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Downtown Fort Pierce Parking Analysis

May 26, 2022

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01 | INTRODUCTION

Project Objectives

The purpose of this study is two-fold. First, recommend a capacity to meet the projected parking need for the new King's Landing development. And second, identify areas of surplus and deficit within the study area to determine where to locate a new parking structure to best meet any future parking needs.

To achieve this goal, Walker prepared a shared parking analysis to model current and future conditions on a zone-by-zone basis. Walker's analysis considered the impact of both the King's Landing project and existing vacancies in the downtown. The projected parking need was then compared to the available parking supply in each zone to quantify any current or future shortages.

It is important to note that the parking inventory data collected for this analysis was gathered from aerial images while information about the quantity and types of land uses in the downtown was found on the St. Lucie County Property Appraiser website. The nature of public parking and development within a municipal setting is constantly variable and must consider development projects with difficult goals as well as plan for future development and growth. Therefore, our analysis is intended to be used for planning purposes and should not be relied on for an exact inventory forecast and capacity analysis.



Recommend Parking Capacity



Identify Surplus and Deficit



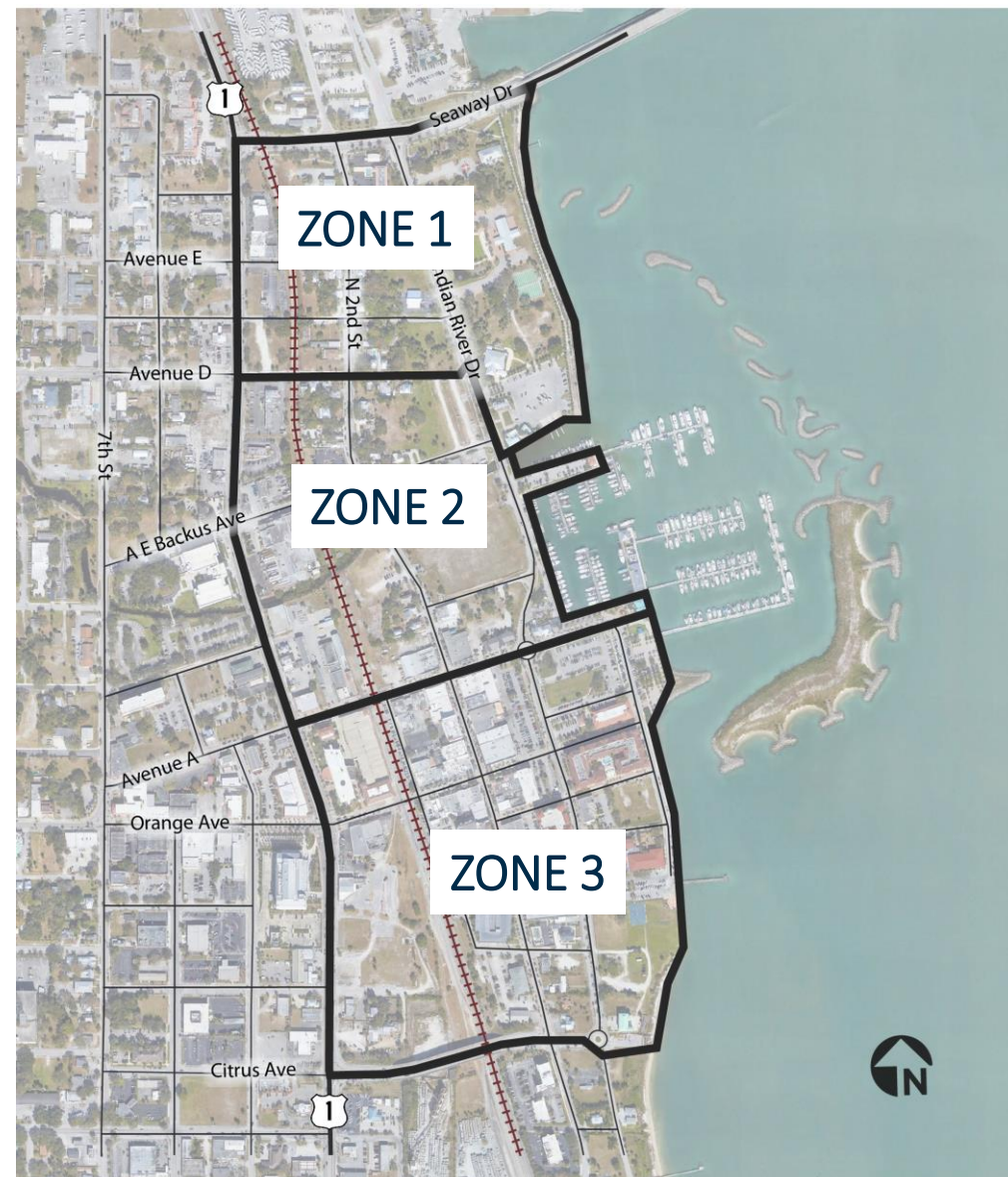
Study Area

The Study Area was divided into three zones based on general features.

Zone 1 is distinguished by its primarily residential nature; however, it also hosts a public park and two museums.

Zone 2 is the future home of the King's Landing development. It is bisected by both Moore Creek and the rail line. As a result, the character of the zone is also mixed. In addition to several industrial parcels, Zone 2 contains some vacant parcels currently used for parking. While the marina itself is in Zone 2, the parking supporting the land use is located to the south (Zone 3).

Zone 3 is the heart of the downtown, and home to both the city and county government services as well as a variety of commercial uses. Like the other zones, the rail line runs north/south bisecting the area, resulting in a real and perceived barrier.





02 | SHARED PARKING METHODOLOGY

Shared Parking Background

The shared parking methodology was developed in the 1980s and has been a widely accepted industry standard for rightsizing parking facilities over the past 30+ years. It is endorsed by the Urban Land Institute (ULI), the American Planning Association (APA), the National Parking Association (NPA), and the International Council of Shopping Centers (ICSC) as an acceptable method of parking planning and management.

It is defined as the ability to use the same parking resource by multiple nearby or adjacent land uses without encroachment. Shared parking considers the parking demand for more than 55 different land uses; the availability and use of alternative modes of transportation; captive market effects; and daily, hourly, and seasonal variations.

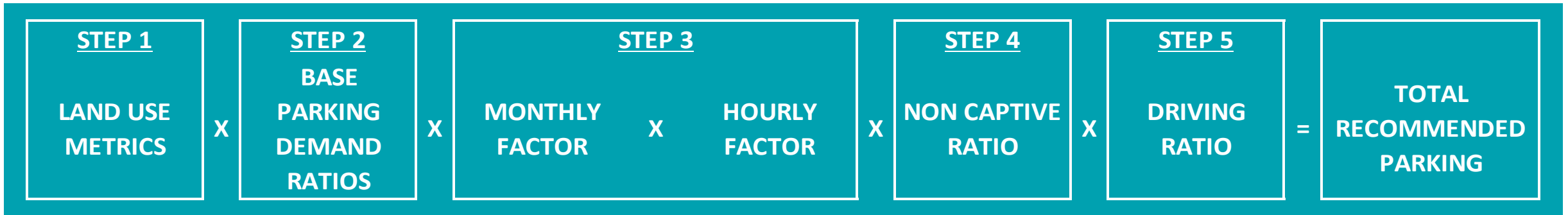
The model generates 494 parking space need calculations and recommends a capacity based on the highest figure generated from these computations. Therefore, the intent is to design for the busiest hour of the year, busiest day of the year, and busiest month of the year, at an 85th percentile level of activity relative to similar properties. The 85th percentile represents a level of activity that occurs frequently enough for which to justify providing spaces.



Shared Parking Methodology

Allows for the sharing of parking spaces among uses in a mixed-use environment without encroachment— in lieu of providing a minimum number of parking spaces for each individual use.

Shared Parking Steps:



01 Identify and Quantify Land Uses
St. Lucie County Land Assessor website

02 Apply ULI published Base Parking Ratios

- Based on the 85th percentile of peak-hour observations
- Significant and high threshold to meet in terms of supplying parking capacity

03 Apply presence factors to account for variations in demand on a daily and annual basis
Complimentary uses such as office and residential

04 Apply adjustment for parkers who visit a second land use during their primary visit

05 Adjust for alternative modes of transportation
Primarily a car-centric commute

Step 1: Identify and Quantify Land Use Components

The first step in projecting parking needs for the Study Area is to understand the **types and quantities** of existing land uses. Walker used data from multiple online sources to determine the mix of commercial and residential development in each zone. The land use assumptions used in the shared parking analysis are shown in the figure to the right.

As a shared parking analysis in a municipal setting, there were several land uses that were unique to the setting.

- City Hall was categorized as Government Office space
- St. Lucie County Courthouse, Office of the Clerk & Comptroller, Law Library and Public Defender’s office was listed as Judicial Complex space
- Museum space includes the AE Backus Museum & Gallery and Manatee Observation and Education Center
- Natalie’s Orchid Island Juice Company was classified as manufacturing space

Land Use	Zone 1	Zone 2	Zone 3	Unit
Retail	19,305	50,672	100,615	SF
Family Restaurant	2,200	20,100	39,658	SF
Fast/ Casual Restaurant	0	6,225	19,858	SF
Bar	0	2,232	0	SF
Theater	0	0	1,200	Seats
Public Park	11	0	0	Acres
Library	0	0	22,523	SF
Museum	13,590	0	0	SF
Hotel/Bed & Breakfast	20	0	0	Keys
Condominium	25	9	38	Dwelling Unit
Townhouse/ Single Family	11	9	2	Dwelling Unit
Office	17,783	12,210	154,456	SF
Government Office	0	0	47,434	SF
Judicial Complex	0	0	168,316	SF
Manufacturing	0	65,572	0	SF
Marina	0	272	0	Slips



Step 2: Apply Standard or Base Parking Generation Ratios

The **base parking ratio** represents how many spaces should be supplied to each use if the spaces are unshared in a suburban context where the driving ratio is at or near 100%. Each land use has a specific metric considered by the parking industry to be a reliable measure of parking demand (i.e., gross leasable area for dining, berths for the marina, and dwelling units for residential).

The ratios are based on an 85th percentile of peak-hour observations, representing parking capacities that will meet or exceed the need of most developments/environments.

The base ratio is informed by thousands of field parking occupancy studies performed by dozens of parking and transportation professionals over decades.

Land Use	Weekday			Weekend			Unit
	Visitor	Employee	Total	Visitor	Employee	Total	
Retail							
Retail	2.10	0.51	2.61	2.33	0.58	2.91	ksf
Food and Beverage							
Family Restaurant	8.27	1.17	9.44	10.77	1.51	12.28	ksf
Fast Casual/Fast Food	9.16	0.75	9.91	8.82	1.39	10.21	ksf
Bar/Lounge/Night Club	15.25	1.25	16.50	17.50	1.50	19.00	ksf
Entertainment and Institutions							
Live Theater	0.30	0.07	0.37	0.33	0.07	0.40	seats
Public Park	4.00	0.40	4.40	5.00	0.50	5.50	acre
Museum/Aquarium	4.00	0.40	4.40	4.50	0.50	5.00	ksf
Public Library	2.00	0.25	2.25	1.90	0.20	2.10	ksf
Hotel and Residential							
Bed & Breakfast	1.00	0.15	1.15	1.00	0.15	1.15	keys
Residential							
Studio Efficiency	0.10	0.85	0.95	0.15	0.85	1.00	units
1 Bedroom	0.10	0.90	1.00	0.15	0.90	1.05	units
2 Bedrooms	0.10	1.65	1.75	0.15	1.65	1.80	units
3+ Bedrooms	0.10	2.50	2.60	0.15	2.50	2.65	units
Office							
Office <25 ksf	0.30	3.50	3.80	0.03	0.35	0.38	ksf
Office =100 ksf	0.25	3.15	3.40	0.03	0.32	0.35	ksf
Office >500 ksf	0.20	2.60	2.80	0.02	0.26	0.28	ksf
Additional Land Uses							
Marina	0.25	0.02	0.27	0.33	0.02	0.35	Berths
Government Office Building	0.30	3.59	3.89	0.03	0.36	0.39	sf GFA
Judicial Complex	0.75	2.27	3.02	0.08	0.23	0.30	sf GFA
Manufacturing	0.30	3.06	3.36	0.03	0.31	0.34	sf GFA



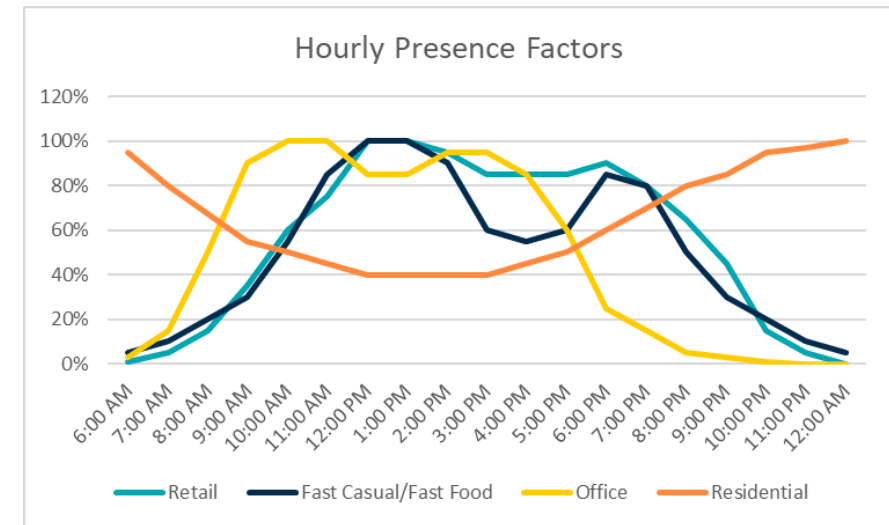
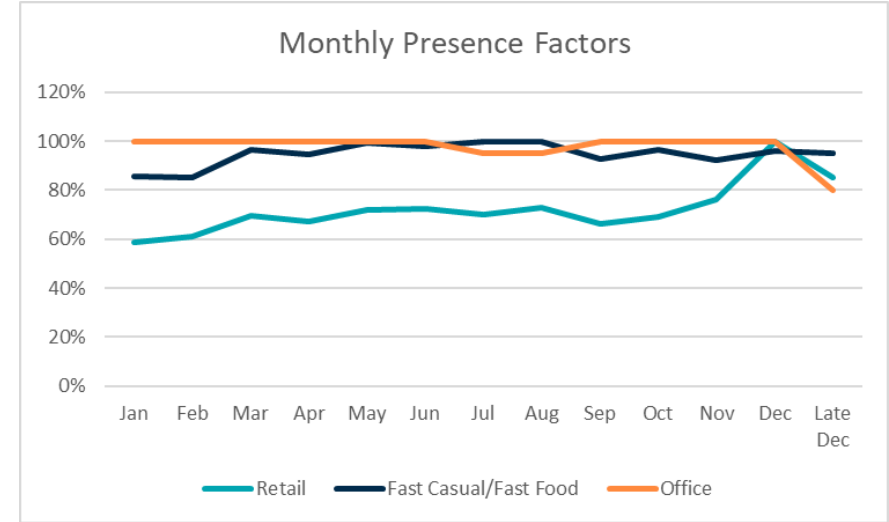
Step 3: Apply Presence Factors

Time-based adjustments, also known as “**presence**” adjustments, are made to account for parking demand variability by hour of day and month of year.

Presence is expressed as a percentage of the peak hour demand on a design day for both time of day and month of the year. The fact that parking demand for each component may peak at different times generally means that fewer parking spaces are needed in the downtown than would be required if each component were a freestanding development.

Seasonally, different land uses experience ebbs and flows in the intensity of their business activity. To account for changes in the last week of December, shared parking assumes a 13-month model. For example, retail peaks in December and is lower throughout the rest of the year while movie theaters peak in July and the last week in December.

The parking demand for any given land use also varies throughout the day. The model evaluates parking demand for each land use from 6 a.m. to 12 midnight on weekdays and weekends for every month of the year.



Step 4: Apply Non-Captive Ratio

“Captive market” is a term borrowed from market researchers to describe people who are already present in the immediate vicinity at certain times of the day. In the shared parking analysis, we use the inverse of captive, or “non-captive,” to reflect the adjustment of parking needs and vehicular trip generation rates due to the interaction among uses in an area.

Generally, **non-captive parking considerations** for any mixed-use environment considers that some visitors to a specific land use may already be parked visiting multiple land uses, such as when an office employee visits a restaurant within the same area (without re-parking). This is referred to as the “effects of a captive market,” as some of the restaurant’s patrons are already parking nearby. Therefore, they **contribute only once to the number of peak hour spaces utilizing the downtown’s parking supply**.

With shared parking, the parking demand ratio for individual land uses can be adjusted downward in proportion to the captive market support of the neighboring land uses.

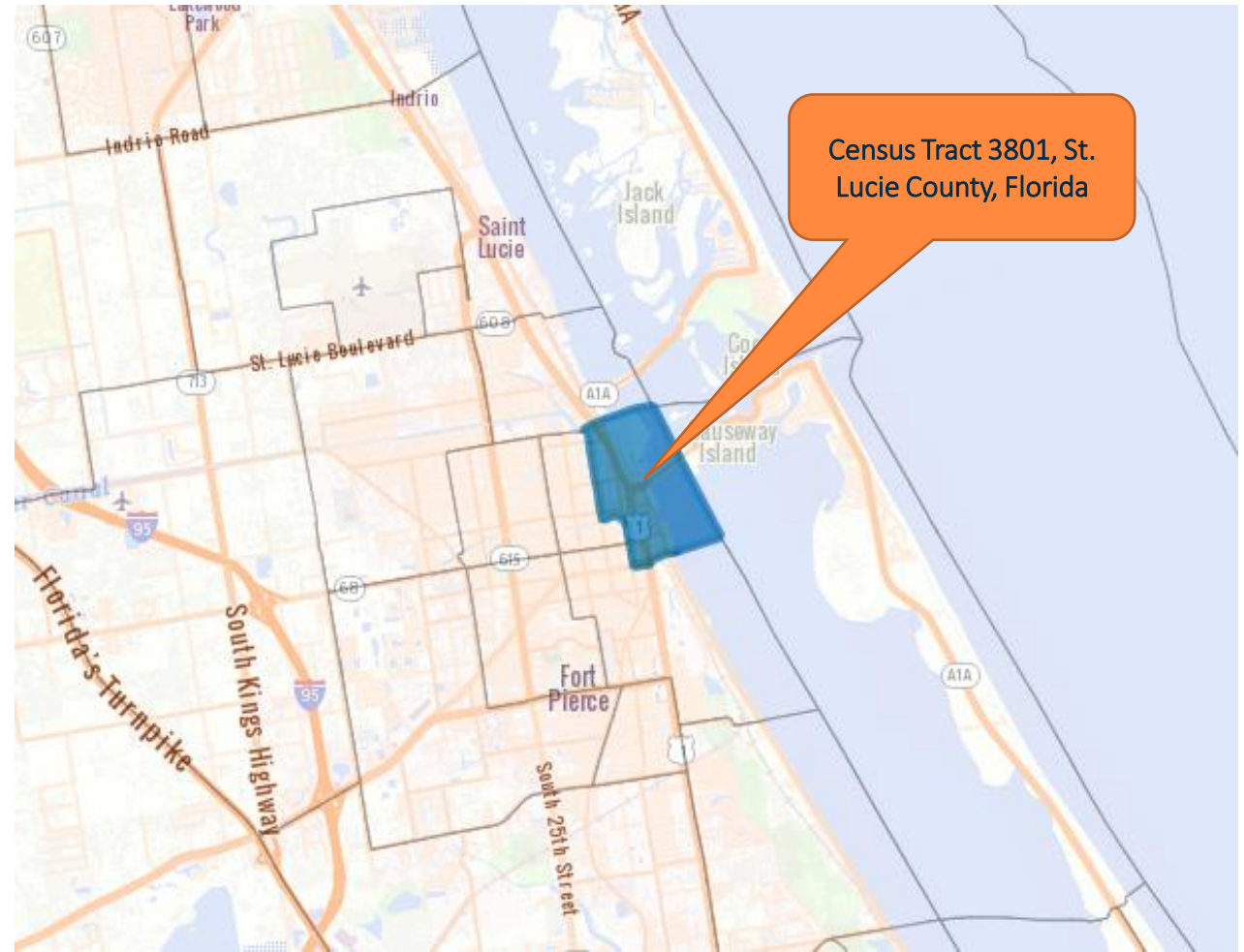


Step 5: Adjust Driving Ratio/Modal Split

The **drive ratio** represents a reduction in anticipated spaces needed to account for employees, guests, and visitors arriving to the site by means other than a single-occupant, motorized vehicle. These other means include mass transit, carpooling/vanpooling, taxi, ride-hailing services, drop offs, bicycling, or walking.

