



# DEL RAY *Parking Study*

Prepared for:



Prepared by:



Kimley-Horn  
and Associates, Inc.

APRIL 2012



# DEL RAY Parking Study



## FINAL REPORT

# DEL RAY NEIGHBORHOOD PARKING STUDY

*Prepared for:*



**Department of Transportation & Environmental Services**

**301 King Street**

**Alexandria, VA 22314**

*Prepared by:*



**11400 Commerce Park Drive, Suite 400**

**Reston, Virginia 20191**

**April 2012**

# DEL RAY Parking Study



## Executive Summary

The purpose of the Del Ray Neighborhood Parking Study was to analyze the existing on- and off-street parking conditions in the Del Ray Neighborhood, build upon previous parking studies in Del Ray, and to identify recommendations to improve the parking system. The study area was mainly along Mount Vernon Avenue from Commonwealth Avenue/Clifford Avenue to Glendale Avenue. The study area also included one block of the side streets to the east and west of Mount Vernon Avenue. The following report is comprised of three chapters, as summarized below.

**Chapter 1** provides details of the existing conditions, which includes utilization for on- and off-street parking and turnover for on-street parking. The study process also involved input from the community. This chapter summarizes the feedback from business owner and resident representatives.

**Chapter 2** summarizes best management practices that can potentially be implemented in the Neighborhood to improve the parking system.

**Chapter 3** presents the recommendations. These recommendations are based on the deficiencies identified in Chapter 1 and the best management practices presented in Chapter 2.

## Parking Utilization

Parking data for on- and off-street spaces were collected in June 2010. The parking utilization analysis showed that on-street parking utilization was between 53 percent and 64 percent, indicating that on-street parking is available in the study area. The off-street parking utilizations ranged from 26 percent to 56 percent, indicating that off-street parking is also available throughout the study area. The utilization analyses showed that parking was available in the study area both on and off-street. However, this does not mean that parking spaces are available at desired locations. There were high demand areas with utilizations that exceed 85 percent both on- and off-street. Those areas were as follows:

### On-Street High Demand Areas

- Mount Vernon Avenue from Commonwealth Avenue to Bellefonte Avenue, with the exception of Custis Avenue to Windsor Avenue, at some point during all time periods
- Oxford Avenue from Clyde Avenue to Mount Vernon Avenue on Weekday evenings, and Saturdays
- Del Ray Avenue from Clyde Avenue to Dewitt Avenue on Saturday afternoons
- Custis Avenue from Mount Vernon Avenue to Dewitt Avenue on Saturdays

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- Windsor Avenue from Mount Vernon Avenue to Dewitt Avenue on weekday evenings
- Howell Avenue from Clyde Avenue to Dewitt Avenue on weekday evenings and Saturdays
- Bellefonte Avenue from Mount Vernon Avenue to Dewitt Avenue on Saturday evenings
- Alexandria Avenue from Ramsey Street to Mount Vernon Avenue on weekday afternoons
- Luray Avenue from Ramsey Street to Mount Vernon Avenue on weekday afternoons
- Luray Avenue from Mount Vernon Avenue to Dewitt Avenue on weekday evenings and Saturday evenings

## Off-Street High Demand Areas

- Residential Area (#1) on weekday evenings (88% occupancy)
- Curves Studio (#4) on Saturday evenings (90% occupancy)
- Natures Nibbles Pet Store (#5) on weekday evenings (89% occupancy)
- Department of Human Services (#6 and #7) on weekday afternoons (both at 100% occupancy)
- Library (#8) on weekday mornings (94% occupancy)
- Mount Vernon Community School (#9) on weekday afternoons (100% occupancy)
- All at Once Hair (#10) on Saturday afternoons (89% occupancy)
- Parking for DHS Employees (#11) on weekday afternoons and evenings (99% occupancy)
- Farmer's Market City Lot (#13) on weekday evenings and Saturday afternoons (109% occupancy)
- St Elmos (#15) on Saturday afternoons (93% occupancy)
- Vital (#18) on Saturday afternoons (100% occupancy)
- 7-11 (#20) on weekdays and Saturdays (113% occupancy)
- BodyMindSole, Artifacts, Elegant Nails, and Zumba/Ballet studio (#21) on weekday evenings and Saturday afternoons (100% occupancy)
- Christian Community Center (#22) on weekday evenings (106% occupancy)
- Evening Star/Majestic Lounge (#28) on weekday and Saturday evenings (109% occupancy)
- Behind Deli/Next to Residential (#45), on weekday afternoons (100% occupancy)
- Mancini's Café (#51) on weekday and Saturday afternoons (100% occupancy)

The following table summarizes on- and off-street utilization in the Del Ray Neighborhood.

