City of Hermosa Beach

Parking Management Study and Recommended Parking Standards for the Coastal Zone

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1. Introduction

A sunny small beach city of 1.4 square miles, Hermosa Beach sits at the center of Los Angeles County's South Bay coastline along the Santa Monica Bay. The town is the very essence of the Southern California lifestyle, with an average of 283 sunny days per year and nighttime temperatures that rarely dip below 50 degrees. With two miles of sandy beach shoreline, Hermosa attracts more than a million visitors to the beach each year.

The small-town charm of Hermosa Beach is highlighted in commercial areas like Pier Avenue, well known for its many diverse restaurants and local retailers. There are architecturally diverse residences on the Strand, bungalows scattered throughout the town, and multi-level homes with ocean views.

Outdoor activities such as beach volleyball, surfing, skateboarding, and biking are quintessential to the Hermosa Beach culture. Other favorite activities include jogging or walking along the Greenbelt or the Strand, the paved path paralleling the beach and connecting Hermosa Beach to cities up and down the Santa Monica Bay coastline.

This lively beach city is also well known for its entertainment offerings including live music from rock to blues to jazz. Festivals, special events, and summer concerts occur throughout the year. The three-day weekends of Memorial Day and Labor Day bring thousands of visitors to the Fiesta Hermosa street fair, which has been a tradition for many years, features hundreds of crafters and artists and live bands.

Home to nearly 20,000 residents, Hermosa Beach is within a short commute of many of the largest and best-known names in corporate America in the aerospace, tech, industrial, service and financial fields. The Hermosa Beach City School District, consistently recognized as a California Distinguished School, offers a high-quality education to students in kindergarten through eighth grade, while high schoolers attend Mira Costa or Redondo Union High Schools.

The City of Hermosa Beach has recently completed a planning process to define the community's vision for the future of the City. Elements of the community vision have identified the need for increased management of the City's parking resources within the Hermosa Beach Coastal Zone. This technical report summarizes the findings of a parking management study conducted for both public and private parking within the Coastal Zone and provides associated recommendations for refining parking standards in the study area.

Purpose

The evaluation of parking within the Coastal Zone is primarily based on comparing existing parking inventory to both parking occupancy and demand, which ultimately inform specific recommendations based upon the analysis to achieve optimal utilization levels of parking resources. To this end, this report considers the goals and objectives from previous Hermosa Beach plans and studies, industry standards, and best practices that form foundational recommendations that the City of Hermosa Beach can implement to balance the parking needs for residents, visitors, and employees alike.

This report is intended to provide additional parking analysis and related parking management strategies to satisfy the requirements set forth in the California Coastal Act. The study evaluates future parking availability and demand, based on the previously completed

parking utilization study (City of Hermosa Beach, Beach Access and Parking Study, January 2015), and with proposed parking strategies from the Downtown Core Revitalization Strategy, the City Facilities Master Plan, and the effect of parking policies and multimodal enhancements proposed within *PLAN Hermosa*. This study includes a review of the City's current parking standards for various uses, identifies peak use times, and collects data from businesses to determine existing parking availability and demand.

This study will form the basis to establish and/or revise parking standards and recommend adjustments to residential and employee parking permit and fee programs within the Coastal Zone to balance coastal access with efficient use of the City's limited land resources and achievement of the City's economic development and mobility goals. The results of this study includes recommended parking standards and/or fee rates for various uses within the Coastal Zone and specifically the Downtown Core.

This study has four main sections:

1. **Existing Conditions & Parking Inventory** – this section documents the characteristics of the study area, the inventory of parking within the study area, and the City's existing parking code requirements and programs to manage parking within the Coastal Zone.
2. **Parking Occupancy Analysis** – –This section also provides a detailed description of occupancy (utilization) counts by both zone and type, and by time of day and week.
3. **Parking Demand Analysis** – compares the occupancy rates to existing City parking code, peer city parking rates, and industry standard rates to determine the appropriateness of current minimum parking requirements. The purpose of this analysis was to assist in determining how to optimize parking within the study area for each of the defined zones.
4. **Recommendations** – The results of the inventory, occupancy, and demand analyses ultimately drive the Recommendations, and are aligned with the goals and objectives from PLAN Hermosa, the Beach Access and Parking Study, and the Downtown Core Revitalization Strategy. The recommendations made in this report draw from best practices by peer cities and industry-wide standards as guidance, and have been tailored to address the unique features of Hermosa Beach's infrastructure, character, and geography.

Study Goals

The goals and objectives of this study were developed based on the current goals and objectives found in *PLAN Hermosa* and the *Downtown Core Revitalization Strategy*. Establishing these goals provides a guide for the recommendations in Section 6 that will focus and streamline the approach necessary to improve the parking within the City's Coastal Zone:

1. *Create a parking system that meets the parking needs and demands of residents, visitors, and employees in an efficient and cost-effective manner.*

   This goal is established in the Mobility chapter of *PLAN Hermosa*. The goal in *PLAN Hermosa* is accompanied with numerous actionable parking-related objectives, which were incorporated into the recommendations section of this report.

2. *Modify parking standards to encourage revitalization and investment in a pedestrian-oriented district.*

This goal is a summarization of a critical parking strategy found in the Hermosa Beach *Downtown Core Revitalization Plan*. While Hermosa Beach looks to relieve its parking congestion, the City is focused on assuring that its small-scale, pedestrian-oriented character is not hindered by parking standards that are more appropriate for suburban auto-oriented areas or require ground floors to be dominated by parking due to smaller lot sizes.

3. *Expand mobility options and optimize parking availability.*

   The analysis of the inventory, occupancy, and anticipated demand for parking demonstrate that parking challenges vary by area, time, and type and a nuanced approach to optimizing the availability of parking will be required. In some cases, increasing parking supply may not be the most effective method, and instead implementing a park-once strategy, expanding safe and convenient mobility options, or implementing shared parking agreements between uses with different peak periods could help to improve availability of parking. Most recommendations presented in this report use strategic parking management methods to achieve this goal. Some strategies to reduce demand include maximizing the use of the existing parking supply to better distribute demand, strategically investing in information and technology, and improving mobility options.

Relevant Plans

Over the past three years the City has initiated several important and forward-thinking planning processes to define the community vision for the future of Hermosa Beach. The City of Hermosa Beach has adopted numerous planning documents that were used to guide the development of this report. These previous plans include:

- *PLAN Hermosa (2017)*
- *The City of Hermosa Beach: Beach Access and Parking Study (2015)* by Fehr & Peers
- *The City of Hermosa Beach Downtown Core Revitalization Strategy (2015)* by ROMA Design Group

These three documents are outlined in greater detail below.

PLAN Hermosa (2017) – The City of Hermosa Beach has recently completed a multi-faceted process to vision the future of the community by integrating the General Plan and Local Coastal Program into *PLAN Hermosa*, adopted in August 2017. The City is ensuring a comprehensive review of the community's needs through outreach with its residents to discuss needs and continued development opportunities. Using community input as the backbone for planning updates, the City is conducting various technical studies to complete and certify their Local Coastal Program (LCP). The LCP identified multiple initiatives including sea level rise, affordable accommodations, and parking management to better serve residents, employees, and visitors of Hermosa Beach. *PLAN Hermosa*'s Mobility section recognizes that the City is continuing to attract higher numbers of visitors from surrounding areas with diverse and changing mobility demands.

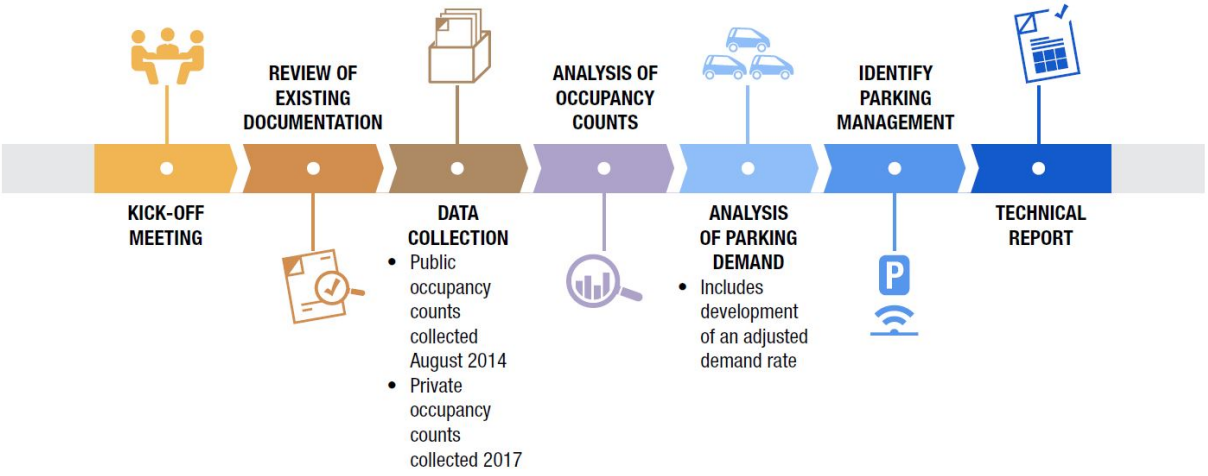
Beach Access and Parking Study (2015) - In an effort to evaluate the existing conditions of parking management, the *Beach Access and Parking Study* was prepared for the Coastal Zone. The study notes that an appropriate quantity of well-managed automobile parking is necessary for the success of the City's businesses and for the quality of life of its car-owning residents. The study also found that efficient management of parking can help provide sufficient space for vehicles while also encouraging more effective use of existing facilities to reduce the impact of parking facilities and reduce automobile use.

Downtown Core Revitalization Strategy (2015) - In February of 2015, the Hermosa Beach City Council accepted the *Hermosa Beach Downtown Core Revitalization Strategy*, a guiding document to improve upon the pedestrian-oriented area, referred to as the "Downtown Core." The study defined the Downtown Core as the area from the Strand to Hermosa Avenue between 14th Street and 10th Street, as well as along Pier Avenue from the Pier east to Valley Drive. The objective of this plan was to create a strategy that maintains the small-town feel of the downtown, while creating opportunities for revitalization and reinvestment in the City core for the future. The plan's Parking Strategy contains parking and land use elements which ultimately guided this study's goals, objectives, and final recommendations.

Project Process

Below is a flowchart (Figure 2.10) of the Hermosa Beach Parking Management Study and Recommendations. This flowchart details the key milestones of this effort from project inception to this technical report.

Figure 1.1 – Project Timeline


KICK-OFF MEETING
REVIEW OF EXISTING DOCUMENTATION
DATA COLLECTION
• Public occupancy counts collected August 2014
• Private occupancy counts collected 2017
ANALYSIS OF OCCUPANCY COUNTS
ANALYSIS OF PARKING DEMAND
• Includes development of an adjusted demand rate
IDENTIFY PARKING MANAGEMENT
TECHNICAL REPORT

2. Existing Conditions & Parking Inventory

The City of Hermosa Beach has substantial commercial, retail, restaurant, and other non-residential uses that create a unique mix of parking demand due to the distinct character of the community and walkability of the downtown core.

Study Area Characteristics

The Coastal Zone of Hermosa Beach represents approximately 43% of the City's land area and includes two miles of sandy shoreline, the City's downtown core of commercial activity, the civic center area, neighborhood commercial establishments, and a mix of residential land uses including single-family homes, small multi-unit complexes, mobile homes, and larger multi-family apartment complexes.

Most of the area land uses and properties were initially developed from 1900 through the 1960s and there is limited undeveloped land area with the exception of the City's network of parks and open spaces.

The majority of public parking within the Coastal Zone in Hermosa Beach is provided through on-street parking within or adjacent to residential uses, with additional on and off-street metered parking provided in the commercial core, and a number of remote parking areas available at no cost at City facilities, parks, and recreational facilities.

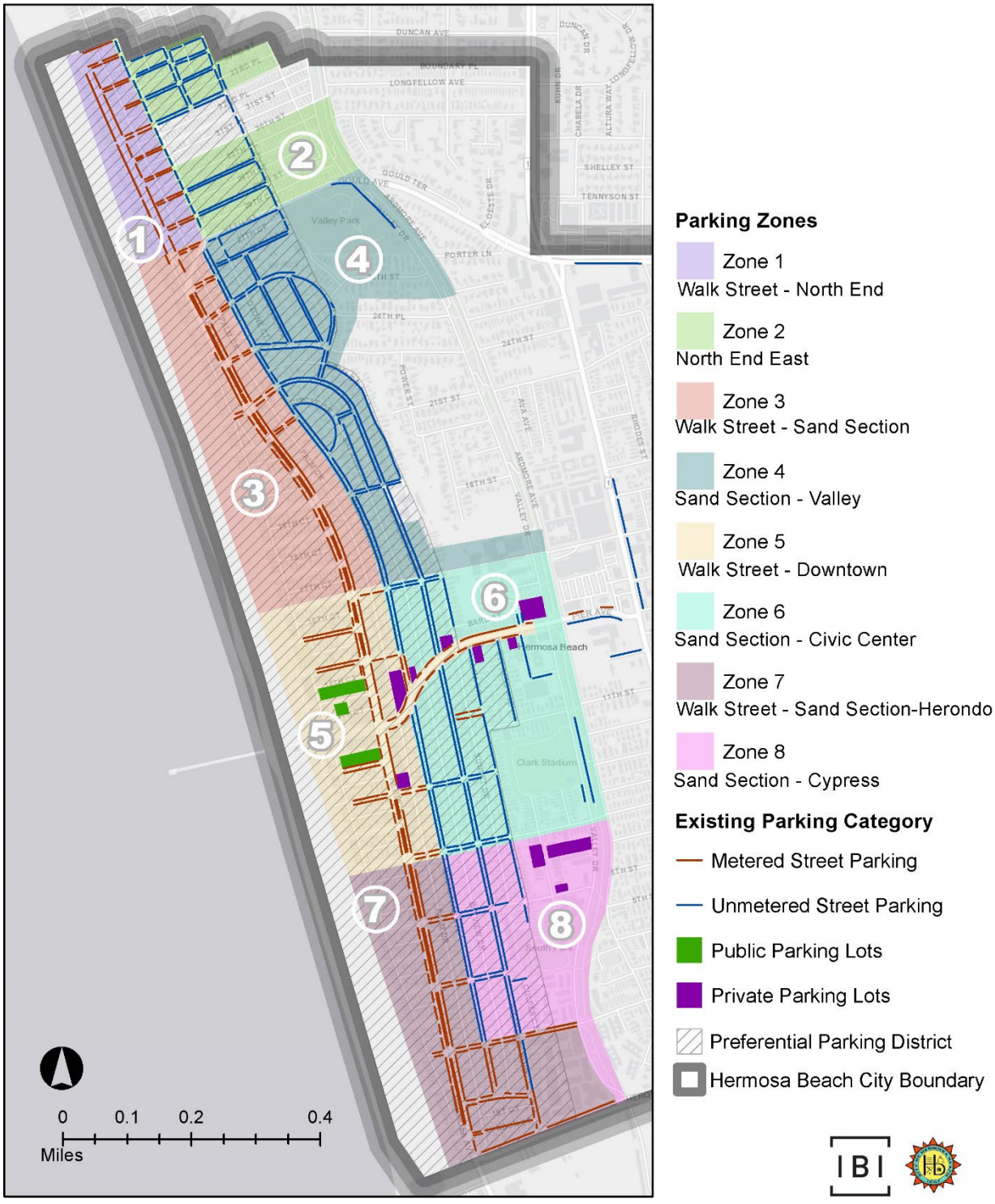
Parking Data Sources

The initial *Beach Access and Parking Study*[1] prepare in 2015 divided the Coastal Zone into three subzones of analysis: northern residential use, central commercial use, and southern residential use.

In order to provide a more detailed evaluation of parking needs within the Coastal Zone, those subzones were redefined as part of this parking study into eight zones to generally reflect the relationship between the existing parking network and the PLAN Hermosa character areas. Rather than following the exact boundaries of the *PLAN Hermosa* character areas, divisions between zones was often dependent on whether the zone provided metered or non-metered parking. Dividing the zones in this manner provides the opportunity to develop recommendations that are more specifically tailored based on the types of parking present in each zone. Figure 2.1 illustrates the resultant zones used in this study. For reference, a map of the delineated zones overlaid on the City's Coastal Zone character areas can be found in Appendix A.

[1] Image Source: Beach Access Parking Study, Fehr & Peers (2015)

Figure 2.1 – Study Area Map



All data as part of this study was obtained from previous parking study efforts and other sources directly from the City. Parking occupancy within each zone was based on existing data provided by the City from two sources. Public parking data was obtained from the Beach Access and Parking Study. Parking supply and occupancy data was collected from the City for all public on-street and public off-street parking in the Coastal Zone. Public on-street parking counts were conducted for the entirety of the Coastal Zone. Public off-street parking counts were collected in Hermosa Beach Public Lot A, Lot B, and Lot C. All three public lots are located in Zone 5: Walk Street – Downtown west of Hermosa Avenue from 11th Street to 14th Street. Lots A and B provide surface parking; Lot C is a three story-parking structure.

Public parking occupancy counts were collected during three time periods in August of 2014: a Tuesday afternoon (2:00 pm – 3:00 pm), a Tuesday evening (7:00 pm – 8:00 pm), and a Saturday afternoon (2:00 pm – 3:00 pm). Afternoon observation times were intended to capture the peak beach visitation period, and the evening time were intended to capture the peak weekday evening restaurant dinner hour. While this data was initially collected in 2014, we believe that the overall inventory and occupancy conditions remain relevant today.

Private off-street parking data for the Coastal Zone was collected separately in 2017, as part of a City-led inventory and occupancy count. While every private lot was inventoried, observed data included only select properties with 15 or more parking spaces given their potential for shared use opportunities. Parking occupancy counts were collected during six time periods: a weekday morning, weekday afternoon, weekday evening, weekday night, weekend afternoon, and weekend evening. For consistency, only the three time periods that aligned with the public occupancy counts were chosen for analysis. Therefore, the data utilized for the purposes of this study included the occupancy observed during the weekday afternoon, weekday evening, and weekend afternoon. No assumptions were made for properties that were not observed for occupancy.

Zone Development and Characteristics

Data on parking inventory, occupancy, and anticipated demand is aggregated at the zonal level, meaning everything within a zone is treated equally. For example, if occupancy within the northern area of a given zone is higher than occupancy in the southern area of the same zone, the analysis would reflect the aggregate of the entire zone. Therefore, any recommendations tied to that particular zone will address overall trends but will not reflect issues on a block-by-block basis. Data for each of the zones was obtained from the City and was grouped and subsequently analyzed as follows:

- Off-Street (Public and Private) Parking
  - Total Inventory and Occupancy
- On-Street (Public) Parking
  - Metered
    - Yellow Meters
    - Non-Yellow Meters
  - Non-Metered
    - Within the Preferential Parking Zone
    - Outside of the Preferential Parking Zone

For consistency with the City's defined character areas, the naming convention for the eight zones are as follows:

Zone 1: Walk Street – North End

Zone 2: North End East

Zone 3: Walk Street – Sand Section North

Zone 4: Sand Section – Valley

Zone 5: Walk Street – Downtown

Zone 6: Sand Section – Civic Center

Zone 7: Walk Street – Sand Section – Herondo

Zone 8: Sand Section – Cypress

Figures 2.2 through 2.9 illustrate each zone in greater detail. Following the figures outlining the boundaries of each zone, Table 2.1 provides a full description of the eight zones based upon the City's character areas, types of parking spaces available, and status as either public or private.

