Ridgeline: the line of intersection at the top of any two  
8 opposing slope aspects where at least one of the slope aspects  
9 has a grade of 15% or greater, measured over a 100 foot slope  
10 distance, and the opposing slope aspect has a 0% grade or  
11 greater. The local jurisdiction shall identify additional  
12 ridgelines, if any, that are strategically important for fire  
13 suppression operations.

14 (z) Road: Vehicular access to more than two (2) parcels; more  
15 than four (4) residential units; or access to any industrial or  
16 commercial use occupancy. This is a general term inclusive of  
17 all other terms such as fire lane, public street, private  
18 street, parking lot lane, and access roadway. Includes public  
19 and private streets and lanes.

20 (aa) Road or driveway structures: Bridges, culverts, and other  
21 appurtenant structures which supplement the traffic lane or  
22 shoulders.

23 ~~Same Practical Effect: As used in this subchapter, means an~~  
24 ~~exception or alternative with the capability of applying~~  
25

~~accepted wildland fire suppression strategies and tactics, and provisions for fire fighter safety, including:~~

~~(a) access for emergency wildland fire equipment,~~

~~(b) safe civilian evacuation,~~

~~(c) signing that avoids delays in emergency equipment response,~~

~~(d) available and accessible water to effectively attack~~

~~wildfire or defend a structure from wildfire, and~~

~~(e) fuel modification sufficient for civilian and fire fighter safety.~~

(bb) Shoulder: Vehicular access adjacent to the traffic lane.

(cc) State Responsibility Area (SRA): As defined in Public Resources Code sections 4126-4127; and the California Code of Regulations, title 14, division 1.5, chapter 7, article 1, sections 1220-1220.5.

(dd) Structure: That which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.

~~Subdivision: As defined in section 66424 of the Government Code.~~

(ee) Traffic lane: The portion of a road or driveway that provides a single line of vehicle travel.

(ff) Turnaround: A road or driveway, unobstructed by parking, which allows for a safe opposite change of direction for emergency equipment. Design of such area may be a hammerhead/T or terminus bulb.

(gg) Turnouts: A widening in a road or driveway to allow vehicles to pass.

~~Utility and Miscellaneous Group U building: A structure of an accessory character or a miscellaneous structure not classified in any specific occupancy permitted, constructed, equipped, and maintained to conform to the requirements of Title 24, California Building Standards Code.~~

(hh) Vegetation species conversion: (to be added)

~~(ii) Vertical clearance: The minimum specified height of a bridge or overhead projection above the road or driveway.~~

(jj) Very High Fire Hazard Severity Zone (VHFHSZ): as defined in Government Code section 51177(i).

(kk) Wildfire: As defined in Public Resources Code Section 4103 and 4104.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

Article 2. ~~Emergency Access and Egress~~

§ 1273.00. ~~Safe Access and Egress Intent.~~

~~Roads, and Driveways, and Road or Driveway Structures, whether public or private, unless exempted under 14 CCR § 1270.02(d), shall provide for safe access for emergency wildfire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a wildfire emergency consistent with 14 CCR §§ 1273.00 through 1273.0709.~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.01. ~~Width.~~ Horizontal and Vertical Curves / Curb Radii

(a) No road or road structure shall have a horizontal inside radius of curvature (measured from the centerline of the inside lane) of less than fifty (50) feet. Additional surface width of four (4) feet shall be added to curves of 50-100 feet radius; one (1) foot shall be added to curves of 100-200 feet as illustrated on Figure 1 and Figure 2.

(i) Flexible plastic posts to delineate the shoulder or bikeway may be accepted if approved by the local jurisdiction.

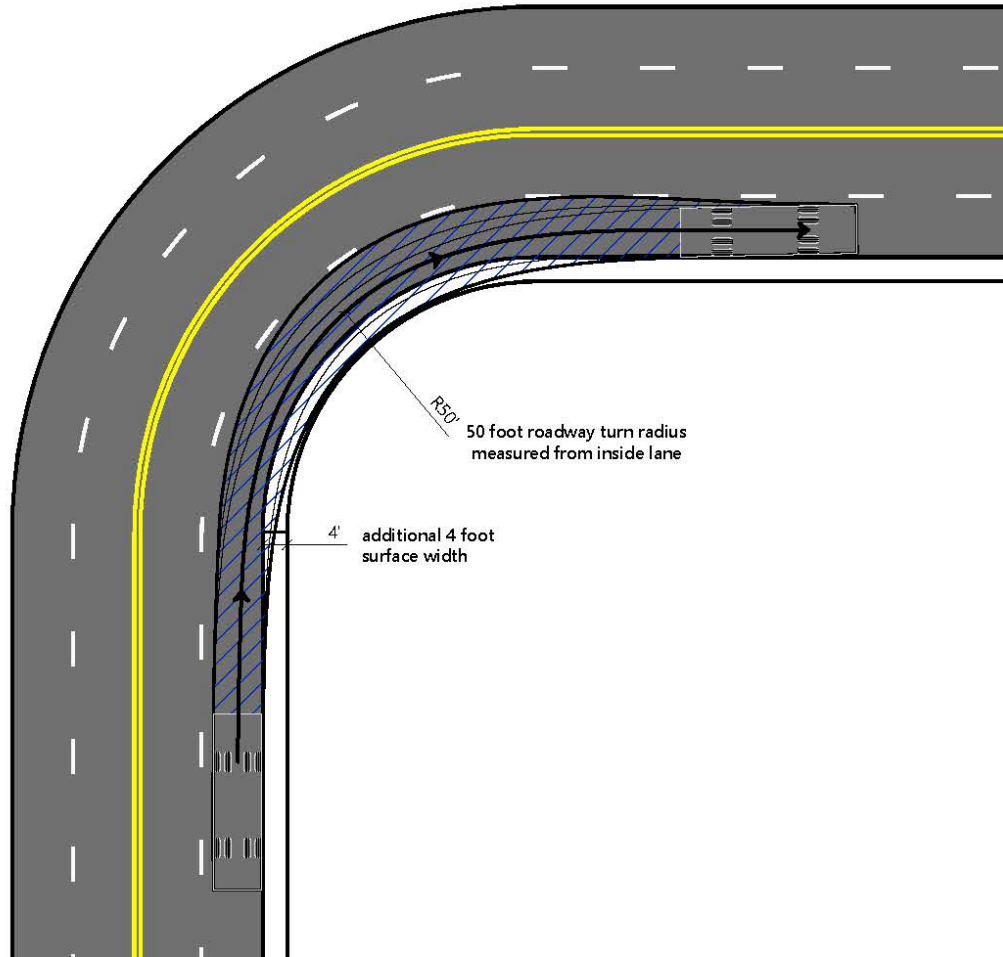
(ii) A design without the additional surface width or a horizontal inside radius of curvature less than 50 feet may be approved where the operating speed is 15 mph or less and the horizontal curve is designed and modeled by a licensed professional engineer demonstrating that a fire apparatus can negotiate the proposed horizontal inside radius.

(b) At intersections where on-street parking and bike lanes may be present as illustrated on Figure 3 below, the effective turning radius shall not be less than fifty (50) feet as shown.

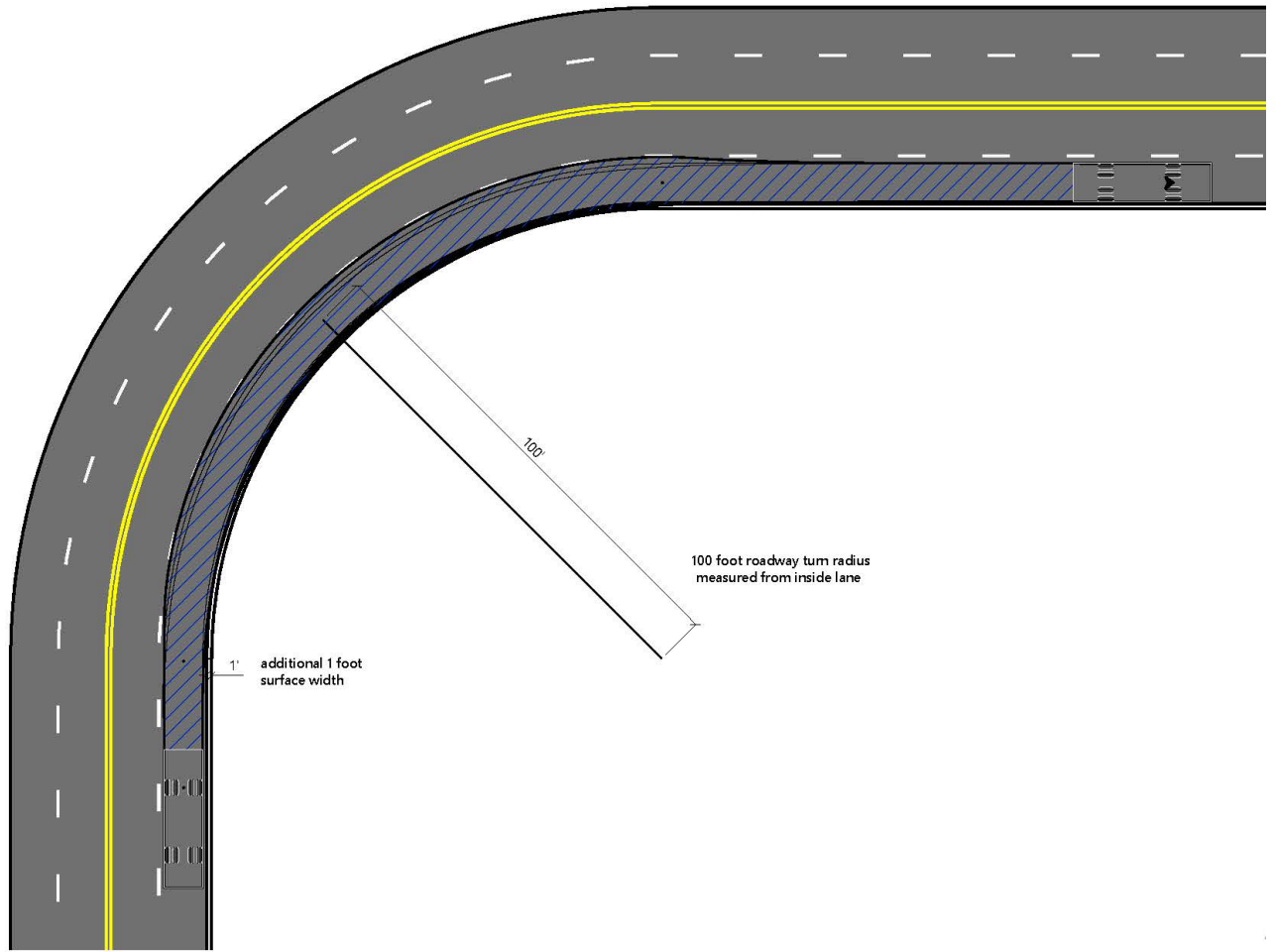
(i) Smaller curb radii or curb extensions may be installed at intersections where width allows to minimize pedestrian exposure and collision severity as long as the effective turning radius is not less than fifty (50) feet.

