

County SRA Fire Safe Regulation Checklist (Building Permit)

Applicant: _____ Date: _____ Application #: _____
Address: _____ APN: _____

These regulations apply to all new construction and development in State Responsibility Areas (SRA) in Humboldt County effective January 1, 1992. These regulations are not retroactive to existing structures and facilities, unless a new use of occupancy is applied for. The following is a summary of the minimum standards for building permit issuance. It is provided for informational purposes only. Reference to the specific adopted language should be made before construction or development plans are prepared.

Road Standards

- Roadway surface provides unobstructed access to conventional drive vehicles including sedans and fire engines using County Road Category 2 standard for surfacing type.
- Roadway turnouts (where required) are 10' wide and 80' long and tapered 25 feet from both ends.
- Roadway structures (bridges and culverts) are built to carry a minimum load as required in California Vehicle Code Sec. 35550, shall be designed for a live load sufficient to carry the imposed loads of fire apparatus, and shall comply with the following standards:
 - Minimum 15' vertical clearances and designed in conformance with the County Roadway Design Manual.
 - Signing reflects capability of each bridge for weight, clearance, single lane access, or other limitations, unless signing waived by the Director of Public Works per Section 3112-9 of H.C.C.
 - One lane bridge has unobstructed visibility from both ends and intervisible turnouts at each end.
 - "Flatcar" bridge has roadway surface of not less than 9' and meets visibility requirements of one land bridge.

Driveways and Gates

- Driveways meet minimum road standards described above.
- Driveways less than 1320' long are 10' wide and have 15' minimum vertical clearance and are built to County Road Category 1 standard.
- Driveways longer than 1320' are 10'-12' wide and have 15' minimum vertical clearance with intervisible turnouts and are built to County Road Category 2 standard.
- Driveways exceeding 150' in length but less than 800' have a turnout near the midpoint; driveways longer than 800' have turnouts at intervisible locations at approximately 400' intervals.
- Driveways have maximum grade meeting standard for County Road Category 1; 7% - 12% (normal); 11% - 18% (tolerable). Grade in excess of 16% must demonstrate conformance with County roadway Design Manual.
- Driveways have minimum curve radius meeting standard for County Road Category 1; 120' (normal); 50' (tolerable). Curve radius less than 50' must demonstrate conformance with County Roadway Design Manual.
- All gates at least 2' wider than the lanes serving the gate and allow a vehicle to stop without blocking traffic.

- Gates providing access from a road to a driveway are located at least 30' from the roadway except as provided below.
- Gates less than 30' from the roadway are permitted when turnouts are constructed next to the travel lanes with safe turning movements and visibility when approaching from either direction of travel.
- One-way roads accessing gates have turnaround with 40' radius minimum.

Signing and Numbering

- Street and road signs (where required):
 - Visible from both directions for 100' minimum and installed prior to final acceptance.
 - Minimum size of letters/numbers/symbols are 3" tall, 3/8" stroke and contrasting with background color.
 - Reflectorized where private road where travel speed is more than 30 mph or along County-maintained roads. Wooden sign material used only when reflectorized signs are not required.
 - Intersections of roads, streets and private lanes are signed.
 - Height, naming, orientation and numbering are according to County standards (H.C.C. Sec. 442-1 et seq.)
 - Access limitations signed at the intersection proceeding and no more than 100' from limitations.
- Addresses for buildings:
 - Permanently posted address located at the driveway entrance and visible from the access road.
 - Minimum size of letters/numbers/symbols are 3" tall, 3/8" stroke and contrasting with background color.
 - Reflectorized where access is from private road where travel speed is more than 30 mph or along County-maintained roads. Wooden sign material used only when reflectorized signs are not required.
 - Posted at beginning of construction and maintained thereafter.
 - Address signs along one-way roads are visible from both directions (this means "wrong way" also).
 - A single post carries all addresses where multiple addresses are required at a single driveway.
 - An address sign is located at the nearest road intersection where a roadway provides access solely to a single commercial or industrial business.

