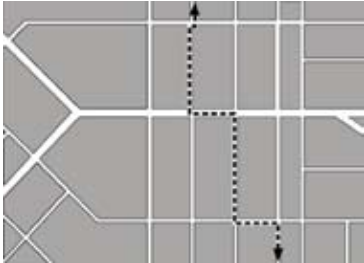




Chapter
2

Plan Context

Figure 3a Traditional Streets

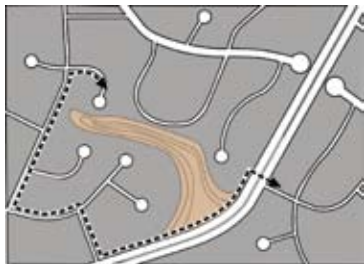


Traditional grid street layouts allowed for short distances between homes and destinations.



Traditional neighborhoods had a well defined pedestrian system with access to all adjacent land uses through a grid street layout.

Figure 3b Post War Streets



Post-war streets were often curvilinear and not interconnected, making it difficult for pedestrians to get from their home to community facilities.



Post war neighborhoods may have included sidewalks, but were often isolated from direct connections to the primary land uses.

2.1 URBAN FORM

The layout of our city has a major influence on the walkability of our neighborhoods. Certain types of land use mixtures, densities and the configuration of our streets can dramatically affect the amount of pedestrian activity found within a community.

2.1.1 Layout of San Diego from a Pedestrian Perspective

Safety and directness are both important components of connectivity. In San Diego, many routes may be relatively safe, but are not direct, such as in a suburban neighborhood with large numbers of cul-de-sac streets or dead end streets on canyons. In other cases, routes may be direct, but they represent barriers such as where a wide, high-speed arterial street bisects an otherwise walkable community.

Traditional Neighborhoods

San Diego neighborhoods vary tremendously in the degree of street connectivity. Neighborhoods built prior to World War II (1940-1945) were designed primarily for pedestrians and streetcars. Streets were laid out on a grid pattern, making it simple and efficient to reach a destination on foot. Often, streets would dead end at canyons or be built down steep slopes regardless of the topography. Examples include most of the beach communities -- Ocean Beach, Pacific Beach and La Jolla -- as well as most neighborhoods south of Interstate 8 and north of 94.

Post-World War II Neighborhoods

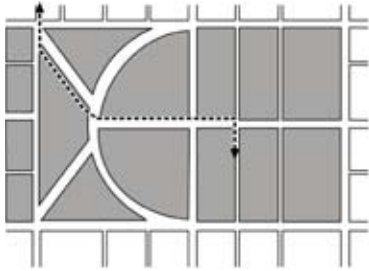
Following the war years (1945-1980), communities were built around the premise that most trips would be made by private automobile and the car became the common denominator for neighborhood design. Streets were designed (dictated by zoning and street standards) with a functional hierarchy, with limited-access residential streets emptying onto collector streets, which then funneled traffic onto large arterial streets. Sidewalks, other pedestrian facilities, and street connectivity were often given a low priority. For most people, distances between destinations were too great to walk because the curving, indirect routes required traveling a much greater distance than the older style of interconnected grid system of streets and walks. A majority of San Diego's developed land is occupied by neighborhoods built in this style.

New Communities

Communities built from the 1980s to the present are generally less circuitous and more pedestrian oriented than those built in the post war period. New communities, master planned communities and neo-traditional neighborhoods are terms used for these newer parts of the city. Over the past few decades, many residential developers have discovered that home-buyers prefer neighborhoods that support walking for transportation and physical activity. Streets in these communities are generally narrower, though usually still wider than traditional neighborhoods. One variation of these newer communities is referred to as neo-traditional. A neo-traditional community attempts to take the best of traditional neighborhoods and create new variation where the street layout is a modified grid. The modified grid has the interconnected benefits of a traditional grid, but provides greater visual interest and variety by providing blocks of varying size. Even though some streets may not completely connect, pedestrian facilities strive to be interconnected and may continue where the street ends. Examples of new walkable communities include Black Mountain Ranch and Pacific Highlands Ranch.



