



THE CITY OF SAN DIEGO

The City of

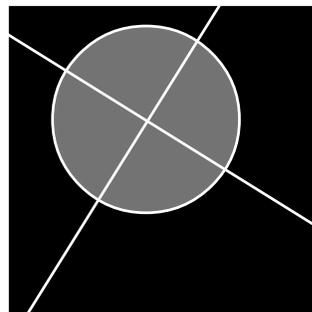
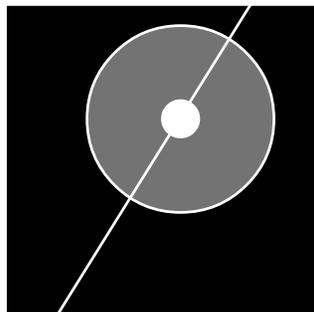
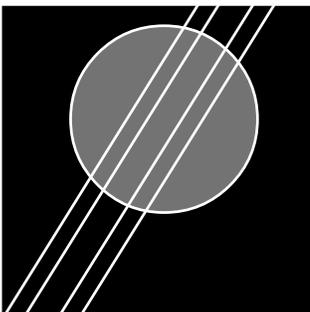
San Diego

Street

Design
Manual

November 2002

"If we can develop and design streets so that they are wonderful, fulfilling places to be—community-building places, attractive for all people—then we will have successfully designed about one-third of the city directly and will have had an immense impact on the rest," Alan B. Jacobs, Great Streets.



2002



THE CITY OF SAN DIEGO

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San Diego
Street Design Manual 2002

"To offer guidelines for the design of streets that will create harmony and promote function for all users while respecting and supporting the needs of the surrounding community."

City of San Diego
Street Design Manual Advisory Committee

Prepared by:
City of San Diego Street Design Manual Advisory Committee
and the City of San Diego Planning Department

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Approved by:
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Street Design Manual 2002



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Introduction



Introduction

“Community streets are public rights-of-way, which unite neighborhoods, provide access for motorists and non-motorists, and promote neighborhood identity, health, comfort, and safety.” Moorish and Brown, Planning to Stay.

INTRODUCTION

Streets play a major role in shaping the form of the urban environment. The quality of the street experience is a key element in the quality of a neighborhood. *The Progress Guide and General Plan* describes the function of the City's street system as follows:

Streets serve a variety of purposes. One is for the circulation of people, vehicles, goods, and services (utilities). Streets also serve as shopping corridors, restaurant rows, linear parks, residential front yards, extensions of office lobbies, ceremonial gathering places, parade grounds, racing courses, display areas, entertainment strips, etc. The street is really the City, organized along a corridor. It is a continuous forum for gathering where all those activities have their overture, making city life what it is. It has economic, social, aesthetic, political, ecological—even philosophical—implications. And, all this is in addition to providing a right-of-way for people and things.

The City of Villages Initiative recognizes streets as an important element in shaping our urban form and improving our neighborhood quality by:

- Balancing the needs of emergency vehicles with everyday traffic concerns—such as vehicle speeding and pedestrian safety—through street design policy.
- Promoting an interconnected street network that includes pedestrian and bicycle access where topography and land form permit.

- Creating a more attractive and safe pedestrian environment through the promotion of an active streetscape and the use of public art and artistic elements.
- Reducing peak energy demand through the incorporation of urban heat island reduction measures into the appropriate site and street design guidelines, landscape standards, and building codes.
- Promoting pedestrian- and transit-friendly design of City streets.
- Providing capacity and operational improvements to streets to minimize congestion and focus on persons and goods, not just vehicles.

These are the guiding principles of the Street Design Manual.

The purpose of the Street Design Manual is to provide information and guidance for the design of the public right-of-way that recognizes the many and varied purposes that a street serves. The Street Design Manual is intended to assist in the implementation of the *Progress Guide and General Plan*, the Strategic Framework Element, the *Transit-Oriented Development Design Guidelines*, and the Land Development Code. In addition, it is intended to assist in the implementation of the special requirements established through community plans, specific plans, precise plans, or other City Council-adopted policy and/or regulatory documents.

APPLICABILITY

These guidelines are applicable primarily to newly developing areas and to older areas that are undergoing major revitalization and redevelopment. In areas with sensitive habitat or unusual and difficult terrain, these guidelines may be modified as appropriate. In historic and older, developed neighborhoods, the existing character of the streets should be maintained and enhanced. In these older neighborhoods, nonstandard street widths are frequently in place in many locations. Existing street designs and configurations not illustrated in this manual may be considered appropriate for continued use in such neighborhoods.