Fuel Modification and Setbacks

- Parcels one (1) acre or larger provide at least 30' minimum setback from property lines and/or center of road, except as provided below:
 - Building setback less than 30 feet from property line where open space easement recorded over adjoining parcel with adjustment no more than width of easement and no exception to zoning setbacks.
 - Detached accessory building setback less than 30 feet from property line when constructed using non-combustive/fire-resistive materials and located at least 20' from all other buildings.
- Parcels less than one (1) acre provide the same practical effect as above. Methods of achieving the "same practical effect" include but are not limited to the following:
 - Development of a community water system.

- Create County Service Area (CSA) or other entity to provide maintenance of defensible space.
- Use of non-combustible or fire-resistive materials in construction.
- Installing residential sprinklering.
- Development of greenbelts in strategic locations.
- Road development with travel lanes and parking lanes which exceed minimum requirements of these regulations.
- Other measures found to provide defensible space.
- Flammable vegetation and fuels caused by site development/construction/fuel modification are lawfully disposed of prior to final inspection.
- Greenbelts proposed by developer are located strategically between structures and wildland fuels.

Provisions for Annual Maintenance

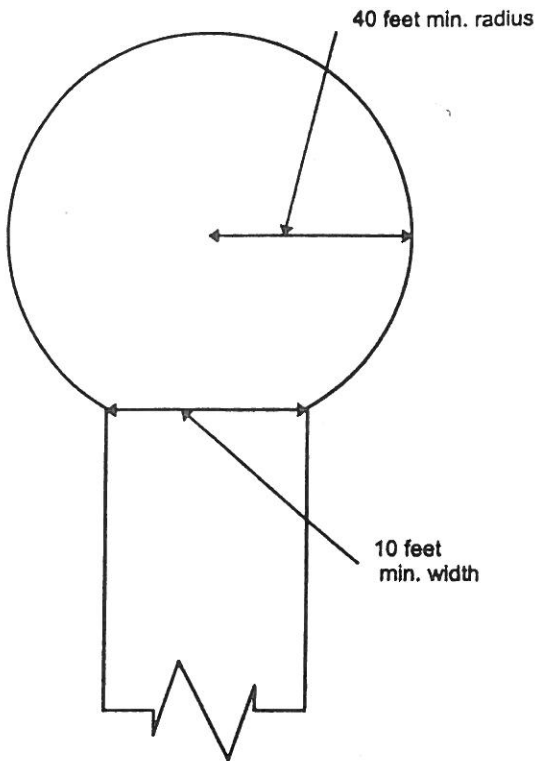
- Annual maintenance of standards and measures secured through condition of building permit. Provisions deemed to satisfy this requirement include but are not limited to:
 - Recordation of a “Notice of Requirement for Maintenance” with the County Recorder’s office.
 - Evidence of the property being within a county Service Area (CSA) with responsibility for annual maintenance of fire safe measures.
 - A maintenance association or similar agreement between property owners which is responsible for annual maintenance of fire safe measures for the development and includes the owner’s property.
 - Recorded Covenants, Conditions and Restrictions (CCR) for maintenance of individual measures which are binding and enforceable against the property.
 - Other provisions acceptable to the County.

Applicant/ Owner’s Acknowledgement

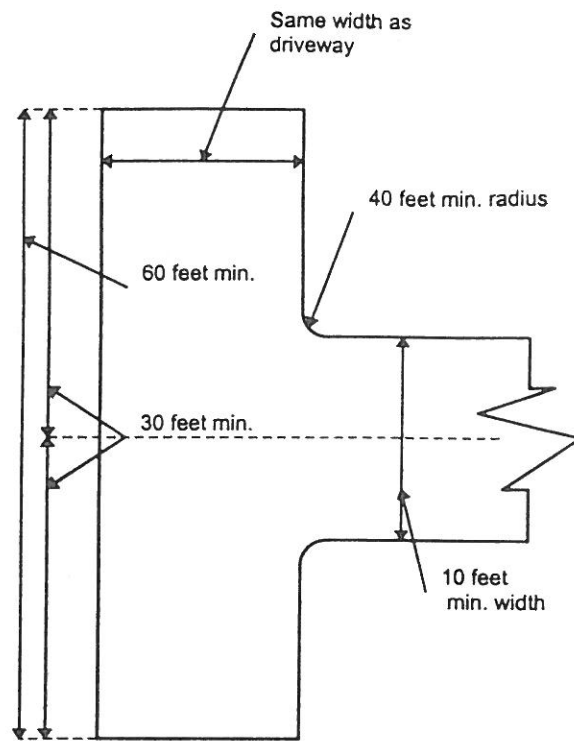
Signature

Once signed this sheet becomes part of the building plans.