Figure 2.2 – Zone 1 Boundary Map

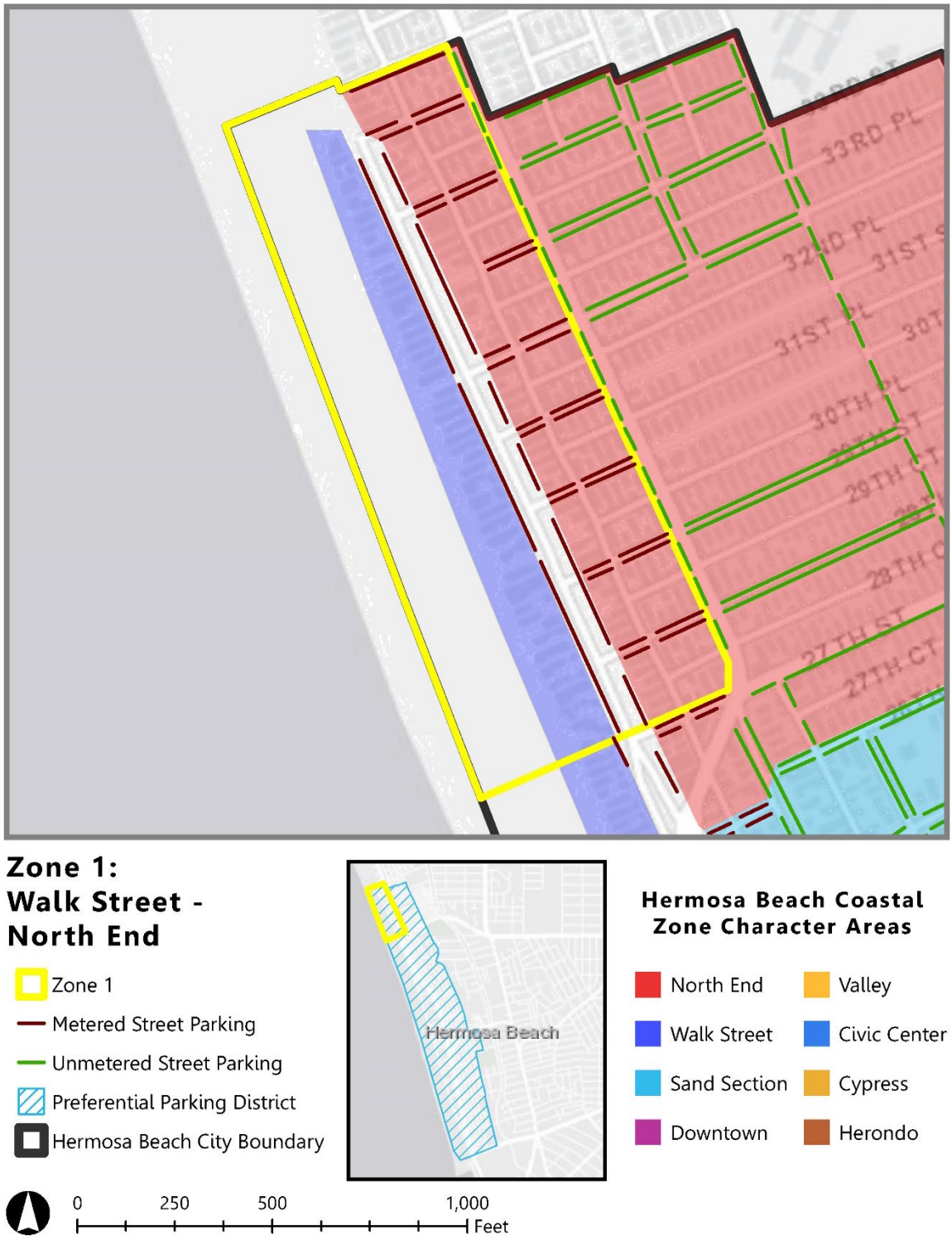


Figure 2.3 – Zone 2 Boundary Map

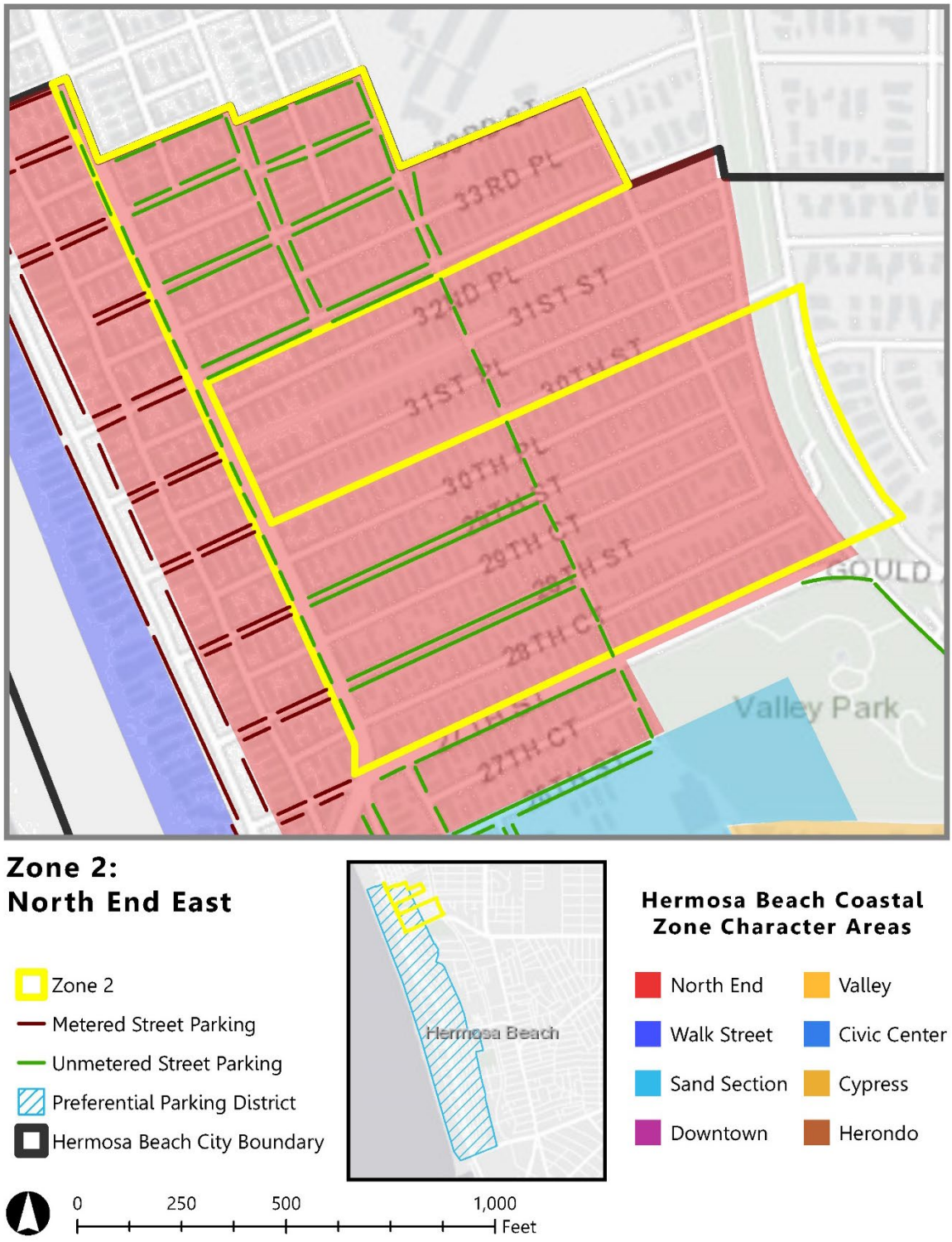


Figure 2.4 – Zone 3 Boundary Map

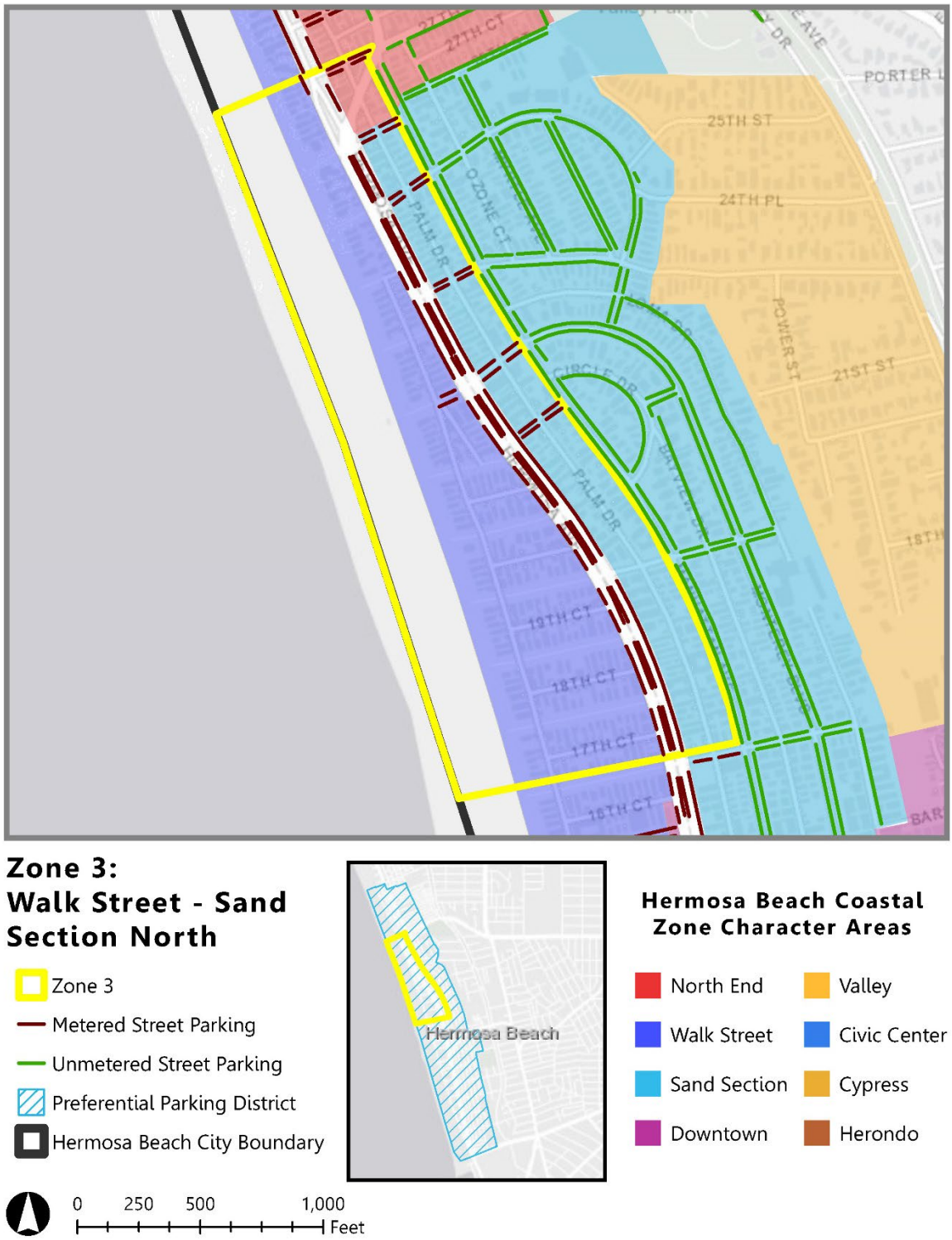


Figure 2.5 – Zone 4 Boundary Map

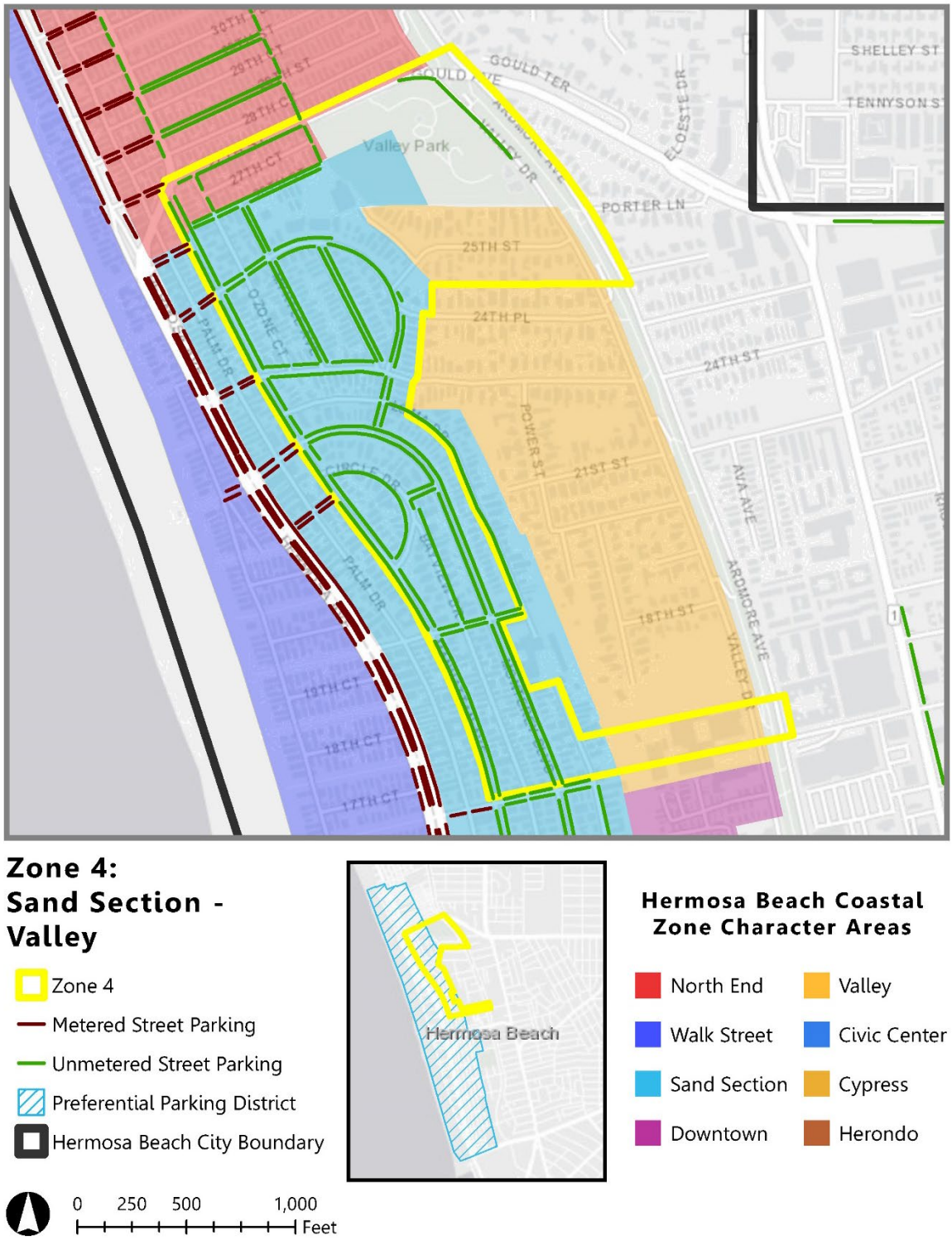
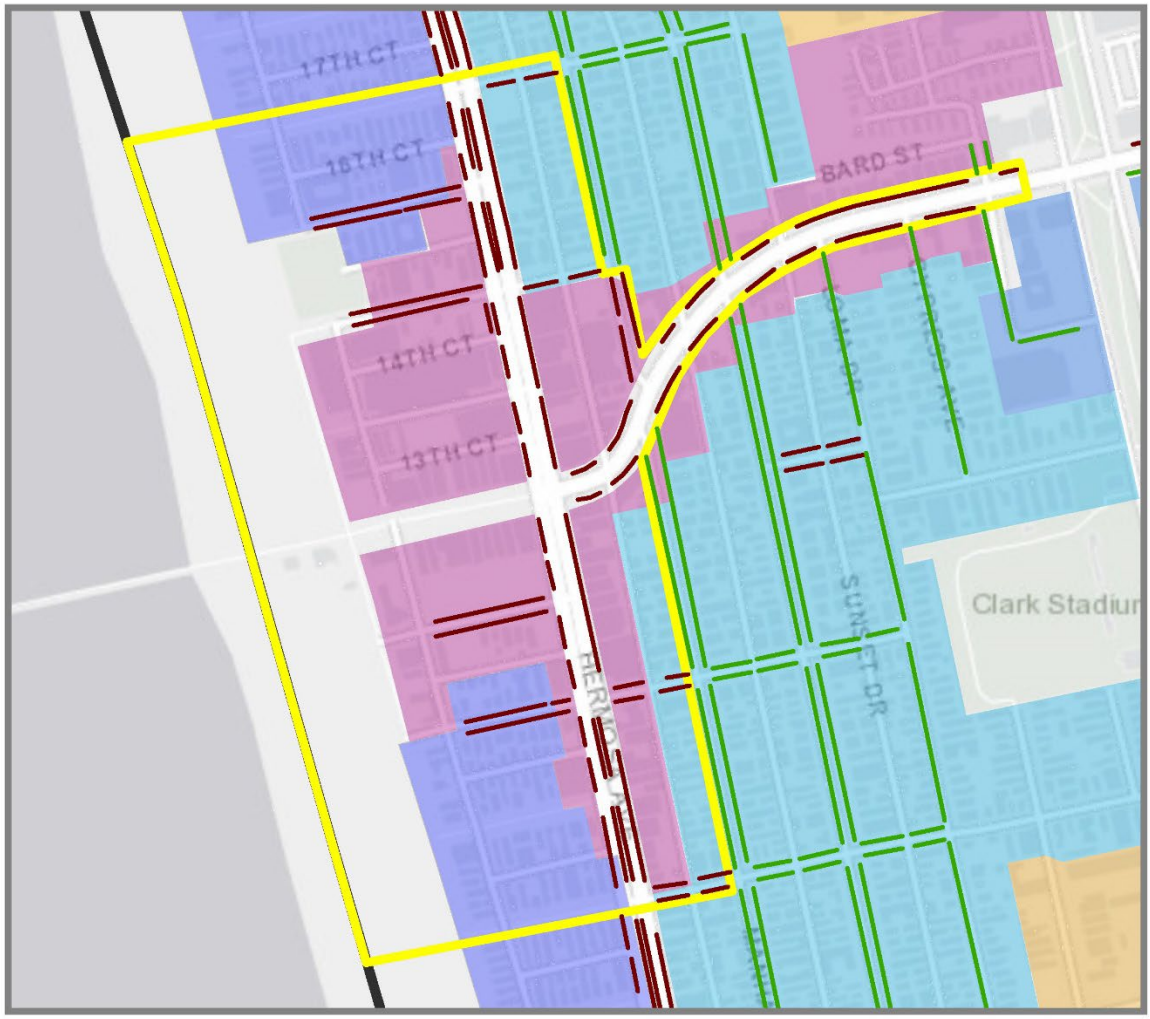


Figure 2.6 – Zone 5 Boundary Map



Zone 5:
Walk Street - Downtown

- Zone 5
- Metered Street Parking
- Unmetered Street Parking
- Preferential Parking District
- Hermosa Beach City Boundary

Hermosa Beach Coastal Zone Character Areas

- North End
- Valley
- Walk Street
- Civic Center
- Sand Section
- Cypress
- Downtown
- Herondo

