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SOUTH LANE COUNTY FIRE & RESCUE

"Making a positive difference in the community through service to others"

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City of Cottage Grove
Howard P. Schesser
Community Development Director

Howard,

Here is the report you requested regarding the new elementary school. I have listed the items with a discription and attached the Oregon Fire Code references in the back. If you have any questions or need further information please contact me.

Thank you,


Danny L. Solesbee, Division Chief/Fire Marshal

1) Hydrants

- a. We are requesting the “new hydrant” that is to be located on the south side in the “play area” be relocated. It would give us better access and service if it were located at the west gated access road.
- b. We also request a hydrant be placed at the south east corner of the building.
- c. The hydrants steamer ports shall have a Stortz adaptor with a locking Knox cap. FDC shall also have locking Knox caps.

2) Access

- a. Gates and access roads shall have a minimum unobstructed width of 26 feet for aerial access. (OFC, D105.2)
- b. Our aerial apparatus shall be able to access the building within a minimum of 15 feet and a maximum of 30 feet from the building, and access shall be positioned parallel to one entire side of the building. (OFC, D105.3)
- c. Overhead utility and power lines shall not be located over the aerial apparatus access. (OFC, D105.4)
- d. We need to maintain Taylor street access and the south side access to these standards. (OFC, D104)
- e. Access road shall be capable of supporting fire apparatus loads of 60,000 pounds. (OFC, D102.1)
- f. Apparatus access shall allow for a 36 foot turning radius. (Aerial) (OFC, D103.3)
- g. Rolled curbs shall be required at both ends of south side access road.

3) Signs and marking of access

- a. Apparatus access roads shall be marked with permanent and well maintained signs meeting OFC specifications. (OFC, D103.6)
- b. Hydrants and FDC shall be marked with same signs and curbs painted red. These shall also be maintained.

4) Knox boxes and locks

- a. We require a Knox box be placed at the “Main” entrance and one at the west entrance. These will be mounted on the right hand side of doors at 5’6” above the finished floor. These will contain keys to the building, alarm codes if necessary, and elevator keys. OFC , 506 .1.1
- b. Access gates shall have Knox pad locks for quicker access. OFC , 506 .1.1

doors shall comply with Chapter 10. Access doors for *high-piled combustible storage* shall comply with Section 3206.6.1.

504.3 Stairway access to roof. New buildings four or more stories above grade plane, except those with a roof slope greater than four units vertical in 12 units horizontal (33.3-percent slope), shall be provided with a *stairway* to the roof. *Stairway* access to the roof shall be in accordance with Section 1009.13. Such *stairway* shall be marked at street and floor levels with a sign indicating that the *stairway* continues to the roof. Where roofs are used for roof gardens or for other purposes, *stairways* shall be provided as required for such occupancy classification.

SECTION 505 PREMISES IDENTIFICATION

505.1 Address identification. New and existing buildings shall have *approved* address numbers, building numbers or *approved* building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Where required by the *fire code official*, address numbers shall be provided in additional *approved* locations to facilitate emergency response. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 4 inches (101.6 mm) high with a minimum stroke width of 0.5 inch (12.7 mm). Where access is by means of a private road and the building cannot be viewed from the *public way*, a monument, pole or other sign or means shall be used to identify the structure. Address numbers shall be maintained.

505.2 Street or road signs. Streets and roads shall be identified with *approved* signs. Temporary signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles. Signs shall be of an *approved* size, weather resistant and be maintained until replaced by permanent signs.

SECTION 506 KEY BOXES

506.1 Where required. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the *fire code official* is authorized to require a key box to be installed in an *approved* location. The key box shall be of an *approved* type listed in accordance with UL 1037, and shall contain keys to gain necessary access as required by the *fire code official*.

Exception: Pharmacies in accordance with OAR 855-041-0035.

506.1.1 Locks. An *approved* lock shall be installed on gates or similar barriers when required by the *fire code official*.

506.1.2 Key boxes for nonstandardized fire service elevator keys. Key boxes provided for nonstandardized fire

service elevator keys shall comply with Section 506.1 and all of the following:

1. The key box shall be compatible with an existing rapid entry key box system in use in the jurisdiction and *approved* by the *fire code official*.
2. The front cover shall be permanently labeled with the words "Fire Department Use Only—Elevator Keys."
3. The key box shall be mounted at each elevator bank at the lobby nearest to the lowest level of fire department access.
4. The key box shall be mounted 5 feet 6 inches (1676 mm) above the finished floor to the right side of the elevator bank.
5. Contents of the key box are limited to fire service elevator keys. Additional elevator access tools, keys and information pertinent to emergency planning or elevator access shall be permitted when authorized by the *fire code official*.
6. In buildings with two or more elevator banks, a single key box shall be permitted to be used when such elevator banks are separated by not more than 30 feet (9144 mm). Additional key boxes shall be provided for each individual elevator or elevator bank separated by more than 30 feet (9144 mm).

Exception: A single key box shall be permitted to be located adjacent to a *fire command center* or the non-standard fire service elevator key shall be permitted to be secured in a key box used for other purposes and located in accordance with Section 506.1.

