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EXECUTIVE SUMMARY

Executive Summary

The City of Garden Grove has undertaken the development of a Downtown Parking Management Strategic Plan (Plan) in collaboration with City staff, the Downtown Parking Advisory Committee, the downtown community, and with consultation from Fehr & Peers. The purpose of the Plan is to identify the parking issues, concerns, and needs—both current and future—and to outline recommendations and strategies for improved and effective management of parking in the downtown area.

Purpose: The parking demand in Downtown Garden Grove is generated by a variety of users, including employers/employees, residents, restaurant/bar patrons, and visitors for special events such as the Main Street Classic Car Show and annual Strawberry Festival. All users share the common desire for both convenient on- and off-street parking in the area.

Study Area: The study area includes on-street and off-street parking encompassed by Grove Avenue and Main Street to the west, Euclid Street and Stanford Avenue to the north, 9th Street to the east, and Garden Grove Boulevard to the south. Existing data was collected through a combination of parking inventory and occupancy counts, field observations, online survey (from October 2017 through February 2018), and City staff support.

Existing Parking Supply and Management: Parking is provided both on- and off-street in the study area. There are 11 publicly-owned and 8 privately-owned off-street parking lots. The total parking supply in the study area is 2,786 spaces (both on- and off-street) of which 1,402 spaces are publicly-owned (both on- and off-street) and 1,384 spaces are privately-owned (off-street) and not necessarily available for public use based on various restrictions. This excludes residential off-street parking in the area.

Existing parking supply is sufficient for the current parking demand in the area. At 10:00 AM on a Tuesday, the peak parking demand is 49% and at 10:00 AM on a Friday the peak parking demand is 41%. The surveyed parking demand exceeds 90% utilization in some lots and street segments for short periods of time. However, there is generally parking available in other nearby facilities within convenient walking distance. There are periods throughout the year the special events held within the study area which result in parking demand that is greater than the surveyed data, but data at these events was not collected because they are temporary in nature and do not reflect typical daily conditions.

Meeting the Future Parking Demand: A parking demand model was developed to estimate the future parking conditions of the study area. The parking model uses data collected in the study area and national parking data collected by the Urban Land Institute. Planned and possible projects were identified by City staff to estimate future parking demand with the model. While parking demand is expected to increase as



development occurs in the study area, the anticipated demand could be accommodated with the existing supply and development of additional parking, which would be part of the planned and possible projects.

Parking Management Strategies: The Plan recommends a variety of strategies that could be implemented either in isolation or combined as part of a larger management strategy. A summary of the strategies are as follows:

- Static Signage directs users to parking facilities to fill up parking resources evenly.
- **Temporary Use Agreements** allows the City to approve time-limited use of property to provide parking for a land use, building, or structure without meeting parking code requirements.
- **Implementing Time Limits and Restrictions** prohibits parking for certain periods of time for particular user groups in high-demand locations. For example, parking time limits in the residential areas near commercial areas discourage long-term parking by commercial employee.
- **Parking Enforcement** is administered by the City to stringently enforce time limits, parking laws, and regulations.
- Project Specific Valet allows visitors to drop off their vehicle with an attendant resulting into greater density of parking and reduced time of searching for parking.
- Assigning Parking Locations maximizes the efficient use of existing parking depending on the
 use and the need. For example, retail employees could park farther to free up closer parking for
 customers.
- **Increasing Use of Shared Parking** makes efficient use of same parking spaces by hour, day, or season depending on the need. For example, parking lots of religious institutions that are usually empty on weekdays could be utilized by other users.
- **Accommodating Transportation Network Companies** encourages provision of convenient drop-off and pick-up locations reducing the need for parking spots.
- **Promoting Other Modes of Transportation** incentivizes the use of other modes such as transit, walk, bike, etc. that can reduce overall parking demand.
- Restriping On-Street Spaces increases the overall parking supply by allowing for increased parking on public streets.
- **Improving Facility Design** increases parking supply and improves flow of traffic in parking facilities.
- **Coordinating Valet Operations** allows users of a broader area to drop off and pick up their vehicles at different locations to meet their needs.
- **Permit Parking Programs** designate a particular area as parking district or permit parking street segments by allowing permitted users to park in those areas.

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- **Charging for Parking** can direct drivers to park long-term in less convenient spaces and short-term in more desirable spaces.
- Implementing Urban Design and Traffic Calming Strategies can encourage people to walk between adjacent destinations in an area without driving to each destination and parking there.
- Updating Parking Standards provide developers more flexibility with parking standards based on a development's location and circumstances. For example, developments near transit could have a lower parking supply.
- **Intelligent Signage** assist users to easily find available parking spaces by providing real-time information about availability.
- Encouraging Smart Growth includes creating more mixed-use developments, fostering walkable
 neighborhoods, and concentrating new developments in or around an existing developed area.
 Combination of these strategies can reduce the need for driving and decrease the overall parking
 demand.
- Adding Off-Street Parking alleviates parking pressure by providing parking at additional locations.

Funding Options: The strategies listed in the Plan are currently unfunded. Several potential funding strategies for Downtown Garden Grove identified as options include:

- In-Lieu Fees allow the city to require developers to pay a fee in-lieu of constructing some or all of the minimum amount of parking that is required for all new developments. The fees are voluntary and can be applied to new development, change of use, or redevelopment of an existing land use.
- **Parking Fees** provide a consistent revenue from different parking locations, but they should be set at a price that do not deter people from using the parking facilities.
- Property-based Business Improvement District (PBID) is a private sector initiative to manage and improve the environment of a business district. The funds raised can supplement services offered by the City.
- **Bonds** assist cities to construct publicly-owned parking facilities the issuing of bonds. The bonds are paid back through either the general fund or on revenue generated by the parking.
- **General Fund** provides cities funding to implement parking management strategies but may be limited in nature.
- **Enhanced Infrastructure Financing Districts (EIFDs)** generate revenue for community infrastructure improvement through net increases in taxes over an established base year.

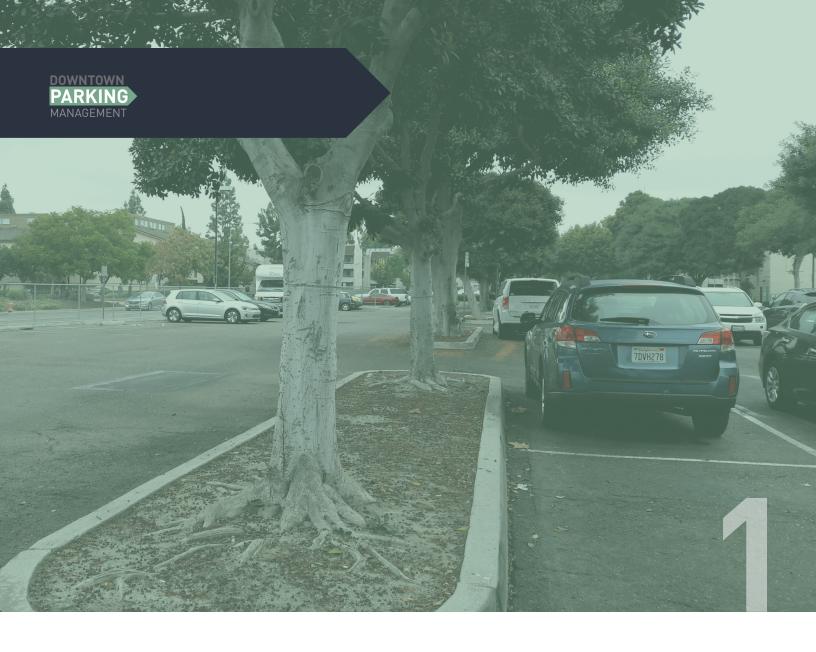


Recommendations: The survey data shows that existing parking supply can accommodate the current typical parking demand in Downtown Garden Grove. While parking demand is expected to increase as new development occurs in Downtown Garden Grove, the anticipated demand should be accommodated by the existing parking supply and development of parking in new projects. As development occurs and technology changes in Downtown Garden Grove, parking management strategies identified in this report should be reviewed and implemented as needed under the following scenarios.

- Parking Management Strategies Based on Regular Parking Demand Review allows for
 the collection and documentation of changes in parking demand due to new development or
 changes to existing development. Regular data collection will allow City staff to better
 understand changes in parking demand and identify parking management strategies as
 needed.
- Parking Management Strategies for New Development allows new developments to implement parking management strategies if they are unable to meet parking supply or demand requirements.
- Requested Parking Management Strategies can be applied to Downtown Garden Grove to address specific parking related concerns identified.
- Parking Management Strategies for Future Changes allows Downtown Garden Grove to collaborate with developers, business owners, and residents to identify potential parking strategies to address concerns that may arise as part of future development.

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INTRODUCTION

1. Introduction

Downtown Garden Grove is the historic heart of Garden Grove. The downtown area combines a mix of civic, retail, restaurants, office, and residential uses. A variety of community events are hosted throughout the year, including the Strawberry Festival, performances, and a weekly Classic Car Show that attracts residents and visitors alike.

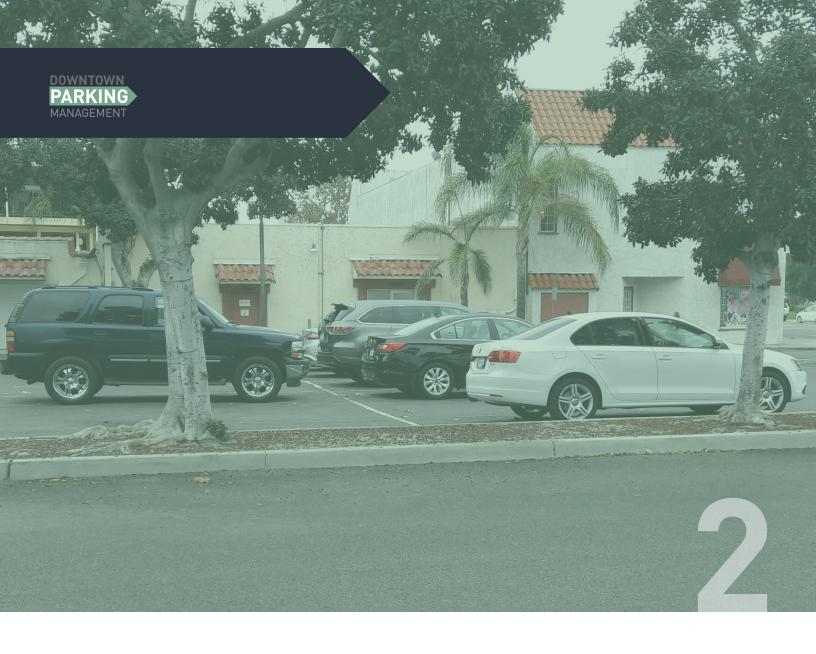
The City of Garden Grove requested a comprehensive study of the Downtown Garden Grove parking utilization and identification of parking management strategies that will work towards the success of the downtown area.

Purpose of the Parking Management Strategic Plan

A parking management plan is intended to comprehensively address parking supply and demand, particularly in a downtown or mixed-use area. Historically, the tendency has been to address parking issues through an increase in supply. In many areas, the desire to increase parking supply results in constructing additional surface lots or parking structures. This approach can be very costly as a structure may cost upwards of \$30,000 per parking space to construct and parking structures may be cost prohibitive for cities to operate on a yearly basis.

Instead of addressing only supply, a parking management plan addresses the demand for parking, through both the management of existing parking and adding to the supply once it becomes necessary. In addition, a parking management plan outlines recommendations and strategies for implementation of parking-related improvements. In the case of Downtown Garden Grove, a parking management plan is appropriate due to the overall availability of parking within downtown at this time, but there may be future shortfalls as additional development occurs.

