To the members of the:
CITY COUNCIL
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City of Carlsbad
Memo ID #2021208

Council Memorandum

Nov. 4, 2021

To: Honorable Mayor Hall and Members of the City Council
From: Gary Barberio, Deputy City Manager, Community Services
Jeff Murphy, Community Development Director
Via: Geoff Patnoe, Assistant City Manager GP
Re: **2021 Parking Data Collection (District - 1)**

This memorandum reports on the Parking Data Collection Memo conducted in Summer 2021 to evaluate parking demand in the Village and Barrio areas.

Background
In 2017, the city finished the Carlsbad Village, Barrio, and Beach Area Parking Study. The study included goals to:

- Make parking more convenient for community members, employees, and visitors
- Promote more efficient use of existing parking
- Support future parking needs and mobility options
- Support the vision outlined in the Village and Barrio Master Plan
- Explore options to make the project area more inviting for walkers, bicyclists and people who use public transportation

The study also included a requirement to complete a parking survey on a regular basis to evaluate parking space usage. Surveys have been completed and are available on the city's website[1] with the exception of one year; a study was not completed in 2020 due to the impacts the pandemic had on businesses.

The Village and Barrio Master Plan requires that the city, "Annually monitor the entire parking system for changes in supply, demand, utilization rates, enforcement, and maintenance needs, and adjust parking programs and services as needed. Data collection shall occur at least between Memorial Day and Labor Day and include weekends." (1.5.2 [B][9]) In the Summer of 2021, the city contracted with a firm to complete an update to the parking survey and provide recommendations. On Thursday, Aug. 26 and Saturday, Aug. 21, 2021, technicians collected parking occupancy data multiple times throughout the day and around the study area. The results of that study are discussed below.

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[1] https://www.carlsbadca.gov/departments/community-development/planning/village-barrio-plan/parking-study-reports/parking-study-and-management-plan

Discussion

In August 2021 the city's parking consultant conducted field work to evaluate parking in the area outlined in the Village, Barrio and Adjacent Beach Area Parking Management Plan, which is slightly larger than the area of the Village & Barrio Master Plan. The updated study included an evaluation of the current parking conditions, changes to parking supply, and the impact of current temporary restrictions in land use conditions due to the ongoing pandemic. Survey findings are summarized in the following three categories.

- Changes to Parking Supply

  The summer 2021 parking inventory data collection revealed discrepancies in the on-street parking inventory of the original study and previous updates. It was determined the original studies overestimated on-street parking by approximately 864 spaces throughout the study area. The updated inventory had consistently lower on-street parking supply estimates by block when compared to the original studies. The reason this likely occurred was because the earlier inventory efforts were higher level estimates that did not exclude parking restricted portions of the street, such as curb cuts. The current consultant performed an in depth analysis to count individual spaces and confirm the changes. Attachment A includes a map that show the change in parking spaces by block and a map that shows the total number of parking spaces in the study area.

- Parking Survey Results

  While the 2019 study did not show significantly impacted parking supply during the weekday and weekend inventories, the updated study shows that during the afternoon to evening hours during the weekday, and morning to evening hours during the weekend there are several areas on State Street in the Village, and in the residential beach areas that are impacted and that occupancies are greater than an 85 percent parking utilization rate during those times; which is the standard included in the Village & Barrio Master Plan showing there is impacted parking. The complete study, including recommendations is included as Attachment B.

  The study provides additional updates on the recommendations included in the 2017 Management Plan, and also noted the following conclusions on issues related to the overall parking situation in the study area:

  - Some vehicles parked in high demand areas (near businesses or beach access) for five or more hours, resulting in less available parking for potential business patrons or beach users.
  - It is not clear that the parking spaces along Garfield Street, between Grand Avenue and Carlsbad Village Drive are public parking spaces. Clear signage should be provided, indicating that these spaces are available to the general public.
  - The interest earned from the parking in-lieu fee program only covers 50% of the cost of renting parking spaces from North County Transit District.

- Parking ticket revenue, which comprised about 50% of annual parking-related revenue, is currently being deposited into the general fund.
- Without additional funding sources, and due to the intermittent nature of developers paying into the parking in-lieu fee program, it is likely that the current in-lieu fee program is not financially sustainable in the long term.
- There are near term (0-2 years) and long term (2+ years) parking management actions that are recommended in the Management Plan and 2021 Survey that would increase utilization of the existing space including:
  - Restriping
  - Removing unnecessary red curb and curb cuts;
  - Updating the current parking in-lieu and curb café fees consistent with costs to provide a parking space;
  - Enforcement and/or metering in areas with low turnover;
  - Establishment of a parking management district; and,
  - Using fee revenue and parking ticket revenue to provide additional off-street parking.

- <u>Temporary Suspension of Land Use Regulations</u>

  In 2020 there were several suspensions of land use regulations allowing businesses to expand into outdoor locations related to the ongoing COVID-19 Pandemic. To date, 116 permits have been issued: 8 for temporary uses, 48 for businesses within the village, and 61 for businesses outside the Village.

  Of the 48 permits issued within the Village, 26 permits are for expansion on private property, and 22 permits are for expansion into the city owned right of way (sidewalks or streets). The Village and Barrio Master Plan currently allows curb cafes and sidewalk cafes, with certain limitations. A curb café is allowed to take up to two parking spaces (temporary curb cafés were allowed to take up four spaces) and is permitted within the city's right-of-way, and installation of a sidewalk café may be permitted in front of a building but outside of the roadway curb-to-curb. Out of the 22 ROW permits, 16 are for sidewalk cafés, nine are for curb cafés, and three are for outdoor displays. Of the nine curb café permits, six have been authorized permanently and three are still temporary. Currently all permits are active. Sidewalk cafés are not required to pay a fee for utilization of the city's right-of-way, and unless the business also has a curb café does not require additional parking for the additional square footage of commercial use.

  Initial findings from the city's parking study have concluded that the curb cafes are not significantly impacting parking operations in the city, because the occupancies observed in the surrounding areas where they are located are generally lower than 85% and the installations only take away a small amount of the parking supply. It is estimated that the remaining three

temporary curb café facilities could be permitted if the number of spaces occupied are reduced to two without an amendment to the Village and Barrio Master Plan. A survey was completed in July 2021 to evaluate the interest of businesses issued permits, and an additional one will be done in Fall 2021 to survey all business owners in the Village area.

Next Steps

On Nov. 16, 2021, city staff is presenting options for updates to the Village & Barrio Master Plan. Through an effort to update the Village & Barrio Master Plan, there could be additional work to implement the recommendations from the 2017 Parking Management Plan, and the updates included in the 2021 Parking Survey. Options are included in the Nov. 16, 2021 action to consider an update to the parking management fees (in-lieu and curb café fees), implement the recommendations from the 2017 parking management plan, and to reaffirm the commitment to conduct a 2022 parking survey to assess conditions and additional options for parking management in the village. A revised study could also determine a methodology to charge a fee for sidewalk cafés and use the revenue as part of the parking fee program.

Attachment: A. Parking Supply Maps (Total Spaces and Changes from 2019)
B. 2021 Parking Survey

cc: Scott Chadwick, City Manager
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Downtown Carlsbad Parking Study

Figure 1
Parking Inventory (2021)

Downtown Carlsbad Parking Study

Figure 1
On-Street Parking Inventory Differences (2019 to 2021)
Apples to Apples Comparison

DOWNTOWN CARLSBAD PARKING STUDY

DRAFT

OCTOBER 2021

Prepared For

City of Carlsbad
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Carlsbad, CA 92008

Prepared By

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1.0 Introduction

This study is a 2021 update of the 2019 parking data and serves to provide updated recommendations from the City of Carlsbad's (City) Downtown Parking Management Plan, which encompasses Carlsbad Village (Village), Carlsbad Barrio (Barrio), and the adjacent coastal areas in the northwestern part of the city. The initial report was authored in 2016 by Kimley-Horn and subsequent parking surveys were conducted in 2017 and 2019. As a part of the monitoring process, it has been updated several times in the years that followed with more recent parking data, most recently in 2019.

Following the introduction, which describes the study area, presents the inventory of parking supply, and describes data collections methods, the report follows with chapters analyzing the weekday and weekend parking occupancy conditions, and concludes with parking management recommendations.

1.1 Project Study Area

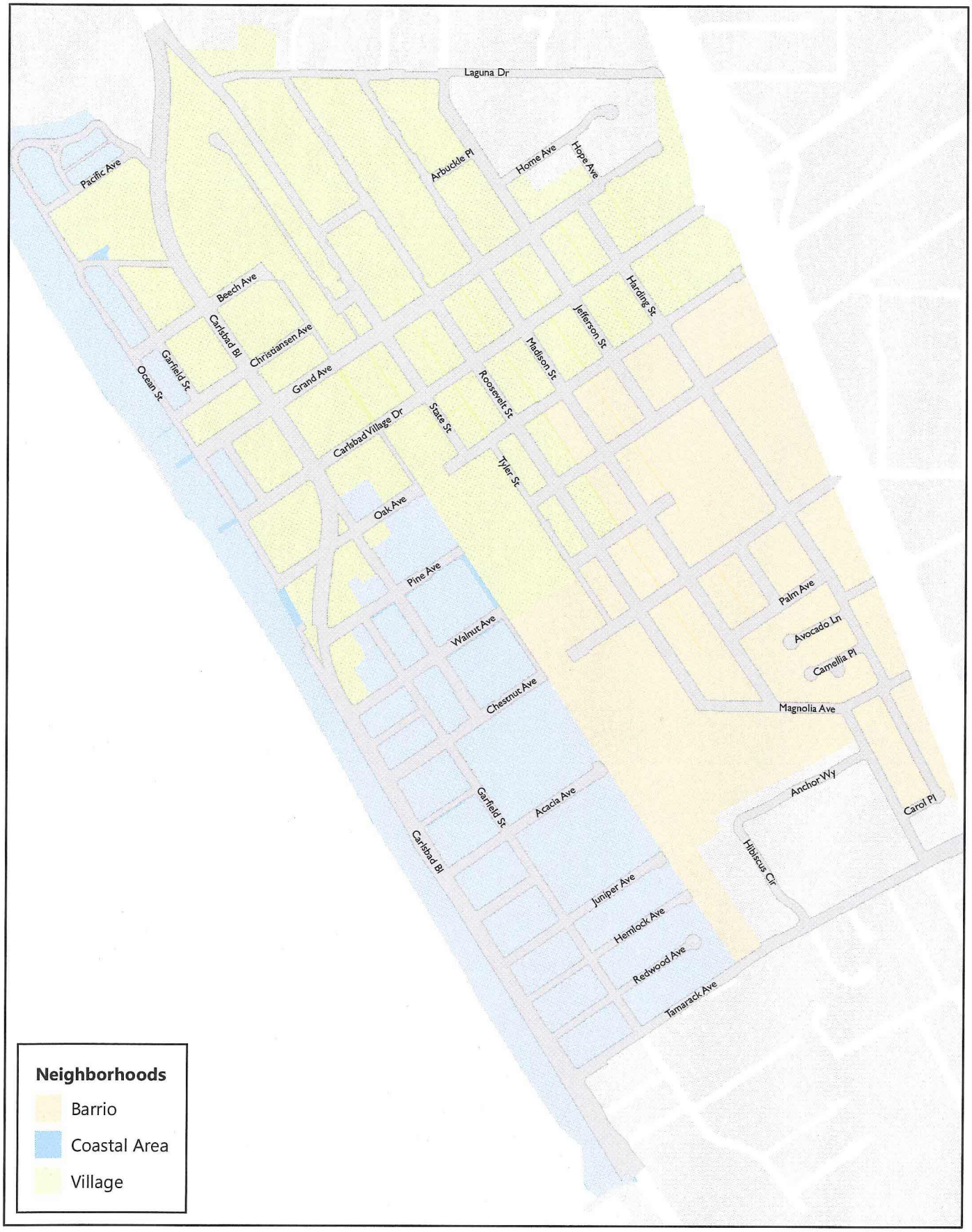
Figure 1.1 shows the geographic extent of the Parking Management Plan study area, which includes the Village, Barrio, and adjacent coastal areas (Coastal Area). The extents of the study area are generally confined between Laguna Drive and Tamarack Drive, from north to south, and the coast and Interstate 5, from west to east. On-street public parking, and off-street public and private parking supply within this area were inventoried and parking occupancies were collected and analyzed. This study area encompasses a larger territory than the Village and Barrio Master Plan area.

1.2 Parking Inventory and Data Collection Methods

Parking was inventoried by a combination of aerial imagery review and field data collection. Where parking was delineated with markings (in parking lots and some on-street locations), technicians inventoried the parking supply through aerial imagery review with confirmation in the field. In locations where on-street parking was not marked, technicians in the field measured and documented the segments of curb where parking is allowed, accounting for areas where parking is not permitted such as along curb cuts and other restricted areas. To estimate supply where it was unmarked, a length of 20' per parking space was assumed for on-street parallel parking. The curb lengths measured in the field were divided by 20, rounding the remainder to the nearest whole parking space. On-street parking supply was summarized to the block level, with a few exceptions where extra short blocks were consolidated to adjacent blocks. Parking supply along four lane roadways such as Carlsbad Boulevard and sections of Grand Avenue were summarized by block on each side of the street. A detailed inventory of the parking supply is provided in **Appendix A**.

The study area was refined from previous iterations of the report. Three on-street locations were added into the updated study area: Laguna Drive (Roosevelt Street to eastern terminus), Tamarack Avenue (Garfield Street to 200' west of LOSSAN rail corridor), and Washington Street (Pine Avenue to southern terminus). One on-street section from the previous study, Village Drive (Roosevelt Street to Magnolia Drive), was removed from the updated study area because it is a private internal roadway to The Village Apartments, and thus should be considered private residential parking which was excluded from occupancy collection.

