

# Circulation

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Circulation refers to all travel modes and routes people use to move within and beyond Manhattan Beach: the local street system, via biking or walking, or using of public transit. Moving people and goods within the City efficiently and effectively allows the community to function well economically and socially. People should be able to circulate from home to school, work, or shopping with ease and safety. Alternatives to the private car – transit, biking, and walking – can offer choice and convenience. Goods must also be easily transported locally and regionally to foster a viable economy. Truck routes are essential to direct trucks off local streets to regional roadways to lessen the impacts of noise and vibrations in residential neighborhoods.

When considering circulation, we think of both the physical infrastructure systems – the roadways, rails, and trails – as well as the method of getting around, by car, bus, or bike, or on foot. In Manhattan Beach, the physical system includes the local street network, the wonderfully unique walkstreets, Veterans Parkway, and several streets of regional significance: Sepulveda Boulevard, Manhattan Beach Boulevard, Rosecrans Avenue, Aviation Boulevard, and Artesia Boulevard. While these roadways afford residents with ready access to surrounding destinations, providing distant connections and linkages, these roads also bring significant regional traffic volumes to and through the City. Much of the traffic traveling along Sepulveda Boulevard during peak periods simply passes through Manhattan Beach to other Los Angeles County areas.

The most pressing mobility concern in Manhattan Beach is traffic congestion. In a year 2002 community survey, when asked to define the most significant issue in Manhattan Beach other than traffic and parking, residents overwhelming responded “traffic and parking.” Congestion can cost businesses money, and people lose time and gain frustration due to traffic. Manhattan Beach’s arterial and collector streets carry significant traffic loads that overflow onto adjoining neighborhood streets, causing noise, traffic, and safety impacts during peak periods of the day. Demand for parking adjacent to the beach and commercial districts can also create undesirable traffic and parking impacts within adjoining residential neighborhoods.

This Circulation section guides the continued development and enhancement of the circulation system to meet local mobility

and neighborhood protection objectives, and to respond to anticipated regional traffic growth. The South Bay area will continue to grow even if Manhattan Beach experiences little or no population increase. Regional growth will increase use of local and regional roadways, and the plan and policies here identify strategies the City will pursue to maintain good operating conditions to the maximum extent possible. Because local circulation is linked with the regional system, policies in this Element highlight Manhattan Beach's continued need to participate in regional programs to alleviate traffic congestion through capacity enhancements and trip reduction. Reduced dependency on the automobile also works toward these goals and improves environmental quality.

## Transportation History in Manhattan Beach

The first railroad tracks were laid down in 1888 through the undeveloped, sandy landscape of Manhattan Beach with the introduction of the Santa Fe Railroad connecting Los Angeles to Redondo Beach Wharf. This line included both freight and passenger services. Santa Fe eventually terminated passenger service in 1918 because it could not compete with the Pacific Electric Red Car passenger rates. The tracks were removed 98 years later in 1986 and replaced by Veterans Parkway.

The Electric Trolley, built by Los Angeles Pacific in 1903, had five stops in Manhattan Beach and connected Hill Street Station in Downtown Los Angeles to Redondo Beach. The tracks were laid just west of The Strand where the bicycle path is today. Los Angeles Pacific later merged with Pacific Electric Red Car in 1910. A Red Car depot was built in 1914 on Marine Avenue. The main selling point of this line was the view of the ocean from the passenger train cars. The Red Cars would run on this line until May 12, 1940.

Starting in the 1920s, the Santa Fe railroad tracks were used to carry clay and other supplies to the Metlox Manufacturing Plant at Center Street (Manhattan Beach Boulevard) and Railroad Drive (Valley Drive).

With a transportation system in place, development and new roadway system soon followed. Most of the early buildings were beach cottages built along the beach west of the Santa Fe Railroad tracks. Manhattan Beach was advertised as a summer vacation resort.

Manhattan Beach's current street system was then taking shape as land was subdivided into smaller lots that eventually were sold. The streets of Manhattan Beach evolved from paths to



Rosecrans Avenue, looking west from Pacific Avenue, circa 1940. The Eucalyptus trees were removed in 1969 when Standard Oil Company (Chevron) agreed to widen the roadway.

wooden planks, to dirt roads, to oil or macadam coating, to asphalt, and to concrete paving. Street paving directly followed land development. Eucalyptus-lined roadways were developed in the City, including Center Street (Manhattan Beach Boulevard), Rosecrans Avenue, and other minor roadways.

The period from 1914 to 1916 saw much activity with transportation projects. The Strand project (from 1<sup>st</sup> Street to 37<sup>th</sup> Street), including lighting and other citywide sidewalk projects, was completed in 1914. Marine Avenue and Highview Avenue were paved, Manhattan Avenue widened, and Highland Avenue paved from the southern boundary of the City to its terminus just north of Marine Avenue. Ocean Boulevard was a coastal “country road” connecting Manhattan Beach to Venice and other coastal cities to the north.

Since Railroad Drive (Valley Drive/Ardmore Avenue) lacked connections between Marine Avenue and Palm Avenue, and 15<sup>th</sup> Street and 10<sup>th</sup> Street, until 1967 the east-west connections from Manhattan Beach to the region were Manhattan Beach Boulevard and Marine Avenue.

A map of the City from 1923 shows that west of Sepulveda Boulevard, the development and street patterns were well established and similar to what we see today. About half of the land east of Sepulveda Boulevard had been subdivided for residential development, with the major streets laid out.

The paving of Sepulveda Boulevard (formerly Camino Real) was completed in April of 1931, marking a milestone in Manhattan Beach’s roadway system. In 1934, Sepulveda Boulevard connected into the City of El Segundo, replacing a previous detour used during construction.

In the 1950s post-war era, as new home construction boomed, major road construction projects (widening, grading, curbs, and resurfacing) occurred throughout the City. In 1957, Interstate 405 (San Diego Freeway) was completed, providing regional freeway access for the South Bay. The I-105 was completed in 1993, with access via Highland Avenue. MTA’s Metro Green Line opened in 1995, with a station located at Douglas Street (Douglas/Rosecrans Station) in El Segundo, making available rail transit to Manhattan Beach residents once again 55 years later.

# Master Plan of Roadways

Manhattan Beach's roadway system is based on a conventional hierarchy of streets. The top of the hierarchy consists of arterial streets that carry large volumes of traffic, with the bottom consisting of low-volume local streets that provide access to abutting properties. Definitions of the roadway classifications are presented below, and Figure I-1 identifies roadways utilizing these classifications. Although a street may be classified in a certain way, it does not necessarily mean that it must be improved accordingly. The classification is more about how a street functions rather than the physical dimensions.

The California Department of Transportation (Caltrans) has authority over the State highway system and must be involved in and approve the planning and design of improvements for State highway facilities. The only State highway facility in Manhattan Beach is Sepulveda Boulevard (State Route 1). Artesia Boulevard, previously State Route 91, was relinquished to the City in 2002.

**Regional Arterial** – Sepulveda Boulevard (State Route 1) is the only Regional Arterial in Manhattan Beach. Regional Arterials are State-designated facilities that are relatively high-speed, high-capacity routes serving intercity and interregional circulation needs.

Regional Arterials also connect major City streets with other regional routes. Local access is intended to be limited to major streets via signal-controlled intersections, although given that Sepulveda Boulevard functions as a major business district, access has been granted to retail business and shopping centers along Sepulveda Boulevard. Left turns should be prohibited or restricted to signalized intersections where feasible. Curbside parking is either prohibited all day or during the peak hours to facilitate the movement of traffic.

**Major Arterial** - Major Arterials provide for through movement between areas of Manhattan Beach and across the City, and to provide access to Minor Arterials and limited access to Collector streets. Access to abutting land uses should be limited where possible, or consolidated to minimize curb cuts to avoid interference with the through-traffic function of these routes. Major Arterials generally provide four to six lanes for through travel within a 60- to 100-foot right-of-way, depending on local land use conditions. Major Arterials have single or double left-turn lanes at intersections, left-turn signal phases where necessary, and other enhancements to help the efficient movement of larger volumes of traffic. Curbside parking may be



prohibited all day or during the peak hours to facilitate the most efficient movement of through traffic. Major Arterials include Artesia Boulevard, Aviation Boulevard, Rosecrans Avenue, and Manhattan Beach Boulevard, east of Sepulveda Boulevard.

**Minor Arterial** – Minor Arterials are similar to Major Arterials in function, providing some through movements and movements across the City. In contrast to Major Arterials, Minor Arterials allow additional access to abutting land uses. While they function similarly to Major Arterials and have similar right-of-way width (generally 70 to 90 feet), they generally have lower capacities and may have lower speeds. Curbside parking is generally allowed, although it may be prohibited in selected locations to facilitate traffic movement. Minor Arterials typically provide four lanes for through traffic. Intersections generally have left-turn lanes (or dual left-turn lanes in selected locations). Minor Arterials include Marine Avenue east of Sepulveda Boulevard and Manhattan Beach Boulevard west of Sepulveda Boulevard to Ardmore Avenue.

**Collector Street** – Collector Streets serve an area or neighborhood, and they function as collectors or distributors of traffic from the local and major local streets to the Minor or Major Arterial or Regional Arterial streets. Collector Streets are lower speed streets with lower capacity than Arterials, but carry more traffic than either Local or Major Local streets. Collector streets have a mixture of single-family residential, multi-family residential, and some commercial land uses. Some of the adjacent land uses may have direct driveway access, while some may have side yards on the collector street. Collector streets often have curbside parking and one or two through lanes in each direction.

