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## 4.0 Circulation

### 4.1 OVERVIEW

This chapter describes the proposed circulation system and transportation alternatives associated with the Laguna Ridge project, and summarizes the information contained in the *Traffic Impact Study for the Laguna Ridge Specific Plan* prepared by Fehr & Peers Associates. This same consultant was utilized in the preparation of the *East Franklin Specific Plan* allowing the Laguna Ridge Plan to be developed in context with the surrounding area. The study area ranged from I-5 located three miles to the west, a half-mile beyond Highway 99 on the east, Laguna Boulevard located one mile to the north and Kammerer Road located approximately one mile to the south. The proposed circulation plan is also consistent with the City's General Plan and EIR Traffic Study.

The Circulation Plan is designed to provide for the efficient movement of goods and people and allows for several modes of transportation including automobile, truck, transit, bicycle, and pedestrian. This chapter provides the requirements of Plan Area roadways, bikeways, and walkways and reviews alternative modes of transportation. The implementation of the Laguna Ridge Specific Plan will provide additional roadway, transit, bicycle, and pedestrian linkages between the project area and the surrounding community, improving connectivity within this portion of the City.

The Circulation Plan provides connections to existing roadways and future roadways as identified in the City of Elk Grove General Plan Circulation Diagram. These connections provide both regional and local mobility between the land uses within and adjacent to the Plan Area. The phasing and financing of the proposed roadway improvements is summarized in Chapter 8 Financing and Capital Improvements.

### 4.2 EXISTING ROADWAYS

The Plan Area is bound on the west by Bruceville Road, on the north by Elk Grove Boulevard, on the south by Bilby and Old Poppy Ridge Roads, and on the east by West Stockton Boulevard. The existing streets and property ownership patterns form a basic grid pattern and provide the basis for the arterial street system for the Plan Area. These arterial streets are located approximately one mile apart and will provide four or six lane corridors.

Regional access to the Plan Area is possible via Highway 99, and Interstate 5. Each of these facilities was included in the study area, although Highway 99 is the closest regional facility to the project. Impacts to the freeway interchanges at Laguna Boulevard, Elk Grove Boulevard, and Kammerer Road and traffic flows on the freeway were reviewed by the traffic impact study. The following is a summary of the key existing roadways.

- Highway 99 is a six-lane freeway facility located east of the Plan Area with controlled access via the existing Elk Grove Boulevard and Grantline Road interchanges.
- Elk Grove Boulevard is an east-west thoroughfare extending from Interstate 5 east to Highway 99 and Grant Line Road on the east. The roadway has from four to six lanes from Interstate 5 to East Stockton Blvd., four lanes from East Stockton Blvd. to Elk Grove-Florin Rd., and two lanes from Elk Grove-Florin Rd. to Grantline Rd. and is adjacent to the northern edge to the project site.
- Bruceville Road is an existing two-lane road adjacent to the western edge of the Plan Area and continues north of Elk Grove Boulevard as a four-lane arterial, providing a north-south arterial through the City of Elk Grove.

### 4.3 PROPOSED CIRCULATION SYSTEM

The LRSP proposes a well-structured network of roadways, bikeways and walkways to serve the project, and includes a system of trails through landscaped open space corridors connecting between land uses. The proposed circulation system will provide convenient and safe access to all areas within the Plan Area as illustrated by Figure 4-1, Circulation Plan. The creation of a well-connected hierarchy of travel modes allows for the efficient flow of vehicular traffic, but also encourages walking, biking and other alternatives to single-occupancy gasoline-powered vehicles. While existing transit service to the Plan Area is limited, the design of the land use plan and the policies contained within this document will encourage public transit. Land uses are generally more intense adjacent to arterial streets to encourage rider-ship, and it is anticipated that Sacramento Regional Transit will expand bus service to the Plan Area as development occurs.

The Laguna South Grand Parkway provides a significant open space connection through the Plan Area and opportunities for bike and pedestrian connections. It stretches from the East Franklin Specific Plan and Bruceville Road on the east to Highway 99 on the west. Links to this open space corridor are provided by several "tributary" parkway corridors or "paseos" allowing north-south access between land uses. These parkways will include an off-street pedestrian trail. Class II (on-street) bike lanes have been designated along all arterial and commercial streets. To encourage walking, all arterial, commercial, and primary residential streets include separated sidewalks and a landscaped parkway strip to provide a buffer from busy streets. Sidewalks are provided along both sides of all local streets within the Plan Area to accommodate pedestrian travel and to allow convenient access to curbside parking.

