



6.0 TRANSPORTATION AND CIRCULATION ELEMENT

Circulation is one of the most pervasive issues of the General Plan, and is related to land use, community design, economic development, air quality, energy consumption, and the City's infrastructure. The Circulation and Transportation element define the City's overall planned transportation system. This element identifies and establishes the City's policies governing streets and highways, public transit network, bicycle routes, pedestrian ways, and other components of the circulation system. The identified goals and policies are intended to provide guidance and specific actions to ensure the continued safe and efficient movement of people and goods within and through the City.

State law recognizes that circulation and land use are closely related, and requires that these two components of a City's General Plan be correlated. Through a comprehensive program of transportation and land use planning, the City will ensure that there is sufficient roadway capacity to accommodate traffic generated by planned future development. Loma Linda's transportation issues affect more than just the City, and are of a regional nature, involving adjacent communities as well as State and Federal agencies. Thus, the City's circulation plan has been coordinated with those of surrounding jurisdiction, as well as with the plans and programs of regional, State, and Federal transportation agencies.

6.1 EXISTING ROADWAY NETWORK

The circulation network provides the linkage between land uses and facilitates access to home, shopping, jobs, and recreation. While this network is planned to provide sufficient capacity to accommodate the growth envisioned in the General Plan, the City must plan not only for roadway capacity improvements, but also for alternatives to roadway widening such as bus, bicycle, and pedestrian circulation systems.

Figure 6.1 shows the existing roadway network. Major east-west highways (arterials) include the following:

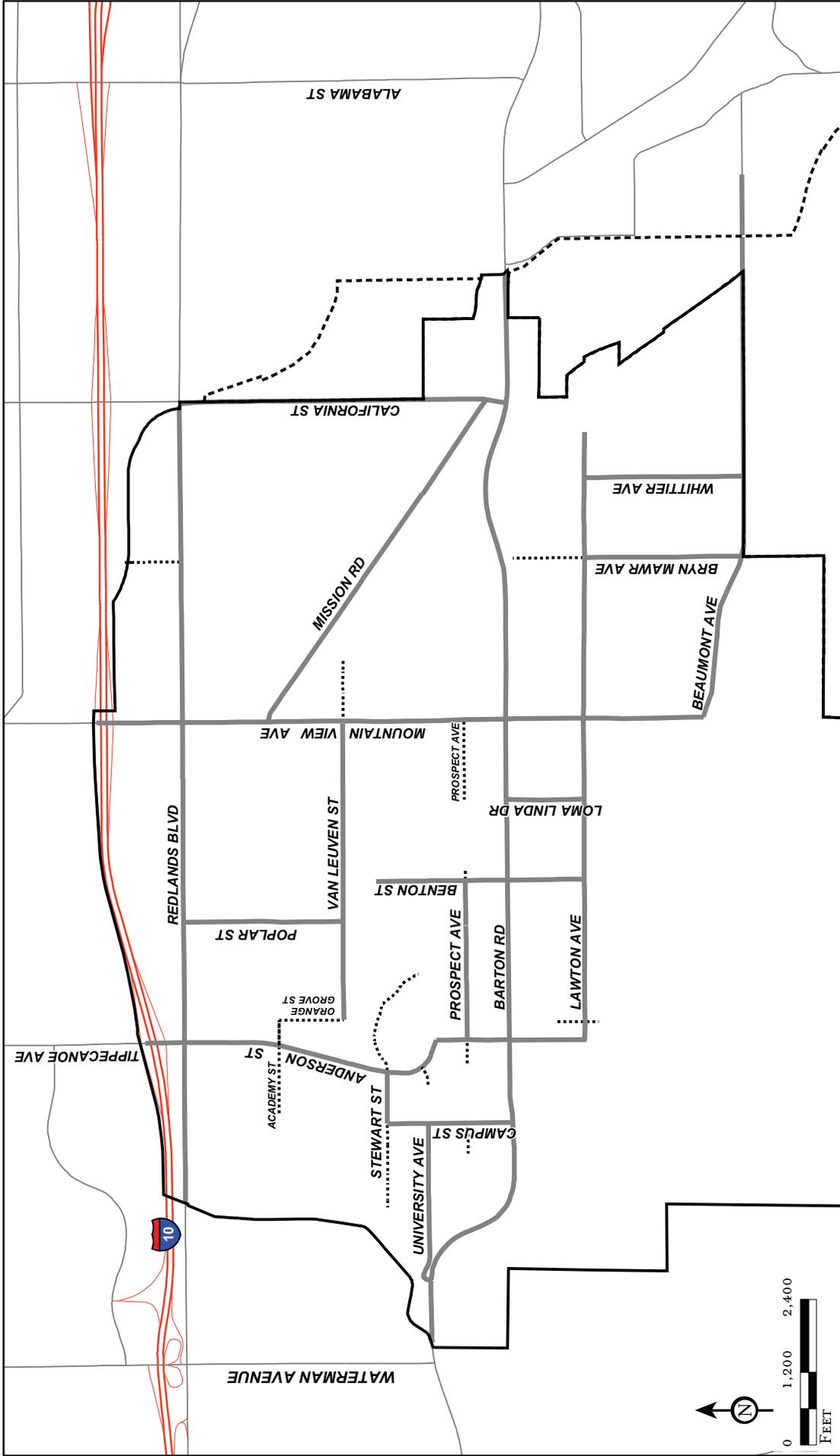


FIGURE 6.1

- LSA**
- CITY OF LOMA LINDA
 - CITY OF LOMA LINDA PLANNING AREA
 - GENERAL PLAN ROADS
 - LOCAL ROADS



- Redlands Boulevard – A four-lane roadway with a continuous two-way center turn lane. Speed limit is generally 45 mph.
- Van Leuven Street – A two-lane undivided roadway. Speed limit is generally 35 mph.
- Stewart Street – A two-lane undivided roadway. Speed limit is generally 30 mph.
- University Avenue – A two-lane undivided roadway. Speed limit is generally 35 mph.
- Prospect Avenue – A two-lane undivided roadway. Speed limit is generally 30 mph.
- Barton Road – A four-lane roadway with bike lanes and a wide, lushly landscaped median with left turn pockets at major intersections. Speed limit is 45 mph west of Mountain View Avenue and 55 mph east of Mountain View Avenue. Landscaped median exists west of Newport Avenue. Bike lanes exist west of the bridge over Union Pacific Railroad (UPRR).
- Lawton Avenue – A two-lane undivided roadway. Speed limit is generally 35 mph.
- Beaumont Avenue – A two-lane undivided roadway. Speed limit is generally 45 mph.

