

City of Henderson Fire Safety Design Criteria for Providing Fire Department Access for Hillside Driveways

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APPROVAL DATE: October 13, 2005

QUESTION / ISSUE: What is the minimum acceptable design criteria for construction of private driveways to custom residences located in the Hillside Areas that exceed 150 feet in length?

CODE PROVISIONS: The **Development Code, Chapter 19.4.8.F/ Hillside Overlay Development Regulations**, item **19. Improvements**, subsection **f. Driveways**, item **(3)** states that *“Driveways shall meet the criteria in Table 19.4.8-2, Driveway Configuration in the H Overlay.”*

Table 19.4.8-2	Minimum Width	Maximum Width	Maximum Grade	Shoulder
Driveways serving a single residence	14 feet	20 feet	12%	5 ft. both sides
Driveways serving multiple residences	20 feet	24 feet	12%	5 ft. both sides

Item (4) states that *“Driveways greater in length than 150 feet shall comply with the Fire Code and Fire Department guidelines for hillside driveways.”*

Item (5) states that *“Additional safety measures may be needed and will be reviewed on a case-by-case basis.”*

**MINIMUM ACCEPTABLE CRITERIA: (for driveways longer than 150 feet...
NOT intended for ladder truck access!)**

- Minimum width of 20 feet except around turns; provide 24 feet width with...
- Minimum turning radii of 45 feet outside/21 feet inside for engine access.
- Maximum slope of 15% with no more than 4% slope through curves. (Optimum design slope for fire access is 12%.)
- Provide a “flat” area of approach and turnaround area at the top near the residence.
- This “flat” area of approach shall be at least 55 feet long. (Optimum length is 110 ft.)
- This “flat” area of approach shall have a maximum slope of 6%.
- The minimum length/width of the turnaround (“hammerhead”) shall be 55 feet.
- A manual dry standpipe system shall be provided. The outlet(s) shall be strategically located for exposure protection as well as fire suppression use. The exact number and locations shall be determined on a case-by-case basis.
- These outlets shall be fed from a free-standing manual dry Fire Department Connection (FDC) located adjacent to the driveway entry and within 100 feet of a fire hydrant.
- The FDC shall be mounted adjacent to a Knox vault (series 1100) which contains a laminated copy of the site plan with standpipe outlet locations.
- Underground pipe shall be minimum Class 200 PVC with minimum nominal diameter as follows: 4” when feeding up to two outlets and 6” when feeding three or more outlets, unless hydraulically calculated.