In addition to the study area refinements, this section identified large parking inventory discrepancies from the earlier studies that were revealed during the data collection process. The 2021 updated inventory had consistently lower on-street parking supply estimates by block from the earlier studies. The reason this occurred was likely because the earlier inventory efforts were higher level estimates that did not exclude parking restricted portions of the street, such as curb cuts.



Downtown Carlsbad Parking Study

Figure 1.1
Parking Management Plan Study Area

A particularly illuminating example of this discrepancy is demonstrated in **Table 1.1**, along Jefferson Street between Carol Place and Tamarack Avenue. The earlier studies estimated the supply for this block to be 19 parking spaces, whereas the updated study which used field level data collection estimated 11 parking spaces. This large discrepancy on a block less than 300' was flagged and the previous study's work was examined more closely. It was determined estimating 19 parking spaces was only possible for this short segment if curb cuts and other restrictions were not excluded. This pattern of including restricted areas in the supply estimates was noticed in many other on-street parking locations throughout the study area, contributing to consistently higher on-street supply estimates for most blocks.

Table 1.1 - Parking Inventory Discrepancies

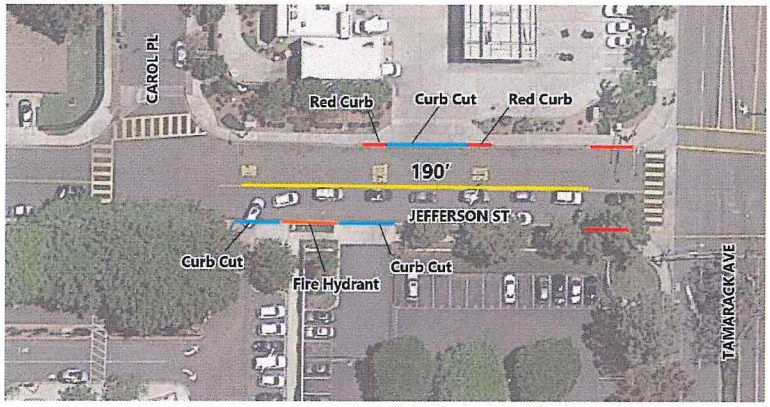
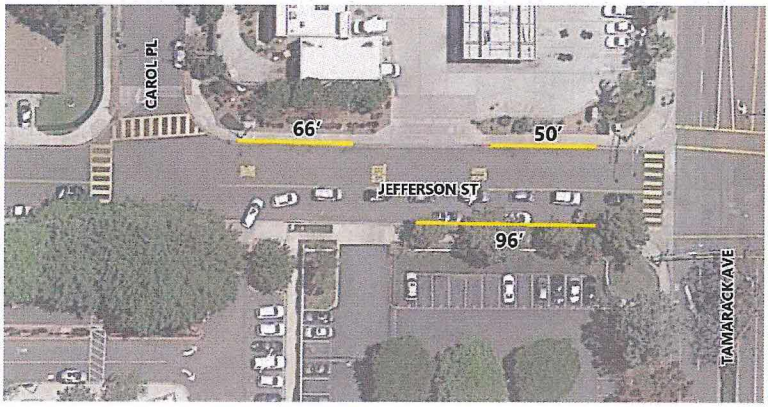
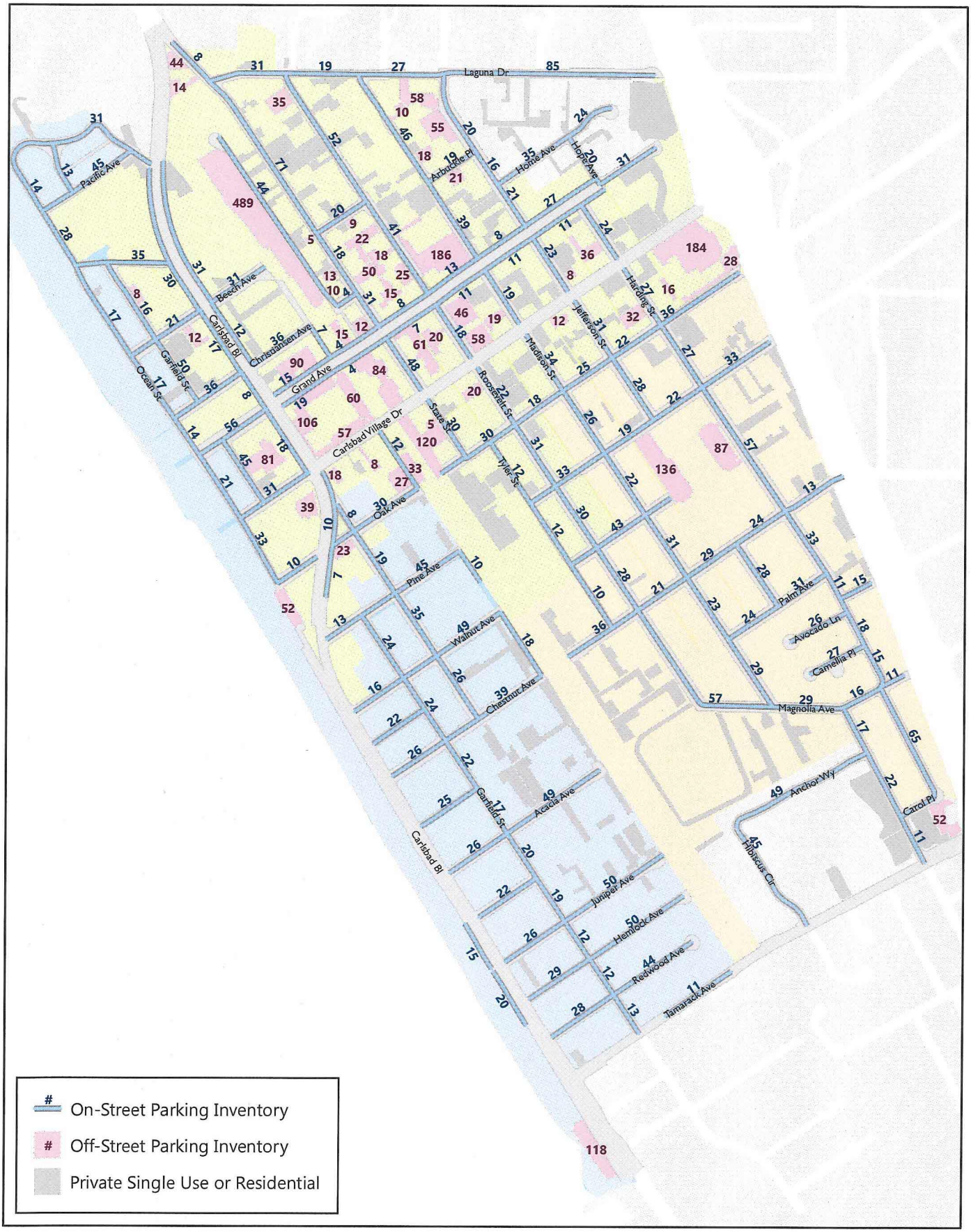
Image		Parking Supply Estimate
	Previous inventory may have estimated parking without excluding restricted areas	190' * 2 = 380' 380' / 20' = 19 **19 total parking spaces**
	Current study measured lengths only where parking is allowed	66' / 20' = 3 50' / 30' = 3 96' / 20' = 5 **11 total parking spaces**

Figure 1.2 shows the quantity of on-street and off-street parking (public and shared-use private) within the study area summarized per block or parking lot as estimated by the 2021 update of this report. Private residential parking and off-street parking from properties with a single occupant (single use) are also displayed on the map but are not inventoried because they are reserved exclusively for the users of the associated property and thus do not contribute to the overall shared parking supply of the study area. Many of these private lots also restricted access. Occupancy counts, presented later in the report, were only collected for public parking and shared-use private parking. **Table 1.2** summarizes the total parking supply within the study area. Within the study area, there are an estimated 5,446 public parking spaces, approximately 86% of the public supply is on-street. There were also 1,514 private off-street parking spaces inventoried in the study area.



Downtown Carlsbad Parking Study

Figure 1.2
Parking Inventory

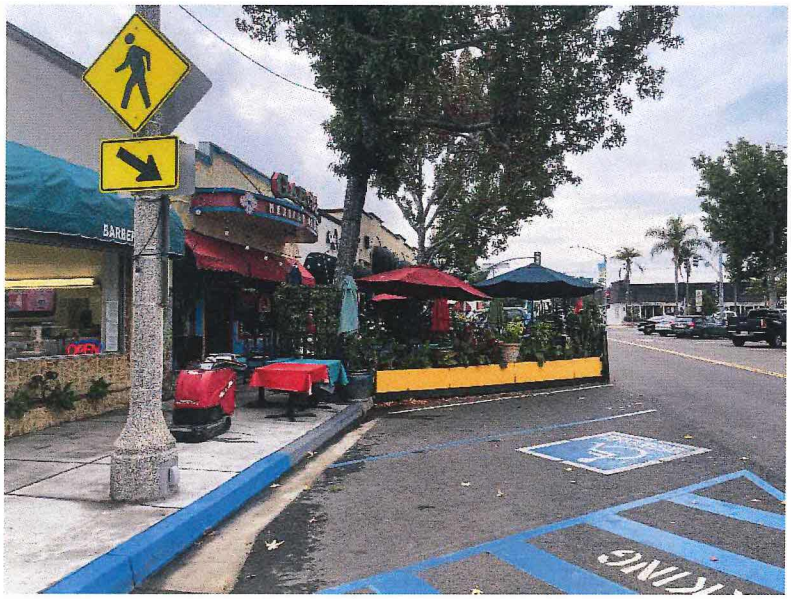
Table 1.2 - Parking Inventory Within the Study Area

Parking Type	Total
On-Street Parking	4,122
Off-Street Public Parking	783
NCTD Transit Parking	541
Total Public Spaces	5,446
Private Parking	1,514
Total Spaces	**6,981**

This difference in inventory approach in the earlier studies may have resulted in an over-estimation of as many as 864 on-street parking spaces in the study area for block segments analyzed in both studies[1]. The current estimate of on-street parking in the study area, excluding the 2021 added segments along Laguna Drive, Washington Street and Tamarack Avenue is 3,970. The previous estimate of on-street parking in the study area, excluding the 2021-removed segment of Village Drive, is 4,844.

1.3 Change in Parking Supply Due to Outdoor Curb Cafes

During the COVID-19 pandemic, among other responses by the City, there were three actions taken in relation to the Proclamation of Local Emergency that addressed modifications and suspensions of Land Development Standards due to the ongoing public health emergency. One such action was City Council resolution 2020-167 empowering the Director of Emergency Services to temporarily suspend or modify certain land development standards related to the establishment of outdoor uses (Curb/Sidewalk cafés and advertisements) to mitigate the economic effects of the COVID-19 pandemic state of emergency on local businesses. The resolution stated that the authorization will remain in effect through the duration of the local COVID-19 pandemic emergency. The California Coastal Commission approved these modifications by the City's request on August 11, 2020 for areas within the Coastal Zone as long as the City of Carlsbad's Local Declaration of Emergency and Resolution No. 2020-167 are in effect.



Allowing these structures was a relief measure for businesses to help offset the substantial loss of indoor commercial space imposed by COVID-19 related public health restrictions, which made

[1] To make an "apples-to-apples" comparison, this would exclude Laguna Drive (east of Roosevelt Street), Tamarack Avenue, Washington Street (south of Pine Avenue), and Village Drive, which were refinements to the study area made in the update.

operations for many businesses untenable. The conversion of sections of on-street parking to curb cafes was largely tolerated because the structures helped the businesses and the demand for public parking in commercial areas was generally much lower due to decreased business activity during the pandemic. **Table 1.3** documents the quantity of parking supply removed from circulation to accommodate the curb cafes. Seventy (70) parking spaces are being used to accommodate the structures, 25 of which are taking up public parking.

Table 1.3 - Parking Spaces used as Outdoor Structures

Parking Type	Total
On-Street Parking	18
Off-Street Public Parking	7
Private Parking	45
Total Spaces	**70**

1.4 Parking Occupancy Data Collection Methods

Parking occupancy in the study area was collected on one weekday (Thursday, August 26, 2021) and one weekend day (Saturday, August 21, 2021) during three time periods: morning (6am to 9am), midday (10am to 1pm) and evening (6pm to 9pm). The 2019 study collected parking occupancy on one weekday and one weekend day in August 2019, during five three-hour periods: 6am to 9am, 9am to noon, noon to 3pm, 3pm to 6pm, and 6pm to 9pm. Technicians collected parking occupancy in the field by driving the study area with video equipment mounted to a vehicle. The video was reviewed, and occupancy counts were transcribed to each unit of supply.

2.0 Weekday Parking Occupancy

Parking occupancy – the percentage of parking supply being used at a given time, was analyzed in two ways: occupancy by supply and destination-based occupancy. Occupancy by supply is the conventional way of conceptualizing parking demand, where the occupancy percentage is attributed to the source of parking (either the block or parking lot). While supply-based occupancy is adequate for understanding the demand of a particular parking source, it is a limited way of describing parking conditions in urban settings because public parking is scattered into many small sources throughout the studied area and is shared by numerous destinations which compete for the same supply.