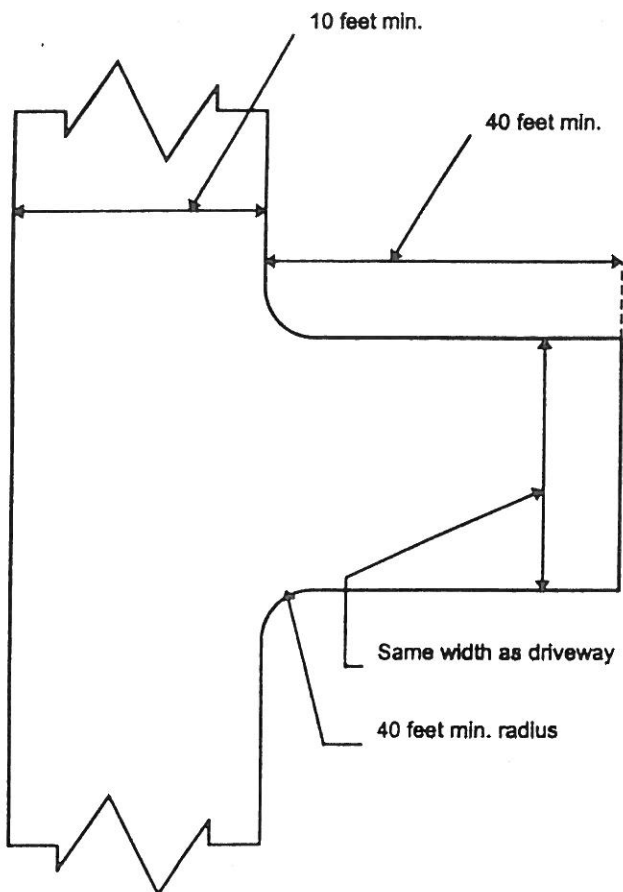
SRA TURNOUTS AND TURNAROUNDS



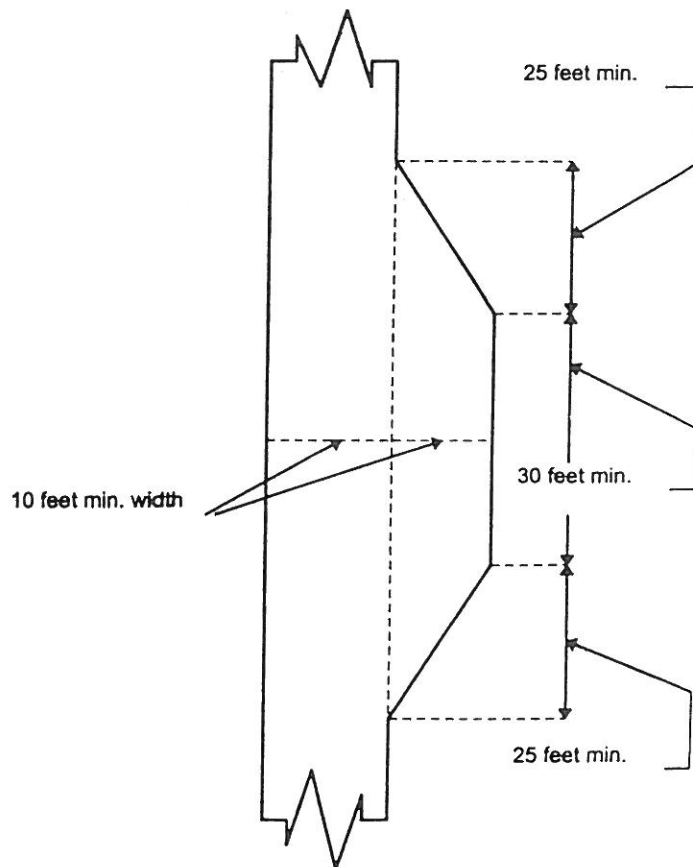
TURNAROUND



HAMMERHEAD T



LATERAL SLIP



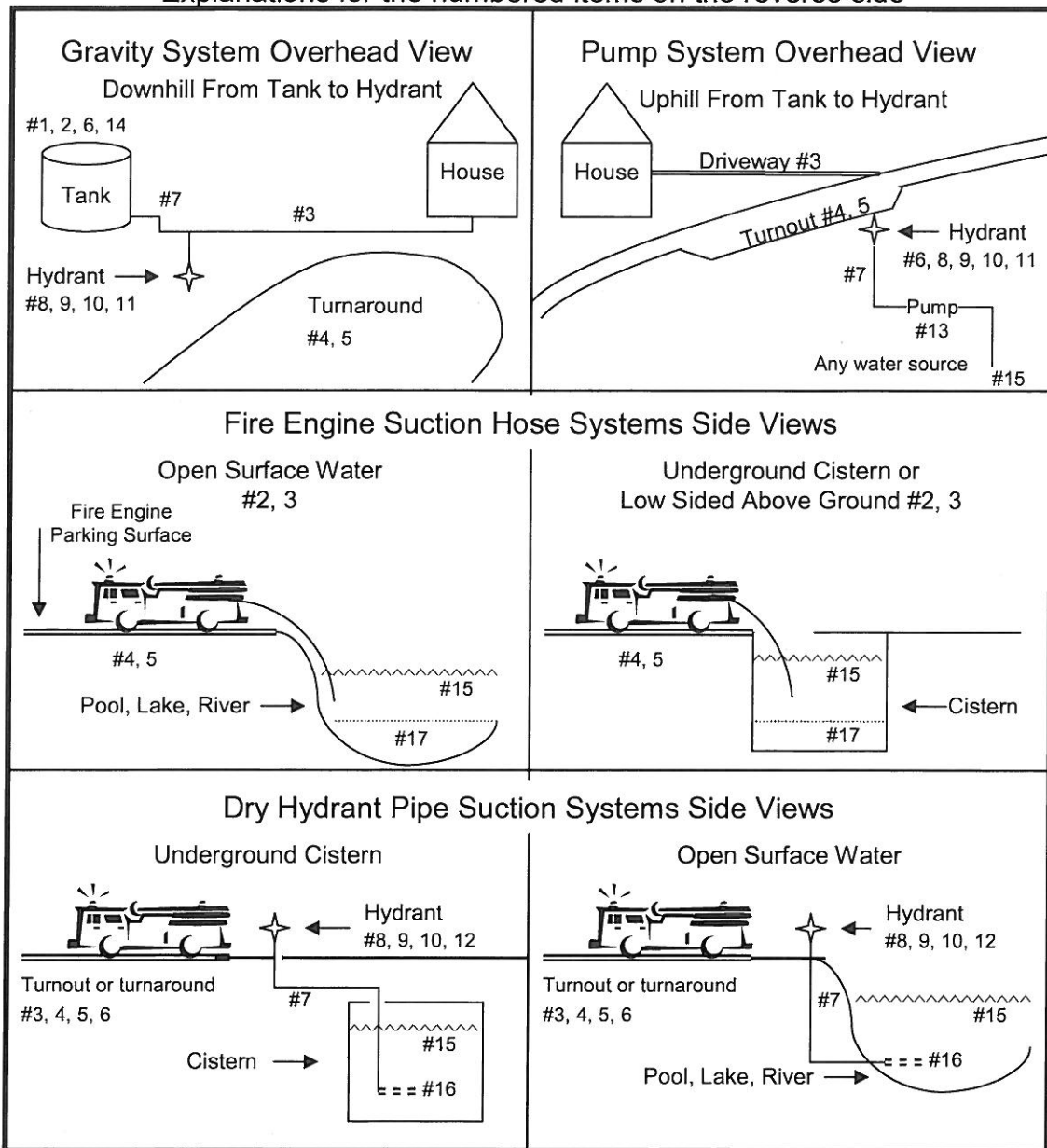
TURNOUT

Domestic Emergency Water Supply Systems

1. The minimum emergency water storage volume of 2,500 gallons easily available for fire use.
2. The emergency supply may be separate from the domestic supply or it may be shared. When shared, and if the refilling supply source (well, etc.) cannot keep up with the daily domestic use; the amount stored should be increased so that 2,500 gallons are available for fire use any time of day.
3. The water hydrant or place for water suction must not be further than ½ mile from the dwelling, or closer than 50 feet to the dwelling using road measurements. Parcels 10 acres or less must have the hydrant/suction within 500 feet; and if this is physically impossible, within 1,000 feet.
4. All hydrant and water suction locations must provide a road standard turnout or turnaround.
5. All water supply hydrants and suction locations must be identified with a 3 inch reflectorized blue dot located 3 to 5 feet above the ground on a post that is within 3 feet of the hydrant. If located off a driveway, another blue dot must be attached to the driveway address sign. Road signs stating “fire water” are an acceptable alternative.
6. All exposed plumbing should have freeze protection and crash barriers as needed to prevent damage.
7. All pipes supplying water to hydrants must be at least 3 inches in diameter. Smaller designs must prove themselves able to provide a 200 GPM flow from the hydrant connection.