Employee driving adjustments were made based on commute to work data from the American Community Survey. Site specific analysis was also used to confirm that transit is available (or not), and that other means (bicycle and walking) are also feasible.

Driving Adjustments				
	Weekday		Weekend	
	Daytime	Evening	Daytime	Evening
Residents (vehicle ownership)	100%	100%	100%	100%
Service (Non-office) Employees	90%	90%	90%	90%
Office Employees	93%	93%	93%	93%
Retail/Dining & Misc. Customers	100%	100%	100%	100%





03 | Existing Conditions

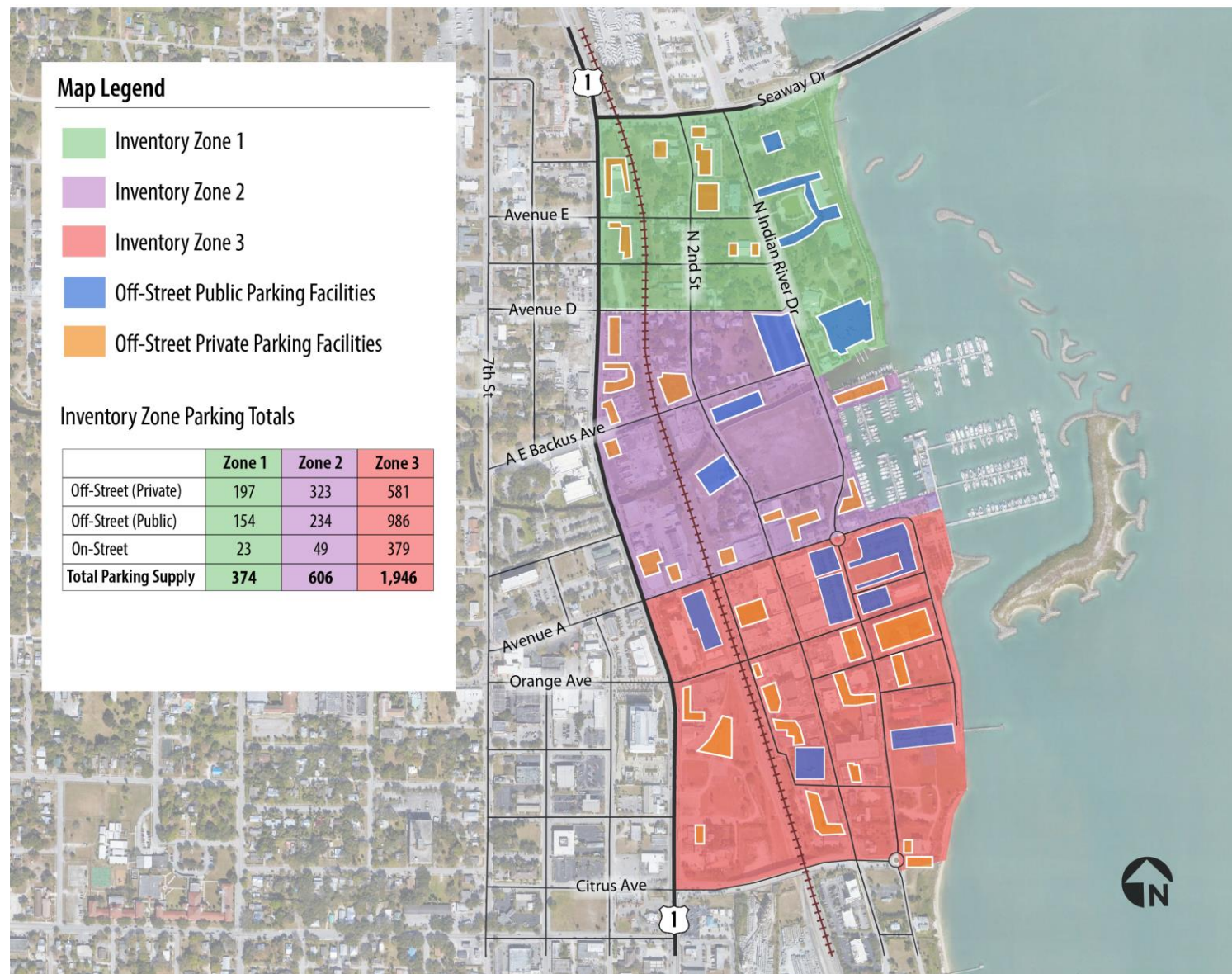
Parking Supply

The Study Area was divided into three zones based on general features.

Parking supply figures were obtained through aerial photographs and City published data. While there are nearly 3,000 spaces in Study Area, approximately 66% of the parking capacity is in Zone 3.

Inventory Zone Parking Totals

	Zone 1	Zone 2	Zone 3
Off-Street (Private)	197	323	581
Off-Street (Public)	154	234	986
On-Street	23	49	379
Total Parking Supply	374	606	1,946



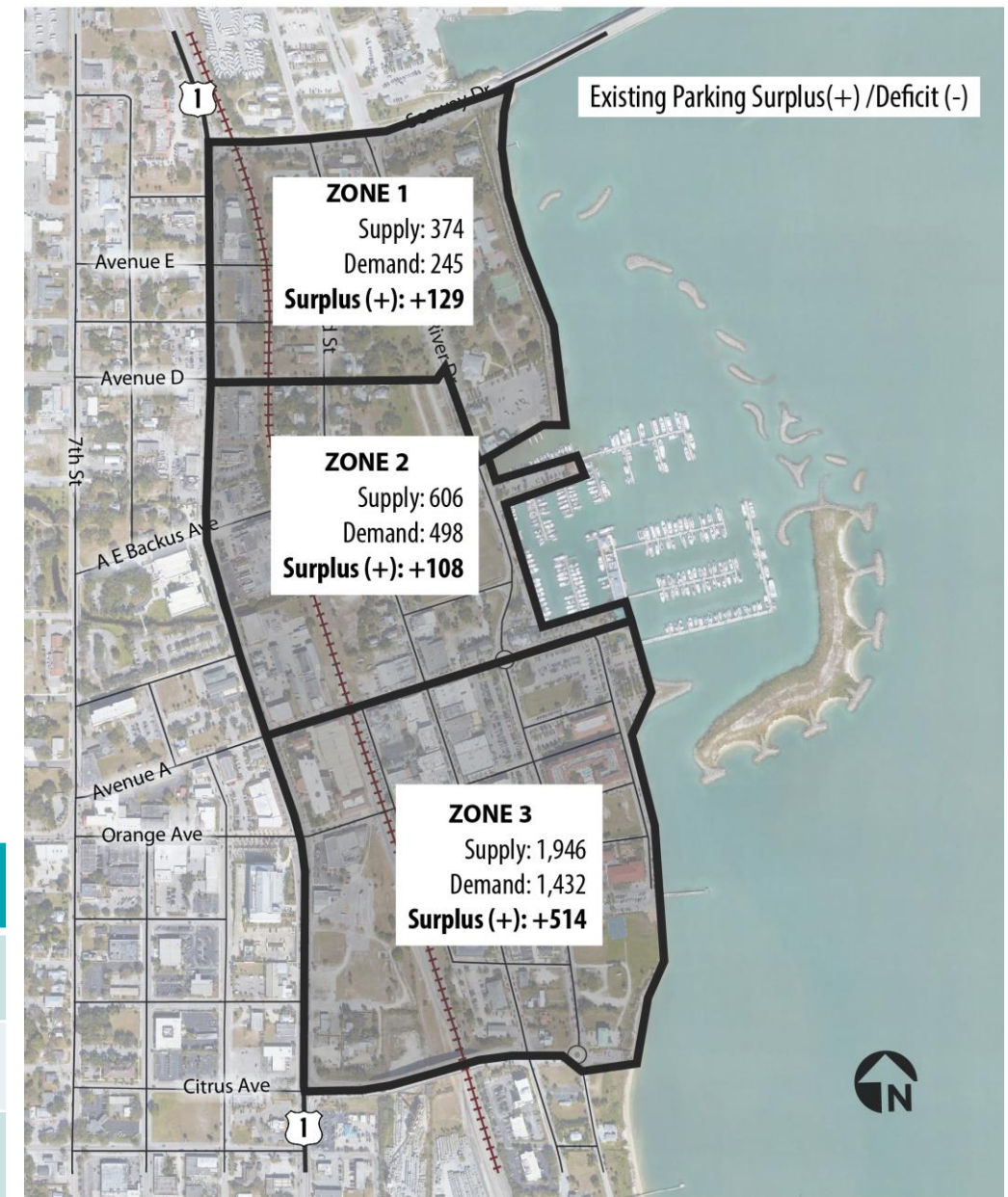
Existing Weekday Conditions

Walker prepared shared parking models for each zone in the study area using land use data available from the County Property Assessor. No onsite occupancy counts were performed as part of this analysis to further refine our findings.

The figure to the right shows peak parking demand in the downtown during weekday conditions. It is important to note that each zone peaks at a slightly different time of day and/or month. As a result, the conditions shown on the map are unlikely to occur simultaneously. For example, Zone 1 is projected to peak around 2 pm in July while Zone 3 peaks at 11 am in December.

While the overall study area is anticipated to have adequate parking to meet peak parking needs, localized shortages in specific lots are likely to occur seasonally and/or during peak hours of activity.

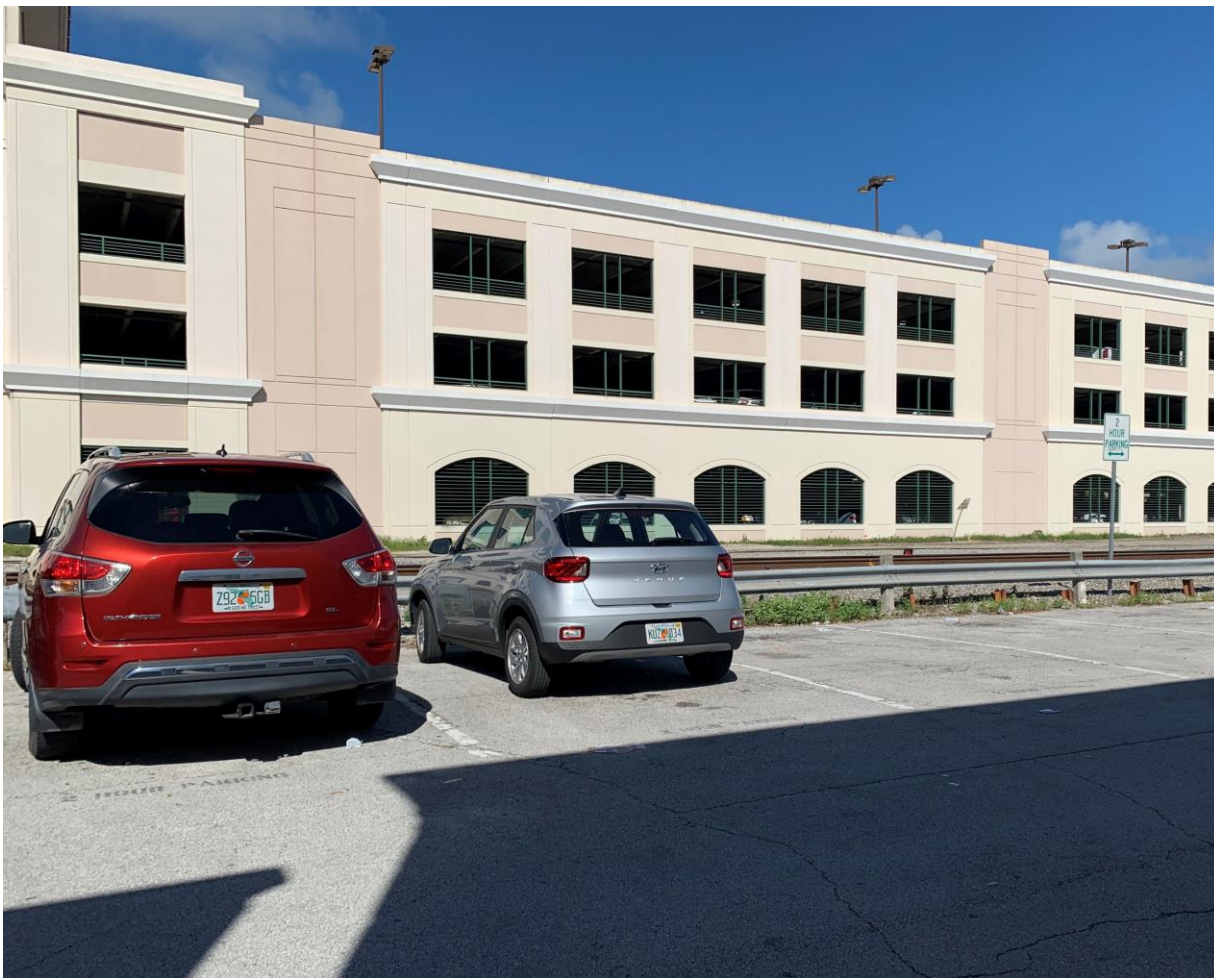
Zone	Supply	Demand	Surplus (+) /Deficit (-)
Zone 1	374	245	+129
Zone 2	606	498	+108
Zone 3	1,946	1,432	+514





04 | Future Conditions

Future Changes to Parking Supply and Demand



Parking Supply

- Addition of three new surface lots
- Demolition of two existing unstriped lots
- New garage and lot associated with King's Landing

Parking Demand

- Backfill of vacant space in existing buildings, primarily in Zone 3
- Development of the King's Landing Mixed-Use development in Zone 2

King's Landing Development Program

17,290 SF Retail

17,543 SF Family Restaurant

17,543 SF Fast/Casual Dining

140-key Hotel

48 Multi-Family Condo Units

27 One-Bedroom

21 Three-Bedroom

8 Townhomes

299 Parking Spaces

129 Surface Spaces

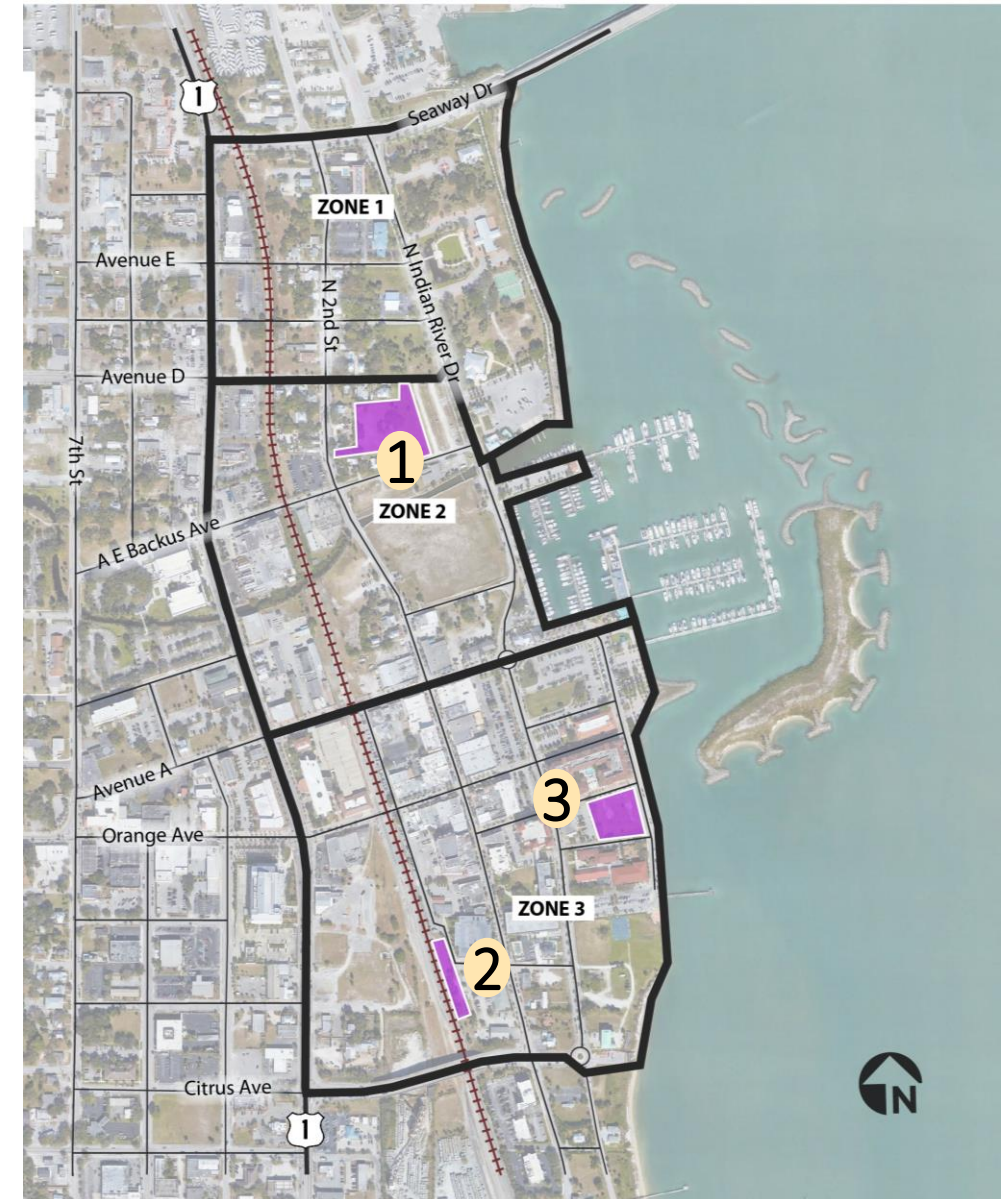
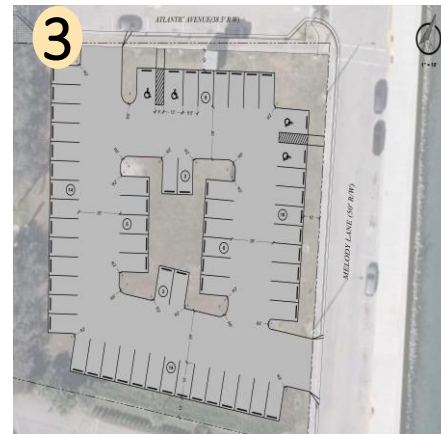
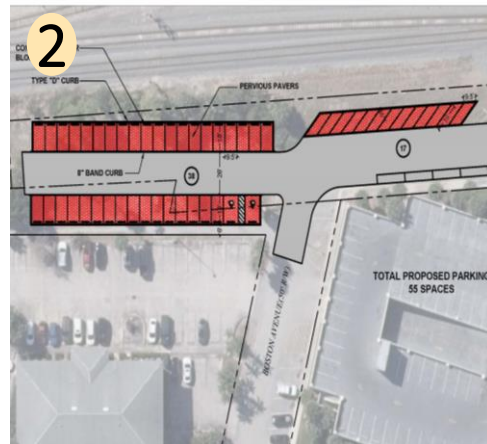
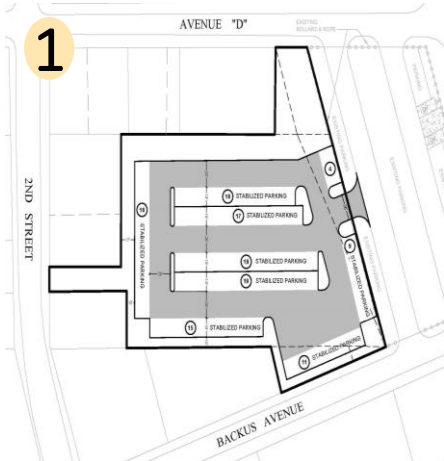
170 Structured Spaces



Proposed Surface Parking Additions

Based on discussions with the City of Fort Pierce, Walker understands conceptual parking layouts have been prepared for three new parking lots/on-street parking locations in the downtown. Walker assumed the plans for additional parking at all three locations would be approved in an analysis of future parking conditions.

