



**FIGURE 3-8**  
**Fire Access Roads**

Source: City of Vacaville, 2004

Not to Scale



City of Vacaville

10794-00

## Water Supply

### Domestic Water Supply and Distribution

#### *Water Supply*

Domestic water supply distribution to the project site is limited. Currently, water for Lower Lagoon Valley is supplied via an 8-inch line from the Butcher Reservoirs, located at the north end of Lower Lagoon Valley. The reservoirs are in the City's Zone 1 (Main Zone) pressure system. The proposed residential subdivision, golf course, and business village are within water pressure zones 2 and 3 and would require the development of additional storage tanks, booster pumps, and distribution lines, as discussed below and as detailed in the Specific Plan (see Figure 3-9).

#### *On-Site Water Distribution*

The Zone 2 system would consist of a looped system of 12- to 18-inch main lines connecting the Butcher Reservoirs to a new proposed 2.8 -million-gallon (mg) water tank near the southwest corner of the residential development at an elevation of approximately 395 feet (see Figure 3-9). The tank would be approximately 30 feet high and 100 feet in diameter and would be partially buried as typically required by the City. The proposed system would include a new booster pump near the Butcher Reservoirs to lift the water from the existing tank to the new proposed tank.

Three options for the Zone 3 area are being considered. A 0.25-mg tank could be constructed in an open space area Triad is dedicating to the City at the south end of the site near Village III. As an alternative to the additional tank, a pneumatic booster pump could be installed, which could increase the pressure in Zone 3 based on the varying demand throughout the day. The pump would adjust to accommodate peak hour and lower flow periods. The pneumatic booster pump station would be located within the dedicated open space between sections of Village III. This EIR evaluates the potential environmental effects of installing and operating either the Zone 3 water tank or the pneumatic booster pump, or one tank alternative. The third alternative would be to construct one water tank at the higher elevation to serve the entire development.

The Proposed Project would construct water mains within the streets to serve residential and commercial development. Appropriately sized water meters would be installed at each service point and fire hydrants will be spaced throughout the development based on the Fire Department requirements. At completion of each development phase, the water system would be dedicated to the City as a public system.

#### *Off-Site Water Distribution*

The Proposed Project would require upsizing two Main Zone water mains in the City of Vacaville to accommodate the water demands of the Proposed Project. These improvements were previously identified in the City's *Development Impact Fee Study* (1992) and are included in the City's Capital Improvement Projects (CIP) planning. These pipelines would be installed regardless of whether the Proposed Project is approved. However, if development proceeds in Lower Lagoon Valley, installation of the pipelines could be accelerated.



A new pipeline within the main zone would be required to deliver water from the main zone at the Butcher Reservoirs to the Specific Plan area. This pipeline would originate at Peabody Road and California Drive and run west on California Drive, north on Davis Street, and northwest on Alamo Drive to the south side of I-80. The size of this pipeline would be restricted in size (30 inches) to accommodate only Specific Plan development and other planned projects within the City of Vacaville. The size of this pipeline would be designed (30 inches) to accommodate only Lower Lagoon Valley development and other planned projects within the City of Vacaville. This pipeline was scheduled for 1992 but the lack of development in Lower Lagoon Valley has deferred the need for this improvement. A 24-inch diameter portion of this improvement from Peabody Road to Alamo Lane (along California Drive) was installed in 2000.

A second pipeline (Peabody Road Pipeline) would be installed from the North Bay Regional (NBR) water treatment plant to California Drive when the City's allocation increases beyond 13.33 million gallons per day (mgd). The pipeline would include 36-inch and 30-inch segments and would parallel the existing 30-inch and 24-inch lines in Peabody Road from the NBR plant.

#### Irrigation Water Supply and Distribution

Water for irrigating the golf course, school site, parks, fire breaks and landscaping within the residential and business village area would be obtained from the Solano Irrigation District (SID) Lateral 37, which currently supplies untreated "raw" water to the Lagoon Valley area for the Hines Nursery and the Lagoon Valley Regional Park. The existing system includes a pump station in the southwestern area of the site near I-80 (Tooby Pump Station) with a low head transmission pipeline. The SID completed upgrades to the Lateral 37 system, which included a 600,000-gallon raw water storage reservoir and a 4,500 gallons-per-minute (gpm) raw water pumping system above the southern boundary of the project site. This system currently serves the Hines nursery and Lagoon Park, but is not connected to the Tooby system.

Based on projected demand, the Proposed Project could use the existing SID Lateral 37 facilities without the need for upgrades to the Tooby Pump Station. New irrigation demands for the Proposed Project would need to be coordinated with the City and SID to determine the required improvements. If required by SID, a new Tooby Pump Station near I-80 and Lagoon Valley Road may be considered, but is currently not a part of the project proposal. The Specific Plan indicates that a new pump station could be required by SID. This determination would be made by the District based on overall system needs. The pump station would be reconstructed at its current location adjacent to Nelson Road.

The main distribution lines for the irrigation system would be installed within proposed roadway alignments, as shown in Figure 3-10.

#### **Wastewater**

The Lagoon Valley area does not currently have a sanitary sewer connection point to the City of Vacaville sanitary sewer system and the City's wastewater treatment plant. The closest point of connection is an 18-inch main located near the end of the Butcher Trail adjacent to I-80.