1        (ii) At intersections in areas without on-street parking  
2        and/or bike lanes, where speeds are less than 15 mph, and  
3        traffic volumes on the receiving road are less than 120  
4        vehicles per hour during either an evacuation event or  
5        during the peak commute hour, whichever is a higher volume,  
6        curb radii of twenty (20) feet may be considered as shown  
7        on Figure 4 if designed by a professional engineer  
8        demonstrating that a fire apparatus can negotiate the turn  
9        safely.

10       (c) The length of vertical curves of roads, exclusive of  
11       gutters, ditches, and drainage structures designed to hold or  
12       divert water, shall be not less than one hundred (100) feet.  
13       Vertical curves less than one hundred (100) feet may be approved  
14       when designed by a professional engineer demonstrating that a  
15       fire apparatus can physically negotiate the road.

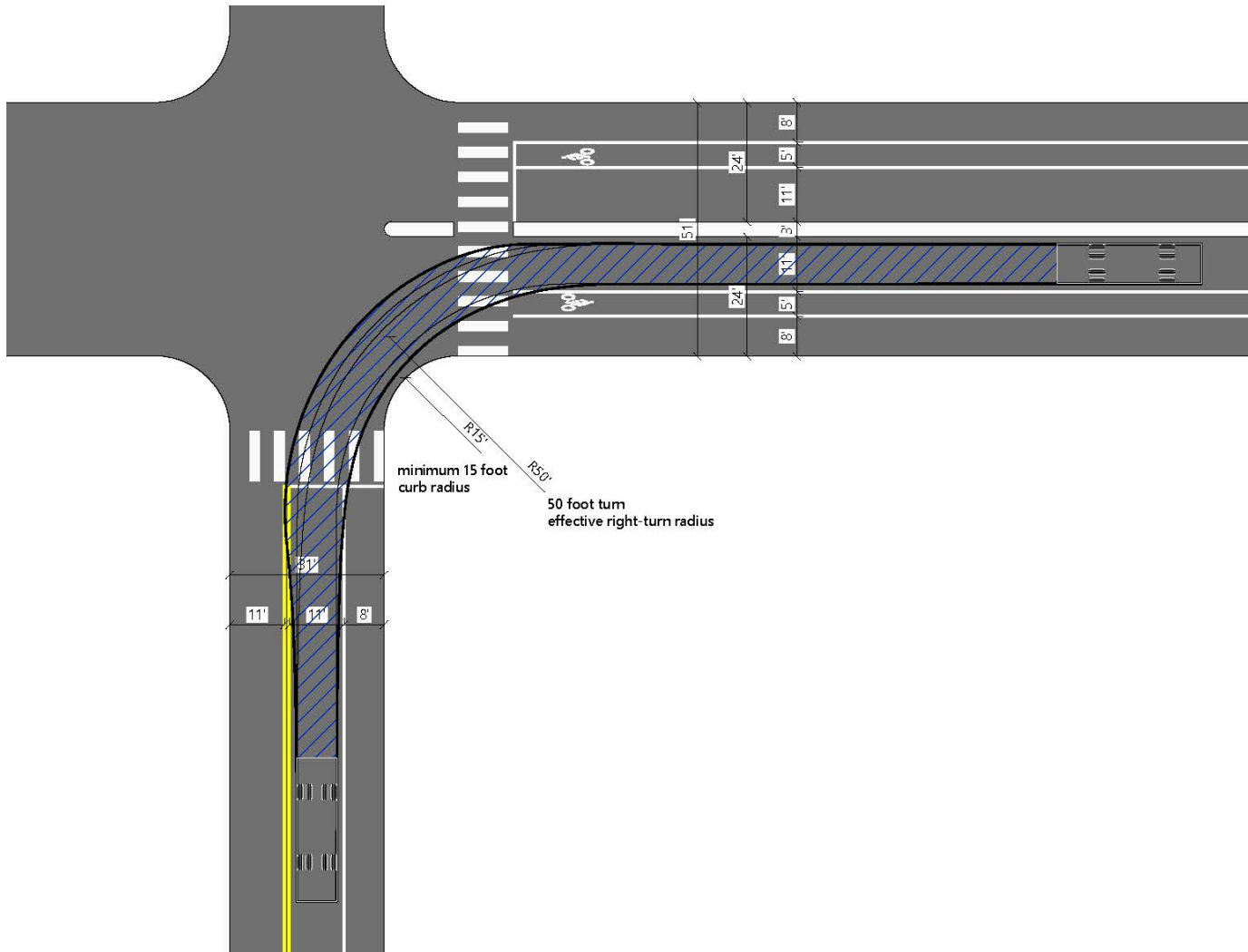


**Figure 1**  
Effective Turning Radius for Horizontal Curvature with 50 Foot Radius

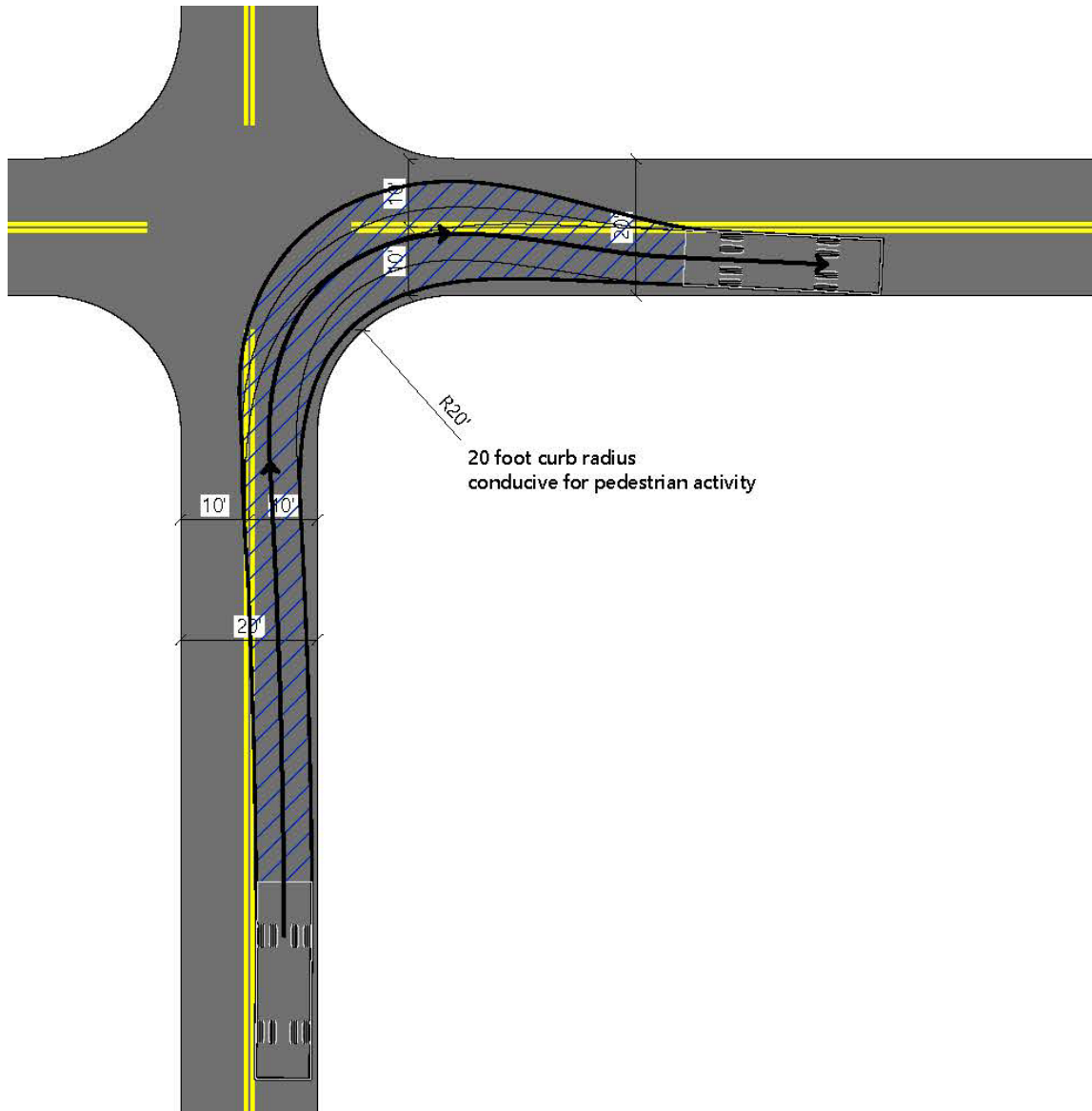


**Figure 2**  
Effective Turning Radius for Horizontal Curvature with 100 Foot Radius





**Figure 3**  
Effective Turning Radius for Intersections with Bike Lanes or Parking



**Figure 4**  
Effective Turning Radius for 20 Foot Wide Road Intersection

~~(a) All roads shall be constructed to provide a minimum of two ten (10) foot traffic lanes, not including shoulder and striping. These traffic lanes shall provide for two-way traffic flow to support emergency vehicle and civilian egress, unless other standards are provided in this article or additional requirements are mandated by local jurisdictions or local~~

~~subdivision requirements. Vertical clearances shall conform to the requirements in California Vehicle Code section 35250.~~

~~(b) All one-way roads shall be constructed to provide a minimum of one twelve (12) foot traffic lane, not including shoulders. The local jurisdiction may approve one-way roads.~~

~~(1) All one-way roads shall, at both ends, connect to a road with two traffic lanes providing for travel in different directions, and shall provide access to an area currently zoned for no more than ten (10) residential units.~~

~~(2) In no case shall a one-way road exceed 2,640 feet in length. A turnout shall be placed and constructed at approximately the midpoint of each one-way road.~~

~~(c) All driveways shall be constructed to provide a minimum of one (1) ten (10) foot traffic lane, fourteen (14) feet unobstructed horizontal clearance, and unobstructed vertical clearance of thirteen feet, six inches (13' 6").~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.02. Road Surfaces.

