

Downtown Redding Parking Strategy



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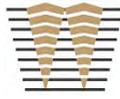
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August 2019

Submitted by Watry Design and PlaceWorks

Submitted to City of Redding

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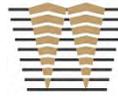
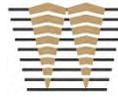


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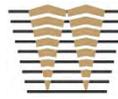


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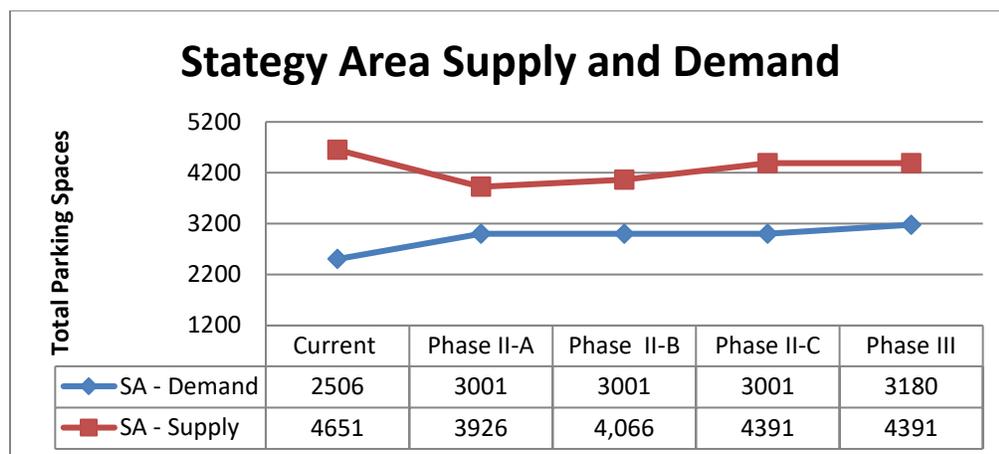
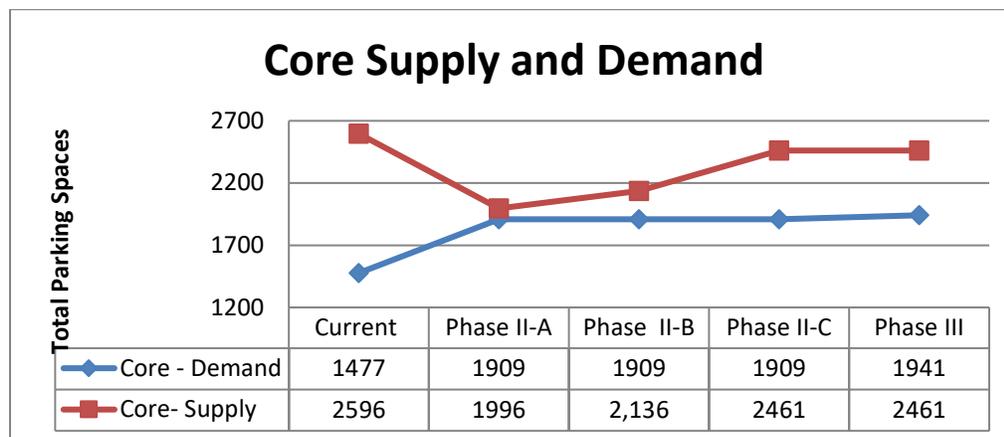


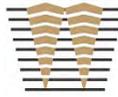
EXECUTIVE SUMMARY

The goal of this *Downtown Redding Parking Strategy* is to make the most efficient use of all public and private parking spaces in Downtown Redding (Downtown), while planning for potential future demands that may necessitate the turnover of on-street parking spaces and the use of additional off-street parking. As construction commences on several significant new Downtown developments including the removal of the California Street Parking Structure, there will be a period of a few years when parking will be required to shift to alternative locations throughout Downtown to make use of the existing capacity.

This study analyzes parking supply and demand and makes recommendations for consideration by the community and City Council. A detailed modeled analysis of the current and proposed parking demand reveals there is considerable excess capacity in the current parking supply to meet the expected demand into the future in both the Downtown Core and the overall Strategy Area studied as shown in the following tables:

Executive Summary Table 1 and 2: Core and Strategy Area Supply and Demand





However, during the construction period over the next few years, the supply will be limited, and the City may desire to add supply during this time to ensure consistent and convenient parking for all user groups including employees, patrons, students and residents. To effectively manage the tight supply and ensure clear communication to the public, there will be a need to increase enforcement, maintenance and public education efforts. These activities as well as the cost of the additional supply needed will require significantly more resources than is allocated to the parking system today. The City and the community will need to consider whether these resources will come from the City's General Fund, be user paid, or funded by property owners through some form of Business Improvement District or other funding mechanism.

Should the decision be made to implement a user paid system, in order to ensure adequate parking throughout this transition and in the long term, it is recommended that the City of Redding (City):

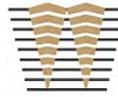
- Lease private lots in order to add public parking inventory, as necessary
- Implement a standard fee structure for parking
- Purchase and implement a parking management mobile device application
- Add smart meters to all on-street parking spaces in the Downtown Core District (Core)
- Partner with new private/public parking garages and surface lots to manage parking
- Add pay stations to the two City-owned surface parking lots and newly leased parking lots
- Provide staff to manage the parking system, including enforcement
- Develop and implement a parking marketing strategy, including signage

In the long term, it is recommended that the City:

- Consider partnering with a private entity to manage the parking system
- Add smart meters to all on-street parking spaces in the Downtown Redding Parking Strategy Area (Strategy Area)
- Add pay stations or app-managed spaces to other parking lots
- Institute a demand based fee structure

A property owner paid system may reduce the initial capital investment in revenue collection devices like smart meters and pay stations. However, enforcement, administration, maintenance and capital reserves will require ongoing resources to ensure a sustainable and consistent parking system.

As these community changes occur to the Downtown and the new parking system, it is imperative to have an open line of communication with the public and Downtown businesses to clearly communicate where and how parking is changing and where it will be available and accessible.



INTRODUCTION

Starting in August 2016 the City began studying parking in Downtown, for the *2018 Downtown Redding Specific Plan Update* (Downtown Specific Plan), and was adopted in April 2018. The Downtown Specific Plan briefly addressed parking but acknowledged the need for further analysis. Since the Downtown Specific Plan, the City, in partnership with private developers, has received grant funding for two projects in Downtown, which will include the removal and addition of parking (e.g., the removal of two parking structures). In anticipation of these projects and future development/revitalization of Downtown, a detailed analysis is needed to address short- and long-term parking needs and strategies.

This strategy, submitted by Watry Design and PlaceWorks to the City, describes existing parking, recent development that has an effect of parking demand and supply, a set of alternative parking strategies, parking recommendations, and financing considerations. As shown in **Figure 1: Strategy Area**, the Strategy Area encompasses the Core and includes portions of the Downtown Specific Plan Area. For comparison and implementation purposes, this strategy compares the larger “Strategy Area” to the smaller “Core” or “Core Area.”

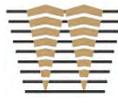
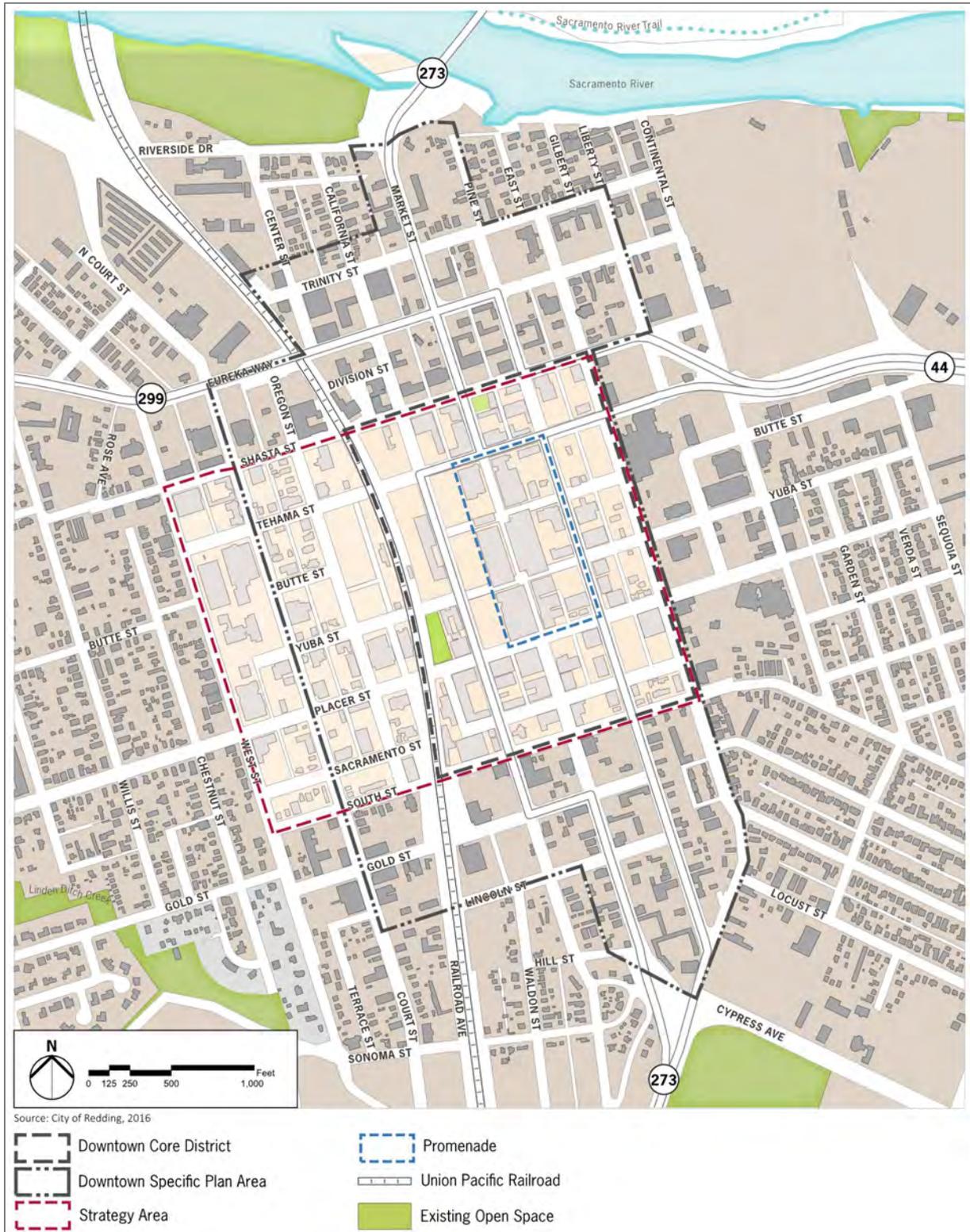
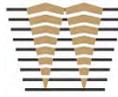


Figure 1: Strategy Area





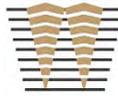
DOWNTOWN PARKING CONTEXT AND CHALLENGES

For several decades, the City and its partners have been trying to encourage development in and the revitalization of Downtown. In an effort to make development projects more affordable in Downtown, the City has provided public parking and has reduced/eliminated parking requirements throughout the Strategy Area, especially in the Core Area. Additionally, the City has invested in parking resources in Downtown, including:

- Providing and maintaining off-street public parking, including a 640-space structure (the California Street Parking Structure), a 140-space subterranean structure (the old Dicker's Parking Structure), and two surface lots. In the Core Area, a total of 1,014 off-street public parking spaces are available, of which 881 (or 87 percent) are owned by the City.
- Removing parking meters from City-owned lots (making them free of charge).
- Providing and maintaining on-street public parking, including 540 spaces in the Core Area (277 of which have poles for parking meters) and 1,187 spaces in the Strategy Area (363 of which have poles for parking meters).

Despite the City's investment in the provision of public parking and maintenance, challenges to the parking program remain and the resulting impact on Downtown vitality and development has been underwhelming. Some of the ongoing issues affecting parking demand and supply include:

- Despite removing parking requirements for development projects in the Core Area, a limited amount of new development has come to Downtown in the past 20 years.
- There is a high rate of business turnover in existing commercial buildings.
- The Mt. Shasta Mall area continues to draw large retail stores away from Downtown.
- There is a large government office presence in Downtown, whose employees patronize retail establishments, but their location in ground floor retail stores creates an all-day parking demand in prime retail parking locations. Recent data for this strategy indicates that government offices use a substantial supply of off-street parking spaces in the Core Area for all-day parking – well over 30 percent of the California Street Parking Structure.
- The California Street Parking Structure takes up nearly three city blocks – an area that is better utilized with more active uses, such as mixed-use development (housing, restaurants, and retail and office uses) and a more compact private parking garage.
- There is an uneven playing field for peripheral development outside of the Core Area. These properties are further from the free centralized off-street parking lots and they must provide on-site parking.
- Over the years, the City has removed some parking meters or has not replaced other broken on-street parking meters due to funding limitations. For the parking meters that remain, the charge for on-street metered parking is \$0.20 per hour. The majority of these meters are mechanical and do not have the ability to be programmed for different rates.
- The City provides very limited enforcement due to funding limitations. This means that parking meters are ignored by some, leading to all-day parking in high demand areas instead of preserving nearby convenient spaces for short-term customers.



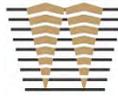
- The Downtown parking program is not self-sufficient. Instead, the City’s General Fund subsidizes parking, providing \$70-80K/year for operational costs and necessary maintenance. Due to funding limitations, preventative maintenance has been deferred. The California Street Parking Structure and the old Dicker’s Parking Structure have approached the end of their useful life at more than 50-years-old; however, due to prohibitive costs, the City likely will not replace these structures.

DOWNTOWN PARKING SUPPLY AND DEMAND

Methodology

City Public Works staff has gathered a considerable amount of data related to current parking supply and demand. Data was collected from several sources, as described below.

- **Physical Counts.** City staff physically counted occupied parking stalls for the Core and the Strategy Areas in October 2010 and May 2017, between 11:00 am and 2:00 pm. For this analysis, the highest number of filled parking spaces on a block (between 2010 and 2017 counts) was used, to give a conservative estimate. Data was updated in 2018. Physically counting the occupied parking stalls is valuable in identifying the parking demands on a specific day and time. The counts performed helped to augment the model developed to determine the demand for parking spaces throughout the Phases outlined in this strategy.
- **Interviews.** Numerous interviews with interested downtown parties were conducted in Summer 2018 to help assess the variety of parking needs and to help calibrate the parking models used to complete this strategy. A few of the larger user groups comments are included below to provide prospective to the variety of issues addressed.
 - Shasta County indicated that downtown office space is critically important to the Social Services operations and that downtown space provides good access to clients and has affordable lease rates. Once the Shasta County Courthouse is completed, it may open up space in the old courthouse to move some of these agencies into the vacated building.
 - Superior Court was interviewed to gain an understanding of existing and projected future parking needs. A new Courthouse is under construction in Downtown; with current parking spaces, they anticipate a need for approximately 100 additional parking spaces after the courthouse is operational.
 - Commercial Realtors – Assisted in determining existing vacant lease space, what the current mix of existing commercial uses are and what clients for space downtown look for in parking.
 - Restaurant Counts. Existing restaurants in the Core and the Strategy Areas were counted during the 2018 summer, to feed into the demand model. At the time of the count, there were 40 restaurants in the Strategy Area, with the majority of them in the Core Area.
 - Downtown property owners and business owners, as well as Downtown interest groups such as Viva Downtown and the Chamber of Commerce, have been part of the process from the beginning and have provided valuable input on existing operations and what the future needs of business owners include.



- Business owners – A variety of owners that own and maintain private parking lots have been consulted as to the impacts of owning businesses downtown and the various issues they continually have to address. These issues are primarily around maintenance and security and how the impacts from trespassing and vandalism affect their businesses.

It should be noted that the existing parking occupancy counts from 2010 and 2017 were for Downtown at a time when there were many vacancies, particularly in the retail sector. These parking occupancy numbers would not give an accurate snapshot of a fully leased and vibrant downtown area, which is anticipated to happen during the next several years. The existing demands downtown are very different from that of a fully energized downtown, which will be addressed in more detail later in this strategy.

Findings

The data is summarized in **Figures 2 to 6**, as described below.

- **Figure 2: 2010/2017 Off-Street Public/Private Parking Capacity** shows the capacity percentages of the off-street public/private parking lots, based on the counts found at the time.
- **Figure 3: 2010/2017 Public Parking Capacity** shows the capacity percentages of the public parking only, a combination of on- and off-street parking, based on the counts found at the time.
- **Figure 4: 2018 On-Street and Off-Street Parking Capacity** provides public/private parking supply numbers, based on the counts found during the new survey.
- **Figure 5: Downtown Parking Distance Analysis** illustrates walking distances from existing parking lots within the Core at 300 feet and 600 feet radiuses,
- **Figure 6: Comparable Parking Distance Analysis** compares the same 300 and 600 feet walking distances at other familiar developments.

As shown in **Figure 2: 2010/2017 Off-Street Public/Private Parking Capacity**:

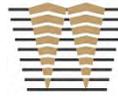
- The Core was parked on average at 60 percent capacity (1,194 occupied stalls within a total supply of 1,987 stalls) inclusive of private facilities.
- The Strategy Area was parked on average at 56 percent capacity (1,916 occupied stalls within total supply of 3,395 stalls) inclusive of private facilities.

As shown in **Figure 3: 2010/2017 Public Parking Capacity**:

- The Core was parked on average at 65 percent capacity (1,018 occupied stalls within a total supply of 1,558 stalls).
- The Strategy Area was parked on average at 60 percent capacity (1,852 occupied stalls within total supply of 3,070 stalls).

As shown in **Figure 4: 2018 On-Street and Off-Street Parking Capacity**:

- The Core total supply count of 2,596 stalls is inclusive of private facilities, and is an increase of 53 stalls from the 2010/2017 survey counts (2,543).
- The Strategy Area total supply count of 4,651 stalls is inclusive of private facilities, and is an increase of 53 stalls from the 2010/2017 survey counts (4,598).



As shown in **Figure 5: Downtown Parking Distance Analysis** and **Figure 6: Comparable Parking Distance Analysis**:

- o These two figures, when compared side by side, illustrate the same walking distances from parking lots to either within the Downtown Core or to big box stores or shopping malls.

The data shows that there is an adequate supply of parking in Downtown, but there continues to be a perceived lack of parking. This is likely due to a combination of issues. One such issue is that, while the few prime on-street spaces in front of stores typically are always being utilized (often by vehicles parked for a full 8 hours), other off-street parking spaces located within one to two blocks away are underutilized. The existing on-street parking is typically the most desired and the off-street public parking supply is out of sight and often overlooked.

Additionally, the data found that many of the metered parking spaces have meters that are out-of-service or missing. As such, the payment requirements are unclear, as many assume the remaining meters are remnants of an older system and it is not necessary to pay. Enforcement has been light, due in part to limited enforcement staff and a lack of funds to pay for more enforcement staff and/or meters.

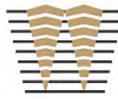
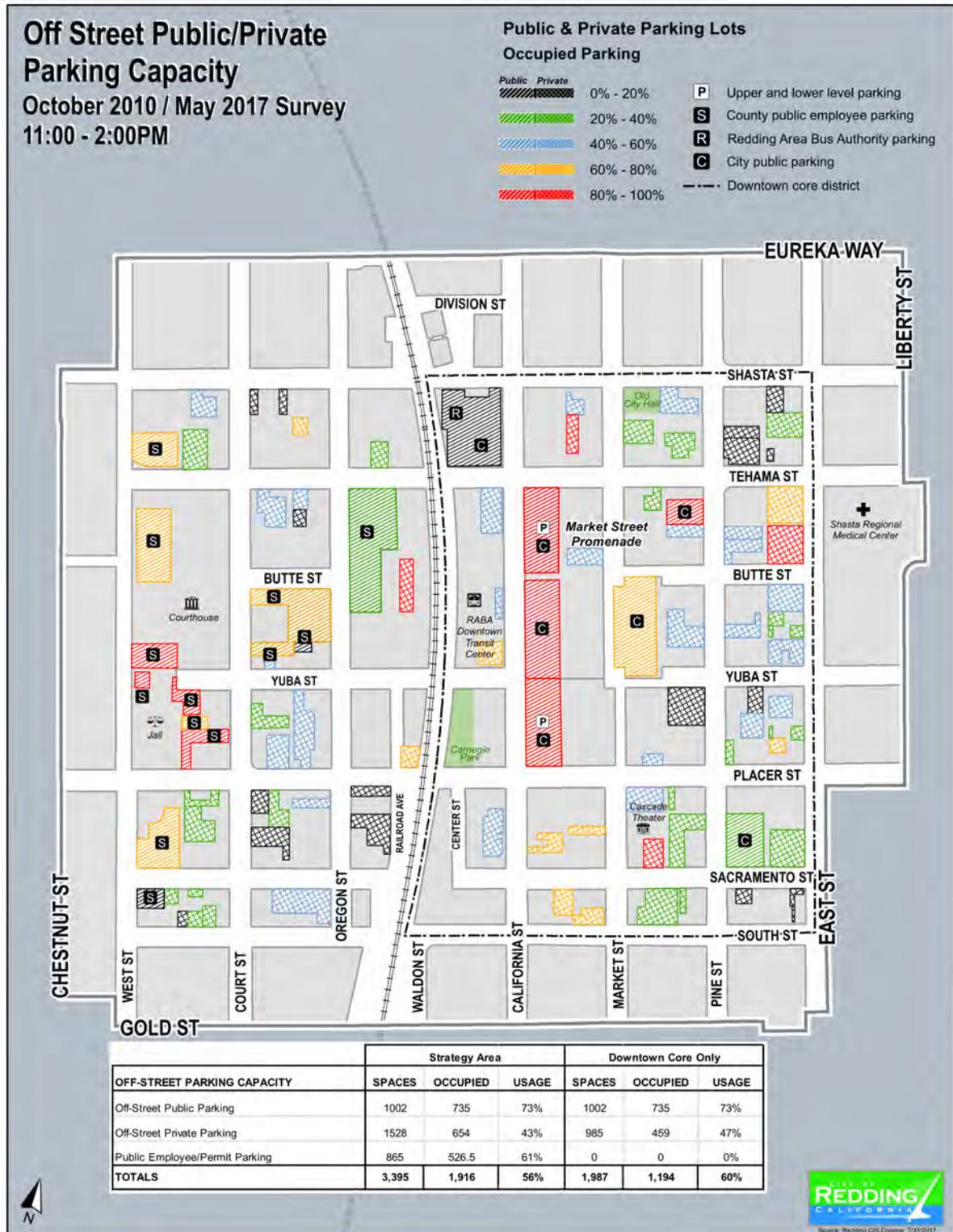


Figure 2: 2010/2017 Off-Street Public/Private Parking Capacity



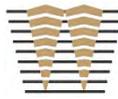
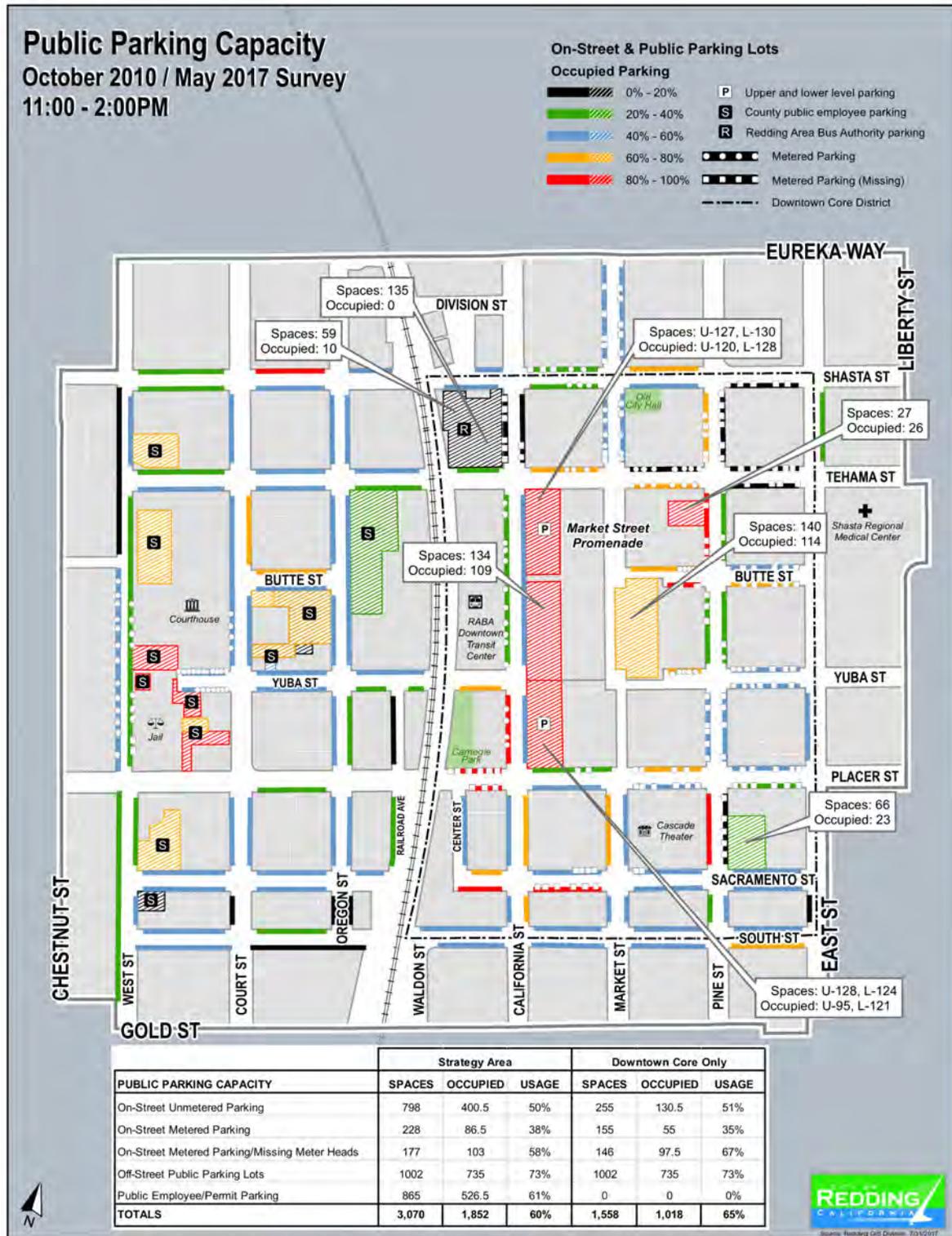