Major north-south highways (arterials) include the following:

- Campus Street – A two-lane undivided roadway. Speed limit is generally 30 mph.
- Anderson Street – A four-lane roadway with a two-way center turn lane or left turn pockets from the I-10 freeway to Barton Road. A two-lane undivided roadway south of Barton Road. Bike lanes exist from Court Street to University Avenue. Speed limit is 35 mph north of University Avenue, 25 mph between University Avenue and Barton Road, and 30 mph south of Barton Road.
- Poplar Street – A narrow two-lane undivided roadway. No posted speed limit.
- Benton Street – A two-lane undivided roadway. No posted speed limit.
- Loma Linda Drive – A two-lane undivided roadway. No posted speed limit.
- Mountain View Avenue – Generally, a four-lane roadway with a continuous center turn lane; speed limit is 40 mph. Narrows to three lanes (two southbound, one northbound) with no center turn lane between Van Leuven Street and Barton Road as it crosses the San Timoteo Creek and the UPRR; speed limit on this section is 35 mph.
- Bryn Mawr Avenue – A two-lane undivided roadway. Speed limit is generally 35 mph.
- Whittier Avenue – Generally, a two-lane undivided roadway. No posted speed limit other than 25 mph school zone. A two-way center turn lane exists between George Street and Picton Street.
- California Street – A two-lane undivided roadway. Speed limit is generally 45 mph.

In addition, Mission Road is an arterial that runs northwest to southeast from Mountain View Avenue to California Avenue. It is a two-lane undivided roadway. The speed limit is generally 45 mph, except for the residential area along the several hundred feet immediately east of Mountain View Avenue, where the speed limit is 35 mph.

Roadway operations and the relationship between capacity and traffic volumes are generally expressed in terms of levels of service (LOS), which are defined using the letter grades A through F, with LOS A being best and LOS F being worst. LOS A, B, and C indicate conditions where traffic can move relatively free. LOS D describes conditions where delay is more noticeable, and average travel speeds during peak hours are as low as 40 percent of the free flow speed. LOS E indicates significant delays and average travel speeds as low as one-third of free flow speed or lower where traffic volumes are at or close to capacity. Finally, LOS F characterizes flow at very slow speeds (stop and go) and intersection delays over one minute as traffic exceeds the roadway's capacity. These levels



recognize that, while an absolute limit exists as to the amount of traffic traveling through a given intersection (the absolute capacity), the conditions that motorists experience rapidly deteriorate as traffic approaches the absolute capacity. Under such conditions, congestion is experienced. Brief descriptions of the six levels of service are as follows:

Table 6.A: Level of Service Definitions and Volume-to-Capacity Ratios

Level of Service Definitions		Roadway and Intersection Volume-to-Capacity Ratio	
LOS	Description		
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation. <i>Conditions of free flow; speed is controlled by driver's desires, speed limits, or physical roadway conditions.</i>	0.00 to 0.30	0.00 to 0.60
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles. <i>Conditions of stable flow; operating speeds begin to be restricted; little or no restrictions on maneuverability from other vehicles.</i>	0.31 to 0.49	0.61 to 0.70
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. <i>Conditions of stable flow; speeds and maneuverability are more restricted; occasional backups behind left-turning vehicles at intersections.</i>	0.50 to 0.71	0.71 to 0.80
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups. <i>Conditions approach unstable flow; tolerable speeds little freedom to maneuver; comfort and convenience low; at intersection, some motorists, especially those making left turns, may wait through one or more signal changes.</i>	0.72 to 0.88	0.81 to 0.90
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand. <i>Conditions approach capacity; unstable flow with stoppages of momentary duration; maneuverability severely limited.</i>	0.89 to 1.00	0.91 to 1.00
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds reduce substantially and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.	>1.00	>1.00

Sources: Transportation Research Board, Highway Capacity Manual, 1994. DKS Associates.

All of the intersections in the City currently operate at LOS C or better except for the Anderson Street/1-10 Westbound Ramps and Richardson Street/Redlands Boulevard during the p.m. peak hour when both intersections operate at LOS F. The average daily traffic volumes are shown in Figure 6.2.



6.2 BICYCLE FACILITIES

According to the Caltrans Highway Design Manual, bicycle facilities are categorized by the degree of separation from motorized vehicles that they provide for bicycles:

- Class I facilities provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with crossflow minimized.
- Class II facilities provide a striped lane for one-way bike travel on a street or highway.
- Class III facilities provide for shared use of a lane with pedestrian or motor vehicle traffic.

Figure 6.3 illustrates existing bicycle facilities in the City.

6.3 PUBLIC TRANSPORTATION

Omnitrans is the primary provider of public transportation within the western portion of San Bernardino County, including the City of Loma Linda. Omnitrans operates five routes that traverse Loma Linda. The Riverside Transit Authority also operates one route that connects Loma Linda to downtown Riverside. There are about 60 bus stops in the City, with approximately 1,400 average weekday boardings on all Omnitrans routes in Loma Linda. According to the Riverside Transit Authority, approximately 29,000 passengers ride its Route 25 monthly; however, data are not available identifying the number of passengers boarding or leaving buses in Loma Linda. LLUMC and the VA Medical Center dial-a-ride also provide limited bus services.

6.4 PARKING

Parking requirements and standards for development within the City of Loma Linda are incorporated in the City's Zoning Ordinance. Parking facilities currently appear to be adequate throughout the community, except for areas around Loma Linda University and the Loma Linda University Medical Center. Because of the high parking demand generated by the University and Medical Center, parking is at a premium in this portion of the City. The proximity of residential areas to the University and Medical center highlights the need to expand off-street parking availability in the area. In response to residents' concerns about the availability of parking on local streets, the City has instituted a residential preferential parking permit program. Under this program, parking on residential streets in the vicinity of the University and the Medical Center is restricted to residents and their guests from 8:00 a.m. to 5:00 p.m. on weekdays. Residents are issued one permit per registered vehicle plus one guest pass.

6.5 TRUCK ROUTES

The City has designated Redlands Boulevard, Anderson Street, Mountain View Avenue north of Barton Road, and Barton Road as truck routes. No other roads in the City are designated as truck routes.

6.6 PEDESTRIAN ROUTES/TRAILS

The City facilitates pedestrian travel through the design of pedestrian-oriented neighborhoods with well-connected streets and sidewalks. The City also provides convenient and safe sidewalk routes to shopping, schools and recreation areas. One such route connects Hulda Crooks Park to Beaumont Avenue thus encouraging pedestrian travel. In addition, the City provides an off-road trail system designed for walking and hiking activities. The Conservation and Open Space Element includes the Trails Plan which covers the City and sphere of influence. One of these proposed pedestrian trails is