(a) Roads shall be designed and maintained to support the imposed load of fire apparatus weighing ~~at least~~ 75,000 pounds. and provide an aggregate base. The material of the Road shall be non-erodible and designed to support the required weight at all times, including during saturation. Roads with a grade of

greater than 16% have additional surface treatment requirements specified in § 1273.01.04.

(b) Where the local fire code official certifies that the fire apparatus used is of a lower weight, the local jurisdiction may approve Roads designed to support a lower apparatus weight. If the Road is designed for lower weight than required in § 1273.02(a), then it shall be identified through signage as described in § 1274.02. In no case shall a Road be designed to support a weight below 36,000 pounds.

~~(b) Driveways and road and driveway structures shall be designed and maintained to support at least 40,000 pounds.~~

(c) When necessary, the local fire code official and/or the local jurisdiction may require Roads be designed to support a vehicle weight up to 100,000 pounds.

~~(de)~~ Project proponent shall provide engineering specifications to support design, if requested by the local authority having jurisdiction.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.03. ~~Grades.~~ Elevated or Bridge Structures.

(a) Appropriate signing, including but not limited to weight or vertical clearance limitations, one-way road or single traffic lane conditions, or bridge weight rating limits, shall reflect

1 the capability of each bridge. Refer to § 1274.02 for specific  
2 signage requirements.

3 (b) Where a bridge or an elevated surface is part of a Road, it  
4 shall be designed and constructed to accommodate a gross vehicle  
5 weight rating of 75,000 pounds. Vehicle load limits shall be  
6 posted at both entrances to bridges.

7 (i) Bridges or elevated surfaces may be designed for a  
8 lower apparatus weight if approved by the local jurisdiction and  
9 if a licensed engineer works with the local fire official to  
10 verify that the apparatus used will be under the load weight of  
11 the bridge. If the bridge is designed for a lower weight, then  
12 it shall be identified through signage as described in §  
13 1274.02. In no case shall the bridge be designed to support a  
14 weight below 36,000 pounds.

15 (ii) AASHTO structure design standards, which focuses on  
16 axle load requirements, may be considered in lieu of total  
17 vehicle weight if designed and certified by a professional  
18 engineer.

19 (iii) When necessary, the local fire code official and/or  
20 the local jurisdiction may require Bridges or elevated  
21 structures be designed to support a vehicle weight up to 100,000  
22 pounds.

23 (c) Where elevated surfaces designed for emergency vehicle use  
24 are adjacent to surfaces which are not designed for such use,  
25 barriers, signs, and/or other distinguishing features, as

1 approved by the local jurisdiction, shall be installed and  
2 maintained.

3 (d) A bridge with only one traffic lane may be authorized by  
4 the local jurisdiction; however, it shall provide for  
5 unobstructed visibility from one end to the other and turnouts  
6 at both ends. Single lane bridges shall be implemented  
7 consistent with requirements outlined in § 1273.02.05.

8 (e) Bridges shall be constructed of non-combustible materials  
9 except when approved by the local jurisdiction.

10 ~~(a) At no point shall the grade for all roads and driveways~~  
11 ~~exceed 16 percent.~~

12 ~~(b) The grade may exceed 16%, not to exceed 20%, with approval~~  
13 ~~from the local authority having jurisdiction and with~~  
14 ~~mitigations to provide for same practical effect.~~

15 Note: Authority cited: Section 4290, Public Resources Code.

16 Reference: Sections 4290 and 4291, Public Resources Code.

17  
18 ~~§ 1273.04. Radius. Grades.~~

19 (a) The grades for all Roads and Driveways shall not exceed 16  
20 percent. A local jurisdiction may approve Road grades of 16 to  
21 20 percent on a case-by-case basis, with proper mitigations to  
22 prevent slippage and scraping, designed and certified by a  
23 licensed engineer and in accordance with Table 1.

24 (b) In areas with extreme weather conditions or other scenarios  
25 that lead to the local jurisdiction to the determination that

Table 1 mitigations are not sufficient, a local jurisdiction retains the authority to require lower percent grade and additional surfacing requirements.

**Table 1. Requirements for Grades of 16-20%**

<u>Grade Range</u>	<u>Surface Treatment</u>	<u>Additional Design Requirements</u>
<u>16.01-18%</u>	<u>Minimum 2" HMA<sup>1</sup> over 5" of Class 2 AB<sup>2</sup></u>	
<u>18.01-20%</u>	<u>Minimum 3" HMA over 5" of Class 2 AB or approved equal designed by licensed engineer</u>	<u>Includes a transition zone of 100' of road immediately before and after with a grade less than 10%; sustained grades of 18% shall be limited to a maximum length of 300 feet</u>

Note: When road grades higher than 16 percent are used, transition lengths and surface treatments are required to prevent slippage or scraping by the fire apparatus, per the requirements of § 1273.01.04.a.

(c) Grade transitions shall be constructed and designed to accommodate maximum approach and departure angles of 12 percent.

<sup>1</sup> Hot Mix Asphalt

<sup>2</sup> Aggregate Base

~~(a) No road or road structure shall have a horizontal inside radius of curvature of less than fifty (50) feet. An additional surface width of four (4) feet shall be added to curves of 50-100 feet radius; two (2) feet to those from 100-200 feet.~~

~~(b) The length of vertical curves in roadways, exclusive of gutters, ditches, and drainage structures designed to hold or divert water, shall be not less than one hundred (100) feet.~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.05. Turnarounds. Road Dimensions and Clearances.

Roads subject to this Subchapter shall conform to the requirements in this section.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.05.01 Width and Horizontal Clearances

(a) All bidirectional Roads shall be constructed to provide a minimum of two ten (10) foot Traffic Lanes, not including Shoulders or striping. These Traffic Lanes shall provide for two-way traffic flow to support emergency vehicle ingress and civilian egress. Where topographic or other limitations require the two Traffic Lanes to be constructed non-adjacently, each Traffic Lane shall be constructed to provide a minimum of twelve (12) feet.



(b) All one-way Roads shall be constructed to provide a minimum of one twelve (12) foot Traffic Lane.

(c) One-way Roads, and Roads with a center median ~~(including all secondary access roads)~~, shall maintain a clear width of 20 feet. This clear width may include bike lanes, Shoulders, or flexible barriers used as traffic calming devices or to delineate a bicycle facility, or for other uses. Fuel clearance within this clear area shall be maintained consistent with requirements in Article 5 of this Subchapter.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

#### § 1273.05.02 Maximum Lengths of One-Way Roads

In no case shall a one-way road exceed 2,640 feet in length.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

#### § 1273.05.03 Maximum Lengths of Dead-End Roads

(a) The maximum length of a dead-end road shall not exceed the following cumulative lengths:

- 1) parcels zoned for less than one acre - 800 feet
- 2) parcels zoned for 1 acre to 4.99 acres - 1,320 feet
- 3) parcels zoned for 5 acres or larger - 2,640 feet

(b) All dead-end roads shall meet the Turnaround requirements in section

(b) All dead-end roads shall meet the width requirements in § 1273.02.01.

(c) Each dead-end road shall be connected directly to a through road (a road that is connected to other roads at both ends). A dead-end road shall not connect to another dead-end road.

(d) All lengths shall be measured from the edge of the dead-end road surface at the intersection with the through road to the end of the dead-end road surface at its farthest point.

(a) Where a dead-end road crosses areas of differing zoned parcel sizes requiring different length limits, the shortest allowable length shall apply.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.05.04 Secondary Access/Egress for Commercial and Industrial Building Construction

(a) When this Subchapter is applicable to a Commercial or industrial Building Construction, such Building Construction may be required by the fire code official to provide for secondary access.

(1) The fire code official may require secondary access where the length of existing Roads exceed the maximum dead-end or one-way distances in this Subchapter.

1        (2) The fire code official may require secondary access  
2 when existing Roads are insufficient due to terrain, location,  
3 potential fire or life-safety hazards, or other factors that  
4 could limit access, or if vehicle congestion, railways, or  
5 weather conditions could impair the single-entry point.

6        (3) The fire code official may require secondary access for  
7 any Building Construction where the site population or activity  
8 attendance is anticipated to exceed 100 people.

9        (b) A secondary access route:

10        (1) Shall be navigable by a passenger vehicle weighing  
11 6,000 pounds or less, or be of equal construction standard to  
12 the primary road. The secondary access road does not have to be  
13 rated to carry the same quantity of traffic (e.g. a two-lane  
14 paved road and one-lane paved road is acceptable).