The Traffic Impact Study prepared by Fehr & Peers summarizes the existing and projected traffic counts for certain selected street segments within the Plan Area, summarizes the cumulative traffic counts and provides a basis for the roadway sizing shown on the Circulation Plan (Figure 4-1). It demonstrates that the proposed Circulation Plan is consistent with the General Plan, which specifies a Level of Service (LOS) of D. For additional detail, please refer to the Traffic Study contained in the appendix.

#### 4.3.1 Roadways

A clear hierarchy of roadways is proposed for the Plan Area. The proposed roadway system calls for expansion of existing roads, construction of new roads, and the addition of signals at various intersections. Generally, the proposed Phasing and Capital Improvement Program will install full roadway improvements curb-to-curb and required street lighting for thoroughfares and arterial roadways from intersection to intersection as these roadway segments are triggered by development. Phasing is discussed in more detail in Chapter 8 Phasing and Financing. Public and private financing, Fee programs and other financing mechanisms will be utilized to ensure the early completion of roadways.

**Thoroughfares and Arterial Streets** include six-lane thoroughfares and four-lane arterials roads. This category of street will serve to convey "cross-town" traffic. These streets will provide for efficient access through the City of Elk Grove, and connections to major commercial uses, employment centers and amenities. They are generally located on one-mile spacing. These streets have been excluded from the calculations of developable acres in the Land Use Plan. The following is a summary of the proposed roadway improvements:

- Elk Grove Boulevard is mostly improved as a 6-lane facility, but frontage and intersection improvements will be constructed with the development of the Plan Area. This road is a thoroughfare providing east-west connectivity within the City of Elk Grove.

- Bruceville Road will be expanded from a 2-lane roadway to a 4-lane roadway with the build-out of the Plan Area, and is considered a thoroughfare. While not required by the development of Laguna Ridge or East Franklin, land area within the right-of-way will be reserved by a 36-foot median and 36-foot landscape corridors to enable this facility to be expanded to a 6-lane facility if needed in the future.
- Big Horn Boulevard will be extended as a 4-lane arterial roadway through the Plan Area from Elk Grove Boulevard south to Bilby Road, with a 40-foot LRT/BRT easement proposed on the east side of Big Horn Boulevard.
- Whitelock Parkway is proposed north of existing Old Poppy Ridge Road to connect to the 4-lane arterial roadway existing within the East Franklin Specific Plan. Whitelock Parkway will be constructed as a 4-lane arterial roadway and will provide an east-west connection through the community from Bruceville Road to West Stockton Blvd.
- Laguna Springs Drive will be extended south from Elk Grove Boulevard as a 4-lane arterial roadway and will tee into Laguna Ridge Road at the proposed High School Site.
- Laguna Ridge Road is a 4-lane arterial roadway that will be constructed with the development of the Plan Area to provide a connection from Big Horn Boulevard east toward West Stockton Boulevard, but is aligned to provide a separate roadway connection parallel to West Stockton Boulevard down toward the proposed Lent Ranch Mall site.
- West Stockton Boulevard will continue to the south and the future Lent Ranch Mall as a 2-lane commercial collector roadway. The ability to expand West Stockton Boulevard to a 4-lane facility within the Plan Area is limited due to existing tree constraints, and special roadway section standards have been applied within the existing Elk Grove Auto Mall.
- Bilby Road will be constructed as a 2-lane collector roadway. When properties to the south develop this roadway could be widened on the south side of the centerline to provide additional travel lanes or a center turn lane, if necessary.

**Collector Commercial and Residential Streets** provide connections into and through neighborhoods, linking to school and park facilities, and allowing residents of one neighborhood to visit another neighborhood without traveling on arterial streets. They generally access arterials on ¼ mile spacing.

**Local Streets** connect to arterials on a more frequent spacing. These connections allow access into neighborhoods, however internal street patterns should be designed to discourage through traffic.

