Mobility Element





Mobility Element

Purpose

To improve mobility through development of a balanced, multi-modal transportation network.

Introduction

An overall goal of the Mobility Element is to further the attainment of a balanced, multi-modal transportation network that gets us where we want to go and minimizes environmental and neighborhood impacts. A balanced network is one in which each mode, or type of transportation, is able to contribute to an efficient network of services meeting varied user needs. For example, the element contains policies that will help walking become more viable for short trips, and for transit to more efficiently link highly frequented destinations, while still preserving auto-mobility. In addition to addressing walking, streets, and transit, the Element also includes policies related to: regional collaboration, bicycling, parking, goods movement, and other components of our transportation system. Taken together, these policies advance a strategy for congestion relief and increased transportation choices in a manner that strengthens the City of Villages land use vision and helps achieve a clean and sustainable environment.



Mi Pueblo Pilot Village Estudio Cruz





The Mobility Element, and Land Use and Community Planning Element of the General Plan are closely linked. The Land Use and Community Planning Element identifies existing uses and planned land uses, and the Mobility Element identifies the proposed transportation network and strategies which have been designed to meet the future transportation needs generated by the planned land uses. The integration of transit and land use planning is illustrated by the Transit/Land Use Connections Map (see Figure ME-1). This map identifies existing and community plan-designated activity centers, commercial centers and corridors, and multifamily residential areas that are along the region's higher frequency existing and planned transit services.

Implementation of the City of Villages growth strategy is dependent upon the close coordination of land use and transportation planning. The strategy calls for redevelopment, infill, and new growth to be targeted into compact, mixed-use, and walkable villages that are connected to the regional transit system. Villages should increase personal transportation choices and minimize transportation impacts through design that pays attention to the needs of people traveling by transit, foot, and bicycle, as well as the automobile. Focused development and density adjacent to transit stops and stations helps make transit convenient for more people, and allows for a more cost-effective expansion of transit services. Housing in mixed-use commercial areas provides opportunities for people to live near their place of work, and helps support the use of neighborhood shops and services. As such, the City of Villages land use pattern is a transportation, as well as a land use strategy.

Communities also benefit from the village transportation/land use strategy as a result of the overall increase of transit service, street and freeway improvements, increased accessibility to regional employment areas citywide improvements to foster walking and bicycling, and citywide multi-modal transportation improvements in conjunction with development. In recognition of the diversity of San Diego's communities and the range of transportation issues that exist within them, the Mobility Element contains several "toolboxes" which illustrate the flexibility that exists and many of the options available to implement citywide policies. These toolboxes contain a variety of strategies and potential improvements that may be utilized where appropriate to develop area-specific solutions to community parking and traffic issues.

The Mobility Element is part of a larger body of plans and programs that guide the development and management of our transportation system.

- The Regional Transportation Plan (RTP), prepared and adopted by the San Diego Association of Governments (SANDAG) is the region's long-range mobility plan. The RTP plans for and identifies projects for multiple modes of transportation in order to achieve a balanced regional system. It establishes the basis for state funding of local and regional transportation projects, and is a prerequisite for federal funding. SANDAG prioritizes and allocates the expenditure of regional, state and federal transportation funds to implement RTP projects.
- The region's Congestion Management Program (CMP), also prepared by SANDAG, serves as a short-term element of the RTP. It focuses on actions that can be implemented in advance of the longer-range transportation solutions contained within the RTP. The CMP establishes



programs for mitigating the traffic impacts of new development and monitoring the performance of system roads relative to Level of Service (LOS) standards. It links land use, transportation, and air quality concerns.

The Mobility Element, the RTP and the CMP all highlight the importance of integrating transportation and land use planning decisions, and using multi-modal strategies to reduce congestion and increase travel choices. However, the Mobility Element more specifically plans for the City of San Diego's transportation goals and needs. The City recognizes that regional planning necessitates close working relationships between City and SANDAG planners and that optimum transportation infrastructure planning must be coordinated through state agencies such as Caltrans. To this end, staff participation on SANDAG advisory committees is critical. The Mobility Element, Section K, and Public Facilities Element, Section B, contain policies on how to work effectively with SANDAG to help ensure that City of San Diego transportation priorities are implemented.

The effectiveness of policies to improve mobility will be measured through monitoring of General Plan and regional plans implementation. The General Plan Monitoring Report measures progress toward reducing traffic congestion through the use of Sustainable Community Indicators that include measurements such as vehicle miles traveled per capita and number of weekday transit riders. SANDAG monitors and evaluates the performance and operation of the region's transportation system using performance indicators that are measured in an annual report.