15        (2) Should have a length that does not exceed the dead-end  
16 road length requirements outlined in § 1273.02.03 to the  
17 connecting through roadway.

18        (3) Shall not be a road with a locked gate or limited  
19 access, and shall provide for legal and deeded access that  
20 serves as a typical travel way to and from the Building  
21 Construction.

22        (4) Shall connect a user to an alternative route that  
23 would not be affected by a closure to the primary access route,  
24 to the extent practicable.

(c) The installation of a secondary access road does not exempt any existing Road from meeting the minimum requirements in this Subchapter.

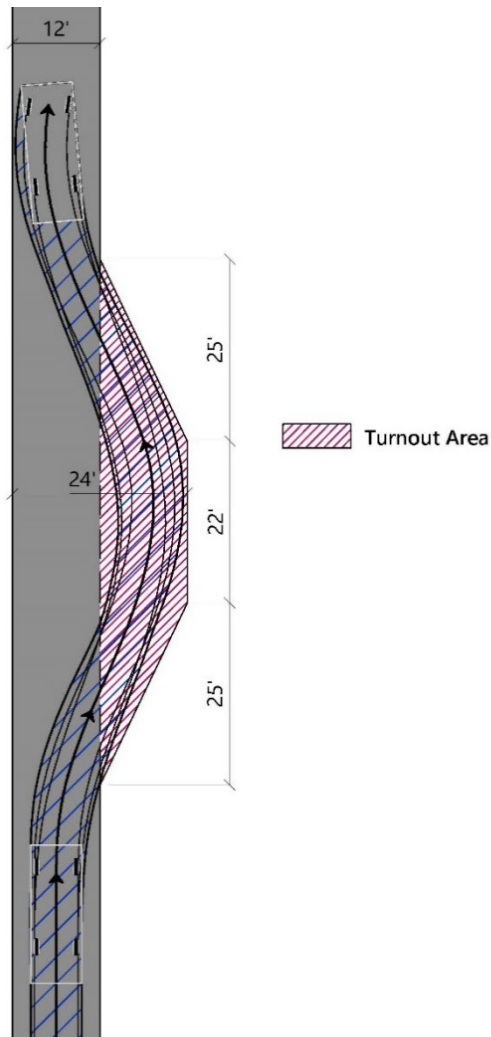
Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.05.05 Turnouts

(a) Turnouts shall be a minimum of twelve (12) feet wide, twenty-two (22) feet long with a minimum twenty-five (25) foot taper on each end, and be facilitated outside of the travel lane to accommodate one passenger vehicle as illustrated on Figure 5.

(b) On one-way Roads, a turnout shall be constructed at approximately the midpoint of the Road.



**Figure 5**  
Turnout Dimensions

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

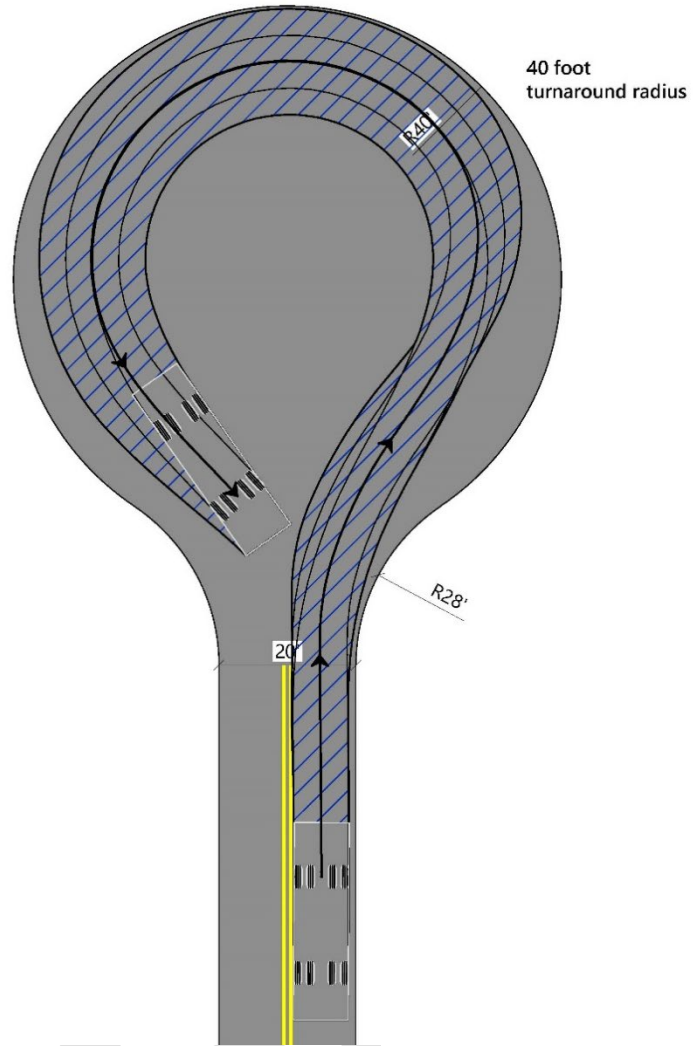
§ 1273.05.06 Turnarounds

(a) Each dead-end Road shall have a turnaround constructed at its terminus. Where the dead-end Road crosses parcels zoned for five (5) acres or larger, turnarounds shall also be provided half way along the dead-end Road.

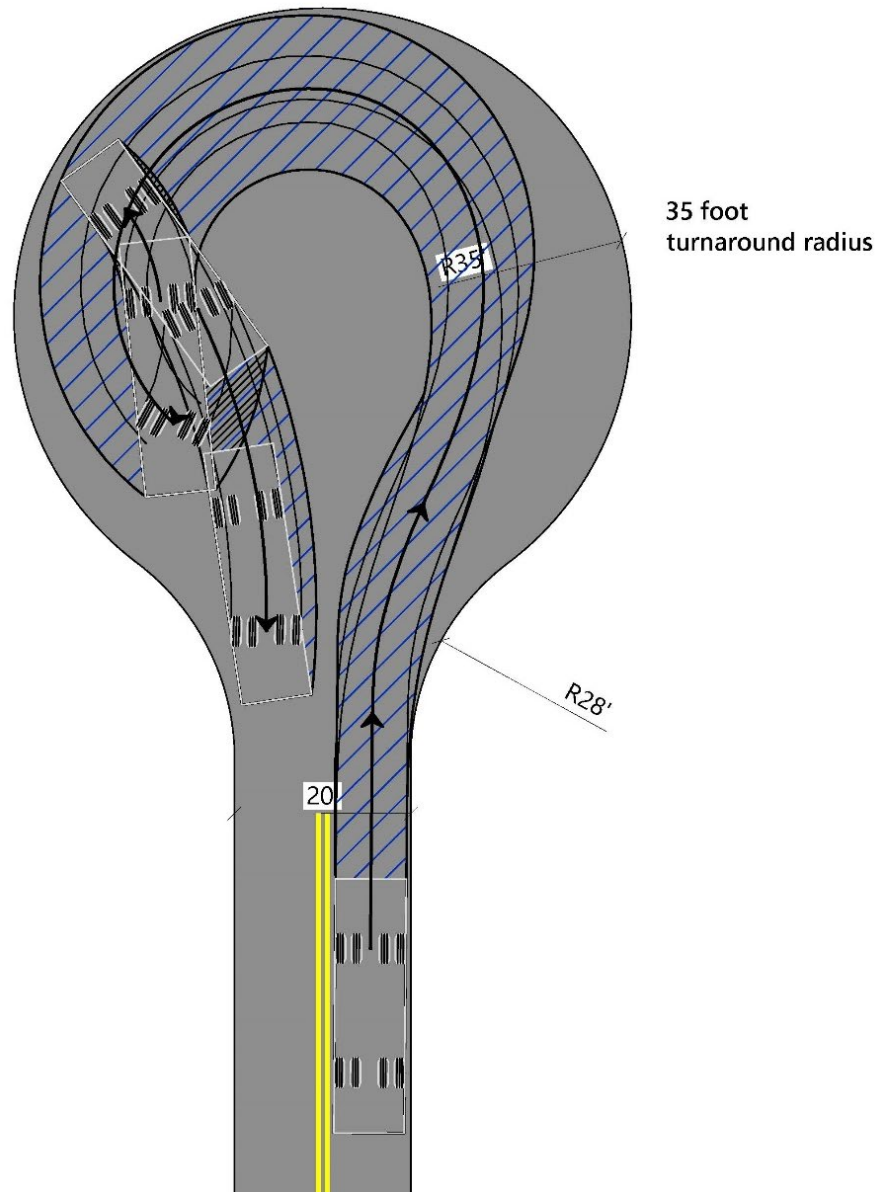
(b) The minimum turning radius for a turnaround shall be forty (40) feet, not including parking, in accordance with Figure 6.1 below. If a hammerhead/T is used instead, the top of the "T" shall be a minimum of sixty (60) feet in length.

(c) Turnarounds with a radius smaller than 40 feet, shown in Figures 6.2 and 6.3 below, may be approved by the local jurisdiction when the turnaround is exclusively providing access to residential Building Construction and physical constraints do not allow for a 40 foot turnaround.

(d) The center of the turnaround shall remain clear of vegetation or decorative elements.