Destination-based occupancy is an improved way of conceptualizing parking demand in urban settings where many destinations are close together and compete for public parking supply that is provided by many small sources of parking. The conceptualization adjusts for the varied size and spatial distribution of parking supplies in the study area that is not well captured by supply-based occupancy and recognizes that most visitors are unable to park directly in front of their destination and may have to walk a short distance. Also, it is common in walkable urban settings like Downtown Carlsbad for visitors to 'chain' trips – parking once in a centralized area and visiting multiple destinations within walking distance, thus making destination-based occupancy a suitable performance measure to assess parking conditions. Encouraging trip chaining (often called 'Park Once') is a parking demand management strategy employed in many urban settings.

To calculate destination-based occupancy, parking occupancy data collected and initially presented by block and parking lot is post-processed and accessibility-based measures are then used to estimate the parking occupancy within 1/8 of a mile network distance of each parcel in the study area by weighting the parking occupancy of the catchment area of the destination. An eighth of a mile (660') approximates two block lengths of short city blocks.

To facilitate comparisons, both ways of presenting the occupancy data on the forthcoming exhibits use the same four occupancy category ranges and color symbols: greater than 85% occupancy (red), 70.1% to 85% (orange), 50.1% to 70% (yellow) and 50% or less (green). Eighty-five percent occupancy is considered within parking industry practice to be the threshold for when parking is being utilized most efficiently, with the number striking a balance between maximizing usage and having some spare capacity. Places symbolized in red are above that optimal threshold and may be considered to have burdensome parking conditions.

The sections below describe weekday parking conditions initially by supply and then by destination, for the morning, midday, and evening time intervals.

2.1 Occupancy by Supply

Morning (6am to 9am)

Figure 2.1 displays weekday parking occupancy for the morning period between 6am and 9am. As shown, occupancy is well below capacity in most parts of the study area. Most off-street parking, including all private off-street parking was below half capacity. This was to be expected during the morning period as many businesses are not operating during this time. **Table 2.1** summarizes public parking occupancy by the three neighborhoods during weekday morning.

Table 2.1 - Weekday Morning Public Parking Occupancy by Neighborhood

Area	Parking Type	Weekday Morning
Barrio	On-Street Parking	53.0%
	Off-Street Public Parking	11.7%
	Total Public Parking	**45.1%**
Coastal Area	On-Street Parking	55.9%
	Off-Street Public Parking	32.9%
	Total Public Parking	**53.0%**
Village	On-Street Parking	43.4%
	Off-Street Public Parking	37.3%
	Total Public Parking	**42.0%**
Village (Other Parking Sources)	Off-Street NCTD Parking	25.5%
	Off-Street Private Parking	11.2%

While neighborhood-wide parking occupancies were generally around half, some scattered locations reached occupancies above 70%, with a few exceeding 85%. Those locations were primarily in residential parts of the study area along the coast and in the Barrio. Three public parking lots (all of them west of the LOSSAN rail corridor) also reached above 85% occupancy, including: 3093 Ocean Street, 2630-2698 Garfield Street, and Village Faire east lot. Comparatively higher parking utilization at this time was expected to occur in residential dominated areas and this was generally confirmed by the occupancies observed during this period. Residential parking demand peaks at night and overnight, and this collection period overlaps with the morning commute peak period, which is when residential parking demand initially begins to decrease.

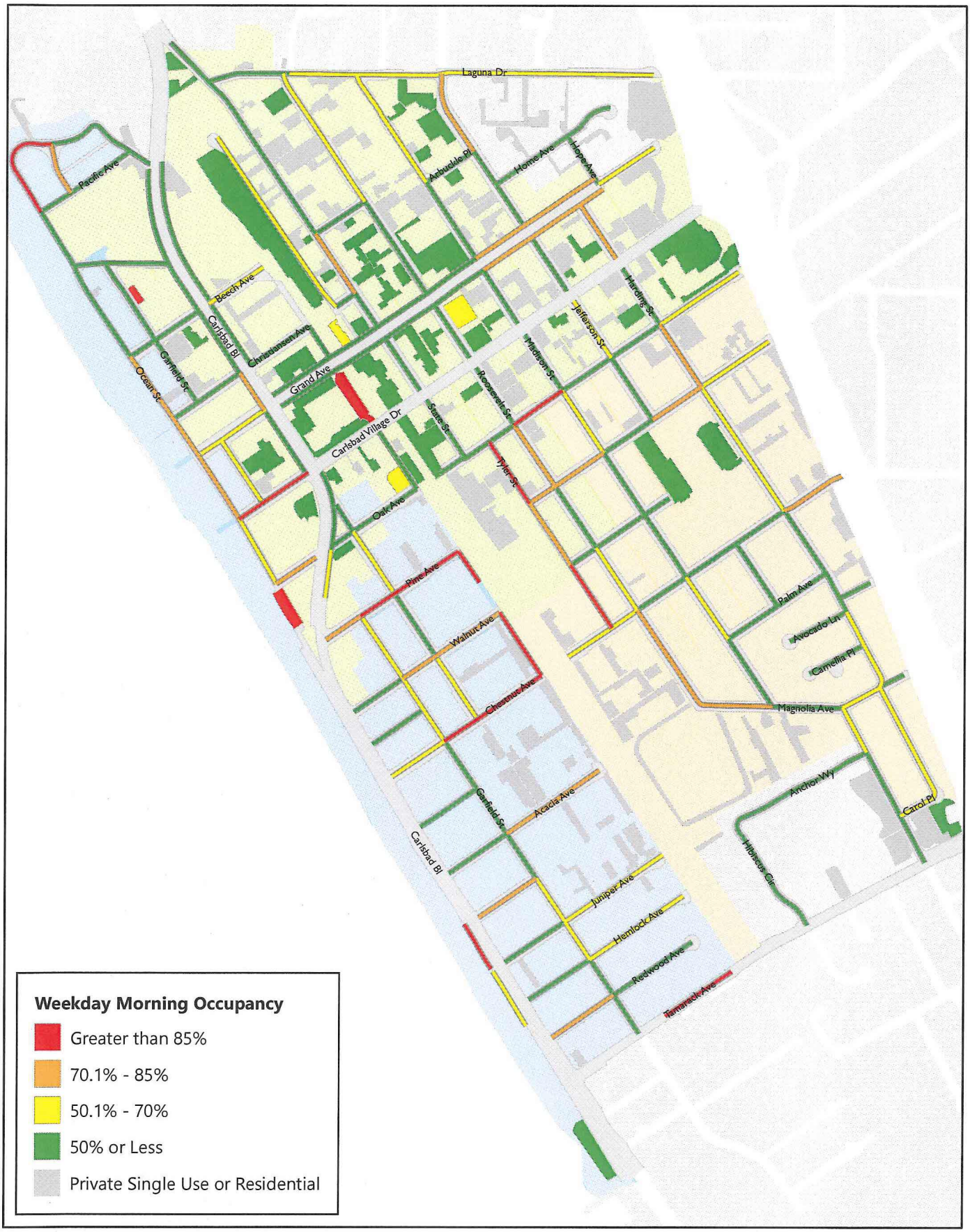


Figure 2.1
Weekday Parking Occupancy
Morning (6am - 9am)

Midday (10am to 1pm)

Figure 2.2 displays weekday parking occupancy for the midday period between 10am and 1pm. Occupancy during midday surges in the Coastal Area and many sections of the Village from the morning period, with an increasing number of on-street and off-street parking sources reaching greater than 85% occupancy. At the same time occupancies decrease in the residential dominated areas in the southern half of the study area. **Table 2.2** summarizes public parking occupancy by the three neighborhoods during weekday midday.

Table 2.2 - Weekday Midday Public Parking Occupancy by Neighborhood

Area	Parking Type	Weekday Midday
Barrio	On-Street Parking	51.0%
	Off-Street Public Parking	32.3%
	Total Public Parking	**47.4%**
Coastal Area	On-Street Parking	69.7%
	Off-Street Public Parking	100%
	Total Public Parking	**73.5%**
Village	On-Street Parking	69.4%
	Off-Street Public Parking	75.4%
	Total Public Parking	**70.7%**
Village (Other Parking Sources)	Off-Street NCTD Parking	34.9%
	Off-Street Private Parking	32.4%

Commercial parking, which is confined mostly to the Village, begins to peak during business hours which overlap entirely with the midday period. Off-street private parking occupancy is three times higher during weekday midday than weekday morning. Public parking occupancies (excluding NCTD parking) throughout the Village exceeds 70% during the midday. Occupancies are even higher in the Coastal Area, where both of its off-street public parking facilities reach 100% capacity (3093 Ocean Street and 3951-3999 Carlsbad Boulevard) and nearly three-quarters of all public parking being used. Many on-street parking locations in the northwest portion of the study area (west of the LOSSAN rail corridor and north of Chestnut Avenue) also reach occupancies higher than 85%.

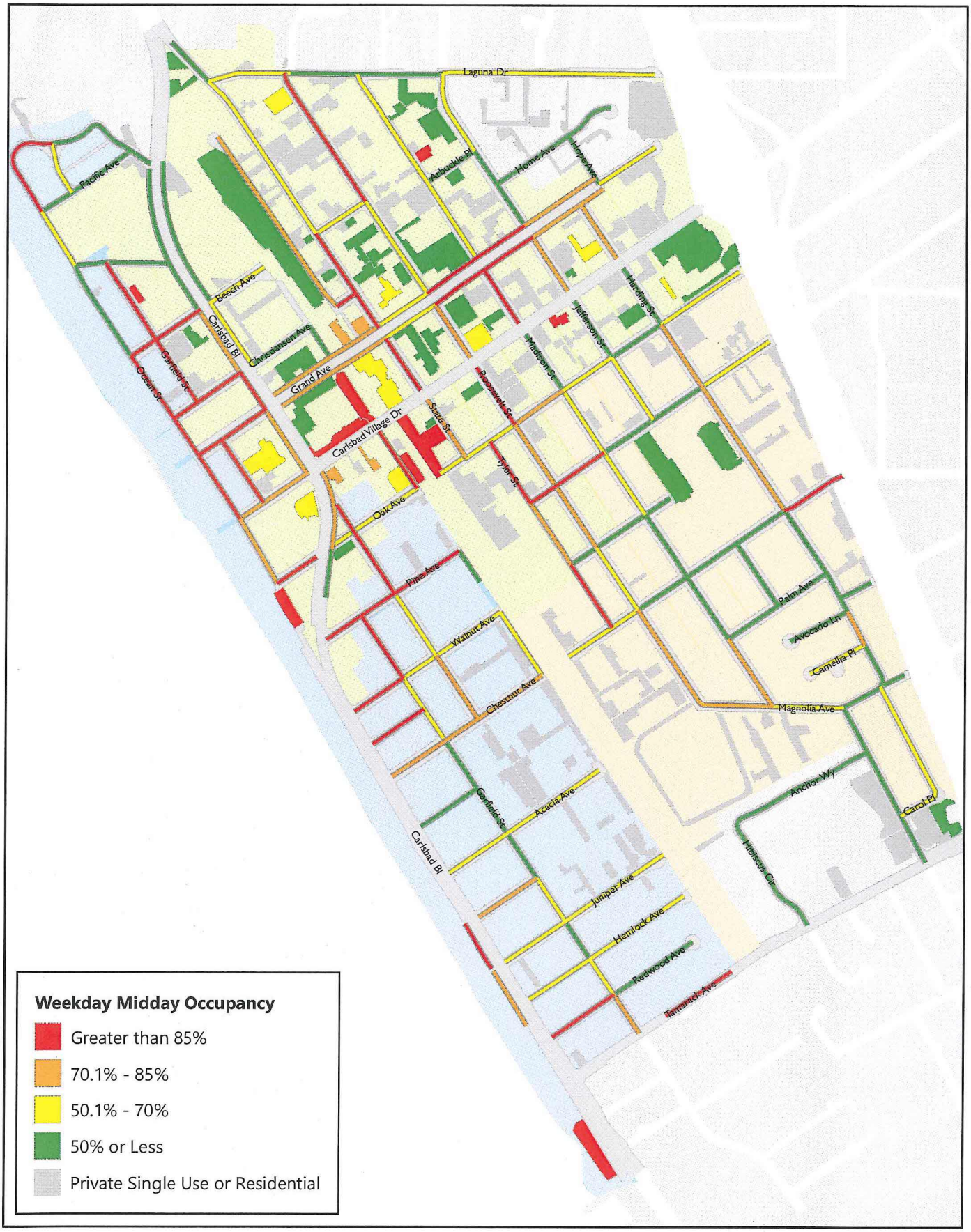


Figure 2.2
Weekday Parking Occupancy
Midday (10am - 1pm)

Evening (6pm to 9pm)

