AUGUST
2022

FINAL



DOWNTOWN CHULA VISTA PARKING DISTRICT

PARKING MANAGEMENT PLAN



PREPARED FOR

CITY OF CHULA VISTA

City of Chula Vista
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Chula Vista, CA 91910

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Executive Summary

The Downtown Parking Management Plan (Downtown PMP) analyzes existing and projected future parking conditions within the Downtown Chula Vista Parking District (Parking District) and provides a series of recommendations to optimize parking facilities and parking availability throughout the Parking District. The objectives of the study are as follows:

- Develop a more holistic understanding of public parking demand within the Parking District, accounting for how the demand varies spatially, temporally, and is specific to various destinations within the study area.
- Assess the City's parking infrastructure and operational practices.
- Forecast near-term parking demand within the project study area based on historical growth patterns.
- Provide recommendations to efficiently utilize parking resources and manage future parking demand.

Data collection, including a parking inventory, occupancy counts, and a series of in-person and on-line surveys of Parking District users, was completed primarily during the summer and fall of 2018 and the results were documented in the Existing Conditions Report, which was completed in June 2019. The parking data and surveys, conducted prior to statewide stay-at-home orders in connection with the COVID-19 global pandemic, remain valid for the purposes of the study and its recommendations. Since most businesses were closed during the stay-at-home orders, parking patterns were significantly disrupted; therefore, the data from 2018 is more typical of normal operations.

The data collected showed that there is adequate parking supply for existing conditions. "Adequate" parking supply reflects no more than 85% occupancy within a 1/8-mile radius. Future parking demand was estimated based on a review of entitled projects in the Parking District and a projection of potential development. If redevelopment occurs as modeled in this analysis, demand for an additional 218 spaces would be generated. The recommendations in the Downtown PMP support this eventuality through increased parking fees, establishment of a capital reserve fund, and re-evaluation of in-lieu fees collected from new development to fund the construction of future parking facilities.

The Downtown PMP included a series of surveys to track the development and evolution of the Curb Café[1] program along Third Avenue to document its effect on parking supply. The Curb Café program has a sunset date of July 31, 2023, and the Downtown PMP provides a series of recommendations, if the City considers extending the sunset date. The Downtown PMP also includes research and analysis on Electric Vehicle (EV) use in Chula Vista, the South Bay, and San Diego County to project EV parking demand and to develop criteria for the siting of EV charging stations in the Downtown area.

The Downtown PMP makes the following recommendations:

[1] Outdoor dining areas within the public right-of-way for restaurants, bars, and breweries. The Curb Café structures temporarily replace existing metered spaces along Third Avenue in accordance with Ordinance No. 3508, which modified CVMC Section 12.28.30.

Recommendation	Rationale	Benefits
1. Convert All Parking District Meters (Except Norman Park) to Smart Meters	Current parking meters do not accept more convenient forms of payment (credit card), thereby discouraging some users.	Increases the utility of parking meter infrastructure, is more convenient for users and provides easier enforcement.
2. Shift Parking Enforcement Time from 9 AM – 6 PM to 10AM - 8 PM	The current hours of parking enforcement do not coincide with the operating hours of most businesses along Third Avenue.	Facilitates parking turnover between 6 PM and 8 PM and encourages use by patrons/shoppers.
3. Re-assess Parking User Fees Meters: $0.75/hour Surface Lots: $0.50/hour	Current parking user fees are insufficient to support credit card payments.	Provides sufficient revenue to support credit card payments and optimizes parking turnover.
4. Update Wayfinding and Information Signage within the Parking District	Parking information signage within Parking District is limited and inconsistent.	Improved information about parking locations and availability for visiting motorists.
5. Revise Downtown In-Lieu Parking Fee Program	Existing In-Lieu Parking Fee program does not meet the needs of expected costs of providing for future parking demand.	Aligns In-Lieu Parking Fee program with costs of providing for future parking demand.
6. Facilitate Non-Vehicular Transportation Modes to the Parking District	Limited end-of-trip facilities for bicycles and micro-mobility and limited pedestrian and transit stop amenities within Parking District	Facilitates usage of other forms of transportation to access destinations within the Parking District, reducing parking demand.
7. Park Plaza Parking Structure Improvements and Maintenance Institute parking fees: $0.50/hour	The City is now responsible for Park Plaza parking structure maintenance and repairs.	Provides funding for maintenance and operation and to make improvements to the largest parking facility within the Parking District. Facilitates parking turn-over
8. Curbside Management	Lack of short-term parking and commercial loading locations along Third Avenue	Accommodates a variety of users, each with varying peak demand times. Reduces double-parking along Third Avenue
9. Modify Parking Restrictions at Norman Park Senior Center Parking Lot Remove meters, increase time limit to 4 hours.	Current time restrictions (two hours) are not compatible with Norman Park Senior Center activities.	Facilitate access to and use of the center.

Recommendation	Rationale	Benefits
10. Demand Management Plans for Large Events	Event attendees may not be aware of parking locations for large public events held in Downtown Chula Vista.	Increases utilization of available parking spaces. Improves event attendee perception of parking within the Parking District. Reduces congestion from motorists searching for parking spaces.
11. Expansion of Parking District Boundary to include all existing parking meters	Approximately 21 parking meters are located to the north of the Parking District boundaries, but which are managed in the same manner as meters inside the Parking District.	All meters are encompassed within the Parking District, facilitating management.
12. Establish funding mechanisms to accommodate future demand.	Approximately 200 additional spaces will be needed in the future if redevelopment occurs as projected.	Implementation of capital reserve fund and recommended changes to the in-lieu fee program will support future construction of parking facilities.
13. Monitor and make minor adjustments to the Curb Café program if it is extended beyond July 31, 2023 sunset date.	Review of implementation and impacts identified several measures to improve administration of the program. Continued monitoring is suggested to address effects on parking availability and to ensure Curb Cafés remain attractive and structurally sound.	Monitoring will help avoid potential parking availability impacts and other recommendations will clarify operation of the program.
14. Provide additional Electric Vehicle Charging Stations (EVCS) in public parking lots and monitor EVCS use.	The City is committed to achieve its Greenhouse Gas (GHG) emission reduction goals and wants to support and encourage the use of electric vehicles. Additional charging stations are needed to accommodate and expected increase in demand.	Establishes EVCS siting criteria, technical specifications, and monitoring procedures to support future EVCS installation and operation.

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1.0 Introduction

1.1 Context

This study analyzes existing and projected future parking conditions within the Downtown Chula Vista Parking District (Parking District) and provides recommendations to manage and accommodate parking demand within the Parking District. The analysis of near-term parking demand considers historical development activity, the Parking District's current parking demand patterns, opportunities for new parking supply and/or more efficient supply management, and the effect of emerging mobility options. This study supersedes the 2007 parking management study. The 2007 study recommended expansion of the Parking District, which was implemented in 2009 by Ordinance 3139.

The primary objective of this study is to develop strategies to ensure abundant existing and future access to Downtown Chula Vista for all of the various user groups, including visitors, residents, businesses, and commuters. This study, which provides a road map intended to help the City achieve this goal, involved the following:

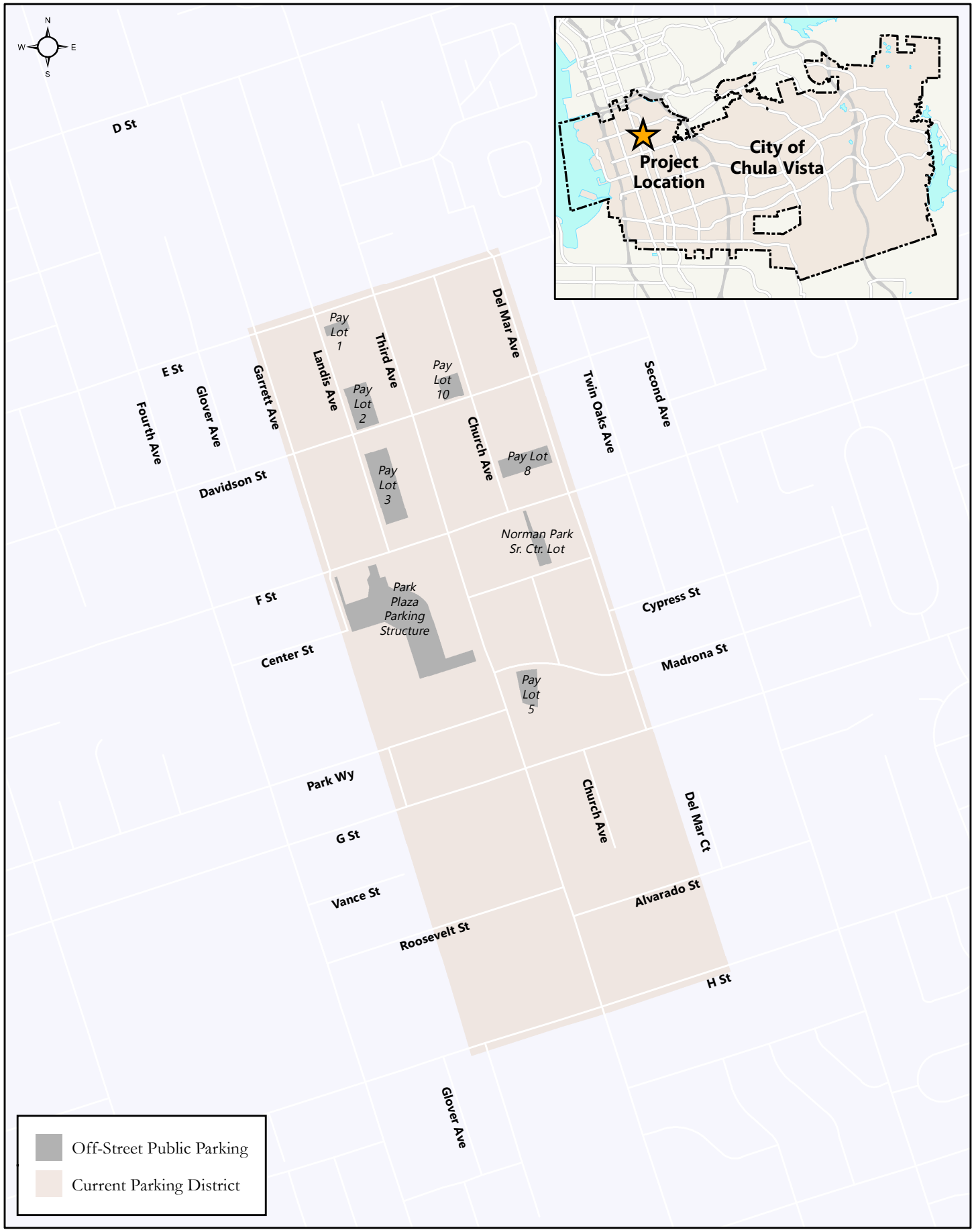
- Developing a more holistic understanding of public parking demand within the Parking District, accounting for how the demand varies spatially, temporally, and is specific to various destinations within the study area.
- Assessing the City's parking infrastructure and operational practices.
- Forecasting near-term parking demand within the project study area based on historical growth patterns.
- Providing recommendations to efficiently utilize parking resources and manage future parking demand.

During this study, input was solicited from the visitors to the Parking District, the business community, and City staff. This was supplemented by additional information obtained from a careful review of the previous study. These recommendations are documented in this report and were also considered in the development of the proposed recommendations.

1.2 Location

The City of Chula Vista (City) is in southern San Diego County and is the second largest city in the County. The City occupies approximately 50 square miles, extending from San Diego Bay in the west, to the foothills of the Jamul and San Ysidro Mountains in the east.

Figure 1.1 displays the present Parking District boundary. Downtown Chula Vista is in the northwest quadrant of the City, and concentrated around Third Avenue, where between E Street and H Street the corridor has retained much of its traditional "main street" character. The Parking District, plus the surrounding few blocks which comprise the remainder of the project study area, contain all the City operated parking meters and other time-limited parking serving Downtown Chula Vista.



Downtown Chula Vista Parking District
Parking Management Plan

Figure 1-1
Project Study Area

1.3 Report Organization

Following the introductory chapter, this study is organized into the following chapters:

Chapter 2 – Existing Parking Conditions documents existing parking conditions within the study area. The chapter inventories the Parking District's parking infrastructure, reports on parking occupancy and turnover, (as collected in August and September of 2018), considers other forms of mobility present within the study area, and examines the City's current In-Lieu Parking Fee program.

Chapter 3 – Community Outreach: summarizes the input received from all stakeholder engagement efforts undertaken during the study, which included the administration of survey questionnaires to the public and business community, presence at community events, and facilitation of stakeholder working group meetings with the Downtown Chula Vista Association (DCVA) (formerly known as the Third Avenue Village Association (TAVA)), the public benefit corporation representing businesses in Downtown Chula Vista.

Chapter 4 – Future Conditions: forecasts future parking conditions based on anticipated redevelopment, associated additional demand, and changes in parking supply.

Chapter 5 – Curb Cafés and Parking Supply: analyzes the impacts that Curb Cafés have on parking occupancy and provides recommendations related to the Parking District.

Chapter 6 – Electric Vehicle Charging Stations: analyzes the Parking District's current Electric Vehicle Charging Stations (EVCS) coverage and provides recommendations related to the EVCS standards for the Parking District.

Chapter 7 – Parking Management Program: synthesizes the findings from the preceding chapters to develop a set of recommendations to manage future parking demand within the Parking District.

2.0 Existing Parking Conditions

This chapter provides a high-level summary of the project study area's supply of public on-street and off-street parking, its parking occupancy (examined in the August and September of 2018, and November 2019[2]) and examines the City's parking management practices. **Appendix A**, the Downtown Chula Vista Existing Conditions Report, completed in June of 2019, examines these topics in much greater detail. Parking demand declined severely starting in March 2020 during the COVID-19 pandemic. The 2018/2019 data is used in this report to better approximate typical conditions. For discussion relating to the City of Chula Vista's parking-related measures in response to the COVID-19 pandemic, refer to Chapter 5.

2.1 Parking Supply

The Downtown Parking District currently maintains 1,528 public parking spaces both on-street and within eight off-street facilities (I.e., surface lots and the Park Plaza Parking Structure). **Table 2.1** summarizes the public parking supply of the Parking District by cost and time restriction. Approximately 47% of the Parking District's supply is free. All but 20 spaces within the Parking District have either a cost, a time restriction, or both. Cost and time restrictions to parking spaces are enforced between 9 AM and 6 PM on all days of the week, excepting Sundays and Holidays.

Table 2.1 - Public Parking by Cost and Time Restriction

Cost and Time Restriction	Parking District	
	Supply	% of Total
Free Parking – Unlimited Time	20	1.3%
Free Parking – Time Limited	704	46.1%
Paid Parking – Time Limited	804	52.6%
Total	**1,528**	**100%**

Source: CR Associates (2022)

The study area for this document also includes on-street parking spaces located outside of the Parking District boundaries. **Figure 2.1** is a map of the project study area that displays the total public parking supply along each block segment and within the eight off-street public parking facilities. Spaces located outside the Parking District include 21 meters, 364 free spaces without time limits, and 67 free, time-limited spaces. The 21 meters are adjacent to the northern Parking District boundary, and the City maintains and operates them in the same manner as those inside the Parking District boundaries. The 670 spaces shown at the Park Plaza Parking Structure includes 637 spaces that are provided within the footprint of the structure plus 23 that are provided in adjacent surface parking areas.[3]

[2] November 2019 surveys covered the Norman Park Senior Center only.

[3] An additional 14 Accessible Parking Spaces are provided within the Park Plaza Parking Structure and 9 Accessible Parking Spaces are provided in the adjacent surface parking area. These Accessible Parking Spaces are not included in the 670 parking spaces.



Public Off-Street Parking Supply

Pay Lot 1	14
Pay Lot 2	74
Pay Lot 3	118
Park Plaza Parking Structure	670
Pay Lot 5	42
Pay Lot 8	53
Pay Lot 10	28
Norman Park Senior Center Lot	15

Downtown Chula Vista Parking District
Parking Management Plan

Figure 2-1
Existing Public Parking Supply

2.2 Destination Based Parking Supply

Within urban settings such as the Third Avenue Village, 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 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 developed for this report which summarizes the parking supply, data collection and future parking demand estimates to each parcel within a 1/8-mile distance. A 1/8-mile (660 feet) approximates one long-sided block length or two short-sided block lengths in the typical street grid system in the northwest quadrant of Chula Vista. That distance also makes for a good approximation of the walking distance from the most remote parking spaces at a typical major shopping center with a large, consolidated parking lot. **Figure 2.2** summarizes paid and free parking supply to within 1/8-mile of every parcel within the study area.

Parking user fees within the Parking District are regulated by Chula Vista Municipal Code (CMVC) Section 10.56.020. CVMC Section 10.56.020 establishes parking user fees at the following rates:

- Thirty (30) Minute Meters: A $0.25 deposit up to the maximum time limit established for the zone in which the meter is located; or
- Two, Three, and Four-Hour Meters: A $0.25 deposit for each 30-minute interval or a $0.50 deposit for each one-hour interval up to the maximum legal time limit established for the zone in which the meter is located; or
- Ten (10) Hour Meters: A $0.25 deposit for each one-hour period up to the maximum legal time limit established for the zone in which the meter is located.

The locations of parking meter zones and paid parking lots (as well as their respective maximum time limits) are listed within Chapter 13 of the City's Master Fee Schedule. Parking citation regulations, including initial citation amount and late payment penalties, are stated in both CVMC Chapter 10.62 and Chapter 13 of the Master Fee Schedule. Expired meter citations are $25 if paid within 30 days, and $50 if not paid within 30 days. Parking revenue collection and enforcement services for the Parking District are provided by a professional parking management firm,

Table 2.2 details the cost, and time restrictions of the eight off-street public parking facilities within the Parking District. The off-street parking facilities, with their time restrictions in excess of two hours, are intended to accommodate lower turnover vehicular trips within the Parking District. Except for the Park Plaza Parking Structure, all the lots are paid parking during enforcement hours. Additionally, the City also issues quarterly parking permits for $124.50, which allow the permit holders to park within the Parking District's off-street public parking lots for an unlimited amount of time.



Downtown Chula Vista Parking District
Parking Management Plan

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Figure 2-2
Estimated Supply of Parking within 1/8 Mile of Destinations

Table 2.2 - Summary of Off-Street Public Parking Facilities

Off-Street Facility	Time Restriction	Cost	Supply
Park Plaza Parking Structure	3 Hours	Free	670
Pay Lot 1	10 Hours	$0.25/hour	14
Pay Lot 2	4 Hours	$0.50/hour	74
Pay Lot 3	10 Hours	$0.25/hour	118
Pay Lot 5	4 Hours	$0.50/hour	42
Pay Lot 8	10 Hours	$0.25/hour	53
Pay Lot 10	10 Hours	$0.25/hour	28
Norman Park Senior Center Lot	2 Hours	$0.50/hour	15
Total			**1,014**

Source: CR Associates (2022)

2.3 In-Lieu Parking Fee Program

The City's In-Lieu Parking Fee program was established in 1980. The In-Lieu Parking Fee program allows for development projects within the Parking District to accommodate a portion (up to 50%) of their minimum parking requirements off-site. The regulations governing the In-Lieu Parking Fee program are codified within CVMC Section 19.62.040. Section 19.62.040A states that:

> *"For any new nonresidential use, structure or building, required off-street parking which, due to the size or location of the parcel, cannot be provided on the premises may be provided on other property not more than 200 feet distant by publicly available pedestrian access from said use, structure or building, subject to an off-site shared parking agreement with the City as to permanent reservation of said space and access thereto; or if the proposed nonresidential use lies within the boundary of a parking district, off-street parking requirements shall be considered to be met; provided, that any developer of a new commercial building within a parking district, or a developer of a commercial addition to an existing building therein, shall pay the required fee(s)."*

The method for calculating the In-Lieu Parking Fee is provided in Resolution 1980-9943, which is based in part on the fair market value of the land needed to accommodate each parking space. The City's Urban Core Specific Plan dictates eligibility by establishing which zones and uses are able to use the program. All In-Lieu Parking Fees collected are set aside for construction of future parking facilities.

It should be noted that the current In-Lieu Fee is calculated based on the fair market value of the land and does not include the anticipated costs of designing and constructing additional parking facilities. The City should consider revising its In-Lieu Parking Fee program to better reflect the actual cost of providing new parking facilities. **Appendix E** provides data on the cost of constructing a parking structure in 2019 dollars. This analysis demonstrates one potential methodology for calculating an in-lieu fee. Regardless of the methodology used, it is recommended that the In-Lieu Parking Fee be better aligned with the current cost of providing additional parking. Chapter 4 provides an analysis of future demand.

2.4 Revenue Purposes

Per CVMC Section 10.56.260, all revenue collected from parking meters in the City are to be deposited into a special fund and earmarked for any or all of the following purposes:

- For the purchasing, leasing, installing, repairing, maintaining, operating, removing, regulating and policing of parking meters in this City and for the payment of any and all expenses relating or incidental thereto.
- For the purchasing, leasing, acquiring, improving, operating and maintaining of off-street parking facilities in the City.
- For the installation and maintenance of traffic control devices and signals.
- For the painting and marking of streets and curbs required for the direction of traffic and parking of motor vehicles.
- For the proper regulation, control and inspection of parking and traffic upon the public streets.
- To be pledged as security for the payment of principal and interest on off-street parking revenue bonds issued by the City or any parking district organized within the City (Ordinance 2670 and Ordinance 973).

City operated parking meters are located only within (and immediately adjacent to) the Parking District boundaries. The City has established the Parking Meter Fund to account for the associated revenues and expenditures. In-Lieu Parking Fees are deposited into a separate fund (the Town Center I Parking Fund). Use of the In-Lieu funds is restricted to the purchase or development of off-street parking sites which will generally and directly benefit the Parking District.

2.5 Current Parking Management and Enforcement Practices

The City has retained a professional parking management firm for parking management and enforcement services for Downtown Chula Vista since 2009. Under their original agreement[4] with the City, the contractor's responsibilities included parking enforcement, parking revenue collection, and maintenance of parking meter equipment.

Parking Enforcement

Under its services agreement, the contractor is responsible for staffing enforcement patrol between 9 AM and 6 PM, Monday through Saturday, excluding Holidays. The Downtown Chula Vista area is overseen by an operations manager, whose responsibilities include proactively maintaining and repairing parking revenue equipment. The contractor also maintains an office at 231 3rd Avenue, Suite F, in Downtown Chula Vista for the purposes of accepting in-person parking citation payments and appeals, as well as handling public inquiries regarding the Parking District.

[4] In March 2020, parking management contractor was awarded a contract for maintenance of the Park Plaza Parking Structure.

Revenue Collection

The parking contractor collects the revenue in the field, tracks the revenue and makes deposits into an account for the City of Chula Vista three times per week. Credit card transactions at the surface parking lot multi-space machines are deposited directly into the City's account. Fees collected from citations and permits sales are remitted monthly to the City.

2.6 Wayfinding and Parking Information Systems

The existing parking wayfinding signage within Downtown Chula Vista is primarily designed to meet the standards of the Third Avenue Village Signage Design Intent Drawings (Third Avenue Village Signage Plan) (**Appendix F**), which was a component of the Third Avenue Streetscape Master Plan improvement projects implemented in 2021. Existing and future signage should reflect the rebranding of the former TAVA to DCVA. The signs were designed to guide patrons to nearby businesses and attractions. Field review indicates that all signs were designed to the standard of the plan except for the parking guiding sign, guiding signage at the Park Plaza Parking Structure, and the pedestrian paseo[5] guiding sign throughout the Parking District. Additional signage is needed to guide the public to under-utilized parking lots.



Downtown Chula Vista Wayfinding Signage

2.7 Existing Parking Occupancy

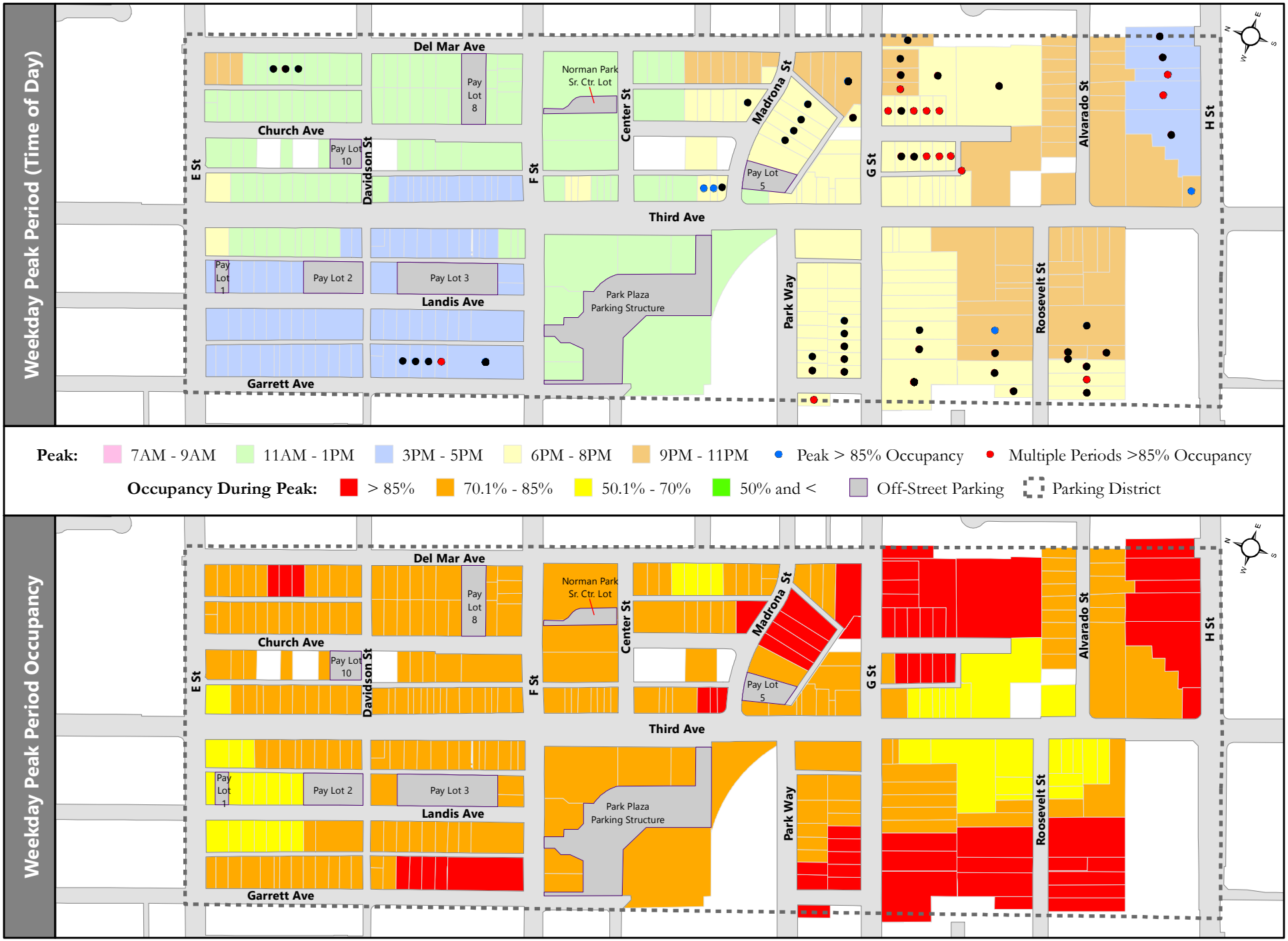
Data Collection Methodology

Average parking occupancy for a typical weekday and weekend day was calculated within the study area, plus an additional perimeter of one block outside of the study area through data collection in the field. Parking occupancy was studied and documented for five different daily time intervals, representing morning, lunch, afternoon, dinner, and evening periods. Data was collected for those periods on four weekday dates and four weekend dates occurring between August 29th and September 16th, 2018. The data collection is consistent with usage prior to the COVID-19 pandemic and is considered valid. The summaries presented in this chapter consist of averages, by period, for the four weekday or weekend dates in which data collection took place.

Teams of two data collectors counted parked vehicles on every block and public parking lot within the study area, plus an additional perimeter of one block outside of the study area, with scheduled departures taking place at 7 AM (morning), 11 AM (lunch), 3 PM (afternoon), 6 PM (dinner), and 9 PM (evening).

Figure 2.3 summarizes weekday peak parking occupancy conditions to within 1/8-mile of destinations within the project study area by time of day (upper panel) and the percent occupancy corresponding to that destination's peak hour (lower panel). A more detailed discussion of parking occupancy and turnover, including exhibits showing parking occupancy by block and lot for every collection period is provided in the Existing Conditions Report (Appendix A).

[5] Paseos are pedestrian spaces (walkways) that provide linkages between public parking, businesses, and the street environment.



Downtown Chula Vista Parking District
Parking Management Plan

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Figure 2-3
Weekday Estimated Parking Occupancy within 1/8 Mile of Destinations - Peak Period by Time of Day

The following conclusions and observations were made based on the analysis of weekday parking occupancy under existing conditions:

- Parking utilization of 85% of total capacity is considered to be a good target threshold for balancing maximum usage and excess capacity[6].
- Parking occupancy between E Street and G Street (near most commercial and retail destinations along Third Avenue) was highest during the mid-day data collection periods (between 11 AM and 5 PM). Parking occupancy typically peaks in the residential portions of the study area (outside of the Parking District boundary and south of Madrona Street) after 6 PM.
- Parking occupancy peaks at greater than 85% in many portions of the Parking District south of Madrona Street, an area which is primarily residential. This is explained by the lower quantity supply of off-street public parking within this area and by residential parking behavior, which is generally lower turnover than commercial.
- Peak off-street parking occupancy does not exceed 85% of the parking capacity at any location except for Pay Lot 5, which reaches full capacity during the 6 PM period. This is explained by the lot's proximity to several restaurants, and its centrality between the Third Avenue Village and the residential areas south of Madrona Street, which begins to peak at this time.
- Parking occupancy at off-street parking facilities decreases substantially after 6 PM, when enforcement of on-street metered parking ends.
- There are no dedicated short-term parking and commercial loading locations along Third Avenue within the study area. Currently, short-term and commercial loading areas within the Parking District are along side streets to Third Avenue. These locations are less convenient for short-term users who access businesses along Third Avenue. It was noted during field observations of existing conditions that there were regular instances of delivery vehicles double-parking along Third Avenue when making deliveries, resulting in blockage of through traffic and parking areas.

<u>Norman Park Senior Center</u>

- Existing parking within the Norman Park Senior Center parking lot does not exceed 85% utilization. However, community outreach efforts (documented in Chapter 3) indicated that available parking supply is a high priority for senior center visitors. Outreach findings also revealed that visitors tend to avoid parking at the parking lots behind the senior center due to concerns about parking enforcement, since most senior center activities last over two hours, longer than the maximum period allowed in most of the surrounding parking.

<u>Special Events</u>

- Field observations were conducted at the following large community events:
    - Villains in the Village (Saturday, October 20, 2018).
    - Starlight Parade (Saturday, December 1, 2018).
    - Lemon Festival (Sunday, August 4, 2019).

[6] Source: Institute of Transportation Engineers – Parking Occupancy Data Collection: https://www.ite.org/technical-resources/topics/trip-and-parking-generation/parking-occupancy-data-collection/
Metropolitan Area Planning Council – How to do a Parking Study: https://www.mapc.org/resource-library/how-to-do-a-parking-study/

Observations suggested a general lack of awareness of where to find off-street public parking. It was observed that much of the public either parked on-street at a further distance from the events or avoided closer off-street parking locations owing to the perception of higher cost. Drone observations show that paid public lots are generally at less than 50% occupancy, whereas on-street (non-metered) parking occupancy is greater than 85%.

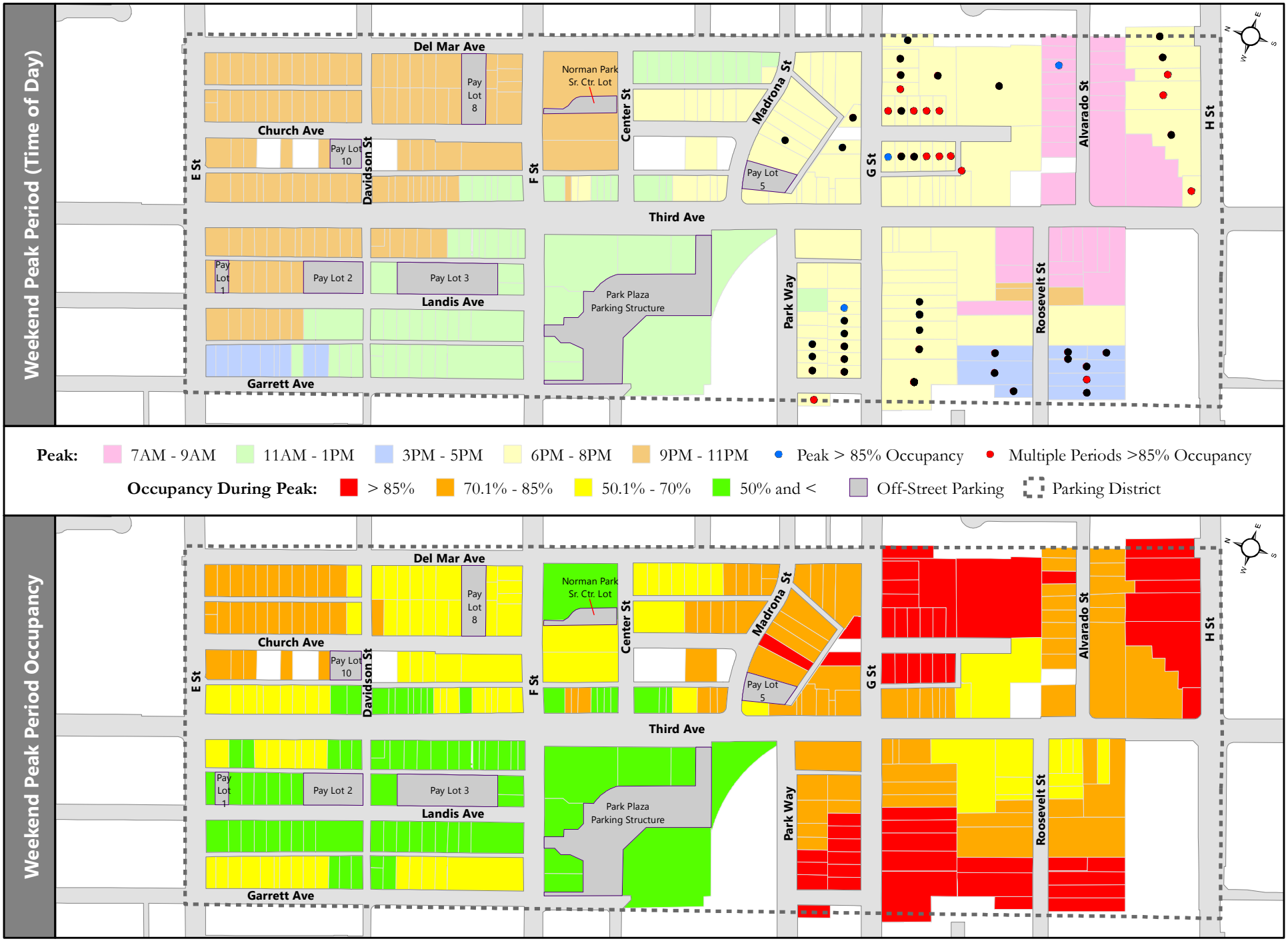
Figure 2.4 summarizes weekend peak parking occupancy conditions to within 1/8-mile of destinations within the project study area by time of day (upper panel) and the percent occupancy corresponding to that destination's peak hour (lower panel). The following conclusions were made based on the analysis of weekend parking occupancy under existing conditions:

- Parking occupancy between E Street and G Street generally does not exceed 70% during its peak periods. West of Third Avenue, in closer proximity to the Park Plaza Parking Structure, peak occupancy does not typically exceed 50%.
- Consistent with weekday observations, peak off-street parking occupancy does not exceed 85% of the parking capacity at any location except for Pay Lot 5, which reaches full capacity during the 6 PM period. As discussed above, this lot is centrally located within the Parking District, which likely explains its high level of occupancy.
- Similar to weekday observations, parking occupancy peaks are greater than 85% in many portions of the Parking District south of Madrona Street, which is primarily residential. This is explained by the lower quantity supply of parking within this area; and by residential parking behavior, which is generally lower turnover than commercial.

Some additional conclusions which were observed to be consistent during both weekday and weekend include:

- Commercial land use (mostly between E Street and G Street) and residential land use (primarily south of Madrona Street and away from Third Avenue) peak time periods are complimentary. Peaks for commercial land uses tend to occur during the mid-day when most retail and service businesses are operating. Where dining and drinking establishments are located, commercial parking demand extends into the early evening hours. Parking peak demand for residential land uses tends to occur when typical business hours conclude in the early evening hours and continue overnight.
- Supply of available parking between E Street and G Street (near most businesses) was generally observed to be adequate (below 85%) during both weekday and weekend peak periods. However, there are a few parcels clustered around G Street which straddle the study area's commercial and residential land uses and experience the overlap between the typical peaks of the two land uses and therefore have less available parking.

  The spatial pattern of demand outside of the Parking District south of Madrona Street is almost identical on both weekdays and weekends: Third Avenue between G Street and Alvarado Street has an occupancy peak between 50% and 70% (forming a yellow core), followed by a concentric (orange) ring of 70% to 85% peak occupancy along Alvarado Street, on the adjacent to Third Avenue portions of Park Way, G Street, and Roosevelt Street, while the surrounding outer portions of the study area have peak occupancy of 85% or greater.



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Figure 2-4
Weekend Estimated Parking Occupancy within 1/8 Mile of Destinations - Peak Period by Time of Day

2.8 Park Plaza Parking Structure



Aerial View of the Park Plaza Parking Structure, facing northwest

The Park Plaza Parking Structure is a multi-level public parking facility located near the southwestern corner of Third Avenue and F Street. According to the recorded Notice of Completion for the project, construction of the structure was completed in February 1984. The Park Plaza Parking Structure provides 637 spaces within the footprint of the structure plus 33 in adjacent surface parking areas. In addition to the 670 unmarked parking stalls, there are a total of 23 Accessible parking spaces in the structure and adjacent areas. This facility is available for up to three hours of free public parking as described in CVMC Section 10.56.040 and as noted by signs displayed at the parking structure. Overnight parking is prohibited at the structure.

On December 15, 1983, the Chula Vista City Council adopted Resolution No. 461, Reciprocal Agreement of Easements and Declarations Establishing Restrictions and Covenants for the Town Center Focus Area Including Provisions for the Maintenance and Management of the Town Centre Parking Facility (Reciprocal Access Agreement). The Reciprocal Access Agreement was between the City and the owners of six commercial parcels located immediately adjacent to the Park Plaza Parking Structure at the southwestern corner of Third Avenue/F Street. Existing uses on these parcels include commercial office, medical office, restaurant, retail, and fitness center. (The One Park Apartments, located to south and west of the structure, was not a part of the Reciprocal Access Agreement.) Under the Reciprocal Access Agreement, Centre City Associates, Limited Commercial (CCAL-C), then owner of three of the six adjacent parcels, assumed responsibility for maintenance and operation of the parking structure.

The Reciprocal Access Agreement had a term of 35 years and expired in December 2018. The City has assumed financial responsibility for all maintenance and operation of the structure and issued a new contract with a parking management contractor for routine maintenance activities. The City engaged a structural engineer in 2019 to evaluate the structural integrity of the parking structure. It was determined to have no major structural concerns, and the engineer recommended repairs to relatively minor instances of cracking and spalling.

3.0 Community Outreach

Various stakeholder groups were engaged during the completion of this study, including residents, business owners, visitors and senior citizens. Outreach efforts utilized two main approaches: through the collection of opinion surveys (conducted through mail, in person, and online) and by presentations to stakeholder groups.

3.1 Outreach Methods



Surveys were promoted through a variety of strategies, including social media, a project website, email blasts, meetings and through targeted "pop-up" outreach at community events. The target respondents to the surveys were visitors of the Parking District, business owners, and the patrons of Norman Park Senior Center. Each group received questionnaires that were tailored to their experiences. A total of 42 surveys were received from visitors to the Parking District, 52 surveys from business owners and 68 were collected from patrons of Norman Park Senior Center.

Presentations were conducted on multiple occasions to solicit feedback to constituent groups. A list of presentations and outreach events is provided in **Table 3.1**. A stakeholder working group was formed during the completion of this study, which comprised members of the DCVA Parking Subcommittee. City staff and consultants engaged with the subcommittee on two occasions, once during the analysis of existing conditions and again to solicit feedback on the development of parking management recommendations. Outreach was paused in March 2020 following stay-at-home orders in response to the COVID-19 pandemic.

To bolster the study's engagement with the senior community of Downtown Chula Vista, a presentation was made at the Norman Park Senior Center prior to a meeting of the City's Commission on Aging on March 11, 2020, to solicit comments on the parking management recommendations.

Feedback obtained from each of the presentations was taken into consideration in the preparation of the parking management recommendations. A summary of the outreach and sample surveys are provided in Appendix A as a part of the Existing Condition Report.

Table 3.1 - Summary of Public Outreach

Date	Location	Target	Type
October 20, 2018	Third Avenue (Villains In The Village)	Visitors to Third Avenue	Intercept Surveys
January 9, 2019	Civic Center	DCVA Ad-Hoc Parking Committee	Project approach presentation & gather DCVA feedback on existing concerns
October 2018 – December 2018	Digital Survey via DCVA email list	Businesses within the Parking District	Digital Survey to understand existing parking concern from a business perspective
February 21, 2019	DCVA Annual Meeting	DCVA Members	Presentation of project approach, existing condition findings, and conduct additional public surveys
March 13, 2020	Civic Center	DCVA Ad-Hoc Parking Committee	Presentation of preliminary recommendations
January 2020 – March 2020	Norman Park Senior Center	Senior Center Patrons	Paper and digital surveys of the Norman Park Senior Center. Paper surveys were left at the front desk and collected weekly.
March 11, 2020	Norman Park Senior Center	Commission on Aging & Friends of the Norman Park Senior Center	Presentation of preliminary recommendations and gather feedback specific to the Senior Center

Source: CR Associates (2022)

3.2 Public Outreach Documentation – Survey Results Summary

Three groups were targeted for survey outreach: visitors to the Third Avenue Village, Third Avenue Village area business owners and patrons of the Norman Park Senior Center. The following provides a summary of the survey findings for each of the three groups. A more detailed analysis can be found in the Existing Conditions Report (Appendix A).

Profile of Visitor Survey Responses

Over half of the visitors surveyed indicated they visit the Third Avenue Village at least once a week. When asked of which destinations in the Third Avenue Village they were going to, nearly three-quarters of the visitors responded that they were going to restaurants, bars or cafes. 13% of respondents stated were going to or from work.

Despite much of the Parking District's supply being time restricted (two hours on street and three hours in the Park Plaza Parking Structure), 60% of the visitors reported that their typical visits to the Third Avenue Village are longer than two hours.

A combined two-thirds of respondents answered *always* or *usually* find parking within one or two blocks of their destination, while a combined 34% indicated they have some level of difficulty finding parking close to their destination. Nearly half (49%) of the respondents claimed they *always* avoid parking in locations which cost money to park, while another 20% stated they *usually* avoid parking in those locations. Of the respondents who reported to *always* avoid parking in locations which cost money, a combined 58% stated they still are *always* (21%) or *usually* (37%) able to find parking within one or two blocks of their destination.

Over half the respondents (54%) have been discouraged on a previous occasion to visit the Third Avenue Village because of parking difficulties. A third of those surveyed were not aware of the free Park Plaza Parking Structure, while just over a quarter of those surveyed (27%) did not perceive the location of the parking structure as conveniently situated to most of their usual destinations.

When asked if more convenient forms of payment (such as credit cards) would make respondents more willing to use the metered parking along Third Avenue, 64% respondents indicated yes. 42% of respondents stated they would not walk longer distances than two blocks (approximately 1/8 mile) under any circumstances, though half of those indicated they might reconsider if walking conditions were improved. The most cited conditions which deterred walkers included inadequate lighting, security concerns related to the presence of a homeless population, ADA-accessibility and lack of shade.

Profile of Business Owner Survey Responses

Three-quarters of the business owners surveyed indicated their businesses do not have their own supply of off-street parking for their customers use. Almost half of the business owners surveyed indicate they instruct their staff to park remotely in order to preserve parking spaces near their business for customers.

While 60% of the visitors indicate they spend more than two hours in the Parking District, 87% of business owners indicates that their patrons spend less than 2 hours in their business. This is typical for a downtown area, where patrons may park once and frequent multiple business during their visit. As such, parking lots and parking structures are typically better at accommodating this type of parking demand versus on-street parking which has a two-hour parking limit.

Half of the business owners surveyed (50%) were unsatisfied with the quantity of available parking close to their business. Very few of the responding business owners (13%) regarded the location of the Park Plaza Parking Structure as a convenient location for their customers to park. Most business owners (70%) believed the meters along Third Avenue would receive better use from visitors to the Third Avenue Village if they accepted more convenient forms of payment, such as credit cards.

Profile of Senior Citizen Survey Responses

Senior citizens surveyed at Norman Park Senior Center indicated overwhelmingly (86%) that they drive to the center. 78% of the senior respondents stated their average duration of visit is over two hours. This conflicts with the parking supply closest to the senior center, which is limited to two-hour turnover. Over half of the senior visitors occasionally or usually have trouble finding parking within one or two blocks. A vast majority of the seniors surveyed state that they have at one time or another been discouraged to visit the Norman Park Senior Center due to parking difficulties.

4.0 Future Parking Conditions

4.1 Growth Projections

The parking demand for future conditions was analyzed as a part of this study. The assumptions for future demand are based on historical development patterns and redevelopment assumptions. For entitled projects, parking demand is known and used in place of estimates. For the other parcels, surface parking capacity estimates were generated based on the dimensions of the parcel. The development capacity estimates assumed the ground floor space would be used for off-street parking. This methodology using known entitlement information and development assumptions for specific parcels generates the most reasonable future scenario.

The future conditions analysis estimated parking generation for two time periods, noon and 9pm, based on projected future development. These timeframes were selected because noon coincides with the peak demand for many commercial uses, while residential parking demand is highest during evening and night hours. Total parking generation for each of the anticipated redeveloped parcels was subtracted by the estimated on-site surface parking supply would provide. Estimated on-site parking capacity and future parking generation attributed to each redeveloped parcel is explained in **Appendix B**. Excess parking generation, per parcel, was then compared to the parking occupancy within the study area under existing conditions during those corresponding time periods and assigned to available supply until occupancy of off-site parking reached 85% of the supply, located within 1/8 mile. The remaining parking generated in excess of what could be accommodated within the existing parking supply, represents the quantity of parking that will need to be created in the future to accommodate anticipated growth.

Table 4.1 summarizes the future parking generation, on-site and off-site parking assignment, and the quantity of parking spaces needed in the study area. Parking generation, per parcel, which exceeds the parcel's parking capacity was summarized for the study area under both time periods.

Table 4.1 - Future Parking Generation and Assignment

Time	Parking Generation	Parking Generation in Excess of Parcel (A)	Parking Assignment Sourced Off-Site (B)	Remaining Parking Generation (A – B)
Noon	680	154	92	62
9 PM	980	436	218	218

Source: CR Associates (2022)

Projected parking occupancy for noon and 9 PM are shown in **Figures 4.1** and **4.2**. The parking demand generated by the future scenario was applied to the on-site parking supply of every parcel and any spillover parking demand was then allocated to the nearest on-street and off-street public parking locations within an 1/8-mile of the parcel.

The following conclusions were made based on the analysis of future parking demand:

- The existing public parking supply within the current Parking District boundary is equipped to handle parking demand under near-term conditions, until such time that future redevelopment starts to cause a parking imbalance (i.e., 85% occupancy within 1/8-mile is exceeded.)

- If redevelopment occurs as modeled for this analysis, an additional 218 spaces would be needed to accommodate the anticipated parking demand at 9 PM, which is concentrated along Third Avenue between G Street and H Street (outside of the Parking District but within the study area).

4.2 Accommodating Long Term Future Demand

Additional parking supply will need to be created to accommodate the future demand anticipated to be generated by redevelopment and the continued transition of the Third Avenue Village into a commercial destination. To provide the needed spaces within the Parking District, a reasonable assumption is to build a structure on one of the City-owned parking lots. The in-lieu parking fees (described in Section 2.3) and Parking District revenues could contribute to the funding of a structure. The timing of the need for additional parking will be determined by the pace of redevelopment.



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Figure 4-1
Near-Term Parking Occupancy by Block
11AM to 1PM Weekday Average



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Figure 4-2
Near-Term Parking Occupancy by Block
9PM to 11PM Weekday Average

5.0 Curb Cafés and Parking Supply

Local businesses were severely impacted by the closure of indoor spaces brought on by public health restrictions in response to the COVID-19 pandemic. The City of Chula Vista responded by adopting a COVID-19 90-Day Economic Recovery Plan in May 2020 to minimize impacts to businesses and to support a safe re-opening and recovery of Chula Vista's local economy. To that end, in July 2020 the City allowed businesses to create additional seating within the public right-of-way via a Temporary Right of Entry License Agreement for Sidewalk and Curb Cafés. In June 2021, Governor Gavin Newsom announced a fully reopened California economy and lifted the pandemic executive orders that limited indoor operations; however, businesses were still recovering financially from eighteen months of reduced occupancy and revenues. Therefore, the City wanted to continue to give businesses the opportunity to operate outdoors, which gave them increased patronage to support their ongoing economic recovery. Additionally, members of the community have enjoyed the opportunity to take a meal and/or beverages outside, and the outdoor cafés contribute to the "place-making" of Third Avenue in downtown Chula Vista through increased pedestrian activity, which enlivens the street scene.

On July 14, 2021, the City Council amended CVMC 12.28.030[7] to broaden allowed encroachments into the public right-of-way. Staff created a Curb/Sidewalk Café Encroachment Permit Guide ("Guide") which sets forth guidelines for design, construction, maintenance and permitting[8] of Curb Cafés and Sidewalk Cafés within the public right-of-way along sidewalks and within on-street parking areas. The purpose of this chapter is to analyze the impacts that Curb Cafés have on parking supply and provide recommendations related to the Parking District. One purpose for establishing a more formal process for Curb and Sidewalk Cafés was to ensure that improvements made in the right-of-way were appropriately designed, structurally sound, do not impede vehicular or pedestrian traffic flow and are ADA accessible. When the new program was adopted, the City required structures not in compliance to be removed. The current program sunsets on July 31, 2023.

5.1 Parameters for Curb Cafés and Sidewalk Cafés

Curb Cafés

- Restaurants, bars, and breweries are the only businesses eligible to establish Curb Cafés in the right-of-way within parking spaces along Third Avenue between E Street and G Street.
- Curb Cafés are limited to the area adjacent to the business' street frontage unless written consent is provided from the adjacent/adjoining business and property owner that the Curb Café would encroach in front of.
- To establish a balanced approach and avoid over-proliferation, the guidelines state that staff will generally endeavor to ensure that the number of Curb Cafés would be limited to two per each side of each block and that no more than six parking spaces would be eliminated per block side (three spaces per Curb Café.)

[7] "Improvements Not Requiring Council Authorization" (CVMC 12.28.30), located here.
[8] Curb/Sidewalk Café Encroachment Permit Guide

- The instrument for approval of Curb Cafés is a "Maintenance Agreement and Encroachment Permit." Maintenance Agreements and Encroachment Permits under this program are for a period of one year, with an option for the City Manager or his/her designee to authorize one additional one-year extension.

Sidewalk Cafés:

- Restaurants, bars, breweries, bakeries, coffee shops and ice cream shops are the types of businesses eligible to establish Sidewalk Cafés in the right-of-way on City sidewalks and sidewalk bulb-out areas along Third Avenue. Similar to Curb Cafés, their location would be limited to the area adjacent to the building's frontage, unless written consent is provided from the adjacent/adjoining business and property owner that the Sidewalk Café would encroach in front of.

Since Sidewalk Cafés would have no effect on parking supply, the remainder of this chapter is focused on the effect of Curb Cafés only.

5.2 Field Observations and Parking Impacts

The Guide allows up to two Curb Cafés per each side of each block and the loss of no more than three parking spaces per café. Therefore, six parking spaces could be eliminated per block side, along Third Avenue, between E Street and G Street, resulting in potentially 54 parking spaces being removed from the Parking District's available inventory. To assess historical Curb Café implementation and parking loss, parking observations were conducted in July 2021, November 2021, January 2022, and February 2022. **Table 5.1** displays the number of Curb Cafés as well as the number of affected parking spaces. The last column shows the maximum spaces that could be impacted under the current program.

Table 5.1 - Summary of Curb Café Parking Occupancy

Third Avenue Block	Side	July 2021 Observation		November 2021 Observation		January 2022 Observation		February 2022 Observation		Max Allowance under Guide	
		No.	Parking Spaces	No.	Parking Spaces	No.	Parking Spaces	No.	Parking Spaces	No.	Parking Spaces
E Street to Davidson Street	West	1	5	1	5	1	5	1	5	2	6
	East	2	6	1	3	1	3	1	3	2	6
Davidson Street to F Street	West	3	14	1	4	1	4	1	4	2	6
	East	3	9	2	5	1	2	1	2	2	6
F Street to Center Street	West	0	0	0	0	0	0	0	0	2	6
	East	1	3	1	3	0	0	0	0	2	6
Center Street to Park Way	West	0	0	0	0	0	0	0	0	2	6
	East	2	6	1	3	1	3	0	0	2	6
Park Way to G Street	West	0	0	0	0	0	0	0	0	2	6
	East[a]	0	0	0	0	0	0	0	0	0	0
Total		**12**	**43**	**7**	**23**	**5**	**17**	**4**	**14**	**18**	**54**

[a] The eastern side of this segment has a total of six parallel parking spaces adjacent to a relatively narrow travel lane. Therefore, this block face was excluded from the maximum parking loss calculations

Source: CR Associates (2022)

As shown, in July 2021 there were a total of 12 businesses utilizing 43 parking spaces for Curb Cafés in July 2021. This number reduced to four businesses and 14 parking spaces by February 2022.

5.3 Effect on Parking Supply

The analysis that follows assumes that all Curb Cafés allowed by the current program are built, and each removes 3 on-street parking spaces. It should be noted that this is a conservative analysis since only certain types of businesses may have Curb Cafés and not all of those business types currently exist on every block. **Figure 5.1** shows the locations along Third Avenue where on-street parking supply was eliminated to accommodate the maximum number of Curb Cafés allowed by the program. **Table 5.2** summarizes the change in supply of on-street parking by block. As shown, maximum parking loss assuming all allowable Curb Cafés would reduce on-street parking supply by an average of 28% per block.



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Figure 5-1
Public Parking Supply Assuming Maximum Number of Curb Cafés

Table 5.2 - Summary of Maximum Parking Spaces Lost per Current Program

Third Avenue Block	Original Parking Supply	Maximum Allowable Parking Loss	New Parking Supply	Percent Loss
E Street to Davidson Street	55	12	43	22%
Davidson Street to F Street	61	12	49	20%
F Street to Center Street	31	12	19	39%
Center Street to Park Way	31	12	19	39%
Park Way to G Street	18	6	12	33%
Total	**196**	**54**	**142**	**28%**

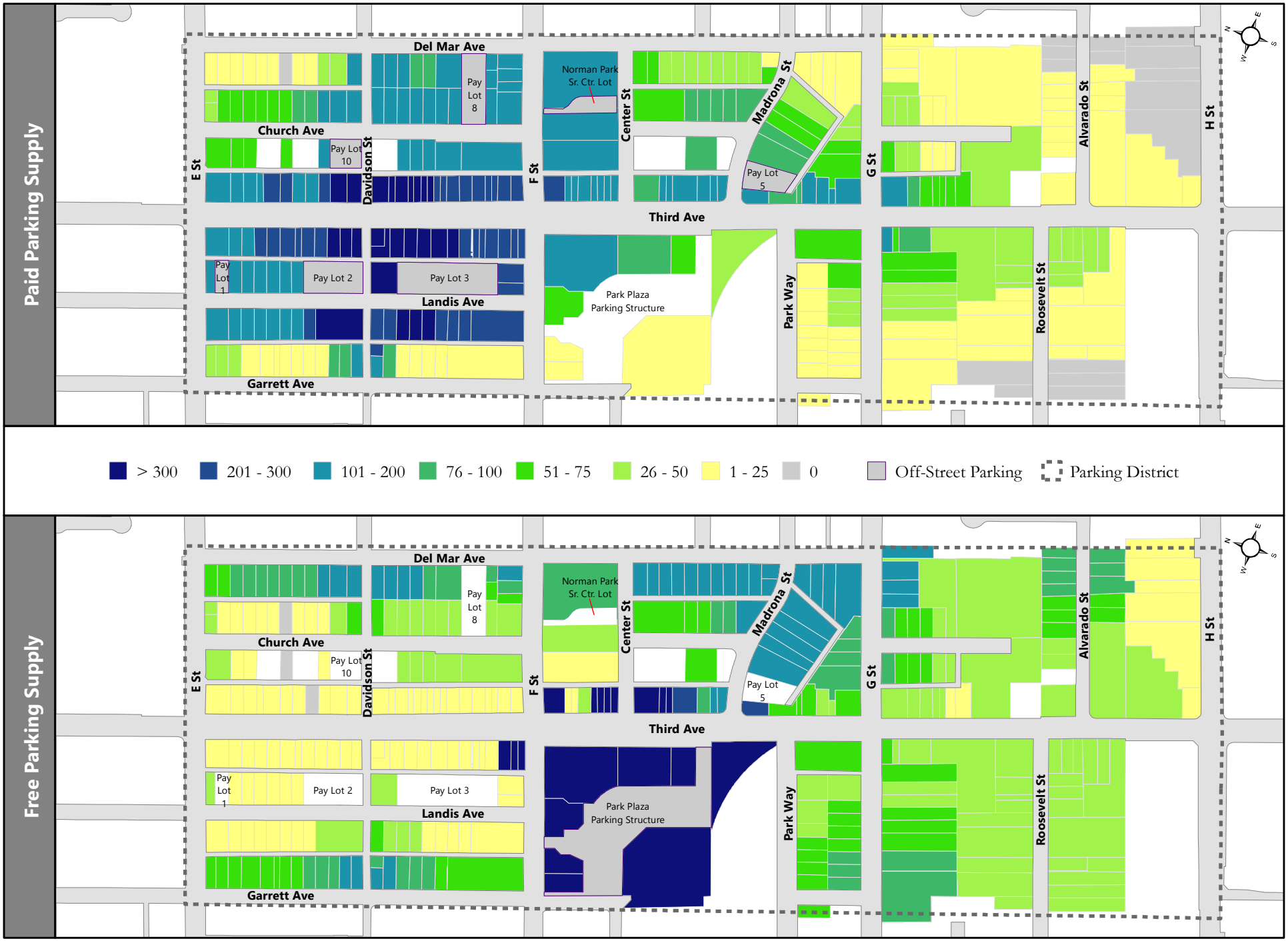
Source: CR Associates (2022)

Figure 5.2 shows total parking supply within a 1/8- mile of every destination in the study area. The distance of 1/8 mile is considered a reasonable distance for a patron to walk for parking. Despite the 12 fewer parking spaces available between Davidson and F Street due to reduction of spaces for Curb Cafés, all parcels along that block still have over 200 metered parking spaces within a short walk because of the proximity to several large capacity paid parking lots and adjacency to neighboring blocks with ample parking.

Figure 5.3 shows the parking occupancy by supply during a weekday from 11 am to 1 pm adjusted for the loss of on-street parking for Curb Cafés. With the smaller available supply, several blocks within the study area would not be able to accommodate the average weekday demand during the lunch peak period at their new capacity. Neighboring blocks can accommodate the spillover parking and none of the adjacent blocks or facilities reach the 85% occupancy threshold due to the spillover, except for Pay Lot 10. The 85% occupancy threshold is considered within parking industry practice as an indicator for when parking is being utilized most efficiently, striking a balance between maximizing usage and having some spare capacity. When parking usage exceeds 85% it is an indication that drivers would need to circulate within the Parking District to find parking.

