

Purpose

The Circulation Element designates the general location and extent of existing and proposed major thoroughfares, transportation routes--including those for bicycles and pedestrians--and other local public facilities.

Relationship to Other Elements

The Circulation Element is systematically and reciprocally correlated with the Land Use Element, which includes policies related to the physical framework for development that the circulation system is designed to serve. The trails and bikeways identified in this element are also related to the recreational plans and policies identified in the Open Space and Environmental Conservation Element. Projected noise conditions in the Noise Element are also based on the traffic analysis conducted as part of the Circulation Element.

Much of Milpitas' evolution and recent growth can be attributed to its strategic location at the narrow plain between the Diablo Range and the San Francisco Bay that connects the East Bay and the South Bay. Several major regional transportation facilities traverse the City including Interstates 680 and 880, State Route 237-Calaveras Boulevard, Montague Expressway, The Santa Clara Valley Transportation Authority (VTA) Light Rail line, the Union Pacific Railroad tracks and the future Bay Area Rapid Transit (BART) commuter rail line. These major routes serve as major regional thoroughfares; however also act as barriers for local access.

Milpitas accommodates significant regional traffic as commuters from the East Bay and Central Valley travel to employment centers in Milpitas and Santa Clara County. The predominant direction of travel is south and west during the morning and east and north during the evening commute. Mean travel time to work for City residents was 22.7 minutes in 2009, compared to 23.8 minutes for County residents as a whole.

The residents' mode of transportation to work was quite similar to that of County residents as detailed in the 2009 American Community Survey 1-Year Estimates, with about 77 percent of the workers relying on the automobile as the primary mode (Table 3-1). Carpooling is slightly higher than the County average with 14 percent Milpitas residents sharing a vehicle over the County's 11 percent. A small amount of Milpitas residents travel by public transportation and about 2 percent of Milpitas residents walk or use another means of transportation which is assumed bicycling.

Table 3-1		
Mode of Transportation to Work for Residents		
	Percent of Total	
	Milpitas	Santa Clara County
Car, Truck or Van		
Drove Alone	76.7%	75.7%
Carpooled	13.8%	11.0%
Public Transportation	1.6%	3.2%
Walked	1.8%	2.2%
Other Means	2.9%	3.5%
Worked at Home	3.2%	4.5%
Total Workers	35,043	947,930
Note: Percentages may not add to 100 because of independent rounding.		
Source: 2009 American Community Survey 1-Year Estimates		

The Circulation Element provides a framework to guide growth of Milpitas' transportation-related infrastructure over the next 20 years. The Element is closely integrated with the Land Use Element to maintain acceptable level of service as the City grows and to plan an adequate street network to serve future development.

3.1 Relationship to Regional Programs

For a discussion of the Bay Area Air Quality Management District's programs, see Section 3.4.

A recognition of the functional relationships between transportation, land use and air quality, as well as of the need for jurisdictional cooperation, has led to a long history of legislation. In accordance with California Statute, Government Code 65088, Santa Clara County established a Congestion Management Program (CMP) to develop a comprehensive transportation improvement program among local jurisdictions that will reduce traffic congestion and improve land use decision-making and air quality. In 1991, Congress enacted the landmark Intermodal Surface Transportation Efficiency Act (ISTEA) followed by TEA-21 (expired in mid-2003) to provide a "national intermodal transportation system that is economically efficient and environmentally sound, and moves people and goods in an energy-efficient manner". This allowed state and metropolitan planning organization to take a broader view of the transportation system and its performance. In 2005, congress approved the Safe, Accountable, Flexible, and Efficient Transportation Equity Act- A Legacy for Users or SAFETEA-LU. Like its predecessors, SAFETEA-LU provided dollars to fund federal highways public transportation, highway safety and motor carrier safety program. The program promotes projects of national significance and it gives state and local transportation decision makers the financial flexibility to solve transportation problems in their communities.

The state of California has adopted three legislative mandates to guide the development of local plans and strategies:

AB 32 California Global Warming Solutions Act of 2006. This bill requires the State board to adopt regulations to require the reporting and verification of Statewide greenhouse gas emissions and to monitor and enforce compliance with this program

SB 97 CEQA Guidelines Amendments of 2009. These amendments provide guidelines for mitigation of green house gas emissions or the effect of greenhouse gas emissions.

SB 375 2008 Transportation Planning: Travel Demand Models; Sustainable Communities Strategy; Environmental Review. This bill requires the California Transportation Commission (CTC) to maintain guidelines, as specified, for travel demand models used in the development of the regional transportation plans by metropolitan planning organizations. This bill would also require the regional transportation plan for regions of the State with a metropolitan planning organization to adopt a sustainable communities strategy, as part of its regional transportation, designed to achieve certain goals for the reduction of greenhouse gas emissions from automobiles and light trucks in a region.