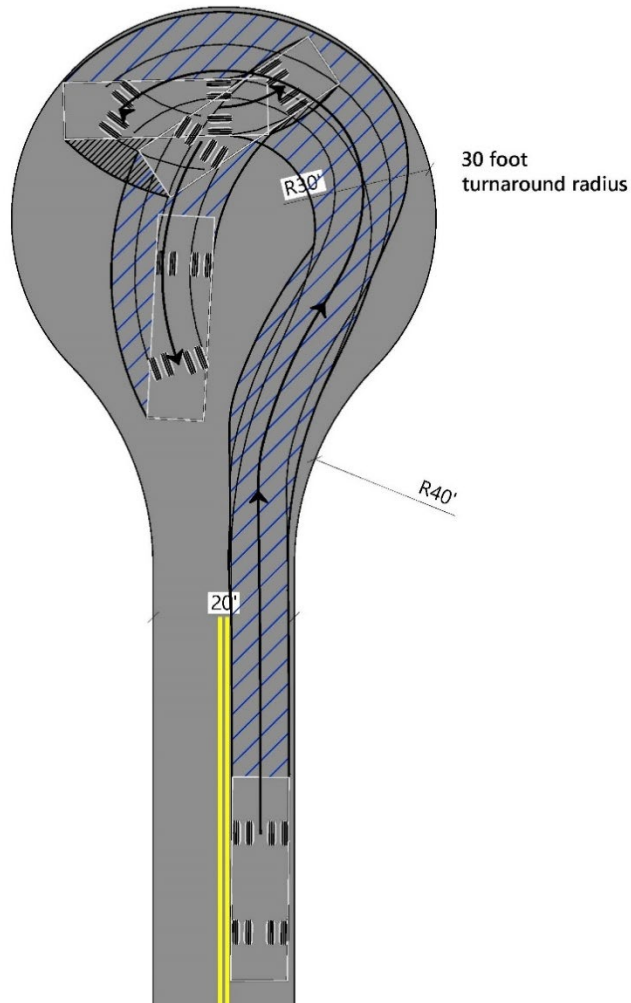


**Figure 6.1**  
Turnarounds with 40-foot radius



**Figure 6.2**  
Turnarounds with 35-foot radius





**Figure 6.3**  
Turnarounds with 30-foot radius

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.06 Security Gates

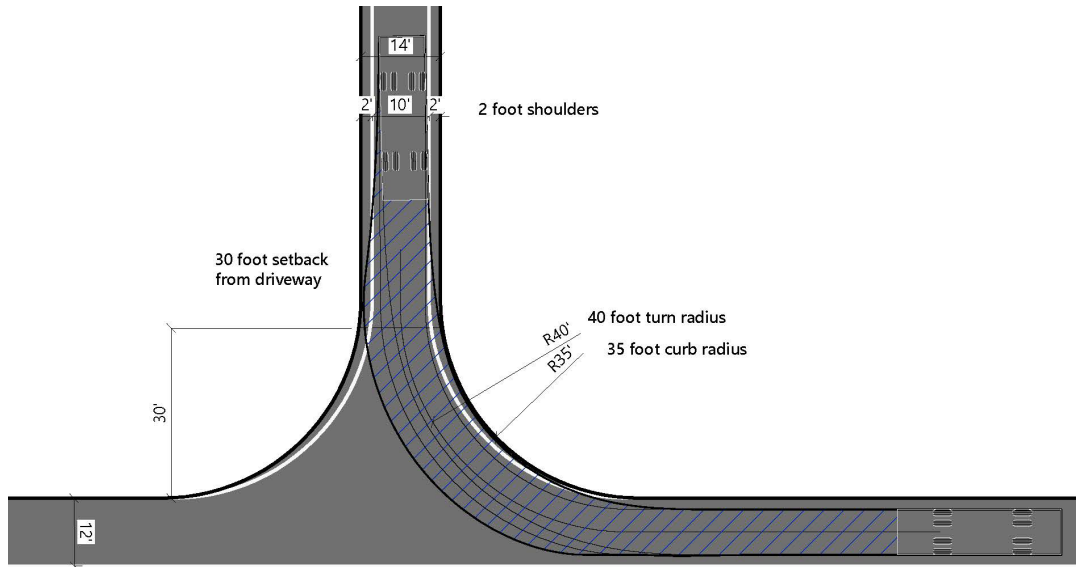
(a) Security gates shall not be installed without approval from the local jurisdiction. Where security gates are installed, they shall have an approved means of emergency operation. Electronic gates shall have a manual method of opening, such as a clutch,

1 in case of electronic failure. The manual operation shall be  
2 maintained operational at all times.

3 (b) Gate entrances shall be at least two (2) feet wider than the  
4 width of the Road or Driveway, as shown in Figure 7 below. Where  
5 a gate is installed across an existing Road or Driveway, the  
6 gate shall be no less than ten (10) feet wide, with a minimum  
7 width of fourteen (14) feet unobstructed horizontal clearance  
8 and unobstructed vertical clearance of thirteen feet, six inches  
9 (13' 6"). Clearance shall be maintained at all times.

10 (c) Where a one-way road with a single Traffic Lane (12 foot  
11 width) provides access to a gated entrance, a forty (40) foot  
12 turning radius shall be used as illustrated on Figure 7.

13 (d) All gates providing access from a Road to a Driveway shall  
14 be located at least thirty (30) feet from the Road and shall  
15 open in direction of travel to allow a vehicle to stop without  
16 obstructing traffic on that Road, in accordance with Figure 7.



**Figure 7**

Effective Turn Radius for Gated Entrances/Driveways with Twelve Foot One-Way Main Road

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

~~§ 1273.07 Road and Driveway Structures. Driveways.~~

~~Driveways subject to this Subchapter shall conform to the requirements in this section.~~

~~(a) Appropriate signing, including but not limited to weight or vertical clearance limitations, one-way road or single traffic lane conditions, shall reflect the capability of each bridge.~~

~~(b) Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with the American Association of State and Highway Transportation Officials Standard Specifications for Highway Bridges, 17th Edition, published 2002 (known as AASHTO HB-17), hereby incorporated by reference. Bridges and elevated~~

~~surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the local authority having jurisdiction.~~

~~(c) Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, barriers, or signs, or both, as approved by the local authority having jurisdiction, shall be installed and maintained.~~

~~(d) A bridge with only one traffic lane may be authorized by the local jurisdiction; however, it shall provide for unobstructed visibility from one end to the other and turnouts at both ends.~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

#### § 1273.07.01 Driveway Width

All driveways shall be constructed to provide a minimum of one (1) ten (10) foot Traffic Lane, fourteen (14) feet unobstructed horizontal clearance, and unobstructed vertical clearance of thirteen feet, six inches (13' 6"). This vertical clearance shall be maintained at all times by the property owner.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1273.07.02 Driveway Turnarounds

(a) A turnaround shall be provided on driveways over 300 feet in length and shall be within fifty (50) feet of the Building.

(b) The minimum turning radius for a turnaround shall be forty (40) feet, not including parking, in accordance with Figure 8.1 below.

(b) Turnarounds with a radius smaller than 40 feet as shown in Figure 8.2 and Figure 8.3. may be approved by the local jurisdiction when the turnaround is exclusively providing access to residential Building Construction and physical constraints do not allow for a 40 foot turnaround. If a hammerhead/T is used instead, the top of the "T" shall be a minimum of sixty (60) feet in length.