Figure 5.4 shows estimated available parking supply within a 1/8-mile of each parcel in the study area during a weekday from 11 am to 1 pm. As shown, a number of parcels along Third Avenue and Church Avenue north of F Street are experiencing 85% occupancy or greater. However, this is not substantially different from conditions without implementation of the Curb Cafés.

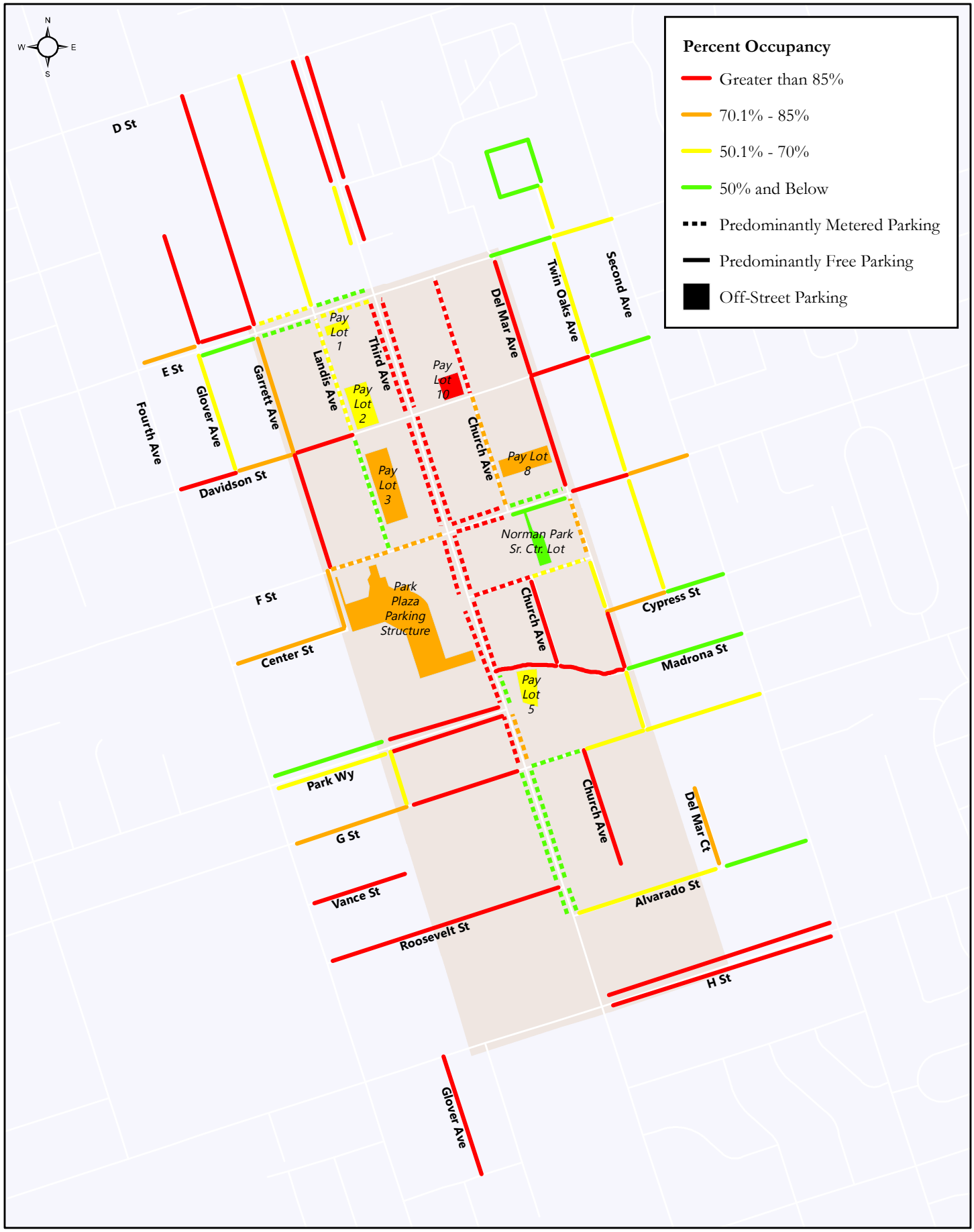
Figure 5.5 shows the parking occupancy during a weekday from 9 pm to 11 pm adjusted for the loss of on-street parking for Curb Cafés. Parking occupancy during this period is much lower on Third Avenue, between E Street and Davidson Street. The reduction of supply of on-street parking on this segment has no impact on evening parking demand. South of Davidson Street, there are several blocks on Third Avenue which are not able to accommodate the average weekday demand during the evening period assuming the maximum number of Curb Cafés are permitted. However, the neighboring blocks and nearby parking lots can accommodate the spillover parking. Only Center Street between Third Avenue and Church Avenue is pushed into the 85% occupancy threshold due to the spillover.



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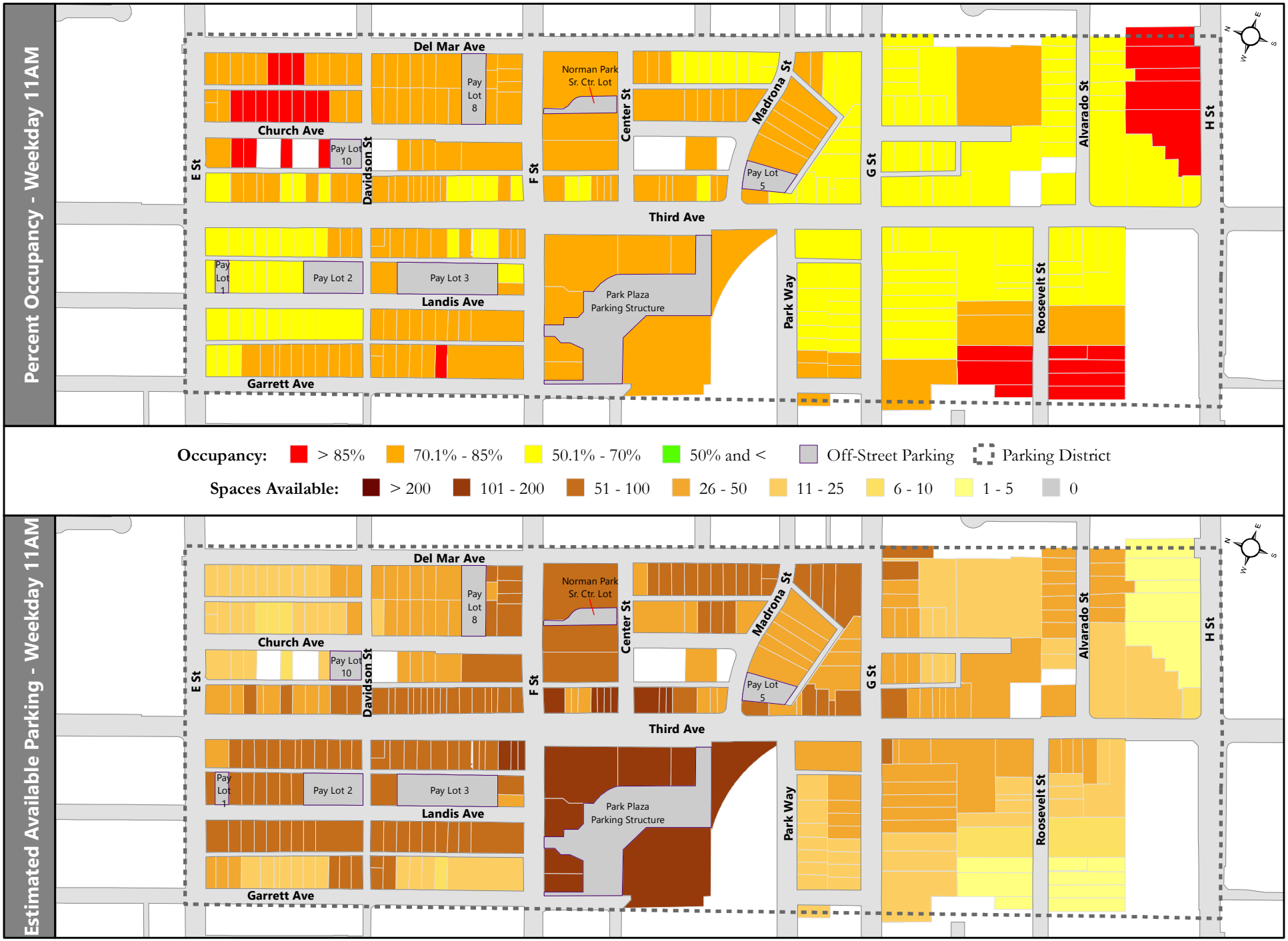
Figure 5-2
Estimated Supply of Parking within 1/8 Mile of Destinations
Assuming Maximum Number of Curb Cafés



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Figure 5-3 Parking Occupancy by Block
11AM to 1PM Weekday Average
(Assuming Maximum Number of Curb Cafés)



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Figure 5-4
Estimated Supply of Available Parking within 1/8 Mile of Destinations
11AM - 1PM Weekday Average (Assuming Maximum Number of Curb Cafés)



Downtown Chula Vista Parking District
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Figure 5-5 Parking Occupancy by Block
9PM to 11PM Weekday Average
(Assuming Maximum Number of Curb Cafés)

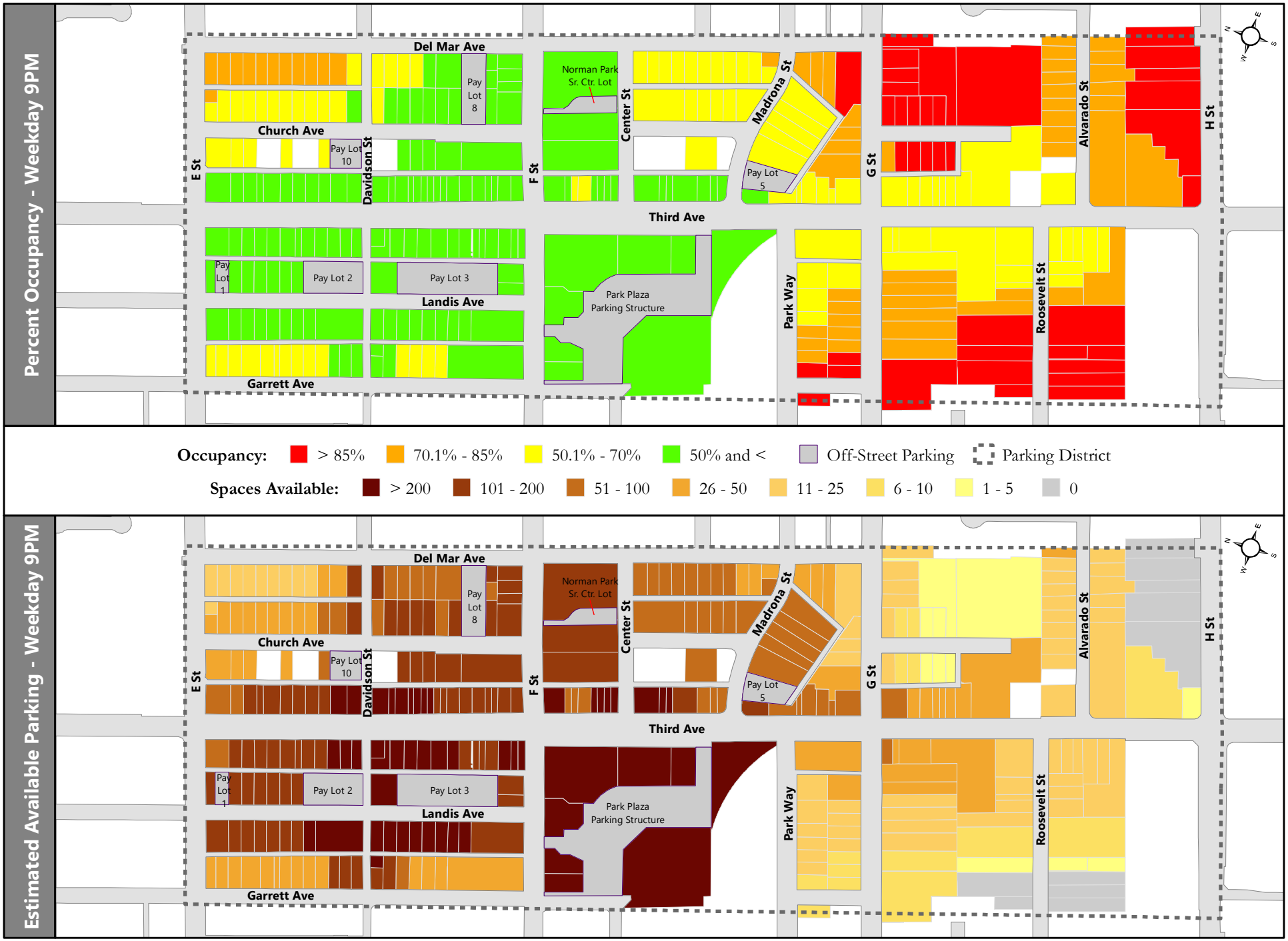
Figure 5.6 shows parking occupancy and estimated available parking supply within a 1/8-mile of each parcel in the study area during a weekday from 9 pm to 11 pm. The reduction of supply of on-street parking does not have a discernable impact during this time period. The heaviest demand for parking during this time period is in the primarily residential southern portion of the study area. Parking occupancy surrounding parcels along Church Avenue between E Street and Madrona Street increased above 50% with the change in supply.

5.4 Curb Café Recommendations

Based on the analysis conducted above, even if all Curb Cafés allowed by the current program are constructed, the loss of parking spaces due to Curb Cafés does not have a consequential effect on available parking, due to the high inventory available behind the businesses in public surface parking lots and neighboring streets. However, this situation could change if there is an increase in the number of businesses with a significant number of patrons or there is intensification of uses in the neighboring blocks. If the City desires to continue the Curb Café program beyond the July 31, 2023, sunset date the following recommendations are made:

- Continue to require the Maintenance and Removal Agreement and Encroachment Permit. Include termination provisions if public right-of-way is needed for parking. Require regular maintenance and repairs to ensure structures do not become unsightly and remain structurally sound.
- The City should monitor parking occupancy periodically to ensure that there is available parking within a 1/8-mile walking distance of the business (during a mid-day and evening peak hour) and confirm that the available parking within that radius does not exceed 85% occupancy.
- If the City does not want to increase the number of Curb Cafés beyond what is allowed in the current program and/or wants to limit the number of parking spaces eliminated per café, it is recommended that Guide state clearly that Curb Cafés are limited to no more than two per block side, with each taking up no more than three parking spaces.

While the Curb Cafés do not have a significant impact on parking supply currently, there is an impact to parking revenue within the Parking District. At the current $0.50 per hour meter rate and assuming the average weekday use level over nine hours per day for an average of 250 weekdays and 52 Saturdays per year, each metered space would generate a maximum revenue of $1,100 per year, or $3,300 per Curb Café per year. The loss of revenue should be balanced with the increased revenue and jobs created by the expansion of these businesses.



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Figure 5-6
Estimated Supply of Available Parking within 1/8 Mile of Destinations
9PM - 11PM Weekday Average (Assuming Maximum Number of Curb Cafés)

6.0 Electric Vehicle Charging Stations

As of April 2022, there were 14 existing, publicly accessible Electric Vehicle (EV) charging stations in the Parking District (I.e., seven each at the Park Plaza Parking Structure and Parkway Community Center), and 16 additional EV charging stations (EVCSs) were under construction in Pay Lot 2. Based on information from the California Energy Commission, EV ownership in Chula Vista, the South Bay Area, and San Diego County grew steadily every year between 2016 and 2020. Within Chula Vista, the proportion of EVs increased from 0.4% of all vehicles in 2016 to 1.3% in 2020. By the year 2030, EVs are projected to be approximately 3.6% of all vehicles owned in Chula Vista. Given the trend of increased EV ownership in San Diego County, including Chula Vista and the surrounding South Bay area, siting criteria and policy recommendations have been developed to guide implementation of future EVCSs in the Parking District, as described below. Refer to **Appendix C** for additional information on EVCSs.

6.1 Siting Criteria and Policy Recommendations

The location of future EVCSs in the Parking District was determined based on a review of San Diego Association of Government's (SANDAG's) *Plug-in San Diego Electric Vehicle Charging Stations Map*[9]. This map estimates the end location of EV trips using EV registration information, future EV sales projections, and trip destination data from the SANDAG Regional Transportation Model. **Figure 6.1** highlights areas within the Parking District where there is likely high EV charging demand, based on SANDAG data. As shown in Figure 6.1, the areas with the highest EV charging demand in the Parking District are the Park Plaza Parking Structure (including adjacent surface parking) and Pay Lot 5, followed by the area surrounding Pay Lot 3, Pay Lot 8, Pay Lot 2, and Pay Lot 10.

As discussed above, the projected future EV ownership would be less than 5% of the total vehicles in the South Bay Region and the City of Chula Vista. To accommodate additional future growth in EV ownership, it is assumed that 5% of the vehicles using parking lots in the Parking District would be EVs. The following policies are recommended for EVCS siting and installation within the Parking District:

- Continue to monitor EVCS usage at the Park Plaza Parking Structure and nearby pay lots to determine EV charging usage. When EV charging usage reaches 85% daily per lot, consider additional EVCSs.
- Consider an enforcement policy such as implementing a time limited charging program to ensure that vehicles are actively charging instead of just using a premium parking space. The recommended time limit is four hours or approximately fifty percent of the time required to charge an EV from empty.
- EVCSs should be in compliance with the technical specifications documented in Appendix C.
- EVCSs should be an open system to be compliance with California Health and Safety Code (HSC) 44268.2.
- All EVCS installations shall comply with current ADA requirements of the California Building Code which sets forth design requirements for accessible EVCSs, number of accessible spaces

[9] Source: https://evcs.sandag.org/

required, and technical requirements for spaces. Site planning for EVCSs should consider accessible routes to building entrances or site boundary.

- The recommended number of EVCSs is 5% of the total available parking spaces within City-operated parking facilities in areas having the highest EV charging demand, as shown in **Table 6.1** below.
- Provide information to the public about the location, cost, and type of charging stations available. (Ex: UCSD website: https://transportation.ucsd.edu/commute/ev-stations.html)

Table 6.1 displays the recommended EVCSs for parking lots within the Parking District within areas having the highest EV charging demand. Given that 16 EVCSs are currently being installed in Pay Lot 2, no additional installation is recommended at this location, unless usage of those spaces reaches 85% daily. As discussed above, **Figure 6.2** displays the additional surface parking lots where EVCSs are recommended. Note that additional EVCS installation should follow the recommendation provided above and occur only when the current EVCS reaches 85% usage to reduce loss of parking.

Table 6.1 - Recommended ECVSs

Off-Street Facility	Total Parking Supply	EVCSs Under Construction	Recommended EVCSs (5%)
Park Plaza Parking Structure [a]	670	0	34
Pay Lot 2	74	16	-
Pay Lot 3	118	0	6
Pay Lot 5	42	0	3
Pay Lot 8	53	0	3
Pay Lot 10	28	0	2
Totals	**985**	**16**	**48**

[a] Including adjacent surface lot near Third Avenue

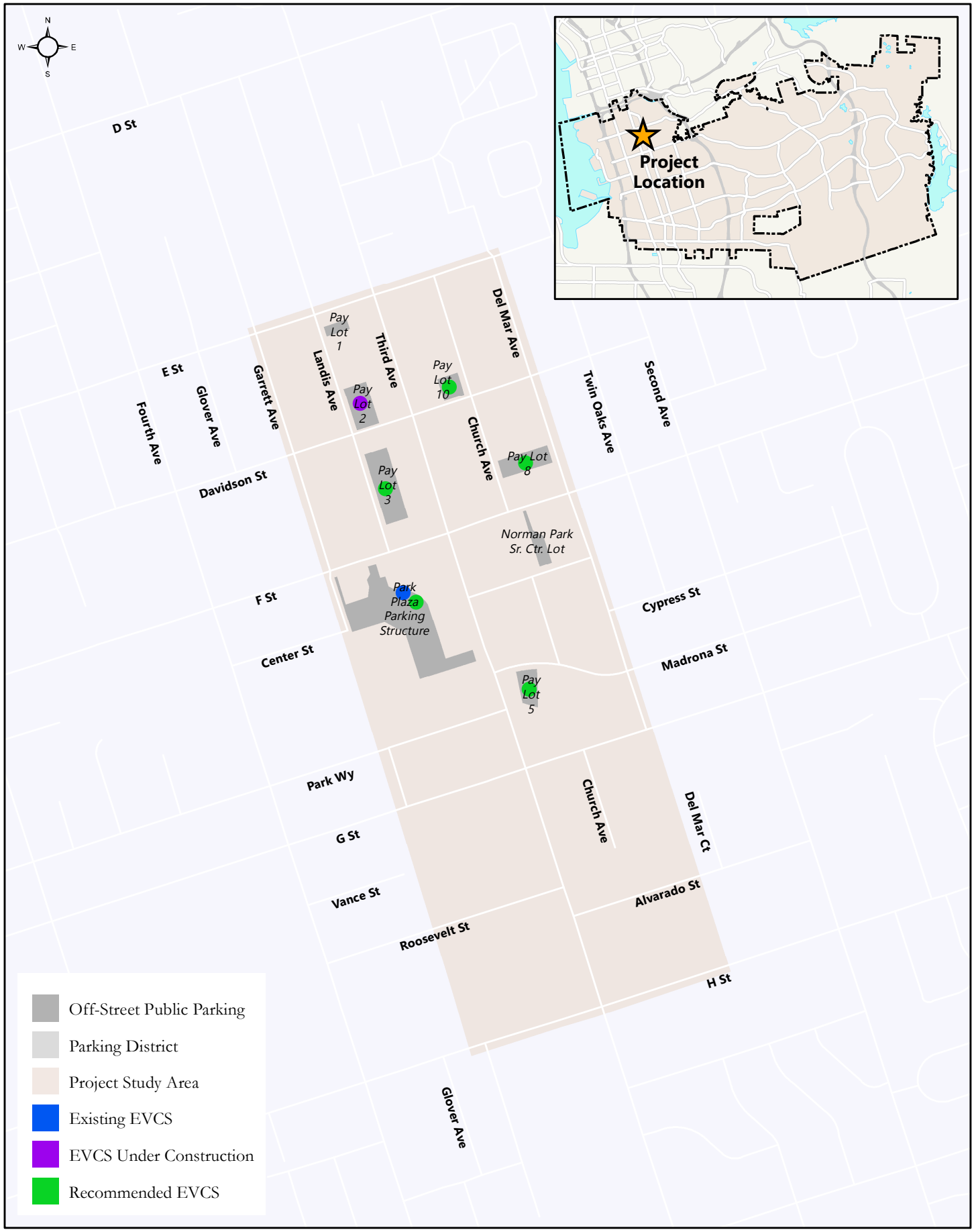
Source: CR Associates (2022)

Since only building a few EVCSs per lot may not be practical or cost-effective due to the cost of infrastructure, the City may need to consider a minimum number of EVCSs per lot. When siting ECVSs in the surface lot adjacent to the Park Plaza Parking Structure, consider adjacency of Memorial Park. Parking adjacent to the Park should not be constrained by EVCSs.



Downtown Chula Vista Parking District
Parking Management Plan

Figure 6-1
SANDAG EV Use Map



Downtown Chula Vista Parking District
Parking Management Plan

Figure 6-2
Surface Lots with with Recommended EVCS Installation

7.0 Parking Management Plan Recommendations

This section provides short-term and long-term recommendations to manage parking demand. The recommended strategies consider the findings from the analysis of existing and future conditions and input from the various stakeholder groups engaged during the outreach process. A financial pro-forma that analyzes Parking District recommendations is provided in **Appendix D**. **Table 7.1** provides a summary of the recommendations presented in this chapter.

The following objectives were considered when developing the parking management strategies:

- Modernization of parking infrastructure that provides convenient payment options and operational flexibility.
- Have clear way-finding systems to guide motorists to the nearest available parking space.
- Maintain convenient parking for visitors, customers, and employees.
- Ensure convenient, safe and clear access between parking lots and destinations.
- Parking revenue needs to cover operational costs.

Recommendation 1: Convert All Existing Meters to Smart Meters

The existing parking meters within and immediately adjacent to the Parking District are not technologically equipped to accept more convenient forms of payment, such as credit cards and mobile payment apps. As found in the outreach conducted for this study, this can discourage visitors from parking at metered locations, where they instead opt for parking at unmetered locations on the outskirts of the Parking District. As noted in Chapter 3, 64% of responded indicated the lack of convenience of the coin-operated parking meters was a deterrent. Smart meters can also ensure more efficient enforcement time restrictions and collection of revenues. Other benefits of the smart meters include:

- Maximizes parking turn-over in front of businesses and within the corridor.
- Remote monitoring of parking conditions allows real time parking analysis and generation of reports without the high cost associated with physical data collection.
- Tracking of financial metrics throughout the smart meter area.
- Allows the City' flexibility to implement dynamic time limits and pricing.
- Dynamic and remote control of meters for special event parking.

Short Term:

It is recommended that the meters within the Parking District and nearby surrounding environs be replaced with modern "smart" parking meters, which have the following capabilities:

- The flexibility to accept multiple forms of payment, including credit cards, coins, and mobile payment apps.

- Sensors which can detect when a vehicle is parked at a space and reset when the vehicle leaves. The sensors will facilitate efficient and prompt parking enforcement response when a meter violation occurs.
- Ability to accept additional payment remotely (up to the maximum legal time limit established for the zone in which the meter is located) using a smart phone app.
- Ability for commercial establishments within the Parking District to issue validations (up to the maximum legal time limit established for the zone in which the meter is located) using a smart phone app.
- Capability for City staff to adjust and control enforcement periods remotely, such as during special events.
- Capability to provide real time information on parking availability.

Long Term:

The following long-term recommendations are made:

- Monitor parking conditions within the Parking District and consider installing additional smart meters as parking demand increases or parking supply or turn-over issues occur.
- Coordinate with parking smart phone apps to inform the public of parking availability.

Recommendation 2: Shift Parking Enforcement Hours to Between 10 AM and 8 PM

The current hours of parking enforcement, between 9 AM and 6 PM do not coincide with the operating hours of most businesses along Third Avenue. Altering the parking enforcement hours would better match commercial demand periods, accommodate a more efficient management of supply and facilitate quicker turnover in the portions of the Parking District where dining and drinking establishments (which peak in the early evening) are concentrated.

Short Term:

- Shift parking enforcement hours to between 10 AM and 8 PM.

Long Term:

- Monitor development and parking utilization throughout the Parking District and adjust the enforcement hours, as needed.

Recommendation 3: Update Parking User Fees

The Downtown Chula Vista user parking fees are currently among the lowest in the region. The current user parking fees within the Parking District range between $0.25 to $0.50 per hour. This amount is less than the typical credit card processing fee ($0.27-$0.35). The parking user fees should be raised to an amount that would make the acceptance of credit card payment (Recommendation 1) financially feasible. Appendix D contains financial pro-forma for smart meter installation.

Short Term:

- Raise parking user fees to $0.75 per hour for all on-street parking meters once the smart meters are implemented.
- Implement parking user fees of $0.50 per hour for all off-street parking lots, including the Park Plaza Parking Structure (Note: the Park Plaza Parking Structure is also included in Recommendation #7). This strategy encourages higher turnover in front of businesses and longer-term parking in surface lots.
- The recommended meter fee is comparable to the City of La Mesa, which has a rate of $0.75 per hour. By way of comparison, the City of San Diego charges $1.25 per hour.
- Monitor and implement dynamic pricing by location and times of day or special events.

Long Term:

- Monitor parking utilization throughout the Parking District and adjust the user parking fees to encourage longer term visitors to use off-street facilities for parking. Monitoring can be done using the smart meter equipment proposed in Recommendation 1.
- Parking user fees should be evaluated on a regular basis (every 5 years).

Recommendation 4: Update Wayfinding and Information Signage within the Parking District

There are four different types of parking information signage within Downtown Chula Vista: Third Avenue Village Signage Plan, Manual on Uniform Traffic Control Devices (MUTCD) Parking Area D4-1, Park Plaza Village Planned Sign Program, and Pedestrian Paseo Parking guidance signs. Based upon review of the existing signage program throughout the Parking District, the following recommendations are made:

Short Term:

MUTCD Parking Area D4-1 signs throughout the Parking District should be replaced with the "Public Parking" signage in the Third Avenue Village Signage Plan, or other comprehensive signage program for Downtown Chula Vista that may be developed in the future. Since the Third Avenue Village Association recently changed their name to Downtown Chula Vista Association, this should be reflected in the signage plan along with any updated branding.



Third Avenue Village Signage Plan Example Signage

- Pedestrian Paseo Parking guidance signs throughout the Parking District should be redesigned to match the style established in the Third Avenue Village Signage Plan,
- Install new wayfinding signage to direct users to surface parking lots and parking structure, with parking rates and enforcement hours clearly posted.
- Ensure all public parking lots are identified in all major driving/mapping apps such as Waze, Google Maps, Apple maps by submitting "places" to each platform.

Long Term:

- Monitor and update signage throughout the Parking District as needed when new development occurs.
- Consider installing parking wayfinding signage at the boundaries of the Parking District.



Example of Potential Parking Pricing Signage

Recommendation 5: Revise the Downtown In-Lieu Parking Fee Program

The City's In-Lieu Parking Fee program was established in 1980. The regulations governing the In-Lieu Parking Fee program are codified within CVMC Section 19.62.040 and the method for calculating the fee is provided in Resolution 1980-9943 (the "In-Lieu Parking Fee"). The purpose of the program is to providing funding for future parking facilities, most likely a parking structure.

Appendix E includes a pro-forma to revise the In-Lieu Parking Fee rates based on current construction costs.

The following recommendations are made:

Short Term:

- The In-Lieu Parking fees should be revised to accommodate future needs, including a potential new parking structure or other off-street parking facilities. Also, CVMC Section 19.62.040 should be revised to state explicitly that the In-Lieu Parking Fee program is applicable to residential uses, in conformance with the Urban Core Specific Plan.

Long Term:

- Monitor and adjust the parking In-Lieu Parking Fee program periodically to maintain sufficient centralized public parking within the Parking District.
- Consider adjusting the In-Lieu Parking Fee rates periodically based on a relevant construction cost index.

Recommendation 6: Facilitate Non-Vehicular Transportation Modes to the Parking District

Bicycle parking and street furniture along Third Avenue is currently constructed to the specifications of the Third Avenue Village Streetscape Master Plan The last phase (Phase 3) of the Third Avenue Streetscape improvements was completed in December 2021. As of the time of this report, most of the bicycle parking and benches within the Parking District are located on both sides of Third Avenue, between F Street and H Street.

Based on review of the field conditions and the Third Avenue Village Streetscape Master Plan, the following recommendations are made:



Micro-Mobility Parking within Red Curb of Roadway

Short Term:

- Bicycle loop racks installed on parking meter posts are the preferred design to accommodate bicycles.
- Bicycle racks should conform to the design of the Third Avenue Village Streetscape Master Plan.
- Bike racks should be installed at regular intervals (one rack every 1-2 blocks) to encourage use and facilitate access.
- Ensure bicycle racks are compliant with ADA regulations.
- Bicycle parking should be located in high visibility areas.



Bicycle Rack on Parking Meter Post

Micro-mobility (short to long term):

- Dedicated parking should be considered along Third Avenue to accommodate micro-mobility vehicles.
- Micro-mobility deployment areas and micro-mobility parking should be concentrated where destinations are most concentrated, to facilitate first and "last mile" portions of trips.
- Micro-mobility parking should be located within the roadway, by converting red curb space (subject to Chula Vista Fire Department approval) or daylighted areas near intersections into dedicated parking. Micro-mobility parking on sidewalk is not an ideal solution due to the possibility of accessibility obstacles and hazards. Micro-mobility parking designation should follow applicable design standard, regulation for clear zones, line of sights, and fire access.

Long Term:

- Monitor innovations and changes in micro-mobility and prepare accordingly.
- Coordinate with San Diego Metropolitan Transit System (MTS) and SANDAG to ensure all bus stops within the study area provide useful travel information and comfort amenities (seating, shade, etc.)

Recommendation 7: Park Plaza Parking Structure Improvements and Maintenance

As discussed in Section 2.8, the City recently assumed responsibility for maintenance and operation of the Park Plaza Parking Structure following the expiration of the Reciprocal Access Agreement. To help cover these additional costs and to implement relevant elements of Recommendation 4, the following recommendations are made:

Short Term:

- Install a parking fee collection system in the Park Plaza Parking Structure. User parking fees in the Park Plaza Parking Structure should be the same as all other off-street parking facilities. The design of the parking fee collection system should consider the unique parking characteristics of the adjacent commercial businesses.
- Park Plaza Parking Structure signage should be updated to be consistent with the Third Avenue Village Signage Plan. The following locations should receive updated signage:
    - Third Avenue, F Street, and Garrett Avenue
    - At Park Plaza Parking Structure entrances, located on Madrona Street and Landis Avenue
- Update the parking structure striping to be consistent with current standards.
- Consider removing the existing planters inside the parking structure and install wheel stops where appropriate.
- Install an upgraded lighting system within the parking structure to improve visibility and public safety.
- Consider implementing a validation program with adjacent tenants when parking fee collection is implemented.

Long Term:

- Install electronic signage at the exterior access points of the parking structure with real time data to indicates available parking spaces within the structure.

Recommendation 8: Curbside Management

There are no dedicated short-term parking and commercial loading locations along Third Avenue within the study area. As the need for curbside space for loading and delivery logistics increases, flexible curb side management will be essential to ensure to meet the needs of all users in the Parking District. The following recommendations are provided:



Potential curbside management locations

Short Term:

- Designate short-term flexible parking spaces at interspersed locations along Third Avenue to accommodate short term users and deliveries. These spaces should be used to serve the different short-term needs throughout the day. During regular business hours these locations could be allocated for visitors with short-term parking needs (15 to 30 minutes). In the evening, the spaces could be dedicated for utilization by taxis and ride-hailing services for pick-up and drop-off, to better serve night life demand. Finally, after 8 PM, the curbside management locations could be designated for overnight parking, to residents who live in the vicinity.
- Consider providing parking for food delivery/app-based delivery in coordination with DCVA, as appropriate.
- Designate a number of commercial parking spaces per block, where appropriate, for commercial delivery during regular business hours. These spaces could be: (1) passenger loading spaces – white zones (2) commercial loading spaces – yellow zones OR combo/flex loading zones for passengers/commercial vehicles.



Potential Curbside Management Signage

Long Term:

- Install digital signage at curbside management parking locations to indicate the permitted uses allowed at the current time.
- As parking technology evolves, consider providing live parking availability information via the City's website or an app.
- Monitor and update flex spaces along Third Avenue as needed.

Recommendation 9: Modify Parking Restrictions at Norman Park Senior Center Parking Lot

Based on findings from the community outreach effort, the following recommendations are provided:

Short term:

- Remove meters and increase the parking time restrictions within the Norman Park Senior Center Parking Lot from two hours to four hours.
- Convert the Normal Park Senior Center parking lot into a lot for the Norman Park Senior Center. Consider development of a Senior Parking Permit program for this parking lot.
- Consider designating 1-2 spaces with a one-hour time limit for short-term use.

Recommendation 10: Demand Management for Large Events

Based on a review of traffic control plans utilized for the Downtown's Lemon Festival and Starlight Parade, and field observations documented in Chapter 2, the following are recommendations for large events:

Short Term:

On-Street events (e.g., Lemon Festival, Starlight Parade, Taste of Third)

- Coordinate with the special event applicant to develop a comprehensive parking management plan to efficiently guide visitors to targeted parking locations.
- Coordinate off-street parking location information together with traffic detour signage.
- Display parking costs and restrictions at the entrances to all off-street parking facilities with the Parking District.
- Coordinate with the special event applicants to provide parking information to ensure adequate communication of parking options, including a list of off-street parking lots.



Drone observation shows empty parking lot but high demand for on-street parking during Lemon Festival

Off-Street events (e.g., Vogue Theater)

- Establish loading and staging areas for ride-hailing services
- Utilize parking valet systems
- Coordinate with event organizers to disseminate parking information on event information and promotional materials.

Recommendation 11: Expansion of Parking District Boundary to Include All Existing Parking Meters

Short Term:

Approximately 21 parking meters are located outside of the Parking District, but within the project study area. The Parking District should be expanded to cover that additional supply. To encompass those locations, the following adjustments to the Parking District boundary would be necessary:

- 300 feet north of E Street on all north-south streets between Garrett Avenue and Del Mar Avenue

Figure 7.1 displays the Parking District boundary adjustment, and **Figure 7.2** displays the proposed Parking District.

Recommendation 12: Establish Funding Mechanisms to Accommodate Future Demand

Approximately 200 additional spaces will be needed in the future if redevelopment occurs as projected.

Short Term:

- Implement a capital reserve fund which, together with the recommended adjustments to the In-Lieu Parking Fee, will build up the fund balance to help pay for future parking facilities, such as a parking structure.

Long Term:

- Monitor parking inventory and demand within the Parking District and program funds for the siting, design, and construction of a new parking facility when additional inventory is warranted.



Public Off-Street Parking Supply

Pay Lot 1	14
Pay Lot 2	74
Pay Lot 3	118
Park Plaza Parking Structure	670
Pay Lot 5	42
Pay Lot 8	53
Pay Lot 10	28
Norman Park Senior Center Lot	15

Downtown Chula Vista Parking District
Parking Management Plan

C+R

Figure 7-1
Parking District Boundary Expansion Recommendation



Public Off-Street Parking Supply

Pay Lot 1	14
Pay Lot 2	74
Pay Lot 3	118
Park Plaza Parking Structure	670
Pay Lot 5	42
Pay Lot 8	53
Pay Lot 10	28
Norman Park Senior Center Lot	15

Downtown Chula Vista Parking District
Parking Management Plan

Figure 7-2
New Parking District Boundary

Recommendation 13: Monitor and Make Minor Adjustments to the Curb Café Program

As discussed in Chapter 5, the Curb Café program, which was initiated in response to the COVID-19 pandemic, does not currently have any significant effect on parking supply. The recommendations below would be implemented if the Curb Café program were to be extended beyond the current sunset date of July 31, 2023:

Short Term:

- Continue to require the Maintenance and Removal Agreement and Encroachment Permit. Include termination provisions if public right-of-way is needed for parking. Require regular maintenance and repairs to ensure structures do not become unsightly and remain structurally sound.
- Monitor parking occupancy periodically to ensure that there is available parking within a 1/8-mile walking distance of the business (during a mid-day and evening peak hour) and confirm that the available parking within that radius does not exceed 85% occupancy.
- If the City does not want to increase the number of Curb Cafés beyond what is allowed in the current program and/or wants to limit the number of parking spaces eliminated per café, is it recommended that guidelines state clearly that Curb Cafés shall be limited to no more than two per block side, with each taking up no more than three parking spaces.

Recommendation 14: Provide additional Electric Vehicle Charging Stations in Public Parking Lots and Monitor EVCS Use

The City is committed to achieve its Greenhouse Gas (GHG) emission reduction goals and wants to support and encourage the use of electric vehicles. Additional charging stations are needed to accommodate expected increase in demand.

Short Term:

- Continue to monitor EVCS usage at the Park Plaza Parking Structure and nearby pay lots to determine EV charging usage. When EV charging usage reaches 85% daily per lot, consider additional EVCSs.
- Consider an enforcement policy such as implementing a time limited charging program to ensure that vehicles are actively charging instead of just using a premium parking space. The recommended time limit is four hours or approximately 50% of the time required to charge an EV from empty.
- EVCSs should be in compliance with the technical specifications documented in Appendix C.
- EVCSs should be an open system to be compliance with California Health and Safety Code (HSC) 44268.2.
- All EVCS installations shall comply with current ADA requirements of the California Building Code which sets forth design requirements for accessible EVCSs, number of accessible spaces required, and technical requirements for spaces. Site planning for EVCSs should consider accessible routes to building entrances or site boundary.

- The recommended number of EVCSs is 5% of the total available parking spaces within City-operated parking facilities in areas having the highest EV charging demand, as shown previously in **Table 6.1**.[10]
- When siting ECVSs in the surface lot adjacent to the Park Plaza Parking Structure, consider adjacency of Memorial Park. Parking adjacent to the Park should not be constrained by EVCSs.

The recommended parking management strategies are summarized in **Table 7.1**.

[10] Alternatively, a minimum number of spaces per lot may be identified based on cost considerations.

Table 7.1 - Recommendation Summary

Recommendation	Rationale	Short Term	Long Term	Benefits
1. Convert All Existing Meters (Except Norman Park) to Smart Meters	Current parking meters do not accept more convenient forms of payment (credit card), thereby discouraging some users.	It is recommended that the meters within the Parking District and nearby surrounding environs be replaced with modern "smart" parking meters, which are able to accept multiple forms of payment, provide vehicle sensors, have a remote payment capability, accommodate merchant validation, allow for remote enforcement, and provide real-time parking information	Monitor parking conditions within the Parking District and consider installing additional smart meters as parking demand increases or parking supply or turn-over issues occur. Coordinate with parking smart phone apps to inform the public of parking availability.	Increases the utility of parking meter infrastructure for user convenience and easier enforcement.
2. Shift Parking Enforcement Time from 9 AM – 6 PM to 10 AM - 8 PM	The current hours of parking enforcement do not coincide with the operating hours of most businesses along Third Avenue.	Shift parking enforcement hours to 10 AM and 8 PM	Monitor and adjust enforcement hours, as needed	Facilitates turnover between 6 PM and 8 PM and encourages use by patrons/shoppers
3. Re-assess Parking User Fees	Current parking user fees are insufficient to support credit card payments.	With installation of smart meters, raise parking user fees $0.75 per hour for all on-street parking meters and $0.50 per hour for off-street parking facilities. Monitor and implement dynamic pricing by location and times of day or special events.	Monitor and adjust parking user fees as appropriate. Parking user fees should be evaluated regularly.	Provides sufficient revenue to support credit card payments and optimizes parking turnover.
4. Update Wayfinding and Information Signage within the Parking District	Parking information signage within Parking District is limited and inconsistent.	Improve signage to the standards proposed in the Third Avenue Village Signage Plan, and update branding to reflect the recently-established Downtown Chula Vista Association. Install new wayfinding signage to direct users to surface parking lots and parking structure, with parking rates and enforcement hours clearly posted Ensure all public parking lots are identified in all major driving/mapping apps such as Waze, Google Maps, Apple maps by submitting "places" to each platform	Monitor and update signage needs within the Parking District as needed. Consider installing parking wayfinding signage at the boundaries of the Parking District	Improved information about parking locations and availability for visiting motorists.

Table 7.1 - Recommendation Summary

Recommendation	Rationale	Short Term	Long Term	Benefits
5. Revise Downtown In-Lieu Parking Fee Program	Existing In-Lieu Parking Fee program does not meet the needs of expected costs of providing for future parking demand.	The In-Lieu Parking fees should be revised to accommodate future needs, including a potential new parking structure or other off-street parking facilities. Also, CVMC Section 19.62.040 should be revised to state explicitly that the In-Lieu Parking Fee program is applicable to residential uses, in conformance with the Urban Core Specific Plan.	Monitor and adjust the In-Lieu Parking Fee Program periodically to maintain sufficient centralized public parking within the Parking District. Consider adjusting the In-Lieu Parking Fee rates periodically based on a relevant construction cost index.	Aligns In-Lieu Parking Fee program with costs of providing for future parking demand.
6. Facilitate Non-Vehicular Transportation Modes to the Parking District	Limited end-of-trip facilities for bicycles and micro-mobility and limited pedestrian and transit stop amenities within Parking District	Bicycle loop racks installed on parking meter posts are the preferred design to accommodate bicycles Install bicycle parking at regular intervals along Third Avenue, between E Street and F Street. Provide micro mobility parking within red curb zones of roadway (subject to Chula Vista Fire Department approval) and other opportunity areas. Micro-mobility parking designation should follow applicable design standard, regulation for clear zones, line of sights, and fire access.	Provide support for emerging micro-mobility options in the future. Coordinate with MTS and SANDAG to improve bus stops within the Parking District.	Facilitates usage of other forms of transportation to access destinations within the Parking District, reducing parking demand.
7. Park Plaza Parking Structure Improvements and Maintenance	The City is now responsible for Park Plaza parking structure maintenance and repairs.	Install a parking fee collection system in the Park Plaza Parking Structure. User parking fees in the Park Plaza Parking Structure should be the same as all other off-street parking facilities. The design of the parking fee collection system should consider the unique parking characteristics of the adjacent commercial businesses. Park Plaza Parking Structure signage should be updated to be consistent with the Third Avenue Village Signage Plan. Update the parking structure striping to be consistent with current standards. Consider removing the existing planters inside the parking structure and install wheel stops where appropriate. Install an upgraded lighting system within the parking structure to improve visibility and public safety. Consider implementing a validation program with adjacent tenants when parking fee collection is implemented.	Provide digital signage indicating real time information of available parking supply.	Provides funding for maintenance and operation and to make improvements to the largest parking facility within the Parking District. Facilitates parking turn-over

Table 7.1 - Recommendation Summary

Recommendation	Rationale	Short Term	Long Term	Benefits
8. Curbside Management	Lack of short-term parking and commercial loading locations along Third Avenue	Identify locations for flexible curbside management uses to accommodate a variety of parking uses, including short-term parking, commercial loading, ride-hailing service pick-up and drop-off and overnight parking. Install discrete physical signage on parking meter indicating allowed parking uses Consider providing parking space for food delivery/app-based delivery within the Parking District.	Install digital signage at curbside management parking locations to indicate the permitted uses allowed at the current time. As parking technology evolves, consider providing live parking availability information via the City's website or an app. Monitor and update flex spaces along Third Avenue as needed.	Accommodates a variety of users, each with varying peak demand times. Reduces double-parking along Third Avenue
9. Modify Parking Restrictions at Norman Park Senior Center Parking Lot	Current time restrictions (two hours) are not compatible with Norman Park Senior Center activities.	Remove parking meters and increase time restriction to lot from two hours to four hours Convert the Norman Park Senior Center parking lot into a permitted senior parking only. Consider 1-2 spaces with one-hour time limit for short-term use.	-	Facilitate access to and use of the center.
10. Demand Management for Large Events	Event attendees may not be aware of parking locations for large public events held in Downtown Chula Vista.	*On-street events* Coordinate with event applicants to develop a comprehensive parking management plan to efficiently guide visitors to parking locations Coordinate with the special event applicants to provide parking information ensure proper promotion of parking options. *Off-street events (Vogue Theater)* Establish loading and staging areas for ride-hailing services. Utilize parking valet systems. Coordinate with event organizer to disseminate parking information on event information materials and promotions.	-	Increases utilization of available parking spaces. Improves event attendee perception of parking within the Parking District. Reduces congestion from motorists searching for parking spaces.

Table 7.1 - Recommendation Summary

Recommendation	Rationale	Short Term	Long Term	Benefits
11. Expansion of Parking District Boundary to Include All Existing Parking Meters	Approximately 21 parking meters are located to the north of the Parking District boundaries, but which are managed in the same manner as meters inside the Parking District.	Expand the Parking District boundary to include the 21 parking meters by extending the northern boundary by approximately 300 feet north of E Street on all north-south streets between Garrett Avenue and Del Mar Avenue	-	All meters are encompassed within the Parking District, facilitating management.
12. Establish Funding Mechanisms to Accommodate Future Demand	Approximately 200 additional spaces will be needed in the future if redevelopment occurs as projected.	Implement a capital reserve fund which, together with the recommended adjustments to the in-lieu fee, will build up the fund balance to help pay for future parking facilities, such as a parking structure.	Monitor parking inventory and demand within the Parking District and program funds for the siting, design, and construction of a new parking facility when additional inventory is warranted.	Implementation of capital reserve fund and recommended changes to the in-lieu fee program will support future construction of parking facilities.
13. Monitor and Make Minor Adjustments to the Curb Café Program, if it is Extended beyond July 31, 2023 Sunset Date	Review of implementation and impacts identified several measures to improve administration of the program. Continued monitoring is suggested to address effects on parking availability and to ensure Curb Cafés remain attractive and structurally sound.	Continue to require the Maintenance and Removal Agreement and Encroachment Permit. Include termination provisions if public right-of-way is needed for parking. Require regular maintenance and repairs to ensure structures do not become unsightly and remain structurally sound. Monitor parking occupancy periodically to ensure that there is available parking within a 1/8-mile walking distance of the business (during a mid-day and evening peak hour) and confirm that the available parking within that radius does not exceed 85% occupancy. If the City does not want to increase the number of Curb Cafés beyond what is allowed in the current program and/or wants to limit the number of parking spaces eliminated per café, it is recommended that Guidelines state clearly that Curb Cafés are limited to no more than two per block side, with each taking up no more than three parking spaces.	-	Monitoring will help avoid potential parking availability impacts and other recommendations will clarify operation of the program.

Table 7.1 - Recommendation Summary

Recommendation	Rationale	Short Term	Long Term	Benefits
14. Provide additional Electric Vehicle Charging Stations in Public Parking Lots and Monitor EVCS Use	The City is committed to achieve its Greenhouse Gas (GHG) emission reduction goals and wants to support and encourage the use of electric vehicles. Additional charging stations are needed to accommodate and expected increase in demand.	Continue to monitor EVCS usage at the Park Plaza Parking Structure and nearby pay lots to determine EV charging usage. When EV charging usage reaches 85% daily per lot, consider additional EVCSs. Consider an enforcement policy such as implementing a time limited charging program to ensure that vehicles are actively charging instead of just using a premium parking space. The recommended time limit is four hours or approximately 50% of the time required to charge an EV from empty. EVCSs should be in compliance with the technical specifications documented in Appendix C. EVCSs should be an open system to be compliance with California Health and Safety Code (HSC) 44268.2. All EVCS installations shall comply with current ADA requirements of the California Building Code which sets forth design requirements for accessible EVCSs, number of accessible spaces required, and technical requirements for spaces. Site planning for EVCSs should consider accessible routes to building entrances or site boundary. The recommended number of EVCSs is 5% of the total available parking spaces within City-operated parking facilities in areas having the highest EV charging demand, as shown previously in **Table 6.1**.[11] Provide information to the public about the location, cost, and type of charging stations available. (Ex: UCSD website: https://transportation.ucsd.edu/commute/ev-stations.html) When siting ECVSs in the surface lot adjacent to the Park Plaza Parking Structure, consider adjacency of Memorial Park. Parking adjacent to the Park should not be constrained by EVCSs.	-	Establishes EVCS siting criteria, technical specifications, and monitoring procedures to support future EVCS installation and operation.

Source: CR Associates (2022)

[11] Alternatively, a minimum number of spaces per lot may be identified based on cost considerations.

Appendix A - Downtown Chula Vista Existing Conditions Report

<u>Correction</u>
Existing Conditions Report
Downtown Chula Vista Parking Management Plan

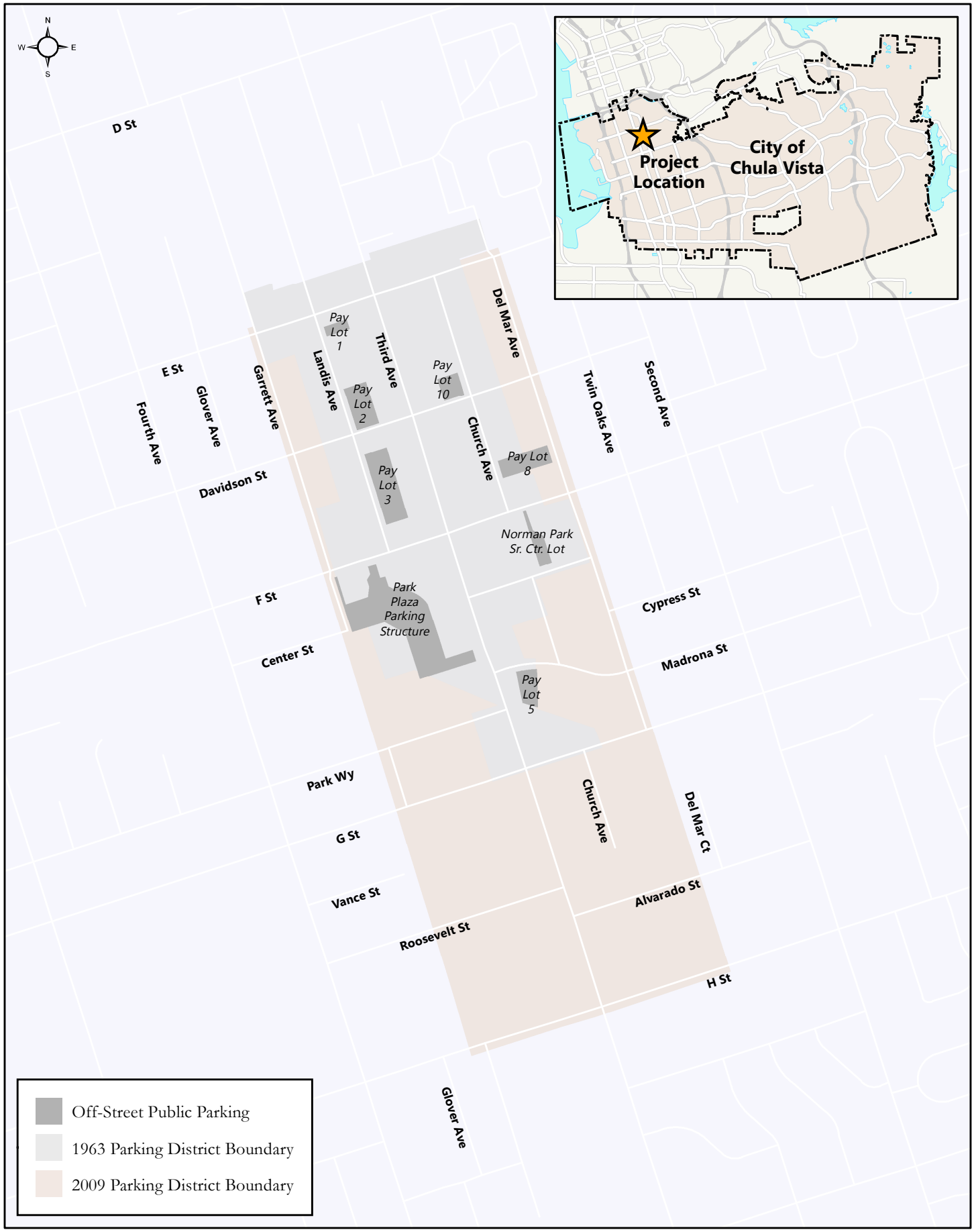
At the time the Existing Conditions Report was drafted (Final Report, June 2019) it was assumed that the boundaries of the Parking District were the original ones established in 1963. After the publication of the Existing Conditions Report, it was discovered that the boundaries of the Parking District were modified in 2009 by Ordinance 3139. The map below shows the 1963 and 2009 Parking District boundaries and the Study Area boundaries.

Due to the boundary adjustment, 21 parking meters are located outside of the 2009 Parking District boundary, including 4 meters along Garrett Avenue, north of E Street, and 17 meters along Landis Avenue, north of E Street. Five of the 17 meters along Landis Avenue are located outside of both the 1963 and 2009 Parking District boundaries. These parking meters were included in the Geographical Information System (GIS) database for the Existing Conditions analysis. This additional clarification only affects the summary presented in Table 4-1, and does not affect the conclusions of the Existing Conditions Report. A strikeout and underline version of Table 4-1 is provided below for informational purposes.

Table 4-1: Public Parking Supply within Study Area

Time Restriction	Location	Cost	Parking District	Within Study Area (Outside Parking District)	Total Study Area
No Time Limit	On-Street	Free	20	364	384
≥10-Hour Limit	Off-Street	Pay	213	0	213
4-Hour Limit	Off-Street	Pay	~~42~~116	0	~~42~~116
3-Hour Limit	Off-Street	Free	670	0	670
2-Hour Limit	On-Street	Pay	~~430~~460	21~~46~~	~~476~~481
2-Hour Limit	Norman Scott	Pay	*15*	0	15
2-Hour Limit	On-Street	Free	16	57	73
1-Hour Limit	On-Street	Free	0	3	3
<1-Hour/Loading	On-Street	Free	18	7	25
Total			**~~1,409~~ 1,538**	**~~477~~452**	**~~1,886~~ 1,980**

It should also be noted that Pay Lot 3 maximum time restriction is 10 hours, instead of the 16 Hours documented in Table 4-3 of the Existing Conditions Report.


N
W
E
S
D St
E St
F St
G St
Vance St
Roosevelt St
H St
Center St
Davidson St
Park Wy
Madrona St
Cypress St
Alvarado St
Fourth Ave
Glover Ave
Garrett Ave
Landis Ave
Third Ave
Del Mar Ave
Church Ave
Twin Oaks Ave
Second Ave
Del Mar Ct
Pay Lot 1
Pay Lot 2
Pay Lot 3
Pay Lot 5
Pay Lot 8
Pay Lot 10
Norman Park Sr. Ctr. Lot
Park Plaza Parking Structure
Project Location
City of Chula Vista
Off-Street Public Parking
1963 Parking District Boundary
2009 Parking District Boundary

Existing Conditions Report

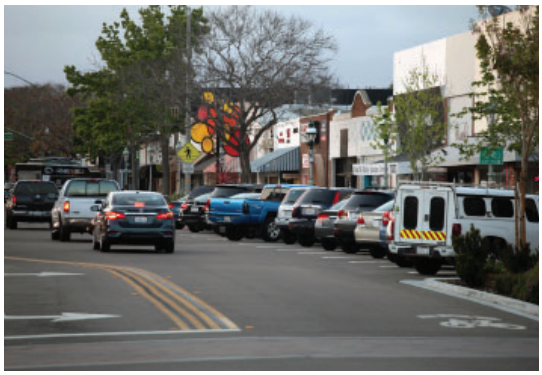
Downtown Chula Vista Parking Management Study

June 28, 2019

FINAL









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TRANSPORTATION • PLANNING • DESIGN

CITY OF CHULA VISTA

Downtown Chula Vista Parking Management Plan

Existing Conditions Report

Final Report

June 28, 2019

Prepared for:
City of Chula Vista

Prepared by:

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In association with:
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1.0 Introduction

This report examines current parking conditions in Downtown Chula Vista. Specifically, it covers the Downtown Parking District (Parking District) and the adjacent surrounding area, as shown in Figure 1-1.