1. Backus Avenue And Indian River Drive Lot Expansion
2. Depot Drive And Boston Avenue On-street Extension
3. New Lot At Atlantic Avenue And Melody Lane



Net Change in Parking Supply

A net gain of approximately 352 spaces within the study area is projected, assuming the proposed changes to the parking supply are realized. The most significant changes in projected parking supply are anticipated in Zone 3, where nearly 70% of the new spaces will be located.

Location	Zone	Parking Gain/Loss
Backus Avenue and Indian River Drive Lot Expansion	2	126 Spaces
New Lot at Atlantic Avenue and Melody Lane	3	61 Spaces
Depot Drive and Boston Avenue On-Street Extension	3	51 Spaces
King's Landing Surface Lot and Garage	2	229 Spaces
Loss of two gravel lots due to King's Landing	2	115 Spaces
Net Gain in Parking		352 Spaces

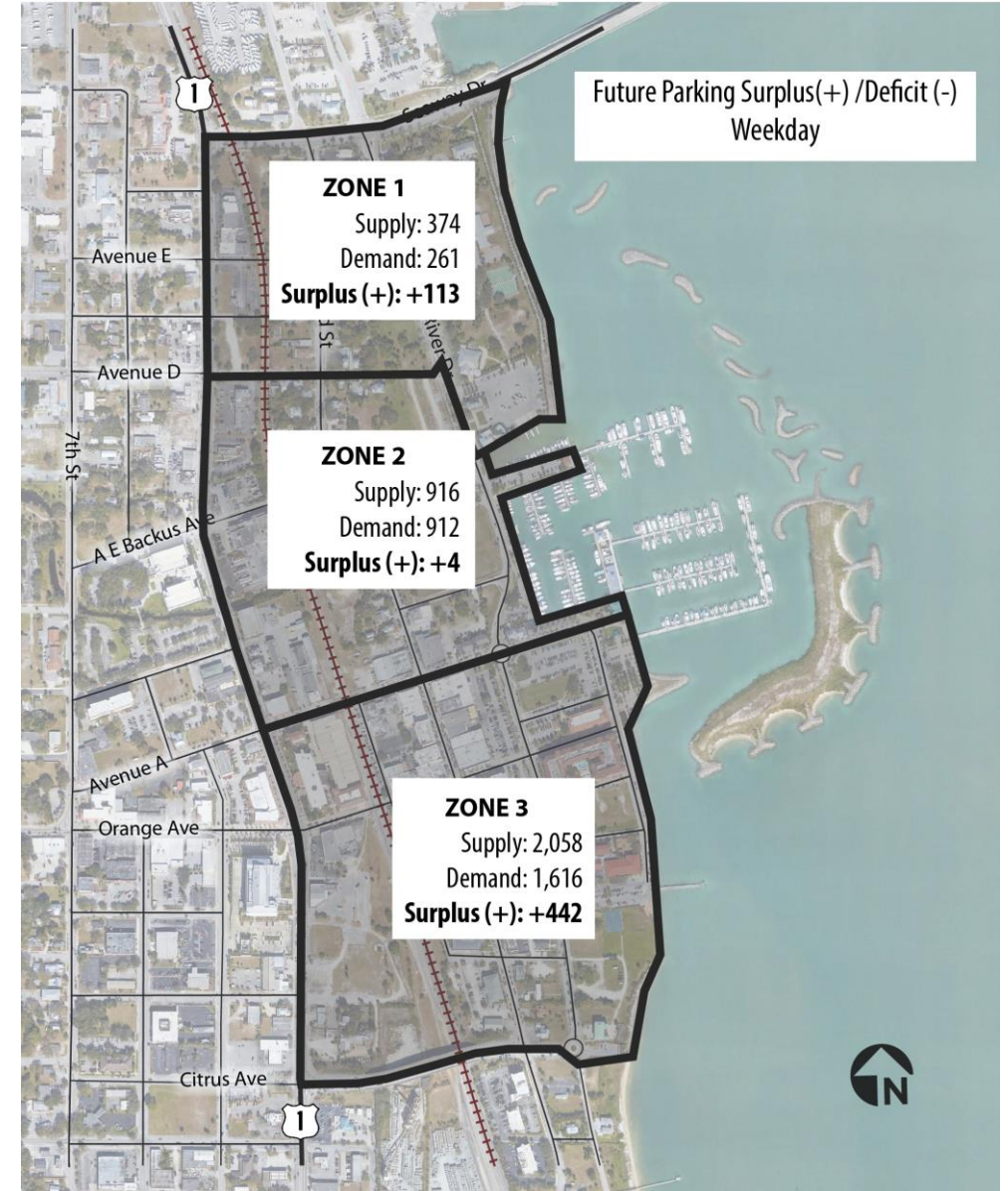
Future Adequacy - Weekday

Using shared parking methodology, Walker modeled future parking demand for the downtown, assuming King’s Landing is fully leased and occupied, as well as any existing vacant property. Based on our analysis, **adequate capacity in all three zones** is projected.

As noted during the existing conditions discussion, each zone is expected to peak at different times of the year. As a result, the conditions shown on the map are unlikely to occur simultaneously. However, if needed, the system is projected to have sufficient capacity to meet the peak projected need in all three zones.

It is also important to remember that Walker’s analysis is designed for planning purposes and is not mean to represent an exact inventory forecast and capacity analysis. Localized shortages within the zone are possible depending on major demand generators.

Zone	Supply	Demand	Surplus (+) /Deficit (-)
Zone 1	374	261	+113
Zone 2	916	912	+4
Zone 3	2,058	1,616	+442



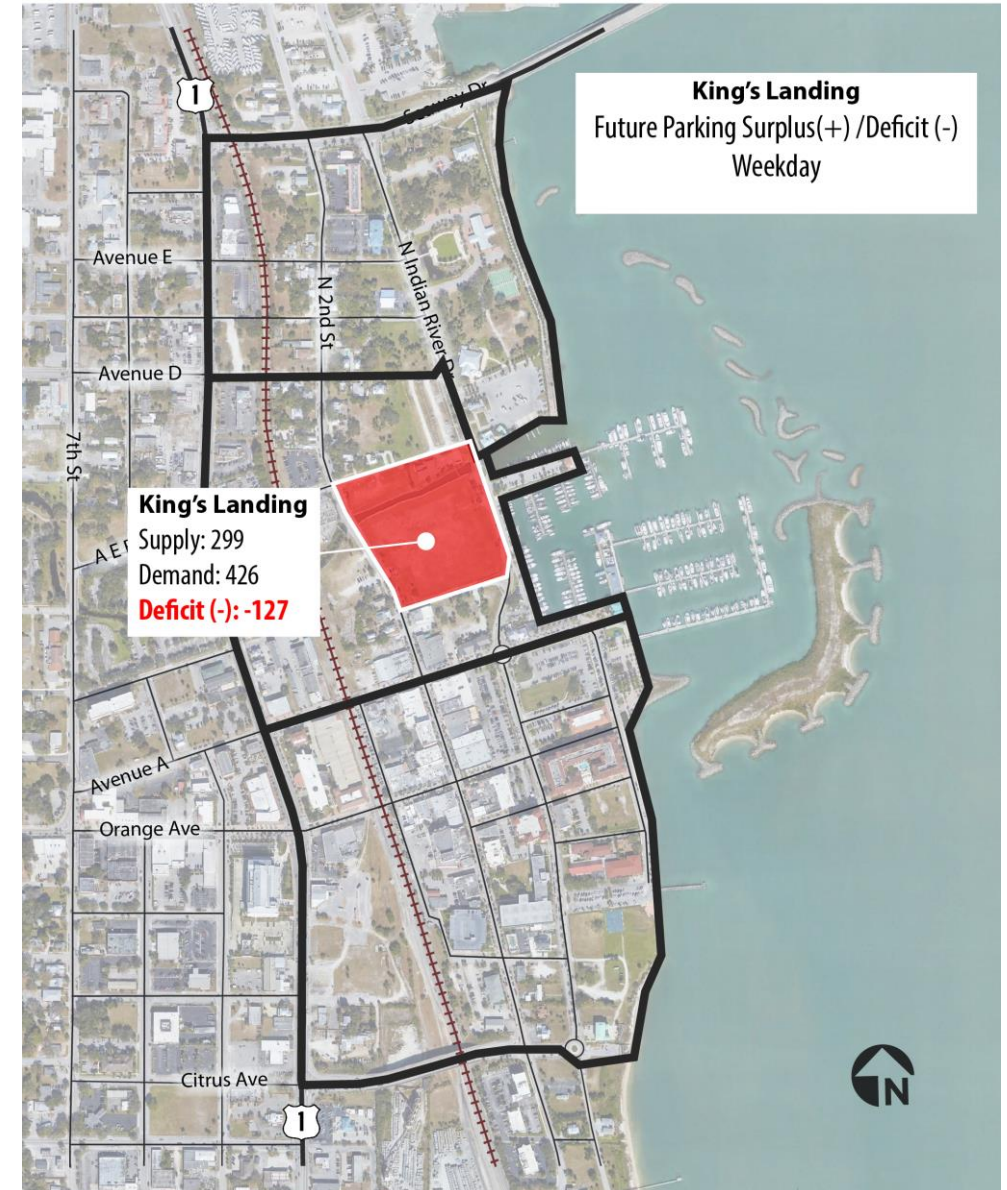
King's Landing Future Adequacy - Weekday

The overall parking capacity in Zone 2 is expected to meet future parking needs, with a small, four-space surplus projected. However, it is also critical to consider the impact of King's Landing as a standalone development.

Once fully operational, the King's Landing project will account for about 47% of future demand and only 33% of the supply. The result is a localized shortage of **127 spaces** at the project site.

It is only the surplus of **public and private spaces** in Zone 2 that provides for the overflow parking associated with King's Landing.

Supply	Demand	Surplus (+) /Deficit (-)
299	426	(127)

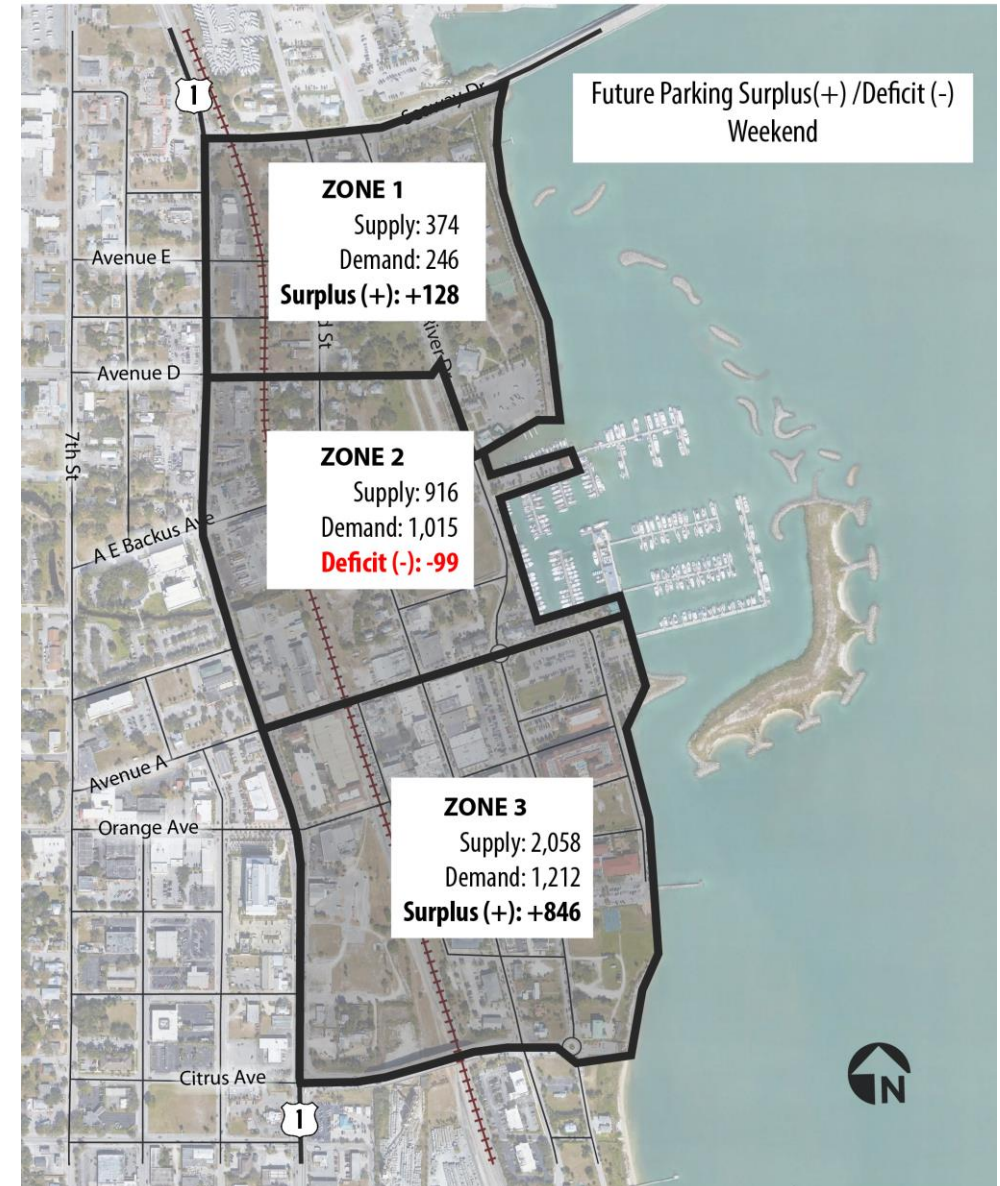


Future Adequacy - Saturday

Walker also modeled future parking demand for the downtown during peak weekend conditions. Based on our analysis, surplus capacity in two zones is projected. The public and private parking capacity in Zones 1 and 3 is expected to adequately meet future parking needs.

There is a **99-space deficit** projected in Zone 2 during peak weekend conditions. While Zone 2 peaks in December due to the increase in retail/restaurant space, a deficit is still anticipated during most months.

Zone	Supply	Demand	Surplus (+) /Deficit (-)
Zone 1	374	246	+128
Zone 2	916	1,015	(99)
Zone 3	2,058	1,212	+846



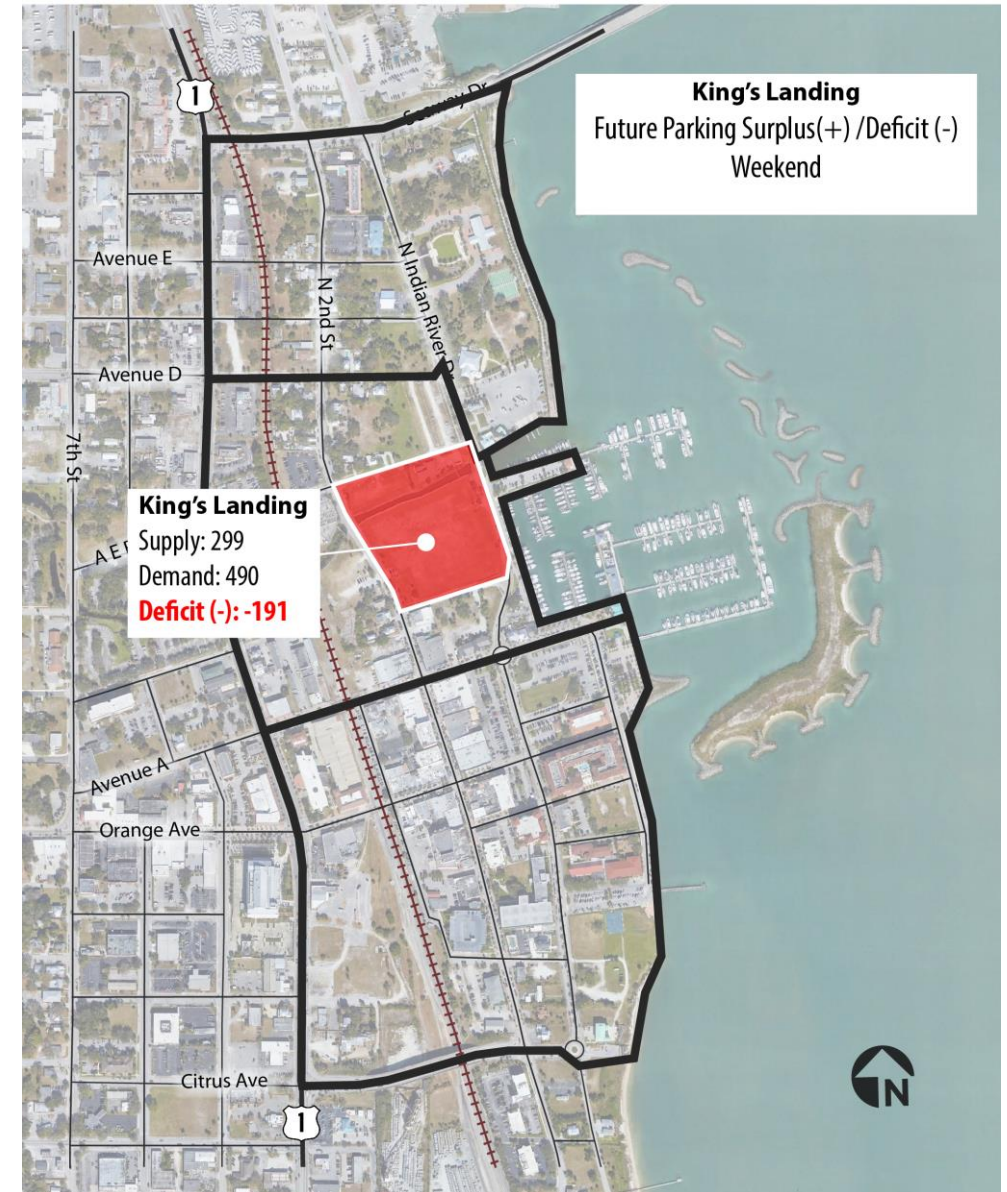
King's Landing Future Adequacy - Saturday

King's Landing is a significant expansion project in downtown Fort Pierce and is expected to greatly impact parking conditions in the future.

Like the weekday analysis, the demand generated by King's Landing is expected to exceed the parking supply built. Once fully operational, the King's Landing project will account for about 48% of future demand and only 33% of the supply. The result is a localized shortage of **191 spaces** at the project site.

By excluding King's Landing from the analysis, Zone 2 is projected to have a surplus of parking spaces during peak weekend conditions.

Supply	Demand	Surplus (+) /Deficit (-)
299	490	(191)





05 | Structured Parking Alternatives

Parking Alternatives

Recognizing the need for additional parking in the downtown, specifically associated with the King's Landing development in Zone 2, Walker worked with the City to identify potential properties where additional parking capacity could be built. Parking already exists and/or is expected to exist on all three parcels identified.