#### **4.3.1.1 Thoroughfares:**

Thoroughfares include Elk Grove Boulevard and Bruceville Road. The total back of curb to back of curb dimension is 96-feet, providing for a 12-foot raised median, one 12-foot and two 11-foot travel lane on each side of the median, a 5-foot bike lane and a 3-foot vertical curb and gutter. A 36-foot landscape corridor is required provided back of curb. On Bruceville Road the inside lanes against the median will not be constructed, providing a larger landscaped median in the interim and preserving an existing hedgerow of trees. The wide median reserves the potential to expand this facility for either additional travel lanes or for Light Rail should this alignment be selected by Regional Transit. The landscape corridor adjacent to major arterials includes a 7-foot separated or detached sidewalk. No on-street parking is allowed (Refer to Figure 4-2).

#### **4.3.1.2 Arterial Streets:**

Arterials include Whitelock Parkway, Bighorn Boulevard, Laguna Springs Drive and Laguna Ridge Road. The total back of curb to back of curb dimension is 72-feet providing for a 12-foot median, a 12-foot and an 11-foot travel lane on each side of the median, a 4-foot bike lane and a 3-foot vertical curb and gutter. A 25-foot landscape corridor is required back of curb. The landscape corridor adjacent to minor arterials includes a 7-foot separated or detached sidewalk. No on-street parking is allowed.

#### **4.3.1.3 Collector Streets:**

There are several sections for Collector Streets depending on the location of the street and the purpose served. The Collector Street for Commercial will provide a back of curb to back of curb dimension of 48-feet, and a variety of roadway striping configurations may be utilized. A Commercial Collector can be configured to provide a 10-foot painted two-way left turn lane or raised median, along with a 12-foot travel lane, 4-foot bike lane and a 3-foot vertical curb & gutter in each direction. A 15-foot landscape easement or parcel is required back of curb. The landscape corridor includes a separated or detached 6-foot sidewalk.

Collector Streets internal to the Auto Mall and West Stockton Boulevard along the easterly edge of the Plan Area will provide a back of curb dimension of 42-feet to allow a 13-foot travel lane each direction, and an 8-foot bike lane (consisting of 5-feet of pavement and a 3-foot vertical curb and gutter). Alternatively, a 4-foot bike lane may be provided in place of curbside parking. A 21-foot landscape easement is required back of curb on the west side of West Stockton Blvd. A 6-foot walk is required within the landscape easement. No landscape easement is required adjacent to the Highway 99 Caltrans fence. The reduced roadway section is subject to a number of design constraints. This roadway is located adjacent to the Highway 99 right-of-way, there are a number of oak trees located near the edge of the existing roadway, and this roadway will be “single-loaded” by future development. South of Poppy Ridge Road, outside of the Laguna Ridge Plan Area and within the Lent Ranch Mall Project, this roadway may be expanded to a 4-lane arterial. Laguna Ridge Road is planned within Laguna Ridge as a parallel 4-lane arterial, and it can be aligned south of the Plan Area to connect to West Stockton Boulevard or can provide a parallel connection to the Lent Ranch Mall Project.

Bilby Road at the southerly edge of the Plan area is designed to provide a Residential Collector Street connection between Franklin Boulevard and Big Horn Boulevard. The roadway section is designed in consideration of the existing Bilby Road centerline and improvements. This roadway will provide a 36-foot back of curb dimension to allow an 11-foot travel lane in each direction, a 4-foot bike lane and a 3-foot curb and gutter. A 31-foot landscape corridor is required back of curb on the north side of this street, with a 4-foot separated sidewalk. On the south side of this street, the vertical curb and bike lane are omitted in exchange for a 4-foot gravel shoulder. When properties to the south develop this roadway could be widened on the south side of the centerline to provide additional travel lanes or a center turn lane, if necessary. Curb and gutter and landscape improvements will be installed if and when the land to the south develops (Refer to Figure 4-3).

Alternative street sections may be allowed for commercial streets within commercial projects on a case-by-case basis.

#### **4.3.1.4 Thoroughfare, Arterial and Collector Street Standards:**

1. A level of service (LOS) D shall be maintained on all roadways with the exception of those roadway segments on which the City made a finding of over-riding consideration.