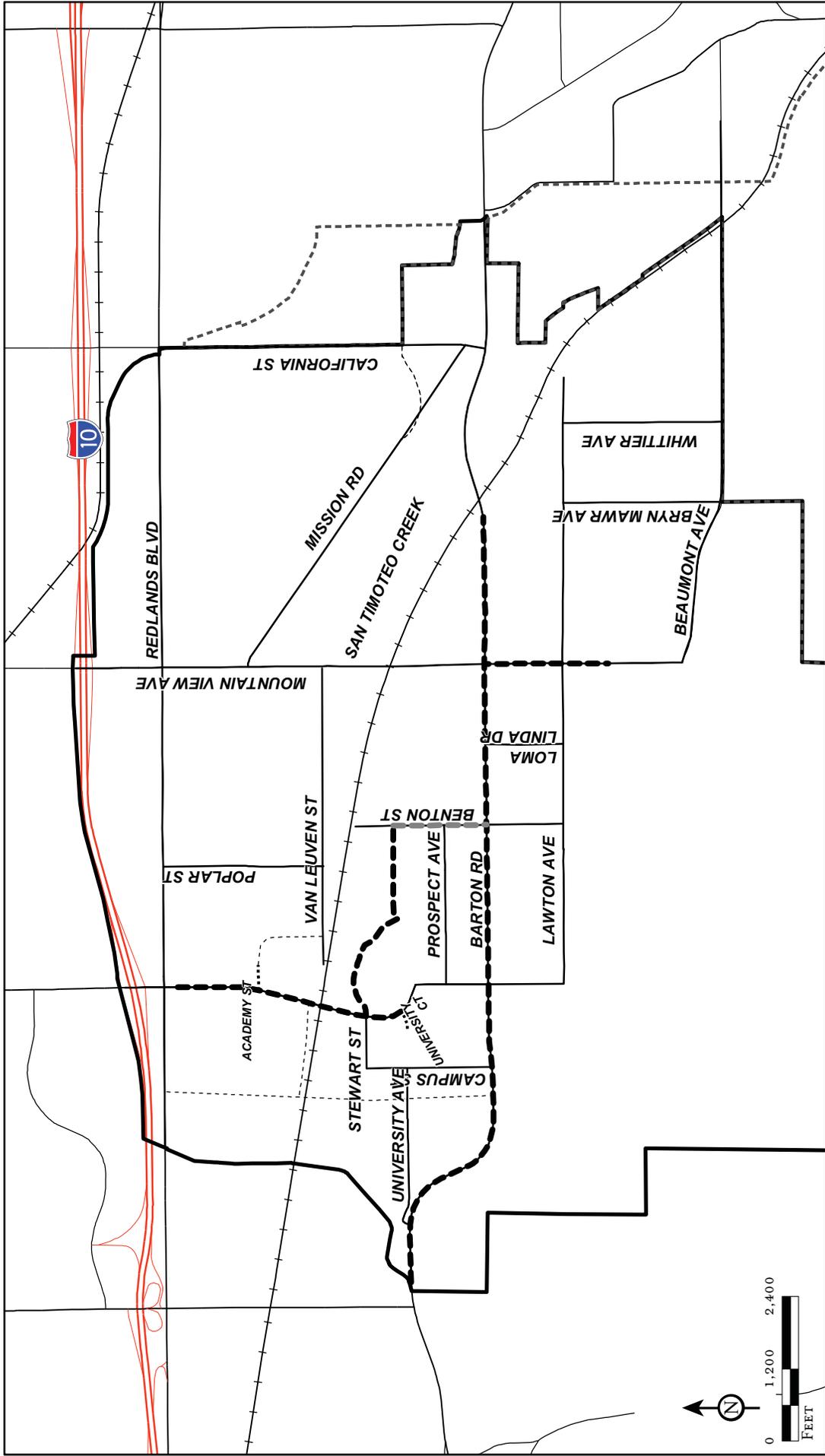


Figure 6.3

L S A

- City Boundary
- City Sphere of Influence
- FUTURE ROADS
- GENERAL PLAN ROADS
- LOCAL ROADS
- Class II Bicycle Facility
- Class III Bicycle Facility



the Edison Easement Trail, which is partially complete, and parallels Mountain Avenue between Redlands Boulevard and Beaumont Avenue. This trail, as shown on the Figure 9.1 (Conservation and Open Space Element), continues throughout the Badlands on the several utility easements in the area with the consent of the landowners, Southern California Edison Company. Another proposed trail, the San Timoteo Creek Trail, follows the creek from Anderson Street to the City limits, providing the flood control district grants approval. For further discussion of the Trail System see the Conservation and Open Space Element.

6.7 RAILROAD LINES

A Union Pacific Railroad (UPRR) line runs from northwest to southeast through the City. Grade separations exist at Anderson Street, Mountain View Avenue, and Barton Road. In addition, a Burlington Northern Santa Fe Railroad (BNSF) line runs along part of the City's northern border. However, the Mission Channel physically separates this railroad line from the rest of Loma Linda. Neither railroad has any spur lines that serve properties in Loma Linda.

6.8 REGIONAL TRANSPORTATION IMPROVEMENT PLANS

Several planned transportation improvements have been programmed for completion in the seven-year Capital Improvement Program (CIP) contained in the San Bernardino Congestion Management Program (CMP). The County CMP provides the overall direction and approach for the regional transportation system, and includes specific projects that may affect the future regional transportation system. The projects included in the CIP are those that:

- Maintain or enhance the performance of the multi-modal transportation system, and minimize travel delay;
- Assist in focusing available transportation funding on cost-effective responses to subregional and regional transportation needs;
- Provide for technical consistency in multi-modal transportation system analysis;
- Help to coordinate development and implementation of subregional transportation strategies across jurisdictional boundaries;
- Anticipate the impacts of proposed new development on the multi-modal transportation system, provide consistent procedures to identify and evaluate the effectiveness of mitigation measures, and provided for adequate funding of mitigation measures;
- Promote air quality and improve mobility through implementation of land use and transportation alternatives or incentives that reduce both vehicle trips and miles travels, and vehicle emission; and
- Participate in tier I and II traffic signal coordination with SANBAG.

The following regional roadway improvements within the City of Loma Linda are identified in the CMP Capital Improvement Program and the Final 2002 Regional Transportation Improvement Program (RTIP):

- Anderson Street/Tippecanoe Avenue from University Court to Hospitality Lane – Provide traffic signal coordination and timing interconnect at seven traffic signals and install emergency preemption of traffic signal operation;
- Mountain View Avenue from Van Leuven to Prospect – Widen existing bridge from three lanes to four lanes – Add pedestrian walkway to outside of bridge;
- Redlands Boulevard at California Street – Widen intersection and install traffic signals and drainage;



- Redlands Boulevard from east City limits to west City limits – Widen from four lanes to six lanes; and
- California Street from Barton Road to Redlands Boulevard – Widen from two to four lanes.

6.9 CIRCULATION ISSUES AND OPPORTUNITIES

Evans Street/West Road Extension. To assist in relieving the congestion on Anderson Street, a new north-south roadway is being planned to connect Redlands Boulevard and Barton Road. This will also relieve congestion at the Anderson Street/Tippecanoe Avenue interchange, and will provide an alternative route to access the University and Medical Center, as well as other facilities within Loma Linda.