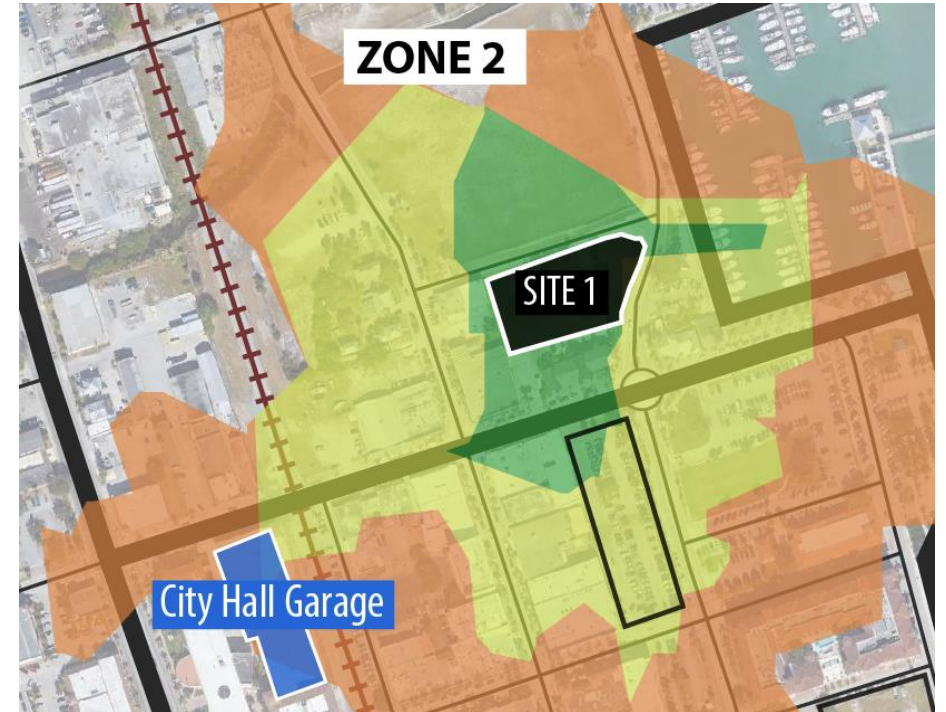
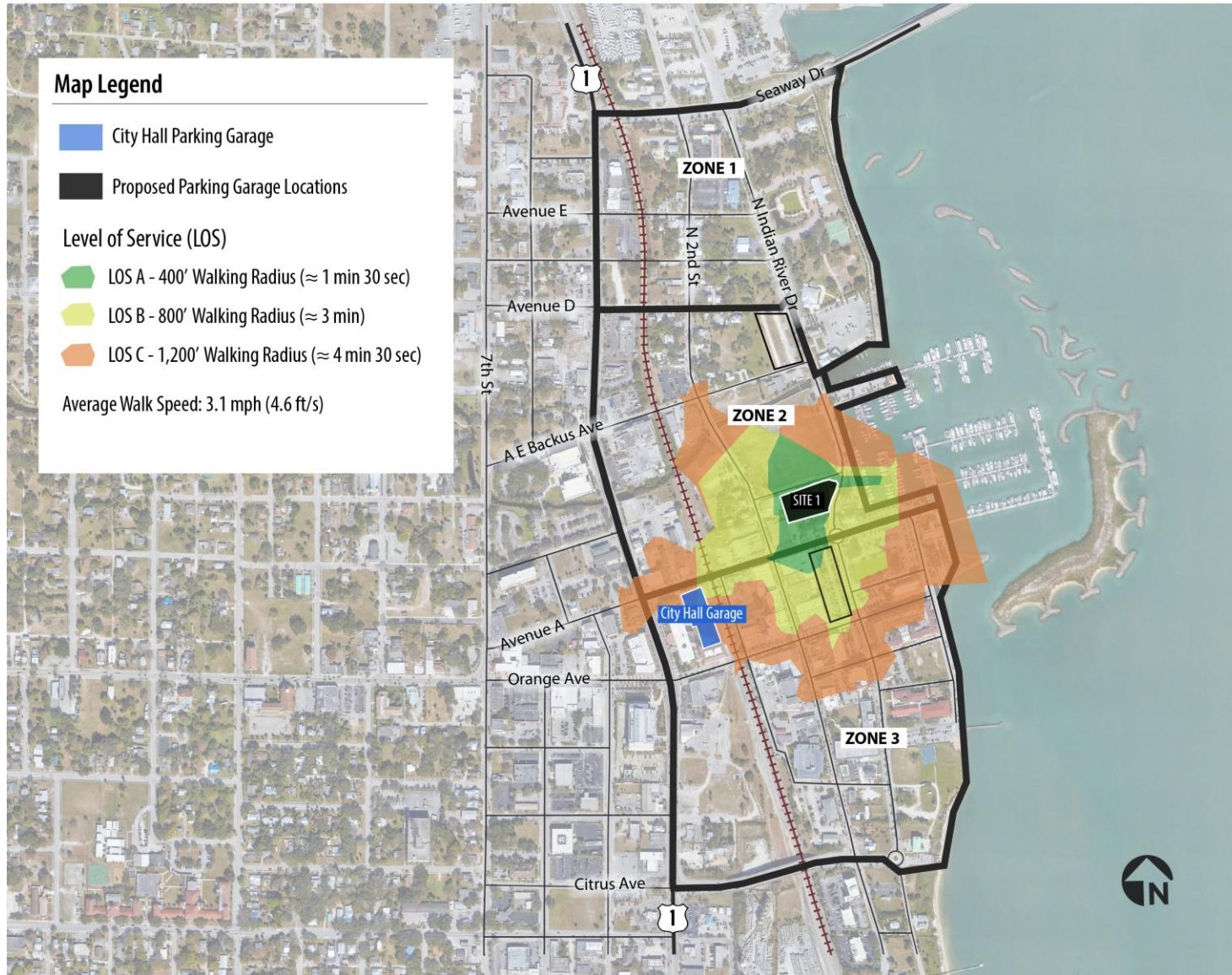
Walker also mapped the walksheds (distances along defined pedestrian pathways) around each location using a three-tiered level of service approach and probable pedestrian routes. For comparison, the existing City Hall Garage is also shown on the map. In most instances, the City Hall Garage is within a 4- or 5-minute walk of the proposed structures.

There are many factors to consider when weighing the potential location of a new parking facility in a downtown area, including, but not limited to:

- Proximity to major demand generators
- Proximity to existing parking facilities
- Net space gain
- Construction cost per space/ net cost per space
- Walkability
- Expansion potential
- Best and highest use of parcel/ lost development opportunity
- Visibility
- Traffic impact
- Zoning restrictions
- Parcel size/efficiency

* Note, the sites were primarily selected based on availability of land and proximity to demand. Walker did not perform a comprehensive alternatives analysis to evaluate the parcels as part of this scope.

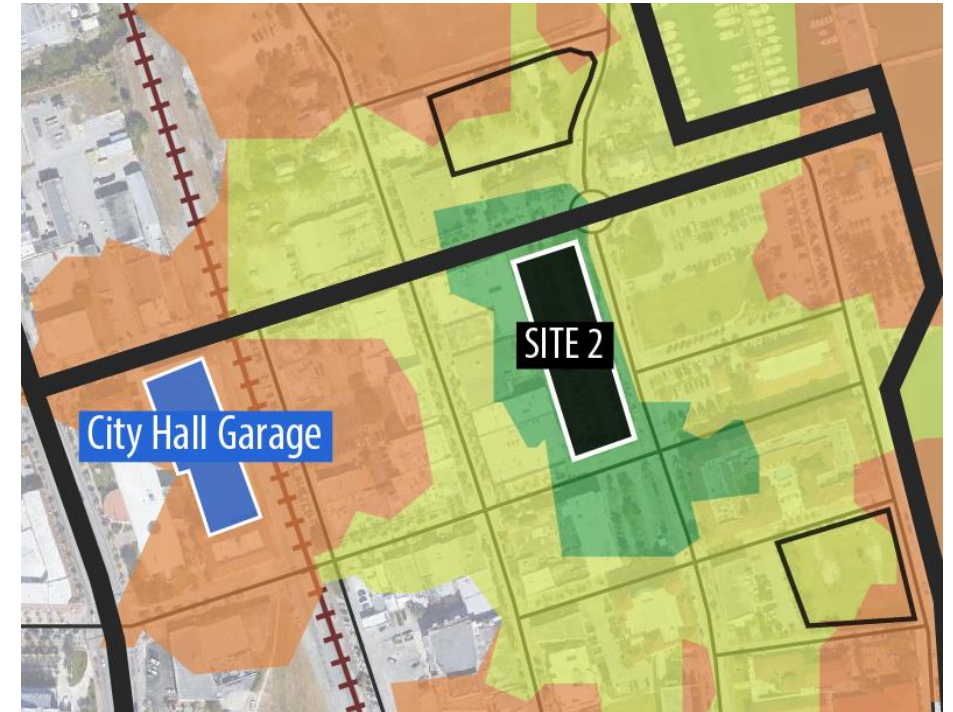
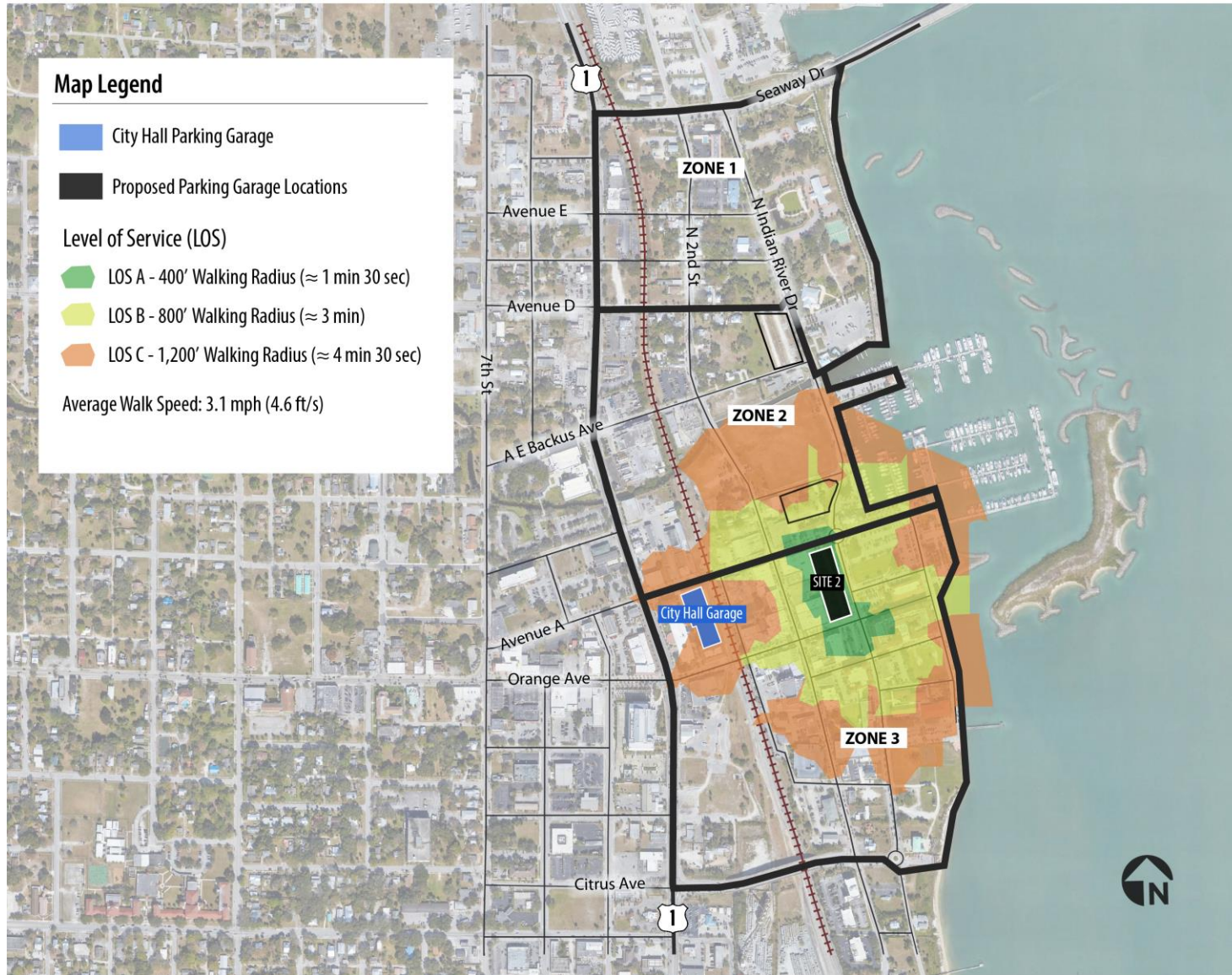
Potential Parking Garage Facilities (Site 1)



Findings:

- City does NOT own the parcel
- Located only two blocks from City Hall Garage
- LOS A walking distance to King's Landing

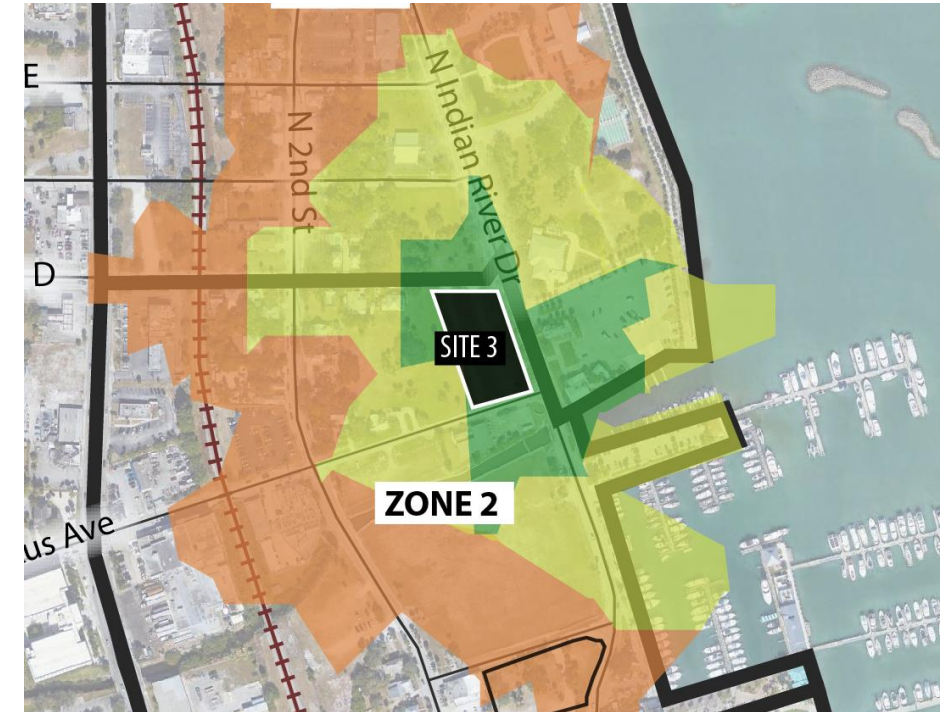
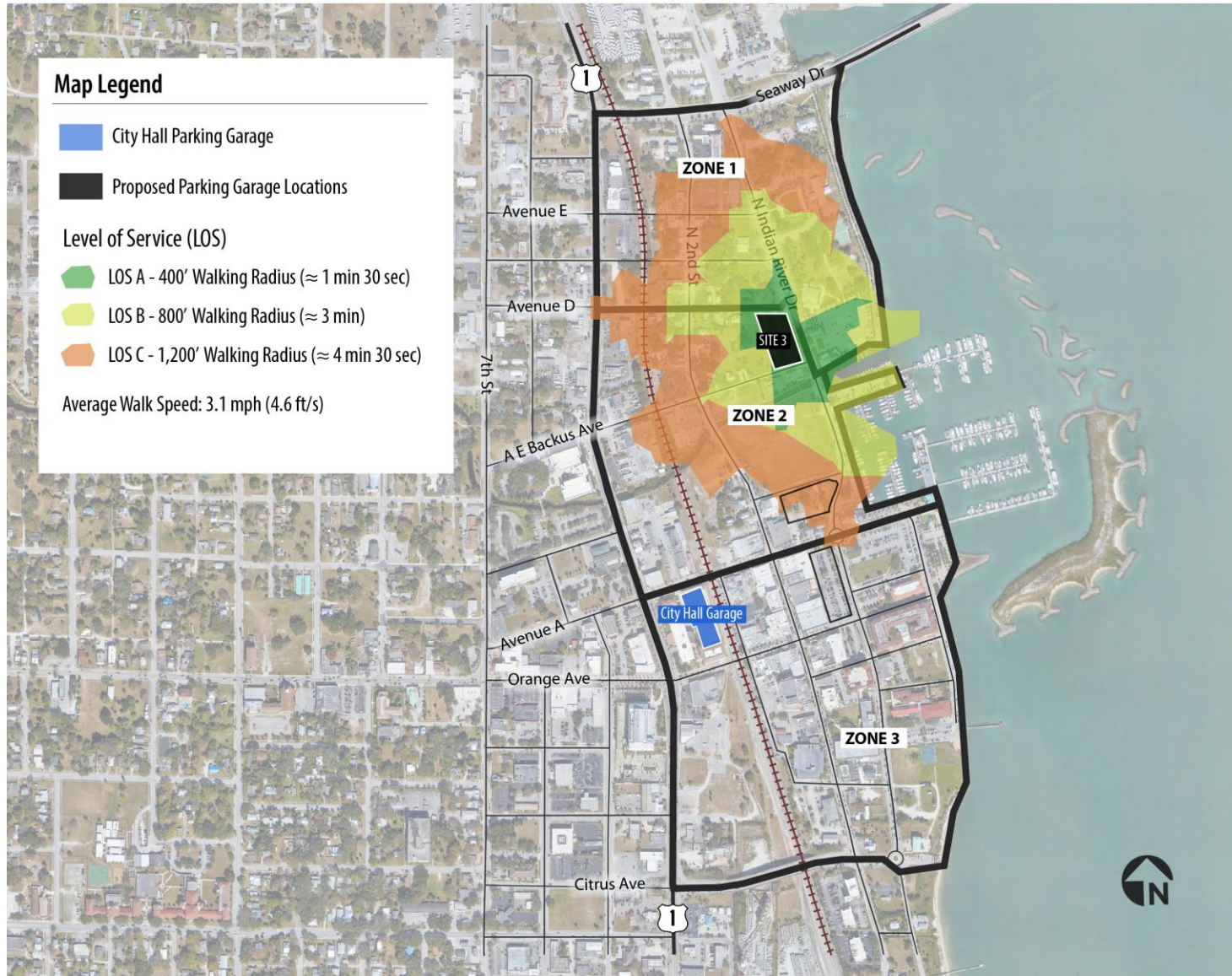
Potential Parking Garage Facilities (Site 2)



Findings:

- City-owned parcel
- LOS C walking distance to King's Landing
- Lost potential to redevelop as mixed-use parcel

Potential Parking Garage Facilities (Site 3)

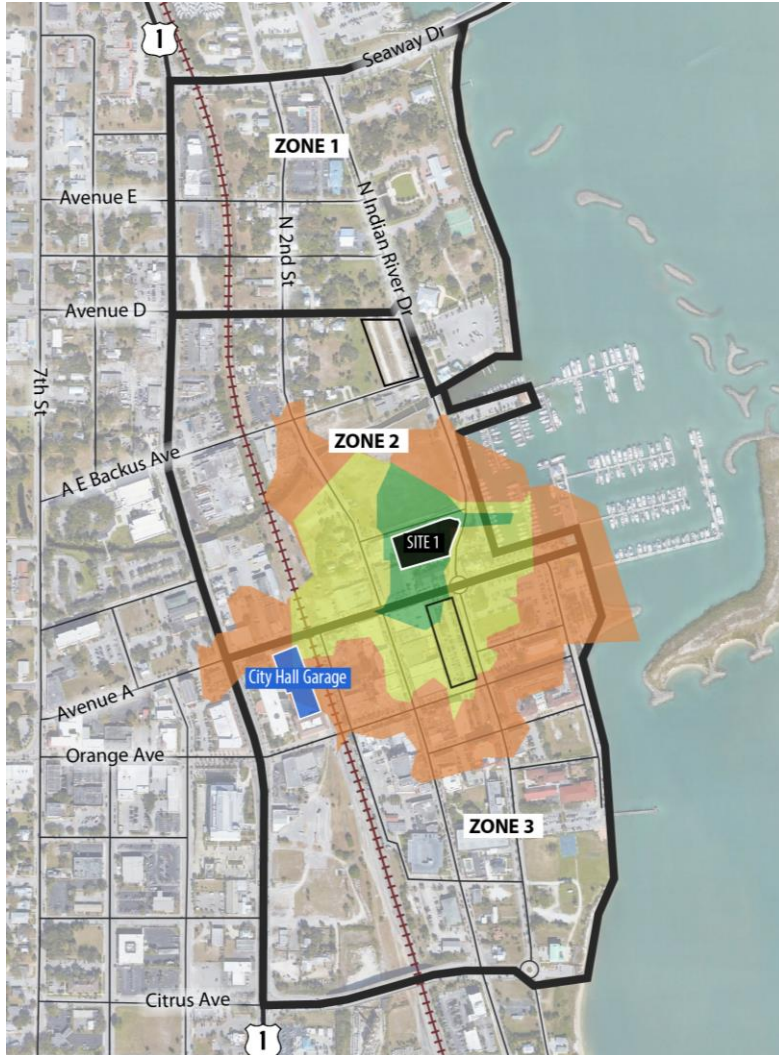


Findings:

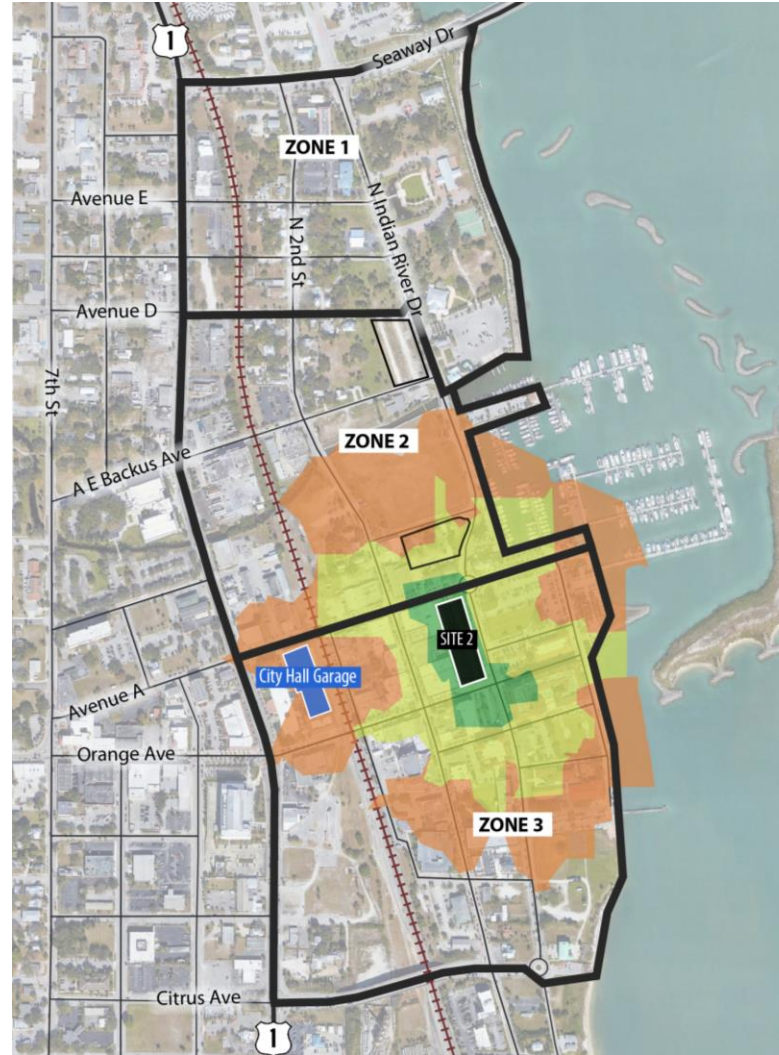
- Close to King’s Landing in Zone 2
- Supports additional development in the north part of the study area
- City does NOT own the parcel

Potential Parking Garage Facilities – Walk Shed Comparison

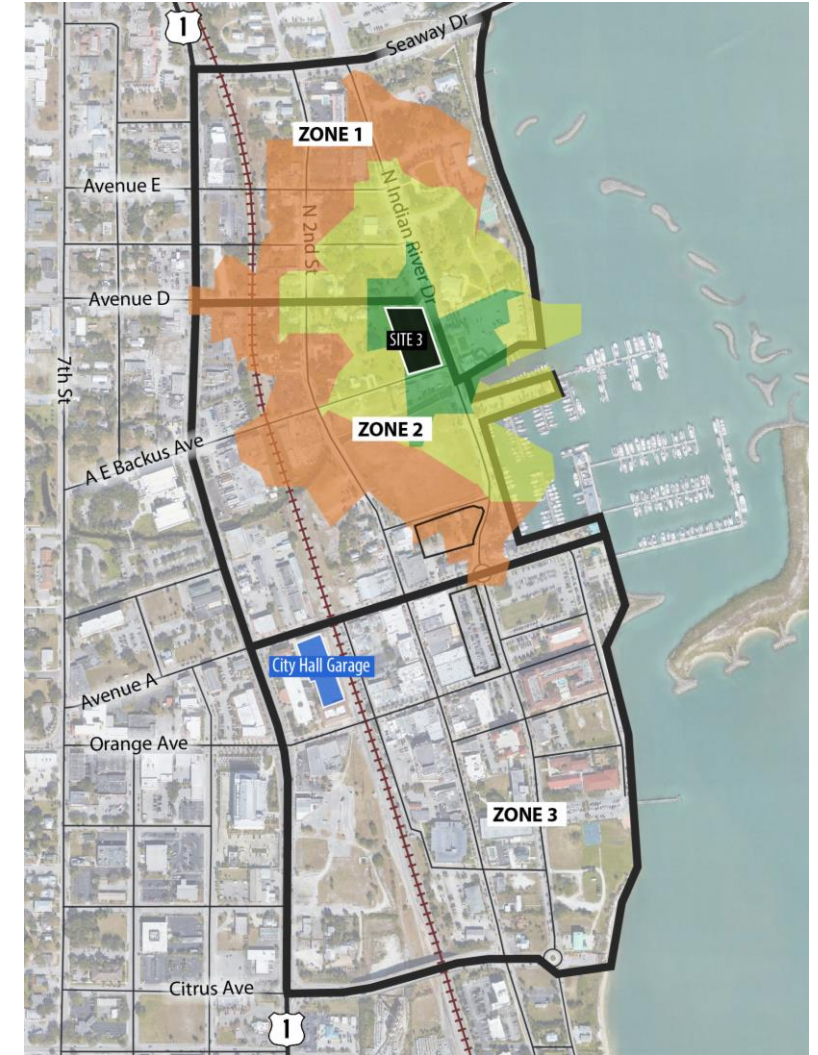
Site 1



Site 2



Site 3



Best Practices & Other Considerations

Connectivity & Multi-Modal Access



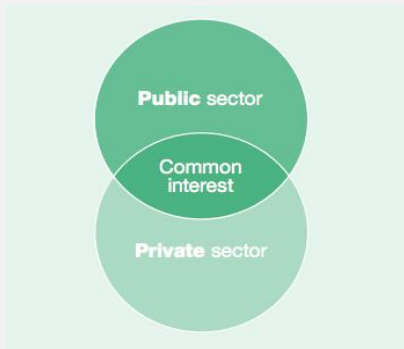
While driving is the most common form of transportation in Fort Pierce, the City should consider opportunities to improve connectivity and foster a ‘park once’ policy through implementation of multi-modal accessibility, such as bikes, scooters, shuttles/trolleys, etc. A parking garage could serve as a node or link in a larger alternative transportation system. For example, a trolley traveling along Avenue D could connect a garage on Site 3 to both the downtown and the Lincoln Park neighborhood.

Walkability & Retail at Grade

Ensuring good pedestrian flow in the downtown starts with placing active commercial uses such as retail and restaurant space at street level. A parking garage with ground floor blank walls creates unattractive environments for walkers. We recommend the City avoid broken street frontages by adding ground floor commercial space in any structured parking solution to engage the public and increase walkability of the downtown.



Public Private Partnership



A Public Private Partnership (P3) is an agreement between a private developer and a government agency for the delivery of a public asset, such as a parking garage. A P3 agreement can take many forms, all typically involving considerations for land and future revenues. It is important to note that the City does not currently have a paid parking program, which will limit opportunities for fostering a P3 agreement. Of the three sites identified by Walker, only Site 2 is owned by the City for use as a P3 agreement incentive. Caution should be given to implementing a parking fee only in a new asset, as this will reduce use of the asset in favor of other options.



06 | Next Steps

Next Steps

Walker's analysis of shared parking needs in the downtown is designed for planning purposes and is not mean to represent an exact inventory forecast and capacity analysis. Parking needs will vary block-by-block and lot-by-lot within the study area. While the overall downtown is projected to have an adequate parking supply to meet future parking needs, localized shortages are likely.

Looking forward, the City has a decision to make regarding future parking supply. One option is to NOT build more parking. Encourage market-based pricing of on- and off-street parking facilities and allow market conditions to redistribute parking supply and demand within the downtown.

Alternatively, the City could develop a new structured public parking asset in Zone 2 or near the new King's Landing development to support future parking needs in the area. As part of our analysis, Walker identified three potential locations such a facility could be built. If a new facility is pursued, Walker recommends further analysis of a structured parking option in order to weigh the pros and cons of each location in more detail.



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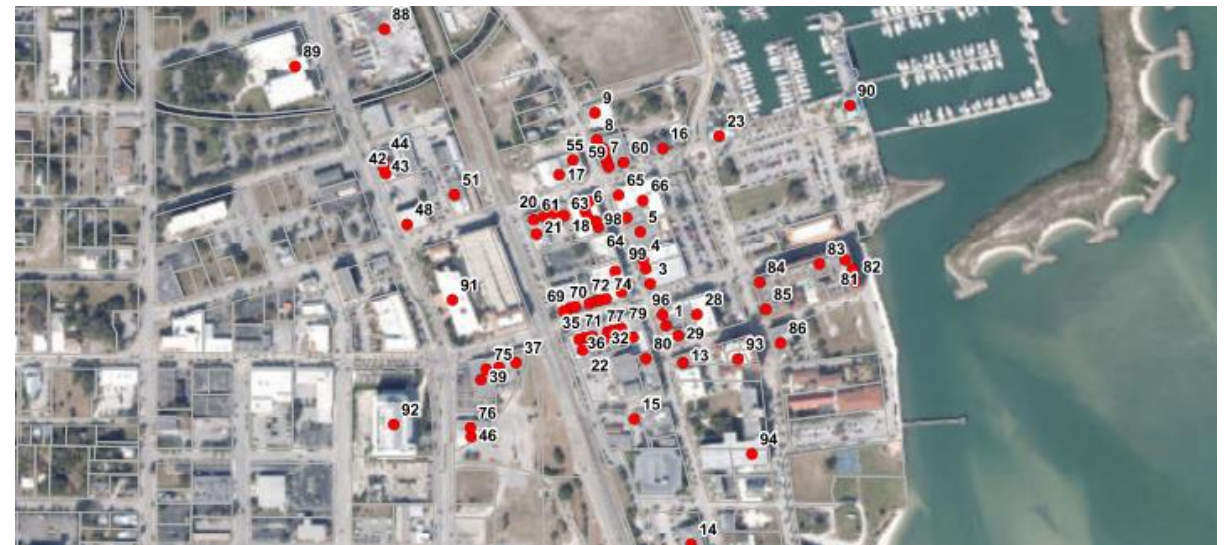
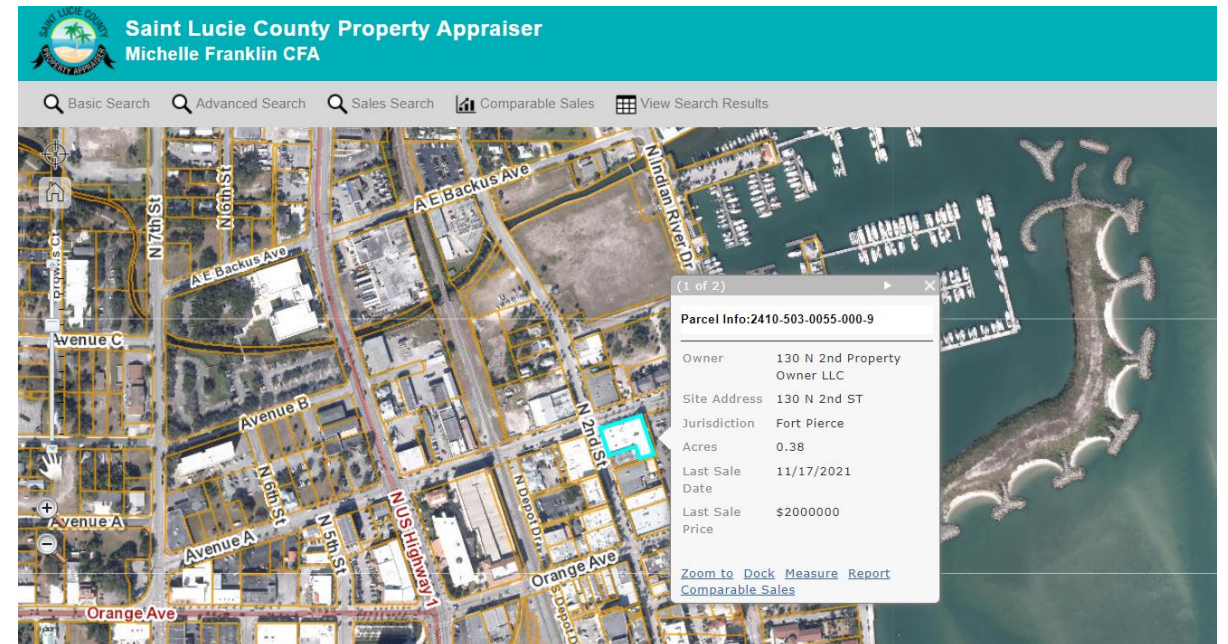
Appendix

Existing Conditions

Detailed Shared Parking Models

Step 1: Source Data

- Saint Lucie County Property Appraiser (<https://www.pasc.gov/map/>)
 - Reviewed for content by the City
- ArcGIS Online Database of Retail Locations (collated by Colliers in conjunction with the City)
- Loopnet, Commercial Café (Vacant Space)



Zone 1 Shared Parking Summary

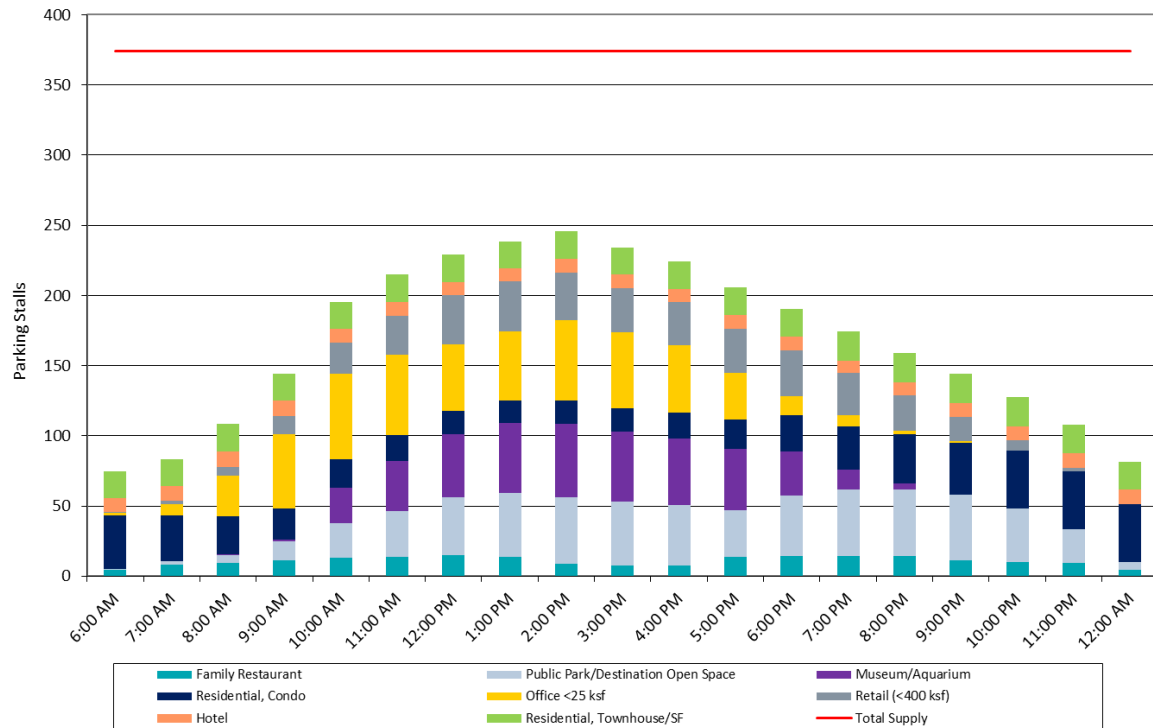
Land Use	Project Data		Weekday					Weekend					Weekday			Weekend		
			Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Peak Hr Adj	Peak Mo Adj	Estimated Parking Need	Peak Hr Adj	Peak Mo Adj	Estimated Parking Need
	Quantity	Unit										2 PM	July		2 PM	April		
Retail																		
Retail (<400 ksf)	19,305	sf GLA	2.10	100%	98%	2.07	ksf GLA	2.33	100%	99%	2.30	ksf GLA	95%	70%	27	100%	67%	30
Employee			0.51	90%	100%	0.46		0.58	90%	100%	0.52		100%	80%	7	100%	77%	8
Food and Beverage																		
Family Restaurant	2,200	sf GLA	8.27	100%	66%	5.48	ksf GLA	10.77	100%	85%	9.13	ksf GLA	50%	96%	6	65%	94%	12
Employee			1.17	90%	100%	1.05		1.51	90%	100%	1.35		100%	100%	3	100%	100%	4
Entertainment and Institutions																		
Public Park/Destination Open Space	11	acre	4.00	100%	98%	3.93	acre	5.00	100%	98%	4.90		100%	100%	43	97%	75%	39
Employee			0.40	90%	100%	0.36		0.50	90%	100%	0.45		100%	100%	4	100%	85%	5
Museum/Aquarium	13,590	sf GLA	4.00	100%	98%	3.93	ksf GLA	4.50	100%	98%	4.41	ksf GLA	100%	87%	47	100%	100%	61
Employee			0.40	90%	100%	0.36		0.50	90%	100%	0.45		100%	97%	5	100%	100%	6
Hotel and Residential																		
Bed & Breakfast	20	keys	1.00	50%	100%	0.50	key	1.00	50%	100%	0.50	key	70%	100%	7	70%	100%	7
Hotel Employees	20	keys	0.15	90%	100%	0.13	key	0.15	90%	100%	0.13	key	100%	100%	3	100%	100%	3
Residential, Condo																0%		
2 Bedrooms	25	units	1.65	100%	100%	1.65	unit	1.65	100%	100%	1.65	unit	40%	95%	16	65%	100%	27
Visitor	25	units	0.10	100%	100%	0.10	unit	0.15	100%	100%	0.15	unit	20%	95%	1	20%	100%	1
Residential, Townhouse/SF																0%		
Reserved	100%	res spaces	1.65	100%	100%	1.65	unit	1.65	100%	100%	1.65	unit	100%	100%	19	100%	100%	19
Visitor	11	units	0.10	100%	100%	0.10	unit	0.15	100%	100%	0.15	unit	20%	95%	-	20%	100%	-
Office																		
Office <25 ksf	17,783	sf GFA	0.30	100%	100%	0.30	ksf GFA	0.03	100%	100%	0.03	ksf GFA	95%	95%	5	60%	100%	1
Employee			3.50	93%	98%	3.21		0.35	93%	98%	0.32		95%	95%	52	60%	100%	4
Additional Land Uses																		

Peak parking need is projected to occur on a weekday in July around 2 pm with 245 spaces occupied.

