Circulation Element





TABLE OF CONTENTS				
	Page			
PURPOSE OF THIS ELEMENT	1			
RELATIONSHIP TO OTHER ELEMENTS	1			
VISION - CIRCULATION	2			
ANALYSIS OF BASELINE CONDITIONS	2			
Existing Transportation SystemRegional Setting				
Southern California Logistics Airport				
Existing Roadway Network				
· ·				
MAJOR CIRCULATION COMPONENTS				
Freeways				
Interstate 15				
I-15 Comprehensive Corridor Study				
New Interchanges				
United States Highway 395 – Alignment				
US-395 – Realignment				
State Route 18				
High Desert Corridor				
Historic Route 66				
Roadway Classifications				
Super Arterials				
Major ArterialsResidential Arterials				
Arterials				
Secondary Arterials				
Collectors				
Local Streets				
Roadway Components				
Super Arterial				
Major Arterial, Arterial and Collector Street				
Intersections				
Segments				
Alignments				
Public Transportation				
Bus Service	17			
Passenger Rail	19			
Victor Valley Transportation Center	19			
Park-and-Ride Lots	19			

Freight	and Goods	s Movement	10
i roigin	Fre	eight Train Service	19
		uck Routes	
		d Pedestrian Facilities and Trails	
		ns Management Program	
		ficient Intersections	
		ear Deficient Intersections	
		tisfactory Intersections	
	Wet and D	Pry Utilities	25
		•	
NEW R		AND RETROFIT SECTIONS	
	Re	etrofit Street Sections For Existing Development	10
		reet Sections For New Development	
	Co	ollector & Local Roadways	14
GOALS	s, OBJECT	IVES POLICIES, AND IMPLEMENTATION	27
		<u>LIST OF FIGURES</u>	
		<u> </u>	
			Page
Figure (Circulation Planning Area	3
Figure (Roadway Network	5
	CIRC-3a	Roadway Classification Standards	10
	CIRC-3b	Roadway Classification Standards	
	CIRC-3c	Roadway Classification Standards	14
Figure (Existing Public Transit Facilities	18
Figure (Freight Rail and Truck Routes	21
Figure (Non Motorized Transportation Plan Map	
Figure (CIRC-7	Circulation Map	26

Circulation Element

PURPOSE OF THIS ELEMENT

The Circulation Element is one of the required General Plan elements identified in State Planning and Zoning Law. As specified in California Government Code (Section 65302(b)), a Circulation Element is required to identify the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, airports and other local public utilities and facilities in the City's Planning Area. This Element is intended to provide guidance to decisions that expand and improve the transportation system for local and regional trips, and to accommodate the diverse transportation needs of the residents of the Planning Area. Furthermore, this Element is intended to specify the City's policies for coordination of transportation infrastructure planning with planning of public utilities and facilities, where joint benefits can be achieved.

A well-planned circulation system is an essential component of the community infrastructure that supports and can determine the general pattern of settlement. versely, the location, type and intensity of development determine, to a major extent, the physical parameters of the transportation system, especially the local roadway network. Failure to achieve an efficient roadway network could have negative economic consequences that could adversely affect the quality of life for local residents and businesses. The design, location and constituent modes of travel can have significant effects on air quality, plant and animal habitat, environmental noise, energy use, and community appearance. Both economic and environmental considerations have been incorporated into the development of this Circulation Element.

RELATIONSHIP TO OTHER ELE-MENTS

Land use policy depends upon and assumes there is an integrated circulation system to effectively move people and goods in and through the Planning Area. A primary purpose of this element is to correlate the transportation network with the land use plan, so that movement of people and goods is maintained in an efficient manner, with a minimum of congestion. This correlation is achieved, in part, through a projection of roadway system capacity requirements associated with the mixture, location and intensity of land uses envisioned in the land use element. Those projections have been translated into roadway design standards and the distribution of roadway classifications and transportation infrastructure throughout the planned circulation network. Please refer to the Circulation Plan described later in this Element.

To the extent that the Circulation Plan ("Plan") is successfully implemented, traffic will move efficiently through the Planning Area, with minimal congestion. Minimizing congestion will yield air quality benefits, because automobiles and trucks that flow smoothly along roadways, as opposed to slow/stop/start conditions, operate more efficiently and generate lower volumes of air pollutants through their exhaust systems. The Plan is also designed to foster development of mixed uses, compact development patterns, transit-oriented development, and to facilitate use of alternative modes of travel that reduce total trips by singlepassenger automobiles. The combination of these land use strategies, together with a circulation network that will support those strategies, will help reduce total vehicle miles traveled, thereby reducing total vehicular exhaust emissions. These air quality benefits are directly correlated with goals, policies and objectives relating to air quality in the Resources Element.

Traffic modeling developed in support of this updated Circulation Element was applied to the assessment of noise impacts associated with implementation of the proposed Circulation Plan. This effort has supported development of the Noise Element policy framework to protect existing and future residents and other noise-sensitive land uses from the adverse effects of exposure to excessive traffic noise. Results of traffic forecast modeling were also considered in the development of air quality management strategies, in the Resources Element.

VISION - CIRCULATION

A long-term, sustainable transportation system serving the Victorville Planning Area is envisioned as one that:

- Provides safe and efficient travel modes and facilities that enhance access for residential and business communities, including those with special needs;
- Satisfies the transportation infrastructure needs of existing and future travel demands and the movement of economic goods, with convenient, multi-modal alternatives;
- Achieves a high level of mobility for the movement of goods and people, in a cost-effective manner, without serious consequences to the environment;
- Is coordinated with and effectively integrated into regional transportation systems;
- Develops infrastructure systems that are coordinated with transportation networks and support Victorville's residential and business communities.

ANALYSIS OF BASELINE CONDI-TIONS

Existing Transportation System

Regional Setting

Located in the heart of San Bernardino County, the Planning Area for the City of Victorville includes its sphere of influence as illustrated in Figure Circ-1. It is located approximately 35 miles northeast of the City of San Bernardino and about 97 miles northeast of the City of Los Angeles. Nestled just north of the San Bernardino Mountains and at the edge of the Mojave Desert, the City is in an area known as Victor Valley and commonly referred to as the "High Desert". The City shares boundaries with the City of Adelanto to the northwest, the Town of Apple Valley to the east, the City of Hesperia to the south and unincorporated San Bernardino County to the southwest and to the north. There are also portions of unincorporated San Bernardino County nested within the City of Victorville. The Mojave Freeway (Interstate 15 or I-15) and United States Federal Highway 395 (US-395) serve as the primary regional connections to other San Bernardino County cities, while State Route 18 (SR-18) provides connection to San Bernardino County communities east and west of the City. In addition, major rail routes pass through the City and Southern California Logistics Airport (SCLA) is a commercial airport in place of the decommissioned George Air Force Base.

With a residential population approaching 120,000 and growing rapidly, the City of Victorville also serves

"The SCLA Specific Plan is designed to accommodate airport and aviation as well as industrial and commercial land uses"

the employment and retail needs of the more than 300,000 people who call the Victor Valley area their home. Victorville is home to the largest enclosed regional

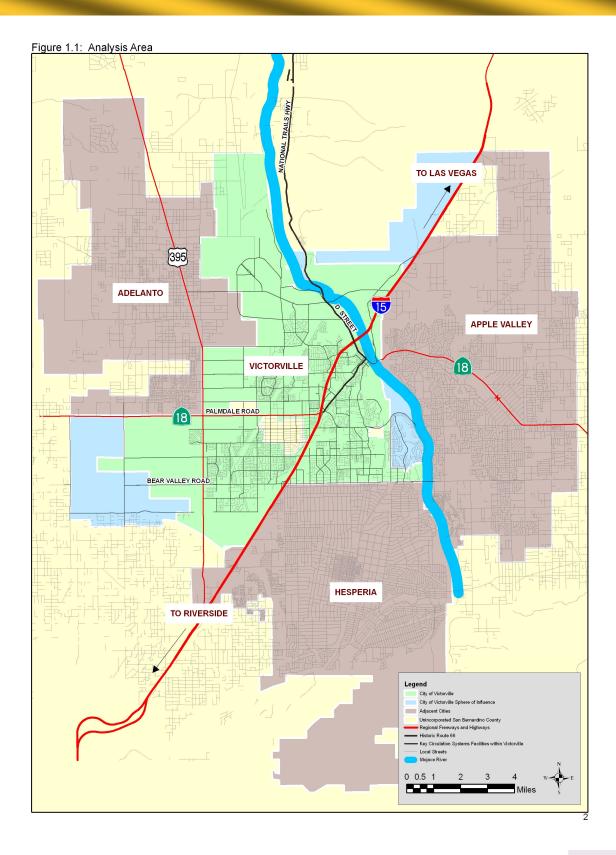


FIGURE CIRC-1: Circulation Planning Area

shopping center between San Bernardino and Las Vegas, located along the I-15 corridor. It is an emerging commercial hub that benefits from its business-friendly environment and central location.