Figure 3: 2010/2017 Public Parking Capacity



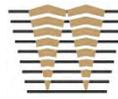
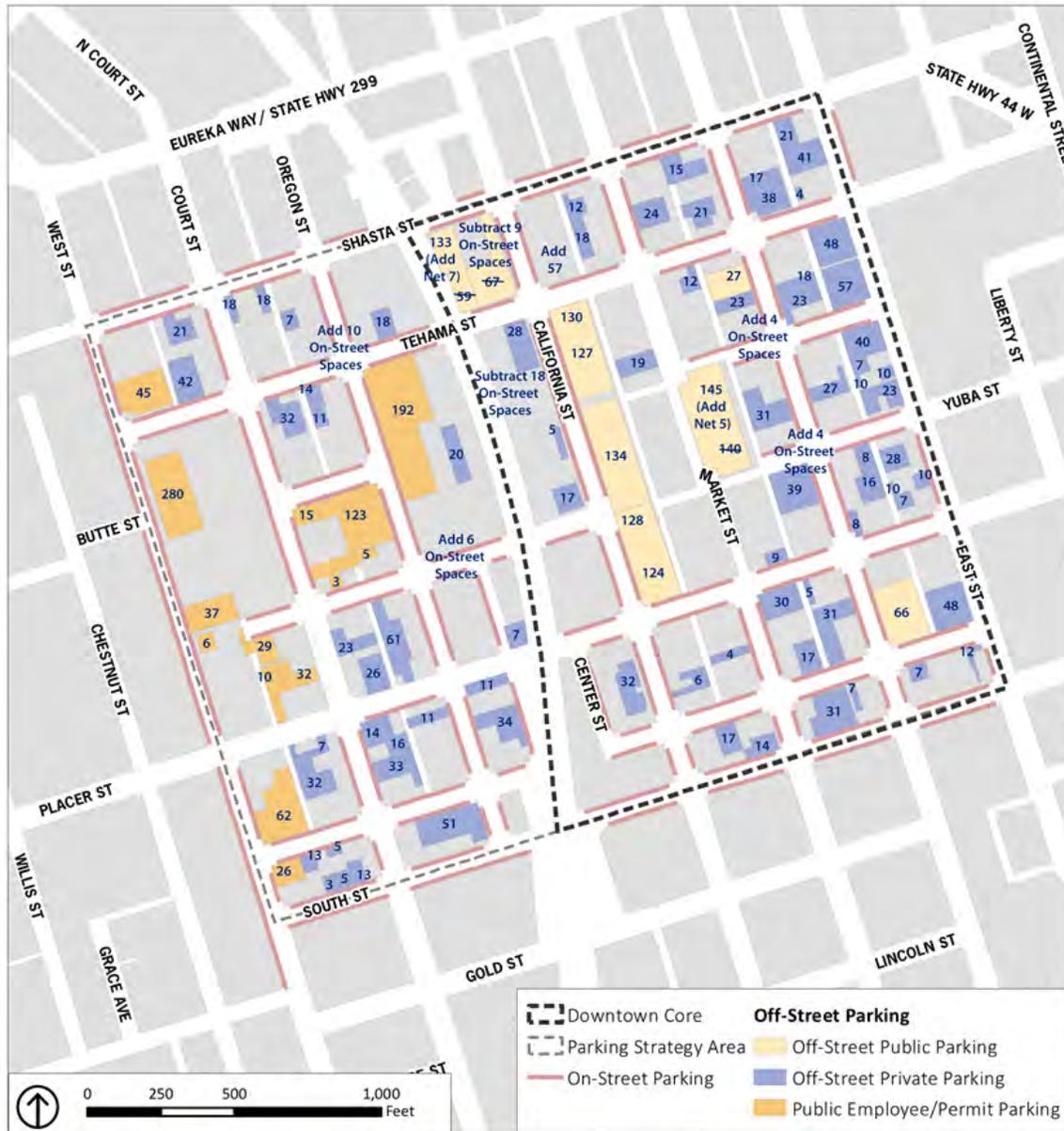


Figure 4: 2018 On-Street and Off-Street Parking Capacity



Source: City of Redding, 2017; PlaceWorks, 2018.

PUBLIC PARKING CAPACITY - WITH IMPROVEMENTS	STRATEGY AREA	DOWNTOWN CORE ONLY
On-Street Unmetered	824	263
On-Street Metered	363	277
Total On-Street Parking Spaces	1187	540
Off-Street Public Parking Spaces	1014	1014
Off-Street County Public Employee/Permit Parking Spaces	865	none
Off-Street Private Parking Spaces	1585	1042
Total Off-Street Parking Spaces	3464	2056
Total Parking Spaces	4651	2596

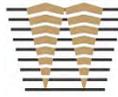
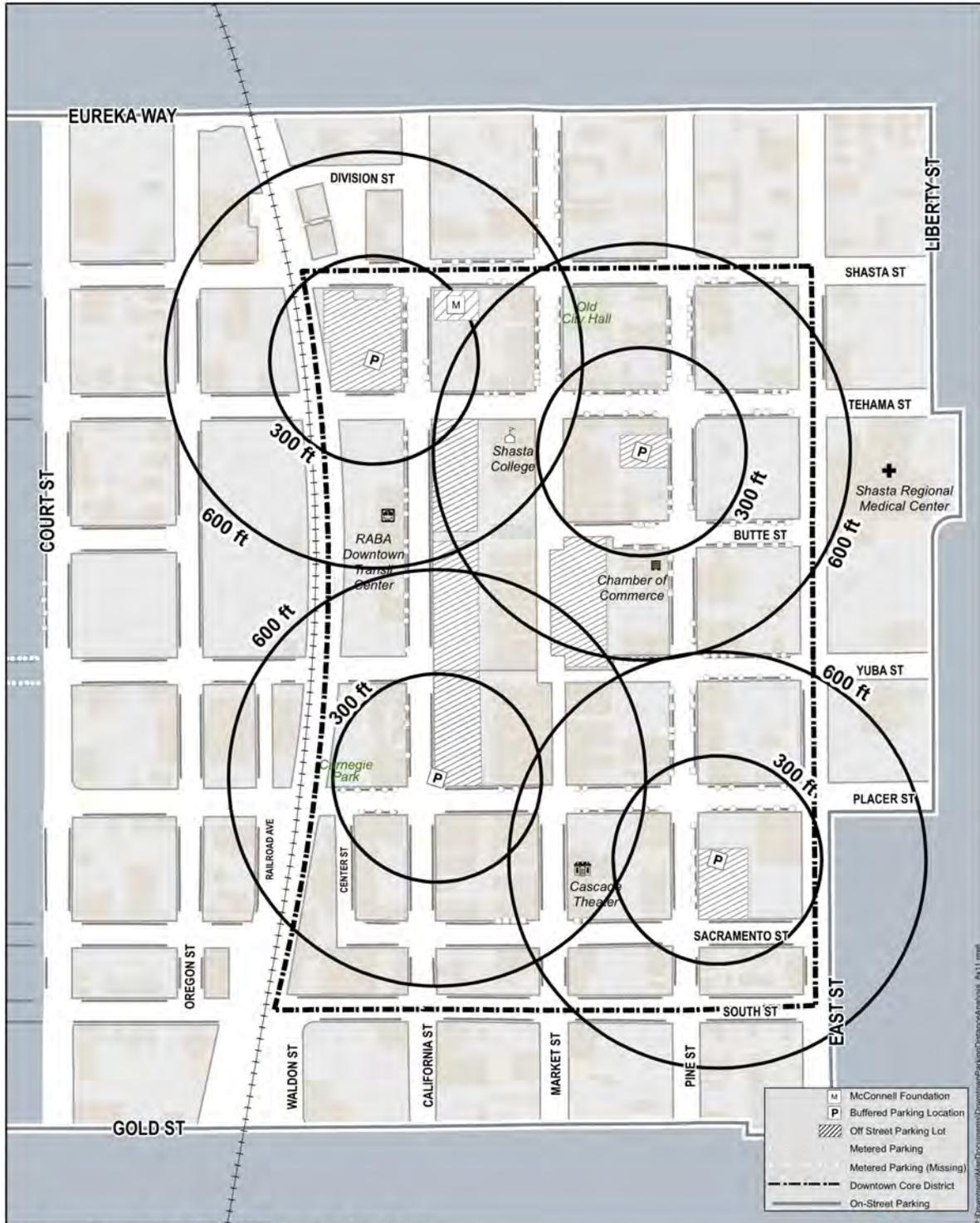


Figure 5: Downtown Parking Distance Analysis: Walking Distance to Downtown Parking Locations



Downtown Parking Distance Analysis
City of Redding



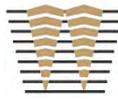
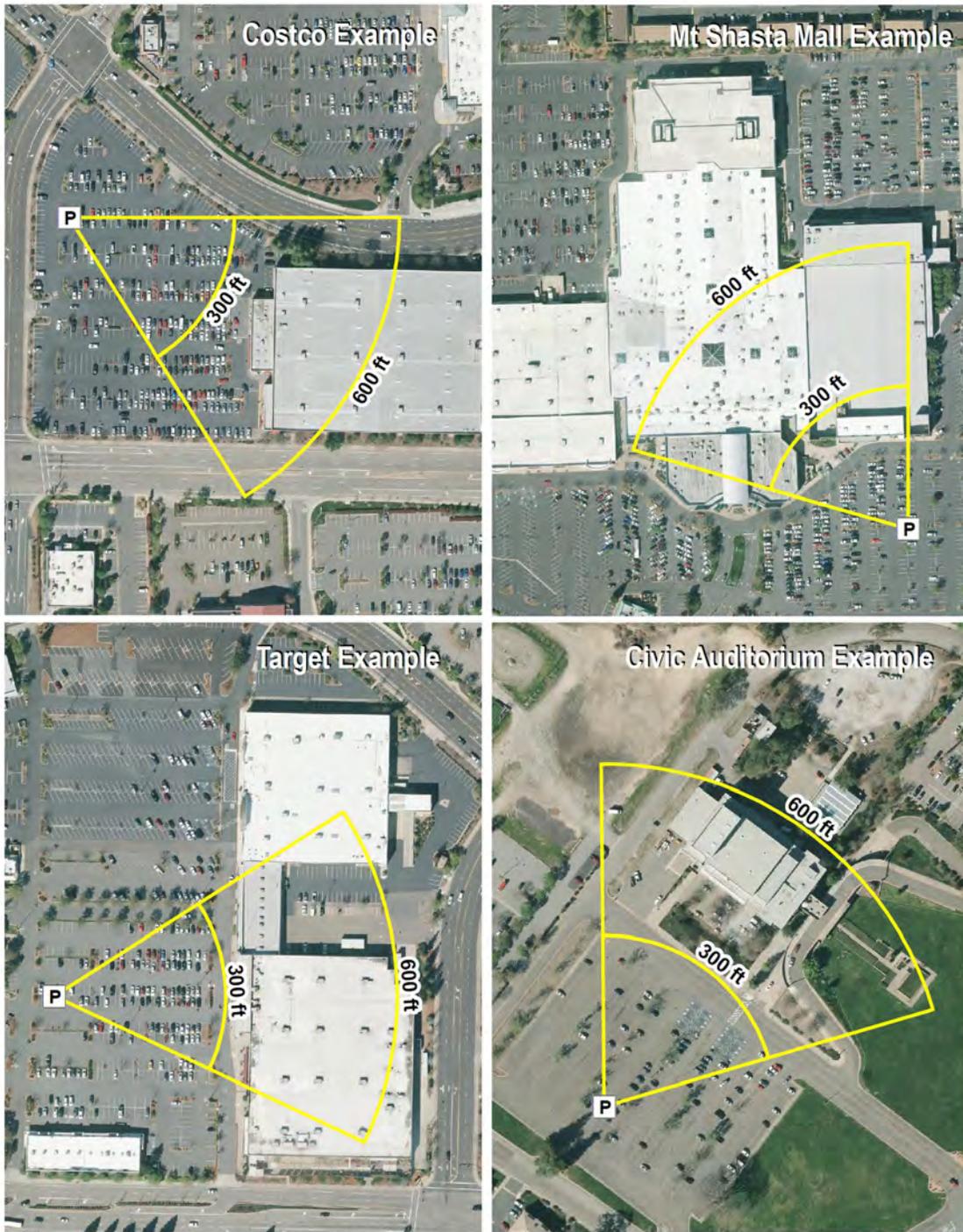
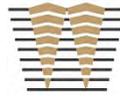


Figure 6: Comparable Parking Distance Analysis: Walking Distance to Regional Shopping Centers



Comparable Parking Distance Analysis
City of Redding





DEVELOPMENT FORECAST AND IMPACTS TO DOWNTOWN PARKING

The revitalization of Downtown will have a significant effect on public parking demands, coupled with a reduced supply of public spaces, both during and after construction of the projects mentioned below. During the Downtown Specific Plan, parking emerged as an issue that many community members and business owners expressed concern. As part of the Downtown Specific Plan process, a community meeting was held on November 9, 2017 that focused on parking issues. Many of the comments received had to do with concerns about cost of parking, where paid parking may or may not be appropriate, enforcement of on-street parking meters, potential loss of parking spots, walking distance from parking, and the potential for new parking at various locations.

A number of significant developments are underway or in development in the short term. The parking impacts are outlined below.

- The 1551 Market Street project (affordable housing, retail space, subterranean parking, and re-introducing the downtown grid through the promenade) has already removed the 140-space subterranean structure (the old Dicker's Parking Structure) and is in the process of rebuilding 100 spaces. The project will add 40-50 on-street spaces with new street connections on Market, Butte and Yuba Streets. The net result will not significantly change the overall supply of parking spaces but will certainly change the parking utilization and parking demand with a mix of residential and retail uses.
- The Block 7 project (affordable and market rate housing, retail space, office space, new transit service, bike and pedestrian facilities, and a new multi-story parking garage) will remove the approximately 640-space California Street Parking Structure. The project will replace roughly 300 spaces on-site with a 200-plus space multi-story parking structure, a 100 plus space surface lot at the south end, and an additional 15 on-street alley parking spaces. The net result will be a loss of roughly 325 spaces.
- These and other planned developments will add about 180 residential units and nearly 40,000 square feet (SF) of retail/office space adding to the future parking demand. This demand will partially be met by providing off-street private parking on the project sites.
- The Shasta County Courthouse project removed 135 off-street spaces and as designed a handful of new employee parking (10-12 spaces) will be on-site.
- The Diestelhorst to Downtown Active Transportation Project will remove about 15 on-street spaces for a cycle track along California Street.
- The McConnell Foundation has committed to a 10-year program to improve the physical and social environment in Downtown, beginning with the launch of the California Street Labs in October 2018, which will temporarily provide for about 70 spaces.
- This activity has encouraged other private development to follow with new breweries, a food truck hub and other mixed-use residential/commercial projects.

Following planned developments, there will be a total net reduction of 135 spaces in the Core Area and 260 in the Strategy Area. See **Table 1 Current and Short-Term Development Impacts to Parking Supply** for a summary of the parking supply changes following the planned short-term developments.

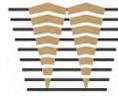
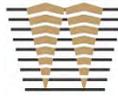


Table 1: Current and Short-Term Development Impacts to Parking Supply

	Yellow	
	Green	
	Core Area	Strategy Area
On-Street parking loss or gain from development-		
Off-Street parking loss or gain from development -		
Forecasted developments:		
1551 Market St. – Center Market Project		
Demolished existing retail and subterranean lot	-140	-140
Add subterranean lot	100	100
New on-street spaces	40	40
Total -	0	0
Block 7		
Demolish parking garage	-640	-640
Add multi-story parking structure	200	200
Replace with a surface lot at south end	100	100
California-Market Alley on-street spaces	15	15
Total -	-325	-325
Courthouse block demolition		
Demolished existing uses		-135
Add employee parking		10
Total -		-125
Diestelhorst to Downtown Project		
Remove spaces for cycle track on Cal. Street	-15	-15
McConnell Foundation		
Open California Street Labs Parking Lot	30	30
Demolished police station and create surface lot	40	40
RABA (Redding Area Bus Authority)		
Demolished retail and auto repair building and added surface lot	135	135
	190	190
Net On- and Off-Street Parking Totals:	-175	-300
	+40	+40
Overall Total:	-135	-260



Parking Demand Analysis by Phase

This section summarizes the findings of the *Downtown Redding Parking Demand Analysis* (Watry, 2018), specifically, the anticipated current, short, and long term parking demands and how the demands align with existing and anticipated supply to determine needed additions, if any. The demand forecast is broken down into three main Phases. Phase I looked at the current situation and used the existing commercial, office and residential occupancy rates and compared them to actual parking counts during peak occupancy to determine that the models were calibrated correctly. Parking demand for short-term development (Phase II), along with demand for future long-term redevelopment (Phase III) were considered and included in an analysis (see **Appendix 2 thru 5**) of predicted future parking demands for Downtown and examined within the Core and Strategy Areas. Phase II and III assumes a fully vibrant and utilized downtown with the existing vacant square footage occupied at 90 percent. This was done to maximize the demand so that, when the vacant spaces are filled and lower parking demand uses such as office are converted to retail space, the associated increase in potential demand is captured in the models.

In a Downtown setting, residential development does not generate additional retail parking demand since residents will be able to park in their development and visit Downtown businesses without driving. In addition, if managed properly, parking for residents can be shared with businesses because many downtown employees live outside of downtown, leaving public parking spaces open during the evening.

With the collected current parking data, known and forecasted developments and the anticipated parking demands, the parking strategy should address short and long-term goals. Below are summaries of the phases, defined by significant points of development. Included in the demand analyses are recent changes that have reduced demand for parking in Downtown, including the demolition of Bings Automotive, the old Police Building, and the Dickers building. A significant amount of research and background information is attached as reference to this report.

Phase I – Current

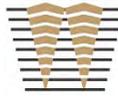
This Phase includes all of the currently occupied and vacant commercial and office square-feet in the Core and Strategy Areas. Phase I Current is the existing condition; it uses parking data based on conditions from the 2010/2017 survey, with 2018 updates. Based on the surveys it is assumed there is an 88 percent occupancy rate for office space and a 65 percent occupancy rate for retail and restaurant space.

- **The Core Area** – The collected data resulted with a **peak demand of 1,477 parking stalls**.
- **The Strategy Area** – The collected data resulted with a **peak demand of 2,506 parking stalls**.

Phase II – Short Term

Phase II assumes all retail and office space is fully revitalized to a 90 percent occupancy rate and considers the addition of the following projects:

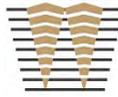
- 1551 Market Street – Demolition of existing 65,000 square feet of retail and the loss of its associated parking demand will be replaced by 82 residential units and 22,800 square foot of retail with its associated parking demand.



- Block 7 development - Demolition of parking garage – a loss of zero demand. At completion will add 100 residential units and approximately 20,000 square feet of retail and office space and its associated demand.
- Shasta County Courthouse - Demolition of multiple buildings including residential, office space, retail, and a restaurant space and their associated parking demand, but at completion will add a new courthouse that will replace the current facility. There will be a net increased demand.
- Planned developments for 40,000 SF of retail and offices – Loss of existing buildings reduces the demand and the replacement may not increase demand, if the redevelopment is not more intense or enough parking is provided onsite.
- California Street Labs/Former police station lot – Demolition of the 14,000 sq. ft. of the police station and its associated parking demand was replaced by the addition of 40 spaces for a total of 70 spaces for California Street Labs.
- Redding Area Bus Authority (RABA) /Bell Rooms lot – Demolition of 4,300 sq. ft. of auto repair and the associated parking demand. This area was replaced with an additional 76 parking spaces including the old gated police lot.
- Miscellaneous other private redevelopment, including mixed use residential and commercial – Much of the other development is redevelopment of existing buildings that may add demand if the redevelopment is a more intense of use than the existing structure.

Forecasted Phase II parking demands (with parking inventory carried over from Phase I):

- **Core Area.** A shared use model for the Phase II conditions was created with assumed square footage increases for different land uses (office, retail and restaurants spaces). The model results were tailored to replicate the collected data with a **peak demand of 1,909 parking stalls, and a net loss of 135 stalls due to development for a 78 percent utilization rate (see Table 3 of Phase II Core)**. This assumes a fully leased, (90 percent) and vibrant Core Area model. Note the modified demand for private parking is assumed to be 459 stalls.
- **Strategy Area.** A shared use model for the Phase II conditions was created with assumed square footage increases for different land uses (office, retail and restaurants spaces). The model results were tailored to replicate the collected data with a **peak demand of 3,001 parking stalls, and a net loss of 260 stalls due to development for a 68 percent utilization rate (see Table 3 of Phase II Strategy)**. This assumes a fully leased, (90 percent) and vibrant Core Area model. Note the modified demand for private parking is assumed to be 654 stalls.
- Initially, demand has been reduced and a few significant structures have been removed, including the old Dicker's building, the former police station, Bings Automotive and a small café, county office buildings, and the Dobrowski House. The demand will quickly ramp up to the anticipated peak demand as new developments come online and create the demand. Even though demand is currently less due to demolition of the structures, it was decided that, in order to be conservative, the loss of demand was not included in these early phases to help compensate for the growth of the retail sector that is occurring. It is also assumed the residential developments will provide their own parking. The developments above are factored in the ULI shared use models in the **Appendix**.



Phase III – Long Term

This Phase includes all of Phase I and Phase II, and new square footage added and some existing square footage re-purposed for other uses. Noted new and re-purposed square footage amounts are assumed to be built out in the next 10-20 years.

Forecasted Phase III parking demands (with parking inventory carried over from Phase II) –

- **The Core Area.** A shared use model for the Phase III conditions was created with assumed square footage increases for different land uses (office, retail and restaurants spaces). The model results were tailored to replicate the collected data with a **peak demand of 1,941 parking stalls with a predicted utilization rate of 79 percent assuming no additional supply (see Table 4 of Phase III Core)**. Note the modified demand for private parking is assumed to be 459 stalls.
- **The Strategy Area.** A shared use model for the Phase III conditions was created with assumed square footage increases for different land uses (office, retail and restaurants spaces). The model results were tailored to replicate the collected data with a **peak demand of 3,180 parking stalls with a predicted utilization rate of 73 percent assuming no additional supply (see Table 4 of Phase III Strategy)**. Note the modified demand for private parking is assumed to be 654 stalls.

Parking Supply Analysis by Phase

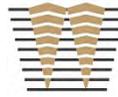
As downtown residential development occurs, the need to add parking supply should be balanced with some anticipated shift in transportation modality. The new residents of downtown are more likely to utilize transit, bike and/or walk to destinations, and have less vehicles. As access to downtown improves and better links are constructed to adjacent neighborhoods, recreation, and the river trail, more users may choose these alternative options to access downtown without a vehicle.

Progress to add parking is already underway with the addition of 135 off-street spaces added following demolition of the Bings Automotive structures for the RABA Bell Rooms lot. Another 70 off-street spaces are available at the former police station, as part of the California Street Labs.

The overall desired effect for the new development is a shift in parking supply, from a centralized model to one that will spread supply throughout the downtown and is dynamic, ebbing and flowing as new developments or significant re-development projects come on-line. The City's goal is to engage the community, encourage efficient use of the existing parking supplies available, provide the best Level of Service (LOS) possible for customers and employees, and develop the downtown parking program into a self-sufficient operation not reliant on the City General Fund.