**Residential Collector** – Residential Collector Streets are similar to Collector streets in function; however, they primarily have residential land uses adjacent to them, with very limited commercial traffic (usually near selected intersections). Residential Collectors are intended to serve an area or neighborhood by collecting or distributing traffic from the Local and Major Local streets to the Collector, Minor Arterial, Major Arterial, or Regional Arterial system. Although similar in character to Collector Streets, Residential Collectors should carry a lower volume of traffic than Collectors, reflecting their residential character. Curbside parking is generally allowed, and adjacent land uses often have direct driveway access. Residential Collectors generally have one lane in each direction.

**Major Local** – Major Local streets provide for circulation within and between residential neighborhoods. Major Local streets are designed to discourage longer distance through trips and higher

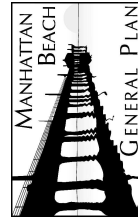
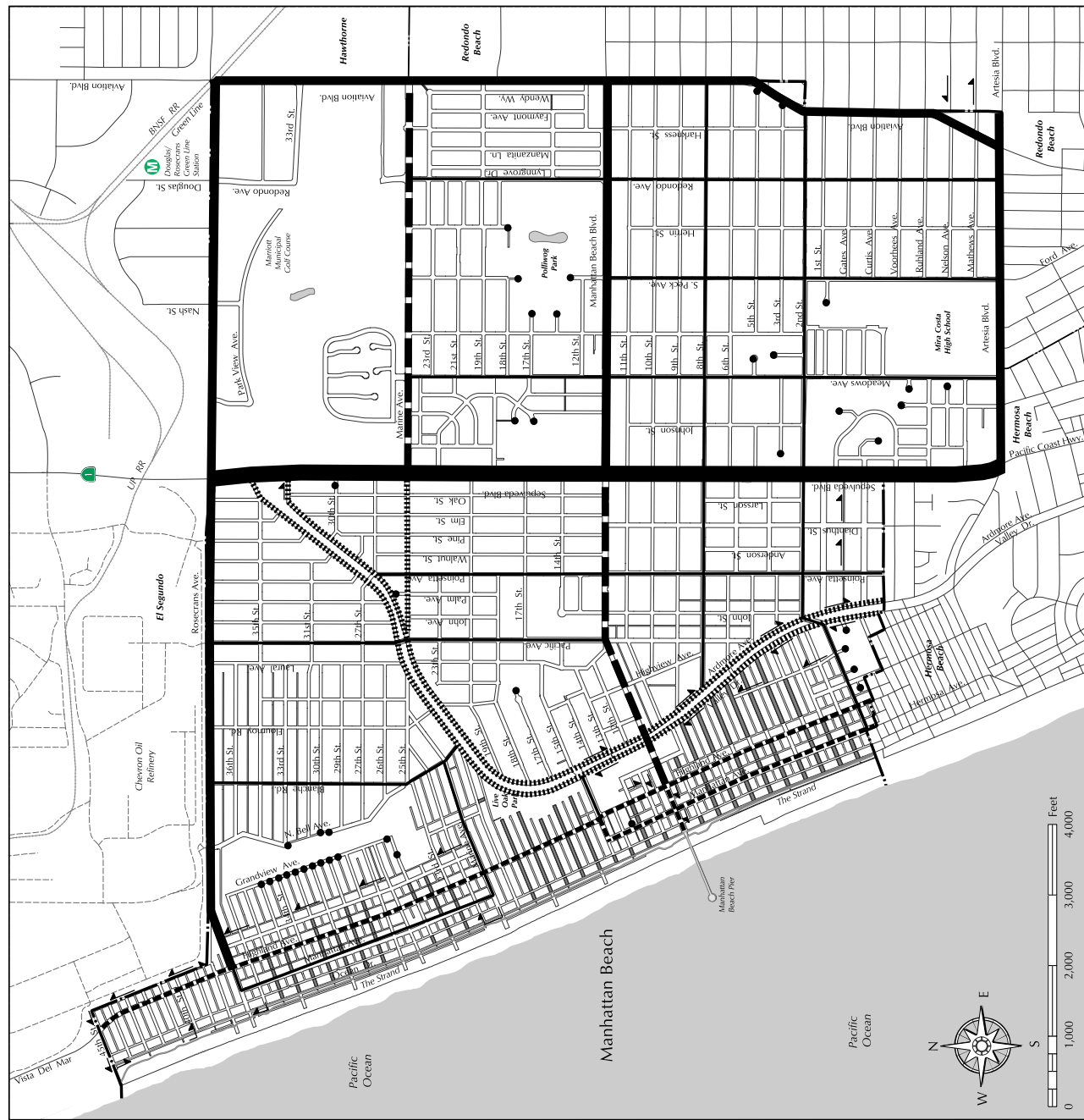


Figure I-1

# Roadway Classifications

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speeds (posted speed limit of 25 miles per hour or slower). Major Local streets generally have a maximum of one lane in each direction, and curbside parking is generally allowed where the street width is sufficient to support both moving traffic and parking lanes.

**Local** – Local streets are the lowest functional classification and are intended solely for access to adjacent residential land uses. They provide for circulation within a residential neighborhood, including bicycle and pedestrian access. Any through traffic, including through traffic from one residential neighborhood to another, is discouraged. Local streets have one lane in each direction and have posted speed limits of 25 miles per hour or slower. Curbside parking is generally allowed where the street width is sufficient to support both moving traffic and parking lanes.

**Walkstreets** – Walkstreets are intended and designed to provide local access solely for pedestrians and cyclists. Motorized vehicles of all kinds are prohibited. Walkstreet right-of-way width ranges from 25 to 60 feet. The Land Use Element establishes policies for the use of Walkstreets beyond their basic mobility function.

## Addressing Traffic Congestion

As residents have expressed, traffic congestion continues to be the leading issue affecting the quality of life in Manhattan Beach. Not only is local congestion a concern, but regional traffic that passes through the City compounds the issue, especially for businesses located along Sepulveda Boulevard, Manhattan Beach Boulevard, and Highland Avenue. The beach draws many visitors, bringing in additional traffic and parking demands. Figure I-2 shows volumes in year 2002. Although Manhattan



Motorists heading northbound on Sepulveda Boulevard can experience lengthy delays and traffic during the morning peak traffic hours of the day.

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Beach will experience only very limited growth, regional influences and the popularity of the beach will continue to contribute to traffic congestion.

Over time, the City will pursue two primary courses of action to improve congestion: (1) focused physical improvements for enhanced function of intersections, which function as the control points in the circulation network; and (2) creative, technological solutions to improve mobility. Examples of the proposed physical improvements include:

- Widening the bridge on Sepulveda Boulevard between Rosecrans Avenue and Marine Avenue
- Widening of Rosecrans Avenue between Douglas Street and Aviation Boulevard
- Widening of Aviation Boulevard between Rosecrans Avenue and Marine Avenue
- Intersection improvements at Manhattan Beach Boulevard/Sepulveda Boulevard and Marine Avenue/Sepulveda Boulevard
- Intersection improvements at Manhattan Beach Boulevard/Redondo Avenue

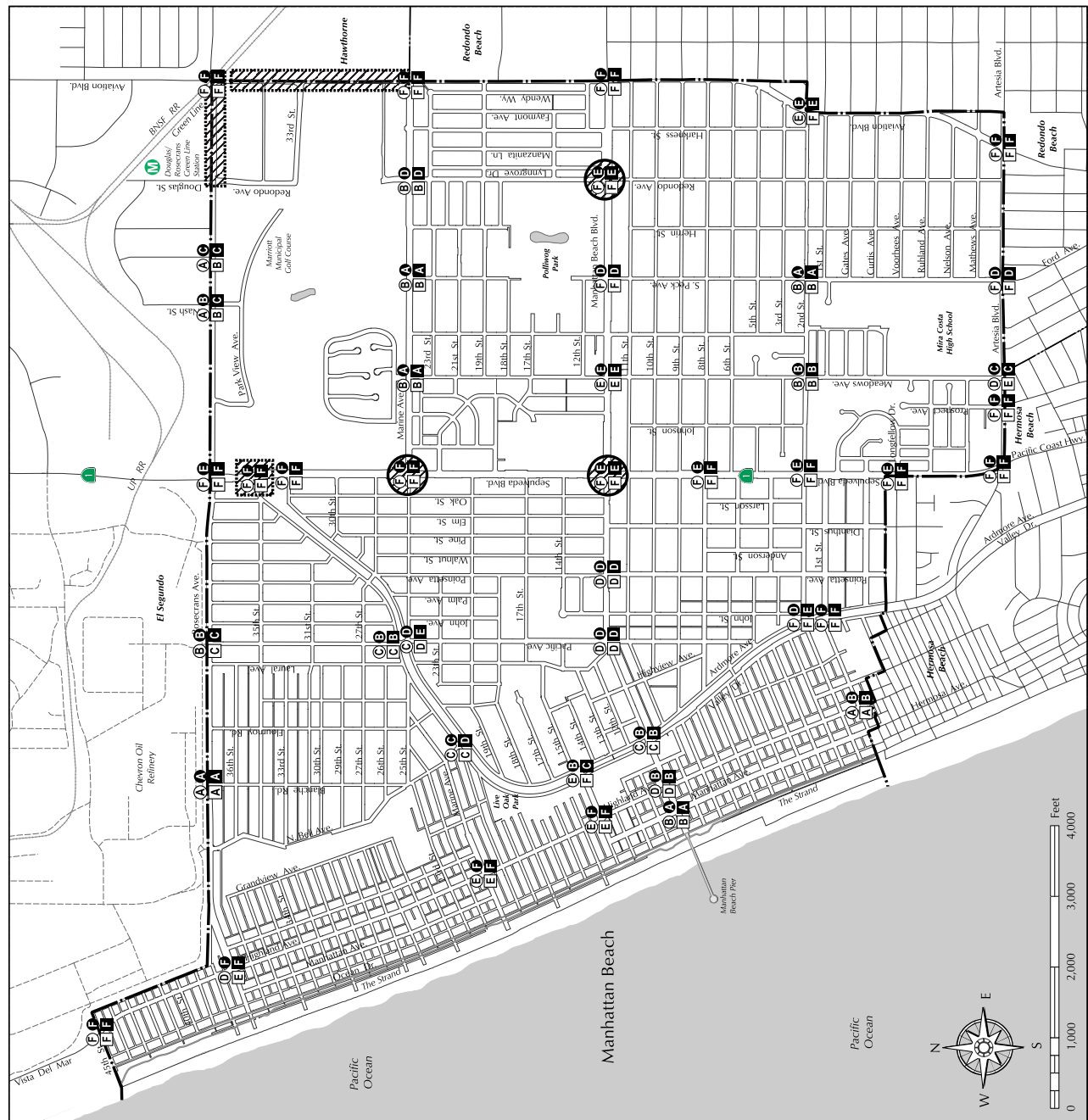
The location of these improvements is shown on Figure I-3. The City's Capital Improvement Program (CIP) will continue to be the tool for identifying needed circulation improvements and for prioritizing funding. As properties are redeveloped and the opportunity arises for other traffic or roadway improvements not identified in this Plan, the City should pursue them. The widening of the north side of 33<sup>rd</sup> Street west of Sepulveda Boulevard is one example of the type of improvement that should be considered.