0 250 500 1,000 Feet

Figure 2.7 – Zone 6 Boundary Map

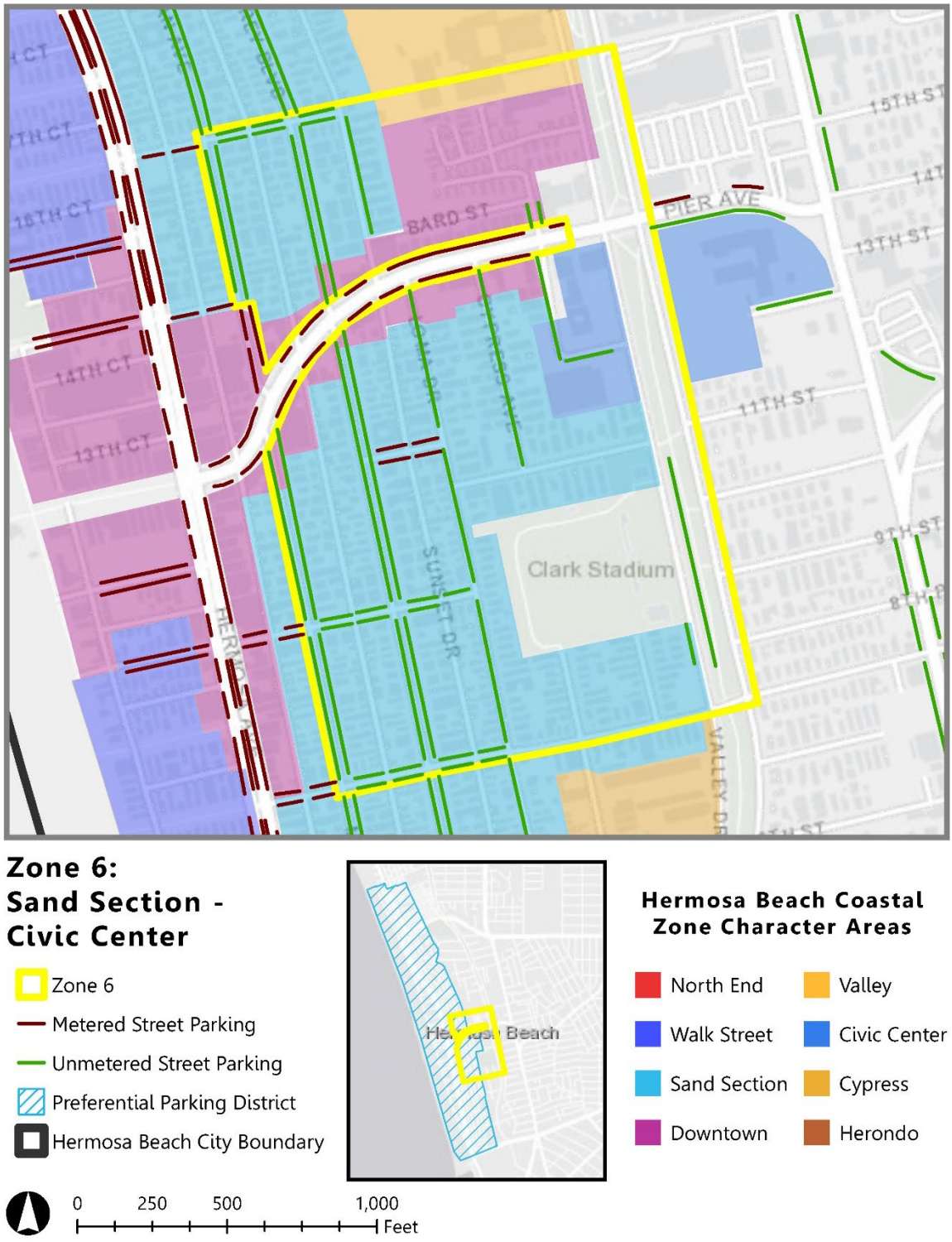


Figure 2.8 – Zone 7 Boundary Map

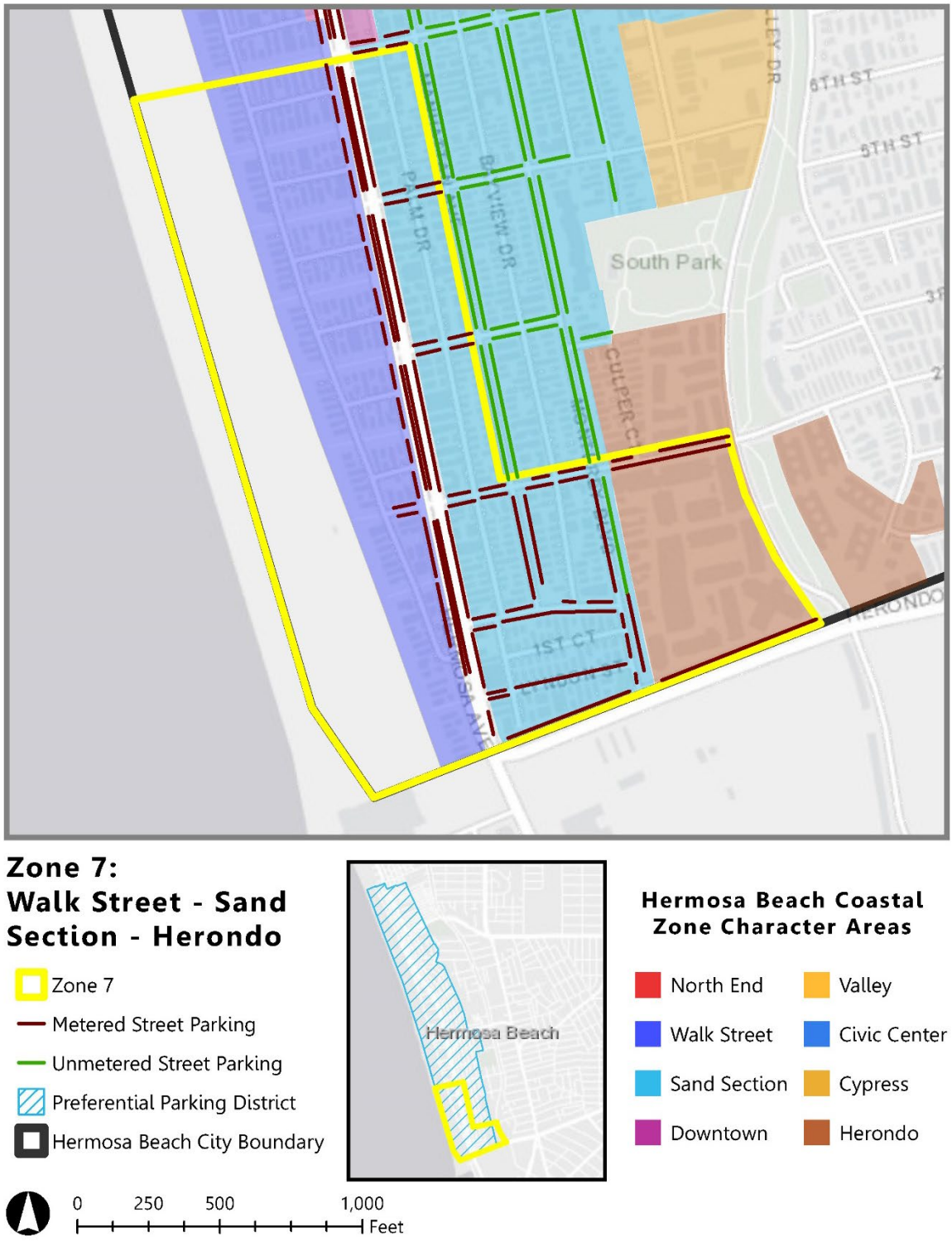


Figure 2.9 – Zone 8 Boundary Map

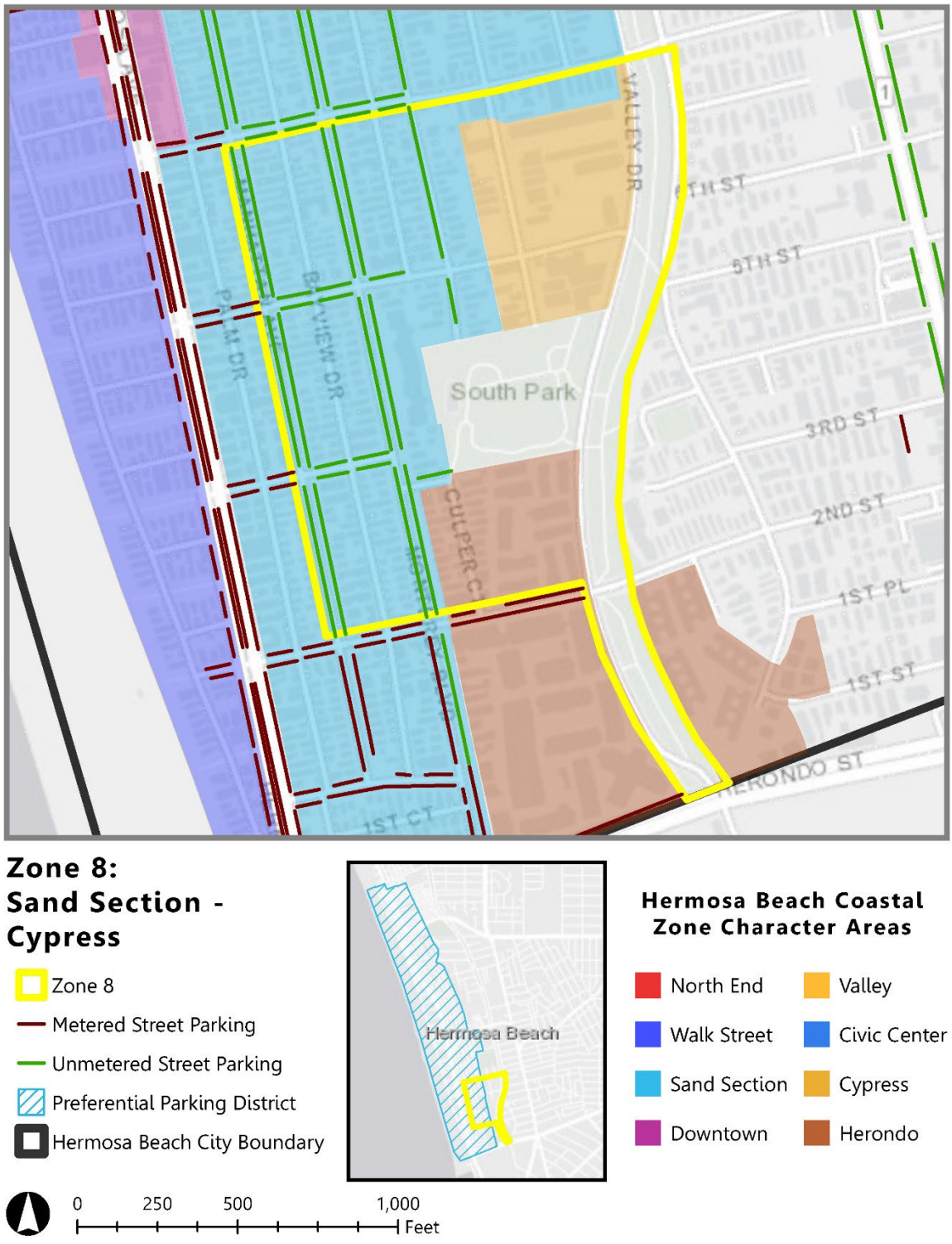


Table 2.1 – Zone Descriptions and Parking Types

Table 2.1 - Zone Descriptions and Parking Types

ZONE	NAME	DESCRIPTION	LAND USE	ON-STREET PARKING			OFF-STREET PARKING	
				METERED	NON-METERED: PREFERENTIAL ZONE	NON-METERED: NON-PREFERENTIAL ZONE	PUBLIC	PRIVATE
1	Walk Street - North End	Encompasses the Walk Street and North End neighborhoods north of 27th Street and west of Manhattan Avenue.	Primarily: High-Density, Low-Density Residential Also Includes: Neighborhood Commercial	✓				
2	North End East	Encompasses the North End neighborhood north of 27th Street, from Manhattan Avenue to the eastern coastal zone boundary.	Primarily: Medium-Density Residential Also Includes: Low-Density Residential, Neighborhood Commercial		✓	✓		
3	Walk Street - Sand Section North	Encompasses the northern Walk Street and Sand Section neighborhoods between 27th Street and 16th Street, west of Manhattan Avenue.	Primarily: Medium-Density Residential Also Includes: Low-Density Residential, Neighborhood Commercial	✓				
4	Sand Section - Valley	Encompasses the northern Sand Section and Valley neighborhoods between 27th and 16th streets, from Manhattan Avenue to the eastern coastal zone boundary.	Primarily: Low-Density Residential Also Includes: Medium-Density Residential, Open Space, Public Facilities,	✓	✓	✓		
5	Walk Street - Downtown	Encompasses the central Walk Street and Downtown areas west of Manhattan Avenue, plus Pier Avenue to Valley Drive.	Primarily: Recreational, Community, Also Includes: Medium-Density, High-Density Residential, Open Space, Public Facilities	✓			✓	✓
6	Sand Section - Civic Center	Encompasses the central Sand Section and Civic Center areas from 16th Street to 8th Street, east of Manhattan Avenue to the eastern coastal zone boundary.	Primarily: High-Density Residential, Community, Public Facilities Also Includes: Open Space, Mobile Home		✓	✓		
7	Walk Street-Sand Section - Herondo	Encompasses the southern Walk Street and Sand Section neighborhoods, south of 8th Street and west of Manhattan Avenue, plus the Herondo neighborhood south of 2nd Street.	Primarily: High-Density Residential Also Includes: Neighborhood Commercial	✓				✓
8	Sand Section - Cypress	Encompasses the southern Sand Section neighborhood from 8th Street to 2nd Street, east of Manhattan Avenue, including the Cypress area.	Primarily: High-Density Residential, Light Industrial, Open Space Also Includes: Medium-Density Residential		✓	✓		✓

Inventory of Parking

Parking inventory for the Coastal Zone is summarized in Table 2.2 (by zone) and Table 2.3 (overall) On-street public parking in the Coastal Zone (all eight zones) consists of a total of 3,837 spaces, while the total off-street parking analyzed for this study includes 869 spaces, 521 of which are City-owned public spaces, and the remaining 348 being privately-owned.

Parking within privately-owned lots was included only if the lot included 15 parking spaces or more. Zones 5, 6, and 8 were the only zones with private off-street parking that met that threshold.

Table 2.2 – *Coastal Zone Parking Space Inventory by Zone*

Zone		Total Inventoried Spaces			
		On-Street	Off-Street		Total
			Public	Private	
Zone 1	Walk Street – North End	281	0	0	**281**
Zone 2	North End East	518	0	0	**518**
Zone 3	Walk Street – Sand Section North	493	0	0	**493**
Zone 4	Sand Section – Valley	738	0	0	**738**
Zone 5	Walk Street – Downtown	513	521	119	**1,153**
Zone 6	Sand Section – Civic Center	533	0	135	**668**
Zone 7	Walk Street – Sand Section – Herondo	543	0	0	**543**
Zone 8	Sand Section - Cypress	218	0	94	**312**
Total		**3,837**	**521**	**348**	**4,706**

Table 2.3 – *Coastal Zone Parking Space Inventory*

Parking Type	Total Inventoried Spaces
On-Street	
Preferential Yellow Metered	1,155
Preferential Silver Metered	327
Preferential Non-Metered	1,662
Non-Preferential Yellow Metered	20
Non-Preferential Non-Metered	673
Total	**3,837**
Public Off-Street (City-Owned)	
Lot A	130
Lot B	37
Lot C	354
Total	**521**
Private Off-Street	
Total	**348**
Overall	
Total	**4,706**

Existing Parking Management Programs

Management of the City's parking resources has long been a policy priority in Hermosa Beach given the built-out nature of the community and the popularity of the city as a destination for visitors, beachgoers, and nearby residents. Over the years, a number of different parking management programs have been implemented to manage the limited parking resources of Hermosa Beach. These programs are described briefly below.

Parking Fees

Within the Coastal Zone, Hermosa Beach maintains a supply of on-street metered or lot/structure pay-by-space parking in the two blocks nearest to the beach throughout the coastal zone. The hourly meter/lot rates cost $1.25 per hour, with meters/lot rates in the commercial core increasing to $1.50 per hour from 8 PM to 2 AM daily. Yellow post meters maintain a rate of $1.25 per hour throughout the day.

Residential Parking Permit Program

In 1984, the City of Hermosa Beach applied for and was granted permission by the California Coastal Commission to establish a preferential parking permit program in conjunction with remote beach parking locations and a park and ride shuttle system. The preferential parking permit program was developed to discourage oversaturation of the City's downtown and coastal parking, to provide free long-term parking at inland locations, and to allow residents within the impacted area to park beyond the one-hour time restrictions or without having to pay the meter at yellow pole/cap meters. The impacted area is bound by the North and South City boundaries; by the Strand on the West; by Loma Drive, Park Avenue, or Morningside Drive on the East. Parking spaces on the West side of Cypress Avenue between 11th Street and Pier Avenue are also included.

Residential parking permits are issued on an annual basis and cost $40 annually. Vehicle permits are available at a rate of one non-transferrable sticker per vehicle registered to an address (no limit on number of vehicles), and one transferrable hang tag guest pass per legal address. As part of the program, a property owner not residing at the address may also obtain one pass per address and residents within the impacted area may purchase one-day event permits at a rate of $1 for event permits one through five and no charge for permits six through twenty.

Daily Parking Permit Program

As part of the residential parking permit program, the City is required to make daily parking permit passes available to non-residents or those that live outside of the impacted area that allow them to park at yellow pole/cap meters or beyond the one-hour time restrictions at non-metered locations. Per the City's Coastal Development Permit for the Residential Parking Permit Program, the maximum daily fee for this permit is $5 and is valid from 8 am to 5 pm.

Employee Parking Permit Program

For those who work in Hermosa Beach and do not have parking available through their employer, monthly and annual parking passes are available. These permits are available to anyone and monthly permits are available for off-street parking lots/structures at a cost of:

- $62 per month to park anytime up to 72 hrs
- $31 per month to park only between 5am to 7pm daily

Employee permits are also available to purchase that allow employees to park at on-street spaces with yellow pole/cap meters and in the unmetered, but one-hour time restricted areas at an annual cost of $143 (pro-rated to $71.50 on September 1st).

Off-Street Parking Requirements

The current parking requirements for land uses within the Coastal Zone are defined within Title 17 of the Hermosa Beach Municipal Code. Chapter 17.44 includes off-street parking requirements for residential uses, commercial and business uses, downtown district uses, mixed-uses, and common parking facilities, among other requirements for space sizes, tandem parking, and maintenance of parking areas. Table 2.4 below details parking requirements for land uses from Title 17 of the Hermosa Beach Municipal Code.

Table 2.4 – Hermosa Beach Off-Street Parking Requirements

Land Use	Parking Requirement
Commercial Uses	
Retail	1 space per 250 square feet of GFA[2]
Offices, general	1 space per 250 square feet of GFA
Offices, medical	1 space per 1,000 square feet of GFA
Restaurants	1 space per 100 square feet of GFA
Fast Food	1 space per 50 square feet of GFA
Assembly	1 space per 50 square feet of GFA
Service / Repair	1 space per 1,000 square feet of GFA
Light Manufacturing	1 space per 300 square feet of GFA
Warehousing / Storage	1 space per 1,000 square feet of GFA
Commercial Uses in the Downtown District[3]	
Retail	1 space per 333 square feet of GFA
Offices, general	1 space per 333 square feet of GFA
Offices, medical	1 space per 333 square feet of GFA

In Hermosa Beach, common parking facilities may be provided to wholly or partially satisfy the off-street parking requirements of two or more uses when one or more of such uses will only infrequently generate use of such parking area at times when it will ordinarily be needed by the patrons or employees of the other use(s). Multiple-use parking areas are allowed through a Parking Plan approved by the Planning Commission.

Hermosa Beach allows parking in-lieu fees for uses in the Downtown District. Building sites with a building floor area to building site of one to one or less may pay an "in-lieu" fee for all required spaces. Otherwise, building sites shall be required to provide a minimum of 25% percent of the required parking on-site.

[2] GFA: Gross Floor Area

Hermosa Beach also allows off-site parking allowable by code up to 300 feet from the use for which the spaces are provided.

3. Parking Occupancy Analysis

The parking occupancy analysis paints a detailed picture of how public on-street, public off-street, and private off-street parking is utilized in the Coastal Zone. The following terms are used when discussing parking occupancy.

- *Occupancy*: The number of cars parked in a specific area, lot, or blockface [4] during one period of observation. It is often expressed as the percentage of the total supply of spaces that is occupied by parked cars.
- *Peak:* The time period associated with the highest observed level of occupancy in a specific area or parking facility.
- *Optimal Capacity:* The occupancy level or number of vehicles that can be parked in a facility or area before it becomes difficult for a driver to find a space without having to circle or "cruise" for parking. Optimal capacity is typically set at an 85% occupancy level.[5] For on-street parking this equates to roughly one vacant space per blockface.
- *Space Type:* Space type is defined as the main characteristic given to a parking space based upon meter or curb type (i.e. green, silver, yellow etc.)

This report presents the findings from this data collection effort in three sections:

- Overall occupancy summary
- Occupancy by zone
- Occupancy by on or off-street parking
- Occupancy levels by space type.
- Occupancy findings

Overall Occupancy Summary

The following discussion presents overall occupancy trends for public on- and off- street parking, as well as private off-street parking during these three distinct times of day or week. Note that occupancy data was collected during the summer period in order to represent a typical peak season within the Coastal Zone of Hermosa Beach. A summary of the occupancy rates by zone and on or off-street parking is provided in Table 3.1.

[4] A blockface is one side of a street between two consecutive features intersecting that street.

[5] An on-street parking occupancy of 85% has been demonstrated by parking experts, most notably by Donald Shoup of UCLA, as the benchmark for the practical or optimal capacity of on-street parking. At 85% occupancy, approximately one available space is expected per block, thus limiting the cruising phenomenon and generally assuring the availability of a space.

Table 3.1– *Summary of Overall Occupancy per Zone*

Zone	On-Street Parking Types			Off-Street Parking Types		Observed On-Street Occupancy			Observed Off-Street Occupancy		
	Metered	*Non-metered: Preferential Zone*	*Non-metered: Non-Preferential Zone*	*Public*	*Private*	*Weekday Afternoon*	*Weekday Evening*	*Weekend Afternoon*	*Weekday Afternoon*	*Weekday Evening*	*Weekend Afternoon*
Zone 1	✓					61%	66%	91%	N/A	N/A	N/A
Zone 2		✓	✓			53%	62%	82%	N/A	N/A	N/A
Zone 3	✓					69%	73%	88%	N/A	N/A	N/A
Zone 4		✓	✓			47%	62%	83%	N/A	N/A	N/A
Zone 5	✓			✓	✓	77%	84%	94%	Public: 89% Private: 10%	Public: 78% Private: 3%	Public: 86% Private: 16%
Zone 6		✓	✓	✓	✓	75%	68%	77%	Private: 64%	Private: 30%	Private: 21%
Zone 7	✓					63%	79%	97%	N/A	N/A	N/A
Zone 8		✓	✓	✓	✓	66%	86%	100%	Private: 46%	Private: 45%	Private: 95%

Occupancy by Zone

This section serves as a summary of the study's findings by zone. Previous sections have detailed figures based upon parking type, while this section provides findings to better show general trends per zone.

Table 3.5 summarizes the previous section and highlights the overall occupancy observed for both on-street and off-street parking along with space types found in each zone. Given the study's findings for the three data collection times, the weekend afternoon tends to have a higher occupancy rate than weekday afternoon and weekday evening. Zone 5 (Walk Street – Downtown), Zone 7 (Walk Street – Sand Section – Herondo), and Zone 8 (Sand Section – Cypress) exceed optimal occupancy during the weekend afternoon time period for both on-street and off-street parking. In general, Zones 1 through 4 have lower occupancy than Zones 5 through 8 for all observed times. This can potentially be explained due to the higher rate of beachgoers in the summer months who prefer to park closer to the beach.

Zone 1: Walk Street – North End

Zone 1 represents the northwest parking zone in Hermosa Beach. This zone consists of high-density residential east of Hermosa Avenue, and low-density residential on the Strand. There are a few commercial/retail uses on Manhattan near Longfellow Avenue such as Boccato's Groceries.

This zone is characterized primarily by yellow-metered parking at over 87% occupancy. The remaining parking inventory in this zone is either unmetered or green. Parking in this zone on weekdays in relatively constant, at around 60% occupancy overall, but upticks above 90% occupancy for the weekend afternoon time period. Relatively constant occupancy with an uptick during the weekend afternoon can be explained because the area is primarily residential with beachfront access.

Zone 2: North End East

Zone 2 represents the northeast corner of the Coastal Zone and the eastern portion of the North End Character Area. The zone consists of mainly medium-density residential, with low-density residential to the south east along Gould Avenue. There are also a few commercial/retail land uses on Manhattan Avenue split by 33rd Place.

This area is split roughly in half for parking within and outside of the preferential parking district. Although parking occupancy rose nearly 30% from a weekday afternoon to a weekend afternoon, all three observation times showed occupancy under optimal capacity. Due to the primarily residential nature of this zone and that it is further from the beach, change in parking occupancy between weekday and weekend is not expected.

Zone 3: Walk Street – Sand Section North

Zone 3 represents the zone just north of downtown adjacent to the beach. This area is primarily zoned medium-density residential with low-density along the Strand and Manhattan Avenue to the north. There are two commercial hubs at Greenwich Village and Palm Drive, as well as the west side of Hermosa Avenue at 22nd Street.

This zone contains mainly yellow-metered parking, but also has silver-metered and unmetered parking, as well as green and handicapped spaces. According to the three observation times, there is a steady rise in occupancy from the weekday afternoon, to a weekday evening, then weekend afternoon. Both yellow- and silver-metered parking reach over optimal capacity during the weekend afternoon. Similar to Zone 1, this rise in parking occupancy is likely attributed to its close proximity to the beach.

Zone 4: Sand Section – Valley

Zone 4 is just east of Zone 3 and south of the North End Character Area. This area is primarily zoned low-density residential with medium-density residential to the north and south. This zone also includes Valley Park and a portion of Hermosa Valley School to the northeast and southeast, respectively.

This zone consists primarily of preferential parking, occupied at 81%, and is the zone with the highest number of parking spaces in total. As such, this zone did not reach optimal capacity during any of the three observation times. Furthermore, this was the only zone that produced overall occupancy rates of less than 50% during any of the three times. Due to the primarily

residential nature of this zone and that it is further away from the beach, any changes in occupancy between the time periods are nominal.

Zone 5: Walk Street – Downtown

Zone 5 represents a large portion of the Downtown Core of Hermosa Beach. Most of the area is zoned recreational west of Hermosa Avenue and community east of Hermosa Avenue. High and medium-density residential uses are located to the north and northeast, as well as to the south and southeast. The Hermosa Beach Pier is located west of this zone.

Zone 5 consists of yellow and silver meters, unmetered parking, and a small portion of other parking types such as green, handicapped, and reserved. This zone contains more silver-metered parking (48% of zone) than yellow-metered parking (30% of zone). Yellow-metered parking occupancy was measured above optimal capacity at all observation times. On-street occupancy was above 90% for metered and unmetered spaces during the weekend afternoon. As the commercial center of Hermosa Beach, higher occupancies are expected.

This same occupancy trend is prevalent for off-street parking in Zone 5 as well, as the occupancy for the 521 observed spaces was above optimal capacity for two of the three observation times.

Observed private parking occupancy was measured to be fairly low at all three times, reaching no greater than 16%. The sample size is relatively small compared to the entirety of private parking in Zone 5. A number of factors could have contributed to the low figure for private parking occupancy, such as no show being playing at the Comedy & Magic Club during the three selected time periods. The club was one of two private parking lots counted for analysis in Zone 5.

Zone 6: Sand Section – Civic Center

Zone 6 is situated just east of the Downtown Core. It is characterized as mainly high-density residential, with community and public facility uses adjacent to Pier Avenue. The zone also includes uses such as the Marineland Mobile Home Park, and a portion of Hermosa Valley School to the northeast.

Similar to Zone 2, on-street optimal capacity was not reached during any of the three observation times in Zone 6. In addition, Zone 6 was the only zone to not exceed 80% capacity. Parking in this zone is largely in the preferential parking district, with just under 100 more spaces than in the non-preferential parking area. The low parking occupancy could be attributable to the area being primarily residential, combined with a higher number of off-street spaces to account for the Civic Center, City Hall, and shops along Pier Avenue.

Zone 6 had the most off-street private parking spaces observed. Occupancy for off-street parking in this zone was highest at 64% during the weekday afternoon. The weekday evening and weekend afternoon times did not reach above 30% occupancy.

Zone 7: Walk Street – Sand Section – Herondo

Zone 7 represents the southwest parking zone in Hermosa Beach, and extends across the City's southern boundary. The zone is primarily high-density residential, with a few commercial parcels along Hermosa Avenue south of 3rd Street.

Parking types in this zone consist primarily of yellow-metered spaces at 80%, with 20 of the total 437 yellow meters outside of the preferential parking district. Zone 7 experienced the second highest occupancy rate of any zone for the weekend afternoon time period at 97%. Yellow-metered and unmetered parking in this zone have noticeably higher occupancy rates than silver-metered parking. The high rate of occupancy can be attributed to lack of sufficient parking spaces for visitors in the residential area combined with visitors from the adjacent Redondo Beach.