Anderson Street/Tippecanoe Avenue Interchange–Redlands Boulevard/Anderson Street. As noted in the existing conditions, this intersection operates at LOS F during p.m. peak hours. In addition, the existing geometrics of the intersection make southbound right turns difficult for trucks servicing existing commercial uses along Redlands Boulevard. Modification of the curb line at the northwest quadrant of the intersection is needed to improve the truck turning radius. The interchange will be reconstructed with a westbound loop on-ramp and wider eastbound ramps. Construction of this interchange will include an eastbound auxiliary lane on the freeway up to the Anderson Street/Tippecanoe Avenue interchange. While the General Plan Master Plan of Roadways includes this proposal, it is the General Plan’s intent that the Master Plan of Roadways reflects the ultimate recommendation of the working group once it is finalized.

Mountain View Avenue Interchange. As part of a regional truck traffic study, improvements to this interchange are being reviewed. It is anticipated that improvements to this interchange will be constructed in the future.

Redlands Boulevard/California Avenue Intersection. Improvements to this intersection are necessary to realign the two streets and eliminate the current offset configuration.

California Street/Mission Road and California Street/Barton Road Intersections. These intersections are in close proximity. Realignment of Mission road to move its intersection with California Street to the north is proposed in the General Plan.

Access to South Hills. In order to protect the sensitive environment of the South Hills and retain its natural character, limitations on access into this area are set forth in Chapter 2A, Growth Management, and Implementing Policy 6.10.1c of this Element.

6.9.1 Future Traffic Demands

New development within the City of Loma Linda along with regional growth will result in an increase in traffic volumes within the City. Loma Linda recognizes that even by constantly expanding the local roadway network and providing an ongoing sequence of programmed street improvements, problems of traffic congestion will continue. Providing a real solution to traffic congestion requires a balanced approach to future transportation improvements.

In order to estimate the effect of future traffic on the City’s arterial roadway system, the East Valley Traffic Model was used. The model included the land uses proposed in the General Plan Update as well as the most recent data for long-range regional transportation patterns (Figure 6.4). To accommodate this anticipated increase in traffic volumes, a master circulation plan was developed. Figure 6.5 illustrates Loma Linda’s Circulation Plan, which has been developed to provide acceptable access to and within the City with General Plan build out.

