City Specification No. 401

Reference to Huntington Beach Fire Code (HBFC) Section 503

Huntington Beach Fire Department

Minimum Standards for Fire Apparatus Access

REQUIREMENTS

The Huntington Beach Fire Code (HBFC) provides specifications for the design of fire apparatus access roads. In an effort to reduce the possibility of life and property loss, the Huntington Beach Fire Department has adopted these regulations and developed the following standards for the construction of fire apparatus access roads. Fire apparatus access roads may also be referred to as fire lanes, access ways and roadways.

1. FIRE APPARATUS ACCESS ROADS

1.1 Fire apparatus access roads shall be provided for every residential, commercial and industrial development, facility, building or portion of a building that has been constructed within, moved within or moved into the city of Huntington Beach. Fire apparatus access roads must extend to within a distance of 150 feet of any portion of an exterior wall of the first story of the building.

1.1.1 The fire code official is authorized to increase the dimension of 150 feet up to 200 feet where all of the following conditions occur:

1.1.1.1 The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.

1.1.1.2 A fire command center for fire department operations shall be provided and shall comply with Section 508.1.1 through 508.1.7.

1.1.1.3 Smoke detection shall comply with section 907.2.10.7.

1.1.1.4 Additional class I standpipe hose connections in an approved location.

1.1.1.5 A fire hydrant shall be located within 25 feet of all fire department connections

1.1.1.6 The automatic sprinkler system shall be designed to one hazard occupancy higher than the minimum hazard occupancy defined in NFPA 13.

1.1.1.7 Structures four or more stories above grade plane shall be provided with two stairways to the roof.

1.1.2 The 150-200 foot travel distance must be unobstructed and approved by the Fire Code Official. Travel over fences, walls, and hedges or through hindering landscaping does not qualify as unobstructed travel.

1.2. Vehicular or pedestrian gates obstructing required access must be installed per City Specification No. 403, Fire Access for Pedestrian or Vehicular Security Gates and Buildings.

2. MINIMUM WIDTHS, HEIGHTS & TURNS FOR FIRE APPARATUS ACCESS ROADS

Minimum Standards for Fire Apparatus Access

2.1 **Dimensions** - Fire apparatus access roads shall have an unobstructed width of not less than 24 feet and an unobstructed vertical clearance (clear to sky). Vertical clearances may be encroached upon when approved by the Fire Code Official and shall not be not less than 13 feet, 6 inches. Vertical encroachment shall not exceed the requirements in Diagram 1: Vertical Encroachment. Fire apparatus access roads adjacent to building fronts of industrial or commercial buildings shall not be less than 26 feet wide.

2.2 **Parking** - Parking shall not infringe upon fire apparatus access roads.

2.2.1 If parallel parking is permitted or possible on **BOTH SIDES** of the road, the curb-face to curb-face road dimension must be a minimum of 40 feet.

2.2.2 If parallel parking is permitted or possible on **ONE SIDE** of the road, the curb-face to curb-face roadway dimension must be a minimum of 32 feet.

2.3 **Corners and Turns** – Corners and turns must allow for clear and unobstructed apparatus travel without backing, driving over curbs, or driving off the surfaced roadway. Corners and turns shall maintain the required road width throughout the corner or turn.

2.3.1 **Inner Radius** – All corners and turns in fire apparatus access roads are required to have a minimum 17 feet inner radius. This radius point is the primary reference.

2.3.2 **Outer Radius** – All corners and turns in fire apparatus access roads are required to have a minimum 45 feet outer radius.

2.3.3 **Transition from Corners and Turns to Straight Sections**– Minimum road width at corners and turns is 28 feet. Where straight sections of road on either side of corners and turns are less than 28 feet in width, the transition may be approved by the Fire Code Official.

2.4 **Vehicle Security Gates with Multiple Travel Lanes (Reference City Specification No. 403.)** – Vehicle security gates or facility/complex entries may utilize multiple travel lanes, as approved by the Fire Code Official. Roads may be divided by a median or raised island to accomplish ingress and egress. Each lane shall be a minimum of 14 feet in unobstructed width.