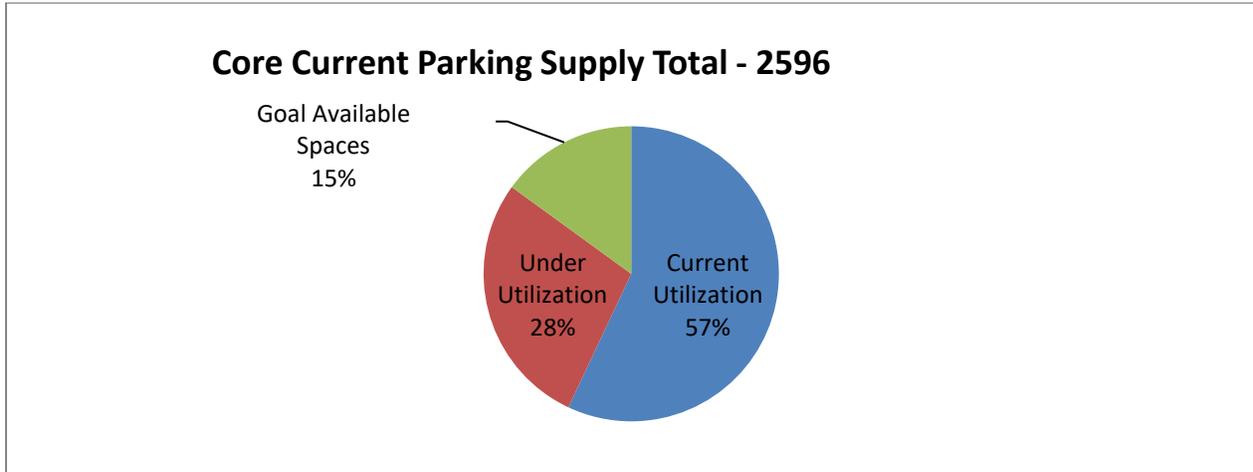
Phase I – Current

Currently, there are 4,651 parking spaces available in the Strategy Area (see **Figure 4: 2018 On-Street and Off-Street Parking Capacity**) either on-street, in public parking lots, or in private parking lots. Of these, 2,596 parking spaces are located in the Core Area. The strategy revealed existing parking supply utilization is on average 57 percent in the Core Area and 54 percent in the Strategy Area, for public and private parking combined. See **Figure 7: Phase I Current Parking Supply (Core Area)** for current utilization rates and available capacity (underutilization) and **Table 1 Current and Short-Term Development Impacts to Parking Supply** for a full breakdown of the current parking demand and supply. The goal is to have 15 percent of parking spaces



open and available for the short-term retail parking, which is the green section of the pie chart. The red section is the amount of supply that on average remains underutilized.

Figure 7: Phase I Current Parking Supply (Core Area)



Phase II – Short Term

Phase II includes planned developments in Downtown. Phase II is already underway as the construction of 1551 Market Street has already closed the 140 public parking spaces that existed under that facility and the Shasta County Courthouse has removed their 135 spaces. The RABA Bell Rooms lot has been completed and is now open to the public. Additionally, the California Street Labs recently paved the former police station lot, bringing the combined total to 205 spaces added. The current state of parking in Downtown following the loss of the parking spaces associated with the Courthouse and 1551 Market Street projects has had a relatively minor impact to date with excess supply absorbing those losses effectively with very little public concern.

The redevelopment of the California Street Parking Garage is slated to begin in late 2019 and will soon remove all 640 spaces. The removal of these spaces and prior to the construction of the new parking garage and surface lot on the south end will result in the fewest parking spaces in the Core Area and will have a significant impact on supply. Although there is predicted to be nearly enough sufficient supply when considering the on-street and private spaces, the City may consider additional public supply during this timeframe to ease the transition during construction. Fortunately, additional spaces are expected to come online in 2020 with the opening of the 1551 Market Street project and the associated 100 space new public parking facility under the structure and the addition of some 40-50 on-street spaces constructed with the new extensions of Butte, Market, and Yuba Streets in the Core Area. Within a year or two of these projects, the Block 7 project will be complete and will add 315 spaces to the Core Area.

To better understand this timing, Phase II can be described in three sub-phases, Phase II-A includes the loss of the 1551 Subterranean Lot, the Courthouse and the California Street Parking Garage, Phase II-B considers the 1551 Market Street project complete with the addition of 140 spaces, and Phase II-C considers all projects contemplated are complete and the Core is revitalized to a 90 percent lease rate for all retail and office space.

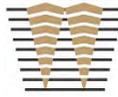
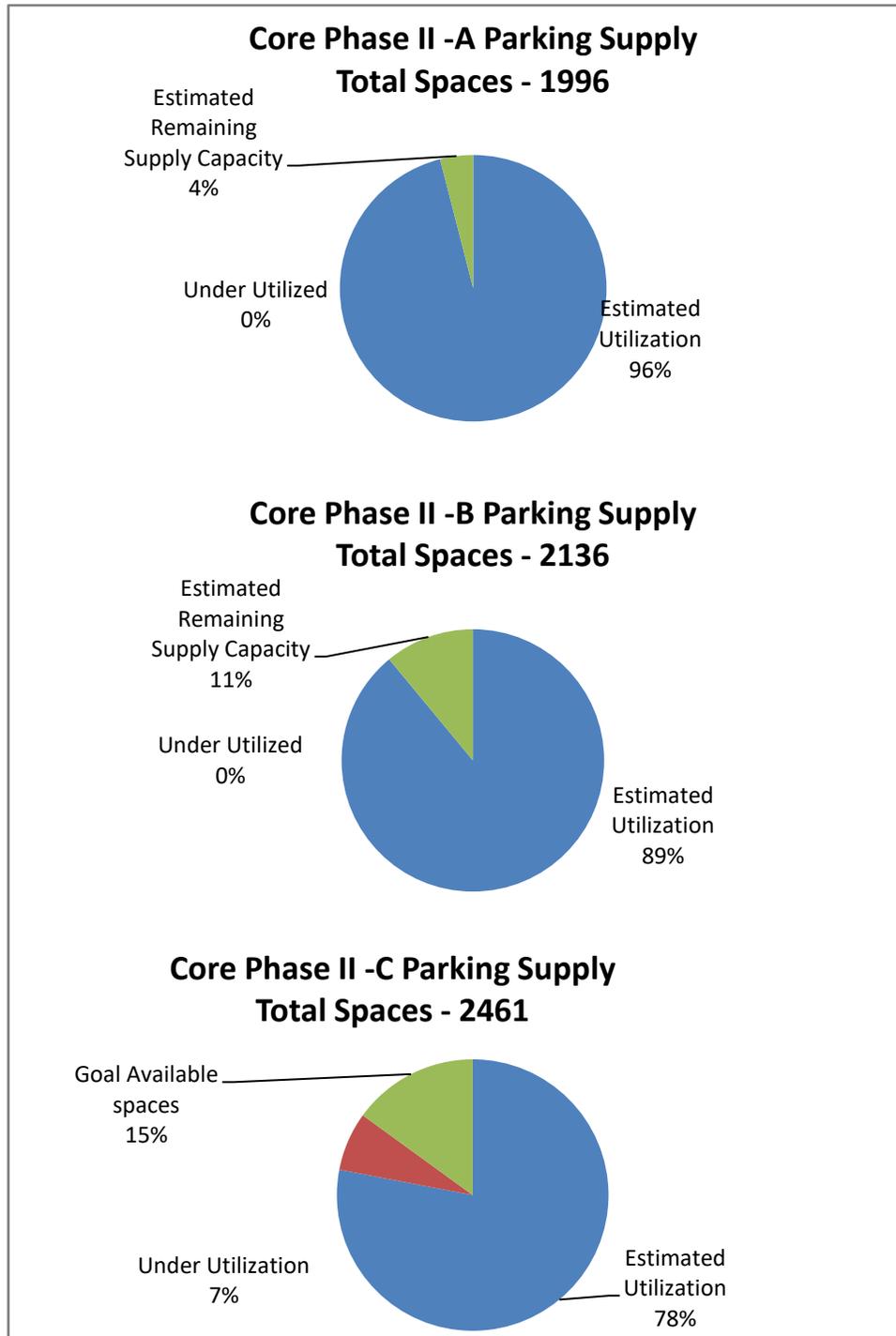
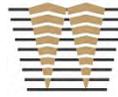


Figure 8 Phase II Short Term Parking Supply (Core Area) depicts the predicted parking utilization rates and available capacity.

Figure 8: Phase II Short Term Parking Supply (Core Area)

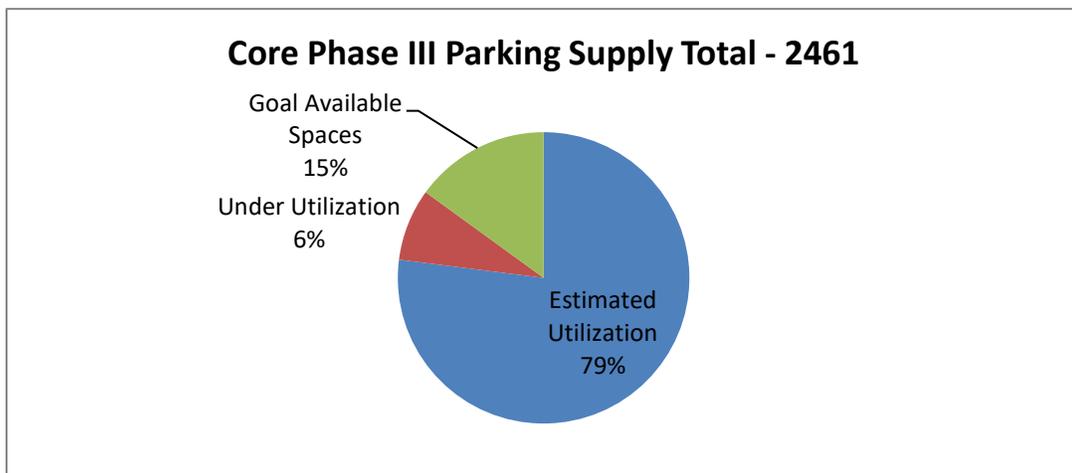




Phase III – Long Term

As shown in **Figure 9: Phase III Long Term Parking Supply (Core Area)**, by phase III, the parking inventory in the Core Area is now reaching 79 percent. In the Strategy Area, parking utilization is projected to be 72 percent occupied. The parking supply is still adequate at this point in time. Although it will remain important to encourage users to take advantage of off-street parking through incentives such as lower hourly rates to maintain available on-street parking.

Figure 9: Phase III Long Term Parking Supply (Core Area)



As depicted in **Tables 2, 3, and 4**, the model shows sufficient capacity to handle the predicted demands in all three phases without building additional supply. However, during construction in Phase II, there will be times when parking demand is approaching 100 percent utilization and the need to add supply, if even temporarily, may be desirable to limit public frustration during the transition.

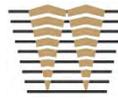


Table 2: Current SF, Parking Supply and Demand (Weekdays)

Occupancy	Core Area	Strategy Area
Current occupied SF	557,167	875,989
Current vacant SF	115,688	181,886
Total SF *	672,855	1,057,875
<i>* Not counting Theater parking</i>		
On-Street Parking (Public)		
Unmetered supply**	263	824
Metered supply (with/without meter heads)**	277	363
Current supply, total	540	1,187
Demand (from 2010/2017 survey)	283	590
Utilization	52%	50%
Off-Street Parking (Public + Permit)		
Current supply**	1,014	1,879
Demand (from 2010/2017 survey)	735	1,262
Utilization	72%	67%
Total Parking (On- and Off-Street Public Parking)		
Current supply**	1,554	3,066
Demand (2010/2017 survey)	1,018	1,852
Utilization	66%	60%
<i>**Supply based on 2018 survey</i>		
Off-Street Parking (Private Parking)		
Current supply**	1,042	1,585
Demand (2010/2017 survey)	459	654
Utilization	44%	41%
Grand Total Parking (On- and Off-Street Parking, Public + Private)		
Current supply**	2,596	4,651
Demand (2010/2017 survey)	1,477	2,506
Utilization	57%	54%
<i>**Supply based on 2018 survey</i>		

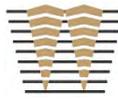


Table 3: Phase II SF, Parking Supply and Demand (Weekdays)

Occupancy	Core Area	Strategy Area
Phase II occupied SF (90% of total available SF)	602,911	964,913
Phase II vacant SF	66,990	107,213
Total SF *	669,901	1,072,125
<i>* Not counting Theater parking</i>		
On-Street Parking (Public)		
Phase II supply, total**	540	1,187
Stalls lost or gained after development construction	40	40
Phase II supply (after construction)	580	1,227
Off-Street Parking (Public + Permit)		
Phase II supply**	1,014	1,879
Stalls lost or gained after development construction	-175	-300
Phase II supply (after construction)	839	1,579
Total Parking (On- and Off-Street Public Parking)		
Supply From Phase I**	1,554	3,066
Stalls lost after development construction	-135	-260
Phase II supply (after construction)	1,419	2,806
Demand (per shared parking demand summary, based on land use and not parking type) less current Private Parking Demand	1,450	2,347
Utilization	102%	84%
<i>**Supply based on 2018 survey</i>		
Off-Street Parking (Private Parking)		
Phase II supply**	1,042	1,585
Grand Total Parking (On- and Off-Street Parking, Public + Private)		
Phase II supply**	2,461	4,391
Demand (per shared parking demand summary, based on land use and not parking type) Includes Private Parking Demand	1,909	3,001
Utilization	78%	68%
<i>**Supply based on 2018 survey</i>		

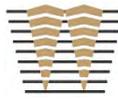


Table 4: Phase III SF, Parking Supply and Demand (Weekdays)

Occupancy	Core Area	Strategy Area
Phase III occupied SF (90% of total available SF)	596,057	992,453
Phase III vacant SF	66,229	110,273
Total SF *	662,286	1,102,725
<i>* Not counting Theater parking</i>		
On-Street Parking (Public)		
Supply from Phase II (Post Phase II construction)**	580	1,227
Off-Street Parking (Public + Permit)		
Supply from Phase II (Post Phase II construction)**	839	1,579
Total Parking (On- and Off-Street Public Parking)		
Supply from Phase II (Post Phase II construction)**	1,419	2,806
Demand (per shared parking demand summary, based on land use and not parking type) less current Private Parking Demand	1,482	2,526
Utilization	104%	90%
<i>**Supply based on 2018 survey</i>		
Off-Street Parking (Private Parking)		
Phase III supply**	1,042	1,585
Grand Total Parking (On- and Off-Street Parking, Public + Private)		
Phase III supply**	2,461	4,391
Demand (per shared parking demand summary, based on land use and not parking type) Includes Private Parking Demand	1,941	3,180
Utilization	79%	72%
<i>**Supply based on 2018 survey</i>		

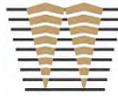
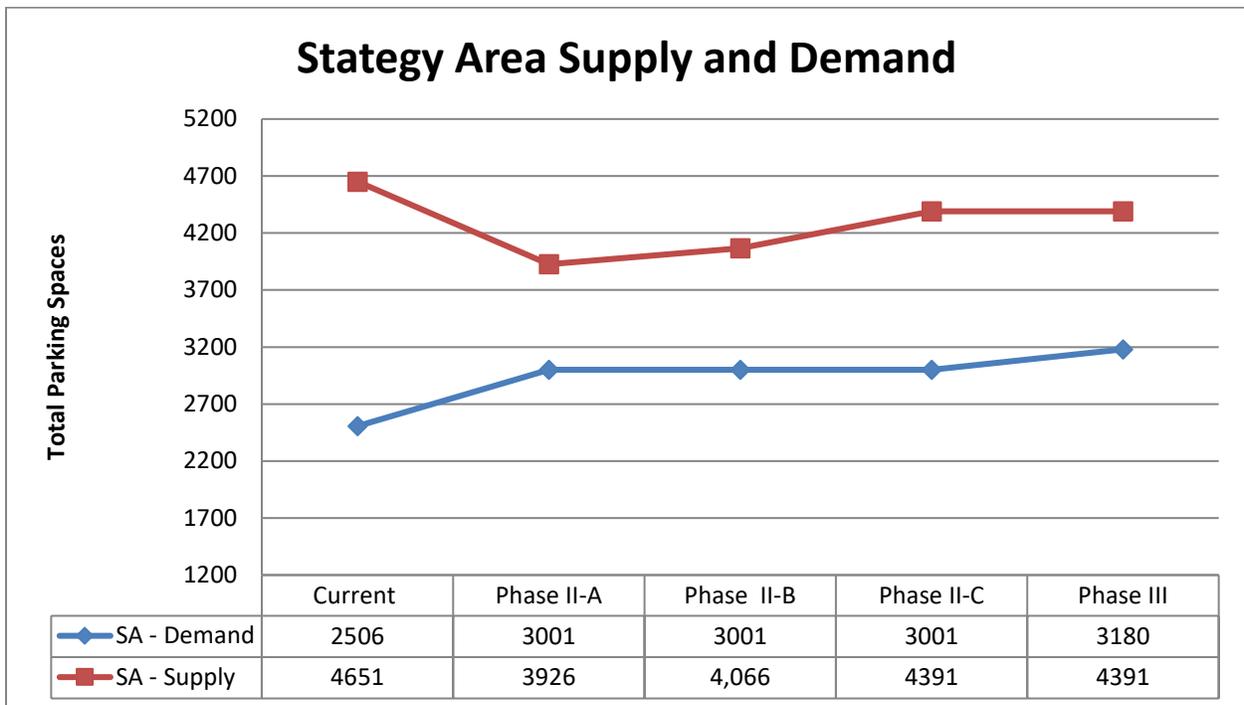
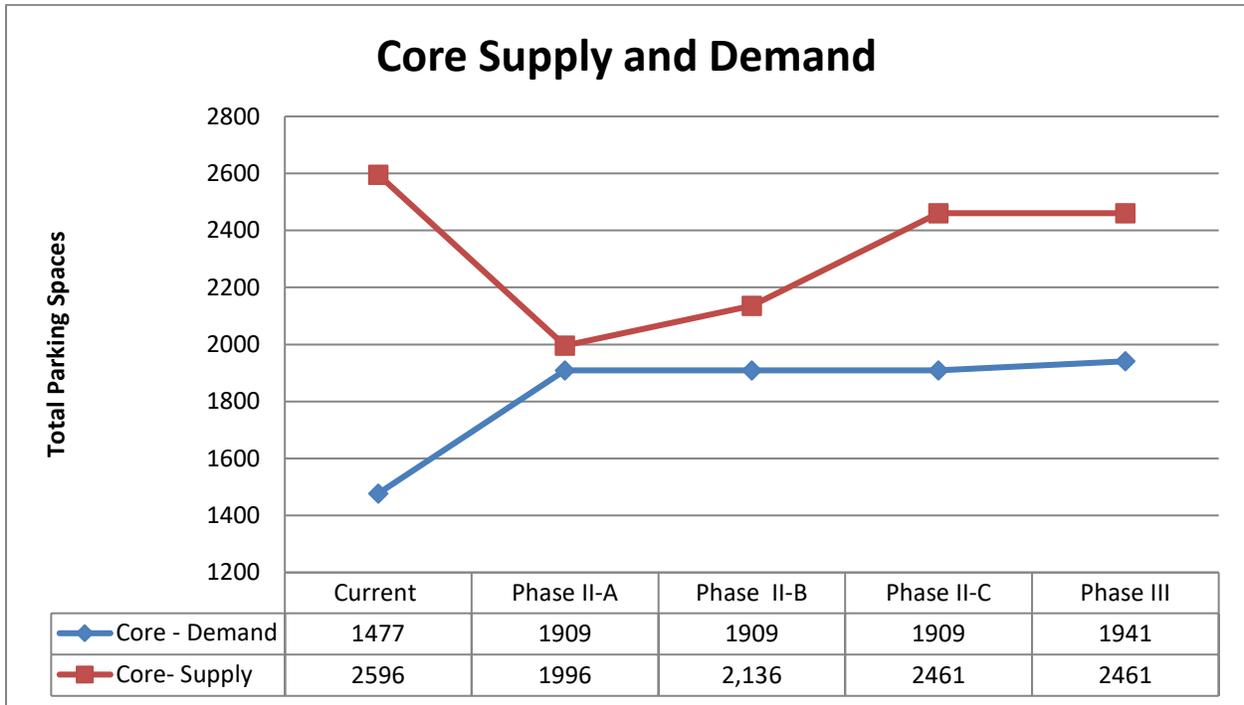
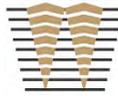


Figure 70: Supply and Demand per Phase (Core and Strategy Areas)





PARKING STRATEGIES

How will the City and its community partners adapt to new demands and loss of supply over the short and long terms? What will the pricing choices look like and will they provide sustainable funding? How can turnover be encouraged during high demand while not overwhelming enforcement? What can be done to ensure a positive customer experience? These questions will be addressed in the following sections.

Shared Parking and Supply Management

Shared parking is the use of a parking space to serve two or more individual land uses without conflict or encroachment. Considering shared use parking is critical to not overestimating the overall supply need. Shared use parking was considered and incorporated into the demand models using industry standards.

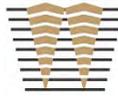
As noted in *Shared Parking*, Second Edition (Mary Smith and Urban Land Institute, 2005)), “shared parking is the use of a parking space to serve two or more individual land uses without conflict or encroachment” and there are two conditions for shared use: 1) “variations in the accumulation of vehicles by hour, by day, or by season at the individual land uses,” and 2) “relationships among the land uses that result in visiting multiple land uses on the same auto trip.” *Shared Parking* also states, “The key goal of shared parking analysis, then, is to find the balance between providing adequate parking to support a development from a commercial viewpoint and minimizing the negative aspects of excessive land area or resources devoted to parking. Downtown areas that share parking result in greater density, better pedestrian connections, and in turn, reduces reliance on driving, typically because multiple destinations can be accessed by walking.”

Parking Demands – When analyzing shared-use parking, one has to understand what parking demands are based on:

- **Project program:** Land uses and sizes of each. Size could be defined by the gross floor area (GFA), gross leasable area (GLA), number of seats, number of units or bedrooms, etc. It is important to have a well-defined program for best results.
- **Parking ratios:** Examples of parking ratios include four to six (4-6) parking stalls per 1,000 GLA of retail space; three (3) parking stalls per 1,000 of GFA for office space; and 0.27 parking stalls per seat for a theater.
- **Multi-modal adjustments:** This includes people arriving at the site by means other than a private vehicle requiring a parking stall, UBER/Lyft, public transportation, ride sharing, etc.
- **Non-captive adjustments:** This includes patrons that are on-site visiting a land use and will visit other land uses without having to re-park the car.

Adjustments can be made to the parking ratios, multi-modal factors, and the non-captive factors as needed in order to create a model that best represents the project’s specific characteristics, behaviors, and parking needs.

The Urban Land Institute (ULI) Model, which is used for this strategy, predicts parking demand by taking into consideration the parking ratios, the multi-modal and non-captive adjustments, time of day, day of month, and month of year, along with shared use considerations for all user groups. ULI, working with the International Council of Shopping Centers (ICSC), the National Parking Association (NPA), and a core group of parking professionals, published *Shared Parking* and the associated MS Excel spreadsheet model to assist with the analysis and development of parking demands. *Shared Parking* is a recognized and accepted tool within



the parking planning and traffic engineering professions and accepted by many municipalities as an effective approach to establish parking demands. The ULI Model calculations include the 85th percentile approach when establishing project peak parking demands, and is consistent with traffic engineering practices.

The nature of a downtown is a great example of the shared parking model. A customer that parks to visit a store or shop and will likely visit other businesses on the same trip; this is a captive sharing factor. Mode of transportation is another sharing factor. Customers who arrive by public transit, UBER/Lyft, drop offs, walking, etc. do not require a parking space. The sharing factors reduce the overall demand for parking spaces and fewer can be built. At approximately \$10,000 for a surface lot space and \$35,000 for a structured space, optimizing the available parking supply is imperative.

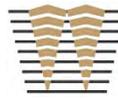
Per the ULI Model the Downtown peak parking demand is currently weekdays at 2:00 p.m. Typically, private off-street lots would not be available at this time to share their parking spaces but since there are vacancies in the downtown and outdated parking models, there is private parking available. Downtown weekend peak parking demand is at 7:00 p.m. This is an ideal time for many businesses to share their parking supply but would require developing partnerships and agreements to allow public parking during certain hours and may require a revenue source to help enforce, maintain, and administer the program.

Private parking for public use - A shared parking strategy that is highly effective is the sharing of off-street private parking spaces. This is an effective way to minimize required parking in downtown areas, as well as minimizing constructing new parking. This is especially true as evening activities increase in downtown areas. This option would require a collaboration and partnership between the City and local businesses. This also may require incentives for local businesses to utilize their privately maintained lots. Charging to use the private parking spaces and sharing the revenue with the owners might be the incentive needed to encourage owners to participate. Sharing of the revenue could be in the form of services, such as litter clean up and periodic power washing. There are 1,585 off-street private parking spaces in the Strategy Area, of which 1,042 are located in the Core Area. These parking spaces could be utilized during their non-business hours for other land uses (e.g., office parking supply could be used in the evenings and weekends for other uses, such as dining and entertainment).