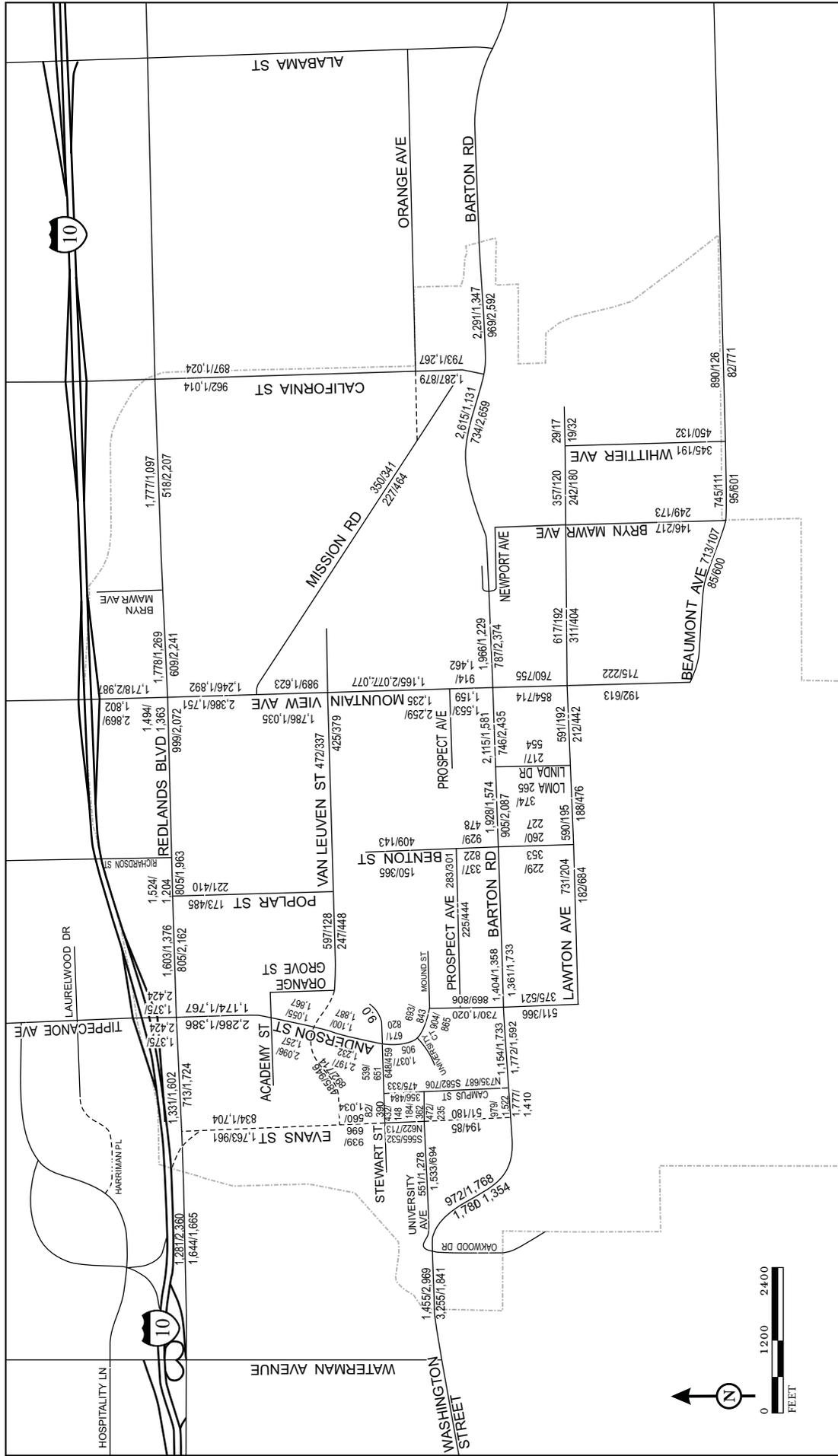


FIGURE 6.4

LSA

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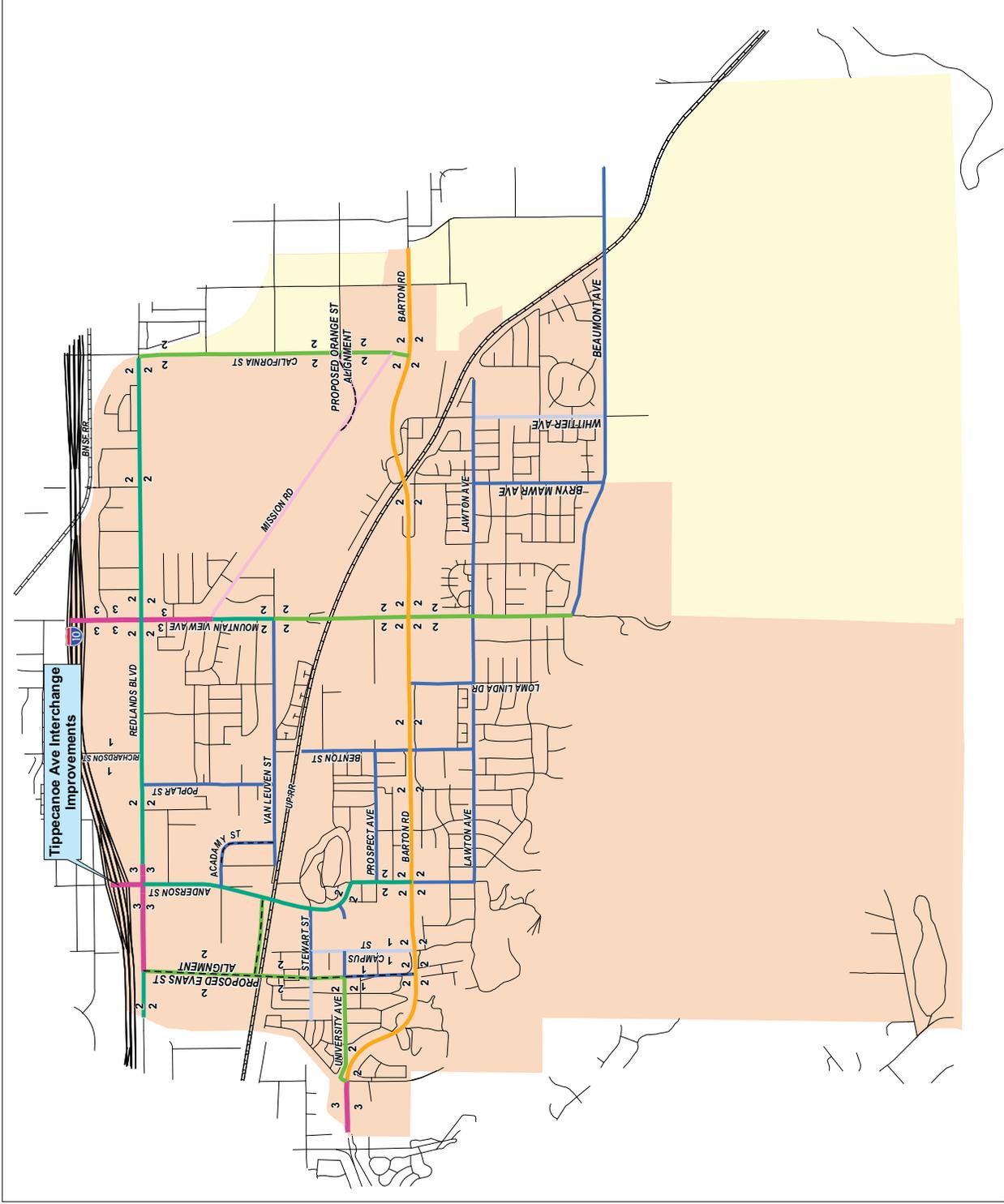
PEAK HOUR TRAFFIC VOLUME AM/PM*

FUTURE ROADWAY (ALIGNMENT UNDETERMINED)

CITY OF LOMALINDA

*Northbound values are on the east side of road
 Southbound values are on the west side of road
 Eastbound values are on the south side of road
 Westbound values are on the north side of road

City of Loma Linda General Plan
BUILD OUT PEAK HOUR TRAFFIC VOLUMES

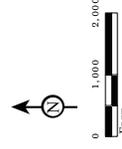


LEGEND

- - - FUTURE ROADWAY
- 2-LANE UNDIVIDED LOCAL STREET
- 2-LANE UNDIVIDED ROADWAY
- 2-LANE DIVIDED ROADWAY
- 4-LANE UNDIVIDED ROADWAY
- 4-LANE DIVIDED ROADWAY
- MODIFIED 4-LANE UNDIVIDED ROADWAY
- 6-LANE UNDIVIDED ROADWAY
- 6-LANE DIVIDED ROADWAY

JURISDICTIONAL AND INFRASTRUCTURE

- SPHERE OF INFLUENCE
- CITY LIMIT
- FREEWAY
- RAILROAD



SOURCE: Parcel Base - City of Loma Linda, Thomas Bros. 2001

LSA

FIGURE 6.5



This plan includes existing and proposed major thoroughfares. Loma Linda's roadway classifications consist of the following categories:

- *Freeway.* Freeways are divided highways with full control of access and grade separations for all intersecting traffic flows. There are no intersection at-grade, traffic signals, pedestrians, or parking on freeways to interfere with the continuity of high-capacity, high-speed traffic flow. Freeways are designed to provide regional rather than local traffic movement.
- *Six-lane Divided Highway.* A major arterial roadway with six lanes of through traffic (three in each direction) with a landscaped, raised median. This roadway serves large volumes of through traffic between different sections of the City and may provide access to freeways. The primary function of this arterial is to provide for through traffic movement. The six-lane divided highways have been proposed to provide sufficient carrying capacity so as to prevent the undesirable diversion of through traffic into residential neighborhoods. Additional turning lanes are typically provided at intersections.
- *Six-lane Undivided Highway.* A major arterial roadway with six lanes of through traffic (three in each direction) and no median: This roadway serves large volumes of through traffic between different sections of the City and may provide access to freeways. The primary function of this arterial is to provide for through traffic movement. The six-lane undivided highways have been proposed to provide sufficient carrying capacity so as to prevent the undesirable diversion of through traffic into residential neighborhoods. Additional turning lanes are typically provided at intersections.
- *Four-lane Divided Highway.* A four-lane (two in each direction) primary arterial highway with a landscaped, raised median. Direct access for individual uses along four lane divided highways is limited to intersecting streets and major driveways serving larger uses. Four-lane divided highways have been proposed to provide sufficient carrying capacity so as to prevent the undesirable diversion of through traffic into residential neighborhoods. Additional turning lanes are typically provided at intersections.
- *Four-lane Undivided Highway.* A secondary arterial highway with four lanes of roadway (two in each direction) and no median. Arterials need to have sufficient carrying capacity so as to prevent the undesirable diversion of through traffic into residential neighborhoods. Four-lane undivided highways have been proposed to provide sufficient carrying capacity so as to prevent the undesirable diversion of through traffic into residential neighborhoods. Left-turn lanes are typically provided at intersections.
- *Modified Four-lane Undivided Highway.* A secondary arterial highway with four lanes of roadway (two in each direction) with a continuous two-way center turn lane: Arterials need to have sufficient carrying capacity so as to prevent the undesirable diversion of through traffic into residential neighborhoods. Modified four-lane undivided highways have been proposed to provide sufficient carrying capacity so as to prevent the undesirable diversion of through traffic into residential neighborhoods. Left-turn lanes are typically provided at intersections.
- *Two-lane Divided Highway.* A collector street with relatively moderate-speed, moderate-volume, with two through lanes (one in each direction), designed for circulation within and between neighborhoods with a landscaped, raised median: These roads serve relatively short trips, and are meant to collect and distribute traffic from local streets to the arterial network. Left-turn lanes are typically provided at major intersections.
- *Two-lane Undivided Highway.* A collector street with relatively moderate-speed, moderate-volume, with two through lanes (one in each direction), designed for circulation within and between neighborhoods. These roads serve relatively short trips, and are meant to collect and



distribute traffic from local streets to the arterial network. Left-turn lanes are typically provided at major intersections.