Major street improvements to meet the needs for a long-range planning horizon are identified in Section 3.3 of this Element. These projects will later be studied in greater detail and funding and implementation sources would be identified. Many of the projects are part of local and regional programs, including the City's Capital Improvement Program, the Santa Clara County Congestion Management Program (CMP), and Regional Transportation Plans as discussed below.

AB 1358 California Complete Streets Act of 2008. In order to fulfill the commitment to reduce greenhouse gas emissions, make the most efficient use of urban land and transportation infrastructure, and improve public health by encouraging physical activity, transportation planners must find innovative ways to reduce vehicle miles traveled (VMT) and to shift from short trips in the automobile to biking, walking and use of public transit. There is no singular design prescription for Complete Streets; each one is unique and responds to its community context.

Regional Transportation Plan

As the designated metropolitan planning organization for the Bay Area, the Metropolitan Transportation Commission (MTC) is responsible for preparing a long range Regional Transportation Plan (RTP). With the adoption of the Regional Transportation Plan in 2009, three principles of sustainability guide the Bay Area: a prosperous and globally competitive economy, a healthy and safe environment, and equity wherein all Bay Area residents share in the benefits of a well-maintained, efficient and connected regional transportation system. These principles are benchmarks to measure the progress of the Bay Area's transportation system.

In addition, to remain eligible for federal transportation funds, a region must demonstrate that the highway and transit projects contained in its RTP will help attain and maintain federal air quality standards. Once adopted, a RTP serves as a guide for the region's Transportation Improvement Programs (TIPs) in which projects and their specific funding sources are listed.

Santa Clara County Congestion Management Program

The Santa Clara Valley Transportation Authority (VTA), in its role as the Congestion Management Agency (CMA) for Santa Clara County, is responsible for preparing and periodically updating the Valley Transportation Plan (VTP), the long range vision for transportation in the County. The VTP identifies existing and future transportation related needs, considers all modes of travel and identifies what can be completed within the anticipated available funding for projects and programs. It provides a roadmap for the planning, policy development and programming of transportation funds in Santa Clara County for the next 25 years according to State and Federal requirements. It considers all travel modes and addresses the links between transportation and land use planning, air quality, energy use and community livability. The VTP updates every 4-5 years on a cycle coinciding with the Bay Area's Regional Transportation Plan (RTP)

The Congestion Management Program (CMP) is administered by the Santa Clara Valley Transportation Authority, the County's Congestion Management Agency, which is also responsible for overseeing local agency compliance with state law. The CMP promotes an integrated approach to transportation planning decision-making and mobility in Santa Clara

County by establishing traffic and transit standards, trip-reduction and travel-demand requirements, and by incorporating the transportation implications of land-use decisions in planning efforts.

Cities within the County are responsible for conformance with the adopted service level standards on the principal arterial system defined by the CMP, and for transit standards. They are also responsible for the adoption and implementation of a trip-reduction and travel-demand ordinance and for developing a program to analyze the impacts of land use decisions. Where deficiencies in the system exist, deficiency plans must be adopted and methods of correcting the deficiencies identified. If deficiencies go unmitigated, a city could lose its entitlement to a portion of its gas tax revenues.

Capital Improvements Program (CIP). The CMA maintains a CIP which includes a list of transportation facility improvements that is submitted to the MTC for inclusion in the Valley Transportation Plan 2040 (VTP 2040), or for funding from the state (Flexible Congestion Relief Funds) or from the federal Surface Transportation and the Congestion Mitigation/Air Quality programs.

Traffic level of service (LOS) standards adopted as part of the CMP is discussed in Section 3.2 and the street network in Section 3.3.

3.2 Standards for Traffic Service

Because much of the City is built-out, the primary traffic issues in Milpitas are the feasibility of improvements and achievement of an acceptable level of service, particularly along two major commute corridors that bisect the city. Areas along the local street system not constrained by available rights-of-way are few.

Level of service (LOS) is a measure of quality of traffic service along a roadway or at an intersection. As described in Table 3-2, it ranges from A to F, with LOS A being best and LOS F being worst. LOS A, B and C indicate conditions where traffic can move relatively freely. LOS D describes conditions where delay is noticeable. LOS E indicates significant delays and traffic volumes are generally at or close to capacity. Finally, LOS F characterizes traffic flow at very slow speeds (stop-and-go), and large delays (more than one minute) with queuing at signalized intersections; in effect, traffic demand on the roadway exceeds the roadway's capacity.

CMP Level-of-Service Standards

As required by state law, the Santa Clara County CMP includes level-of-service standards for the designated CMP Roadway System as follows:

- The LOS basic standard is LOS E;
- The LOS goal for the CMP system is LOS D, however member agencies (including the City of Milpitas) are not required to conform to the goal.
- Intersections that have a baseline (1991) LOS F are grandfathered in as LOS F.