Adding Public Parking Supply

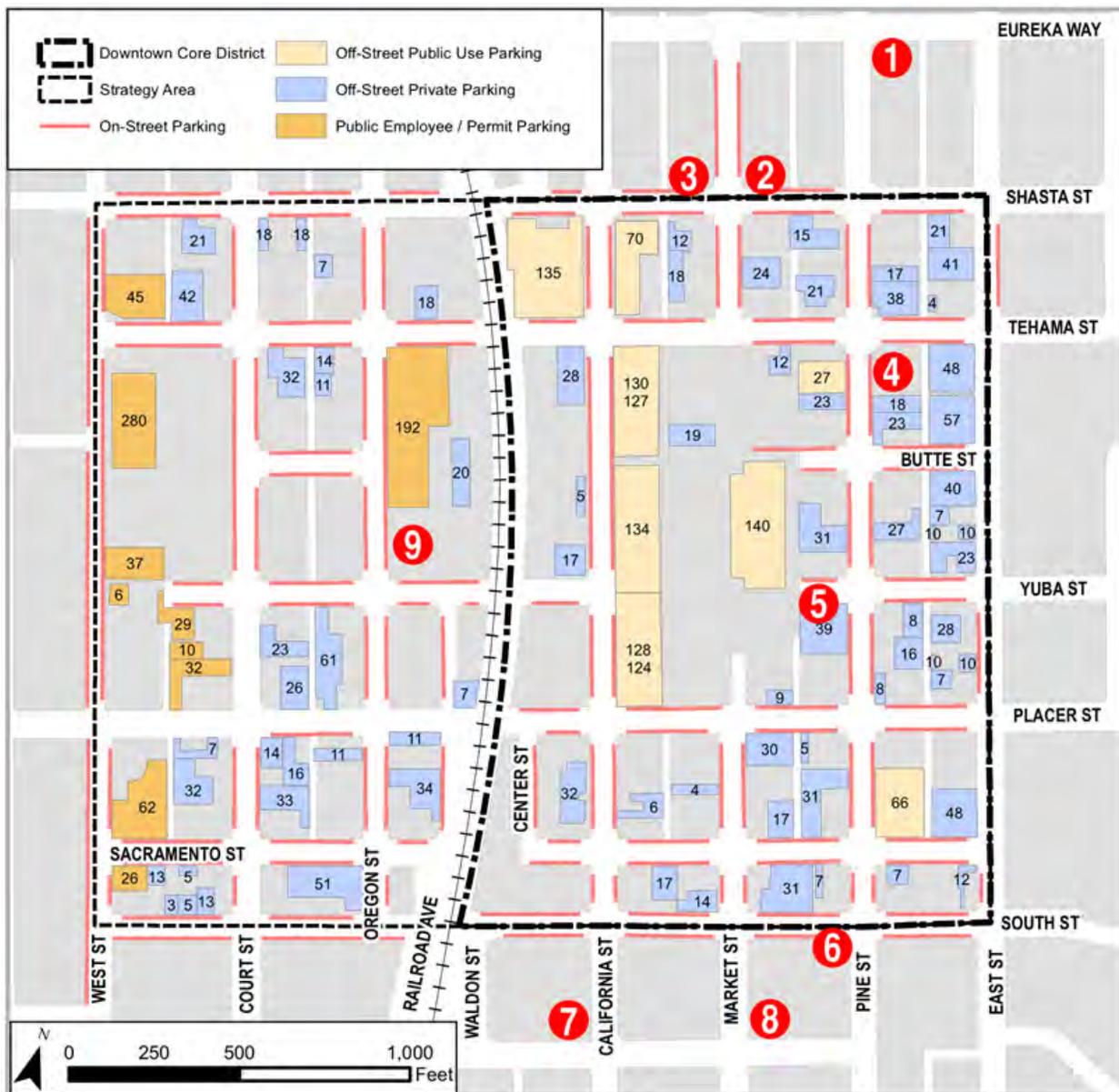
Although there appears to be sufficient supply for the short and long term, the community may wish to invest in additional supply to ebb and flow with development and provide more convenient options. There are several options to increase supply as noted below.

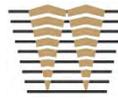
- **Develop New City Owned Parking Spaces**— Add additional off-street parking spaces, which could consist of the City purchasing existing properties for new surface parking lots or the development of multi-story parking structures. Parking structures are very expensive at approximately \$35,000 per space and require a revenue source. On-grade, off-street lot parking costs approximately \$10,000 per space.
- **Encourage Private Provision of Off-Street Parking**— Encourage policies that allow private investment in off-street parking spaces. This will only work if public lots are paid parking since they will not be able to compete with free parking. A lot where the primary use is parking may be counter to the newly adopted Downtown Specific Plan that encourages development of a walkable, pedestrian-friendly downtown and discourages parking lots along street frontages.



- Leasing of Off-Street Private Lots for Public Use** – Leasing of private lots will provide a way to provide parking in locations that are flexible to ebb and flow with demand. The goal is to lease the lots at a rate that will be funded through the collection of parking fees to cover the lease and maintenance costs associated with the lease. The City has a large number of off-street parking spaces or empty lots that are underutilized, this may provide a low cost method to provide parking as Downtown redevelops and spurs private development to be able to provide parking that would pay for itself. A benefit is that there is little risk in overinvesting in parking and having unused parking spots which is more expensive.

Figure 81: Potential Off-Street Parking Lease Locations





Potential Parking Lots to Lease for Public Use

Location	Size	Spaces
1 Pine/Eureka Way	0.4	36
2 Shasta /Market East	0.32	29
3 Shasta Market / West	0.18	16
4 Pine/Tehama	0.31	28
5 Pine / Yuba	0.4	36
6 Pine / South	0.33	30
7 Gold / California	0.3	27
8 Gold / Market	0.25	23
9 Yuba / Oregon	0.50	50
TOTAL SPACES		275

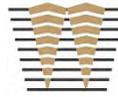
Figure 12 Potential Off-Street Parking Lease Locations provides a list of potential locations for leasing on grade lots, with approximate costs using recent lease rates. If fully implemented, 275 stalls could be added to the supply at a cost of approximately \$15,000 per month based on current lease rates. The lots listed are meant to be an example of potential lots that are privately owned and currently underutilized. They may not be available if owners do not wish to partner with the City. As other lots become available in desired locations, they may also be considered.

Costs, Revenue, and Financing

To charge or not to charge for parking is itself an option. Providing parking free of charge to the user is a nice amenity but requires the City subsidize parking operations and enforcement from the City General Fund or a subsidy from the private businesses that benefit from the parking through a Business Improvement District (BID) or some other financing mechanism. Alternatively, charging the user for parking can contribute to or cover the cost of parking operations, maintenance, enforcement, and other amenities. User paid parking also provides an effective mechanism to manage parking in high demand areas and encourages turnover through a balance of pricing options.

Historically, the City has had some form of parking meters on most of the parking spaces, both prior to construction of the Downtown Mall and today. Meters were slowly removed from off-street lots and only on-street meters remain. The current rate on those remaining historical meters that are still operational is 20 cents per hour. The rate cannot be changed as they are mechanical and not electronic with programmable rates. Although the City has since purchased a few replacement electronic meters in recent years, the majority of the remaining meters have become obsolete, vandalized, and eventually removed by the City due to a lack of a funding source. As a result, many of the parking spaces downtown remain unmetered and by default the parking spaces are free of charge.

The City decided to provide free parking in the downtown garages and surface lots to attract customers and compete with other retail developments. Now, as Downtown redevelops and streets are reintroduced, the question of whether to provide free parking in Downtown has again become an issue to address the new



developments and its overall vibrancy. If the parking remains free, will the costs be borne by public or private sources? If parking becomes user paid, what revenue collection mechanism is appropriate for this community? What are the costs of parking facilities, maintenance, collection systems and enforcement? And regardless of payment, enforcement, administration, communication is necessary for a healthy, transparent, and functioning parking system.

A shift to paid parking on- and off-street may be required if businesses are unwilling to subsidize parking for their patrons. The City General Fund impact to own and maintain these facilities is substantial and much of the maintenance has been deferred with no funding reserved to pay for capital replacement.

Municipal or Private Parking Lots for Public Use

Until recently, the City has owned and maintained up to six off-street parking lots. Over time, as the maintenance burdens have proven to be difficult and the lots were underutilized, they have been sold to investors looking to redevelop Downtown. The former police station parking lot at 1346 California Street was sold to RABA, who will maintain it as a parking lot.

The 1551 Market Street project removed subterranean public parking, but the developer will rebuild, maintain, and manage new public parking. The City is currently talking to the Block 7 project developers regarding how the 640 space California Street Parking Structure will be redeveloped. This strategy will help to guide discussions on how many spaces will be required to be maintained throughout the redevelopment and how many will need to be replaced and left open to the public. That would leave two City-owned parking lots remaining: one at 1410 Pine Street with 27 parking spaces and the other at 1795 Pine Street with about 66 spaces. Below, **Table 5 Current Off-Street Parking Ownership (Core Area)** summarizes the current off-street parking ownership (mostly the City) and **Table 6 Projected Off-Street Parking Ownership (Core Area)** summarizes the projected off-street parking ownership (includes planned redevelopment projects).

City of Redding Owned Parking Lots



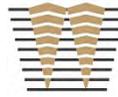


Table 5: Current Off-Street Parking Ownership (Core Area)

Lot Location	Spaces	Ownership Type
1551 Market Street Subterranean Lot	140	City of Redding
California Street Parking Structure	640	City of Redding
Lot 4 at the Sacramento/Pine	27	City of Redding
Lot 11 at 1795 Pine St	66	City of Redding
Total Inventory	873	

Table 6: Projected Off-Street Parking Ownership (Core Area)

Lot Location	Spaces	Ownership Type
1551 Market Street Subterranean Lot	100	Private with Public Provision
California Street Parking Structure	200	Private with Public Provision
South Surface Lot at California/Placer	100	Private with Public Provision
Bell Lot at Shasta/Tehama/California	135	Redding Area Bus Authority
California Street Labs	70	Private with Public Provision
Lot 4 at the Sacramento/Pine	27	City of Redding
Lot 11 at 1795 Pine St	66	City of Redding
Total Inventory	698	

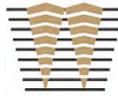
The question of ownership must be addressed. The City may continue to own land and maintain public parking lots or rather lease and/or sell existing lots to private development retaining agreements to ensure access for public parking. A major benefit is that private ownership of parking lots affords the owners of the lots the ability to enforce trespass laws and other security concerns while public lots are not able to as easily provide the same level of security.

Either type of lot may charge users for parking. How those funds are utilized will vary greatly. A private parking lot may not be part of a larger parking system and therefore able to maintain and enforce their parking lot with little relationship/consistency to the larger parking landscape Downtown. Municipal lots, or City controlled lots through leasing, as part of a larger, centrally managed parking system may pool funds that would go back into the Downtown area to fund the lease arrangements, parking operations, capital improvements, maintenance and enforcement. This parking district could include other items such as: litter abatement, restrooms, security, adding and replacing lights, power washing, and the replacement or addition of street trees.

Pricing Strategies

To ensure turnover, accessibility, convenience and distribution of parking, there are several strategies and pricing options that are available.

Maintain the Status Quo - Let the current supply accommodate the demand and continue to subsidize the current parking operation (cleaning of structure and blocks four days per week, meter maintenance and collection and limited enforcement). This will result in continued deterioration of parking facilities due to the



lack of a maintenance budget, prevent the improvement of parking facilities, such as adding lights to increase security at night and will not provide funds to invest in new parking facilities. The General Fund impact of the limited operations is approximately \$40-50K annually with another \$30K in deferred maintenance.

Validation Parking – Depending on the type of fee collection system there are a variety of options to provide for a validation program. Individual business owners could subsidize the parking costs by allowing their specific customers a method to provide free parking for the time that they might patronize their facility.

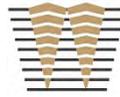
First Hour Free – One way to incentivize use of parking spaces outside of prime on-street locations would be to allow the first hour free. This could encourage users that plan on going Downtown to eat or run some errands to know that they could find a spot and not worry about paying the meter for a short trip. This may work to incentivize parking spots that may not be as convenient and would encourage some users to change parking habits, opening spots up for users willing to pay for the open spot closer to the destination.

Nights and Weekends Free Parking – One of the main goals of the parking program is to provide an accessible method for people to patronize businesses downtown in a safe, clean, comfortable manner that attracts customers to Downtown. One hindrance to this is that some employees that work in the area tend to park in the prime parking locations for a typical 8-hour shift from 8:00 a.m. to 5:00 p.m. A parking program should ensure the employees have access to longer-term parking in an alternative location so that customers will have access to prime parking during business hours. The current status of parking Downtown is dominated by a majority of 8:00 a.m. to 5:00 p.m. workers; and the nights and weekends do not yet have the same level of parking constraints. The peak parking timeframe is currently around the lunch hour until 2:00 p.m. Allowing free parking at night or on the weekends may be allowed as an option until such time that the same methods to manage parking is required. This may lead to loss in potential revenue to fund items such as security; lighting, cleaning and maintenance that could help manage issues at night when those potential issues rise.

Static Rate – One option is to simply assign a flat hourly rate for every stall in downtown. The static rate could be different by on-street and off-street lots, or by zones, such as Core and outside Core pricing. Holding a static rate has the benefit of a consistent approach that may ease adoption and creating a standard that is understood by users. Simple items such as signage are easier to understand and to reproduce.

Length of Stay Pricing - This option calls for zones within the Downtown area to have the same base hourly rate for parking. This rate increases as time spent parked increases. For example, the base rate can start at first hour free, second hour \$1, third hour \$1.75 and so on. This approach encourages parkers to move their cars in order to avoid a higher charge. In central Downtown, the incremental increase of pricing might be more aggressive than surrounding areas to incentivize employees, long-term parkers and solo drivers with more flexible time to park farther away and save money. We recommend the initial hour be free at off-street lots only to encourage the use of off-street parking.

Demand Based Variable Pricing –Parking availability and turnover is critical to the success and viability of local businesses. This option seeks to optimize occupancy by determining desired occupancy rates block-by-block in order to achieve an even spread of 85 percent occupancy across Downtown. Other communities have established its desired target occupancy rate on a block-by-block basis as 60 percent-80 percent. This approach also helps support the ability of local employees, long-term parkers and solo drivers to find parking,



but discourages them from parking in “prime” on-street spaces. For example, employees that park for 8-hour shifts should have the ability to purchase permits at reduced rates outside of the prime on-street parking areas. The other communities that have implemented demand based pricing have seen, prices increased in 32 percent of the cases, decreased in 31 percent, and remained the same in 37 percent. Although the spatial spread changed, the overall average price of parking within the area remained almost the same with very little change. This could be a strategy in the future once a more straightforward parking strategy is in place but is not recommended for initial implementation.

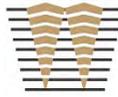
Revenue Collection

Should the decision be made to move toward user paid parking, the simplest option is to address the problem that is most visible to the public: missing and broken parking meters. By replacing meters, the City restores a functioning parking meter network. It eliminates uncertainty about whether or not certain meters are enforced. The majority of the meters in Downtown are missing or broken; these are most concentrated in the Core. With a functioning meter network, visitors and residents will know that consistent enforcement is in place. Since the parking meter posts still exist, this may be more cost effective than the implementation of the pay stations as you would only have to install the new meter head. The following are options for revenue collection in Downtown.

Smart Meters – Since many of the meter poles are in place, the first option would be to replace the existing on-street meters with smart, single-space meters (See **Figure 12 Single-Space Parking Meter**). Smart meters are powered by a small photovoltaic system and allow coin or credit card payment. They can sense when a car is parked or has not paid so enforcement is simplified. In addition, they reset when a user leaves with time still on the meter, which increases revenue. Basic electronic parking meters from POM Incorporated can range from \$875 to \$920 each, depending on how many are ordered at a time. For cost estimate calculations \$875 per smart meter is used.

Figure 92: Single-Space Parking Meter





In the Core Area there are 263 unmetered on-street parking spaces and 277 metered parking spaces. In total, there are 540 on-street parking spots. If only the unmetered parking spaces receive new smart meters the cost would be \$230,125 for new smart meter equipment. However approximately half of the parking spaces would have old fashioned meters with locked in rates and half the parking spaces would have new smart meters. To be consistent, we recommend replacing all meters in the Core Area. This would cost approximately \$472,500. The 277 old fashioned meters could be reused in preferred parking locations in the Core area until funds are available to replace them with smart meters.

In the Strategy area there are 561 on-street unmetered parking spaces and 86 metered parking spaces. If only the unmetered parking spaces receive new smart meters the cost would be \$490,875 for new smart meter equipment. A small portion of the metered parking spaces in the Strategy area already have smart meters. If the entire supply of 647 on-street parking spaces in the Strategy area receive new smart meters the cost would be \$566,125 for new smart meter equipment.

Recurring fees include \$5 per meter per month, as well as \$0.10 per settled credit card transaction. Cost estimates do not include installation.

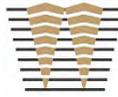
An alternative option is to replace existing on-street meters with smart, dual-space meters. The unit price is the same as single-space smart meters - \$875 each. The only difference is just over half the amount of meters would need to be purchased, for each of the scenarios listed above. Since it is not always possible to have every stall use dual meters we assume the cost would be 60 percent of singles space meters to account for some stalls that will need to have a single space meter.

In the Core Area there are 263 unmetered on-street parking spaces and 277 metered parking spaces. In total there are 540 on-street parking spots. If only the unmetered parking spaces receive new smart meters the cost would be \$138,075 for new smart meter equipment. However, approximately half of the parking spaces would have old fashioned meters with locked in rates and half the parking spaces would have new smart meters. To be consistent we recommend replacing all meters in the Core Area. This would cost approximately \$283,500. The 277 old fashioned meters could be reused in preferred parking locations in the Core area until funds are available to replace them with smart meters.

In the Strategy Area there are 561 on-street unmetered parking spaces and 86 metered parking spaces. If only the unmetered parking spaces receive new smart meters the cost would be \$294,525 for new smart meter equipment. A portion of the metered parking spaces in the Strategy area are already smart meters. If the entire supply of 647 on-street parking spaces in the Strategy area receive new smart meters the cost would be \$339,675 for new smart meter equipment.

Recurring fees include \$5 per meter per month, as well as \$0.10 per settled credit card transaction. Cost estimates do not include installation.

For off-street parking, smart meters are cost prohibitive due to the amount of parking stalls. With 374 off-street parking stalls (1,014 stalls minus California Street Garage), the initial cost would be \$327,250 plus installation for single space meters and approximately \$196,350 plus installation for dual-space meters.



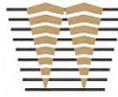
Pay Stations – Another viable option is to install multi-space pay stations throughout Downtown, both on- and off-street (See **Figure 13 Multi-Space Pay Station**). Pay stations are not necessarily a new concept, but their implementation in Downtown would involve a learning curve, especially after parking meters have been defunct for such a long period. These units are centralized and serve multiple stalls at a time. They are strategically located to have maximum visibility for the stalls they serve. These stations cost more than single-space parking meters and mounting locations would need to be determined.

Figure 103: Multi-Space Pay Station



- **Pay-by-Space On- and Off-Street** - MacKay Meters carries pay-by-space stations that list at approximately \$10,000 plus installation. For convenience, each pay station should serve about 25 parking spaces for on-street parking and 50 parking spaces at off-street parking (or a minimum of 1 per lot).

In the Core Area there are 540 on-street spaces. This would require 22 pay stations. The total cost for equipment would be approximately \$220,000. In the Strategy area there are 647 on-street parking stalls. This would require 26 pay stations. The total cost for equipment would be approximately \$260,000.

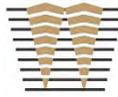


For the 374 stalls on the public off-street lots (1,014 stalls minus California Street Garage) in the Strategy area, 8 pay stations minimum is required, but to be conservative, assume 10. At 10 pay stations, \$100,000 can be expected for the equipment, plus installation and maintenance costs. Recurring fees include \$5 per pay station per month, as well as \$0.10 per settled credit card transaction. Cost estimates do not include installation.

- **Pay-by-Space On-Street, Pay-On-Foot Off-Street** - An alternative way to implement all multi-space stations, both on- and off-street, would be installing pay-by-space stations on-street and pay-on-foot systems with gate arms off-street. The costs involved with implementing a pay-on-foot off-street solution are as follows: each pay-on-foot station costs approximately \$25,000, plus \$25,000 per entry or exit lane, and \$25,000 for the server. Users would pull a ticket at an entry station and once ready to leave pay at a pay station on foot or at the exit station adjacent to the gate arm. For the 374 off-street parking spaces and lots 18 pay-on-foot stations would be required. The total cost for 18 off-street pay-on-foot stations would be approximately \$450,000 for the equipment alone plus installation and maintenance costs. This is significantly higher than pay by space but is offset by the fact that enforcement is not required since the gate arms will not lift and allow users to leave until they have paid.
- **Combination of Pay-by-Space Off-Street and Smart Meters On-Street** - A third option is to install a combination of both single-space smart meters, (or dual space smart meters) and pay stations. The smart meters would be located at on-street parking and the pay stations located on off-street lots (**Figure 14 Smart Meter Technology**) demonstrates the different combinations possible). The City has the option to install single-space smart meters on-street. It can also opt to install dual-space smart meters on-street. For off-street, the City can install either pay-by-space pay stations, or install pay-on-foot pay stations.

Figure 114: Smart Meter Technology





Pay-by-phone - A pay-by-phone system could be implemented in a short timeframe and help reestablish revenues quickly. There are a number of smart phone applications such as ParkMobile and pay-by-phone that provide a revenue collection solution with no equipment requirements by the City other than signage. This can be a cost-effective method to reestablish the revenue control system and provide an initial move towards technological solutions with minimal up-front investment for the City. However, pay-by-phone is typically used to augment a pay station system. It is not typically a stand-alone system. Customers can use a smart phone app solution to quickly pay for on-street and off-street parking without having to use a meter or pay station.

When implemented successfully pay-by-phone increase revenue by allowing users to add more time to their smart meter or pay-by-space stall and can reduce the amount of pay stations needed.

Once a customer has selected a parking space, they would then open the mobile app, enter the parking stall number, and enter the amount of time desired. Additional time can be conveniently added using the phone app, if needed. Stall numbers would be painted onto the stalls to uniquely identify them in the same manner as with a pay station system.

Phone application payment methods reduce cash collection and management, provide valuable data on parking trends and demands that can be useful in establishing parking rates, and improve the user's parking experience.

Management of the Parking System

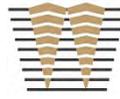
Expand the role of the City Public Works Department - If the City manages a newly formed parking system, it would require the addition of approximately three full time equivalent employees.

- Administrative staff member to manage marketing, payment collections, mobile applications, contracts, leases, cleaning, and enforcement staff
- At a minimum a full-time equivalent enforcement staff member is required. It is recommended that there be at least two staff members to manage shift work and may employ part time staff to manage enforcement schedules
- A full-time maintenance worker to clean and maintain City-owned/leased lots as well as revenue collection, sign and furniture/amenity maintenance.

The additional costs of these staff members should be fully borne by a newly formed parking system.

Public Private Partnerships - A public private partnership may be formed to develop a parking district that is privately maintained but has a public element that would help to coordinate the public parking for the community.

Business Improvement District or Other Financing District - Another way to provide for a parking district is for the beneficiaries of the parking to help fund the maintenance and replacement of these types of facilities. The BID or other similar financing district may provide the financing mechanism to generate the necessary revenue to pay maintenance and replacement costs as well as the associated benefits such as parking enforcement, cleaning, security and other general amenities to improve the area.



Enforcement Options

License Plate Recognition - Enforcement can be improved with a license plate recognition (LPR) based system. An LPR camera on an enforcement vehicle can be used to simply drive through the lots and scan parked vehicles. The LPR system will cross reference the plates with the registered permits or paid parking and flag vehicles that are in violation. This works well for employee permits and can be integrated with any of the paid parking concepts to reduce enforcement staff. This type of automated LPR system integrated with an existing vehicle costs approximately between \$50-60K, which includes installation, equipment, training and infrastructure needed.

Permits – Implement an Employee Parking Permit Program - Employees often park in prime on-street spaces, limiting parking for customers and visitors and increasing the number of vehicles circling for parking. An employee parking permit (EPP) program operates by designating priority parking within the Core for employees. Designated parking areas for employees can be located in off-street facilities, with permit holders eligible to park in those spaces during a specific time period exempt from posted regulations. Ownership of a permit, however, does not guarantee the availability of a parking space. For this reason, it is important not to sell permits far in excess of parking supply. It is assumed that the 865 off-street county parking spaces in the Strategy area will continue to be handled with parking permits.

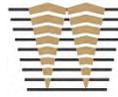
Many conventional EPP programs do not prohibit non-employee parking, but allow the general public to park within the area, subject to posted parking restrictions. Permits provide a consistent parking option for employees, reducing the need for an employee to search for a parking space or move their vehicle to avoid parking tickets. Experience with other cities has shown that most employees will choose to pay for a permit that offers a reliable parking option over searching for on-street parking and having to move their vehicle throughout the day in a time limit zone or pay higher fees in a paid parking area. A convenient parking option makes it easier for employers to attract and retain employees. When employees park in popular on- or off-street spaces, those spaces are no longer available for customers and visitors. Employee permits encourage participants to park in select areas while enhancing customer parking turnover at prime locations. EPP programs do create additional administrative costs for the City and potentially to employers and employees as well.

Implementation of a new EPP would involve costs to the City to administer the program, including enforcement. Permit costs would generally be set at a rate to offset those administrative costs, but the City should ensure that permit rates are low enough to encourage their use. In addition to administering the program, enforcement costs should be taken into consideration when setting the permit price. The cost of this program would be low to moderate compared to the other strategies, depending on the price the City sets for permits. The strategy does not increase parking supply, but would likely free up prime parking spaces that are currently being used by downtown employees for long periods of time. This is likely to be a very cost-effective strategy as it could improve the availability of on-street parking spaces in the Core at a relatively low cost to the City.