The recommended General Plan build out roadway classifications are as follows:

- **Redlands Boulevard:** A divided six-lane highway between Evans Street and approximately 400 feet east of Anderson Street. A four-lane divided highway at all other segments with additional through lanes at the intersection with Mountain View Avenue.
- **Van Leuven Street:** A four-lane undivided highway between Evans Street and Anderson Street. A two-lane undivided highway between Academy Street and Mountain View Avenue.
- **Stewart Street:** A two-lane local street west of Evans Street. A two-lane undivided highway between Evans Street and Anderson Street.
- **University Avenue:** A two-lane undivided highway.
- **Prospect Avenue:** A two-lane undivided highway.
- **Barton Road:** A four-lane divided highway with bike lanes and a wide, lushly landscaped median with left-turn pockets at major intersections. A special circumstances roadway between western City limits and University Avenue and between Loma Linda Drive and eastern City limits.
- **Lawton Avenue:** A two-lane undivided highway.
- **Beaumont Avenue:** A two-lane undivided highway.
- **Evans Street:** A four-lane undivided highway between Redlands Boulevard and University Avenue. A two-lane undivided highway between University Avenue and Barton Road.
- **Campus Street:** A two-lane local street.
- **Anderson Street:** A six-lane undivided highway between the I-10 Ramps and Redlands Boulevard. A modified four-lane undivided highway with a two-way center turn lane or left-turn pockets from I-10 to Barton Road. A two-lane undivided highway south of Barton Road. Bike lanes from Court Street to University Avenue.
- **Academy Street:** A two-lane undivided highway between Anderson Street and Van Leuven Street.
- **Poplar Street:** A two-lane undivided highway.
- **Benton Street:** A two-lane undivided highway.
- **Loma Linda Drive:** A two-lane undivided highway.
- **Mountain View Avenue:** An undivided six-lane highway between I-10 Ramps and Mission Road. A modified four-lane undivided highway with a continuous center turn lane between Mission Road and Van Leuven Street. An undivided four-lane highway between Van Leuven Street and Beaumont Avenue.
- **Bryn Mawr Avenue:** A two-lane undivided highway.
- **Whittier Avenue:** Generally, a two-lane local street. A two-way center turn lane exists between George Street and Picton Street.
- **Mission Road:** A two-lane divided highway running northwest to southeast from Mountain View Avenue to California Street.
- **California Street:** A four-lane undivided highway.



- *Local Streets.* These streets are primarily used for access to individual abutting land uses. These streets are more pedestrian-oriented than collector or arterial roadways, and will also carry higher volumes of bicycle traffic. Through vehicular traffic is discouraged.
- *Special Circumstances.* Traffic volumes along certain roadways require special treatment, and are identified on the Circulation Plan as having “Special Circumstances.” These include the southern end of proposed Evans Street between University Avenue and Barton Road, which is to be designed as a two-lane street, with a continuous two-way left turn lane in the median. Redlands Boulevard is to be provided with additional through lanes at its intersection with Anderson Street. Similarly, Benton Street is to be with additional through lanes at its intersection with Barton Road. To preserve the historic district, a two-lane divided highway is to be provided on a major portion of Mission Road even though the volume on the roadway meets the guidelines for a four-lane roadway.

6.10 GUIDING POLICY

Provide a balanced, convenient, energy-efficient, and safe transportation system that incorporates all feasible modes of transportation.

6.10.1 Vehicular Circulation

Transportation conditions on Loma Linda roadways are generally acceptable, with congestion developing at the intersections of major roadways at freeway interchanges during peak hours. As traffic volumes increase throughout the City due to future development within Loma Linda and surrounding communities, it will be critical to improve the local roadway system to provide additional capacity, including extending or expanding existing roadways, and providing connections between existing roadways.

Implementing Policies - Vehicular Circulation

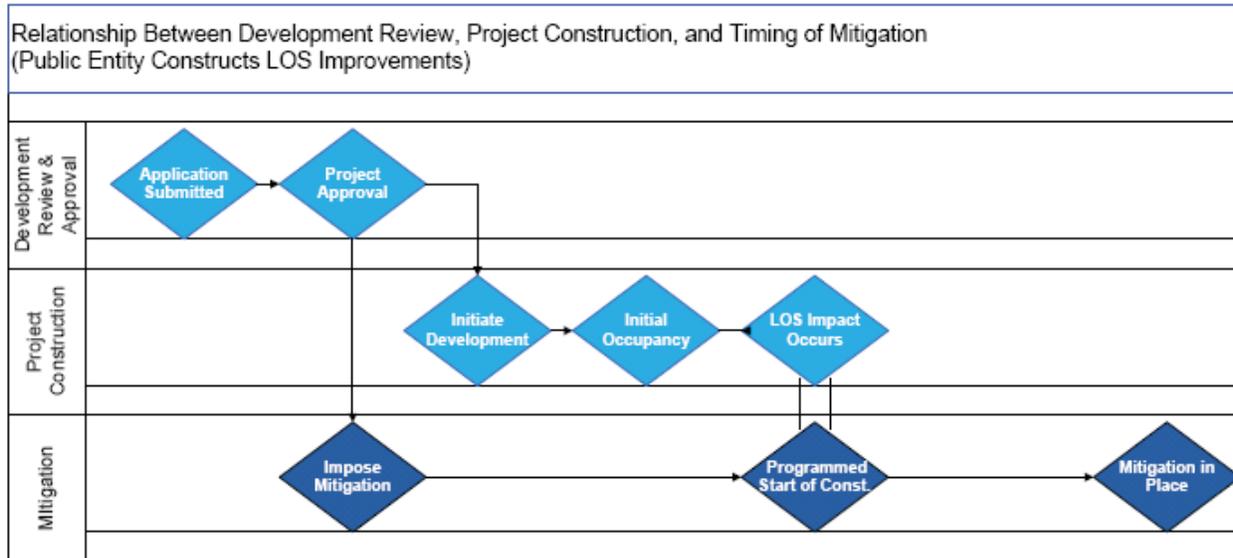
- a. Maintain long-term traffic levels of service at LOS C.
 - (1) In those locations where maintaining LOS C is not feasible and Measure V permits a lower level of service, implement all feasible mitigation measures.
- b. Require all development projects to provide their fair share (in the form of physical improvements and/or fee payment) for all feasible improvements needed to implement Policy “a,” above.
 - (1) Where it is determined that it is not feasible to impose the mitigation measures necessary to meet City LOS standards on a project that is not exempt from the traffic level of service standards set forth in Measure V, development shall not be permitted to proceed unless and until the project is able to meet applicable level of service standards in Measure V.
- c. Where the payment of fees is accepted as mitigation in lieu of actual construction of physical improvements, such fee payment shall be considered to be adequate mitigation if, at the time of project approval, a public agency has programmed construction of the improvements needed to meet City LOS standards to commence at or prior to the time that the proposed project is anticipated to cause or contribute to the deterioration of traffic levels of service below City standards.¹ Notwithstanding the above, developments impacting the California/Redlands, Benton/Barton, and Anderson/Redlands intersections or requiring the realignment of Orange

¹ Generally, this would be considered to be opening day of the project (first occupancy), unless a traffic study approved by the City identifies a later date.