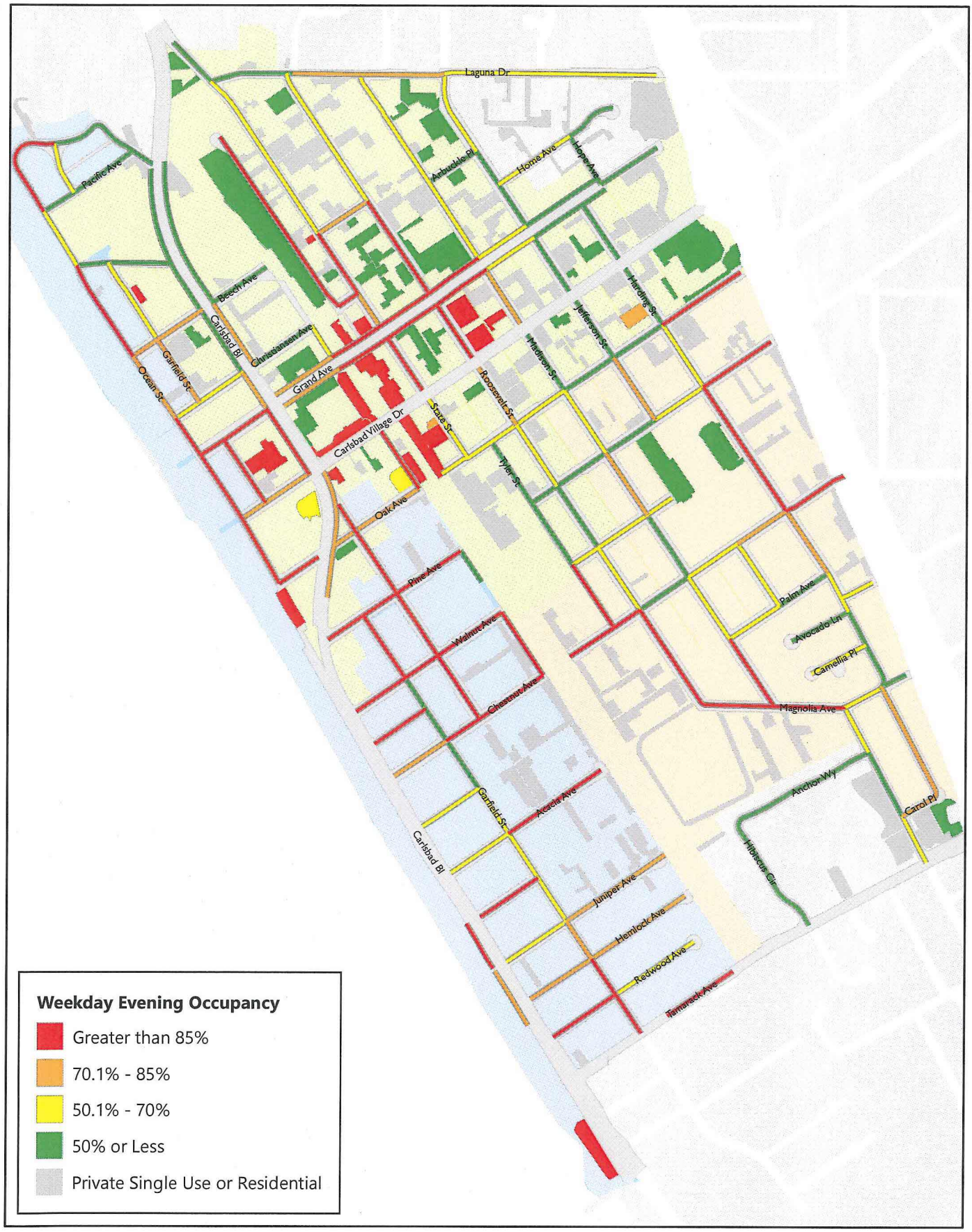
Table 2.3 summarizes weekday evening (6pm to 9pm) occupancies by neighborhood along with the occupancies of the earlier periods to facilitate comparison. As shown, neighborhood-wide occupancies increase from midday to evening in the Barrio (47% to 59%) and Coastal Area (74% to 80%), while remaining stable in the Village (71% to 69%), despite off-street parking occupancies rising to 93% from 75% in the midday.

Table 2.3 - Weekday Public Parking Occupancy by Neighborhood (All Periods)

Area	Parking Type	Weekday Morning	Weekday Midday	Weekday Evening
Barrio	On-Street Parking	53.0%	51.0%	66.9%
	Off-Street Public Parking	11.7%	32.3%	26.5%
	Total Public Parking	**45.1%**	**47.4%**	**59.2%**
Coastal Area	On-Street Parking	55.9%	69.7%	77.9%
	Off-Street Public Parking	32.9%	100%	95.9%
	Total Public Parking	**53.0%**	**73.5%**	**80.1%**
Village	On-Street Parking	43.4%	69.4%	62.2%
	Off-Street Public Parking	37.3%	75.4%	93.4%
	Total Public Parking	**42.0%**	**70.7%**	**69.4%**
Village (Other Parking Sources)	Off-Street NCTD Parking	25.5%	34.9%	32.2%
	Off-Street Private Parking	11.2%	32.4%	26.3%

Figure 2.3 shows weekday parking occupancy for the evening period. The exhibit confirms the sharp increase in off-street public parking demand in the Village, as numerous lots in the core of the Village are displayed at above 85% capacity.

While commercial-based parking demand tends to decline during this period, there are exceptions for some businesses like dining and drinking establishments, where the evening represents their peak demand period. The Coastal Area's parking supply continues to be in high demand, as many on-street block occupancies are above 85% and the occupancies of its two off-street parking lots remain well above 85%. This period also captures increasing parking demand in the residential areas to the east and south of the study area. This is consistent with the peak temporal patterns of residential generated parking demand. Residential parking demand begins to peak in the evening and continues overnight. Except for the Coastal Area, where residential densities are higher and its supply co-mingles with beach visitors, the other residential portions of the study area can absorb the increased parking demand without strain.



Downtown Carlsbad Parking Study

Figure 2.3
Weekday Parking Occupancy
Evening (6pm - 9pm)

2.2 Destination-Based Occupancy

Within urban settings such as the Village and Barrio, reliance on on-street parking and numerous small-supply parking lots scattered in various locations is typical. When an area's collective parking supply is composed of fragmented and scattered sources, it can often be difficult to conceptualize how many parking spaces are within a close walking distance of specific destinations. To overcome that limitation, an analysis approach was used for this report which summarizes the parking supply for each parcel (destination) within a 1/8 of a mile distance. An eighth of a mile approximates one long-sided block length or two short-sided block lengths in a typical street grid.

Since parking demand is typically not evenly distributed throughout a neighborhood, this analysis will also more effectively reveal hotspots within neighborhoods otherwise not captured by the neighborhood-wide summarized occupancies. For example, within the Coastal Area which had a weekday morning occupancy neighborhood-wide of 53%, there are numerous destinations within the neighborhood where the occupancy conditions experienced were much higher, in the 70% to 85% range.

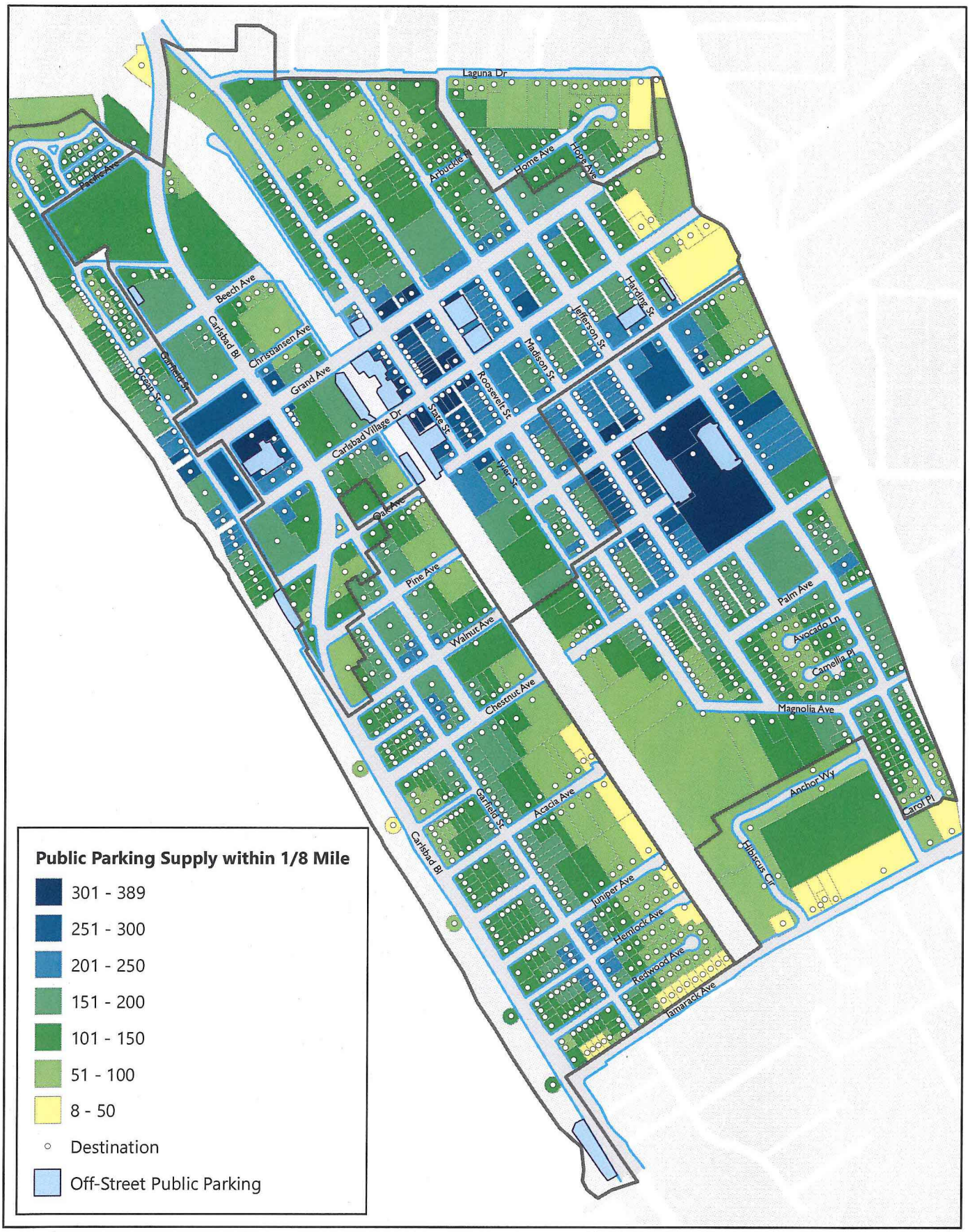
Figure 2.4 summarizes public parking supply to within 1/8 of a mile of every destination within the study area. The destination-based occupancy analysis and accompanying exhibits excludes NCTD parking and private parking occupancies despite being displayed in the preceding supply-based occupancy exhibits, because those sources are not available for the general use public parking and thus their inclusion does not contribute to an accurate representation of visitor public parking availability.

Morning (6am to 9am)

Figure 2.5 shows the parking occupancy within a 1/8 mile of each destination inside the study area during the morning period. During this period, nearly all destinations within the study area were below 85% occupancy. The Village area has very few businesses operating during this period, which largely explains the general abundance of parking and lower demand for parking (70% or less). The parts of the study area where occupancy is the highest (primarily in the 'optimal' 70% to 85% range) were in the coastal areas with higher residential densities. Commercial and single-family residential concentrated areas were generally unburdened during this period.

Midday (10am to 1pm)

Figure 2.6 shows the parking occupancy within a 1/8 mile of each destination inside the study area during the midday period. Parking occupancies exceed 85% during this period within some parts of the Coastal Area, primarily along Ocean Street and portions of Carlsbad Boulevard. Some destinations in the Village on the west edge of the LOSSAN rail corridor along Carlsbad Village Drive and Oak Avenue also reach above 85%. Much of the Village commercial core is between 70% to 85% occupancy during this time, consistent with the Village-wide occupancy during this time of 71%. Parking demand in primarily residential portions the study area to the south and east range between 50% and 70%.



Downtown Carlsbad Parking Study

Figure 2.4
Public Parking Supply within 1/8 Mile from Destinations (Excluding NCTD Parking)

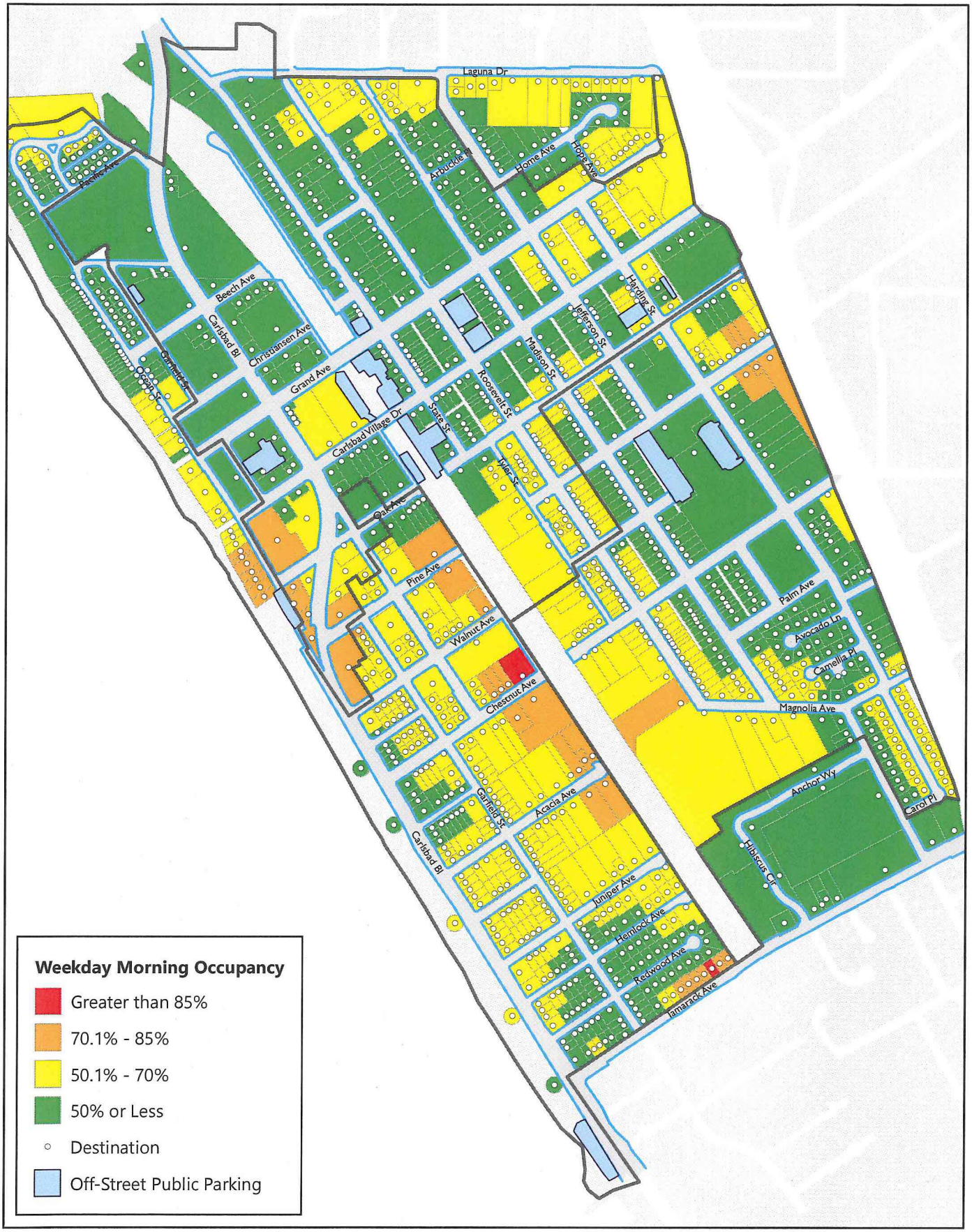


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Figure 2.5
Weekday Parking Occupancy by Destination
Morning (6am - 9am)