Zone 8: Sand Section – Cypress

Zone 8 is located east of Zone 7 and north of 2nd Street. Zone 8 consists primarily of light manufacturing uses within the northeast portion of the zone, and a combination of high-density and medium-density residential spread throughout.

Zone 8 provides the lowest number of parking spaces and the highest occupancy rate at 100%. In addition, Zone 8 is the only zone that reaches above optimal capacity during the weekday evening. High occupancy is likely due to a greater number of 24-hour spaces in combination with demand generated from South Park.

Private parking in this zone is generally higher than private parking observed in other zones. Zone 8 measured 95% occupancy during the weekend afternoon for private parking, which is the only private parking rate observed to be above optimal capacity during any of the three observation times for this zone.

Occupancy by On and Off-Street Parking

On-Street Parking

In general, all odd numbered zones, or zones that border the beach experience higher levels of parking occupancy than zones further away from the beach, which is expected due to a high rate of beachgoers during summer months. In all zones, peak occupancy occurred during the weekend afternoon. In particular, weekend afternoon occupancy rates exceeded optimal capacity in the following zones:

- Zone 1: Walk Street – North End (average occupancy of 91%);
- Zone 3: Walk Street – Sand Section North (average occupancy of 88%);
- Zone 5: Walk Street – Downtown (average occupancy of 94%);
- Zone 7: Walk Street – Sand Section – Herondo (average occupancy of 97%), and
- Zone 8: Sand Section – Cypress (average occupancy of 100%).

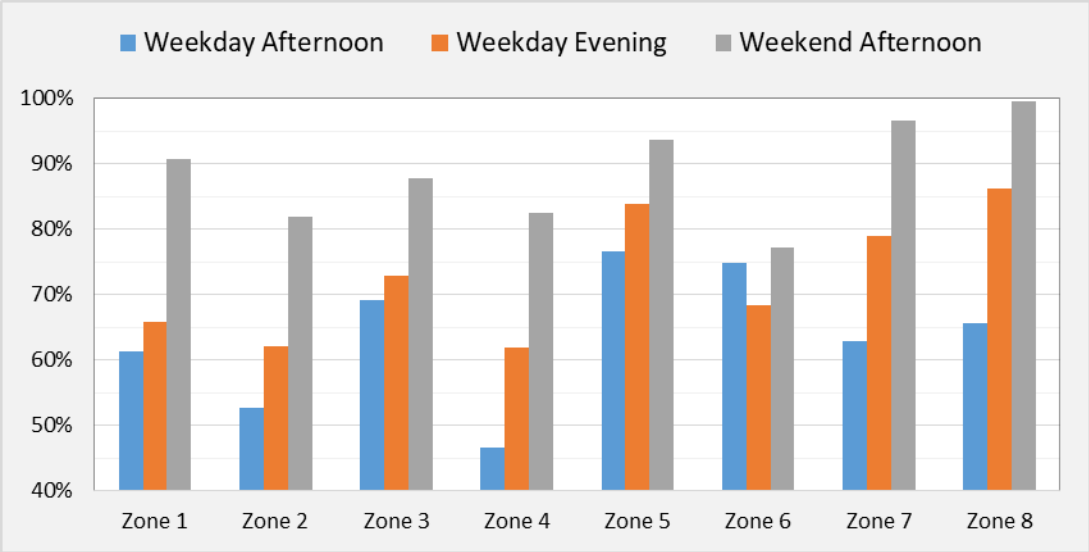
Weekday evening occupancy only exceeded optimal capacity in Zone 8 (Sand Section – Cypress, occupancy of 86%). All zones, except Zone 6 (Sand Section – Civic Center), experienced the lowest levels of occupancy during the weekday afternoon (average occupancy of 62%).

The highest peak, measured in Zone 8 (Sand Section – Cypress), reached nearly 100% occupancy during the weekend afternoon. While not every spot was occupied in this zone, some segments registered higher occupancy than the available supply due to parking in non-designated parking spaces. For instance, some on-street segments that restricted parking entirely still registered one parked car (i.e. east side of Manhattan Avenue from 6th Street to 8th Street.) Zone 1 (Walk Street – North End), Zone 3 (Walk Street – Sand Section North), Zone 5

(Walk Street – Downtown), and Zone 7 (Walk Street – Sand Section – Herondo) saw peaks in occupancy above 90% during the weekend afternoon.

Zone 5 (Walk Street – Downtown) and Zone 8 (Sand Section – Cypress) saw peaks in occupancy above 80% for weekday evening. Zone 5 (Walk Street – Downtown) and Zone 6 (Sand Section – Civic Center) saw peaks in occupancy above 70% for weekday afternoon.

Figure 3.1 – On-Street Parking Occupancy by Zone

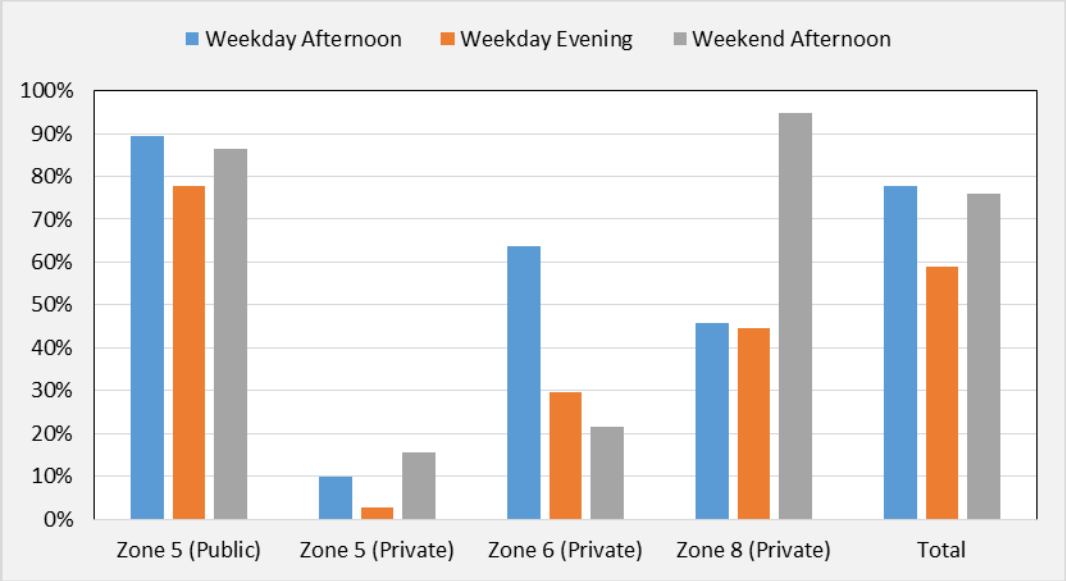


Off-Street Parking (Public and Private)

Specific parking lots and structures in Zone 5 (Walk Street – Downtown), Zone 6 (Sand Section – Civic Center), and Zone 8 (Sand Section – Cypress) were observed for off-street parking occupancy. Zone 5 (Walk Street – Downtown) is the only zone where public, city-owned off-street parking is provided, consisting of Lots A, B, and C. For these three public lots, average occupancy among the three observation times are fairly consistent ranging, between 78% and 89%. The lowest occupancy observed was 78% during the weekday evening, suggesting that the public lots have availability while being generally well-utilized.

Private off-street parking in Zone 5 (Walk Street – Downtown) registered relatively low (less than 16% at peak) occupancy for the two sites counted. One site, at 1301 Manhattan Avenue, serves an office/commercial use that is relatively new and the other is the Comedy & Magic Club which serves as an assembly use. Both uses show high parking availability compared to surrounding uses in the Downtown Core, which may have contributed to the low parking occupancy observed in a typically dense zone. Zone 6 (Sand Section – Civic Center) exhibited a peak of 64% occupied of off-street private parking during the weekday afternoon, where Zone 8 (Sand Section – Cypress) showed a peak of 95% occupied during the weekend afternoon. The total observed off-street parking, regardless of zone, registered a peak of 78% occupancy.

Figure 3.2 – Off-Street Parking by Zone



Occupancy by Space Type

Table 3.3 presents the on-street occupancy rates by parking and post type for the following zones:

- Zone 1: Walk Street – North End;
- Zone 3: Walk Street – Sand Section North;
- Zone 5: Walk Street – Downtown; and
- Zone 7: Walk Street – Sand Section – Herondo.

On-street occupancy rates were classified by the preferential zone designation in the following zones:

- Zone 2: North End East;
- Zone 4: Sand Section – Valley;
- Zone 6: Sand Section – Civic Center; and
- Zone 8: Sand Section – Cypress.

As shown in the table, the total of on-street parking inventory as well as total occupancy per time period by zone, and an overall occupancy rate of all on-street parking spots is provided.

Table 3.2 – On-Street Occupancy

On-Street Parking Type	Inventory	Occupancy		
		Weekday Afternoon	Weekday Evening	Weekend Afternoon
Zone 1: Walk Street – North End				
Yellow Meter	246	62%	64%	**91%**[6]
Silver Meter	0	0%	0%	0%
Green	3	0%	67%	33%
Unmetered	32	63%	81%	**94%**
Total	281	61%	66%	**91%**
Zone 2: North End East				
Preferential Zone	304	49%	59%	82%
Non-Preferential Zone	214	58%	67%	81%
Total	518	53%	62%	82%
Zone 3: Walk Street – Sand Section North				
Yellow Meter	337	75%	75%	**91%**
Silver Meter	40	68%	55%	**95%**
Unmetered	96	57%	83%	84%
Green	6	67%	67%	83%
Handicap	8	13%	0%	13%
Unidentified	6	0%	0%	0%
Total	493	69%	73%	**88%**
Zone 4: Sand Section – Valley				
Preferential Zone	600	45%	59%	83%
Non-Preferential Zone	138	56%	74%	82%
Total	738	47%	62%	83%
Zone 5: Walk Street – Downtown				
Yellow Meter	155	**88%**	**95%**	**98%**
Silver Meter	247	73%	80%	**94%**
Unmetered	61	82%	**90%**	**97%**
Green	22	41%	32%	68%
Handicap	5	40%	80%	80%
Other	23	65%	83%	78%
Total	513	77%	84%	**94%**
Zone 6: Sand Section – Civic Center				
Preferential Zone	306	77%	76%	78%
Non-Preferential Zone	227	72%	57%	76%
Total	533	75%	68%	77%
Zone 7: Walk Street – Sand Section – Herondo				
Yellow Meter (Preferential)	417	69%	81%	**98%**
Silver Meter	40	48%	58%	78%
Unmetered	56	48%	**95%**	**102%**
Green	7	29%	43%	**100%**
Handicap	1	0%	0%	0%
Yellow Meter (Non-Pref.)	20	30%	65%	**100%**
Loading (Non-Pref.)	2	0%	0%	0%
Total	543	63%	79%	**97%**

[6] All percentages in bold have measured to reach at or above optimal capacity (85%)

On-Street Parking Type	Inventory	Occupancy		
		Weekday Afternoon	Weekday Evening	Weekend Afternoon
Zone 8: Sand Section – Cypress				
Preferential Zone	126	60%	**96%**	**102%**
Non-Preferential Zone	92	73%	73%	**96%**
Total	218	66%	**86%**	**100%**
Overall				
Total	3,837	63%	71%	**87%**

On-Street Parking

Overall occupancy during the weekend afternoon, regardless of parking type, yielded consistent levels of occupancy greater than the optimal capacity of 85 percent. Yellow-metered parking occupancy reached levels above 90% during the weekend afternoon. Unmetered parking occupancy reached levels at or above 94% during the weekend afternoon in:

- Zone 1: Walk Street – North End;
- Zone 5: Walk Street – Downtown; and
- Zone 7: Walk Street – Sand Section – Herondo.

Silver-metered parking reached over 85 percent optimal capacity in:

- Zone 3: Walk Street – Sand Section North; and
- Zone 5: Walk Street – Downtown.

Zone 8 (Sand Section – Cypress) is the only zone that does not border the beach to register levels greater than optimal capacity. In total, all on-street parking experienced occupancy levels just above optimal capacity for the weekend afternoon (87%).

Off-Street Parking (Public and Private)

Parking occupancy reached optimal capacity twice in the three public lots, during the weekday afternoon and the weekend afternoon, at 89% and 86% respectively. Zone 8 (Sand Section – Cypress) experiences a very high occupancy rate during the weekend afternoon for its private off-street parking at 95%. Overall off-street parking, in total, did not reach optimal capacity for any of the three surveyed times.

Table 3.3 – Off-Street Occupancy

Off-Street Parking	Inventory	Occupancy		
		Weekday Afternoon	Weekday Evening	Weekend Afternoon
Zone 5 (Public)	521	**89%**	78%	**86%**
Zone 5 (Private)	119	10%	3%	16%
Zone 6 (Private)	135	64%	30%	21%
Zone 8 (Private)	94	46%	45%	**95%**
Total	869	78%	59%	76%

Key Takeaways

Key takeaways from the parking occupancy analysis conducted in this section are presented below. These takeaways are intended to guide the development of parking management strategy recommendations for the Coastal Zone later in this report.

Overall:

- The weekend afternoon time period tends to experience a higher occupancy rate than weekday afternoon and weekday evening, at 87% occupancy in total.
- Zones in the southern part of the study area generally experience higher occupancy that zones in the northern part of the study area.
- Zones that border the beach experienced the highest levels of occupancy, along with the southern Sand Section – Cypress area. This likely correlates with the higher rate of beachgoers expected on weekends, especially during the summer months.
- Zones 1, 3, 5, and 7 consist of on-street parking bordering the beach. During the weekend afternoon:
    - These zones exceeded optimal capacity (90% occupancy).
    - Yellow-metered parking exceeded optimal capacity in Zones 1, 5, and 7 (above 90%).
    - Unmetered parking exceeded optimal capacity in Zones 1, 5, and 7 (above 94%).
    - Silver-metered parking exceeded optimal capacity in Zones 3 and 5 (above 85%).
- Zone 8 is the only zone that does not border the beach that exceeded optimal capacity. During the weekend afternoon, this zone:
    - Experienced the highest occupancy out of all of the study zones (100%).
    - Reached optimal capacity for its private parking supply (95%). Weekday time periods experienced significantly less occupancy.
    - Reached above 100% occupancy in on-street parking due to parking in non-designated spaces.

On Street Parking:

- Total on-street parking occupancy is above optimal capacity during the weekend afternoon (87%).
- Weekday afternoon on-street occupancy remains below optimal capacity in all zones.
- All zones experience their lowest on-street occupancy during the weekday afternoon, except the Civic Center area.
- Weekday evening on-street occupancy only exceeded optimal capacity in the southern Sand Section – Cypress area.

Off-Street Parking:

- Public parking lots in the Downtown Core generally remain available while being well-utilized (occupancy ranges from 78-89%). They reach optimal capacity during the weekday and weekend afternoons.
- Private parking occupancy in the Downtown Core is relatively low, likely due to high utilization of public parking in this zone during observation times.

4. Parking Demand Analysis

Combined with the analysis of existing conditions, analyzing anticipated parking demand in the study area is essential to determine the appropriate parking management strategies for the Coastal Zone. Anticipated parking demand is typically calculated based on industry standards. However, due to the study area's unique coastal character, it was necessary to create a more complex methodology tailored to Hermosa Beach, which is detailed in the following section.

Parking Demand Analysis

To determine the City's current non-residential off-street parking requirements for the study area, the square footage of each land use type in the study area was aggregated by zone. Building square footages were used to calculate the minimum number of off-street parking spaces required by code for each zone. The calculated minimum parking requirement was then compared to the existing number of off-street parking spaces currently available for each type of non-residential use.

In order to provide additional data points for determining anticipated parking demand for non-residential land uses (as municipal code requirements are often outdated and may not reflect actual conditions), an anticipated demand of private off-street parking was calculated using the following three sources:

1. **Peer City Code** – Parking rates from peer city code were averaged among eight (8) comparable cities. Each peer city is listed below. The location of each city respective to Hermosa Beach is found in the image below.
    1. Santa Monica
    2. Manhattan Beach
    3. Redondo Beach
    4. Long Beach
    5. Huntington Beach
    6. Newport Beach
    7. Laguna Beach
    8. Carlsbad

The eight peer cities chosen were based on four main characteristics:

- Proximity to Hermosa Beach
- Similar distinction as a beach city
- Similar land use distribution
- Parking requirement code describing a parking overlay district (i.e. downtown district) that reduces their parking regulations as a deviation from the remainder of the city due to higher density, mix of uses, and mode split.

2. **Institute of Transportation Engineers Parking Generation: 4th Edition (ITE)** - ITE rates are more reflective of suburban uses that are not prevalent throughout the study area, therefore parking demand rates by land use were adjusted to reflect the coastal character of Hermosa Beach. Rates were reduced in the Downtown District by 35% to account for a higher mix of uses and greater modal split (i.e. walkability/ bike-ability/ transit).
3. **Urban Land Institute Shared Parking Manual: 2nd Edition (ULI)** - ULI rates are more reflective of suburban uses that are not prevalent throughout the study area, therefore shared parking rates by land use were adjusted similar to ITE rates to account for synergy amongst land uses and the overall walkability of Hermosa Beach.

Parking ratios from each source (peer city code average, ITE and ULI) were then averaged and calculated against built square footages of non-residential land uses to determine spaces anticipated to be utilized based on demand. This analysis is then compared to the number of parking spaces currently provided. Built and utilized parking ratios are important as they provide insight on whether an area is under- or over-parked, and the parking strategies need to be adjusted to meet anticipated demand. Section 5 of the report provides detailed calculations for the aforementioned parking ratios.

Code Requirements for Existing Non-Residential Uses

The City provided land use classifications for the majority of the non-residential parcels in the study area. The aggregate square footage of each land use type in the study area was calculated by zone and further analyzed against the City's existing zoning code. Since each land use type requires a different amount of parking, parking rates vary from use to use. Land Use data was organized by the following non-residential land uses, which are consistent with the designations provided by the City:

- Commercial / Retail
- Office / Professional
- Restaurant
- Assembly
- Fast Food
- Service / Repair
- Medical Office
- Light Manufacturing
- Warehouse / Storage

In addition to these uses, the City of Hermosa Beach implements an overlay district for the Downtown Core which reduces the parking requirement for some of the same uses stated above. The Downtown Core uses are:

- Commercial/ Retail (Downtown District)
- Office/ Professional (Downtown District)
- Medical Office (Downtown District)
- Restaurant (Downtown District) [7]

[7] Although the City of Hermosa Beach does not provide a reduction in parking rate for restaurants within the Downtown District, the distinction is made for consistency with Section 5 Parking Demand Analysis, in which the restaurant parking demand is reduced. Justification for restaurant parking demand reduction is also found in Section 5.

Table 4.1 below shows the resulting total number of parking spaces required for each land use type based on the total square footage as well as corresponding parking requirement ratios currently specified in Chapter 17.44.030 and Chapter 17.44.40 of the City of Hermosa Beach Zoning Code. Total existing private off-street parking inventory is also shown for comparison to the number of parking spaces required by the municipal code.

Table 4.1 – Non-Residential Parking Spaces Required by City Code

Land Use	Square Feet by Use Type	Existing Minimum Parking Requirements	Spaces Required by Code	Existing Private Off-Street Parking Spaces
Zone 1: Walk Street – North End				
Commercial / Retail	6,659	1 space per 250 sf	27	4
Total	6,659		27	4
Zone 2: North End East				
Office / Professional	3,168	1 space per 250 sf	13	6
Commercial / Retail	4,905	1 space per 250 sf	19	4
Total	8,073		32	10
Zone 3: Walk Street – Sand Section North				
Office / Professional	2,842	1 space per 250 sf	12	12
Commercial / Retail	12,002	1 space per 250 sf	48	4
Restaurant	5,114	1 space per 100 sf	51	2
Total	19,958		111	18
Zone 4: Sand Section – Valley				
N/A[8]	N/A	N/A	N/A	N/A
Zone 5: Walk Street – Downtown				
Office / Professional (Downtown District)	28,640	1 space per 333 sf	86	104[9]
Commercial / Retail (Downtown District)	67,915	1 space per 333 sf	203	50[10]
Restaurant (Downtown District)	39,871	1 space per 100 sf	399	11[11]
Assembly	9,483	1 space per 50 sf	190	42
Fast Food	2,800	1 space per 50 sf	56	4
Service / Repair	2,900	1 space per 1,000 sf	3	0
Total	151,609		937	211
Zone 6: Sand Section – Civic Center				

[8] There is no off-street private parking in Zone 4: Sand Section – Valley

[9] 1301 Manhattan Ave: Parking Plan 14-8, CUP 16-5

[10] 1301 Manhattan Ave: Parking Plan 14-8, CUP 16-5

[11] 1301 Manhattan Ave: Parking Plan 14-8, CUP 16-5

Land Use	Square Feet by Use Type	Existing Minimum Parking Requirements	Spaces Required by Code	Existing Private Off-Street Parking Spaces
Office / Professional (Downtown District)	20,684	1 space per 333 sf	62	66[12, 13, 14]
Commercial / Retail (Downtown District)	72,438	1 space per 333 sf	217	179[15]
Restaurant (Downtown District)	1,600	1 space per 100 sf	16	0
Medical Office (Downtown District)	2,000	1 space per 333 sf	6	4[16]
Light Manufacturing	13,676	1 space per 300 sf	46	22
Total	110,398		347	271
Zone 7: Walk Street – Sand Section – Herondo				
Commercial /Retail	15,979	1 space per 250 sf	64	39[17]
Restaurant	4,542	1 space per 100 sf	45	15
Total	20,521		109	54
Zone 8: Sand Section – Cypress				
Office / Professional	8,933	1 space per 250 sf	36	13
Light Manufacturing	87,900	1 space per 300 sf	292	169
Warehousing / Storage	14,519	1 space per 1,000 sf	15	1
Service / Repair	9,057	1 space per 1,000 sf	9	13
Total	120,409		352	196
Overall				
Total	437,627		1,915	764

The table shows that Zones 3 (Walk Street – Sand Section North) and Zone 5 (Walk Street – Downtown), in particular, have less existing parking spaces than required by code. In the City of Hermosa Beach, multiple Common/Shared Parking Plans, Conditional Use Permits (CUP's), in-lieu fees, and resolutions are in place that allow for a deviation of parking spaces from the City's existing code. As these deviations are specific to individual sites, this analysis reflects aggregate parking requirements on a zone level. The deviations within each zone level in Table 4.1 are provided as footnotes to explain any potential discrepancies between City parking requirements and associated existing spaces.