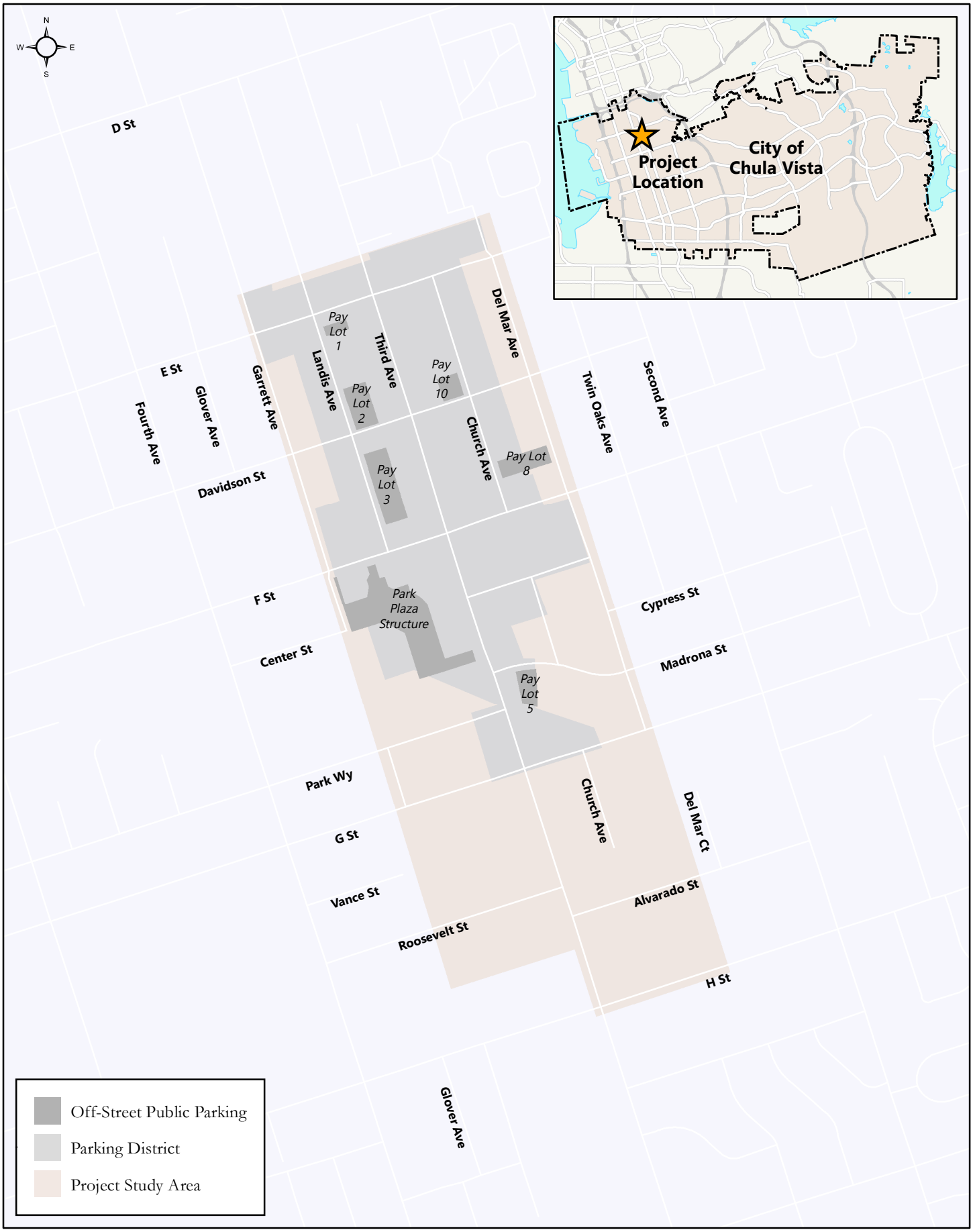
Project Location

Chula Vista (City) is located in southern San Diego County, and is the second largest city in the region. The City is approximately 50 square miles, extending from San Diego Bay in the west, to the foothills of the Jamul and San Ysidro Mountains in the east.

Downtown Chula Vista is in the northwest quadrant of the City, and concentrated around Third Avenue – where between E Street and H Street the corridor has retained much of its traditional main street character. These extents also describe the approximate study area of the project. The Parking District, which is within the project study area, is where a vast majority of the metered and other time-limited parking serving the needs of the Downtown Chula Vista business community is situated. The Parking District was established in 1963 and surrounds Third Avenue between E Street and G Street, including some intersecting side streets and adjacent parallel blocks.



Third Avenue in Downtown Chula Vista (looking to the north)



Downtown Chula Vista Parking Management Plan

Figure 1-1
Project Location

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Report Context

Downtown Chula Vista land use planning is guided by the Urban Core Specific Plan (UCSP), which, among other goals, envisions higher densities, mixed-use development, traffic calming and more place-making attractions within the community. The City's In-Lieu Parking Fee program (established in 1980 via Resolution 9943, and codified in Section 19.62.040 of the Chula Vista Municipal Code (CVMC)) relaxes parking requirements for projects within UCSP area, allowing developments to utilize excess public parking capacity within the area to accommodate a portion of their project's parking demand off-site. This report represents the first phase of the Downtown Chula Vista Parking Management Plan, which will inquire how suitable the Downtown area's parking infrastructure is for the density and development changes encouraged by the UCSP. This assessment is based on observations of the existing parking patterns and evaluation of currently-practiced parking management measures. The full study will synthetize that information, project how expected development changes to the urban core area will affect parking demand and identify measures which can be implemented to better manage parking demand in the future.

Project Background

This study is an update to a 2007 parking management study conducted by *Rich and Associates, Inc*. The 2007 study estimated that there is an overall surplus of parking within the Parking District; however, utilization throughout is spread unevenly, resulting in some individual block locations within Downtown having parking deficits. Some of the recommendations from that plan were designed to distribute utilization more evenly, thereby taking advantage of underutilized parking assets.

Report Organization

The remainder of this report is organized into the following chapters:

Chapter 2 – Summary of Relevant Policy Documents identifies and reviews policies from other Chula Vista planning and transportation studies which have any relation to parking within the Downtown project study area.

Chapter 3 – Public Parking Facilities & In-Lieu Fee Program reviews the main parking revenue sources which fund the operations of the Parking District.

Chapter 4 – Facilities Inventory provides a detailed quantification of the entire supply of public parking within the study area, including documentation of any unique attributes of the supply such as cost, time and purpose restrictions. This section also examines how parking enforcement practices, alternative transportation modes, and auxiliary infrastructure such as wayfinding signage supplement the use of parking within the study area.

Chapter 5 – Existing Parking Demand presents and analyzes parking occupancy data collection within the study area. This chapter introduces a unique approach to analyzing parking occupancy conceptualizing fragmented parking supply. This section also examines parking turnover along Third Avenue and within the Park Plaza parking structure.

Chapter 6 – Public Outreach summarizes all the public outreach efforts undertaken during the life of the project up to this point in time. These efforts include meetings with stakeholder groups, a pop-up booth hosted at a community event, and the preparation of opinion surveys, which were administered to business owners and public stakeholders. Responses from the survey efforts will also be presented and analyzed in this section.

Chapter 7 – Conclusions synthesizes the information and findings from the chapters which preceded it.

2.0 Summary of Relevant Policy Documents

This section summarizes policies related to Downtown Chula Vista parking from municipal planning documents, including the Chula Vista General Plan and the Urban Core Specific Plan. Relevant issues or findings from other local planning and transportation studies are also summarized.

Chula Vista General Plan

The General Plan includes several parking-related objectives within the Land Use and Transportation (LUT) Element. Each of these objectives are accompanied by several more focused policy strategies.

As stated in Objective 30 of the LUT Element, the General Plan prefers parking management strategies to make more efficient utilization of existing parking resources over public expenditures for creating additional parking supply. One policy (LUT 30.3) which supports this objective emphasizes short-term parking in commercial areas, which generates higher parking turnover than otherwise, thereby serving a greater number of users more efficiently. Another policy (LUT 30.2) recommends considering parking maximums (as opposed to minimum parking requirements) in mixed-use areas, the externalities of which can be offset by the closer proximity of destinations to each other and the availability of transit.

Another General Plan parking objective (LUT 32) favors, where applicable, exploring flexible strategies for pairing parking with land uses, such as joint-use parking agreements (Policy LUT 32.1), the creation of parking districts with centralized parking (Policy LUT 32.2), and the use of parking credits/in-lieu fees where parking resources are abundant (Policies LUT 32.3 and 32.4).

One other parking-related General Plan objective (LUT 33) indicates a preference for parking siting and design that is efficient, appropriately integrated with the surrounding urban form, and which interfaces properly with alternative vehicles and the pedestrian environment.

Urban Core Specific Plan

The UCSP is a planning document devised to guide growth and development in the urban core located in northwestern Chula Vista, where the Parking District is located. The key vision of the UCSP is to facilitate the transformation of the core area into a place with land use diversity and urban vitality, supported by a variety of mobility options in addition to driving, such as walking, bicycling and public transportation. The UCSP aims are consistent with visions of the City's General Plan, while also allowing for some innovative planning strategies, not otherwise available in the General Plan, to better deal with the unique conditions of the downtown and more urban area.

The plan recognizes that providing this type of environment while simultaneously mandating abundant parking supply are conflicting priorities and that they need to be balanced. The City's In-Lieu Parking Fee program relaxes parking requirements for projects within UCSP area, allowing non-residential developments to utilize excess public parking capacity within the area to accommodate a portion of their project's parking demand off-site. The plan also aims to reconcile this tension through land use and development regulations that are form-based, as opposed to the traditional use-based regulations found in most urban plans. The plan also provides extensive design guideline criteria which specifically addresses how parking should complement and interface with the pedestrian environment.

The UCSP also recognizes that a component to its vitality is its ability to attract new businesses and future development to the core. The plan recommends that the In-Lieu Parking Fee program, which is a

mechanism used to assist developers with the challenges of accommodating parking on infill sites, be evaluated for possible expansion in scope.

Downtown Parking Management Study (2007)

The Downtown Parking Management Study analyzed then-current (i.e., year 2007) and projected future parking needs within the Parking District and issued a series of recommendations.

Based upon a parking generation assumption of 2.37 spaces per 1,000 per square feet of building area (a ratio more conservative than the required 2.0 parking spaces per 1,000 square feet found within the UCSP form-based codes), the study calculated that under 2007 year conditions the Parking District collectively would have a parking surplus of approximately 1,300 spaces. Despite the overall surplus, the distribution was not spread evenly throughout the district and some specific block locations inside of the would have parking supply deficits. The study recommended making better use of the underutilized parking assets, such as the 675-space Park Plaza parking structure located near Third Avenue and F Street, to help offset deficits within individual block areas. Based on the parking ratio developed by the authors, the study estimated that there would be a deficit of 500 parking spaces within the Parking District with a complete buildout of the planned land uses.

Some of the recommendations from the study included:

- Formation of a parking committee with appointed leadership to facilitate stronger management and operations; and
- Updated and improved signage to increase efficient utilization of parking resources; and
- Increased rates for permits and meters; and
- Ordinance controlling how valet parking operates within the Parking District.

Some of those recommendations have been implemented, including the establishment of a parking committee within Third Avenue Village Association (TAVA) in 2018. Wayfinding signage enhancements were proposed and implemented as a part of the Third Avenue Village Streetscape Improvements in 2012.

Chula Vista Bicycle Master Plan (2011)

The currently adopted Bicycle Master Plan recommends that the Third Avenue corridor, in its entirety, be dedicated as a Class III Bicycle Route. A Class III Bicycle route is a mixed-traffic facility where bicyclists and motorists share the same lane. A Class III route will contain bicycle signage and often include ”sharrow” markings, a bicycle symbol with chevron arrows stenciled in the middle of the travel lane at frequent intervals. Class III bicycle facilities do not typically require modifications to the roadway such as the removal of on-street parking; however, the plan recommends an ideal travel lane width for such facilities to be 14 feet – allowing enough room for a motorist to pass a cyclist while providing 3 feet of clearance (the State recently increased the clearance requirement to 5 feet). In comparison to eastern Chula Vista, there are fewer bike lane projects that are proposed in the older, more developed western half of Chula Vista due to the western half’s generally narrower street widths and heavier reliance on on-street parking.

The Bicycle Master Plan recommended several initiatives which may relate to or compliment transportation planning objectives of the business district core of Chula Vista, including improved wayfinding signage as a navigational aid for cyclists; encouragement activities such as Bike to Work events; business and employer bicycling incentive programs; bicycle sharing programs; and replication of “open street” events such as *CicLAvia* in Los Angeles – where selected streets are closed to vehicular traffic in order to celebrate a

reclamation of the city streets for human-scaled transportation. Since plan adoption, the City of Chula Vista has established its own open street event called *CiclaVista*.

The City of Chula Vista is currently updating their bicycle and pedestrian master plans under the umbrella of an 'active transportation' master plan.

Chula Vista Pedestrian Master Plan (2010)

The currently adopted Pedestrian Master Plan recommends wider sidewalks and curb extensions along several high priority project corridors which overlap with the downtown area, including Third Avenue, E Street, G Street and H Streets. The plan does not otherwise reference parking issues within the City and Downtown area.

3.0 Public Parking Facilities & In-Lieu Fee Program

Operations within the District are funded by the following main revenue sources: (1) revenues generated from parking user fees and penalties (i.e., payments at meters and parking lots, employee parking permits, and parking citations); and (2) revenues received from the Parking In-Lieu Fee Program. The regulations governing parking user fees are specified in Chapter 10 of the CVMC. Current rates for parking meters, parking permits, and parking citations are published in Chapter 13 (General Parking Fees) of the City's Master Fee Schedule. The conditions and processes for utilizing the Parking In-Lieu Fee program are codified within CVMC Section 19.62.040, while the UCSP dictates eligibility by establishing which zones and uses are able to use the program. The Downtown Parking District In-Lieu Fee structure is established in Chapter 9 of the City's Master Fee Schedule (Downtown District Fees).

3.1 Parking User Fees

CVMC Section 10.56.020 establishes parking user fees at the following rates:

- Thirty (30) Minute Meters: A $0.25 deposit up to the maximum time limit established for the zone in which the meter is located; or
- Two, Three, and Four-Hour Meters: A $0.25 deposit for each 30-minute interval or a $0.50 deposit for each one-hour interval up to the maximum legal time limit established for the zone in which the meter is located; or
- Ten (10) Hour Meters: A $0.25 deposit for each one-hour period up to the maximum legal time limit established for the zone in which the meter is located.

The locations of parking meter zones and paid parking lots (as well as their respective maximum time limits) are listed within Chapter 13 of the City's Master Fee Schedule.

Parking citation regulations, including initial citation amount and late payment penalties, are stated in both CVMC Chapter 10.62 and Chapter 13 of the Master Fee Schedule. Expired meter citations are $25 if paid within 30 days, and $50 if not paid within 30 days.

Parking revenue collection and enforcement services for the District are provided by Ace Parking, under City Agreement Number 16147, adopted by Resolution 2017-047.

3.2 Parking In-Lieu Fee Program

The City's Parking In-Lieu Fee program was established in 1980. The In-Lieu Fee program allows for development projects within the District to accommodate a portion (up to 50%) of their minimum parking requirements off-site. The regulations governing the Parking In-Lieu Fee program are codified within CVMC Section 19.62.040. Section 19.62.040 states that:

> *"For any new nonresidential use, structure or building, required off-street parking which, due to the size or location of the parcel, cannot be provided on the premises may be provided on other property not more than 200 feet distant by publicly available pedestrian access from said use, structure or building, subject to an off-site shared parking agreement with the City as to permanent reservation of said space and access thereto; or if the proposed nonresidential use lies within the boundary of a parking district, off-street parking requirements shall be considered to be met; provided, that any developer of a new*

commercial building within a parking district, or a developer of a commercial addition to an existing building therein, shall pay the required fee(s).”

The UCSP dictates eligibility by establishing which zones and uses are able to use the program.

3.3 Revenue Purposes

Per CVMC Section 10.56.260, all monies collected from parking meters in the City are to be deposited into a special fund and earmarked for any or all of the following purposes:

- For the purchasing, leasing, installing, repairing, maintaining, operating, removing, regulating and policing of parking meters in this City and for the payment of any and all expenses relating or incidental thereto;
- For the purchasing, leasing, acquiring, improving, operating and maintaining of off-street parking facilities in the City;
- For the installation and maintenance of traffic control devices and signals;
- For the painting and marking of streets and curbs required for the direction of traffic and parking of motor vehicles;
- For the proper regulation, control and inspection of parking and traffic upon the public streets;
- To be pledged as security for the payment of principal and interest on off-street parking revenue bonds issued by the City or any parking district organized within the City. (Ord. 2670 § 1, 1996; Ord. 973 § 1, 1966; prior code § 19.17.13).

  The only City operated parking meters are located in the District. The City has established the Parking Meter Fund to account for the associated revenues and expenditures.

Parking In-Lieu Fees are deposited into a separate fund (the Town Center I Parking Fund). Use of the In-Lieu funds is restricted to the purchase or development of off-street parking sites which will generally and directly benefit the District.

4.0 Facilities Inventory

This chapter documents the project study area's supply of public on-street and off-street parking, examines the Parking District's current parking management practices and support infrastructure, and evaluates the area's mobility alternatives.

4.1 Parking Supply

Figure 4-1 shows the extent of the project study area and total parking supply along each block segment, and the total parking supply provided within the seven off-street public parking facilities. The quantity of parking supply within the study area and approximately one block surrounding was determined through a combination of aerial imagery interpretation with field verification.

Individually-marked on-street parking stalls, which are normally encountered where parking is metered, were counted on aerial imagery and were verified in the field. Any usage restrictions which apply to specific parking locations, such as cost, time limits or use purpose were gathered in the field. Unmarked on-street parking was estimated using a method which interprets aerial imagery from *Google Earth* and *Google Street View* in order to determine the extents and length of segments where on-street parking is allowed. Spatially-referenced lines along curbside locations where on-street parking is allowed were subsequently drawn in *Google Earth*. The parking supply was then estimated by dividing the extents of each line segment by 25 feet, rounding to the nearest whole number. Typically, marked parking stalls are about 22 feet in length. The somewhat more conservative 25-foot interval was chosen because vehicles are seldom parked in a configuration in which the maximum storage of vehicles is possible when street parking is unmarked.



Downtown Chula Vista Parking Management Plan

Figure 4-1
Existing Public Parking Supply

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Table 4-1 presents the total supply of public parking by each of the unique time restrictions represented in the study area.

Table 4-1: Public Parking Supply within Study Area

Time Restriction	Location	Cost	Parking District	Within Study Area (Outside Parking District)	Total Study Area
No Time Limit	On-Street	Free	20	364	384
≥10-Hour Limit	Off-Street	Pay	213	0	213
4-Hour Limit	Off-Street	Pay	42	0	42
3-Hour Limit	Off-Street	Free	670	0	670
2-Hour Limit	On-Street	Pay	430	46	476
2-Hour Limit	On-Street	Free	16	57	73
1-Hour Limit	On-Street	Free	0	3	3
<1-Hour/Loading	On-Street	Free	18	7	25
Total			**1,409**	**477**	**1,886**

Source: Chen Ryan Associates (2019)

As shown, including the seven off-street public parking facilities, there are an estimated total of 1,891 parking spaces within the study area. The Park Plaza parking structure (and adjacent lot to the south of the structure), which provides free parking for up to 3 hours, has 670 spaces, accounting for almost half of the total supply within the Parking District and about 35% of the total parking within the study area. There are approximately 476 metered on-street parking spaces within the study area. All meters are coin-operated and cost $0.50 per hour. All cost and time restrictions to parking spaces are enforced on all days except Sunday and Holidays between 9 am and 6pm.

Figure 4-2 shows the metered parking supply by time restrictions. Note there are also some metered parking spaces outside of the study area.

Figure 4-3 summarizes the quantity of paid and free parking within 1/8th of a mile of each parcel within the study area. Parcels which appear blank in both panels of this figure are vacant lots.

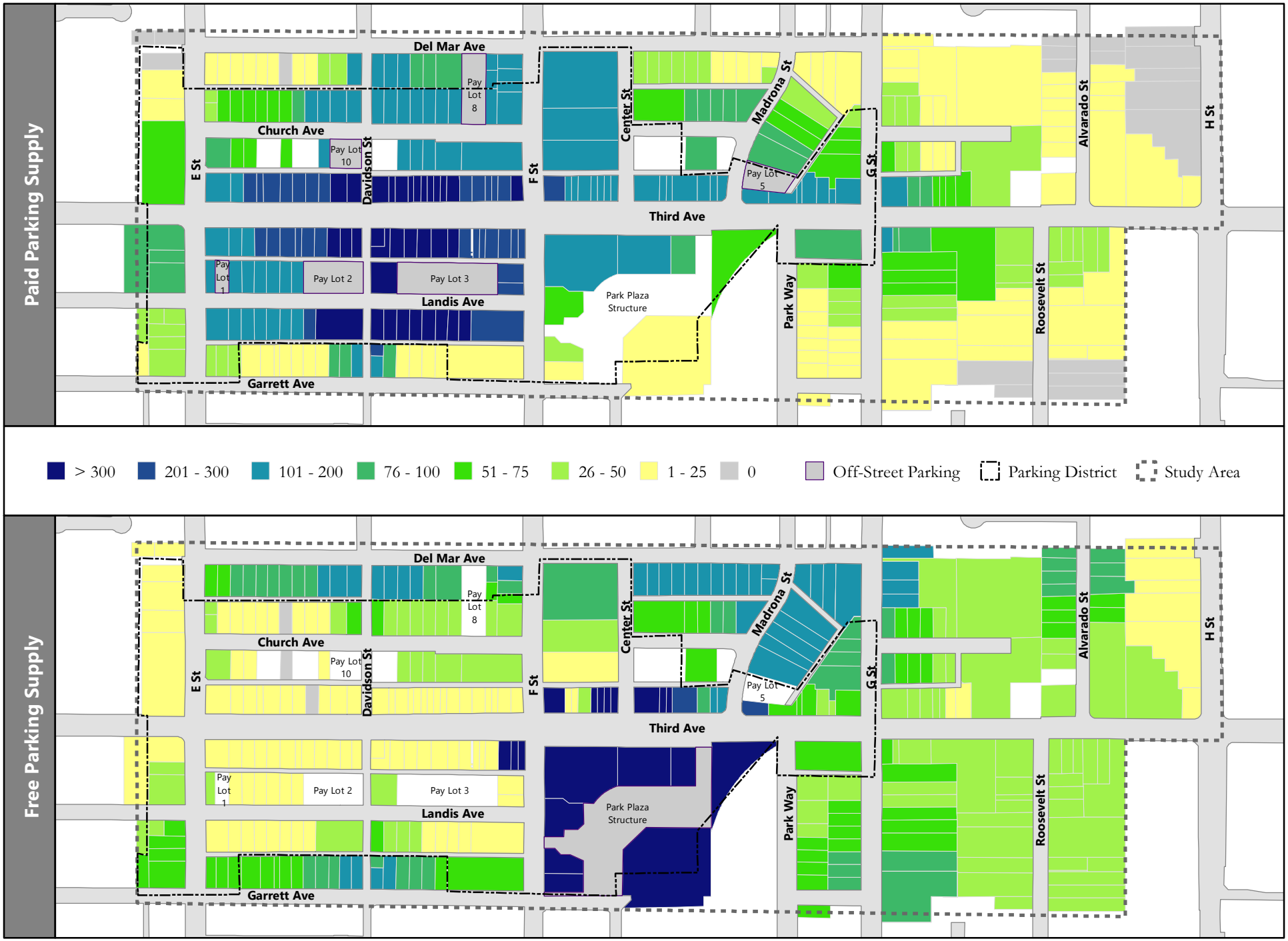
Table 4-2 breaks down the public parking supply of the study area by cost and time restriction. As shown, almost the entire supply within the Parking District has either a cost and/or time restriction associated with it (98.6%). About half of the Parking District's supply is free with a time restriction (this total is mostly comprised of the Park Plaza parking structure). Within the study area as a whole, including the areas outside of the Parking District, nearly 80% of the parking supply has either a cost or time restriction.



Downtown Chula Vista Parking Management Plan

Figure 4-2
Metered Parking Supply by Time Limit

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Downtown Chula Vista Parking Management Plan

Figure 4-3

Estimated Supply of Parking within 1/8 Mile of Destinations

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Table 4-2: Public Parking by Cost and Time Restriction

Cost and Time Restriction	Parking District		Within Study Area (Outside Parking District)		Total Study Area	
	Supply	% of Total	Supply	% of Total	Supply	% of Total
Free Parking – Unlimited Time	20	1.4%	364	76.3%	384	20.3%
Free Parking – Time Limited	704	50.0%	67	14.1%	771	41.0%
Paid Parking – Time Limited	685	48.6%	46	9.6%	731	38.7%
Total	**1,409**		**477**		**1,886**	

Source: Chen Ryan Associates (2019)

As shown in **Table 4-3**, there are seven off-street public parking facilities included within the study area. With time restrictions between 3 and 16 hours, the off-street parking facilities are intended to accommodate lower turnover trip activities within the Parking District. With the exception of the Park Plaza parking structure, all of the lots are paid parking during enforcement hours.

Table 4-3: Summary of Off-Street Public Parking Facilities

Off-Street Facility	Time Restriction	Cost	Supply
Park Plaza Parking Structure	3 Hours	Free	670
Pay Lot 1	10 Hours	$0.25/hour	14
Pay Lot 2	4 Hours	$0.50/hour	74
Pay Lot 3	16 Hours	$0.25/hour	118
Pay Lot 5	4 Hours	$0.50/hour	42
Pay Lot 8	10 Hours	$0.25/hour	53
Pay Lot 10	10 Hours	$0.25/hour	28

Source: Chen Ryan Associates (2019)

4.2 Current Parking Management and Enforcement Practices

Ace Parking has provided parking management and enforcement services for Downtown Chula Vista since 2009. The most recent contract with Ace was approved by the City of Chula Vista City Council in November 2015. *Ace Parking*'s responsibilities include parking enforcement, parking revenue collection, and maintenance of parking meter equipment.

Parking Enforcement

Under its contract, *Ace Parking* is responsible for staffing enforcement patrol between 9am and 6pm on Mondays through Saturdays. The Downtown Chula Vista area is overseen by an operations manager, whose responsibilities include proactively maintaining and repairing parking revenue equipment. *Ace Parking* also maintains an office at 231 3rd Avenue, Suite F, in Downtown Chula Vista for the purposes of accepting in-person parking citation payments and appeals, as well as handling public inquiries regarding the Parking District.

Revenue Collection

Collection of cash parking revenues from individual coin-operated parking meters and parking lot multi-space payment machines are regularly scheduled to occur between 6am and 10am, Monday through Thursday, using a sealed collection system that prevents the loss or theft of revenues in the field. The meter collections are transferred in sealed containers to *Ace Parking*'s headquarters for counting., Deposits are made three times per week into an account for the City of Chula Vista. Credit card transactions at parking lot multi-space machines are deposited directly into the City's account. Fees collected from citations and permits sales are remitted monthly to the City.



Parking Lot Pay Machine at Pay Lot 5

4.3 Wayfinding and Parking Information Systems

The parking wayfinding signage within Downtown Chula Vista is primarily designed to meet the standards of the Third Avenue Downtown Signage Master Plan, which was a component of the Third Avenue Streetscape Improvements projects implemented in 2012. The signs were designed to guide patrons to nearby businesses and attractions. Field review indicates that all signs were designed to the standard of the plan with the exception of the parking guiding sign, which instead followed the California Manual on Uniform Traffic Control Devices (MUTCD) Parking Area Sign D4-1.



Downtown Chula Vista Wayfinding Signage

Figure 4-4 displays the locations of the MUTCD Parking Area D4-1 parking guide signs within the Parking District. As shown, there are eight signs positioned around four intersections:

- Third Avenue and Davidson Street
- Third Avenue and Madrona Street
- Landis Street and F Street
- Church Avenue and F Street

The signage mounted above the vehicular entrances to the Park Plaza parking structure signage were designed to the specifications identified in the Park Plaza at the Village Planned Sign Program (1988).



MUTCD Parking Sign D4-1 on Third Avenue



Downtown Chula Vista Parking Management Plan

Figure 4-4
Parking Wayfinding Signage within Parking District

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4.4 Transit Services

Four Metropolitan Transit System (MTS) bus routes traverse the project study area: one bus route (#929) runs north-to-south along Third Avenue, while the other three bus routes (#705, #701, and #709) run from west-to-east, crossing Third Avenue at E Street, F Street, and H Street, respectively. Along Third Avenue within the study area, there are bus stops at F Street and at G Street. There are also bus stops on the cross-streets of Third Avenue at E Street and H Street.



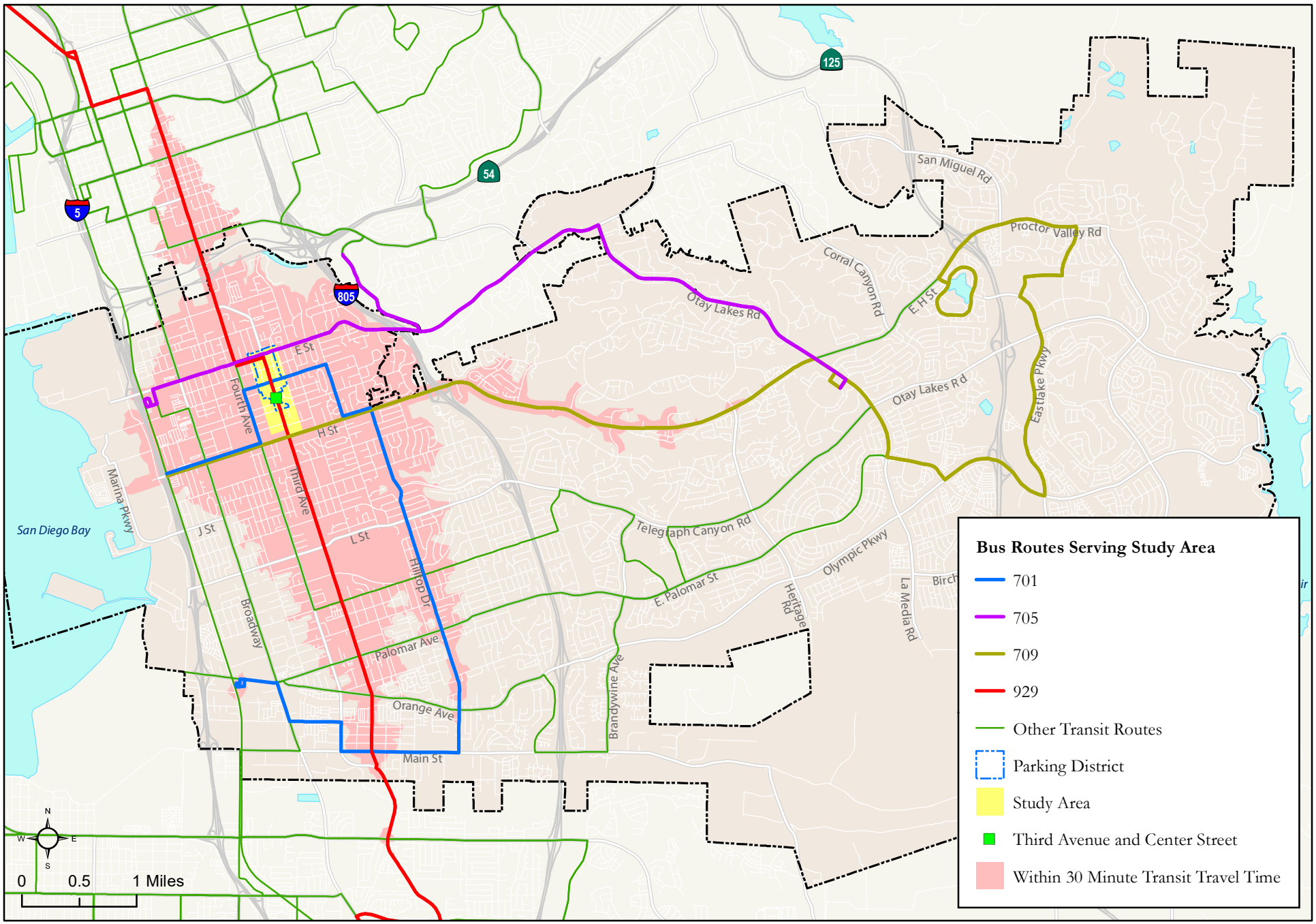
Route #929 headed south on Third Avenue at Madrona Street

Figure 4-5 displays the existing bus routes within the study area, as well as the areas that can reach the corridor via transit within a thirty-minute travel time. The intersection of Third Avenue and Center Street was assumed as the approximate center of the study area. As shown, southern Chula Vista along Third Avenue and Hilltop Drive, a portion of Chula Vista east of Interstate 805 along H Street, and National City along Highland Avenue are within a thirty-minute transit trip of the study area.

Route #929

Route #929 bus service operates between the Downtown San Diego transit hub at 12th Street and Imperial Avenue and Iris Avenue Transit Center in the southern San Diego community of Otay Mesa-Nestor (south of Chula Vista). According to MTS statistics, Route #929 carried over 2.2 million annual riders in FY2017. In addition to Chula Vista, the communities served along this route include Downtown San Diego, Barrio Logan (San Diego), National City, and Otay Mesa-Nestor (San Diego). The route runs along Third Avenue much of its way through Chula Vista. Bus stops are spaced approximately 1/8th of a mile apart for most of the route.

On weekdays, MTS operates this route on 15-minute headways in both directions during the morning and midday, and on 12-minute headways in both directions in the afternoon and PM peak period. After 7pm, headways decrease to 30 minutes and to 60 minutes after midnight. On weekends, headways are typically 20 minutes during the middle of the day and 30 minutes during the mornings and evenings. Service span lasts approximately 20 to 21 hours on weekdays and Saturdays.



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Figure 4-5

Existing Transit Service

Route #701

Route #701 operates entirely within western Chula Vista and runs along a U-shaped route, with both of its termini at *Blue Line* trolley stations: H Street station in the north and Palomar Street station in the south. According to MTS statistics, Route #701 carried over 519,000 annual riders in FY2017. Route #701 runs along Hilltop Drive when it is farthest from its termini. There are some minor deviations to the U-shape on the west-to-east portions, where the route is aligned along some portions on H Street and some portions on F Street in the north. In the south, it deviates from Palomar Street to run partially along Anita Street and Main Street. Route #701 overlaps with the project study area when the route intersects Third Avenue at F Street; that location is also transfer point for Route #929. Bus stops are typically spaced approximately 1/8th of a mile apart along the route.

On weekdays, MTS runs buses along this route at 15-minute headways in both directions during the morning and midday. After 6pm, headways decrease to 30 minutes and to approximately 45 minutes after 7pm. On weekends, headways are typically 60 minutes during its entire service span. Service span lasts approximately 18 hours on weekdays, 15 hours Saturdays and 12 hours on Sundays.

Route #705

Route #705 operates mostly within the City of Chula Vista, along E Street, Bonita Road and Otay Lakes Road. According to MTS statistics, Route #705 carried over 240,000 annual riders in FY2017. Its western terminus is at E Street trolley station. The eastern terminus varies according to schedule – alternating between Westfield Plaza Bonita shopping center (in National City) and Southwestern College. Route #705 comes into contact with the study area along E Street at Third Avenue, which is a transfer location for Route #929.

On weekdays, headways along this route between the E Street Trolley Station and Plaza Bonita are 15-minutes in both directions. Headways to locations along the route between Plaza Bonita and Southwestern College are 30-minute in both directions. After 6pm, service terminates at Plaza Bonita for all route runs and headways decrease to 60 minutes. On Saturdays, service terminates at Plaza Bonita and headways are 30 minutes during its entire operating span on Saturday. This route does not operate on Sundays. Service span lasts approximately 16 hours on weekdays and 12 hours on Saturdays.

Route #709

Route #709 operates entirely within the City of Chula Vista, primarily along H Street. According to MTS statistics, Route #709 carried over 915,000 annual riders in FY2017. Its western terminus is at H Street trolley station. The eastern terminus varies according to schedule – alternating between Southwestern College (every 15 minutes during the day and twice every 15 minutes during peaks), Eastlake Parkway and Olympic Parkway (every half hour during the day), and Eastlake Drive and Lakeshore Drive (limited service).

Route #709 interfaces with the project study area where the route crosses Third Avenue at H Street – that location is also a transfer point for Route #929. Bus stops are typically spaced approximately 1/8th of a mile apart along the route in western Chula Vista; spacing between stops widens in eastern Chula Vista to approximately 1/4mile apart in some locations. Occasional runs of Route #709 also operate as limited stop service between Third Avenue and Southwestern College during the peak period according to the peak direction.

After 6pm, 15-minute headways decrease to 30 minutes between H Street Trolley Station and Southwestern College. On weekends, headways are typically 30 minutes during its entire service span on Saturday and 60 minutes during its entire service span on Sundays. Service span lasts approximately 18 hours on weekdays, 15 hours Saturdays and 12 hours on Sundays.

4.5 Walking and Bicycling Conditions

Walking Environment

The Third Avenue Village within the study area resembles a traditional main street in its urban form. Most of the businesses are situated on narrow lots with mostly full building coverages, contributing to an engaging walking environment where pedestrians pass by many different visual elements across a short walking distance.



Elements of the Third Avenue Village walking environment

Third Avenue is also equipped with enhanced walking facilities and pedestrian-friendly treatments. Third Avenue is lined with frequently-spaced trees and other landscaping enhancements between E Street and H Street, which provide shade for pedestrians and contribute to the visual interest of the walking environment. Sidewalks are equipped with aesthetically-chosen pedestrian-scaled lighting and other installations such as seating areas. Several of the parking lots located on Landis Avenue (Pay Lots 2 and 3), Church Avenue (Pay Lot 10) and Madrona Street (Pay Lot 5) are connected to Third Avenue through *paseos* – walkways designed to be integrated with Third Avenue's pedestrian-friendly urban form that provide short-cuts to and from the off-street parking facilities. The Park Plaza parking structure is also connected to Third Avenue through walkways.

Third Avenue uses a variety of treatments to calm the traffic within the Parking District, including a lowered (25-mph) posted speed limit, the reduction of travel lanes from four to two within the Village, the utilization of angled parking (which helps slow traffic through traffic side "friction"), the installation of frequent crossing locations and the use of variegated pavement materials and other streetscape elements along the corridor.



Uncontrolled crossing location along Third Avenue

All of the street crossings along Third Avenue south of E Street and north of H Street make use of the different pavement materials, which visually break up the asphalt of the roadway – conveying the message to motorists that they are driving through an area with many pedestrians. Several non-traffic-controlled crossings have been installed along Third Avenue to supplement the controlled crossing locations at Davidson Street, F Street and G Street, so that designated crossings are spaced, on average, every 300 feet. The non-traffic-controlled crossings are enhanced by the use of same pavement materials, signage and traffic calming. Crossings along Third Avenue are also aided by curb extensions, which enhance pedestrian visibility at street corners and reduce the width of the roadway

pavement by reclaiming road space unusable for parking at the intersections. Curb extensions at intersections near the end of angled parking rows have reallocated a large amount of roadway width for the pedestrian realm along Third Avenue at locations near Davidson Street, F Street and Center Street.

Many of the aforementioned pedestrian enhancements along Third Avenue, such as the high visibility crossings, street furniture, lighting and landscaping, have been added as a part of the Third Avenue Streetscape Improvement Plan. This plan has implemented improvements in two previous phases along Third Avenue between F Street and H Street since 2012. A third phase, scheduled to take place in 2019, will extend such improvements north of F Street to E Street.

Other streets within the study area partially incorporate some of the pedestrian-friendly treatments described above. Center Street includes angled parking and the sidewalks along F Street are equipped with street furniture and enhanced landscaping. The residential streets within the study area, such as Del Mar Avenue and Church Street, do not have any pedestrian treatments other than street trees, though most of these streets are two-lane with low posted speeds, which generally contribute toward a neutral (or "non-hostile) pedestrian environment.

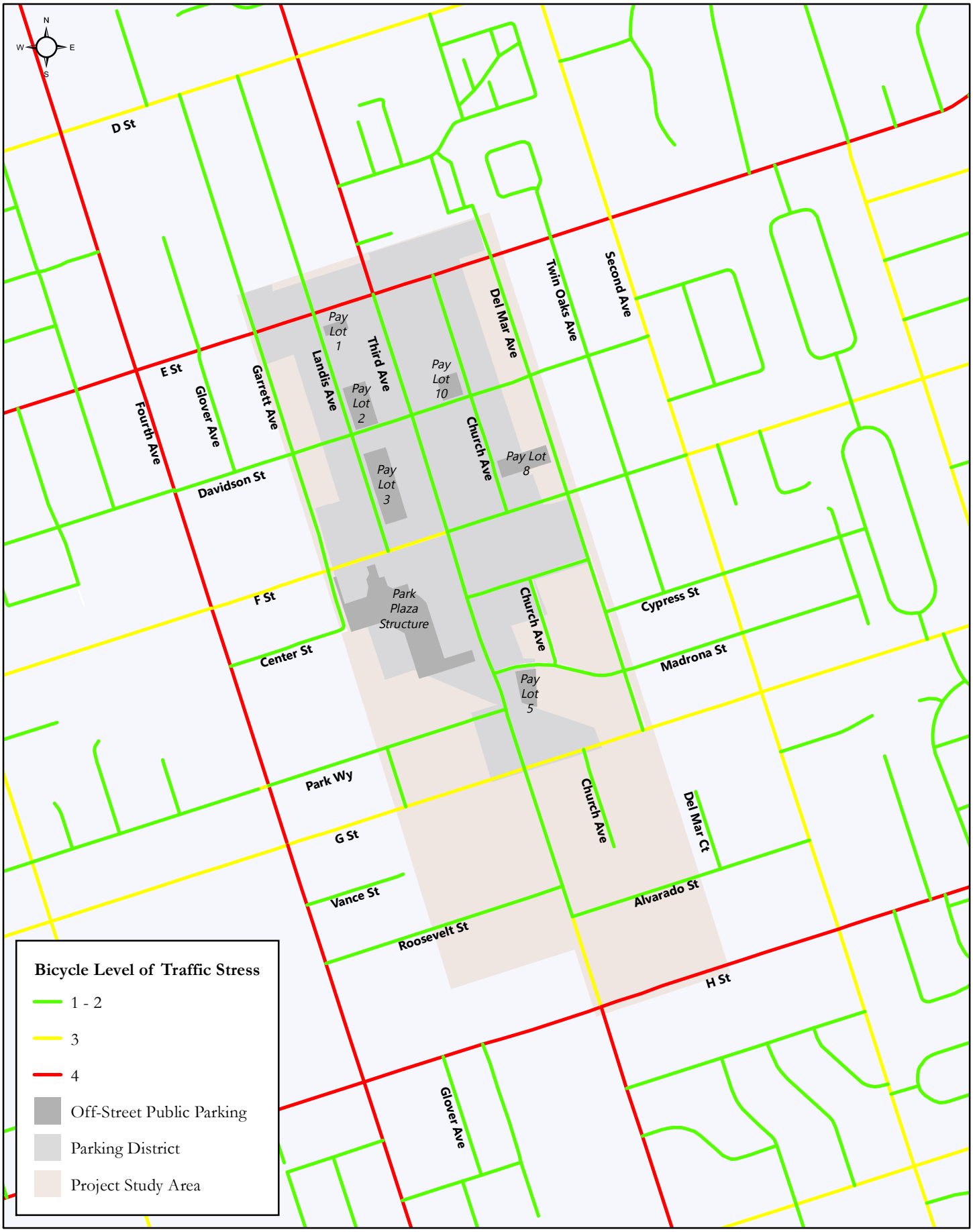
Bicycling Environment

There are no bicycle facilities within the study area other than Class III shared-lane roadway markings called "sharrows" along Third Avenue. Despite the traffic-calmed environment along Third Avenue, angled parking is generally considered not to be complimentary with mixed-traffic cycling due to the poor visibility a motorist backing out of an angled parking space would have of an oncoming cyclist.

Despite the absence of dedicated bicycle facilities on most of the roadways within the study area, many of the roadways are two-lane with 25-mph posted speed limits, which are regarded in leading bicycle planning research[1] as low-stress cycling environments for most adult populations riding in mixed-traffic. Bicycle Level of Traffic Stress (LTS) classifies the street network according to estimated level of stress it causes cyclists, taking into consideration a cyclist's physical separation from vehicular traffic, posted speed limits and number of travel lanes along a roadway, as well as factors related to intersection approaches.

Figure 4-6 shows the Bicycle LTS scores for the roadway links within the project study area. LTS scores, ranging from 1 (lowest stress) to 4 (highest stress), correspond to roadway conditions that different cycling demographics would find suitable for riding on the basis of stress tolerance. According to LTS literature, roadways which do not have bicycle facilities but which are LTS 2 or lower are generally suitable for "interested but concerned" cycling populations. The most cycling-deficient (LTS 4) roadways within the study area are E Street and H Street, both of which are four-lane 35-mph roadways with no bicycle facilities. According to LTS criteria, LTS 4 roadways present enough traffic stress to deter all but the "strong and fearless" cycling demographic, which represents under 1% of the population.

[1] "Low-Stress Bicycling and Network Connectivity", Mekuria et. al. (2012)



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Figure 4-6
Existing Bicycle Level of Traffic Stress

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5.0 Existing Parking Demand

Within downtown urban settings such as the Third Avenue Village, 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 be 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 developed for this report which summarizes the parking data collection to within a 1/8th of a mile distance of the parcels within the study area. A distance of 1/8th of a mile (660 feet) approximates one long-sided block length or two short-sided block lengths in the typical street grid in the northwest quadrant of Chula Vista. That distance also makes for a good approximation of the walking distance from the most remote parking spaces at a typical major shopping center with a large consolidated parking lot.

Data Collection Methodology

Average parking occupancy for a typical weekday and weekend day was determined within the study area, plus an additional perimeter of one block outside of the study area for five different daily time intervals, representing morning, lunch, afternoon, dinner, and evening periods. Data was collected for those periods on four weekday dates and four weekend dates occurring between August 29th and September 16th, 2018. The summaries presented in this chapter consist of averages by period for the four weekday or weekend dates in which data collection took place.

Teams of two data collectors counted parked vehicles on every block and public parking lot within the study area, plus an additional perimeter of one block outside of the study area, with scheduled departures taking place at 7am (morning), 11am (lunch), 3pm (afternoon), 6pm (dinner), and 9pm (evening). Prior to initiating the data collection, a route was developed designed to strike a balance between collection efficiency and rational navigation. The route developed would, on average, require two hours to complete; therefore, the average parking occupancies for each of the time periods represent a snapshot taking place in an approximate two-hour window following departure of the data collection teams.

Occupancy was calculated by dividing the time period averages for weekday and weekend parked vehicles along each block or parking lot by its approximate supply. Parking occupancy totals by block and parking lot are summarized for weekday and weekend by the average hourly totals in the following sections. This section also presents estimates of parking occupancy and parking availability within a short walking distance of destinations at the parcel level within the study area.

5.1 Weekday Parking Occupancy

Weekday parking occupancy was collected during the aforementioned five different time intervals on the following dates:

- Wednesday, August 29th
- Thursday, August 30th
- Wednesday, September 12th
- Thursday, September 13th

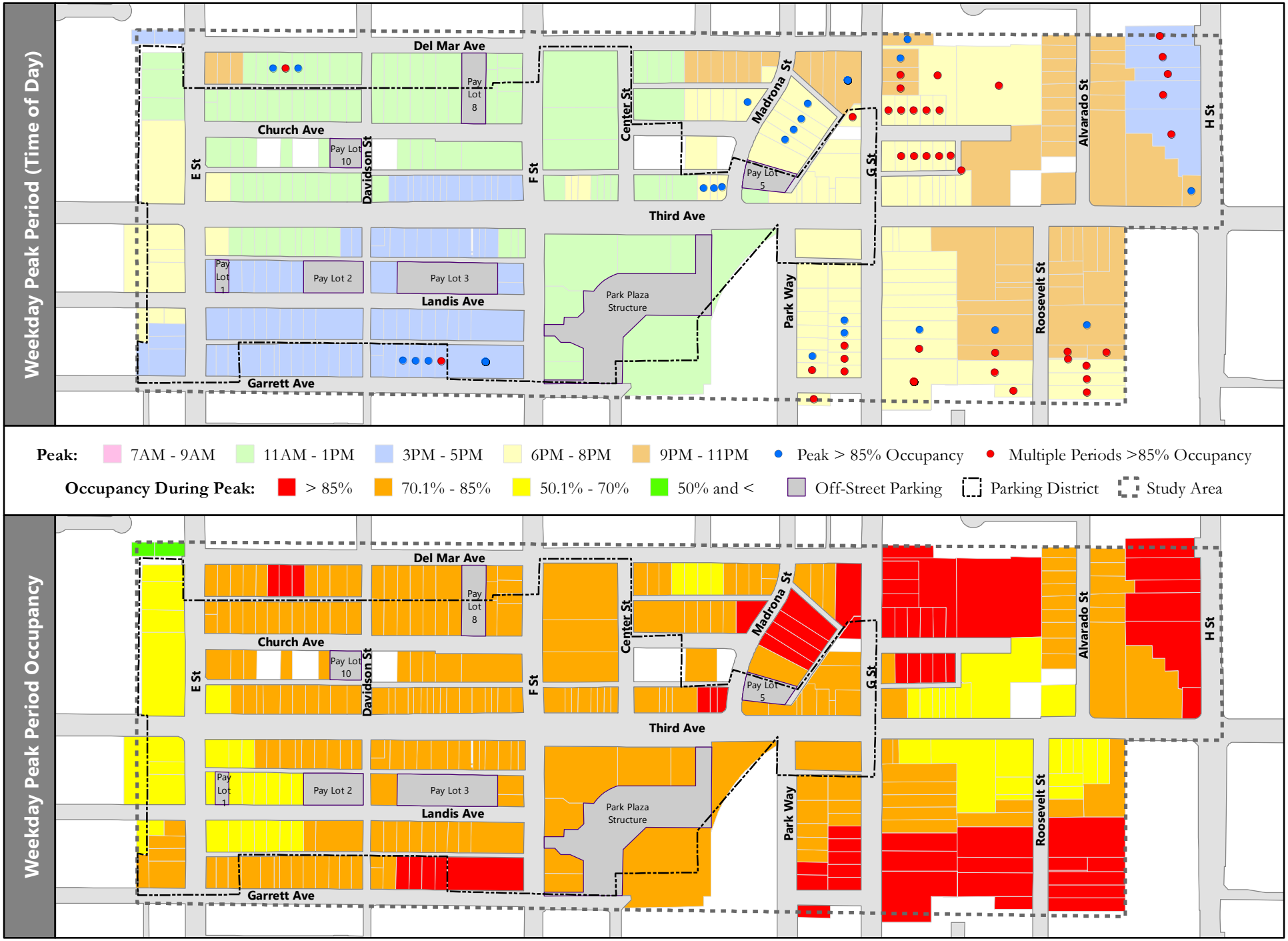
A summary of weekday peak parking occupancy within the project study area by time period and percent occupancy is presented in **Figure 5-1**. As shown, the peak time periods vary by different sections of the study area. The peak time periods within much of the Parking District, where the destinations are commercial, dining and retail, occur during the 11am (lunch) and the 3pm (afternoon) collection shifts.

While the peaks within the Parking District occur during daytime business hours, the peak time periods outside of the Parking District boundary – where land uses are primarily residential, mostly occur during the 6pm (dinner) and 9pm (evening) observation periods. These different time period peaks are a result of the different types of land uses inside and outside of the Parking District boundary. Residential areas reliant on on-street parking typically fill up after business hours, when commuters are returning home and staying home for the remainder of the night. Commercial and retail land uses have different time of day demand peaks that coincide with the operating hours of the majority of its businesses. While some dining establishments might have later operating peak time periods within the district, most of the businesses within the district maintain regular daytime business hours.

Another notable observation from Figure 5-1 is that the peak occupancy percentages are of different magnitudes inside and outside of the Parking District. Peak parking occupancy within the District generally does not exceed 85%. Some of that is explained by the abundant supply, aided by the 670-space Park Plaza parking structure and other large off-street parking facilities. However, another major contributing factor is also the cost and time restrictions on much of the parking within the District. Time and cost restrictions discourage low-turnover and more discretionary parking behaviors, thereby enabling parking to be more efficiently allocated (i.e., serving the highest use and a greater number of individual users).

In contrast, outside of the Parking District – where the supply is comparatively limited in quantity and much of the parking is unregulated, parking occupancy hits higher percentages (greater than 85% in some portions of the study area). Many of the parcels outside of the Parking District also experienced multiple observation periods over the course of the weekday where their nearby parking supply exceeded 85% occupancy[2]. The typical pattern occurring in those locations is that the parking fills up by 6pm and remains that way through the next observation period at 9pm. In the case of the parcels along H Street, the nearby parking fills up earlier (at 3pm) and remains that way through the remainder of the day.

[2] In the event there are multiple observation times with the identical peak occupancy value, the earliest of occurring those peak times are represented in Figure 5-1.



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Figure 5-1

Weekday Estimated Parking Occupancy within 1/8 Mile of Destinations - Peak Period by Time of Day

Table 5-1 presents the occupancy peaks by time of day for the off-street public parking facilities studied, all of which are situated inside of the Parking District. Table 5-1 offers a good basis for understanding how the peak demands cycle by time of day within the District. When enforcement of paid parking ends at 6pm, parking demand decreases in the parking lots (which are less conveniently situated to the entrances of businesses along Third Avenue), while utilization at the more conveniently-situated on-street meters increases.

Table 5-1: Weekday Off-Street Parking Occupancy by Time of Day in Public Parking Facilities

Facility	Spaces	7am	11am	3pm	6pm	9pm
Parking Structure	670	27%	80%	58%	52%	33%
Pay Lot 1	14	43%	55%	68%	66%	48%
Pay Lot 2	74	28%	67%	65%	31%	21%
Pay Lot 3	118	27%	84%	81%	40%	20%
Pay Lot 5	42	38%	61%	64%	100%	33%
Pay Lot 8	53	32%	74%	55%	16%	15%
Pay Lot 10	28	22%	80%	79%	74%	29%

Note: Red cell denotes peak period

Source: Chen Ryan Associates (2019)

Weekday Parking Occupancy – Morning (7am to 9am)

Figure 5-2 displays average weekday parking occupancy by block for the morning hours between 7am and 9am. As shown, most of the metered blocks within the Parking District (where the vast majority of the Downtown businesses are located) were below 50% utilization during this time period. The seven off-street public parking facilities serving the District were also observed to be below 50% utilization. The blocks outside of the Parking District (where the land uses are primarily residential) experienced higher utilization rates during this time, including several in the 85% or greater category. It is probable that since the collection took place during the morning commute peak period, the parked vehicles of many residents within the study area who work regular business hours and had not yet left for work were captured during the data collection.

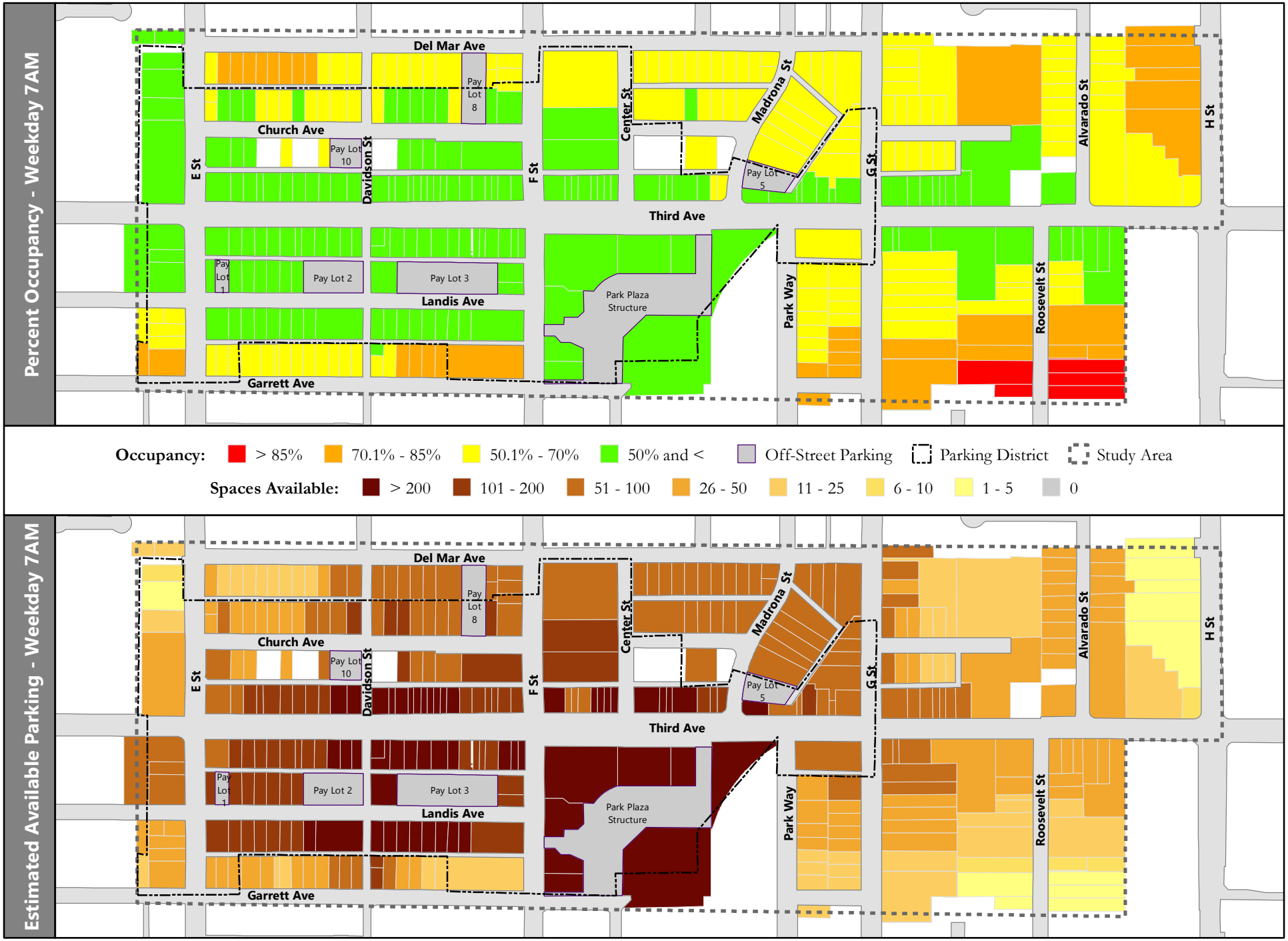
Figure 5-3 shows the parking occupancy and estimated quantity of parking available within a 1/8th mile of each parcel inside the study area during the morning observation period. During this time period, nearly all parcels within the Parking District boundary, as well as southern portion of Third Avenue between G Street and H Street average below 50% occupancy. Very few of the businesses within the study area are operating during these hours, which largely explains the low demand for parking along Third Avenue. The blocks on the outer periphery of the study area surrounding the District are primarily residential and have higher utilization at this time. Available parking is generally abundant throughout the study area on a weekday during this time period, especially within the Parking District.



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Figure 5-2
Parking Utilization by Block
7AM to 9AM Weekday Average



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Figure 5-3

Estimated Supply of Available Parking within 1/8 Mile of Destinations

7AM - 9AM Weekday Average

Weekday Parking Occupancy – Lunch (11am to 1pm)

Figure 5-4 shows average weekday parking occupancy, by block, for the lunch period between 11am and 1pm. During this time period the metered blocks along Third Avenue within the Parking District have an average parking utilization between 70% and 85%. Five of the seven off-street public parking facilities serving the parking district were also observed to have utilization in that range, including the free 670-space Park Plaza parking structure. The streets with free on-street parking in the closest proximity to the Parking District boundary (such as the parking along Del Mar Avenue, Garrett Avenue, and Park Way) had utilization greater than 85% during the lunch period.

As shown in Figure 5-5, the parking occupancy within a 1/8th mile walk of most parcels within the Parking District boundary falls between 70% and 85% during the 11am to 1pm time period. This period represents the highest overall parking utilization within the District during the average weekday. Most of the parcels within the District increased two occupancy categories during this period (from green in the morning, symbolizing below 50%, to orange in the lunch period, symbolizing between 70% and 85%). The primarily residential blocks on the outer periphery of the study area fluctuated less drastically from morning to lunch, with the parcels in those locations retaining comparable rates of parking occupancy within a 1/8th mile from morning to lunch and others only shifting one category (from below 50% to between 50% and 70%).

Available parking is generally abundant throughout the study area on weekdays during this time period, though not at the same quantities as the morning. The majority of the available parking in close proximity to the parcels along Third Avenue between E Street and F Street is paid parking. The Park Plaza parking structure still provides an abundant supply of available free parking to the blocks of Third Avenue between F Street and Park Way.

Weekday Parking Occupancy – Afternoon (3pm to 5pm)

Parking occupancy, by block, for the afternoon period between 3pm and 5pm is shown in Figure 5-6. At the block level, afternoon parking occupancy appears to be at levels collectively similar to the lunch period; however, some blocks shift one occupancy category higher and some blocks shift one occupancy category lower from the lunch period. Notably, along Third Avenue in both directions between Davidson Street and F Street demand intensifies to the highest occupancy category (greater than 85%).

As shown in Figure 5-7, parking occupancy within a 1/8th mile walk of parcels between 3pm and 5pm afternoon period remained at levels similar (70% and 85%) to the lunch period along Third Avenue between Davidson Street and F Street, while the parcels within the peripheral areas of the Parking District receded from the orange 70% to 85% category to the yellow 50% to 70% category.