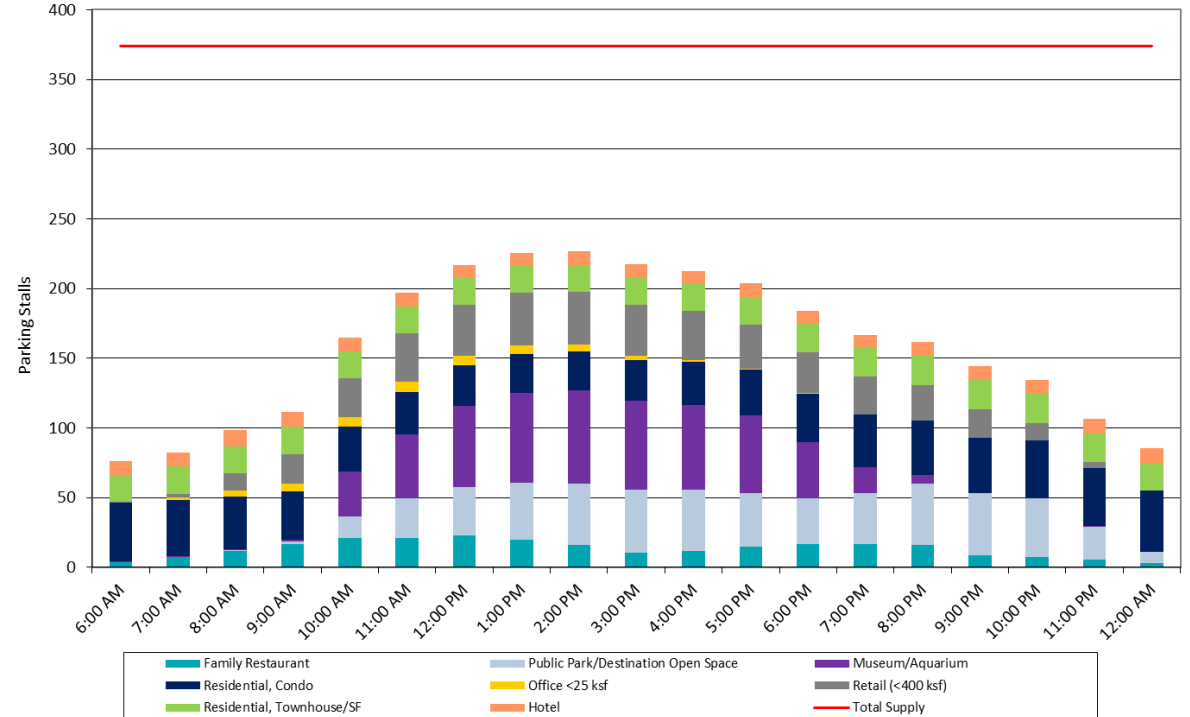
Customer/Visitor	136	Customer/Visitor	151
Employee/Resident	90	Employee/Resident	57
Reserved	19	Reserved	19
Total	245	Total	227

Zone 1 Shared Parking Summary

Daily Parking Need by Hour on a Weekday
During Peak Month (July)



Daily Parking Need by Hour on a Weekend
During Peak Month (April)



In Zone 1, parking needs peak in the early afternoon during both weekday and Saturday conditions.

Overall, an adequate supply of parking is available to meet parking needs.

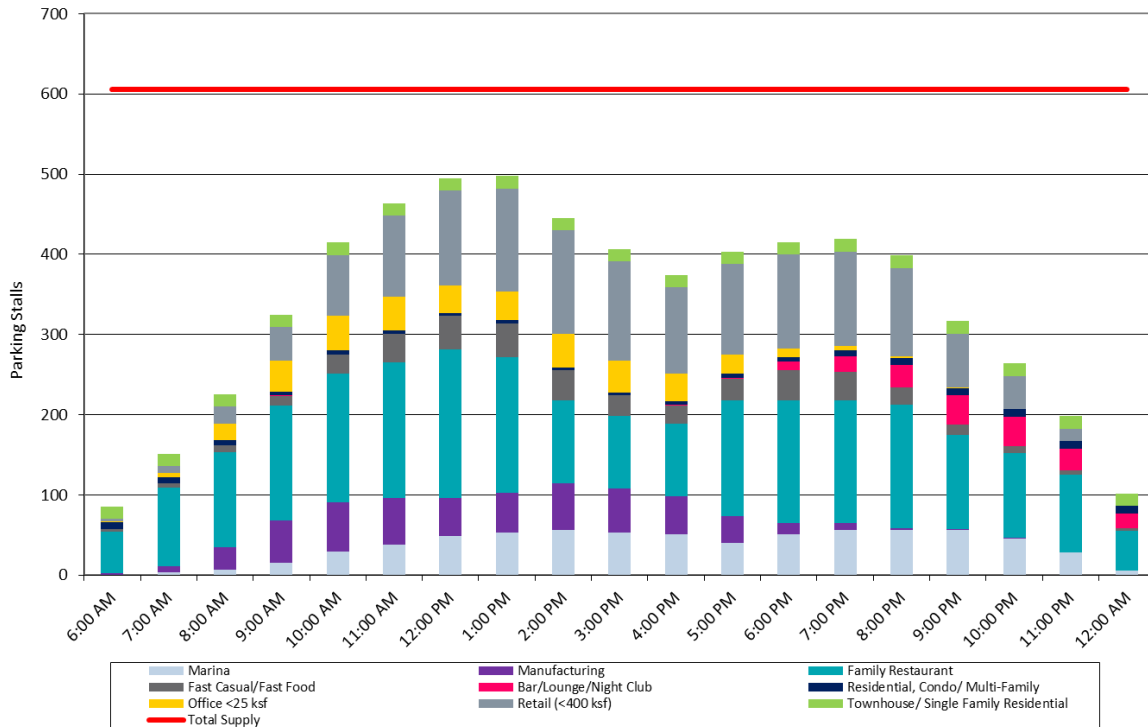
Zone 2 Shared Parking Summary

Land Use	Project Data		Weekday					Weekend					Weekday			Weekend		
			Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Peak Hr Adj	Peak Mo Adj	Estimated Parking Need	Peak Hr Adj	Peak Mo Adj	Estimated Parking Need
	Quantity	Unit											1 PM	December		12 PM	December	
Retail																		
Retail (<400 ksf)	50,672	sf GLA	2.10	100%	99%	2.07	ksf GLA	2.33	100%	98%	2.29	ksf GLA	100%	100%	106	100%	100%	116
Employee			0.51	90%	100%	0.46		0.58	90%	100%	0.52		100%	100%	23	100%	100%	27
Food and Beverage																		
Family Restaurant	20,100	sf GLA	8.27	100%	98%	8.13	ksf GLA	10.77	100%	99%	10.70	ksf GLA	90%	100%	148	100%	100%	216
Employee			1.17	90%	100%	1.05		1.51	90%	100%	1.36		100%	100%	22	100%	100%	28
Fast Casual/Fast Food	6,225	sf GLA	9.16	100%	66%	6.07	ksf GLA	8.82	100%	66%	5.79	ksf GLA	100%	96%	37	100%	96%	35
Employee			0.75	90%	100%	0.68		1.39	90%	100%	1.25		100%	100%	4	100%	100%	8
Bar/Lounge/Night Club	2,232	sf GLA	15.25	100%	98%	14.99	ksf GLA	17.50	100%	99%	17.39	ksf GLA	0%	96%	-	0%	96%	-
Employee			1.25	90%	100%	1.12		1.50	90%	100%	1.35		10%	100%	-	5%	100%	-
Entertainment and Institutions																		
Hotel and Residential																		
Residential, Condo/ Multi-Family																		
1 Bedroom	9	units	0.90	100%	100%	0.90	unit	0.90	100%	100%	0.90	unit	40%	100%	4	68%	100%	6
Visitor	9	units	0.10	100%	100%	0.10	unit	0.15	100%	100%	0.15	unit	20%	100%	-	20%	100%	-
Townhouse/ Single Family Residential																		
Reserved	100%	res spaces	1.65	100%	100%	1.65	unit	1.65	100%	100%	1.65	unit	100%	100%	15	100%	100%	15
Visitor	9	units	0.10	100%	100%	0.10	unit	0.15	100%	100%	0.15	unit	20%	100%	-	20%	100%	-
Office																		
Office <25 ksf	12,210	sf GFA	0.30	100%	100%	0.30	ksf GFA	0.03	100%	100%	0.03	ksf GFA	45%	100%	2	90%	100%	1
Employee			3.50	93%	99%	3.24		0.35	93%	99%	0.32		85%	100%	34	90%	100%	4
Additional Land Uses																		
Marina	272	Berths	0.25	100%	100%	0.25	Berths	0.33	100%	100%	0.33	Berths	95%	75%	48	75%	75%	51
Employee			0.02	100%	100%	0.02		0.02	100%	100%	0.02		100%	85%	5	100%	85%	5
Manufacturing	65,572	sf GFA	0.08	100%	100%	0.08	sf GFA	0.01	100%	100%	0.01	sf GFA	45%	100%	3	90%	100%	1
Employee			0.84	100%	100%	0.84		0.08	100%	100%	0.08		85%	100%	47	90%	100%	5
														Customer/Visitor	344	Customer/Visitor		420
														Employee/Resident	139	Employee/Resident		83
														Reserved	15	Reserved		15
														Total	498	Total		518

Peak parking need is projected to occur on a Saturday in December around 12 pm with 518 spaces occupied.

Zone 2 Shared Parking Summary

Daily Parking Need by Hour on a Weekday During Peak Month (December)



Daily Parking Need by Hour on a Weekend During Peak Month (December)



In Zone 2, parking needs peak around noon with a smaller secondary peak in the evening (7 pm-8 pm)

Overall, an adequate supply of parking is available to meet parking needs.

Zone 3 Shared Parking Summary

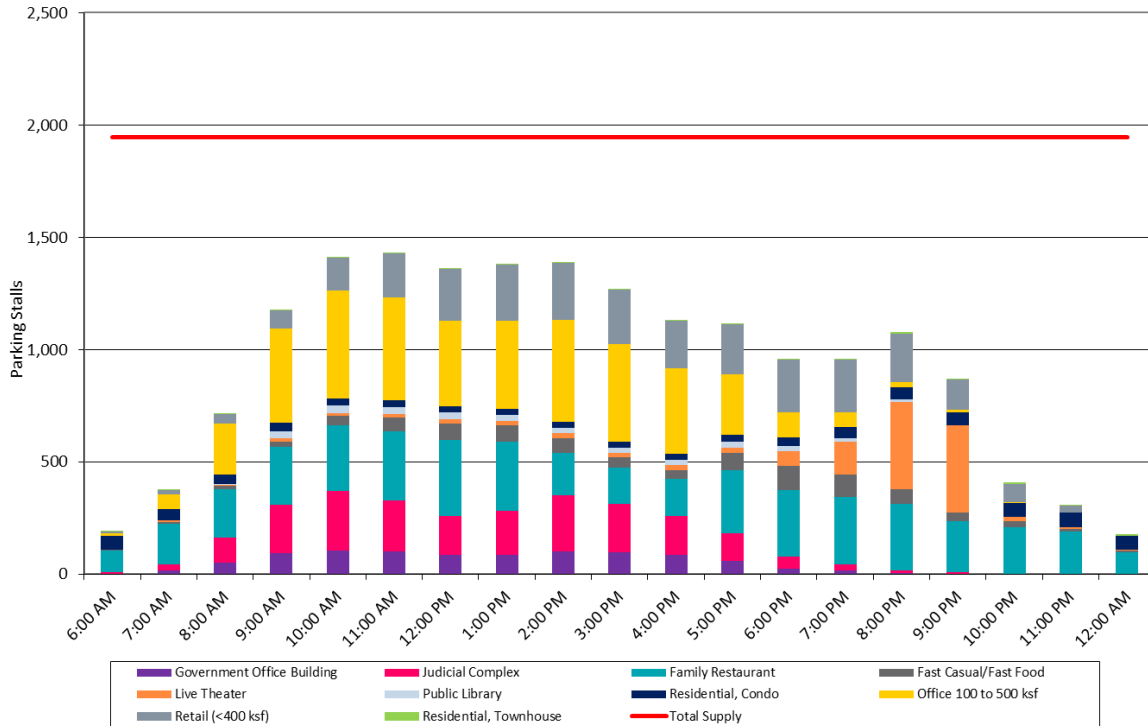
Land Use	Project Data		Weekday					Weekend					Weekday			Weekend		
			Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Peak Hr Adj	Peak Mo Adj	Estimated Parking Need	Peak Hr Adj	Peak Mo Adj	Estimated Parking Need
	Quantity	Unit											11 AM	December		2 PM	December	
Retail																		
Retail (<400 ksf)	100,615	sf GLA	2.10	100%	97%	2.04	ksf GLA	2.33	100%	98%	2.28	ksf GLA	75%	100%	154	100%	100%	231
Employee			0.51	90%	100%	0.46		0.58	90%	100%	0.52		95%	100%	44	100%	100%	53
Food and Beverage																		
Family Restaurant	39,658	sf GLA	8.27	100%	90%	7.42	ksf GLA	10.77	100%	99%	10.61	ksf GLA	90%	100%	266	65%	100%	274
Employee			1.17	90%	100%	1.05		1.51	90%	100%	1.36		100%	100%	42	100%	100%	54
Fast Casual/Fast Food	19,858	sf GLA	9.16	100%	34%	3.13	ksf GLA	8.82	100%	64%	5.68	ksf GLA	85%	96%	51	90%	96%	98
Employee			0.75	90%	100%	0.68		1.39	90%	100%	1.25		100%	100%	13	95%	100%	24
Entertainment and Institutions																		
Live Theater	1,200	seats	0.30	100%	10%	0.03	seat	0.33	100%	96%	0.32	seat	1%	100%	-	67%	100%	255
Employee			0.07	90%	100%	0.06		0.07	90%	100%	0.06		20%	85%	13	100%	85%	64
Public Library	22,523	sf GLA	2.00	100%	97%	1.94	ksf GLA	1.90	100%	98%	1.86	ksf GLA	98%	65%	28	50%	65%	14
Employee			0.25	90%	100%	0.22		0.20	90%	100%	0.18		100%	65%	4	100%	65%	3
Hotel and Residential																		
Residential, Condo																		
2 Bedrooms	38	units	1.65	100%	100%	1.65	unit	1.65	100%	100%	1.65	unit	45%	100%	28	65%	100%	41
Visitor	38	units	0.10	100%	100%	0.10	unit	0.15	100%	100%	0.15	unit	20%	100%	1	20%	100%	1
Residential, Townhouse																		
Reserved	100%	res spaces	1.65	100%	100%	1.65	unit	1.65	100%	100%	1.65	unit	100%	100%	4	100%	100%	4
Visitor	2	units	0.10	100%	100%	0.10	unit	0.15	100%	100%	0.15	unit	20%	100%	-	20%	100%	-
Office																		
Office 100 to 500 ksf	154,456	sf GFA	0.24	100%	100%	0.24	ksf GFA	0.03	100%	100%	0.03	ksf GFA	45%	100%	17	60%	100%	3
Employee			3.08	93%	100%	2.86		0.31	93%	100%	0.29		100%	100%	441	60%	100%	27
Additional Land Uses																		
Government Office Building	47,434	sf GFA	0.18	100%	100%	0.18	sf GFA	0.02	100%	100%	0.02	sf GFA	45%	100%	4	60%	100%	1
Employee			2.21	93%	100%	2.05		0.22	93%	100%	0.21		100%	100%	98	60%	100%	6
Judicial Complex	168,316	sf GFA	0.41	100%	100%	0.41	sf GFA	0.04	100%	100%	0.04	sf GFA	45%	100%	31	60%	100%	4
Employee			1.23	93%	100%	1.15		0.12	93%	100%	0.11		100%	100%	193	60%	100%	12

Peak parking need is projected to occur on a weekday in December around 11 am with 1,432 spaces occupied.

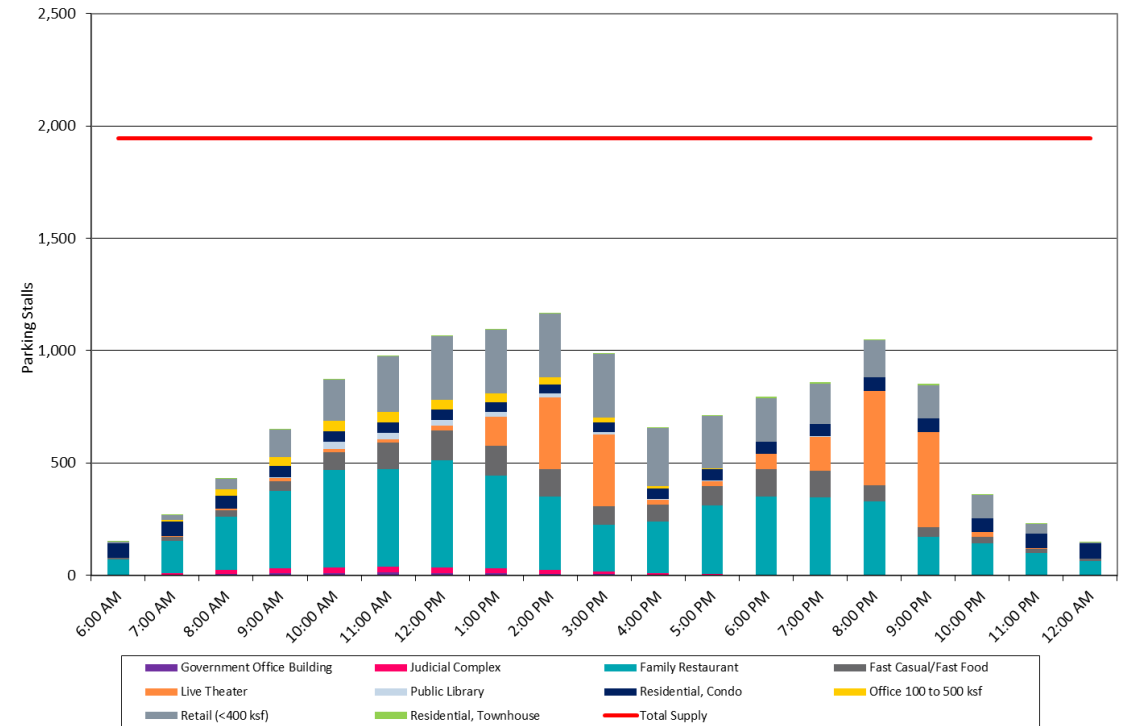
Customer/Visitor	552	Customer/Visitor	881
Employee/Resident	876	Employee/Resident	284
Reserved	4	Reserved	4
Total	1,432	Total	1,169

Zone 3 Shared Parking Summary

Daily Parking Need by Hour on a Weekday During Peak Month (December)



Daily Parking Need by Hour on a Weekend During Peak Month (December)



Weekday parking activity peaks around 11 am, when commercial, city, and county offices are open. While localized shortages are likely, the overall capacity in Zone 3 is sufficient to meet peak parking needs.

Future Conditions

Detailed Shared Parking Models

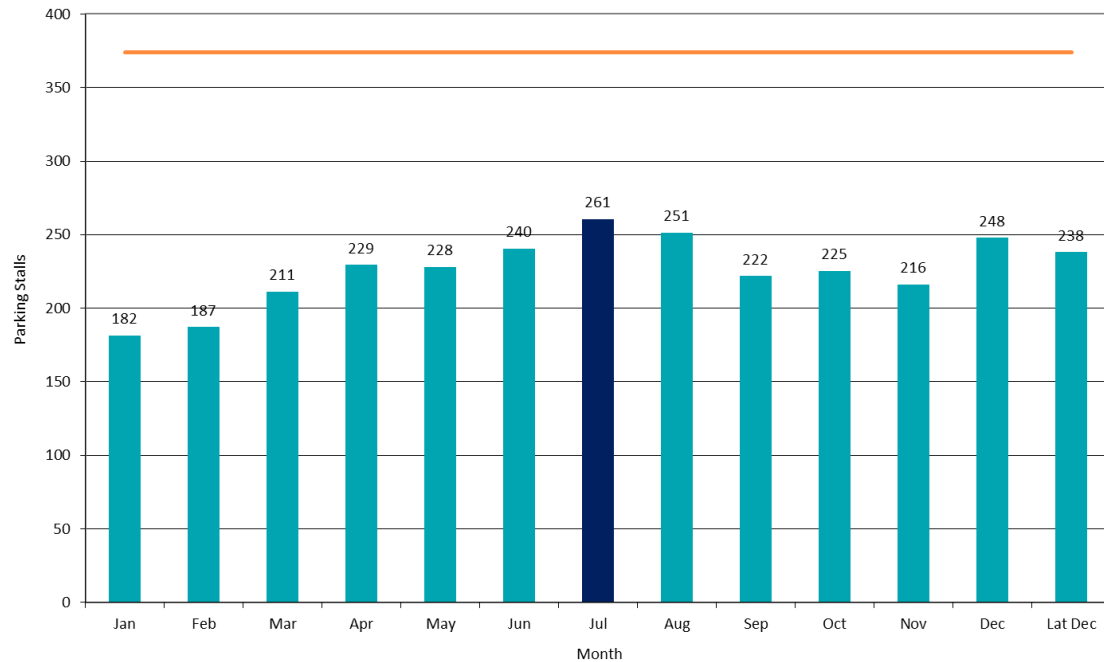
Future Monthly Parking Needs– Zone 1

The figures below show the peak hour parking need in Zone 1 on a monthly basis compared to the available parking supply. No new development is planned in Zone 1; however, Walker assumed about 8,500 SF of vacant retail space would be leased in the future.