Figure 3c Typical Street Layouts



A neo-traditional street layout often combines the grid with irregularly sized blocks and often a circular or angled street to avoid a boring layout and to set up a hierarchy of streets.

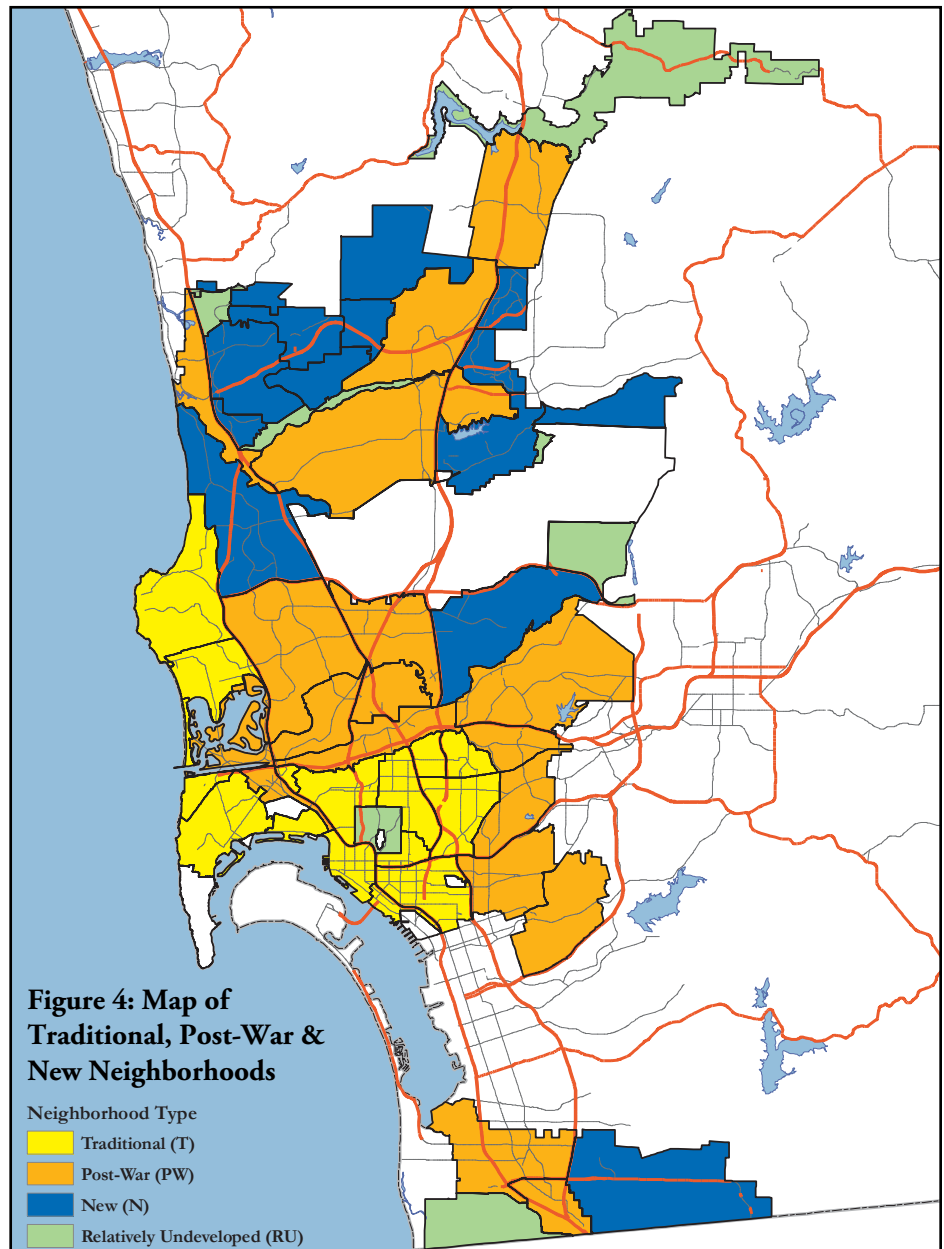


Newer communities often include enhanced walking environments, though the land use patterns and street hierarchy often make it difficult to walk to adjacent land uses because of distance and major street crossing requirements.