This plan documents the comprehensive data collection effort conducted in June 2017 and estimation of future parking demand in Downtown Garden Grove. Parking management strategies have been recommended based on feedback from city staff, members of the Downtown Parking Advisory Committee, and input reviewed through an on-line survey. A series of recommendations are provided that will support the continued development of Downtown Garden Grove.



EXISTING CONDITIONS

2. Existing Conditions

A comprehensive data collection effort was undertaken to identify the existing parking demand and supply in the Downtown Garden Grove study area. Figure 1 identifies the extents of the study are in the regional context of Garden Grove and the surrounding cities. The study area extents, were identified in consultation with City of Garden Grove staff and encompass all available on-street parking, 11 publicly-owned, and 8 privately-owned off-street parking lots encompassed by Grove Avenue and Main Street to the west, Euclid Street and Stanford Avenue to the north, 9th Street to the east, and Garden Grove Boulevard to the south. Figure 2 shows the parking lots and street parking surveyed in the study area.

Existing Data Collection

On- and off-street parking surveys were conducted by Fehr & Peers during June 2017 when area schools were in session. The surveys were conducted on Tuesday, June 13th from 8:00 AM to 8:00 PM when the Garden Grove City Council was in session and on Friday, June 16th from 8:00 AM to 8:00 PM when the Main Street Garden Grove Classic Car Show was occurring.

An inventory of on- and off-street parking supply was collected during the parking surveys. The inventory entailed counting the off-street spaces in designated publicly-owned and privately-owned lots; estimating on-street parking spaces; and identifying restrictions on parking, such as no student parking or no parking during certain time periods.

Field observations of parking conditions and traffic operations were also conducted by Fehr & Peers staff. The observations were reviewed with City of Garden Grove staff to verify the overall level of parking occupancy in the study area, to qualitatively assess parking occupancy, and to verify the location and types of parking spaces and identified parking restrictions.

Since the time the parking data and field observations were collected, some publicly-owned parking lots have had parking restriction changes. These changes have been noted in Table 1 of the following section.

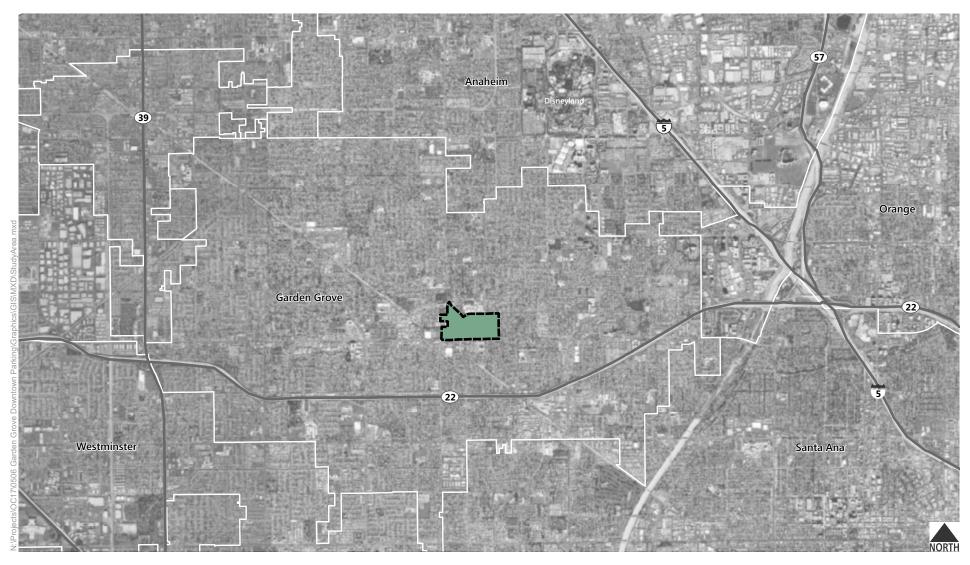
Garden Grove hosts several events and activities in the downtown area that create a higher demand for parking. Many of these events occur annually and include the Strawberry Festival and performances at the Festival Amphitheatre. Parking data was not collected during these events as these events are temporary in nature and do not reflect typically daily parking operations in Downtown Garden Grove. Event organizers coordinate with privately-owned parking facilities throughout the area to accommodate the parking demand generated by these events.



As an additional source of anecdotal information about parking conditions, an online survey was prepared to record the parking preferences of downtown business owners, downtown/civic center employees, downtown residents, downtown shoppers and diners, and other visitors in the study area. The survey was posted on a website hosted by the City of Garden Grove Community Economic Development Department and shared by City staff and the Downtown Parking Advisory Committee. The survey collected data from October 2017 through December 2017 and had approximately 224 responses.

Land use information for parcels in the study area was provided by City of Garden Grove staff to aid in the development of existing parking demand rates, which were used as reference to estimate future parking demand.

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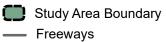
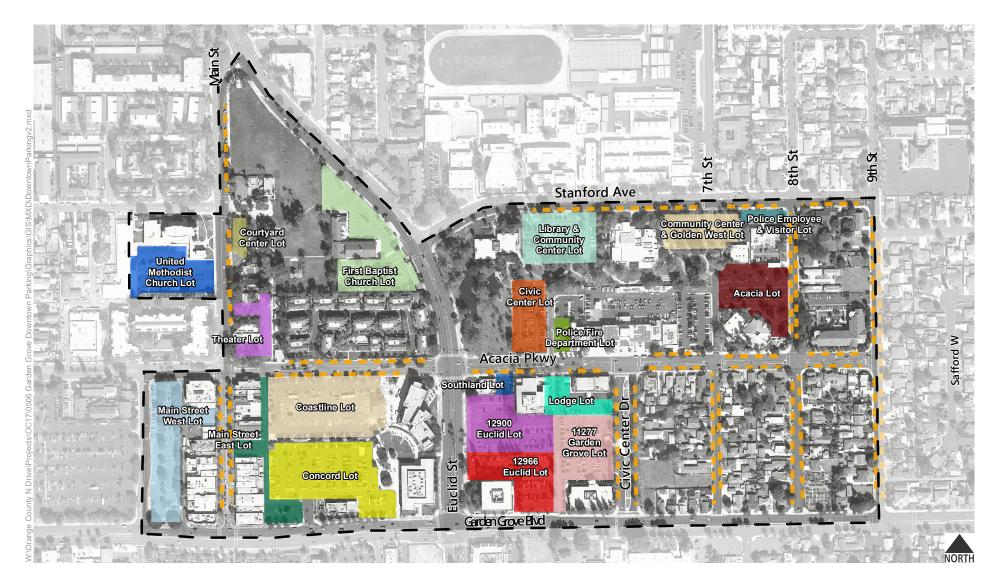




Figure 1

Study Area



Street Parking

Study Area Boundary



Figure 2

Downtown Garden Grove Parking Lots and Street Parking

Existing Parking Supply

The study area has a total parking supply of 2,786 parking spaces (both on- and off-street). 1,402 parking spaces are publicly-owned (both on- and off-street) and 1,384 parking spaces are owned by private entities (off-street).

Approximately 2,316 parking spaces are provided in the off-street parking lots in the study area. The off-street parking is divided into publicly-owned and privately-owned parking. Approximately 932 off-street parking spaces are publicly-owned and approximately 1,384 off-street parking spaces are privately-owned. Off-street parking at private residential properties was not included in the parking inventory. Table 1 documents the number of off-street parking lots, each lot's parking supply, and any identified parking conditions and restrictions related to public access.

Approximately 470 on-street publicly-owned parking spaces are provided in the study area. The number of parallel on-street spaces was estimated by assuming that each parked vehicle requires 22 feet of curb length. Aside from identified weekly street sweeping and time restrictions along segments near Garden Grove High School and City Hall, many of the street segments in the study area provide unrestricted public parking. Table 2 documents the number of on-street parking spaces on each roadway segment.



Table 1: Summary of Parking Lot Information

Name	Location	Total Number of Spaces	Reservations	Publicly-owned	Identified Restrictions	Other Notes
United Methodist Church Lot	West side of Main Street, between Stanford Avenue and Acacia Parkway.	145	ADA Accessible: 13	No	Authorized parking only, violators' cars will be towed away at owner's expense.	Shared with Head Start Preschool.
Courtyard Center Lot	East side of Main Street, between Stanford Avenue and Acacia Parkway.	14	ADA Accessible: 2	Yes	No student parking, parking for Village Green, Courtyard Center, Gem Theater, Festival Amphitheatre patrons only.	
Theater Lot	The Northeast corner of Main Street and Acacia Parkway.	47	ADA Accessible: 3 Reserved: 4	Yes	No public parking during theatre performance hours. No student parking, parking for patrons only.	As of Summer 2018 select spaces are reserved for Garden AMP from 5pm – 12am everyday. Unauthorized vehicles will be towed.
First Baptist Church Lot	West side of Euclid Street, across from Stanford Avenue.	186	ADA Accessible: 8	No	Church parking only.	Used as an overflow lot for Garden Grove High School.



Table 1: Summary of Parking Lot Information

Name	Location	Total Number of Spaces	Reservations	Publicly-owned	Identified Restrictions	Other Notes
Library and Community Center Lot	South side of Stanford Avenue, east of Garden Grove Main Library.	146	ADA Accessible: 6 City Council: 8 Mayor: 1 Library Staff: 9 Employee of the Month: 1	Yes	Community Meeting Center and Library parking only. No school or public parking. Vehicles are subject to citation or may be towed at vehicle owners' expense. Vehicle parking prohibited 11 PM – 7 AM.	
Civic Center Lot	North of Acacia Parkway, east of Community Center Park.	107	ADA Accessible: 3 Employee: 78 Visitor: 14 Carpool: 12	Yes	Users who are not employees or visitors are subject to citation or may be towed away at vehicle owners' expense, Monday – Friday, 7 AM – 6 PM. No school parking or drop off.	At the time of the data collection, this parking lot was used by visitors and employees of City Hall. Starting September 2017, the parking lot was designated employee permit parking only. City Hall visitors can park in the Police and Fire Department.



Table 1: Summary of Parking Lot Information

Name	Location	Total Number of Spaces	Reservations	Publicly-owned	Identified Restrictions	Other Notes
Police/Fire Department Lot	North of Acacia Parkway, west of fire station.	18	ADA Accessible: 2 Reserved: 5 Visitor: 2 City pool cars: 9	Yes	Visitor parking, 2- hour time-limit.	At the time of the data collection, this parking lot was used by Police and Fire Department staff. Starting September 2017, the parking lot was designated for City Hall visitor parking.
Community Center and Golden West Lot	South of Stanford Avenue, across from 7 th Street.	94	ADA Accessible: 9 Credit Union: 4 Credit Union, ADA Accessible: 2 HDM: 3 Loading: 1	Yes	H. Louis Lake Senior Center parking only, no school or public parking.	
Police Employee and Visitor Lot	The southwest corner of 8 th Street and Stanford Avenue.	16	ADA Accessible: 2	Yes	No Parking, Unauthorized Vehicles will be towed away at owner's expense.	
Acacia Lot	North of Acacia Parkway, between 7 th Street and 8 th Street.	110	ADA Accessible: 4 Credit Union: 6 Credit Union, ADA Accessible: 2 Motorcycle: 1	Yes	Student parking and parking 2 AM - 6 AM prohibited. Vehicles are subject to citation or may be towed away at vehicle owners' expense.	