The manual establishes guidelines to carry out the City's street design functions. It does not establish a legal standard for such functions nor is it intended that it should do so. Moreover, these guidelines do not supersede requirements and policies established through community plans, specific plans, precise plans, regional and City standard drawings or other City Council-adopted policy and/or regulatory documents; but, rather, they are designed to work in concert with them.

It should be noted that all drawings included in this manual are for illustrative purposes only and should not be used as construction plans.

How To Use This Manual

The Street Design Manual is divided into six sections: Roadway Design, Pedestrian Design, Traffic Calming, Street Lighting, Parkway Configurations, and Design Standards. It is important to understand how all six parts work. All six parts should be considered, in order to design an effective street system. The manual complements the *Transit-Oriented Development Design Guidelines* and substantiates the importance of site planning in the design of an effective street system. Each of the street classifications described in this manual includes icons (at the bottom of the page) that indicate the appropriate parkway configuration and traffic calming devices for the type of street, as illustrated below and on the following page.

Sheet Title

Chapter

Low Volume Residential Local Street

Typical Intersection

Low profile landscaping within visibility area at all intersection corners.

Refer to Table P-1, page 118 for minimum curb radius.

plan (not to scale)

12

Page Number

Applicable Parkway Configurations (Detailed in Parkway Configuration section of manual)

U-2 U-3 a U-3 b U-4 a

Sheet Title

Chapter

Low Volume Residential Local Street

Width, Right-of-Way (Single-lane)	54 ft (16.2 m)/55 ft (16.8 m) 51 ft (15.2 m) ¹
Recommended ADT	700
Width, Curb-to-Curb (Single-lane)	30 ft (9.2 m)/32 ft (9.8 m) ^{2,3} 28 ft (8.4 m)
Maximum Grade	Design Parameters
Minimum Curve Radius	100 ft (30 m)
Land Use	Large Lot Single Dwelling Residential, Single Dwelling Residential, Low Density, Multiple Dwelling Residential, Open Space-Park
Parkway Options	U-2, U-3(a), U-4(a)
Land Use	School, Church, or Public Parking
Parkway	U-2

¹ Increase width where block is greater than 500 feet (150 m) long, is less than 500 feet (150 m) from a signal, and there is a single access point.

² Construct sidewalks on both sides of street, including single-lane streets.

³ Within planned residential developments, where no on-street parallel parking is allowed, curb-to-curb width may be reduced to 28 feet (7.2 m), provided parking spaces are provided at intervals of approximately 200 feet (60 m). At the hydrant location, the curb-to-curb width shall be 30 feet (7.8 m), for a distance of 20 feet (6.0 m) on each side of the fire hydrant.

⁴ Where auto-to-curb width is 30 ft (9.2 m), bypass lanes of 7.5 ft (2.25 m) in length should be provided at intervals of 150 ft (45 m) to provide for emergency response vehicles.

⁵ U-1 parkways that be installed only in areas where a street is adjacent to natural open space.

Typical Cross Section

section A-A (not to scale)

13

Page Number

Applicable Traffic-Calming Devices (Detailed in Traffic-Calming section of manual)

URBAN

RURAL

Parkway Configurations

- U-1** — 10' parkway - contiguous sidewalk
- U-2** — 10' parkway with tree grates
- U-3** — 12' parkway - non-contiguous sidewalk
- U-4_a** — 15' parkway - non-contiguous sidewalk
- U-4_b** — 22' parkway - non-contiguous sidewalk
- U-5_a** — 14' parkway - with tree grates
- U-5** — 14' parkway - with tree grates (transit area)
- U-6_a** — 20' parkway - with tree grates
- U-6_b** — 20' parkway - (transit area)

- R-1** — 12' parkway
- R-2_a** — 14' parkway
- R-2_b** — 14' parkway
- R-3** — 18' parkway
- R-4** — 26' parkway

Traffic Calming

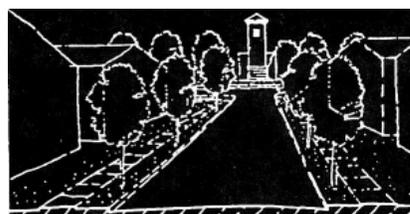
-  — chicane
-  — traffic circle
-  — median slow point
-  — road hump
-  — speed table raised crosswalk
-  — intersection pop-out
-  — semi-diverter
-  — channelization