Figure 4 classifies the community based on its relative age, dominant street pattern, and timeframe of development. Many redeveloped areas of downtown San Diego have had key streets rebuilt to enhance pedestrian comfort and connectivity. Examples of new neighborhoods in traditional communities include the Marina District, Cortez Hill, East Village and Little Italy. Other infill development, such as the Uptown District, the City Heights Urban Village, and the Kearney Mesa General Dynamics redevelopment also provide a new interpretation on a traditional walkable community.

2.1.2 Relevance of Urban Form

- Urban form (street layouts) is a major factor in determining walkability
- Urban land use and the distance between these land uses is another major factor in determining walkability
- Short block lengths set on a grid with a broad mixture of land uses and a distributed circulation network are more walkable than long blocks set in a curvilinear fashion with isolated land uses and hierarchical circulation.



2.2 WALKING TRENDS

Walking in the U.S. has declined over time among both adults and children. For example, today only 15 percent of students walk to school and one percent bike, compared with 48 percent who walked or biked in 1969 (Federal Highway Administration 1972, "Transportation Characteristics of School Children," Report No. 4, National Personal Transportation Study). A 2004 survey of parents of school-age children indicated the two greatest barriers to walking to school were distance and traffic-related danger, both of which characterize automobile oriented development (Centers for Disease Control and Prevention, Barriers to children walking to or from school --- United States, 2004, Morbidity and Mortality Weekly Report, September 30, 2005/54(38):949-952). As most new development in the U.S. and the San Diego region is of the low-density form, the percentage of households living in compact, walkable neighborhoods declines. A 2005 study (S. Handy and P. Mokhtarian 2005. Which comes first, the neighborhood or the walking? Access Spring 2005:16-21) showed families that move from more to less walkable neighborhoods, reduce the amount they walk, and drive more.

Walking in the US has declined for both adults and children. For Example, the rate of walking to school for children has gone from a high of 48% in 1969 to a low of 15% today.

2.2.1 Walking to Work

The U.S. 1990 Journey to Work Census indicates a combined percentage for walking and biking to work of seven percent of commute trips in San Diego. In 2000, the combined percentage was down to five percent. This decline was consistent with national trends. The 2000 walking to work rate was less than 4.0 percent (citywide average) of employed residents, not including transit riders. As Table 1 indicates, the neighborhoods with the highest walk-to-work rates are more compact and have a mix of uses, or include a university. (See Appendix D for walk-to-work rates in all San Diego neighborhoods).

2.2.2 Relevance of Walking Trends

Collectively, these data suggest that while walking continues to decline as low density development proliferates, residents of the city's older, traditional neighborhoods tend to walk more, own fewer vehicles, and use transit more than residents of newer, automobile oriented neighborhoods. Since most of the available data focus on commuting -- usually the longest routine trip -- the data do not reflect how much people walk to meet a variety of other needs, see Table 2. The Saelens study noted in Section 2.3.1 below suggests non-commute walking trips may be significantly more common in more walkable neighborhoods. These conclusions suggest the following:

- Pedestrian improvements are likely to provide the most benefit in areas with higher densities, higher transit use, lower vehicle ownership rates, and a variety of walking-distance destinations near residences.
- More studies are needed to establish the extent of walking for non-commute trips including walking for local services, exercise and social interaction.