- If the baseline LOS for a CMP System facility was LOS F and the facility is not included in an approved deficiency plan, then changes to traffic conditions caused by a project shall not be allowed to increase LOS by more than the criteria outlined in the CMP Traffic LOS Impact criteria for intersections- four or more second increase of average stopped delay for the critical movements and increase in critical volume-to-capacity ration (v/c) by 0.01 or more. In the event that the project causes CMP System facilities to worsen below baseline conditions, either a mitigation proposal to improve traffic LOS shall be provided, or an approved deficiency plan must be approved.

Level of Service (LOS)	Traffic Flow Conditions	Maximum Volume to Capacity Ratio
A	Describes primarily free-flow operations at average travel speeds, usually about 90 percent of the free-flow speed for the arterial class. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Stopped delay at signalized intersections is minimal.	0.6
B	Represents reasonably unimpeded operations at average travel speeds, usually about 70 percent of the free-flow speed for the arterial class. The ability to maneuver within the traffic stream is only slightly restricted and stopped delays are not bothersome. Drivers are not generally subjected to appreciable tension.	0.7
C	Represents stable operations. However, ability to maneuver and change lanes in midblock locations may be more restricted than in LOS B, and longer queues and/or adverse signal coordination may contribute to lower average travel speeds of about 50 percent of the average free-flow speed for the arterial class. Motorists will experience an appreciable tension while driving.	0.8
D	Borders on a range on which small increases in flow may cause substantial increases in approach delay and, hence decreases in arterial speed. This may be due to adverse signal progression, inappropriate signal timing, high volumes, or some combination of these. Average travel speeds are about 40 percent of free-flow speed.	0.9
E	Characterized by significant approach delays and average travel speeds of one-third the free-flow speed or lower. Such operations are caused by some combination of adverse progression, high signal density, extensive queuing at critical intersections, and inappropriate signal timing.	1.0
F	Characterizes arterial flow at extremely low speeds, below one-third to one-quarter of the free flow speed. Intersection congestion is likely at critical signalized locations, with high approach delays resulting. Adverse progression is frequently a contributor to this condition.	>1.0

Source: *Highway Capacity Manual*, 1985.

Traffic Analysis

The City completed two major planning documents in order to address community needs as it relates to land use and transportation. The Midtown Specific Plan provides a new vision for the approximately 589 acre area of land in central Milpitas. This area provides for approximately 1400 units of housing, reinvestment in the Great Mall, the VTA Light Rail and the future Bay Area Rapid Transit line. Recent additions to Midtown Milpitas include the Milpitas Library and the County's multi-regional Medical Facility. The Transit Area Specific Plan is a plan for the redevelopment of an approximately 437-acre area in the southern portion of the City that currently includes a number of industrial uses near the Great Mall shopping center. This plan proposes redevelopment of this area with 7,109 dwelling units, 993,843 square feet of office space, 340 hotel rooms and 287,075 square feet of retail space centered around the proposed Milpitas BART station and the VTA Light Rail system. Both these plans forecast traffic conditions include 2030 development as well as the VTA estimates of land use in the year 2030 in all parts of the County outside of the City's Planning Area.

In the Planning Area, overall employment projections based on ABAG's Projections 2009 were appropriately converted to land uses and distributed based on the Midtown and Transit Area Specific Plan designations. The model was used to produce forecasts of peak-hour traffic on the freeways, arterials and many of the collector streets in the City. Results of the traffic analysis are included in Appendix A. Major improvements needed to accommodate these anticipated traffic increases are discussed in Section 3.3.

3.3 Street Network and Classification

A hierarchy of streets will be required to provide access to future development and maintain acceptable levels of service. The circulation network in the General Plan Diagram (Figure 2-1) identifies the functional classifications of key routes. A route's design is determined by the projected traffic level on the street. The classifications and their required access standards are identified in Table 3-3. Street widths, number of lanes, and the need for on-street parking are to be tailored to individual conditions.

Street Classifications			
Street Type	Function	Access	Discussion
Freeway	Provides for intra- and inter- regional mobility.	Restricted to primary arterials and expressways via interchanges.	Interstates 880 and 680 and State Route 237 west of 880 are the freeways in the Planning Area.

Street Type	Function	Access	Discussion
Expressway	Provide for movement of through-traffic.	Limited accesses to abutting properties; varies according to situation.	
Arterial	Collect and distribute traffic from freeways and expressways to collector streets, and vice versa.	Varies according to situation.	State Route 237 east of 880 is a signalized arterial being used as a regional freeway to freeway connector.
Collector	Serve as connectors between local and arterial streets and provide direct access to parcels.	Driveways and/or intersecting streets or collector streets should be no closer than 300 – 400 feet apart. Joint-Use driveways are encouraged.	
Local Street	Provide access to parcels.	Access is not restricted.	Local streets constitute the largest part of the City's circulation system.