Creative solutions can be used primarily to address regional concerns. While no freeway passes through Manhattan Beach, nearby I-405, I-105, and SR-91 routes provide regional access for residents and businesses. Sepulveda Boulevard and Aviation Boulevard serve as commuter routes north and south, paralleling the function of I-405. Both arterials experience heavy congestion during the morning and evening peak hours. As part of a large metropolitan area and of necessity, Manhattan Beach has integrated its street system – and these routes in particular – with existing and planned regional systems.

Transportation planning and management require cooperation and coordination among local cities with the South Bay Cities Council of Governments (SBCCOG) and the Los Angeles County Metropolitan Transportation Authority (MTA). Working together, these agencies are determined to address the Intelligent



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### Intersection Level of Service (LOS)

#### Baseline

- (A)** AM Peak Hour LOS
- (A)** PM Peak Hour LOS

#### Projected with regional growth and General Plan growth

- (A)** AM Peak Hour LOS
- (A)** PM Peak Hour LOS

#### Proposed Circulation Improvements

Roadway Widening Improvements

Intersection Improvements



City Boundary

### Level of Service Definitions

LOS	Interpretation
A	Excellent operation - free-flow
B	Very good operation - stable flow, little or no delays
C	Good operation - slight delays
D	Fair operation - noticeable delays, queuing observed
E	Poor operation - long delays, near or at capacity
F	Forced flow - congestion

Source: Highway Capacity Manual, Special Report 209, Transportation Research Board, Washington D.C., 1985 and Interim Materials on Highway Capacity, NCHRP Circular 212, 1982



Figure I-3

## Intersection Level of Service (LOS)

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Source: Meyer, Minard, Inc., includes estimated regional growth on Sepulveda, Reservoir, Aviation, Artesia and Valley/Windward based on model results from the Southern California Association of Governments (SACOG) Regional model; City of Manhattan Beach Civic Center/Medina Development Environmental Impact Report

Transportation Systems approaches, for example, to move traffic flow. The SBCCOG Rosecrans Corridor and Coastal Corridor studies are examples of projects that the South Bay is working on together to address regional traffic issues. Regional, cooperative efforts are also critical to ensuring that convenient alternative transportation modes allow for an integrated approach to addressing traffic problems.

## Traffic Volumes and Intersection Level of Service

Traffic flow is measured and analyzed both on a daily basis and during peak hours (commute peak hours). On a daily basis, traffic flow is measured on roadways at mid-block locations to determine the overall level of travel demand and level of service. Traffic volume values have been developed that represent the typical daily traffic flow, within a 24-hour period, on key roadways in the City, as shown on Figure I-2. This figure shows streets carrying significant traffic volumes, particularly Sepulveda Boulevard, with traffic volumes ranging from 54,000 to 62,000 vehicles trips. Signalized intersections were analyzed using the Intersection Capacity Utilization (ICU) method. This methodology produces an intersection volume-to-capacity (V/C) ratio that is then related to a "Level of Service" (LOS) estimate. LOS describes the ability of an intersection or road segment to meet its intended design capacity. Each LOS rating describes how people perceive the amount of congestion or difficulty in getting where they want to go. LOS is ranked from A, representing no limitation on movement (best), to F, representing very high levels of congestion (worst).

The traffic analysis for the General Plan evaluated baseline and projected conditions on intersections within the City. Figure I-3 summarizes baseline and projected conditions for the identified intersections.

## Congestion Management Plan

The MTA oversees preparation of the County's Congestion Management Program (CMP). The CMP includes a "credit/deficit" program, with debits incurred as a result of new development activity and credits issued for specific traffic mitigation strategies. The mitigation strategies are divided into the following categories: (1) Land Use Strategies, (2) Capital Improvement Strategies, and (3) Transportation Demand Management and Transit Services. Manhattan Beach incurs debits with new development construction and offsets these debits through implementation of mitigation strategies. Compliance with the program is defined as maintaining a credit balance. The City works with MTA to address debits incurred by new construction and develops action plans to receive credits.

Manhattan Beach is required to meet the major program requirements identified in the CMP to continue receiving State gas tax funding.

The City continues to have difficulty incurring credits, as the opportunities for transportation improvements that meet MTA's CMP criteria are limited. The City has a contract with another jurisdiction that has excess "credits" and has allowed developers to purchase these credits as required project mitigation. Similarly, creative strategies will be approved as necessary to ensure the City continues to receive transportation tax funds.

## Expanding Mobility Options

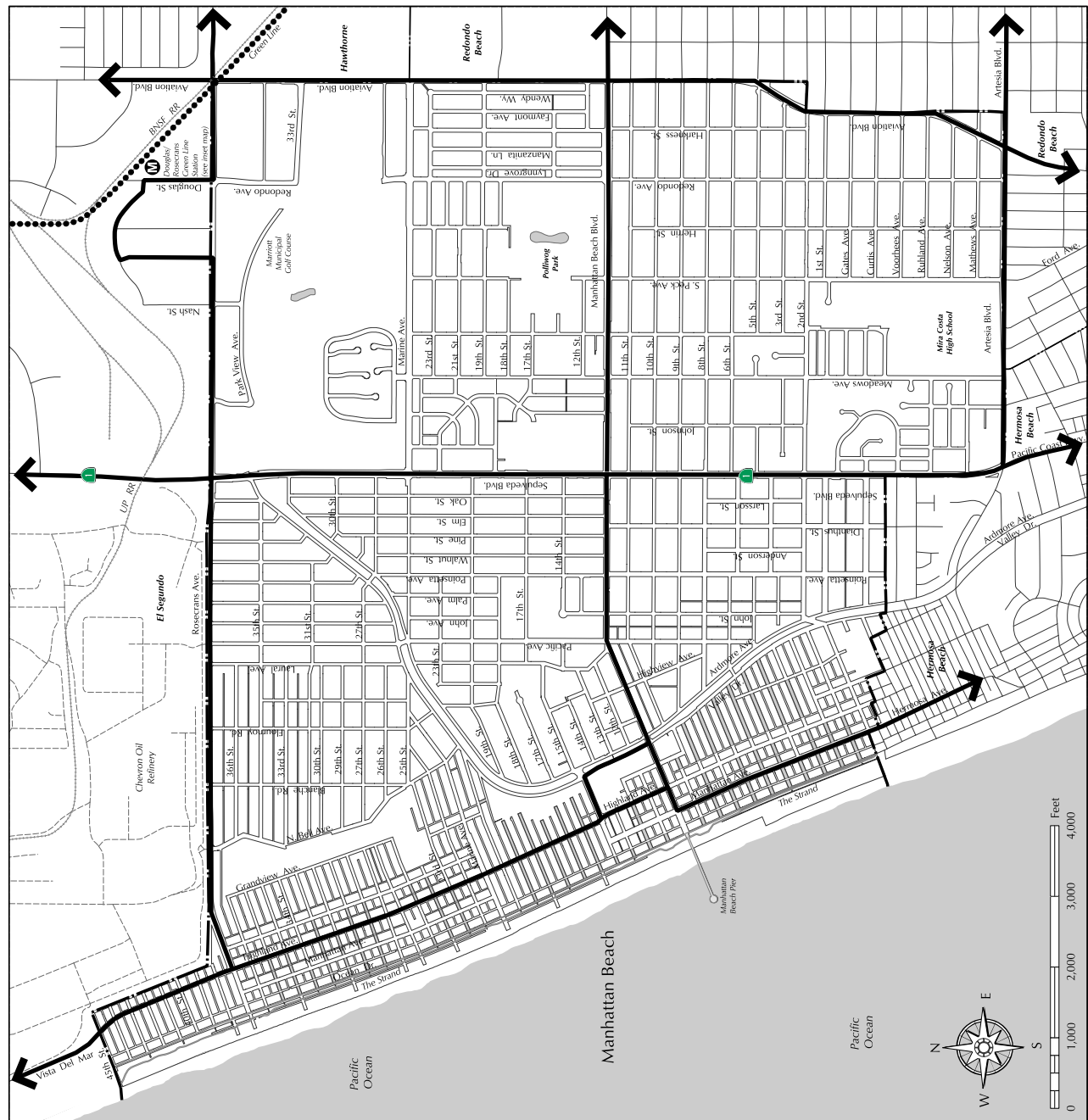
To achieve a balanced transportation system, City policies focus not only on strategies to improve traffic flow but also on ways to encourage use of alternative mobility options such as transit, walking, and bicycling. A balanced transportation system also includes transportation strategies and programs aimed at reducing congestion, in turn allowing for the safe and efficient movement of people, goods, and services throughout the City.