Industry Enforcement Guidelines

The key goal for parking enforcement is to promote compliance with regulations designed to maximize the safety and efficiency of public parking. Emerging best practices combine enforcement with Downtown ambassadors who provide information resources to users and communicate the active enforcement system in place. Industry guidelines for efficient and effective parking enforcement include:

- Parking enforcement officers should be routed such that a circuit of the enforcement area is completed every two hours.



- Set a goal to lower the rate of violation, an ideal percentage rate is at or below 9 percent.
- Street signs should clearly indicate the hours of enforcement.
- Courtesy tickets should be issued to first-time offenders as a gentle reminder that they have overstayed the posted time limit. Courtesy tickets can also serve as a marketing piece, thanking parkers for coming downtown and directing them to facilities where longer stays are allowed.
- Enforcement officers can be used as Downtown “ambassadors” to assist parkers with directions, parking options, and use of the Downtown businesses.

Revenue from citations should cover all operating costs and future needs of the enforcement system. Users who obey the rules should not be burdened with parking fines.

Fees for parking violations should be based on three criteria:

- The cost of maintaining existing operations, including administration, personnel, back office, equipment, and the physical condition of the parking facilities.
- Capital improvements including system growth, replacement, and technology upgrades.
- Targeted goals for rate of violation (less than 9 percent, with an ideal range of 5 percent-8 percent).

Rates should be evaluated every two years based on the above. To support this strategy, the City can:

- Review existing deployment routes to ensure the highest efficiency of coverage.
- Evaluate violation data and assess methods to lower the current rate of violation.
- Develop a reporting format that separates parking spaces to differentiate between on-street and off-street parking supply and location of spaces.
- Develop a reporting format that separates citations issued for parking violations and those issued for non-parking incidents (e.g., expired tags, jaywalking).

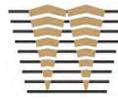
Review citation fees every two years to ensure that revenue covers, at minimum, all operating costs for the enforcement program. Annual personnel needs are estimated at \$120K and require initial investment in vehicles for service.

Off-Street Parking Improvement Cost Considerations

It is important to address the condition of the existing parking lots and garages. The parking facilities have been neglected over the years and are in the need of maintenance and repair. The recommended physical improvements are presented in the table below.

Table 7: Initial Improvements: Cost per Square Feet

INITIAL IMPROVEMENTS - COST PER SQUARE FEET		
ITEM	GARAGE	SURFACE LOT
Sealants	\$0.150	\$0.113
Traffic topping	\$0.300	\$0.225
Pavement markings	\$0.075	\$0.056
Miscellaneous	\$0.250	\$0.188
Sub-Total	\$0.775	\$0.581
Contingency	\$0.078	\$0.058
Total	\$0.853	\$0.639
1,000 space facility (325,000 S.F.)	\$277,062.50	\$207,796.88
Cost per space	\$277.06	\$207.80



Maintenance and Operations with Opinion of Probable Costs

The maintenance program will address routine maintenance and repair and replacement maintenance. Preventative maintenance is covered in the Initial Improvements section on the preceding page. The program budget is reflective of the condition of the surface lots and garages and typically starts with a comprehensive condition assessment.

Table 8: Preventative Maintenance: Cost per Square Feet

PREVENTATIVE MAINTENANCE - COST PER SQUARE FEET		
ITEM	GARAGE	SURFACE LOT
Sealants	\$0.100	\$0.050
Traffic topping	\$0.250	\$0.250
Pavement markings	\$0.050	\$0.050
Miscellaneous	\$0.200	\$0.100
Sub-Total	\$0.600	\$0.450
Contingency	\$0.060	\$0.045
Total	\$0.660	\$0.495
1,000 space facility (325,000 S.F.)	\$214,500.00	\$160,875.00
Cost per space per year	\$42.90	\$32.18

Table 9: Routine Maintenance: Cost per Square Feet

ROUTINE MAINTENANCE - COST PER SQUARE FEET		
ITEM	GARAGE	SURFACE LOT
Maintain sealants	\$0.075	\$0.038
Maintain traffic topping	\$0.125	\$0.063
Interim surface patching	\$0.075	\$0.038
Interim beam and column patching	\$0.040	
Maintain drainage system	\$0.040	\$0.020
Maintain lighting	\$0.030	\$0.015
Maintain PARCS	\$0.125	\$0.063
Maintain elevators	\$0.040	
Miscellaneous	\$0.020	\$0.150
Sub-Total	\$0.570	\$0.385
Contingency	\$0.086	\$0.058
Total	\$0.656	\$0.443
1,000 space facility (325,000 S.F.)	\$213,037.50	\$143,893.75
Cost per space per year	\$213.04	\$143.89

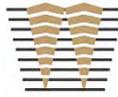


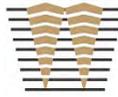
Table 10: Replacement of System: Cost per Square Feet

REPLACEMENT OF SYSTEM - COST PER SQUARE FEET		
ITEM	GARAGE	SURFACE LOT
Replace drainage system	\$1.000	\$0.500
Replace lighting system	\$2.150	\$2.150
Replace PARCS	\$0.175	\$0.175
Replace signs and graphics	\$0.025	\$0.025
Replace elevators	\$1.850	
Miscellaneous	\$0.150	\$0.100
Sub-Total	\$5.350	\$2.825
Contingency	\$0.535	\$0.283
Total	\$5.885	\$3.108
1,000 space facility (325,000 S.F.)	\$1,912,625.00	\$1,009,937.50
Cost per space per year	\$95.63	\$50.50

The total annual cost to provide preventative and routine maintenance combined with system replacement cost is \$351.57 per parking space for the garages and \$226.57 per parking space for the surface lots.

Public On-Street Parking Costs

The maintenance program budget to support the on-street parking spaces located within the public right-of-way (streets) is likely part of the street maintenance program. Currently, street maintenance is a considerable issue for the City, with a system pavement condition rating in the mid 40's of a 100 point scale. Current revenues are not sufficient to properly maintain existing pavement inventory. Given the limited resources available, a proportionate share of the parking revenue profits should supplement the maintenance program with minor improvements.



RECOMMENDATIONS AND IMPLEMENTATION

Parking Supply and Ownership

Although the analysis indicates there will be sufficient parking supply both on- and off-street to meet the predicted demand there will certainly be short term supply concerns during construction and an overall reduction in parking supply – particularly the public off-street supply. To minimize the risk of expensive over investment and to ensure public convenience and perception, it is recommended that off-street supply be increased by up to 200 spaces in the short term through leasing available underutilized private lots. This will facilitate the transition from a large centralized model to one that ebbs and flows with demand and is strategically placed to provide convenient access for all purposes. Off-street parking should be incentivized to encourage all day parkers to use these alternative off-street parking lots instead of the prime on-street parking spaces near retail locations.

A new ownership and operational model is actively in place with the subterranean lot at 1551 Market Street where a public/private partnership has been created. This model will likely follow with the Block 7 development as well. In addition, much of the new supply will be owned either privately such as the California Street Labs or by other governmental agencies like RABA and Shasta County. The City should monitor these various model types and consider further private partnerships in the long term.

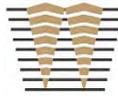
Parking Pricing Strategy

In order to sufficiently fund new off-street parking facilities like the 1551 subterranean garage and the Block 7 garage, user fees will be assessed. To ensure consistency, fund repair and replacement, and to encourage private investment, off-street parking should move toward a user paid model with incentives.

For on-street parking, we recommend a user-paid model as well. This will allow the City to quickly implement supply, enforcement, management and maintenance needs. Moving toward a BID or other funding model will take significant time and community coordination/buy in from the business owners. However, this model is available should the business community be willing to invest in parking for their patrons rather than on-street user-paid collection.

The most effective parking pricing strategy for the size and scale of Downtown would be the static rate approach. A static rate is simple and easily understood and can be adjusted periodically over time. We recommend initially implementing a simple pricing policy with parking rates at \$0.50 per hour for both the on-street spaces and the off-street City-owned or leased lots. Parking should be enforced Monday through Friday, 10:00 a.m. to 8:00 p.m. for Core parking and 10:00 a.m. to 6:00 p.m. for the remaining strategy area. We recommend operating this system for a minimum of three years before implementing any significant changes or until the system is financially self-sustainable.

When it is time to review the pricing, we recommend consideration of a demand based variable rate system for on-street and off-street parking spaces. Where and when the parking demand is high, the rates increase. Where and when there is a lower demand the rates decrease. This is the age-old supply and demand approach. The prime parking spaces on a block or within a lot should be priced as such; the less desirable parking spaces should have a lower price point.



The prime on-street parking spaces are the most desirable and yet at the same time they need to be medium to high-turnover spaces with a space by space monitoring system. Having the prime spaces priced correctly will encourage good turnover and generate higher revenues. We recommend a goal of 85 percent as the optimum occupancy rate. If the demand pushes to 85 percent and up, the rates should be increased until the 85 percent is back in balance. If the occupancy rate drops, so do the rates until we get back up to 85 percent.

Grace periods where parking is free for a limited time may be considered at the beginning of the program, for special events, or to manage parking and encourage users to make use of the off-street parking facilities in outlying areas from the Core area. For example, a one-hour grace period may be used for on-street parking in the Core area, and longer (90- or 120-minute) grace periods for off-street parking in the outlying strategy area. The city will be examining these and other grace period combinations with the impacts to cash flow and the overall plans of improving the Downtown parking experience.

Revenue Collection

Smart Meters – On-street

Installing all smart meters to replace all missing, broken and antiquated meters will provide a high level of service for users since they are familiar with parking meter technology and paying with coins is an option. To reduce the cost, dual-head meters that serve two spots would be an option where it works. We recommend starting with the Core Area and expanding smart meters to the Strategy area once a revenue stream is established.

Pay Stations – Off-street

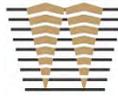
A pay-on-foot or at the gate payment system would be a viable option for large garages and off-street lots since over time enforcement costs are reduced. This option would include a large upfront investment for implementation of the gate and ticket system. The quickest and most cost effective payment system for off-street parking is to install pay stations. Enforcement will be required but the upfront savings are substantial. This system should be augmented with a pay-by-phone system.

The privately managed new parking garages will likely be gate controlled and paid through a variety options for tenants, patrons and business owners.

Pay by Mobile Application

There are a number of mobile parking applications that would be an excellent supplement to the parking program and could assist in a number of areas to allow the parking program to become more self-sufficient moving into the future. For example an app could:

- Identify Parking Lot locations and even number of empty spaces;
- Manage payment for your location on your phone, even if you overstay your allotted time;
- Manage leased lots without a pay station;
- Provide parking analytics about locations and length of stay;
- Integrate parking lots into one system managed by the app; and
- Prepare for future auto integration.



Management

In order to oversee and manage all the parking operations, we suggest that the City implement a centralized Parking Division that provides full-time management of the parking operation. Responsibilities pertaining to parking can become easily overlooked; a municipality's departments that have some form of a parking related role can span many disciplines, including transit, finance, police department, public works, planning and even community and economic development. A lack of internal structure within the City when it comes to parking can adversely affect all of the departments mentioned above, so it is in the City's best interest to allocate specific resources to parking management operations.

If in the long term the City can partner with a newly formed Downtown district to manage the parking system along with other downtown maintenance items, this may be the preferred option.

Marketing

To ensure a successful implementation it is important to market the new parking system including branding. This introduces users to the system and creates awareness. Additionally, a marketing and branding program educates users about the benefits of paying for parking since some of the profits are reinvested to the area.

Additional public outreach should be conducted to identify how the local community would like to see the parking revenue reinvested in the Downtown blocks. Ideas for improvements could be services such as power washing the sidewalks regularly, touch up painting of site fixtures (light poles, fire hydrants, etc.), new site furniture (trash cans, benches), enhanced holiday decorations, etc. This will create a cleaner and more inviting Downtown and is good for community overall.

Continued collaboration with Downtown partners will be beneficial to parking operations and help maintain a good level of service for all. Having an established working relationship with the retailers who work directly with the public every day will provide parking operations with current information of ongoing parking related issues and trends. Additionally, regular meetings will provide a place to discuss issues, share ideas, and plan for the evolution of the System.

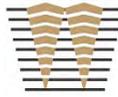
Signage

As a successful part of the marketing program for the parking district, the City should develop a parking wayfinding sign program that is distinctive and easy to use. The signage could implement new technology that indicates how many spaces are available in a parking garage or surface lot to help guide users to the best options.

Enforcement

A major issue that needs to be implemented along with the installation of a collection system is enforcement. The potential parking district or the City would need to review cost versus return. The parking district would need to evaluate what the costs will be to provide staff hours, salaries, and benefits, in relation to the revenue of parking fees that would be generated. Additional enforcement goals that the City should consider including:

- An enforcement circuit that checks most of the spaces downtown in approximately 2 hours;
- Start the program with courtesy "tickets" that are used during an implementation period;



- Enforcement officers should be trained as downtown “ambassadors” to help the users learn the new program and to work with business owners;
- Monitor parking rates, violations, costs and usage in order to consider adjustments over time; and
- Implement a system that realizes an approximate 9 percent violation rate.

With any changes made to parking Downtown, it is crucial to keep the public informed. Designating and advertising a grace period or a “first time warning” is recommended once new meters and time zones are in place in order to allow people time to learn about changes instead of being misinformed and penalized as a result. Additionally, it is suggested that the parking district maintain social media and an online presence so people have an additional resource to reference.

Implementation

Short Term

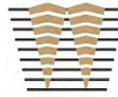
If the City determines that there is the need to institute a revenue collection system, the first step is to develop a parking management program. There will be some initial investment in order to start the program management:

- Negotiate additional supply leases from the private sector
- Establish pricing block locations
- Establish rate and time schedules
- Select payment collections for on- and off-street parking:
 - o Smart meters within the Core
 - o Pay stations for all public off-street parking
- Select and implement a Mobile Parking Application
- Establish the management, maintenance and enforcement system

The first capital purchase will be upgrading and modernizing the parking revenue collection equipment. Watry recommends focusing on the Core initially. The 540 on-street parking spaces in the Core should have dual space smart meters installed. Users are familiar with the current parking meters so matching the current meter concept with more modern meters makes sense from a user familiarity perspective and an upfront cost perspective. The cost of the equipment is \$283,500 not including installation. At the same time the on-street parking meters are installed in the Core we recommend installing pay-by-space pay stations in public off-street parking locations in the Core. The cost of the equipment is \$210,000 not including installation. The 277 remaining old fashioned meters could be reused at preferred parking locations in the Strategy area until revenue is established to upgrade them and install smart meters in the Strategy Area. Alternatively the Strategy area could be left as free parking which would encourage some Core users to park in the free Strategy area parking which makes more parking in the Core available.

As downtown develops we recommend adding wayfinding signage to the Core, directing users to larger and more remote parking facilities away from the Core, likely in the Strategy area since underutilized supply exists. Ideally parking revenue could be used to pay for the new signage.

Following initial development and implementation, the City should begin to address maintenance, operations and other improvements. With the meters and pay stations in operation, revenue should allow the establishment of a parking maintenance, operations and improvements program. Such items to address are:



- Lighting
- General Maintenance to asphalt
- Landscaping
- Meter upkeep
- Site furniture (benches, trash and recycling receptacles)

Revenue should be assessed at this point since the new parking payment system will have been in place for a few years. Based on City provided data the existing meters generate \$300/year each charging the current rate of \$0.20 per hour. Assuming Downtown leasing is at 90 percent (which increases parking demand as shown in **Table 2 Current SF, Parking Supply and Demand (Weekdays)**) and 540 smart meters are installed in the Core, revenue would be approximately \$162,000, not counting the recommended rate increases. For the 1,014 off-street public parking spaces in the core (839 after development), revenue would be \$304,200 not counting the recommended rate increase. With the proposed rate increase to \$0.50 per hour, revenues will increase incrementally with total receipts expected in the \$600-\$700,000 range.

Long Term

Parking Revenues will have been collected for 5 to 10 years at this point so consideration should be given to adding smart meters in the Strategy area on-street parking. The Strategy area has 647 on-street parking spaces. The cost of dual head smart meter equipment is approximately \$339,675 not including installation. Based on City provided data, the existing meters generate \$300/year each these 647 meters at 71 percent occupied these meters would generate yearly revenue of \$137,811 at current parking rates.

The longer term is an ideal time to evaluate additional improvements and upgrades. Such items may include:

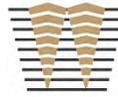
- Amenity projects with excess receipts
- Parking supply alternatives, if needed (may include reducing or adding supply and location)
- General maintenance capital improvements such as sealing or pavement replacement
- Parking rate design with the potential for demand based variable rates
- Landscaping enhancements
- Meters added in Strategy area
- Site furniture (benches and trash/recycling receptacles)
- Banners and flags

FINANCING CONSIDERATIONS

Initial Costs - We recommend proceeding with the installation of single-space smart meters in combination with pay stations, and with a pay-by-phone option. Once a consistent revenue source has been established we recommend a trailblazing sign package to direct drivers to the off-street or non-prime on-street parking spaces. These could be dynamic real time stall availability signs or static signs that direct users to off-street parking resources. Some of the residents will have a difficult time at first and this can be addressed using the Parking Ambassadors. Having an Enforcement Officer walking the beat is good for the neighborhood, improves the level of service to the community and improved relations with City staff.

Table 11: Short-term Equipment/Material Costs

Dual Head Smart Meters at on-street parking in Core Area
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Item	Unit Cost	No. of Units	Cost
Smart Meters	\$875	540x60%	283,500
Installation	33% Cost		\$93,555
Contingency	20% Cost+Install		\$75,411
Total			\$452,466

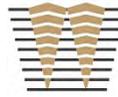
Pay Stations at off-street parking in Core Area			
Item	Unit Cost	No. of Units	Cost
Pay Stations	10,000	10	\$100,000
Installation	33% Cost		\$33,000
Contingency	20% Cost+Install		\$26,600
Total			\$159,600

Dual Head Smart Meters at on-street parking in Strategy Area			
Item	Unit Cost	No. of Units	Cost
Smart Meters	\$875	647x60%	\$339,675
Installation	33% Cost		\$112,093
Contingency	20% Cost+Install		\$90,354
Total			\$542,122

Table 12: Short-term Implementation Costs

Item	Annual On-going	Initial Capital
Add Smart Meters to the Core (540 on-street)	\$32,400	\$452,460
Add Pay Stations to Off-street lots (21)		\$159,600
Add Wayfinding and Trailblazing Signage		\$120,000
Lease 200 off-street spaces for supply (\$60/stall/month)	\$144,000	
Implement Mobile Parking Application		
Enforcement (two part time employees)	\$120,000	
Cleaning, Maintenance and Revenue Collection	\$120,000	
Parking Management, Fines and Appeal	\$150,000	
Upgrade Existing City Owned Lots (Paving and Striping)		\$180,000
Annual Maintenance/Replacement Reserves for City Managed Space (300 spaces at \$230 per space)	\$69,000	
On-street Maintenance Reserve Fund	\$30,000	
Total	\$665,400	\$912,060

If the City decides to pursue a privately funded BID based model, a significant portion of the capital investment will not be needed. The system will not be user-paid and there will be no need for revenue



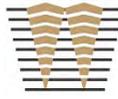
collection equipment. However, ongoing funding for enforcement, management, maintenance and leased space will still be needed.

Economist Steve Gunnells of PlaceWorks has developed options for financing of the measures discussed above. These are presented in a separate Parking Strategy Funding and Finance report.

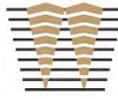
CONCLUSION

The City has an opportunity to help gain acceptance of the new pay-for-parking System and engage the retailers and public by reinvesting a share of the parking revenue back into the Downtown streets.

Continued collaboration will be beneficial to parking operations and help maintain a good level of service for all. Having an established working relationship with the retailers who work directly with the public every day will provide parking operations with current information of ongoing parking related issues and trends.



APPENDICES



Appendix 1 - User Groups

To better understand the Downtown parking needs it is helpful to discuss the different user groups and parking space types. They include the following:

Customer Parking - Ideally, customers should have a choice of parking options based on convenience and price. The choice of parking stall type could include on-street prime parking, on-street secondary parking, off-street surface lot parking, or garage parking. Many customers like to park in on-street parking spaces as close to the shopping or service they are visiting. Others would prefer a space within a small walking distance and save on the cost of parking.

Residential Parking – Ideally, each residential project will provide the adequate parking supply for the project at a minimum. However, since the residential parking is needed at night and not during the daytime when demand is higher there is an opportunity to share parking and provide new residential development without added parking. By adding residents to downtown, nighttime uses such as restaurants and entertainment will see increased revenue since most employees in downtown live outside of downtown.

Commercial Employee Parking - Employee and customer conflicts are common in Downtown areas. Employees should be required to park in off-street parking lots or structures away from the Core and have an opportunity to purchase an all-day parking pass for a reduced rate.

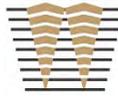
Courthouse Employee Parking – Employee and patron parking will be provided within the existing supply plus an additional 100 parking spaces. Employees can use their current credentials to park in designated areas all day.

Students and Staff – Students of educational facilities, especially Shasta College, often drive to school for classes. Students should be directed to park in off-street parking lots away from the Core and have an option to purchase a pass for long term parking.

ADA Parking - ADA parking should be evaluated to ensure that the appropriate amount is existing at each parking facility and that the existing conditions meet current local, state and federal requirements.

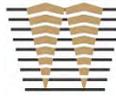
Electric vehicles – The percentage of electric vehicles sold in California today is about 5 percent of total vehicles sold and expected to increase although electric vehicles are much more common in large cities. For new parking structures, 6 percent of stalls are required to be electric vehicle ready, with conduit prepared for future installations per the (Cal Green Building Code – CGBC).

Alternative fuel vehicles, carpools and electric vehicle charging spaces - For new parking structures, the CGBC requires that 8 percent of the parking supply be designated for any combination of alternative fuel vehicles, car pools and electric vehicle charging stalls.