Although there were 348 private off-street parking spaces observed for occupancy in the Coastal Zone as noted previously in table 3.1, there are actually a total of 764 private off-street

[12] 205 Pier Ave: Parking Plan 08- 1 and 10-2, Planning Commission Resolution 08-29

[13] Note for 425 Pier Ave: Parking Plan to allow the expanded business to use 8 off-site shared parking spaces at 555 Pier Ave (PARK 12-8, CUP 12-5)

[14] Parking Plan 98-2 shared use of existing parking for off-site business CON 04-15

[15] 205 Pier Ave: Parking Plan 08- 1 and 10-2, Planning Commission Resolution 08-29

[16] 555 Pier Ave: Planning Commission Resolution 93-60 for a Parking Plan to allow less than required for a medical office

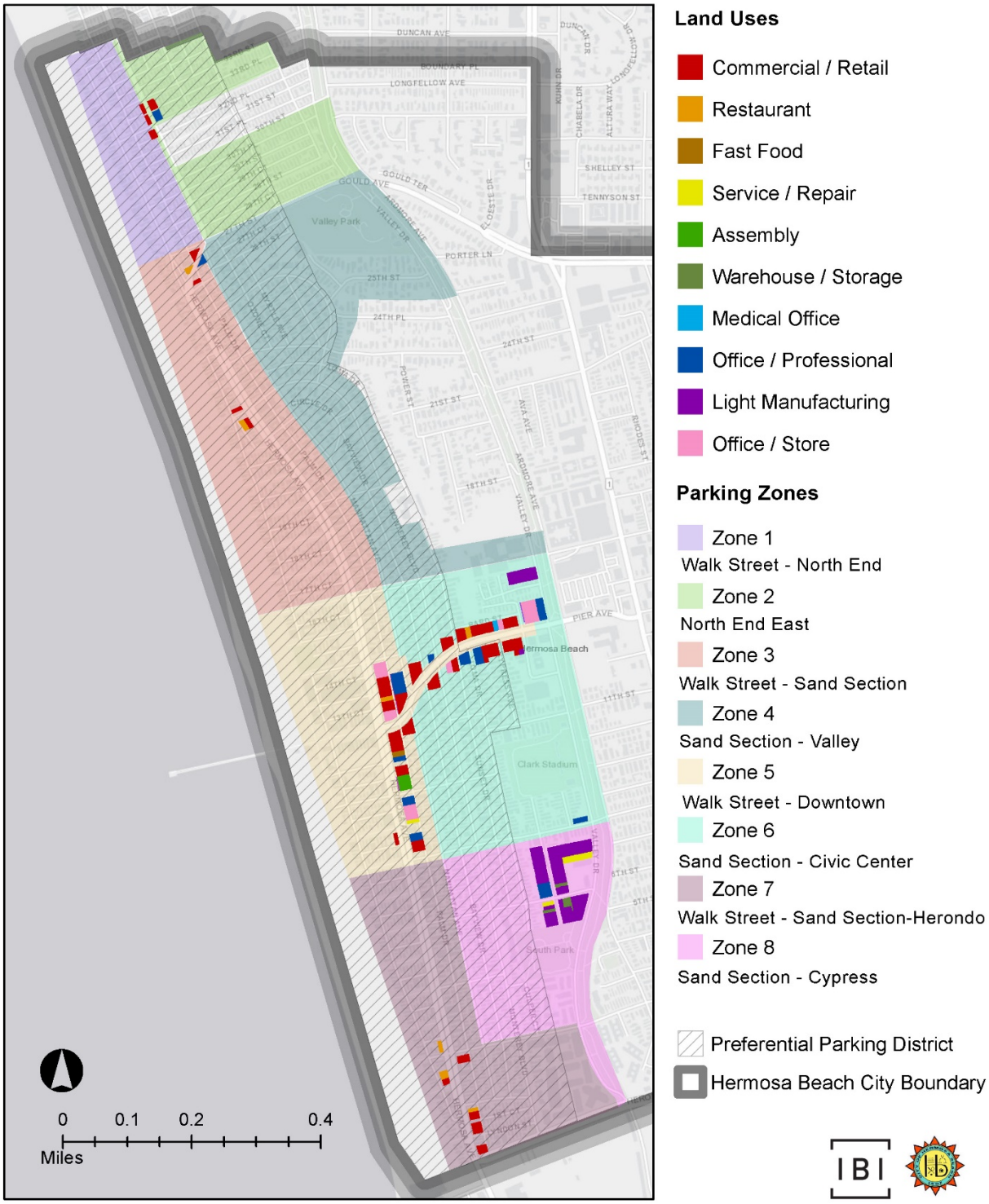
[17] Parking Plan 03-6, Conditional Use Permit 04-8, Precise Development Plan 04-9

parking spaces. Since the analysis using municipal code is not limited to only observed parking demand, all 764 private off-street spaces in the Coastal Zone were included in the calculations for non-residential uses. Figure 4.1 illustrates the locations of the non-residential uses that were observed.

The total number of spaces required for non-residential uses in the Coastal Zone based on the City's code is approximately 1,915 spaces compared to the 764 spaces that currently exist for the same uses.

Figure 4.1 – Map of Observed Non-Residential Land Uses

Figure 4.1 - Map of Observed Non-Residential Land Uses



Actual Built Parking Ratios

Comparing land use ratios to existing parking spaces may not provide the whole picture in determining whether the number of existing spaces is sufficient and adequate for the City's needs. It is important to analyze the total square footage of a land use to the total parking spaces provided to create an actual built[18] ratio for each zone and for the Coastal Zone as a whole. The following analysis shows actual built ratios of private off-street parking supply (Table 4.2). The actual built ratio per space was determined by dividing the actual total built square footage by the actual parking supply in each zone. For comparative purposes, Table 4.2 also includes the actual built ratio of parking spaces per 1,000 square feet of non-residential land uses. This was determined by dividing the parking supply by the actual built square footage per 1,000.

The resulting total figure of 1.75 shows that for every 1,000 square feet of non-residential land use in the Coastal Zone, there are 1.75 existing off-street parking spaces. 1.75 spaces per 1,000 square feet for this specific mix can be compared to the Adjusted Peak Demand Ratio per 1,000 square feet found in Table 5.5.

Example: Zone 1 Walk Street – North End

6,659 sf (actual built square footage) / 4 spaces (actual parking supply)

= 1,665 sf (actual built ratio per space)

1,000 sf (typical sf figure to determine parking ratios) / 1,665 sf (actual built ratio per space)

= 0.60 spaces (actual built ratio per 1,000 sf)

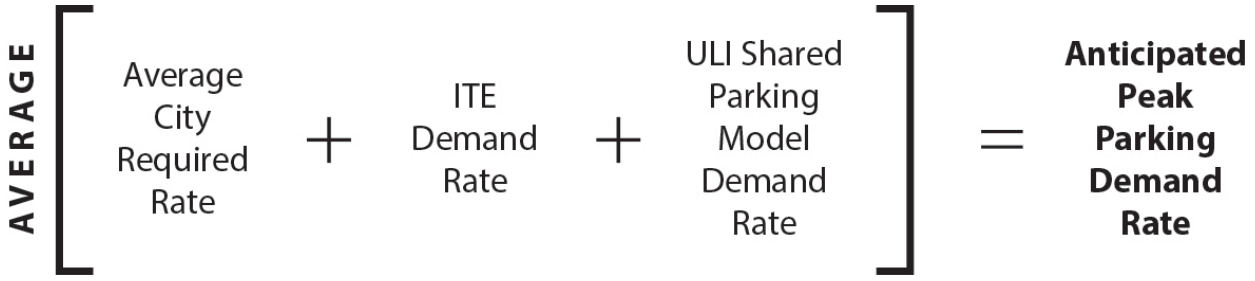
Table 4.2 – Actual Built Parking Ratios for Non-Residential Land Uses

Zone	Actual Built Square Footage (sf)	Actual Parking Supply	Actual Built Ratio per Space (sf)	Actual Built Ratio per 1,000 sf (spaces)
Zone 1: Walk Street – North End	6,659	4	1,665	0.60
Zone 2: North End East	8,073	10	807	1.24
Zone 3: Walk Street – Sand Section North	19,958	18	1,109	0.90
Zone 4: Sand Section – Valley	N/A	N/A	N/A	N/A
Zone 5: Walk Street – Downtown	151,609	211	719	1.39
Zone 6: Sand Section – Civic Center	110,398	271	407	2.45
Zone 7: Walk Street – Sand Section – Herondo	20,521	54	380	2.63
Zone 8: Sand Section – Cypress	120,409	196	614	1.63
Total	437,627	764	573	1.75

[18] "Actual built" implies that there is no distinction between occupied sf or vacant sf, and includes all building sf.

Anticipated Peak Parking Demand

The anticipated peak parking demand for each non-residential land use type was determined based on a rate that combines peer city rates (including reduced-parking demand districts), adjusted ITE rates, and adjusted ULI rates. These three rates were averaged together (where data was applicable) to create an anticipated peak parking demand rate for each use (Table 5.1). Table 5.1 also presents Hermosa Beach's current required parking rates as well as observed demand based on the City's Beach Access Study. Each comparative demand rate is discussed in detail below.



Average City Required Rate

The peer cities chosen were based on four main characteristics: their proximity to Hermosa Beach, their similar distinction as a beach city, their similar land use distribution, and parking requirement code describing a parking overlay district (i.e. downtown district) that reduces their parking regulations as a deviation from the remainder of the City due to higher density, mix of uses, and mode split. The eight cities that were studied are:

- Long Beach
- Santa Monica
- Newport Beach
- Laguna Beach
- Manhattan Beach
- Huntington Beach
- Carlsbad
- Redondo Beach

Using the parking requirements found in each of the eight peer cities, an "Average City Required Rate" was created for comparison to the land use types studied in Hermosa Beach and is presented in Table 5.1. For walkable, high-density areas with a mix of uses where ridesharing is commonly used, most cities create a specialized overlay district where parking requirements are reduced. The Average City Required Rate was created by averaging all eight city codes based on land use. For land uses within an overlay district, the Average City Required Rate in the table reflects the reduced requirements found in the cities' overlay districts. Uses found in the overlay district include commercial/retail, office/professional, medical office, and restaurant uses. A table of all city rates for each land use type can be found in Appendix B.

ITE Rate

The *Institute of Transportation Engineers (ITE) Parking Generation Manual: 4th Edition* is used as the industry standard for parking demand rates. Since these rates are based mostly on suburban land uses and may not be accurate for the beach city character of Hermosa Beach, uses in the overlay district were reduced by 35% to account for a higher density of uses, a mix of uses, and a greater variation in mode split.

Numerous case studies were considered when developing a specific and appropriate reduction rate. Data was taken from the Victoria Transport Policy Institute Parking Management Strategies, the 'Reduced Parking for Mixed-Use Areas' provision of *the City of Portland, Oregon Off-street Parking Management and Guiding Policies*, and the *Petco Park Area Transportation Study* found in the *Escondido Ballpark Project Traffic Impact Analysis* by Linscott, Law & Greenspan in 2010. These case studies, coupled with other industry standards and previous parking studies similar to the Hermosa Beach's Downtown Core, show that a 25% reduction from the standard ITE rate is necessary to account for mode split, citing a higher rate of ride hailing services and alternative modes. An additional 10% reduction in parking is also appropriate to account for a walkable area with a high mix of uses where "park once" is a common approach by downtown users. More detail on these case studies can be found in Appendix C.

ULI Rate

The *Urban Land Institute (ULI) Shared Parking Manual: 2nd Edition* has established the industry standard for shared parking demand among mixed uses. ULI differs from ITE as ULI considers the synergy and efficiency amongst compatible land uses by time of day, time of week, or time of year. ULI rates presented in Table 5.1 were also reduced by 35% for the Hermosa Beach Downtown District based on the same findings mentioned above.

Table 4.3 – Anticipated Peak Parking Demand Rates for Non-Residential Land Uses

Land Use	Comparative Demand Rates[19]			Anticipated Peak Parking Demand Rate	Hermosa Beach Rates[20]	
	Average City Required Rate	ITE Demand Rate	ULI Shared Parking Demand Rate		Hermosa Beach Required Rate	Hermosa Beach Observed Demand
Commercial / Retail	250 sf	214.1 sf	277.8 sf	247 sf	250 sf	609.7 sf
Commercial / Retail (Overlay District)	329.2 sf	329.4 sf	427.4 sf	362 sf	333 sf	642.4 sf
Office / Professional	287.5 sf	352.1 sf	263.2 sf	301 sf	250 sf	N/A
Office / Professional (Overlay District)	307.8 sf	541.7 sf	404.9 sf	439 sf	333 sf	413.3 sf
Medical Office (Overlay District)	181.3 sf	480.8 sf	341.8 sf	335 sf	333 sf	500 sf
Restaurant	119.3 sf	181.8 sf	95.2 sf	132 sf	100 sf	N/A
Restaurant (Overlay District)	135 sf	279.7 sf	146.4 sf	187 sf	100 sf	201.4 sf
Fast Food	159.4 sf	121.9 sf	66.7 sf	116 sf	50 sf	N/A
Service / Repair	362.5 sf	444.4 sf	No rate	404 sf	1,000 sf	N/A
Assembly	3.8 seats	2.6 seats	2.5 seats	3 seats	50 sf	378.3 sf
Light Manufacturing	537.5 sf	980.4 sf	No rate	759 sf	300 sf	785.8 sf
Warehousing / Storage	1,187.5 sf	1,960.8 sf	No rate	1,574 sf	1,000 sf	1,051.8 sf

After developing an Anticipated Peak Parking Demand Rate for each use, the number of parking spaces anticipated to be occupied in each zone at peak was calculated using the actual built square footage of non-residential land uses[21] and their associated Anticipated Peak Parking Demand Rates, presented in Table 5.2. Existing off-street parking inventory is also shown for comparison to the anticipated peak demand. The total number of parking spaces forecast for non-residential uses in the Coastal Zone is 1,283 spaces compared to the 764 spaces that exist for the same uses, suggesting that the anticipated parking demand for the Coastal Area exceeds the actual off-street parking supply.[22]

[19] The comparative rates (purple) were summed and averaged to establish the Anticipated Peaking Parking Demand Rate. All rates represent square footage per one parking space.

[20] These Hermosa Beach rates (blue) are presented for comparative purposes only. All rates represent square footage per one parking space.

[21] This calculation assumes 100% of actual building square footage is occupied and generating parking demand, as building vacancy rates were not collected for this study.

[22] Although some zones show a higher anticipated demand than supply available, it is important to note that there may be additional supply not included in this analysis. Private lots were only observed if they consisted of 15 or more spaces. Additionally, Zone 5: Walk Street –Downtown contains public, city-owned, off-street lots that are not included in this private off-street inventory and may account for any inconsistencies between the number of existing spaces and the number anticipated to be occupied.

Table 4.4 – Non-Residential Parking Demand by Number of Parking Spaces

Land Use	Square Feet by Use Type	Anticipated Peak Parking Demand Rate	Anticipated Number of Occupied Parking Spaces	Existing Private Off-Street Parking Spaces
Zone 1: Walk Street – North End				
Commercial / Retail	6,659	1 space per 247 sf	27	4
Total	6,659		27	4
Zone 2: North End East				
Office / Professional	3,168	1 space per 301 sf	11	6
Commercial / Retail	4,905	1 space per 247 sf	20	4
Total	8,073		31	10
Zone 3: Walk Street – Sand Section North				
Office / Professional	2,842	1 space per 301 sf	9	12
Commercial / Retail	12,002	1 space per 247 sf	49	4
Restaurant	5,114	1 space per 132 sf	39	2
Total	19,958		97	18
Zone 4: Sand Section – Valley				
N/A	N/A	N/A	N/A	N/A
Zone 5: Walk Street – Downtown				
Office / Professional (Downtown District)	28,640	1 space per 439 sf	65	104
Commercial / Retail (Downtown District)	67,915	1 space per 362 sf	188	50
Restaurant (Downtown District)	39,871	1 space per 187 sf	213	11
Assembly	9,483	1 space per 3 seats	75	42
Fast Food	2,800	1 space per 116 sf	24	4
Service / Repair	2,900	1 space per 404 sf	7	0
Total	151,609		572	211
Zone 6: Sand Section – Civic Center				
Office / Professional (Downtown District)	20,684	1 space per 439 sf	47	66
Commercial / Retail (Downtown District)	72,438	1 space per 362 sf	200	179
Restaurant (Downtown District)	1,600	1 space per 187 sf	9	0
Medical Office (Downtown District)	2,000	1 space per 335 sf	6	4
Light Manufacturing	13,676	1 space per 759 sf	18	22
Total	110,398		280	271
Zone 7: Walk Street – Sand Section – Herondo				
Commercial / Retail	15,979	1 space per 247 sf	65	39
Restaurant	4,542	1 space per 132 sf	34	15
Total	20,521		99	54
Zone 8: Sand Section – Cypress				

Land Use	Square Feet by Use Type	Anticipated Peak Parking Demand Rate	Anticipated Number of Occupied Parking Spaces	Existing Private Off-Street Parking Spaces
Office / Professional	8,933	1 space per 301 sf	30	13
Light Manufacturing	87,900	1 space per 759 sf	116	169
Warehousing / Storage	14,519	1 space per 1,574 sf	9	1
Service / Repair	9,057	1 space per 404 sf	22	13
Total	120,409		177	196
Overall				
Total	437,627		1,283	764

To further compare anticipated demand for each zone, an analysis of anticipated parking demand ratios is shown in Table 5.3. The ratio of built square footage per parking space was calculated by dividing the actual built square footage of non-residential land uses in the study area by the corresponding number of parking spaces anticipated to be occupied during peak demand, as calculated in the previous table. For comparative purposes, the demand ratio of parking spaces per 1,000 square feet was determined by dividing the anticipated demand rate by the actual built square footage per 1,000 square feet. The resulting total figure of 2.93 shows that for every 1,000 square feet of non-residential uses in the Coastal Zone, there is an anticipated demand of 2.93 parking spaces during peak times. Below is a sample calculation for Zone 1: Walk Street – North End.

Example: Zone 1 Walk Street – North End

6,659 sf (actual built square footage) / 27 spaces (anticipated number of occupied spaces)

= 247 sf (adjusted peak demand ratio per space)

1,000 sf (typical sf figure to determine parking ratios) / 247 sf (adjusted peak demand ratio per space)

= 4.04 spaces (adjusted peak demand ratio per 1,000 sf)

Table 4.5 – Anticipated Peak Parking Demand Ratios

Zone	Actual Built Square Footage (sf)	Actual Parking Supply	Actual Built Ratio per Space (sf)	Actual Built Ratio per 1,000 sf (spaces)
Zone 1: Walk Street – North End	6,659	27	247	4.04
Zone 2: North End East	8,073	31	266	3.76
Zone 3: Walk Street – Sand Section North	19,958	97	206	4.84
Zone 4: Sand Section – Valley	N/A	N/A	N/A	N/A
Zone 5: Walk Street – Downtown	151,609	572	265	3.78
Zone 6: Sand Section – Civic Center	110,398	280	395	2.53
Zone 7: Walk Street – Sand Section – Herondo	20,521	99	207	4.82
Zone 8: Sand Section – Cypress	120,409	177	680	1.47
Total	**437,627**	**1,283**	**341**	**2.93**

In Section 4, Table 4.2 shows the actual number of spaces provided per 1,000 square feet, and comparative Table 5.3 above shows the peak number of spaces demanded per 1,000 square feet. Each zone's anticipated demand exceeds the actual built supply of off-street parking, except for Zone 8 (Walk Street – Sand Section – Herondo). In general, the average supply of off-street parking for non-residential land uses is currently 1.75 spaces per 1,000 square feet, while average demand is 2.93 parking spaces per 1,000 square feet at peak.

While non-residential land use comparisons to private off-street parking provide insight on their lot utilization, the availability of nearby on-street parking should also be considered. If on-street parking utilization in the vicinity of non-residential land uses is high, then it may be possible that these non-residential land uses are demanding more parking than can be measured through observing respective private lot capacity exclusively, as users are willing to park on-street to access these uses.

Although no formal survey was conducted, street segments adjacent to non-residential land uses were evaluated to determine if there was any correlation between land use and adjacent on-street parking utilization. On a zone-by-zone basis, there is no definitive correlation between the two. However, in general, specific on-street parking segments within each zone that are adjacent to non-residential land uses, such as on Hermosa Avenue and Pier Avenue appear to experience higher rates of occupancy than other areas and are either at or above optimal capacity.

Anticipated Seasonal Parking Demand

Peer city code, ITE, and ULI all provide rates for peak times, however, parking demand for every land use rarely peak simultaneously. The parking demand findings in Section 5.1 reflect parking demand at peak times for all individual uses, regardless of season. To more accurately reflect parking demand in Hermosa Beach, demand rates should also be analyzed according to season, as different land uses may reach peak times at different times of the year.

For instance, commercial/ retail uses have the highest parking demand in December, but office uses do not reach their highest parking demand in the same month. Because of this, demand for uses varies from season to season. According to ULI, the month of December typically has the greatest parking demand among all months, and therefore often represents

peak parking demand in this analysis. Seasonal adjustments are based on demand anticipated every three months starting from December, reflecting typical conditions for Spring (March), Summer (June), and Fall (September).

To adjust accordingly to seasonal parking demand rates, the *ULI Shared Parking Manual: 2nd Edition* was used. This nationally accepted shared parking manual provides seasonal demand rates adjusted for customer/visitor parking. Using the ULI Shared Parking Manual has limitations since it averages numerous U.S. cities to determine averaged seasonal peak demands, where unique cities such as Hermosa Beach may not be represented as accurately. Due to the greater influx of summer visitors in Hermosa Beach compared to a typical U.S. city, Hermosa Beach could expect peak demand in summer months fairly close or higher than the calculated demand in December.

Table 5.4 provides a summary of seasonal demand parking rates per zone and per land use. The table includes the anticipated number of occupied spaces found in Table 5.2 for comparative purposes, which represents the "Peak" (if all land uses simultaneously reach peak demand). According to the ULI manual, the month of December represents the highest anticipated parking demand for any of the 12 months. For Hermosa Beach, the analysis indicates that 1,246 spaces would be demanded overall in December, which is 37 spaces less than the number of spaces demanded during the simultaneous total peak. The month that saw the lowest parking demand was September, with only 1,050, or 233 less spaces than the number of spaces demanded at the simultaneous total peak.