Table 1: Summary of Parking Lot Information

Name	Location	Total Number of Spaces	Reservations	Publicly-owned	Identified Restrictions	Other Notes
Main Street West Lot	West of Main Street, between Acacia Parkway and Garden Grove Boulevard.	187	ADA Accessible: 15 Compact: 1	Yes	Two-hour parking 9 AM - 6 PM, except Sunday.	Used for a car show that occurs every Friday night from 4:00 to 8:00 PM.
Main Street East Lot	East of Main Street, between Acacia Parkway and Garden Grove Boulevard.	77	ADA Accessible: 3 Bank: 17 Loading: 1	Yes	One-hour parking for customers only, no student parking.	Used for a car show that occurs every Friday night from 4:00 to 8:00 PM.
Coastline Lot	South of Acacia Parkway, between Pine Street and Euclid Street.	352	ADA Accessible: 8 Motorcycle: 6 Staff: 20 Compact: 2 Electric: 4	No	Coastline College and Garden Grove Education Center parking only, current permit required.	According to Coastline Facility staff, 20 spaces are reserved for Acacia Park residents.
Concord Lot	North of Garden Grove Boulevard, between Pine Street and Euclid Street.	307	ADA Accessible: 6 Motorcycle: 12 McDonald's customers: 36 McDonald's ADA Accessible customers: 2	No	Coastline College and Garden Grove Education Center parking only, current permit required.	
Southland Lot	The southeast corner of Euclid Street and Acacia Parkway	13	ADA Accessible: 1 20-minute parking: 5	No	No City Hall parking.	



Table 1: Summary of Parking Lot Information

Name	Location	Total Number of Spaces	Reservations	Publicly-owned	Identified Restrictions	Other Notes
12900 Euclid Lot	East of Euclid Street, between Acacia Parkway and Garden Grove Boulevard.	116	Maintenance Vehicles: 4 City Council and Directors: 19	Yes	-	City is leasing property to future tenant (SteelCraft). Future tenant meets parking requirements based on use.
12966 Euclid Lot	Northeast corner of Euclid Street and Garden Grove Boulevard	178	ADA Accessible: 5 One-hour guest: 5	No	Private parking for tenants and guests of Garden Grove Plaza. Unauthorized vehicles will be towed away at owners' expense. No overnight parking.	
Lodge Lot	The Southwest corner of Acacia Parkway and Civic Center Drive.	46	ADA Accessible: 5 City: 6 Carpool: 15	No	Private parking, members only. Unauthorized vehicles will be towed away at owners' expense.	
11277 Garden Grove Lot	West of Civic Center Drive, between Acacia Parkway and Garden Grove Boulevard.	157	ADA Accessible: 6 Bicycle: 1 Compact: 23	No	Purcell Building parking only. Tenant parking only.	

Table 2: Summary of On-Street Parking

Location	Side of Street	Number of Spaces	Identified Restrictions
Main Street between Acacia Parkway and Garden Grove Boulevard	West	20	-
Main Street between Acacia Parkway and Garden Grove Boulevard	East	17	-
Main Street between Acacia Parkway and driveway	East	13	No parking this street 5 AM – 9 AM every first and third Thursday
Main Street between driveway and Stanford Avenue	East	13	No parking this street 5 AM – 9 AM every first and third Thursday
Main Street between Stanford Avenue and Euclid Street	East	27	No parking this street 5 AM – 9 AM every first and third Thursday
Main Street between Stanford Avenue and Euclid Street	West	21	No parking this street 5 AM – 9 AM every first and third Thursday
Main Street between Stanford Avenue and Acacia Parkway	West	19	No parking this street 5 AM – 9 AM every first and third Thursday
Acacia Parkway between Euclid Street and Main Street	North	17	No parking this street 8 AM – 4 PM every first and third Thursday
Acacia Parkway between Euclid Street and Main Street	South	22	No parking this street 8 AM – 4 PM every first and third Thursday
Acacia Parkway between Euclid Street and crosswalk	South	10	20-minute parking 7 AM - 6 PM
Acacia Parkway between crosswalk and Civic Center Drive	South	6	-
Acacia Parkway between Civic Center Drive and 7th Street	South	7	-
Acacia Parkway between Civic Center Drive and 7th Street	North	11	-
Civic Center Drive between Acacia Parkway and Garden Grove Boulevard	West	17	-
Civic Center Drive between Acacia Parkway and Garden Grove Boulevard	East	14	-
7 th Street between Acacia Parkway and Garden Grove Boulevard	West	19	-
7 th Street between Acacia Parkway and Garden Grove Boulevard	East	18	-



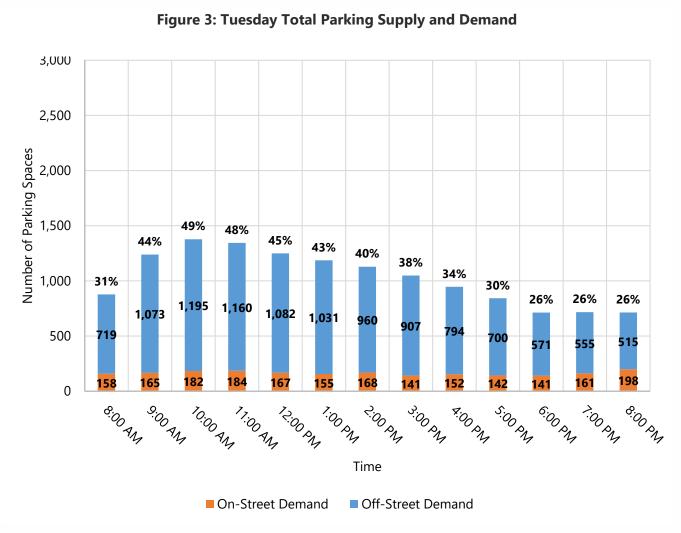
Table 2: Summary of On-Street Parking

Location	Side of Street	Number of Spaces	Identified Restrictions
8 th Street between Acacia Parkway and Garden Grove Boulevard	West	20	-
8 th Street between Acacia Parkway and Garden Grove Boulevard	East	16	-
Acacia Parkway between 7 th and 8 th Street	South	8	-
Acacia Parkway between 7 th and 8 th Street	North	11	-
Acacia Parkway between 8 th and 9 th Street	South	6	-
Acacia Parkway between 8 th and 9 th Street	North	10	-
8 th Street between Stanford Avenue and Acacia Parkway	West	15	-
8 th Street between Stanford Avenue and Acacia Parkway	East	16	-
9 th Street between Garden Grove Boulevard and Acacia Parkway	West	14	-
9 th Street between Stanford Avenue and Acacia Parkway	West	10	-
9 th Street between Stanford Avenue and Garden Grove Boulevard	East	34	-
Stanford Avenue between 8 th Street and 9 th Street	South	7	-
Stanford Avenue between driveway and 8 th Street	South	8	-
Stanford Avenue between Euclid Street and second crosswalk	South	24	2-hour parking 9 AM -6 PM every day except Sunday

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Existing Parking Demand

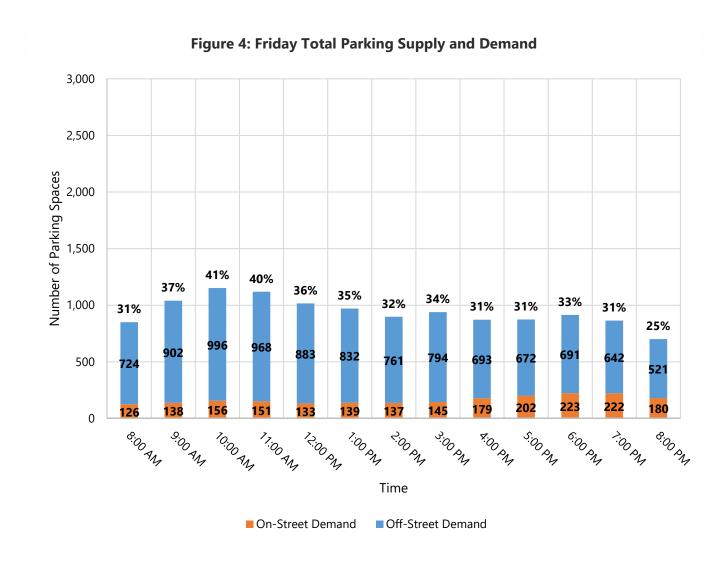
The figures below summarize parking demand per hour for publicly-owned and privately-owned spaces on the surveyed days. As shown in Figure 3, Tuesday total peak parking demand for the entire study area occurred from 10:00 – 11:00 AM with a total of 1,377 vehicles parked (49% utilization of the 2,786 total parking spaces).



The above information is based on parking counts conducted in June 2017.



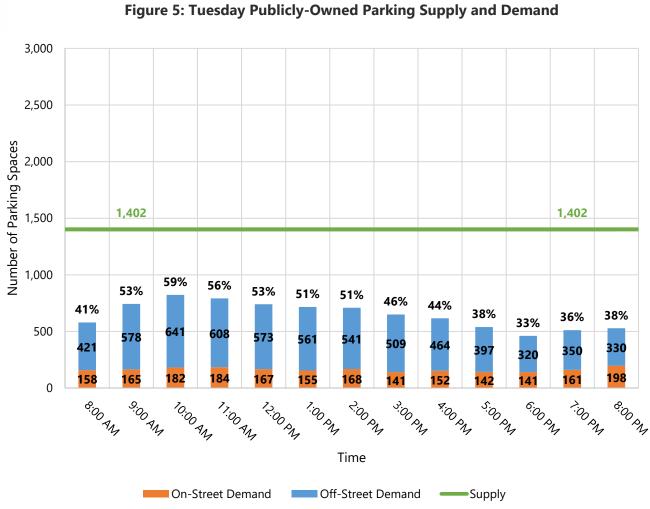
As shown in Figure 4, Friday publicly-owned and privately-owned total peak parking demand also occurred from 10:00 – 11:00 AM with a total of 1,152 vehicles parked (41% utilization of the 2,786 total parking spaces).



The above information is based on parking counts conducted in June 2017.

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Figure 5 shows that peak parking demand of the publicly-owned spaces, both off-street and on-street, on Tuesday occurred from 10:00 – 11:00 AM, with a total of 823 vehicles parked (59% utilization of the 1,402 publicly-owned parking spaces).

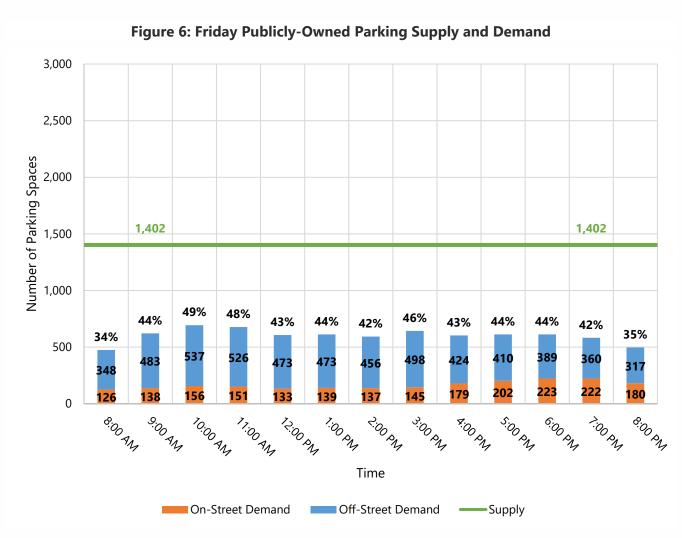


The above information is based on parking counts conducted in June 2017.

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Peak parking demand of the publicly-owned spaces on Friday occurred from 10:00 – 11:00 AM with a total of 693 vehicles parked (49% utilization of the 1,402 publicly-owned parking spaces), as shown in Figure 6. The parking demand on Friday increases in the evening due to the Main Street Garden Grove Classic Car Show.



The above information is based on parking counts conducted in June 2017.