506.2 Key box maintenance. The operator of the building shall immediately notify the *fire code official* and provide the new key when a lock is changed or rekeyed. The key to such lock shall be secured in the key box.

SECTION 507 FIRE PROTECTION WATER SUPPLIES

507.1 Required water supply. An *approved* water supply capable of supplying the required fire flow for fire protection shall be provided to premises upon which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction.

507.2 Type of water supply. A water supply shall consist of reservoirs, pressure tanks, elevated tanks, water mains or other fixed systems capable of providing the required fire flow.

507.2.1 Private fire service mains. Private fire service mains and appurtenances shall be installed in accordance with NFPA 24.

507.2.2 Water tanks. Water tanks for private fire protection shall be installed in accordance with NFPA 22.

APPENDIX D

FIRE APPARATUS ACCESS ROADS

The provisions contained in this appendix are adopted by the State of Oregon.

SECTION D101 GENERAL

D101.1 Scope. Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the *International Fire Code*. The *fire code official* may be guided by the Oregon Department of Land and Conservation and Development's Neighborhood Street Design Guidelines, June 2001.

SECTION D102 REQUIRED ACCESS

D102.1 Access and loading. Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an *approved* fire apparatus access road with an asphalt, concrete or other *approved* driving surface capable of supporting the imposed load of fire apparatus weighing at least 60,000 pounds (27 240 kg).

Exception: The minimum weight specified in Section D102.1 may be increased by the *fire code official* based upon the actual weight of fire apparatus vehicles serving the jurisdiction that provides structural fire protection services to the location, including fire apparatus vehicles that respond under automatic and mutual aid agreements.

D102.1.1 Access in wildland-urban interface areas. For egress and access concerns in wildland-urban interface locations, the *fire code official* may be guided by the *International Wildland-Urban Interface Code*.

SECTION D103 MINIMUM SPECIFICATIONS

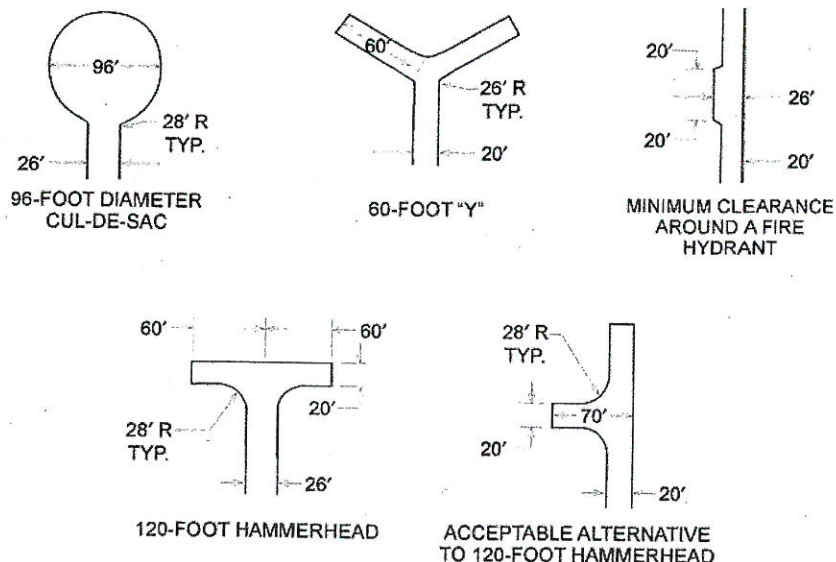
D103.1 Access road width with a hydrant. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm), exclusive of shoulders (see Figure D103.1).

Exception: The *fire code official* is authorized to modify the provisions of Section D103.1 when:

1. In accordance with Oregon Administrative Rule (OAR) 918-480-0100, all buildings are completely protected with an approved automatic fire sprinkler system;
2. Provisions are made for the emergency use of sidewalks by such means as rolled or mountable curbs capable of supporting the fire department's apparatus;
3. Streets or roadways are identified for one-way circulating flow of traffic or pullouts are provided every 150 feet (45 720 mm) on streets or roadways identified for two-way traffic; or
4. A grid system for traffic flow is provided and streets or roadways in the grid do not exceed 300 feet (91 400 mm) in length but are accessible at each end from approved access roadways or streets.

D103.2 Grade. Fire apparatus access roads shall not exceed 10 percent in grade.

Exception: Grades steeper than 10 percent as *approved* by the fire chief.



For SI: 1 foot = 304.8 mm.

FIGURE D103.1
DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND

D103.3 Turning radius. The minimum turning radius shall be determined by the *fire code official*.

D103.3.1 Drainage. When subject to run-off damage, the *fire code official* is authorized to require approved drainage.

D103.4 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D103.4.