Table 4.6 – Seasonal Parking Demand

Land Use	Square Feet by Use Type	Anticipated Number of Occupied Parking Spaces					Existing Private Off-Street Parking Spaces
		Peak	Dec.	Mar.	Jun.	Sep.	
Zone 1: Walk Street – North End							
Commercial / Retail	6,659	27	27	17	18	17	4
Total	6,659	27	27	17	18	17	4
Zone 2: North End East							
Office / Professional	3,168	11	9	11	11	11	6
Commercial / Retail	4,905	20	20	13	13	13	4
Total	8,073	31	29	24	24	24	10
Zone 3: Walk Street – Sand							
Office / Professional	2,842	9	8	9	9	9	12
Commercial / Retail	12,002	49	49	31	33	31	4
Restaurant	5,114	39	39	37	37	35	2
Total	19,958	97	96	77	79	75	18
Zone 4: Sand Section – Valley							
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zone 5: Walk Street – Downtown							
Office / Professional (Downtown District)	28,640	65	52	65	65	65	104
Commercial / Retail (Downtown District)	67,915	188	188	118	126	120	50

Land Use	Square Feet by Use Type	Anticipated Number of Occupied Parking Spaces					Existing Private Off-Street Parking Spaces
		Peak	Dec.	Mar.	Jun.	Sep.	
Restaurant (Downtown District)	39,871	213	213	203	203	194	11
Assembly	9,483	75	71	74	68	69	42
Fast Food	2,800	24	23	23	22	23	4
Service/Repair	2,900	7	7	7	7	7	0
Total	151,609	572	554	490	491	478	211
Zone 6: Sand Section – Civic Center							
Office/ Professional (Downtown District)	20,684	47	38	47	47	47	66
Commercial/ Retail (Downtown District)	72,438	200	200	126	134	128	179
Restaurant (Downtown District)	1,600	9	9	8	8	8	0
Medical Office (Downtown District)	2,000	6	5	6	6	6	4
Light Manufacturing	13,676	18	18	18	18	18	22
Total	110,398	280	270	205	213	207	271
Zone 7: Walk Street – Sand Section – Herondo							
Commercial/ Retail	15,979	65	65	41	43	41	39
Restaurant	4,542	34	34	33	33	31	15
Total	20,521	99	99	74	76	72	54
Zone 8: Sand Section – Cypress							
Office/ Professional	8,933	30	24	30	30	30	13
Light Manufacturing	87,900	116	116	116	116	116	169
Warehousing/ Storage	14,519	9	9	9	9	9	1
Service/ Repair	9,057	22	22	22	22	22	13
Total	120,409	177	171	177	177	177	196
Overall							
Total	437,627	1,283	1,246	1,064	1,078	1,050	764

Anticipated Future Parking Demand

The City of Hermosa Beach's Coastal Zone has a unique character that will slowly transform and progress in the future. As part of the character, the Coastal Zone is fairly built-out, meaning that there is little area for newly built structures in west Hermosa Beach. A large majority of growth in the Coastal Zone will come in two ways:

- Additional or modified construction on existing infrastructure
- A change to more intensive land uses while maintaining existing infrastructure

To plan for future growth in the Coastal Zone, the City should reconsider all new projects, modifications, and land use changes as an alteration to parking demand. The basis for formulating changes in anticipated parking demand should stem from two key documents, *PLAN Hermosa* and this report.

In *PLAN Hermosa*, Table 2.1 Land Use Designations [23] outlines density and intensity constraints for each land use designation. The limits set by dwelling units per acre (Du/Ac) and floor area ratio (FAR) would be facilitated to maintain the future character of Hermosa Beach and limit the amount of accompanying parking per use.

Dwelling units per acre and floor area ratio for any new growth in the Coastal Zone should be studied against the Anticipated Peak Parking Demand established in Table 5.1 in this report. Using both of these datasets would create meaningful parking requirements that support the planned character of the Coastal Zone while maintaining a level of parking supply that is suitable for efficient automobile access.

Table 2.1 Land Use Designations

Designation	Definition	Density / Intensity
Low Density	Single-family residential (attached or detached)	2.0 - 13.0 DU/AC
Medium Density	Single-family residential and small-scale multi-family residential (duplex, triplex, condominium)	13.1 - 25.0 DU/AC
High Density	Medium (8-20 unit buildings) and large-scale (20+ unit buildings) multi-family residential	25.1 - 33.0 DU/AC
Mobile Home	Mobile home parks, where lots are owned, rented or leased to accommodate mobile homes for human habitation	2.0 - 13.0 DU/AC
Neighborhood	Convenience stores, markets, eateries, laundromats, or similar uses to primarily serve local walk-in traffic	0.5 - 1.0 FAR
Community	Locally-oriented uses including retail stores, restaurants, professional and medical offices, and personal services	0.5 - 1.25 FAR
Recreational	Coastal related uses such as beach/bike rentals, restaurants, snack shops, retail, lodging accommodations, entertainment and similar uses	1.0 - 1.75 FAR
Gateway	Lower floor community or regionally-oriented commercial uses with upper floor high-visitor office uses or hotel uses	1.0 - 2.0 FAR
Service	Home improvement stores, furniture stores, auto dealerships, and light automotive service stations	0.25 - 0.5 FAR
Light Industrial	Production uses for light manufacturing, creative art, or design services with professional office as an allowed accessory use	0.25 - 1.0 FAR
Public Facility	Civic-related offices, community centers, operational facilities and educational/institutional facilities	0.10 - 1.0 FAR
Open Space	Passive and active park, recreational, open space uses and educational/institutional facilities	0.0 - 0.5 FAR
Beach	Coastal-related recreational activities and essential public facilities (lifeguard tower/restrooms)	0.0 - 0.05 FAR

Key Takeaways

Key takeaways from the parking demand analysis conducted in this section are presented below. These takeaways are intended to guide the development of parking management strategy recommendations for the Coastal Zone later in this report.

- A total of 764 spaces currently exist for non-residential uses in the Coastal Zone, as observed for this study, while the total number of spaces required for the same non-residential uses based on the City's code is approximately 1,915 spaces.
- The total number of parking spaces forecast for the same non-residential uses is 1,283 spaces, suggesting that the anticipated parking demand for the Coastal Area exceeds the actual off-street parking supply.
- The average supply of off-street parking for non-residential land uses is currently 1.75 spaces per 1,000 square feet, while average demand is 2.93 parking spaces per 1,000 square feet at peak.
- As a result, on-street parking segments that are adjacent to non-residential land uses generally appear to experience higher rates of occupancy than other areas and are either at or above optimal capacity. Parking management strategies should account for this trend in parking utilization.
- Seasonally, the highest peak in parking demand can be anticipated to be in December, as well as the summer months due to the Coastal Zone's proximity to the beach and various commercial/retail/recreational uses.
- PLAN Hermosa Land Use Designations should be used in conjunction with the Anticipated Peak Parking Demand Analysis conducted in this report to determine appropriate parking requirements in response to the anticipated growth in the Coastal Zone.

[23] Image Source: Plan Hermosa (2017)

5. Recommendations

The City of Hermosa Beach's unique character makes the Coastal Zone a destination for residents, employees, and visitors alike. Hermosa Beach's positioning as a small town paired with a destination city creates a host of parking challenges that should be addressed to optimize the City's parking resources in the short and long-term. The recommendations presented below lay the foundational aspects to resolve current parking limitations found in the parking occupancy and demand analyses with the intent to improve upon the overall parking system.

The recommendations follow the use of nationally-recognized best practices, case studies, and peer cities to inform parking management solutions, and are tailored to the unique character of Hermosa Beach. All potential recommendations were evaluated and selected based upon alignment with the stated goals and objectives found in *PLAN Hermosa* and the *Downtown Core Revitalization Plan*. The following recommendations are actionable and feasible with the given characteristics of the Coastal Zone.

There are twelve (12) specific recommendations categorized by six (6) overall strategies. These recommendations and strategies are organized in Table 6.1 below:

Table 5.1 – Recommendations

Recommendation Number	Recommendation
Strategically Invest in Information and Technology	
1	Implement an App-Based Mobile Pay System
2	Design and Implement a Demand-Based Parking Management Program
3	Invest and Implement a Comprehensive Parking Signage and Wayfinding System
Maximize Use of Existing Parking Supply	
4	Pilot a Shared Parking Program and Facilitate Shared Parking
5	Maximize Flexibility of Curb Space to Accommodate Rideshare, Other Modes, and/or Valet Service
Improve Mobility Options to Reduce Parking Demand	
6	Reinvest Parking Revenues into Multimodal Improvements
Simplify and Leverage the Zoning Code	
7	Revise the Zoning Code to Better Support Walkable, Mixed-Use Development in the Coastal Zone
Enhance Parking Administration and Operations	
8	Enhance Event Management Practices to Maximize Parking System Flexibility and Predictability
9	Improve the Residential Parking Permit Program
10	Improve Employee Parking Permit Program
11	Establish an Ongoing Collection, Monitoring, and Evaluation Process
Provide Additional Public Parking as Needed	
12	Strategically Invest in New Public and Shared Parking Supply in Key Locations

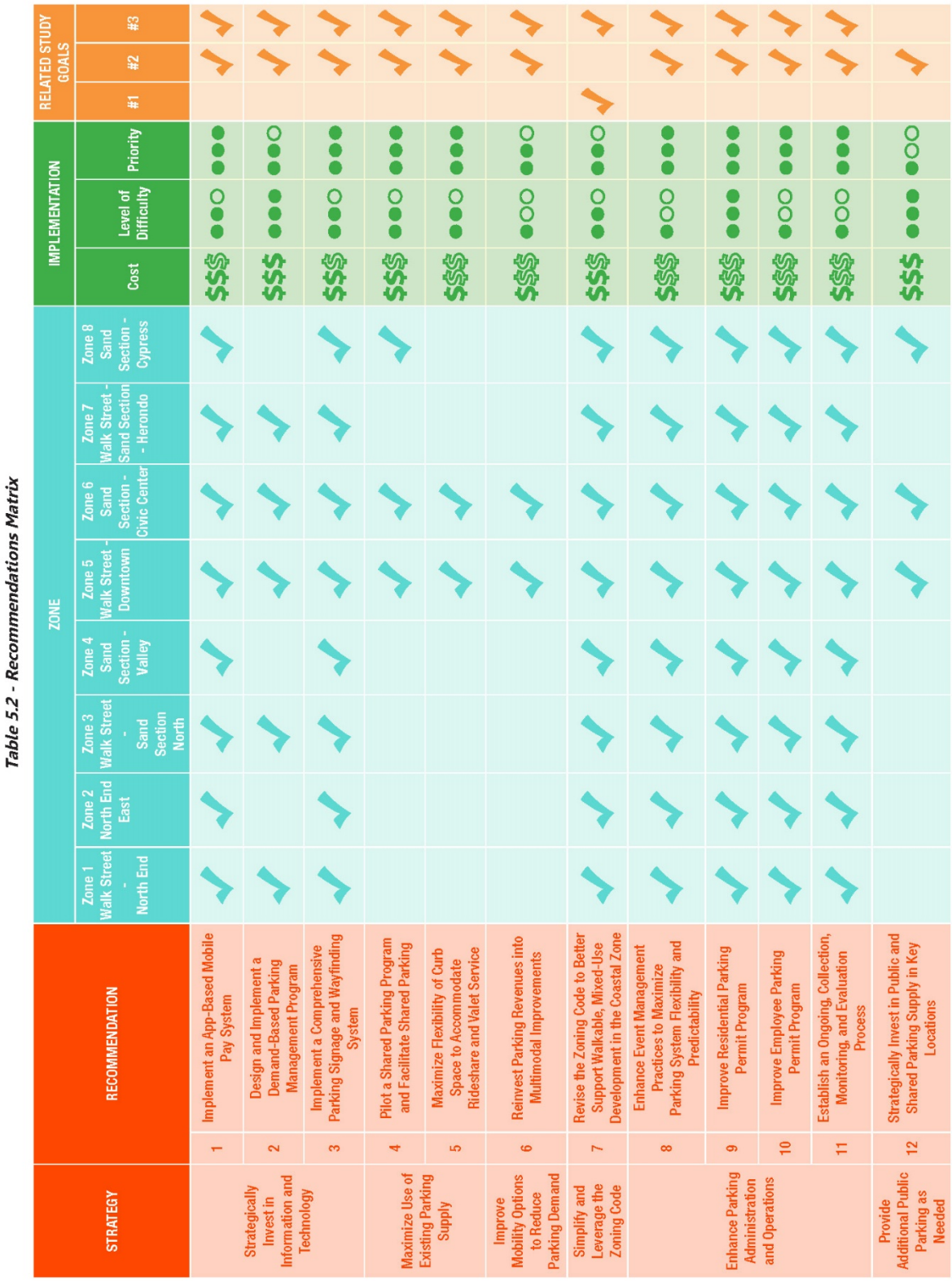
Several parameters were used to screen the specific recommendations. The matrix in Table 5.2 provides a summary of recommendations with the following key implementation criteria:

- **Cost**
  - Level of cost is relatively based against all other recommendations (i.e. constructing a parking structure would have a high cost respective to an employee parking permit program).
- **Level of Difficulty**
  - Level of difficulty is relatively factored against all other recommendations based upon the amount of coordination or space available needed to implement the recommendation.
- **Priority**
  - Priority level is factored against all other recommendations based upon the greatest impact that is in line with the City of Hermosa Beach's goals.
- **Implementation Timeline**
  - Cost, level of difficulty, and priority were all factors weighted to inform the short-, mid-, or long-term implementation goals for each recommendation.
- **Recommended Zones for Implementation**
  - Recommended zones indicate where the recommendation would be most beneficial for implementation based on the zone's unique character and observed demand.
- **Relation to Study Goals**
  - Relation to Study Goals details how a recommendation aligns with the goals for the Coastal Zone stated in the Introduction. The goals are also listed below:
    - *#1: Create a parking system that meets the parking needs and demands of residents, visitors, and employees in an efficient and cost-effective manner.*
    - *#2: Modify parking standards to encourage revitalization and investment in a pedestrian-oriented district.*
    - *#3: Expand mobility options and optimize parking availability.*

The recommendations listed below utilize policies and programs that will efficiently use existing parking supply while maintaining land use flexibility within the Coastal Zone. The recommendations emphasize a zonal and performance-based management approach that will better utilize parking assets. Improved parking management will enable Hermosa Beach to continue to grow sustainably, while reducing parking demand and traffic congestion.

The recommendations that follow are designed to work together to meet the City's parking management goals. It is important that to the greatest extent possible the recommendations be implemented as a cohesive "package" of reforms. As the Coastal Zone area continues to grow and evolve, its parking needs will change as well. This report recommends techniques to both address current challenges and allow the City to be nimble in reacting to future parking challenges. Finally, it is important to emphasize that these recommendations are specific to the established parking zones studied and would not necessarily apply to other neighborhoods outside the City of Hermosa Beach Coastal Zone.

Table 5.2 – Recommendations Matrix



Development of Recommendations

Each of the recommendations in this report are driven by inventory, occupancy, and demand analyses and are aligned by the goals and objectives from *PLAN Hermosa*, the *Beach Access and Parking Study*, and the *Downtown Core Revitalization Strategy*. The recommendations made in this report draw from best practices by peer cities and industry-wide standards as guidance, but were tailored to address the unique features of Hermosa Beach's infrastructure, character, and geography.

Strategically Invest in Information and Technology

Information and technology solutions are key aspects in advanced parking demand management. A strategic vision for technology solutions tied to new parking management policies would ensure successful implementation and monitoring of the City's parking goals. These first two recommendations set a framework for innovating data collection, communicating critical information, and promote change in parking behavior.

Recommendation #1

Implement an App-Based Mobile Pay System

Cost: Average

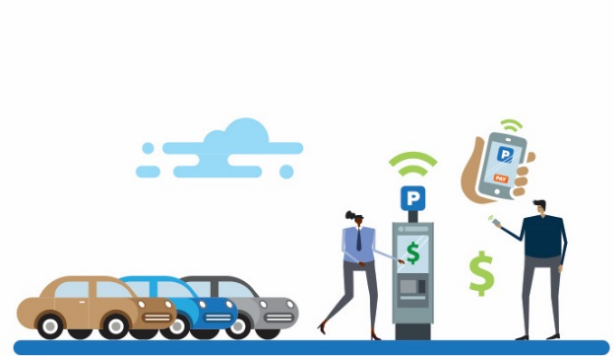
Level of Difficulty: Average

Priority: High

Implementation Timeline: Short-Term

Zones for Implementation: All

Related Study Goals: #2, #3



Why?

Most payment systems are antiquated. Finding current parking in in high-demand areas consist of circling, which has secondary effects of congestion and could leave an unpleasant experience for users. After parking, drivers have to leave their car and check the meter before they would know the cost of parking in that space. After a driver pays with coins or card, users with longer visits tend to need to return to their car and "feed the meter" if they wished to stay in Hermosa Beach longer, compelling them to find a new parking space if they've hit the hours restriction or cut their visit short altogether. Implementing application-based mobile pay system for parking in Hermosa Beach would allow drivers to find open spaces immediately, know the price of the space in real-time, and be able to pay for the parking space from anywhere. The application-based system would allow the users to have multiple options, regardless of how long or short their stay.

How?

The City of Hermosa Beach has a strong desire to stay ahead of the technological curve for parking and mobile payment systems. There are numerous payment applications that are able to make parking in Hermosa Beach as convenient and efficient as possible. Mobile phone applications, such as Passport, ParkMobile, SpotHero, and Parking Panda allow users the ability to be as informed as possible and take control of their parking. There are wide-ranging benefits with minor

infrastructure changes for converting the current pay system to an app-based program online. The multiple benefits to installing and implementing an app-based pay system include the ability to:

- Show available parking spaces in real-time, allowing potential parkers to know exactly where to go, which would reduce and/or eliminating the need to circle
- Pay for parking spaces from the app before a user begins their journey, offering peace of mind to those visiting Hermosa Beach
- Expand the number of payment options, increasing the likelihood a user will park at a paid spot
- Allow users to know prices and dynamic rate changes in real-time before they choose a parking spot, affording the users to make informed decisions on pricing compared to the distance to their final destination
- Become informed on events in Hermosa Beach, which may influence dynamic rates and availability of parking
- Pay from anywhere, pay for additional time, and know the duration of time left on the meter, eliminating the need to constantly "feed the meter," or stress about their length of time their car has been parked

Many application-based parking solution companies have demos that allow municipalities to explore solutions, demo administrative tools, implement pilot programs, and view the technical capabilities of the system.

Case Study

In terms of payment systems, there are various emerging technologies with a range of applications that municipalities are starting to utilize. For example, the City of Long Beach in 2018 launched the *Passport* parking mobile app which simplifies parking payments at their beachfront parking lots. Similarly, the City of Newport Beach launched a program called *ParkMobile*, which shows available parking meters in real-time in addition to reserving metered spots before a user arrives.

Recommendation #2

Design and Implement a Demand-Based Parking Management Program

Cost: High

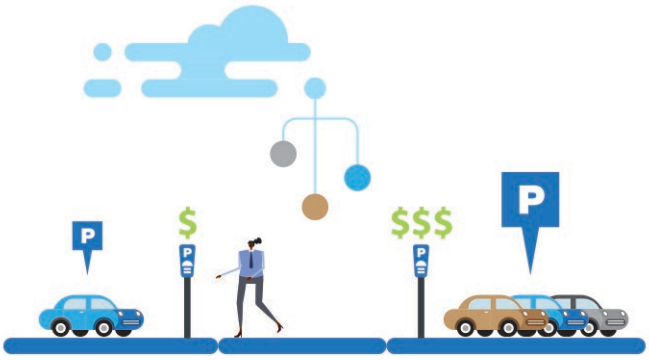
Level of Difficulty: High

Priority: Average

Implementation Timeline: Long-Term

Zones for Implementation: 1, 3, 5, 6, 7

Related Study Goals: #2, #3



Why?

Static parking rates do not match the level of demand or patterns of behavior. For example, silver post meters in Hermosa Beach are set at $1.25 every hour, then $1.50 every hour after 8:00 PM. In addition, yellow post meters are always $1.25 every hour, including those adjacent to Lot A. Often, on-street prices cost less than off-street prices, which can provide incentive for drivers to circle and wait in traffic to find the best deal. In this system, some spaces may be

underutilized. Additionally, the current Hermosa Beach parking system varies in payment, information and technology; this can overwhelm the user and decrease the system's value.

It is recommended that the City of Hermosa Beach look to adopt and implement a demand-based parking program that adjusts rates and regulations to make it as easy as possible for users to find a parking space. The main goal of this demand-based pricing strategy is to ensure consistent availability of parking spaces while distributing parking demand throughout the Coastal Zone, with additional revenue as a positive effect. Ideally, this demand-based program would allow off-street parking to be a cheaper, long-term option, as opposed to using on-street spaces for long-term parking. Alternatively, on-street parking should be available to be the short-term parking solution. The City should also look to price public parking assets at a lower rate for centralized locations in order to promote a "park once/walk many" environment. Visitors not having to go back to their cars to feed meters or to add time allow the centralized parking locations to be more utilized for longer periods of the day.

How?

In this program, parking demand will set the "right price" at all times, which is the lowest price that will achieve a set target of parking availability. The demand-based parking management system can be developed with the following actionable items:

- Set specific availability targets for on- and off-street parking locations. It is recommended that no more than 85% occupancy should be targeted at all times in each of the eight zones. (For instance, 100% occupancy in Zone 5 and 50% occupancy in Zone 3, totaling 85% occupancy would not meet the target.)
- Establish minimum and maximum parking price changes for demand, like increasing rates by $1 during the high demand periods. Peer city Laguna Beach fluctuates parking charges between $1 and $2 per hour, while Huntington Beach fluctuates between $1 and $3 an hour. The best price rate to set is one that allows 85% availability at all times. On-going monitoring of occupancy is necessary to determine the rate that achieves the 85 percent target.
- Mark meters and lots based upon convenience and demand on tiers of price, such as 'premium', 'value', or 'discount'. A tiered system can be found at airport and sports stadiums traditionally but can be applicable for Hermosa Beach as well.
- Track occupancy data, including location, and length of stay per car, to create algorithms to predict demand and adjust pricing accordingly by reading collected meter data.
- Develop a database with this inventory and occupancy information to provide staff real-time understanding of utilization. Include parking regulations and key enforcement metrics.
- Evaluate price-determining rate methodologies at least annually and adjust as needed with the intent to allow a consistent occupancy rate that allows the lowest prices while avoiding a parking shortage.
- Make parking inventory and occupancy data open to the public by creating an online website in which transportation users can view relevant parking information such as location, prices, and restrictions.
- Issue reports approximately every six months to inform city staff, key stakeholders, City Council, and the public on system performance. System performance would be measured upon revenue generation, occupancy statistics, citation numbers, and parking user satisfaction.

The program implementation should have effective outreach and messaging including:

- An overall demand-based program brand
- Marketing materials, including websites, apps, social media, brochures, ads, and service announcements
- On-going workshops and trainings with downtown stakeholders
- Use of social media platforms to communicate system information and updates

This recommendation should be implemented in all parking zones where metered or paid spaces exist, but would be most impactful in the Downtown Core which would see the highest turnover of short-term parking users. Specific streets include Hermosa Avenue from 8th Street to 16th Street, and Pier Avenue from Hermosa Avenue to Valley Drive. Although implementing this initiative requires a high level of cost and difficulty, this is a high priority recommendation.