Southern California Logistics Airport

Victorville is strategically situated along the "e-Corridor" (a portion of the I-15 between Ontario and Barstow), with global access provided by the all-cargo. Southern California Logistics Airport (SCLA). SCLA is located in the northwest corner of the City of Victorville and is within 30-40 minutes of driving from the Ontario International Airport. It is planned to be a domestic and international air cargo facility, with a 4,740acre business complex integrating manufacturing, industrial multimodal and office facilities. The SCLA Specific Plan was adopted by the City to provide a planning tool for implementing the reuse plan established by the Victor Valley Economic Development Authority (VVEDA) pursuant to the Base Closure Realignment Act (BCRA), and to implement related policies of the General Plan Land Use, Noise and Safety Elements. The SCLA Specific Plan is designed to accommodate airport and aviation uses as well as industrial and commercial land uses. Its circulation plan includes establishing a mass transit system to serve the site; designating Phantom Road as a minimum six-lane Super Arterial to connect to Air Expressway; introducing a new north/ south road, 'Perimeter Road' which will connect future Colusa Road from the north to Phantom East Street to the South; and upgrading several roads to arterials, which will eventually connect Phantom East and West Street to the rest of the site.

Existing Roadway Network

The City's circulation system is comprised of freeways and their interchanges, arterial, collector and local streets, public transportation and non-motorized transportation. In addition to these facilities and services, the

implementation and management of the circulation system includes parking policies and goods and freight movement.

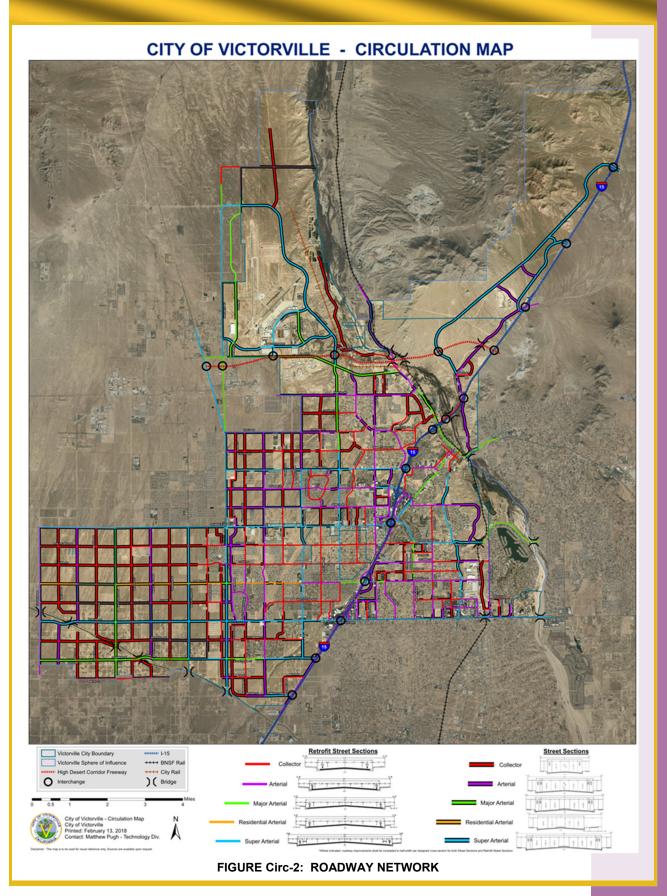
Non-Motorized Transportation Plan

In 2011, the City Council of the City of Victorville approved, by Resolution No. 10-052, a non-motorized transportation plan for bikeways and pedestrian trails. The plan was initiated by the City's Public Works Department when they applied for and were awarded a grant from the Southern California Association of Governments (SCAG). The plan utilizes existing and future roadways, paseos, washes, utility corridors, the California Aqueduct and the Mojave River Walk to form an interconnecting network of trail and bikeways. This non-motorized transportation plan helps in meeting the goals and objectives of the General Plan and guides the future, orderly development of trails and bikeways, by requiring developers to install the segments adjoining their projects.

Complete Streets

The term complete streets describes a comprehensive, integrated transportation network with infrastructure and design that allows safe and convenient travel along and across streets for all users, including pedestrians, bicyclists, persons of disabilities, motorist, trucks, emergency services and public transportation. The Circulation Element will balance the needs of automobiles with the needs of pedestrians, bicyclists, and public transit services.

The City of Victorville recognizes the importance of Complete Streets infrastructure and modifications that enable safe, convenient and comfortable travel for all categories of users. Implementation of complete streets will happen over time and evolve the City's current street network into multimodal streets that offer safe and attractive choices of travel options throughout the City. This will be accomplished through the



implementation of updated roadway sections and the retrofit of existing street networks that embody the principles of complete streets.

Figure Circ-2 illustrates the circulation network through build-out year 2035, including the City's local thoroughfares and limited access freeways. Regional access to the City of Victorville is provided primarily by the I-15 freeway and several other highways.

MAJOR CIRCULATION COMPONENTS

Freeways



Interstate 15

Over the years, I-15 has emerged as a multi-faceted corridor, serving commuters in the cities of the Victor Valley. For the City, it provides access to and from Riverside County to the south and Barstow, continuing to Nevada, to the north. Also called the Mojave Freeway, this is a major northsouth corridor, with three lanes through Victorville in each direction. According to the California Department of Transportation (Caltrans), the section of the I-15 within Victorville carried an annual average daily traffic (AADT) of 60,000 to 104,000 vehicles in 2006, of which approximately 17% to 24% was comprised of truck traffic. In Victorville, seven full-service interchanges with the I-15 are currently provided at the following streets:

- Bear Valley Road
- Palmdale Road (SR-18) / 7th Street
- Roy Rogers Drive / La Paz Drive
- Mojave Drive
- National Trails Highway / D Street
- E Street
- Stoddard Wells Road

- Stoddard Wells Road North (Sphere of Influence)
- Dale Evans Parkway (Sphere of Influence proposed)

I-15 Comprehensive Corridor Study

A Major Investment Study (MIS) examined potential improvements on I-15 between the State Route 60 (SR-60) interchange in Mira Loma (Riverside County) and the Mojave River crossing in Victorville. This effort evaluated possible solutions to problems of higher than average truck volumes (10 to 15% of total traffic), steep grades approaching 6% through the Cajon Pass, roadway design limitations particularly at the I-15/I-215 interchange, heavy traffic demand on both weekdays and weekends, and limited alternative travel options. Five alternatives were selected for detailed evaluation, from an initial set of nine alternatives, including:

- A. No-Build;
- B. Transportation Demand Management / Transportation System Management (TDM/TSM);
- C. High Occupancy Vehicle (HOV) Lanes;
- D. Full Corridor Dedicated Truck Lanes; and
- E. Reversible Managed Lanes.

The Southern California Association of Governments (SCAG), San Bernardino Associated Governments (SANBAG), and the California Department of Transportation (Caltrans) jointly sponsored this study. The Final Report was completed December 20, 2005. Based on the report findings, two alternatives will be carried forward for further corridor development efforts: Alternative D and Alternative C/E hybrid.

New Interchanges

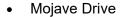
A new interchange is being planned at Eucalyptus Street, approximately 1.2 miles south of I-15/Bear Valley Road Interchange and about 2.3 mi north of the I-15/Main

Street Interchange. This is a joint project between the City of Victorville and the City of Hesperia. This project is intended to reduce congestion at the Bear Valley Road interchange and Main Street interchange, and is expected to reduce operational conflicts, accidents and provide levels of service that are consistent with the goals of the local components of the countywide Congestion Management Plan. A Project Study Report/Project Development Support (PSR/PDS) for this new interchange was approved by Caltrans on May 18, 2005. There has been no further activity on the project since approval of the PSR/PDS.