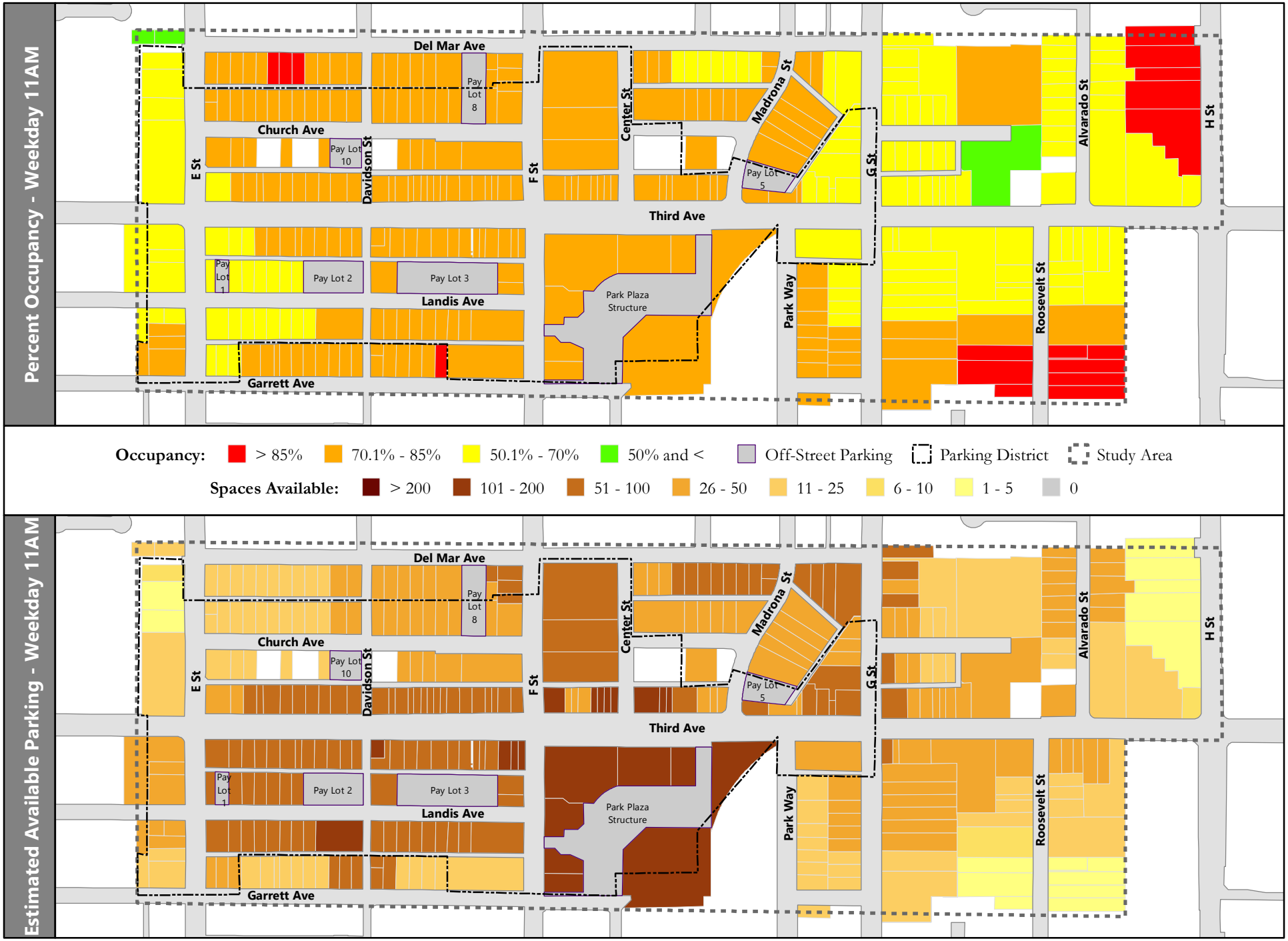
Available parking is generally abundant throughout the study area on weekdays during this time period, which is consistent with the lunch period. The majority of available parking in close proximity to the parcels along Third Avenue between E Street and F Street is paid parking. The quantity of available parking is boosted along Third Avenue between F Street and Park Way as the rate of occupancy at the 670-space Park Plaza parking structure decreases from 80% in the lunch period to 58% in the afternoon period.



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Figure 5-4
Parking Utilization by Block
11AM to 1PM Weekday Average



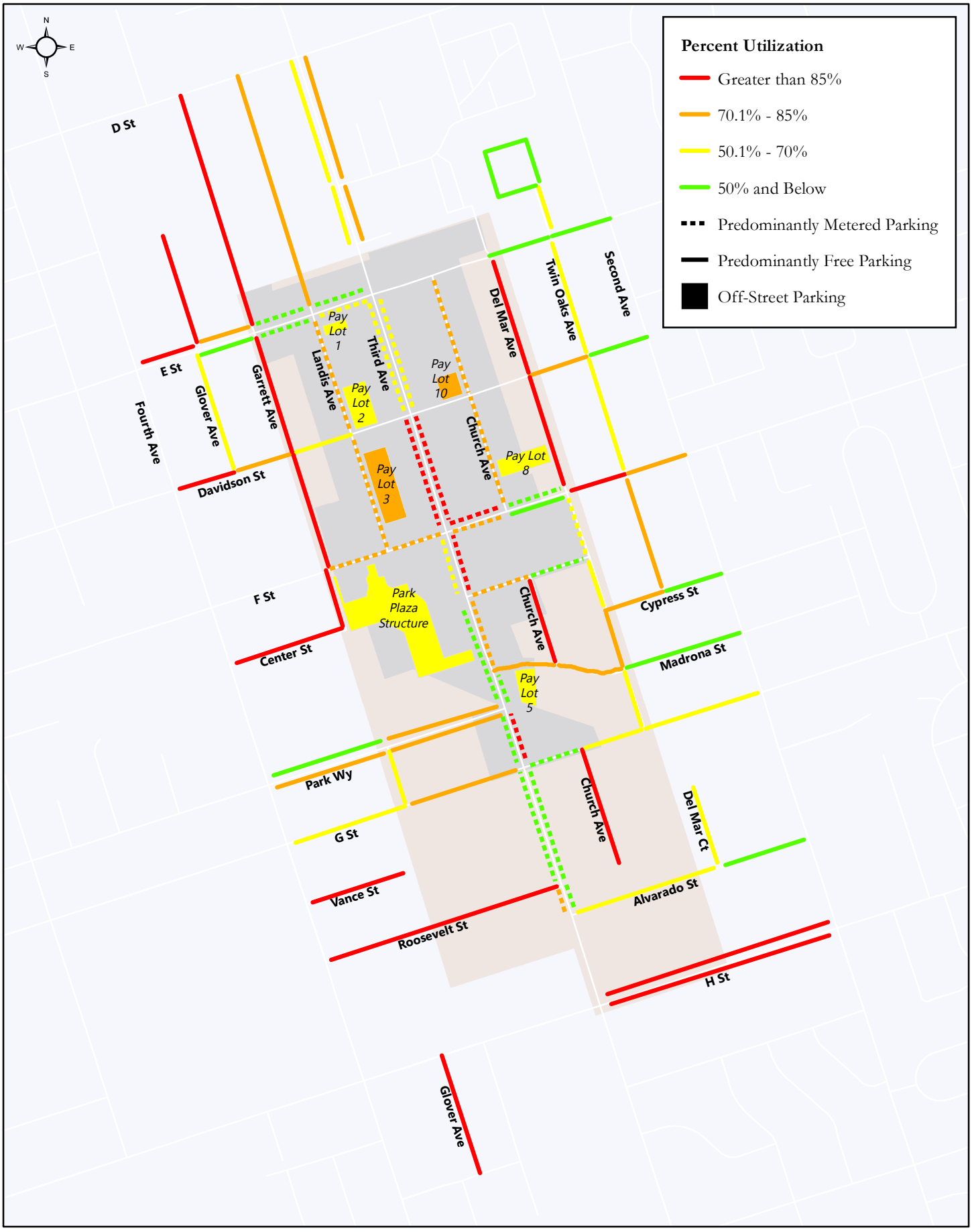
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Figure 5-5

Estimated Supply of Available Parking within 1/8 Mile of Destinations

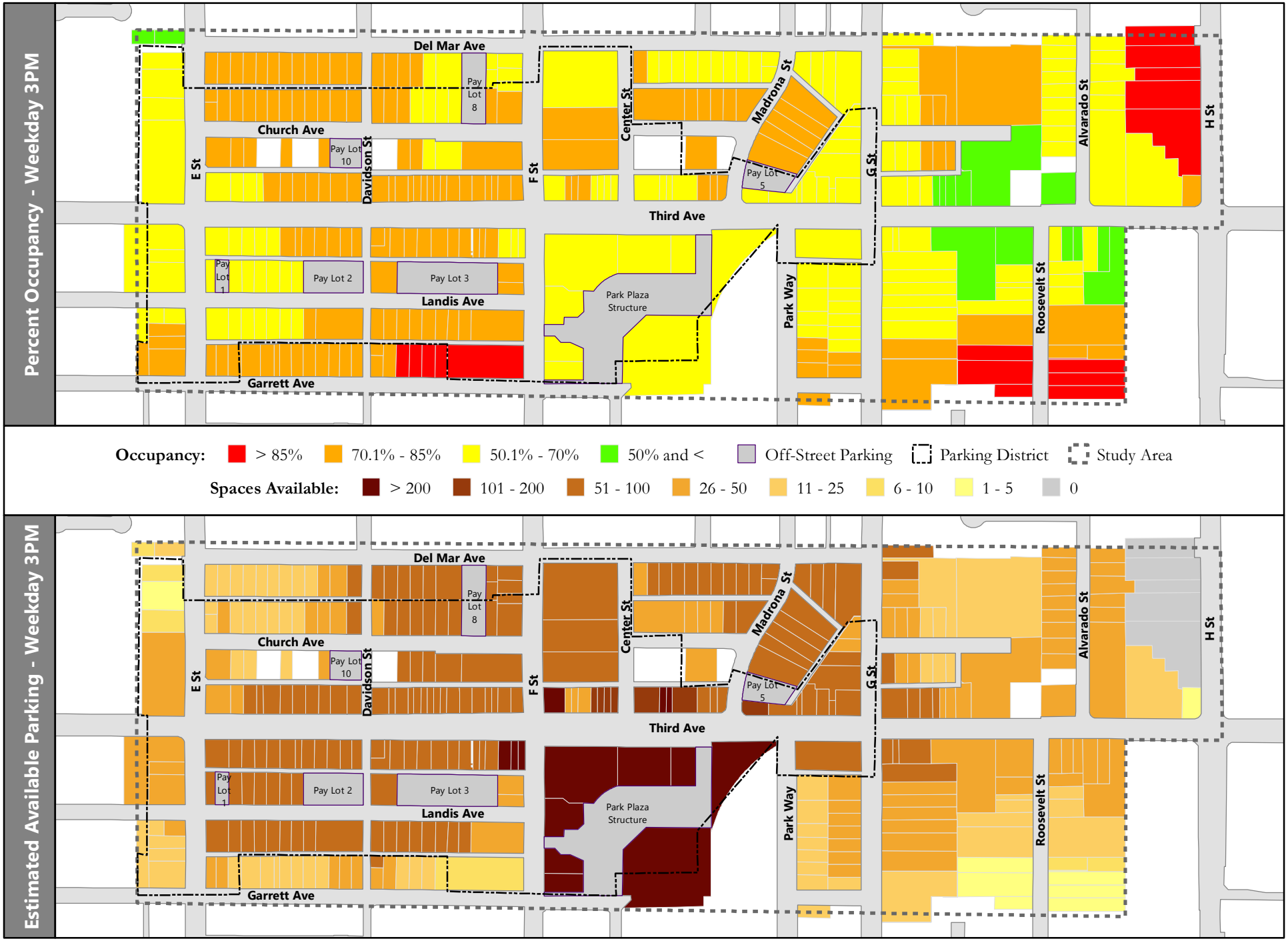
11AM - 1PM Weekday Average



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Figure 5-6
Parking Utilization by Block
3PM to 5PM Weekday Average



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Figure 5-7

Estimated Supply of Available Parking within 1/8 Mile of Destinations

3PM - 5PM Weekday Average

Weekday Parking Occupancy – Dinner (6pm to 8pm)

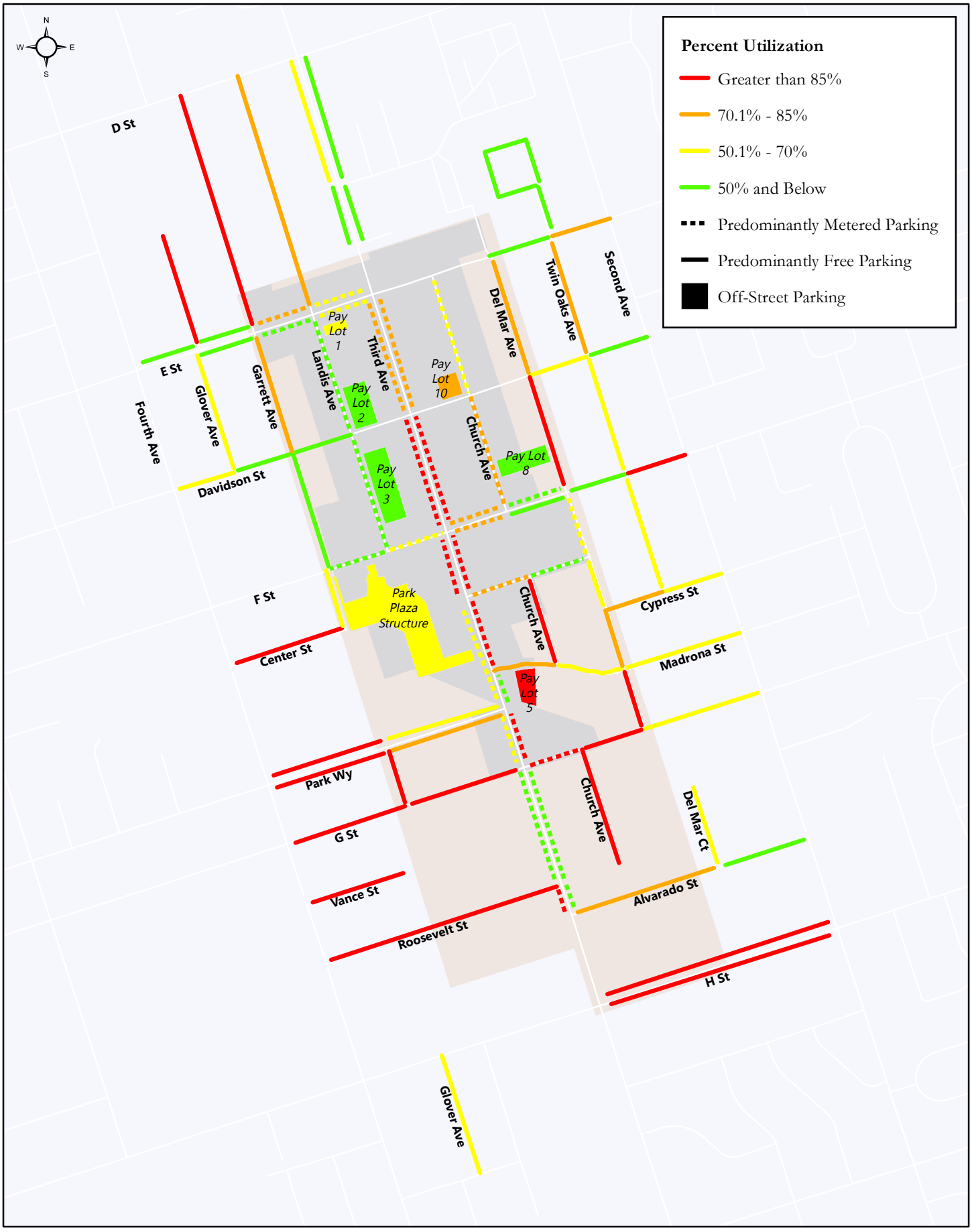
Figure 5-8 shows the average weekday parking occupancy, by block, for the dinner period between 6pm and 8pm. During this time period, most of the metered blocks along Third Avenue within the Parking District increase to the highest utilization category (paid parking enforcement at meters and pay parking lots ends at 6pm throughout the District). After 6pm, the parking utilization in the Pay Lot 2, Pay Lot 3, and Pay Lot 8 decrease to below 50% percent. Among the parking lots, Pay Lot 5 (next to several busy restaurants), is the exception as it averages full 100% utilization during the dinner period. Some of the residential-fronting blocks on the periphery of the study area also climb to the highest occupancy categories (85% or greater) during this time period, including Park Way, G Street and Roosevelt Street.

As shown in Figure 5-9, the occupancy of the parking supply within a 1/8th mile of the parcels along Third Avenue between E Street and Park Way is consistently between 50% and 70%, despite the previously noted increase in parking occupancy along the metered spaces of Third Avenue between Davidson Street and G Street after the enforcement period ends. The overall supply of parking available is balanced by the aforementioned decline in use of the pay parking lots after 6pm. There are some exceptions, such as those parcels on Third Avenue closest to Pay Lot 5, where the occupancy of nearest supply to those parcels are in excess of 70%. At this time, the residential areas begin filling up with commuters returning home, explaining decreases in the number of available parking spaces in the peripheral parts of the study area.

Weekday Parking Occupancy – Evening (9pm to 11pm)

Figure 5-10 shows average weekday parking occupancy, by block, for the evening period between 9pm and 11pm. During this time period parking occupancy decreases below 50% throughout within all of the off-street parking facilities and along most of the metered on-street blocks within the Parking District, while parking occupancy increases to above 85% along most of the residential blocks in the periphery of the study area.

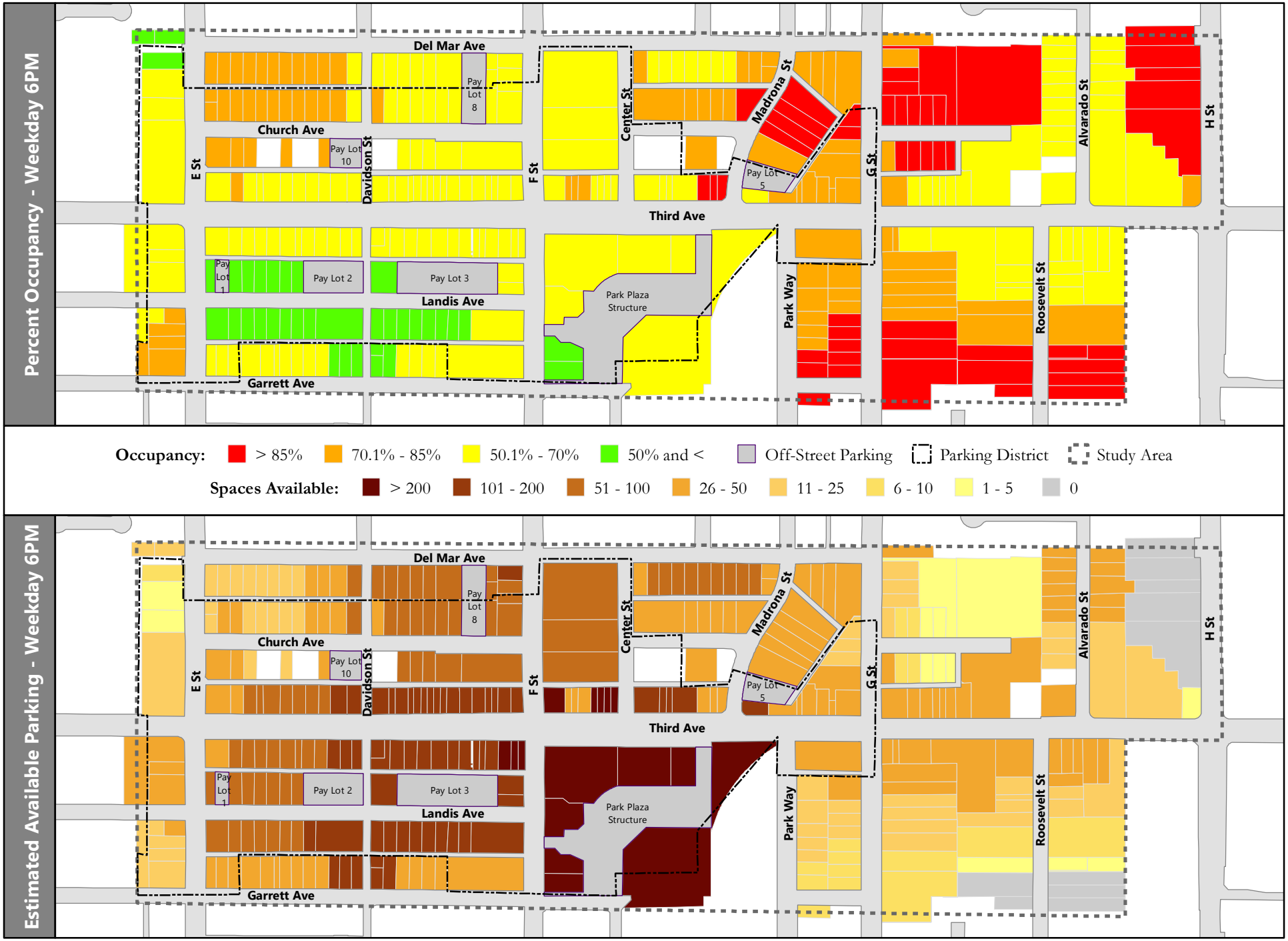
As shown in Figure 5-11, the occupancy of the parking supply within a 1/8th mile of the parcels within nearly the entire Parking District recedes to below 50%. Parcels along the residential blocks in the southern fringes of the study area increase to above 85%, with very little available parking along blocks such as Church Avenue (south of G Street) and Roosevelt Street.



Downtown Chula Vista Parking Management Plan

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Figure 5-8
Parking Utilization by Block
6PM to 8PM Weekday Average



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Figure 5-9

Estimated Supply of Available Parking within 1/8 Mile of Destinations

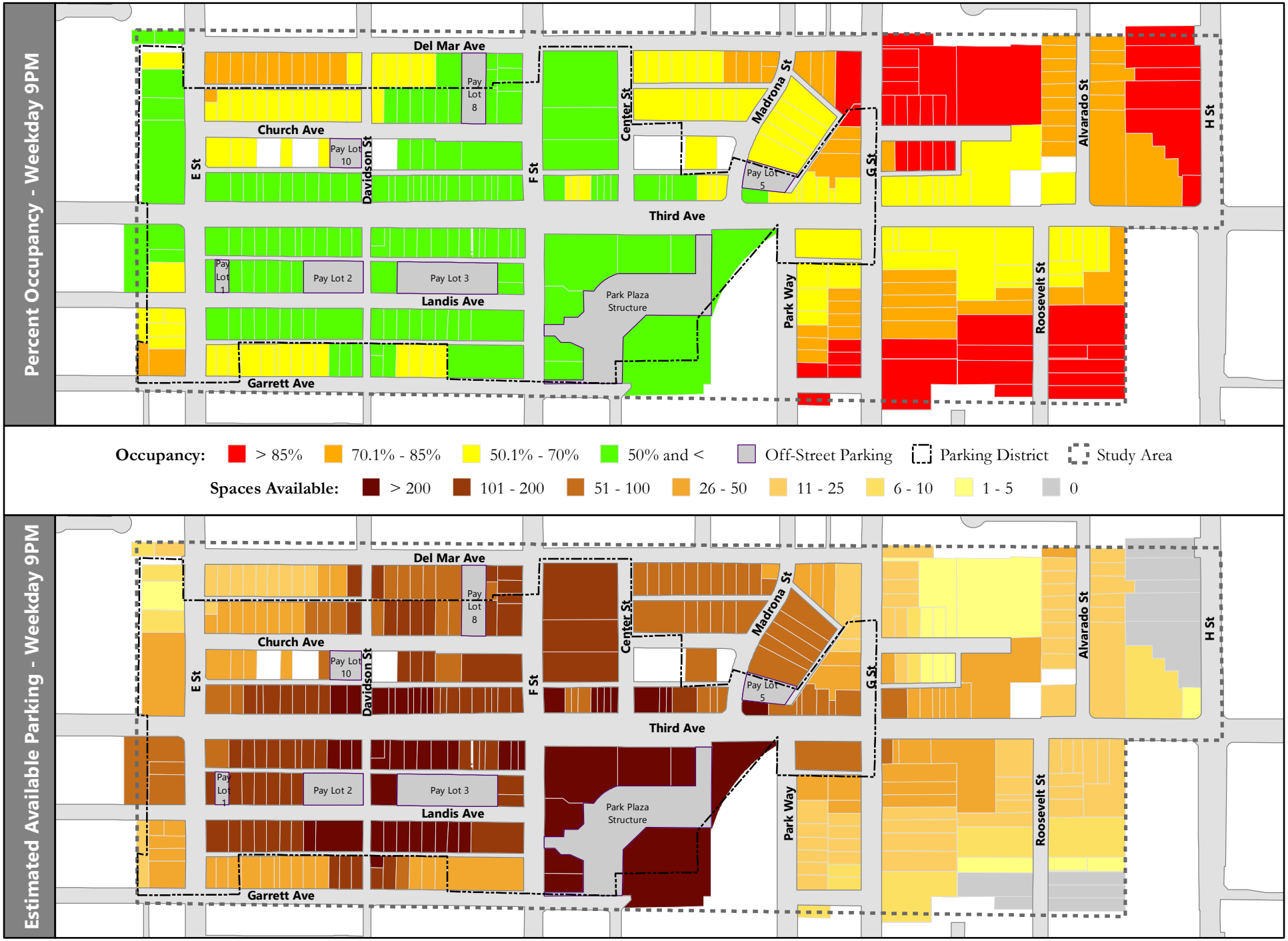
6:00PM - 9:00PM Weekday Average



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Figure 5-10
Parking Utilization by Block
9PM to 11PM Weekday Average



Downtown Chula Vista Parking Management Plan

Figure 5-11
Estimated Supply of Available Parking within 1/8 Mile of Destinations
9PM - 11PM Weekday Average

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5.2 Weekday Parking Turnover

Parking turnover was observed along Third Avenue between E Street and Madrona Street and within the Park Plaza parking structure over a period of time between October 11th and November 13th 2018.

Turnover along Third Avenue was collected over a 24-hour period by photograph. Cameras were installed at selected positions along Third Avenue and programmed to take hourly photos. This method was able to capture approximately one block at a time. Collection took place over a period of weeks in order for the data to be collected on the same weekday (Thursday). Technicians interpreted the photographs to record the data.

Due to the large size, irregular configuration and varying ceiling height of the Park Plaza parking structure, photo capture by mounted cameras was not utilized to collect turnover due to limitations in visibility; instead, turnover was collected by manually. The turnover counts took place on one weekday, Wednesday, November 7, 2018. Vehicles observed for more than one period were considered parked for a period longer than three hours and vehicles observed in the same parking place for more than two periods were considered parked for a period longer than six hours.

The data collection approach and quantity of turnover data collection obtained for the project study area, including the parking structure is consistent within industry practice for parking studies.

Table 5-2 summarizes weekday parking turnover by block along Third Avenue, separating enforcement hours (9am to 6pm) from non-enforcement hours. The mean vehicle length of stay observed on weekdays along Third Avenue between E Street and Madrona Street during enforcement hours was one hour and 29 minutes. During enforcement hours, approximately 10% of vehicles observed remained parked longer than the two-hour time limit. It should be noted that any data collection method used short of continuous monitoring will under-estimate vehicles making short-duration stays as additional vehicles could have arrived and departed between scheduled collection snapshots. Correcting for this would, if anything, reduce the mean length of stay and the percentage of vehicles exceeding 2-hours parked to lower values than what are presented in the table. During non-enforcement hours, approximately one quarter of vehicles were parked for a period of time exceeding 2-hours.

Table 5-2: Weekday Parking Turnover along Third Avenue between E Street and Madrona Street

Section of Third Avenue	Total Spaces Monitored	Total Vehicles Observed	Mean Length of Stay (Hours)	Vehicles Exceeding 2-Hours	Total Vehicles Observed	Mean Length of Stay (Hours)	Vehicles Exceeding 2-Hours
		During Enforcement Hours			Outside of Enforcement Hours		
E Street to Davidson Street	55	217	1:24	21 (10%)	55	2:11	15 (27%)
Davidson Street to F Street	61	285	1:38	39 (14%)	105	2:49	38 (36%)
F Street to Center Street	31	121	1:28	11 (9%)	100	2:37	13 (13%)
Center Street to Madrona Street	21	98	1:14	1 (1%)	55	2:15	15 (27%)
Total	**168**	**721**	**1:29**	**72 (10%)**	**315**	**2:14**	**81 (26%)**

Source: Chen Ryan Associates (2019)

Table 5-3 summarizes weekday parking turnover within the Park Plaza parking structure. As was previously stated, due to the size of the area, turnover was collected less frequently. As shown, 68% of the vehicles observed remained parked for under three hours. A total of 46 vehicles were observed (5% of total observations) to be parked longer than six hours.

Table 5-3: Weekday Parking Turnover in Park Plaza Parking Structure

Parking Structure Levels	Total Spaces Monitored	Total Unique Vehicles Observed	Under 3 Hours (One Period)	3 to 6 Hours (Two Periods)	Greater than 6 Hours (Three or more Periods
1st Level	198	524	408 (78%)	94 (18%)	22 (4%)
2nd Level	193	297	170 (57%)	108 (36%)	19 (7%)
3rd Level	246	164	91 (56%)	68 (41%)	5 (3%)
Total	**637**	**985**	**669 (68%)**	**270 (27%)**	**46 (5%)**

Source: Chen Ryan Associates (2019)

5.3 Weekend Parking Occupancy

Weekend parking occupancy was collected during the same time intervals (7am, 11am, 3pm, 6pm, and 9pm) on the following dates:

- Saturday, September 1st
- Sunday, September 2nd
- Saturday, September 15th
- Sunday, September 16th

A summary of weekend peak parking occupancy within the project study area by time period and percent occupancy is presented in **Figure 5-12**. As shown, the supply of parking within close proximity to most parcels within the Parking District do not typically reach high occupancy peaks on the weekend. Most parcels, particularly those clustered around the Park Plaza parking structure, have a peak occupancy that tops out below 50% on the weekend. Other parcels within the Parking District, situated farther from the parking structure, have weekend peaks between 50% and 70%. The block of Church Avenue, between E Street and Davidson Street, peaks between 70% and 85%.

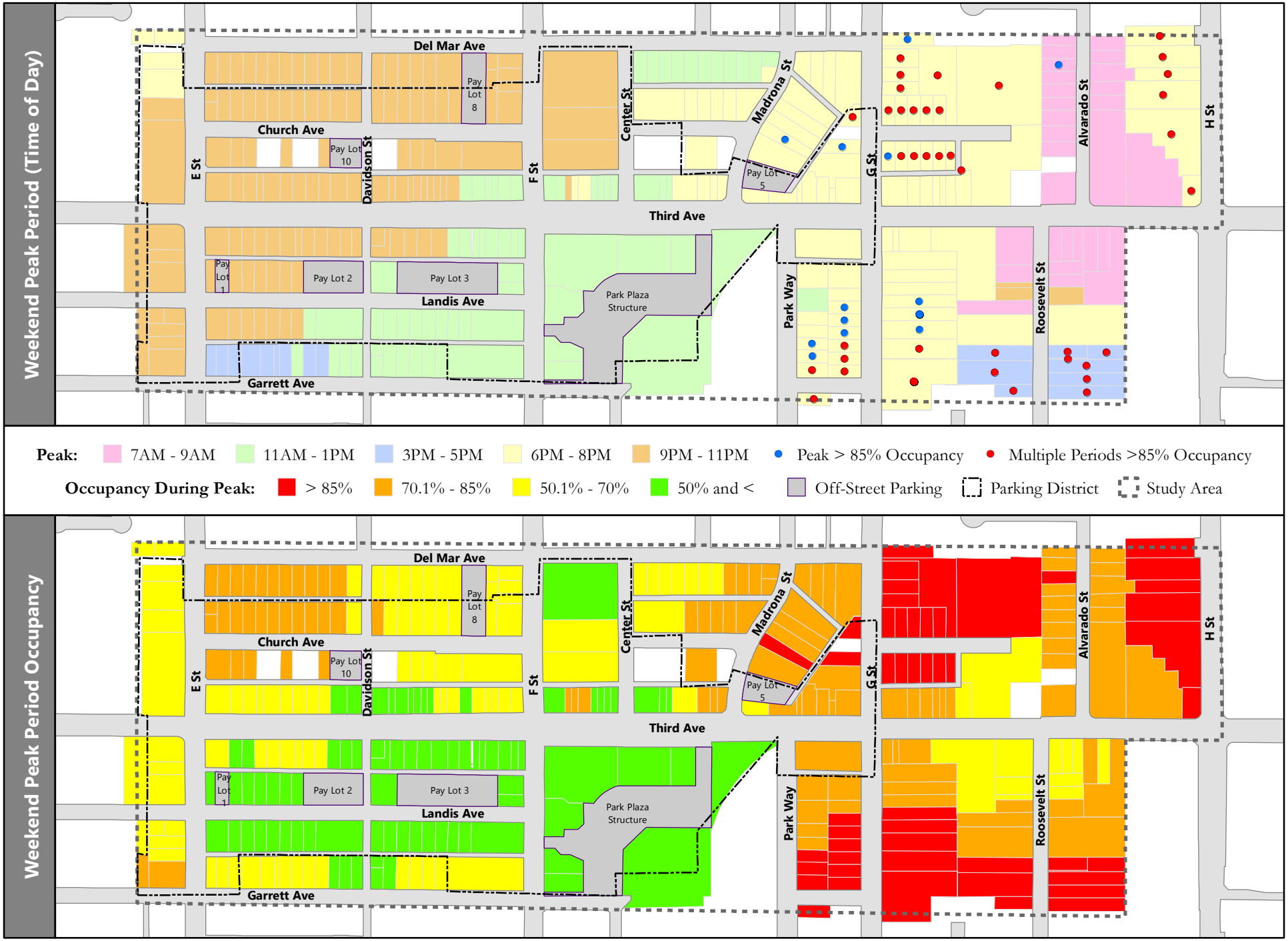
There is a strong visual correlation between the parcels whose peaks occur at 11am (lunch) on the weekend and the parcels which have occupancy peaks below 50%. The two largest public parking facilities, Park Plaza parking structure and Pay Lot 3, are closely situated to this part of the parking district. As shown in **Table 5-4**, both of those facilities have their peak occupancy periods at 11am and are significantly under-utilized on the weekends (as evidenced by their peaks, 17% and 33%, respectively).

Table 5-4: Weekend Parking Occupancy by Time of Day in Public Parking Facilities

Facility	Spaces	7am	11am	3pm	6pm	9pm
Parking Structure	670	9%	20%	17%	15%	8%
Pay Lot 1	14	32%	48%	61%	66%	55%
Pay Lot 2	74	16%	19%	15%	17%	23%
Pay Lot 3	118	13%	33%	24%	19%	14%
Pay Lot 5	42	27%	81%	85%	100%	35%
Pay Lot 8	53	14%	13%	10%	12%	20%
Pay Lot 10	28	22%	52%	48%	56%	81%

Note: Red cell denotes peak period

Source: Chen Ryan Associates (2019)



Downtown Chula Vista Parking Management Plan

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Figure 5-12

Weekend Estimated Parking Occupancy within 1/8 Mile of Destinations - Peak Period by Time of Day

Outside of the Parking District, where land uses are primarily residential, the peak occupancy times occur at various times throughout the day. Along Alvarado Street, the peak was observed at 7am. Unlike the weekday 7am period, less commuting takes place on the weekends, resulting in the 7am weekend observation time retaining some commonalities with the 9pm weekday observation time periods where a large number of residents are at home. Between the southern extent of the Parking District at G Street and Alvarado Street, the peak time period was observed at 6pm. It is likely that the blocks in this vicinity are receiving a mix of demand from both residents and downtown visitors, since they are situated in close proximity to both the business district and the residential areas (the peak period on G Street during the weekday was also 6pm).

As was true during the weekday observations, the magnitudes of the peak parking occupancies within the study area are higher outside of the Parking District. The spatial pattern of demand outside of the District is almost identical on both weekday and weekend: Third Avenue between G Street and Alvarado Street has an occupancy peak between 50% and 70% (forming a yellow core), followed by a concentric (orange) ring of 70% to 85% peak occupancy along Alvarado Street, on the adjacent to Third Avenue portions of Park Way, G Street, and Roosevelt Street, while the surrounding outer portions of the study area have peak occupancies of 85% or greater.

Weekend Parking Occupancy – Morning (7am to 9am)

Figure 5-13 shows the average weekend parking occupancy, by block, for the morning hours between 7am and 9am. All of the metered blocks within the parking district are below 50% utilization during this time period, as was also the case during weekday observations. The seven off-street public parking facilities serving the Parking District were observed to be well below 50% utilization. Numerous residential blocks on the periphery of the study area were observed to have 85% or greater occupancy. On weekend mornings, it is likely that many residents would be home and fewer persons would be commuting, as compared to weekdays.

Figure 5-14 shows the occupancy of surrounding parking supply and estimated quantity of parking available during the morning observation period within a 1/8th mile walk of parcels within the study area. During this period, the supply of parking within a 1/8th mile of nearly all parcels within the Parking District boundary are below 50% occupancy. Some parcels along Alvarado Street, Roosevelt Street and H Street on the outer periphery of the study area which surround the parking district have occupancies which range from 70% to 100%.

Weekend Parking Occupancy – Lunch (11am to 1pm)

Figure 5-15 displays the average weekend parking occupancy, by block, for the lunch period between 11am and 1pm. During this period the occupancy along some of the metered blocks on Third Avenue increases from the morning period, though available parking is still generally abundant within the parking district. Four of the largest off-street public parking facilities are below 50% occupancy.

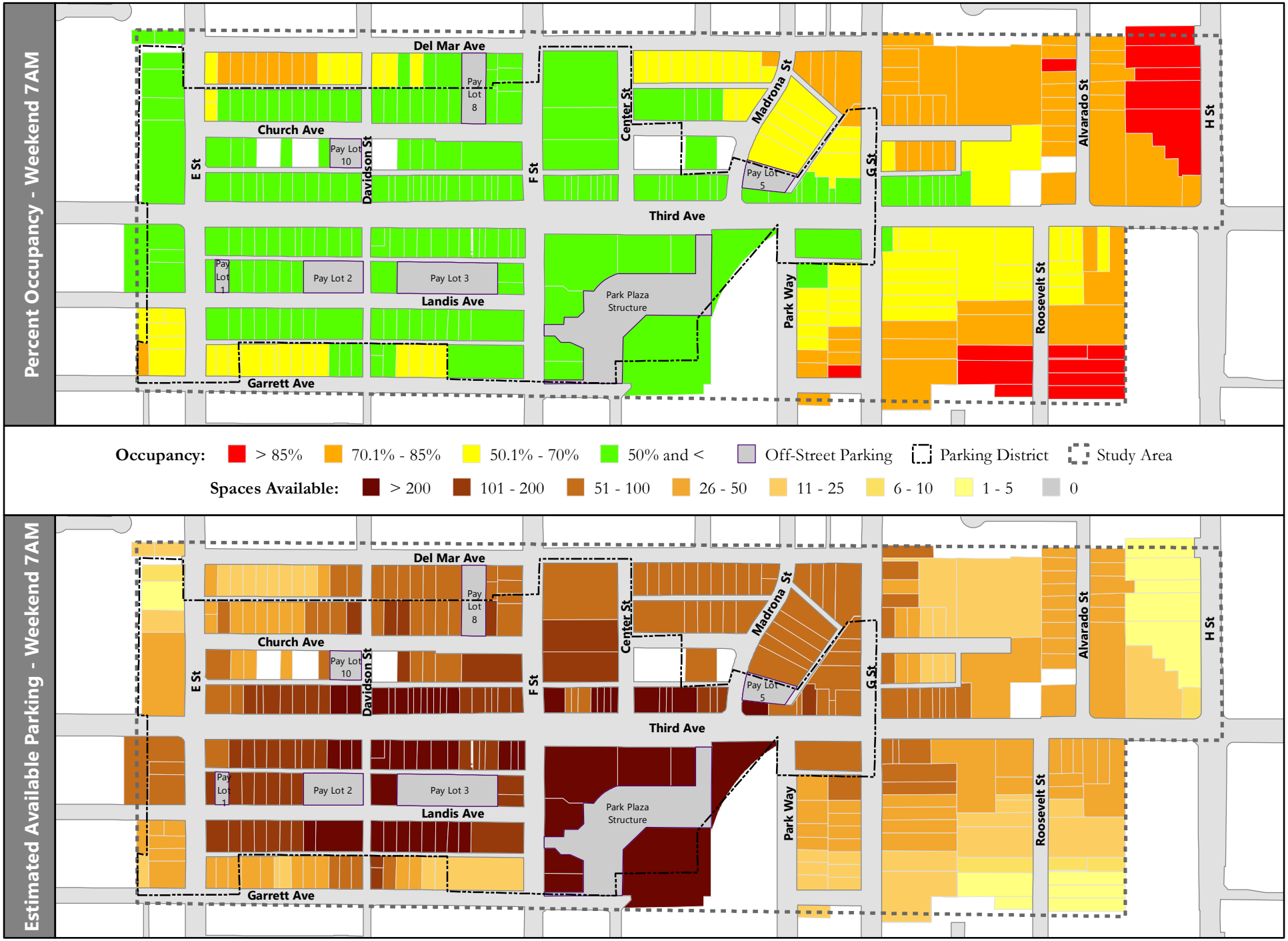
Figure 5-16 shows the occupancy of surrounding parking supply and estimated quantity of parking available during the weekend lunch observation period within a 1/8th mile walk of parcels within the study area. During the lunch period, the supply of parking within a 1/8th mile of most parcels within the Parking District remains below 50% occupancy. The occupancy of parking supply near the residential parcels on the periphery of the study area decreases slightly from the morning period.



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Figure 5-13
Parking Utilization by Block
7AM to 9AM Weekend Average



Downtown Chula Vista Parking Management Plan

Figure 5-14
Estimated Supply of Available Parking within 1/8 Mile of Destinations
7AM - 9AM Weekend Average

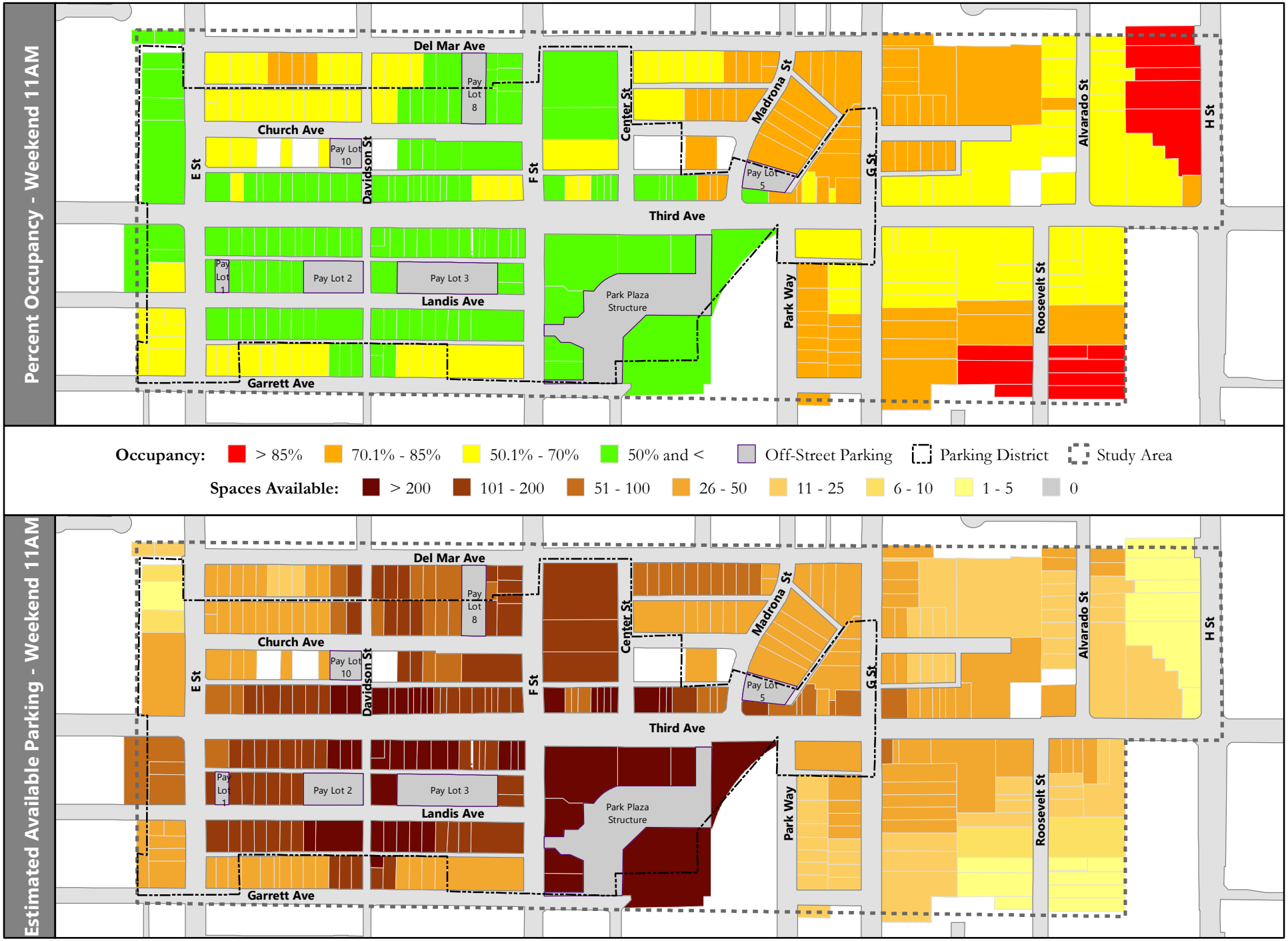
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Figure 5-15
Parking Utilization by Block
11AM to 1PM Weekend Average



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Figure 5-16

Estimated Supply of Available Parking within 1/8 Mile of Destinations

11AM - 1PM Weekend Average

Weekend Parking Occupancy – Afternoon (3pm to 5pm)

Parking occupancy, by block, for the afternoon period between 3pm and 5pm is presented in Figure 5-17. As shown, parking within the District is generally under-utilized with the exception of Pay Lot 5 and along G Street. The residential blocks on the surrounding periphery of the study area remain at higher occupancies, with some blocks (G Street, Church Avenue – south of G Street, Roosevelt Street) exceeding 85%.

Figure 5-18 displays the parking occupancy within a 1/8th mile walk of parcels between 3pm and 5pm. The usage of parking throughout the study area is generally the same as the previous period, with the exception of occupancy increases to the parcels on Church Avenue, south of G Street. Conditions along that block of Church Avenue are affected by the increased usage of parking at Pay Lot 5 and along G Street.

Weekend Parking Occupancy – Dinner (6pm to 8pm)

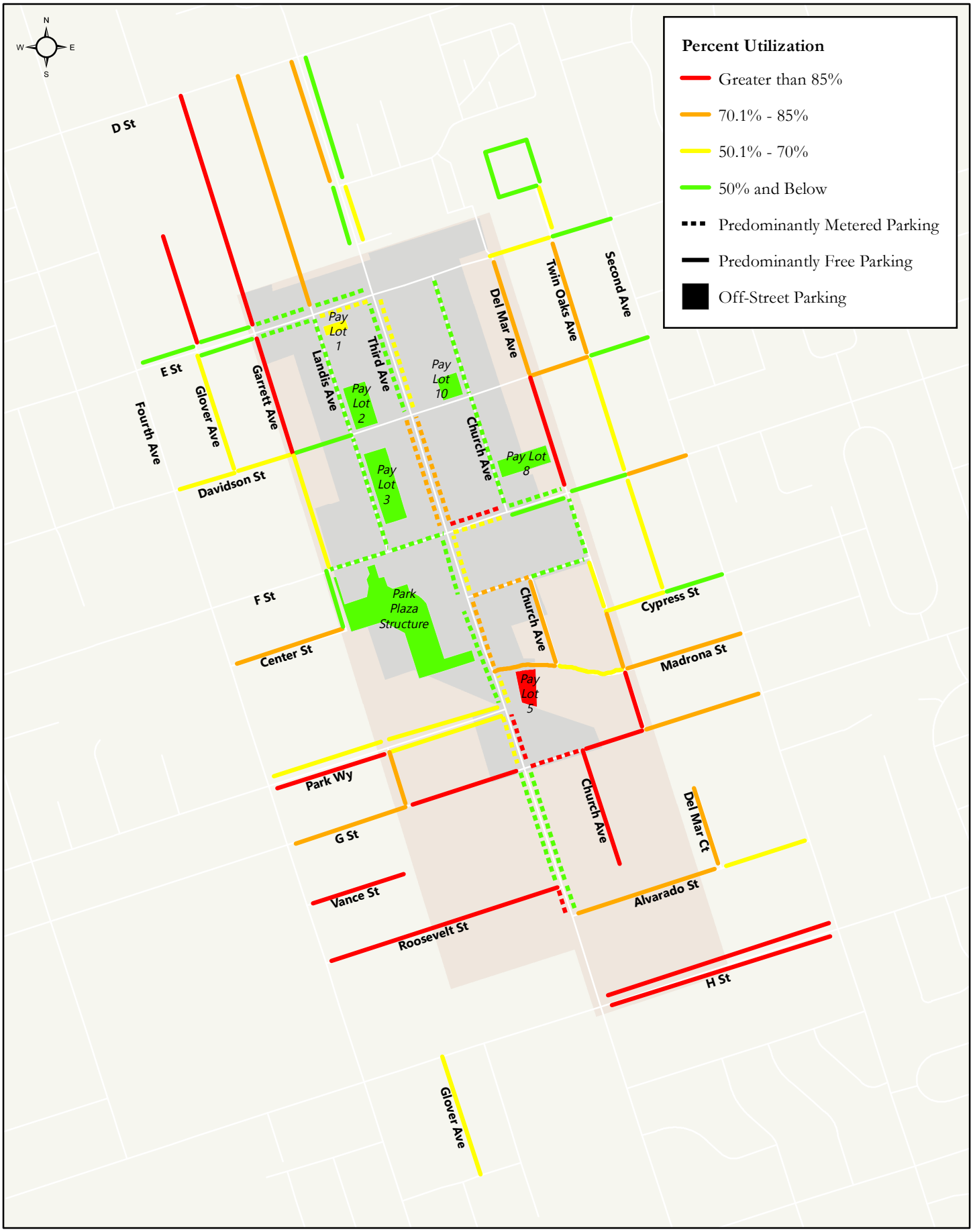
Figure 5-19 shows the average weekend parking occupancy, by block, for the dinner period between 6pm and 8pm. After 6pm, the metered blocks along Third Avenue within the Parking District increase to above 85% occupancy (paid parking enforcement at meters and pay parking lots ends at 6pm throughout the district). The on-street parking along many of the residential blocks in the periphery of the study area are also greater than 85% occupancy.

As shown in Figure 5-20, the occupancy of the parking supply within a 1/8th mile along Third Avenue remains below 50% for most parcels, despite the previously noted increase in parking occupancy which occurs along the metered spaces of Third Avenue after the enforcement period ends. Overall supply of parking available is balanced by the aforementioned decline in use of the pay parking lots after 6pm. Occupancy along Church Avenue between E Street and F Street increases for most parcels to between 50% and 70%. The residential parcels south of the parking district are primarily at occupancies greater than 70%.

Weekday Parking Occupancy – Evening (9pm to 11pm)

Figure 5-21 shows the average weekend parking occupancy by block for the evening period between 9pm and 11pm. During this time period parking occupancy increases to above 85% on the metered blocks on Third Avenue between Davidson Street and Church Avenue and to between 70% and 85% along the meters on Church Avenue and on Third Avenue north of Davidson Street. The on-street parking for many of the residential blocks in the periphery of the study area remains at greater than 85% occupancy.

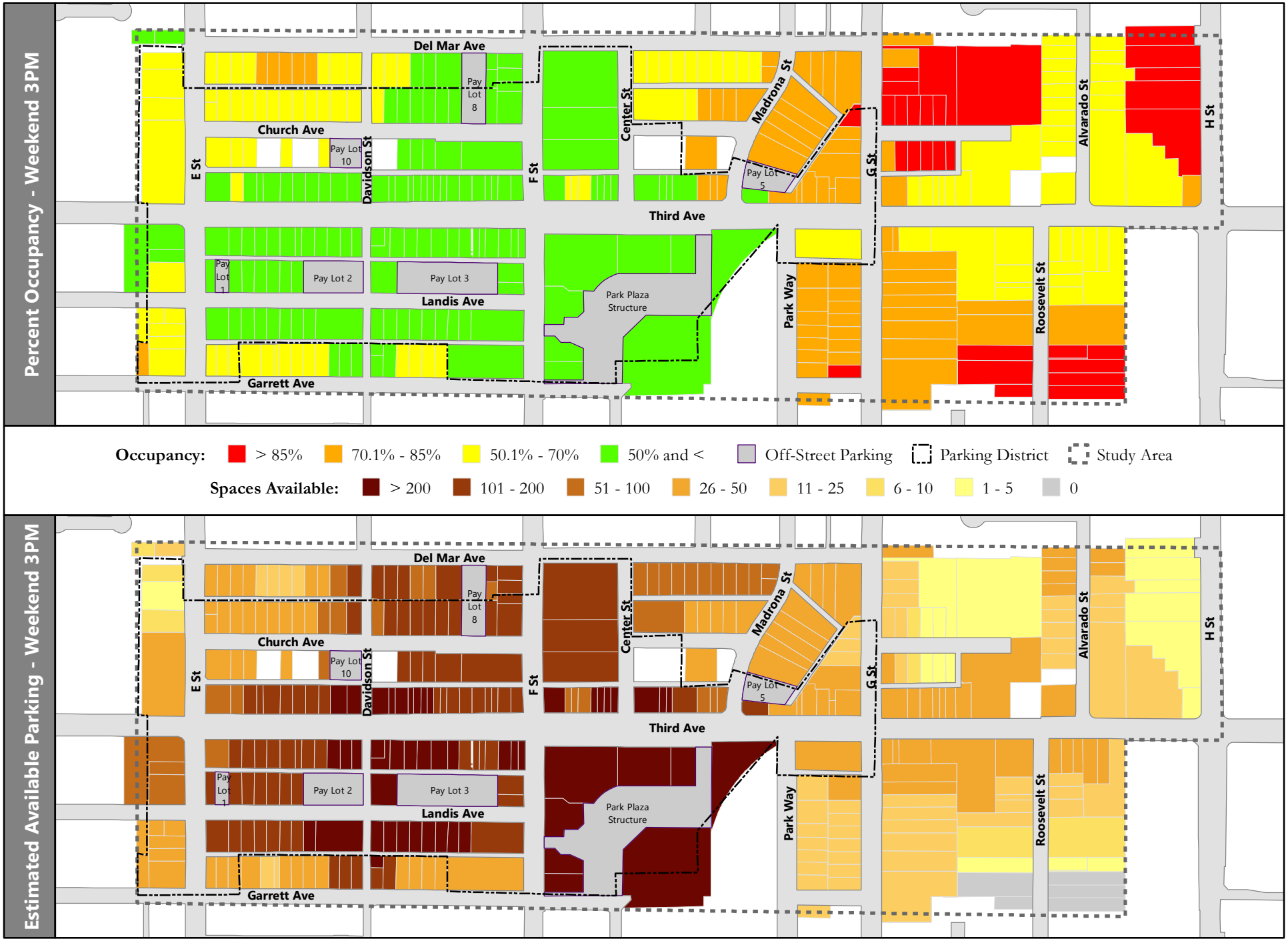
As shown in Figure 5-22, the occupancy of the parking supply within a 1/8th mile of the parcels increases in some portions of the parking district to above 50%: notably along Church Avenue between E Street and Davidson Street, it is between 70% and 85%. North of F Street, this period represents the weekend peak for many of the parcels within the Parking District.