Case Study

SF*park* in San Francisco implemented a major price reform for on-street parking. The City of San Francisco established pilot zones with sensors that reported the occupancy of each curb on every block. Parking rates were adjusted solely on observed occupancies to charge the lowest prices possible without creating a parking shortage. A target range was set between 60% and 80% occupancy, with prices readjusting every 3 hours. After the pilot, 31% of the cases noted an increase in prices, prices decreased in 30% of the cases, and remained the same in 39% of the cases. In two years, 62% of the blocks were within the target range (60%-80%), a 30% increase from before the pilot began. San Francisco uses all of its parking revenue from SF*park* to subsidize public transit.[24]

Recommendation #3

Invest and Implement in a Comprehensive Parking Signage & Wayfinding System

Cost: Average

Level of Difficulty: Average

Priority: High

Implementation Timeline: Mid-Term

Zones for Implementation: All

Related Study Goals: #2, #3

Why?

Parking signs are critical to the success of the parking network, however signage that varies from zone to zone can create confusion. Providing a well-designed, branded parking signage system can effectively communicate critical wayfinding information the second you enter the city, enabling visitors to find venues and parking options more easily. A lack of consistent signage can lead to additional congestion, driver confusion, and potential conflicts between pedestrians/bicycles/vehicles as vehicles look for parking. These negative factors can lead to

[24] SF*park*: Pricing Parking by Demand by Gregory Pierce and Donald Shoup

an outcome where available parking options are underutilized, solely because motorists do not know where available parking exists.

Signage and wayfinding is a core component of communicating a demand-based management program. As mentioned in Recommendation #3, street signage should be used to display pricing tiers and level of availability for multiple parking locations so drivers can make an informed decision.

How?

In conjunction with Recommendation #, dynamic signage and wayfinding becomes especially important to communicate pricing, regulations, and parking availability. A Wayfinding Plan should be a part of the Demand-Based Parking Management Program.

The wayfinding plan should include:

- A signage implementation program that is created in conjunction with city stakeholders
- Wayfinding and signage that serve the customer to make finding parking and payment as easy as possible
- Dynamic and variable sign messaging that is recognizable, intuitive, and strategically placed
- Uniform and distinct signage that is reflective of Hermosa's Beach's character and promote a sense of place
- Real time availability information via on-the-ground signage, advanced signage, a one-stop website, and a mobile phone application.
- Marketable information about a new parking wayfinding strategy

Wayfinding would be applicable in all eight zones, especially at key destinations and entry points within the city. Key entry points include all streets that have access to cross the Hermosa Valley Greenbelt, including Gould Avenue, Pier Avenue, and 8th Street. Priority and cost for this recommendation is high while level of difficulty is average.

Case Study

Laguna Beach implemented a similar marketing/signage parking pilot program in 2014, utilizing dynamic electronic message boards and consistent wayfinding. The pilot program led to a 25% decrease in expired-meter parking citations and a 36% increase in total parking revenue. Their program has since been continued.

Maximize Use of Existing Parking Supply

Maximizing the existing parking supply is a crucial element of parking management and is aligned with Study Goals 1 and 2. This strategy aims to extract more value out of all existing private and public parking by expanding shared parking and maximizing curb space.

Recommendation #4

Pilot a Shared Parking Program and Facilitate Shared Parking

Cost: Average

Level of Difficulty: Average

Priority: High

Implementation Timeline: Long-Term

Zones for Implementation: 5, 6, 8

Related Study Goals: #2, #3

Why?

Shared parking programs maximize use of existing parking facilities, reduce the need for additional parking, reduce congestion, and facilitate more walkable and active downtowns. Determining the most efficient use of parking facilities is crucial to the success and growth of the Hermosa Beach Downtown Core. Hermosa Beach currently undertakes numerous shared parking plans in the Coastal Zone (such as plans noted in Table 5.1), including shared parking between private entities on the same site, but shared parking agreements between private entities on separate properties or between private and public entities in the Coastal Zone could further increase parking availability for visitors.

Not all private parking needs to be shared, but even if 25% of private parking can be included in a shared parking arrangement during any portion of a day, public parking supply in the Coastal Zone can increase by 60 spaces at a fraction of the cost of new construction of parking facilities. Shared parking works best when multiple uses have different peak use periods such as an office, which typically does not operate or reach peak parking demand during the evening hours, can be paired with a restaurant or assembly use that is primarily used during those evening hours.

How?

To facilitate shared parking among private property owners, the City can proactively provide technical assistance. This may include:

- The creation of a parking ownership database, connecting parties to each other.
- Educational materials about the benefits of shared parking.
- Sample language and agreements.
- Cost and revenue sharing information.
- Potential use of technology/ signage.

The City could take the lead in engaging property owners in their willingness to develop private-private or public-private shared parking agreements. These agreements could allow for the City to:

- Directly lease parking from a private facility for use in public parking.

- Open parking for public use at certain hours or days, depending on the tenant use.
- Facilitate shared agreements between nearby properties with different peak hours.
- Collect data to facilitate demand-based management of each shared parking agreement.
- Incentivize business owners to open up their parking to other uses during off-hours through the provision of an umbrella liability policy or agreements to tow unauthorized users.

Implementation of this recommendation would see the best results in Zone 5 (Walk Street – Downtown), Zone 6 (Sand Section – Civic Center), and Zone 8 (Sand Section – Cypress) due to the concentration of private parking supply in these zones, as well as the fact that parking in Zone 8 is currently not time-restricted. There is an average level of cost and high level of difficulty for this medium priority recommendation stemming from coordination, feasibility studies, and agreement implementation.

Recommendation #5

Maximize Flexibility of Curb Space to Accommodate Rideshare and Other Modes

Cost: Low

Level of Difficulty: Average

Priority: High

Implementation Timeline: Short-Term

Zones for Implementation: 5, 6

Related Study Goals: #2, #3

Why?

Through previous studies, every curb and parking space within the Coastal Zone has been inventoried by street segment and curb type. Curb types and their roles are static. A loading zone, for instance, stays as a loading zone at all times even if it is only used during specific days. Off- and on-street facilities should be inventoried in a manner that allows for real-time understanding of parking by curb regulation type by time of day and day of week, to evaluate the potential for other uses of curb space.

Curb space in the Coastal Zone is currently occupied mostly by metered or unmetered on-street parking. As of May 2019, Hermosa Beach has created three new rideshare zones in a four-block area on Hermosa Avenue between 10th and 14th Streets within Zone 5 (Walk Street – Downtown). The designated rideshare zones were converted from previously underutilized taxi zones. The City has communicated the availability of the new zones through updates to their website as well as signage and mobile ridesharing application updates. Dedicating curb space for ridesharing near Pier Plaza is a great example of maximizing the use of curb space and provides more opportunities to access the beach and the Downtown Core efficiently.

How?

To continue to maximize the flexibility of the curb space in the Coastal Zone, the City should monitor the newly-designated rideshare zones and additionally, evaluate the use of supplemental valet service. To achieve this, the City can:

- Utilize the inventory and occupancy database mentioned in Recommendation #3 to track curb space utilization and parking regulations at all times of day and week.
- Conduct resident, visitor, employee, and employer intercept surveys to evaluate the success of the new rideshare zones, measuring frequency of use and proper locations.
- Evaluate the need for additional designated rideshare zones, if appropriate.
- Evaluate curb space and re-configure spaces where appropriate to maximize the use of red zones or re-configure spaces to accommodate on-street parking space for other modes through bicycle corrals, motorcycle parking, or Neighborhood Electric Vehicle (NEV) parking.

These methods of maximizing curb space would be most effective in Zone 5 (Walk Street – Downtown) and Zone 6 (Sand Section – Civic Center). Priority for this recommendation is high compared to other recommendations, with low cost, and an average level of difficulty.

Case Study

The Institute of Transportation Engineers has recently released their *Curbside Management Practitioners Guide* which details planning considerations, available tools and treatments, and the treatment selection process for curbside management. In this guide, ITE highlights the City of Seattle as a standout example of flexing curb spaces to allow streets to safely and efficiently connect and move people and goods to their destinations while creating inviting spaces within the right-of-way. In the study, Seattle was able to reduce commercial vehicle loading zones during peak parking periods and flex them back during prime loading/unloading times, which has led to an increase in curbside efficiency.

Improve Mobility Options to Reduce Parking Demand

Hermosa Beach can reduce parking demand by providing safe, accessible, and convenient options for residents, employees, and visitors to access the beach without a car. Mobility options such as public transit, bicycling, car share, bike share, micro-mobility, and walking would all factor in to reduce vehicle demand. Reinvesting parking revenues for this cause is key to the success of the Downtown Core and the rest of the Coastal Zone.

Recommendation #6

Reinvest Parking Revenues into Multimodal Improvements

Cost: Low

Level of Difficulty: Low

Priority: Average

Implementation Timeline: Mid-Term

Zones for Implementation: 5, 6

Related Study Goals: #2, #3

Why?

Every motorist becomes a pedestrian at some point on their trip. Parking is about more than vehicle storage; it is about access and mobility. For every trip taken by alternative mode, there is another parking space available for someone who drives. Demand-based management

may create additional revenue, which, in turn, should be used in programs that directly support multimodal improvements in the Coastal Zone.

Parking utilization data shows that many prime on-street parking spaces are full, while many off-street spaces outside the core remain empty throughout the day. Multimodal transportation can help alleviate and redistribute parking demand. This would improve connections to underutilized parking assets to distribute parking demand more evenly. An example would be a pilot program to introduce peripheral parking outside of the high-demand areas in conjunction with a frequent shuttle circulator.

Hermosa Beach has been successful in improving multimodal accessibility by enhancing bicycle access on Hermosa Avenue, maintaining a scramble crossing at Hermosa Avenue and Pier Avenue, implementing bulb-outs, maintaining vibrant zebra pedestrian crossings, and increasing shade and lighting. Hermosa Beach can build on these efforts by providing more bicycle hubs, drop-off and rideshare cutouts, and more transit opportunities.

How?

The City should increase and diversify the allocation of parking revenue to investments that will improve overall mobility in the Downtown Core. These improvements include:

- Improved pedestrian, bicycle, and multimodal mobility, especially to and from parking outside the Downtown Core. For instance Hermosa Beach's proposed bicycle facilities includes many Class III bike routes, but does not propose any bike paths or bike lanes in the Coastal Zone. Hermosa Beach could increase the number of pedestrian plazas to fulfill the goal to create a pedestrian-oriented district.
- Streamlined implementation of bike-share, rideshare, public transit, and potential circulator shuttle.
- The evaluation of micro-transit use to establish a remote parking network and improve alternative mobility.
- Shared parking initiatives to improve access to parking for the general public, as mentioned in Recommendation #4.
- A Coastal Zone Wayfinding System, as mentioned in Recommendation #3.
- Promotions encouraging employees to bike and walk to work.
- Enhanced event management, as mentioned in Recommendation #8.
- Improved marketing and communication of the parking system, as mentioned in Recommendation #3.
- Technology upgrades to the parking system, as mentioned in Recommendations #1 and #3.
- Streetscape and safety improvements, including parking enforcement and street cleaning.
- Evaluation of the potential to continue the shared mobility program currently being piloted with neighboring cities.
- Further evaluation and monitoring of parking initiatives, as mentioned in Recommendation #11.

Hermosa Beach can also look to mobility initiatives in addition to mobility investments. Alternative mobility initiatives also include:

- Create an employee parking database including store location and employee origin, and mode of transportation.
- Travel training and analysis for employees.

- Branding and marketing highlighting the ease of switching from vehicle to alternative commute mode.
- Pursue incentives for employers who provide demand-management initiatives for employees.
- Create "Bike to Work" days.
- Free or subsidized transit passes.
- Subsidized shuttles, carpools, guaranteed rides home, and other programs.
- Bicycle/ pedestrian safety and encouragement programs.
- Restrict employee parking to top floors of structures for long term occupants

Revenue would be generated from all parking spaces excluding unmetered spaces, and should be reinvested in in all zones, with Zone 5 (Walk Street – Downtown) being at the top of the priority list. Priority, cost, and difficulty are all low for this recommendation.

Case Study

Laguna Beach teamed up with OCTA in 2016 to start the Summer Breeze trolley service. Summer Breeze is a summer-only route that allows users to park remotely and shuttle them to Downtown Laguna Beach at no expense for the user. The service runs only on Saturdays and Sundays from 11:00 am to midnight from late June to early September. Providing a multimodal alternative for visitors reduces Laguna Beach's parking demand in its downtown core and also alleviates congestion in the street network locating the lots on the outskirts of the city. One of the issues facing the City of Hermosa Beach is a long-term parking shortage, and implementing a similar remote parking with shuttle service like Summer Breeze could relocate a portion of long-term parkers outside of the Downtown.

Simplify and Leverage the Zoning Code

Simplifying and leveraging the zoning code to work in favor of a pedestrian-oriented district supports Goal #3 from Section 1.3. Pedestrians should have just as much access and mobility options as vehicles on the road, and the following recommendation supports this end.

Recommendation #7

Revise the Zoning Code to Better Reflect Urban Uses and Walkable Commercial Uses in the Coastal Zone

Cost: Average

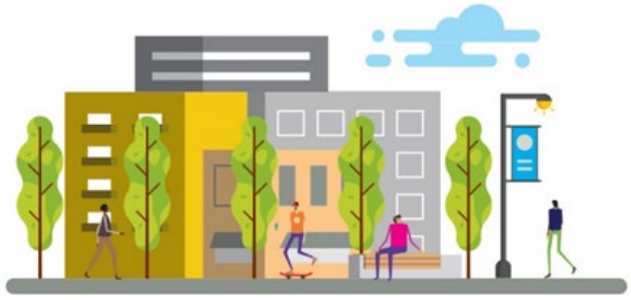
Level of Difficulty: Average

Priority: Average

Implementation Timeline: Short-Term

Zones for Implementation: All

Related Study Goals: #1, #3



Why?

In the Coastal Zone, undeveloped parcels are all but gone, and most future development will utilize existing buildings and/or smaller parcels. Flexible and innovative management of

parking and mobility in the zoning code will be crucial to support this type of infill development and continued reinvestment. The existing code offers opportunities for improvement and revision, as data analysis has shown discrepancies between minimum code requirements, actual parking provided, and adjusted parking demand for non-residential uses.

How?

Some zoning code revisions that can be made to better suit Hermosa Beach include:

- Adjust parking minimums within the Downtown District to their "right-size" according to demand for specific uses, specifically offices, retail, and restaurants. Uses that generate invariable demand regardless of location, such as assembly uses or visitor accommodations, may not be applicable to a parking minimum adjustment (which is consistent with peer cities). This will give property owners the flexibility to build or repurpose according to market demand. In addition, this supports the City's land use goals to maintain the small scale, pedestrian-oriented character of Downtown. See Appendix C for examples of parking minimums established in peer cities with similar parking demand.
- Consider no parking minimums in certain pedestrian-emphasized locations within Zone 5: Walk Street -Downtown and Zone 6: Sand Section - Civic Center.
- For the addition to a building, addition of outdoor space, or a change in use, allow required parking to be reduced by providing implementing extensive transportation demand management measures.
- Reduce or exempt requirement of additional parking for certain uses that change to uses typically considered more intensive in the zoning code, like restaurant or food service use, when located in a pedestrian district provided that square footage remains the same. This reduction of exemption would not be applicable to uses that generate consistent demand, such as assembly uses or visitor accommodations.
- Allow for in-lieu fees to contribute more towards on-site parking requirements to improve development and tenant flexibility to produce context-sensitive design. This would allow property owners to consider a greater reduction in on-site spaces. Revenue from fees should continue be used to fund the shared parking supply.
- Consider incorporating site-specific requirements related to all mobility options. This could include linking bicycle, car share, and electric vehicle requirements in proportion to the size of a given use, phased down above a certain number of spaces. Code can also be included to allow space for micro-mobility docking as well.
- Allow trip reduction incentives for private development to create more mode share opportunities within the City.
- Incorporate design requirements that support a walkable environment. These include:
    - Limit driveways and driveway widths along walkable corridors.
    - Provide high-visibility pedestrian accommodations at crosswalks and curb cuts, such as signage, striping, or flashing lights.
    - Incentivize the design and construction of parking that can be converted to active uses.
    - Parklets, or an extension of the sidewalk into one or more on-street parking spaces, at pedestrian-oriented locations. Parklets introduce new streetscape features such as seating, planting, bicycle parking, or elements of play.
    - Pedestrian/ Bike Plazas, whether temporary or permanent, have potential in dead-end or short street segments with little auto-oriented needs. Examples for opportunity include any numbered street, such as 11th Court, west of Beach Drive.

A revision of the zoning code would be applicable throughout the City. Revising the zoning code has moderate cost and moderate difficulty. This recommendation has average priority compared to other recommendations.

Case Study

In July 2017, the City of Santa Monica updated their parking code based upon the *Parking Zoning Ordinance Update (2013)* completed by Nelson\Nygaard. The land uses in the city were split among three designations: Downtown Core, Transit-Oriented and Mixed Use, and Low-Intensity Neighborhood. In 2015, the City took the approximate designation boundaries established in this plan to adopt a new off-street parking code that regulated parking into three separate categories: Citywide, Parking Overlay Area 1, and the Downtown Community Plan Area. Both the Citywide and Parking Overlay Area 1 designations set parking minimums. The Downtown Community Plan Area set parking maximums but eliminated any parking minimums required of new development. The Plan included amendments to the existing ordinance and new zoning ordinance provisions for:

- Parking waivers
- Parking maximums
- Parking in-lieu fees
- Leasing programs
- Unbundled parking
- Carsharing
- Parking cashout

The City could formulate an EV Action Plan, similar to the Santa Monica EV Action Plan, which plans to have 300 smart chargers in the City by 2022. Additionally, in Santa Monica, businesses with over 10 employees are given a choice between three TDM strategies and must implement at least one or pay a fee for each parking space per day. The City of Santa Monica provides a mandatory survey to determine Average Vehicle Ridership in which the results determine a reduction in fee for workplaces with high non-auto ridership.

Enhance Parking Administration and Operations

To better plan for the daily and peak parking demand for its visitors, employees, and residents, parking management programs will effectively minimize the stress on parking supply. This strategy recommends enhancing event management practices, improving residential and employee permit parking programs, and establishing a monitoring and evaluation process to adapt to different events, businesses, and various uses coming into the City.

Recommendation #8

Enhance Event Management Practices to Maximize Parking System Flexibility and Predictability

Cost: Low

Level of Difficulty: Low

Priority: High

Implementation Timeline: Short-Term

Zones for Implementation: All

Related Study Goals: #2, #3

Why?

Hermosa Beach is home to many unique and diverse events each year. These events spur economic activity and are a fundamental part of Hermosa Beach's character and culture. However, events can place a burden on the parking system and disrupt access due to street closures and increased numbers of visitors. Today, there are limited requirements for producers of mid to large-scale events to implement alternative transportation plans for participants/spectators of their events, as well as the general beach-going population when event production may require the use of nearby public parking.

There are also opportunities to ensure consistent communication of event parking policies, from communications strategies, signage, and alternative options available. These issues can create a disconnected system that oversaturates certain areas or impacts beachgoers.

How?

There are a number of strategies to maximize the parking system for each event effectively and consistently. These strategies include:

- Adjust parking rates via the demand-based program (Recommendation #2) to include peak event pricing in high demand areas. Conversely, value, discount, or

remote peripheral parking should be priced at a lower rate to incentivize use of those areas to balance demand and reduce traffic.

- Provide online information and education in advance of the event (similar to Recommendation #3), including location-based prices and parking locations to limit searching, traffic, and frustration. Parking information can be linked to information provided by event organizers, hotels, tickets, and key event stakeholders.
- Provide GPS-compatible updates with real-time utilization to allow event-goers to begin their search for parking at their origin, not their destination.
- Coordinate temporary signage during the event permitting process to divert and direct drivers to multiple parking locations. This signage can be dynamic to instruct best parking locations in real time.
- Implement a pilot program for purchasing parking for off-street locations in advance of an event. Advanced purchases can be advantageous to both users and operators, as it makes parking demand more predictable and ensures that available spaces are effectively used, reducing congestion related to circling. Advanced parking purchases can be incentivized by allowing lower rates than those who park without a reservation. No parking lot should be reserved completely, as parking facilities should still allow short-term spontaneous parking for those who may not have access to the technology to do so, or for visitors who may be unaware of the program. *Pavemint* is a parking application in Los Angeles that allows the ability to reserve parking weeks in advance, a similar approach could be applied to Hermosa Beach.
- Use dynamic parking inventory mentioned in Recommendation #1 to predict potential event demand hotspots.
- Coordinate event-based shuttle systems if needed, during the event permitting process. Shuttles can be used to reduce the distance barrier from the user's car to the event location. Coordination with peripheral lot owners, such as schools and churches, including those outside of the City limits, are encouraged.
- Require an event parking plan during the event permitting process, regardless of event size. Smaller events may require fewer demand management strategies, but event parking plans should be developed to adequately manage and accommodate the variety of Hermosa Beach events. The size of event and therefore the level of parking demand management strategies should be determined by the Impact Level already established in the Hermosa Beach Special Events Policy Guide.

Event parking management would be applicable in all zones that incorporate events. Priority is rated high for this strategy while cost, and difficulty are low for this recommendation.

Case Study

The City of Long Beach provides multiple large events every year that are completely inaccessible by automobile, such as the Smokin' Grooves Fest and Once Upon a Time in the LBC. For these events, event attendees park in designated structures in the Downtown Area,

and shuttle to the event site using two shuttle locations. Attendees can pre-pay for a parking spot in one of the designated structures using an official Long Beach web portal. Rideshare drop-offs are only allowed to the shuttle stop locations and not at the event site. Besides the shuttle, attendees can either walk, bus, water taxi to the event grounds. The capacity for these events is set above 10,000 attendees.

Recommendation #9

Improve the Residential Parking Permit Program

Cost: Low

Level of Difficulty: High

Priority: High

Implementation Timeline: Short-Term

Zones for Implementation: All

Related Study Goals: #2, #3

Why?

With the amount of residential uses in the Coastal Zone, residents are a crucial part of the parking discussion when considering efficient solutions to meet the parking needs of the Coastal Zone. As mentioned in Section 1.1 of this report, the City's Preferential Parking District Permit Program currently allows residential parking permit holders to park at 24-hour meters without paying the meter, or in one-hour residential zones without regard to time limit for up to 72 hours.

The preferential parking district is bound by the City's northern and southern boundaries, by the Strand on the West, and Loma Drive, Park Avenue, and Morningside Drive to the east. Residential permits cost $40 annually and require that the vehicle is registered to an address in the Preferential Parking Permit District. Currently, the City does not place a limit on the number of permits purchased per household. Furthermore, many residents utilize their garage space as storage rather than parking spaces and park on-street, which exacerbates occupancies on many residential streets.