A. Walkable Communities

Goals

- A city where walking is a viable travel choice, particularly for trips of less than one-half mile.
- A safe and comfortable pedestrian environment.
- A complete, functional, and interconnected pedestrian network, that is accessible to pedestrians of all abilities.
- Greater walkability achieved through pedestrianfriendly street, site and building design.





Discussion

The pedestrian environment affects us all whether we are walking to transit, a store, school, or simply walking from a parked car to a building. Pedestrian activity is more likely in areas where destinations are nearby. People enjoy walking in places where there are sidewalks shaded with trees, lighting, interesting buildings or scenery to look at, other people outside, neighborhood destinations, and a feeling of safety. Pedestrian improvements in areas with land uses that promote pedestrian activities can help to increase walking as a means of transportation and recreation. Land use and street design recommendations that benefit pedestrians also help promote use of alternatives to automobile travel and contribute to the overall quality, vitality, and sense of community of our neighborhoods. Policies designed to support walking and pedestrians are also intended to benefit overall accessibility.

Walkable communities offer public health benefits by providing opportunities for people to be active as a part of their everyday lives. There have been numerous studies that demonstrate a strong link between public health and the built environment, with the healthiest communities exhibiting many of the same types of features that are central to the City of Villages strategy and addressed throughout the General Plan, including:

- Compact, mixed-use neighborhoods linked by public transportation¹ (see Land Use and Community Planning Element, Section A_i and ME Sections A and B).
- Residences within close proximity of parks, schools, shopping, employment, and transit stops² (see Land Use and Community Planning Element, Section A; and Recreation Element, Section D).
- A safe and accessible walking environment³ (see ME Section A).
- Neighborhood streets designed for pedestrian safety (Mobility Element Sections A and C and Urban Design Element Section B);
- Neighborhoods where residents have easy and convenient access to healthy food choices⁴ (see Conservation Element, Section L).

The policies below address safety, accessibility, connectivity, and walkability goals. More specific actions to implement these policies are recommended to be included in a citywide Pedestrian Master Plan (PMP). The PMP will identify and prioritize pedestrian improvement projects based on technical analysis and community input. The PMP is intended to be



¹ Lawrence F, Sallis J, Conway T, et al. *Many Pathways from Land Use to Health*. Journal of the American Planning Association. 2006;72:75-87.

² McGinnis M, Williams-Russo P, Knickman J. *The Case for more active policy attention to health promotion*. Health Affairs. 2002;21:78.

³ Saelens BE, Sallis JF, Black JB, et al. *Neighborhood-based differences in physical activity: an environmental scale evaluation.* American Journal of Public Health. 2003;93:1552-8.

⁴ Flournoy R, Treuhaft S. *Healthy Food, Healthy Communities: Improving Access and Opportunities Through Food Retailing.* PolicyLink 2005. Accessed at <u>http://www.policylink.org/pdfs/HealthyFoodHealthyCommunities.pdf</u>.



complementary to the community plans, recognizing that not all community plans currently address pedestrian issues.

Policies

Safety and Accessibility

- ME-A.1. Design and operate sidewalks, streets, and intersections to emphasize pedestrian safety and comfort through a variety of street design and traffic management solutions, including but not limited to those described in the Pedestrian Improvements Toolbox, Table ME-1.
- ME-A.2. Design and implement safe pedestrian routes.
 - a. Collaborate with appropriate community groups, and other interested private and public sector groups or individuals to design and implement safe pedestrian routes to schools, transit, and other highly frequented destinations. Implement needed improvements and programs such as wider and non-contiguous sidewalks, more visible pedestrian crossings, traffic enforcement, traffic calming, street and pedestrian lighting, pedestrian trails, and educating children on traffic and bicycle safety.



Safe Routes to Schools

- b. Promote "Walking School Bus" efforts where parents or other responsible adults share the responsibility of escorting children to and from school by foot or bicycle.
- c. When new schools are planned, work with school districts and affected communities to locate schools so that the number of students who can walk to school safely is maximized.
- d. Implement Crime Prevention Through Environmental Design (CPTED) measures to reduce the threat and incidence of crime in the pedestrian environment (see also Urban Design Element, Policy UD-A.17).