## Enhancing Transit Services

MTA provides transit service in Manhattan Beach and throughout Los Angeles County. Bus routes are established on several streets in Manhattan Beach, including Rosecrans Avenue, Manhattan Beach Boulevard, Highland Avenue, Aviation Boulevard, and Sepulveda Boulevard, as shown on Figure I-4.



MTA also operates the Metro Green Line, a twenty-mile light rail system with fourteen stations throughout the South Bay region.



### Transit System

- Transit Routes
- ..... MTA Green Line Route
- Green Line Station
- - - City Boundary

### Green Line Stations

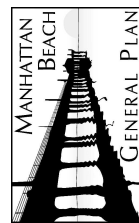
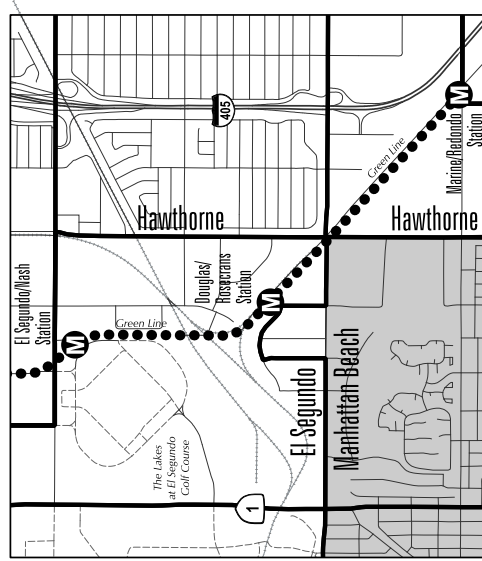


Figure 1-4

## Transit System

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The Metro Green Line extends from Los Angeles International Airport east along the I-105 to the City of Norwalk and links to the Blue Line, providing connections to Downtown Los Angeles and Long Beach. MTA has no plans to extend the Green Line or other rail service within the South Bay. The closest Green Line stations are the Douglas/Rosecrans Station and the Marine/Redondo Station located in the cities of El Segundo and Hawthorne, respectively, as shown on Figure I-4. Thus, Manhattan Beach's challenge lies in enhancing local connectivity to Green Line stations via bus or similar service. To address localized transit needs, Manhattan Beach operates a Dial-A-Ride, a shared ride, curb-to-curb bus service for Manhattan Beach residents, with ridership restrictions based on age, disability, or similar factors.

One demographic group continually challenged to find public transit is school children. When the State budget is unable to assist with school bus funding, the Manhattan Beach Unified School District cannot bear the cost of providing bus service to its schools. Traffic congestion around schools, particularly in the morning, creates not only delays but safety risks to Manhattan Beach's younger residents. Working cooperatively with the District, the City may be able to find new ways to provide safe routes to school.

## Incorporating Transportation Demand Management

Transportation Demand Management (TDM) is a general term for strategies that promote the efficient use of transportation systems without adding carrying capacity (e.g., additional lanes or widening) on the roadway or freeway system. TDM strategies can help address a variety of traffic problems and provide secondary economic, social, and environmental benefits. When all are considered, TDM strategies are often the most cost-effective way to improve transportation. Examples of TDM include:

- Bike/Transit Integration
- Carpooling
- Improvements to Pedestrian Ways
- Transit Improvements
- Walking and Cycling Encouragement
- Parking Pricing
- Bicycle Parking
- Parking Management
- Alternative Work Schedules



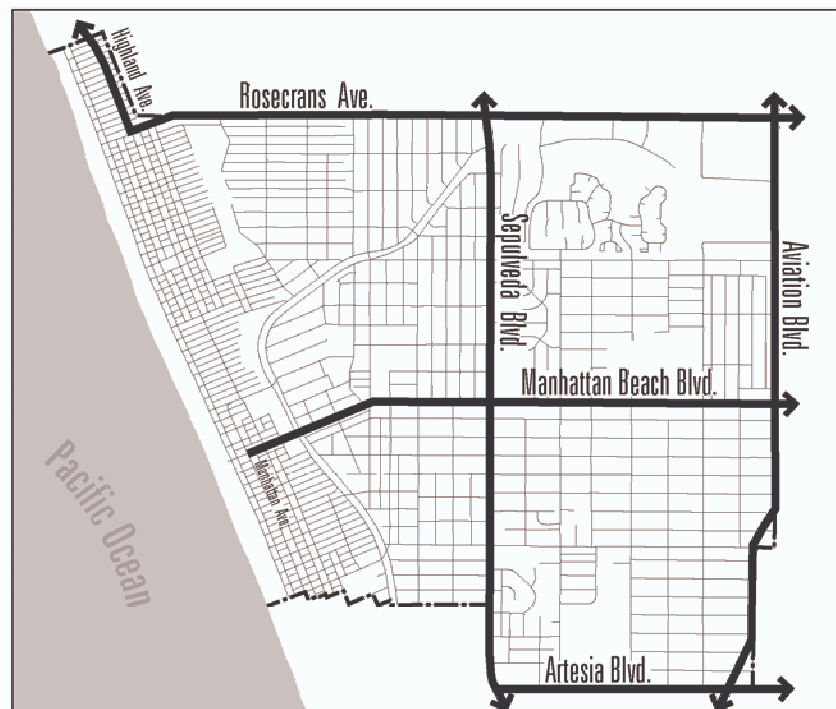
## Maintaining Truck Routes

Truck routes have been designated for use by heavy trucks to access most commercial areas in the City, including Downtown and El Porto. These roadways are primarily Arterial Roadways, except for Highland Avenue in El Porto/North End, which is designated as a Collector street and Manhattan Beach Boulevard from Highland Avenue to Manhattan Avenue (Figure I-5). No trucks are allowed on other streets unless they are on a direct route for the purpose of making special pick-ups or deliveries. The intent of truck routes is to protect residential areas from impacts of heavy truck traffic, noise, and vibration.

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See Noise Element for a further discussion of truck noise.

**Figure I-5:  
Truck Routes**



# Goals and Policies: Ensuring a Balanced Transportation System

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**Goal I-1:**      **Provide a balanced transportation system that allows the safe and efficient movement of people, goods and services throughout the City.**

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Policy I-1.1:      Review the functioning of the street system on a regular basis to identify problems and develop solutions.

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Policy I-1.2:      Improve street signage citywide, and ensure that street signs are not obscured or obstructed by vegetation or structures.

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Unique street signage, such as walkstreet obelisks, can help improve pedestrian orientation.




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Policy I-1.3:      Encourage the development of Transportation Demand Management (TDM) plans for all major developments or facility expansions to encourage ride-sharing and other improvements, thereby reducing vehicle trips.

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The Manhattan Beach City Council adopted a Transportation Demand Management Ordinance (No. 1873) that includes TDM measures and trip reduction standards depending on the size of proposed projects. Such measures may include informative bulletin boards, preferential parking for vanpools/carpools, bicycle parking, bus stop improvements, and a pedestrian circulation system.




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Policy I-1.4:      Work with neighboring communities and other South Bay cities, as well as state and other agencies, to develop regional solutions to traffic problems that are regional in nature, and to mitigate impacts of development in neighboring communities that impact the City of Manhattan Beach.

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The South Bay Cities Council of Governments represents all South Bay cities, including Manhattan Beach. This organization can be used as a resource in communicating with other



agencies and cities that make up the regional area around Manhattan Beach, as well as a starting point for regional cooperation. Other transportation agencies of importance include MTA and Caltrans.

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Policy I-1.5: Investigate and encourage the use of alternative transportation systems such as intra/inter-city shuttle or trolley systems.

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Policy I-1.6: Support dial-a-ride or other para-transit systems for the senior and disabled members of the community.

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**Policy  
Discussion**

The para-transit system offered by the City represents an important transportation option for the seniors and disabled. Continuation of this program with adequate resources to meet riders' needs is critical.

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Policy I- 1.7: Consider emergency vehicle access needs when developing on-street parking and other public right-of-way development standards.

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Policy I- 1.8: Require property owners, at the time new construction is proposed, to either improve abutting public right-of-way to its full required width or to pay in-lieu fees for improvements, as appropriate.

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Policy I-1.9: Require property owners, at the time of new construction or substantial remodeling, dedicate land for roadway or other public improvements, as appropriate and warranted by the project.

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Policy I-1.10: Adopt and implement standards for public street right-of-way use for private purposes.

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**Policy  
Discussion**

On February 18, 2003, the City Council adopted Encroachment and Right-of-way Ordinances (No. 2039 and 2042) that establish new standards for development on vehicular and walkstreets, such as patios/decks, landscaping, walkways, stairs, parking pads, and drainage.