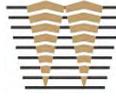
Appendix 3 – Phase III Core Area Parking Demand, Shared Parking Demand Summary

Table Project: City of Redding Core Area Phase III - Long Term Forecast Description: Shared Use Study	SHARED PARKING DEMAND SUMMARY														9/13/2018						
	PEAK MONTH: DECEMBER – PEAK PERIOD: 2 PM, WEEKDAY																				
	Land Use	Project Data Quantity	Unit	Weekday				Weekend				Weekday		Weekend							
Base Rate				Mode Adj	Non-Captive Ratio	Project Rate	Unit	Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 2 PM	Peak Mo Adj December	Estimated Parking Demand	Peak Hr Adj 7 PM	Peak Mo Adj December	Estimated Parking Demand			
Retail	84,866	sf GLA	2.90	0.90	1.00	2.61	/ksf GLA	3.20	0.95	1.00	3.04	/ksf GLA	1.00	0.56	221	0.75	1.00	194			
Employee			0.70	0.80	1.00	0.96	/ksf GLA	0.80	0.80	1.00	0.64	/ksf GLA	1.00	0.80	47	0.80	1.00	44			
Fine/Casual Restaurant	35,000	sf GLA	15.25	0.90	0.80	10.98	/ksf GLA	17.00	0.95	0.90	14.54	/ksf GLA	0.65	0.85	250	0.95	1.00	483			
Employee			2.75	0.80	1.00	2.20	/ksf GLA	3.00	0.80	1.00	2.40	/ksf GLA	0.90	0.95	69	1.00	1.00	84			
Family Restaurant	45,000	sf GLA	9.00	0.80	0.75	5.40	/ksf GLA	12.75	0.90	0.90	10.33	/ksf GLA	0.50	0.85	122	0.70	1.00	325			
Employee			1.50	0.80	1.00	1.20	/ksf GLA	2.25	0.80	1.00	1.80	/ksf GLA	1.00	0.95	54	0.95	1.00	77			
Fast Food Restaurant	5,000	sf GLA	12.75	0.80	0.70	7.14	/ksf GLA	12.00	0.90	0.90	9.72	/ksf GLA	0.90	0.85	32	0.80	1.00	39			
Employee			2.25	0.80	1.00	1.80	/ksf GLA	2.00	0.80	1.00	1.60	/ksf GLA	0.95	0.95	8	0.90	1.00	7			
Theater	1,000	seats	0.19	0.90	0.90	0.15	/seat	0.26	0.90	0.90	0.21	/seat	0.55	0.27	19	0.80	0.67	113			
Employee			0.01	0.80	1.00	0.01	/seat	0.01	0.80	1.00	0.01	/seat	0.60	0.50	2	1.00	0.80	6			
Office >500 ksf	492,420	sf GLA	0.20	0.95	1.00	0.19	/ksf GLA	0.02	1.00	1.00	0.02	/ksf GLA	1.00	1.00	93	0.00	1.00	0			
Employee			2.60	0.80	1.00	2.08	/ksf GLA	0.26	1.00	1.00	0.26	/ksf GLA	1.00	1.00	1,024	0.00	1.00	0			
ULI base data have been modified from default values.														Customer	737	Employee	1204	Reserved	0	Total	1941
														Customer	1154	Employee	218	Reserved	0	Total	1372
														Shared Parking Reduction				44%	60%		



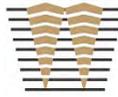
Appendix 4 – Phase II Strategy Area Parking Demand, Shared Parking Demand Summary

Table		SHARED PARKING DEMAND SUMMARY														9/13/2018					
Project: City of Redding Strategy Area Phase II - Short Term Forecast		PEAK MONTH: DECEMBER - PEAK PERIOD: 2 PM, WEEKDAY																			
Description: Shared Use Study																					
Land Use	Project Data Quantity	Weekday			Weekend			Weekday			Weekend			Weekday			Weekend				
		Base Rate	Mode Adj	Non- Captive Ratio	Base Rate	Mode Adj	Non- Captive Ratio	Project Rate	Unit	Base Rate	Mode Adj	Non- Captive Ratio	Project Rate	Unit	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand	
Retail	144,125 sf GLA	2.90	0.90	1.00	2.61	/ksf GLA	3.20	0.90	1.00	2.88	/ksf GLA	1.00	0.56	376	1.00	1.00	394	0.95	1.00	394	
Employee	56500	0.70	0.80	1.00	0.56	/ksf GLA	0.80	0.80	1.00	0.64	/ksf GLA	1.00	0.80	81	1.00	1.00	82	1.00	1.00	82	
Family Restaurant	37,500 sf GLA	15.25	0.90	0.80	10.96	/ksf GLA	17.00	0.90	0.90	13.77	/ksf GLA	0.90	0.85	268	0.95	1.00	284	0.95	1.00	284	
Employee	56,500 sf GLA	2.75	0.80	1.00	2.20	/ksf GLA	3.00	0.80	1.00	2.40	/ksf GLA	0.90	0.95	74	0.75	1.00	68	0.75	1.00	68	
Employee	56,500 sf GLA	9.00	0.80	0.75	5.40	/ksf GLA	12.75	0.80	0.90	9.18	/ksf GLA	0.50	0.85	153	0.85	1.00	441	0.85	1.00	441	
Fast Food Restaurant	15,000 sf GLA	1.50	0.80	1.00	1.20	/ksf GLA	2.25	0.80	1.00	1.80	/ksf GLA	1.00	0.95	68	1.00	1.00	102	1.00	1.00	102	
Employee	15,000 sf GLA	12.75	0.80	0.70	7.14	/ksf GLA	12.00	0.80	0.90	8.64	/ksf GLA	0.90	0.85	96	1.00	1.00	130	1.00	1.00	130	
Theater	1,000 seats	2.25	0.80	1.00	1.80	/ksf GLA	2.00	0.80	1.00	1.60	/ksf GLA	0.95	0.95	26	1.00	1.00	24	1.00	1.00	24	
Employee	1,000 seats	0.00	0.80	1.00	0.00	/seat	0.26	0.80	0.90	0.21	/seat	0.90	0.27	0	0.45	0.67	63	0.45	0.67	63	
Office >500 ksf	819,000 sf GLA	0.00	0.80	1.00	0.00	/seat	0.01	0.80	1.00	0.01	/seat	1.00	0.50	0	0.60	0.80	4	0.60	0.80	4	
Employee	819,000 sf GLA	0.20	0.95	1.00	0.19	/ksf GLA	0.02	0.95	1.00	0.02	/ksf GLA	1.00	1.00	196	0.80	1.00	12	0.80	1.00	12	
Employee	819,000 sf GLA	2.60	0.80	1.00	2.08	/ksf GLA	0.26	1.00	1.00	0.26	/ksf GLA	1.00	1.00	1,703	0.80	1.00	170	0.80	1.00	170	
ULI base data have been modified from default values.																Customer Employee Reserved Total			Customer Employee Reserved Total		
																1049 1952 0 3001			1324 460 0 1784		
																40%			64%		
																Shared Parking Reduction			Shared Parking Reduction		



Appendix 5 – Phase III Strategy Area Parking Demand, Shared Parking Demand Summary

Table Project: City of Redding Strategy Area Phase III - Long Term Forecast Description: Shared Use Study		SHARED PARKING DEMAND SUMMARY																				9/13/2018
		PEAK MONTH: DECEMBER – PEAK PERIOD: 2 PM, WEEKDAY																				
Land Use	163225	Project Data Quantity	Weekday				Weekend				Weekday				Weekend							
			Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Peak Hr 2 PM Adj	Peak Mo December	Estimated Parking Demand	Peak Hr 7 PM Adj	Peak Mo December	Estimated Parking Demand				
Retail		163,225 sf GLA	2.90	0.90	1.00	2.61	/ksf GLA	3.20	0.95	1.00	3.04	/ksf GLA	1.00	0.56	1.00	426	0.75	1.00	372			
Employee			0.70	0.80	1.00	0.56	/ksf GLA	0.80	0.80	1.00	0.64	/ksf GLA	1.00	0.80	1.00	91	0.80	1.00	84			
Fine/Casual Restaurant		42,500 sf GLA	15.25	0.90	0.80	10.98	/ksf GLA	17.00	0.95	0.90	14.54	/ksf GLA	0.65	0.65	1.00	303	0.95	1.00	587			
Employee			2.75	0.80	1.00	2.20	/ksf GLA	3.00	0.80	1.00	2.40	/ksf GLA	0.90	0.95	1.00	84	1.00	1.00	102			
Family Restaurant		65,500 sf GLA	9.00	0.80	0.75	5.40	/ksf GLA	12.75	0.90	0.90	10.33	/ksf GLA	0.50	0.85	1.00	177	0.70	1.00	473			
Employee			1.50	0.80	1.00	1.20	/ksf GLA	2.25	0.80	1.00	1.80	/ksf GLA	1.00	0.95	1.00	78	0.95	1.00	112			
Fast Food Restaurant		19,000 sf GLA	12.75	0.80	0.70	7.14	/ksf GLA	12.00	0.90	0.90	9.72	/ksf GLA	0.90	0.85	1.00	122	0.80	1.00	148			
Employee			2.25	0.80	1.00	1.80	/ksf GLA	2.00	0.80	1.00	1.60	/ksf GLA	0.95	0.95	1.00	33	0.90	1.00	27			
Theater		1,000 seats	0.19	0.90	0.90	0.15	/seat	0.26	0.90	0.90	0.21	/seat	0.55	0.27	1.00	19	1.00	0.67	113			
Employee			0.01	0.80	1.00	0.01	/seat	0.01	0.01	1.00	0.01	/seat	0.60	0.50	1.00	2	1.00	0.80	6			
Office >500 ksf		812,500 sf GLA	0.20	0.95	1.00	0.19	/ksf GLA	0.02	1.00	1.00	0.02	/ksf GLA	1.00	1.00	1.00	165	0.00	1.00	0			
Employee			2.60	0.80	1.00	2.08	/ksf GLA	0.26	1.00	1.00	0.26	/ksf GLA	1.00	1.00	1.00	1,890	0.00	1.00	0			
ULT base data have been modified from detail values.																						
															Customer	1202			1693			
															Employee	1978			331			
															Reserved	0			0			
															Total	3180			2024			
															Shared Parking Reduction		40%			62%		



Appendix 6 – Program Summaries: Core Area

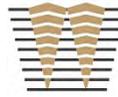
The following is our understanding of the project area programs and the land uses as categorized by the Urban Land Institute’s Shared Parking, for the Core Area.

TABLE 1A – PHASE II A SHORT TERM	
Use	SF or Units
Retail	73,481 GLA ¹
Fine/Casual Restaurants	30,000 GLA
Family Restaurant (no table service)	40,500 GLA
Fast Food Restaurant (take out)	5,000 GLA
Office	520,920 GFA
Theater	1,000 seats

¹ Reduction of retail space due to redevelopment to residential/mixed-use.

TABLE 2A – PHASE III LONG TERM	
Use	SF or Units
Retail	84,866 GLA
Fine/Casual Restaurants	35,000 GLA
Family Restaurant (no table service)	45,000 GLA
Fast Food Restaurant (take out)	5,000 GLA
Office	492,420 GFA ²
Theater	1,000 seats

² Reduction of office space due to redevelopment to residential/mixed-use.



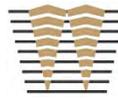
Appendix 7 – Program Summaries: Strategy Area

The following is our understanding of the project area programs and the land uses as categorized by the Urban Land Institute’s Shared Parking, for the Strategy Area.

TABLE 1B – PHASE II SHORT TERM	
Use	SF or Units
Retail	144,125 GLA
Fine/Casual Restaurants	37,500 GLA
Family Restaurant (no table service)	56,500 GLA
Fast Food Restaurant (take out)	15,000 GLA
Office	819,000 GFA
Theater	1,000 seats
Courthouse (100 dedicated stalls)	

TABLE 2B – PHASE III LONG TERM	
Use	SF or Units
Retail	163,225 GLA
Fine/Casual Restaurants	42,500 GLA
Family Restaurant (no table service)	65,500 GLA
Fast Food Restaurant (take out)	19,000 GLA
Office	812,500 GFA ¹
Theater	1,000 seats
Courthouse (100 dedicated stalls)	

¹ Reduction of office space due to redevelopment to residential/mixed-use.

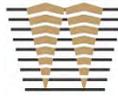


Appendix 8 – Parking Demands for the Core and Strategy Areas

The four models included in this report (**Appendices 2–5**) support recommendations for parking demands for the Core and Strategy Areas. We studied three scenarios: Phase I Current, Phase II Short Term forecast, and Phase III Long Term forecast. At the same time, we included the results from the 2010/2017 survey, for comparison. The results are summarized in the tables below and all numbers represent public parking only, not private.

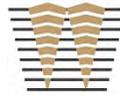
TABLE 1C - CORE AREA PEAK PARKING DEMANDS	
Phase	Weekday Peak
Phase I - Current	1,018 stalls
Phase II - Short Term Forecast	1,450 stalls
Phase III - Long Term Forecast	1,482 stalls

TABLE 2C - STRATEGY AREA PARKING DEMANDS	
Phase	Weekday Peak
Phase I - Current	1,852 stalls
Phase II - Short Term Forecast	2,347 stalls
Phase III - Long Term Forecast	2,526 stalls



Appendix 9 – Funding and Finance Approaches, based on Parking Strategies

To be provided.



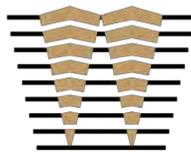
Appendix 10 – September 2018 Downtown Redding Parking Demand Analysis



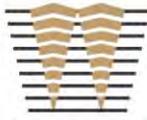
Downtown Redding Parking Demand Analysis

September 14, 2018

Architects • Engineers • Parking Planners



WATRY DESIGN, INC.



WATRY DESIGN, INC.

September 14, 2018

Bruce Brubaker, LEED AP
Associate Principal

PLACEWORKS

1625 Shattuck Avenue, Suite 300
Berkeley, California 94709
510.848.3815

RE: City of Redding, California
Downtown Redding Parking Strategy – Parking Demand Analysis
WDI Job #15061.312

Dear Bruce,

Watry is pleased to present this parking demand analysis to compliment the Downtown Parking Strategy exercises for the City of Redding. The report includes our shared parking demand findings and recommendations.

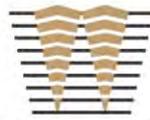
We appreciate the opportunity to assist PLACEWORKS and the City of Redding with the Parking Strategy exercises.

Sincerely yours,
WATRY DESIGN, INC.

Matt Davis
Associate Principal

Michael Johnson
Sr. Project Manager

cc:
Enclosure
MJ/mj



WATRY DESIGN, INC.

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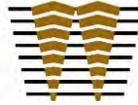
 ATTACHMENT E – CORE AREA PHASE II – SHORT TERM FORECAST 22

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SHARED USE PARKING - CONCEPT AND METHODOLOGY

When analyzing the parking demand for a downtown area like the City of Redding, a shared use parking demand analysis is a suitable approach within the parking planning and traffic engineering professions.

The Urban Land Institute (ULI), working with the International Council of Shopping Centers (ICSC), the National Parking Association (NPA), and a core group of parking professionals, published the *Shared Parking* manual and associated MS Excel spreadsheet model to assist with the analysis and development of parking demands for various mixed-use land developments. The first edition was published in 1983 and the second addition was published in 2005. The third edition is currently being produced with an anticipated release date in 2019. *Shared Parking* is a recognized and accepted tool within the parking planning and traffic engineering professions as well as many municipalities.

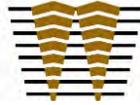
“Shared parking is the use of a parking space to serve two or more individual land uses without conflict or encroachment”, according to the *Shared Parking, Second Edition* introduction. *Shared Parking* also identifies two conditions for shared use: 1) “variations in the accumulation of vehicles by hour, by day, or by season at the individual land uses”, and 2) “relationships among the land uses that result in visiting multiple land uses on the same auto trip”.

“The key goal of shared parking analysis, then, is to find the balance between providing adequate parking to support a development from a commercial viewpoint and minimizing the negative aspects of excessive land area or resources devoted to parking. Downtown areas that share parking result in greater density, better pedestrian connections, and in turn, reduces reliance on driving, typically because multiple destinations can be access by walking”, *Shared Parking, Second Edition*.

Parking demands are based on:

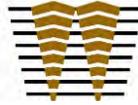
- **Project program:** Land uses and sizes of each. Size could be defined by the GFA (gross floor area), GLA (gross leasable area), number of seats, number of units or bedrooms, etc. It is important to have a well-defined program for best results.
- **Parking ratios:** Examples of parking ratios include: four to six (4-6) parking stalls per 1,000 GLA of retail space; three (3) parking stalls per 1,000 of GFA for office space; and .27 parking stalls per 1,000 seats for a theater.
- **Multi-modal adjustments:** This includes people arriving at the site by means other than a private vehicle requiring a parking stall; UBER/Lift, public transportation, ride sharing, etc.
- **Non-captive adjustments:** This includes patrons that are on-site visiting a land use and will visit other land uses without having to re-park the car.

Adjustments can be made to the parking ratios, multi-modal factors, and the non-captive factors as needed in order to create a model that best represents the project’s specific characteristics, behaviors, and parking needs.



The ULI model takes into consideration the parking ratios, the multi-modal and non-captive adjustments, time of day, day of month, and month of year, along with shared use considerations for all user groups. Again, “The key goal of shared parking analysis, then, is to find the balance between providing adequate parking to support a development from a commercial viewpoint and minimizing the negative aspects of excessive land area or resources devoted to parking”, *Shared Parking, Second Edition*.

The ULI model calculations include the 85th percentile approach when establishing project peak demands and is consistent with traffic engineering practices. The parking demands will represent 85 percent of the overall peak demand. The thinking is that you don’t build the church for Easter Sunday.



PROJECT APPROACH

We were tasked with providing parking demand analyses for the Core Area and the Strategy Area shown on the map in Attachment A.

Phase I – Current Conditions

Core Area: Create a ULI shared use model to replicate the current conditions with a parking demand of 1,476 cars. The parking demand of 1,476 cars was established using the 2010 and 2017 field occupancy counts collected by City staff. We adjusted the parking ratios and the multi-modal and non-captive patron factors within the model, specifically the retail and restaurants as these have the largest vacancy rate and lower parking needs.

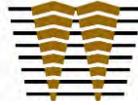
Strategy Area: Create a ULI shared use model using the Core Area model's parking ratios and the multi-modal and non-captive factors. A parking demand of 2,504 cars was established using the 2010 and 2017 field occupancy counts collected by City staff. The goal is to see if the Core's factors and the Strategy Area's program data reflect the parking demand of 2,504 parking stalls. The ULI model calculated a peak parking demand of 2,316 parking stalls.

Phase II – Short Term Forecast

Core and Strategy Areas: create ULI shared use models for the short term scenarios that includes five mixed-use and commercial projects in the planning stages, in entitlement review, or approved. The ULI model assumes occupancy rates at capacity in combination with a fully energized downtown.

Phase III – Long Term Forecast

Core and Strategy Areas: create ULI shared use models for the long term scenarios that includes anticipated developments over the next 10 to 20 years in conformity with the Downtown Redding Specific Plan. Parking ratios and adjustments used in the models represent an energized downtown and associated parking demands.



PARKING OCCUPANCY COUNTS

The City staff physically counted occupied parking stalls for the Core and the Strategy Areas in October of 2010 and May of 2017 between 11:00 am and 2:00 pm. The data collected on those days revealed:

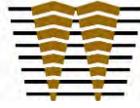
- The Core Area was parked at 58% capacity (1,476 occupied stalls within total supply of 2,543 stalls).
- The Strategy Area was at 55% capacity (2,504 occupied stalls within total supply of 4,598 stalls).

Physically counting the occupied parking stalls can be valuable in identifying the parking demands on a specific day and time. Ideally, but not practical, would be to collect physical counts three days a week for the entire year. However, even a limited number of physical counts help. It should be noted that the existing parking occupancy counts and resulting parking ratios should not be used when forecasting the parking demands for a fully leased and vibrant downtown area. The demands an economically challenged downtown are very different than that of a fully energized downtown.

PHASE I – CURRENT PARKING DEMANDS

The Core Area ULI model for the current conditions was created to replicate the parking count data collected in 2010 and 2017. The current conditions include office space with an 88% occupancy rate and retail space occupied at 65%. The model results were tailored to replicate the collected data with a **peak demand of 1,476 parking stalls**. A fully leased and vibrant Core Area model shows a peak parking demand would be approximately 1,860 parking stalls.

The Strategy Area model was then created using identical ratios, adjustments, and discounts that were used for the Core Area model, just more program space for retail, office, and restaurants. The model identified a **peak demand of 2,316 parking stalls** versus the 2,504 occupied parking stalls from field data.



SUMMARY OF PEAK PARKING DEMANDS FOR PHASES II AND III

The following is a summary of the peak parking demands for weekdays and weekends for the Core Area and for the Strategy Area. Refer to Attachments D through I for details of parking demand numbers.

Phase II - Core Area Short Term Forecast

- Weekday Peak Demand: 1,909 parking stalls at 2:00 PM.
- Weekend Peak Demand: 1,218 parking stalls at 7:00 PM.

Phase II - Strategy Area Short Term Forecast

- Weekday Peak Demand: 3,122 parking stalls at 2:00 PM¹.
- Weekend Peak Demand: 1,884 parking stalls at 7:00 PM¹.

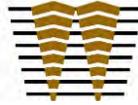
Phase III - Core Area Long Term Forecast

- Weekday Peak Demand: 1,941 parking stalls at 2:00 PM.
- Weekend Peak Demand: 1,372 parking stalls at 7:00 PM.

Phase III Strategy Area Long Term Forecast

- Weekday Peak Demand: 3,220 parking stalls at 2:00 PM¹.
- Weekend Peak Demand: 2,070 parking stalls at 7:00 PM¹.

¹ The peak parking demand numbers shown include 100 dedicated Courthouse parking stalls.



PROGRAM SUMMARIES – CORE AREA

The following is our understanding of the project area programs and the land uses as categorized by the Urban Land Institute’s *Shared Parking*.

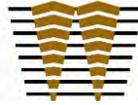
TABLE 1A – PHASE I CURRENT CONDITIONS	
Use	SF or Units
Retail	90,435 GLA
Fine/Casual Restaurants	25,000 GLA
Family Restaurant (no table service)	31,500 GLA
Fast Food Restaurant (take out)	5,000 GLA
Office	520,920 GFA
Theater	1,000 seats

TABLE 2A – PHASE II A SHORT TERM	
Use	SF or Units
Retail	73,481 GLA ¹
Fine/Casual Restaurants	30,000 GLA
Family Restaurant (no table service)	40,500 GLA
Fast Food Restaurant (take out)	5,000 GLA
Office	520,920 GFA
Theater	1,000 seats

¹ Reduction of retail space due to redevelopment to residential/mixed-use.

TABLE 3A – PHASE III LONG TERM	
Use	SF or Units
Retail	84,866 GLA
Fine/Casual Restaurants	35,000 GLA
Family Restaurant (no table service)	45,000 GLA
Fast Food Restaurant (take out)	5,000 GLA
Office	492,420 GFA ²
Theater	1,000 seats

² Reduction of office space due to redevelopment to residential/mixed-use.



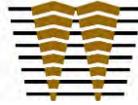
PROGRAM SUMMARIES – STRATEGY AREA

TABLE 1B – PHASE I CURRENT CONDITIONS	
Use	SF or Units
Retail	144,1255 GLA
Fine/Casual Restaurants	32,500 GLA
Family Restaurant (no table service)	47,250 GLA
Fast Food Restaurant (take out)	15,000 GLA
Office	819,000 GFA
Theater	1,000 seats

TABLE 2B – PHASE II SHORT TERM	
Use	SF or Units
Retail	144,125 GLA
Fine/Casual Restaurants	37,500 GLA
Family Restaurant (no table service)	56,500 GLA
Fast Food Restaurant (take out)	15,000 GLA
Office	819,000 GFA
Theater	1,000 seats
Courthouse (100 dedicated stalls)	

TABLE 3B – PHASE III LONG TERM	
Use	SF or Units
Retail	163,225 GLA
Fine/Casual Restaurants	42,500 GLA
Family Restaurant (no table service)	65,500 GLA
Fast Food Restaurant (take out)	19,000 GLA
Office	812,500 GFA ¹
Theater	1,000 seats
Courthouse (100 dedicated stalls)	

¹ Reduction of office space due to redevelopment to residential/mixed-use.

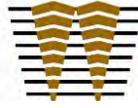


CONCLUSIONS AND RECOMMENDATIONS

The six models included in this report support recommendations for parking demands for the Core and Strategy Areas. We studied three scenarios: Phase I Existing Conditions, Phase II Short Term forecast, and Phase III Long Term forecast. The results are summarized in the tables below.

TABEL 4A - CORE AREA PEAK PARKING DEMANDS		
Phase	Weekday Peak	Weekend Peak
Phase I - Existing Conditions	1,476 stalls	811stalls
Phase II - Short Term Forecast	1,909 stalls	1,218 stalls
Phase III - Long Term Forecast	1,941 stalls	1,372 stalls

TABLE 4B - STRATEGY AREA PARKING DEMANDS		
Phase	Weekday Peak	Weekend Peak
Phase I - Existing Conditions	2,316 stalls	1,235 stalls
Phase II - Short Term Forecast	3,122 stalls	1,884 stalls
Phase III - Long Term Forecast	3,220 stalls	2,070 stalls



ATTACHMENTS

ATTACHMENT A – MAP OF STUDY AREAS

ATTACHMENT B – TABLE OF PARKING OCCUPANCY COUNTS

ATTACHMENT C – SHORT TERM FORECAST MAP AND DATA

ATTACHMENT D – CORE AREA PHASE I – CURRENT CONDITIONS

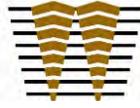
ATTACHMENT E – CORE AREA PHASE II – SHORT TERM FORECAST

ATTACHMENT F – CORE AREA PHASE III – LONG TERM FORECAST

ATTACHMENT G - STRATEGY AREA PHASE I – CURRENT CONDITIONS

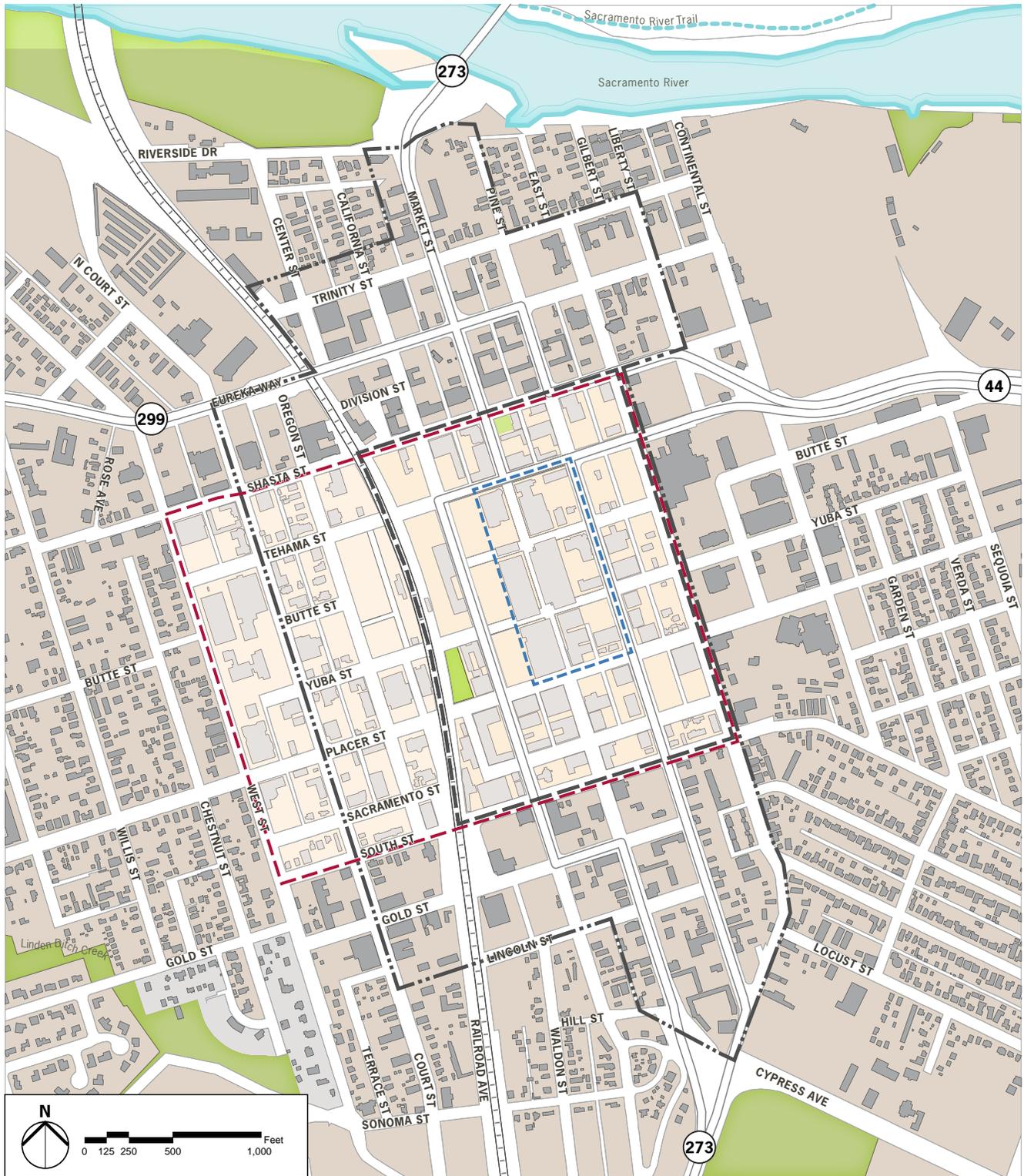
ATTACHMENT H – STRATEGY AREA PHASE II – SHORT TERM FORECAST

ATTACHMENT I – STRATEGY AREA PHASE III – LONG TERM FORECAST



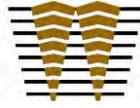
ATTACHMENT A – MAP OF STUDY AREAS

PARKING STRATEGY AREA



Source: City of Redding, 2016

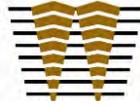
-  Downtown Core District Boundary
-  Promenade
-  Downtown Specific Plan Boundary
-  Union Pacific Railroad
-  Parking Strategy Boundary
-  Existing Open Space