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Figure 5-17
Parking Utilization by Block
3PM to 5PM Weekend Average



Downtown Chula Vista Parking Management Plan

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Figure 5-18

Estimated Supply of Available Parking within 1/8 Mile of Destinations

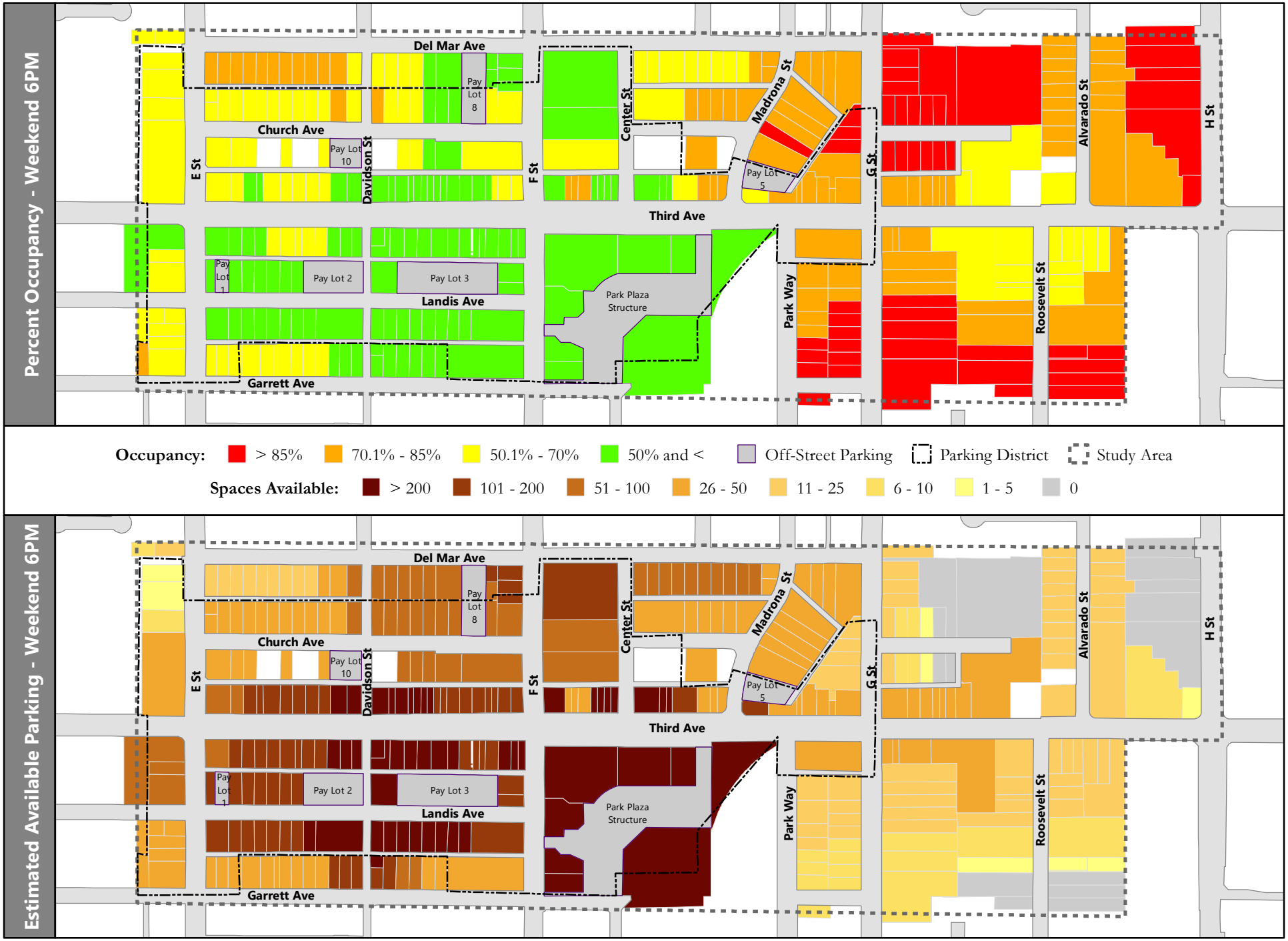
3PM - 5PM Weekend Average



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Figure 5-19
Parking Utilization by Block
6PM to 8PM Weekend Average



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Figure 5-20

Estimated Supply of Available Parking within 1/8 Mile of Destinations

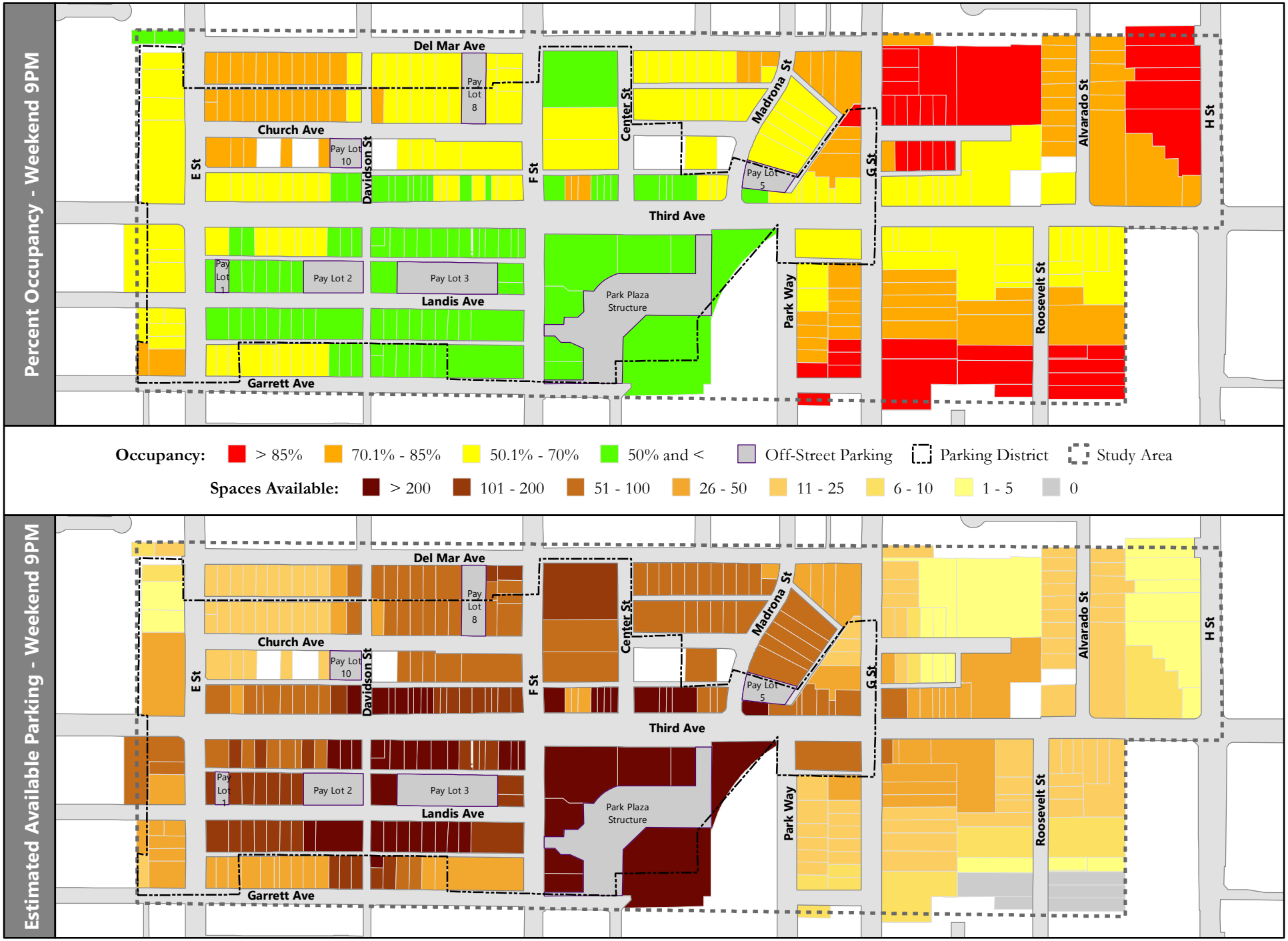
6PM - 8PM Weekend Average



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Figure 5-21
Parking Utilization by Block
9PM to 11PM Weekend Average



Downtown Chula Vista Parking Management Plan

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Figure 5-22

Estimated Supply of Available Parking within 1/8 Mile of Destinations

9PM - 11PM Weekend Average

5.4 Weekend Parking Turnover

Weekend parking turnover by block along Third Avenue is summarized in Table 5-5. Turnover was observed on Saturday only, when parking cost and time limits at the meters are enforced. The mean vehicle length of stay observed on weekends along Third Avenue between E Street and Madrona Street during enforcement was one hour and 28 minutes. During enforcement hours, approximately 8% of vehicles observed remained parked longer than the two-hour time limit. As discussed previously, any data collection method used short of continuous monitoring will under-estimate vehicles making short-duration stays as it is probable that some vehicles could have arrived and departed between scheduled collection snapshots. Correcting for this would, if anything, reduce the mean length of stay and the percentage of vehicles exceeding 2-hours parked to lower values than what are presented in the table. During non-enforcement hours, about 43% of vehicles were parked for a period of time exceeding 2-hours, with the average length of stay two hours and 46 minutes.

Table 5-5: Weekend Parking Turnover along Third Avenue between E Street and Madrona Street

Section of Third Avenue	Total Spaces Monitored	Total Vehicles Observed	Mean Length of Stay (Hours)	Vehicles Exceeding 2-Hours	Total Vehicles Observed	Mean Length of Stay (Hours)	Vehicles Exceeding 2-Hours
		During Enforcement Hours			Outside of Enforcement Hours		
E Street to Davidson Street	55	238	1:20	16 (7%)	89	3:24	54 (61%)
Davidson Street to F Street	61	328	1:37	37 (11%)	136	3:02	68 (50%)
F Street to Center Street	31	117	1:27	10 (9%)	69	2:19	22 (32%)
Center Street to Madrona Street	21	96	1:14	2 (2%)	55	1:34	4 (7%)
Total	**168**	**779**	**1:28**	**65 (8%)**	**349**	**2:46**	**148 (43%)**

Source: Chen Ryan Associates (2019)

Table 5-6 summarizes weekend parking turnover within the Park Plaza parking structure. As was previously stated, due to the size of the area, turnover was collected less frequently. As shown, 84% of the vehicles observed remained parked under the three-hour limit. A total of 19 vehicles (6%) were observed to be parked longer than six hours.

Table 5-6: Weekend Parking Turnover in Park Plaza Parking Structure

Parking Structure Levels	Total Spaces Monitored	Total Unique Vehicles Observed	Under 3 Hours (One Period)	3 to 6 Hours (Two Periods)	Greater than 6 Hours (Three or more Periods
1st Level	198	227	196 (86%)	18 (8%)	13 (6%)
2nd Level	193	117	93 (80%)	18 (15%)	6 (5%)
3rd Level	246	4	3 (75%)	1 (25%)	0
Total	**637**	**348**	**292 (84%)**	**37 (11%)**	**19 (6%)**

Source: Chen Ryan Associates (2019)

6.0 Public Outreach

This chapter summarizes the methods of public outreach undertaken during this phase of the project. To date, the project team has met with stakeholders one time – a meeting involving TAVA on January 9, 2019. The project team drafted and administered two surveys, one for the public and one for business owners. Results from the two surveys are summarized in this section.

6.1 Documentation of Public Outreach Efforts

Opinion surveys were developed and tailored toward two Third Avenue Village stakeholder groups: the public who visits Third Avenue Village, as shown in Figure 6-1; and the TAVA business owner's association, as shown in Figure 6-2. The results from both surveys are discussed in the forthcoming sections. Raw results from both surveys are presented in Appendix A.

The survey for the public which visits Third Avenue Village was developed in both English and Spanish, and structured to gather some basic information from the public about their typical trip purpose, travel behavior, and their thoughts on parking matters such as convenience and cost. It was administered in two ways: as an intercept[3] survey and as an online survey. Many intercept surveys were gathered along Third Avenue, at locations near F Street and Madrona Street. The survey was also hosted online and promoted to the public through various communications, including the City's official website and social media accounts. In total, 52 persons completed the survey.

The TAVA survey gathered basic information from the TAVA business community regarding their clients' and customers' parking needs, and their perceptions on the quantity and convenience of the Village's parking supply. The survey was circulated and promoted through the association's email lists. Most of the business owners who responded to the survey run businesses on Third Avenue within the Parking District (between E Street and Center Street); however, some responding businesses were located elsewhere on Third Avenue, on cross-streets to Third Avenue – such as F Street and G Street, or on parallel blocks such as Church Avenue or Garrett Avenue. The survey was also translated into Spanish.

In addition to the development of surveys, the project team also hosted a booth at the *Villains In The Village*, a Halloween-themed community event held by TAVA on Saturday, October 20, 2018. The booth was staffed by members of the project team, who shared information regarding the study and provided Halloween treats to the children. The public was invited to take the survey at the booth or provided encouragement to complete the survey online at later time.

[3] Intercept surveys are conducted in-person, where the interviewer – positioned in a populated public area, asks individuals approaching for their participation

Figure 6-1: Public Opinion Survey

This is a questionnaire designed to gather opinions about parking conditions and gain a better understanding about travel behaviors from members of the public who frequent the area around the Third Avenue Village of Downtown Chula Vista. It is being administered on behalf of the City of Chula Vista, and the results will help inform the update of the City's Downtown Parking Study.

1) How frequently do you visit the Third Avenue Village?

a) Multiple times per week
b) About once a week
c) About once or twice a month
d) A few times per year
e) A couple times per year or less

2) Within the past month, have you come to the Third Avenue Village to do any of the following activities?
Select all that apply:

a) Shopping
b) Visiting Restaurants, Bars or Cafes
c) Working
d) Entertainment
e) Exercise or Recreation
f) Other

On the occasions you have arrived to the Third Avenue Village via automobile:

3) Are your typical visits longer than 2-hours?

a) Yes b) No c) Unsure d) Not applicable

4) How often are you able to find parking within one or two blocks of your destination?

a) Always b) Usually c) Occasionally d) Never
e) Not applicable

5) Do you try to avoid parking in locations which cost money (such as meters or paid parking lots)?

a) Always b) Usually c) Occasionally d) Never
e) Not applicable

6) If the parking meters along Third Avenue accepted more convenient forms of payment – such as credit cards, would you be more encouraged to use those parking spaces?

a) Yes b) No c) Unsure d) Not applicable

7) Were you aware that there is a parking structure with free parking situated behind the shops on the west side of Third Avenue near F Street?

a) Yes b) No

8) Is the location of this parking structure convenient to most of the destinations you visit along Third Avenue?

a) Yes b) No c) Unsure

Figure 6-1: Public Opinion Survey

9) If you could not find parking on the same block as your destination, are there circumstances where you would be willing to walk longer distances from where you parked (approximately 3 to 4 blocks) to reach your destination?

a) Yes
b) No
c) No, but would reconsider if conditions along the streets in the neighborhood were improved*

*If you answered question 9 with "C", indicate what conditions would need to be improved in order for you to reconsider your unwillingness to walk longer distances from where you parked:

_____

10) Have prior difficulties in searching for parking at the Third Avenue Village discouraged you from wanting to make visits here on other occasions?

a) Yes b) No c) Not applicable

11) Other than driving, indicate any other forms of transportation you have ever utilized previously to visit the Third Avenue Village:
Select all that apply:

a) Dropped-off by a driving companion
b) Taxi or Ride-Hailing service (Lyft, Uber, etc)
c) Bus
d) Bicycle
e) Walking
f) Other

Figure 6-2: Business Owners Survey

This is a questionnaire designed to gather opinions from Third Avenue Village business owners about parking conditions and to gain a better understanding about their customers'/clients' parking needs. It is being administered on behalf of the City of Chula Vista, and the results will help inform the update of the City's Downtown Parking Study.

1) What is the address of your business? _____

2) What type of business do you operate?

a) Retail
b) Food and Beverage
c) Professional Services
d) Entertainment
e) Exercise or Recreation
f) Other

3) On average, how much time do your customers/clients spend in your business per visit?

a) Less than 30 Minutes
b) 30 Minutes to 2 Hours
c) 2 Hours to 4 Hours
d) Longer than 4 Hours
e) Unsure

4) Does your business have its own private supply of off-street parking?

a) Yes, for customers use only
b) Yes, for staff use only
c) Yes, for both customers and staff
d) No

5) Does your business direct its employees to park remotely, in order to preserve closer parking spaces for customers?

a) Yes b) No c) Unsure d) Not applicable

6) Do you believe that visitors to the Village would be more encouraged to use the parking meters along Third Avenue if they accepted more convenient forms of payment, such as credit cards?

a) Yes b) No c) Unsure d) Not applicable

Please indicate whether you agree or disagree with the following statements:

7) I am generally satisfied with the quantity of available parking spaces close to my business

a) Strongly Agree
b) Agree
c) Neutral
d) Disagree
e) Strongly Disagree
f) Unsure

Figure 6-2: Business Owners Survey

8) The location of the Village parking structure (behind the shops on the west side of Third Avenue, south of F Street) is a convenient place to park for my customers/clients

a) Strongly Agree
b) Agree
c) Neutral
d) Disagree
e) Strongly Disagree
f) Unsure

6.2 Results from Public Survey

Table 6-1 shows the frequency that respondents indicated they visit the Third Avenue Village. Among the respondents, 40% reported visiting the Third Avenue Village multiple times per week, with an additional 19% indicating they average about one visit per week.

Table 6-1: Survey Respondents Visitation Frequency

Visitation Frequency	Percent of Respondents
Multiple times per week	40%
About once per week	19%
About once or twice per month	19%
A few times per year	14%
A couple times per year or less	8%

Source: Chen Ryan Associates (2019)

Trip Purpose

Respondents were asked to indicate which types of activities (allowing multiple answers) drew them to the Third Avenue Village in the past month. Table 6-2 summarizes the percent of total respondents who indicated each activity type.

Table 6-2: Survey Respondents Trip Purpose

Activity Type	Percent of Respondents
Visiting Restaurants, Bars or Cafes	73%
Exercise or Recreation	37%
Entertainment	27%
Shopping	21%
Working	13%
Other	2%

Source: Chen Ryan Associates (2019)

Almost three-quarters (73%) of the respondents indicated they have recently visited the Third Avenue Village in order to patronize a restaurant, bar or cafe. The second most common response was exercise or recreation, with 37% indicating they have come or came recently for that purpose. The unexpectedly large number of responses for exercise and recreation is likely due to the success that survey administrators had gathering surveys near the *24 Hour Fitness*. Work trips were specified by 13% of the respondents (notably, that number is much lower than the 40% of respondents who indicate they visit the Village multiple times per week). This may also be a function of the survey sample group.

Length of Visit

Respondents were asked if on the occasions they have arrived to the Third Avenue Village by automobile, if their typical visits are longer than two hours. Two hours is the time restriction imposed on the parking meters along Third Avenue in order to ensure quicker parking turnover. As shown in Table 6-3, 60% of the respondents reported that their typical visits are longer than two hours, while 28% said their typical length of stay at the Third Avenue Village takes less time. It should be noted, a sizable share of intercept surveys

was gathered near the Park Plaza parking structure, which allows longer-term parking. 68% of those who parked in the parking structure during parking turnover observations were staying under three hours.

Table 6-3: Respondents Typical Length of Visits

Typical Length of Visit	Percent of Respondents
Longer than 2-Hours	60%
2-Hours and Less	28%
Unsure	12%

Source: Chen Ryan Associates (2019)

Perceived Convenience of Parking

Survey takers were asked a series of questions intended to gauge their opinions regarding the convenience of parking in the Third Avenue Village and their general attitudes toward paying for parking. The responses to these questions are summarized in Tables 6-4a and 6-4b.

Table 6-4a: Perceived Convenience of Parking at Third Avenue Village (Likert Scale)

Respondent	Always	Usually	Occasionally	Never
Able to find parking within one or two blocks of destination	30%	36%	28%	6%
Avoids parking in locations which cost money	49%	20%	25%	6%

Source: Chen Ryan Associates (2019)

When respondents were asked how often they could find parking within one or two blocks of their destination, a combined two-thirds of respondents answered *always* or *usually* (30% and 36%, respectively). A combined 34% chose answers (*occasionally* or *never*) indicating that they have some level of difficulty finding parking close to their destination.

Another question asked if respondents try to avoid parking in locations which cost money (such as the meters or paid parking lots). Nearly half (49%) of the respondents claimed they *always* avoid parking in those locations, while another 20% stated they *usually* avoid parking in those locations. 25% answered that only *occasionally* avoid those locations, while 6% responded that they *never* avoid those locations.

When filtering the survey responses by the respondents who reported to *always* avoid parking in locations which cost money, a combined 58% stated they still are *always* (21%) or *usually* (37%) able to find parking within one or two blocks of their destination.

Table 6-4b: Perceived Convenience of Parking at Third Avenue Village (Yes/No)

Respondent	Yes	No	Unsure
Has been discouraged to visit Third Avenue Village on a previous occasion because of parking difficulties	54%	46%	
Is aware of free parking structure at Third Avenue and F Street	67%	33%	
Considers the location of free parking structure convenient to their destinations	65%	27%	8%
Would be willing to use meters if more convenient forms of payment (such as credit cards) were accepted	64%	28%	8%
Would consider walking a longer distance from parking (3 to 4 blocks) under some circumstances	58%	42%	

Source: Chen Ryan Associates (2019)

Over half the respondents (54%) have, on a previous occasion, been discouraged to visit the Third Avenue Village because of parking difficulties. A third of those surveyed were not aware of the free Park Plaza parking structure, while just over a quarter of those surveyed (27%) did not perceive the location of the parking structure as conveniently-situated to most of their usual destinations. When asked if more convenient forms of payment (such as credit cards) would make respondents more willing to use the metered parking along Third Avenue, 64% respondents indicated so.

42% of respondents stated they would not walk longer distances than two blocks under any circumstances, though half of those indicated they might reconsider if walking conditions were improved. The most commonly-cited conditions which deterred walkers included inadequate lighting, security concerns related to the presence of a homeless population, ADA-accessibility and lack of shade.

Other Forms of Transportation Utilized

Respondents were asked what other forms of transportation (allowing multiple answers) they have ever previously utilized to visit the Third Avenue Village. Table 6-5 summarizes the percent of total respondents who indicated each form of mobility.

Table 6-5: Other Forms of Transportation Previously Utilized

Transportation	Percent of Respondents
Dropped-off by a driving companion	42%
Taxi or ride-hailing service	42%
Walking	42%
Bicycling	7%
Bus	7%
Have only reached the Village via personal vehicle	12%

Source: Chen Ryan Associates (2019)

As noted in the table, 88% of the respondents have had at least one previous experience of arriving at the Third Avenue Village without requiring vehicular parking. A plurality of those respondents indicated they had used a taxi or ride-hailing service, received a drop-off by a companion or walked in a previous instance.

6.3 Results from Business Owners Survey

Table 6-6 summarizes the types of businesses run by the 40 business owners who took the survey. Among the respondents, almost half of businesses were professional services (20), while a quarter were retail (10).

Table 6-6: Respondents Business Type

Business Type	Number of Respondents
Professional Services	20 (50%)
Retail	10 (25%)
Food and Beverage	6 (15%)
Other	3 (7.5%)
Exercise or Recreation	1 (2.5%)
Total	40

Source: Chen Ryan Associates (2019)

Table 6-7 shows the duration that customers or clients to the responding businesses spend on a typical visit to their business. A combined 87% of the businesses surveyed stated that under two hours is the typical the length of stay for their patrons. The short typical customer/client duration suggests that the two-hour parking time limit along Third Avenue is sufficient to accommodate visits to multiple businesses in one trip.

Table 6-7: Customers/Clients Typical Duration of Visit

Typical Duration	Percent of Respondents
Less than 30 Minutes	23%
30 Minutes to 2 Hours	64%
2 Hours to 4 Hours	8%
Longer than 4 Hours	5%

Source: Chen Ryan Associates (2019)

Tables 6-8 and 6-9 show that a majority of the businesses surveyed (62.5%) do not have their own supply of off-street parking. Three-quarters (75%) of those businesses surveyed have no parking available for their customers. Almost half of the business owners surveyed indicate they instruct their staff to park remotely in order to preserve parking spaces closer to their business for customers.

Table 6-8: Business Has Own Source of Off-Street Parking

Has Source of Parking	Percent of Respondents
No	62.5%
Yes (for customers and staff)	15%
Yes (for staff use only)	12.5%
Yes (for customer use only)	10%

Source: Chen Ryan Associates (2019)

Table 6-9: Business Directs Staff to Park Remotely

Instructs Staff to Park Remotely	Percent of Respondents
Yes	47%
No	37%
Not Applicable	16%

Source: Chen Ryan Associates (2019)

Table 6-10 shows that half of the business owners surveyed (50%) were unsatisfied with the quantity of available parking close to their business. Very few of the responding business owners (13%) regarded the location of the Park Plaza parking structure as a convenient location for their customers to park. A large majority of business owners believed the meters along Third Avenue would receive better use from visitors to the Third Avenue Village if they accepted more convenient forms of payment, such as credit cards.

Table 6-10: Business Owners Perception of Convenient Available Parking at Third Avenue Village

Business Owner	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Is generally satisfied with quantity of available parking close to their business	7.5%	25%	17.5%	30%	20%
Regards the location of the Park Plaza parking structure as convenient place for its customer/clients to park	5%	8%	18%	32%	37%
Believes visitors would use meters more often if more convenient forms of payment (such as credit cards) were accepted	Yes		Unsure	No	
	70%		12.5%	17.5%	

Source: Chen Ryan Associates (2019)

7.0 Conclusions

Based on extensive data collection and observations, there is a lot of underutilized parking within the Parking District. On the weekdays, a majority of the district peaks between 11am and 1pm with parking occupancy ranging between 70% and 85% - as shown in Figure 5-1. On the weekends, parking within the Parking District is heavily underutilized – with most of the large parking lots observed to be at near-vacant occupancies. However, there are some areas within the Parking District which experience higher peaks. The parcels near Third Avenue and Madrona Street, experience higher evening peaks – partially influenced by its proximity to both a cluster of restaurants and residential land uses.

The parking within the residential areas outside of the Parking District were observed to have much heavier utilization, though most of the supply outside of the district is free and non-time-restricted – contributing to lower-turnover parking behavior. The supply of parking serving the residential portions of the study area is also much smaller in quantity than the Parking District.

Outreach efforts yielded a several notable observations. One is that both the public and business owners (64% and 70%, respectively) believe that the parking meters, provided that they accepted more convenient forms of payment (such as credit cards), would be used more often. This is notable because there is capacity to spare at the metered parking locations during many of the observation times which coincided with enforcement hours. Metered parking spaces along Third Avenue are also typically the most conveniently-situated parking spaces to the entrances of businesses within the Parking District. Another observation is that there are a substantial number of visitors who are either unaware of (33%) or do not find the Park Plaza parking structure to be convenient (27%) to their usual destinations. The vast size of the parking structure and its central location to the district make it an ideal opportunity for the focus of a "park once" district. The lack of familiarity or desirability some visitors have with the parking structure suggests that information, the general walkability of the surrounding area and wayfinding are possibly lacking to the standards of the visiting population.

The occupancy within the Park Plaza parking structure peaks at 77% during the typical weekday lunch period, but otherwise hovers at half-occupancy or below the rest of the week. The parking structure has more than enough capacity to accommodate a larger number of visitors to the area, and its peak period is complimentary with residential growth (peaking at during weekday mid-day, when most residents are away at work).

Conclusion Points

•Supply of available parking within Parking District was observed to be adequate during peak periods
•Residential peak time of day periods complimentary with commercial peak time of day periods
•Parking demand within Parking District not allocated efficiently; these are possible reasons:

- Many visitors have lack of knowledge about where to park
- Walking distances from areas with available parking to destination undesirable for some
- Coin-operated meters (not accepting credit cards) inconvenient to many patrons

Appendix A

Public Survey and Business Owners Survey
Raw Data

Individual Survey Results provided under separate cover

Appendix B - On-Site Parking Capacity and Future Parking Generation

Appendix B – Overview of Near-Term Parking Conditions Analysis

This appendix explains how on-site parking capacity and future parking generation was estimated for each redeveloped parcel.

- Ground floor parking capacity was estimated for parcels anticipated to redevelop in the near-term
- Development capacity of parcels anticipated to redevelop was estimated in the near-term, except for entitled projects where the development quantities were known
- Parking generation was estimated for noon and 9pm periods under near-term conditions
- Parking generation was assigned to on-site parking per parcel and off-site within the study area

Parking Capacity Estimation – Ground floor parking capacity for each parcel was estimated based on typical parking feature dimensions and the dimensions and access characteristics of each parcel. The parking capacity per parcel would subsequently be used to subtract from parking generation estimates per parcel of each development scenario in order to determine how much off-site public parking each of the scenarios would generate. For entitled near-term projects, the known parking quantities were substituted in place of the estimates.

Based on typical parking lot feature dimensions shown in **Table 1**, a series of basic possible ground floor parking configurations were developed for all parcels within the study area. The accompanying image demonstrates a couple of the basic parking configurations considered.

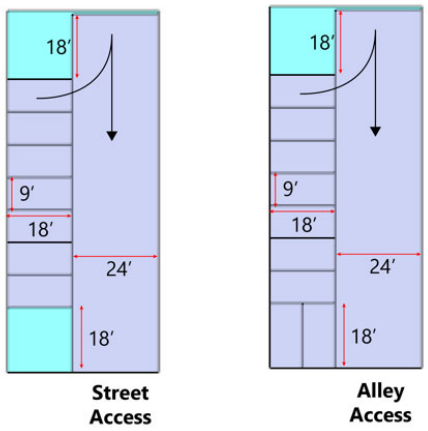


Table 1: Assumed Parking Lot Feature Dimensions

Feature	Dimension
Parking Space Width	9′
Parking Space Length	18′
Driveway Aisle	24′
Driveway Entry Depth	18′
Driveway Backing Area Depth	18′

Each parking configuration within a parcel was contingent on if required conditions were present in the parcel such as street access, alley access and minimum feasible width and depth to accommodate parking in that configuration. Parcels which are also zoned to have a ground floor mixed-use component had 50′ subtracted from their lot depth to account for the ground floor non-residential land uses.

Table 2 shows the formulas used to calculate estimated parking capacity under each possible configuration for every parcel within the study area, provided it met the conditions of that configuration. If multiple parking configurations were possible within a parcel, the configuration which could accommodate the largest number of spaces possible was selected for that parcel and the corresponding supply total was assumed for that parcel. Irregular-shaped parcels were divided into rectangles and the same calculations were performed on the rectangular portions. It was assumed that no future development projects would construct underground or structured parking on site, or that no parcel assembly would take place.

Table 2: Assumed Parking Lot Required Conditions and Formulas

Parking Configuration	Access side (As) Minimum	Non-Access Side (Ns) Minimum	Non-Access Side (Ns) Minimum if Ground Floor Retail	Formula without Ground Floor Retail	Formula with Ground Floor Retail
Alley	≥9’	≥18’	≥68’	As / 9	As / 9
One Row / One Aisle / No Alley	≥42’	≥45’	≥95’	(Ns – 36) / 9	((Ns – 50) – 36) / 9
One Row / One Aisle / Alley	≥42’	≥45’	≥95’	((Ns – 36) / 9) + 2	((Ns – 50) – 36) / 9) + 2
Two Rows / One Aisle / No Alley	≥60’	≥45’	≥95’	((Ns – 36) * 2) / 9	((Ns – 50) – 36) * 2) / 9
Two Rows / One Aisle / Alley	≥60’	≥45’	≥95’	(((Ns – 36) * 2) / 9) + 4	(((Ns – 50) – 36) * 2) / 9) + 4
Three Rows / Two Aisles / No Alley	≥102’	≥45’	≥95’	((Ns – 36) * 3) / 9	((Ns – 50) – 36) * 3) / 9
Three Rows / Two Aisles / Alley	≥102’	≥45’	≥95’	(((Ns – 36) * 3) / 9) + 6	(((Ns – 50) – 36) * 3) / 9) + 6
Four Rows / Circular Aisle	≥120’	≥57’	≥107’	(((Ns – 48) / 9) * 4) + 8	(((Ns – 50) – 48) / 9) * 4) + 8
Six Rows / Figure Eight Circulation	≥180’	≥57’	≥107’	(((Ns – 48) / 9) * 6) + 8	(((Ns – 50) – 48) / 9) * 6) + 8

Development Capacity Estimation – Development capacity for each parcel was estimated based on the parcel’s dimensions and the permitted uses and development envelopes of the respective Urban Core Specific Plan zones each parcel was located within. For entitled near-term projects, the known development quantities were substituted in place of the estimates.

Table 3 shows the UCSP zones in the study area and their maximum allowed height, allowed Floor-Area Ratio (FAR), and residential parking requirements. The non-residential parking requirements are identical in all the UCSP zones within the study area. Except for UC-3 Roosevelt, the UCSP zones allow both residential and non-residential land uses. Where non-residential uses are permitted, they are typically allowed on the ground floor only. The descriptions of the zone regulations within the UCSP[1] specify the blocks and streets where those land use types are forbidden or allowed within the zone.

[1] UCSP Chapter 6

Table 3: UCSP Zone Building Envelope and Parking Regulations

Zone	Name	FAR	Max Height	Residential Parking	Non-Residential Parking
V-1	East Village	2.0	45’	1.6 per DU	2 per 1,000 sf
V-2	Village	2.0	45’	1.6 per DU	2 per 1,000 sf
V-3	West Village	4.5	84’	1.6 per DU	2 per 1,000 sf
UC-1	St. Rose	4.0	84’	1.1 per DU	2 per 1,000 sf
UC-2	Gateway	5.0	84’	1.1 per DU	2 per 1,000 sf
UC-3	Roosevelt	3.0	60’		n/a

Development capacity was estimated through a series of calculations. FAR was divided by the maximum allowed floors (an assumption converted from the maximum building height, specified in the UCSP) generates a number which can be multiplied by the parcel area to determine a maximum building footprint area possible allowed by the zone.

Maximum Building Footprint

$$(a / b) * c$$

a = FAR
b = floors
c = parcel square footage

The maximum building footprint represents the area of one floor plate, which can be multiplied by the number of floors allowed by the zone. On-site parking was assumed to be configured on the ground level, which eliminates the ground floor for residential use. In locations where mixed land uses are allowed, the commercial uses were assumed to go on the ground level. In either situation, one floor plate is subtracted from the maximum number of floors allowed when calculating residential square footage. An assumption was made that 85% of space within the building is leasable (85% building efficiency), with the remaining space accounting for common-area or shared necessities of the building that are not leasable, such as stairwells, hallways, and utility rooms.

Residential Square Footage

$$(b – 1) * (d * 0.85)$$

b = floors
d = maximum building footprint

To determine the number of dwelling units which can be accommodated on each parcel, the total residential square footage was divided by 800 square feet. This average square footage per dwelling unit is comparable with recent development projects in Downtown Chula Vista. It is representative of the typical square footage of a one-bedroom apartment, while also accounting for a diversity of a dwelling unit sizes, roughly averaging the sizes of smaller apartment units such as studios and larger two-bedroom apartments.

Total Dwelling Units

$$e / 800$$

e = residential square footage

Parking Generation Estimation

The Urban Land Institute (ULI) Shared Parking Analysis Manual (2020) was used to estimate the parking generation for near-term conditions. To account for the different peaks by land use, future conditions parking generation considered a noon snapshot representing a typical peak period for commercial land uses and a 9pm representing a typical peak parking period for residential land uses were used.

Near-term conditions analysis assumed three land uses within the study area, which each have an estimate equation: residential, commercial shopping and commercial fine dining. The ULI parking generation estimates consider factors by time of day which account for the blending of various peak times of different land uses. As was documented during existing conditions, the more heavily commercial portions of the study area (within the parking district boundary) were observed to have occupancy peaks occurring mid-day periods, while the more heavily residential portions of the study area peaked after typical business hours.

Table 4 shows the ULI Shared Parking Analysis parking generation estimate equations. Within the study area, it was assumed commercial land use square footage would be split evenly between commercial shopping and commercial fine dining. As shown, each type of commercial has a different parking generation estimate equation and different time of day factors – with the fine dining land use producing a much higher parking generation.

Table 4: Parking Generation Estimate Equations

Land Use	Unit Measure	Equation	Noon Factor	9pm Factor
Residential	Per Dwelling Unit (DU)	(1.7*DU) + (0.15*DU)	0.65	0.99
Commercial – Shopping	Per 1,000 sq.ft. (KSF)	(2.9*KSF) + (0.7*KSF)	0.95	0.5
Commercial – Fine Dining	Per 1,000 sq.ft. (KSF)	(15.25*KSF) + (2.48*KSF)	0.75	1.0

Source: Urban Land Institute Shared Parking Manual (2020)

Table 5 demonstrates a sample parking generation calculation for each land use considered under future conditions, with the noon and 9pm factors applied.

Table 5: Parking Generation Sample Calculation

Land Use	Raw Parking Generation	Noon Factor	9pm Factor
25 Dwelling Units	47	31	47
5,000 sq.ft. Commercial Shopping	9	9	5
5,000 sq.ft. Commercial Fine Dining	44	33	44

Source: Urban Land Institute Shared Parking Manual (2020)

The calculations were applied to the redeveloping parcels in the study area, rounding the parking generation of each parcel to multiples of 10. Table 6 summarizes the total rounded parking generation within the study area under near-term conditions using the noon and 9pm factors.

Table 6: Study Area Near-Term Parking Generation

Time Period	Parking Generation
Near-Term Conditions Noon	730
Near-Term Conditions 9pm	1,070

Appendix C - Electric Vehicle Parking Analysis Memo

TO: Scott Barker, PE, AICP, DSD Facilities Financing, City of Chula Vista
Kimberly Elliott, DSD Facilities Financing, City of Chula Vista

FROM: Phuong Nguyen, PE, CR Associates
Cristian Belmudez, CR Associates

DATE: April 11, 2022

RE: Downtown Chula Vista Parking District – Electric Vehicle Charging

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The purpose of this technical memorandum is to provide the City of Chula Vista information on the current state of publicly accessible Electric Vehicle (EV) charging stations, as well as to offer guidance on applying relevant best practices with respect to charging station siting in the Downtown Chula Vista Parking District (the District). Providing EV charging spaces for public use helps to encourage the use of electrical vehicles by providing convenient charging locations for people who live, work, and patronize business in the urban core. Additionally, locating EV stations in public areas helps to close the EV charging gap by assuring the availability of charging stations that may not be readily available in older multi-family and affordable housing neighborhoods.

Electric Vehicle Ownership

EV ownership is increasing every year. Vehicle manufacturers have demonstrated their commitment to the electrification of the automobile industry by offering consumers a wider range of EV options. In conjunction with the increased availability and choices of EV, federal, state, and local incentives (such as credit programs) further encourage consumers to transition from their traditional, fuel-powered vehicles to electric cars. **Table 1** displays a five-year summary of the proportion of EVs and Non-EVs within San Diego County.

Table 1 – Electric Vehicle Ownership Within County of San Diego

Region	Vehicle Type	2016	2017	2018	2019	2020
San Diego	Non-EV	2,165,637	2,434,649	2,443,399	2,453,443	2,426,015
	EV	16,908	23,347	33,694	43,982	51,616
	Total	2,182,545	2,457,996	2,477,093	2,497,425	2,477,631
	% EV	0.8%	1.0%	1.4%	1.8%	2.1%

Source: California Energy Commission (2021) [1]

As shown in the table, the number of EV in the San Diego region increased from approximately 17,000 in 2016 to approximately 52,000 in 2020 while the total vehicle ownership remained relatively stable. This is a strong indication of the overall trend in consumer choice and behavior: EV ownership is on the rise in San Diego. However, the trends or patterns observed for a large and geographically diverse region may not necessarily be reflective of the consumer behavior at a more localized level. **Table 2** displays the proportion of EV and non-EV within the South Bay region and specifically in the City of Chula Vista.

[1] Source: California Energy Commission (2021). California Energy Commission Zero Emission Vehicle and Infrastructure Statistics. Data last updated April 1, 2021. Retrieved February 14, 2022 from http://www.energy.ca.gov/zevstats.

Table 2 – Electric Vehicle Ownership Within South Bay Region and City of Chula Vista

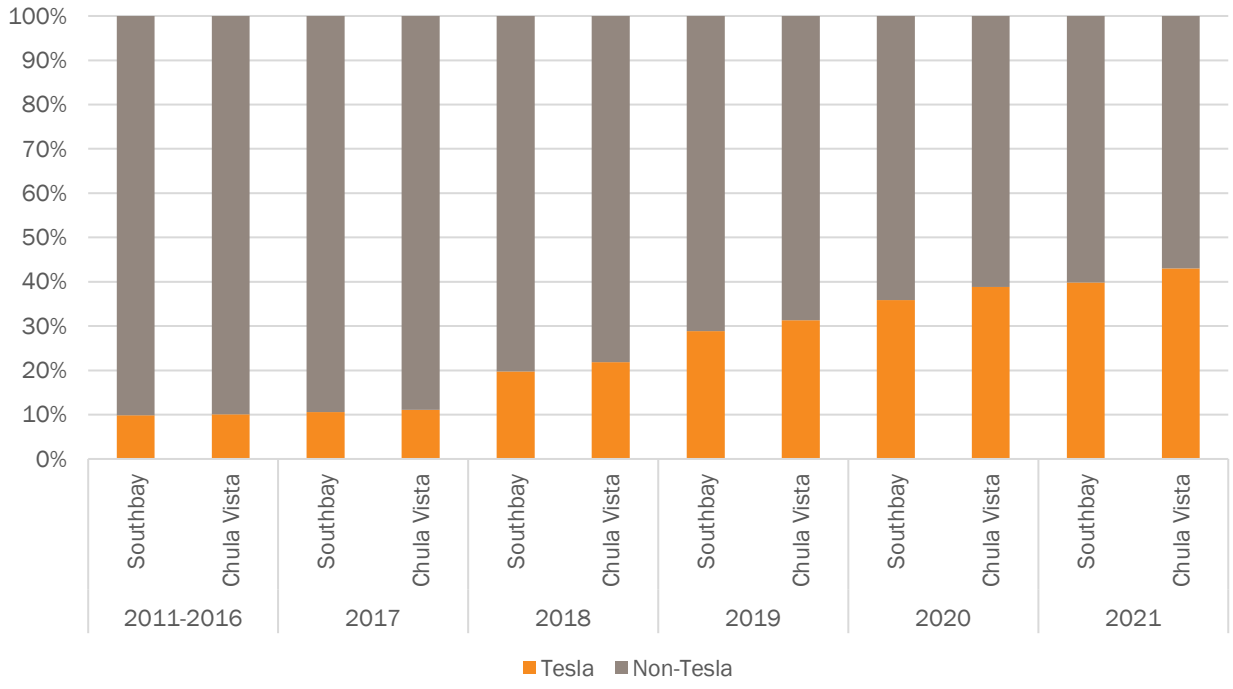
Region	Vehicle Type	2016	2017	2018	2019	2020
South Bay	Non-EV	346,745	395,042	400,564	405,886	408,889
	EV	1,090	1,511	2,220	3,172	3,934
	Total	347,835	396,553	402,784	409,058	412,823
	% EV	0.3%	0.4%	0.6%	0.8%	1.0%
Chula Vista	Non-EV	169,571	192,953	196,294	199,453	201,290
	EV	720	993	1,496	2,162	2,694
	Total	170291	193946	197,790	201,615	203,984
	% EV	0.4%	0.5%	0.8%	1.1%	1.3%

Source: California Energy Commission (2021)[2]

As shown in the table, similar to the San Diego region as a whole, both South Bay and Chula Vista also experienced same upward trend in EV ownership. Within the City of Chula Vista, EV ownership in 2020 almost quadrupled as compared to 2016.

Relative to other EV manufacturers, Tesla has gained a significant increase in market share since 2016. The Tesla lineup includes a variety of vehicle sizes (i.e., coupe, sedan, and SUV) and price points, which have made it a popular choice for EV consumers. **Figure 1** displays the percentage of EV owners that owned a Tesla during the five-year period between 2017 and 2021.

Figure 1 – Five-Year Summary of Tesla Ownership



As shown in Figure 1, between 2011 and 2016, Tesla ownership was approximately 10% of all EVs. During these years, EV were not popular due to the lack of options and functionality. Plug-in hybrids

[2] Source: California Energy Commission (2021). California Energy Commission Zero Emission Vehicle and Infrastructure Statistics. Data last updated April 1, 2021. Retrieved February 14, 2022 from http://www.energy.ca.gov/zevstats.

were marketed specifically towards a unique market, such as urban commuters with short range travel needs. In 2012, Tesla introduced their Model S to the market. The Model S offered consumers increased range and amenities not typically found in other EVs at that time. By 2017, Tesla's lineup included four models, including a more affordable mid-size sedan intended for the majority of consumers. Since then, as shown in this figure, the percentage of Tesla owners amongst all EV owners within the South Bay region and City of Chula Vista has increased from approximately 10% to 40%. It should be noted that the share of Tesla owners increased the most in 2018 and 2019 (up 10% from 2017) and continued to grow each year after but at a slower pace. The lower rate of growth is likely due to the growing competition from most major vehicle manufacturers, such as Ford, GM, BMW, Honda, and Toyota, which all have introduced EV models within the last five years. Back in 2017, there were only 15 EV models and of which four were made specifically for urban commuting (i.e., Leaf, Smart fortwo, Fiat 500e, Mitsubishi i-MiEV) and four were Tesla models. Today, there are 33 EV models available. As the EV market becomes saturated with more options ranging in affordability, amenities, and sizes, it is likely that Tesla's share of the market will be reduced.

Given the upward trend in EV demand, the industry's commitment to meeting such demand, as well as the support from federal, state, and local governments, it is projected that EV ownership will continue to increase in the future. Within San Diego County, cumulative EV ownership is projected to increase from 52,000 in 2020 to 143,000 by 2030[3]. **Table 3** below summarizes EV ownership projections for the San Diego region, South Bay region, and the City of Chula Vista.

Table 3 – EV Ownership Projections

Through Year	San Diego Region	South Bay Region	City of Chula Vista
2020	51,616	3,934	2,694
2022	71,177	5,425	3,715
2025	106,900	8,148	5,579
2030	142,517	10,862	7,438

Source :Center for Sustainable Energy (2022)[4]

Electric Vehicle Charging Station Features

As EV ownership increases, the need for publicly available EV charging stations also increases. This section discusses the three major components for EV charging stations: (1) charging levels, (2) charging connectors, and (3) charging systems. "Charging levels" describes the different technologies and charging capacities available to EV. "Charging connectors" addresses the connectors used by different EV manufacturers and their compatibility. "Charging systems" describes the types of charging systems currently being used.

Charging Levels

Electric charging is categorized into the following three power levels:

- ***Level 1 Charging*** uses a common 120-volt household outlet. Every electric or plug-in hybrid vehicle can be charged on Level 1 by plugging the charging equipment into a regular wall outlet. Level 1 is the slowest way to charge an EV. It adds between 2 and 5 miles of range per hour (RPH). RPH is a metric for drivers to estimate how far they can travel after charging.

[3] Source: https://evcs.sandag.org/docs/PISDMethodology.pdf

[4] Source: Center for Sustainable Energy (2022). California Air Resources Board Clean Vehicle Rebate Project, Rebate Statistic. Data last updated 1/21/2022. Retrieved 2/1/2022 from https://cleanvehiclerebate.org/en/rebate-statistics

- ***Level 2 Charging*** is the most commonly used level for daily EV charging. Level 2 charging equipment can be installed at home, at the workplace, as well as in public locations like shopping centers, transit stations and other destinations. Level 2 charging can replenish between 10 and 20 miles of RPH. Certain vehicles and chargers can achieve higher charging rate, up to 80 miles of RPH, depending on the power output of the Level 2 charger, and the vehicle's maximum charge rate.
- ***Level 3 Charging*** is the fastest type of charging available and can recharge an EV at a rate of 60 to 80 miles of range in 20 minutes (180 to 240 miles of RPH, depending on the maximum range of the vehicle). Unlike Levels 1 and 2 Charging that use alternating current (AC), Level 3 charging uses direct current (DC).

Charging Connectors

Chargers are also classified by the kind of connector on the charging cord. Except for Tesla, all vehicle manufacturers use the Society of Automotive Engineers (SAE) J1772 connectors for Level 1 and Level 2 charging. For Level 3 charging, there are two types of chargers for non-Tesla vehicles: Combined Charging System (CCS) and CHAdeMO. Detailed information about these two standards and the Tesla standard are provided below. **Figure 2** displays the layout of the different charging standards.

- ***Combined Charging System***: The CCS connector, developed by SAE, uses the same plug type as the SAE J1772 connector with two additional high-speed charging pins underneath. CCS is the accepted standard in North America and almost every automaker today has agreed to use the CCS standard, including General Motors, Ford, Chrysler, Dodge, Jeep, BMW, Mercedes, Volkswagen, Audi, Porsche, Honda, Kia, Fiat, Hyundai, Volvo, smart, MINI, Jaguar Land Rover, Bentley, Rolls Royce and others. It should be noted that while Tesla uses a proprietary connection in North America, it uses this CCS connector in its European market.
- ***CHAdeMO***: CHAdeMO was developed by the Japanese utility Tepco and is the official standard in Japan. In North America, only Nissan and Mitsubishi use this standard. However, Nissan is currently in the process of moving to the CCS standard. It should be noted that due to the low demand for CHAdeMO standard, charging station companies in North America are moving away from this model and adopting the CCS connector.
- ***Tesla***: In North America, Tesla uses a proprietary connection at all their DC fast charging (i.e., Level 3) stations. Tesla fast charging stations only charge Tesla vehicles, and non-Tesla vehicles are unable to charge even with an adapter cable because Tesla charging stations go through an authentication process before providing power. As of November 1, 2021, Tesla began a pilot program to allow other vehicles to utilize Tesla stations during off-peak hours, but this program is only available in the Netherlands, Germany, and Belgium.

Figure 2 – Types of Charging Connectors

J1772	CCS1	CHAdeMO	Tesla
			

Charging Systems

To ensure compatibility between different charging systems and allow for open market charging, the charging industry developed the Open Charge Point Protocol (OCPP). Manufacturers who wish to be certified as OCPP compliant must go through a certification process via the Open Charge Alliance. This uniform standard ensures that charging system owners/hosts are less dependent upon individual system manufacturers. For example, if a charging station manufacturer goes out of business or increases their price, charging system owners/hosts can switch to another OCPP compliant manufacturer. As of January 2022, many major charging systems are OCPP compliant, including Blink, EVConnect, Evercharge, Enel X, Volta, and more. Tesla Super Charger Stations are not currently OCPP compliant, as Tesla uses a proprietary connector that is not compatible with the CCS1 system, and Tesla charging software does not allow non-Tesla EV to use the station even if an adapter is available. Non-Tesla owners cannot use Tesla charging stations; however, Tesla owners can use other types of chargers with a Tesla CCS Combo 2adapter.

Electric Vehicle Charging Station Design Specifications

The following specifications are recommended for public charging stations:

- Commercial-grade, Level 2 chargers or DC Fast Charge
- Ability to charge any EV using the SAE J-1772 coupler (North American standard)
- Fast chargers should be CCS
- Rated for outdoor usage
- Network-ready (OCPP 2.0 or later)
- ADA compliant
- Include agreement for timely upgrades and maintenance

Facilities with EV charging stations for public and common use must provide van accessible, standard accessible, and ambulatory EV charging stations as required per California Building Code (CBC 11B-8121). Standard specifications for each type of accessible EV charging stations are provided below:

Van Accessible	Standard Accessible	Ambulatory
▪ 12 feet minimum width	▪ 9 feet minimum width	▪ 10 feet minimum width
▪ 18 feet minimum length	▪ 18 feet minimum length	▪ 18 feet minimum length
▪ Access aisle 5 feet minimum width located on passenger side with head-in parking	▪ Access aisle 5 feet minimum width located on passenger or driver side of EV space	▪ No access aisle required Surface marking 12” high letters “EV CHARGING ONLY”

- Surface marking 12” high letter “EV CHARGING ONLY”

- Surface marking 12” high letter “EV CHARGING ONLY”

Table 4 displays the minimum number of ADA Compliant Electric Vehicle Charging Stations (EVCS) required to comply with CBC 11B-8121.

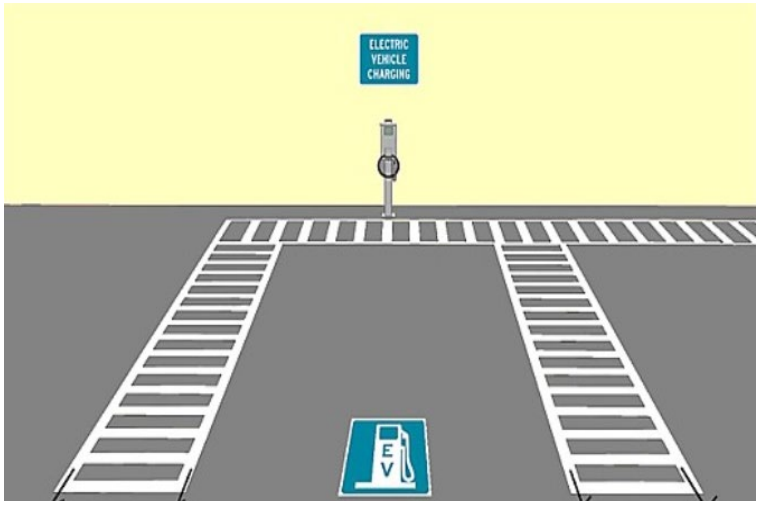
Table 4 – ADA Electric Vehicle Charging Stations for Public Use and Common Use

Total Number of EVCS at a Facility	Minimum Number of EVCS Required		
	Van Accessible	Standard Accessible	Ambulatory
1 to 4	1	0	0
5 to 25	1	1	0
26 to 50	1	1	1
51 to 75	1	2	2
76 to 100	1	3	3
101 and over	1, plus 1 for each 300, or fraction thereof, over 100	3, plus 1 for each 60, or fraction thereof, over 100	3, plus 1 for each 50, or fraction thereof, over 100

Source: California Building Code (2022)

Facilities with accessible EV charging stations should ensure that the charging stations are used exclusively for charging and not as ADA parking spaces. Signage should be clear enough to differentiate between non-accessible and accessible charging stations, without misleading users to believe the spaces can be used as non-EV, accessible parking. **Figure 3** displays an example of an accessible EV charging station. Refer to the California Vehicle Code (CVC) for detailed ADA compliant design specifications.

Figure 3 – Typical Accessible EV Charging Station[5]



[5] Source: https://www.access-board.gov/aba/guides/chapter-5-parking/#electric-vehicle-charging-stations

Regulations for Electric Vehicle Charging Stations

In November 2021, congress passed the Infrastructure Investment and Jobs Act ("IIJA") which includes funding to States to strategically deploy EV charging infrastructure and establish an interconnected network. The Federal Highway Administration has provided guidance to implement the legislation[6]. The IIJA bill establishes a discretionary grant program, Charging and Fueling Infrastructure Program, with $7.5 billion to create an interconnected EV charging network that includes alternative fuel corridors and locations that are accessible to all drivers. The State of California is expected to receive over $384 million over five years to support the expansion of an EV charging network and other types of alternative fuel infrastructure in the state. California will also be able to apply for grants out of the $2.5 billion available for EV charging. The federal funds, must be used for:

- The acquisition and installation of EV charging infrastructure to serve as a catalyst for the deployment of such infrastructure and to connect it to a network and facilitate data collection, access, and reliability;
- Proper operation and maintenance of EV charging infrastructure; and
- Data sharing on EV charging infrastructure to ensure the long-term success of investments made under the program.

Additionally, the legislation states the following:

> *"The Federal share payable for projects funded under the EV Charging Program is 80 percent. EV Charging Program funds may be used to contract with a private entity for acquisition and installation of publicly accessible EV charging infrastructure, and the private entity may pay the non-Federal share of the project cost. However, funds must be used for projects directly related to vehicle charging and only for EV charging infrastructure that is open to the general public or to authorized commercial motor vehicle operators from more than one company. Further, any EV charging infrastructure acquired or installed with program funds must be located along a designated alternative fuel corridor, unless a State determines, and the Secretary of Transportation (Secretary) certifies, that the designated alternative fuel corridors in the State are fully built out. In that case, the State could use the funds for EV charging infrastructure on any public road or in other publicly accessible locations."*

In the State of California, Assembly Bill 1100 (AB-1100) was enacted to further deploy EV infrastructure. The Bill requires that standard spaces designated for EV are to be counted as at least one standard parking space when determining compliance with minimum parking standards established by local jurisdictions. Accessible parking spaces designated for EV should be counted as at least two standard parking spaces. Furthermore, California Health and Safety Code (HSC) 44268.2 prohibits charging stations that require users to subscribe to a service; EV charging stations shall be accessible to all types of users including nonsubscribers and nonmembers of subscription-based services. The California Green Building Standards Code specifies the standards for infrastructure to support the future installation of electric vehicle supply equipment in building construction.

[6] The National Electric Vehicle Infrastructure (NEVI) Formula Program Guidance (dot.gov)

In addition to above, the widespread adoption of EV infrastructure is also supported through the California Public Utilities Commission (CPUC), which oversees investor-owned utilities in the state of California. The CPUC is committed to providing access to clean transportation options, including safe and convenient EV charging, while increasing the availability and affordability of EV, such as equitable fueling prices[7].

Electric Vehicle Charging in Study Area

Existing Stations

Within the Downtown Chula Vista Parking Management Plan study area, there are currently a total of fourteen charging stations (note that addition EVCSs are located in the City of Chula Vista Civic Center, which lies outside of the District). A breakdown of the stations is provided below:

- Seven (7) at Park Plaza Parking Structure (340 F Street, Chula Vista, CA 91910) – one DC Fast Charger station with two CHAdeMO connectors (one standard and one ADA charging space), five standard Level 2 chargers (J1772 port) and one ADA Level 2 charger.
- Seven (7) at Parkway Community Center & Gym (373 Park Way, Chula Vista, CA 91910) – six Level 2 chargers (J1772 port) and one ADA Level 2 charger.

The existing (2021) EV usage at the two charging locations above was obtained from the City of Chula Vista calendar year 2021 EV usage database. **Table 5** displays the charging duration (how long a vehicle was plugged-in and charging) for each site.

Table 5 – Year 2021 Charging Stations Statistics

Duration (Hours)	Number of Vehicles	
	Park Plaza Parking Structure	Parkway Community Center & Gym
Not Charging[8]	688	218
1	252	129
2	478	47
3	263	75
4	78	65
5	39	35
6	16	26
7	9	1
8	6	0
9	3	0
10	4	0
11	3	0
12	1	0
13	1	0
14	1	0
Total Actively Charging Vehicles	1,154	378
Average Charging Duration	2 hours 28 minutes	2 hours 46 minutes

[7] Source: https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M326/K281/326281940.PDF

[8] Vehicles that parked in an EV parking space for convenience and plugged in but not actively charging. These vehicles are not included in the average or median charging calculation.

Source: City of Chula Vista (2022); CR Associates (2022)

As shown in the table, in 2021, there were a total of 1,154 actively charging vehicles with an average charging time of 2 hours and 28 minutes at the Park Plaza Parking Structure and 378 actively charging vehicles with an average charging time of 2 hours and 46 minutes at the Parkway Community Center & Gym parking lot. There were 688 vehicles at the Park Plaza Parking Structure and 218 vehicles at the Parkway Community Center & Gym parking lot that were not actively charging. These vehicles were detected by the charging station; however, energy was not delivered to these vehicles (zero-kilowatt hour), indicating that these vehicles likely have used the charging station for the convenient parking location. The hours for parking and not charging represents approximately 37% of the total hours in 2021.

Table 6 displays the number of charges by day of the week. As shown, Mondays have the highest usage with a total of 330 uses, followed by Thursdays with 291 uses. Furthermore, usage on a typical Monday is higher than the combined usage on Saturday and Sunday, indicating that users tend to charge on Monday and recharge prior to the weekend.

Table 6 – Charging Station Usage by Day of the Week

Day	Park Plaza Parking Structure	Parkway Community Center & Gym	Total
Sunday	121	8	129
Monday	207	123	330
Tuesday	173	20	193
Wednesday	180	37	117
Thursday	183	108	291
Friday	183	72	255
Saturday	107	10	117

Source: City of Chula Vista (2022); CR Associates (2022)

Table 7 displays the starting time of when a vehicle is plugged into a charging station by time of day. As shown, the most frequent starting time is around 8 AM with 227 occurrences. This is likely related to people arriving to their places of work. The second highest starting time is around 12 PM with 197 occurrences. This could be associated with people charging their vehicles during lunch break. At the Park Plaza Parking Structure, 77 vehicles start their charging between 7 PM and 5 AM, these vehicles are likely residentials living nearby who need to charge their vehicles overnight due to lack of charging facilities near their places of residents.

It should be noted that based on field observations and review of charging data, the fast-charging stations likely have a low demand due to having only CHAdeMo connectors, which limits charging to only a few EV models, such as the Nissan Leaf.

Table 7 – Charging Station Usage Starting Time

Time of Day	Park Plaza Parking Structure	Parkway Community Center & Gym	Total
12 AM	0	1	1
1 AM	0	0	0
2 AM	3	0	3
3 AM	0	0	0

Time of Day	Park Plaza Parking Structure	Parkway Community Center & Gym	Total
4 AM	0	0	0
5 AM	11	0	11
6 AM	29	0	29
7 AM	42	4	46
8 AM	130	97	227
9 AM	139	6	145
10 AM	90	13	103
11 AM	82	58	140
12 PM	133	64	197
1 PM	96	32	128
2 PM	89	39	128
3 PM	70	4	74
4 PM	56	26	82
5 PM	50	17	67
6 PM	46	7	53
7 PM	29	6	35
8 PM	27	0	27
9 PM	14	3	17
10 PM	3	0	3
11 PM	1	1	2

Source: City of Chula Vista (2022); CR Associates (2022)

Stations Under Construction

At the time of this memo, the City is in the process of installing 16 EVCSs at Pay Lot 2. These state-funded installations include 6 level 3 fast chargers and 5 dual-port level 2 chargers.

Future Station Needs

Based on a nationally representative survey conducted by Consumer Reports in July and August 2020[9], the majority of U.S. drivers would consider buying an EV in the future. Additionally, consumers expressed that the lack of charging stations is a barrier to EV ownership, especially for residents of large apartment buildings. These residents are more likely to charge at public fast charging stations since they don't have access to a personal garage or driveway for charging at home.

To alleviate consumer concerns about EV ownership, the location of future EV charging stations should be determined based on the projected demand for EV charging stations. As discussed previously, field observations and existing data indicate that EV charging stations are likely being utilized by employees who work in the vicinity of the charging station, followed by nearby residents who utilize these stations overnight. The amount of overnight charging vehicles is likely to increase as EV's become more affordable.

[9] https://www.consumerreports.org/hybrids-evs/cr-survey-shows-strong-interest-in-evs-a1481807376/

It is recommended that the *Plug-in San Diego Electric Vehicle Charging Stations Map*[10] be used for determining future charging locations. The map estimates the end location of EV trips using EV registration information, future EV sales projections, and trip destination data from the SANDAG Regional Transportation Model. **Figure 4** highlights areas within the District where there is likely high EV charging demand, based on SANDAG data. As shown in Figure 4, the areas with the highest EV charging demand in the District are the Park Plaza Parking Structure (including adjacent surface parking) and Pay Lot 5, followed by the area surrounding Pay Lot 3, Pay Lot 8, Pay Lot 2, and Pay Lot 10. Recommended EVCS quantities for each lot (in addition to the 16 being added to Pay Lot 2) are provided in the next section.