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Policy I-1.11: Monitor the use of public walkstreets for private purposes consistent with City standards.

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Policy I-1.12: Monitor and minimize traffic issues associated with construction activities.

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Policy I-1.13: Consider implementing a development impact fee program to collect funds from developers constructing new projects. Such fees would fund “fair-share” costs of circulation improvement projects required to mitigate project impacts.

# Neighborhood Traffic Intrusion

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The clean, expansive beaches in Manhattan Beach attract visitors from far away to enjoy the splendid amenities of the Pacific Ocean, particularly during the summer. This attraction generates significant outside traffic and parking demands along the beach. While beneficial to the local economy, the beachgoers can impact residential neighborhoods by using local streets to avoid congested thoroughfares and parking in quiet residential areas.

Manhattan Beach lies between major employment centers to the north and South Bay residential communities and Palos Verdes Peninsula to the south. As described above, through north-south traffic significantly impacts Sepulveda and Aviation Boulevards, which carry volumes over their design capacity during morning and evening commute hours. This effect is intensified whenever I-405 experiences substantial delays.

When arterial and collector roadways become over-congested and vehicular movement is limited, motorists look for alternative routes to bypass the heavily congested streets. Regular commuters use the alternative routes regularly. Manhattan Beach's grid street pattern established in the early 1900s is conducive to cut-through traffic, which creates noise impacts and compromises pedestrian and vehicular safety in these neighborhoods. Local streets that intersect with congested arterials and collector streets experience the most cut-through problems.

2<sup>nd</sup> Street is a popular street for motorists to cut through. The uses on 2<sup>nd</sup> Street are all residential. A slight grade change is conducive to higher vehicle speeds as motorists travel downhill.



Motorists also look to avoid major intersections where excessive queuing occurs. Intersections along Sepulveda Boulevard in particular are heavily congested during peak hours, and connecting streets facilitate motorists cutting through to other north-south routes.

## Neighborhood Traffic Issue Areas

Marine Avenue (residential section west of Sepulveda Boulevard) and 2nd Street have experienced significant traffic impacts, including speeding, excessive volumes, truck traffic, and cut-through traffic during the peak hours of the day. Traffic studies have been conducted to determine the needed street measures that will help reduce traffic impacts on both streets. Marine Avenue measures included stop signs, increased enforcement, signage directing commuters to arterials, and modification to the centerline. 2nd Street has also gone through extensive street experimenting with street chokers and diverters aimed at reducing cut-through traffic.

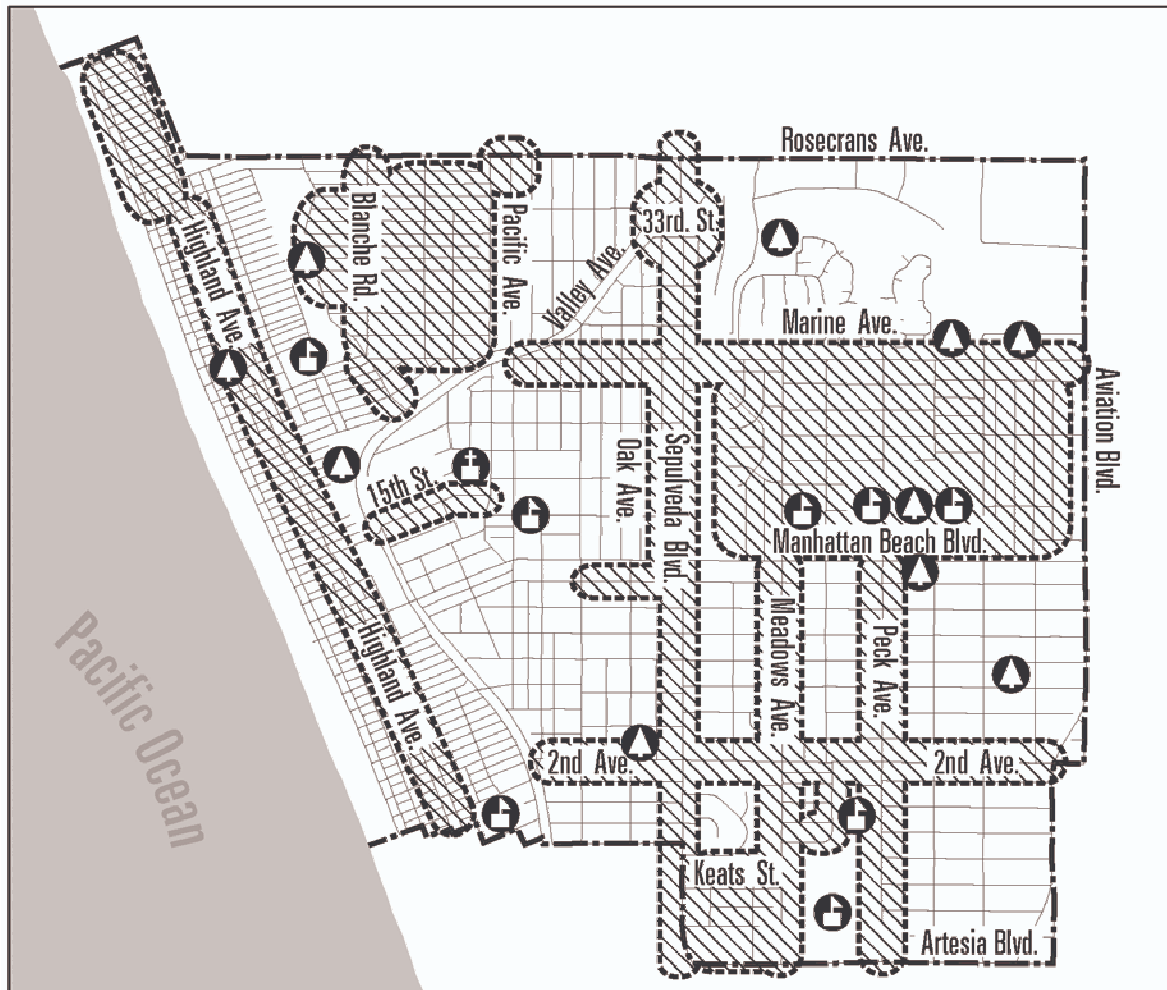
Residents are concerned about excessive speed and volume resulting from Meadows Avenue being used as an alternative to Sepulveda Boulevard. Complaints from residents originated from persons with homes between Marine Avenue and Manhattan Beach Boulevard. The intersection is posted to only allow right or left turns onto Marine Avenue from Meadows Avenue, both directions; no through traffic is allowed. Residents surrounding Sand Dune Park have voiced their concern to the City about traffic volumes and lack of parking for park users.

Local streets directly adjacent to schools experience traffic impacts as well, such as cut-through traffic (vehicles and buses) and speeding, and pick-up and drop-off trips during morning and mid-afternoon hours. Parents shuttling children to school significantly increase traffic on local streets that surround the schools. Student parking for Mira Costa High School can encroach into surrounding residential areas, creating significant impacts.

Other areas have been identified as having traffic issues and some of these areas have been studied (see Figure 1-6). In many of these areas where traffic issues have identified, the City continues to experiment with options and has taken proactive measures to reduce impacts on the surrounding residential neighborhood.



**Figure I-6:  
Residential Streets/Neighborhoods with Traffic Issues**



Source: Meyer, Mohaddes, Inc. and Neighborhood Traffic Committee; November 2002

Residential/Neighborhood Traffic Issue Areas

**Schools**

Public      Parks  
 Private

## Neighborhood Traffic Management Program

In response to continued residents' concerns regarding traffic impacts in neighborhoods, in 2002 the City instituted a Neighborhood Traffic Management Program designed to identify specific issues at a local neighborhood level, and to allow residents to help define mitigation strategies appropriate to the identified and documented problem. The overall objective of the Neighborhood Traffic Management Program is to improve the livability of neighborhoods by mitigating the impacts of vehicular

traffic in residential areas. Specific impacts addressed by the Program include high non-local cut-through traffic volumes, excessive speeds, truck traffic intrusion, demonstrated accident history, and related problems.

The process will ensure that neighborhoods with demonstrated problems and community support for traffic improvements have equal access to neighborhood traffic management measures. The Program depends upon resident involvement and may vary from year-to-year based upon funding available for installation of neighborhood traffic improvements. The process includes the following steps:

- Step 1** - Identify Candidate Streets/Neighborhoods
- Step 2** - Preliminary Screening and Evaluation
- Step 3** - Engineering Analysis/Preliminary Recommendations
- Step 4** - Neighborhood Meetings and Survey/Petitions
- Step 5** - Develop, Install, and Evaluate Test Projects
- Step 6** - Determination of Permanent Project
- Step 7** - Monitoring

Various traffic management measures can be placed within a neighborhood street to help alleviate traffic; however, each control measure can have an impact on or divert traffic to adjacent streets. The Neighborhood Traffic Management Program requires extensive evaluation, analysis, and monitoring to prevent additional traffic problems elsewhere within a neighborhood.

Figure I-7 and Table I-1 present some of the different traffic management measures that can be used to ease traffic issues on local neighborhood streets. Efforts to apply Level 1 toolbox measures will be made first where feasible, then proceeding to Level 2 and Level 3 only when applicable Level 1 tools have been demonstrated as inadequate to solve the problems.



At Meadows Elementary School, both a speed limit sign and a temporary electronic message board warn drivers to slow down and drive safely.