U. S. Highway 395 - Alignment

U.S. Highway 395 is a second north-south highway that passes through the western part of the City. Predominantly a two-lane highway, this facility has a stretch of four lanes just south and north of its intersection with Palmdale Road. In the City of Victorville, it currently has eight at-grade intersections with the following arterials:

- Eucalyptus Street
- Sycamore Street
- Bear Valley Road / Duncan Road
- Dos Palmas Road
- Luna Road
- Palmdale Road (SR-18)



Cactus Road

Caltrans traffic data shows that for Victorville in 2006, this facility carried an AADT of approximately between 16,000 and 25,000 vehicles, of which about 13% to 18% was truck traffic. With the southern terminus of this facility at its junction with I-15 in the City of Hesperia, this facility connects the City of Victorville to the City of Adelanto and unincorporated northwestern

San Bernardino County, before continuing on to adjacent Kern County.

This alignment within the City of Victorville, from the aqueduct to Adelanto / Hopland Road (about 6.9 miles in length) is two-lane with existing 4-lane segments as follows:

- 1.3 miles, south of Eucalyptus Street to Bear Valley Road (1.4 miles long)
- Luna Road to 0.3 miles north of Palmdale Road (1.3 miles long).

A memorandum of understanding (MOU) regarding the existing US-395 among Victorville, Caltrans, SANBAG, San Bernardino County, Hesperia and Adelanto became effective on October 18, 2002. The MOU established US-395 in the local agency general plans as a 6-lane conventional highway with the minimum right of way width of 130 feet. Typical cross sections for segments and signalized intersections are included in the MOU. Development projects adjacent to or with significant impacts to US-395 are required to submit a traffic report to the Caltrans District 8 Intergovernmental Review California Environmental Quality Act (IGR/ CEQA). Projects are subject to the IGR/ CEQA review process and required to reasonably mitigate impacts.

Caltrans is the lead agency and is proceeding with the Project Approval / Environmental document to widen the existing US-395 from two to four lanes from I-15 to SR-58.

State Route 18

The existing SR-18 is a four-lane divided highway with turn lanes in the Town of Apple Valley, where it is also called Happy Trails Highway, and a four-lane divided road with a continuous left turn lane through most of the City of Victorville (D Street). When SR-18 joins I-15, travelers must follow I-15 south to Palmdale road, where SR-18 proceeds west and is called Palmdale Road. A designated truck route within the City of Victorville, this facility carried an AADT of 19,000 to 48,000 vehicles in 2006, of which approximately 7% to 9% was truck traffic. SR 18 provides access to and from Antelope Valley to the west and the Town of Apple Valley, continuing further eastward to Lucerne Valley.

High Desert Corridor

This proposed project will realign SR-18 to a new alignment from about one mile south of Yucca Loma Road in the Town of Apple Valley, through the City of Victorville, to US-395 in the City of Adelanto. It would be the first phase of the 21-mile long High Desert Corridor linking the Victor Valley to SR-14 in the Antelope Valley. The proposed alignment proceeds northwest until it nears the Apple Valley Airport, where it turns west. The alignment continues west near SCLA in the City of Victorville and proceeds on to US -395. The new facility will be a four-lane expressway between the connection to existing SR-18 and I-15 with at-grade intersections and an interchange at I-15. From I-15 to US-395, the facility will be a six-lane freeway with grade separated interchanges at Phantom East, Phantom West and either Adelanto Road and existing US-395.

The project is jointly funded by Caltrans, using Federal Demonstration and Measure I funds. Caltrans is the lead agency. Preparation of the Project Approval and Environmental Document (PA/ED) began in 2003. The Final Environmental Impact Report/Environmental Impact Statement was completed in 2016.

Historic Route 66

One of the original federal routes, Route 66 or Will Rogers Highway was established in 1926. Its original length of approximately 2,500 miles connected the cities of Chicago, Illinois and Los Angeles, California, traversing through the states of Missouri, Kansas, Oklahoma, Texas, New Mexico and Arizona. As a major migratory path west, especially during the Dust Bowl of the 1930s, it supported the economies of the communities through which it passed. These communities later fought to keep it alive when the new interstate freeway system began dominating the country's transportation network. This route was officially decommissioned after the interstate freeways began to define this country's surface transportation and segments of this route that were not replaced by interstate freeway alignments were designated as national scenic byways and renamed 'Historic Route 66' (Hist-66).

Today, from the southern limit of the City of Victorville, Hist-66 follows the current alignment of I-15 to the freeway's interchange with Palmdale Road (SR-18) / 7th Street. North of this interchange, Hist-66 follows the alignment of 7th Street to D Street. Continuing northeast on D Street it follows the National Trails Highway alignment into the community of Oro Grande on the northwestern edge of the City.

Roadway Classifications

There are several different types of roadway classifications maintained by the City of Victorville that range from two lane, undivided collectors to super arterials with six lanes and a positive separation (raised median). The City has developed design standards and specifications for six different street classifications, which are illustrated by their standard cross-sections and, if applicable, modified retrofit cross-sections shown in **Figure Circ-3**, and described below.

Retrofit cross-sections are typically existing roadways that are modified to include bicycle lanes within existing right-of-way widths.

The roadways are designated by their primary function and level of mobility. The typical roadway cross-sections illustrated in Figure Circ-3 are general standards and in certain cases, where implementation of the standard street width may not be possible due to various constraints, such as right of way, existing development, etc., these may be modified, subject to the approval of the Where unavoidable con-City Engineer. straints exist, right-of-way dedication, median, shoulder, lane widths and other features may be modified to the non-desired widths but still provide the functionality and safety designated in standard roadways. function of the street will still remain the same to serve the City's traffic demand.