Major Improvements Needed

Due to regional through-traffic along sub-regional routes, such as State Route 237 and Montague Expressway, a large increase in traffic by year 2035 is anticipated. In addition, the completion of the Midtown Specific Plan and Transit Area Specific Plan, along with recent development activity has forecasted the increase of cumulative traffic. It is anticipated that segments of the following Milpitas roadways will have higher levels of traffic volume by year 2030:

- Abel Street
- Dixon Landing Road
- Main Street
- McCarthy Boulevard
- Milpitas Boulevard
- Montague Expressway
- Tasman Drive/Great Mall Parkway

Mitigation measures have been identified in order to alleviate the traffic pressure on these roadways. Major improvement projects are reviewed annually and are included in the VTP/RTP in order to be eligible for funding. Currently, these projects included are:

- Calaveras Boulevard Widening- bridge replaced between Milpitas Boulevard and Abel Street to accommodate 6 lanes and pedestrian bicycle facilities in both directions;
- Dixon Landing Road Widening- Widening from Interstate-880 to N. Milpitas Blvd from four to six lanes, including pedestrian and bicycle facilities
- Dixon Landing Road/Milpitas Boulevard Intersection and Widening Improvements.

Consistency with the Capital Improvement Program

Because of the incremental nature of development, the General Plan does not outline a schedule for the improvements to the City's street system discussed above. Projects identified in the Plan will be prioritized and included in the City's ongoing Capital Improvement Program (CIP). Modifications to the CIP are to be made as a normal part of the City's budgeting and implementation process and do not require amendment of the General Plan.

3.4 Transportation Demand Management

The term "Transportation Demand Management" (TDM) refers to measures designed to reduce peak-period auto traffic, by making more efficient use of existing transportation resources, and expanding and emphasizing more sustainable non-auto alternatives. These include public transit, flexible working hours, telecommuting, carpooling and vanpooling, and incentives to increase the use of these alternatives. TDM has become increasingly important in the effort to enhance mobility through efficient use of alternative modes of transportation, and in meeting federal and state air quality standards.

A successful TDM program is an essential and important element in the continuing effort to achieve acceptable levels of traffic service based on the standards in Section 3.2. The specific objectives of TDM are to:

- Reduce peak hour traffic congestion by reducing the number of single-occupant vehicle trips associated with commuting by provide travelers with alternate mobility choices;
- Reduce or delay the need for street improvements by making more efficient use of existing facilities;
- Reduce future air pollution concentrations and strive towards meeting state and federal ambient air pollution standards by reducing the number of single-occupant vehicle trips associated with commuting; and
- Reduce consumption of energy for transportation uses, thereby contributing to the national policy to increase energy self-sufficiency.

Transportation Control Measures

Under the California Clean Air Act (CCAA) of 1988, the Bay Area Air Quality Management District (BAAQMD) is required to prepare a Clean Air Plan (CAP) to achieve state standards for ozone and carbon monoxide. The Bay Area 2010 Clean Air Plan (CAP) provides a comprehensive plan to improve Bay Area air quality and protect public health. The CAP defines a control strategy that the Air District and its partners will implement to: (1) reduce emissions and decrease ambient concentrations of harmful pollutants; (2) safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily impacted by air pollution; and (3) reduce greenhouse gas (GHG) emissions to protect the climate.

The CCAA states that attainment plans should emphasize reducing emissions from transportation and area wide sources. The Act requires air districts to adopt, implement, and enforce Transportation Control Measures (TCMs). TCMs are defined in state law as “any strategy to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing motor vehicle emissions.” Although cars are about 90 percent cleaner than they were 20 years ago and fleet turnover will produce the bulk of mobile source emission reductions in the future, the state plan still requires TCMs as a complementary strategy. MTC develops and updates a list of TCMs to the BAAQMD.

Transit

Only 1.6 percent of Milpitas' workforce uses public transportation to travel to work (see Table 3-1). The primary function of transit in the City is to transport residents from the City to commercial and employment centers and to other transit stations in surrounding jurisdictions. The bus transfer station and park-and-ride lot, at the Great Mall transit center acts as a hub for most of the bus lines that serve Milpitas. Frequent service (less than 30 minute headway) is offered primarily during peak hours (6 AM to 9 AM and 3 PM to 6 PM on weekdays) while headway increase to 30 minutes or more during the midday, after 6 PM and on weekends and holidays.

Bus. The VTA provides a majority of the bus service for Milpitas. Local bus routes provide service to Mountain View, Sunnyvale, Great America, southeast and east San Jose, and Evergreen College, at average headway of 15 to 30 minutes during commute hours. Service to the Fremont BART station is provided by express buses. Additionally, Alameda County (AC) Transit provides lines from Milpitas to the Fremont including the Fremont BART Station. Details on transit service are included in Appendix B.

Light Rail. The Alum Rock-Santa Teresa Line travels through Milpitas stopping at 3 locations: Montague Expressway, Great Mall Transit Center (bus transfer station) and I-880/Milpitas at Tasman Drive/Alder. Both the Great Mall Transit Center and I-880/Milpitas have park and ride facilities. The Montague Expressway stop will link with the future BART station and bus transfer center, being the first multimodal station in Santa Clara County.