2.4.1 Vehicle security gates shall provide a minimum straight 30-foot approach and a 30-foot departure, for a minimum of 60 feet in a straight line. Approach/departure shall be measured from the gate or significant incoming/outgoing obstructions, including but not limited to a guard office structure, planters, landscape features, callbox/keypad posts, etc.

2.4.2 As the opening width increases, the approach and departure dimensions requirement may be decreased at the discretion of the Fire Code Official.

2.4.3 An unobstructed vertical clearance of not less than 13 feet, 6 inches shall be provided. Vertical encroachment shall not exceed the requirements as shown in Diagram 1: Vertical Encroachment.

2.5 **Multiple Travel Lanes** – Vehicle entrance/exit to facilities or complexes may utilize divided or multiple travel lanes, as approved by the Fire Code Official. Roads may be divided by a median or raised island to accomplish ingress and egress separation. Each lane shall be a minimum of 14 feet in unobstructed curb-face to curb-face width. No vehicle parking is allowed in the travel lanes.

2.5.1 Multiple travel lanes are allowed as a component of fire apparatus access, but are not to be used in close proximity to, or around, a structure. Multiple travel lanes are intended to be used to connect a fire apparatus access road to a city street or public thoroughfare and are intended to be of minimal length. A typical application would be the entrance to a residential development or business complex.

2.5.2 An unobstructed vertical clearance of not less than 13 feet, 6 inches shall be provided. Vertical encroachment shall not exceed the requirements as shown in Diagram 1: Vertical Encroachment

2.6 **Road Surface** – Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus (75,000 lbs. total load / 12,000 lbs. point load) and shall be surfaced full road width to provide all-weather driving capability.

2.6.1 **Grade** – Fire apparatus access roads shall not exceed 10 percent grade.

2.6.2 **Speed Bumps/Humps** – Speed bumps/humps are **not allowed** as a roadway speed control measure. These devices impose an obstacle and hindrance to fire department vehicles responding to emergency incidents.

2.6.3 **Construction Access Roads** – Temporary or permanent access roads for development project shall comply with the requirements stated in section 2.6.

3. MINIMUM LENGTHS AND DIMENSIONS FOR TURNAROUNDS FOR FIRE APPARATUS ACCESS ROADWAYS

3.1 All fire apparatus roadway lengths are measured from start of road to end of road (for an example, reference Diagram 2: Minimum Cul-De-Sac Turnaround).

3.2 Roads exceeding 150 feet, but less than 600 feet in length, and terminating shall be provided with a cul-de-sac or hammerhead turnaround per Diagrams 2: Minimum Cul-De-Sac Turnaround; 3: Minimum Hammerhead Turnaround "L" Turn; and 4: Minimum Hammerhead Turnaround "T" Turn.

3.2.1 Roads terminating in a cul-de-sac must comply with subsections 3.2.1.1 and 3.2.1.2. as shown in Diagram 2: Minimum Cul-De-Sac Turnaround.

3.2.1.1 Roads with an "X" dimension between 151 feet and 299 feet in length and terminating in a cul-de-sac, shall have a minimum "Y" dimension of 62 feet as shown in Diagram 2: Minimum Cul-de-Sac Turnaround. No parking is permitted in a cul-de-sac when "Y" is less than 80 feet.

3.2.1.2 Roads between 300 feet and 599 feet in length and terminating in a cul-de-sac shall have a minimum "Y" dimension of 80 feet as shown in Diagram 2: Minimum Cul-de-Sac Turnaround.

3.3 Roads 600 feet or longer in length **may not** terminate in a cul-de-sac or hammerhead turnaround, but must become part of an inter-tying loop circulation system as approved by the Fire Code Official.

APPROVED: _____ DATE: 9.6.22

Scott M. Haberle, Fire Chief

DIAGRAM 1

VERTICAL ENCROACHMENT

Minimum Standards for Fire Apparatus Access

REQUIREMENTS

Fire apparatus access roads shall be maintained in accordance with Section 503 of the Huntington Beach Fire Code.