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Peak parking demand of the privately-owned spaces, which only consists of off-street spaces, occurred from 10:00 - 11:00 AM on Tuesday with a total of 554 vehicles parked (40% utilization of the 1,384 privatelyowned parking spaces), as shown in Figure 7.

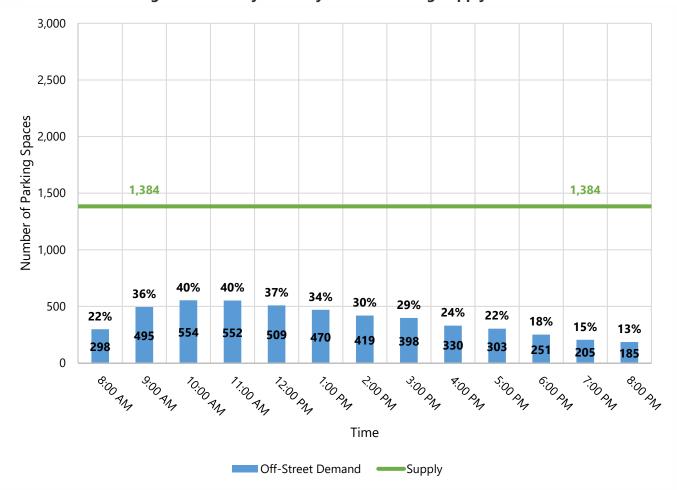


Figure 7: Tuesday Privately-Owned Parking Supply and Demand

The above information is based on parking counts conducted in June 2017.



As shown in Figure 8, peak parking demand of the privately-owned spaces on Friday occurred from 10:00 – 11:00 AM with a total of 459 vehicles parked (33% utilization of the 1,384 privately-owned parking spaces).



Figure 8: Friday Privately-Owned Parking Supply and Demand

The above information is based on parking counts conducted in June 2017.

Appendix A documents the parking supply and hourly demand of each parking lot and street segment in the study area in separate tables. Tables are separated by publicly-owned and privately-owned parking; parking lots and streets segments; and day of the week. Appendix B includes figures of the study area with the parking supply and hourly utilization percentage of each parking lot and street segment. Figures are separated by parking lot and street segment, hour of day, and day of week. **Appendix C includes figures and an assessment of the publicly-available parking supply and demand.**

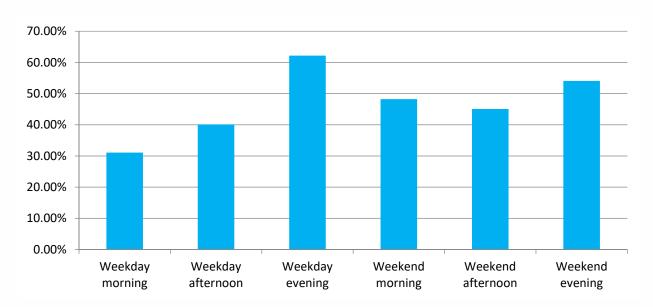
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Parking Survey

An online survey was provided to downtown business owners, downtown/civic center employees, downtown residents, downtown shoppers and diners, and other visitors to gather perceptions of parking demand and supply in downtown. There were 224 survey respondents, and approximately 100 of those respondents provided additional comments. The key themes that emerged from reviewing these comments relate to space availability, price, the provision of ADA accessible parking, and accommodating alternative transportation modes. The results of the survey are provided in Appendix D.

Approximately half of the survey respondents visit Downtown Garden Grove once a week or less and many of them visit during weekday and weekend evenings, as Figure 9 shows.

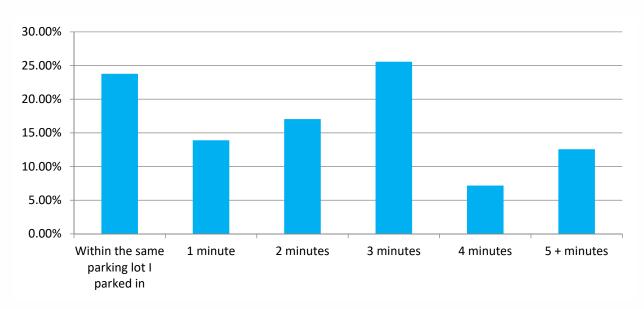
Figure 9: Parking Survey Question 5 – Which day(s) and period of time(s) do you typically visit downtown?

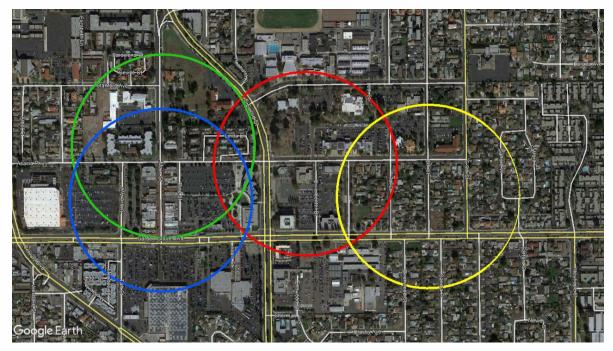


More than half of respondents are either neutral or satisfied with parking availability in Downtown Garden Grove. Figure 10 shows that more than half of the respondents would be willing to walk three or more minutes to their destination. It also identifies four separate circles with radii equal to three minutes (0.15 miles at 3 mph walking). The four circles represent distances form Main Street, the Gem Theater, City Hall, and 8th Street.



Figure 10: Parking Survey Question 5 – How far are you willing to walk from your parking spot to destination?





Existing Land Use Information

To develop parking demand rates that were reflective of the land uses in the study area, existing land use information was provided by City of Garden Grove staff. The information included existing square footages or unit counts of developments, types of uses, and estimated occupancy. This information was incorporated

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in a parking demand model using the Urban Land Institute (ULI) parking demand data to develop parking demand rates for future parking demand forecasting.

Assessment of Current Parking Conditions

Figures depicting on- and off-street parking occupancy during Tuesday and Friday survey periods are provided in Appendix B.

When reviewing parking occupancy, it is important to consider the effective parking supply or "cushion" of extra spaces that a parking system should have to account for operating fluctuations, vehicle maneuvering, minimizing driver frustration, and maintaining adequate traffic circulation. It is unrealistic to expect an arriving driver to find the last available parking space in a system without significant frustration and the resulting perception that parking is inadequate. Because "perception is reality", parking "demand" should include this effective parking supply cushion (Parking Structure – Planning, Design, Construction and Repair, 3rd edition (Anthony P Chrest et al., 2001). For this existing parking assessment, a parking facility is considered to have reached its effective parking supply or practical parking capacity if 90% of the spaces are utilized. A 10% cushion is widely accepted in the parking industry as adequate cushion for parking.

The survey results show peak parking utilization at 49% occurring at 10:00 AM on a Tuesday and a peak parking utilization of 41% occurring at 10:00 AM on a Friday. Peak utilization on a Tuesday for publicly-owned parking was observed at 59% occurring at 10:00 AM, and peak utilization of publicly-owned parking on a Friday was observed at 49% occurring at 10:00 AM. The privately-owned parking utilization trend matched the total parking utilization with a peak parking utilization of 40% at 10:00 AM on Tuesday and a peak parking utilization of 33% at 10:00 AM on a Friday. Parking demand on Tuesday increases from 8:00 – 10:00 AM, and then decreases until 8:00 PM. On Friday, parking demand also increases from 8:00 – 10:00 AM, and then decreases until 8:00 PM. Friday evening parking demand does experience localized increases due to the Main Street Garden Grove Classic Car Show, however the parking demand during this time period is lower than the peak Friday demand. With a peak parking utilization of 49% across all parking spaces, 59% for publicly-owned spaces, and 40% for privately-owned spaces, it can be concluded that the parking supply for both publicly-owned and privately-owned spaces, is sufficient for the current parking demand in the study area.

Although total publicly-owned and privately-owned parking demand can be accommodated, there are a few parking lots and street segments that exceeded 90% occupancy during survey period. These parking facilities are identified below:

• **Library and Community Center Lot (Publicly-Owned)** – The library and community center lot exceeded 90% utilization on Tuesday from 10:00 – 11:00 AM. This lot serves the library, community



center, and city hall. While signage in the parking lot restricts school parking, field observations and discussions with City of Garden Grove staff indicate that this parking lot is used by visitors, students, and parents of Garden Grove high school. The high utilization can be attributed to the multiple users of the facility.

- **Courtyard Center Lot (Publicly-Owned)** The courtyard center lot exceeded 90% utilization on Tuesday from 9:00 10:00 AM. This lot is located near Village Green Park which can account for its higher utilization at 9:00 AM and throughout the day.
- **Theater Lot (Publicly-Owned)** The theater lot exceeded 90% utilization on Tuesday from 8:00 9:00 PM. The lot is used for rehearsals during weekday evenings.
- **Civic Center Lot (Publicly-Owned)** The civic center lot exceeded 90% utilization on Tuesday from 10:00 AM 12:00 PM. This lot experienced higher utilization due to visitors at City Hall. At the time of the surveys, the civic center lot was used by visitors and staff of City Hall.
- **Police and Fire Department Lot (Publicly-Owned)** The Police and Fire Department lot exceeded 90% utilization on Tuesday from 10:00 AM 12:00 PM. This lot experienced higher utilization due to visitors and employees of City Hall and the Police and Fire Departments.
- Main Street West Lot (Publicly-Owned) The main street west lot exceeded 90% utilization on Friday from 5:00 8:00 PM. The lot is the primary parking facility for attendees of the Main Street Garden Grove Classic Car Show. The car show occurs every Friday from 4:00 8:00 PM and is one of the reasons for the increase in parking utilization during Friday evenings.
- Main Street East Lot (Publicly-Owned) The main street east lot exceeded 90% utilization on Friday from 5:00 7:00 PM. The lot is an additional parking facility for attendees of the Main Street Garden Grove Classic Car Show.
- West Side of Main Street Between Acacia Parkway and Garden Grove Boulevard This street segment exceeded 90% utilization on Friday from 3:00 9:00 PM. Main Street is the location of the Main Street Garden Grove Classic Car Show. The parking spaces on Main Street are used to display cars. Cars are typically displayed in a perpendicular or angled position, thus resulting in more cars parked than spaces available. The higher parking utilization on the weekday can be attributed to the various restaurants that are located along Main Street.
- East Side of Main Street Between Acacia Parkway and Garden Grove Boulevard This street segment exceeded 90% utilization on Tuesday from 8:00 9:00 PM and on Friday from 1:00 2:00 PM and from 4:00 9:00 PM. This side of Main Street is also used for the Main Street Garden Grove Classic Car Show. Cars are typically displayed in a perpendicular or angled position thus resulting in more cars parked than spaces available. The higher parking utilization on the weekday can be attributed to the various restaurants that are located along Main Street.
- South Side of Acacia Parkway Between Crosswalk and Civic Center Drive This street segment exceeded 90% utilization on Tuesday from 8:00 9:00 AM and from 10:00 AM 12:00 PM. Given

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the proximity of these spaces to City Hall and the Police and Fire Departments, these spaces can be used by visitors of the each.

- South Side of Acacia Parkway Between Civic Center Drive and 7th Street This street segment exceeded 90% utilization on Tuesday from 8:00 9:00 PM. This segment is located adjacent to residential properties which typically have higher parking demand in the evening. Given that the estimated parking supply is seven spaces with six residential properties are adjacent to the segment, it is reasonable to assume that the seven parking spaces could be utilized during the evening.
- South Side of Stanford Avenue Between 8th Street and 9th Street This street segment exceeded 90% utilization on Friday from 7:00 9:00 PM. This segment is located adjacent to residential properties which typically have higher parking demand in the evening. The estimated parking supply on this segment is seven spaces with three residential properties adjacent to the segment. The exceeding of 90% utilization seems unique as the Tuesday parking utilization during the same time period was approximately 57%. Therefore, it is assumed that a temporary increase in parking demand was experienced on this segment during the 7:00 9:00 PM timer period on Friday.