2. All roadside landscape corridors or landscape easements shall be landscaped in accordance with Elk Grove CSD and City of Elk Grove standards.
3. The City Engineer may allow alternatives to the proposed roadway sections or landscape corridors subject to design review.

#### **4.3.1.5 Residential Streets:**

The locations of key Collector or Primary Residential Streets have been identified on the Land Use Plan and the Circulation Plan to illustrate connections through neighborhoods to schools, parks and other land uses. Collector, Primary and Secondary Residential Streets will provide a separated sidewalk and landscaped parkway strip with street trees located between the sidewalk and curb. Depending on the anticipated traffic volumes, residential lots may "front", "side" or "back" onto the Collector or Primary Residential Streets, however "front-on" or "side-on" lots are encouraged. Where residential lots "back-on" to Collector or Primary Residential Streets, and additional 5-feet of landscape area shall be provided between the sidewalk and the residential fence or wall.

Secondary and Local Residential Streets are not identified on the Circulation Plan. The precise location of Residential Streets (collector, primary, secondary and local) will be determined with the preparation of Tentative Subdivision Maps.

A Collector Residential Street consists of a 38-foot back of curb dimension and an overall back of walk dimension of 58-feet, and includes a 12-foot travel lane in each direction, and a 7-foot bike lane (which includes 4-feet of pavement and the 3-foot vertical curb and gutter). Where the City determines that on-street parking is required, a 5-foot bike lane and 8-foot parking lane shall be provided. In the case where Collector Residential Streets transition to Primary Residential Streets within a short distance from the arterial street, the City Engineer may allow the bike lane to be eliminated in favor of a raised median. A 4-foot sidewalk separated from the curb by a 6-foot parkway strip is required to provide a buffer to pedestrians on streets anticipated to have higher traffic volumes than typical residential streets. (Refer to Figure4-4).

A Primary Residential Street provides a 38-foot back of curb dimension and includes an eleven-foot travel lane in each direction and an un-striped 8-foot parking lane (which includes the 3-foot rolled curb and gutter), and a 4-foot sidewalk separated from the curb by a 6-foot parkway strip. (Refer to Figure 4-5)

A Secondary Residential Street provides a 36-foot back of curb dimension and includes a 10-foot travel lane in each direction, an un-striped 8-foot parking lane (which includes the 3-foot rolled curb and gutter), and a 4-foot sidewalk separated from the curb by a 6-foot parkway strip. (Refer to Figure4-6).

Local Residential Streets provide a 40' back of walk dimension, which allows for an 8-foot travel lane in each direction, and an un-striped 8-foot parking lane (which includes a 3-foot rolled curb and gutter) and a 4-foot sidewalk located adjacent to the curb. The total back of curb dimension is 32 feet, and parking is allowed on both sides of the street. (Refer to Figure4-6)

The City Engineer may require traffic calming devices, including but not limited to traffic circles, curb extensions, raised or specially painted crosswalks, or other measures to be installed as part of street improvements required for a project. Multi-family projects and seniors' or age-restricted projects may be allowed to utilize reduced street sections as allowed by the City Engineer, or gates and private streets to enhance security as approved by the City on a case-by-case basis. The Tentative Subdivision Map or Development Plan Review process shall be utilized to determine street sections or drive aisle and parking stall locations for multi-family projects.

[Insert Figure 4-1 - Circulation Plan]