- e. Ensure that there are adequate law enforcement, code enforcement, and litter and graffiti control to maintain safe and attractive neighborhoods.
- f. Provide adequate levels of lighting for pedestrian safety and comfort.
- ME-A.3. Engage in a public education campaign to increase drivers' awareness of pedestrians and bicyclists, and to encourage more courteous driving.
- ME-A.4. Make sidewalks and street crossings accessible to pedestrians of all abilities.
 - a. Meet or exceed all federal and state requirements.
 - b. Provide special attention to the needs of children, the elderly, and people with disabilities.
 - c. Maintain pedestrian facilities to be free of damage or trip hazards.
- ME-A.5. Provide adequate sidewalk widths and clear path of travel as determined by street classification, adjoining land uses, and expected pedestrian usage.
 - a. Minimize obstructions and barriers that inhibit pedestrian circulation.
 - b. Consider pedestrian impacts when designing the width and number of driveways within a street segment.

Connectivity

- ME-A.6. Work toward achieving a complete, functional and interconnected pedestrian network.
 - a. Ensure that pedestrian facilities such as sidewalks, trails, bridges, pedestrian-oriented and street lighting, ramps, stairways and other facilities are implemented as needed to support pedestrian circulation. Additional examples of pedestrian facilities are provided in the Pedestrian Improvements Toolbox, Table ME-1.



North Park pedestrian breaktbroughs

- 1. Close gaps in the sidewalk network.
- 2. Provide convenient pedestrian connections between land uses, including shortcuts where possible.



- 3. Design grading plans to provide convenient and accessible pedestrian connections from new development to adjacent uses and streets.
- b. Link sidewalks, pedestrian paths and multi-purpose trails into a continuous regionwide network where possible (see also Recreation Element, Policy RE-D.6).
- c. Provide and maintain trash and recycling receptacles, and restrooms available to the public where needed.
- d. Address pedestrian needs as an integral component of community and public facilities financing plan updates and amendments, other planning studies and programs, and the development project review process.
- e. Routinely accommodate pedestrian facilities and amenities into private and public plans and projects.

Walkability

- ME-A.7. Improve walkability through the pedestrian-oriented design of public and private projects in areas where higher levels of pedestrian activity are present or desired.
 - a. Enhance streets and other public rights-of-way with amenities such as street trees, benches, plazas, public art or other measures including, but not limited to those described in the Pedestrian Improvement Toolbox, Table ME-1 (see also Urban Design Element, Policy UD-A.10).



- b. Design site plans and structures with pedestrian-oriented features (see also Urban Design Element, Policies UD-A.6, UD-B.4, and UD-C.6).
- c. Encourage the use of non-contiguous sidewalk design where appropriate to help separate pedestrians from auto traffic. In some areas, contiguous sidewalks with trees planted in grates adjacent to the street may be a preferable design.
- d. Enhance alleys as secure pathways to provide additional pedestrian connections.
- e. Implement traffic calming measures to improve walkability in accordance with Policy ME-C.5.



- f. When existing sidewalks are repaired or replaced, take care to retain sidewalk stamps and imprints that are indicators of the age of a particular neighborhood, or that contribute to the historic character of a neighborhood.
- ME-A.8. Encourage a mix of uses in villages, commercial centers, transit corridors, employment centers and other areas as identified in community plans so that it is possible for a greater number of short trips to be made by walking.
- ME.A.9. Continue to collaborate with regional agencies, school districts, community planning groups, community activists, public health professionals, developers, law and code enforcement officials, and others, to better realize the mobility, environmental, social, and health benefits of walkable communities.

Pedestrian Improvement	Description	Illustration
Accessible Pedestrian Traffic Signal	Accessible Pedestrian Traffic Signals are devices that communicate information about pedestrian timing in nonvisual format such as audible tones, verbal messages, and/or vibrating surfaces.	Emiliar Emiliar Emiliar Emiliar
Connection Pathway for Pedestrians	Connection Pathways for Pedestrians provide a more direct access between streets that do not connect.	
Curb Radius Reduction	Curb Radius Reductions provide tighter corner radii at intersections. This treatment reduces the speeds of right-turning vehicles, increases the visibility of pedestrians to drivers, and reduces the crossing distance for pedestrians.	





Pedestrian Improvement	Description	Illustration
Curb Ramp	A Curb Ramp is a combined ramp and landing that provides an accessible transition between the high and low sides of a curb. Curb ramps provide street and sidewalk access to pedestrians using wheelchairs.	
Education, Encouragement, and Awareness Programs	Education, Encouragement and Awareness Programs include activities at local schools that teach children about pedestrian safety, programs that encourage walking to school or work, and traffic safety awareness campaigns.	<complex-block></complex-block>
Enforcement	Enforcement requires the presence of police officers to monitor and enforce speed limits and other traffic regulations. Enforcement is used to improve compliance with traffic laws.	
High-Visibility Crosswalk Striping	High Visibility Crosswalk Striping such as zebra or ladder-style markings improve visibility of crosswalks to drivers.	
Lead Pedestrian Interval at Traffic Signals	Lead Pedestrian Intervals at Traffic Signals enable pedestrians to establish themselves in the crosswalk before concurrent traffic movements get a green indication. This reduces conflicts between pedestrians and turning vehicles.	