² “Existing” levels of service and the level of service standard to be applied to the project is to be determined at the time an application is deemed complete and an initial study pursuant to the requirements of CEQA is prepared, and not at the time of project approval.



Street shall be conditioned to require the provision of needed physical improvements rather than payment of fair share fees.



- d. Alternatively, if the physical improvements are to be constructed by a private entity, construction of the needed improvements shall have begun prior to the time that the proposed project causes or contributes to the deterioration of traffic levels of service below City standards.
- e. Facilitate roadway capacity by implementing the Loma Linda Circulation Plan.
 - Pursue the Evans Street interchange and roadway extension.
 - Although included in regional funding for additional lanes, maintain a four-lane divided highway on Redlands Boulevard except at intersection of Anderson Street where additional through lanes will be necessary.
 - Widen roadways as feasible consistent with the General Plan Circulation map, consistent with City level of service objectives.
- f. Promote the design of arterial and collector roadways to optimize safe traffic flow within established roadway configurations by minimizing driveways and intersections, uncontrolled access to adjacent parcels, on-street parking, and frequent stops to the extent consistent with the character of adjacent land uses.
- g. As development occurs, provide adequate capacity at intersections to accommodate future traffic volumes by installing intersection traffic improvements and traffic control devices, as needed.
- h. Facilitate the synchronization of traffic signals along Redlands Boulevard, Barton Road, Anderson Street, and Mountain View Avenue.
- i. Require the provision of reciprocal access and parking agreements between adjacent land uses where appropriate to facilitate off-street vehicular movement between adjacent commercial and other non-residential uses, and to reduce the number of driveways along major roadways.
- j. Encourage regional goods movement to remain on area freeways and other appropriate routes.
- k. Require the design of new developments to focus through traffic onto arterial streets, and away from local neighborhoods.



- I. Require that existing driveways that are unnecessary or substandard be removed or upgraded, wherever feasible, in conjunction with any on-site development or any adjacent street construction.
- m. Where single-family residences have no feasible alternative but to front on collector or arterial roadways, require, wherever possible, that circular driveways or on-site turnarounds be provided to eliminate the need for residents to back onto the street.
- n. Locate driveways on corner parcels as far away from the intersection as is possible.
- o. Avoid locating driveways within passenger waiting areas of bus stops or within bus bays. Locate driveways so that drivers will be able to see around bus stop improvements.
- p. Where a series of traffic signals is provided along a route, facilitate the coordination of traffic signals to optimize traffic progression on a given route. Traffic signalization should emphasize facilitating access from neighborhood areas onto the City's primary roadway network, and should work to discourage through traffic from using local streets.
 - Require developments impacting traffic along Redlands Blvd., Barton Road, Anderson Street or Mountain View Avenue to provide a fair share contribution for to the synchronization of traffic signals along the impact road(s).
 - If the City has not yet adopted an implementation mechanism for these improvements, require the project applicant to install the required synchronization, and the City will enter into a reimbursement agreement with the applicant to be reimbursed as future funds are received by the City for that improvement.
- q. Expand intersections to include additional turning and through lanes at intersections where needed to relieve congestion and improve intersection operation, so long as the intersection can continue to accommodate pedestrians and bicyclists. Avoid traffic system improvements that facilitate vehicular turning and bus movements, but that also discourage pedestrian or bicycle movements.
- r. Maintain the first priority for public streets of providing safe and efficient travel for the public with on-street parking as a second priority.
- s. Pursue construction of parking structures within the downtown area to serve projected parking demand and facilitate mixed-use development without the need to meet off-street parking standards on each individual parcel.
- t. Work with the Loma Linda University/Medical Center to provide a direct connection of Van Leuven Street to Anderson Street, preferably at the existing intersection of Academy Street.
- u. Work with the Loma Linda Academy to modify its entry to provide stacking room for parents' vehicles waiting to drop off or pick up students.
- v. As part of the development of the mixed-use area west of California Street, realign Mission Road to connect to Orange Street. West of California Street, design the realigned Mission Road to maximize access to lands north of Barton Road.
- w. Place ultimate responsibility for mitigating the impacts of future growth and development, including construction of a new and widened roadways, as well as intersection improvements, with individual development projects. The City's Capital Improvements Program will be used primarily to address the impacts of the existing development, and to facilitate adopted economic development programs.
- x. Ensure that development projects pay applicable traffic mitigation fees and provide appropriate participation in relation to improvements for routes of regional significance.



- y. Within hillside areas, develop roads to standards appropriate to the character and topography of the area. In addition, provide for dispersion of traffic dispersion so as to prohibit direct alignment or new roadways with Whittier Avenue, Bryn Mawr Avenue, or Wellesley Avenue.

6.10.2 Non-motorized Transportation

Bicycling and walking are key elements of Loma Linda's planned circulation system. A trail system has been adopted and is shown in Figure 9.1 of the Conservation and Open Space Element. In addition, the City currently has an extensive network of sidewalks that enhance neighborhoods' accessibility, and help to reduce reliance on the private automobile for mobility within the community.

Maintaining a system of bicycle facilities in Loma Linda is important, both as recreation and transportation. Bikeways are becoming increasingly important because they are a non-polluting alternative mode of transport, and provide links to schools, civic and neighborhood shopping centers and employment within the region. By providing bicycle routes throughout the City, riders will be able to travel with a greater sense of security (Figure 6.6).

The City's Master Plan of Bikeways as shown in Figure 6.6 has three bicycle facility classifications. Bike trails (Class I) are facilities at least eight feet in width that are physically separated from vehicular roadways and are reserved exclusively for bicycle use. Bike lanes (Class II) consist of a painted stripe reserving at least five feet nearest the curb for bicycle use. Bike routes (Class III) are designated only with signs and are mainly used to bridge short distances between bike lanes or trails.