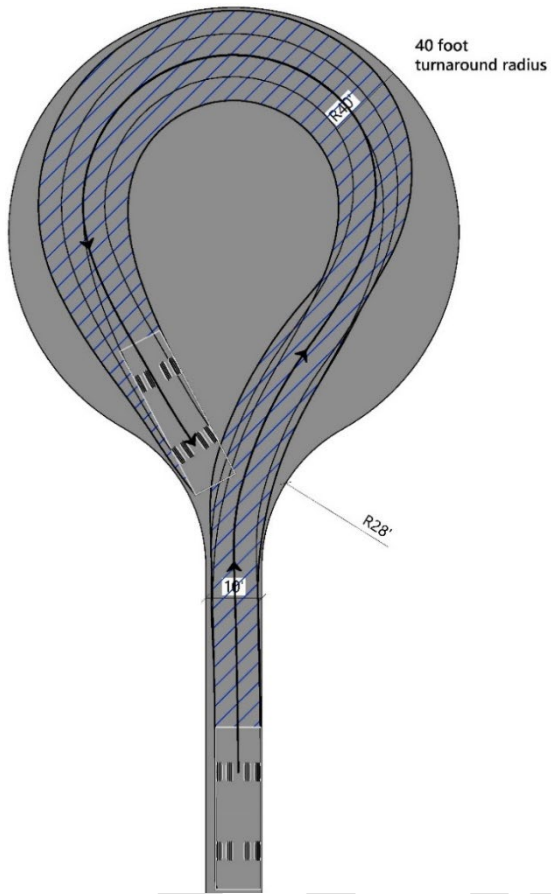


Figure 8.1

Turnarounds for Driveways with Ten Foot Road Width

40 Foot Turnaround Radius

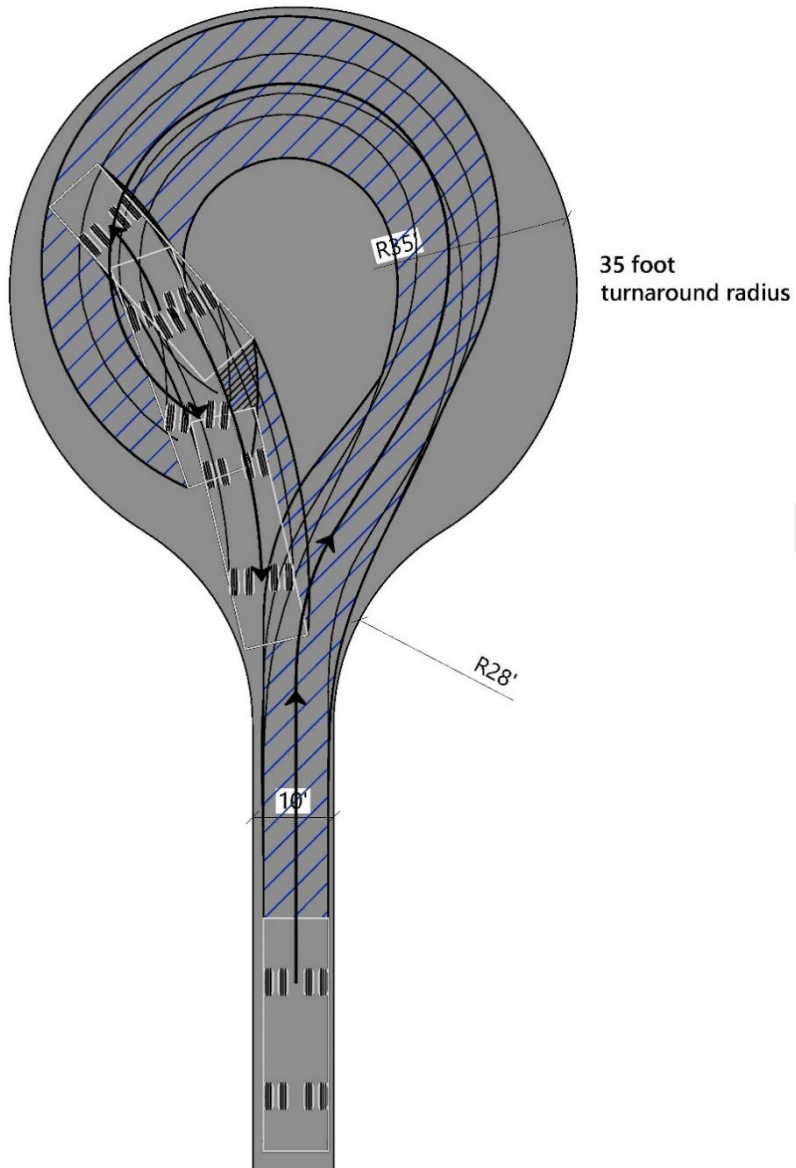


Figure 8.2

Turnarounds for Driveways with Ten Foot Road Width

35 Foot Turnaround Radius

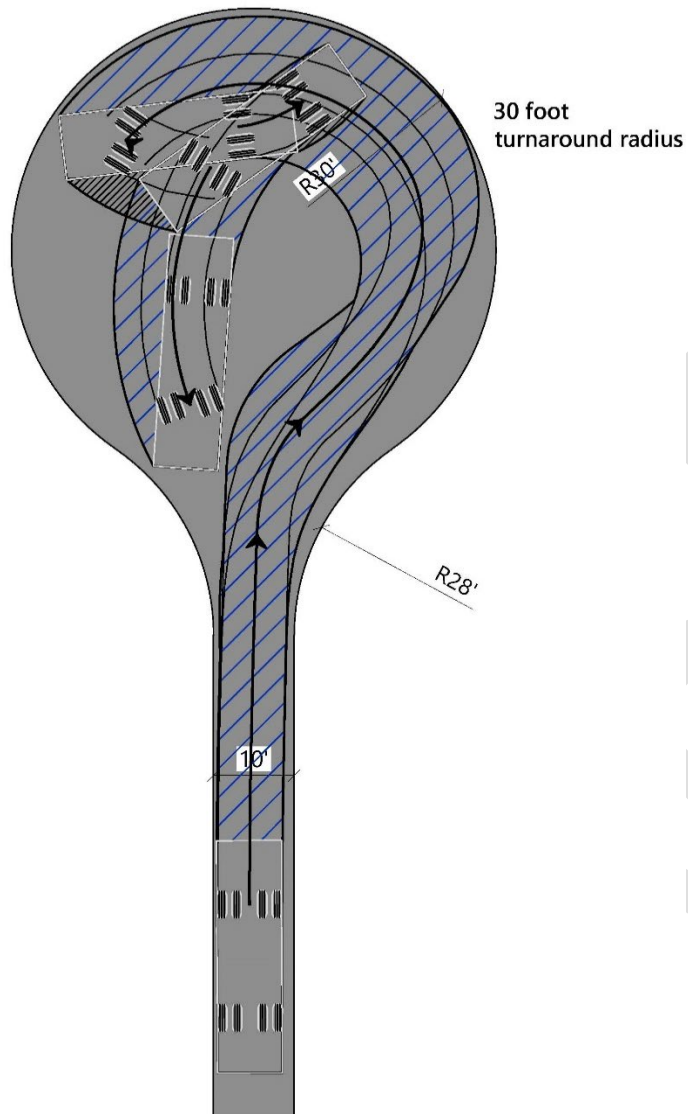


Figure 8.3

Turnarounds for Driveways with Ten Foot Road Width

30 Foot Turnaround Radius

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.



1 § 1273.07.03 Driveway Turnouts

2 Driveways that are less than 20 feet wide and exceed 150 feet in  
3 length shall require a turnout(s). Driveways greater than 150  
4 feet in length and less than 800 feet in length, shall provide a  
5 turnout (as shown in Figure 5) near the midpoint of the  
6 Driveway. Where the Driveway exceeds 800 feet, turnouts shall be  
7 provided no more than 400 feet apart.

8 Note: Authority cited: Section 4290, Public Resources Code.

9 Reference: Sections 4290 and 4291, Public Resources Code.

10 § 1273.07.04 Driveway Structures

11 (a) Driveway structures shall be designed and maintained to  
12 support at least 75,000 pounds.

13 (i) Bridges or elevated surfaces may be designed for a  
14 lower apparatus weight if the local fire official verifies that  
15 the fire apparatus used will be under the load weight of the  
16 bridge.

17 (ii) If the bridge is designed for a lower weight, then it  
18 shall be identified through signage as described in § 1274.02.

19 (iii) In no case shall the bridge be designed to support a  
20 weight below 36,000 pounds.

21 (c) AASHTO structure design standards, which focuses on axle  
22 load requirements, may be considered (in lieu of total vehicle  
23 weight) if designed and verified by a professional engineer.

24 Note: Authority cited: Section 4290, Public Resources Code.

25 Reference: Sections 4290 and 4291, Public Resources Code.

~~§ 1273.08. Dead-end Roads. Vertical Clearances~~

~~Roads and Driveways shall provide for a minimum of 13' 6" of unobstructed vertical clearance and otherwise be in compliance with vertical fuel clearance requirements in Article 5 of this Subchapter.~~

~~(a) 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:~~

~~parcels zoned for less than one acre - 800 feet~~

~~parcels zoned for 1 acre to 4.99 acres - 1,320 feet~~

~~parcels zoned for 5 acres to 19.99 acres - 2,640 feet~~

~~parcels zoned for 20 acres or larger - 5,280 feet~~

~~All lengths shall be measured from the edge of the road surface at the intersection that begins the road to the end of the road surface at its farthest point. Where a dead-end road crosses areas of differing zoned parcel sizes requiring different length limits, the shortest allowable length shall apply.~~

~~(b) See 14 CCR § 1273.05 for dead-end road turnaround requirements.~~

~~Note: Authority cited: Section 4290, Public Resources Code.~~

~~Reference: Sections 4290 and 4291, Public Resources Code.~~

~~§ 1273.09. Gate Entrances.~~

~~(a) Gate entrances shall be at least two (2) feet wider than the width of the traffic lane(s) serving that gate and a minimum width of fourteen (14) feet unobstructed horizontal clearance and unobstructed vertical clearance of thirteen feet, six inches (13' 6").~~

~~(b) All gates providing access from a road to a driveway shall be located at least thirty (30) feet from the roadway and shall open to allow a vehicle to stop without obstructing traffic on that road.~~

~~(c) Where a one-way road with a single traffic lane provides access to a gated entrance, a forty (40) foot turning radius shall be used.~~

~~(d) Security gates shall not be installed without approval. Where security gates are installed, they shall have an approved means of emergency operation. Approval shall be by the local authority having jurisdiction. The security gates and the emergency operation shall be maintained operational at all times.~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

### Article 3. Signing and Building Numbering

§ 1274.00. Intent.

Specific signing and building numbering requirements shall ensure that emergency personnel can locate and access a site

1 efficiently. All Road signs shall conform to CA MUTCD  
2 requirements.

3 ~~To facilitate locating a fire and to avoid delays in response,~~  
4 ~~all newly constructed or approved roads and buildings shall be~~  
5 ~~designated by names or numbers posted on signs clearly visible~~  
6 ~~and legible from the road. This section shall not restrict the~~  
7 ~~size of letters or numbers appearing on road signs for other~~  
8 ~~purposes.~~

9 Note: Authority cited: Section 4290, Public Resources Code.

10 Reference: Sections 4290 and 4291, Public Resources Code.

11 § 1274.01. Road Name Signs.

12 (a) Newly constructed or approved roads ~~must~~ shall be identified  
13 by a name or number through a consistent system that provides  
14 for sequenced or patterned numbering and/or non-duplicative  
15 naming within each local jurisdiction. This section does not  
16 require any entity to rename or renumber existing roads, ~~nor~~  
17 ~~shall a road providing access only to a single commercial or~~  
18 ~~industrial occupancy require naming or numbering.~~

19 (b) The size of letters, numbers, and symbols for road signs  
20 shall be a minimum four (4) inch letter height, half inch (.5)  
21 inch stroke, reflectorized, contrasting with the background  
22 color of the sign.

23 Note: Authority cited: Section 4290, Public Resources Code.

24 Reference: Sections 4290 and 4291, Public Resources Code.

§ 1274.02. Road Sign Installation, Location, and Visibility.

(a) All Road signs shall be compliant with the current version of the CA MUTCD. ~~visible and legible from both directions of vehicle travel for a distance of at least one hundred (100) feet.~~

(b) Signs required by this article identifying intersecting roads shall be placed at the intersection of those roads.

(c) A sign identifying traffic access or flow limitations, including but not limited to weight or vertical clearance limitations, dead-end roads, one-way roads, or single lane conditions, shall be placed:

(i) at the intersection preceding the traffic access limitation, and

(ii) no more than one hundred (100) feet before such traffic access limitation.

(d) Road signs required by this article shall be posted at the beginning of construction and shall be maintained thereafter.

(e) Road signs shall meet the minimum sign retroreflectivity requirements per the CA MUTCD.