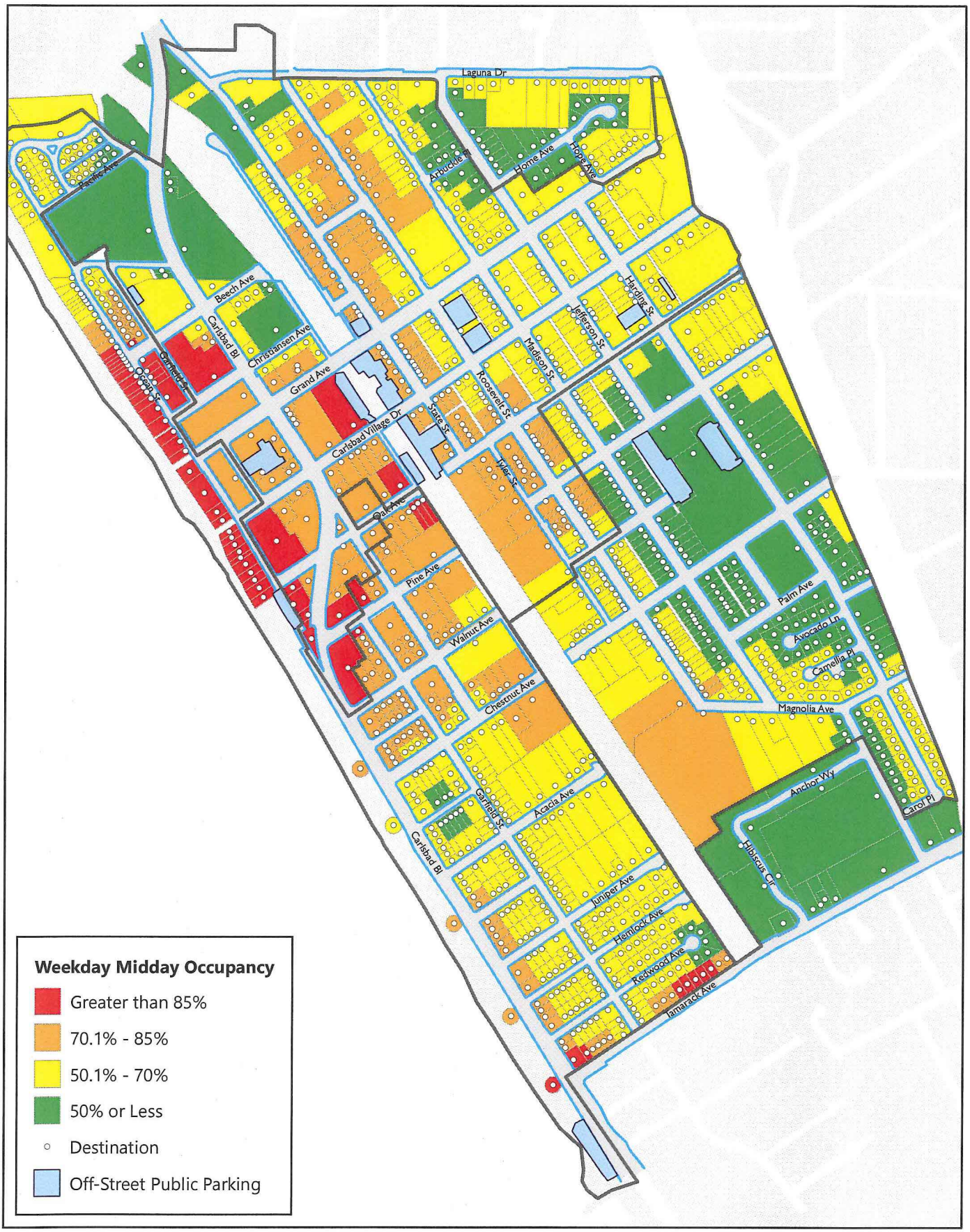

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Figure 2.6
Weekday Parking Occupancy by Destination
Midday (10am - 1pm)

Evening (6pm to 9pm)

Figure 2.7 shows the parking occupancy within a 1/8 mile of each destination inside the study area during the evening period. Parking demand during this period peaks the highest of the three weekday periods observed. Parking occupancy is greater than 70% throughout much of the Coastal Area, with greater than 85% occupancy conditions clustered between Grand Avenue and Walnut Avenue. Parking occupancy increases in the Barrio neighborhood-wide by 12% from midday to evening. As shown, some areas within the Barrio (around the Magnolia Avenue-Roosevelt Street junction) reach greater than 85% occupancy conditions.

Of the three periods analyzed, the evening period is unique in that captures both residential generated parking demand and commercial generated parking demand (in the evening, commercial-related parking demand is primarily generated from dining and drinking establishments and typically not from retail). The demand converging from these two sources is most likely to impact areas where residential land uses are adjacent to commercial land uses, such as in the Village core and the adjacent surrounding blocks.

Temporal Peak by Destination

Figure 2.8 shows the peak parking period of each destination based on its parking occupancy within 1/8 mile during the weekday three time periods. As shown, the evening period is the peak throughout most of the study area. In the northern reaches of the study area, and within the northern extent of the Barrio (between Carlsbad Village Drive and Chestnut Avenue, the peak period is midday. While the Coastal Area peaks in the evening, occupancies are above 85% for many destinations within that subarea during both the midday and evening. Destinations within the Village core, which also peaks in the evening, do not reach occupancies over 85% outside of its peak period.

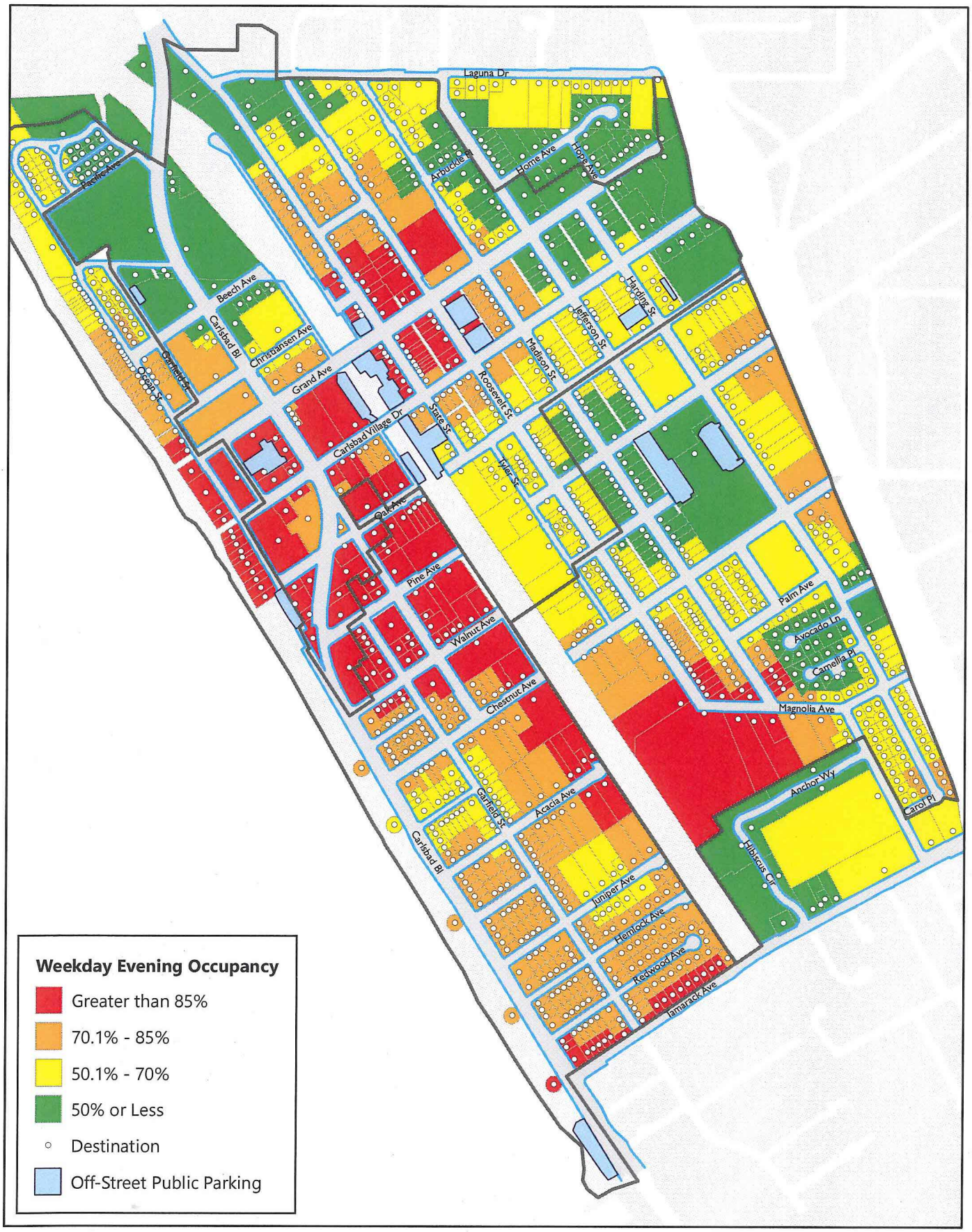

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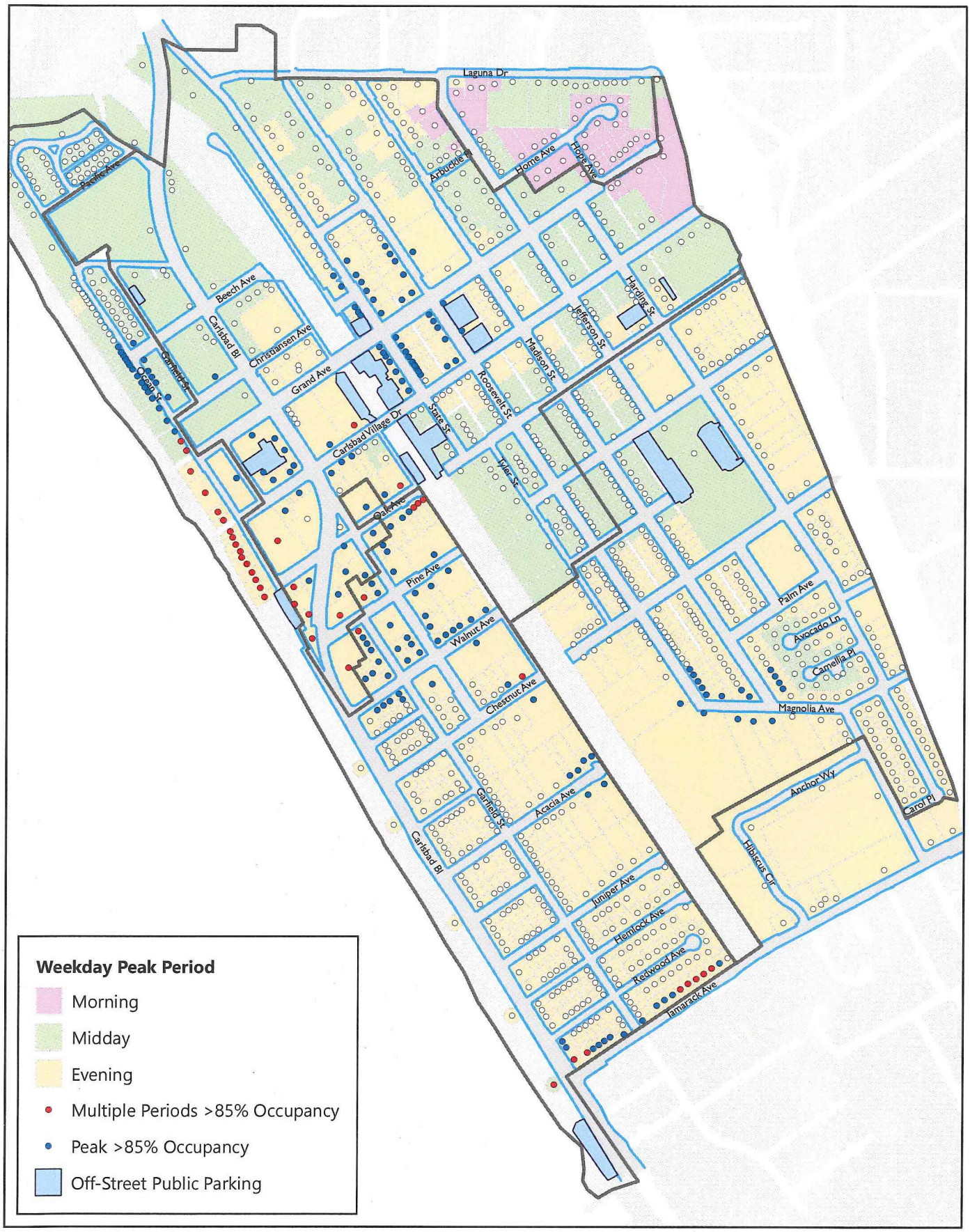
Figure 2.7
Weekday Parking Occupancy by Destination
Evening (6pm - 9pm)



Downtown Carlsbad Parking Study

Figure 2.8
Weekday Peak Period

3.0 Weekend Parking Occupancy

3.1 Occupancy by Supply

Morning (6am to 9am)

Table 3.1 summarizes public parking occupancy by neighborhood for the weekend morning period. Morning occupancies neighborhood-wide in the Barrio and Coastal Area are about half, similar to their weekday morning occupancies. Village parking occupancy, at 29%, is 13% lower than its weekday morning neighborhood-wide occupancy.