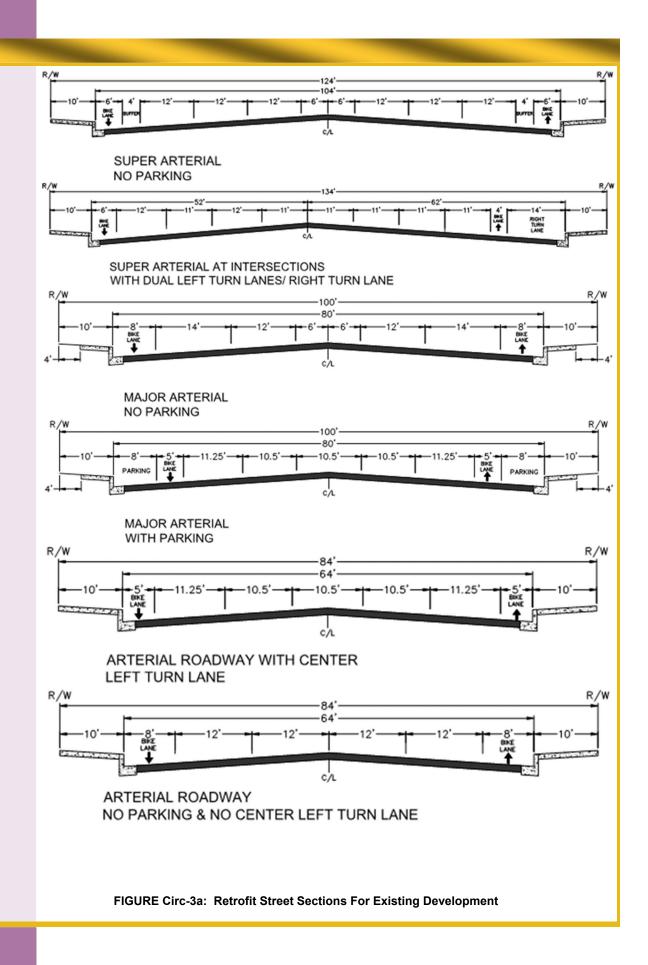
Super Arterials

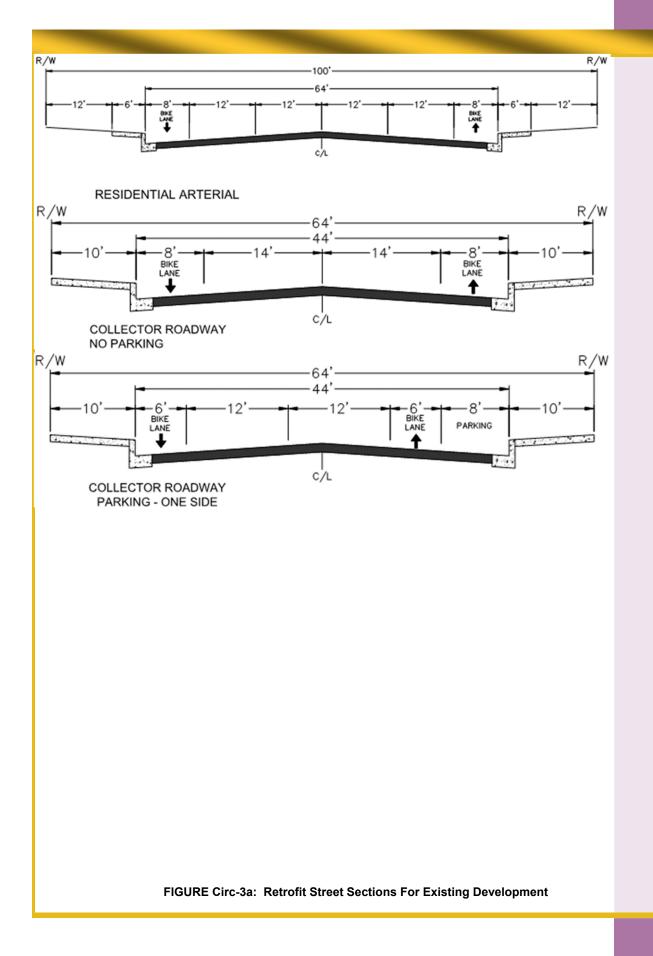
Super Arterials transport large volumes of intercity, intra-city, and regional traffic at higher speeds with limited access control points. Super arterials generally connect to freeways to distribute traffic to other facilities such as major and secondary arterials, and collector facilities serving the City and other regional networks. At a minimum, development of new segments of super arterials shall have a 128-foot wide right of way consisting of six travel lanes, two bicycle lanes with traffic buffers, and a raised median up to fourteen feet in width.

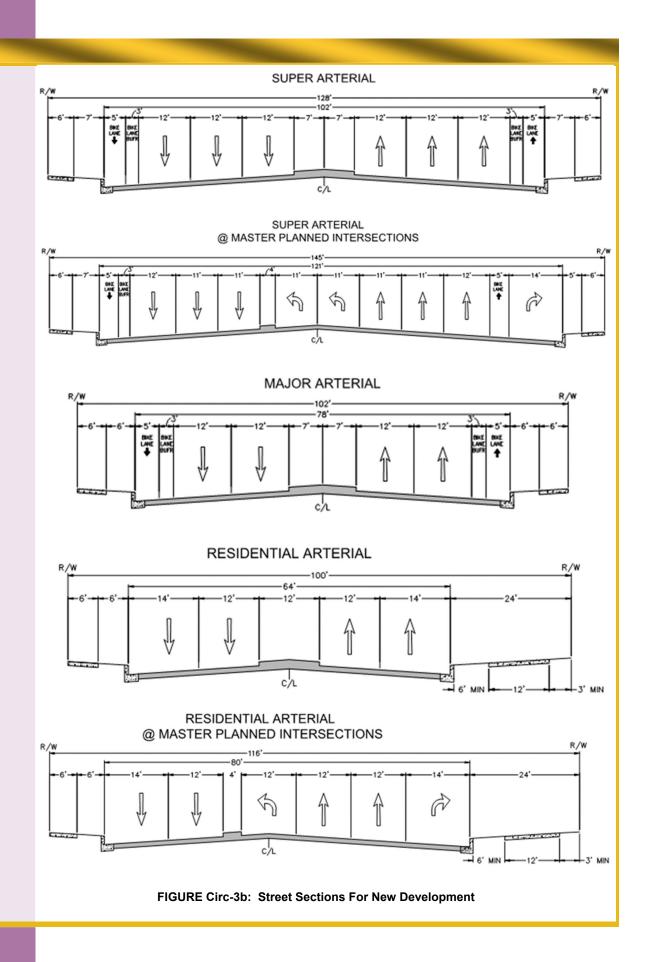
Super arterials can also have the lane configuration of six travel lanes with additional right turn lanes at intersections. This lane configuration requires a 145 foot wide right of way. At intersections, the super arterial can have a double left within the center median area, three through lanes and a right turn lane.

Existing roadways, or as specified on Figure Circ-2, will utilize a "Retrofit" roadway classification, which provides the same six lanes, bike lanes and sideways at non-preferred widths within existing right-of-way.

Currently, this category includes Bear Valley Road east of Petaluma Road. The City's recently updated Circulation Map at build-out indicates that the full extent of Bear Valley Road, Palmdale Road, Mojave Drive, and US-395 are designated as Super Arterials.







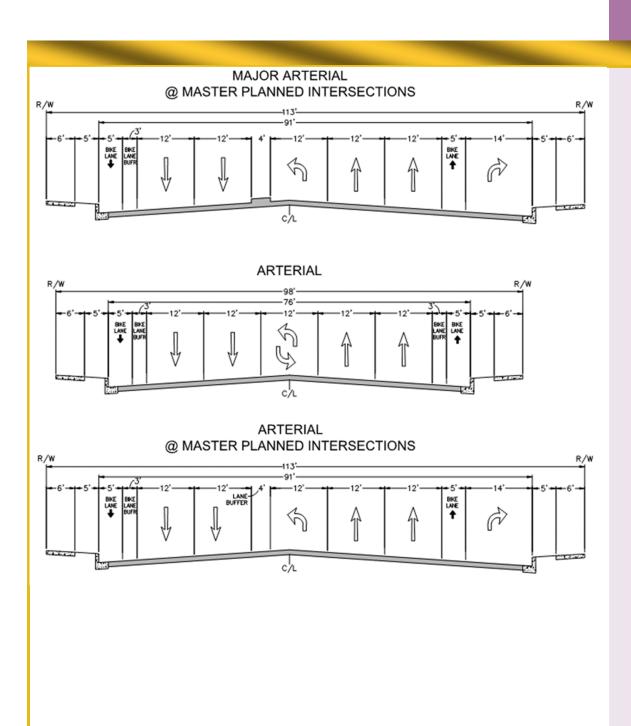
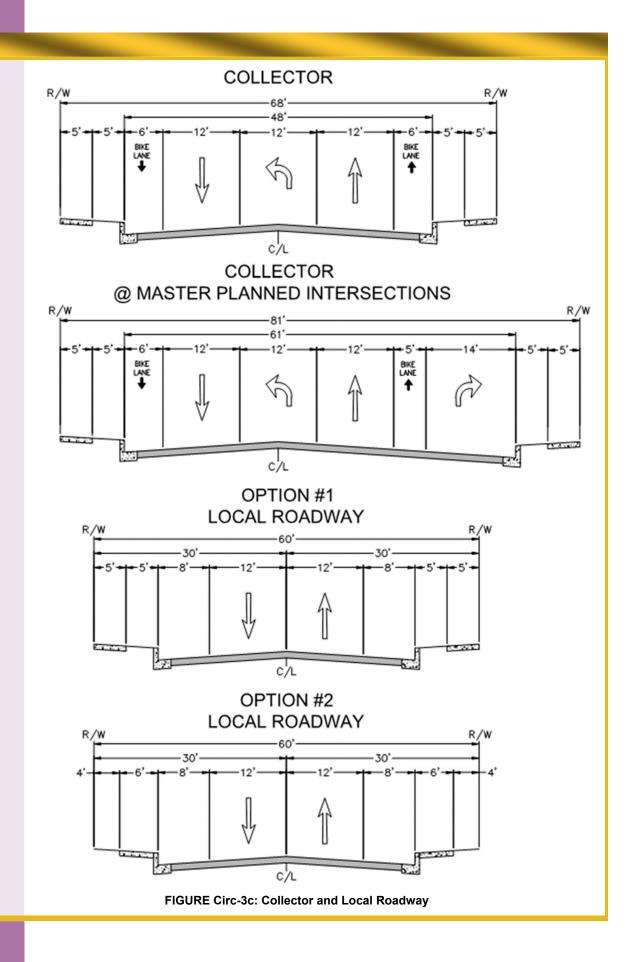


FIGURE Circ-3b: Street Sections For New Development



Major Arterials

Major Arterials facilitate mobility of large volumes of intra-city traffic. These streets access freeways or super arterials and distribute traffic to secondary arterials or collector streets. Major Arterials have a 102-foot minimum right of way consisting of a minimum of four travel lanes, two bicycle lanes with traffic buffers, and a raised median up to fourteen feet in width. Traffic signals are located at major intersections. Existing major arterials in the Planning Area include: 7th Street, Amethyst Road, El Evado Road, Green Tree Boulevard, Hesperia Road, and La Mesa Road east of Amethyst Road.