Recommended Siting Criteria and Policy Recommendations

Future EVCS demands are calculated based on the projected EV ownership within the City of Chula Vista and the South Bay Region. As shown in Table 1, the number of EV in the San Diego region gradually increase over the year, while the total vehicle ownership remained relatively stable, indicating that aging non-electric vehicles are being replaced by newer EV. As such, for a conservative analysis, it is assumed that the total vehicles will remain the same, and the number of non-EV will decrease over the years as consumers replace their vehicles.

Table 3 shows that the cumulative EV ownership within the South Bay Region would increase to 10,862 EV and the City of Chula Vista would increase to 7,438 EV, resulting in an EV ownership percentage of 2.6% and 3.6% respectively. As shown, the EV ownership would be less than 5% of the total vehicles in the South Bay Region and the City of Chula Vista. For a conservative estimate, and to accommodate additional future growth in EV ownership, it is assumed that 5% of the vehicles using parking lots in the District would be EVs. The following policies are recommended for EVCS siting and installation within the District:

1. Continue to monitor EVCS usage at the Park Plaza Parking Structure and nearby pay lots to determine EV charging usage. When EV charging usage reaches 85% daily per lot, consider additional EVCSs.
2. Consider an enforcement policy such as implementing a time limited charging program to ensure that vehicles are actively charging instead of just using a premium parking space. The recommended time limit is four hours or approximately fifty percent of the time required to charge an EV from empty. Consider adding provision to the Chula Vista Municipal Code (or other regulations as appropriate) to support enforcement.
3. EVCSs should be in compliance with the technical specifications documented in this report.
4. EVCSs should be an open system to be compliance with California Health and Safety Code (HSC) 44268.2.
5. The recommended number of EVCSs is 5% of the total available parking spaces within City-operated parking facilities in areas having the highest EV charging demand, as shown in Table 8 below.
6. Provide information to the public about the location, cost, and type of charging stations available. (Ex: UCSD website: https://transportation.ucsd.edu/commute/ev-stations.html)

Table 8 displays the recommended EV for parking lots within the District within areas having the highest EV charging demand. Given that 16 EVCSs are currently being installed in Pay Lot 2, no additional installation is recommended at this location, unless usage of those spaces reaches 85%

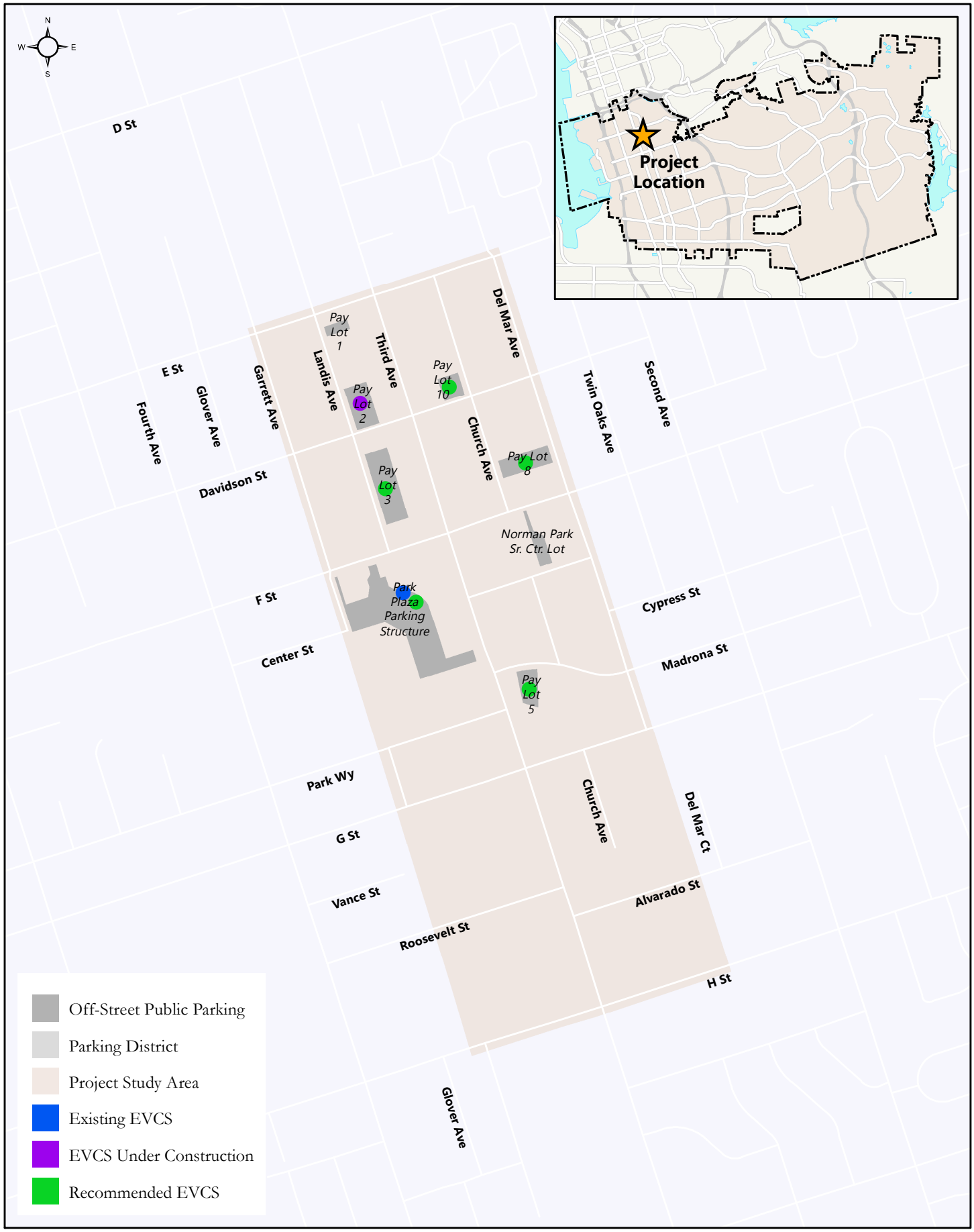
[10] Source: https://evcs.sandag.org/#

daily. As discussed above, **Figure 5** displays the additional surface parking lots where EVCSs are recommended. Note that additional EVCS installation should follow the recommendation provided above and occur only when the current EVCS reaches 85% usage to reduce loss of parking.



Downtown Chula Vista Parking District
Electric Vehicle Charging

Figure 4
SANDAG EV Use Map



Downtown Chula Vista Parking District
Electric Vehicle Charging

Figure 5
Public Parking Facilities with Recommended EVCS Installation

Table 8 – Recommended EVCSs

Off-Street Facility	Total Parking Supply	EVCSs Under Construction	Recommended EVCSs (5%)[11]
Park Plaza Parking Structure	670[12]	0	34
Pay Lot 2	74	16	-
Pay Lot 3	118	0	6
Pay Lot 5	42	0	3
Pay Lot 8	53	0	3
Pay Lot 10	28	0	2
Totals	**985**	**16**	**48**

Since only building a couple EVCSs per lot may not be practical or cost-effective due to the cost of infrastructure, the City may need to consider a minimum number of EVCSs per lot. When siting ECVSs in the surface lot adjacent to the Park Plaza Parking Structure, consider adjacency of Memorial Park. Parking adjacent to the Park should not be constrained by EVCSs.

Funding

There are a variety of installation and operational structures currently being used in the marketplace. The following are four of the most common methods for financing EV charging stations through EV charging station providers:

- *Hybrid Owned* – Charging station provider covers the cost of equipment, operations, and administration while the City covers the cost of installing EV chargers at desired locations.
- *Subscription* – Subscription based service that provides the City with EV charging stations, low upfront costs, and control of ownership.
- *Provider Owned* – Charging station provider covers the cost of installation, equipment, operations, and administration and shares a portion of the revenues with the City.
- *Host Owned* – City covers the cost of installation, equipment, operations, and administration and is the sole owner and operator of the EV charging stations.

Revenue generated by EV charging stations will vary based on the selected business model. For EV charging stations that are located within the Parking District, generated revenue could be used to supplement the Parking District Fund.

Funding from the Federal IIJA legislation to assist with the installation of publicly accessible EV charging stations is likely to be available in the future, as federal and state agencies develop funding distribution mechanisms. Announcements are likely to be provided via one of the sources below.

[11] All EVCS installations should comply with current ADA requirements.

[12] Including adjacent surface lot near Third Avenue

Keeping Up with the Electric Vehicle Industry

The EV industry is a fast changing and it's in the interest of the City stay up to date with EV laws and regulations, and best practices. It is recommended that the City subscribes to EV industry newsletters that offer updates on new technologies. Recommended newsletters are provided below:

- https://insideevs.com/news/category/charging/
- https://www.traffictechnologytoday.com/
- https://energycenter.org/energy-loop-newsletter
- https://calevip.org/
- https://www.openchargealliance.org/

Another valuable source is the California Legislative Information website. By creating an account, users can sign-up to receive email notifications of new government documents that contain information related to the EV industry. Once an account is created, the user can use keyboard tracking to receive emails regarding proposed legislations that match the tracking requirements. The new user registration website can be found here:

- https://leginfo.legislature.ca.gov/faces/keywordTrackingList.xhtml

Appendix D - Parking District Pro-Forma

Install Smart Meters (excluding 15 meters at Senior Center), $0.75 On-street Meter Rate, $0.50 Off-street Meter Rate, $0.50 for Park Plaza Parking Structure		
Number of Meters		481
Revenue		
Coin and Credit Card (On-Street)	$	333,000.00
Usage (hourly per year)		444,208
Hourly Rate (On-Street)	**$**	**0.75**
Coin and Credit Card (Off-Street) $0.50/hour	$	245,000.00
Usage (hourly per year)		489,438.00
Hourly Rate (Off-Street)	**$**	**0.50**
Permit Rental	$	30,000.00
Citations	$	217,000.00
Park Plaza Structure Revenue	$	388,000.00
Usage (hourly per year)		776,437.00
Hourly Rate (Off-Street)	**$**	**0.50**
Total	**$**	**1,213,000.00**
Expense		
Surface Lot Credit Card Fees @ 10 cents flat rate + 2.5%	$	(40,000.00)
Ace District Mangement Costs	$	(208,000.00)
Ace Structure Maintenance Costs	$	(60,000.00)
Other Contracted Services	$	(18,000.00)
Other Supplies and Services	$	(22,000.00)
Utilities	$	(10,000.00)
City Staff Services (a)	$	(75,000.00)
Curb Café Revenue Loss - assumes 10 cafes, 30 spaces)	$	(50,000.00)
Parking Citation Proceeds to County (b)	$	(80,000.00)
CIP Project Expense	$	(59,000.00)
Contribution to Operating Reserve (c)	$	(34,000.00)
Contribution to Capital Reserve (d)	$	(150,000.00)
Non-routine Structure Maintenance	$	(5,000.00)
Smart Meter Vendor Contract	$	(55,000.00)
Smart Meter Vendor Fee @ 6 cents per swipe	$	(21,000.00)
Smart Meter Credit Card Fees @ 10 cents flat rate + 2.5%	$	(42,000.00)
Park Plaza Annual Subscription Fees and Annual Call Center Fees	$	(62,000.00)
Park Plaza Structure Credit Card Fees @ 10 cents flat rate + 2.5%	$	(70,000.00)
Total Expense	**$**	**(1,061,000.00)**
(Deficit) / Surplus	**$**	**152,000.00**

(a) City staff time to maintain parking facilities and manage the parking district.
(b) Allocation of a portion of parking citation collections to the County of San Diego in accordance with relevant sections of the California Government Code, Vehicle Code, and Penal Code.
(c) Six months of parking meter fund expenses to be built up over a six-month period.
(d) Reserve fund to replace assets and build up fund for future parking structure.

Appendix E - In-Lieu Fee Program Pro-Forma

Downtown Chula Vista Parking Study - Pro-forma for Parking Structure		
Parking Demand Scenario		Near-term
Expense		
Parking Demand (excess of on-site parking)		490
Parking Accomodated off-site (existing infrastructure)		272
Parking Needs (Remaining and unmet parking needs) - Note 1		218
Average Parking Cost per Space - Note 2	$	23,368.00
Operation & Maintenance Cost/Space/Year	$	575.00
Total O&M/Year - Note 3	$	126,000.00
Total Construction Cost - Note 4	$	5,095,000.00
Interest Rate (%)		3.50%
Bond Expense/Year	$	6,000.00
Final Cost (30 year Fix)	$	5,275,000.00
Revenue		
Existing Fund	$	136,726.82
Yearly Revenue (50% are allocated toward paying off structure bond)	TBD	
30 Years Revenue (50% are allocated toward paying off structure bond)	TBD	
Total Available Fund	**$**	**136,726.82**
Net Cost		
Net Cost (Final Bond Cost + Revenue Paid off)	$	5,138,273.18
In-Lieu Fee (Cost / Space) - Note 3	$	(10,486.00)
Operation & Maintenance Cost/Space/Year	$	275.00
Total O&M/Year	$	60,000.00

Note 1: Calculations assume that excess existing capacity (up to 85% occupancy) would also be available for in-lieu parking program

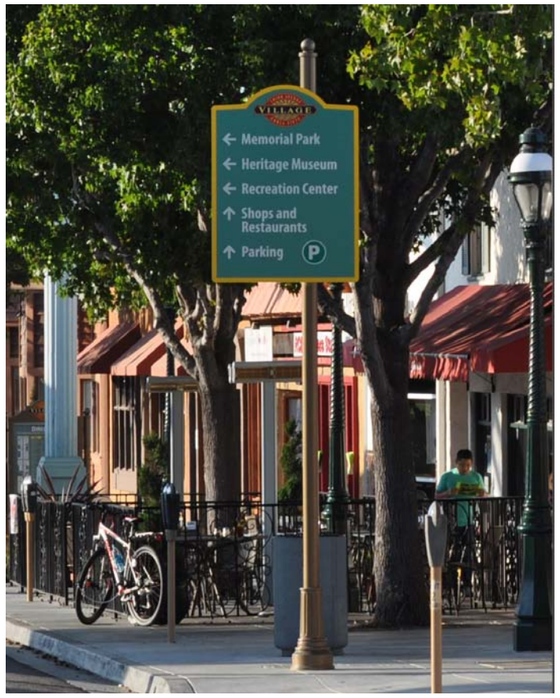
Note 2: Reflects development costs (2019 dollars) excluding land acquisition. Source: WGI Parking Structure Cost Outlook for 2019 report. Included at the end of this appendix.

Note 3: Source: Victoria Transport Policy Institute O&M per space for Central Business District - 4-Level Structure

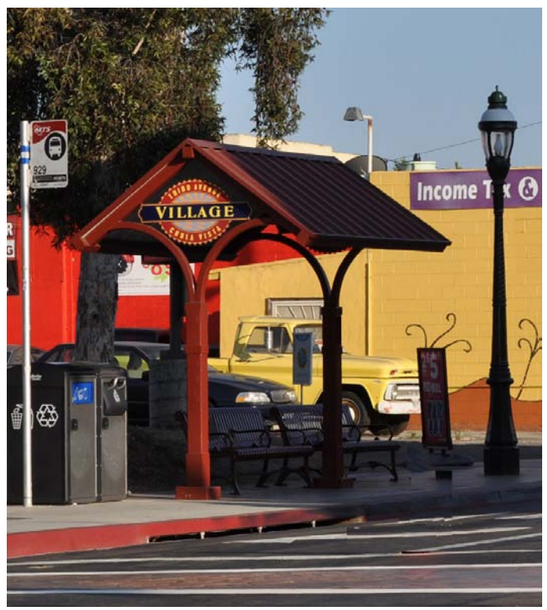
Note 4: Assumes all construction costs would be paid for by In-Lieu program and no additional revenue from the parking district would be used to supplement costs

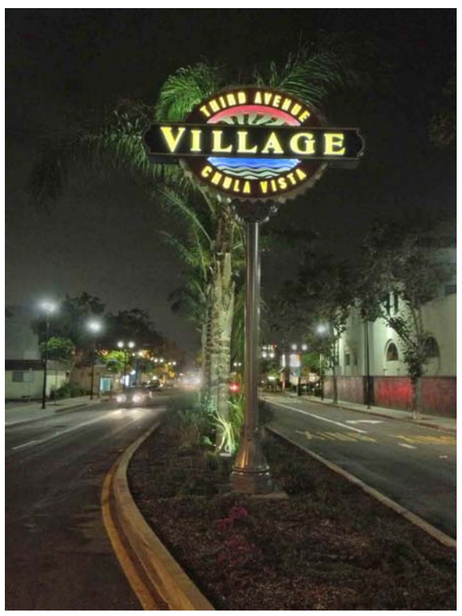
Appendix F - Third Avenue Village Signage Plan


VILLAGE
DIRECTORY


VILLAGE
Memorial Park
Heritage Museum
Recreation Center
Shops and Restaurants
Parking
P


THIRD AVENUE
DOWNTOWN
Vista Photo Studio


VILLAGE
Income Tax &


THIRD AVENUE
VILLAGE
CHULA VISTA


THIRD AVENUE
VILLAGE
CHULA VISTA

THIRD AVENUE VILLAGE
DESIGN INTENT DRAWINGS

- MEDIAN GATEWAY SIGN (B)
- VEHICULAR DIRECTIONAL SIGN (C)
- MAST ARM DIRECTIONAL SIGN (D)
- PARKING DIRECTIONAL SIGNS (E)
- PEDESTRIAN DIRECTORY SIGN (G)
- INTERPRETIVE SIGN (J)
- SCOOTER PARKING SIGNS (K)
- FACILITY IDENTIFIACTION SIGN (L)

Date: 01/04/2011
Revised: 06/09/2011
Revised: 02/06/2012 (SIGN TYPE “C”)

Prepared by:
GRAPHIC SOLUTIONS
2952 Main Street
San Diego, California 92113
(619) 239-1335

GRAPHIC SOLUTIONS, LTD. DESIGNER OF RECORD SAN DIEGO, CALIFORNIA
Signature
02/06/2012
Date

DANTON REGULAR - “VILLAGE”

ABCDEFGHIJKLMNOPQRSTU VWXYZ

PILLSDON REGULAR - “CHULA VISTA” “THIRD AVENUE”

ABCDEFGHIJKLMNOPQRSTUVWXYZ

MYRIAD PRO BOLD CONDENSED - DESTINATIONS

ABCDEFGHIJKLMNOPQRSTUVWXYZ

PAINTS

ID	COLOR	FINISH	DESCRIPTION
P1	METALLIC BRONZE	SATIN-GLOSS CLEAR COAT	TO MATCH MATTHEWS MEDIUM BRONZE 41-312 VOC281-312
P2	METALLIC GOLD	SEMI-GLOSS CLEAR COAT	TO MATCH MATTHEWS BRILLIANT GOLD 46-400 VOC286-400
P3	YELLOW	SEMI-GLOSS	TO MATCH MATTHEWS MP 08237
P4	BURGUNDY	SEMI-GLOSS	TO MATCH MATTHEWS MP01126
P5	BLUE	SEMI-GLOSS	TO MATCH MATTHEWS MP10259
P6	GREY GREEN (DARK)	SEMI-GLOSS	TO MATCH MATTHEWS MP13462
P7	GREY	SEMI-GLOSS	TO MATCH MATTHEWS DUNN EDWARDS DE6338 SHINY NICKEL
P8			

VINYLS

ID	COLOR	OPQ./TRNSL	DESCRIPTION
V1	YELLOW GOLD	TRANSLUCENT	3M 3630-75 MARIGOLD
V2	WHITE	REFLECTIVE	3M DIAMOND GRADE WHITE VINYL 983-10
V3	GREEN	REFLECTIVE	3M DIAMOND GRADE GREEN VINYL 3997
V4	GREEN	TRANSLUCENT	3M 3630-76 HOLLY GREEN
V5	WHITE	TRANSLUCENT	3M WHITE DIFFUSER OR WHITE FILM AS REQUIRED
V6	WHITE	OPAQUE	3M 180C-10

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SAN DIEGO, CALIFORNIA
Signature
01/04/2011
Date

THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/04/11

SCALE AS NOTED

DESIGNER

FILE NAME 3rd AveVill _DesInt ALL Signs

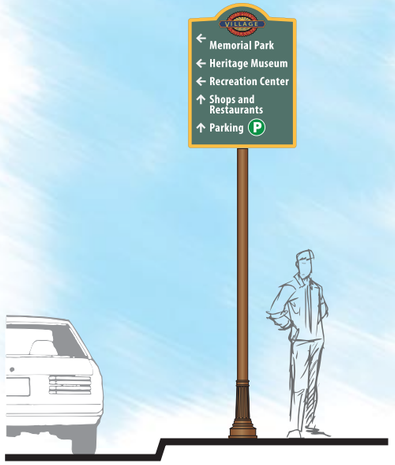
SIGN TYPE

SHEET 01



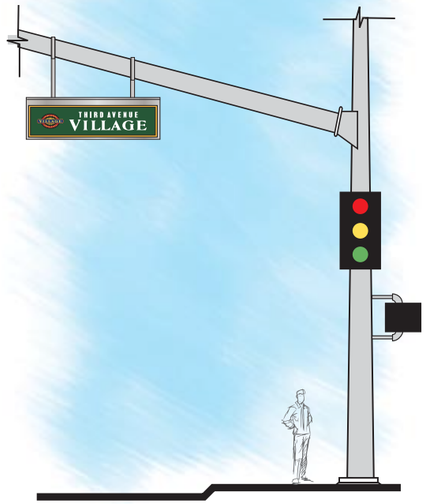
B MEDIAN GATEWAY SIGN

SEE SHEET #7



C VEHICULAR DIRECTIONAL SIGN

SEE SHEET #10



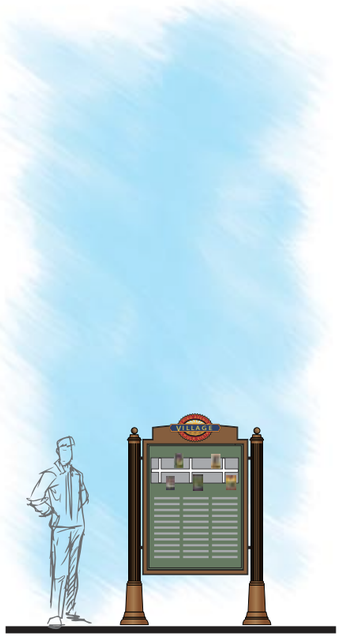
D MAST ARM DIRECTIONAL

SEE SHEET #14



E PARKING DIRECTIONAL

SEE SHEET #15



G PEDESTRIAN DIRECTORY SIGN

SEE SHEET #16



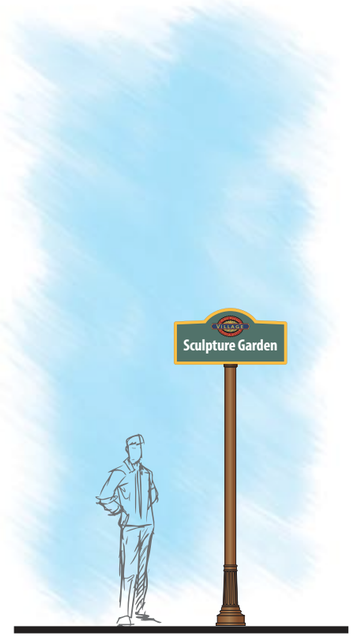
J INTERPRETIVE SIGN

SEE SHEET #20



K SCOOTER PARKING SIGN

SEE SHEET #21



L FACILITY IDENTIFICATION SIGN

SEE SHEET #22

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THIRD AVENUE VILLAGE DESIGN INTENT DRAWNIGS

DATE 01/04/11
02/06/12

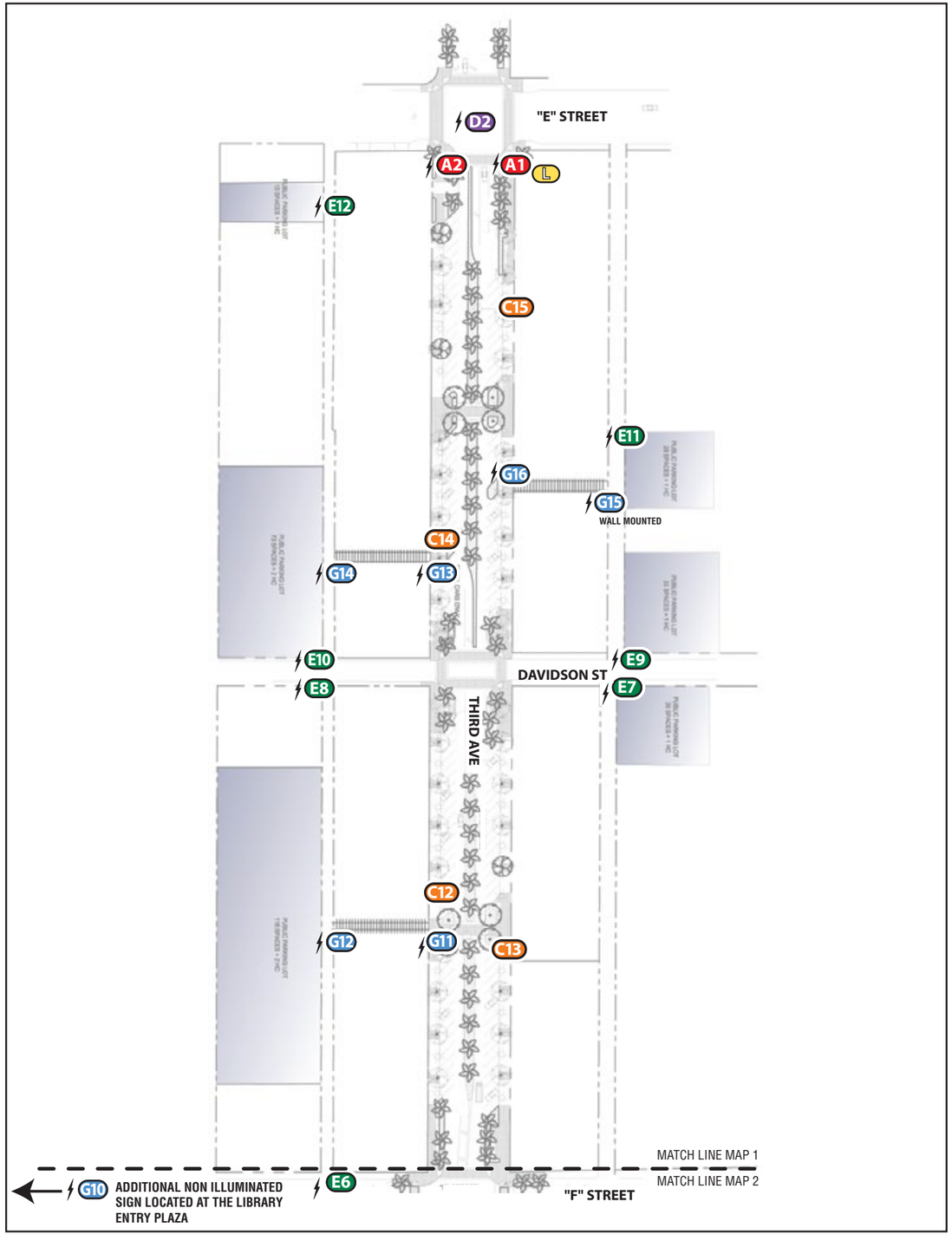
SCALE
AS NOTED

DESIGNER

FILE NAME
3rd AveVill _DesInt ALL Signs

SIGN TYPE
FAMILY OF SIGNS

SHEET 02



LOCATION MAP 1
CHULA VISTA THIRD AVENUE VILLAGE "**E**" - "**F**" STREETS

THE SIGN CONTRACTOR MUST VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, FIELD VERIFY EXACT LOCATIONS AND CONDITIONS FOR EACH SIGN AND NOTIFY THE CITY IN WRITING, OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS AS THEY AFFECT SIGN DESIGN OR LOCATION.



KEY PLAN

- A PEDESTRIAN GATEWAY SIGN (SPECIFIC DESIGN SOLUTIONS T.B.D.)
- B MEDIAN GATEWAY SIGN
- C VEHICULAR DIRECTIONAL
- D MAST ARM DIRECTIONAL SIGN
- E PARKING DIRECTIONAL SIGN
- F PEDESTRIAN DIRECTIONAL SIGN (DESIGN SOLUTIONS & LOCATIONS T.B.D.)
- G DIRECTORY: KIOSKS AND WALL MOUNTED
- H BANNERS (NOT SHOWN)
- J INTERPRETIVE SIGN (NOT SHOWN)
- K SCOOTER PARKING SIGN (NOT SHOWN)
- L FACILITY IDENTIFICATION SIGN (MOUNTING AND LAYOUT MAY CHANGE BASED ON SITE CONDITIONS).

SIGN LOCATIONS WITH ELECTRICAL REQUIREMENTS

NORTH

100 0 50 100 200

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Signature
01/04/2011
Date

THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/04/11
01/26/12

SCALE
AS NOTED

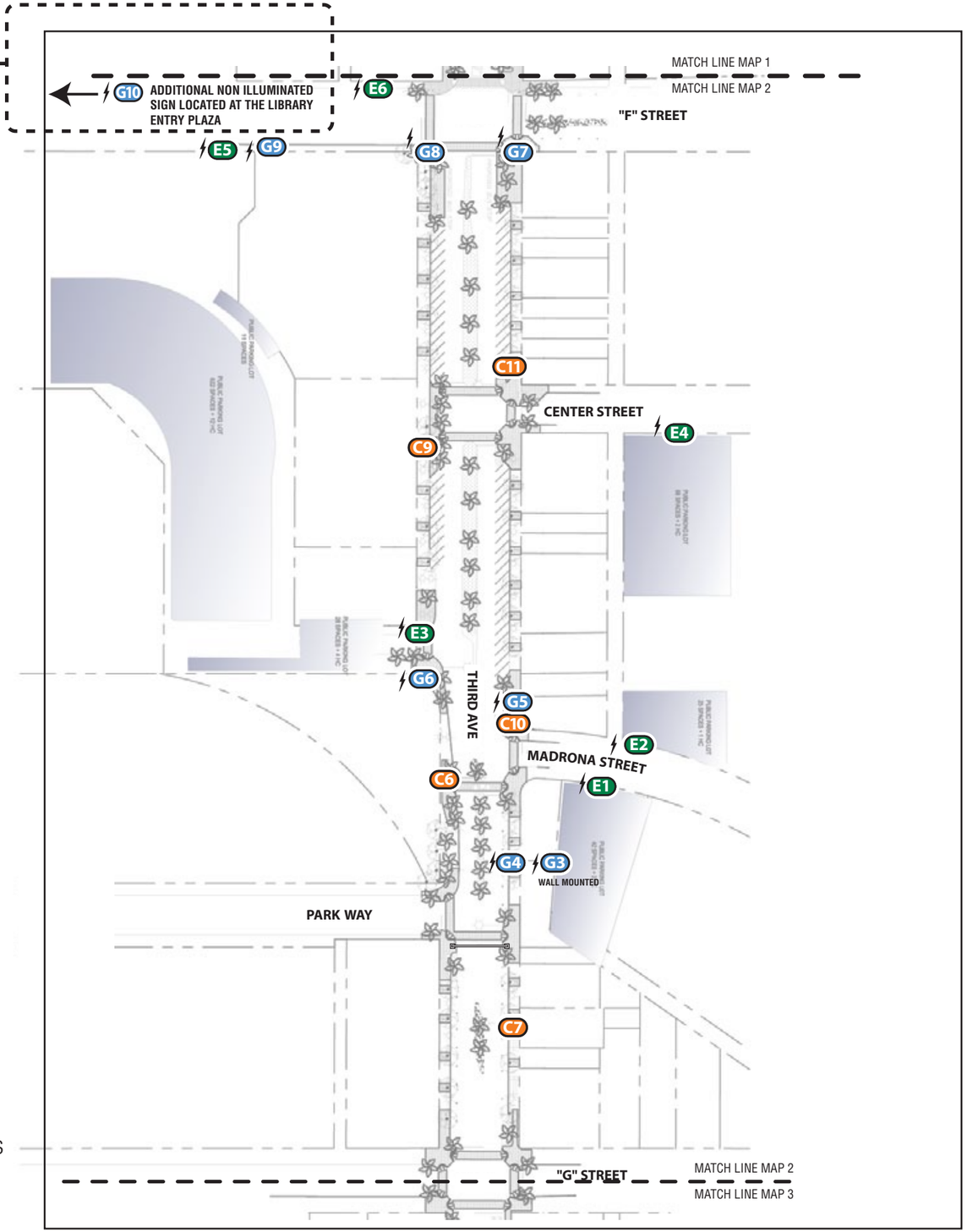
DESIGNER

FILE NAME
3rd AveVill _DesInt ALL Signs

SIGN TYPE
C

SHEET 03

SEE SHEET #6 FOR CONCEPTUAL LOCATION



LOCATION MAP 2
CHULA VISTA THIRD AVENUE VILLAGE "**F**" - "**G**" STREETS



KEY PLAN

- **A** PEDESTRIAN GATEWAY SIGN (SPECIFIC DESIGN SOLUTIONS T.B.D.)
- **B** MEDIAN GATEWAY SIGN
- **C** VEHICULAR DIRECTIONAL
- **D** MAST ARM DIRECTIONAL SIGN
- **E** PARKING DIRECTIONAL SIGN
- **F** PEDESTRIAN DIRECTIONAL SIGN (DESIGN SOLUTIONS & LOCATIONS T.B.D.)
- **G** DIRECTORY: KIOSKS AND WALL MOUNTED
- **H** BANNERS (NOT SHOWN)
- **J** INTERPRETIVE SIGN (NOT SHOWN)
- **K** SCOOTER PARKING SIGN (NOT SHOWN)
- **L** FACILITY IDENTIFICATION SIGN (MOUNTING AND LAYOUT MAY CHANGE BASED ON SITE CONDITIONS).

SIGN LOCATIONS WITH ELECTRICAL REQUIREMENTS

THE SIGN CONTRACTOR MUST VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, FIELD VERIFY EXACT LOCATIONS AND CONDITIONS FOR EACH SIGN AND NOTIFY THE CITY IN WRITING, OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS AS THEY AFFECT SIGN DESIGN OR LOCATION.

NORTH

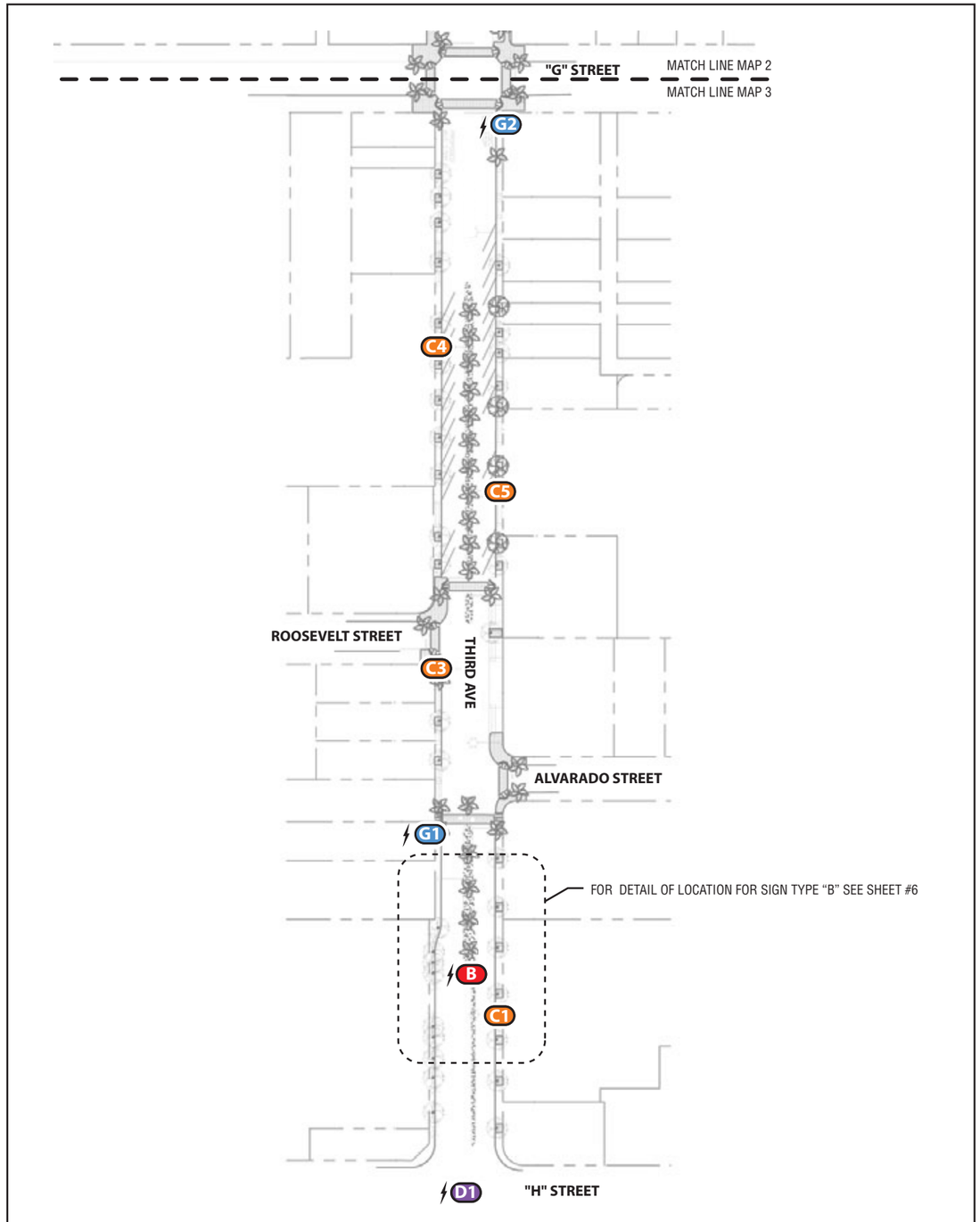
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DESIGNER OF RECORD
Signature
01/04/2011
Date

THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/04/11
01/26/12
SCALE AS NOTED
DESIGNER
FILE NAME 3rd AveVill DesInt ALL Signs
SIGN TYPE C
SHEET 04



LOCATION MAP 3
CHULA VISTA THIRD AVENUE VILLAGE "**G**" - "**H**" STREETS

THE SIGN CONTRACTOR MUST VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, FIELD VERIFY EXACT LOCATIONS AND CONDITIONS FOR EACH SIGN AND NOTIFY THE CITY IN WRITING, OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS AS THEY AFFECT SIGN DESIGN OR LOCATION.



KEY PLAN

- A PEDESTRIAN GATEWAY SIGN (SPECIFIC DESIGN SOLUTIONS T.B.D.)
- B MEDIAN GATEWAY SIGN
- C VEHICULAR DIRECTIONAL
- D MAST ARM DIRECTIONAL SIGN
- E PARKING DIRECTIONAL SIGN
- F PEDESTRIAN DIRECTIONAL SIGN (DESIGN SOLUTIONS & LOCATIONS T.B.D.)
- G DIRECTORY: KIOSKS AND WALL MOUNTED
- H BANNERS (NOT SHOWN)
- J INTERPRETIVE SIGN (NOT SHOWN)
- K SCOOTER PARKING SIGN (NOT SHOWN)
- L FACILITY IDENTIFICATION SIGN (MOUNTING AND LAYOUT MAY CHANGE BASED ON SITE CONDITIONS).

SIGN LOCATIONS WITH ELECTRICAL REQUIREMENTS

NORTH

100 0 50 100 200

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THIRD AVENUE VILLAGE
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01/26/12

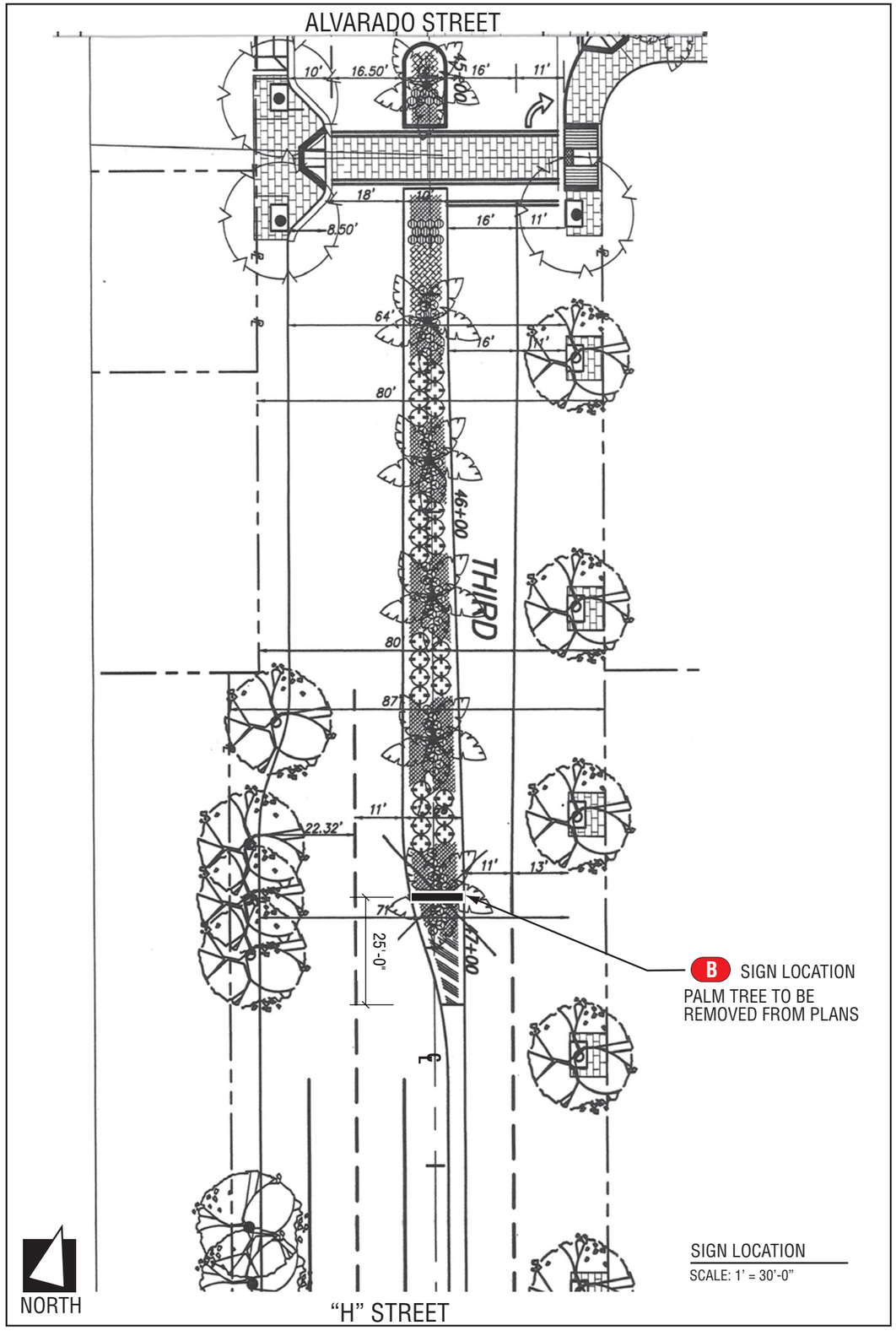
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DESIGNER

FILE NAME
3rd AveVill DesInt ALL Signs

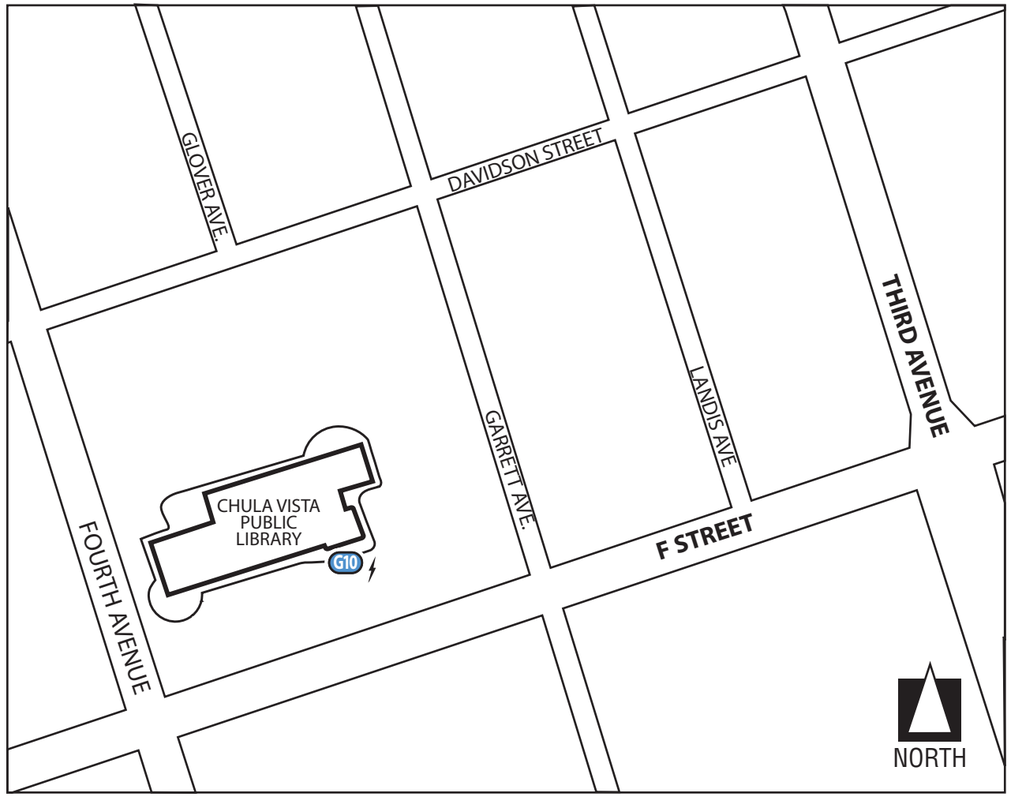
SIGN TYPE
C

SHEET 05



SIGN LOCATION

SCALE: 1' = 30'-0"



DIRECTORY SIGN LOCATION

NOT TO SCALE

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02/06/2011
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DESIGN INTENT DRAWNIGS

DATE 01/04/11
02/06/12

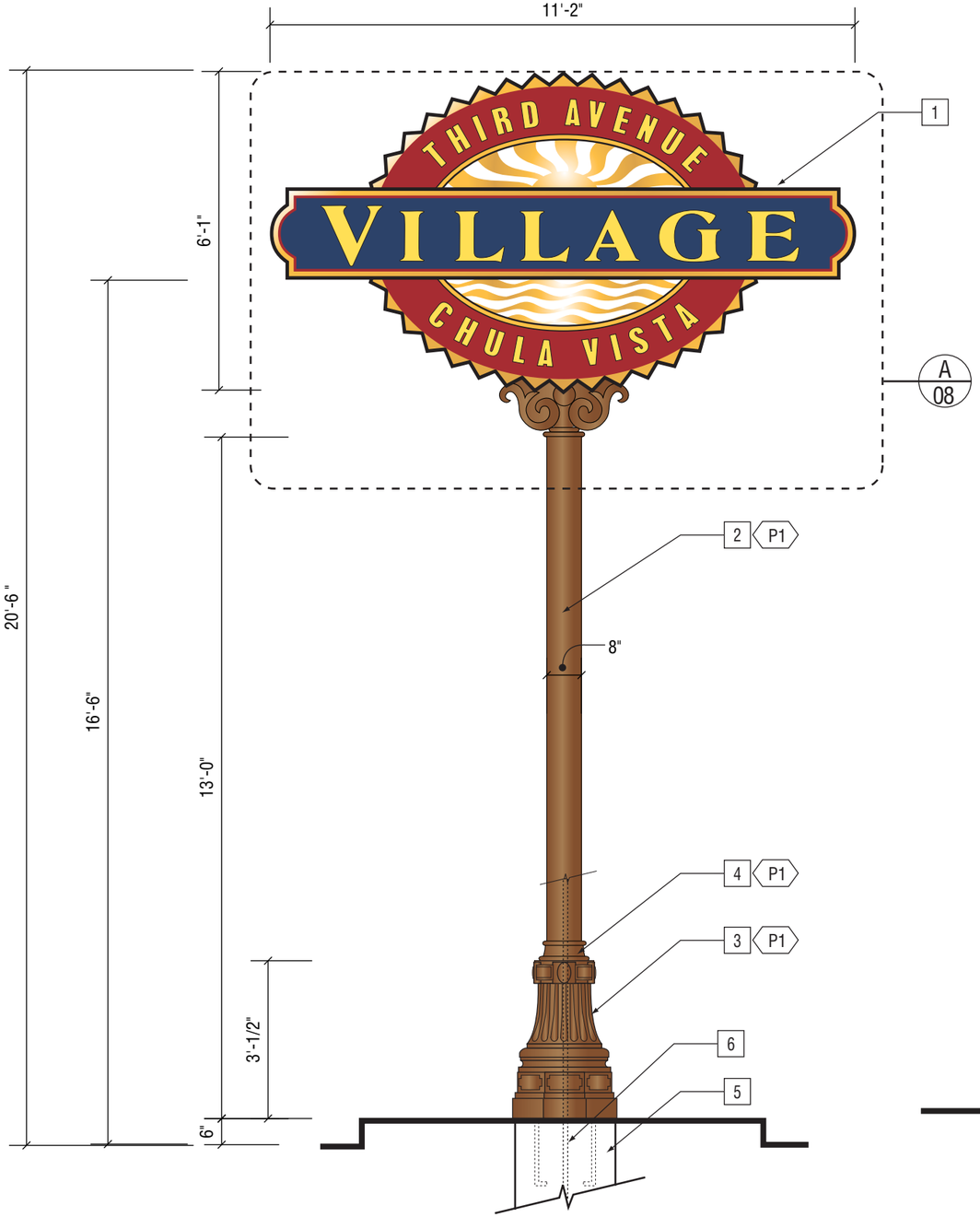
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AS NOTED

DESIGNER

FILE NAME
3rd AveVill
_DesInt ALL
Signs

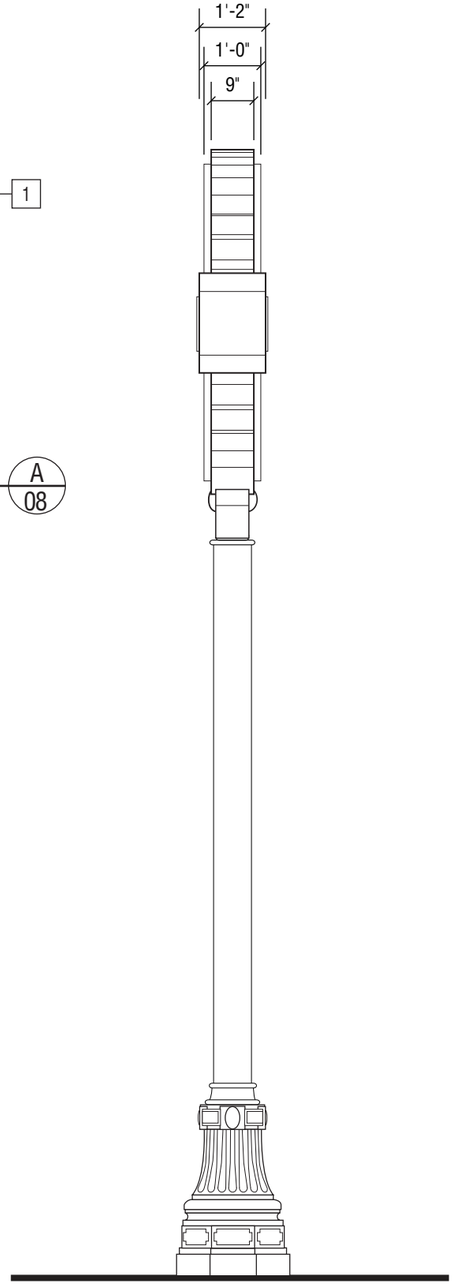
SIGN TYPE
B

SHEET 06



MEDIAN GATEWAY SIGN - FRONT VIEW (DOUBLE FACED)

SCALE: 3/8" = 1'-0"



SIDE VIEW

SPECIFICATIONS FOR SIGN TYPE "B"

1 SIGN CABINET:
FABRICATED MULTI LEVEL ALUMINUM SIGN CABINET WITH INTERNAL WELDED ALUMINUM STRUCTURE PER ENGINEERING CALCULATIONS. CABINET INTERNALY ILLUMINATED. PAINT FINISH.

2 SIGN POLE:
8" DIAMETER STEEL POLE WITH WELDED STEEL BASE PLATE, ANCHOR TO FOOTING WITH J-BOLTS. PER STRUCTURAL ENGINEER CALCULATIONS. PAINT FINISH.

3 DECORATIVE POLE BASE:
2 PIECE ALUMINUM CASTING (CLAMSHELL) # BCSTE2436. STERLING, OCTAGONAL SERIES FROM SOUTH COAST LIGHTING & DESIGN. ATTACHMENT HARDWARE TO BE TAMPERPROOF. 24.5" WIDE X 36.5" HIGH. PAINT FINISH.

4 REDUCER COLLAR:
CUSTOM FABRICATED DECORATIVE ALUMINUM ROUND REDUCER COLLAR. ATTACHMENT HARDWARE TO BE TAMPERPROOF. PAINT FINISH.

5 CONCRETE FOOTING:
CONCRETE FOOTING PER STRUCTURAL ENGINEER CALCULATIONS SEE SHEET #23.
TO BE FABRICATED BY SIGN CONTRACTOR.
FOOTING TO INCLUDE STAINLESS STEEL J-BOLTS REQUIRED FOR ATTACHMENT OF SIGN.

6 ELECTRICAL CONDUIT:
CONDUIT RUNS UP THROUGH FOOTING INTO SIGN POLE.
STUB OUT AT FOOTING LOCATION TO BE PROVIDED BY OTHERS.
(2) 20 AMP CIRCUIT.

14 PHOTO CELL:
SIGN CONTRACTOR TO PROVIDE PHOTO CELL FOR ON-OFF OPERATION OF SIGN.
PROVIDE AUTOMATED TIMER SWITCH (NOT SHOWN) FOR PROGRAMED ON-OFF OPERATION OF SIGN. LOCATE AUTOMATED TIMER SWITCH AT NEAREST POWER SOURCE. AUTOMATED TIMER SWITCH TO BE PROVIDED BY OTHERS.

NOTES:
SIGN CONTRACTOR TO PROVIDE CUT OFF SWITCH.
ISOLATE DISSIMILAR METALS.
ALL HARDWARE TO BE VANDAL RESISTANT.
ALL SIGN ELEMENTS TO HAVE ANTI GRAFFITI COATING.
VERIFY BELOW GRADE CONDITIONS BEFORE CORING FOOTINGS.
THE SIGN CONTRACTOR MUST VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, FIELD VERIFY EXACT LOCATIONS AND CONDITIONS FOR EACH SIGN AND NOTIFY THE CITY IN WRITING, OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS AS THEY AFFECT SIGN DESIGN OR LOCATION.

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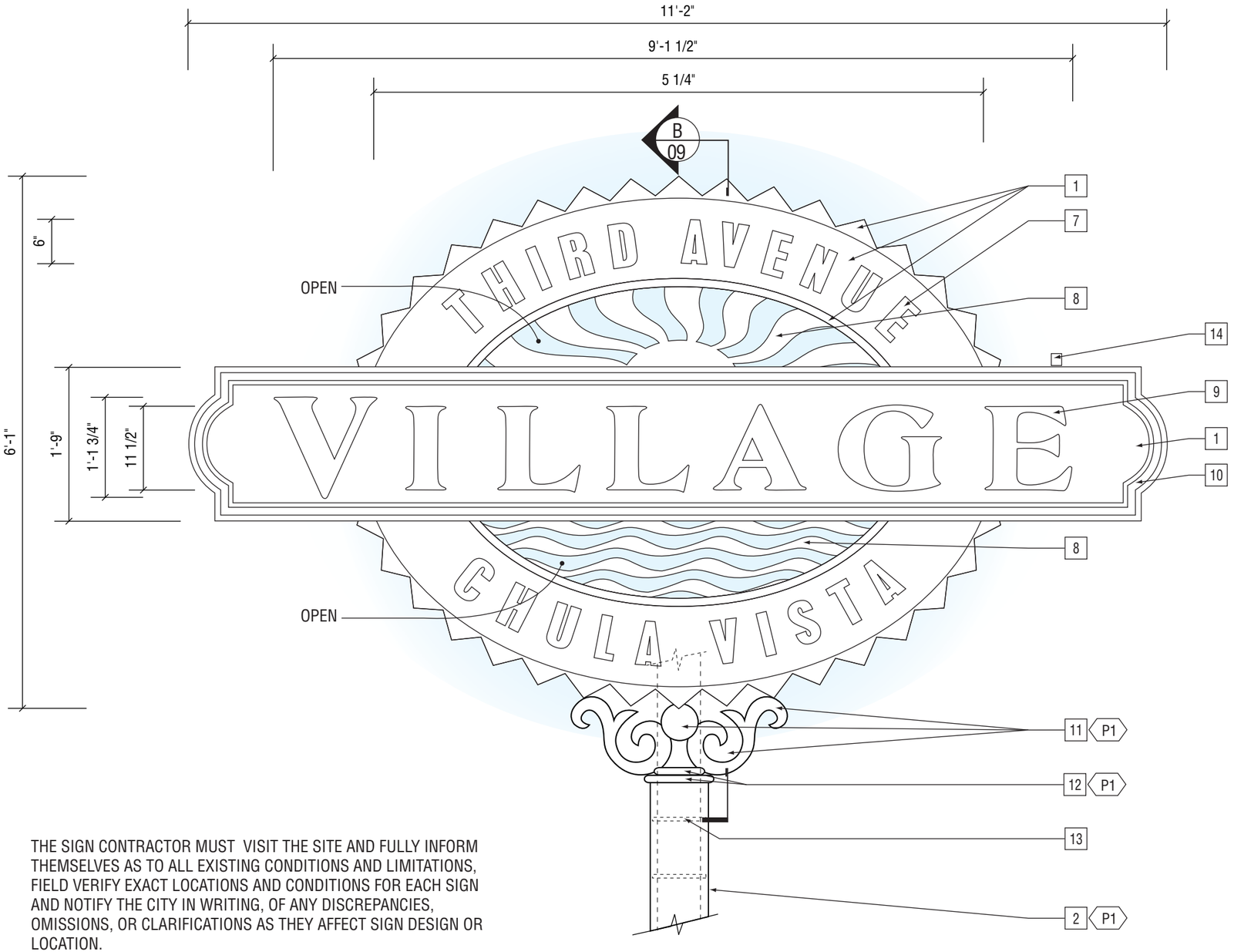
SCALE AS NOTED

DESIGNER

FILE NAME 3rd AveVill _DesInt ALL Signs

SIGN TYPE B

SHEET 07



THE SIGN CONTRACTOR MUST VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, FIELD VERIFY EXACT LOCATIONS AND CONDITIONS FOR EACH SIGN AND NOTIFY THE CITY IN WRITING, OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS AS THEY AFFECT SIGN DESIGN OR LOCATION.

A MEDIAN GATEWAY SIGN - FRONT VIEW
SCALE: 3/4" = 1'-0"

SPECIFICATIONS FOR SIGN TYPE "B"

1 SIGN CABINET:
FABRICATED MULTI LEVEL ALUMINUM SIGN CABINET WITH INTERNAL WELDED ALUMINUM STRUCTURE PER ENGINEERING CALCULATIONS. CABINET INTERNALY ILLUMINATED. PAINT FINISH.

2 SIGN POLE:
8" DIAMETER STEEL POLE WITH WELDED STEEL BASE PLATE, ANCHOR TO FOOTING WITH J-BOLTS. PER STRUCTURAL ENGINEER CALCULATIONS. PAINT FINISH.

7 LETTERS "THIRD AVENUE" & "CHULA VISTA":
1/2" DEEP POP-THRU ACRYLIC LETTERS WITH FACE ADHERED TRANSLUCENT VINYL.
LETTER RETURNS SANDED.

8 SUN AND WAVE CUT OUT SHAPES:
1/2" THICK CUT OUT ALUMINUM SHAPES, WELDED TO ALUMINUM SIGN CABINET.

9 LETTERS "VILLAGE":
1" DEEP POP-THRU ACRYLIC LETTERS WITH FACE ADHERED TRANSLUCENT VINYL.
LETTER RETURNS SANDED.

10 TRIM:
3/4" HALF ROUND ALUMINUM TRIM. WITH WELDED JOINTS, SECURE TO FACE OF SIGN CABINET WITH STAINLESS STEEL BACKPINS AND NUTS.