8. All hydrants must be 18 inches above ground, at least 8 feet from flammable vegetation, at least 4 feet from the parking surface where the fire equipment will be when using it and no more than 12 feet from the parking surface.
9. All hydrants must have a 2 ½ inch, make national hose connection with cap.
10. All hydrants/valves and connections must be made of brass or other corrosion resistant material.
11. A wet hydrant used with a gravity supply or pressure system must have a 2 ½ inch valve.
12. A dry hydrant used for water suction does not need a valve, but does require a strainer (perforated pipe length) at the end of the suction pipe. The strainer must be at least 3 feet long, (see note on bottom of other side).
13. Where a pump is relied upon to deliver water to the hydrant (not gravity and not suction); it must deliver 200 gallons per minute to the hydrant. If it is an electrically powered pump, it must have a fueled engine backup (or generator). Also, a strainer (see #12) is required.
14. Where gravity is used to get the water to the hydrant, the source (tank) must at least be higher than the hydrant so that all 2,500 gallons can drain out without suction. Also, the tank should be no more than 600 feet above the hydrant; or have a pressure reducer restricting to 250 psi.
15. Where suction is needed to get the water up out of a source (by hose, dry hydrant or pump) from a natural pond, underground tank, swimming pool, etc., the end of the hose or dry hydrant pipe strainer must have 2 feet of water above it at all times to prevent cavitation (a vortex funnel that allows air to be sucked in). Also, the end of the suction hose or dry hydrant pipe strainer must