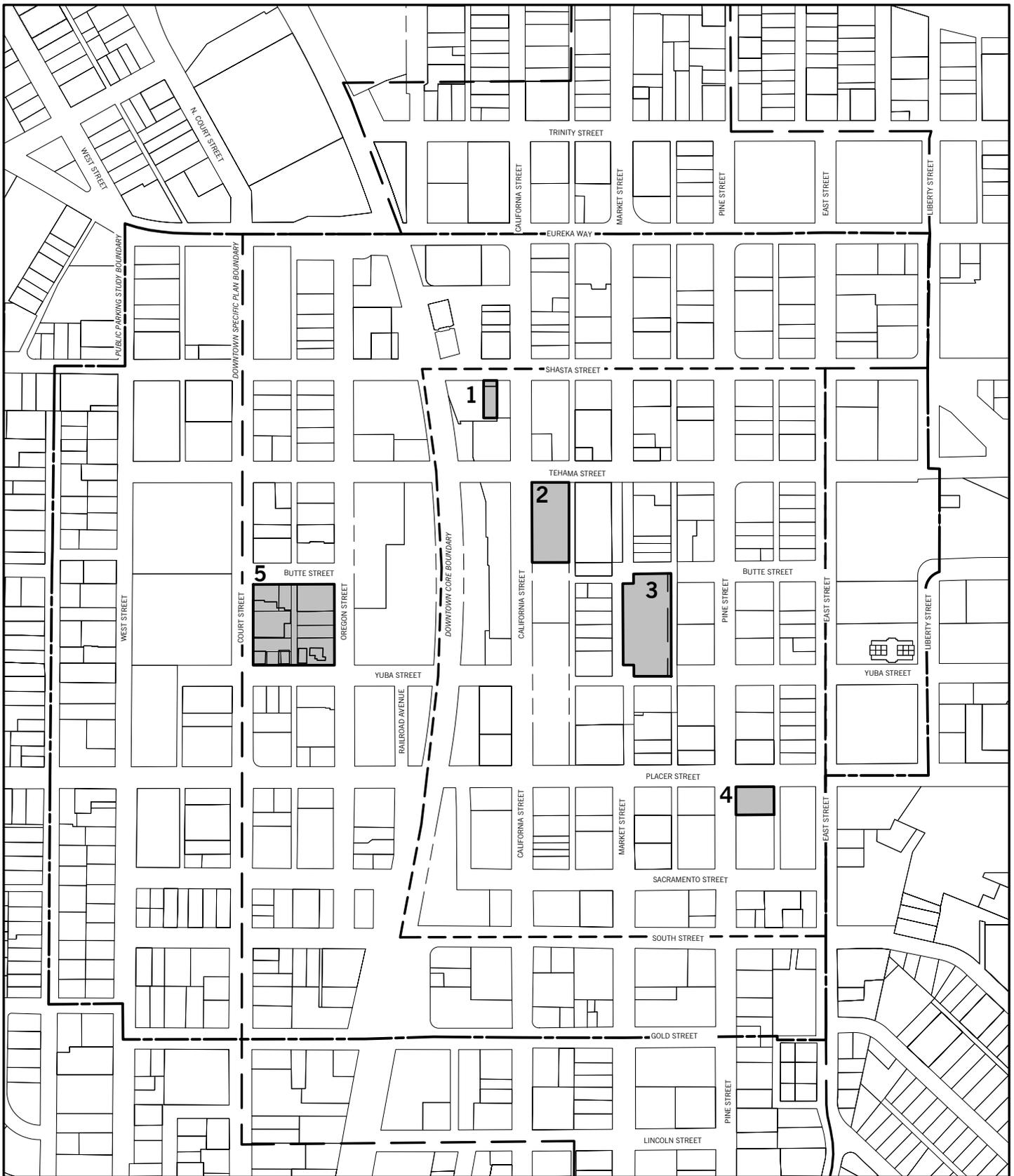
ATTACHMENT B – TABLE OF PARKING OCCUPANCY COUNTS

Parking Data	Downtown Core Total Spaces	Downtown Core Occupied	Entire Strategy Area Total Spaces	Entire Strategy Area Occupied
Off Street Public Parking	1002	735	1002	735
On Street Unmetered Spaces	255	130	798	400
On Street Metered Spaces	97	55	170	86
On Street Missing Meter Heads	204	97	235	103
Off Street Private Parking Parking	985	459	1528	654
Public Employee/Permit Parking	0	0	865	526
Total	2543	1476	4598	2504

Data from "Public Parking Capacity" map dated 7/31/2017 plus "Off Street Public/Private Parking Capacity" map dated 7/31/17
(note: whole numbers used)



ATTACHMENT C – SHORT TERM FORECAST MAP AND DATA



Downtown Redding Parking Study: Opportunity Sites for Parking Demand (Short-term)

July 19, 2018

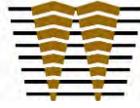
SCALE: 1' = 500'
0 125 250 500 FEET



Downtown Redding Parking Study: Estimated Areas for Parking Demand (Short-term)

July 19, 2018

Opportunity Site Parcel	Site Name / Address	Lot Area (sf)	Existing Use	Existing Building Footprint (sf)	Anticipated Use	Stories	Retail Ground Floor Area (sf)	Office (sf)	Residential (units)	Projected Parking Demand
Within Downtown Core										
1	Former Bell Rooms	6,994	Vacant Commercial	1,059	Commercial / Retail	TBD	4,800	-	-	-
2	California Street Parking Structure	41,331	Parking Structure	1,625	Mixed Use	TBD	12,525	-	79	-
3	1551 Market Street	65,634	Commercial	60,675	Mixed Use	TBD	22,800	-	82	-
4	1701 Pine Street	14,859	Vacant	-	Mixed Use	TBD	4,921	-	16	-
Additional within Parking Study Area (Outside Downtown Core)										
5	New Courthouse	91,466	Surface Parking	TBD	Courthouse	TBD	-	TBD	N/A	300
TOTAL		220,283		63,360			45,046	Total Demand	Total Demand	300
			Total Retail / Commercial Loss	(63,360)	Total Retail Gain		45,046		Net Retail	(18,314)
			Total Office Loss	TBD	Total Office Gain		TBD		Net Office	TBD



ATTACHMENT D - CORE AREA PHASE I – CURRENT CONDITIONS

**Redding Downtown Core Area
Phase I - Current Conditions
Parking Demand**
September 14, 2018

Projected Parking Supply: 2543		Max Parking Spaces						Mode Adjustment						Noncaptivity Ratio					
		Quantity	Weekday	Weekend	Daytime	Evening	Weekend	Daytime	Evening	Daytime	Evening	Daytime	Evening	Daytime	Evening	Daytime	Evening		
Retail	90,435 sf GLA	181	289	90%	95%	90%	90%	95%	100%	100%	100%	100%	100%	100%	100%	100%			
Employee		44	72	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	100%			
Fine/Casual Restaurant	25,000 sf GLA	210	234	90%	95%	90%	90%	95%	80%	80%	80%	80%	80%	80%	80%	80%			
Employee		38	41	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	100%			
Family Restaurant	31,500 sf GLA	156	221	80%	90%	80%	80%	90%	75%	75%	75%	75%	75%	75%	75%	75%			
Employee		26	39	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	100%			
Fast Food Restaurant	5,000 sf GLA	35	33	80%	90%	80%	80%	90%	70%	70%	70%	70%	70%	70%	70%	70%			
Employee		6	5	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	100%			
Theater	1,000 seats	0	260	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%			
Employee		2	10	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	100%			
Office >500 ksf	520,920 sf GLA	92	10	95%	100%	95%	95%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Employee		1219	135	80%	100%	80%	80%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Subtotal Customer/Guest Spaces		674	1047																
Subtotal Employee/Resident Spaces		1335	302																
Subtotal Reserved Spaces		0	0																
Total Parking Spaces		2009	1349																

**Redding Downtown Core Area
Phase I - Current Conditions
Parking Demand**
September 14, 2018

Recommended Parking Ratios						
Spaces required per unit land use						
Land Use	Weekday		Weekend		Unit	
	Visitor	Employee	Visitor	Employee		
Retail	2.00	0.49	3.20	0.80	/ksf GLA	
Regional Shopping Center (400 to 600 ksf)	Linear 2.9<x<3.2					
Super Regional Shopping Center (>600 ksf)	3.20	0.80	3.60	0.90	/ksf GLA	
Fine/Casual Restaurant	8.39	1.51	9.35	1.65	/ksf GLA	
Family Restaurant	4.95	0.83	7.01	1.24	/ksf GLA	
Fast Food Restaurant	7.01	1.24	6.60	1.00	/ksf GLA	
Nightclub	15.25	1.25	17.50	1.50	/ksf GLA	
Theater	0.00	0.00	0.26	0.01	/seat	
Performing Arts Theater	0.30	0.07	0.33	0.07	/seat	
Arena	0.27	0.03	0.30	0.03	/seat	
Pro Football Stadium	0.30	0.01	0.30	0.01	/seat	
Pro Baseball Stadium	0.31	0.01	0.34	0.01	/seat	
Gym	6.60	0.40	5.50	0.25	/ksf GFA	
Convention Center	5.50	0.50	5.50	0.50	/ksf GLA	
Hotel-Business	1.00	0.25	0.90	0.18	/room	
Motel	1.00	0.25	1.00	0.18	/room	
Restaurant/Lounge	10.00		10.00		/ksf GLA	
Conference Ctr/Banquet (20 to 50 sq ft/guest room)	30.00		30.00		/ksf GLA	
Convention Space (>50 sq ft/guest room)	20.00		10.00		/ksf GLA	
Residential, Rental, Shared Spaces *	0.15	1.50	0.15	1.50	/unit	
Residential, Owned, Shared Spaces *	0.15	1.7	0.15	1.7	/unit	
Office <25 ksf	0.30	3.5	0.03	0.35	/ksf GFA	
Office 100 to 500 ksf					/ksf GFA	
Office 100 to 500 ksf	Linear 0.25<x<0.2					
Office >500 ksf	0.18	2.34	0.02	0.26	/ksf GFA	
Data Processing Office	0.25	5.75	0.03	0.58	/ksf GFA	
Medical/Dental Office	3.00	1.50	3.00	1.50	/ksf GFA	
Bank Branch Office	3.00	1.60	2.00	1.60	/ksf GFA	

**Redding Downtown Core Area
Phase I - Current Conditions
Parking Demand**
September 14, 2018

9/13/2018

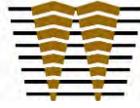
Table
Project: City of Redding Core Area Phase I - Current Conditions
Description: Shared Use Study

SHARED PARKING DEMAND SUMMARY

Land Use	Project Data Quantity Unit	PEAK MONTH: DECEMBER -- PEAK PERIOD: 2 PM, WEEKDAY										Weekend				Weekend			
		Weekday					Non-Captive					Weekday		Weekend		Weekend		Weekend	
		Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 2 PM	Peak Mo Adj December	Estimated Parking Demand	Peak Hr Adj 1 PM	Peak Mo Adj December	Estimated Parking Demand		
Retail Employee	90,435 sf GLA	2.00	0.90	1.00	1.80	/ksf GLA	3.20	0.90	1.00	2.88	/ksf GLA	1.00	0.56	163	0.95	1.00	247		
Fine/Casual Restaurant Employee	25,000 sf GLA	8.39	0.90	0.80	6.04	/ksf GLA	9.35	0.90	0.90	7.57	/ksf GLA	0.80	0.85	35	0.55	1.00	58		
Family Restaurant Employee	31,500 sf GLA	4.95	0.80	0.75	2.97	/ksf GLA	7.01	0.80	0.90	5.05	/ksf GLA	0.90	0.85	98	0.75	1.00	104		
Fast Food Restaurant Employee	5,000 sf GLA	7.01	0.80	0.70	3.93	/ksf GLA	6.60	0.80	0.90	4.75	/ksf GLA	0.90	0.85	27	0.85	1.00	25		
Theater Employee	1,000 seats	0.00	0.90	1.00	0.00	/seat	0.26	0.90	1.00	0.21	/seat	0.55	0.27	0	0.45	0.67	63		
Office >500 ksf Employee	520,920 sf GLA	0.18	0.95	1.00	0.17	/ksf GLA	0.02	0.95	1.00	0.02	/ksf GLA	1.00	0.50	0	0.60	0.80	4		
		2.34	0.80	1.00	1.87	/ksf GLA	0.26	1.00	1.00	0.26	/ksf GLA	1.00	1.00	975	0.80	1.00	8		
ULL base data have been modified from default values.												Customer Employee Reserved Total	413	Customer Employee Reserved Total	581				
												Customer Employee Reserved Total	1063	Customer Employee Reserved Total	230				
												Customer Employee Reserved Total	0	Customer Employee Reserved Total	0				
												Customer Employee Reserved Total	1476	Customer Employee Reserved Total	811				

Shared Parking Reduction 41%

68%



ATTACHMENT E – CORE AREA PHASE II – SHORT TERM FORECAST

**Redding Downtown Core Area
Phase II - Short Term Forecast
Parking Demand**
September 14, 2018

Projected Parking Supply: 2543		Max Parking Spaces						Mode Adjustment						Noncaptivity Ratio					
		Quantity	Weekday	Weekend	Weekday	Weekend	Weekend	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend		
Retail	73,481 sf GLA	213	235	90%	95%	90%	90%	95%	80%	80%	90%	95%	100%	100%	100%	100%			
Employee		51	59	80%	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%			
Fine/Casual Restaurant	30,000 sf GLA	458	510	90%	95%	90%	90%	95%	80%	80%	90%	95%	100%	100%	100%	100%			
Employee		83	90	80%	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%			
Family Restaurant	40,500 sf GLA	365	516	80%	90%	80%	80%	90%	80%	80%	80%	90%	75%	75%	90%	90%			
Employee		61	91	80%	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%			
Fast Food Restaurant	5,000 sf GLA	64	60	80%	80%	80%	80%	90%	80%	80%	80%	90%	70%	75%	90%	90%			
Employee		11	10	80%	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%			
Theater	1,000 seats	190	260	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%			
Employee		10	10	80%	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%			
Office >500 ksf	520,920 sf GLA	104	10	95%	100%	95%	95%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Employee		1354	135	80%	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%			
Subtotal Customer/Guest Spaces		1394	1591																
Subtotal Employee/Resident Spaces		1570	395																
Subtotal Reserved Spaces		0	0																
Total Parking Spaces		2964	1986																

Redding Downtown Core Area Phase II - Short Term Forecast Parking Demand

September 14, 2018

Recommended Parking Ratios						
Spaces required per unit land use						
Land Use	Weekday		Weekend		Unit	
	Visitor	Employee	Visitor	Employee	Visitor	Employee
Retail	2.90	0.70	3.20	0.80	3.20	0.80
Regional Shopping Center (400 to 600 ksf)	Linear 2.9<x<3.2					
Super Regional Shopping Center (>600 ksf)	3.20	0.80	3.60	0.90	3.60	0.90
Fine/Casual Restaurant	15.25	2.75	17.00	3.00	17.00	3.00
Family Restaurant	9.00	1.50	12.75	2.25	12.75	2.25
Fast Food Restaurant	12.75	2.25	12.00	2.00	12.00	2.00
Nightclub	15.25	1.25	17.50	1.50	17.50	1.50
Theater	0.19	0.01	0.26	0.01	0.26	0.01
Performing Arts Theater	0.30	0.07	0.33	0.07	0.33	0.07
Arena	0.27	0.03	0.30	0.03	0.30	0.03
Pro Football Stadium	0.30	0.01	0.30	0.01	0.30	0.01
Pro Baseball Stadium	0.31	0.01	0.34	0.01	0.34	0.01
Gym	6.60	0.40	5.50	0.25	5.50	0.25
Convention Center	5.50	0.50	5.50	0.50	5.50	0.50
Hotel-Business	1.00	0.25	0.90	0.18	0.90	0.18
Motel	1.00	0.25	1.00	0.18	1.00	0.18
Restaurant/Lounge	10.00		10.00		10.00	
Conference Ctr/Banquet (20 to 50 sq ft/guest room)	30.00		30.00		30.00	
Convention Space (>50 sq ft/guest room)	20.00		10.00		10.00	
Residential, Rental, Shared Spaces *	0.15	1.50	0.15	1.50	0.15	1.50
Residential, Owned, Shared Spaces *	0.15	1.7	0.15	1.7	0.15	1.7
Office <25 ksf	0.30	3.5	0.03	0.35	0.03	0.35
Office 100 to 500 ksf						
Office 100 to 500 ksf	Linear 0.25<x<0.2					
Office >500 ksf	0.20	2.60	0.02	0.26	0.02	0.26
Data Processing Office	0.25	5.75	0.03	0.58	0.03	0.58
Medical/Dental Office	3.00	1.50	3.00	1.50	3.00	1.50
Bank Branch Office	3.00	1.60	2.00	1.60	2.00	1.60

**Redding Downtown Core Area
Phase II - Short Term Forecast
Parking Demand**
September 14, 2018

Table
Project: City of Redding Core Area Phase II - Short Term Forecast
Description: Shared Use Study

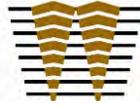
9/13/2018

SHARED PARKING DEMAND SUMMARY

Land Use	Project Data Quantity Unit	PEAK MONTH: DECEMBER -- PEAK PERIOD: 2 PM, WEEKDAY										Weekend					
		Weekday					Non-Captive Ratio					Weekday		Weekend			
		Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 2 PM	Peak Mo Adj December	Estimated Parking Demand	Peak Hr Adj 7 PM	Peak Mo Adj December	Estimated Parking Demand
Retail Employee	73,481 sf GLA	2.90	0.90	1.00	2.61	/ksf GLA	3.20	0.95	1.00	3.04	/ksf GLA	1.00	0.56	192	0.75	1.00	167
Fine/Casual Restaurant Employee	30,000 sf GLA	0.70	0.80	1.00	0.56	/ksf GLA	0.80	0.80	1.00	0.64	/ksf GLA	1.00	0.80	41	0.80	1.00	38
Family Restaurant Employee	40,500 sf GLA	15.25	0.90	0.80	10.98	/ksf GLA	17.00	0.95	0.90	14.54	/ksf GLA	0.65	0.85	214	0.95	1.00	414
Fast Food Restaurant Employee	5,000 sf GLA	2.75	0.80	1.00	2.20	/ksf GLA	3.00	0.80	1.00	2.40	/ksf GLA	0.90	0.95	60	1.00	1.00	72
Theater Employee	1,000 seats	9.00	0.80	0.75	5.40	/ksf GLA	12.75	0.90	0.90	10.33	/ksf GLA	0.50	0.85	110	0.70	1.00	293
Office >500 ksf Employee	520,920 sf GLA	1.50	0.80	1.00	1.20	/ksf GLA	2.25	0.80	1.00	1.80	/ksf GLA	1.00	0.95	49	0.95	1.00	69
		12.75	0.80	0.70	7.14	/ksf GLA	12.00	0.90	0.90	9.72	/ksf GLA	0.90	0.85	32	0.80	1.00	39
		2.25	0.80	1.00	1.80	/ksf GLA	2.00	0.80	1.00	1.60	/ksf GLA	0.95	0.95	8	0.90	1.00	7
		0.19	0.90	0.90	0.15	/seat	0.26	0.90	0.90	0.21	/seat	0.55	0.27	19	0.80	0.67	113
		0.01	0.80	1.00	0.01	/seat	0.01	0.80	1.00	0.01	/seat	0.60	0.50	2	1.00	0.80	6
		0.01	0.95	1.00	0.19	/ksf GLA	0.02	1.00	1.00	0.02	/ksf GLA	1.00	1.00	99	0.00	1.00	0
		2.60	0.80	1.00	2.08	/ksf GLA	0.26	1.00	1.00	0.26	/ksf GLA	1.00	1.00	1,083	0.00	1.00	0
ULL base data have been modified from default values.																	
											Customer Employee Reserved Total	666	1243	0	1909	Customer Employee Reserved Total	1026
																	192
																	0
																	1218

Shared Parking Reduction 42%

63%



ATTACHMENT F – CORE AREA PHASE III – LONG TERM FORECAST

**Redding Downtown Core Area
Phase III - Long Term Forecast
Parking Demand**
September 14, 2018

Projected Parking Supply: 2543		Max Parking Spaces						Mode Adjustment						Noncaptivity Ratio					
		Quantity	Weekday	Weekend	Daytime	Evening	Weekend	Daytime	Evening	Weekday	Daytime	Evening	Weekend	Daytime	Evening	Weekday	Daytime	Evening	Weekend
Retail	84,866 sf GLA	246	272	90%	95%	90%	95%	80%	80%	90%	95%	100%	100%	100%	100%	100%	100%	100%	
Employee		59	68	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	
Fine/Casual Restaurant	35,000 sf GLA	534	595	90%	95%	90%	95%	80%	80%	90%	95%	100%	100%	100%	100%	100%	100%	100%	
Employee		96	105	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	
Family Restaurant	45,000 sf GLA	405	574	80%	90%	80%	90%	80%	80%	80%	90%	75%	75%	100%	100%	100%	100%	100%	
Employee		68	101	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	
Fast Food Restaurant	5,000 sf GLA	64	60	80%	90%	80%	90%	80%	80%	80%	90%	70%	70%	100%	100%	100%	100%	100%	
Employee		11	10	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	
Theater	1,000 seats	190	260	90%	90%	90%	90%	80%	80%	90%	90%	90%	90%	90%	90%	90%	90%	90%	
Employee		10	10	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	
Office >500 ksf	492,420 sf GLA	98	10	95%	100%	95%	100%	100%	100%	95%	100%	100%	100%	100%	100%	100%	100%	100%	
Employee		1280	128	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	
Subtotal Customer/Guest Spaces		1537	1771																
Subtotal Employee/Resident Spaces		1524	422																
Subtotal Reserved Spaces		0	0																
Total Parking Spaces		3061	2193																

Redding Downtown Core Area Phase III - Long Term Forecast Parking Demand

September 14, 2018

Recommended Parking Ratios						
Spaces required per unit land use						
Land Use	Weekday		Weekend		Unit	
	Visitor	Employee	Visitor	Employee		
Retail	2.90	0.70	3.20	0.80	/ksf GLA	
Regional Shopping Center (400 to 600 ksf)	Linear 2.9<x<3.2				/ksf GLA	
Super Regional Shopping Center (>600 ksf)	3.20	0.80	3.60	0.90	/ksf GLA	
Fine/Casual Restaurant	15.25	2.75	17.00	3.00	/ksf GLA	
Family Restaurant	9.00	1.50	12.75	2.25	/ksf GLA	
Fast Food Restaurant	12.75	2.25	12.00	2.00	/ksf GLA	
Nightclub	15.25	1.25	17.50	1.50	/ksf GLA	
Theater	0.19	0.01	0.26	0.01	/seat	
Performing Arts Theater	0.30	0.07	0.33	0.07	/seat	
Arena	0.27	0.03	0.30	0.03	/seat	
Pro Football Stadium	0.30	0.01	0.30	0.01	/seat	
Pro Baseball Stadium	0.31	0.01	0.34	0.01	/seat	
Gym	6.60	0.40	5.50	0.25	/ksf GFA	
Convention Center	5.50	0.50	5.50	0.50	/ksf GLA	
Hotel-Business	1.00	0.25	0.90	0.18	/room	
Motel	1.00	0.25	1.00	0.18	/room	
Restaurant/Lounge	10.00		10.00		/ksf GLA	
Conference Ctr/Banquet (20 to 50 sq ft/guest room)	30.00		30.00		/ksf GLA	
Convention Space (>50 sq ft/guest room)	20.00		10.00		/ksf GLA	
Residential, Rental, Shared Spaces *	0.15	1.50	0.15	1.50	/unit	
Residential, Owned, Shared Spaces *	0.15	1.7	0.15	1.7	/unit	
Office <25 ksf	0.30	3.5	0.03	0.35	/ksf GFA	
Office 100 to 500 ksf					/ksf GFA	
Office 100 to 500 ksf	Linear 0.25<x<0.2				/ksf GFA	
Office >500 ksf	0.20	2.60	0.02	0.26	/ksf GFA	
Data Processing Office	0.25	5.75	0.03	0.58	/ksf GFA	
Medical/Dental Office	3.00	1.50	3.00	1.50	/ksf GFA	
Bank Branch Office	3.00	1.60	2.00	1.60	/ksf GFA	

**Redding Downtown Core Area
Phase III - Long Term Forecast
Parking Demand**
September 14, 2018

Table
Project: City of Redding Core Area Phase III - Long Term Forecast
Description: Shared Use Study

9/13/2018

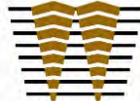
SHARED PARKING DEMAND SUMMARY

Land Use	Project Data Quantity Unit	PEAK MONTH: DECEMBER -- PEAK PERIOD: 2 PM, WEEKDAY										Weekend				Weekend				
		Weekday					Non-Captive					Weekday		Weekend		Weekend		Weekend		
		Base Rate	Mode Adj	Non- Captive Ratio	Project Rate	Unit	Base Rate	Mode Adj	Non- Captive Ratio	Project Rate	Unit	Peak Hr Adj	2 PM	Peak Hr Adj	7 PM	Estimated Parking Demand	Peak Mo Adj	December	Estimated Parking Demand	Peak Mo Adj
Retail Employee	84,866 sf GLA	2.90	0.90	1.00	2.61	/ksf GLA	3.20	0.95	1.00	3.04	/ksf GLA	1.00	0.75	221	1.00	1.00	194	1.00	1.00	44
Fine/Casual Restaurant Employee	35,000 sf GLA	15.25	0.90	0.80	10.98	/ksf GLA	17.00	0.95	0.90	14.54	/ksf GLA	0.65	0.85	250	0.85	1.00	483	0.85	1.00	84
Family Restaurant Employee	45,000 sf GLA	9.00	0.80	0.75	5.40	/ksf GLA	12.75	0.90	0.90	10.33	/ksf GLA	0.50	0.85	69	0.95	1.00	325	0.70	1.00	77
Fast Food Restaurant Employee	5,000 sf GLA	12.75	0.80	0.70	7.14	/ksf GLA	12.00	0.90	0.90	9.72	/ksf GLA	0.90	0.85	32	0.85	1.00	39	0.80	1.00	7
Theater Employee	1,000 seats	2.25	0.80	1.00	1.80	/seat	2.00	0.80	1.00	1.60	/ksf GLA	0.95	0.27	8	0.95	1.00	7	0.90	1.00	6
Office >500 ksf Employee	492,420 sf GLA	0.01	0.80	1.00	0.01	/seat	0.01	0.80	1.00	0.01	/seat	0.60	0.50	2	0.50	1.00	0	1.00	1.00	0
		2.60	0.80	1.00	2.08	/ksf GLA	0.26	1.00	1.00	0.02	/ksf GLA	1.00	1.00	93	1.00	1.00	0	0.00	1.00	0
												Customer Employee Reserved Total		737	Customer Employee Reserved Total		1154			218
														1204			0			1372

ULLI base data have been modified from default values.