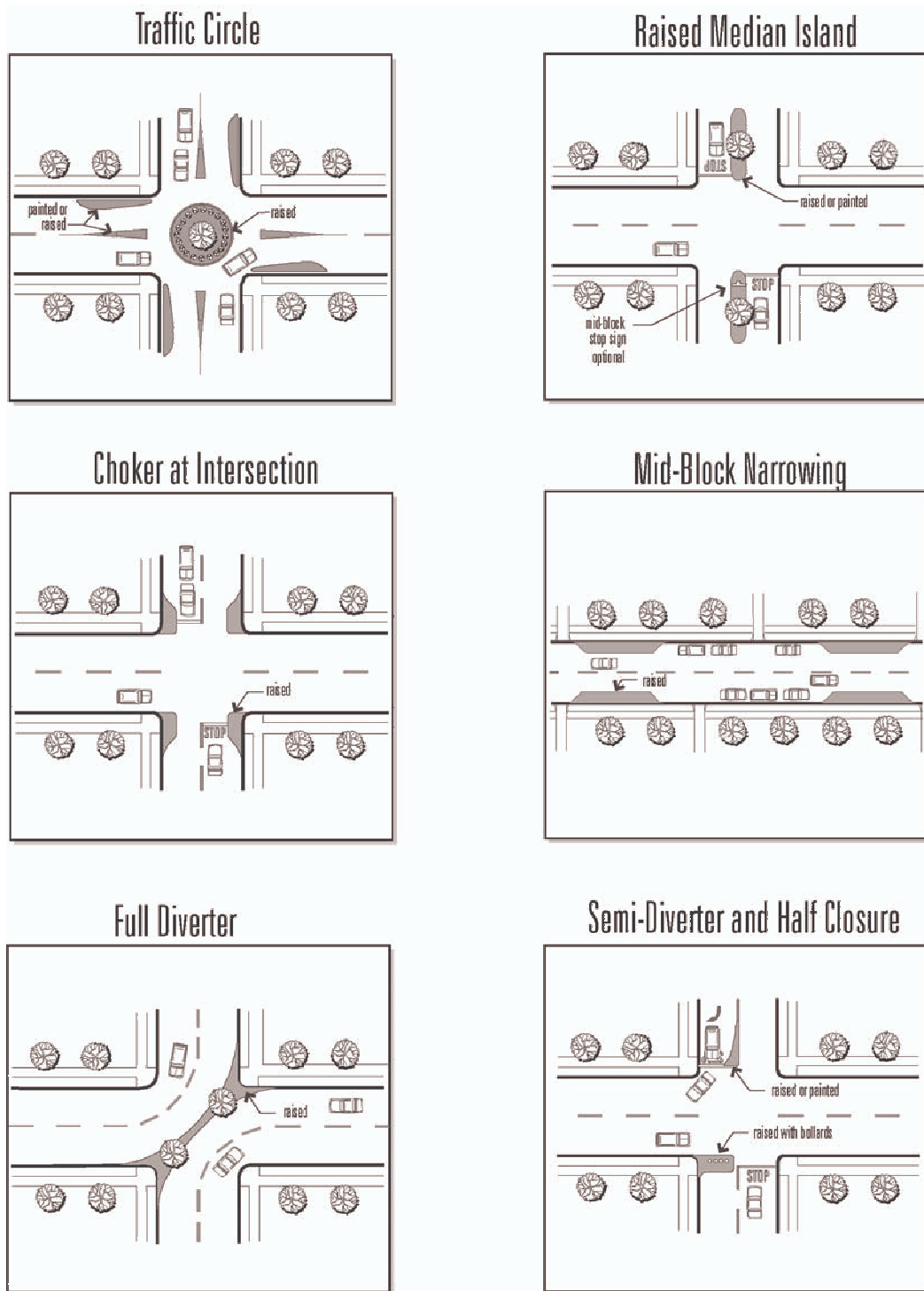
This speed monitoring trailer, provided by the Manhattan Beach Police Department, is an example of a Level 1 Toolbox measure.



**Table I-1**  
**Traffic Management Measures**

Level 1	Level 2	Level 3
<ul style="list-style-type: none"> <li>Enhanced Police Enforcement</li> <li>Speed Monitoring Trailer</li> <li>Neighborhood Traffic Watch Program</li> <li>Higher Visibility Crosswalk</li> <li>Pedestrian Crossing Signs</li> <li>Electronic Speed Limit Signs/Larger Static Speed Limit Signs</li> </ul>	<ul style="list-style-type: none"> <li>Traffic Signal Adjustments to Discourage Cut-Through Traffic</li> <li>Turn Restrictions Via Signage</li> <li>Rumble Strips/Dots</li> <li>Crosswalk Warning System</li> <li>Raised Median Island</li> <li>Entry Island (Neighborhood Identification Island)</li> <li>Mid-Block Narrowing</li> <li>Chokers at Intersections</li> <li>Lane Reduction/Lane Narrowing/Restriping</li> <li>Stop Sign as Neighborhood Traffic Control Measure</li> <li>Parking Restrictions</li> </ul>	<ul style="list-style-type: none"> <li>Raised Crosswalk</li> <li>Raised Intersection</li> <li>Traffic Circle</li> <li>Restricted Movement Barrier</li> <li>Entrance Barrier-Half Closure</li> <li>Diagonal Diverter</li> </ul>

Some traffic management measures can limit or affect access of emergency vehicles. Specific measures can negatively impact response time, such as diagonal diverter or half closure. Many of Manhattan Beach's roadways are very narrow; adding traffic measures can further limit emergency vehicle access. Public Works, Fire, Traffic Engineering, Community Development staff, and the Police Traffic Division review traffic improvement related requests and make recommendations to the to the Parking and Public Improvements Commission. The Commission members, who are appointed by the City Council, make recommendations and the City Council then takes action on the request.



Source: Meyer Mohaddes Associates, 2002.

Figure I-7  
Examples of Neighborhood Traffic  
Management Measures

## Police Department Traffic Team

In addition to the physical improvement strategies offered by the Neighborhood Traffic Management Program, the City will continue to use the Police Department's Traffic Team to patrol the streets of Manhattan Beach, investigating and resolving traffic-related concerns or complaints and enforcing traffic laws. Traffic officers are assigned to neighborhood patrol areas and solicit the support of the patrol officers, and to work as a team to address issues within their assigned area. The intent of the strategy is to have traffic officers become aware of and be more responsive to community concerns. This program also encourages officers to establish relationships with community residents and businesses, creating a heightened awareness of the people and activities in their assigned area. Contact with the community provides familiarity and allows the officers to develop a sense of ownership, thereby positively impacting traffic issues. It also provides residents a means to express traffic issues within their neighborhoods.

## Goals and Policies: Preventing Neighborhood Traffic Intrusion

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**Goal I-2:**      **Move commuter traffic through the City primarily on arterial streets, and on collector streets as appropriate, to protect other streets from the intrusion of commuter traffic.**

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**Policy I-2.1:**      Encourage the use of the Neighborhood Traffic Management Program and utilize neighborhood traffic management tools to mitigate neighborhood intrusion by commuter traffic.

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**Policy I-2.2:**      Establish priorities and determine funding available for implementing the Neighborhood Traffic Management Program.

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Levels 2 and 3 traffic measures can be considerable in costs. With limited funding resources, planning and prioritizing the implementation of traffic measures is important, and will be established by the City Council.

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**Policy I-2.3:**      Upgrade all major intersections and arterial streets to keep traffic moving efficiently.

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Policy I-2.4: Require additional traffic lanes and/or other traffic improvements for ingress and egress for new development along arterials where necessary for traffic and safety reasons.

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Policy I- 2.5: Work with neighboring cities and regional and sub-regional agencies to widen and upgrade all major intersections and associated street segments within the City and adjacent jurisdictions to optimize traffic flow.

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Manhattan Beach is working with the cities of El Segundo, Hawthorne, and Redondo Beach to synchronize traffic signals using real time information and develop traffic management plans to combat congestion. Manhattan Beach consistently works with the MTA, South Bay Cities Council of Governments, Caltrans, employees associations, and neighboring jurisdictions on projects such as the Sepulveda Boulevard widening, Aviation Boulevard widening, Rosecrans Corridor Study and, the Douglas Street extension. Public Works has a number of CIP projects in the City that address subregional and regional traffic issues.




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Policy I-2.6: Encourage the use of Intelligent Transportation Systems (ITS), such as advanced signalization, motorist information, advanced transit, advanced emergency vehicle access, and intelligent parking systems, as well as other appropriate communication technologies, to direct through traffic.

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Intelligent Transportation Systems include the application of advanced information processing (computers), communications, technologies, and management strategies in an integrated manner to improve the safety, capacity, and efficiency of a transportation system. As mentioned in Policy I-2.5, Manhattan Beach is working with neighboring cities to coordinate traffic signals to move traffic through cities faster.




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Policy I- 2.7: Monitor and minimize traffic issues associated with construction activities.

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Construction activity can cause significant traffic congestion due to the need to close lanes or streets, limiting vehicle capacity or creating detours. More than one construction site on a street simultaneously can pose serious traffic impacts on surrounding streets.