**TABLE D103.4
REQUIREMENTS FOR DEAD-END
FIRE APPARATUS ACCESS ROADS**

LENGTH (feet)	WIDTH (feet)	TURNAROUNDS REQUIRED
0-150	20	None required
151-500	20	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with Figure D103.1
501-750	26	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with Figure D103.1
Over 750		Special approval required

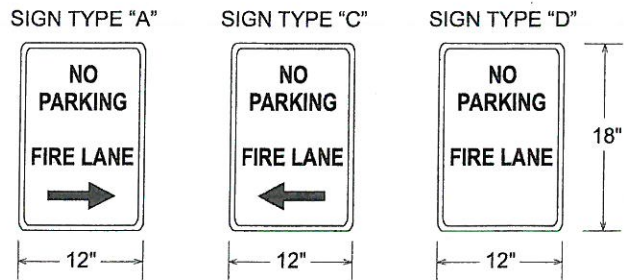
For SI: 1 foot = 304.8 mm.

D103.5 Fire apparatus access road gates. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. The minimum gate width shall be 20 feet (6096 mm).
2. Gates shall be of the swinging or sliding type.
3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be *approved* by the *fire code official*.
6. Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools or when a key box containing the key(s) to the lock is installed at the gate location.
7. Locking device specifications shall be submitted for approval by the *fire code official*.
8. Electric gate operators, where provided, shall be *listed* in accordance with UL 325.
9. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

D103.6 Signs. Where required by the *fire code official*, fire apparatus access roads shall be marked with permanent NO PARKING—FIRE LANE signs complying with Figure D103.6. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs shall be posted

on one or both sides of the fire apparatus road as required by Section D103.6.1 or D103.6.2.



**FIGURE D103.6
FIRE LANE SIGNS**

D103.6.1 Roads 20 to 26 feet in width. Fire lane signs as specified in Section D103.6 shall be posted on both sides of fire apparatus access roads that are 20 to 26 feet wide (6096 to 7925 mm).

D103.6.2 Roads more than 26 feet in width. Fire lane signs as specified in Section D103.6 shall be posted on one side of fire apparatus access roads more than 26 feet wide (7925 mm) and less than 32 feet wide (9754 mm).

**SECTION D104
COMMERCIAL AND INDUSTRIAL DEVELOPMENTS**

D104.1 Buildings exceeding three stories or 30 feet in height. Buildings or facilities exceeding 30 feet (9144 mm) or three stories in height shall have at least two means of fire apparatus access for each structure.

D104.2 Buildings exceeding 62,000 square feet in area. Buildings or facilities having a gross *building area* of more than 62,000 square feet (5760 m²) shall be provided with two separate and *approved* fire apparatus access roads.

Exception: Projects having a gross *building area* of up to 124,000 square feet (11 520 m²) that have a single *approved* fire apparatus access road when all buildings are equipped throughout with *approved automatic sprinkler systems*.

D104.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.

**SECTION D105
AERIAL FIRE APPARATUS ACCESS ROADS**

D105.1 Where required. Where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet (9144 mm), approved aerial fire apparatus access roads shall be provided. For purposes of this section, the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater.

D105.2 Width. Aerial fire apparatus access roads shall have a minimum unobstructed width of 26 feet (7925 mm), exclusive of shoulders, in the immediate vicinity of the building or portion thereof.

D105.3 Proximity to building. At least one of the required access routes meeting this condition shall be located within a minimum of 15 feet (4572 mm) and a maximum of 30 feet (9144 mm) from the building, and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the *fire code official*.

D105.4 Obstructions. Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial fire apparatus road and the building. Other obstructions shall be permitted to be placed with the approval of the *fire code official*.

2. The number of *dwelling units* on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the *fire code official*.

**D108
REFERENCED STANDARDS**

ASTM	F 2200—05	Standard Specification for Automated Vehicular Gate Construction	D103.5
ICC	IFC—12	International Fire Code	D101.5, D107.1
UL	325—02	Door, Drapery, Gate, Louver, and Window Operators and Systems, with Revisions through February 2006	D103.5

SECTION D106

MULTIPLE-FAMILY RESIDENTIAL DEVELOPMENTS

D106.1 Projects having more than 100 dwelling units. Multiple-family residential projects having more than 100 *dwelling units* shall be equipped throughout with two separate and *approved* fire apparatus access roads.

Exception: Projects having up to 200 *dwelling units* may have a single *approved* fire apparatus access road when all buildings, including nonresidential occupancies, are equipped throughout with *approved automatic sprinkler systems* installed in accordance with Section 903.3.1.1 or 903.3.1.2.

D106.2 Projects having more than 200 dwelling units. Multiple-family residential projects having more than 200 *dwelling units* shall be provided with two separate and *approved* fire apparatus access roads regardless of whether they are equipped with an *approved automatic sprinkler system*.

SECTION D107

**ONE- OR TWO-FAMILY
RESIDENTIAL DEVELOPMENTS**

D107.1 One- or two-family dwelling residential developments. Developments of one- or two-family *dwelling units* where the number of *dwelling units* exceeds 30 shall be provided with two separate and *approved* fire apparatus access roads, and shall meet the requirements of Section D104.3.

Exceptions:

1. Where there are more than 30 *dwelling units* on a single public or private fire apparatus access road and all *dwelling units* are equipped throughout with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3 of the *International Fire Code*, access from two directions shall not be required.