Shared Parking Reduction 44%

60%



ATTACHMENT G - STRATEGY AREA PHASE I – CURRENT CONDITIONS

Redding Downtown Strategy Area
Phase I - Current Conditions
Parking Demand
 September 14, 2018

Projected Parking Supply: 4598		Mode Adjustment						Noncaptivity Ratio					
		Weekday			Weekend			Weekday			Weekend		
Land Use	Quantity	Weekday	Weekend	Daytime	Evening	Daytime	Evening	Daytime	Evening	Daytime	Evening	Daytime	Evening
Retail	144,125 sf GLA	288	461	90%	95%	90%	95%	100%	100%	100%	100%	100%	100%
Employee		70	115	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%
Fine/Casual Restaurant	32,500 sf GLA	273	304	90%	95%	90%	95%	80%	80%	90%	90%	90%	90%
Employee		49	54	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%
Family Restaurant	47,250 sf GLA	234	331	80%	90%	80%	90%	75%	75%	90%	90%	90%	90%
Employee		39	59	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%
Fast Food Restaurant	15,000 sf GLA	105	99	80%	90%	80%	90%	70%	75%	90%	90%	90%	90%
Employee		19	15	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%
Theater	1,000 seats	0	260	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Employee		2	10	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%
Office >500 ksf	819,000 sf GLA	144	16	95%	100%	95%	100%	100%	100%	100%	100%	100%	100%
Employee		1916	213	80%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Subtotal Customer/Guest Spaces		1044	1471										
Subtotal Employee/Resident Spaces		2095	466										
Subtotal Reserved Spaces		0	0										
Total Parking Spaces		3139	1937										

**Redding Downtown Strategy Area
Phase I - Current Conditions
Parking Demand**
September 14, 2018

Recommended Parking Ratios						
Project: City of Redding Strategy Area Phase I - Current Conditions						
Land Use	Weekday		Weekend		Unit	
	Visitor	Employee	Visitor	Employee		
Retail	2.00	0.49	3.20	0.80	/ksf GLA	
Regional Shopping Center (400 to 600 ksf)	Linear 2.9<x<3.2					
Super Regional Shopping Center (>600 ksf)	3.20	0.80	3.60	0.90	/ksf GLA	
Fine/Casual Restaurant	8.39	1.51	9.35	1.65	/ksf GLA	
Family Restaurant	4.95	0.83	7.01	1.24	/ksf GLA	
Fast Food Restaurant	7.01	1.24	6.60	1.00	/ksf GLA	
Nightclub	15.25	1.25	17.50	1.50	/ksf GLA	
Theater	0.00	0.00	0.26	0.01	/seat	
Performing Arts Theater	0.30	0.07	0.33	0.07	/seat	
Arena	0.27	0.03	0.30	0.03	/seat	
Pro Football Stadium	0.30	0.01	0.30	0.01	/seat	
Pro Baseball Stadium	0.31	0.01	0.34	0.01	/seat	
Gym	6.60	0.40	5.50	0.25	/ksf GFA	
Convention Center	5.50	0.50	5.50	0.50	/ksf GLA	
Hotel-Business	1.00	0.25	0.90	0.18	/room	
Motel	1.00	0.25	1.00	0.18	/room	
Restaurant/Lounge	10.00		10.00		/ksf GLA	
Conference Ctr/Banquet (20 to 50 sq ft/guest room)	30.00		30.00		/ksf GLA	
Convention Space (>50 sq ft/guest room)	20.00		10.00		/ksf GLA	
Residential, Rental, Shared Spaces *	0.15	1.50	0.15	1.50	/unit	
Residential, Owned, Shared Spaces *	0.15	1.7	0.15	1.7	/unit	
Office <25 ksf	0.30	3.5	0.03	0.35	/ksf GFA	
Office 100 to 500 ksf					/ksf GFA	
Office 100 to 500 ksf	Linear 0.25<x<0.2					
Office >500 ksf	0.18	2.34	0.02	0.26	/ksf GFA	
Data Processing Office	0.25	5.75	0.03	0.58	/ksf GFA	
Medical/Dental Office	3.00	1.50	3.00	1.50	/ksf GFA	
Bank Branch Office	3.00	1.60	2.00	1.60	/ksf GFA	

**Redding Downtown Strategy Area
Phase I - Current Conditions
Parking Demand**
September 14, 2018

9/13/2018

Table
Project: City of Redding Strategy Area Phase I - Current Conditions
Description: Shared Use Study

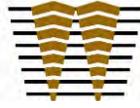
SHARED PARKING DEMAND SUMMARY

4598

Land Use	Project Data Quantity Unit	Weekday				Weekend				Weekday				Weekend			
		Base Rate	Mode Adj	Non- Captive Ratio	Project Rate	Unit	Base Rate	Mode Adj	Non- Captive Ratio	Project Rate	Unit	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand
Retail Employee	144,125 sf GLA	2.00	0.90	1.00	1.80	/ksf GLA	3.20	0.90	1.00	2.88	/ksf GLA	1.00	0.56	259	0.95	1.00	394
Fine/Casual Restaurant Employee	32,500 sf GLA	8.39	0.90	0.80	6.04	/ksf GLA	9.35	0.90	0.90	7.57	/ksf GLA	0.65	0.85	128	0.55	1.00	135
Family Restaurant Employee	47,250 sf GLA	1.51	0.80	1.00	1.21	/ksf GLA	1.65	0.80	1.00	1.32	/ksf GLA	0.90	0.95	35	0.75	1.00	32
Fast Food Restaurant Employee	15,000 sf GLA	4.95	0.80	0.75	2.97	/ksf GLA	7.01	0.80	0.90	5.05	/ksf GLA	0.50	0.85	70	0.85	1.00	203
Theater Employee	1,000 seats	0.83	0.80	1.00	0.66	/ksf GLA	1.24	0.80	1.00	0.99	/ksf GLA	1.00	0.95	31	1.00	1.00	47
Office >500 ksf Employee	819,000 sf GLA	7.01	0.80	0.70	3.93	/ksf GLA	6.60	0.80	0.90	4.75	/ksf GLA	0.90	0.85	53	1.00	1.00	71
		1.24	0.80	1.00	0.99	/ksf GLA	1.00	0.80	1.00	0.80	/ksf GLA	0.95	0.95	14	1.00	1.00	12
		0.00	0.90	1.00	0.00	/seat	0.26	0.90	1.00	0.21	/seat	0.55	0.27	0	0.45	0.67	63
		0.00	0.80	1.00	0.00	/seat	0.01	0.80	1.00	0.01	/seat	0.60	0.50	0	0.60	0.80	4
		0.18	0.95	1.00	0.17	/ksf GLA	0.02	0.95	1.00	0.02	/ksf GLA	1.00	1.00	137	0.80	1.00	12
		2.34	0.80	1.00	1.87	/ksf GLA	0.26	1.00	1.00	0.26	/ksf GLA	1.00	1.00	1,533	0.80	1.00	170
ULI base data have been modified from default values.																	
											Customer Employee Reserved Total		647 1669 0 2316	Customer Employee Reserved Total		878 357 0 1235	

Shared Parking Reduction 39%

67%



ATTACHMENT H – STRATEGY AREA PHASE II – SHORT TERM FORECAST

**Redding Downtown Strategy Area
Phase II - Short Term Forecast
Parking Demand**
September 14, 2018

Projected Parking Supply: 4598		Max Parking Spaces						Mode Adjustment						Noncaptivity Ratio					
		Quantity	Weekday	Weekend	Daytime	Evening	Weekend	Daytime	Evening	Daytime	Evening	Daytime	Evening	Daytime	Evening	Daytime	Evening		
Retail	144,125 sf GLA	418	461	90%	95%	90%	95%	80%	80%	90%	95%	100%	100%	100%	100%	100%			
Employee		101	115	80%	80%	80%	80%	90%	80%	80%	80%	100%	100%	100%	100%	100%			
Fine/Casual Restaurant	37,500 sf GLA	572	638	90%	95%	90%	95%	80%	80%	90%	95%	100%	100%	100%	100%	100%			
Employee		103	113	80%	80%	80%	80%	90%	80%	80%	80%	100%	100%	100%	100%	100%			
Family Restaurant	56,500 sf GLA	509	720	80%	90%	80%	90%	80%	80%	80%	90%	75%	75%	90%	90%	90%			
Employee		85	127	80%	80%	80%	80%	90%	80%	80%	80%	100%	100%	100%	100%	100%			
Fast Food Restaurant	15,000 sf GLA	191	180	80%	90%	80%	90%	80%	80%	80%	80%	70%	70%	90%	90%	90%			
Employee		34	30	80%	80%	80%	80%	90%	80%	80%	80%	100%	100%	100%	100%	100%			
Theater	1,000 seats	190	260	90%	90%	90%	90%	80%	80%	80%	90%	90%	90%	90%	90%	90%			
Employee		10	10	80%	80%	80%	80%	95%	100%	100%	100%	100%	100%	100%	100%	100%			
Office >500 ksf	819,000 sf GLA	164	16	95%	100%	80%	95%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Employee		2129	213	80%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Subtotal Customer/Guest Spaces		2044	2275																
Subtotal Employee/Resident Spaces		2462	608																
Subtotal Reserved Spaces		0	0																
Total Parking Spaces		4506	2883																

**Redding Downtown Strategy Area
Phase II - Short Term Forecast
Parking Demand**
September 14, 2018

Recommended Parking Ratios						
Project: City of Redding Strategy Area Phase I - Current Conditions						
Land Use	Weekday		Weekend		Unit	
	Visitor	Employee	Visitor	Employee		
Retail	2.90	0.70	3.20	0.80	/ksf GLA	
Regional Shopping Center (400 to 600 ksf)	Linear 2.9<x<3.2				/ksf GLA	
Super Regional Shopping Center (>600 ksf)	3.20	0.80	3.60	0.90	/ksf GLA	
Fine/Casual Restaurant	15.25	2.75	17.00	3.00	/ksf GLA	
Family Restaurant	9.00	1.50	12.75	2.25	/ksf GLA	
Fast Food Restaurant	12.75	2.25	12.00	2.00	/ksf GLA	
Nightclub	15.25	1.25	17.50	1.50	/ksf GLA	
Theater	0.19	0.01	0.26	0.01	/seat	
Performing Arts Theater	0.30	0.07	0.33	0.07	/seat	
Arena	0.27	0.03	0.30	0.03	/seat	
Pro Football Stadium	0.30	0.01	0.30	0.01	/seat	
Pro Baseball Stadium	0.31	0.01	0.34	0.01	/seat	
Gym	37500.00	0.40	5.50	0.25	/ksf GFA	
Convention Center	5.50	0.50	5.50	0.50	/ksf GLA	
Hotel-Business	56500.00	0.25	0.90	0.18	/room	
Motel	1.00	0.25	1.00	0.18	/room	
Restaurant/Lounge	10.00		10.00		/ksf GLA	
Conference Ctr/Banquet (20 to 50 sq ft/guest room)	30.00		30.00		/ksf GLA	
Convention Space (>50 sq ft/guest room)	20.00		10.00		/ksf GLA	
Residential, Rental, Shared Spaces *	0.15	1.50	0.15	1.50	/unit	
Residential, Owned, Shared Spaces *	0.15	1.7	0.15	1.7	/unit	
Office <25 ksf	0.30	3.5	0.03	0.35	/ksf GFA	
Office 100 to 500 ksf					/ksf GFA	
Office 100 to 500 ksf	Linear 0.25<x<0.2				/ksf GFA	
Office >500 ksf	0.20	2.60	0.02	0.26	/ksf GFA	
Data Processing Office	0.25	5.75	0.03	0.58	/ksf GFA	
Medical/Dental Office	3.00	1.50	3.00	1.50	/ksf GFA	
Bank Branch Office	3.00	1.60	2.00	1.60	/ksf GFA	

**Redding Downtown Strategy Area
Phase II - Short Term Forecast
Parking Demand**
September 14, 2018

Table
Project: City of Redding Strategy Area Phase II - Short Term Forecast
Description: Shared Use Study

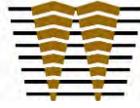
9/13/2018

**SHARED PARKING DEMAND SUMMARY
PEAK MONTH: DECEMBER -- PEAK PERIOD: 2 PM, WEEKDAY**

Land Use	Project Data Quantity Unit	Weekday				Weekend				Weekday		Weekend		Estimated Parking Demand
		Base Rate	Mode Adj	Non- Captive Ratio	Project Rate	Unit	Base Rate	Mode Adj	Non- Captive Ratio	Project Rate	Unit	Peak Hr Adj 2 PM	Peak Mo Adj December	
Retail Employee	144,125 sf GLA	2.90	0.90	1.00	2.61	/ksf GLA	3.20	0.90	1.00	2.88	/ksf GLA	1.00	1.00	376
Employee	56500	0.70	0.80	1.00	0.56	/ksf GLA	0.80	0.80	1.00	0.64	/ksf GLA	1.00	1.00	81
Employee	37,500 sf GLA	15.25	0.90	0.80	10.98	/ksf GLA	17.00	0.90	0.90	13.77	/ksf GLA	0.65	0.85	268
Family Restaurant	56,500 sf GLA	2.75	0.80	1.00	2.20	/ksf GLA	3.00	0.80	1.00	2.40	/ksf GLA	0.90	0.95	74
Employee		9.00	0.80	0.75	5.40	/ksf GLA	12.75	0.80	0.90	9.18	/ksf GLA	0.50	0.85	153
Fast Food Restaurant	15,000 sf GLA	1.50	0.80	1.00	1.20	/ksf GLA	2.25	0.80	1.00	1.80	/ksf GLA	1.00	1.00	68
Employee		12.75	0.80	0.70	7.14	/ksf GLA	12.00	0.80	0.90	8.64	/ksf GLA	0.90	0.85	96
Theater	1,000 seats	2.25	0.80	1.00	1.80	/ksf GLA	2.00	0.80	1.00	1.60	/ksf GLA	0.95	0.95	26
Employee		0.19	0.90	0.90	0.15	/seat	0.26	0.90	0.90	0.21	/seat	0.55	0.27	19
Office >500 ksf	819,000 sf GLA	0.01	0.80	1.00	0.01	/seat	0.01	0.80	1.00	0.01	/seat	0.60	0.50	2
Employee		0.20	0.95	1.00	0.19	/ksf GLA	0.02	0.95	1.00	0.02	/ksf GLA	1.00	1.00	156
		2.60	0.80	1.00	2.08	/ksf GLA	0.26	1.00	1.00	0.26	/ksf GLA	1.00	1.00	1,703
ULI base data have been modified from default values.														
											Customer Employee Reserved Total			1068 1954 0 3022
											Customer Employee Reserved Total			1324 460 0 1784

Shared Parking Reduction 39%

64%



ATTACHMENT I – STRATEGY AREA PHASE III – LONG TERM FORECAST

**Redding Downtown Strategy Area
Phase III - Long Term Forecast
Parking Demand**
September 14, 2018

Projected Parking Supply: 4598		Mode Adjustment						Noncaptivity Ratio					
		Weekday			Weekend			Weekday			Weekend		
Land Use	Quantity	Weekday	Weekend	Daytime	Evening	Daytime	Evening	Daytime	Evening	Daytime	Evening	Daytime	Evening
Retail	163,225 sf GLA	473	522	90%	95%	90%	95%	100%	100%	100%	100%	100%	100%
Employee		114	131	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%
Fine/Casual Restaurant	42,500 sf GLA	648	723	90%	95%	90%	95%	80%	80%	90%	90%	90%	90%
Employee		117	128	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%
Family Restaurant	65,500 sf GLA	590	835	80%	90%	80%	90%	75%	75%	90%	90%	90%	90%
Employee		98	147	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%
Fast Food Restaurant	19,000 sf GLA	242	228	80%	90%	80%	90%	70%	75%	90%	90%	90%	90%
Employee		43	38	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%
Theater	1,000 seats	190	260	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Employee		10	10	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%
Office >500 ksf	812,500 sf GLA	163	16	95%	100%	95%	100%	100%	100%	100%	100%	100%	100%
Employee		2113	211	80%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Subtotal Customer/Guest Spaces		2306	2584										
Subtotal Employee/Resident Spaces		2495	665										
Subtotal Reserved Spaces		0	0										
Total Parking Spaces		4801	3249										

**Redding Downtown Strategy Area
Phase III - Long Term Forecast
Parking Demand**
September 14, 2018

Recommended Parking Ratios						
Project: City of Redding Strategy Area Phase I - Current Conditions						
Land Use	Weekday		Weekend		Unit	
	Visitor	Employee	Visitor	Employee		
Retail	2.90	0.70	3.20	0.80	/ksf GLA	
Regional Shopping Center (400 to 600 ksf)	Linear 2.9<x<3.2				/ksf GLA	
Super Regional Shopping Center (>600 ksf)	3.20	0.80	3.60	0.90	/ksf GLA	
Fine/Casual Restaurant	15.25	2.75	17.00	3.00	/ksf GLA	
Family Restaurant	9.00	1.50	12.75	2.25	/ksf GLA	
Fast Food Restaurant	12.75	2.25	12.00	2.00	/ksf GLA	
Nightclub	16.32	2.50	17.50	1.50	/ksf GLA	
Theater	0.19	0.01	0.26	0.01	/seat	
Performing Arts Theater	0.30	0.07	0.33	0.07	/seat	
Arena	0.27	0.03	0.30	0.03	/seat	
Pro Football Stadium	0.30	0.01	0.30	0.01	/seat	
Pro Baseball Stadium	0.31	0.01	0.34	0.01	/seat	
Gym	37.50	0.40	5.50	0.25	/ksf GFA	
Convention Center	5.50	0.50	5.50	0.50	/ksf GLA	
Hotel-Business	56.50	0.25	0.90	0.18	/room	
Motel	1.00	0.25	1.00	0.18	/room	
Restaurant/Lounge	10.00		10.00		/ksf GLA	
Conference Ctr/Banquet (20 to 50 sq ft/guest room)	30.00		30.00		/ksf GLA	
Convention Space (>50 sq ft/guest room)	20.00		10.00		/ksf GLA	
Residential, Rental, Shared Spaces *	0.15	1.50	0.15	1.50	/unit	
Residential, Owned, Shared Spaces *	0.15	1.7	0.15	1.7	/unit	
Office <25 ksf	0.30	3.5	0.03	0.35	/ksf GFA	
Office 100 to 500 ksf					/ksf GFA	
Office 100 to 500 ksf	Linear 0.25<x<0.2				/ksf GFA	
Office >500 ksf	0.20	2.60	0.02	0.26	/ksf GFA	
Data Processing Office	0.25	5.75	0.03	0.58	/ksf GFA	
Medical/Dental Office	3.00	1.50	3.00	1.50	/ksf GFA	
Bank Branch Office	3.00	1.60	2.00	1.60	/ksf GFA	

Redding Downtown Strategy Area
Phase III - Long Term Forecast
Parking Demand
September 14, 2018

Table
Project: City of Redding Strategy Area Phase III - Long Term Forecast
Description: Shared Use Study

9/13/2018

SHARED PARKING DEMAND SUMMARY
PEAK MONTH: DECEMBER -- PEAK PERIOD: 2 PM, WEEKDAY

Land Use	163225	Project Data Quantity Unit	Weekday				Weekend				Unit	Project Rate	Non- Captive Ratio	Weekday			Weekend			Estimated Parking Demand
			Base Rate	Mode Adj	Non- Captive Ratio	Project Rate	Base Rate	Mode Adj	Non- Captive Ratio	Project Rate				Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand	
Retail		163,225 sf GLA	2.90	0.90	1.00	2.61	/ksf GLA	3.20	0.95	1.00	3.04	/ksf GLA	1.00	0.56	426	0.75	1.00	372		
Employee			0.70	0.80	1.00	0.56	/ksf GLA	0.80	0.80	1.00	0.64	/ksf GLA	1.00	0.80	91	0.80	1.00	84		
Fine/Casual Restaurant		42,500 sf GLA	15.25	0.90	0.80	10.98	/ksf GLA	17.00	0.95	0.90	14.54	/ksf GLA	0.65	0.85	303	0.95	1.00	587		
Employee			2.75	0.80	1.00	2.20	/ksf GLA	3.00	0.80	1.00	2.40	/ksf GLA	0.90	0.95	84	1.00	1.00	102		
Family Restaurant		65,500 sf GLA	9.00	0.80	0.75	5.40	/ksf GLA	12.75	0.90	0.90	10.33	/ksf GLA	0.50	0.85	177	0.70	1.00	473		
Employee			1.50	0.80	1.00	1.20	/ksf GLA	2.25	0.80	1.00	1.80	/ksf GLA	1.00	0.95	78	0.95	1.00	112		
Fast Food Restaurant		19,000 sf GLA	12.75	0.80	0.70	7.14	/ksf GLA	12.00	0.90	0.90	9.72	/ksf GLA	0.90	0.85	122	0.80	1.00	148		
Employee			2.25	0.80	1.00	1.80	/ksf GLA	2.00	0.80	1.00	1.60	/ksf GLA	0.95	0.95	33	0.90	1.00	27		
Theater		1,000 seats	0.19	0.90	0.90	0.15	/seat	0.26	0.90	0.90	0.21	/seat	0.55	0.27	19	1.00	0.67	113		
Employee			0.01	0.80	1.00	0.01	/seat	0.01	0.80	1.00	0.01	/seat	0.60	0.50	2	1.00	0.80	6		
Office >500 ksf		812,500 sf GLA	0.20	0.95	1.00	0.19	/ksf GLA	0.02	1.00	1.00	0.02	/ksf GLA	1.00	1.00	155	0.00	1.00	0		
Employee			2.60	0.80	1.00	2.08	/ksf GLA	0.26	1.00	1.00	0.26	/ksf GLA	1.00	1.00	1,890	0.00	1.00	0		
ULI base data have been modified from default values.																Customer Employee Reserved Total	1693			
																Customer Employee Reserved Total	331			
																Customer Employee Reserved Total	0			
																Customer Employee Reserved Total	2024			

Shared Parking Reduction 40%

62%