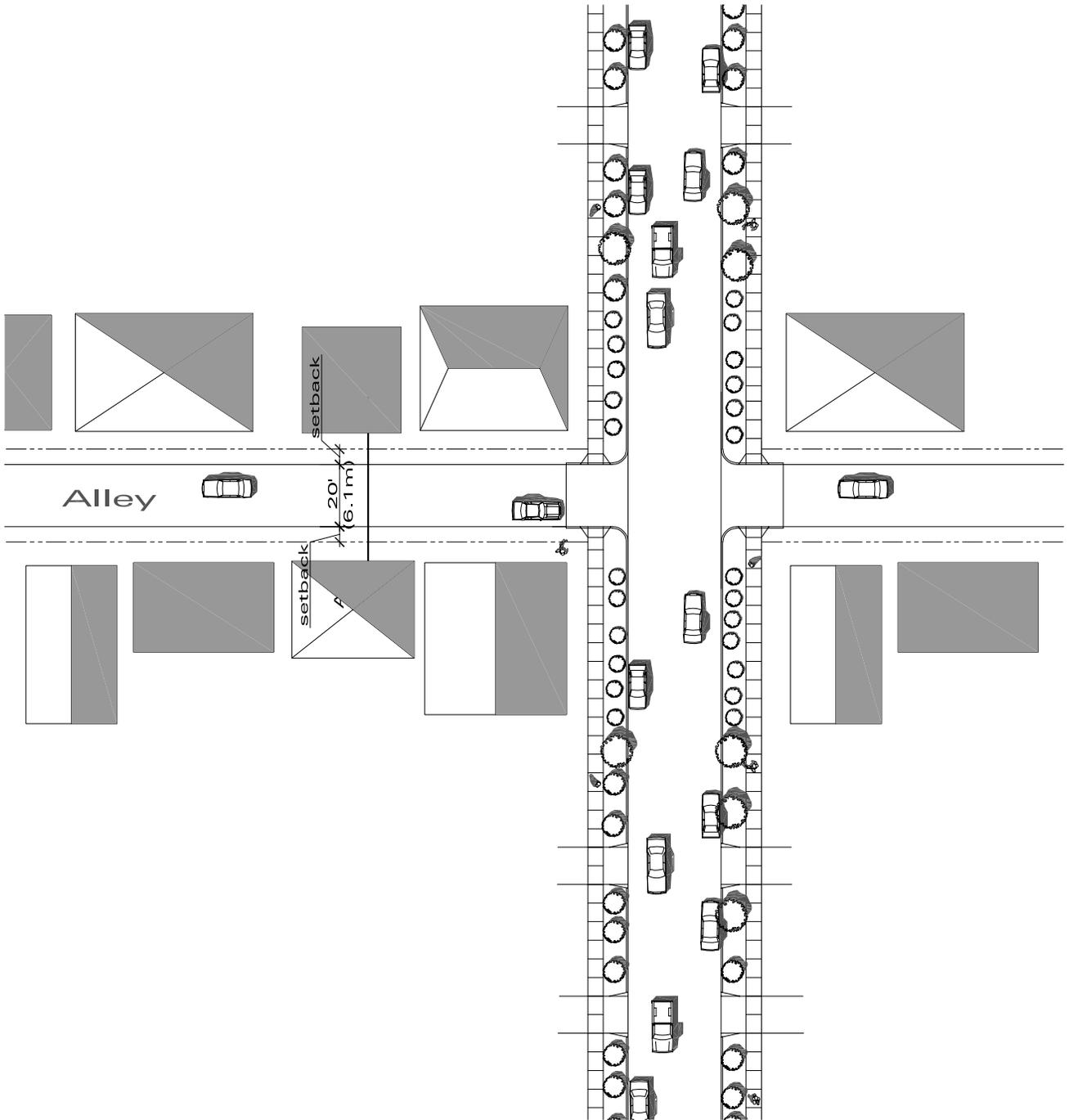
DESIGN REQUIREMENTS

- The necessary width and configuration of a street is also related to the estimated future average daily traffic (ADT).
- Ordinarily, the ADT is the motor vehicle volume projected within the next twenty years. However, in newly developing communities, the volume after buildout may be considered.
- Special studies may be required to establish future traffic volumes for a given street. When required, the study must be performed by a Registered Traffic Engineer. In the absence of such a study, ADT in residential areas will be computed on the basis of the City's standard trip generation factors.
- The "Design ADT" for streets of Collector classification and higher indicates an ADT range. The lower number represents the maximum ADT for LOS C as indicated in the City of San Diego Traffic Impact Study Manual. The higher number represents LOS D according to the Manual. LOS C is the appropriate design parameter for streets in urbanizing communities in accordance with the City's General Plan. LOS D is an acceptable level of service for CEQA (California Environmental Quality Act) review.
- The ADTs corresponding to the various LOS included in the Traffic Impact Studies Manual are intended as guidelines to correlate the quality of traffic service with typical sections of different street classifications. The ADT should not be used as the sole factor in determining the appropriate street classifications, since other factors play an important role in shaping the operating conditions on a facility. Designers are encouraged to perform analysis using Highway Capacity Manual methodologies to assist in determining appropriate street classifications and accompanying levels of service for their street projects.
- Basic width and alignment requirements are described in the Roadway Design section of this Manual.