While parking in the study area is typically underutilized, there are periods throughout the year when parking demand is greater than the surveyed data. Garden Grove hosts several events and activities in the downtown area that create a higher demand for parking. Many of these events occur annually and include the Strawberry Festival and performances at the Festival Amphitheatre. Parking data was not collected during these events as these events are temporary in nature and do not reflect typically daily parking operations in Downtown Garden Grove. Event organizers coordinate with privately-owned parking facilities throughout the area to accommodate the parking demand generated by these events.

In summary, the survey data shows that the study area currently has sufficient parking supply. Even though the surveyed parking demand exceeds 90% utilization in certain lots and streets for short periods of time, there is generally parking available in other nearby facilities within convenient walking distance. The current parking supply can accommodate the demand generated by existing land-uses in the study area.



FUTURE CONDITIONS

3. Future Conditions

Future parking conditions within the study area were estimated based on the comprehensive data collection effort. Future conditions were estimated using information from the City on several planned and possible future development projects and utilizing the parking demand model that was developed to reflect the parking characteristics of Downtown Garden Grove.

Downtown Garden Grove Future Buildout

Fehr & Peers worked with Garden Grove Planning staff to identify planned and possible development projects in the downtown Garden Grove area. These projects were identified by location, type of land use, and estimated size. Table 3 summarizes these future planned and possible development projects. This information was included in the parking model to estimate future parking demand in the study area.

Table 3: Future List Development

Number	Name	Location	Land Use	Туре	Size
Possible Future Building Development					
	-	Parking Lot West of Main Street	Housing	Multifamily Housing	30 units
1			Commercial	Retail	2,000 square feet
			Commercial	Restaurant	2,000 square feet
		Alley East of Main Street	Housing	Multifamily Housing	16 units
2	-		Commercial	Retail	2,500 square feet
			Office	Office	2,500 square feet
		CSUF Parking Lot	Housing	Multifamily Housing	120 units
3			Commercial	Retail	7,500 square feet
3	-		Commercial	Restaurant	12,500 square feet
			Office	Office	14,000 square feet
4	-	First Baptist Church Parking Lot	Housing	Multifamily Housing	24 units
F	Garden Grove Regional Library	11200 Stanford Avenue	Commercial	Retail	750 square feet
5			Commercial	Restaurant	750 square feet



Table 3: Future List Development

Number	Name	Location	Land Use	Туре	Size
6	-	West side of 8th Street between Stanford Avenue and Acacia Parkway	Housing	Multifamily Housing	84 units
7	1913 House	11442 Stanford Avenue	Housing	Multifamily Housing	34 units
8	Credit Union	12860 Euclid Street	Office	Office	5,000 square feet
9	Masonic Lodge	11270 Acacia Parkway	Gym	Studio	6,000 square feet
	-	Parking Lot North of Garden Grove Blvd between Civic Center Drive and Euclid Street	Housing	Multifamily Housing	7 units
10			Office	Office	
10			Commercial	Retail	3,625 square feet
			Commercial	Restaurant	3,625 square feet
11	-	Parking Lot West of Civic Center Drive between Garden Grove Boulevard and Acacia Street	Housing	Multifamily Housing	21 units
			Commercial	Retail	5,580 square feet
			Commercial	Restaurant	5,580 square feet
	Cottage Industries	Houses in 3-block residential area on the east side of downtown	Commercial	Retail	7,000 square feet
12			Commercial	Restaurant	8,000 square feet
			Lodging	Hotel	12 rooms
Planned Future Building Development					
	-	12889 Main Street	Housing	Multifamily Housing	9 units
1			Commercial	Retail	1,944 square feet
			Commercial	Restaurant	1,944 square feet
2	Steelcraft ¹	12900 Euclid Street	Commercial	Retail	4,766 square feet
	Steelerare		Commercial	Fast-food Restaurant	4,766 square feet
3	Cottage Industries	Houses in 3-block residential area on the east side of downtown	Lodging	Hotel	8 rooms
			Commercial	Restaurant	8,635 square feet
			Commercial	Restaurant (Dinner	3,762 square feet
			Commercial	Fast-food Restaurant	3,968 square feet

¹ The Steelcraft project was under construction at the time of data collection and not included in the existing parking supply count.

Table 3: Future List Development

Number	Name	Location	Land Use	Туре	Size
			Commercial	Retail	4,108 square feet
			Office	Office	1,155 square feet
4	-	12782 9th Street	Housing	Multifamily Housing	2 units
			Totals		
			Housing	Multifamily Housing	347 units
			Commercial	Retail	39,773 square feet
			Commercial	Restaurant	43,034 square feet
			Commercial	Restaurant (Dinner Service)	3,762 square feet
			Commercial	Fast-food Restaurant	8,734 square feet
			Office	Office	22,655 square feet
			Gym	Studios	6,000 square feet
			Lodging	Hotel	20 rooms

Parking Demand Model

To understand how parking demand would change with future development in Downtown Garden Grove, parking demand for the anticipated land uses was reviewed. Parking standards from Section 9.18.140.030 of the Garden Grove Municipal Code were reviewed for application of future parking demand. However, these standards were not used as parking supply standards are typically set higher than parking demand to ensure that enough parking is provided to accommodate circulation and turnover within the facility. Therefore, the parking demand data collected in the surveys was used in combination with data from *Shared Parking, Second Edition* (ULI, 2005) and the existing land use information to develop a parking demand model that reflects the study area.

Parking Model Development

To more accurately model parking conditions in the study area, a parking model was developed based on parking data from *Shared Parking, Second Edition* (ULI, 2005) and *Parking Generation, 4th Edition* (Institute of Transportation Engineers [ITE], 2010). The model accounts for parking demand fluctuation during different months of the year and periods of the day. Additionally, the model accounts for the internalization and mode choice (vehicles, transit, walk, bike) options of Downtown Garden Grove.



The parking model uses base parking ratios for land uses that are based on a national study of parking occupancy data from across the United States. The ratios are based on expected peak parking demand of vehicles assuming nearly 100 percent modal split to automobile. In addition to parking demand and modal split, the parking ratios are based on 85th percentile parking demand observed, for the purpose of optimizing supply. This is so that parking supply is not designed to the absolute peak demand generated during limited hours of a peak day on a peak month.

The parking model also includes modal adjustments to account for local transit availability, parking fees, ride sharing programs, and other transportation demand management systems. Additionally, the parking model accounts for internal capture of people who park once and visit multiple land uses. Modal adjustments and internalization were adjusted to reflect transit, walking, and biking connectivity to Downtown Garden Grove. The internalization was adjusted to reflect the relative distance between the various land uses in downtown. Time of day and seasonal variations are included in the model to account for the variability of parking demand across various land uses. The variations are based on data from across the United States but were adjusted to reflect the temporal aspects of demand specific to Downtown Garden Grove. The model provides parking demand ratios and that can be applied to a variety of land uses to estimate peak parking demand for a given land use

Assessment of Future Parking Demand

The information for the planned and possible development projects identified in Table 3 was applied to the parking demand model to estimate future parking demand in Downtown Garden Grove. The model identified an estimated parking demand of 2,281 parking spaces during the peak hour of the study period. This represents a Tuesday peak hour increase of approximately 904 vehicles and a Friday peak hour increase of approximately 1,129 vehicles as compared to survey data. Although there is an abundance of available parking spaces in the study area, it is reasonable to assume that some parking will be built as part of the planned and possible development projects. The following assumptions were made regarding the development of additional parking spaces:

- Residential 1 space per dwelling unit
- Retail 2 spaces per 1,000 square feet
- Restaurant 2 spaces per 1,000 square feet
- Office 2 spaces per 1,000 square feet
- Gym 2 spaces per 1,000 square feet
- Lodging 0.5 space per room

The assumptions regarding the development of additional parking spaces are less than half of the parking supply standards from Section 9.18.140.030 of the Garden Grove Municipal Code. These assumptions would

increase parking supply in the study area by approximately 605 parking spaces thus resulting in approximately 3,391 total parking spaces. This increase in parking demand and supply would result in less than 90% utilization during typical peak occupancy throughout the year.

It is not feasible to determine which of these planned and possible developed projects will be included in the publicly-owned parking supply of the study area. As such, both the publicly-owned off-street parking lots and privately-owned parking lots utilization were reviewed with an additional 605 parking spaces supplied and 904 Tuesday and 1,129 Friday parking spaces demanded during the peak hour to determine the if the estimated future parking supply can accommodate the anticipated development.

Tuesday Future Assessment

Figure 5 identifies the peak publicly-owned off-street parking demand on Tuesday from 10:00 – 11:00 AM, with a total of 641 vehicles parked (69% utilization of the 932 publicly-owned off-street parking spaces). With the estimated parking supply of 605 spaces and demand of 904 vehicles from planned and possible developed projects, the parking demand increases to 1,545 vehicles parked (101% utilization of the 1,537 publicly-owned off-street parking spaces).

The parking demand utilization over 80% (309 vehicles) could be shifted to the on-street parking supply to accommodate the increase in parking demand of the publicly-owned off-street parking supply. The estimated parking demand of all publicly-owned on-and off-street parking spaces would increase to 1,727 vehicles parked (86% utilization of the 2,007 publicly-owned parking spaces). The increase in parking demand could also be accommodated in the privately-owned parking lots. The same 309 vehicles could also be shifted to privately-owned parking lots through shared-use agreements to accommodate the increase in parking demand of the publicly-owned off-street parking supply. The additional 309 vehicles would result in a peak privately-owned parking demand of 863 vehicles parked (62% utilization of the 1,384 privately-owned parking spaces).

Figure 7 identifies the peak privately-parking demand on Tuesday from 10:00 – 11:00 AM, with a total of 554 vehicles parked (40% utilization of the 1,384 privately-owned parking spaces). With the estimated parking supply of 605 spaces and demand of 904 vehicles from planned and possible developed projects, the parking demand increases to 1,458 vehicles parked (73% utilization of the 1,989 privately-owned parking spaces).

Friday Future Assessment

Figure 6 identifies the peak publicly-owned parking demand on Friday from 10:00 – 11:00 AM, with a total of 537 vehicles parked (58% utilization of the 932 publicly-owned off-street parking spaces). With the



estimated parking supply of 605 spaces and demand of 1,129 vehicles from planned and possible developed projects, the parking demand increases to 1,666 vehicles parked (108% utilization of the 1,537 publicly-owned off-street parking spaces).