11 SIGN CABINET:
FABRICATED AS PART OF MULTI LEVEL SIGN CABINET, BUT WITH NO INTERNAL ILUMINATION. 1/2" THICK CUT OUT ALUMINUM FLOURISHES AND CIRCLES ATTACHED TO FACE OF SIGN CABINET WITH STAINLESS STEEL BACK PINS AND NUTS. 1/2" THICK CUT OUT CIRCULAR SHAPE TO HAVE 1/2" RADIUS ROUND EDGES.
PAINT FINISH.

12 POLE CAP/NECK:
FABRICATED RING TRIM/CAP CUT OUT FROM 1' THICK ALUMINUM. 1/2" RADIUS ROUND EDGES. WELD TO SIGN CABINET.
PAINT FINISH.

13 INTERNAL STEEL POLE:
POLE IS PART OF INTERNAL WELDED STEEL STRUCTURE FOR MULTI LEVEL SIGN CABINET. STEEL POLE SLEVES INTO 2 SIGN POLE AND IS SECURED WITH STAINLESS STEEL COUNTER SUNK FLAT HEAD SCREWS. STRUCTURAL SPECIFICATIONS AND ATTACHMENTS PER STURCTURAL ENGINEER CALCULATIONS.

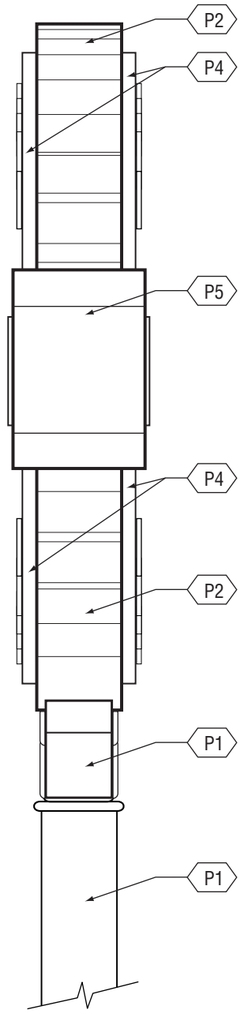
14 PHOTO CELL:
SIGN CONTRACTOR TO PROVIDE PHOTO CELL FOR ON-OFF OPERATION OF SIGN.
PROVIDE AUTOMATED TIMER SWITCH (NOT SHOWN) FOR PROGRAMED ON-OFF OPERATION OF SIGN. LOCATE AUTOMATED TIMER SWITCH AT NEAREST POWER SOURCE. AUTOMATED TIMER SWITCH TO BE PROVIDED BY OTHERS.

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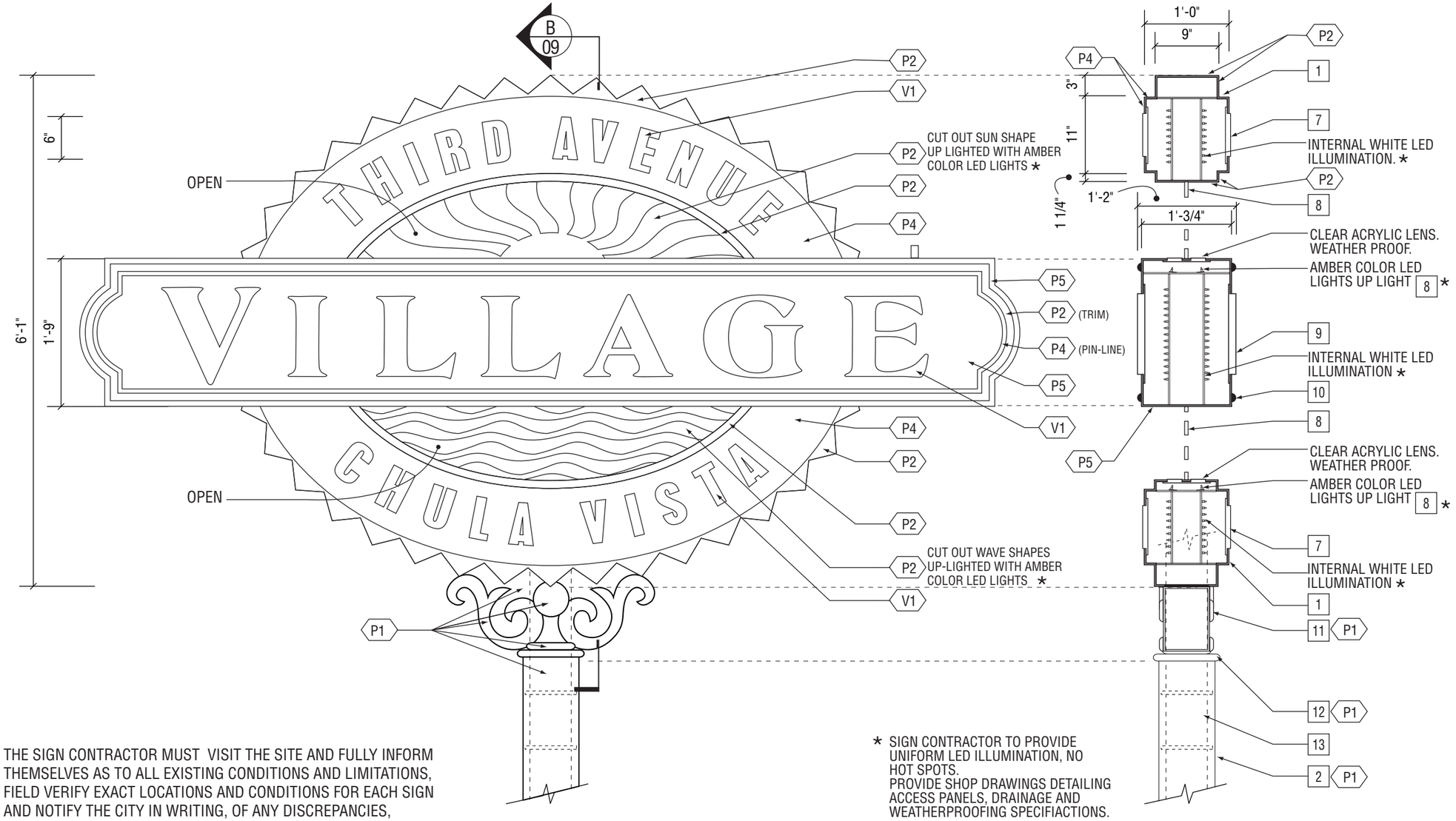
GRAPHIC SOLUTIONS, LTD. DESIGNER OF RECORD SAN DIEGO, CALIFORNIA
Signature
01/04/2011
Date

THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/04/11
SCALE AS NOTED
DESIGNER
FILE NAME 3rd AveVill _DesInt ALL Signs
SIGN TYPE B
SHEET 08



SIDE VIEW



MEDIAN GATEWAY SIGN - FRONT VIEW

SCALE: 3/4" = 1'-0"

B
09
CONCEPTUAL SECTION-DETAIL
SCALE: 3/4" =1'-0"

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* SIGN CONTRACTOR TO PROVIDE UNIFORM LED ILLUMINATION, NO HOT SPOTS.
PROVIDE SHOP DRAWINGS DETAILING ACCESS PANELS, DRAINAGE AND WEATHERPROOFING SPECIFIACTIONS.

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Signature
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Date

THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/04/11
SCALE AS NOTED
DESIGNER
FILE NAME 3rd AveVill _DesInt ALL Signs
SIGN TYPE B
SHEET 09



3rd. AVENUE VILLAGE - DIRECTIONAL (SINGLE FACED)

SCALE: 1"= 1'-0"

NOTES:
ALL HARDWARE TO BE VANDAL RESISTANT.
ALL SIGN ELEMENTS TO HAVE ANTI GRAFFITI COATING. PROVIDE SAMPLES AND CUT SHEETS FOR CITY'S APPROVAL.
COPY SHOWN IS TYPICAL (FOR ILLUSTRATIVE PURPOSES ONLY).
SEE SHEET #13 FOR MESSAGE SCHEDULE.
VERIFY BELOW GRADE CONDITIONS BEFORE CORING FOOTINGS.

SPECIFICATIONS FOR SIGN TYPE "C"

1 SIGN PANEL:
3/16" THICK FLAT ALUMINUM SIGN PANEL.
PAINT FINISHED ALL SIDES.

2 "VILLAGE" LOGO:
4 COLOR DIGITAL VINYL OUTPUT 3M STANDARD, ADHERED TO FACE OF SIGN PANEL. NEGATIVE AREAS IN SUN & WAVES TO BE REMOVED TO SHOW PAINTED BACKGROUND.

3 ARROW AND DESTINATIONS:
CUT OUT REFLECTIVE VINYL GRAPHICS APPLIED TO FACE OF SIGN PANEL.

4 SIGN POLE:
4 1/2" DIAMETER ALUMINUM POLE WITH WELDED ALUMINUM BASE PLATE, ANCHOR TO FOOTING WITH STAINLESS STEEL J-BOLTS. PER STRUCTURAL ENGINEER CALCULATIONS. PAINT FINISH.

5 STRAPS:
3/4" STAINLESS STEEL BANDING STRAPS (SIGNFIX OR BAND-IT BRANDS) SECURE CLAMP/SIGN FACE TO SIGN POLE.
PAINT FINISH.

6 CLAMP:
UNIVERSAL CHANNEL STAINLESS STEEL CLAMP BY SIGNFIX, CLAMP SLIDES INTO EXTRUDED CHANNEL TO AFFIX SIGN FACE TO POLE. PART #SX0220. PAINT FINISH.

7 ALUMINUM EXTRUSION:
MEDIUM CHANNEL EXTRUSION BY SIGNFIX WELDED TO BACK OF SIGN PANEL. PART #SX0073. PAINT FINISH.

8 POLE CAP:
FABRICATE CUSTOM ALUMINUM CAP FOR POLE WITH 3" ALUMINUM SPHERE FINIAL AT TOP. PAINT FINISH CAP TO MATCH POLE COLOR. ISOLATE DISSIMILAR MATERIALS. SECURE TO POLE WITH SILICONE ADHESIVE.

9 DECORATIVE POLE BASE:
2 PIECE ALUMINUM CASTING (CLAMSHELL) #BCRVS1123.
REVERE LARGE, FROM SOUTH COAST LIGHTING & DESIGN.
ATTACHMENT HARDWARE TO BE TAMPERPROOF. 12" WIDE X 23.25" HIGH. PAINT FINISH.

10 CONCRETE FOOTING:
CONCRETE FOOTING BY SIGN FABRICATOR TO INCLUDE STAINLESS STEEL J-BOLTS REQUIRED FOR ATTACHMENT OF SIGN.

FOR STRUCTURAL ENGINEER CALCULATIONS SEE SHEET #29.

THE SIGN CONTRACTOR MUST VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, FIELD VERIFY EXACT LOCATIONS AND CONDITIONS FOR EACH SIGN AND NOTIFY THE CITY IN WRITING, OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS AS THEY AFFECT SIGN DESIGN OR LOCATION.

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Signature
02/06/2012
Date

THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

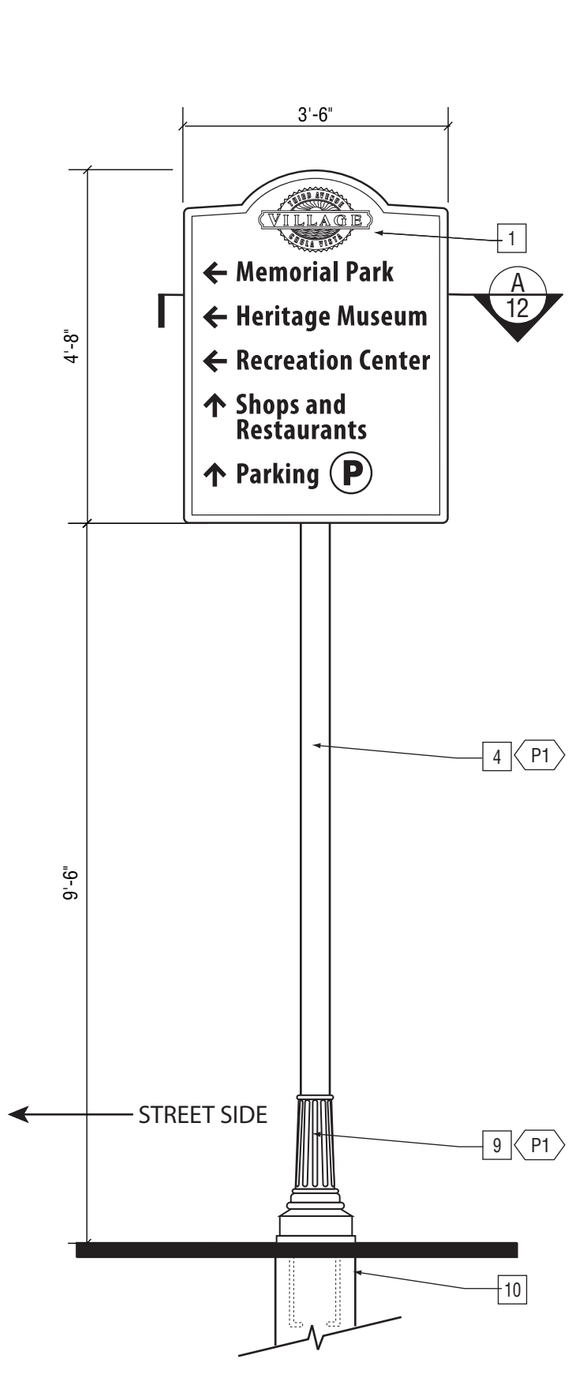
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02/06/12

SCALE
AS NOTED

DESIGNER

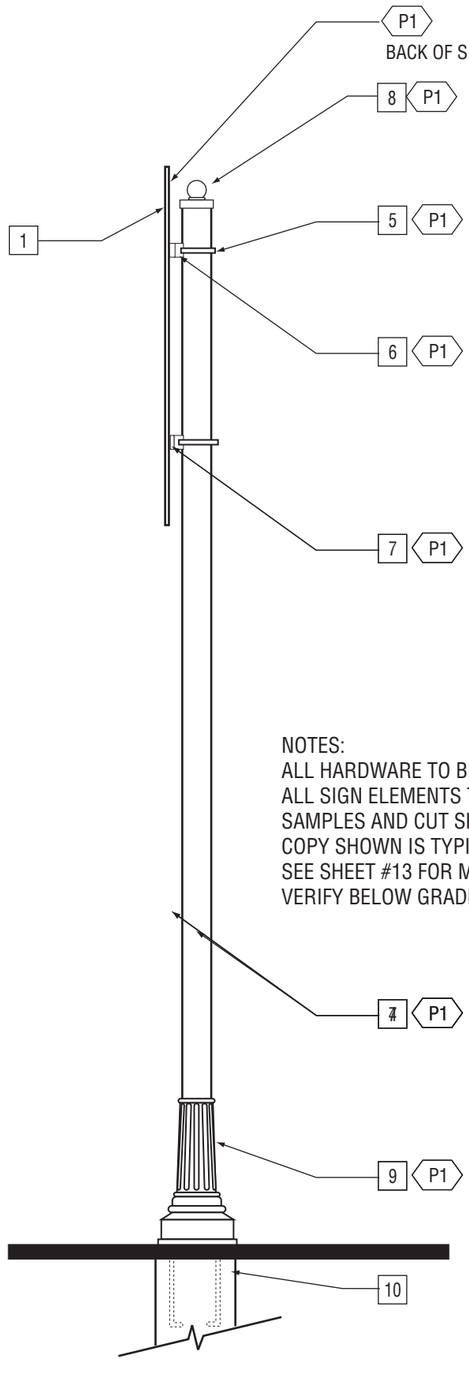
FILE NAME
3rd AveVill _DesInt ALL Signs

SIGN TYPE
C



VEHICULAR DIRECTIONAL SIGN - FRONT VIEW

SCALE: 1/2" = 1'-0"



SIDE VIEW

NOTES:
ALL HARDWARE TO BE VANDAL RESISTANT.
ALL SIGN ELEMENTS TO HAVE ANTI GRAFFITI COATING. PROVIDE SAMPLES AND CUT SHEETS FOR CITY'S APPROVAL.
COPY SHOWN IS TYPICAL (FOR ILLUSTRATIVE PURPOSES ONLY).
SEE SHEET #13 FOR MESSAGE SCHEDULE.
VERIFY BELOW GRADE CONDITIONS BEFORE CORING FOOTINGS.

SPECIFICATIONS FOR SIGN TYPE "C"

1 SIGN PANEL:
3/16" THICK FLAT ALUMINUM SIGN PANEL.
PAINT FINISHED ALL SIDES.

2 "VILLAGE" LOGO:
4 COLOR DIGITAL VINYL OUTPUT 3M STANDARD, ADHERED TO FACE OF SIGN PANEL. NEGATIVE AREAS IN SUN & WAVES TO BE REMOVED TO SHOW PAINTED BACKGROUND.

3 ARROW AND DESTINATIONS:
CUT OUT REFLECTIVE VINYL GRAPHICS APPLIED TO FACE OF SIGN PANEL.

4 SIGN POLE:
4 1/2" DIAMETER ALUMINUM POLE WITH WELDED ALUMINUM BASE PLATE, ANCHOR TO FOOTING WITH STAINLESS STEEL J-BOLTS.
PER STRUCTURAL ENGINEER CALCULATIONS. PAINT FINISH.

5 STRAPS:
3/4" STAINLESS STEEL BANDING STRAPS (SIGNFIX OR BAND-IT BRANDS) SECURE CLAMP/SIGN FACE TO SIGN POLE.
PAINT FINISH.

6 CLAMP:
UNIVERSAL CHANNEL STAINLESS STEEL CLAMP BY SIGNFIX,
CLAMP SLIDES INTO EXTRUDED CHANNEL TO AFFIX SIGN FACE TO POLE.
PART #SX0220. PAINT FINISH.

7 ALUMINUM EXTRUSION:
MEDIUM CHANNEL EXTRUSION BY SIGNFIX WELDED TO BACK OF SIGN PANEL. PART #SX0073. PAINT FINISH.

8 POLE CAP:
FABRICATE CUSTOM ALUMINUM CAP FOR POLE WITH 3" ALUMINUM SPHERE FINIAL AT TOP. PAINT FINISH CAP TO MATCH POLE COLOR. ISOLATE DISSIMILAR MATERIALS. SECURE TO POLE WITH SILICONE ADHESIVE.

9 DECORATIVE POLE BASE:
2 PIECE ALUMINUM CASTING (CLAMSHELL) #BCRVS1123.
REVERE LARGE, FROM SOUTH COAST LIGHTING & DESIGN.
ATTACHMENT HARDWARE TO BE TAMPERPROOF. 12" WIDE X 23.25" HIGH. PAINT FINISH.

10 CONCRETE FOOTING:
CONCRETE FOOTING BY SIGN FABRICATOR TO INCLUDE STAINLESS STEEL J-BOLTS REQUIRED FOR ATTACHMENT OF SIGN.

FOR STRUCTURAL ENGINEER CALCULATIONS SEE SHEET #29.

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DESIGN INTENT DRAWNIGS

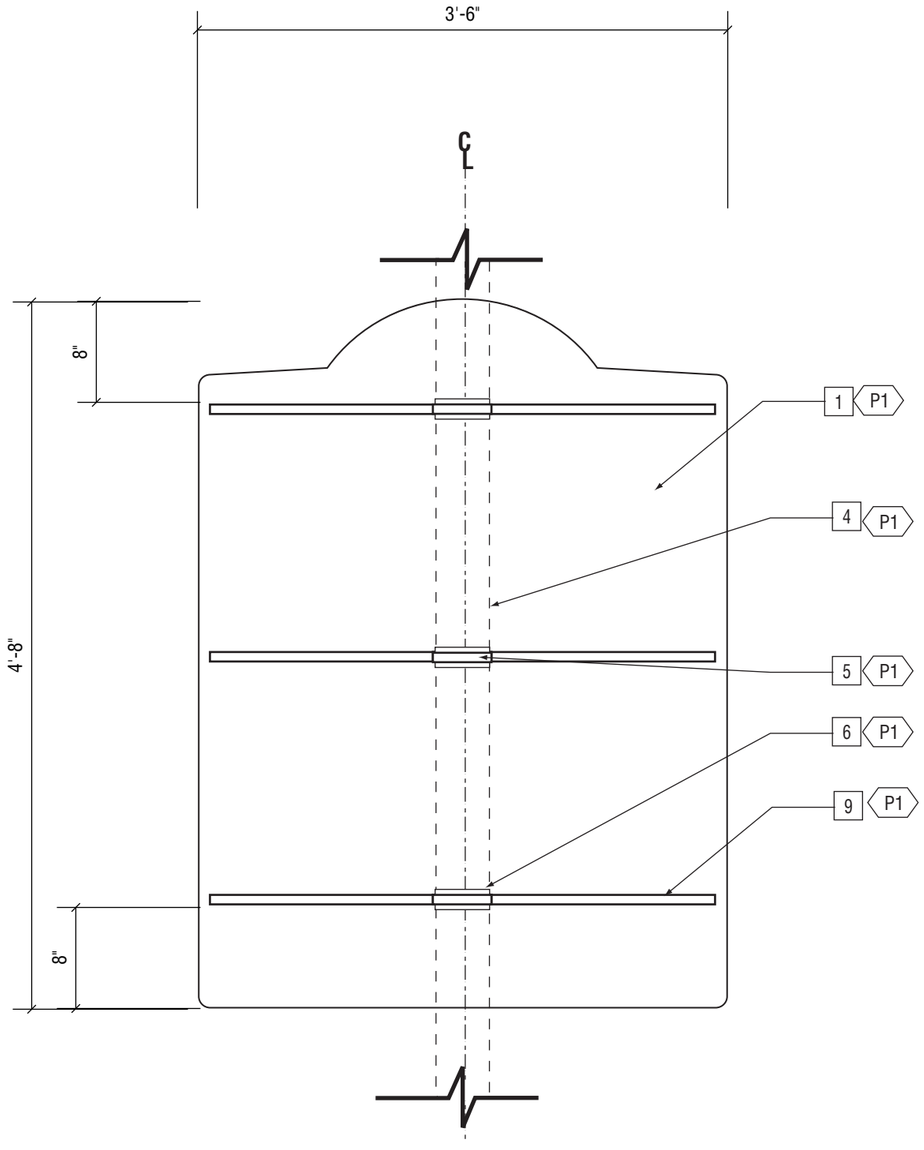
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02/06/12

SCALE
AS NOTED

DESIGNER

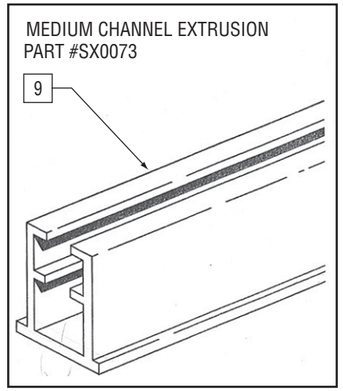
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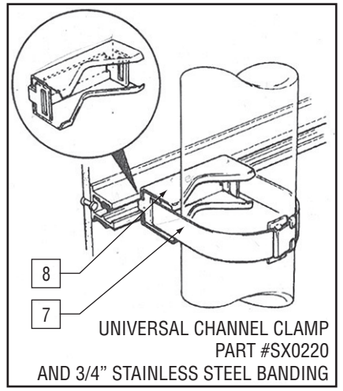
SIGN TYPE
C



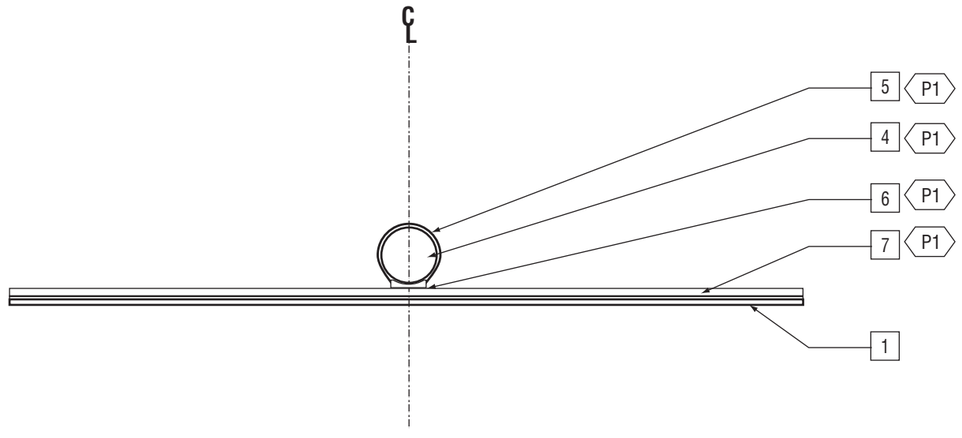
BACK FACE OF SIGN

SCALE: 1"= 1'-0"





ATTACHMENT HARDWARE BY SIGNFIX



A/12 SECTION DETAIL

NOT TO SCALE

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DESIGNER

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3rd AveVill _DesInt ALL Signs

SIGN TYPE
C

SHEET 12

CHULA VISTA
THIRD AVENUE VILLAGE SIGN & GRAPHICS PROGRAM

Initial Implementation Phase
Sign Type "C" – Vehicular Directional Signs

October 11, 2010

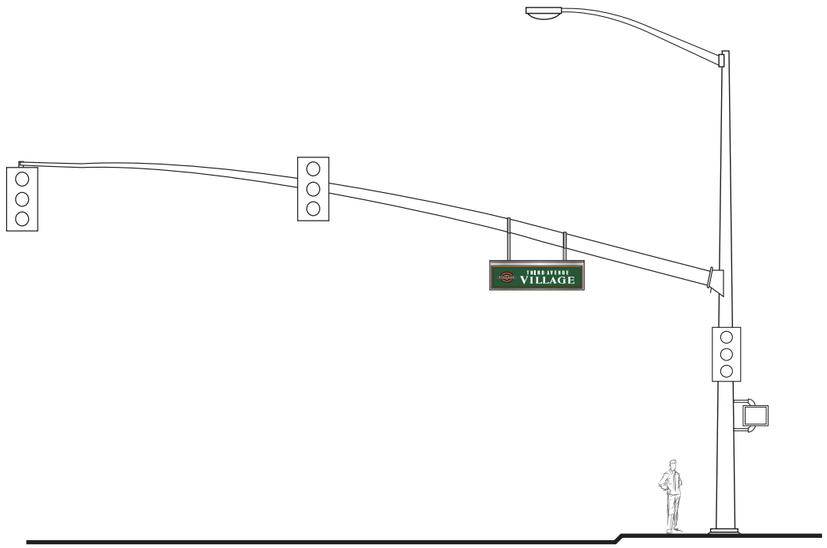
Sign #	Location	S/F D/F	Orientation	Message < = arrow direction on panel
C-1	E. side Third Ave., N. of H St.	S/F	South facing	^ Shops & Restaurants ^ Memorial Park ^ Recreation Center ^ Parking
C-2	NOT USED			
C-3	W. side Third Ave., S. of Roosevelt St.	S/F	North facing	^ Shops & Offices ^ County Offices ^ Post Office ^ Parking
C-4	W. side Third Ave., S. of G St.	S/F	North facing	^ Shops & Offices ^ Parking
C-5	E. side Third Ave., S. of G. St.	S/F	South facing	^ Shops & Restaurants ^ Memorial Park < Women's Club ^ Parking
C-6	W. side Third Ave., S. of Madrona St.	S/F	North facing	> Women's Club ^ County Offices ^ Post Office ^ Shops & Offices
C-7	E. side Third Ave., N. of G St.	S/F	South facing	< Memorial Park < Heritage Museum < Recreation Center ^ Shops & Restaurants ^ Parking
C-8	NOT USED			
C-9	W. side Third Ave., S. of Center St.	S/F	North facing	^ Memorial Park ^ Recreation Center ^ Heritage Museum > Parking
C-10	E. side Third Ave., N. of Madrona St.	S/F	South facing	^ Shops & Restaurants > Parking
C-11	E. side Third Ave., N. of Center St.	S/F	South facing	> Senior Center < Civic Center < Library < Bayfront & Marina < Parking
C-12	W. side Third Ave., N. of F St.	S/F	North facing	< Senior Center > Civic Center > Library > Bayfront & Marina > Parking
C-13	E. side Third Ave., S. of Davidson OR N. of F St.	S/F	South facing	^ Shops & Restaurants ^ Fredericka Manor < >Parking
C-14	W. side Third Ave., N. of Davidson	S/F	North facing	^ Shops & Restaurants ^ Memorial Park ^ Heritage Museum < > Parking
C-15	E. side Third Ave., S. of E St.	S/F	South facing	< Bayfront & Nature Center ^ Fredericka Manor < Freeway 5 ^ Freeway 54

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THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/04/11
SCALE AS NOTED
DESIGNER
FILE NAME 3rd AveVill _DesInt ALL Signs
SIGN TYPE C
SHEET 13



MAST ARM DIRECTIONAL



FRONT VIEW - MAST ARM DIRECTIONAL - INTERNALLY ILLUMINATED STREET NAME SIGN (DOUBLE FACED)
SCALE: 1" = 1'-0"

SPECIFICATIONS FOR SIGN TYPE "D"

1 EXISTING STREET NAME SIGN CABINETS:
STANDARD INTERNALLY ILLUMINATED STREET NAME SIGN CABINET WITH FLUORESCENT BULBS. SIGN CONTARCTOR TO VERIFY EXISTING CABINET DIMENSIONS PRIOR TO FABRICATION OF SIGN.

2 GRAPHICS PANEL:
RETROFIT EXISTING STREET NAME SIGN CABINETS WITH NEW TRANSLUCENT BACKGROUND PANELS.
TRANSCLUCENT VINYL FACE ADHERED TO TRANSLUCENT PANEL.
BACKGROUND COLOR = GREEN, OUTLINE = YELLOW AND LETTERS = WHITE.

3 "VILLAGE" LOGO:
FOUR COLOR DIGITAL VINYL OUTPUT ADHERED TO FACE OF TRANSLUCENT BACKGROUND PANEL. TRANSLUCENT GREEN VINYL BACKGROUND CUT OUT AND REMOVED.

NOTES:
SIGN CONTRACTOR TO VERIFY EXISTING SIGN CABINET DIMENSIONS PRIOR TO FABRICATION OF SIGN.

THE SIGN CONTRACTOR MUST VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, FIELD VERIFY EXACT LOCATIONS AND CONDITIONS FOR EACH SIGN AND NOTIFY THE CITY IN WRITING, OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS AS THEY AFFECT SIGN DESIGN OR LOCATION.

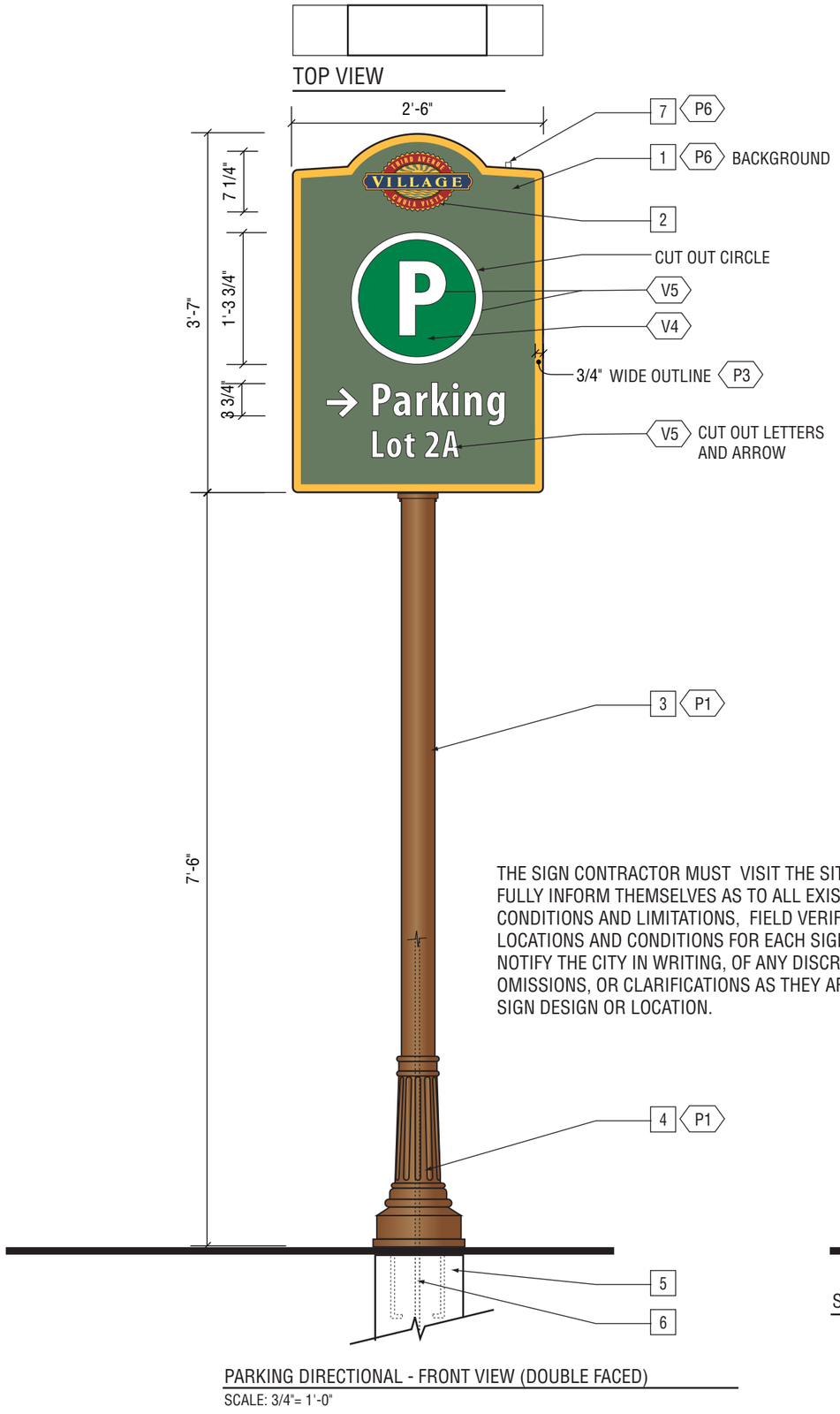
FONTS:
DANTON REGULAR - "VILLAGE"
PILLSDON REGULAR - "CHULA VISTA" "THIRD AVENUE"

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THIRD AVENUE VILLAGE
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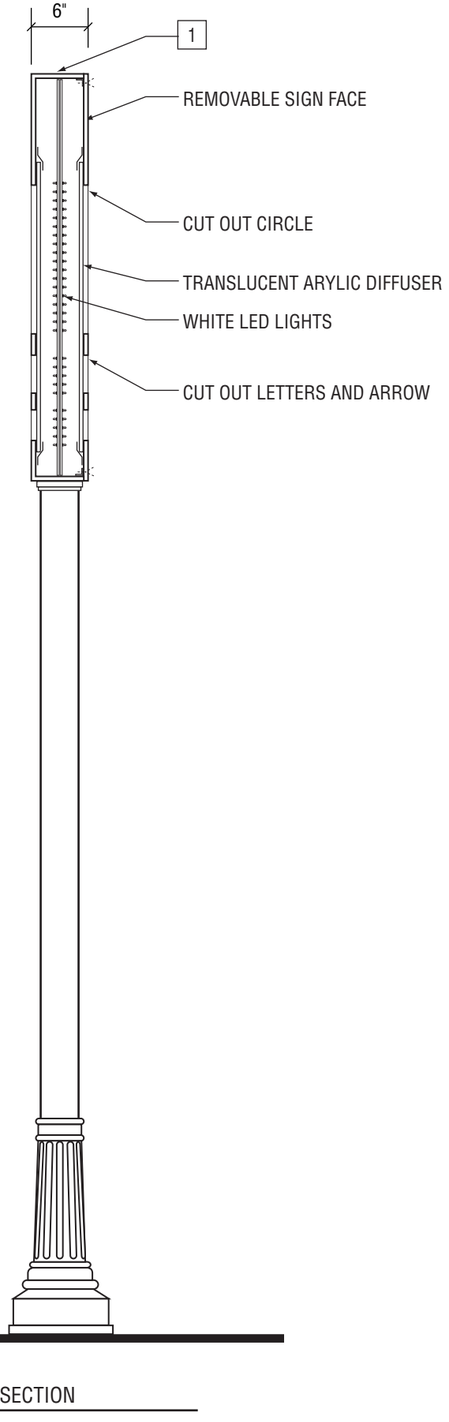
DATE 01/04/11
SCALE AS NOTED
DESIGNER
FILE NAME 3rd AveVill _DesInt ALL Signs
SIGN TYPE D
SHEET 14



THE SIGN CONTRACTOR MUST VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, FIELD VERIFY EXACT LOCATIONS AND CONDITIONS FOR EACH SIGN AND NOTIFY THE CITY IN WRITING, OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS AS THEY AFFECT SIGN DESIGN OR LOCATION.

PARKING DIRECTIONAL - FRONT VIEW (DOUBLE FACED)

SCALE: 3/4"= 1'-0"



SIDE VIEW / SECTION

SPECIFICATIONS FOR SIGN TYPE "E"

1 SIGN CABINET:
INTERNALLY ILLUMINATED ALUMINUM SIGN CABINET WITH WELDED ALUMINUM ANGLE STRUCTURE.
CUT OUT CIRCLE, LETTERS AND ARROW FROM ALUMINUM FACES AND ATTACH TRANSLUCENT ACRYLIC DIFFUSER PANELS TO INSIDE FACES. PAINT FINISH ALUMINUM CABINET.
ADHERE TRANSLUCENT VINYL GRAPHICS TO FACE OF ACRYLIC DIFFUSER.
ILLUMINATION = WHITE LED LIGHTS, ILLUMINATION TO BE EVEN, NO HOT OR DARK SPOTS.
PROVIDE FULL REMOVABLE SIGN FACE AS ACCESS PANEL, SECURE WITH COUNTER SUNK STAINLESS STEEL FLAT HEAD SCREWS. PAINT FINISHED TO MATCH ADJACENT SURFACE.
WEATHER PROOF.

2 "VILLAGE" LOGO:
4 COLOR DIGITAL VINYL OUTPUT 3M STANDARD, ADHERED TO FACE OF SIGN CABINET. NEGATIVE AREAS IN SUN & WAVES TO BE REMOVED TO SHOW PAINTED BACKGROUND.

3 SIGN POLE:
4" DIAMETER ALUMINUM POLE WITH WELDED ALUMINUM BASE PLATE, ANCHOR TO FOOTING WITH STAINLESS STEEL J-BOLTS. PER STRUCTURAL ENGINEER CALCULATIONS. PAINT FINISH.

4 DECORATIVE POLE BASE:
2 PIECE ALUMINUM CASTING (CLAMSHELL) # BCRVS1123.
REVERE SMALL, FROM SOUTH COAST LIGHTING & DESIGN.
ATTACHMENT HARDWARE TO BE TAMPERPROOF. 11" WIDE X 23" HIGH. PAINT FINISH.

5 CONCRETE FOOTING:
CONCRETE FOOTING PER STRUCTURAL ENGINEER CALCULATIONS SEE SHEET #24.
TO BE FABRICATED BY SIGN CONTRACTOR.
FOOTING TO INCLUDE STAINLESS STEEL J-BOLTS REQUIRED FOR ATTACHMENT OF SIGN.

6 ELECTRICAL CONDUIT:
CONDUIT RUNS UP THROUGH FOOTING INTO SIGN POLE.
STUB OUT AT FOOTING LOCATION TO BE PROVIDED BY OTHERS.
(1) 20 AMP CIRCUIT.

7 PHOTO CELL:
SIGN CONTRACTOR TO PROVIDE PHOTO CELL FOR ON-OFF OPERATION OF SIGN.
PROVIDE AUTOMATED TIMER SWITCH (NOT SHOWN) FOR PROGRAMED ON-OFF OPERATION OF SIGN. LOCATE AUTOMATED TIMER SWITCH AT NEAREST POWER SOURCE. AUTOMATED TIMER SWITCH TO BE PROVIDED BY OTHERS.

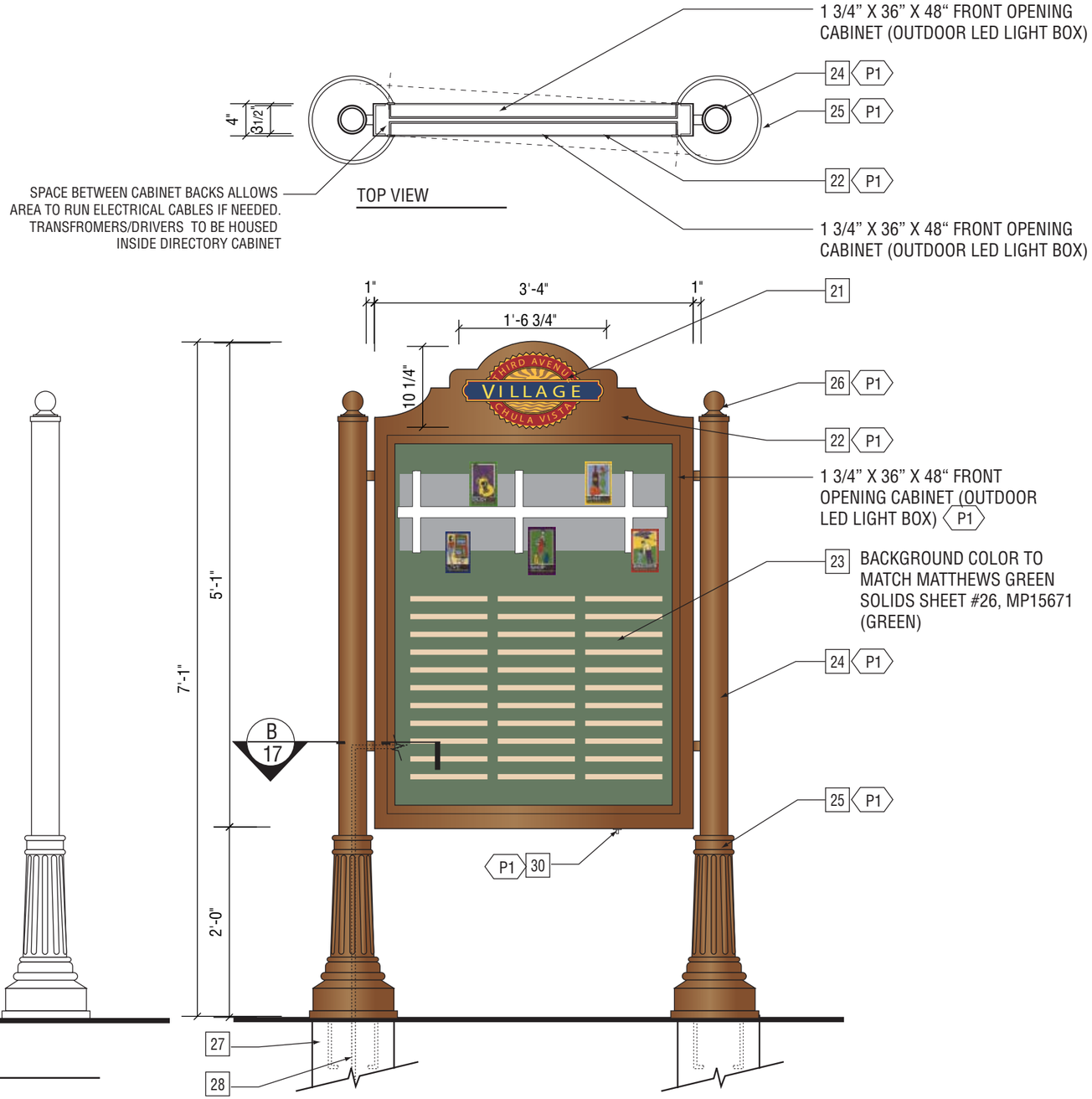
NOTES:
ISOLATE DISSIMILAR METALS.
SIGN CONTRACTOR TO PROVIDE CUT OFF SWITCH.
ALL HARDWARE TO BE VANDAL RESISTANT.
ALL SIGN ELEMENTS TO HAVE ANTI GRAFFITI COATING.
VERIFY BELOW GRADE CONDITIONS BEFORE CORING FOOTINGS.

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Signature
01/04/2011
Date

THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/16/11
SCALE AS NOTED
DESIGNER
FILE NAME 3rd AveVill _DesInt ALL Signs
SIGN TYPE E
SHEET 15



THE SIGN CONTRACTOR MUST VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, FIELD VERIFY EXACT LOCATIONS AND CONDITIONS FOR EACH SIGN AND NOTIFY THE CITY IN WRITING, OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS AS THEY AFFECT SIGN DESIGN OR LOCATION.

SPECIFICATIONS FOR SIGN TYPE "G"

21 "VILLAGE" LOGO:
CAST ALUMINUM PAINT FILLED OR PORCELAIN ENAMEL.
ATTACH TO DIRECTORY CABINET WITH STAINLESS STEEL BACK PINS.

22 DIRECTORY CABINET:
FABRICATED ALUMINUM DIRECTORY CABINET WITH INTERNAL ALUMINUM STRUCTURE HOUSES (2 BACK TO BACK) FRONT OPENING CABINETS FROM DSA PHOTOTECH (OR EQUIVALENT), 1 3/4" X 36" X 48" OUTDOOR LED LIGHT BOX WITH INTERNAL POWER SUPPLY. WEATHER PROOF, SEALED DOOR WITH SECURITY LOCK. CABINET ON BACK FACE OF DIRECTORY MAY NOT BE REQUIRED TO BE INTERNALY ILLUMINATED AT ALL LOCATIONS. PAINT FINISH.
SIGN FABRICATOR TO VERIFY WITH CITY OF CHULA VISTA WHICH DIRECTORIES NEED ONLY ONE OF THE (2) CABINETS ILLUMINATED.

23 DIRECTORY MAP:
TRANSLUCENT 4-COLOR DIGITAL OUTPUT MAP GRAPHICS. SIGN CONTRACTOR RESPONSIBLE FOR CREATING MAP ART WITH DESTINATION LOCATIONS AND TO GET FINAL ART APPROVAL FROM CLIENT. DESTINATION LOCATIONS TO BE PROVIDED BY CLIENT.

24 SIGN POLE:
3 1/2" DIAMETER ALUMINUM POLE WITH WELDED BASE PLATE HIDDEN WITHIN DECORATIVE BASE. PAINT FINISH. ANCHOR WITH "J" BOLTS PER ENGINEERING.

25 DECORATIVE POLE BASE:
2 PIECE ALUMINUM CASTING (CLAMSHELL) # BCRVS1123.
REVERE SERIES FROM SOUTH COAST LIGHTING & DESIGN.
ATTACHMENT HARDWARE TO BE TAMPERPROOF.
11" WIDE X 23" HIGH, FITS 3" TO 4" DIA. POLES. PAINT FINISH.

26 DECORATIVE POLE CAP.
ALUMINUM CAP FOR 3 1/2" DIAMETER POLE, WITH 2 1/2" ALUMINUM SPHERE. ATTACH TO POLE. PAINT FINISH.

27 CONCRETE FOOTING:
CONCRETE FOOTING PER STRUCTURAL ENGINEER CALCULATIONS SEE SHEET #25.
FABRICATED BY SIGN CONTRACTOR.
FOOTING TO INCLUDE J-BOLTS REQUIRED FOR ATTACHMENT OF SIGN.

28 ELECTRICAL CONDUIT:
CONDUIT RUNS UP THROUGH FOOTING INTO SIGN POLE.
STUB OUT AT FOOTING LOCATION TO BE PROVIDED BY OTHERS.
(1) 15 AMP CIRCUIT.

29 AUTOMATED TIMER SWITCH:
PROVIDE AUTOMATED TIMER SWITCH (NOT SHOWN) FOR PROGRAMED ON-OFF OPERATION OF SIGN. LOCATE AUTOMATED TIMER SWITCH AT NEAREST POWER SOURCE. AUTOMATED TIMER SWITCH TO BE PROVIDED BY OTHERS.

30 CUT OFF SWITCH:
SIGN CONTRACTOR TO PROVIDE CUT OFF SWITCH IF REQUIRED (NOT SHOWN).

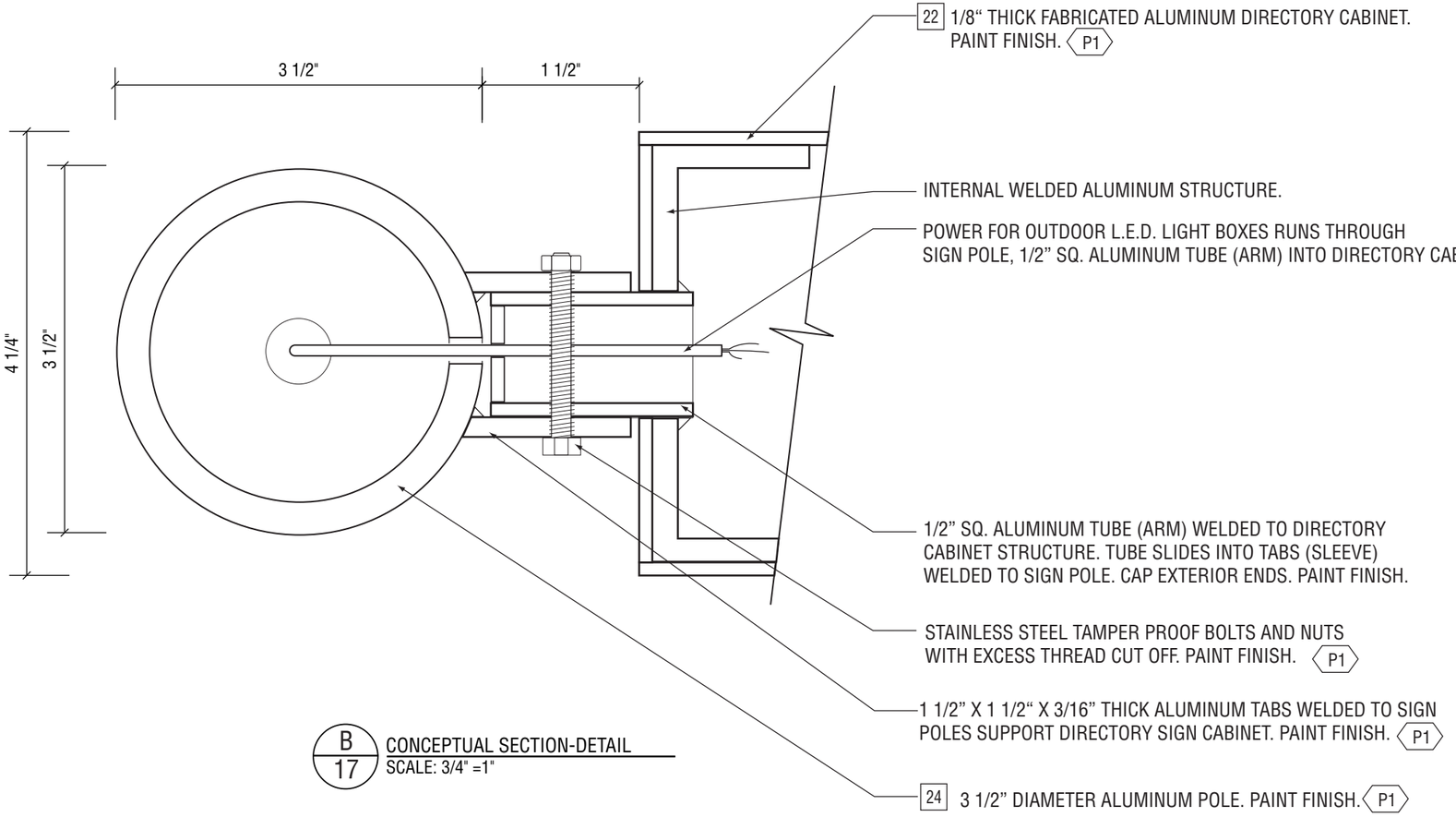
NOTES:
ALL SIGN ELEMENTS TO HAVE ANTI GRAFFITI COATING.
ALL HARDWARE TO BE VANDAL RESISTANT.
VERIFY BELOW GRADE CONDITIONS BEFORE CORING FOOTINGS.

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THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/16/11
SCALE AS NOTED
DESIGNER
FILE NAME 3rd AveVill _DesInt ALL Signs
SIGN TYPE G
SHEET 16



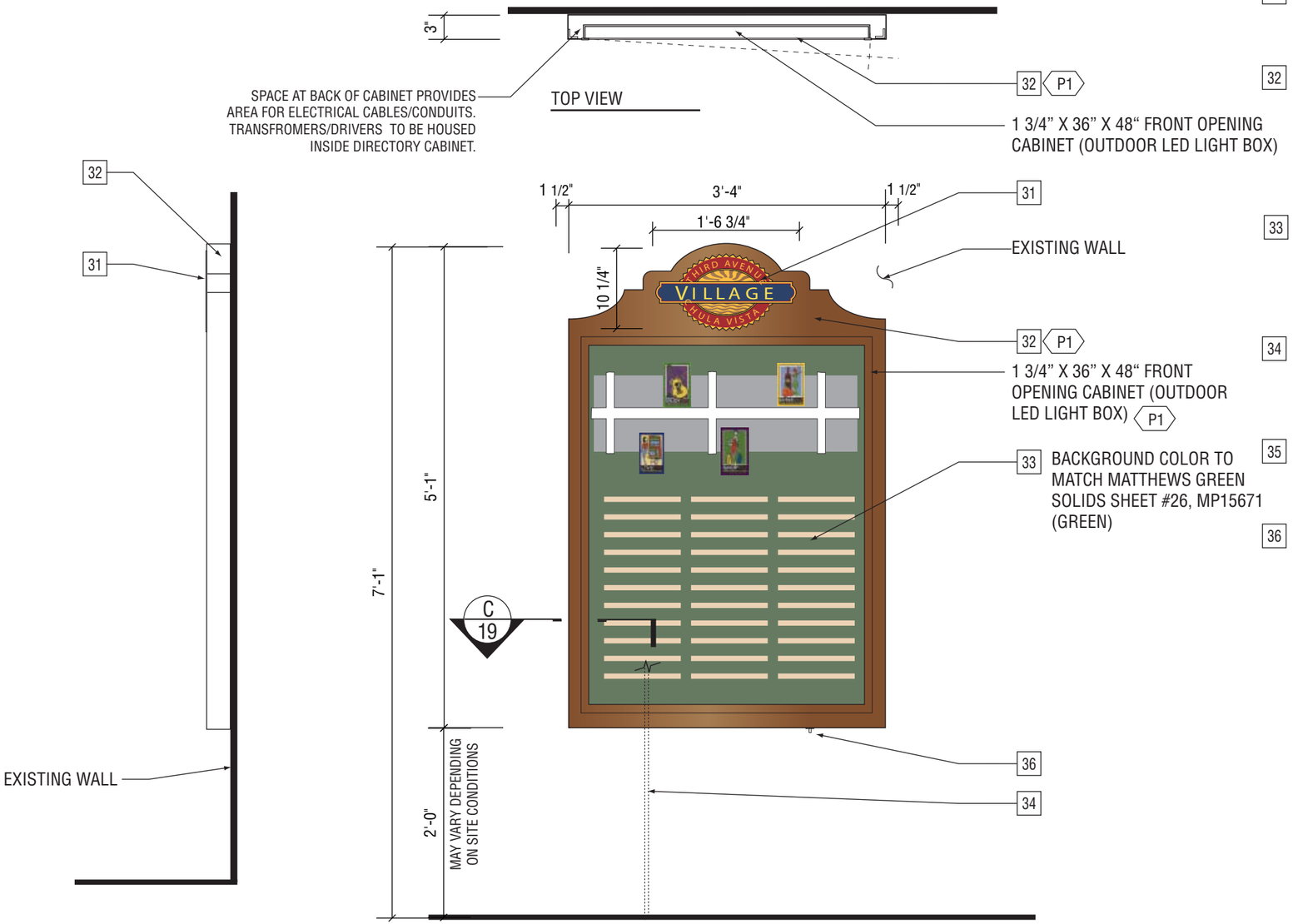
B / 17 CONCEPTUAL SECTION-DETAIL
SCALE: 3/4" =1"

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DATE 01/04/11
SCALE AS NOTED
DESIGNER
FILE NAME 3rd AveVill DesInt ALL Signs
SIGN TYPE G
SHEET 17



SPECIFICATIONS FOR SIGN TYPE "G" - WALL MOUNTED

31 "VILLAGE" LOGO:
CAST ALUMINUM PAINT FILLED OR PORCELAIN ENAMEL.
ATTACH TO DIRECTORY CABINET WITH STAINLESS STEEL BACK PINS.

32 DIRECTORY CABINET:
FABRICATED ALUMINUM DIRECTORY CABINET WITH INTERNAL ALUMINUM STRUCTURE HOUSES A FRONT OPENING CABINET FROM DSA PHOTOTECH (OR EQUIVALENT), 1 3/4" X 36" X 48" OUTDOOR LED LIGHT BOX WITH INTERNAL POWER SUPPLY. WEATHER PROOF, SEALED DOOR WITH SECURITY LOCK. PAINT FINISH.

33 DIRECTORY MAP:
TRANSLUCENT 4-COLOR DIGITAL OUTPUT MAP GRAPHICS 3M STANDARD. SIGN CONTRACTOR RESPONSIBLE FOR CREATING MAP ART WITH DESTINATION LOCATIONS AND TO GET FINAL ART APPROVAL FROM CLIENT. DESTINATION LOCATIONS TO BE PROVIDED BY CLIENT.

34 ELECTRICAL CONDUIT:
CONDUIT RUNS UP THROUGH WALL INTO SIGN CABINET. CITY CONTRACTOR PROVIDE STUB OUT AT SIGN LOCATION. (1) 15 AMP CIRCUIT. TO BE PROVIDED BY OTHERS.

35 AUTOMATED TIMER SWITCH:
PROVIDE AUTOMATED TIMER SWITCH FOR ON-OFF OPERATION OF SIGN AT NEAREST POWER SOURCE. (NOT SHOWN). TO BE PROVIDED BY OTHERS.

36 CUT OFF SWITCH:
SIGN CONTRACTOR TO PROVIDE CUT OFF SWITCH IF REQUIRED.

NOTES:
ALL SIGN ELEMENTS TO HAVE ANTI GRAFFITI COATING.
ALL HARDWARE TO BE VANDAL RESISTANT.
VERIFY BELOW GRADE CONDITIONS BEFORE CORING FOOTINGS.