Residential Arterials

Residential Arterials transport large volumes of intra-city traffic to and from residential areas. These streets connect to major arterials, arterials, and collectors. Residential arterials have a minimum right of way of one-hundred feet, four traffic lanes with up to a twelve foot raised median, and a Class 1 two-way bicycle and pedestrian path on one side of the street. Traffic signals are located at major intersections. La Mesa Road west of Amethyst Road is the only designated Residential Arterial.

Arterials

Arterials serve the same function as Major Arterials, although serving relatively lower traffic demands. The standard 98-foot right of way contains four travel lanes with a center left turn lane, and two bicycle lanes with traffic buffers. Left-turn and right-turn lanes are provided, at master planned intersections. Some of the Arterials in Victorville include Amargosa Road, Eagle Ranch Parkway, Hook Boulevard, Mariposa Road, Mesa Linda Avenue, Topaz Road, Village Drive, and most of El Evado Road.

Secondary Arterials

Secondary Arterials are localized in the Old Town area, situated in the northeastern part of the City, bounded by I-15 in the west, Hesperia Road in the east, Mojave Drive/Verde Road in the south and to the north by E Street. The right-of-way width of these existing roadways vary to provide facilitates such as wider sidewalks, on-street parking and two-to-four travel lanes. 7th Street between Forrest Avenue and D Street is the only Secondary Arterial.

Collectors

Collectors are street that provide circulation within a defined geographic area and connect this area to intra-city traffic routes. Some motorists may use collectors as through routes, but the primary function of a collector is to connect local traffic to larger streets and to provide access to nearby destinations.

Collectors contain two travel lanes, center turn lane and two bicycle lanes with a 68-foot right of way. Alternatively, collectors may have two travel lanes and parking without a center left turn lane when located away from intersections. Collector streets in the Planning Area include 1st Avenue, 9th Avenue, Cobalt Road, Cypress Avenue, Luna Road, Pacoima Road, Reno Loop, Sycamore Street, and Tawney Ridge Lane.

Local Streets

Local Streets provide direct access to adjacent properties and transport local traffic from these properties to higher volume, higher speed facilities. In general, local streets are not intended to carry through traffic. The 60-foot right of way contains two traffic lanes and two parking lanes. Sidewalks are generally provided within a ten-foot, right of way. Most streets in residential neighborhoods are designed as Local Streets. The local roadway classification standard, as shown in **FIGURE Circ-3b**, provides two options for parkway design.

Option #1 has parkway landscape area between the curb/gutter and sidewalk, and this option shall only be utilized when a developer demonstrates sufficient means to maintain this landscape area, as approved by the Planning Commission.

Roadway Components

Super Arterial Components

<u>Traffic Signals – Super Arterials</u>

Locations for new traffic signals shall be at a minimum of one-half mile spacing, or at master planned intersections (collector street classifications or above). Proposed traffic signal locations shall be justified by a traffic study and are subject to the approval of the City Engineer.

Driveway Access - Super Arterials

Residential driveway access is not allowed from a super arterial, unless approved by the City Engineer for a large multi-family residential project. Commercial driveway access, if allowed, should be as far away from a street intersection or other driveways as feasible. Shared driveway access with other parcels or other developments may be required. If a commercial driveway access is allowed, an additional number 4, merge in / merge out, lane is required. New driveway access shall allow right in / right out access only. Left turns in and out shall be prohibited. The design of the access control, whether raised median or other controls, is subject to the approval of the City Engineer.

Street Connections – Super Arterials

New street connections to super arterials, including Bear Valley Road, Mojave Drive, Palmdale Road and US-395 will be restricted. Only streets classified as collector or higher may connect to a super arterial. No new local street connections shall be allowed.

Major Arterial, Arterial and Collector Street Components

<u>Traffic Signals – Major Arterial, Arterial</u> and <u>Collector Street</u>

Proposed traffic signals locations shall be justified by a traffic study and are subject to the approval of the City Engineer.

<u>Driveway Access – Major Arterial, Arterial and Collector Street</u>

Residential driveway access is not allowed to new segments or for new subdivisions fronting on existing segments. For infill single family homes on existing segments, forward egress for residential driveways is required by either a standard circular or hammerhead driveway. Commercial driveway access should be as far away from a street intersection or other driveways as feasible, or connect to a street of lower classification. Shared driveway access with other parcels or other developments may be required. To accommodate commercial driveway access, an additional merge in / merge out may be required. New driveway access may be restricted to right in / right out access only, or left turns out may be prohibited. The design of the access control, whether raised median or other controls, is subject to the approval of the City Engineer. Full access driveways, if allowed, should line up with driveways on the other side of the street.

Intersections

At intersections of collector or larger roadway classifications with another collector or larger roadway classification, additional right turn lanes shall be accommodated within 100-500 feet of such intersections, as approved by the City Engineer. The City may require augmentation at existing intersections that necessitates requirements including dedication of additional right of way, relocation of existing facilities, road widening, medians, restriping, signage changes and traffic signal modifications. The City may also require augmentation of new intersections that necessitates requirements above the minimum standards including dedication of additional right of way, relocation of existing facilities, road widening, medians, striping, signage changes and traffic signal construction.

The additional turn lanes may be master planned by the City or justified by a traffic study subject to the approval of the City Engineer.

Segments

Standard roadway classification widths and cross sections can be modified as discussed below to accommodate additional merge in / merge out lanes for driveway access. School site or commercial site access may also necessitate additional center turn lanes or parking lanes and thus additional right of way dedication, relocation of existing facilities, road improvements, medians, striping, signage,

Caltrans buffer

Alignments

The alignment of roads on the Circulation Map is not depicted as precise alignments. Most of the arterial and collector alignments in the City have been laid out along section lines or half section lines. Usually, the centerline of the right of way is located on or between property lines. Usually, arterial and collector roads are straight. However, several constraints can dictate arterial and collector road alignments that may shift the alignments, introduce reversing curves or result in slight skews at intersections. The constraints can include, crossing SCE or LADWP power line easements, meeting clearance requirements for SCE or LADWP transmission towers or transmission lines, crossing or running parallel to major washes, crossing the aqueduct, avoiding the relocation of major utilities or avoiding impacts to existing development.

Public Transportation

Public transportation (bus and train) provides an alternative means of travel to the automobile and offers additional mobility choices, while making more efficient use of available roadway capacity. Transit service in the Victor Valley area has expanded from providing approximately 4,480,200 passenger miles in 1998 to approximately 11,055,700 passenger miles in 2003, with the number of average weekday transit trips rising from about 2,579 daily trips in 1998 to roughly 3,766 average weekday transit trips in 2003. This growth in transit services correlates to associated growth in Victorville and surrounding areas.

Bus Service

Bus service in the City of Victorville is provided by the Victor Valley Transit Authority (VVTA), a joint powers agency serving Victorville and adjacent areas. The VVTA service area is comprised of the cities of Adelanto, Hesperia, and Victorville, the Town of Apple Valley, and San Bernardino County. Within the joint powers area, the VVTA currently operates 13 fixed-routes with various transfer points to adjoining routes, with additional subscriber services for certified rid-There are ten fixed-routes providing service within or through Victorville. Transit service currently is offered from 6:00 AM to 9:00 PM, Monday through Friday, and from 7:00 AM to 8:00 PM on Saturdays, with no service on Sundays and national holidays.

VVTA buses are equipped with bicycle racks that facilitate intermodal bicycle-transit trips. These racks can accommodate two bicycles at a time. For physically challenged patrons, Direct Access Transit is available by reservation only. Direct Access Transit is available the same dates and times as general transit service and observes the same holidays.

Regional commuter bus service from the City of Victorville was initiated in July 2002



FIGURE Circ-4: Existing Public Transit Facilities

but discontinued in July 2005. The commuter service was a three-year demonstration project funded with a Congestion Mitigation Air Quality (CMAQ) grant from the Federal Transit Administration (FTA), which at the end of the three-year period would be funded by the VVTA or discontinued on unavailability of funds. The program provided commuter routes from Victorville to downtown Bernardino, San the Rancho Cucamonga Metrolink station and Ontario Currently, VVTA does not provide commuter service beyond the Victor Valley region; however, Amtrak Motor Coach service provides two daily round trips to Bakersfield.