Table 3.1 - Weekend Morning Public Parking Occupancy by Neighborhood

Area	Parking Type	Weekday Midday
Barrio	On-Street Parking	61.9%
	Off-Street Public Parking	10.3%
	Total Public Parking	**52.0%**
Coastal Area	On-Street Parking	60.5%
	Off-Street Public Parking	33.5%
	Total Public Parking	**57.1%**
Village	On-Street Parking	33.1%
	Off-Street Public Parking	14.9%
	Total Public Parking	**28.9%**
Village (Other Parking Sources)	Off-Street NCTD Parking	13.5%
	Off-Street Private Parking	11.2%

Figure 3.1 shows the weekend parking occupancy for the morning period. Occupancies are generally below half throughout the study area. There are a few scattered blocks with higher occupancies within the Barrio and Coastal Area. Residential parking demand peaks at night and overnight and is low turnover, on weekends fewer people work so residual demand from overnight is expected to linger deeper into the weekend morning collection period. The 3093 Ocean Street parking lot does exceed 85% occupancy during this period, reflective of beach-related parking demand.
The significant decline in weekend morning parking demand within the Village during this time is expected, as it is off-peak for most retail establishments.

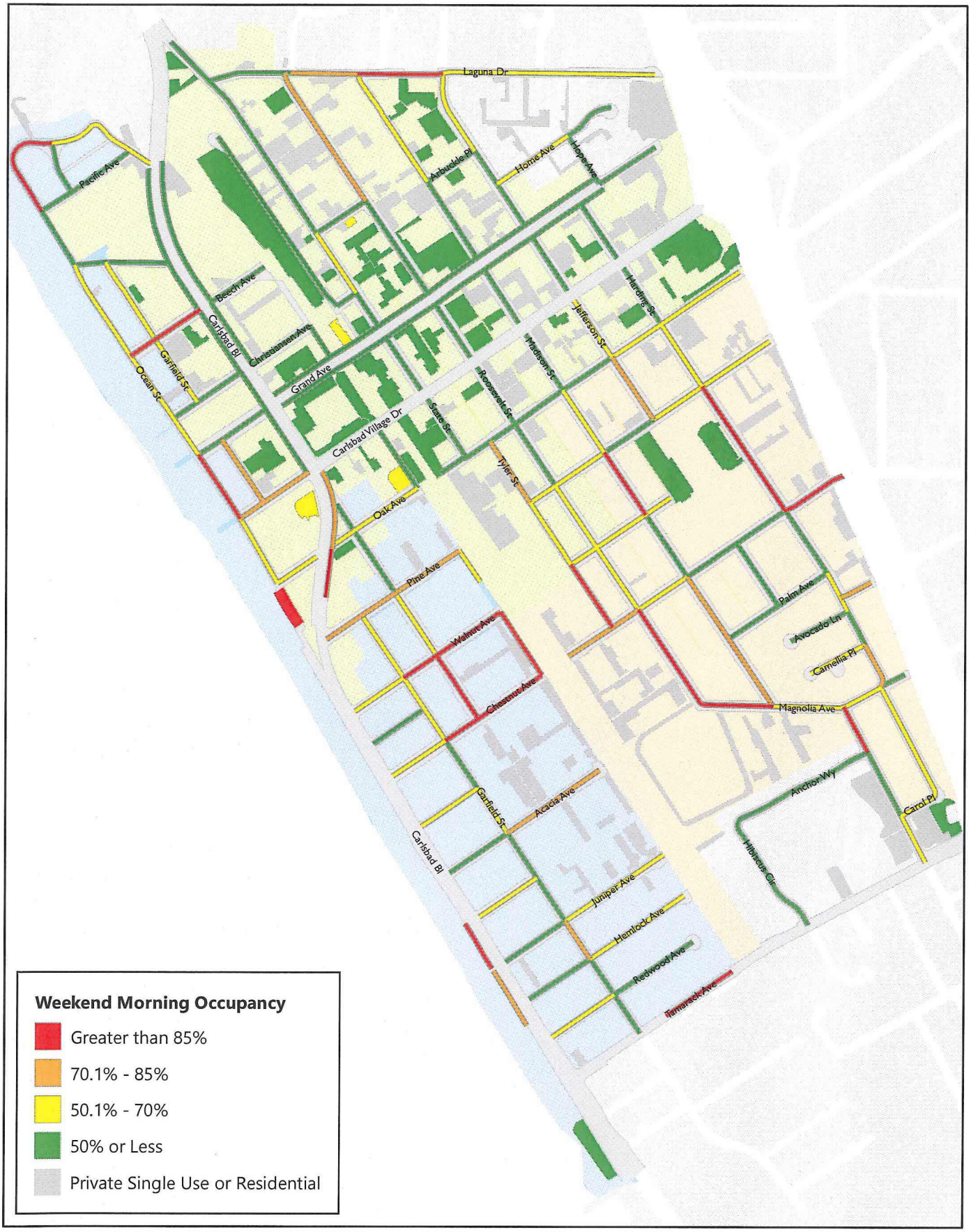


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Figure 3.1
Weekend Parking Occupancy
Morning (6am - 9am)

Midday (10am to 1pm)

Table 3.2 summarizes public parking occupancy by neighborhood for the weekend midday period. Parking demand sharply increases in the Village and Coastal Area, with the latter approaching 85% threshold levels neighborhood-wide.

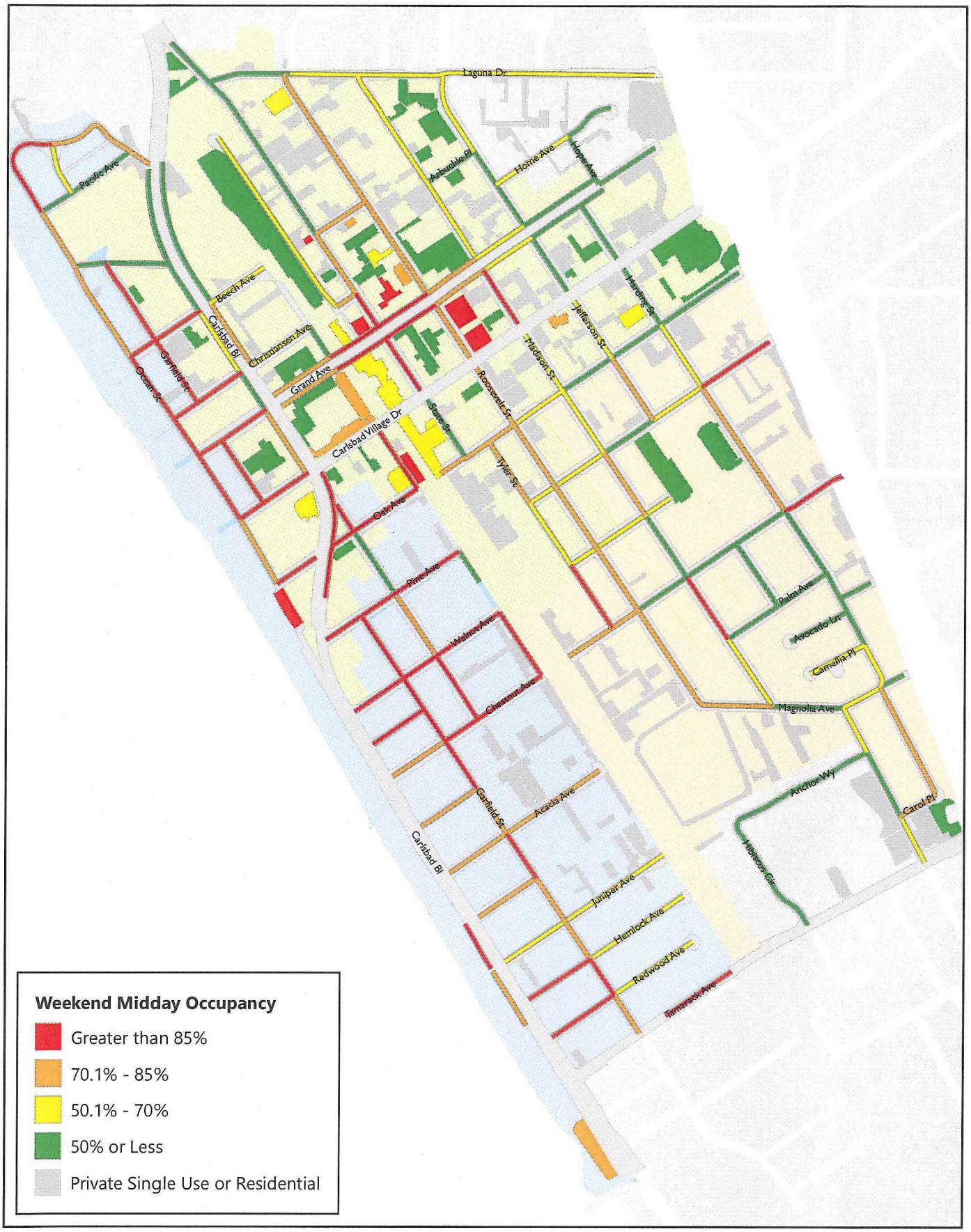
Table 3.2 - Weekend Midday Public Parking Occupancy by Neighborhood

Area	Parking Type	Weekday Midday
Barrio	On-Street Parking	58.5%
	Off-Street Public Parking	25.1%
	Total Public Parking	**52.1%**
Coastal	On-Street Parking	82.6%
	Off-Street Public Parking	81.2%
	Total Public Parking	**82.5%**
Village	On-Street Parking	65.7%
	Off-Street Public Parking	73.5%
	Total Public Parking	**67.5%**
Village (Other Parking Sources)	Off-Street NCTD Parking	28.4%
	Off-Street Private Parking	28.2%

The increase in parking demand within the Village and Coastal Area is evident in **Figure 3.2**, which shows most on-street parking blocks west of the LOSSAN rail corridor in either the greater than 85% (red) category or 70.1% to 85% (orange) categories. The Village core area includes several off-street parking lots reaching above 85% occupancy. While parking demand during the weekend midday was generally similar in magnitude to weekday midday within the Village core, midday parking occupancies throughout the Coastal Area is noticeably higher on the weekend (83% to 74%). Parking demand throughout the Barrio did not fluctuate from the weekend morning period.