Pedestrian Improvement	Description	Illustration
Marked Crosswalks with In- Pavement Flashers	Marked Crosswalks with In- Pavement Flashers are highly visible and warn drivers that pedestrians are present in the crosswalk.	
On-Street Parking	On-Street Parking provides a buffer between pedestrians on the sidewalk and moving vehicles.	
Pedestrian Countdown Display at Traffic Signals	Pedestrian Countdown Displays at Traffic Signals let pedestrians know how much crossing time remains.	
Planting Strip/Parkway Planting	A Planting Strip/Parkway Planting along the sidewalk sets the pedestrian path away from the roadway, provides a buffer between pedestrians and moving vehicles, and is aesthetically pleasing.	
Pedestrian-Scale Lighting	Pedestrian-Scale Lighting improves visibility and security.	



Pedestrian Improvement	Description	Illustration
Pedestrian Bridge/Grade Separation	Pedestrian Bridges/Grade Separations eliminate conflicts between vehicles and pedestrians.	
Pop-out/Bulb-out/Curb Extension	Bulb-outs, also known as Pop-Outs an Curb Extensions, narrow the width of street at an intersection by extending the curb into roadway at the corner(s) of an intersection. This reduces the speeds of right-turning vehicles, increases the visibility of pedestrians t drivers, and creates a shorter crossing distance, reducing pedestrians' exposure to moving vehicles.	
Raised Crosswalks	Raised Crosswalks have ramps on both sides of the flat crosswalk surface. The vertical deflection encourages traffic to slow down while markings increase visibility of the crosswalk to drivers.	
Raised Median Pedestrian Refuge	Raised Median Pedestrian Refuges are used to reduce pedestrian exposure to moving vehicles, and provide a refuge in the middle of the street. This allows the pedestrian to identify a safe gap and cross one direction of traffic at a time.	
Sidewalk	Sidewalks are walkways that parallel vehicle roadways. Contiguous sidewalks have the pedestrian path of travel immediately adjacent to the curb. Non-contiguous sidewalks have the pedestrian path of travel separated from the curb by a planting strip.	



Pedestrian Improvement	Description	Illustration
Street Furnishings for Comfort	Street Furnishings such as benches and other amenities improve the pedestrian environment.	
Trees for Shade	Canopy Trees provide protection from the sun. When trees are located between the sidewalk and roadway, they provide a buffer between pedestrians and moving vehicles.	
Traffic Controls	Traffic Controls such as stop signs and traffic signals assign right-of way.	STOP
Turn Restrictions	Turn Restrictions may be used at intersections to reduce or eliminate vehicle conflicts with pedestrians.	ON RED
Walkways	Walkways are prepared exterior routes designed to provide pedestrian accessibility. They are general pedestrian routes, including plazas, courts and sidewalks.	





B. Transit First

Goals

- An attractive and convenient transit system that is the first choice of travel for many of the trips made in the City.
- Increased transit ridership.

Discussion

A primary strategy of the General Plan is to reduce dependence on the automobile in order to achieve multiple and inter-related goals including: increasing mobility, preserving and enhancing neighborhood character, improving air quality, reducing storm water runoff, reducing paved surfaces, and fostering compact development and a more walkable city. Expanding transit services is an essential component of this strategy.

Regional Collaboration

The Regional Transit Vision (RTV), adopted as a part of the 2030 Regional Transportation Plan (RTP), calls for development of a fast, flexible, reliable and convenient transit system that connects the region's major employment and activity centers with a rich network of transit services, and improves the quality of the travel experience for transit patrons. Under this vision, transit and land use will be tightly linked, with transit stations integrated into walkable, transitoriented neighborhoods and centers. In addition to the existing and planned light and commuter rail networks the vision incorporates the use of Bus Rapid Transit (BRT) vehicles. The BRT vehicles have the flexibility of standard buses,



The American Plaza Trolley Station downtown provides an architecturally integrated, "front door" experience for transit patrons.



Local bus service improvements are needed to create a highfrequency urban network of transit routes. Photo by MTS/Brett Shoaf

but have the look and feel of rail vehicles. Greater use of low-floor transit vehicles and smart fare cards will allow for easier and speedier passenger boarding. Upgraded stations and real-time information will let patrons know when the next vehicle will be arriving. Continued refinements of the RTV are expected to occur over time as additional transit-related research and analysis takes place.