Passenger Rail

Passenger rail service to the City is provided by Amtrak. **Figure Circ-4** illustrates passenger rail routes serving the City of Victorville. Amtrak's Southwest Chief Liner connecting Chicago, Illinois with Los Angeles, California, via Arizona, New Mexico, Colorado, Kansas and Missouri, offers daily service from the City of Victorville to Los Angeles. This train offers a morning and an evening commute to and from Los Angeles. Westbound, travelers can connect to the Coast Starlight in Los Angeles and the Pacific Surfliner in Fullerton.

Victor Valley Transportation Center

Located on the north side of D Street, between 2nd Street and 6th Street, in the northeastern section of the City, the Victor Valley Transportation Center offers travelers multi-modal services and facilities. The transportation center is fully accessible to persons using wheelchairs, and is a transfer point for Amtrak national rail service and local bus. It contains 145 automobile parking spaces in a lighted, parking lot and bicycle lockers. Since the station is not staffed by Amtrak, tickets, baggage, or package express shipments are not handled at this The nearest stations offering these services are in Los Angeles or Bakersfield.

Park-and-Ride Lots

Public transportation within the City of Victorville is supported by the convenience of park-and-ride lots. As shown in **Figure Circ -4**, the City has two existing park-and-ride lots, and one proposed in 2006. The existing lots are located at the following locations:

- Victor Valley Transportation, off D Street
 145 parking spaces
- Southwest corner of Amargosa Road and Bear Valley Road – 70 parking spaces, with space to expand to 203).

A new park-and-ride lot is planned at the northeast corner of Bear Valley Road and Fish Hatchery Road, adjacent to the Victor Valley College with 412 spaces.

Freight and Goods Movement

Freight Train Service

Southern California's major inter-modal cargo loading facilities are located in ports of Long Beach and Los Angeles. In the future, with the expansion of the SCLA, the City will function as a major hub for inter-modal cargo transfer and distribution. As shown in Figure Circ-5, the City is served by a major freight rail corridor. The Burlington Northern Santa Fe Company ("BNSF") operates freight rail services through the City of Victorville, with a double main line and lead tracks for industrial uses. The services offered include transporting containers, trailers, and chemical/oil tankers. Union Pacific Railroad also operates on the double main line and Victorville is within its service area.

Southern California's major inter-modal cargo loading facilities are located in the ports of Long Beach and Los Angeles. In the future, with the expansion of the SCLA, the City will function as a major hub for cargo transfer and distribution. Potentially encompassing 1,600 acres and creating 1,500 permanent jobs, the City has begun construction of the first phase of rail lines leading to

a new inter-modal/multi-modal rail yard. This facility will allow transfer of freight from rail-to-truck and rail-to-rail and include storage areas for automobiles and storage containers.

The City's Foxborough Industrial Park currently offers freight rail accessed parcels. Companies such as Goodyear, Mars M&M, Nutro and ConAgra utilize rail spurs in their day-to-day operations. This service will also be offered in the industrial area at the north end of the SCLA.

Truck Routes

Various size trucks and other types of vehicles are the primary mode of transporting goods from storage and distribution centers in and out of the Victor Valley, to their user destinations throughout the Planning Area. In concert with Noise Element policies, truck routes are restricted to arterials that minimize disturbance to noise sensitive land uses, such as residences, hospitals, churches, schools, etc., with the exception of existing truck routes adjacent to existing developed areas such as along Hesperia Road, Amargosa Road and Nisqualli Road. Chapter 12.36 of the Victorville Municipal Code establishes truck route regulations for commercial vehicles exceeding a maximum gross weight limit of 12,000 pounds. With the exception of making pickups or deliveries of goods, wares and merchandise from or to any building or structure located on non-truck routes, or for building construction or repair in these locations, trucks exceeding the specified weight limit are mandated to drive on City arterials that are clearly marked as a 'Truck Traffic Route'. All designated truck routes have access to the regional freeways within the Victor Valley area.

As **Figure Circ-5** indicates, the following streets are designated as truck routes within the City of Victorville:

- Air Expressway
- National Trails Highway / D Street

- Hesperia Road from Bear Valley Road to D Street
- Mojave Drive from I-15 to Highway 395
- Mariposa Road from Bear Valley Road to Green Tree Boulevard
- Bear Valley Road within the City limits
- Amargosa Road from Bear Valley Road to Dos Palmas Road.
- Nisqualli Road from Hesperia Road to I-15.

Bicycle and Pedestrian Facilities and Trails

In 2010, the City of Victorville adopted an updated non-motorized transportation plan to address the increased demand for nonmotorized facilities and recreational opportunities for the City. The purpose of the plan is to provide a safe network of facilities for pedestrians, hikers, bicyclists, wheelchairs, and health enthusiast that will link public facilities such as parks, open spaces, golf courses, the Victor Valley Transportation Center, Old Town Victorville, Victor Valley Community College, the Mojave Narrows Regional Park, and other destinations. The Plan will also provide connectivity to the San Bernardino County Non-Motorized Transportation Plan system and the non-motorized transportation plan of surrounding cities.

The City of Victorville recognizes the value of providing opportunities for local residents and visitors to bicycle for work and recreation, as well as to use off-road trails for hiking, equestrians and jogging. Such opportunities help to reduce auto trips, improve the environment, promote healthy lifestyles and create livable communities.



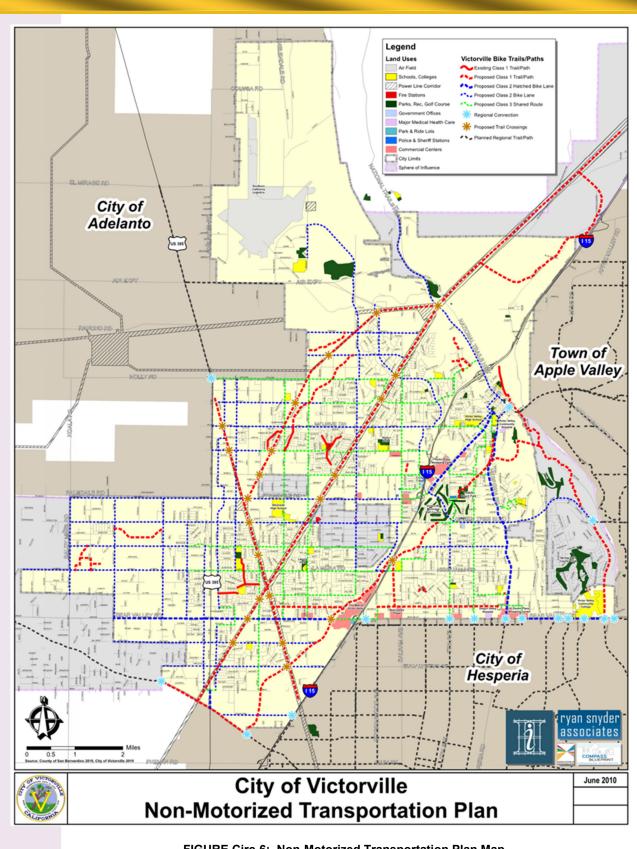


FIGURE Circ-6: Non-Motorized Transportation Plan Map

The plan promotes the alternate mode of transportation and will utilize the Mojave River, river washes, public utility easements, existing specific plan paseo systems, future paseos and the existing street system to develop non-motorized facilities. These non-motorized transportation facilities, as noted on Figure Circ-6, will be provided as the City matures and continues to build out.

In 2001, SANBAG updated the San Bernardino County Non-Motorized Transportation Plan. It is intended to coordinate and guide San Bernardino County and local jurisdictions in taking measurable steps to promote and facilitate the use of non-motorized modes for recreational travel and for commuting and other purposes. The Plan includes regional and intra-jurisdictional bicycle connections and pedestrian facilities. To develop a successful and widely used bicycle route network, the San Bernardino County Non-Motorized Transportation Plan identifies the following four key issues to be addressed: safety, access, quality of life and effective implementation. A main goal of this Plan is to upgrade existing facilities, implement new facilities and develop a countywide non-motorized network.

A majority of the non-motorized facilities include both shared-use and exclusive bicycle use facilities. Shared-use facilities, include shared paths for pedestrians and bicycles, and shared right of ways with bicycles and automobiles. Non-motorized facilities, specifically bike routes or sharedpaths are defined in Section 890.4 of the California Streets and Highway Code. The design standards for such facilities are described in the Caltrans Design Manual and are consistent the criteria documented in the American Association of State Highway and Transportation Officials (AASHTO) Guidelines for the Development of Bicycle Facilities.