Bay Area Rapid Transit. The Milpitas Station is scheduled to open in 2017 that will link the Berryessa Station to the south in San Jose with the remainder of the BART system to the East Bay and San Francisco. BART will provide Milpitas regional transit connectivity to San Mateo, San Francisco, Alameda, and Santa Clara Counties.

3.5 Pedestrian and Bicycle Circulation

The relatively flat topography of the Valley Floor and the City's mild Mediterranean climate are conducive to walking and bicycling. Yet, few residents utilize these means of transportation for commuting. Walking and bicycling constituted only about 4.7 percent of the total trips made by City's employed residents in 2009¹ (see Table 3-1). Measures aggressively promoting and accommodating alternative mode choice should prove to increase this percentage in the future.

Many parts of the City also hold good potential for recreational biking and walking, including along Coyote Creek and within the Hillside Area. There are also additional opportunities along many of the creek channels and the Hetch-Hetchy rights-of-way.

Milpitas is crossed by two freeways and two railroad tracks; which fragment the City's circulation system, including facilities for biking and walking. In addition, many shopping centers and neighborhoods are accessed through a limited number of entrances, through which pedestrians and bicyclists must compete with the automobile for safe passage to their destination. As Milpitas is approaching build out, it is critical that bikeways and trails be addressed with each planned development and redevelopment program.

Bicycling and walking are recognized as vital forms of transportation in the Federal legislation, which calls upon the states to maximize the efficiency of the existing roadway system and to provide for intermodal transportation. Pedestrians and bicyclists are integral to the success of the intermodal system.

Bikeways

The City's existing system of bike lanes and routes support this transportation mode. The City's Bicycle Pedestrian Advisory Committee (BPAC) serves as an advisory body to the City Council on matters relating to planning, modifications and expansion of the City's Bikeway System. BPAC also promotes safety, education and awareness of bicycling and pedestrian issues.

The City has adopted a Bikeways Master Plan which includes:

- Goals, objectives, and benchmarks for bicycling
- A review of existing bicycling conditions
- Descriptions of Relevant Local and Regional Plans and Policies related to Bicycling
- An analysis of bicycling needs
- Recommended Bicycling Projects, Cost Estimates, and Priorities for implementation
- Recommended Bicycling Programs
- Funding Sources for Bicycle Projects and Programs
- Design Guidelines with best practices for implementing bikeways

¹ 2009 American Community Survey 1-Year Estimates

Table 3-4	
Bikeway Classifications	
Classification	Function
Bike Paths	Provide exclusive right-of-way for bicyclists with cross flows by motorists minimized to the extent possible.
Classification	Function
Bike Lanes	To provide preferential use of the paved area of roadway for bicyclists by establishing specific lines of demarcation between areas reserved for bicycles and motorists.
Bike Routes	To provide continuity of bikeway system along routes not served by Bike Lanes or Bike Paths. Bike Routes are shared facilities, either with motor vehicles on the street or with pedestrians on sidewalks.

The VTA Bicycle Plan identifies regional bicycle routes that provide for inter-city commuting. Portions of the Milpitas Bikeway System are identified in this regional plan. The VTA Bicycle Technical Guidelines is a guide for local agencies in Santa Clara County that present standards for planning, designing, operating retrofitting, and maintaining roadways and bikeways as best practices.

Trails

Milpitas Trails Master Plan. Recognizing that an off-street trail system will enhance the quality of life within Milpitas by providing an alternative transportation system, expanding recreational opportunities and improving the environmental conditions of those trail corridors that parallel creeks, the City Council adopted the Milpitas Trails Master Plan on June 3, 1997. Several of the trail corridors identified in the Trails Master Plan will provide direct, grade-separated routes from home to work, school and shopping. The direct access and lack of street crossings provided by grade separated facilities enhances the convenience of the off-street trail system. This added convenience encourages more people to bicycle and walk. The trail system will provide access to the Town Center, the Great Mall, all of the major employment centers, numerous schools and parks and the Tasman Corridor Light Rail stations.

Approximately 35 miles of trails are identified in the Master Plan. Of these, 6 miles have been built and 29 miles are proposed, including about 4 miles of on-street connectors proposed to link together the off-street system. The majority of trails identified in the plan follow the creeks, rail corridors and utility right of ways that traverse the City. In addition, the Midtown Specific Plan promotes the development of these trails. The trails are categorized into the following four groups:

- Regional Trails are those routes identified in the Santa Clara County Trails Master Plan as having national, state or regional significance. In Milpitas these are the Coyote Creek Trail, the San Francisco Bay Trail and the Juan Bautista de Anza National Historic Trails (which share the same alignment in Milpitas), and the Bay Area Ridge Trail.
- City Trails provide north-south and east-west cross-town routes and extend beyond the City limits to Fremont and San Jose. These trails provide recreation and transportation benefits by linking neighborhoods with employment centers, shopping districts, schools, and transit facilities. City Trails include the Berryessa Creek Trail, Calera Creek Trail, Hetch-Hetchy Trail, Penitencia Creek Trail, and Wrigley Creek/Union Pacific Railroad Trail.
- Neighborhood Trails connect homes with schools and parks and provide pedestrian and bicycle access to local shops and markets. They include the Hillcrest Park/Ben Rogers Park Trail, McCarthy Ranch Jogging Trail and Par Course, Rancho Milpitas Middle School/Sinnott School Trail and the Yellowstone Park Trail.
- On-Street Connectors consist of on-street bicycle lanes and routes that link segments of the off-street trail system where no other route is available. They include Calaveras Road, Yosemite Drive and North Park Victoria Drive.

The Trails Master Plan details trail types and the specific corridors included in the plan, offers general analysis, prioritizes trail projects and provides preliminary budget estimates. The Master Plan notes that detailed trail alignment studies for each corridor will be needed as trail projects move forward towards development.

Pedestrian Support

Sidewalks and Streetscapes. In general, pedestrian support has similar infrastructure and safety needs as bikeways and trails. It should be identified that pedestrian activity (as well as the enjoyment of walking) is increased when walkway facilities are safe, comfortable and attractive for all users including children, seniors and persons with disabilities. Some of the best ways to enhance walkways are through the provision of adequate sidewalk width, lighting, buffers between the pedestrians, median islands, curb extensions, safe crossing opportunities, and ample landscaping, particularly street trees. In addition, other enhancements at signalized crossings such as adequate pedestrian crossing timing and accessible pedestrian signals near senior complexes and medical facilities further improve access for users with slower walking pace and sensory loss. Obstructions to movement should be removed to the extent feasible and planned for accordingly.

Street Trees. Street trees have soothing visual impact, provide shade and a habitat for wildlife and add to property values. However, City maintenance costs can be expected to increase as street trees grow taller, requiring additional and more difficult pruning. Sidewalk damage is one of the difficult problems in street maintenance, and one reason for the increased use of

monolithic sidewalks located next to the curb, which widens the appearance of the street and reduces pedestrians' sense of safety by putting them closer to traffic.

Planning for Children. The Milpitas Suggested Routes to School program encourages parents and students to walk or bike to school by identifying obstacles, promoting safety, and suggested improvements. A strong education component is included in the program.

Planning for Seniors. Adequate pedestrian timing and accessible pedestrian signals for crossing should be in place at signalized crossings in the vicinity of senior residential complexes, civic and medical facilities to improve the pedestrian experience for senior citizens.

Planning for Persons with Disabilities. As with the measures suggested for senior citizens, adequate pedestrian timing and accessible pedestrian signals for signalized crossings should be in place where appropriate, such as civic and medical facilities. Obstructions to movement should also be removed and placed in appropriate locations during the planning stages to maximize movement for those with disabilities.

3.6 Goods Movement

Providing adequate circulation for trucks is necessary for economic development of the City by facilitating transportation of goods and products. In Milpitas, there is a four-ton weight limit restriction on all streets, except those shown on Figure 3-3. Therefore, by default, through truck traffic can only utilize the exempted streets, which can be referred to as “truck routes.” The routes shown in the Figure serve as primary commercial truck movements entering and leaving the City. Trucks, however, can use any street to get to and from specific delivery locations when a restricted street is on the direct path to the origin or destination and there is no other permitted facility.

Where feasible, efforts should be made to minimize conflicts along streets with heavy pedestrian activities by implementing parallel corridors for goods movements.

Figure 3-3 Truck Routes

Approved Truck Routes
Figure 3-3



City of Milpitas
GENERAL PLAN

3.7 Circulation Principles and Policies

a. Standards for Traffic Circulation

Guiding Principles

- 3.a-G-1** Continue to utilize the City's adopted Level of Service standards in evaluating development proposals and capital improvements. *Current City LOS standards apply only to development east of I-880.*
- 3.a-G-2** Maintain acceptable service standards for all major streets and intersections.
- 3.a-G-3** Create accessible transportation networks system to meet the needs of all segments of the population, including youth, seniors, persons with disabilities and low-income households.

Implementing Policies

- 3.a-I-1** Strive to maintain CMP LOS standards and goals for the CMP Roadway System in Milpitas.
- 3.a-I-2** For collectors and arterials east of Interstate 880 operating at baseline (1991) LOS F, require any development project that impacts the facility at or greater than one percent of facility capacity to implement mitigation measures to reduce the development project's impacts below the one percent level. These mitigations shall not adversely impact the safety, circulation, or accessibilities of pedestrian, bicycle, and transit travel. If an identified location cannot be mitigated, measures designed to improve system-wide levels of service can be implemented. These system-wide improvement strategies will be contained in the Citywide Deficiency Plan. *Conforms to CMA requirements and existing City LOS policy.*

- 3.a-I-3** Recognize that the City's development pattern and deficiencies in the regional network have resulted in substandard service levels on certain streets where capacity cannot be increased.