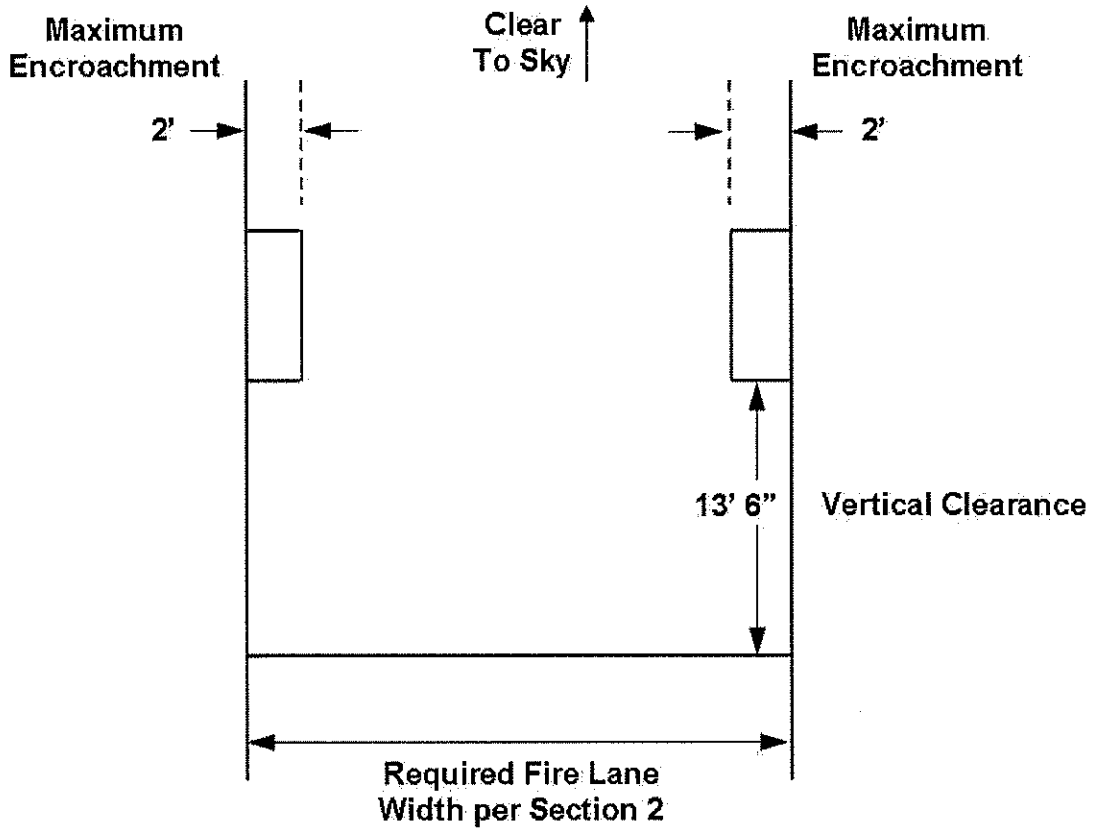

DIAGRAM 2

MINIMUM CUL-DE-SACTURNAROUND

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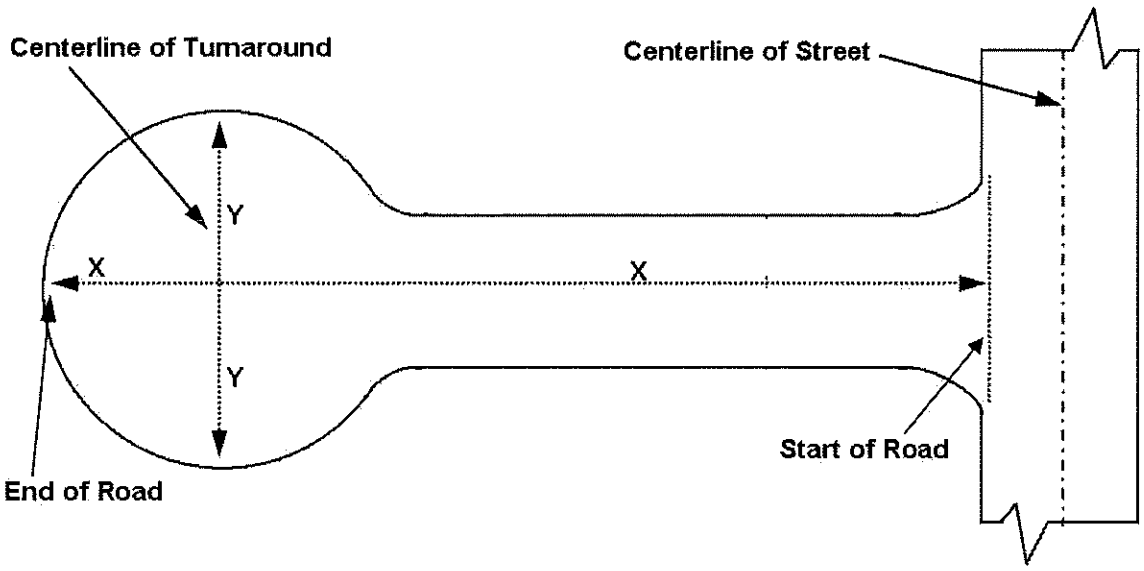
Fire apparatus access roads shall be maintained in accordance with Section 503 of the Huntington Beach Fire Code.