**[Insert Figure 4-2 - Street Sections, Thoroughfare, Arterial Streets]**

**[Insert Figure 4-3 - Street Sections, Residential Collector-Bilby, Collector-Auto Mall]**

**[Insert Figure 4-4 Collector - Commercial, Collector - Residential]**

**[Insert Figure 4-5 Primary Residential, Secondary Residential, Local Residential]**

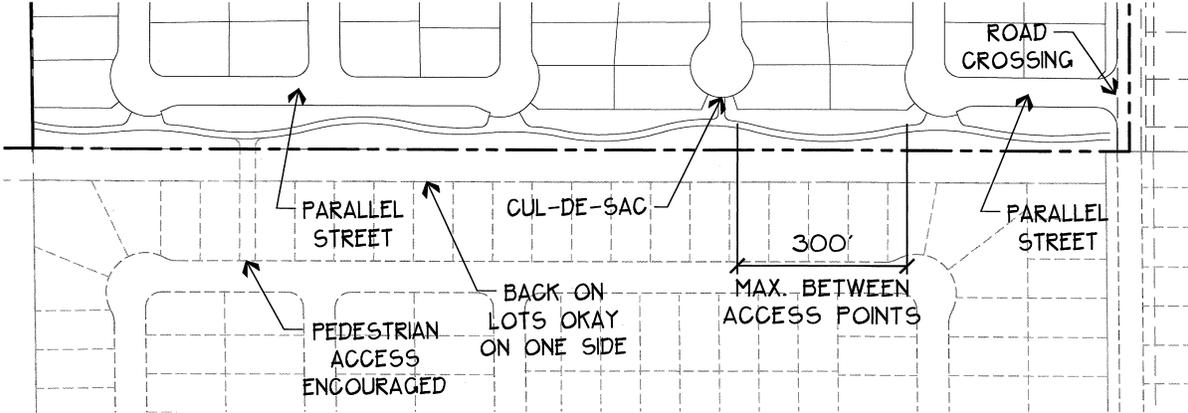
**4.3.1.6 Residential Street Standards:**

1. All residential streets will be designed in accordance with provisions set forth in this Specific Plan and the City of Elk Grove Roadway Improvement Standards. These Improvement Standards specify the following right-of-way widths for internal roadways.

<i>Local Residential Street</i>	<i>&lt; 1,000 ADT (less than 100 units)</i>	<i>40-foot width</i>
<i>Secondary Residential Street</i>	<i>1,000 to 2,000 ADT (100 to 200 units)</i>	<i>56-foot width</i>
<i>Primary Residential Street</i>	<i>2,000 to 4,000 ADT (200 to 400 units)</i>	<i>58-foot width</i>
<i>Collector Residential Street</i>	<i>&gt; 4,000 ADT (greater than 400 units)</i>	<i>58-foot width</i>

2. Local or minor residential streets serving less than 100 units may utilize a 40-foot roadway. Where it is estimated that between 100 to 200 units are served by a particular segment of roadway the 56-foot Secondary Residential Street with a separated sidewalk shall be utilized. Where 200 to 400 units are served, the 58-foot Primary Residential Street shall be utilized. Where more than 400 units load onto a particular segment of a street, the 58-foot Collector Residential Street providing separated sidewalks shall be utilized. In the absence of traffic projections for a particular street segment, ADTs may be assigned based on a reasonable distribution of traffic through the project area. For senior's or age-restricted projects the number of units that may load on a particular street may be adjusted in response to the lower ADT generated per unit as determined by the City Engineer.
3. Residential Street Interface with Open Space Corridors. Tentative subdivision maps for single-family residential projects shall be designed to ensure a positive and safe orientation toward paseos and open space corridors. Roadway access shall be provided adjacent to the paseo or open space corridor every 300-feet on average to allow surveillance. This may be accomplished by aligning residential streets adjacent to and parallel with one side of the corridor, extending cul-de-sacs into the corridor to allow visual access, or by crossing the corridor with a residential street. Back-on lots are allowed on the opposite side of the corridor from a parallel street.

**Figure 4.6: Residential Interface with Open Space Corridor**



4. Residential Street Interface with Parks. For local 2.0-acre parks residential streets shall be located on a minimum of two sides of the park to provide convenient visual and pedestrian access and curbside parking. Streets located on three or four sides are preferred. For neighborhood parks adjacent streets shall be located on two sides. Residential lots and/or elementary schools may be located on the remaining two sides.

### **4.3.2 Bikeways**

A comprehensive system of bikeways is proposed for the Plan Area that will allow for convenient access between land uses, thereby encouraging bicycling as an alternative mode of transportation. An extensive Class I and Class II bike trail system is proposed.

A Class I bike trail providing 10-feet of pavement with 2-foot shoulders (for a total of 14-feet) is provided along the south side of the Laguna Ridge Grand Parkway Corridor. As noted earlier, this facility will provide a significant connection across the Plan Area from Bruceville Road to Highway 99, and allows for connections to the west through East Franklin and potentially to the east to Elk Grove Park.