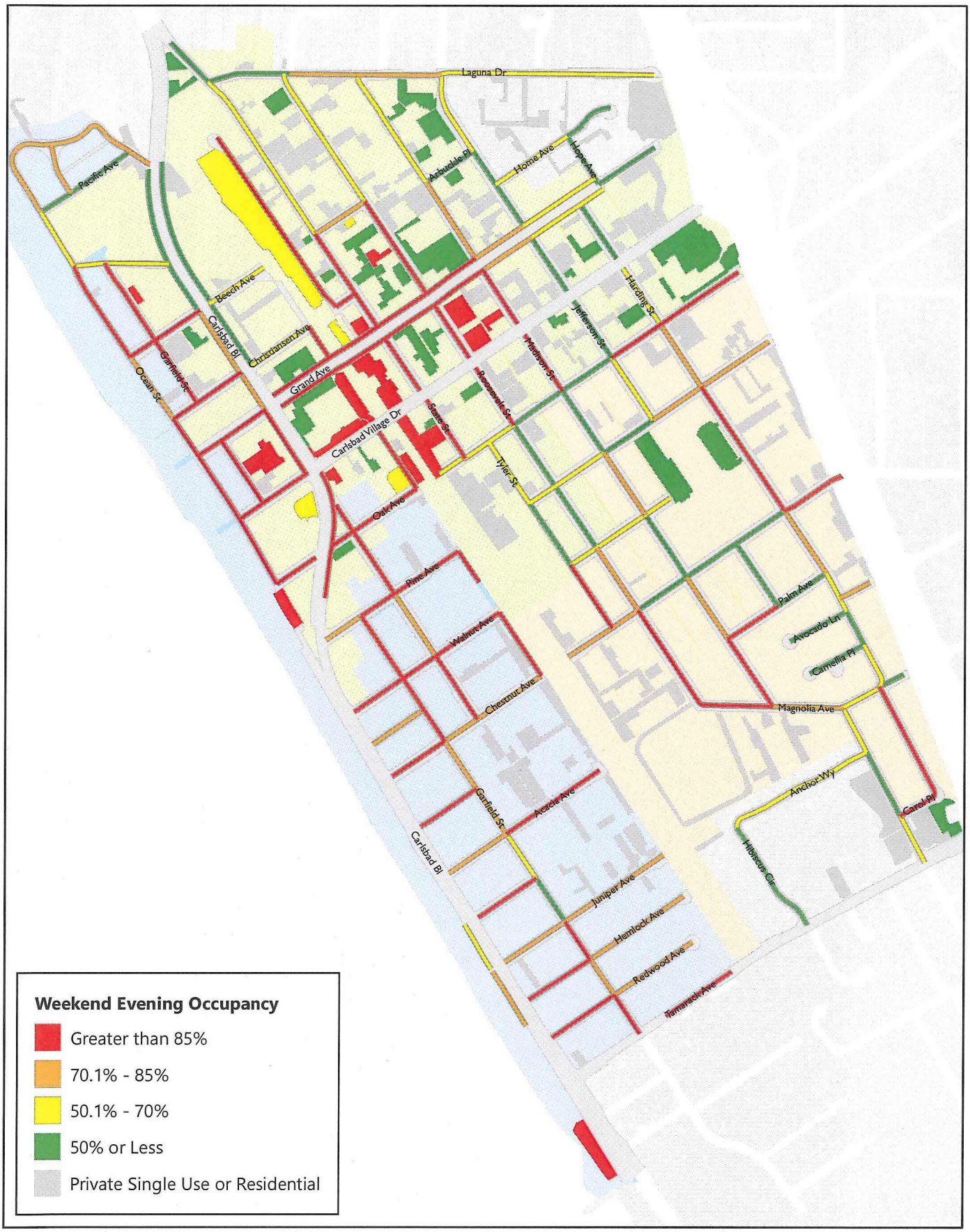
Evening (6pm to 9pm)

Figure 3.3 displays weekend parking occupancy for the evening period between 6pm and 9pm. During this period, parking occupancy is high throughout the Coastal Area and Village. Off-street parking facilities in both neighborhoods are at or near capacity. In the Village, NCTD-specific parking facilities, including the occupancy of the nearly 500-space Carlsbad Village Station parking facility, are above 60%, and almost double the utilization of their weekday peak. These parking lots, generally reserved for NCTD commuters, absorb some of the parking demand in the Village during the weekend evenings.



Downtown Carlsbad Parking Study

Figure 3.2
Weekend Parking Occupancy
Midday (10am - 1pm)



Downtown Carlsbad Parking Study

Figure 3.3
Weekend Evening Occupancy
Midday (6pm - 9pm)

Table 3.3 summarizes weekend evening (6pm to 9pm) occupancies by neighborhood along with the occupancies of the earlier periods to facilitate comparison. As shown, neighborhood-wide occupancies in the Coastal Area surpass the 85% threshold. Village occupancies also peak, reaching over three-quarters neighborhood-wide with the cumulative occupancy of the off-street public parking at over 90%. The noticeable spike in utilization of NCTD parking (65%) helps to manage the overall peak parking demand in the Village.

Table 3.3 - Weekend Public Parking Occupancy by Neighborhood (All Periods)

Area	Parking Type	Weekend Morning	Weekend Midday	Weekend Evening
Barrio	On-Street Parking	61.9%	58.5%	64.8%
	Off-Street Public Parking	10.3%	25.1%	13.0%
	Total Public Parking	**52.0%**	**52.1%**	**54.9%**
Coastal Area	On-Street Parking	60.5%	82.6%	84.9%
	Off-Street Public Parking	33.5%	81.2%	100%
	Total Public Parking	**57.1%**	**82.5%**	**86.8%**
Village	On-Street Parking	33.1%	65.7%	70.7%
	Off-Street Public Parking	14.9%	73.5%	93.0%
	Total Public Parking	**28.9%**	**67.5%**	**75.8%**
Village (Other Sources)	Off-Street NCTD Parking	13.5%	28.4%	64.6%
	Off-Street Private Parking	11.2%	28.2%	27.4%

For the Coastal Area and Village, the neighborhood-wide weekend peaks were each higher in magnitude than their weekday peaks by about 6%. The Barrio's neighborhood wide parking demand remains consistent over all three weekend periods nor does not fluctuate very much from its weekday occupancies.

3.2 Destination-Based Occupancy

Morning (6am to 9am)

Figure 3.4 shows the parking occupancy within a 1/8 mile of each destination inside the study area during the morning period. As shown, the parking demand summarized by neighborhood is not distributed evenly geographically. Within the Barrio and Coastal Area, where neighborhood-wide occupancy was slightly over half, a cluster of destinations around Roosevelt Street/Magnolia Avenue and Chestnut Avenue, in each neighborhood respectively, where occupancy conditions are greater than 85%, and other clusters where occupancy conditions are between 70% and 85%.

Midday (10am to 1pm)

Figure 3.5 shows the parking occupancy within a 1/8 mile of each destination inside the study area during the midday period. Within much of the Coastal Area, occupancy conditions are greater than 85%. The Village core also shows high occupancies, clustered around Roosevelt Street and Grand Avenue. While the Barrio's neighborhood-wide occupancy remains consistently around 52%, occupancies along the properties fronting the LOSSAN rail corridor are between 70% and 85%.

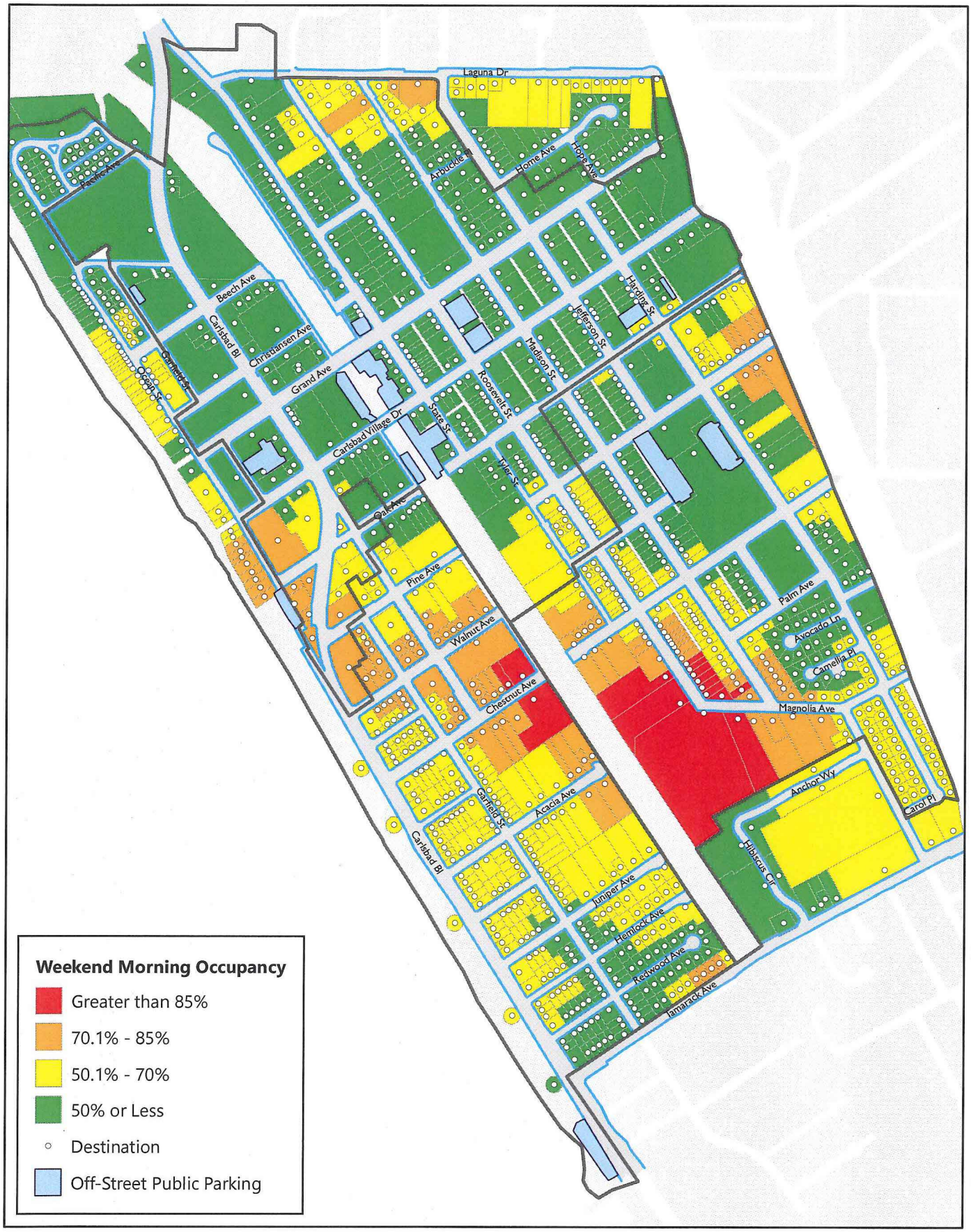


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Figure 3.4
Weekend Parking Occupancy by Destination
Morning (6am - 9am)