The City's bikeway network consists of three types of facilities, as follows:

- Class I bikeways, such as 'bike paths', provide a completely separated right of way designated for exclusive use of bicycles and pedestrians with minimum cross flows by motorists. These are shared use paths that may be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users.
- Class II bikeways, such as 'bike lanes', provide a restricted right of way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with permitted vehicle parking and cross flows by pedestrians and motorists. This is a portion of roadway that has been designated by striping, signing, pavement delineation, and pavement markings for preferential or exclusive use of bicyclists.
- Class III bikeways, such as onstreet or off-street 'bike routes,' provide a right of way designated by signs or permanent markings and shared with pedestrians or motorists. Under the Caltrans Design Standards, Class III bikeways are designated by signage as a preferred route for bicycle use and routes.

Congestion Management Program

The need to maintain a comprehensive and functional regional circulation system throughout the Victor Valley and San Bernardino County was one of the main objectives in the creation of the San Bernardino Associated Governments (SANBAG). SANBAG is the council of governments and acts as the transportation planning agency for San Bernardino County. There are currently 25 member jurisdictions that, through appointed representatives, are responsible for the cooperative regional planning of local and regional roadway improvements,

train and bus transportation, deployment of intelligent transportation systems and long term planning studies. As designated by statute, SANBAG serves in the capacity of County Transportation Commission, which is responsible for allocating and programming state and federal funds for regional transportation projects throughout the County.

SANBAG also serves as the County Transportation Authority and is responsible for administering Measure I, the half-cent transportation sales tax originally approved by voters in 1989 and extended for an additional 30 years in November 2004. SANBAG also has been designated as the Service Authority for Freeway Emergencies and as the Congestion Management Agency responsible for establishing, maintaining, and enforcing San Bernardino County's Congestion Management Program (CMP). San Bernardino County's CMP was created in June 1990 as a provision of Proposition 111. Under this proposition, urbanized areas with populations of more than 50,000 were required to undertake a congestion management program that was adopted by designated Congestion Management Agency (CMA). As stated earlier, SANBAG was designated as the CMA by the County Board of Supervisors.

The CMP's level of service (LOS) standard requires all CMP segments to operate at LOS E or better, with the exception of those facilities identified in the list below. The following Victor Valley roadway segments have been designated LOS F in the 2001 CMP, updated in December of 2001:

- Bear Valley Road, between Amargosa Road and Mariposa Road
- Bear Valley Road, between Hesperia Road and Peach Avenue
- SR-18, between I-15 (North) and Stoddard Wells Road

The procedures in the 2000 Highway Capacity Manual (HCM) were adopted as the LOS procedures to be utilized in analyzing CMP facilities. Through the use of traffic impact analysis (TIA) reports and Comprehensive Transportation Plan (CTP) model forecasts, the CMP evaluates proposed land use decisions to ensure adequate transportation network improvements are developed to accommodate future growth in population. If a CMP facility is found to fall below the level of service standard, either under existing or future conditions, a deficiency plan must be prepared, adopted, and implemented by local jurisdictions that contribute to such situations.

Deficient Intersections

Deficient intersections are those with an Intersection Capacity Utilization (ICU) value greater than 0.95 or Highway Capacity Manual (HCM) delay LOS worse than D (i.e., E or F). Intersections under this category would require mitigations to improve the LOS to satisfactory levels, that is to an ICU less than 0.95 or an HCM delay LOS of D or better. Specific critical movements that are LOS F require mitigation to satisfactory levels. For existing deficiencies, a determination can be made to mitigate for future impacts to avoid degrading the LOS of the intersection.

Near-Deficient Intersections

Near-deficient intersections are those with an ICU value greater than 0.90 but less than 0.95 and HCM delay LOS equal to or better than D. Intersections under this category are technically operating satisfactorily, under the given conditions, but could become deficient if traffic volumes increase slightly or if the growth in traffic volumes or land use projections become higher than those assumed in the model.

Satisfactory Intersections

All intersections that operate at ICU less than 0.90 but less than 0.95 and HCM delay LOS D or better are considered to be operating satisfactorily.

Wet and Dry Utilities

Water, sewer and storm drainage infrastructure (wet utilities) and electricity, natural gas, and telecommunications infrastructure (dry utilities) are also essential components of the circulation system. Such infrastructure is typically installed in conjunction with development to serve that development or be reasonably related to it. Utility systems usually follow the street system and are installed within the public right of way. Planning and maintenance of wet utilities is the City's responsibility. Private and quasi-public entities own and manage the dry utilities systems. An exception is that the City of Victorville Utility Department provides service for dry utilities (exclusive of telephone service) in the SCLA and Foxborough industrial area.

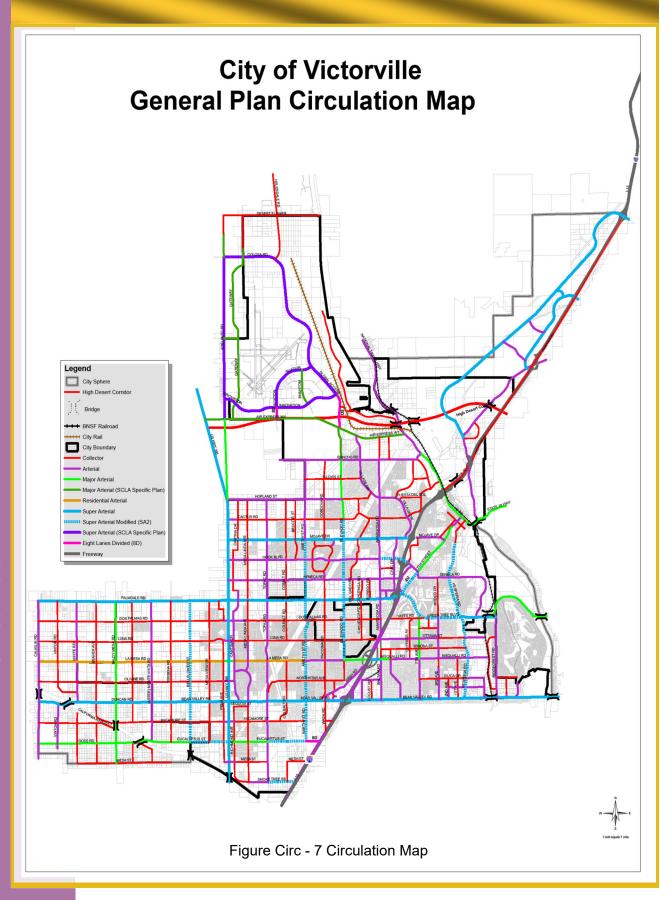
Through its annual Capital Improvement Program (CIP), the City identifies anticipated major infrastructure needs for the next five years, including street improvements, traffic signals, sewer improvements, water system improvements and storm drains. Planning and programming of water system improvements are handled by County Service Area 64. CIP projects include those for which funding is anticipated, from Federal, State and local sources. Since priorities and funding levels are subject to change, the CIP is subject to annual review and revisions. The CIP is designed to:

- Provide a centralized and comprehensive mechanism for forecasting and defining capital improvement needs;
- Assign priorities among capital projects;

- 3. Budget projects in accordance with City priorities;
- 4. Develop a projected revenue program for financing;
- Schedule projects on a fixed-time basis and provide for appropriate implementation;
- 6. Coordinate activities of various City departments and outside entities in meeting schedule objectives
- 7. Monitor and evaluate the progress of capital improvements; and
- 8. Inform the public and private developers of projected capital improvements needs and implementation projects

While the CIP can save the City money by facilitating purchase of land and materials in advance of actual need, careful consideration is necessary when programming projects to ensure that physical improvements do not outpace need. The City's policy has and continues to be that infrastructure should be installed only when necessary and only to the extent warranted to avoid excessive maintenance costs.





GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION

The following goals, objectives, policies and implementation measures are intended to achieve the Vision of this Circulation Element and to guide the City's efforts to continue to build and maintain an efficient transportation and circulation infrastructure to support the community development policies set forth in the Land Use Element.

GOAL #1: GOOD MOBILITY - PROVIDE A SAFE, EFFICIENT TRANSPORTATION SYSTEM THAT ENHANCES MOBILITY FOR LOCAL RESIDENTS AND BUSINESSES, AND FACILITATES REGIONAL TRAVEL FOR AUTOMOBILES AND TRUCKS.