(i) Signs that are not required to meet the retroreflectivity requirements (e.g. blue or brown backgrounds) shall be retroreflective or illuminated to show the same shape and color by both day and night.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1274.03. Addresses for Buildings.

(a) All buildings shall be issued an address by the local jurisdiction ~~which conforms to that jurisdiction's overall address system. Utility and miscellaneous Group U buildings are not required to have a separate address; however, each residential unit within a building shall be separately identified.~~

(b) ~~The size of letters, numbers, and symbols for addresses shall conform to~~ and consistent with the standards in the California Fire Code, California Code of Regulations title 24, part 9.

(c) Addresses for residential buildings shall be reflectorized.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

~~§ 1274.04. Address Installation, Location, and Visibility.~~

~~(a) All buildings shall have a permanently posted address which shall be plainly legible and visible from the road fronting the property.~~

~~(b) Where access is by means of a private road and the address identification cannot be viewed from the public way, an unobstructed sign or other means shall be used so that the address is visible from the public way.~~

~~(c) Address signs along one-way roads shall be visible from both directions.~~

~~(d) Where multiple addresses are required at a single driveway, they shall be mounted on a single sign or post.~~

~~(e) Where a road provides access solely to a single commercial or industrial business, the address sign shall be placed at the nearest road intersection providing access to that site, or otherwise posted to provide for unobstructed visibility from that intersection.~~

~~(f) In all cases, the address shall be posted at the beginning of construction and shall be maintained thereafter.~~

~~Note: Authority cited: Section 4290, Public Resources Code.~~

~~Reference: Sections 4290 and 4291, Public Resources Code.~~

#### Article 4. ~~Emergency Water Standards~~ Fire Water Supply

§ 1275.00. Intent.

~~Emergency water for wildfire protection shall be available, accessible, and maintained in quantities and locations specified in the statute and these regulations in order to attack a wildfire or defend property from a wildfire.~~

Water supply for fire protection shall be available, accessible, and maintained in quantities and locations specified in this section for firefighting and emergency responder use.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.01. Application.

The provisions of this article shall apply in the tentative and parcel map process when new parcels are approved by the local jurisdiction having authority.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.02. Approved Fire Water Supply.

(a) The local jurisdiction shall require the fire water supply of a new development to meet or exceed the California Fire Code, California Code of Regulations Title 24, Part 9. ~~When a water supply for structure defense is required to be installed, such protection shall be installed and made serviceable prior to and during the time of construction except when alternative methods of protection are provided and approved by the local authority having jurisdiction.~~

(b) Where a municipal-type water supply is unachievable in rural and suburban areas, the local jurisdiction is authorized to utilize the National Fire Protection Association (NFPA) 1142, "Standard on Water Supplies for Suburban and Rural Fire Fighting," 2017 Edition, as referenced in the California Fire Code, California Code of Regulations Title 24, Part 9, Appendix B and Appendix BB. ~~Water systems equaling or exceeding the California Fire Code, California Code of Regulations title 24, part 9, or, where a municipal-type water supply is unavailable, National Fire Protection Association (NFPA) 1142, "Standard on~~



~~Water Supplies for Suburban and Rural Fire Fighting," 2017 Edition, hereby incorporated by reference, shall be accepted as meeting the requirements of this article.~~

(c) A water supply for structure defense is required to be installed for any new development. Such protection shall be installed and made serviceable prior to and during the time of construction, except when alternative methods of protection are provided and approved by the local jurisdiction. Such emergency water may be provided in a fire agency mobile water tender, or naturally occurring or man made containment structure, as long as the specified quantity is immediately available.

(d) Nothing in this article prohibits the combined storage of emergency wildfire and structural firefighting water supplies unless so prohibited by local ordinance or specified by the local fire agency.

(e) Where freeze or crash protection is required by local jurisdictions having authority, such protection measures shall be provided.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.03. Identification of Water Sources~~Hydrants and Fire Valves.~~

(a) Hydrants, fire valves, or water access located along a Driveway shall be identified by a reflectorized blue marker,

1 with a minimum dimension of three (3) inches shall be located on  
2 the driveway address sign and mounted on a fire retardant post  
3 or as specified in the State Fire Marshal's Guidelines for Fire  
4 Hydrant Markings Along State Highways and Freeways, May 1988.

5 (b) Hydrants, fire valves, or access of water located along a  
6 Road shall be identified by a reflectorized blue marker, with a  
7 minimum dimension of three (3) inches and shall be mounted on a  
8 fire-retardant post. The sign post shall be within three (3)  
9 feet of said hydrant or fire valve, with the sign no less than  
10 three (3) feet nor greater than five (5) feet above ground, in a  
11 horizontal position and visible from the Road or as specified in  
12 the State Fire Marshal's Guidelines for Fire Hydrant Markings  
13 Along State Highways and Freeways, May 1988.

14 ~~(a) The hydrant or fire valve shall be eighteen (18) inches~~  
15 ~~above the finished surface. Its location in relation to the road~~  
16 ~~or driveway and to the building(s) or structure(s) it serves~~  
17 ~~shall comply with California Fire Code, California Code of~~  
18 ~~Regulations title 24, part 9, Chapter 5, and Appendix C.~~

19 ~~(b) The hydrant head shall be a two and half (2 1/2) inch~~  
20 ~~National Hose male thread with cap for pressure and gravity flow~~  
21 ~~systems and four and a half (4 1/2) inch for draft systems.~~

22 ~~(c) Hydrants shall be wet or dry barrel and have suitable freeze~~  
23 ~~or crash protection as required by the local jurisdiction.~~

24 Note: Authority cited: Section 4290, Public Resources Code.

25 Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.04. Access to Water Sources ~~Signing of Water Sources.~~

(a) Notwithstanding fire water sources that are accessible by roads that meeting the requirements of Article 2, fire apparatus access shall be provided to all water sources identified and approved by the local jurisdiction in accordance with the International Fire Code (2018) Appendix D.

(b) Break away lock systems, or similar systems approved by the local jurisdiction shall provide fire fighters with access to any water connections, valves or controls that are normally secured by gates, doors, or locking systems.

~~(a) Each hydrant, fire valve, or access to water shall be identified as follows:~~

~~(1) if located along a driveway, a reflectorized blue marker, with a minimum dimension of three (3) inches shall be located on the driveway address sign and mounted on a fire retardant post, or~~

~~(2) if located along a road,~~

~~(i) a reflectorized blue marker, with a minimum dimension of three (3) inches, shall be mounted on a fire retardant post. The sign post shall be within three (3) feet of said hydrant or fire valve, with the sign no less than three (3) feet nor greater than five (5) feet above ground, in a horizontal position and visible from the driveway, or~~

~~(ii) as specified in the State Fire Marshal's Guidelines for Fire Hydrant Markings Along State Highways and Freeways, May 1988.~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.05. Municipal Water System Hydrants and Fire Valves

(a) The municipal hydrant or fire valve shall be eighteen (18) inches above the finished surface. Its location in relation to the road or driveway and to the building(s) or structure(s) it serves shall comply with California Fire Code, California Code of Regulations Title 24, Part 9, Chapter 5, and Appendix C.

(b) The municipal hydrant head shall be a two and half (2 1/2) inch National Hose male thread with cap for pressure and gravity flow systems and four and a half (4 1/2) inch for draft systems.

(c) Where municipal water supply hydrant systems are not practical due to the absence of a municipal water supply, or other limiting factors, a performance-based water supply alternative that is approved by the local jurisdiction shall be designed and installed to meet the minimum fire flow water supply requirements of 500 gpm.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.06. Dry Hydrants

When dry hydrants have been approved by the local jurisdiction,  
the requirements of NFPA 1142 (2017) Chapter 8 (8.3, 8.4, 8.5,  
8.6, 8.7 and 8.8) shall be met.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.07. Alternative Water Supply

Performance-based alternative water supplies shall be based on  
the NFPA 1142 (2017) Annex B as the minimum requirements for  
each alternative to be presented for approval by the local  
jurisdiction.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.08. Mobile Water Supply (Water Tenders)

(a) Fire water delivery systems that rely on mobile water supply  
(water tenders) shall only be permitted under the following  
conditions:

(1) During the construction phase of a new development,  
prior to the permanent fire water delivery system installation

(2) When the local jurisdiction, through a finding of fact,  
has determine that all other means of water supply is  
unachievable

(b) The mobile water supply must be capable of providing 500 gpm for a 1-hour duration within 5 minutes of the arrival of the first apparatus.

(c) The NFPA 1142 (2017) Annex C will be used for guidance to mobile water supplies to achieve minimum fire flow requirements.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1275.09. Protection of Fire Water Supply Infrastructure from Wildfire

(a) All fire water supply infrastructure shall be protected from wildfire radiant heat, convective heat and embers by underground burial or construction of combustible materials, fittings and valves, such as concrete or metal; or installation of a defensible space, extending out to a 100-foot slope adjusted perimeter from the furthest extend of the structure.

(b) Any buildings sheltering critical components of the fire water supply infrastructure shall be constructed to the requirements of the California Building Code, California Code of Regulations Title 24, Part 2, Chapter 7A.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

Article 5. Building Siting, Setbacks and Fuel Modification ~~Fuel Modification Standards~~

§ 1276.00. Intent.

To reduce the intensity of a wildfires adjacent to communities, the strategic placement of fuel modification and siting of structures shall provide for a reduced volume and density of flammable vegetation, reduced wildfire heat exposure to wildfires and adjacent structures, increased safety for emergency fire access and evacuation, and a point of attack or defense from a wildfire.

~~To reduce the intensity of a wildfire by reducing the volume and density of flammable vegetation, the strategic siting of fuel modification and greenbelts shall provide for increased safety for emergency fire equipment and evacuating civilians by its utilization around structures and roads, including driveways, and a point of attack or defense from a wildfire.~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.01. Applicability ~~Setback for Structure Defensible Space.~~

(a) The following provisions of this article shall apply in the tentative and parcel map process when new parcels are approved by the local jurisdiction: § 1276.02; § 1276.03(e); § 1276.04; § 1276.05; § 1276.06; and § 1276.08.