# Parking

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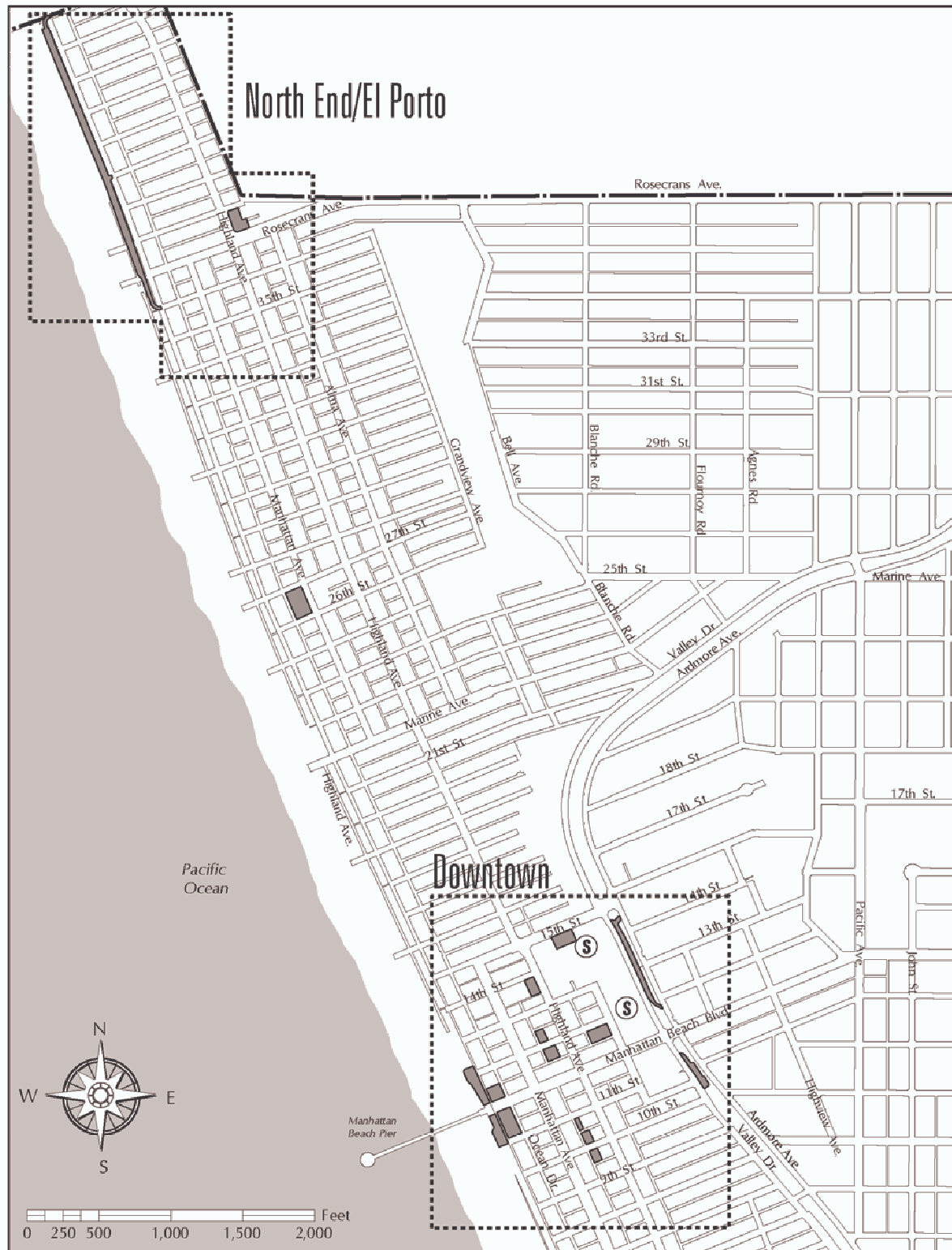
Parking typically is considered a separate issue from vehicle circulation. However, the presence of on-street parking has a direct effect on roadway capacity, particularly in Manhattan Beach, where many streets are narrow. In addition, inadequate off-street parking can cause vehicles to re-circulate the streets in search of parking, increasing traffic volumes and congestion.

For many years, lack of parking has been a key community concern, particularly near the beach and in the Downtown and North End commercial districts. Neighborhoods with older high-density housing also experience parking shortages, as the units were built before more stringent parking standards were in place. When beach parking facilities are full, beachgoers take up on-street parking spaces in residential areas adjacent to the beach, spaces that local residents use as well. Public parking often appears as the best solution to meeting broad-based community parking needs for residents and visitors. While the City owns many parking facilities and operates surface parking and structures along the Strand and near Parque Culiacan (Figure I-8), constructing new facilities involves significant cost, and few sites are available where parking is most needed. Figure I-8 identifies areas where parking is most deficient and where public and/or private shared facilities may be sited. Off-site shuttles are provided for large annual events Downtown and beach events such as the Old Hometown Fair and the AVP Volleyball tournament.

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This public parking lot, just south of Parque Culiacan, provides convenient parking for beachgoers.





Source: City of Manhattan Beach, GIS data, 2002.

- Public Surface Parking Lots
- S Public Subterranean Parking Structures (Under Construction)
- Areas with Parking Needs

Figure I-8  
Public Parking

The City's zoning ordinance includes parking requirements to ensure that adequate parking spaces are provided as well as minimum stall dimensions. These regulations will continue to apply to all new development as well as existing uses with major remodeling or expansion.

## Parking Management

The City will also encourage parking management to promote efficient use of private parking facilities. Parking management can help address a wide range of transportation issues, including spillover problems, parking demand, and parking facility improvements. Example of parking management strategies include:

- Shared parking
- Allow reduced parking requirements in exchange for TDM Programs
- Accurate assessment of parking demand
- Valet parking program
- Address parking spillover problems
- Develop overflow parking plans
- Regulate parking facilities for efficiency
- Improve parking facility design

## Parking for Residents

Residents should have reasonable access to parking near their homes. Parking problems can inconvenience residents and erode their perception of neighborhood livability. Part of the problem stems from residents who cannot park near their homes because of all-day parking by businesses, schools, and/or beachgoers.

Residential neighborhoods, particularly along the beach and North End/El Porto, experience severe on-street parking deficiencies. Narrow streets and alleys, and driveways and access to off-street parking limit the number of parking spaces that can be placed on the street.



The residential neighborhoods adjacent to Mira Costa High School also experience parking issues. Many students park their automobiles in the surrounding residential neighborhoods during school hours. Residential areas adjacent to Mira Costa High's athletic fields experience problems during weekends and evenings when youth sporting activities occur.

## Goals and Policies: Meeting Community Parking Needs

Parking is a significant issue; the City is committed to finding solutions to improve access to public parking.

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**Goal I-3:**      **Ensure that adequate parking and loading facilities are available to support both residential and commercial needs.**

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Policy I-3.1:      Review the existing Downtown Parking Management Program recommendations, re-evaluate parking and loading demands, and develop and implement a comprehensive program, including revised regulations as appropriate, to address parking issues.

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Policy I-3.2:      Explore opportunities for creating peripheral parking lots to serve the Downtown and North End.

# Policy Discussion

The Metlox development, scheduled for completion in 2003, will provide 460 new public parking spaces within two levels of a subterranean parking structure in the Downtown. The Public Safety Facility, scheduled for completion in 2005, will also increase public parking in the Downtown.

Policy I-3.3: Periodically evaluate the adequacy of parking standards in light of vehicle ownership patterns and vehicle sizes in the City.

Policy I-3.4: Review development proposals to ensure potential adverse parking impacts are minimized or avoided.

Policy I-3.5: Encourage joint-use and off-site parking where appropriate.

Policy I-3.6: Evaluate parking and loading demands in the North End, and develop and implement a comprehensive program to address these needs.

# Policy Discussion

The North End Business Improvement District (BID) is conducting a study to address parking and loading demands within this area.

Policy I-3.7: Require private development to provide public on-street parking in the public right-of-way according to Public Works standards in certain areas of the City.

# Policy Discussion

Ordinances 2039 and 2042 regulate construction within the public street right-of-way. Ordinance 2039 contains updated Encroachment Permit regulations pertaining to private use construction within the public right of way. Ordinance 2042 contains standards for public use construction within the off-roadway portion of the right of way in certain residential areas.

Policy I-3.8: Monitor and minimize parking issues associated with construction activities.

# Policy Discussion

The Manhattan Beach Police and Community Development Departments track and adjust the number of contractor parking permits issued to minimize parking impacts. Parking of construction dumpsters in the street right-of-way is generally not allowed, as it also impacts street parking.

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Policy I-3.9:	Work to retain on-street parking in the Beach Area, particularly on Highland Avenue.
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Policy I-3.10	Continue to work with businesses and public agencies to coordinate parking strategies.
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<b>Goal I-4:</b>	<b>Protect residential neighborhoods from the adverse impacts of traffic and parking of adjacent non-residential uses.</b>
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Policy I-4.1:	Review on-street parking in neighborhoods adjacent to commercial areas where neighbors have requested such review, and develop parking and traffic control plans for those neighborhoods which are or which could potentially be adversely impacted by spillover parking and traffic.
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Policy I-4.2:	Carefully review commercial development proposals with regard to planned ingress/egress, and enforce restrictions as approved.
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Policy I-4.3:	Encourage provision of on-site parking for employees.
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Policy I-4.4:	Ensure that required parking and loading spaces are available and maintained for parking.
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<b>Goal I-5:</b>	<b>Reduce the adverse parking and traffic impacts that schools create on surrounding residential neighborhoods.</b>
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Policy I-5.1:	Encourage the school district and private schools to provide busing or other alternative transportation modes to the schools as a means of reducing peak-hour traffic.
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Policy I-5.2:	Work with the school district and private schools to improve pedestrian and bicycle safety around schools.
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Policy I-5.3:	Coordinate after-school, weekend, and community activities on school grounds with consideration of potential traffic and parking impacts on neighborhoods.
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Policy I-5.4: Discourage parking associated with schools, particularly at Mira Costa High School, within surrounding neighborhoods.