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Category	Total Spaces	Weekday				Weekend			
		12 to 1pm	1 to 2pm	6 to 7pm	7 to 8pm	11 to 12pm	12 to 1pm	7 to 8pm	8 to 9pm
<b>Off-Street Parking Utilization</b>									
Overall <sup>1,2</sup>	630	55%	56%	43%	45%	39%	38%	26%	27%
Current Public Parking	19	63%	53%	100%	95%	50%	75%	74%	74%
Potential Shared Parking	487	56%	56%	41%	45%	39%	42%	26%	27%
Not Practical For Shared Parking	124	56%	60%	48%	45%	65%	54%	39%	44%
<b>On-Street Parking Utilization</b>									
Overall <sup>3</sup>	1,099	53%	54%	58%	63%	62%	61%	64%	63%
Mount Vernon Avenue Parking	270	61%	63%	70%	76%	70%	71%	70%	67%
Side Street Parking	829	51%	51%	55%	58%	59%	58%	62%	62%
<b>Overall Utilization</b>									
Entire System	1,729	54%	55%	53%	56%	56%	55%	52%	53%

<sup>1</sup> Overall off-street parking total space count does not include locations that are related to auto sales/service/fueling stations or are private-gated and not available to any public use.

<sup>2</sup> Utilization counts are based on observed locations from June 2010 inventory and occupancy field collection.

<sup>3</sup> Overall on-street count includes Mount Vernon Avenue and side street spaces

## Parking Turnover

The data collected in June 2010 was also used to analyze parking turnover for on-street spaces. The analysis concluded that vehicles, on average, were parked less than the two-hour time limit. However, there were a handful of vehicles that were parked for durations longer than the two-hour limit, indicating a need for changes to enforcement and/or management of the parking system.

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## Best Management Practices

Chapter 2 identified and discussed best management practices for shared parking, spillover mitigation, and implementation of paid parking. The chapter focuses on the purpose, implementation, and operation of each of these practices. In addition, case studies are provided related to shared parking in smaller communities with less parking assets and partnership opportunities.

## Recommendations

Recommendations were developed utilizing the previous studies recommendations as a baseline, utilizing findings from the occupancy and turnover analyses, as well as input from community stakeholders. The recommendations are divided into three categories: 1) Recommendations for immediate implementation, 2) General area recommendations, and 3) Recommendations for specific areas. Chapter 3 provides the recommended prioritization of all study recommendations.

### Immediate Recommendations

Immediate recommendations are actions that can be implemented in the short-term to improve the parking system. These recommendations are as follows:

- Addition of general parking (with the existing two hour time limits) along the northwest corner of Mount Vernon Avenue and Windsor Avenue.
- Implementing additional loading zones to support local business at various locations along Mount Vernon Avenue, north of Custis Avenue.
- Creating *Customer Convenience Zones*, which are intended to be short-term (an hour or less), high-turnover spaces to serve businesses with quick turnaround transactions
  - Two locations on the west side of Mount Vernon Avenue between Custis Avenue and Oxford Avenue
  - One location on the southwest corner of Mount Vernon Avenue and Howell Avenue
  - Two locations on the east side of Mount Vernon Avenue between Bellefonte Avenue and Windsor Avenue
  - In one location, these *Customer Convenience Zones* will be shared with loading zones to minimize general parking losses and to account for off-setting peaks between loading and parking needs. This shared zone is located at the northeast corner of Mount Vernon Avenue and Howell Avenue

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- Addition of residential permit zones in areas where parking utilization data dictates additional parking restrictions.
- Removal of some taxi stands to add general parking (this recommended approach occurs in very minimal areas).

Figure 3-1 in Chapter 3 illustrates the locations of these recommendations.

## General Area Recommendations

General area recommendations are recommendations that are applicable to the entire study area. These recommendations are appropriate for implementation in the medium or long-term planning horizon. The general area recommendations are as follows:

- Consistent enforcement of two-hour time limits
- Provide additional public parking capacity. Two possible methods that could be implemented include:
  - Shared parking arrangements - There is potential for implementing shared parking of the off-street lots due to the mixture of uses along Mount Vernon Avenue. Shared parking allows lots that are underutilized during certain times of the day to be opened up to increase supply and reduce overutilization in adjacent lots
  - Build new parking facilities (surface lots or parking garage) – This option is not recommended at this time since demands are not high enough to necessitate new lots or a garage. In the future, if demands change in the study area, this option could become feasible.
- Implement paid parking to balance utilization and turnover after the 85 percent occupancy threshold is eclipsed on a regular basis, especially during night and weekend peaks.
- Implement a wayfinding program that includes signage and branding of the area.
- Provide short-term parking to promote turnover and increase availability for customers that “run-in and run-out” of desired destinations.
- Provide sufficient loading zones and manage those zones with the following means:
  - Variable loading zones – loading zone times can vary along the corridor to cater to surrounding businesses.
  - Offset delivery peaks – designate loading zone times during off-peak hours such as the early morning or late evening. The appropriate time for loading will depend on the peaks of the surrounding land uses.

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- Customer Convenience Zones – these zones can be utilized as loading zones or for quick “run-in, run-out” parking for customers.
- Improve enforcement to promote turnover and accessibility by assigning an enforcement officer to cover the area.
- Improve the perception of parking through educational pamphlets that highlight parking facilities and rules, and with continued meetings of the Del Ray Neighborhood Community Parking Action Committee, which represents business owners and residents in the Neighborhood and can work towards identifying and resolving parking issues for the area.
- Funding for parking improvements could include collection from parking revenues if paid parking was implemented and revenues from increased enforcement.
- Remove parking requirements for new businesses (or redevelopment along the corridor) under certain threshold levels (e.g., less than 5,000 square-feet) to assist with the move to a shared parking program.