(b) When individual buildings are approved by the local jurisdiction through a building permitting process, the

1 following provisions of this article shall apply: § 1276.03(a)

2 (b), and (c); § 1276.04; and § 1276.08.

3 ~~(a) All parcels shall provide a minimum thirty (30) foot setback~~  
4 ~~for all buildings from all property lines and/or the center of a~~  
5 ~~road.~~

6 ~~(b) When a thirty (30) foot setback is not possible for~~  
7 ~~practical reasons, which may include but are not limited to~~  
8 ~~parcel dimensions or size, topographic limitations, or other~~  
9 ~~easements, the local jurisdiction shall provide for same~~  
10 ~~practical effect.~~

11 ~~(i) Same practical effect requirements shall reduce the~~  
12 ~~likelihood of home-to-home ignition.~~

13 ~~(ii) Same practical effect options may include, but are not~~  
14 ~~limited to, noncombustible block walls or fences; five (5) feet~~  
15 ~~of noncombustible material horizontally around the structure;~~  
16 ~~installing hardscape landscaping or reducing exposed windows on~~  
17 ~~the side of the structure with a less than thirty (30) foot~~  
18 ~~setback; or additional structure hardening such as those~~  
19 ~~required in the California Building Code, California Code of~~  
20 ~~Regulations title 24, part 2, Chapter 7A.~~

21 ~~(c) Structures constructed in the SRA are required to comply~~  
22 ~~with the defensible space regulations in Title 14. Natural~~  
23 ~~Resources Division 1.5. Department of Forestry and Fire~~  
24 ~~Protection Chapter 7. Fire Protection Subchapter 3. Fire Hazard.~~



Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.02. Lot and Block Design Plan ~~Maintenance of Defensible Space Measures.~~

For new developments in the tentative and parcel map process when new parcels are approved by the local jurisdiction, the proponent shall provide a lot and block design plan that includes the proposed building envelope locations, defensible space setbacks, fuel breaks, greenbelt locations, access locations, grade and topography, and any proposed alternate performance-based measures for approval by the local jurisdiction.

~~To ensure continued maintenance of commonly owned properties in conformance with these standards and to assure continued availability, access, and utilization of the defensible space provided by these standards during a wildfire, provisions for annual maintenance shall be provided in emergency access covenants or similar binding agreements.~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.03. Building and Parcel Siting and Setbacks ~~Disposal of Flammable Vegetation and Fuels.~~

(a) All parcels shall provide a minimum thirty (30) foot slope-adjusted building setback (table 2) from hazardous vegetation to

1 ensure the defensible space requirements of Title 14. Natural  
2 Resources Division 1.5. Department of Forestry and Fire  
3 Protection Chapter 7. Fire Protection Subchapter 3. Fire Hazard  
4 can be met on the private parcel portion of a parcel or  
5 subdivision and protect the future building from damaging levels  
6 of radiant heat exposure when combined with a strategic fuel  
7 break (§ 1276.04) located outside the property boundaries.

8 (b) All parcels shall provide a minimum thirty (30) foot slope-  
9 adjusted setback from a slope break or hazardous terrain feature  
10 of any slope that exceeds a 15% grade over 30 feet. The slope of  
11 the thirty (30) foot setback shall not exceed 10%.

12 (c) All parcels shall provide a minimum thirty (30) foot slope-  
13 adjusted building setback for all buildings from adjacent  
14 buildings that are outside the boundaries of the parcel.

15 (d) When the minimum requirements in § 1276.02(a), (b), or (c)  
16 are not possible to achieve due to practical reasons such as,  
17 but not limited to, parcel dimensions or size; topographic  
18 limitations; development density requirements or other  
19 development patterns that promote low-carbon emission outcomes;  
20 sensitive habitat; or other site constraints, the lot and block  
21 design plan shall detail alternate measures approved by the  
22 local jurisdiction resulting in the same performance-based  
23 outcome. Alternate measures may include, but are not limited to:  
24 non-combustible block walls or fences; five (5) feet of non-  
25 combustible material extending five (5) feet horizontally from

the further extent of the building; installing hardscape landscaping or reducing exposed windows on the side of the structure with a less than thirty (30) foot setback; or additional structure hardening such as the more stringent non-combustible requirements in the California Building Code, California Code of Regulations Title 24, Part 2, Chapter 7A.

(e) All parcels shall provide a minimum one hundred (100) foot slope-adjusted setback from a ridgeline, as defined in Section § 1270.04 (a), on both aspects to allow for fuel break construction.

**Table 2. Slope adjusted parcel setback and ridgeline setback distances**

% slope	30 foot parcel setback	100 foot ridgeline setback	
	Downslope Distance (feet)	Downslope Distance (feet)	Upslope Distance (feet)
0	30	100	100
20	60	200	150
40	120	400	200

~~Disposal, including chipping, burying, burning or removal to a site approved by the local jurisdiction, of flammable vegetation and fuels caused by site development and construction, road and driveway construction, and fuel modification shall be completed prior to completion of road construction or final inspection of a building permit.~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.04. Ridgelines. Greenbelts.

(a) Establishment of new parcels within a 100-foot slope adjusted distance from any Ridgeline is prohibited to reduce the radiant and convective heat exposure to buildings and allow for the effective establishment of strategic fuel breaks and the effective implementation of fire suppression operations.

(b) Strategic ridgelines shall be determined by the local jurisdiction through findings of fact and in consultation with the local fire authority.

~~Subdivision and other developments, which propose greenbelts as a part of the development plan, shall locate said greenbelts strategically as a separation between wildland fuels and structures. The locations shall be approved by the local authority having jurisdiction and may be consistent with the CAL FIRE Unit Fire Management Plan or Contract County Fire Plan.~~

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.05. Fuel Breaks

(a) Upon approval of the local jurisdiction and must be consistent with the CAL FIRE Unit Fire Management Plan or Contract County Fire Plan, fuel breaks shall be strategically located to protect a community, structures, or routes of access and egress.

1 (b) Fuel breaks shall be completed prior to the commencement of  
2 any permitted building construction within the development.

3 (c) Fuel breaks shall be located in a manner that meets one or a  
4 combination of the following objectives:

5 (1) Directly adjacent to structure defensible space to  
6 reduce radiant and convective heat exposure and/ or support fire  
7 suppression tactics;

8 (2) Directly adjacent to access/egress roads to manage fire  
9 behavior, increase travel safety and support fire suppression  
10 tactics;

11 (3) Directly adjacent to a hazardous land use to limit the  
12 spread of fire from hazardous land uses, and/or reduce radiant  
13 and convective heat exposure and/ or support fire suppression  
14 tactics;

15 (4) Strategically located along ridgelines, in greenbelts,  
16 or other locations to manage embers or support community level  
17 fire suppression tactics.

18 (d) Fuel breaks shall be located, designed, and maintained in a  
19 condition that limits fire intensity, rate of spread, crown fire  
20 potential and ember production during 97 percentile weather  
21 conditions to reduce the potential of damaging radiant and  
22 convective heat, or ember exposure to access routes, buildings  
23 or infrastructure within the development by using performance-  
24 based vegetation management prescriptions developed by a  
25 qualified professional. These fire behavior objectives shall be

1 established based on the use of peer reviewed fire behavior  
2 modeling methodologies.

3 (e) Fuel breaks shall be constructed using the most ecologically  
4 and site appropriate treatment option, such as, , but not  
5 limited to, prescribed burning, manual treatment, mechanical  
6 treatment, prescribed herbivory, targeted ground application of  
7 herbicides and vegetation species conversion.

8 (e) Fuel breaks shall have at least two points of access where  
9 fire fighters can safely access and establish control lines and  
10 establish escape routes; or fire suppression heavy equipment can  
11 access, establish control lines and establish escape routes and  
12 safety zones; or NWCG Type 3, 4, 5 and or 6 wildland fire  
13 engines can access, establish control lines and establish escape  
14 routes; or a combination of the above.

15 Note: Authority cited: Section 4290, Public Resources Code.

16 Reference: Sections 4290 and 4291, Public Resources Code.

17 § 1276.06. Greenbelts

18  
19 (a) Where Greenbelts, or portions thereof, are intended to serve  
20 as a fuel break, the Greenbelt or relevant portion thereof shall  
21 conform with the requirements in § 1276.05.

22 (b) Local jurisdictions shall approve Greenbelts that are  
23 intended to serve as areas of refuge for the public or safety  
24 zones for firefighters shall meet minimum standards that are  
25 acceptable to the local jurisdiction. Greenbelts intended to  
serve as public areas of refuge or firefighter safety zones must

be carefully evaluated by fire behavior experts and local fire authorities through a findings of fact based on the local 97<sup>th</sup> percentile fire conditions and site-specific. The fire behavior limitations and thresholds must be clearly documented.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.07. Maintenance of Fuel Breaks

(a) Annual maintenance requirements shall be included in the initial fuel break prescriptions to ensure the fire behavior objectives and thresholds are maintained.

(b) To ensure continued maintenance of commonly owned properties in conformance with these requirements and to assure continued availability, access, and utilization of the fuel breaks provided by these standards during a wildfire, provisions for annual maintenance shall be provided in emergency access covenants or similar binding agreements.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.

§ 1276.08 Disposal of Flammable Vegetation and Fuels

Disposal, including burning or removal to a site approved by the local jurisdiction, of flammable vegetation and fuels caused by site development and construction, road and driveway construction the site impacts (ecological, aesthetics, safety) and the cumulative effects of disposal methods shall be

considered as part of the performance-based vegetation  
management prescription.

Note: Authority cited: Section 4290, Public Resources Code.

Reference: Sections 4290 and 4291, Public Resources Code.