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Policy I-5.5: Work with the school district and private schools to address high traffic volumes during the morning and afternoon peak school hours, and improve drop-off and pick-up circulation.

# Pedestrian and Bicycle Networks

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Manhattan Beach's high residential density, walkstreets, small lots, narrow streets, and lively street frontages in Downtown and the North End all make it a very "walkable" City. Walking from the residential neighborhoods down to the beach can be accomplished easily and quickly. Lack of parking and traffic congestion also make walking and biking desirable alternatives for accessing the beach and activity centers.

## Walking in Manhattan Beach

Walkability, access, and connections are necessary components of a circulation system that easily and specifically accommodates pedestrians. Walkability includes wide sidewalks, safe street crossings, features that encourage cautious driving, and a pleasant and safe walking environment. Walkways, mid-block crossings, pathways, and pedestrian short-cuts allow people to get from one destination to another with ease. Dedicated pedestrian paths can provide safe access between residential, beach, and retail areas. Pedestrian connections should be provided primarily to and from intense commercial activity centers such as Downtown, the North End, and transit stops, as well as schools. Handicapped access strategies, which also accommodate strollers and other "wheeled" transportation, should be incorporated into all street and pathway plans.



Walkstreets provide convenient and safe access to the beach for pedestrians.

Walkstreets are unique pedestrian features in Manhattan Beach that provide safe, attractive paths to the beach and surrounding areas. Walkstreets are pedestrian-only streets perpendicular to the beach between the Strand and Alma Avenue in the North and Valley Drive in the south. Walkstreets generally front residential units with alleys providing vehicular access. Walkstreets also create visual corridors framing the ocean. Figure I-6 identifies the major pedestrian and bicycle networks in Manhattan Beach, including and complementary to the walkstreets.

The Strand provides two miles of continual pedestrian access along the beach. Veterans Parkway, a pedestrian jogging and walking trail between Valley Drive and Ardmore Avenue, connects the City from Manhattan Village through Downtown and through Hermosa Beach. The trail was once the right-of-way for the Atchison Topeka and Santa Fe railway.

## Accommodating Bicyclists

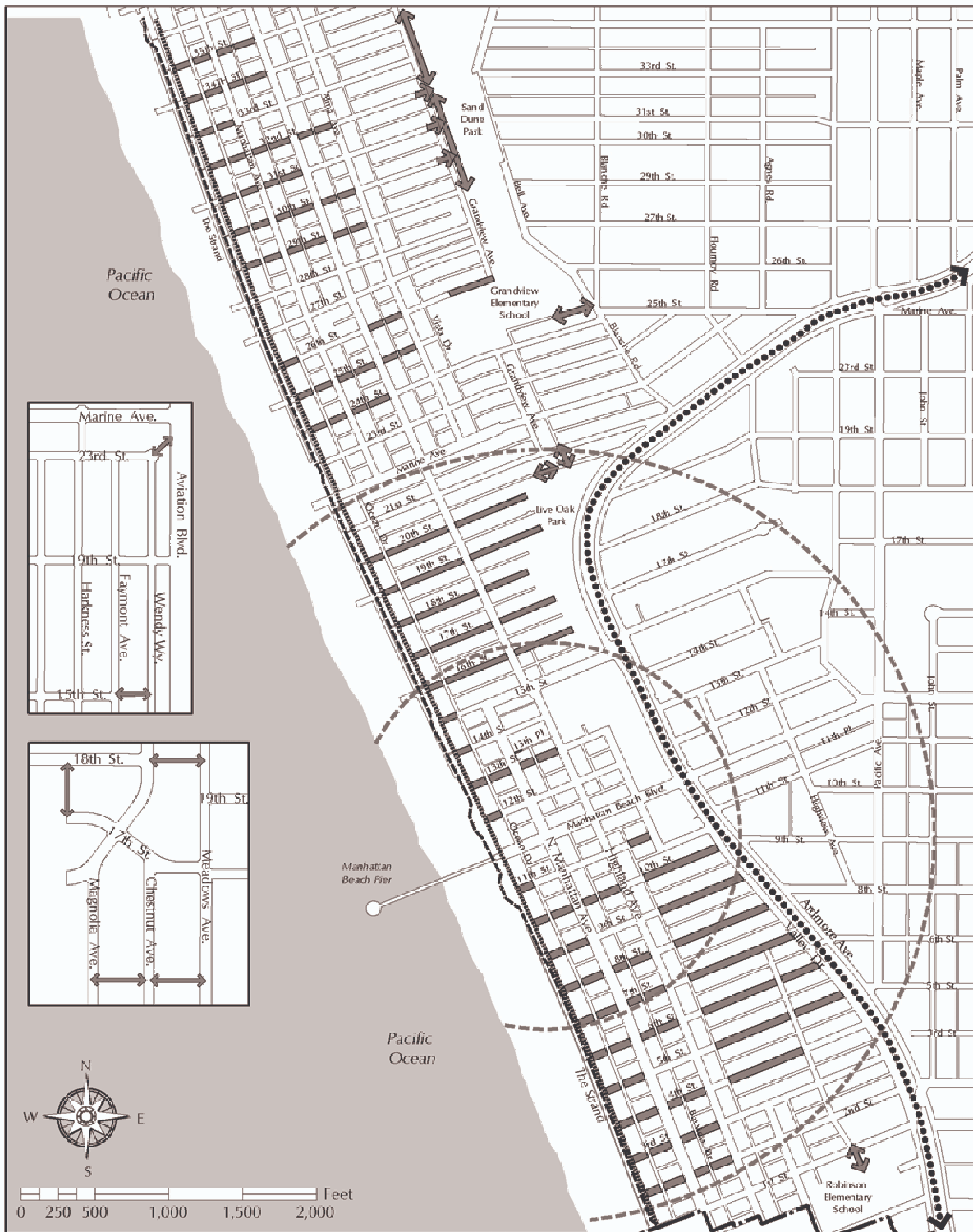
With rain falling less than 30 days a year and moderate temperatures most of the year, the Southern California climate is perfect for bicycling. Cycling to work or school is a popular means of transportation for short distances. Allowing bicycles on buses or providing secure bicycle parking facilities can encourage bicycling for longer trips, provided safe routes are established.

Cycling is a major recreational activity in Manhattan Beach. However, the only bicycle facility is a dedicated bicycle path along the Strand. This bicycle path is a two-mile segment of a larger system that links Marina Del Rey to Palos Verdes, covering a distance of approximately twelve miles (Figure I-9).

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The bike path along the Strand, separate from the pedestrian path, allows bicyclists to enjoy rides along the beach. Magnificent views of the Pacific Ocean can be seen all along the bike path.





Source: City of Manhattan Beach, GIS data, 2002.

- Walkstreets
- ↔ Pedestrian Walkways
- ..... Veterans Parkway (Multi-use Trail)
- - - Strand Bikeway
- . - Strand Walkway



Radius from Downtown Manhattan Beach  
 1/4 mile - 5 minutes walking distance  
 1/2 mile - 10 minutes walking distance

Figure I-9  
 Walkstreets, Pedestrian  
 Walkways, and Bikeways

The narrow and congested streets in Manhattan Beach make adding bicycle lanes and routes difficult. Bike lanes are only recommended on streets where the right-of-way is wide enough to accommodate bike lanes and where on-street parking is limited. Veterans Parkway and/or the adjacent streets of Valley/Ardmore are possible locations for a bikeway, with enough space to serve both bikes and pedestrians. Feasibility of accommodating a bicycle path should be considered.

Providing a bicycle-to-transit link is a critical strategy to encourage daily bicycle and transit use, potentially reducing air pollution, energy consumption, and traffic congestion. Bicycle-transit integration has four components:

- Allowing bicycles on transit
- Offering bicycle parking at transit locations
- Improving bikeways to transit
- Encouraging usage of bicycle and transit programs

The Green Line Station on Douglas Street in El Segundo accommodates bicyclists by providing bicycle parking and lockers. Most MTA buses have bicycle racks on the front of buses.

## Goals and Policies: Accommodating Pedestrians and Bicyclists

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**Goal I-6:**      **Create well-marked pedestrian and bicycle networks that facilitate these modes of circulation.**

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Policy I-6.1:      Implement those components of the Downtown Design Guidelines that will enhance the pedestrian-oriented environment.

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Policy I-6.2:      Protect the walkstreets as important pedestrian access to the beach.

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Policy I-6.3:      Monitor City standards regarding the use of public walkstreets for private purposes.

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The City has developed encroachment standards for walkstreets, providing regulations for the installation of fences, retaining walls, landings, landscaping, decks, and patios in the encroachment areas.




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Policy I-6.4:      Consider and protect the character of residential neighborhoods in the design of pedestrian access.

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Policy I-6.5:      Develop standards to encourage pedestrian-oriented design in the North End.

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Policy I-6.6:      Incorporate bikeways and pedestrian ways as part of the City's circulation system where safe and appropriate to do so.

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Policy I-6.7:      Encourage features that accommodate the use of bicycles in the design of new development, as appropriate.

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Policy I-6.8:      Encourage the development of recreational bicycle routes to link residential, schools, and recreational areas east of Sepulveda Boulevard with the Strand bike path.