Table 1: Rates of Commuting by Walking

Community	Percent of Residential Working Population Commuting by Walking
Five Highest	
Centre City	22.10%
Old San Diego (Old Town)	10.40%
Peninsula (Pt. Loma)	10.30%
Barrio Logan	7.80%
College Area	7.70%
Representative Suburban Areas	
San Ysidro	4.40%
Ocean Beach	2.80%
Rancho Bernardo	1.50%
City of San Diego Total	4.00%

Source: U.S. Bureau of the Census

Table 2: Average Rates of Commuting by Transit

Community	Percent of Residential Working Population Primarily Using Transit
Five Highest	
Barrio Logan	19.90%
Centre City	19.10%
Southeastern San Diego	14.70%
Greater Golden Hill	13.00%
City Heights	11.10%
Representative Suburban Areas	
San Ysidro	8.70%
University City	3.00%
Rancho Bernardo	1.20%
City of San Diego Total	3.50%

Source: U.S. Bureau of the Census



There is increasing awareness that urban form and the walkability of our neighborhoods have multiple and fundamental impacts on the health of residents.



Providing safe, accessible and connected walkway environments will serve to improve the overall health, safety and welfare of the general public, which is the primary purpose of local governments.

Steps that can be taken ...



• *Encourage research on the relationship between urban form, street layout, land use mixture and circulation hierarchy and its affect on walking rates.*

• *For new areas, or those that are retrofitted for increased walkability, initiate research on walking rates and how the implementation of walking policies may be positively affecting these rates.*

• *Support the creation of cooperative programs between health care providers, park and recreation programs and community development and redevelopment efforts to highlight the connection between land use, transportation options, the physical environment and health.*

2.3 PUBLIC HEALTH TRENDS

Traditionally, the argument for creating more walkable communities has centered on the need to reduce congestion, mitigate environmental impacts and bring about economic revitalization. However, there is increasing awareness that urban form and the walkability of our neighborhoods have multiple and fundamental impacts on the health of residents.

2.3.1 Physical Activity, Obesity and Chronic Disease

Making neighborhoods walkable is a key strategy in the effort to combat obesity and physical inactivity which are at epidemic levels in San Diego, as well as nationwide. A study from San Diego State University compared physical activity levels of residents from Normal Heights and Clairemont, two neighborhoods that are different in terms of pedestrian walkability. Even when controlling for demographic differences (age, education, income, etc.), the study found that participants from Normal Heights, engaged in 70 more minutes of physical activity per week compared to participants from Clairemont. In addition, 60% of residents from Clairemont were overweight, but only 35% of Normal Heights residents were overweight. The authors concluded that “the current levels of these health variables may not change for the better until neighborhoods are designed to be more walkable and investments needed to accomplish this goal are made.” [fn: Saelens, Brian E., James F. Sallis, Jennifer B. Black, and Diana Chen. 2003. Neighborhood-Based Differences in Physical Activity, American Journal of Public Health, Vol. 93, No. 9, pp. 1552-1558.]

2.3.2 Mental Health, Social Networks and Violence

Neighborhoods that inhibit walking and active living may also be contributing to poor mental health. Physical activity is known by the medical and health community to relieve depression and anxiety. It also reduces the risk of developing depression. When neighborhood design promotes walking, it provides more opportunities for residents to interact and form social networks.

2.3.3 Child Development

The built environment affects children’s psycho-social development. Based on fears for their child’s safety, parents are increasingly keeping children from playing in their neighborhood or from walking or bicycling to school. This decline in spontaneous outdoor activity decreases the opportunity for children to enlarge their geographical boundaries, develop physical and practical life-skills, and learn how to make decisions without direct adult supervision.

2.3.4 Respiratory Disease

An increase in driving time in the U.S. has resulted in increased air pollution and in the incidence of respiratory diseases. Among California’s school-age children, the rate of asthma has jumped 74 percent since 1980.

2.3.5 Relevance of Health Issues

- Health trends indicate that more needs to be done to create an environment that encourages walking for commuting purposes or for exercise.
- Mental health and social health depends on a walkable environment that improves overall neighborhood quality and social opportunities.
- Local governments have a responsibility to provide the public with more walkable and safe facilities so they can engage in walking as part of their daily routine.