Objective 1.1: Provide sufficient traffic carrying capacity at intersections throughout the roadway network, to achieve level of service performance standards.

Policy 1.1.1: Maintain LOS "D" or better at intersections (as defined in the most current version of the Highway Capacity Manual), except in certain high activity areas designated by the Planning Commission, where a LOS E is acceptable.

Implementation Measure 1.1.1.1: Assess traffic impacts of significant new development and redevelopment projects to determine whether the projects would cause affected intersections to operate at deficient levels of service or would substantially worsen the LOS at already deficient LOS. A threshold for determination of what classes of projects trigger a traffic impact analysis or traffic study shall be established by the City Engineer.

Policy 1.1.2: If a development project would worsen an intersection peak hour LOS to E or worse, it is considered a significant impact that must be mitigated. If a de-

velopment project would worsen an already deficient intersection by two percent or more, it is considered a significant impact that must be mitigated.

Policy 1.1.3: Require new development and redevelopment projects to bear responsibility for traffic system improvements necessary to mitigate the project's significant impacts at affected intersections, concurrently with construction of such projects.

Implementation Measure 1.1.3.1: Typically, developers will construct necessary traffic system improvements. Alternately, in lieu of developer-provided improvements, the City will impose exactions, dedications and/or fees on new development and redevelopment projects to fund improvements that mitigate significant safety and/or congestion impacts on the roadway network. These shall be based on a clear and proportional nexus between the level of project impact and the estimated cost of providing the improvements required to mitigate the impact.

Policy 1.1.4: Complete deficiency plans to mitigate near-deficient and deficient intersections to an acceptable level of service or to prevent degrading to a worse level of service.

Implementation Measure 1.1.4.1: Incorporate deficiency plan projects into the fiveyear Capital Improvement Program or into longer range plans.

Objective 1.2: Achieve and maintain mobility goals set forth in county-wide CMP, on local CMP segments.

Policy 1.2.1: Support and cooperate with all aspects of the countywide CMP for maintaining levels of service for CMP segments located in the Planning Area.

Implementation Measure 1.2.1.1: The City will be responsible for requiring, reviewing and approving traffic impact analyses and traffic studies for all applicable private and

public projects, in accordance with CMP standards for these studies.

<u>Implementation Measure 1.2.1.2</u>: Incorporate deficiency plan projects into the fiveyear Capital Improvement Program or into longer range plans.

Objective 1.3: Complete the planned highway improvements.

Policy 1.3.1: Participate with Caltrans and SANBAG on the environmental documents for the realignment of Highway 395 through the Planning Area.

Policy 1.3.2: Complete the project approval and environmental document for the High Desert Corridor Project.

Policy 1.3.3: Prioritize General Plan improvements for new interchanges, interchange modifications, new road constructions and road widenings.

Implementation Measure 1.3.3.1: Incorporate deficiency plan projects into the five-year Capital Improvement Program or into longer range plans.

Objective 1.4: Maintain smooth traffic flow, reduce and minimize traffic conflicts

Policy 1.4.1: Restrict residential driveway access to arterial roadways to locations where a finding can be made that such access will not result in a significant safety problem, will not conflict with traffic movements and will not result in a congestion impact.

Policy 1.4.2: Minimize through traffic in residential neighborhoods through a variety of land use controls, traffic control devices, signs, traffic calming techniques, etc.

Policy 1.4.3: Support and participate in regional efforts to improve/expand freight movement via trucks and train services, without increasing conflicts with passenger

car traffic and without increasing congestion on the highway and arterial roadway networks.

Policy 1.4.4: Continue to enforce truck route restrictions throughout the Planning Area.

Objective 1.5: Ensure adequate planning and programming of roadway improvements.

Policy 1.5.1: Review and prioritize Transportation Systems Management (TSM) measures and incorporate into Capital Improvement Programming (CIP) as appropriate.

Implementation Measure 1.5.1: Each year, as part of the CIP effort, select a specific set of TSM measures to complete in the next fiscal year, to optimize the efficiency of the local roadway network. TSM measures include, but are not limited to:

- 1. Intersection widening
- Installation of traffic control devices signals and stop signs
- 3. Signal timing optimization
- 4. Signal synchronization
- 5. Channelization
- 6. Exclusive turn lanes
- 7. Continuous, two-way left turn lanes
- 8. Turn prohibitions
- 9. Parking prohibitions
- 10. One way streets
- 11. Intelligent Transportation System technologies
- 12. Traffic surveillance and incident control

GOAL #2: EFFICIENT MULTI-MODAL TRANSPORTATION NETWORK - MEET DIVERSE TRANSPORTATION NEEDS OF EXISTING AND FUTURE RESIDENTS AND BUSINESSES IN THE PLANNING AREA THROUGH CONVENIENT, SAFE, MULTI-MODAL MEANS.

Objective 2.1: Shall work toward developing an integrated and connected multimodal transportation system of Complete Streets that serves all neighborhoods.

Policy 2.1.1: Each year, as part of the CIP effort, consider allocation of funds toward completion of some portion of the Non-Motorized components of the Circulation Plan.

Policy 2.1.2: The Development, Engineering and Public Works Departments shall routinely work in coordination with each other, any Bicycle or Pedestrian Coordinator, and any relevant advisory committees, to create Complete Streets and to ensure consistency with existing Pedestrian/Bicycle/Multi-Modal Plans, such as the Non-Motorized Transportation Plan and this Circulation Element.

Policy 2.1.3: Wherever possible, Transportation Projects shall strive to create a network of continuous bicycle- and pedestrian-friendly routes, including routes that connect with transit and allow for convenient access to work, home, commercial areas, and schools.

Policy 2.1.4: The Development, Engineering and Public Works Departments shall coordinate with adjacent jurisdiction(s) and any other relevant public agencies, including Caltrans, to ensure that, wherever possible, the network of continuous bicycleand pedestrian-friendly routes identified in Policy 2.1.3 extends beyond Victorville's boundaries into adjacent jurisdictions.

Policy 2.1.5: Victorville shall rely upon the current editions of street design standards and guidelines that promote and support Complete Streets.

Objective 2.2: Expand public transit in conjunction with population growth

Policy 2.2.1: Require new development and redevelopment projects (public and private), to incorporate needed public transit facilities as identified by the Victor Valley Transit Authority (VVTA).

Implementation Measure 2.2.1.1: Consult with the VVTA during planning/design of major new development and redevelopment projects and public facilities, to incorporate appropriate public transit improvements, in optimal locations.

Implementation Measure 2.2.1.2: Consult with VVTA regarding regular assessments of special transit needs for low-income, elderly, handicapped and other residents who do not have access to private automobiles or the public bus system.

GOAL #3: ADEQUATE INFRA-STRUCTURE - DEVELOP AND MAIN-TAIN INFRASTRUCTURE THAT SUP-PORTS THE TRANSPORTATION AND CIRCULATION NEEDS OF THE COM-MUNITY IN A COST-EFFECTIVE AND ENVIRONMENTALLY SENSITIVE MANNER.

Objective 3.1: Meet multiple infrastructure needs within common public rights-of-way.

Policy 3.1.1: Planning and design of new roadways and expansion/completion of existing roadways shall include consideration of water, sewer, storm drainage, communications, and energy facilities that can be colocated within the road right of way.

Implementation Measure 3.1.1.1: Establish specifications for construction of utility infrastructure within each roadway functional classification.

Objective 3.2: Design infrastructure that minimizes impacts to the environment.

Policy 3.2.1: Minimize or prohibit the use of landscape materials that require regular watering in the design of landscaping for public streets.

Policy 3.2.2: Include in the design specifications for public and private streets structural and non-structural techniques to filter storm water runoff prior to conveyance to storm drain inlets.

Policy 3.2.3: Program the funding and construction of wet and dry utilities within City service areas concurrent with the actual need for those improvements.

Objective 3.3: Provide adequate infrastructure improvements in conjunction with new development and redevelopment projects

Policy 3.3.1: Require private and public development projects to be responsible for constructing road improvements along all frontages abutting a public street right of way, in accordance with the design specifications for that roadway. Such road frontage improvements shall be constructed concurrently with and completed prior to opening of the project.

Implementation Measure 3.3.1.1: Require private and public development projects to be responsible for constructing roads, traffic control devices, wet and dry utility improvements necessary to meet the needs of the project, and to property integrate into the established and planned infrastructure systems. Such improvements shall be constructed concurrently with and completed prior to opening of the project.