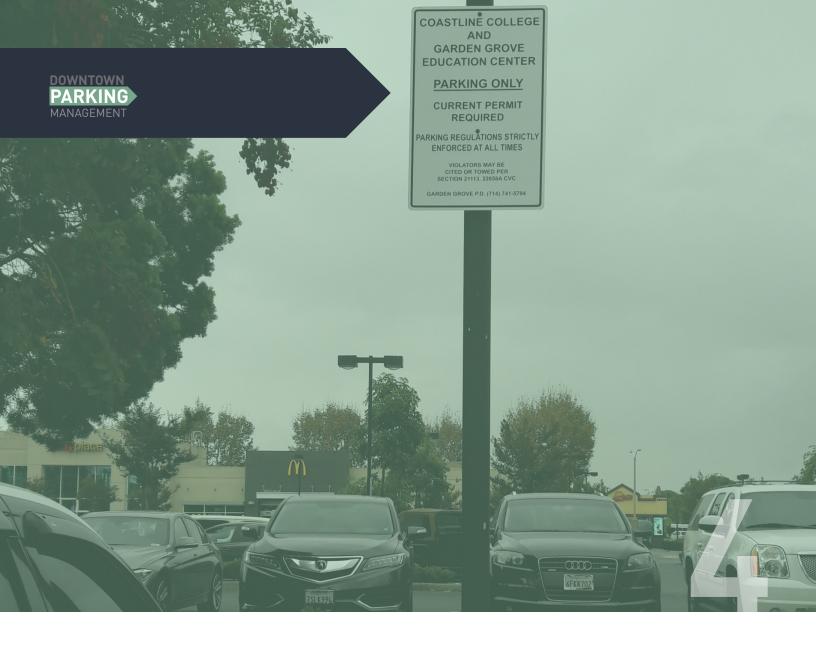
The parking demand utilization over 80% (333 vehicles) could be shifted to the on-street parking supply to accommodate the increase in parking demand of the publicly-owned off-street parking supply. The estimated parking demand of all publicly-owned on-and off-street parking spaces would increase to 1,822 vehicles parked (91% utilization of the 2,007 publicly-owned parking spaces). The increase in parking demand could also be accommodated in the privately-owned parking lots. The same 333 vehicles could also be shifted to privately-owned parking lots through shared-use agreements to accommodate the increase in parking demand of the publicly-owned off-street parking supply. The additional 333 vehicles would result in a peak privately-owned parking demand of 887 vehicles parked (64% utilization of the 1,384 privately-owned parking spaces).

Figure 8 identifies the peak privately-owned parking demand on Friday from 10:00 – 11:00 AM, with a total of 459 vehicles parked (33% utilization of the 1,384 privately-owned parking spaces). With the estimated parking supply of 605 spaces and demand of 1,129 vehicles from planned and possible developed projects, the parking demand increases to 1,588 vehicles parked (80% utilization of the 1,989 privately-owned parking spaces).

While parking demand is expected to increase as development occurs in the Downtown Garden Grove area, the anticipated demand could be accommodated with the existing supply and development of projects with parking. While these assumptions and estimates are based on the information available at the time of the survey, parking demand can vary with changes in Downtown Garden Grove or changes to planned and possible development projects. Parking demand changes should be reviewed as new development occurs to ensure that sufficient parking supply is available.

The following chapter summarizes several parking management strategies found to be suitable to Downtown Garden Grove given the current parking demand and potential for new development or changes to parking that could occur in Downtown. These strategies should be reviewed and applied on a case-by-case basis to ensure that parking demand is being effectively met.





PARKING MANAGEMENT STRATEGIES

4. Parking Management Strategies

A variety of parking management strategies have been identified for implementation in Downtown Garden Grove. These strategies vary from management of existing parking spaces to the development of more parking spaces. These strategies can be used in isolation or combined as part of a larger management strategy. The strategies are summarized below based on relative cost and time to implement.

Strategy Descriptions

Static Signage

Description: Signage is key to the efficiently and effectively directing motorists to use of available parking resources upon entry in to the Downtown area. It can direct users to parking facilities they might have been unaware of and also help fill up parking resources more evenly.

Pros: A relatively simple solution for increasing the efficiency of existing parking facilities.

Cons: Static signs are limited to what can be placed on them. Changes to parking facilities may require the installation of new signage.

Reasons for Recommendation: In Downtown Garden Grove, signage could inform users of other parking facilities they might not have considered and spread out parking demand more evenly. Also, signage can clarify which facilities are intended for patrons of downtown shops, restaurants, and entertainment venues, which was noted as a source of confusion in the online survey and might contribute to the concentration of parking demand in a few areas.

Temporary Use Agreements

Description: Temporary Use Agreements involve cities approving the temporary or time-limited use of property to provide parking for a land use, building, or structure without mandating complete compliance with the development standards of that zoning district.

Pros: These are an effective method to supply parking for seasonal or transient land uses.

Cons: Sufficient notice needs to be provided to the public before the agreement is implemented.

Reason for Recommendation: This strategy is already being used with special events in downtown, however it should be considered as part of all events that need additional parking.



Implementing Time Limits & Restrictions

Description: Time-based parking restrictions prohibit parking for certain periods to save parking resources for particular user groups and also result in better turnover of parking spaces at high-demand locations. In residential areas adjacent to commercial areas, parking time limits are used to discourage long-term parking by commercial employees. In commercial areas, typically by petition of the business/property owners, time limits are used to encourage turnover of parking spaces to provide short-term customer parking.

Pros: One of the simplest ways to manage long duration parking demand.

Cons: This strategy requires enforcement to be effective, which increases cost.

Reason for Recommendation: Implementing time limits at facilities which have higher utilization or long-term parking can distribute demand to underutilized facilities.

Parking Enforcement

Description: Parking enforcement usually involves a non-peace officer writing and issuing parking citations relating to the violation of codes, laws, regulations, and validation programs pertaining to parking on City streets. If a city intends to stringently enforce time limits, sufficient public notice should be provided prior to initiating enforcement.

Pros: Ensures that other strategies, such as assigning parking locations and enforcing time limits, are effective.

Cons: Entails administrative and operation costs.

Reason for Recommendation: The City already provides enforcement in certain areas, however, if the City implements other promising strategies in certain areas, such as assigning parking locations and enforcing time limits, providing additional enforcement in those areas will ensure the success of those strategies.

Project Specific Valet

Description: Allows visitors of a specific development to drop off their vehicle with an attendant for efficient parking. Visitors will be given a ticket associated with their vehicle that the attendant will use to identify the appropriate vehicle when the visitor returns.

Pros: Valet parking can stack vehicles and achieve greater density of parking than is possible with self-parking.

Cons: The cost of managing and operating the system would fall on the developer of business. The valet should be contained within the specific development site. A development that is approved with a valet operating will need to continue using the valet operations unless the lack of need for a valet can be justified.

Reason for Recommendation: A valet provides increased parking demand through better parking efficiency. The system can result in smaller parking facilities due to the limited access and control of the parking facility.





Implementing parking signage with time limits and restrictions and enforcing it is one of the simplest ways of managing parking demand.





Valet service provides better parking efficiency. Assigning parking locations improves the use of parking space.



Assigning Parking Locations

Description: This strategy involves assigning users to specific locations to increase the efficiency of space use. For example, employers could require all-day employee to park in remote facilities to free up more desired on-street parking spaces for customers resulting in better turnover. Alternatively, the most convenient spaces could be reserved for pick-up and drop-off.

Pros: Maximizes the efficient use of existing parking spaces and reduces the need to create additional spaces.

Cons: This strategy does not reduce parking demand, but rather distributes the parking demand to better accommodate users. This strategy requires enforcement to be effective, which increases cost.

Reason for Recommendation: Assigning parking locations could spread parking demand to underutilized areas and decrease the need to provide additional parking in high utilized areas.

Increasing Use of Shared Parking

Description: Section 9.18.140.030 of the Garden Grove Municipal Code allows for up to a 25% credit for shared parking. Shared parking is the use of a parking space to serve two or more individual land uses without conflict or encroachment. This is possible when two conditions are in place:

- Variations in the accumulation of vehicles by hour, day, or season at the individual land uses; and
- Relationships among the land uses that result in visiting multiple land uses on the same auto trip.

For instance, the parking lots of religious institutions are generally full on the weekends, but empty during the week. Such institutions can lease their parking lots to nearby office buildings, which conversely require high amounts of parking during the week and low amounts during the weekends. These types of arrangements result in both land uses satisfying their parking needs without building additional parking facilities.

Pros: Shared parking can maximize the use and efficiency of existing parking facilities, reduce the need to provide more parking, and enables more compact development.

Cons: To be successful, shared parking requires that each component of the shared parking agreement have complementary parking patterns (i.e. peak parking occurring during different periods of the day). Additionally, shared parking agreements should be reviewed to ensure that parking demand does not exceed supply.

Reasons for Recommendation: Encouraging current and future developments to share parking facilities would increase parking efficiency and decrease the need to supply additional parking facilities. For instance, the sharing of parking spaces in the CSUF lot with business on Main Street can help accommodate additional development on Main Street without providing more parking.



Find the best parking in Sacramento by booking a guaranteed spot in advance with SacPark. Parking is available for pre-purchase throughout Sacramento including near restaurants, hotels, and the best attractions. Book Sacramento Convention Center or Golden 1 Center parking with ease. Search and compare all available parking options and prices in real-time and redeem your purchase seamlessly at your selected location. Book Sacramento parking with SacPark and save time and money with hassle-free parking.

Downtown Sacramento facilitates dynamic parking management by providing users various ways to find parking.



Downtowns are increasingly accommodating for TNC curbspace management.



Accommodating Transportation Network Companies

Description: This strategy involves converting on-street parking spaces into pick-up and drop-off locations for Transportation Network Companies (TNCs) such as Uber and Lyft. The location should be easily accessible and located on the street to accommodate simple pick-up and drop-off.

Pros: Can maximize the number of people who use a parking space associated with commercial land uses.

Cons: This strategy is best suited for commercial land uses with higher numbers of visitors or customers (such as a restaurant, hotel, or retail use).

Reason for Recommendation: One of the biggest changes in transportation modes over the past few years has been the development of TNCs. TNCs can reduce the need for parking because people will not be driving themselves to Downtown Garden Grove.

Promoting Other Modes of Transportation

Description: This strategy entails incentivizing the use of other modes besides Single Occupancy Vehicles (SOVs). Examples include improving transit connectivity and amenities, improving pedestrian and bicycle connectivity and facilities, and increasing usage of TNCs.

Pros: Any parking supply issue can be addressed by changing parking demand through incentivizing other modes of transportation.

Cons: Incentivizing other modes of transportation require financial investment and may only change parking characteristics of some users.

Reason for Recommendation: Decreasing parking demand is a more sustainable solution to managing parking than increasing supply. Improving transit, bicycle, and pedestrian facilities within downtown can increase those uses within the Downtown Garden Grove.

Restriping On-Street Spaces

Description: Additional curbside areas can be striped for on-street parking, including angled parking, if right-of-way and traffic conditions allow.

Pros: On-street parking has a traffic calming effect and can improve pedestrian safety by acting as a buffer between pedestrians and moving vehicles. This can increase the walkability of downtowns.

Cons: This strategy only increases supply and does not manage parking demand. Other strategies are better at long-term management of parking demand.

Reason for Recommendation: If Garden Grove's parking demand exceeds parking supply in the future, and the City has exhausted applying other strategies that decrease parking demand, it should consider providing more spaces. It should also consider thorough review of various demands on curb-space including loading, passenger pick-up/drop-off, bus-stops, bike lanes, etc. before simply adding more onstreet spaces.



Incentives to alternative modes of transportation reduces driving and overall parking demand.



Angled on-street parking improves pedestrian safety and encourages walkability.



Improving Facility Design

Description: Enhancing the design of existing parking facilities can provide additional parking. For instance, changing the layout and orientation of parking stalls can increase parking supply and improve flow through parking facilities.

Pros: Provides additional parking spaces without building new parking facilities.

Cons: Increase in parking supply may not outweigh cost of studying and implementing new parking layout.

Reason for Recommendation: Improving the design of existing facilities can result in more parking availability and decrease the need to build more facilities.

Coordinating Valet Operations

Description: Allows visitors to an area to drop their vehicle with an attendant at one of several valet stands. The attendant parks the vehicle in an available space (usually a structure or stacked lot) and retrieves the vehicle when the owner returns. A true coordinated operation allows vehicle owners to drop off and pick up at different locations, and smartphone apps now make it possible for vehicle owners to "call" for their vehicle before they arrive at their selected pick-up location. In a coordinated system, vehicles are also parked across shared facilities within the coordinated valet area.

Pros: Valet parking can stack vehicles and achieve greater density of parking than is possible with self-parking. The coordinated system allows users of different land uses to use one valet system for parking.