A secondary Class I bike trail system providing 8-feet of pavement is required within the north-south paseos that are shown on the Land Use Plan. This system of 8-foot trails will provide off-street trail connections through neighborhoods to schools and parks, the proposed civic center site, and allows connection to the Laguna South Parkway Corridor.

Additional Class I bike trail connections are encouraged within individual projects to link land uses and connect to the paseo and parkway system illustrated on the Land Use Plan.

In addition to the Class I bike trail system proposed, every arterial and commercial street will provide striped on-street Class II bike lanes cycling. Separated or detached 7-foot or 6-foot sidewalks are located adjacent to all arterial or collector streets to provide pedestrian walkways, however these sidewalks may also be utilized by children on bicycles.

Lastly, Class III bike routes can be designated on primary residential streets or secondary residential streets to provide further connectivity between key land uses. Class III routes can be analyzed during the review of tentative subdivision maps.

The usefulness of the bike system depends, in part, on providing reasonably direct routes to the primary activity centers within the plan area. Each village will be designed to facilitate pedestrian and bicycle access to homes, shopping, schools, parks and jobs. The bikeway system proposed will provide a connection to neighboring communities. The extensive bikeway system within the plan will provide opportunities to connect with any future bikeways in the area, and in open space corridors designated in future development within the community plan area or in nearby future master plans.

There are two fundamentally different types of bikeways: those in dedicated open space corridors and those along streets. Both serve the primary function of providing bike connections between major activity centers in the plan.

Bicycle facilities are generally categorized into three distinct classes.

Class I (Bike Path or Trail) - Provides a completely separated paved trail.

Class II (Bike Lane) - Provides a paved striped lane at the edge of the street for one-way bike travel.

Class III (Bike Route) - Shared use with vehicle traffic on a residential street.

#### **4.3.2.1 Bikeway Standards**

1. Where residential neighborhoods directly abut arterial streets, Class II or Class III bikeway access should be provided at intervals of approximately 1,000 feet. These connections may occur along residential streets connecting to the arterial, from the end of cul-de-sac or between lots. The objective should be to provide convenient routes to public transit stops or non-residential uses. The design of bikeways shall be determined with Tentative Subdivision Maps or commercial project Development Plan submittals.
2. Where residential neighborhoods abut paseos, Class I bikeway access should be provided at intervals of approximately 600 feet. These connections may occur along residential streets adjacent to the paseo, from the end of cul-de-sac or between lots. The objective should be to provide convenient routes to parks, schools, key non-residential uses and public transit. These connections may be included as part of the paseo open space corridor lot, or alternatively as an easement across or between private lots.

#### **4.3.3 Walkways**

A comprehensive hierarchy of pedestrian walkways and sidewalks meandering through parkways, paseos and landscape corridors is proposed. The Laguna South Parkway Corridor provides a major landscaped open space corridor along the north side of Whitelock Parkway and traverses the Plan Area from Bruceville Road on the east to Highway 99 on the west. It allows for a future potential connection/freeway over-crossing to Elk Grove Regional Park east of Highway 99. A number of "tributary" paseos or north-south parkways provide connections to the Laguna South Parkway Corridor, schools, parks and other land uses and encouraging pedestrian travel and alternatives to the automobile. Separated sidewalks are provided along all arterial, collector and primary residential streets within the Plan Area, providing a pleasant and comfortable walking experience. This comprehensive system of pedestrian walkways will encourage school children to walk or bike to schools and parks, and will allow convenient connections between residential land uses and non-residential land uses. Residents will be able to walk from their neighborhood to commercial and office centers, thereby encourage an alternative to vehicular travel.

##### **4.3.1 Walkway Standards:**

1. A sidewalk shall be provided to connect from commercial uses to the sidewalk alongside adjacent streets.
2. A sidewalk shall be provided along the face of commercial buildings allowing storefronts or office buildings to be linked.
3. Where lots back up to parkway corridors that contain walkways, open iron fencing is encouraged to allow visibility into these areas.
4. Access to parkway corridors should be provided from an adjacent or nearby street. This may be achieved by having streets cross perpendicular to parkway corridors, aligning a street parallel to one side of the corridor or a portion of the corridor, or access may be provided from a cul-de-sac or easement between lots as shown on previous illustrations. This access area may be included as part of the parkway or paseo corridor, or alternatively may be an easement across or between private lots.