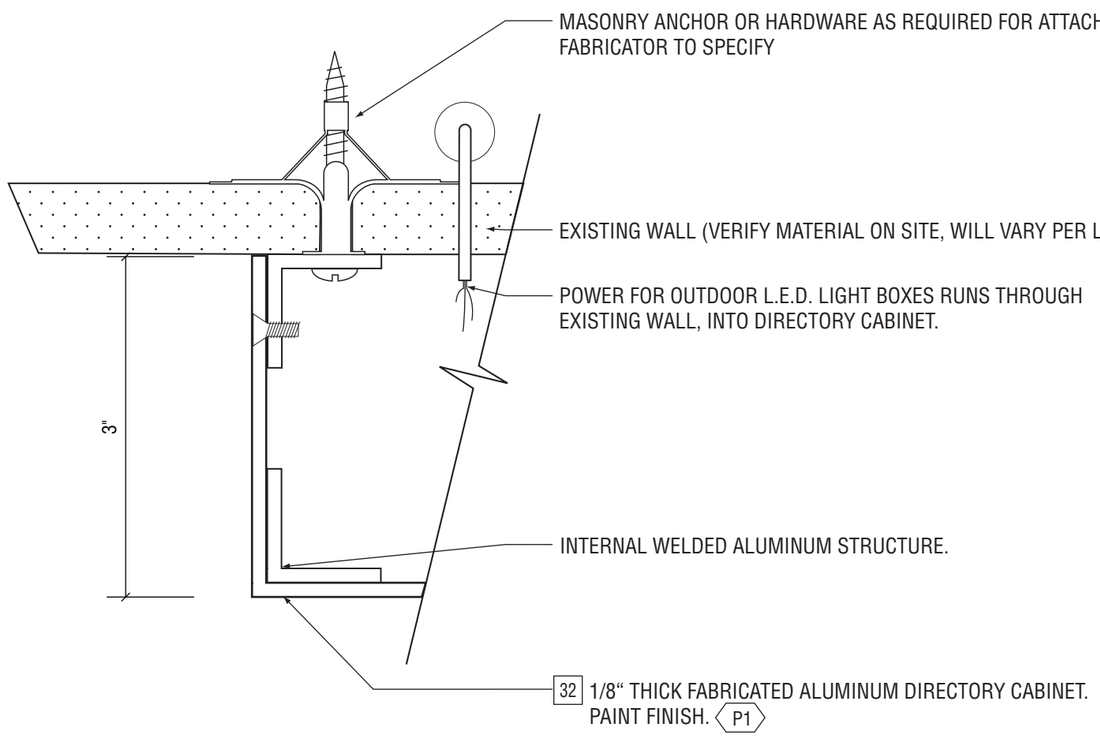
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DESIGNER
FILE NAME 3rd AveVill _DesInt ALL Signs
SIGN TYPE G
SHEET 18



C/19 CONCEPTUAL SECTION-DETAIL
SCALE: 3/4" =1"

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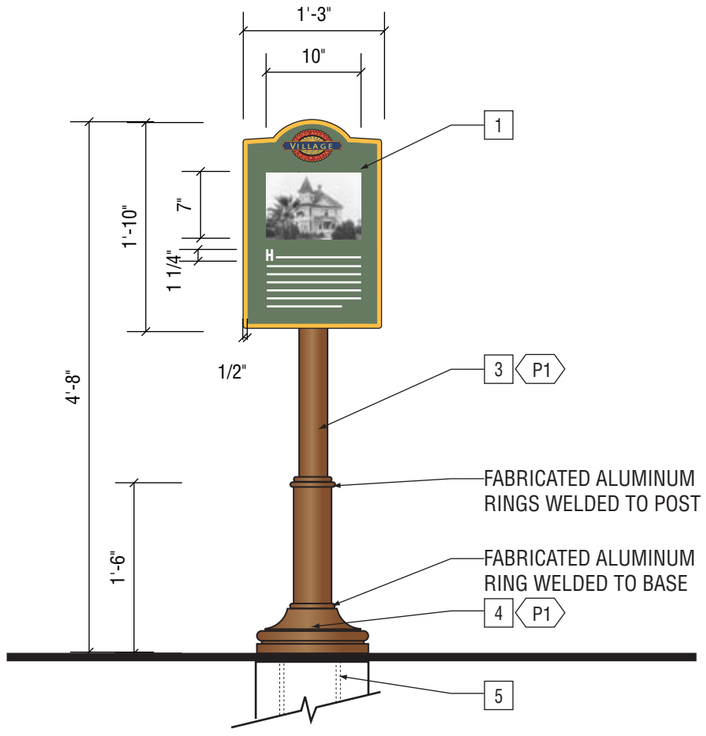
SCALE AS NOTED

DESIGNER

FILE NAME 3rd AveVill _DesInt ALL Signs

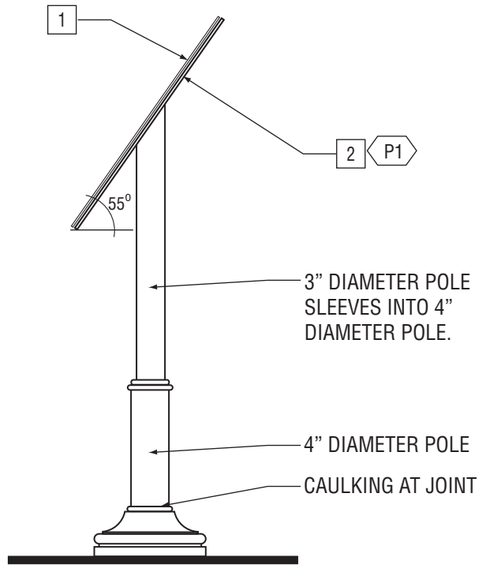
SIGN TYPE G

SHEET 19



INTERPRETIVE SIGN (SINGLE FACED)

SCALE: 3/4"= 1'-0"



SIDE VIEW

SPECIFICATIONS FOR SIGN TYPE "J"

1 SIGN PANEL:
FULL COLOR (12 INKS) DIGITAL HIGH PRESSURE LAMINATE PANEL BY FOSSIL INDUSTRIES OR EQUIVALENT. ATTACH TO ALUMINUM BACKING PANEL WITH 3M MARINE ADHESIVE/ SEALANT FAST CURE 4000 UV.

2 ALUMINUM BACKING PANEL:
1/4" FLAT ALUMINUM PANEL WELDED TO TOP OF 3" DIAMETER ALUMINUM SIGN POLE. PAINT FINISH.

3 SIGN POST:
3" AND 4" DIAMETER ALUMINUM POLES WELDED TO 3/8" ALUMINUM BASE PLATE, ANCHOR TO FOOTING WITH STAINLESS STEEL J-BOLTS. PAINT FINISH.

4 DECORATIVE POST BASE:
ONE PIECE ALUMINUM CASTING BASE SLEEVES OVER SIGN POST TO COVER ATTACHMENT BOLTS.
ALUMINUM CASTING #BC1-4 FROM SOUTH COAST LIGHTING & DESIGN. SECURE TO SIGN POLE WITH STAINLESS STEEL TAMPERPROOF HARDWARE AFTER SECURING SIGN POST TO J-BOLTS. PAINT FINISH.

5 CONCRETE FOOTING:
CONCRETE FOOTING PER STRUCTURAL ENGINEER CALCULATIONS SEE SHEET #26.
FABRICATED BY SIGN CONTRACTOR.
FOOTING TO INCLUDE J-BOLTS REQUIRED FOR ATTACHMENT OF SIGN.

NOTES:
ISOLATE DISSIMILAR METALS.
ALL WELDS TO BE GROUND SMOOTH AND FILLED.
ALL HARDWARE TO BE VANDAL RESISTANT.
ALL SIGN ELEMENTS TO HAVE ANTI GRAFFITI COATING.
VERIFY BELOW GRADE CONDITIONS BEFORE CORING FOOTINGS.

THE SIGN CONTRACTOR MUST VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, FIELD VERIFY EXACT LOCATIONS AND CONDITIONS FOR EACH SIGN AND NOTIFY THE CITY IN WRITING, OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS AS THEY AFFECT SIGN DESIGN OR LOCATION.

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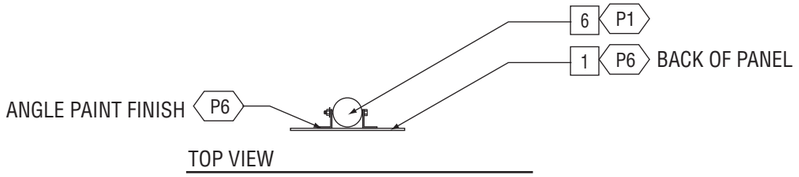
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SCALE AS NOTED

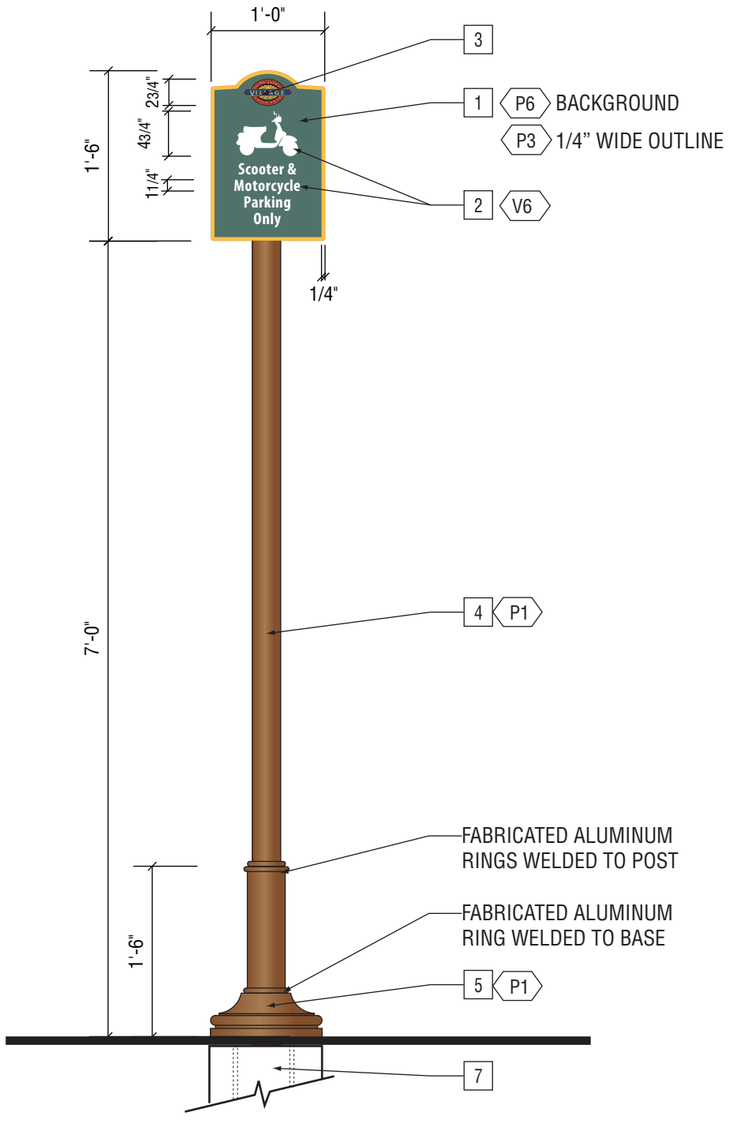
DESIGNER

FILE NAME 3rd AveVill _DesInt ALL Signs

SIGN TYPE J

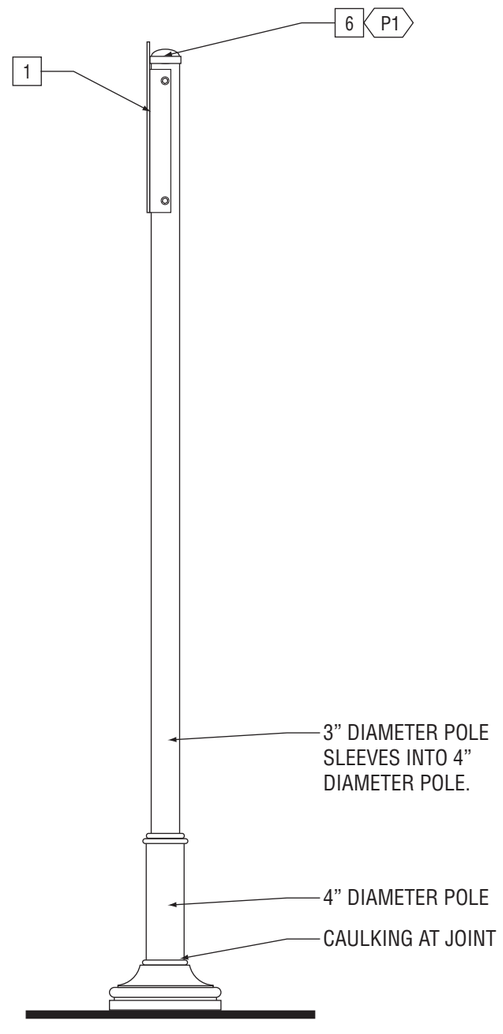


TOP VIEW



SCOOTER PARKING SIGN (SINGLE FACED)

SCALE: 3/4"= 1'-0"



SIDE VIEW

SPECIFICATIONS FOR SIGN TYPE "K"

1 SIGN PANEL:
1/8" THICK FLAT ALUMINUM SIGN PANEL. ALUMINUM ANGLES WELDED TO BACK AS BRACKETS. SECURE PANEL TO POST WITH STAINLESS STEEL TAMPER PROOF BOLTS. PAINT FINISH.

2 COPY AND SCOOTER GRAPHICS:
REFLECTIVE VINYL ADHERED TO SIGN PANEL FACE.

3 "VILLAGE" LOGO:
4 COLOR DIGITAL VINYL OUTPUT 3M STANDARD, ADHERED TO FACE OF SIGN CABINET. NEGATIVE AREAS IN SUN & WAVES TO BE REMOVED TO SHOW PAINT FINISHED BACKGROUND PANEL.

4 SIGN POST:
3" AND 4" DIAMETER ALUMINUM POLES WELDED TO ALUMINUM BASE PLATE, ANCHOR TO FOOTING WITH STAINLESS STEEL J-BOLTS. PAINT FINISH.

5 DECORATIVE POST BASE:
ONE PIECE CAST ALUMINMUM BASE SLEEVES OVER SIGN POST. ALUMINUM CASTING #BC1-4 FROM SOUTH COAST LIGHTING & DESIGN. SECURE TO SIGN POST WITH STAINLESS STEEL TAMPERPROOF HARDWARE AFTER SECURING SIGN POST TO J-BOLTS. PAINT FINISH.

6 POLE CAP:
STOCK ALUMINUM 3" DIAMETER POLE CAP WELDED IN PLACE. PAINT FINISH.

7 CONCRETE FOOTING:
CONCRETE FOOTING PER STRUCTURAL ENGINEER CALCULATIONS SEE SHEET #27.
FABRICATED BY SIGN CONTRACTOR.
FOOTING TO INCLUDE J-BOLTS REQUIRED FOR ATTACHMENT OF SIGN.

NOTES:
ISOLATE DISSIMILAR METALS.
ALL WELDS TO BE GROUND SMOOTH AND FILLED.
ALL HARDWARE TO BE VANDAL RESISTANT.
ALL SIGN ELEMENTS TO HAVE ANTI GRAFFITI COATING.
VERIFY BELOW GRADE CONDITIONS BEFORE CORING FOOTINGS.

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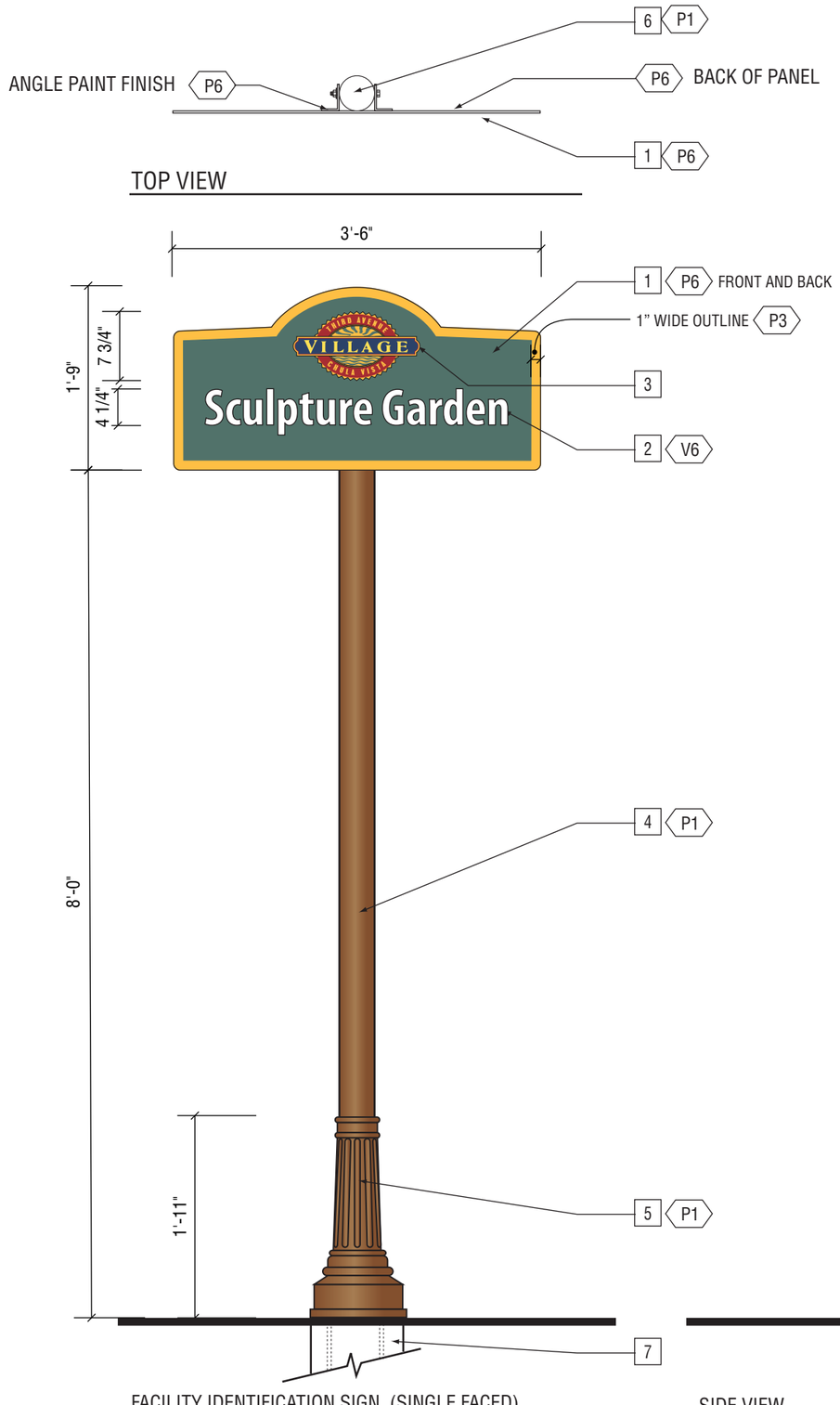
DATE 01/16/11

SCALE AS NOTED

DESIGNER

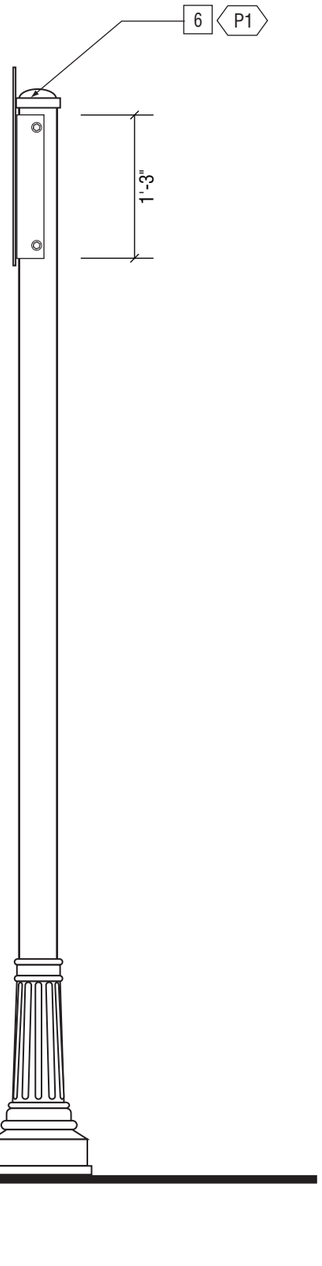
FILE NAME 3rd AveVill _DesInt ALL Signs

SIGN TYPE K



FACILITY IDENTIFICATION SIGN (SINGLE FACED)

SCALE: 3/4"= 1'-0"



SIDE VIEW

SPECIFICATIONS FOR SIGN TYPE "L"

1 SIGN PANEL:
3/16" THICK FLAT ALUMINUM SIGN PANEL. ALUMINUM ANGLES WELDED TO BACK AS BRACKETS. SECURE PANEL TO POST WITH STAINLESS STEEL TAMPER PROOF BOLTS. PAINT FINISH.

2 FACILITY NAME:
OPAQUE VINYL ADHERED TO SIGN PANEL FACE. (NAME SHOWN IS TYPICAL FOR REPRESENTATIONAL PURPOSE ONLY).

3 "VILLAGE" LOGO:
4 COLOR DIGITAL VINYL OUTPUT 3M STANDARD, ADHERED TO FACE OF SIGN CABINET. NEGATIVE AREAS IN SUN & WAVES TO BE REMOVED TO SHOW PAINTED BACKGROUND.

4 SIGN POLE:
4" DIAMETER ALUMINUM POLE WITH WELDED ALUMINUM BASE PLATE, ANCHOR TO FOOTING WITH STAINLESS STEEL J-BOLTS. PER STRUCTURAL ENGINEER CALCULATIONS. PAINT FINISH.

5 DECORATIVE POLE BASE:
2 PIECE ALUMINUM CASTING (CLAMSHELL) # BCRVS1123. REVERE SMALL, FROM SOUTH COAST LIGHTING & DESIGN. ATTACHMENT HARDWARE TO BE TAMPERPROOF. 11" WIDE X 23" HIGH. PAINT FINISH.

6 POLE CAP:
STOCK ALUMINUM 4" DIAMETER POLE CAP WELDED IN PLACE. PAINT FINISH.

7 CONCRETE FOOTING:
CONCRETE FOOTING PER STRUCTURAL ENGINEER CALCULATIONS SEE SHEET #28.
FABRICATED BY SIGN CONTRACTOR.
FOOTING TO INCLUDE J-BOLTS REQUIRED FOR ATTACHMENT OF SIGN.

NOTES:
MOUNTING AND LAYOUT MAY CHANGE BASED ON SITE CONDITIONS.
ISOLATE DISSIMILAR METALS.
ALL HARDWARE TO BE VANDAL RESISTANT.
ALL SIGN ELEMENTS TO HAVE ANTI GRAFFITI COATING.
VERIFY BELOW GRADE CONDITIONS BEFORE CORING FOOTINGS.

THE SIGN CONTRACTOR MUST VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, FIELD VERIFY EXACT LOCATIONS AND CONDITIONS FOR EACH SIGN AND NOTIFY THE CITY IN WRITING, OF ANY DISCREPANCIES, OMISSIONS, OR CLARIFICATIONS AS THEY AFFECT SIGN DESIGN OR LOCATION.

GRAPHIC SOLUTIONS®
ENVIRONMENTAL GRAPHIC DESIGN
2952 MAIN STREET - SAN DIEGO, CA 92113
TEL (619) 239-1335 FAX (619) 235-6018

GRAPHIC SOLUTIONS LTD. DESIGNER OF RECORD SAN DIEGO, CALIFORNIA
Signature
01/04/2011
Date

THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/16/11

SCALE AS NOTED

DESIGNER

FILE NAME 3rd AveVill _DesInt ALL Signs

SIGN TYPE L

Y.J. INC.

25379 Wayne Mills Pl # 272
Valencia, CA 91355

DATE 1/12/2011
TEL: (661) 259-0700
FAX: (661) 259-0900

Sign Design Based on 2007 CBC

Job #	JTS_2411
Project	Third Avenue Village Sign B
Job Location	Chula Vista, CA

INPUT DATA

Exposure category (B, C or D)		=	C	
Importance factor, pg 77, (0.87, 1.0 or 1.15)	I	=	1.00	Category II
Basic wind speed (3 sec. gust wind)	V	=	90	mph
Topographic factor (Sec.6.5.7.2, pg 26 & 45)	K_{zt}	=	1	Flat
Height to Top	h	=	20.5	ft
Vertical dimension (for wall, s = h)	s	=	5	ft
Horizontal dimension	B	=	11.17	ft
Dimension of return corner	L_r	=	1	ft
Moment Arm	A	=	17.5	ft

DESIGN SUMMARY

Max horizontal wind pressure	p	=	24	psf
Max total horizontal force at centroid of base	F	=	**1.340**	kips
Max bending moment at centroid of base	M	=	**23.457**	ft-kips

ANALYSIS

Velocity pressure

$q_h = 0.00256\ K_h K_{zt} K_d V^2 I$ = 15.93 psf

where:

q_h = velocity pressure at mean roof height, h. (Eq. 6-15, page 27)			
K_h = velocity pressure exposure coefficient evaluated at height, h,(Tab. 6-3, Case 1, pg 79)	=	0.90	
K_d = wind directionality factor. (Tab. 6-4, for building, page 80)	=	0.85	
h = height of top	=	20.50	ft

Wind Force Case A: resultant force though the geometric center (Sec. 6.5.14 & Fig. 6-20)

$p = q_h G C_f$ =	=	24	psf
$F = p A_s$	=	1.34	kips
M = F (h - 0.5s) for sign, F (0.55h) for wall	=	23.46	ft-kips
where: G = gust effect factor. (Sec. 6.5.8, page 26).	=	0.85	
C_f = net force coefficient. (Fig. 6-20, page 73)		1.80	
$A_s = B\ s$	=	55.9	ft^2

Footing Design (Unconstrained)

Diameter	2.00	FT
Soil Pressure	100.00	PSF/FT
S_1	693.37	PSF
A	2.26	FT
EMBED.	7.74	FT

24" Dia.	**Depth = 7'-9"**

Base Pole Design

Std' St'l Pipe

MOD.	Required	USE A500 Grade B	
S	13.40	**8" Dia., t=0.322"**	S=16.8

2nd Pole Design

Std' St'l Pipe

MOD.	Required	USE A500 Grade B	
S	1.83	**4" Dia., t=0.237"**	S=3.21

Anchor Bolt Design

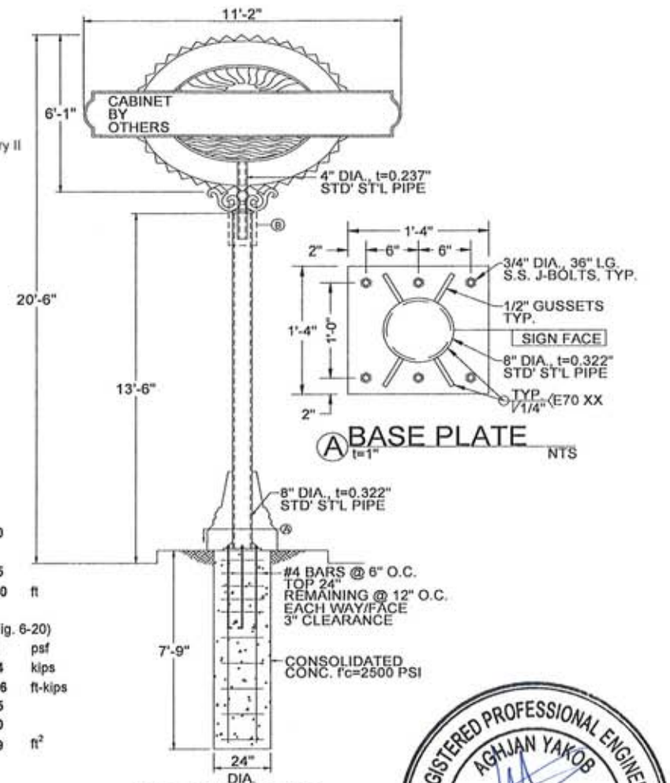
St'l. J-Bolts

TENSION	Required	USE Stainless Steel	
Ten	7819	**3/4" Dia.x 36" LG.**	T=9,210

Base Plate

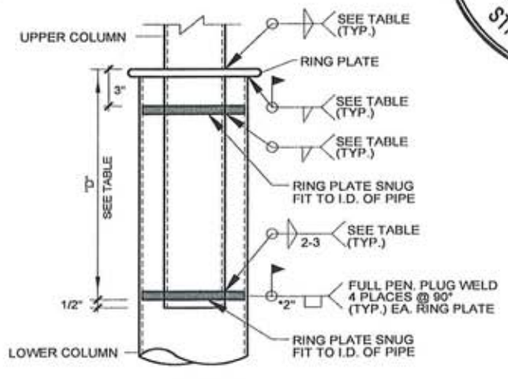
St'l Plate

THICKNESS	Required	USE A36	
Thick	0.82	**PL 16" x 16" x 1"**	t=1.0"



ELEVATION NTS

Ⓐ BASE PLATE t=1" NTS



Ⓐ STEP DOWN NTS

UPPER COL. DIA.	"D"	WELD SIZE	RING PL.
UP TO 8" Ø	18"	3/16"	1/2"

REGISTERED PROFESSIONAL ENGINEER
AGHJAN YAKOB
No. C53791
1/30/2011
CIVIL
STATE OF CALIFORNIA

1-12-2011

GRAPHIC SOLUTIONS®
ENVIRONMENTAL GRAPHIC DESIGN
2952 MAIN STREET - SAN DIEGO, CA 92113
TEL (619) 239-1335 FAX (619) 235-6018

THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/16/11
SCALE AS NOTED
DESIGNER
FILE NAME 3rd AveVill DesInt ALL Signs
SIGN TYPE B

Y.J. INC.

25379 Wayne Mills Pl # 272
Valencia, CA 91355

DATE 1/12/2011
TEL: (661) 259-0700
FAX: (661) 259-0900

Sign Design Based on 2007 CBC

Job #	JTS_2411
Project	Third Avenue Village Sign E
Job Location	Chula Vista, CA

INPUT DATA

Exposure category (B, C or D)		=	C	
Importance factor, pg 77, (0.87, 1.0 or 1.15)	I	=	1.00	Category II
Basic wind speed (3 sec. gust wind)	V	=	90	mph
Topographic factor (Sec.6.5.7.2, pg 26 & 45)	K_{zt}	=	1	Flat
Height to Top	h	=	11.08	ft
Vertical dimension (for wall, s = h)	s	=	4.58	ft
Horizontal dimension	B	=	2.5	ft
Dimension of return corner	L_r	=	0.25	ft
Moment Arm	A	=	9.5	ft

DESIGN SUMMARY

Max horizontal wind pressure	p	=	23	psf
Max total horizontal force at centroid of base	F	=	**0.263**	kips
Max bending moment at centroid of base	M	=	**2.502**	ft-kips

ANALYSIS

Velocity pressure

$q_h = 0.00256\ K_h K_{zt} K_d V^2 I$ = 14.98 psf

where:

q_h = velocity pressure at mean roof height, h. (Eq. 6-15, page 27)

K_h = velocity pressure exposure coefficient evaluated at height, h,(Tab. 6-3, Case 1, pg 79)	=	0.85	
K_d = wind directionality factor. (Tab. 6-4, for building, page 80)	=	0.85	
h = height of top	=	11.08	ft

Wind Force Case A: resultant force though the geometric center (Sec. 6.5.14 & Fig. 6-20)

$p = q_h G C_f$ =	=	23	psf
$F = p A_s$	=	0.26	kips
M = F (h - 0.5s) for sign, F (0.55h) for wall	=	2.50	ft-kips
where: G = gust effect factor. (Sec. 6.5.8, page 26).	=	0.85	
C_f = net force coefficient. (Fig. 6-20, page 73)		1.77	
$A_s = B\ s$	=	11.5	ft^2

Footing Design (Unconstrained)

Diameter	1.50 FT
Soil Pressure	100.00 PSF/FT
S_1	354.67 PSF
A	1.16 FT
EMBED.	4.08 FT

18" Dia.	Depth = 4'-1"

Pole Design — Alum. Round Pipe

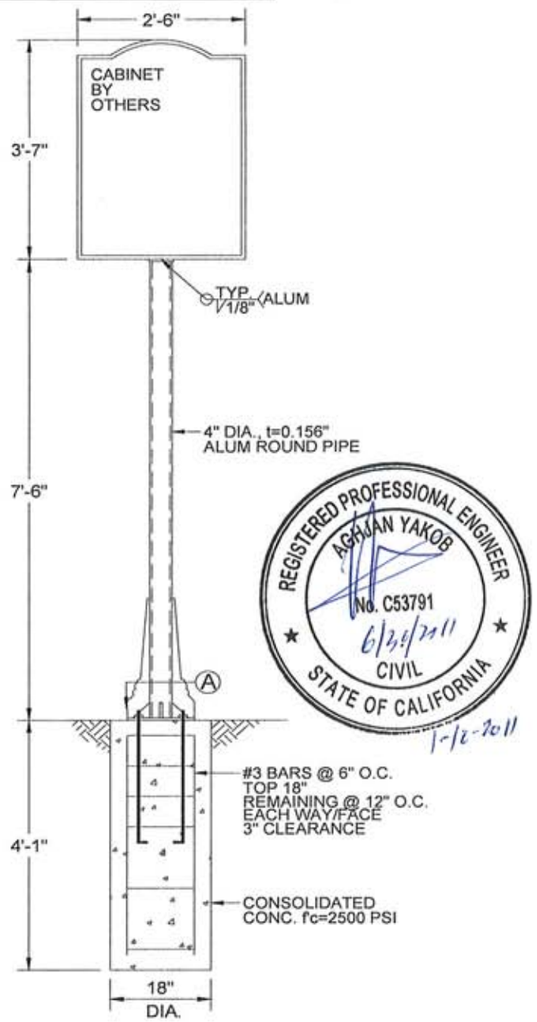
MOD.	Required	USE 6061-T6	
S	1.58	4" Dia., t=0.156"	S=1.75

Anchor Bolt Design — St'l. J-Bolts

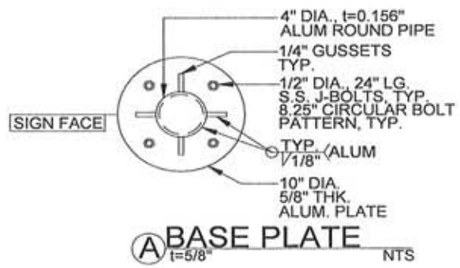
TENSION	Required	USE Stainless Steel	
Ten	1876	1/2" Dia.x 24" LG.	T=4,110

Base Plate — Alum. Plate

THICKNESS	Required	USE 6061-T6	
Thick	0.55	PL 10" Dia., 5/8" Thk.	t=0.625"



ELEVATION NTS



A BASE PLATE t=5/8" NTS

REGISTERED PROFESSIONAL ENGINEER
AGHJAN YAKOB
No. C53791
6/30/2011
CIVIL
STATE OF CALIFORNIA
1-12-2011

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THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/16/11
SCALE AS NOTED
DESIGNER
FILE NAME 3rd AveVill _DesInt ALL Signs
SIGN TYPE E

Y.J. INC.

25379 Wayne Mills Pl # 272
Valencia, CA 91355

DATE 1/12/2011
TEL: (661) 259-0700
FAX: (661) 259-0900

Sign Design Based on 2007 CBC

Job #	JTS_2411
Project	Third Avenue Village Sign G
Job Location	Chula Vista, CA

INPUT DATA

Exposure category (B, C or D)		=	C	
Importance factor, pg 77, (0.87, 1.0 or 1.15)	I	=	1.00	Category II
Basic wind speed (3 sec. gust wind)	V	=	90	mph
Topographic factor (Sec.6.5.7.2, pg 26 & 45)	K_{zt}	=	1	Flat
Height to Top	h	=	7.08	ft
Vertical dimension (for wall, s = h)	s	=	7.08	ft
Horizontal dimension	B	=	4	ft
Dimension of return corner	L_r	=	0.5	ft
Moment Arm	A	=	4	ft

DESIGN SUMMARY

Max horizontal wind pressure	p	=	23	psf
Max total horizontal force at centroid of base	F	=	**0.651**	kips
Max bending moment at centroid of base	M	=	**2.605**	ft-kips

ANALYSIS

Velocity pressure

$q_h = 0.00256\ K_h K_{zt} K_d V^2 I$ = 14.98 psf

where:

q_h = velocity pressure at mean roof height, h. (Eq. 6-15, page 27)

K_h = velocity pressure exposure coefficient evaluated at height, h,(Tab. 6-3, Case 1, pg 79)	=	0.85	
K_d = wind directionality factor. (Tab. 6-4, for building, page 80)	=	0.85	
h = height of top	=	7.08	ft

Wind Force Case A: resultant force though the geometric center (Sec. 6.5.14 & Fig. 6-20)

$p = q_h G C_f$ =	=	23	psf
$F = p A_s$	=	0.65	kips
$M = F (h - 0.5s)$ for sign, $F (0.55h)$ for wall	=	2.61	ft-kips
where: G = gust effect factor. (Sec. 6.5.8, page 26).	=	0.85	
C_f = net force coefficient. (Fig. 6-20, page 73)	=	1.54	
$A_s = B\ s$	=	28.3	ft^2

Footing Design (Unconstrained)

Diameter	1.50 FT
Soil Pressure	100.00 PSF/FT
S_1	310.33 PSF
A	1.64 FT
EMBED.	3.57 FT

18" Dia.	Depth = 3'-8"

Base Pole Design — Alum. Round Pipe

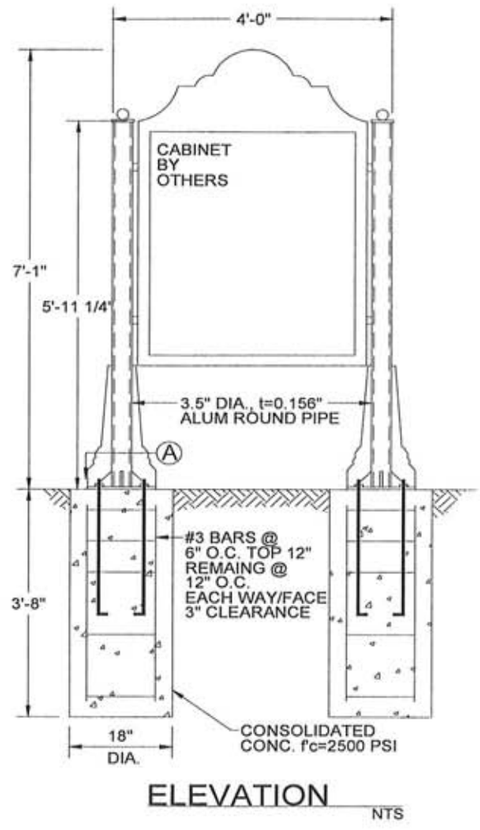
MOD.	Required	USE 6061-T6	
S	0.82	3.5" Dia., t=0.156"	S=1.31

Anchor Bolt Design — St'l. J-Bolts

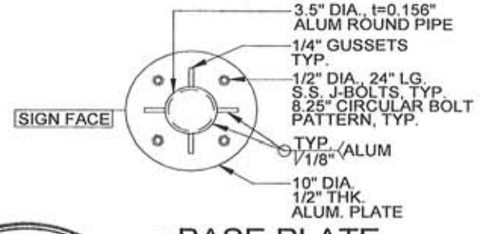
TENSION	Required	USE Stainless Steel	
Ten	977	1/2" Dia.x 24" LG.	T=4,110

Base Plate — Alum. Plate

THICKNESS	Required	USE 6061-T6	
Thick	0.40	PL 10" Dia., 1/2" Thk.	t=0.5"



ELEVATION NTS



A BASE PLATE t=1/2" NTS

REGISTERED PROFESSIONAL ENGINEER
AGHAN YAKOB
No. C53791
6/30/2011
CIVIL
STATE OF CALIFORNIA

1-12-2011

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ENVIRONMENTAL GRAPHIC DESIGN
2952 MAIN STREET - SAN DIEGO, CA 92113
TEL (619) 239-1335 FAX (619) 235-6018

THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/16/11
SCALE AS NOTED
DESIGNER
FILE NAME 3rd AveVill _DesInt ALL Signs
SIGN TYPE G
SHEET 25

Y.J. INC.

25379 Wayne Mills Pl # 272
Valencia, CA 91355

DATE 1/12/2011
TEL: (661) 259-0700
FAX: (661) 259-0900

Sign Design Based on 2007 CBC

Job #	JTS_2411
Project	Third Avenue Village Sign J
Job Location	Chula Vista, CA

INPUT DATA

Exposure category (B, C or D)		=	C	
Importance factor, pg 77, (0.87, 1.0 or 1.15)	I	=	1.00	Category II
Basic wind speed (3 sec. gust wind)	V	=	90	mph
Topographic factor (Sec.6.5.7.2, pg 26 & 45)	K_{zt}	=	1	Flat
Height to Top	h	=	4.67	ft
Vertical dimension (for wall, s = h)	s	=	2.5	ft
Horizontal dimension	B	=	1.25	ft
Dimension of return corner	L_r	=	0.25	ft
Moment Arm	A	=	4	ft

DESIGN SUMMARY

Max horizontal wind pressure	p	=	23	psf
Max total horizontal force at centroid of base	F	=	**0.072**	kips
Max bending moment at centroid of base	M	=	**0.288**	ft-kips

ANALYSIS

Velocity pressure

$q_h = 0.00256\ K_h K_{zt} K_d V^2 I$ = **14.98** psf

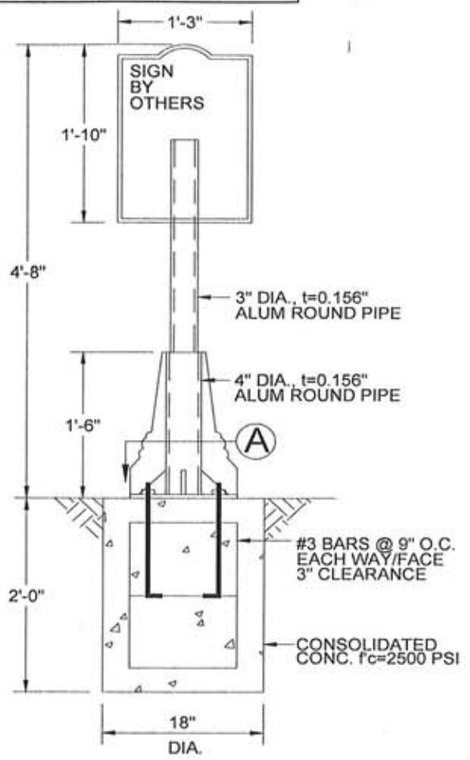
where:

q_h = velocity pressure at mean roof height, h. (Eq. 6-15, page 27)

K_h = velocity pressure exposure coefficient evaluated at height, h,(Tab. 6-3, Case 1, pg 79)	=	0.85	
K_d = wind directionality factor. (Tab. 6-4, for building, page 80)	=	0.85	
h = height of top	=	4.67	ft

Wind Force Case A: resultant force though the geometric center (Sec. 6.5.14 & Fig. 6-20)

$p = q_h G C_f$ =	=	23	psf
$F = p A_s$	=	0.07	kips
M = F (h - 0.5s) for sign, F (0.55h) for wall	=	0.29	ft-kips
where: G = gust effect factor. (Sec. 6.5.8, page 26).	=	0.85	
C_f = net force coefficient. (Fig. 6-20, page 73)		1.74	
$A_s = B s$	=	3.1	ft^2



ELEVATION
NTS

Footing Design (Unconstrained)

Diameter	1.50 FT
Soil Pressure	100.00 PSF/FT
S_1	180.88 PSF
A	0.62 FT
EMBED.	2.00 FT

18" Dia.	**Depth = 2'-0"**

Base Pole Design — Alum. Round Pipe

MOD.	Required	USE 6061-T6	
S	0.18	**4" Dia., t=0.156"**	S=1.75

Second Pole Design — Alum. Round Pipe

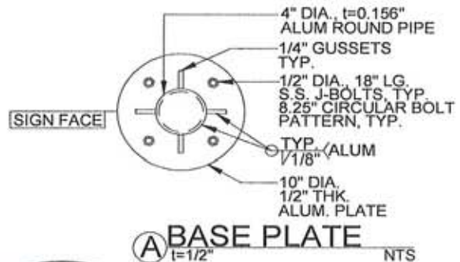
MOD.	Required	USE 6061-T6	
S	0.16	**3" Dia., t=0.156"**	S=0.944

Anchor Bolt Design — St'l. J-Bolts

TENSION	Required	USE Stainless Steel	
Ten	216	**1/2" Dia.x 12" LG.**	T=4,110

Base Plate — Alum. Plate

THICKNESS	Required	USE 6061-T6	
Thick	0.19	**PL 10" Dia., 1/2" Thk.**	t=0.5"



A BASE PLATE t=1/2"
NTS

REGISTERED PROFESSIONAL ENGINEER
AGHAVAN YAKOB
No. C53791
6/30/2011
CIVIL
STATE OF CALIFORNIA

1-12-2011

GRAPHIC SOLUTIONS®
ENVIRONMENTAL GRAPHIC DESIGN
2952 MAIN STREET - SAN DIEGO, CA 92113
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THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/16/11

SCALE AS NOTED

DESIGNER

FILE NAME 3rd AveVill DesInt ALL Signs

SIGN TYPE J

Y.J. INC.

25379 Wayne Mills Pl # 272
Valencia, CA 91355

DATE 1/12/2011
TEL: (661) 259-0700
FAX: (661) 259-0900

Sign Design Based on 2007 CBC

Job #	JTS_2411
Project	Third Avenue Village Sign K
Job Location	Chula Vista, CA

INPUT DATA

Exposure category (B, C or D)		=	C	
Importance factor, pg 77, (0.87, 1.0 or 1.15)	I	=	1.00	Category II
Basic wind speed (3 sec. gust wind)	V	=	90	mph
Topographic factor (Sec.6.5.7.2, pg 26 & 45)	K_{zt}	=	1	Flat
Height to Top	h	=	8.5	ft
Vertical dimension (for wall, s = h)	s	=	2.5	ft
Horizontal dimension	B	=	1	ft
Dimension of return corner	L_s	=	0.25	ft
Moment Arm	A	=	7	ft

DESIGN SUMMARY

Max horizontal wind pressure	p	=	23	psf
Max total horizontal force at centroid of base	F	=	**0.058**	kips
Max bending moment at centroid of base	M	=	**0.403**	ft-kips

ANALYSIS

Velocity pressure

$q_h = 0.00256\ K_h K_{zt} K_d V^2 I$ = 14.98 psf

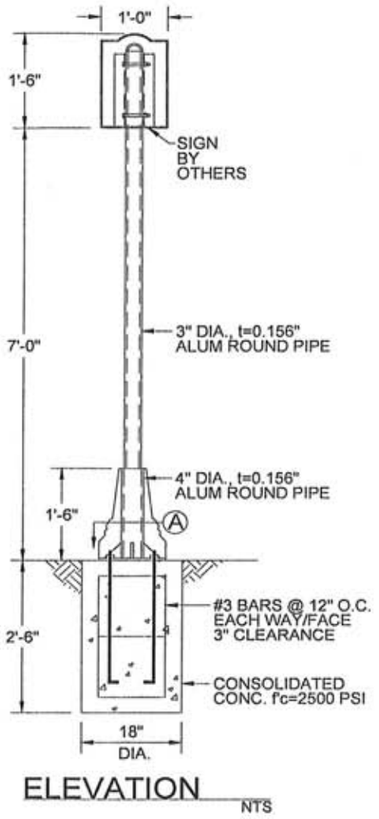
where:

q_h = velocity pressure at mean roof height, h. (Eq. 6-15, page 27)

K_h = velocity pressure exposure coefficient evaluated at height, h,(Tab. 6-3, Case 1, pg 79)	=	0.85	
K_d = wind directionality factor. (Tab. 6-4, for building, page 80)	=	0.85	
h = height of top	=	8.50	ft

Wind Force Case A: resultant force though the geometric center (Sec. 6.5.14 & Fig. 6-20)

$p = q_h G C_f$ =	=	23	psf
$F = p A_s$	=	0.06	kips
M = F (h - 0.5s) for sign, F (0.55h) for wall	=	0.40	ft-kips
where: G = gust effect factor. (Sec. 6.5.8, page 26).	=	0.85	
C_f = net force coefficient. (Fig. 6-20, page 73)		1.82	
$A_s = B\ s$	=	2.5	ft^2



ELEVATION NTS

Footing Design (Unconstrained)

Diameter	1.50	FT
Soil Pressure	100.00	PSF/FT
S_1	177.33	PSF
A	0.51	FT
EMBED.	2.25	FT

18" Dia.	Depth = 2'-6"

Base Pole Design — Alum. Round Pipe

MOD.	Required	USE 6061-T6	
S	0.25	4" Dia., t=0.156"	S=1.75

Second Pole Design — Alum. Round Pipe

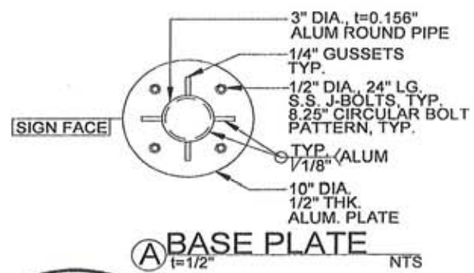
MOD.	Required	USE 6061-T6	
S	0.22	3" Dia., t=0.156"	S=0.944

Anchor Bolt Design — St'l. J-Bolts

TENSION	Required	USE Stainless Steel	
Ten	302	1/2" Dia.x 24" LG.	T=4,110

Base Plate — Alum. Plate

THICKNESS	Required	USE 6061-T6	
Thick	0.22	PL 10" Dia., 1/2" Thk.	t=0.5"



A BASE PLATE t=1/2" NTS



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THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/16/11

SCALE AS NOTED

DESIGNER

FILE NAME 3rd AveVill _DesInt ALL Signs

SIGN TYPE K

SHEET 27

Y.J. INC.

25379 Wayne Mills Pl # 272
Valencia, CA 91355

DATE 1/12/2011
TEL: (661) 259-0700
FAX: (661) 259-0900

Sign Design Based on 2007 CBC

Job #	JTS_2411
Project	Third Avenue Village Sign L
Job Location	Chula Vista, CA

INPUT DATA

Exposure category (B, C or D)		=	C	
Importance factor, pg 77, (0.87, 1.0 or 1.15)	I	=	1.00	Category II
Basic wind speed (3 sec. gust wind)	V	=	90	mph
Topographic factor (Sec.6.5.7.2, pg 26 & 45)	K_{zt}	=	1	Flat
Height to Top	h	=	9.75	ft
Vertical dimension (for wall, s = h)	s	=	2.75	ft
Horizontal dimension	B	=	3.5	ft
Dimension of return corner	L_r	=	0.25	ft
Moment Arm	A	=	8	ft

DESIGN SUMMARY

Max horizontal wind pressure	p	=	23	psf
Max total horizontal force at centroid of base	F	=	**0.221**	kips
Max bending moment at centroid of base	M	=	**1.771**	ft-kips

ANALYSIS

Velocity pressure

$q_h = 0.00256\ K_h K_{zt} K_d V^2 I$ = 14.98 psf

where:

q_h = velocity pressure at mean roof height, h. (Eq. 6-15, page 27)			
K_h = velocity pressure exposure coefficient evaluated at height, h,(Tab. 6-3, Case 1, pg 79)	=	0.85	
K_d = wind directionality factor. (Tab. 6-4, for building, page 80)	=	0.85	
h = height of top	=	9.75	ft

Wind Force Case A: resultant force though the geometric center (Sec. 6.5.14 & Fig. 6-20)

$p = q_h G C_f$ =	=	23	psf
$F = p A_s$	=	0.22	kips
M = F (h - 0.5s) for sign, F (0.55h) for wall	=	1.77	ft-kips
where: G = gust effect factor. (Sec. 6.5.8, page 26).	=	0.85	
C_f = net force coefficient. (Fig. 6-20, page 73)		1.80	
$A_s = B\ s$	=	9.6	ft^2

Footing Design (Unconstrained)

Diameter	1.50	FT
Soil Pressure	100.00	PSF/FT
S_1	317.43	PSF
A	1.09	FT
EMBED.	3.67	FT

18" Dia.	**Depth = 3'-9"**

Pole Design — Alum. Round Pipe

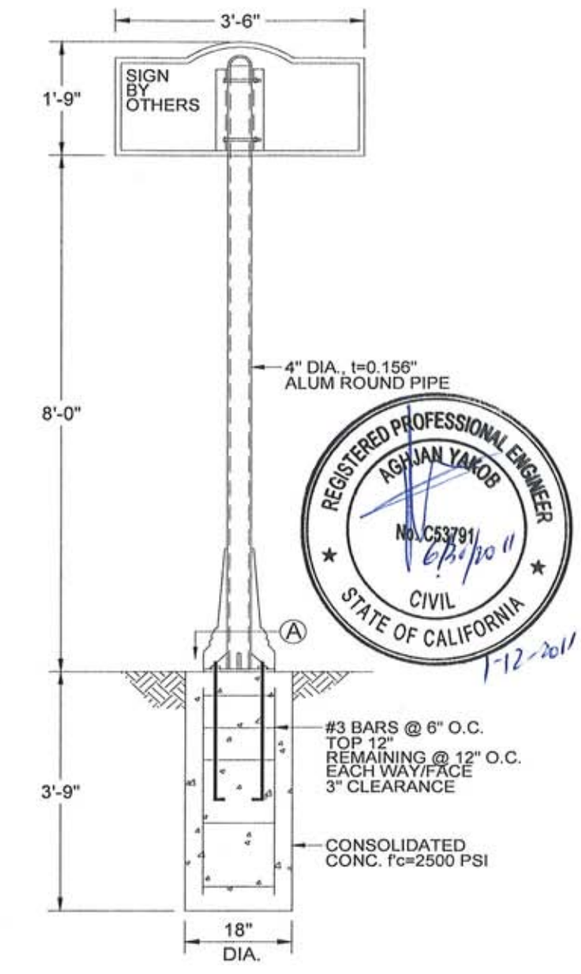
MOD.	Required	USE 6061-T6	
S	1.12	**4" Dia., t=0.156"**	S=1.75

Anchor Bolt Design — St'l. J-Bolts

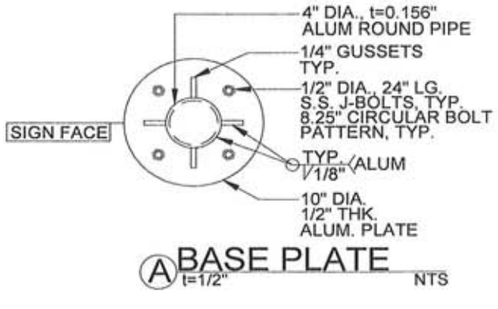
TENSION	Required	USE Stainless Steel	
Ten	1328	**1/2" Dia.x 24" LG.**	T=4,110

Base Plate — Alum. Plate

THICKNESS	Required	USE 6061-T6	
Thick	0.46	**PL 10" Dia., 1/2" Thk.**	t=0.5"



ELEVATION
NTS



A BASE PLATE t=1/2"
NTS

REGISTERED PROFESSIONAL ENGINEER
AGHJAN YAKOB
No. C53791
CIVIL
STATE OF CALIFORNIA
1-12-2011

GRAPHIC SOLUTIONS®
ENVIRONMENTAL GRAPHIC DESIGN
2952 MAIN STREET - SAN DIEGO, CA 92113
TEL (619) 239-1335 FAX (619) 235-4018

THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 01/16/11

SCALE AS NOTED

DESIGNER

FILE NAME 3rd AveVill _DesInt ALL Signs

SIGN TYPE L

Y.J. INC.

25379 Wayne Mills Pl # 272
Valencia, CA 91355

DATE 2/2/2010

TEL: (661) 259-0700
FAX: (661) 259-0900

Sign Design Based on 2010 CBC

Job #	JTS_6112_R
Project	Third Avenue Village Sign C - Pylon
Job Location	Third Avenue Village Chula Vista, CA

INPUT DATA

Exposure category (B, C or D)		=	C	
Importance factor, pg 77, (0.87, 1.0 or 1.15)	I	=	1.00	Category II
Basic wind speed (3 sec. gust wind)	V	=	90	mph
Topographic factor (Sec.6.5.7.2, pg 26 & 45)	K_{zt}	=	1	Flat
Height to Top	h	=	14.17	ft
Vertical dimension (for wall, s = h)	s	=	5.5	ft
Horizontal dimension	B	=	3.5	ft
Dimension of return corner	L_r	=	0.33	ft
Moment Arm	A	=	11.21	ft

DESIGN SUMMARY

Max horizontal wind pressure	p	=	23	psf
Max total horizontal force at centroid of base	F	=	**0.443**	kips
Max bending moment at centroid of base	M	=	**4.963**	kip-ft

ANALYSIS

Velocity pressure

$q_h = 0.00256\ K_h K_{zt} K_d V^2 I$ = **14.98** psf

where:

q_h = velocity pressure at mean roof height, h. (Eq. 6-15, page 27)		
K_h = velocity pressure exposure coefficient	=	**0.85**
evaluated at height, h_t(Tab. 6-3, Case 1, pg 79)		
K_d = wind directionality factor. (Tab. 6-4, for building, page 80)	=	**0.85**
h = height of top	=	**14.17** ft

Wind Force Case A: resultant force though the geometric center (Sec. 6.5.14 & Fig. 6-20)

$p = q_h G C_f$ =	=	**23** psf
$F = p A_s$	=	**0.44** kips
M = F (h - 0.5s) for sign, F (0.55h) for wall	=	**4.96** kip-ft
where: G = gust effect factor. (Sec. 6.5.8, page 26).	=	**0.85**
C_f = net force coefficient. (Fig. 6-20, page 73)		**1.78**
A_s = B s	=	**19.3** ft^2

Footing Design (Nonconstrained)

Diameter	1.50 FT
Soil Pressure	100.00 PSF/FT
S_1	454.86 PSF
A	1.52 FT
EMBED.	5.13 FT

18 in. Dia. Depth = 5'-2"

Pole Design — Alum. Round Tube

Sec. Mod. Req'd. USE 6061-T6

S = 6.54 **4.50 OD x 0.750 Wall** S=7.18

Bolt Design — Stainless St'l . Headed Bolts

Tension Req'd. USE T304

Ten = 5956 **5/8" Dia., x 24" Min. Embed.** T=6,356

Base Plate — Alum. Plate

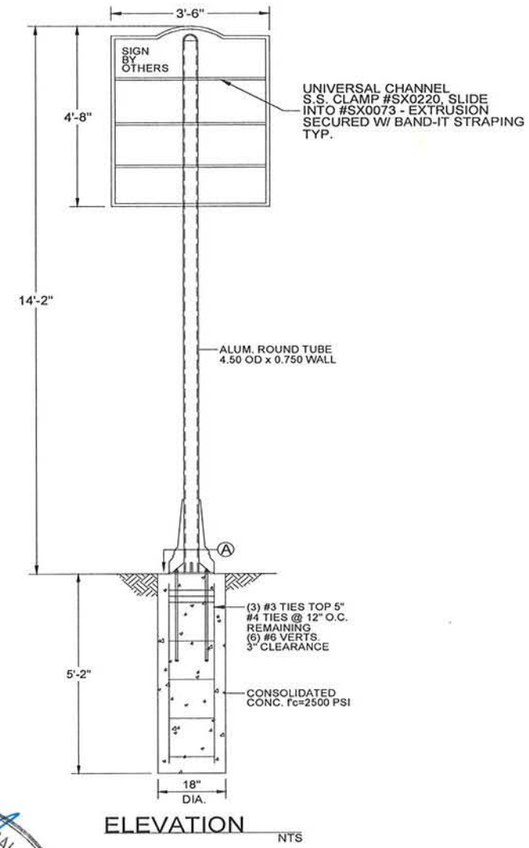
Thickness Req'd. USE 6061-T6

Thick = 0.68 **PL 10" Dia. x3/4"** t=0.75"

Panel Support Design — Band-It Alum. Channel

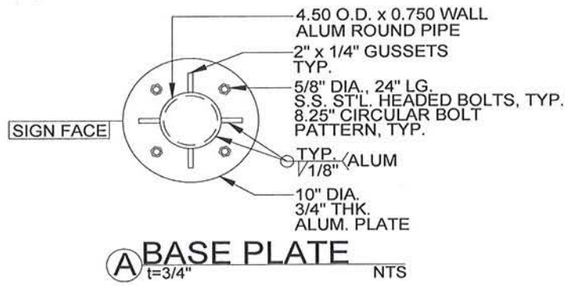
Sec. Mod. Req'd. USE 6061-T6

S = 0.07 **SX0073 - Extrusion** S=0.112



ELEVATION NTS

REGISTERED PROFESSIONAL ENGINEER
CEREWICO GOZO MADRONA
No. C72319
CIVIL
STATE OF CALIFORNIA
FEB 02 2012



Ⓐ BASE PLATE t=3/4" NTS

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THIRD AVENUE VILLAGE
DESIGN INTENT DRAWNIGS

DATE 02/06/11

SCALE AS NOTED

DESIGNER

FILE NAME 3rd AveVill _DesInt ALL Signs

SIGN TYPE C