be held 1 foot off the bottom of storage that can accumulate debris. This means that the bottom 3 feet of storage at the suction point is unusable and at least 2,500 gallons must be available 3 feet above the bottom when the water is at the lowest level of the year.
16. Where suction through a dry hydrant pipe is used to get water up to a fire engine, the level where the suction pipe strainer is must be no more than 15 feet lower than the hydrant connection.
17. Where a fire engine suction hose is needed to get water (no dry hydrant), the level where the strainer end of the suction hose must go can be no more than 10 feet lower than the surface where the engine parks. Also, the total reach from the edge of the parking surface to where the end of the suction hose must be can require no more than 15 feet of suction hose and no sharp bends. This means that a tank with no dry hydrant will have to be below the parking area, or have a low side wall, because it could take more than 15 feet of hose to reach up to the top of a tank and then back to the bottom; and could require a very sharp bend.

Single Family Dwelling Emergency Water Supply Systems

Explanations for the numbered items on the reverse side



A hydrant can also be described as a standpipe. A wet hydrant must have a valve; a dry hydrant used for suction does not. Using metal pipe for the pipe exposed above ground is desirable. Plastic pipe may work with support and ultra-violet protection.

=== A strainer can be as simple as capping the end of the pipe and drilling 3/8 inch holes spaced 2 inches apart in all directions on the last 3 feet of pipe. No foot valve is needed for fire engine use.