Cons: The cost of managing and operating a valet would fall on the City or land uses associated with the valet operation. Additionally, a valet operation would require approval from the City regarding a valet system using City streets and the parking facility for the valet.

Reason for Recommendation: A coordinated valet provides the benefits of a valet system to multiple land uses. Additionally, it also encourages the use of off-street parking facilities that may be further than what a motorist perceives as acceptable.

Permit Parking Programs

Description: Cities often implement preferential parking districts or permit parking street segments in residential areas to protect these neighborhoods from parking intrusion by employees and customers of nearby businesses. Preferential or permit parking districts restrict parking for all motorists, but area residents and their guests are exempt from the restrictions if they purchase and display permits. Permit parking can

also be applied to on-street parking in commercial districts to provide unrestricted parking for residents and employees who work in a parking district.

Pros: Minimizes commercial parking in residential neighborhoods.

Cons: The cost of implementing and managing the permitted parking program would fall on the City.

Reason for Recommendation: The City already allows for permit parking on streets. Expanding the number of streets that require permits could be accommodating within the existing permit parking program.

Charging for Parking

Description: Charging for parking is a key element in encouraging drivers to use parking efficiently, by directing long-term parking to less convenient spaces and gaining the most productivity from the most desirable spaces. There are many alternatives for collecting parking charges, including traditional parking meters, centralized parking machines, and debit card systems.

Charging for parking should be considered for parking facilities that experience parking demand utilization above 80% - 90% for most of the hours the parking facility is operating. Parking charges should be set to maintain the 80% - 90% parking utilization in the facilities. If charging for parking shifts parking demand to a nearby facility, then charges should be considered at that facility when parking demand utilization is above 80% - 90% for most of the hours the parking facility is operating.

Some paid parking strategies place parking costs on business owners rather than customers. See the below summaries regarding these options.

- **Merchant Programs:** Some cities or counties run merchant discount parking programs that allow merchants to purchase parking coupons to issue to customers who patronize their establishment. These validation programs can be arranged in various ways to meet the validation needs of interested merchants. Merchants who participate in the programs typically display a sign in the window to inform potential customers that coupons are available with purchases.
- **Parking Benefit Districts**: This strategy is a variation of an on-street parking charge scheme for residential areas. Instead of prohibiting non-resident parking in neighborhoods, as occurs with a residential permit parking program, non-resident parking is allowed for a charge. The charge could be collected with meters, pay-boxes, or monthly passes. Revenues from the fee can flow back to the community, for neighborhood or transportation improvements.
- **Access Control:** Access to off-street parking can be controlled through both charging and non-charging strategies. An example of a charging strategy is using gate arm controls and requiring



payment to exit a facility. Examples of non-charging strategies creating hang tag or sticker systems for employee parking, and using validation systems that ensure that users are those that the facility is intended for.

Pros: Charging for parking is an effective method to deter the concentration of parking demand in select areas. It can also encourage alternative transportation use.

Cons: Charging for parking is a highly contested issue that many respondents in the on-line survey would not support.

Reason for Recommendation: While charging for parking is unpopular, it is an effective method for managing parking supply. If charging for parking is considered, then it should be applied to an entire parking facility or street segment to avoid circulation in search of free parking. The strategy can be applied to parking facilities that experience consistent high parking utilization or to an entire region of downtown. Improving pedestrian facilities should also be considered as part of this strategy as some people will search for free parking further from their destination.





Innovative parking lot design improves flow of traffic. Revenues from charging for parking can be used for downtown improvements.

Implementing Urban Design and Traffic Calming Strategies

Description: Urban design can encourage walking by enhancing connections between parking spaces and destinations. This can reduce the need to build additional parking adjacent to destinations and increase the use of existing facilities. For instance, planting more shade trades between parking facilities and popular destinations downtown can encourage more walking. Similarly, implementing traffic calming strategies, which moderate traffic speeds, can increase pedestrian safety and willingness to walk to destinations. For example, creating road humps reduces vehicle speeds and increases pedestrian comfort.

Pros: Can reduce the need to build additional parking spaces and promote walking and bicycling.

Cons: Any measure that reduces vehicle speeds can face strong opposition.

Reasons for Recommendation: Several survey respondents expressed that they are either willing to walk up to three minutes from their parking spots to their destinations, or that they would like to see more pedestrian infrastructure improvements downtown. Encouraging these people to walk more through good urban design and traffic calming strategies could be a more cost-effective tool for managing parking than building additional facilities adjacent to destinations. Furthermore, citizens that live in the residential areas to the east and west of downtown are within walking distance of key downtown destinations.



Urban design and traffic calming strategies reduces the need for driving to the nearby destinations.



Updating Parking Standards

Description: Providing more flexibility to developers with parking standards based on a development's location and circumstances can increase parking efficiency. For instance, decreasing parking requirements for projects located near transit can incentivize transit-oriented development and decrease parking demand. Reducing parking requirements for developers that provide bicycle parking or annual transit passes to building occupants can also decrease parking demand.

Pros: Can decrease parking demand and promote alternative forms of transportation.

Cons: Reevaluating and revising parking standards can be time-consuming.

Reason for Recommendation: This strategy could decrease parking demand and the need to provide additional parking. It would also promote the development of more sustainable transportation facilities, which survey participants requested in their comments.



Updated parking standards can decrease parking requirements and allow for alternative modes.

Intelligent Signage

Description: To improve on the short-term strategy of signage, more technologically advanced signs can also guide drivers to available parking. Such signs can provide real-time information about available spaces either on particular levels of a certain parking facility or at various publicly-owned parking facilities throughout a community. This information can also be disseminated through apps or websites.

Pros: Can provide real-time information regarding parking demand in various parking facilities. Will send some visitors to more readily available parking facilities.

Cons: Intelligent signs can be expensive and implementing the technology to identified demand can be expensive. Will create situations where visitors circulate parking facilities looking for remaining spaces available.

Reasons for Recommendation: Intelligent signage can inform visitors about parking availability and direct them to appropriate parking facilities. The technology can be integrated with apps and websites to provide additional means of sharing the parking information.

Encouraging Smart Growth

Description: The term "smart growth" encompasses various development and conservation strategies that are intended to benefit the environment, public health, and local communities by increasing their economic strength and social diversity. Such strategies include creating more mixed-use developments, fostering walkable neighborhoods, and focusing new developments in areas where development already exists. All these strategies can be used to manage parking, because they all reduce driving and thus parking demand.

Pros: In addition to reducing parking demand, these strategies also have environmental, health, social, and economic benefits.

Cons: These strategies can be difficult and slow to implement.

Reasons for Recommendation: The most sustainable solution to managing parking is to reduce the need for it in the first place, and these strategies accomplish this. Garden Grove has been implementing Smart Growth principles with the development of downtown businesses and mixed-used developments.

Adding Off-Street Parking

Description: Cities or property owners may consider adding more off-street parking through parking lots or parking structures. The size of the parking facilities will be dependent on the anticipated demand but



could be located on an existing city owned parking lot or a city owned property. The parking facility should be located along and accessed from bigger streets to for improved accessibility.

Pros: Adding off-street parking can alleviate the pressure on current parking supply.

Cons: Like restriping on-street spaces, this strategy only increases supply and does not manage parking demand. Other strategies are better at long-term management of parking demand. Adding off-street parking can have a higher direct expense and opportunity cost. The average cost of building surface parking is \$5,000 - \$10,000 per space, the average cost of a parking structure is \$20,000 - \$30,000 per space, and the average cost of a underground parking is \$30,000 - \$40,000 per space. These costs do not include the cost of the land on which the parking is built. Additionally, when parking is built, the opportunity for other uses in the same space is limited. Paving land for parking also results in environmental costs, including greenspace loss, stormwater management costs for increased impervious surfaces, heat island effects, etc.

Reason for Recommendation: If parking facilities are being efficiently used in the future and parking demand still exceeds supply, Garden Grove will not be able to satisfy demand without providing additional parking.





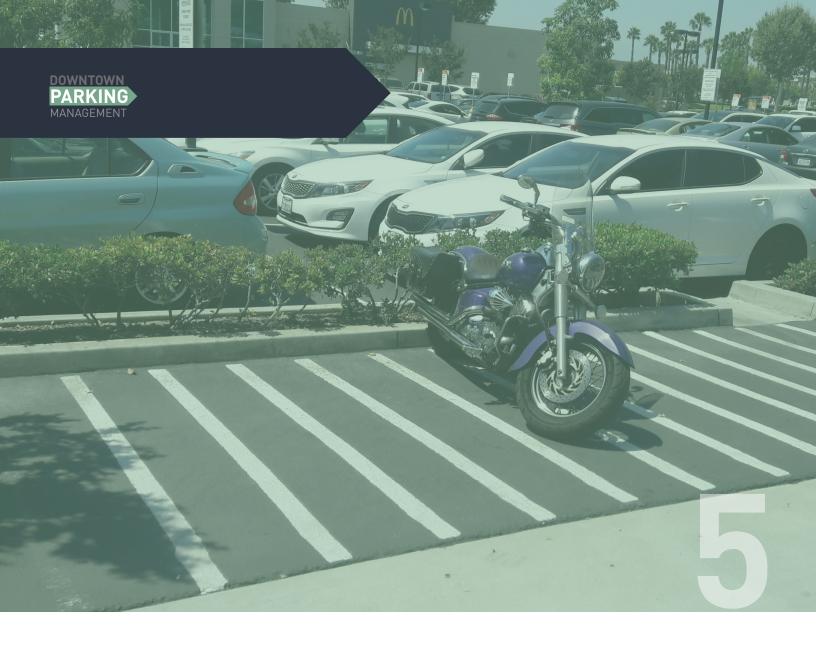
Real-time information on parking availability helps users to find parking easily. Parking structures can make efficient use of land in downtown where land is more valuable.

Strategy Summary

Table 4 summarizes cost and time to implement. These strategies can be used in isolation or combined as part of a larger management strategy. The number of dollar and clock signs represent the relative cost and time for implementing the strategies.

Table 4: Summary of Parking Management Strategies

		,
Strategy	Cost	Time to Implement
Static Signage	\$	(1)
Temporary Use Agreements	\$	O
Implementing Time Limits & Restrictions	\$	(
Parking Enforcement	\$\$	0
Project Specific Valet	\$	(3)
Assigning Parking Locations	\$	0
Increased Use of Shared Parking	\$\$	()
Accommodating Transportation Network Companies	\$	00
Promoting Other Modes of Transportation	\$\$	00
Restriping On-Street Spaces	\$\$	00
Improving Facility Design	\$\$\$	00
Coordinated Valet Operations	\$	00
Permit Parking Programs	\$\$	00
Charging for Parking	\$\$	00
Implementing Urban Design and Traffic Calming	\$\$	000
Updating Parking Standards	\$\$	000
Intelligent Signage	\$\$\$	000
Encouraging Smart Growth	\$	000
Adding Off-Street Parking	\$\$\$	000



FUNDING OPTIONS

5. Funding Options

Fehr & Peers reviewed various funding options utilized by different cities to finance their parking strategies. The following funding strategies have been identified as potential options for Downtown Garden Grove.

In-Lieu Fees

Some cities allow developers to pay a fee in-lieu of constructing some or all the minimum amount of parking be required as part of all new developments. The fee allows a project an alternative to providing off-street parking required by the municipal code. The fees should be voluntary and applied to new development, change of use, or redevelopment of an existing land use. The fees collected can be used to implement parking management strategies or the development of publicly-owned parking facilities. The fee should generate enough revenue to fund the planned parking management strategies without causing a project to be developed in another jurisdiction. An in-lieu fee program is in use in the cities of Glendale, Beverly Hills, Culver City, Hermosa Beach, Santa Monica, and Pasadena.