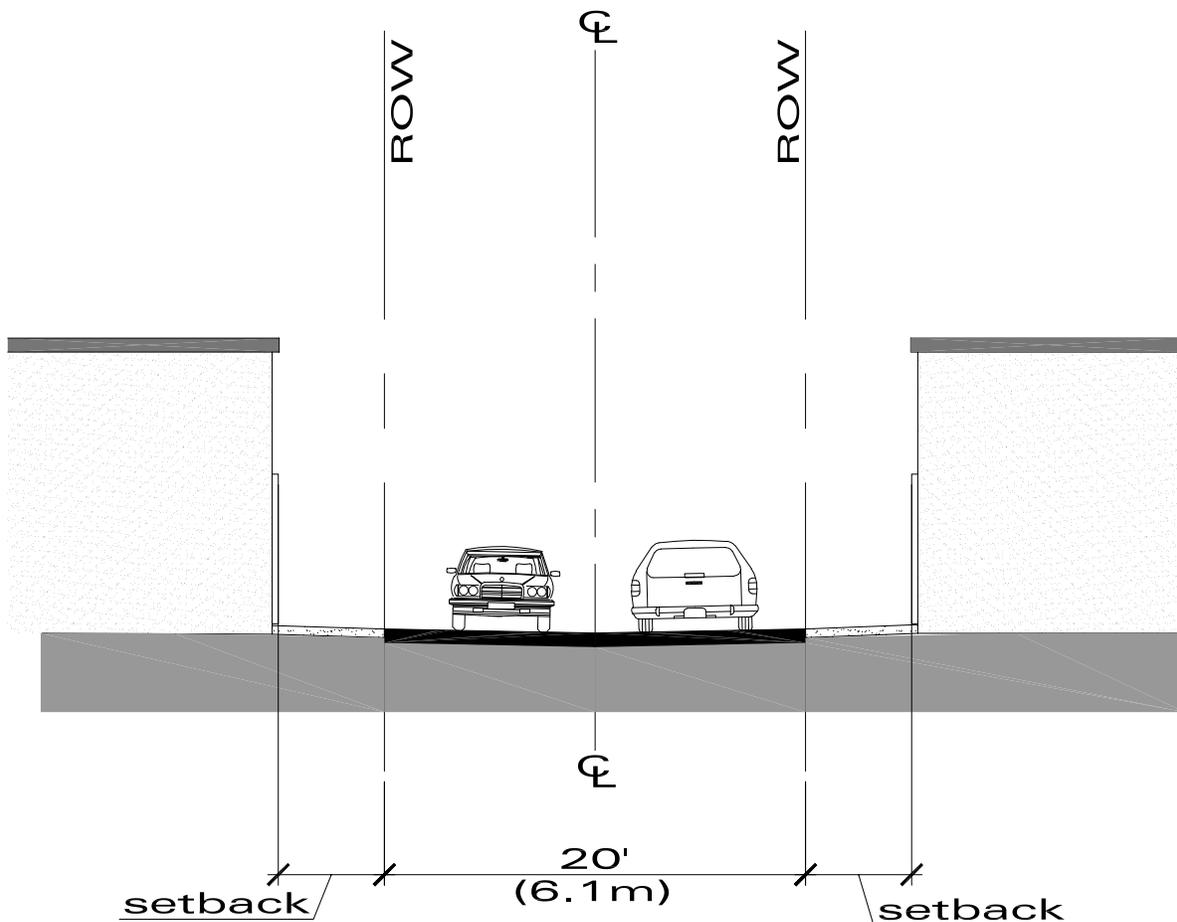
Alleys





plan (not to scale)

- A. An alley is a secondary means of access usually lying along the rear of property, the front of which abuts on and has primary access from a street. Alleys should not intersect streets of four-lane urban major or higher classification.
- B. Alleys are to be improved 20 feet (6.1 m) wide within a 20-foot (6.1 m) right-of-way. Where utility services, fire hydrants, etc. are located in the alley, the right-of-way must be widened as required. At the intersection of two alleys, a triangular area at the corner, 20 feet (6.1 m) on each side, shall be improved and included in the right-of-way.
- C. Maximum grade is 15 percent. Minimum curve radius is 100 feet (30 m) or as needed to accommodate commercial and emergency vehicle access and provide for 15 mph (25 km/h) minimum sight distance.
- D. Curb ramps shall be installed on both sides of an alley entrance in the sidewalk path of travel.
- E. Alleys shall be constructed in accordance with San Diego Regional Standard Drawings.



section A-A (not to scale)