- 3.a-I-4** On streets where substandard service levels are anticipated, investigate and implement improvement projects that will enhance traffic operations.
- 3.a-I-5** Continue to monitor traffic service levels and implement Circulation Element improvements prior to deterioration in levels of service to below the stated standard.
- 3.a-I-6** Implement street standards that remove barriers and provide accessibility for pedestrians and bicyclists.

b. Street Network and Classification Principles and Policies

Guiding Principles

- 3.b-G-1** Develop a street network integrated with the pattern of living, working and shopping areas, and which provides for safe, inviting, convenient, and efficient intermodal movement within the City and to other parts of the region.
- 3.b-G-2** Direct special consideration toward the circulation needs of a modern, convenient central business district, including adequate off-street parking.
- 3.b-G-3** Create a street pattern that encourages industrial growth and promote livable community where all people – regardless of age, ability or mode of transportation – feel safe & welcome on the streets.
- 3.b-G-4** Use the “Major Improvements Needed” subsection as a basis for identifying, scheduling, and implementing transportation improvements as development occurs in the future.

Implementing Policies

- 3.b-I-1** Require new development to pay its share of street and other transportation improvements based on its impacts.
- 3.b-I-2** Require all projects that generate more than 100 peak-hour (A.M. or P.M.) vehicle trips to submit a transportation impact analysis that follows guidelines established by CMP. *This is part of the CMP requirements.*
- 3.b-I-3** As part of the Capital Improvement Program (CIP), annually update a five-year program of projects required to construct and/or update circulation facilities.
- 3.b-I-4** Continue to actively seek funding from regional, state, federal, and other agencies for projects identified in Table 3-4 and others included in the City's CIP.
- 3.b-I-5** Create a balanced multimodal transportation network that meets the needs of all users of streets, roads, and highways for safe and convenient travel in a manner that is suitable in respect to the community context of the general plan.

c. Transportation Demand Management

Guiding Principles

- 3.c-G-1** Implement measures that increase transit use and other non-motorized travel modes that lead to improved utilization of the existing transportation system, such as improvements to access public transit stops and stations by walking and biking, and provide transit stops near employment centers and higher density residential developments.
- 3.c-G-2** Cooperate with other private entities and public agencies to promote local and regional transit serving Milpitas.

Implementing Policy

- 3.c-I-1** Support regional planning efforts for the development of mass transit facilities such as transit priority for designated bus rapid transit, bus queue jump lanes, exclusive bus queue jump lanes, exclusive transit lanes, and other transit preferential treatments.
- 3.c-I-2** Support regional planning efforts for the development of transit facilities generally along either the Union Pacific or South Pacific Railroad corridors.
- 3.c-I-3** Implement measures to enhance transit efficiency where feasible as such farside bus stop locations and bus stop pullouts.
- 3.c-I-4** Encourage feeder services to carry commuters to transit stations, including shuttle connections from businesses, residences, and attractions to bus and rail services.

d. Pedestrian and Bicycle Circulation Principles and Policies

Guiding Principles

- 3.d-G-1** Implement the goals, objectives, and benchmarks of the Bikeways Master plan.
- 3.d-G-2** Promote walking and bicycling for transportation and recreation purposes by providing a comprehensive system of sidewalks, bicycle lanes and routes and off-street trails that connects all parts of the City.
- 3.d-G-3** Provide adequate bicycle parking and end-of-trip support facilities for bicyclists at centers of civic, retail, recreation, education, and work activity.
- 3.d-G-4** Promote intermodal commuting options by developing connected system of streets, roads, bridges, and highways that provides continuous, efficient, safe and convenient travel for all users regardless of age or ability.

- 3.d-G-5** Encourage a mode shift to non-motorized transportation by expanding and enhancing current pedestrian and bicycle facilities to accommodate casual and experienced cyclists and pedestrians.
- 3.d-G-6** Analyze the feasibility and cost/benefit of a pedestrian crossing connecting Yosemite Drive with Curtis Avenue.
- 3.d-G-7** Study the feasibility of a pedestrian circulator around the BART station.

Implementing Policies

- 3.d-I-1** Complete the on-street bicycle and the off-street circulation systems as depicted and described in the Bikeways and Trails Master Plans.
- 3.d-I-2** Develop connections between the off-street trail system and on-street bicycle system to fully integrate these facilities. Maximize linkages to other trail and bikeway systems to provide alternative transportation routes for pedestrians and bicyclists.
- 3.d-I-3** View all public capital improvement projects as opportunities to enhance the bicycle and pedestrian systems, and incorporate bicycle and pedestrian facilities into the design of such projects wherever feasible.
- 3.d-I-4** Encourage walking, biking and transit use by improving bicycle and pedestrian connections to transit centers, specifically the Great Mall transit centers and light rail stations and the proposed commuter/passenger rail stations.
- 3.d-I-5** Distribute the Milpitas Bicycle Map, Trail Map, bicycle safety information and other related materials at City buildings and schools, and special events.
- 3.d-I-6** Use funds from the Streets budget for bicycle and pedestrian projects as appropriate.