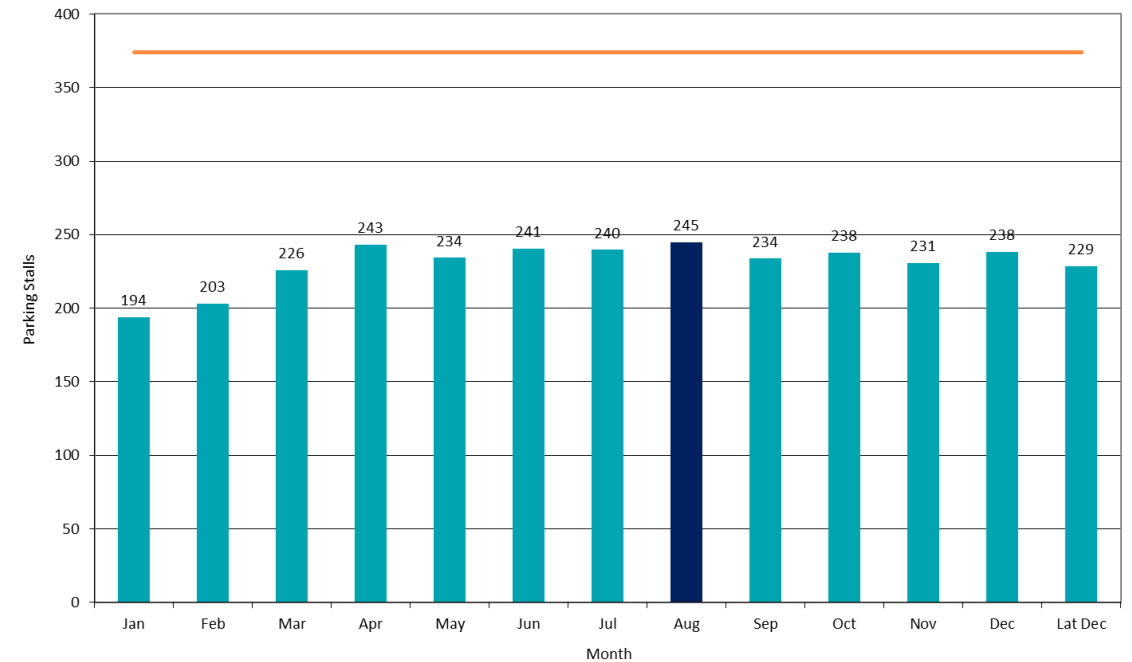
Peak Weekday Need projected to occur in July around 2 pm

Peak Weekend Need projected to occur in August around 2 pm

Weekday Month-by-Month Estimated Parking Need



Weekend Month-by-Month Estimated Parking Need



Future Conditions – Zone 1

Peak Weekday
need is projected
to occur in July
around 2 pm

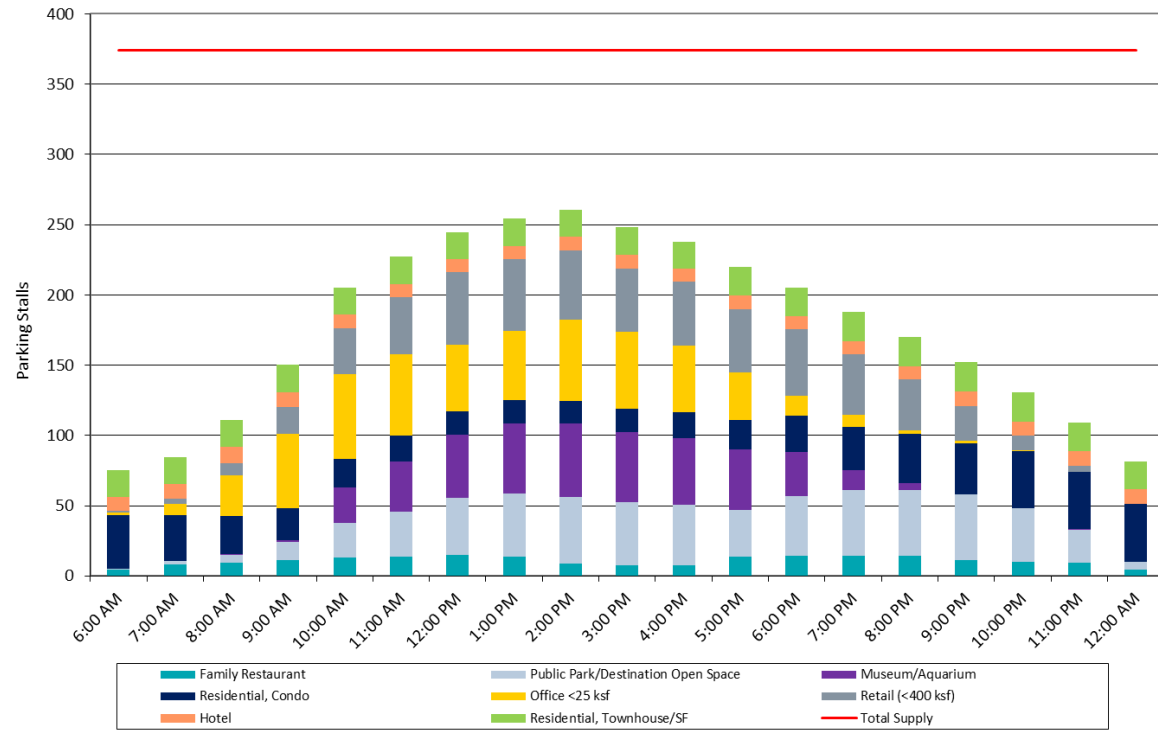
Peak Weekend
need is projected
to occur in August
around 2 pm

Distribution of Weekday Need by Zone				
Land Use	Existing	Vacant	Total	
Retail				
Retail (<400 ksf)	27	12	39	
Employee	8	3	11	
Food and Beverage				
Family Restaurant	6	0	6	
Employee	3	0	3	
Entertainment and Institutions				
Public Park/Destination Open Space	43	0	43	
Employee	4	0	4	
Museum/Aquarium	47	0	47	
Employee	5	0	5	
Hotel and Residential				
Bed & Breakfast	7	0	7	
Hotel Employees	3	0	3	
Residential, Condo				
2 Bedrooms	16	0	16	
Visitor	1	0	1	
Residential, Townhouse/SF				
Reserved	19	0	19	
Visitor	0	0	0	
Office				
Office <25 ksf	5	0	5	
Reserved	0	0	0	
Employee	52	0	52	
Additional Land Uses				
	Existing	Vacant	Total	
Parking Demand	Customer/Visitor	136	12	148
	Employee/Resident	91	3	94
	Reserved	19	0	19
	Total	246	15	261
Parking Supply	Customer/Visitor	235	15	250
	Employee/Resident	100	5	105
	Reserved	19	0	19
	Total	354	20	374
Surplus (+)/Deficit (-)	Customer/Visitor	99	3	102
	Employee/Resident	9	2	11
	Reserved	0	0	0
	Total	108	5	113

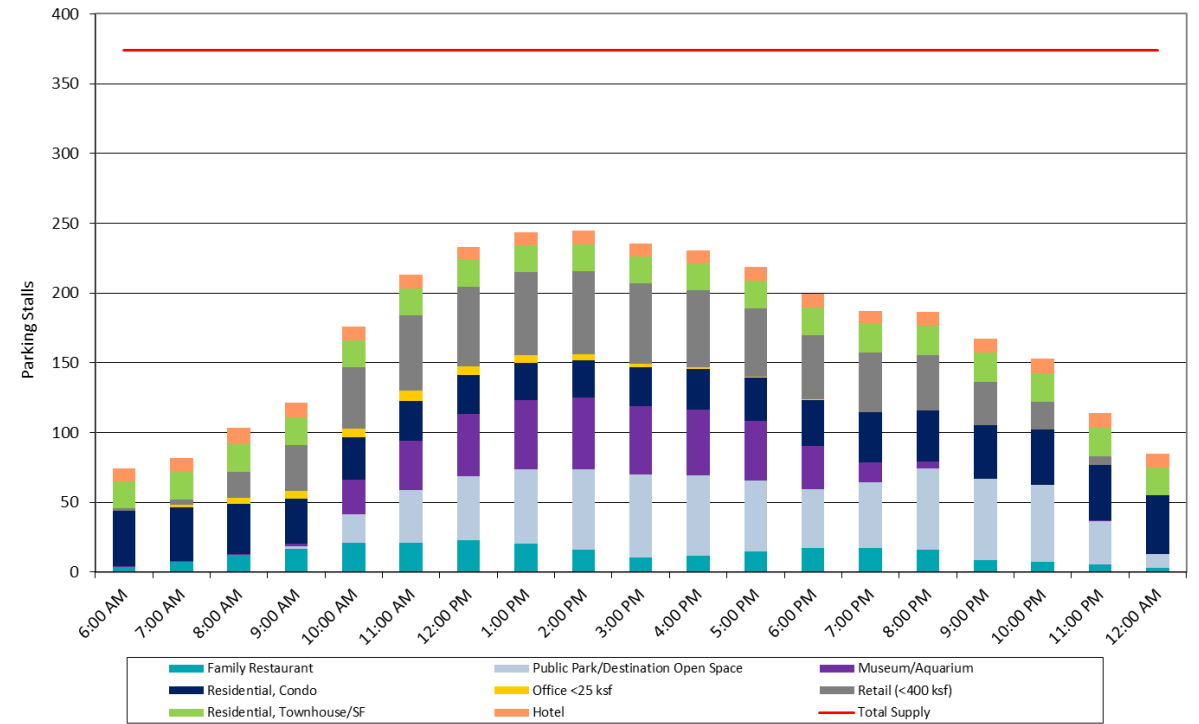
Distribution of Weekend Need by Zone				
Land Use	Existing	Vacant	Total	
Retail				
Retail (<400 ksf)	33	14	47	
Employee	9	4	13	
Food and Beverage				
Family Restaurant	13	0	13	
Employee	4	0	4	
Entertainment and Institutions				
Public Park/Destination Open Space	52	0	52	
Employee	5	0	5	
Museum/Aquarium	46	0	46	
Employee	5	0	5	
Hotel and Residential				
Bed & Breakfast	7	0	7	
Hotel Employees	3	0	3	
Residential, Condo				
2 Bedrooms	26	0	26	
Visitor	1	0	1	
Residential, Townhouse/SF				
Reserved	19	0	19	
Visitor	0	0	0	
Office				
Office <25 ksf	1	0	1	
Reserved	0	0	0	
Employee	4	0	4	
Additional Land Uses				
	Existing	Vacant	Total	
Parking Demand	Customer/Visitor	153	14	167
	Employee/Resident	56	4	60
	Reserved	19	0	19
	Total	228	18	246
Parking Supply	Customer/Visitor	235	15	250
	Employee/Resident	100	5	105
	Reserved	19	0	19
	Total	354	20	374
Surplus (+)/Deficit (-)	Customer/Visitor	82	1	83
	Employee/Resident	44	1	45
	Reserved	0	0	0
	Total	126	2	128

Zone 1 – Future Conditions

Daily Parking Need by Hour on a Weekday During Peak Month (July)



Daily Parking Need by Hour on a Weekend During Peak Month (August)



Should the vacant space in Zone 1 be leased, Walker anticipates the parking system will be sufficient to meet future parking needs.

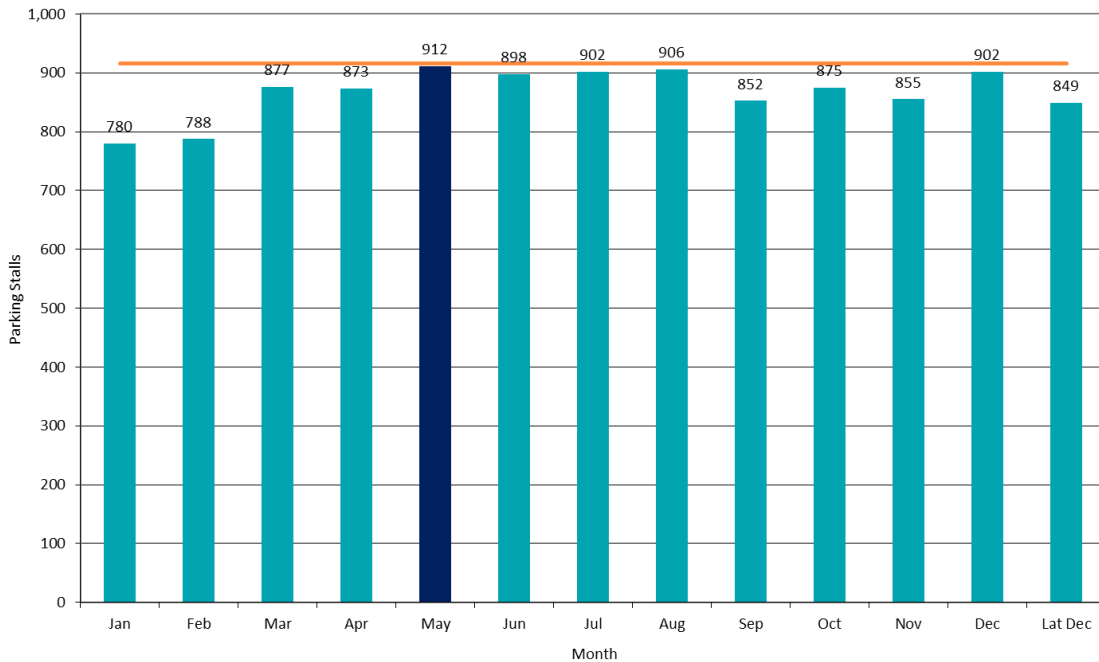
Future Monthly Parking Needs– Zone2

The figures below show the peak hour parking need in Zone 2 on a monthly basis compared to the available parking supply. The King’s Landing Development will be built in Zone 2, introducing new retail, restaurant, residential and hotel space to the area. During weekend conditions, most months are projected to exceed the available capacity in Zone 2 after King’s Landing is developed.

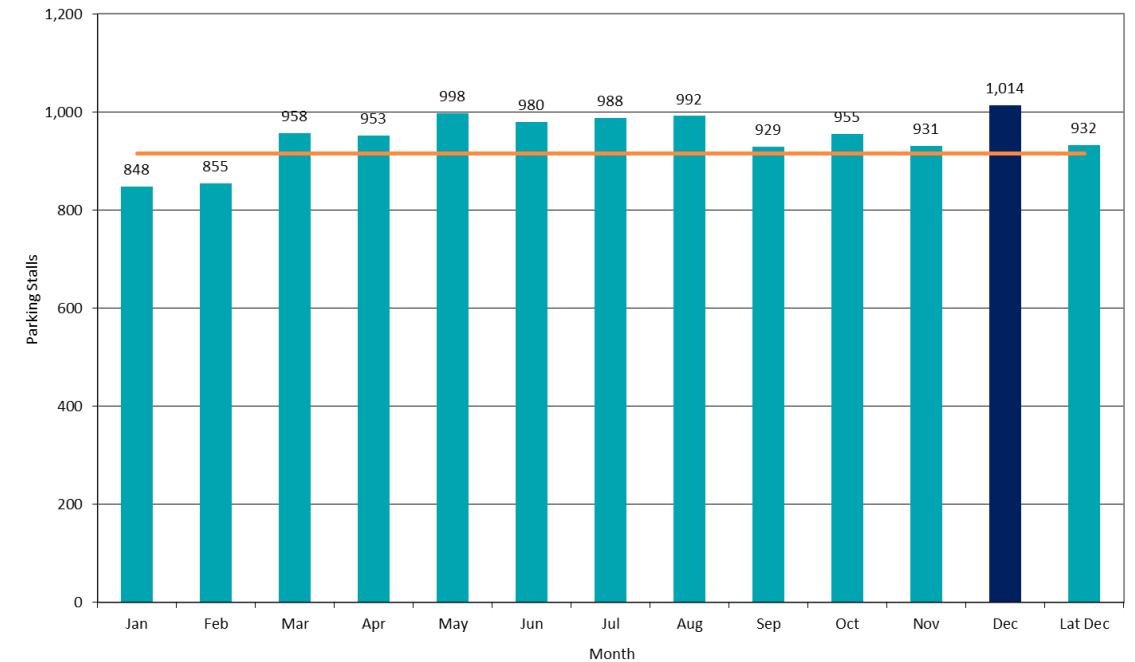
Peak Weekday Need projected to occur in May around 12 pm

Peak Weekend Need projected to occur in December around 12 pm

Weekday Month-by-Month Estimated Parking Need



Zone 2 Weekend Month-by-Month Estimated Parking Need



Future Conditions – Zone 2

Peak Weekday need is projected to occur in May around Noon

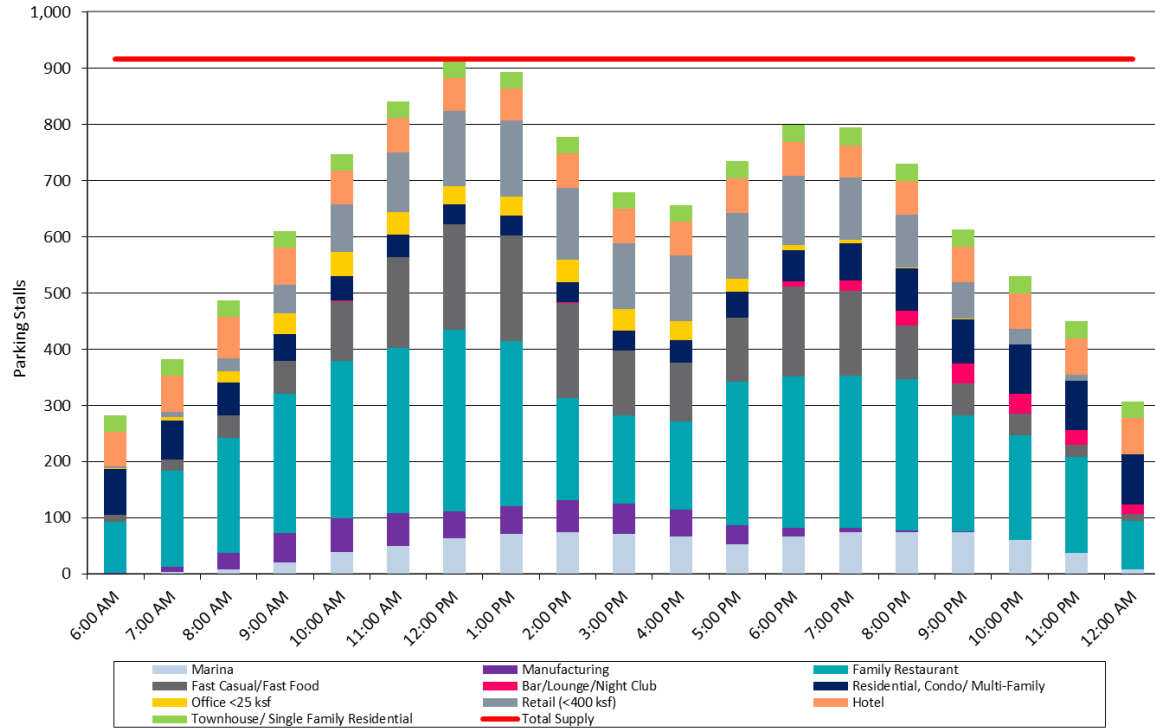
Peak Weekend need is projected to occur in December around Noon