Pros: Does not limit development as fees are paid if required parking supply is not met.

Cons: Fees should only be used to implement parking management strategies or develop publicly-owned parking facilities.

Parking Fees

Cities can collect parking fees through metered spaces or paid parking facilities and reinvest the funds into the parking system by implementing parking management strategies. Many of these cities have a parking advisory committee consisting of stakeholders who identify concerns, review project proposals, and makes recommendations to the City Council for the final distribution of funds. The funds can be used to implement parking management strategies or develop publicly-owned parking facilities. While these funds can provide a consistent revenue stream, the fees must be set at a level to not deter people from use the parking facilities. This funding option works best in a city that already charges for parking or has support for charging for parking. This program is used in the cities of Santa Monica, Anaheim, Pasadena, and Glendale.

Pros: Parking revenue is generated by each user paying for parking and the fees help manage parking demand.

Cons: May not generate enough revenue to cover the cost of strategy implementation. Price sensitivity should be reviewed and adjusted to balance parking demand and revenue.



Property-based Business Improvement District (PBID)

Many cities in California utilize a property-based Business Improvement District (PBID), which is a private sector initiative to manage and improve the environment of a business district. PBIDs are created through Assembly Bill 1381 (Property and Business Improvement District Law of 1994) and allow property owners who vote amongst themselves to establish assessments for funding the PBID. PBIDs are approved for an initial five years and can be reapproved repeatedly for an additional ten years.

The local government collects the assessment but provides the funds to the PBID for management and use in accordance with the PBIDs management plans. The funds generated by a PBID are meant to supplement the services provided by the City. The services offered by a PBID can include public safety, maintenance and cleaning, marketing, and other things. A PBID could be used to implement parking management strategies such as enforcement and signage. This program is used in Pasadena.

Pros: Assessments can be regularly collected resulting in a consistent funding source.

Cons: Fund use is at the discretion of the PBID and coordination between the PBID and local government should be maintained to ensure that services are complimentary and not competitive.

Bonds

Many cities issue bonds to construct publicly-owned parking facilities. The two most common types of municipal bonds are general obligation and revenue bonds. General obligation bonds are paid back through the general fund of the issuing municipality. Revenue bonds are paid back through funds generated by the project itself. Bonding for the development of publicly-owned parking facilities has been done in the cities of Santa Monica, Anaheim, Pasadena, and Glendale.

Pros: Creates a large funding source for implementation of high cost parking management strategies.

Cons: Requires repayment with interest. Repayment would either come from the general fund or through parking fees applied to the strategy or facility.

General Fund

Cities can utilize general funds to implement parking management strategies as they would any other program or initiative in the city. While these funds already exist without additional work, this funding can be limited due to other projects or commitments. Many cities that do not have any other funding mechanism utilize the general fund to implement parking management strategies.

Pros: Funds are available for immediate use pending approval from City Council.

Cons: Takes funds and opportunities away from other things that are financed by the City Council.

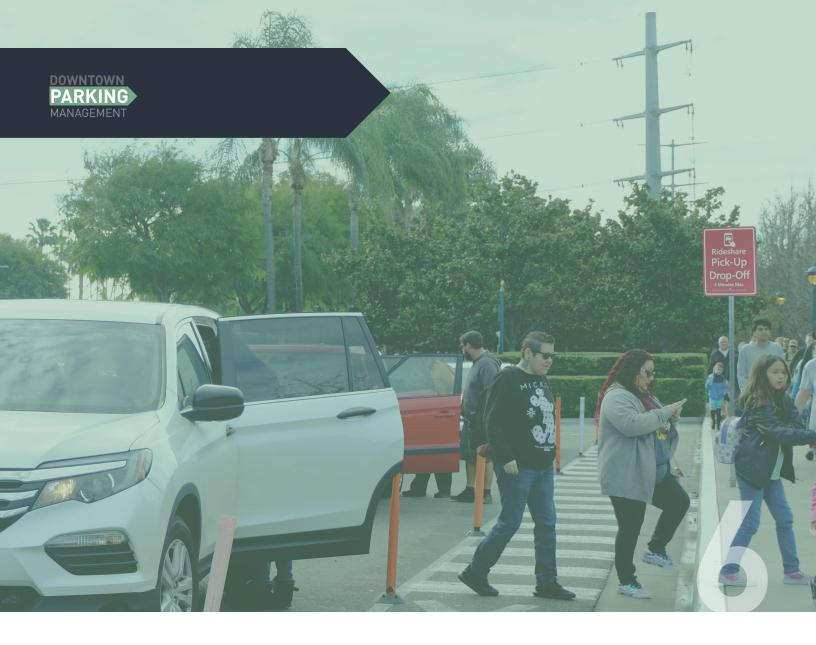
Enhanced Infrastructure Financing Districts (EIFDs)

A city can establish a financing district to define an area in which improvement or rehabilitation of community infrastructure is a priority. EIFD activities are primarily funded through a property tax increment over a tax baseline within the EIFD area. The tax increment is not a new tax, but rather the increase in tax revenue over a baseline. EIFDs must receive consent from other taxing entities including applicable cities, counties, or special districts. EIFD creation is also subject to public review. The revenue generated by property tax increases can be used to implement infrastructure based components of parking management strategies.

Pros: Does not assess new taxes or fees, but rather uses net increases in taxes over established base year.

Cons: Funding can only be used for physical infrastructure and funding stream is dependent on property tax increases in district area.





DISRUPTIVE TRENDS IN PARKING



6. Disruptive Trends in Parking

The transportation landscape has undergone substantial changes over the past few years. Since the early 2010's, many new and innovative transportation options have been developed that change the way people travel. As illustrated in **Figure 11**, changes in accessibility and the rise of the sharing economy have provided more modes of transportation than had previously been available.

TAXI

SHARE

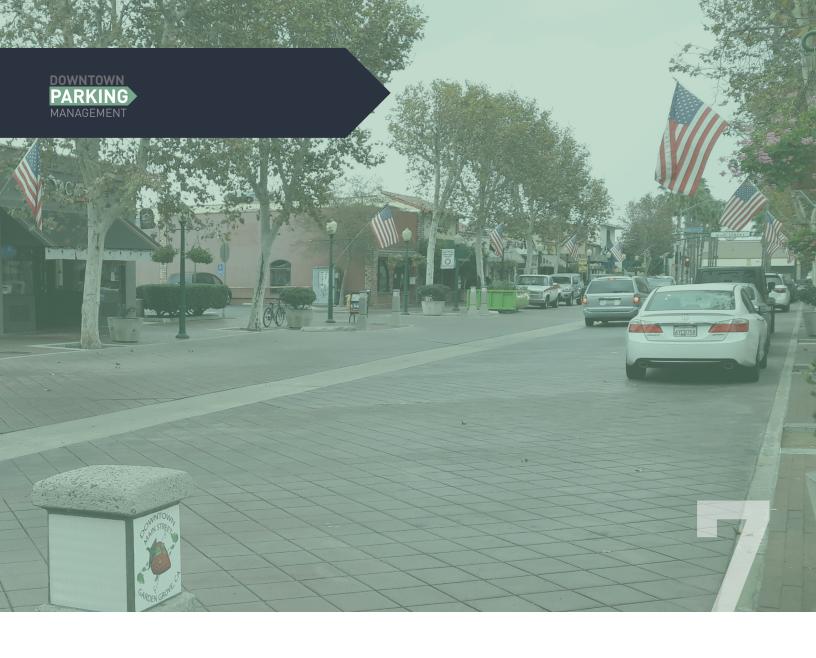
SHA

Figure 11: Vehicle Accessibility and Travel Mode

One of the biggest changes in transportation modes over the past few years has been the growth of TNC use. Additionally, fully autonomous vehicles will be available in the future which will also affect how people travel. These services/technologies provide opportunities for people to travel without the need to park a private vehicle at their destination which will influence how parking is utilized in the future.

While it can be inferred that the use of TNCs and autonomous vehicles would reduce the demand for parking spaces, there is currently limited research available to suggest how parking standards could be changed due to the influx of TNCs and autonomous vehicles. There are approximately 6 parking spaces available for each vehicle in the United States and the use of these additional modes of transportation will change how existing parking spaces are used or how new parking spaces are developed.

Until more research is completed on the effects of these new technologies on parking demand, it is recommended that changes in parking demand with the use of TNCs, autonomous vehicles, and other technologies be reviewed on an ongoing basis. It is also recommended that any development of new parking spaces consider the potential reuse of the parking spaces due to change in parking demand.



RECOMMENDATIONS



7. Recommendations

The survey data shows that existing parking supply can accommodate the current typical parking demand in Downtown Garden Grove. While parking demand is expected to increase as new development occurs in Downtown Garden Grove, the anticipated demand should be accommodated by the existing parking supply and development of parking in new projects. As development occurs and technology changes in Downtown Garden Grove, parking management strategies identified in this report should be reviewed and implemented as needed under the following scenarios.

Regular Parking Demand Review

Parking demand data in the Downtown Garden Grove should be regularly collected and documented to identify changes in parking demand due to new development or changes to existing development. The data collection should occur whenever deemed necessary by the City of Garden Grove staff. A few examples of situations that could be deemed necessary include, but are not limited to:

- A set number of years since the previous parking demand data collection was completed
- After the development of a new project in or near Downtown Garden Grove that alters parking demand significantly
- After the substantial change of an existing development in or near Downtown Garden Grove that alters parking demand
- At the request of Downtown Garden Grove parking user when the reasons for the request are justified and validated

Given the increase of public interest in land use change, any parking demand data collection should be conducted after new developments or changes to existing developments have had time to consistently operate at a baseline of parking demand. The data collection process and review can be organized and conducted by either City of Garden Grove staff or a qualified professional. The data collection and review of parking demand should either encompass all Downtown Garden Grove or a specified area of concern. The data collection should include the following information:

- Parking space supply
- Parking restrictions
- Hourly parking demand that at a minimum covers the peak parking demand
- Multiple days of data collection if deemed necessary by City of Garden Grove staff

Regular data collection of parking demand will allow City of Garden Grove staff and those concerned about parking availability in Downtown Garden Grove with the opportunity to review quantitative parking demand

information. Upon reviewing quantitative parking demand information, parking management strategies could be applied as needed to address parking demand concerns.

New Development Parking Management Strategies

If new developments can satisfy parking demand with on-site supply, then management strategies should only be applied if parking demand exceeds the on-site supply. The management strategies should result in the development utilizing an appropriate share of the off-site parking spaces. If new developments cannot satisfy parking demand with on-site supply, then parking managements strategies should be included as part of the development approval process. The management strategies should result in the development utilizing an appropriate share of the off-site parking spaces.

There is no one-size-fits-all parking management solution; all projects are unique and should be addressed on a project by project basis. Developers should work with the City of Garden Grove staff to identify which parking management strategies are appropriate to consider for the given development. If these strategies prove to be ineffective, then additional strategies should be reviewed and implemented to effectively manage the off-site parking.

Requested Parking Management Strategies

Parking management strategies are typically applied at the request of elected officials or constituents to address parking demand concerns. In coordination with parking demand review, parking management strategies can be applied to all Downtown Garden Grove or a specific area to address a request. The City of Garden Grove staff should work with the requestee to identify the specific concern and identify possible parking management strategies.

Parking Management Strategies for Future Changes

Parking demand is constantly changing with the development of new technology and changes in land use. While parking demand concerns may be limited, the implementation of parking management strategies may be used as a preemptive measure to address changes in parking demand. Parking management strategies can be applied to all Downtown Garden Grove or a specific area to address concerns that may arise as part of future development. The City of Garden Grove staff should work with developers, business owners, and residents to identify potential parking strategies that could be implemented to manage future parking demand.