Development Services
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Residential Masterplan Fire Sprinkler Submittal Requirements

Effective January 01, 2011 Re: CRC section 313.0 & 2010 NFPA 13D

The following information is the minimum required for approval of a residential fire sprinkler Master Plan submittal. Please provide two (2) sets of plans, hydraulic calculations, and manufacturers' data sheets. The Developer shall submit this information to the permit center on a Plan Check Take-In form as a revision to the Master Plan using the appropriate master plan BD number or included as part of a new master plan submittal.

A. General Information:

- ☐ Completed Plan Check Take-in form.
- ☐ Fire Sprinkler contractor, Master plan square footage, Subdivision name, Phase and Developers name on all documents.
- ☐ Complete contact information; name, address, phone, and email address.
- ☐ City water pressure information. Provide copy of Fire Flow letter from Environmental Utilities. Letter must be within 12 months of the submittal date.
- ☐ Pump and storage tank information. (If applicable)
- ☐ Manufacturer's data sheets for all piping, meters, sprinkler heads and devices installed.
- ☐ Full height building cross section showing vaulted ceilings and location of sprinkler heads and piping.
- ☐ Symbol legend.
- ☐ Sprinkler legend including totals for the project.
- ☐ Plans and calculations to be stamped and signed by licensed C-16 or Fire Protection Engineer.

B. Water Site Plan:

- ☐ Property lines.
- ☐ Outline of residences and any additional structures, showing the location of the most remote lot.
- ☐ North arrow.
- ☐ Streets adjoining property.
- ☐ Location, size, type of pipe, and length of all underground from the city's main to the water meter(s).
- ☐ Location of fire sprinkler riser.
- ☐ Elevation difference between the source and the most hydraulically demanding lot.
- ☐ The hydraulic reference points.

C. Piping Plans:

- ☐ All plans must be drawn to an indicated scale on a minimum sheet size of 24” x 36”.
- ☐ Completely dimension the plans. Dimension the sprinkler heads off of all the adjacent walls, ceiling fans, light fixtures and heat zones.
- ☐ Location and type of all light fixtures. Indicate the size and depth of all fixtures that are not flush with the ceiling.
- ☐ Location of all heat producing devices (i.e. fireplaces, wood stoves, ovens, ranges, diffusers, furnace, water heaters, etc.) Show the heat zone of each device and maintain the proper distances from these devices.
- ☐ Ceiling elevations. Clearly indicate the sloped, beamed, or special shaped ceilings.
- ☐ Size, depth, and spacing of any exposed beams.
- ☐ Provide room use and clearly indicate the dimensions of any area or room where sprinkler protection is not being provided.
- ☐ The location of all sprinkler heads.
- ☐ Indicate type, size, and length of all pipes.
- ☐ Include passive purge system @ remote toilet
- ☐ Riser location and Riser detail. Include alternate Riser location if applicable
- ☐ Hydraulic reference points.
- ☐ Indicate the basis for the hydraulic design (i.e. 16 x 16 spacing, 18 x 18 spacing, etc.)
- ☐ All sprinklers must comply with the current UL 1626 requirements providing a minimum density of .05 gpm/sq. ft. (The discharge requirements and number of design sprinklers shall be in accordance with the manufacturer’s literature).

D. Fire Sprinkler Riser Detail:

- ☐ Location of main control valve for the domestic and fire sprinkler systems.
- ☐ Location of the water flow switch, check valve, pressure gauges, and test/drain assembly.
- ☐ Location of transitions between all piping materials.
- ☐ Hydraulic reference points.

E. Hydraulic Calculations:

- ☐ All calculations to be stamped and signed by licensed C-16 or Fire Protection Engineer.
- ☐ Show 1 and 2 head most hydraulically demanding locations.
- ☐ The meter loss must include the fixed loss of the meter, and all other appurtenances, that occur at the meter utility box. The fixed losses must consider everything within the meter box as installed by the City of Roseville, and should be applied as a fixed loss device at the meter location in the hydraulic calculations. For the meter assembly diagram see detail W-5 at the link below: http://www.roseville.ca.us/civicax/filebank/blobdload.aspx?blobid=2374