X= Start of road to end of road
Y=Curb-face to curb-face of cul-de-sac

DIAGRAM 3

MINIMUM HAMMERHEAD TURNAROUND "L" TURN

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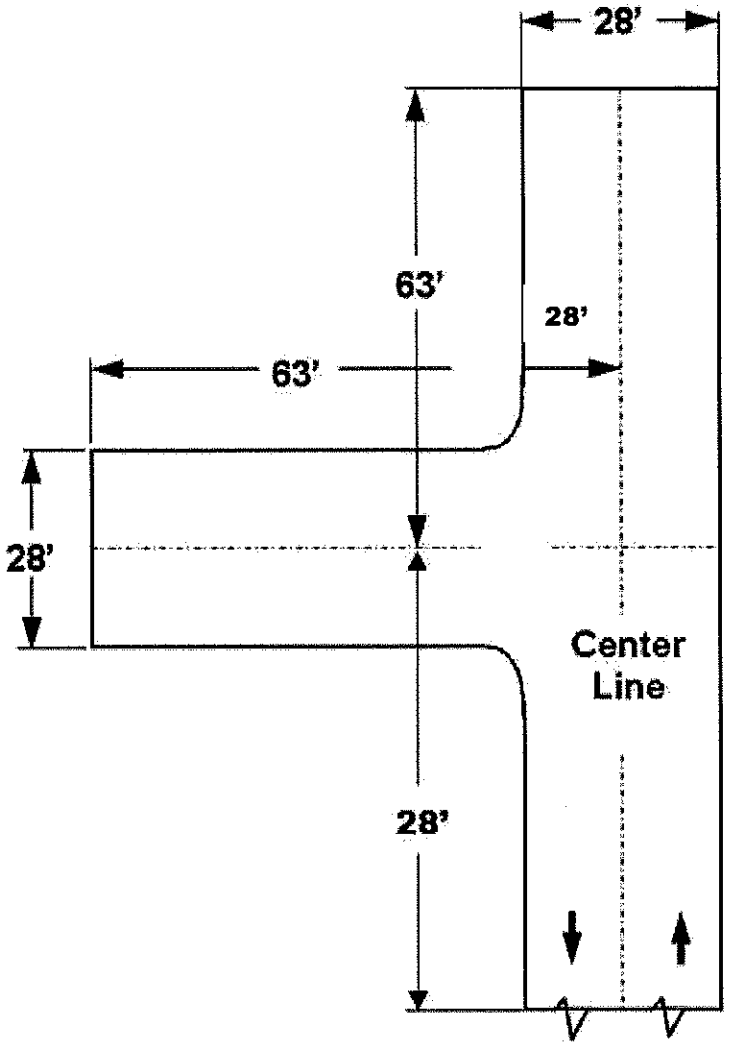

Minimum Standards for Fire Apparatus Access

DIAGRAM 4

MINIMUM HAMMERHEAD TURNAROUND "T" TURN

REQUIREMENTS

Fire apparatus access roads shall be maintained in accordance with Section 503 of the Huntington Beach Fire Code.