Distribution of Weekday Need by Zone				
Land Use	Existing	Vacant	Kings Landing	Total
Retail				
Retail (<400 ksf)	75	6	26	107
Employee	18	2	7	27
Food and Beverage				
Family Restaurant	151	0	132	283
Employee	22	0	18	40
Fast Casual/Fast Food	45	0	127	172
Employee	4	0	12	16
Entertainment and Institutions				
Hotel and Residential				
Hotel-Business	0	0	0	0
Hotel-Leisure	0	0	41	41
Hotel Employees	0	0	17	17
Residential, Condo/ Multi-Family				
1 Bedroom	3	0	10	13
3+ Bedrooms	0	0	21	21
Visitor	0	0	1	1
Townhouse/ Single Family Residential				
Reserved	15	0	14	29
Visitor	0	0	0	0
Office				
Office <25 ksf	1	0	0	1
Reserved	0	0	0	0
Employee	32	0	0	32
Additional Land Uses				
Marina	58	0	0	58
Employee	6	0	0	6
Manufacturing	1	0	0	1
Employee	47	0	0	47
Parking Demand				
Customer/Visitor	331	6	327	664
Employee/Resident	132	2	85	219
Reserved	15	0	14	29
Total	478	8	426	912
Parking Supply				
Customer/Visitor	419	10	199	628
Employee/Resident	169	5	100	274
Reserved	15	0	0	15
Total	602	15	299	916
Surplus (+)/Deficit (-)				
Customer/Visitor	88	4	(128)	(37)
Employee/Resident	37	3	15	55
Reserved	0	0	(14)	(14)
Total	124	7	(127)	4

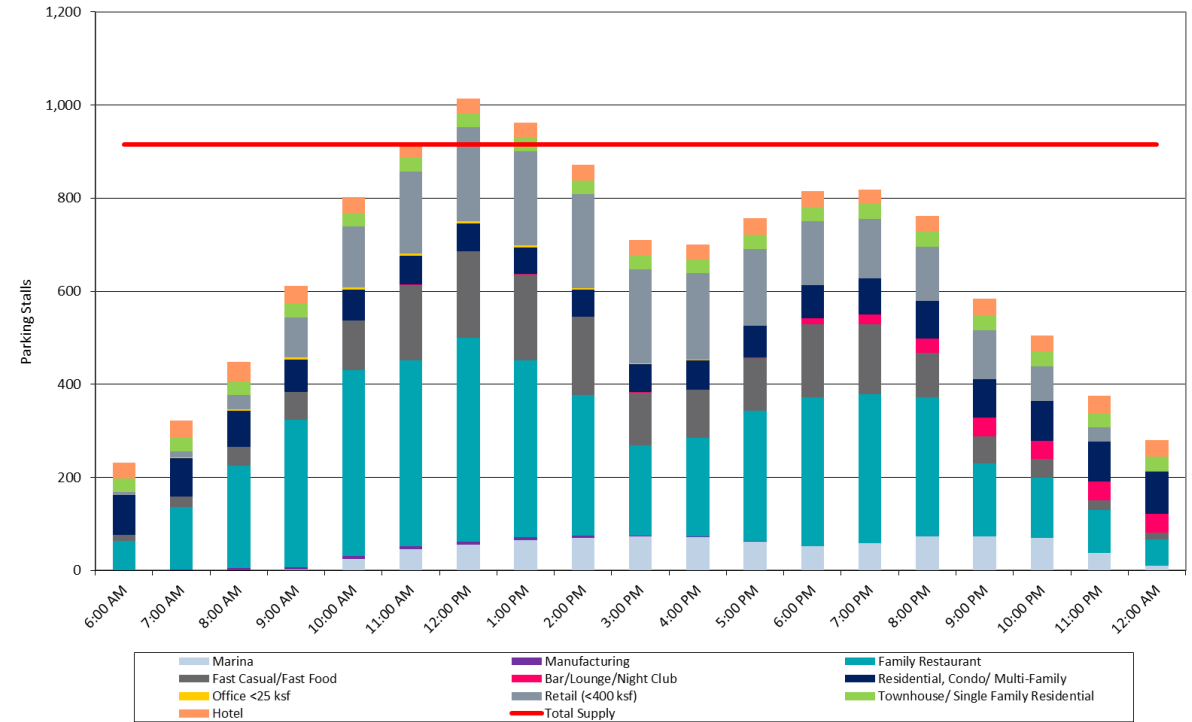
Distribution of Weekend Need by Zone				
Land Use	Existing	Vacant	Kings Landing	Total
Retail				
Retail (<400 ksf)	116	9	39	164
Employee	27	2	9	38
Food and Beverage				
Family Restaurant	207	0	180	387
Employee	27	0	24	51
Fast Casual/Fast Food	41	0	114	155
Employee	8	0	23	31
Entertainment and Institutions				
Hotel and Residential				
Hotel-Business	0	0	0	0
Hotel-Leisure	0	0	23	23
Hotel Employees	0	0	9	9
Residential, Condo/ Multi-Family				
1 Bedroom	5	0	17	22
3+ Bedrooms	0	0	36	36
Visitor	0	0	2	2
Townhouse/ Single Family Residential				
Reserved	15	0	14	29
Visitor	1	0	0	1
Office				
Office <25 ksf	1	0	0	1
Reserved	0	0	0	0
Employee	4	0	0	4
Additional Land Uses				
Marina	51	0	0	51
Employee	5	0	0	5
Manufacturing	1	0	0	1
Employee	5	0	0	5
Parking Demand				
Customer/Visitor	418	9	358	785
Employee/Resident	81	2	118	201
Reserved	15	0	14	29
Total	514	11	490	1,015
Parking Supply				
Customer/Visitor	419	10	199	628
Employee/Resident	169	5	100	274
Reserved	15	0	0	15
Total	602	15	299	916
Surplus (+)/Deficit (-)				
Customer/Visitor	1	1	(159)	(157)
Employee/Resident	87	3	(18)	72
Reserved	0	0	(14)	(14)
Total	88	4	(191)	(99)

Zone 2 Post King's Landing Development

Daily Parking Need by Hour on a Weekday During Peak Month (May)



Daily Parking Need by Hour on a Weekend During Peak Month (December)



Projected deficit during Saturday AM after King's Landing Development is built

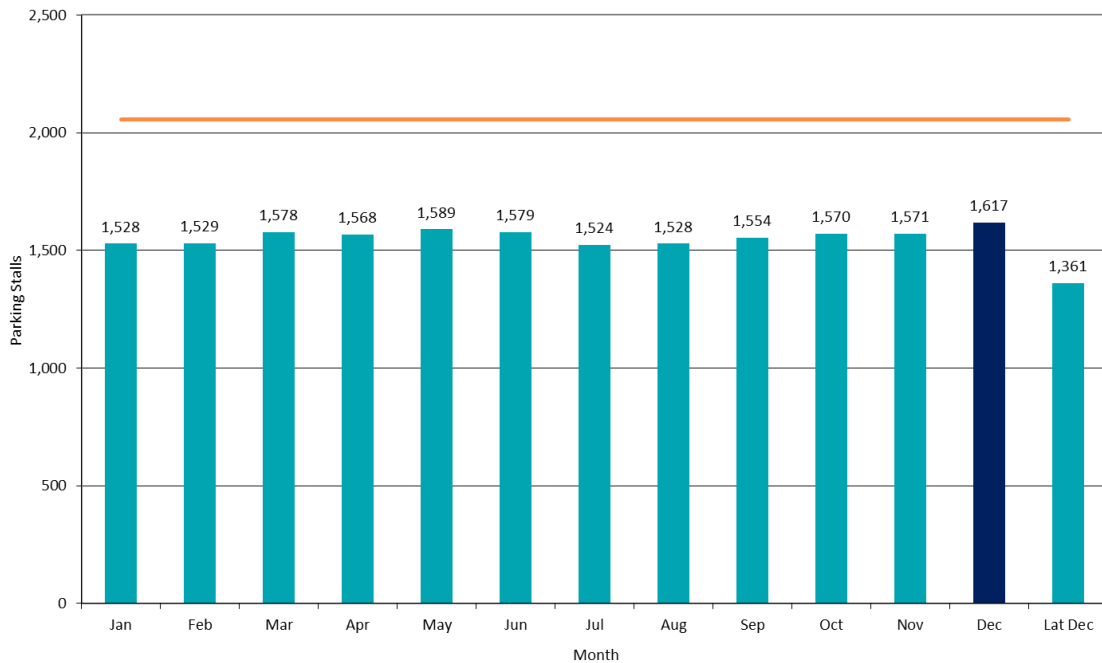
Future Conditions – Zone 3

The figures below show the peak hour parking need in Zone 3 on a monthly basis compared to the available parking supply. No new development is planned in Zone 3; however, Walker assumed vacant office, retail, and residential space would be occupied.

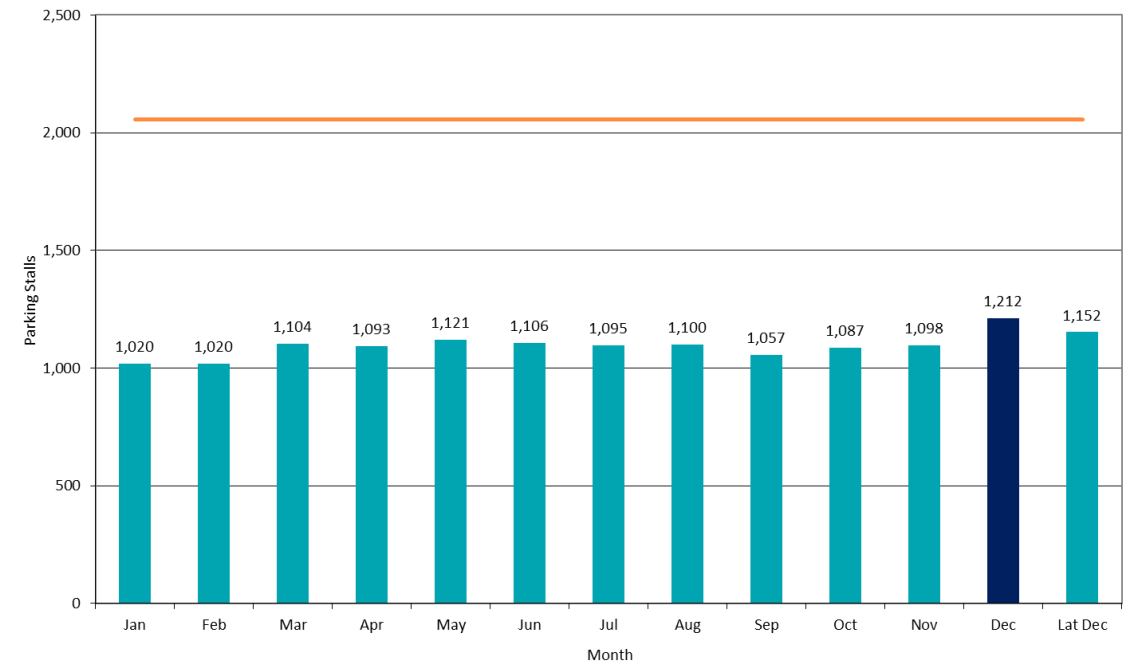
Peak Weekday Conditions projected to occur in December around 11 am

Peak Weekend Conditions projected to occur in December around 2 pm

Weekday Month-by-Month Estimated Parking Need



Weekend Month-by-Month Estimated Parking Need



Future Conditions – Zone 3

Peak Weekday need is projected to occur in December around 11 am

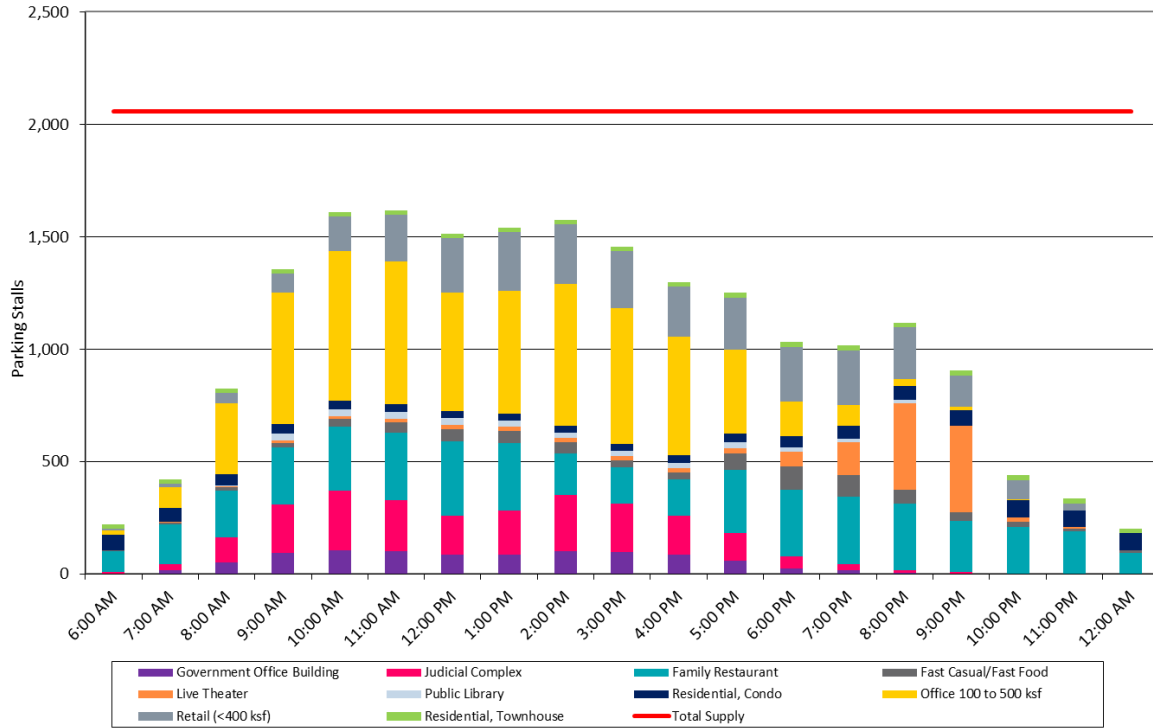
Peak Weekend need is projected to occur in December around 2 pm

Distribution of Weekday Need by Zone				
Land Use	Existing	Vacant	Total	
Retail				
Retail (<400 ksf)	154	8	162	
Employee	44	2	46	
Food and Beverage				
Family Restaurant	259	0	259	
Employee	42	0	42	
Fast Casual/Fast Food	34	0	34	
Employee	13	0	13	
Entertainment and Institutions				
Live Theater	0	0	0	
Employee	13	0	13	
Public Library	28	0	28	
Employee	4	0	4	
Hotel and Residential				
Residential, Condo				
2 Bedrooms	29	4	33	
Visitor	1	0	1	
Residential, Townhouse				
Reserved	3	16	19	
Visitor	0	0	0	
Office				
Office 100 to 500 ksf	16	7	23	
Employee	429	184	613	
Additional Land Uses				
Government Office Building	4	0	4	
Employee	98	0	98	
Judicial Complex	31	0	31	
Employee	193	0	193	
	Existing	Vacant	Total	
Parking Demand				
Customer/Visitor	527	15	542	
Employee/Resident	865	190	1,055	
Reserved	3	16	19	
Total	1395	221	1,616	
Parking Supply				
Customer/Visitor	913	20	933	
Employee/Resident	900	200	1,100	
Reserved	5	20	25	
Total	1818	240	2,058	
Surplus (+)/Deficit (-)				
Customer/Visitor	386	5	391	
Employee/Resident	35	10	45	
Reserved	2	4	6	
Total	423	19	442	

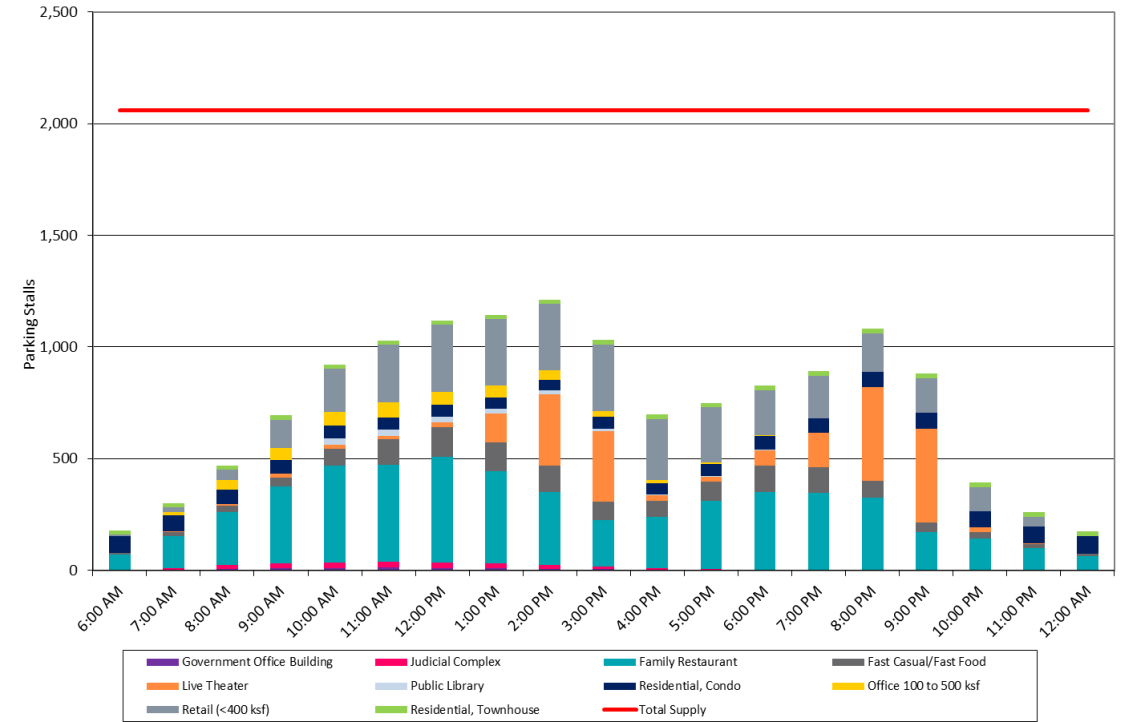
Distribution of Weekend Need by Zone				
Land Use	Existing	Vacant	Total	
Retail				
Retail (<400 ksf)	230	12	242	
Employee	53	3	56	
Food and Beverage				
Family Restaurant	274	0	274	
Employee	54	0	54	
Fast Casual/Fast Food	96	0	96	
Employee	24	0	24	
Entertainment and Institutions				
Live Theater	254	0	254	
Employee	64	0	64	
Public Library	14	0	14	
Employee	3	0	3	
Hotel and Residential				
Residential, Condo				
2 Bedrooms	41	6	47	
Visitor	1	0	1	
Residential, Townhouse				
Reserved	3	16	19	
Visitor	0	0	0	
Office				
Office 100 to 500 ksf	3	1	4	
Employee	26	11	37	
Additional Land Uses				
Government Office Building	1	0	1	
Employee	6	0	6	
Judicial Complex	4	0	4	
Employee	12	0	12	
	Existing	Vacant	Total	
Parking Demand				
Customer/Visitor	877	13	890	
Employee/Resident	283	20	303	
Reserved	3	16	19	
Total	1163	49	1,212	
Parking Supply				
Customer/Visitor	913	20	933	
Employee/Resident	900	200	1,100	
Reserved	5	20	25	
Total	1818	240	2,058	
Surplus (+)/Deficit (-)				
Customer/Visitor	36	7	43	
Employee/Resident	617	180	797	
Reserved	2	4	6	
Total	655	191	846	

Zone 3 – Future Conditions

Daily Parking Need by Hour on a Weekday During Peak Month (December)



Daily Parking Need by Hour on a Weekend During Peak Month (December)



Surplus parking supply is anticipated during peak weekday and weekend conditions in Zone 3.