Implementing Policies – Non-motorized Transportation

- a. Design new residential neighborhoods to provide safe pedestrian and bicycle access to schools, parks and neighborhood commercial facilities through explicit development requirements for such amenities.
- b. Provide lighting that is attractive, functional, and appropriate to the character and scale of the neighborhood or area, and which contributes to pedestrian, and bicycle safety.
- c. Maintain roadway designs that maintain mobility and accessibility for bicyclists and pedestrians through incorporation of sidewalks and bicycle lanes, where appropriate.
- d. Integrate multi-use paths into creek corridors, railroad rights-of-way, utility corridors, and park facilities through proactive coordination with property owners and developers.
- e. Where shopping facilities are located adjacent to residential areas, provide direct access between residential and commercial uses without requiring pedestrians and bicyclists to travel completely around the commercial development through stipulations in the design review process.
- f. Require the construction of attractive walkways in new residential, commercial, office, and industrial developments, through the use of landscaping which includes shading for pedestrian paths.
- g. Orient site design in non-residential areas to allow for safe and convenient pedestrian access from sidewalks, transit and bus stops, and other pedestrian facilities, in addition to access through required parking facilities.

6.10.3 Transit

Although rail transit service is not currently available in Loma Linda, there has been discussion regarding the potential of extending Metrolink service to the Loma Linda area. In addition, the Riverside Transit Authority and Omnitrans provide public bus transportation over six separate bus routes in the City. These bus routes provide a necessary transportation service by improving access

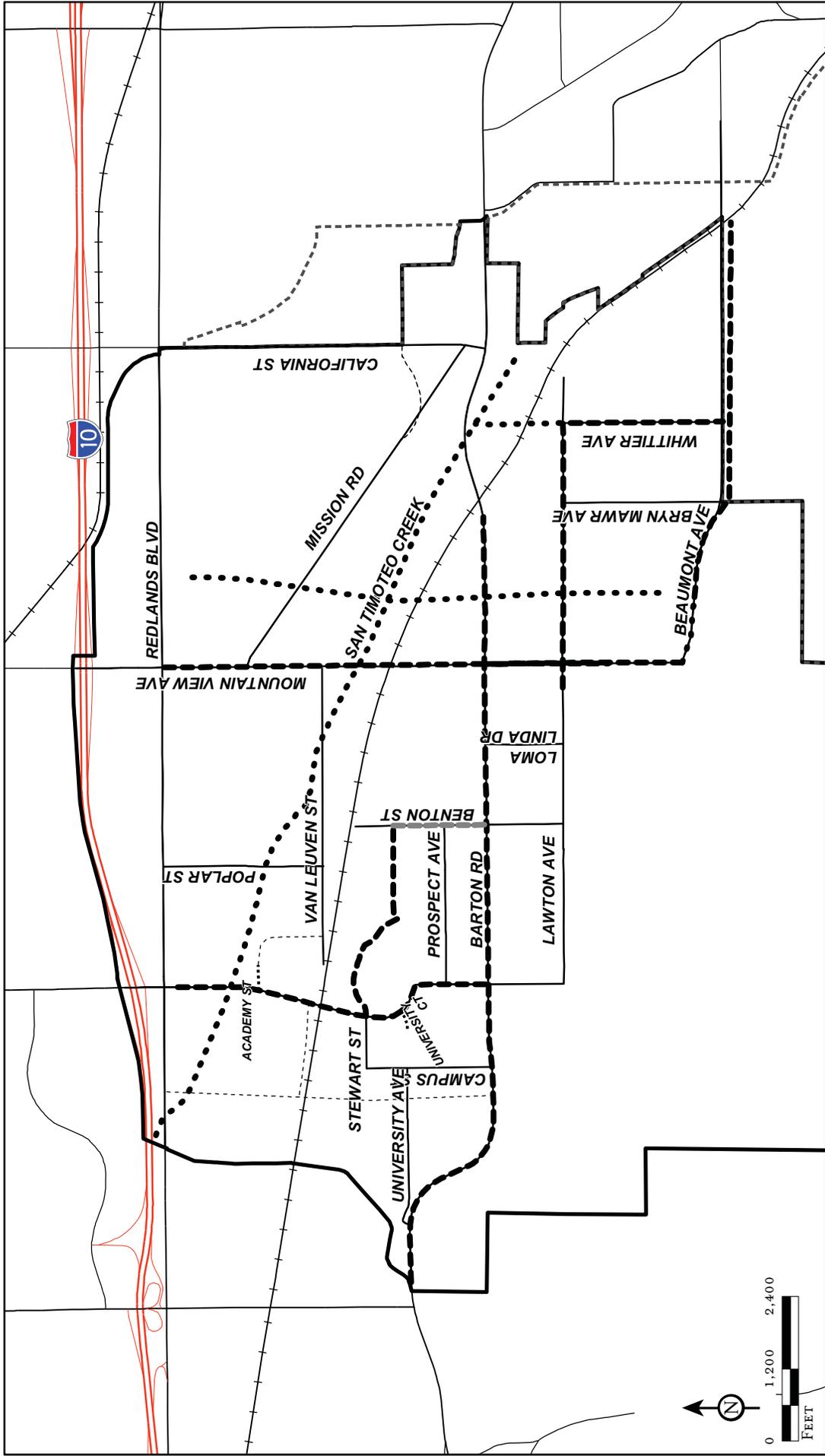


Figure 6.6

LSA

- City Boundary
- City Sphere of Influence
- FUTURE ROADS
- GENERAL PLAN ROADS
- LOCAL ROADS
- Class I Bicycle Trail
- Class II Bicycle Facility
- Class III Bicycle Facility



to employment and service centers such as Loma Linda University and the Veterans Hospital. Omnitrans and the cities of Loma Linda and San Bernardino are also involved in a major transit initiative called the “E Street Locally Preferred Alternative,” which involves establishment of transit-oriented development at key locations to serve as the impetus for expanding public transit services to the area. The Loma Linda City Council has gone on record as supporting the E Street Locally Preferred Alternative

Implementing Policies for Transit

- a. Ensure that the site design of new developments provides for pedestrian access to existing and future transit routes and transit centers through specific review during the development review process.
- b. Preserve options for future transit use when designing roadway and highway improvements.
- c. When applicable, such as adjacent to E Street Locally Preferred Alternative station(s), include Omnitrans in the review of new development projects, and require new development to provide transit improvements in proportion to traffic demands created by the project. Transit improvements may include direct and paved access to transit stops; provision of bus turnout areas and bus shelters; and roadway geometric designs to accommodate bus traffic.
- d. Support transit-oriented development in proximity to E Street Locally Preferred Alternative station(s). Such development would include a variety of retail, housing, employment opportunity, healthcare, and civic/governmental uses in walking distances of stations to encourage transit ridership and address air quality and traffic congestion concerns. In addition, support integration of E Street Locally Preferred Alternative transit stations into nearby planned developments and attractively landscaped pedestrian linkages interconnecting transit supportive uses to the transit stations.
- e. Encourage ridership on public transit through use of City information sources (e.g., City web site, and mail-outs) to provide information on transit services.
- f. Encourage extension of Metrolink service to the Loma Linda area, including assistance in locating and developing a Metrolink station within Loma Linda should service be extended to the area.
- g. Require community care facilities and large age-restricted developments (50 units or more, but excluding facilities designed for “active” adults) to provide transportation services for the convenience of residents as a condition of development.