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## **4.4 ALTERNATIVE TRANSPORTATION MODES**

### **4.4.1 PUBLIC TRANSIT**

There is presently no direct transit service into the Plan Area due to the lack of development and roadways. With the build-out of Laguna Ridge bus service will be expanded to serve residents. Generally, routes are aligned along arterial streets, however Regional Transit may also include routes that link internally through the Plan Area to provide connections to schools and parks, and between residential areas and employment or shopping areas. Elk Grove Boulevard and Bruceville Road are currently identified as transit corridors.

To support public transit and the likelihood that bus routes will follow arterial roadways, the Land Use Plan has been configured to place higher intensity land uses adjacent to arterial streets. For example, all multi-family sites are located adjacent to arterials. This type of configuration will maximize the potential for ridership.

The City of Elk Grove may choose to operate a shuttle during non-commute periods. It should be routed to provide a convenient link between residences and neighborhood/community regional commercial opportunities.

#### **4.4.1.1 Public Transit Standards**

1. Bus turnouts will be provided with the design of arterial streets on the far side of each major intersection in coordination with Regional Transit and RT improvement standards.
2. Benches and bus shelters will be provided by RT when bus service is provided along the street.

### **4.4.2 LIGHT RAIL TRANSIT/BUS RAPID TRANSIT**

Currently Light Rail Transit (LRT) extends from downtown Sacramento to two terminus points: Watt Avenue/I-80 to the northeast, and Butterfield Road/Folsom Boulevard to the east. Phase One of the "South" Line extending service to Meadowview Road has been completed and opened September 2003. This terminus point is over 5 miles north of Elk Grove Boulevard and the Plan Area.

The Phase Two-South Line extension contemplated by Regional Transit would extend LRT to Cosumnes River College. Several alignments are being studied for phase three. One alignment for the third phase of the South Line proposes to extend light rail from Cosumnes River College, east across Highway 99 to Calvine Road, and then south along the Union Pacific Railroad down to Grant Line Road. Another alignment under consideration is to extend Light Rail down Bruceville Road and Big Horn Boulevard, within the Plan Area. There are a number of constraints that face each of these alignments, including the potential for funding in the near future. The City of Elk Grove General Plan adopted the Big Horn Boulevard alignment.

Figure 4-1 – Circulation Plan locates the LRT/BRT alignment on the east side of Big Horn Boulevard. A 40-foot IOD is required behind the 25-foot landscape corridor and 60-feet x 400-feet will be required at the two proposed station sites (See Figure 4-2).

Currently, timing for Phase II is unknown and is dependent on a number of factors, including detailed study of potential alignments, environmental review of potential alignments, acquisition of right-of-way and funding for construction.

It is anticipated that Sacramento Regional Transit will arrange for bus service to link commuters with light rail stations located to the north. As an alternative to Light Rail Transit, Regional Transit is studying Bus Rapid Transit.

#### **4.4.3 ALTERNATIVE VEHICLES/LIGHT ELECTRIC VEHICLES**

A variety of alternatives to the conventional internal combustion engine currently exist or are under development. It is anticipated that the use of these alternative vehicles will continue to grow as technology brings performance, features and cost within close range of the prevalent gasoline-powered vehicles. The trend toward these types of vehicles and their potential to improve air quality is discussed in Chapter 8, Resource Management.

These alternative vehicles may include LPG/LNG powered buses, trucks or cars; electric cars or carts; hybrid designs utilizing both electric and gas-powered engines; electric scooters or other types of vehicles with low-emission systems. These vehicles will be regulated by the California Motor Vehicle Code, and lighter vehicles may be limited to low-speed residential streets, however the use of alternative vehicles is encouraged as one measure toward meeting air quality goals. All streets within each of the three sub-areas or neighborhoods are proposed to be two-lane roads, and residential collector streets include a wide travel lane and a striped bike lane allowing light vehicles to travel safely within the roadways.