With recent interest from the City, the residential parking permit program should be revisited to establish a system that is equitable, yet supports a reduction in parking demand. Data and observations from City of Hermosa Beach Parking Enforcement demonstrated that the City sells almost twice the number of residential parking permits than spaces available. Peer cities, such as Newport Beach and Corona Del Mar, price residential parking permits at an escalating rate, so the price for each additional permit per household increases.

How?

It is recommended that the first annual permit per household is priced at $40 to stay in line with the current Hermosa Beach rate, while the second permit is priced at $60, the third at $80, and the last permit at $100 for a maximum of 4 permits. These rates provided are an average of multiple peer cities methods and prices for limiting the number of permits provided.

After sufficient data is collected, the City of Hermosa Beach can create residential parking zones for areas in need of greater restrictions, similar to a recently adopted permit program by the City of Newport Beach. Hermosa Beach would essentially create eight residential parking zones using the same boundaries established in the data collection process, as these bounds were created specifically to distinguish between car-restrictive sections in the Coastal Zone. Using zones for residential parking is beneficial as it would prevent residents from using their residential pass for other areas in the City, which could oversaturate demand in specific areas.

Guest permits can be registered by their license plate number through an official Hermosa Beach online web portal to ensure guest permits are non-transferrable and cannot be used past their allotted time. Parking enforcement would be able to determine if a license is permitted through an online, real-time database. Residential parking locations should be subject to parking for only the residence assigned to the permit.

An online database of guest parking permit requests can be managed after its creation to determine what residential areas require the most guest permits, and how many permits are being issued per day of week, or time of year. A cap on guest parking permits or any other relevant modifications to the system should be considered after substantial data has been collected in the guest permit database. For instance, the City of Carlsbad caps guest parking permits at five two-week passes a year. Residents with extra spaces can post on the app, and can be used in conjunction with special events. Hermosa Beach can implement a test guest parking restriction to allow permits to be available for up to 30 days in a year, or 3 times a month. App-based guest parking solutions are also a possibility. *Pavemint* is a parking application in Los Angeles that allows people to connect residents with people who have an extra parking space to share.

An update for residential and employee parking permits would be valuable in all parking zones. Updating residential parking permits has high priority, with high difficulty and low cost.

Case Study

The City of Newport Beach has adopted a comprehensive parking permit program that provides residential permits in zones. There are three residential zones where residents in those zones can apply for their respective residential permit. Permits can be purchased through an official Newport Beach web portal. Permit holders of a single zone cannot park in the other zones. Creating specific zones for residential permits ensures permit holders must stay with a certain boundary to use their permit.

Recommendation #10

Improve the Employee Parking Permit Program

Cost: Low

Level of Difficulty: Low

Priority: High

Implementation Timeline: Short-Term

Zones for Implementation: All

Related Study Goals: #2, #3

Why?

Employees are also a crucial part of the parking discussion as many employees come from outside of the Coastal Zone and contribute to parking demand daily. Currently, employees of local businesses are allowed to purchase parking permits for an additional fee in designated areas. For employees, monthly permits are available for off-street parking lots/structures at a cost of:

- $62 per month to park anytime up to 72 hrs
- $31 per month to park only between 5am to 7pm daily

Employee permits are also available to purchase that allow employees to park at on-street spaces with yellow pole/cap meters and in the unmetered, but one-hour time restricted areas at an annual cost of $143 (pro-rated to $71.50 on September 1st).

How?

The employee parking permit program should be retained, however the City should update the locations and pricing of employee permit parking to encourage off-street parking availability for employees. It is preferred that on-street parking be reserved for short-term users to promote higher turnover. Programs and alternative mobility initiatives, such as those mentioned in Recommendation #5 can reduce employee parking demand. Improving mobility choice does not mean that every employee has to stop driving. In fact, a shift in behavior for a fraction of employees can have a significant impact on reducing parking demand and congestion.

An update for residential and employee parking permits would be especially valuable in Zone 5 (Walk Zone – Downtown) and Zone 6 (Sand Section – Civic Center), as these zones contain a large concentration of retail and commercial uses. Updating the employee parking permits has high priority, with low difficulty and cost.

Case Study

UCLA introduced the BruinGO program in an effort to incentivize students and employees to utilize transit instead of commuting by single-occupancy vehicles. The UCLA BruinGO program is an unlimited access transit program which subsidized the cost of transit commutes for students and university employees. The goals of the study were to increase bus ridership to campus, reduce vehicle trips to campus, and to reduce parking demand on campus.

Commutes by bus increased by 73% after just one year of the program's initiation. In addition, 37% of new bus riders were previously solo drivers to campus. Over 1,000 solo drivers relinquished their parking permits after BruinGO's initiation, and 19% of commuters who kept their permit still took BruinGO at least two times a week. Since the introduction of the program as an alternative to solo driving, UCLA was able to utilize this service to recruit new employees to the university while also reducing fare payments for riders and reducing the demand for parking.

Recommendation #11

Establish an Ongoing Collection, Monitoring, and Evaluation Process

Cost: Low

Level of Difficulty: Low

Priority: High

Implementation Timeline: Short-Term

Zones for Implementation: All

Related Study Goals: #2, #3

Why?

For parking, you can only manage what you measure. This recommendation seeks to improve the "measurement" process by creating a centralized parking database established in a new demand-based parking management program. This program, as previously mentioned, would create real-time data automatically, which would move the focus away from manual data collection and unwieldy datasets, and onto innovative parking analysis for monitoring and evaluation. Decisions based on high-level real-time data would be exponentially quicker and can be made with more confidence. If real-time data is not feasible, the City can conduct before and after studies or introduce pilot programs to test the efficiency of various programs and initiatives.

Each iteration of data monitoring will allow the City to make informed decisions regarding the continued use of the recommendations, as well as real-time modifications or adjustments to the system as needed. The parking system will always need to be monitored and evaluated, especially due to seasonal change or event management.

How?

To better track, monitor, and evaluate data, the City can:

- Develop and implement specific methodologies for tracking occupancy data for on- and off-street parking. Initial approaches could include manual spot counts and could evolve into utilizing algorithms based on meter and payment data.
- There are many innovative technologies available that can be used to collect and track parking data. Technologies include: smart meters, magnetometers, lasers, inductive loops, ultrasound, or automated license plate readers. Some technologies are more suited for parking lots or garages, while others are better for large zones and on-street counting.
- Establish data-sharing protocols, including making inventory and occupancy data "open source," as mentioned in Recommendation #2.

- Issue quarterly reports on system performance for parking/city staff and key stakeholders, as also mentioned in Recommendation #2.

The collection, monitoring and evaluation system would be valuable for the entire Coastal Zone. Priority for this recommendation is high, with a low cost and low level of difficulty to implement.

Case Study

The City of Los Angeles and LADOT launched LA Express Park in 2012 which is a parking management strategy with innovative parking data collection and monitoring. LA Express Park was implemented to achieve 10% to 30% parking space availability on each block by using demand-based pricing. The system relied upon a highly integrated back-end system with an advanced pricing engine. The system required a continuous compiling of occupancy and payment data, analyzing it, and then relaying information to customers and enforcement officials in real-time. After the first 6 months, parking congestion decreased by 10%, under-utilized parking spaces decreased by 5%, pilot-wide parking rates decreased by 11%, and parking revenue increased by 2%.

Provide Additional Public Parking as Needed

In some cases, provision of additional parking resources is necessary for zones that are truly constrained by physical impediments and constantly yield high occupancy. Adding parking spaces should be done strategically and with substantial caution, as new resources such as parking garages or structures are cost-prohibitive and could be obsolete within the next decade. This recommendation should be treated as the recommendation with the lowest priority.

Recommendation #12

Strategically Invest in New Public and Shared Parking Supply in Key Locations

Cost: High

Level of Difficulty: High

Priority: Low

Implementation Timeline: Long-Term

Zones for Implementation: 5, 6, 8

Related Study Goals: #2

Why?

Hermosa Beach's success as a destination for residents and visitors has attracted new development in the Coastal Zone. Multimodal access, complimented by convenient and accessible parking, is a key factor for the Downtown Core's success. After a study of parking demand, analysis indicates that parking demand often peaks above optimal capacity rates in Zone 3 (Walk Street – Sand Section North), Zone 5 (Walk Street – Downtown), Zone 7 (Walk Street – Sand Section – Herondo), and Zone 8 (Sand Section – Cypress).

Hermosa Beach faces a parking management problem, not a parking problem; spaces are available during peak times, drivers may just be unaware of their availability or unwilling to park further from their destination. Adding more parking, especially private spaces, could exacerbate the City's current dilemma should those spaces remain underutilized. Nevertheless, to provide adequate parking for current and continued growth in the Coastal Zone, Hermosa Beach could strategically invest in public and shared parking supply in key locations.

How?

Recommendations #1 through #11 should be prioritized to address current issues related to high on- and off-street demand, time limit violations, varied signage, fragmented technology and payment systems. All decisions to build more parking should be evaluated against the City of Hermosa Beach's primary goals to reduce vehicular congestion and improve multimodal travel established in *PLAN Hermosa* and the *Downtown Core Revitalization Strategy*. Creating additional parking can also bring more vehicles into the Coastal Zone if motorists find that more spaces are available. New structures should be evaluated based upon their cost effectiveness/potential revenue compared to other recommendations presented above, which are designed to improve overall management, enhance mobility, and reduce demand for parking.

It is recommended that the City conduct independent need, market, funding and fiscal studies for constructing a multi-story parking structure within the Civic Center or Cypress character area. For Lot A, conversion of the parking lot to a parking structure identical to Lot C, for example, would increase the total number of spaces by approximately 224[25]. Assuming a full capacity in the potential Lot A structure by transferring as many on-street parked cars into Lot A, on-street parking occupancy in Zone 5 would drop from 94% to 65% on peak weekday afternoons. This potential decrease in on-street occupancy at the busiest measured time in a highly commercialized zone would have secondary benefits such as reducing occupancy rates in neighboring zones, as parking would become easier to find closer to the Downtown District and the beach. There is a significantly greater cost associated with constructing a parking structure compared to other recommendations, but the benefits of increasing supply in Zone 5 (Walk Street – Downtown), Zone 6 (Sand Section – Civic Center), and Zone 8 (Sand Section – Cypress) may be necessary to alleviate current or future parking constraints throughout Hermosa Beach.

When considering constructing renovations to existing parking lots, efforts can be guided from the Hermosa Beach Parking Lot D Demonstration Project with respect to proposed design improvements, sustainability features, and plant palettes in order to maintain consistency throughout the Coastal Zone among public parking. This is the recommendation with the lowest priority, but has an associated high level of difficulty and cost.

Case Study

[25] Lot C, a three-story structure, has 354 spaces. Lot A, a surface lot, has 130 spaces. The difference between the two lots is 224 spaces. Although more research needs to be done on the exact number of added spaces including the size of the lot and its compatible use with adjacent buildings, using Lot C as a potential duplicate in this report gives a rough estimate for a Lot A three-story parking structure.

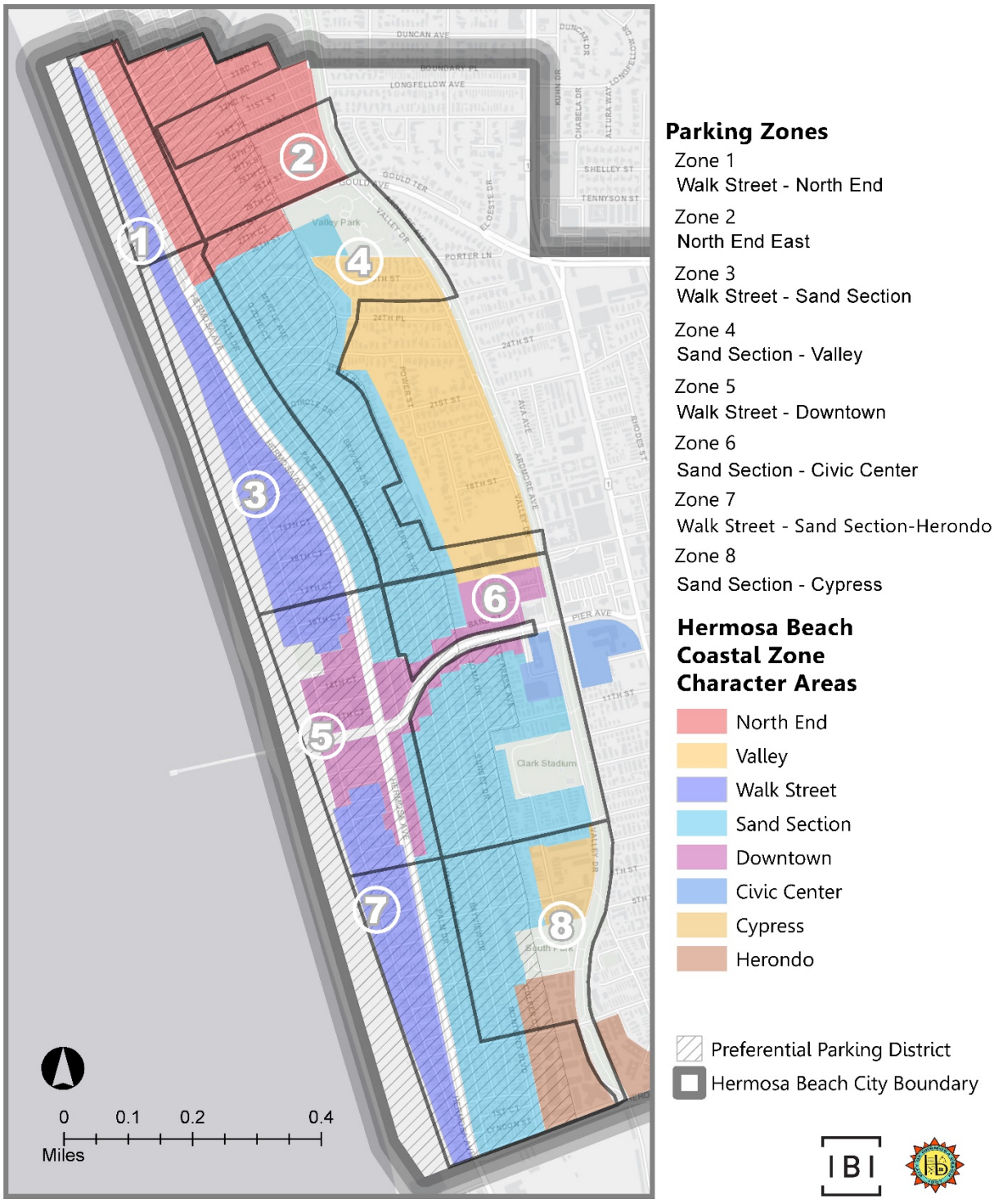
The Pacific Beach Visitor Oriented Parking Facilities Study by Wilbur Smith Associates analyzed a potential future parking structure in the San Diego area. The study showed that an efficient structure must be consumer friendly, be a good neighbor, be operationally efficient, and have a certain ease of implementation. Some factors that should be considered in deciding to build a structure are:

- Capacity considerations
- Existing Use
- Site accessibility for both vehicles and pedestrians
- Compatibility with adjacent uses
- Proximity to principal parking generators and areas with parking deficiencies
- Security/ visibility
- Environmental considerations, including potential noise and visual impacts
- Sources of funding
- An increase of rideshare and the onset of autonomous vehicles

This study found that the revenue generated by erecting a parking structure would be far short of the amount needed to cover the costs of operation and the debt service of the bonds issued to fund the construction of the structure.

Appendix A

Appendix A - Delineated Zones over Hermosa Beach Character Areas



Appendix B

Appendix B – Hermosa Beach and Peer City Code Matrix

Land Use (1 space per sf)	Hermosa Beach	Long Beach	Santa Monica	Newport Beach	Laguna Beach	Manhattan Beach	Huntington Beach	Carlsbad	Redondo Beach
Commercial / Retail	250[26]	250	300	250	250	200 or 250	200	300	250
Commercial / Retail (Overlay District)	333	500	450 or 500	0 spaces	250	Reduced rate[27]	200	300	250
Office / Professional	250	250 or 500	300	250 or 300 or 350[28]	250	300	250 or 300	250	250
Office / Professional (Overlay District)	333	500 or 1,000	300 or 500	0 spaces	250	Reduced rate	250 or 300	300	250
Medical Office (Overlay District)	333	400	250 or 300	0 spaces[29]	250	Reduced rate	175	200	150
Restaurant	100	100	125 or 200 or 500	30 to 50[30]	100	200	60	Gradual rate[31]	75
Restaurant (Overlay District)	100	100	125 or 200 or 500	0 spaces	100	Reduced rate	60	Gradual rate	250
Fast Food	50	300	300	50	100	200	200	Gradual rate	75
Service / Repair	1,000	300	300	500	300	500	500	300	250
General Assembly	50	3.3 seats	4 seats	3 seats	3 seats	100[32]	35[33]	5 seats	5 seats
Light Manufacturing	300	500	400	500 or 1,000	500	750	500	400	500
Warehousing / Storage	1,000	1,000	1,000	2,000	1,000[34]	1,500	1,000	1,000	Gradual rate[35]

[26] For all uses, rates are to be read as 1 space per number given. For instance, for Commercial uses in Hermosa Beach the parking requirement is 1 parking space per 250 square feet.
[27] For all overlay districts in Manhattan Beach: If the site GFA is equal or less than lot area, no parking required; If site GFA is greater than lot area, full parking requirements excluding 5,000 sf and above is required. Code can be circumvented with a use permit if found that demand is less than what is required, and long-term occupancy will not generate additional demand.
[28] 1 space per 250 sf for first 50 tsf; 1 space per 300 sf after 75 tsf; 1 space per 350 sf after 125 tsf
[29] A rate of 1 space per 200 sf to be applied for medical office outside of the Newport Beach overlay district.
[30] Of public restaurant area
[31] For all food uses in Carlsbad: 1 space per 100 sf for the first 4,000 sf, plus 1 space per every 50 sf thereafter
[32] 100 sf of seating area
[33] 35 sf of assembly area
[34] Plus two spaces
[35] For warehousing and storage in Redondo Beach: 1 space per 1,000 sf for the first 10,000, plus 1 space per every 5,000 sf thereafter

Appendix C

C.1 Victoria Transportation Policy Institute

From the Victoria Transportation Policy Institute Transportation Demand Management Encyclopedia

(*https://www.vtpi.org/tdm/tdm28.htm*, November 2018):

The table below is taken from the Parking Management chapter of the TDM Encyclopedia and summarizes parking management strategies, indicates their typical reduction in parking requirements, and whether they tend to reduce vehicle traffic and therefore provide additional benefits (such as reductions in congestion, accidents, energy consumption, pollution emissions and consumer costs).

Summary of Parking Management Strategies:

Strategy	Description	Typical Reduction	Traffic Reduction
Shared Parking	Parking spaces serve multiple users and destinations.	10-30%	
Parking Regulations	Regulations favor higher-value uses such as service vehicles, deliveries, customers, quick errands, and people with special needs.	10-30%	
More Accurate and Flexible Standards	Adjust parking standards to more accurately reflect demand in a particular situation.	10-30%	
Parking Maximums	Establish maximum parking standards.	10-30%	
Remote Parking	Provide off-site or urban fringe parking facilities.	10-30%	
Smart Growth	Encourage more compact, mixed, multi-modal development to allow more parking sharing and use of alternative modes.	10-30%	X
Walking and Cycling Improvements	Improve walking and cycling conditions to expand the range of destinations serviced by a parking facility.	5-15%	X
Increase Capacity of Existing Facilities	Increase parking supply by using otherwise wasted space, smaller stalls, car stackers and valet parking.	5-15%	X
Mobility Management	Encourage more efficient travel patterns, including changes in mode, timing, destination and vehicle trip frequency.	10-30%	X
Parking Pricing	Charge motorists directly and efficiently for using parking facilities.	10-30%	X
Improve Pricing Methods	Use better charging techniques to make pricing more convenient and cost effective.	Varies	X
Financial Incentives	Provide financial incentives to shift mode, such as cash out.	10-30%	X
Unbundle Parking	Rent or sell parking facilities separately from building space.	10-30%	X
Parking Tax Reform	Change tax policies to support parking management objectives.	5-15%	X
Bicycle Facilities	Provide bicycle storage and changing facilities.	5-15%	X
Improve User Information and Marketing	Provide convenient and accurate information on parking availability and price, using maps, signs, brochures and electronic communication.	5-15%	X
Improve Enforcement	Insure that parking regulation enforcement is efficient, considerate and fair.	Varies	

Strategy	Description	Typical Reduction	Traffic Reduction
Transportation Management Associations	Establish member-controlled organizations that provide transport and parking management services in a particular area.	Varies	X
Overflow Parking Plans	Establish plans to manage occasional peak parking demands.	Varies	
Address Spillover Problems	Use management, enforcement and pricing to address spillover problems.	Varies	
Parking Facility Design and Operation	Improve parking facility design and operations to help solve problems and support parking management.	Varies	

C.2 Portland, OR Reduced Parking for Mixed-Use Areas Provision

From page 11 of the City of Portland Off-Street Parking Management and Guiding Polices (*https://www.portlandoregon.gov/transportation/article/547704*):

In all cases, minimum parking requirements can be reduced by up to 50%, using combinations of the following provisions:

- One space reduction for every 12-inch diameter tree that is preserved (reduction of up to 2 spaces, or 10% of the total required parking);
- One space reduction for every 5 non-required bicycle parking spaces (reduction of up to 25% of the total required parking);
- Transit-supportive plazas may replace up to 10% of required parking, provided that at least 20 parking spaces are required and certain design standards are met;
- One space for every 4 motorcycle spaces provided (reduction of up to 5 spaces or 5% of the total required parking)
- Two spaces for every car sharing (e.g., Zipcar) space provided (reduction of up to 25% of the total required parking); and
- Three spaces for every 15-dock bike sharing station, with a further one-space reduction for each additional 4 docks (reduction of up to 25% of the total required parking).

C.3 Petco Park Area Transportation Study

From page 29 of the Escondido Ballpark Project Traffic Impact Analysis (*https://www.escondido.org/Data/Sites/1/media/pdfs/Planning/Ballpark/TrafficImpactAnalysis.pdf*, October 2010):

Petco Park conducted a Transportation Survey for the 2007 season. The survey provides information on travel characteristics of ballpark fans. The survey indicates that the automobile represents the primary mode of travel at approximately 71%. This equates to 29% for transit and other non-auto travel modes such as pedestrian, bicycle, etc. This compares with the Petco Park Environmental Impact Report (EIR) conducted in 1999 which assumed an 80% split for auto and 20% for transit/non-auto modes.