- 3.d-I-7** Actively pursue external grant funds for bicycle and pedestrian capital improvement projects.
- 3.d-I-8** Consider developing additional local sources of funding for trails and bikeways such as special assessment districts, nonprofit corporations and ballot initiatives.
- 3.d-I-9** Require developers to make new projects as bicycle and pedestrian “friendly” as feasible, especially through facilitating pedestrian and bicycle movements within sites and between surrounding civic, recreation, education, work, and retail centers.
- 3.d-I-10** Require developer contributions toward pedestrian and bicycle capital improvement projects, bicycle parking, and end-of-trip support facilities to promote alternate modes of transportation.
- 3.d-I-11** Support Safe Routes to School Projects, including infrastructure improvements and education, as an important source for encouragement of walking and bicycling to school as well as supporting the reduction of green house gas emissions
- 3.d-I-12** Design streets to include detached sidewalks with planting strips or wider, attached sidewalks with tree-wells to encourage pedestrian use and safety, as well as to remove barriers and increase accessibility.

Bikeway Policies

- 3.d-I-13** Make improvements to roads, signs, and traffic signals as needed to improve bicycle travel. *Provide bicycle actuated traffic signals, detection, loop detector stencils*
- 3.d-I-14** Discourage speed bumps and other street features that hinder bicycling on public streets and private parking lots.
- 3.d-I-15** Where appropriate, install bicycle lockers

and/or racks at public parks, civic buildings and other community facilities. Ensure required amount of bicycle racks for residential, commercial and mixed use projects as required in the Milpitas Zoning Ordinance.

- 3.d-I-16** Include evaluation of bicycle facility needs in all planning applications for new developments and major remodeling or improvement projects.
- 3.d-I-17** Require new developments to provide end-of-trip facilities such as secure bicycle parking, and on-site showers and clothing storage lockers, etc. where feasible.
- 3.d-I-18** Support bicycle education programs.
- 3.d-I-19** Link City pedestrian and bicycle circulation to existing and planned regional networks.

Trail Policies

- 3.d-I-20** Acquire adequate set backs and right of way to complete the Trails master Plan.
- 3.d-I-21** Provide and accommodate recreational and transportation use of the trail system.
- 3.d-I-22** Preserve and enhance the natural environment of the creek corridors in conjunction with each trail project.
- 3.d-I-23** Monitor proposed developments and work with applicants to design projects that preserve the integrity of the identified trail routes.
- 3.d-I-24** Support building bridges or under-crossings across creek channels, railroad lines and roadways to facilitate bicycling and walking between high density residential developments, retail centers, and civic buildings, and recreational centers..
- 3.d-I-25** Use existing cul de sacs, bridges and other

public improvement areas as trail access points wherever possible.

- 3.d-I-26** Use existing parks, schools and other public facilities as staging areas wherever possible.
- 3.d-I-27** Where appropriate, require new development provide public access points to the trail system and/or contribute to staging areas.
- 3.d-I-28** Encourage existing businesses to provide access to the trail system.

Sidewalk Policies

- 3.d-I-29** Require sidewalks on both sides of the street as a condition of development approval, where appropriate with local conditions.
- 3.d-I-30** Review City street improvement standards to see if there are ways to increase walking enjoyment and safety, particularly with regards to increased sidewalk width, landscape buffers between sidewalks, streets and pedestrian lighting, and other amenities.
- 3.d-I-31** Develop a Streetscape Master Plan that identifies goals and policies for improving the appearance and enjoyment of public streets and sidewalks in Milpitas, particularly with regards to landscaping, street furniture and the identification of significant entryways and corridors.
- 3.d-I-32** Remove obstructions to facilitate pedestrian movements taking into account persons with disabilities.

Pedestrian Crossing Policies

- 3.d-I-33** Provide accessible pedestrian signals and appropriate signal timing to pedestrian crossings near senior residential complexes, civic and medical facilities.

- 3.d-I-34** Concentrate pedestrians crossing activity at a specific location to minimize their exposure to vehicular conflicts and position pedestrians to be more visible by motorists

e. Goods Movement

Guiding Principle

- 3.e-G-1** Provide adequate circulation and off-street parking and loading facilities for trucks.

Implementing Policies

- 3.e-I-1** Restrict trucks to designated non-restricted routes.

Truck routes in the City are regulated by Section V-100.12.05 of the Municipal Code.

- 3.e-I-2** Ensure that adequate pavement depth, lane widths, bridge capacities, loading areas, and turn radii are maintained on the permitted streets.

- 3.e-I-3** Minimize conflicts with pedestrians where feasible by creating parallel corridors for truck routes.