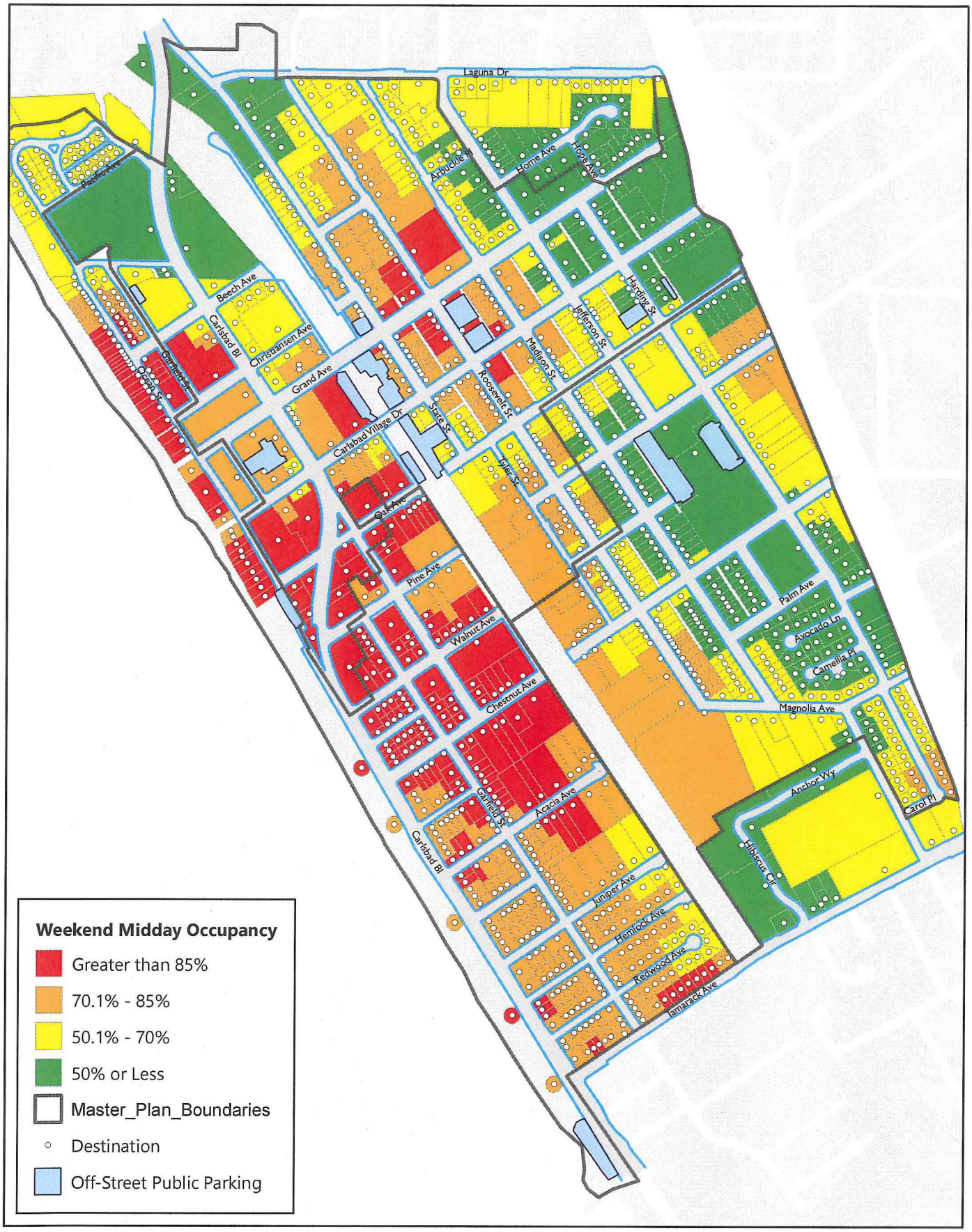


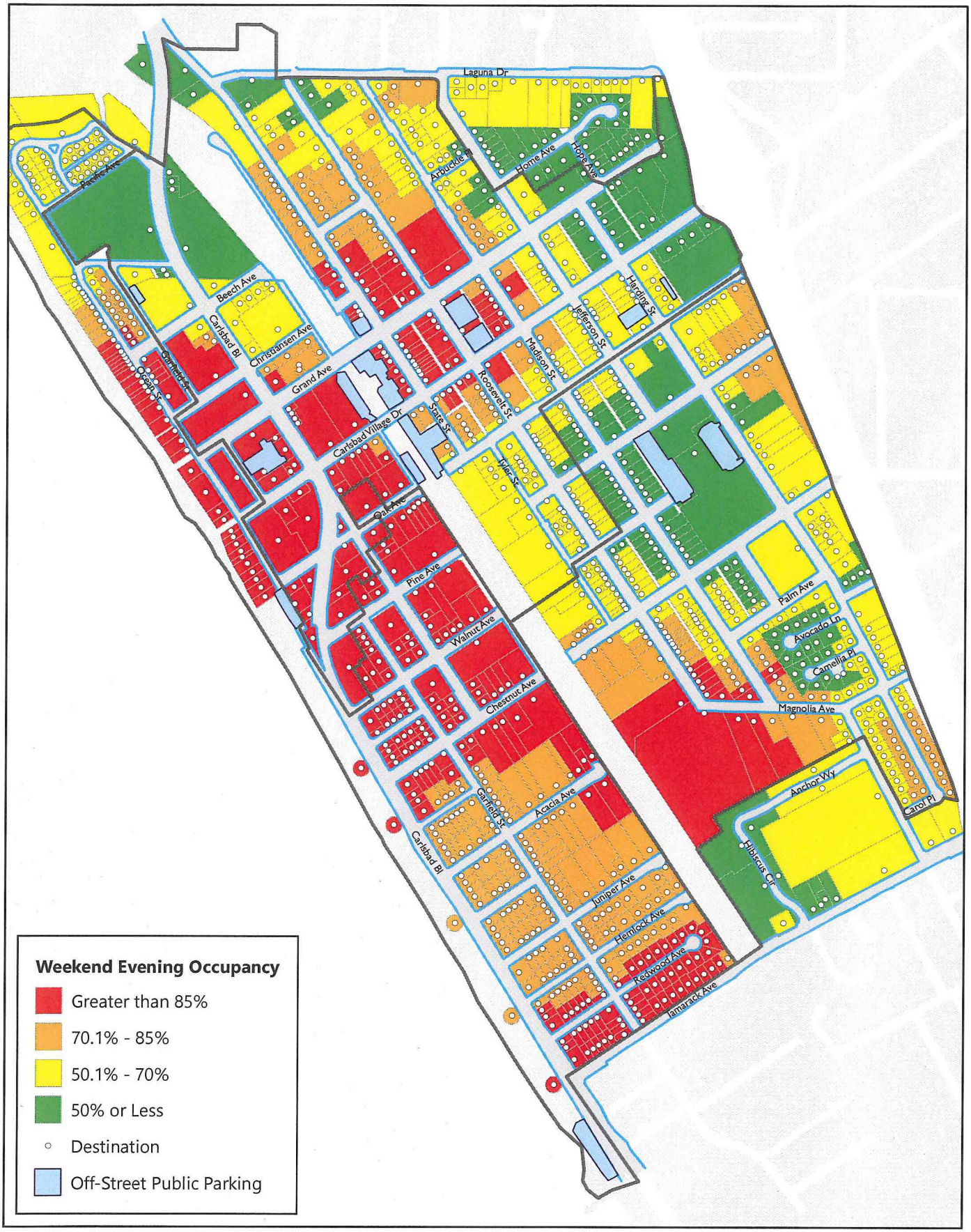
Figure 3.5
Weekend Parking Occupancy by Destination
Midday (10am - 1pm)

Evening (6pm to 9pm)

Figure 3.6 shows the parking occupancy within a 1/8 mile of each destination inside the study area during the evening period. During this period, which is the overall peak for the Coastal Area (slightly above the 85% threshold neighborhood-wide), most of the destinations west of the LOSSAN rail corridor between Beech Avenue and Chestnut Avenue experience occupancy conditions above 85%. The Village's cluster of 85% occupancy or greater from weekend midday increases in coverage in the weekend evening, and the greater than 85% cluster within the Barrio at Roosevelt Street and Magnolia Avenue, present during the weekend morning period, reemerges during the weekend evening period.

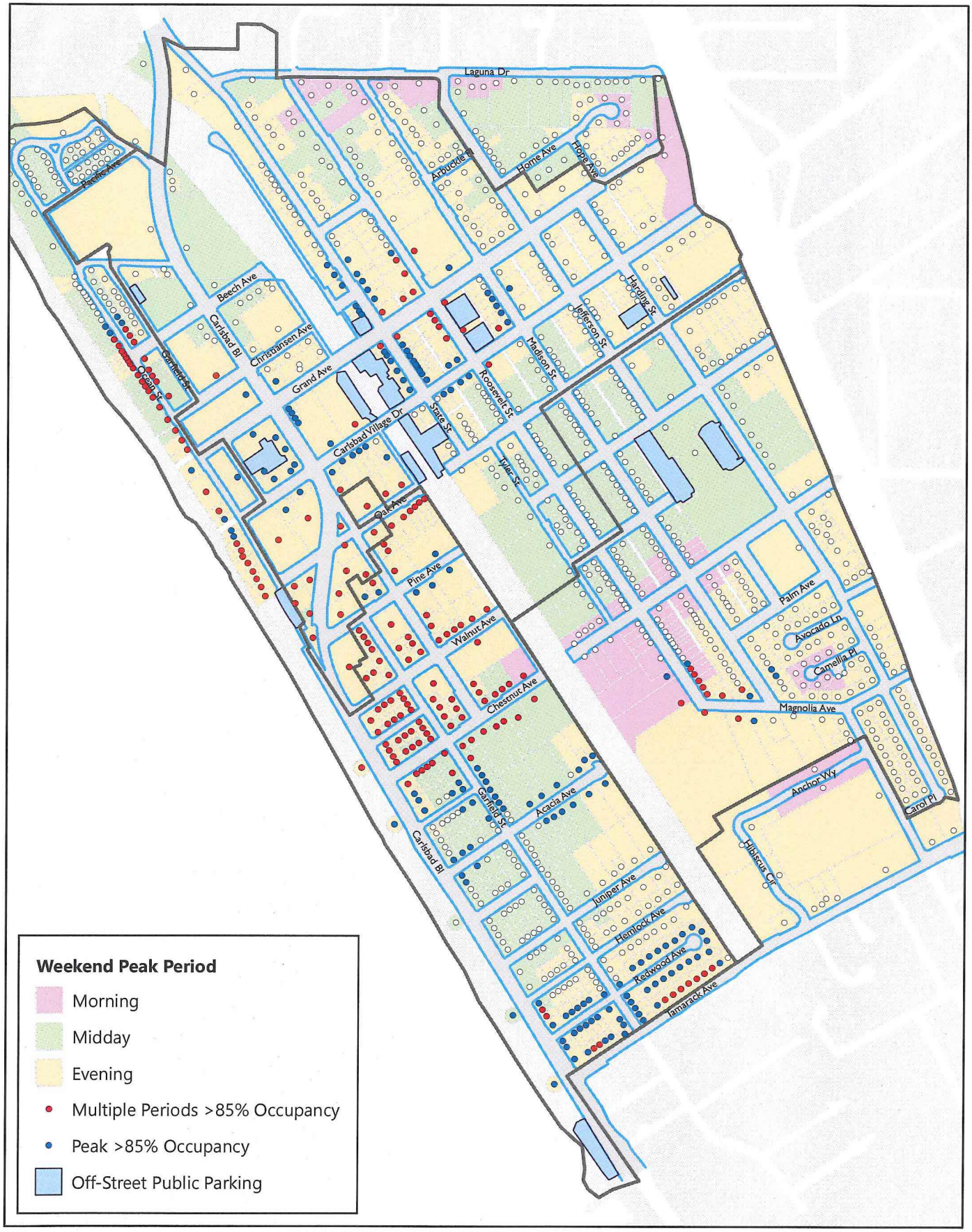
Temporal Peak by Destination

Figure 3.7 shows the peak parking period of each destination based on its parking occupancy within 1/8 mile during the weekend three time periods. As shown, the evening period is the peak within large portions of three neighborhoods analyzed as was the case during the weekday. While the previous section pointed out the magnitudes peak demand is higher on the weekend, compared to weekday, the exhibit reveals more destinations within the study area experience 85% conditions on the weekend compared to weekday, and more destinations experience multiple observation periods where parking occupancy was above the 85% threshold.



Downtown Carlsbad Parking Study

Figure 3.6
Weekend Parking Occupancy by Destination
Evening (6pm - 9pm)



Downtown Carlsbad Parking Study

Figure 3.7
Weekend Peak Period

4.0 Summary and Parking Management Recommendations

This section summarizes key findings and provides recommendations to manage parking demand into the short term (two-year horizon) and long term (five-year horizon) timeframes.

4.1 Key Findings

Findings from the report and review of other documents including the current parking in-lieu fee program, relevant finances, and parking lease agreements are provided below are as follows:

1. Weekday parking demand throughout the Village and Coastal Area ramps up beginning in the midday with peaks generally occurring in the evening period in most parts of the study area. The highest parking demand is west of the LOSSAN rail corridor, in particular between Beech Avenue and Walnut Avenue, where parking occupancies are greater than 85% for multiple periods. Within the Village, the destinations along State Street and Roosevelt Street (between Beech Avenue and Carlsbad Village Drive) also experience greater than 85% demand during the weekday evening period.
2. Weekend parking demand follows similar temporal demand pattern as weekday, though at higher intensities. Most of the Coastal Area and Village west of the LOSSAN rail corridor experiences very high parking occupancies (greater than 85%) through both the midday and evening periods. Destinations within the Village core area around State Street, Roosevelt Street, Grand Avenue and Carlsbad Village Drive also have very high occupancies through the weekend midday and evening periods.
3. Some low turnover was observed in high demand locations within non-residential portions of the Village and Coastal Area. In some instances, vehicles were parked for five or more hours. Low turnover results in fewer total visitors being able to access the destinations within the study area.
4. The parking spaces along Garfield Street, between Grand Avenue and Carlsbad Village Drive are public parking spaces, though are ambiguously marked. Clear signage should be provided, indicating that these spaces are available to the general public.
5. Parking fees are one-time fees, therefore there is a structural deficit in the funding expended per year versus collected. The interest earned from the parking in-lieu fee program only covers 50% of the cost of renting parking spaces from North County Transit District.
6. Parking citation revenue, which comprised about 50% of annual parking-related revenue, are currently being deposited into the general fund.
7. Revenues from the current parking in-lieu fee program are insufficient to be sustainable in covering the costs of parking management in the long term. Additional funding or parking revenue sources should be identified.
8. Existing temporary expansion of outdoor uses are not significantly impacting the parking supply, however, following the cessation of pandemic authorizations curb cafes and outdoor activation that results in a loss of off-street parking would need to pay the applicable fees and obtain permanent authorization.

4.2 Parking Recommendations

The earlier iterations of the Parking Management Plan included recommendations that could be implemented to increase the supply and better manage the utilization of parking in the study area. Those recommendations were reviewed and refined as appropriate based on findings of this report, understanding of parking management best practices, and the financial status of the City's parking program. These findings should also be revisited with each subsequent update of this report.

Near-term recommendations (within two years):

1. Consider restriping Grand Avenue, between State Street and Jefferson Street to convert parallel parking locations to angled parking to gain additional on-street parking spaces. Depending on the preferred width of the re-striped parking spaces (existing angled parking spaces along State Street range from 10' to 14' along the curb) approximately between 12 and 25 parking spaces could be gained through the restriping. This recommendation would also necessitate the reduction of Grand Avenue to one travel lane per direction.
    a. Restriping existing angled parking spaces along Grand Avenue east of State Street to 10' could create a gain of approximately another 16 parking spaces. In total, 41 parking spaces could be gained along Grand Avenue between State Street and Hope Avenue if all existing and potential angled parking was restriped to the 10' width along the curb.
2. Direct staff to research the costs and options for metered parking installation and the establishment of a Parking Management District, and the costs of increasing parking enforcement. Metered parking is strongly recommended in areas with high commercial activity, such as the area in the Village bounded by Beech Avenue, Jefferson Street, and Pine Avenue, which may be impacted by low parking turnover behavior from nearby beach and residential generated parking. The installation of metered parking is not contingent upon the formation of the Parking Management District.
3. Direct staff to solicit request for proposals to comprehensively update the Parking Management Plan. The intention is not to develop a completely new plan, but rather to update the existing plan to reflect current conditions. This update should include feasible and implementable short-term and long-term parking mitigation measures, as well as an update to the current parking in-lieu fee program.
4. Update the parking in-lieu fee program to ensure sustainable finances. The update should also take potentially consider factoring in the cost to construct a parking structure if monitoring determines one should be necessary in the future.

Long-Term (2-plus years):

1. If a Parking Management District is established, it is anticipated increases in parking revenues from metered parking and an updated in-lieu fee program. Consider establishing an employee parking permit program and designated employee parking areas with the anticipated increase in parking revenues. This parking supply can be leased from NCTD, especially during night and weekend when there is lower transit parking demand and high restaurant and retail employee parking demand. This program would also ensure that employees do not park in more desirable parking areas closer to businesses for an extended period.
2. Consider providing local neighborhood shuttle services within the Parking Management District. The shuttle services would be funded by fees collected from the parking meters and citations. The shuttle services would also provide connectivity between employee parking area and their respectively location of employment.
3. If sufficient funding is available and demand in the Village and Coastal Area warrants it, consider constructing a parking structure. The City-owned parking lot at 3045 State Street parking lot is one potential location that could serve demand in both areas. Automated parking structures are typically safer, can be constructed on a smaller footprint and require less staffing than a traditional parking structure.