Successful implementation of capital, operational, and station area improvements is intended to result in a transit system that is so attractive and convenient that transit will become the first choice of travel for many of the trips made in the region. Regional transit connectivity is to be provided through regional, corridor, local, and neighborhood transit services. Local and neighborhood services serve local trips, and may also provide linkages to regional and corridor services.

Transit Supportive City Land Use Planning

The Transit/Land Use Connections Map (Figure ME-1) shows lines that are a part of the urban network adopted by the Metropolitan Transit System in 2006 and the land uses that these routes serve. Urban Network routes operate with service frequencies of 15 minutes throughout most of the day. Peak hour service frequencies may be greater to handle demand, while late evening service may be less.

The Transit/Land Use Connections Map also shows planned rail and bus rapid transit routes that were adopted in the RTP Mobility 2030 transit network in the City of San Diego. The State Route 56 and Carroll Canyon corridors are shown as areas where the City will continue to work with SANDAG to plan for future transit service for existing and planned transit-oriented developments in these corridors.

The City of Villages strategy supports expansion of the transit system by calling for villages, employment centers, and other higher-intensity uses to be located in areas that can be served by high quality transit services. This will allow more people to live and work within walking distance of transit. The General Plan also supports transit through policies supportive of transit and pedestrian-oriented design, and implementation of transit priority measures.



Transit-Oriented Development Example of Street and Public Spaces Layout



Policies

Regional Agency Collaboration

- ME-B.1. Work closely with regional agencies and others to increase transit ridership and mode share through increased transit service accessibility, frequency, connectivity, and availability.
 - a. Develop an urban network of routes that operate with a base, mid-day service frequency of ten-minute intervals or better.
 - b. Provide transit routes that offer efficient connections between highly frequented origins and destinations.
 - c. Enhance overall transit customer experience through attention to safety, station areas, vehicles, seating, and other factors.
- ME-B.2. Support the provision of higher-frequency transit service and capital investments to benefit higher-density residential or mixed-use areas; higher-intensity employment areas and activity centers; and community plan-identified neighborhood, community, and urban villages; and transit-oriented development areas.
- ME-B.3. Design and locate transit stops/stations to provide convenient access to high activity/density areas, respect neighborhood and activity center character, implement community plan recommendations, enhance the users' personal experience of each neighborhood/center, and contain comfortable walk and wait environments for customers (see also Urban Design Element, Policy UD-A.9).



Transit lane simulation

- ME-B.4. Collaborate with regional agencies to evaluate the need for, and design of, park-and-ride spaces at transit stations based on the character of the neighborhood, community plan recommendations, and the stations role in the regional transit system (see also Urban Design Element, Policies UD-A.11 and UD-A.12).
- ME-B.5. Integrate the regional transit system with the intercity rail network.
- ME-B.6. Work closely with regional agencies to achieve a transit system that is accessible to persons with disabilities.



- ME-B.7. Support efforts to develop additional transportation options for non-driving older adults and persons with disabilities, including:
 - Expansion of the regional database of public and private/nonprofit transportation providers;
 - Development of innovative programs to link a wide range of transportation providers with persons in need; and
 - Identification of transportation providers and programs that could assist in evacuating persons in need, as a part of emergency and disaster preparedness plans that are referenced in the Public Facilities Element, Section P (see also Land Use Element, Policy LU-I.10).
- ME-B.8. Support efforts to use alternative fuels in transit vehicles to help implement air quality and energy conservation goals.

Transit Supportive City Land Use Planning

- ME-B.9. Make transit planning an integral component of long range planning documents and the development review process.
 - a. Identify recommended transit routes and stops/stations as a part of the preparation of community plans and community plan amendments, and through the development review process.
 - b. Plan for transit-supportive villages, transit corridors, and other higher-intensity uses in areas that are served by existing or planned higher-quality transit services, in accordance with Land Use and Community Planning Element, Sections A and C.
 - c. Proactively seek reservations or dedications of right-of-way along transit routes and stations through the planning and development review process.
 - d. Locate new public facilities that generate large numbers of person trips, such as libraries, community service centers, and some recreational facilities in areas with existing or planned transit access.
 - e. Design for walkability in accordance with the Urban Design Element, as pedestrian supportive design also helps create a transit supportive environment.
 - f. Address rail corridor safety in the design of development adjacent to or near railroad rights-of-way.
- ME.B.10. Implement transit priority measures to help bypass congested areas. Priority measures include, but are not limited to, transit signal priority, queue jumpers, exclusive transit lanes, transit ways, use of freeway shoulders, and direct access ramps to freeway High Occupancy Vehicle (HOV) facilities.