## Specific Area Recommendations

For the purpose making specific area recommendations, the study area was divided into four areas and recommendations were made that cater to the needs in those areas. The four specific areas and their respective recommendations are summarized below.

### *Commonwealth Avenue to Stewart Avenue*

1. Add Public Parking Capacity –additional capacity should be developed in this section and the section directly south (Stewart Avenue to Howell Avenue).  
  
SunTrust bank parking lot has evening utilization between 25-33%. The SunTrust lot already has a formal shared parking agreement in place with several businesses. The City should promote the use of this lot for general public use after hours, through the use of signage and general marketing  
  
The AGA lot has less than 30% utilization during evening and weekend peaks. The City should discuss sharing agreements with ownership of the AGA lot to allow for evening public parking.
2. Analyze residential parking on Mount Vernon Avenue between Randolph Avenue and Raymond Avenue –collect parking turnover data for this block segment. This information will indicate whether there is an existing problem with longer duration parking (related to apartment guests). If there is a problem, follow these steps:
  - a. Education and outreach – provide materials to residents/owners that indicate the appropriate places for guests to park (Randolph or SunTrust surface lot).

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- b. Strictly enforce two-hour time limit – to ensure that valuable Mount Vernon spaces remain available for short-term use, enforce 2-hour limit. Residential parking should be restricted to on-site spaces (underground garage).

## *Stewart Avenue to Howell Avenue*

1. Add Public Parking Capacity –
  - a. Surface Lots - the AGA lot has less than 30% capacity during evening and weekend peaks. The City should discuss sharing agreements with owners of the AGA lot to allow for evening public parking
2. Enforce two-hour time limit – while average durations in the segment were between 1-1.5 hours, there were numerous observations of parking durations exceeding 2-hours. Improvement should include educating employers where employees should park and monitoring on-street durations
3. Evaluate Residential Parking on Side Streets – collect turnover and resident mix data along side streets. Determine whether heavy weekend peaks represent spillover or residential parking. If the problem is spillover, poll the residents about a residential parking permit program. If utilization is residential parking, then parking isn't an issue in these areas.
4. Implement Paid Parking – the on-street parking along Mount Vernon Avenue should serve as the premier parking within the neighborhood. As parking begins to consistently exceed 85%, a move to paid parking should be considered.

## *Howell Avenue to Mason Avenue*

1. Add Public Parking Capacity – any additional parking should be recognized in the northern extents of this segment. The southern extents begin to transition into auto dealerships, which should not require additional off-street parking for service. Primary candidates include:
  - a. Private gated lot along Howell Avenue (22 spaces, utilization in the evenings and weekend of 0-4%)
  - b. Post Office parking lot (10 spaces, utilization in the evenings and weekend of 0-10%)
  - c. Salvation Army lot (33 spaces, utilization in the evenings and weekend of 18-42%) - *note: already shares some of its spaces with La Strada Restaurant and Osteria MCMIX in the evenings and weekends*

## *Mason Avenue to Glendale Avenue*

1. Evaluate Residential Parking on Side Streets – collect turnover and resident mix data along side streets. Determine whether high utilization periods represent

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- spillover or residential parking. If the problem is spillover, poll the residents about a residential parking permit program. If utilization is residential parking, then parking isn't an issue in these areas.
2. Extend residential permit parking to both sides of Mount Vernon Avenue – depending upon the results of the residential parking evaluation, it may be necessary to extend the permit parking to both sides, especially if commuters begin to use this area to access the adjacent rail station.
  3. Implement parking management recommendations consistent with the remainder of the Mount Vernon corridor – This area does not experience some of the same issues that the sections to the north do. This is primarily due to the differences in development type (auto dealership vs. restaurant/retail as an example). However, it is important that as parking management decisions are made (enforcement, paid parking, valet, etc.) that they be implemented consistently along the corridor.

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## Chapter 1 – Existing Conditions

### Introduction

The Del Ray neighborhood is anchored by Mount Vernon Avenue, which is home to an assortment of restaurant, retail, and office uses that serve both the neighborhood and the surrounding community. The street system in this area is largely a symmetric grid. Mount Vernon Avenue has on-street parking on both sides, which is currently only regulated by use (loading zone, handicap, bus, or regular) and time restriction (two hour weekday limits in most areas). Mount Vernon Avenue also has sidewalks on both sides and is served by city transit. Most of the residential streets throughout the Del Ray neighborhood have on-street parking on one side of the street.

The Del Ray Neighborhood and the immediately surrounding streets are populated with a mixture of uses, in which many of the owners and residents have various concerns about current parking conditions. To continue to support the area's business owners and residents, the City has undertaken an evaluation of the parking system to understand current conditions and ultimately develop strategies and implement measures to better manage parking within the neighborhood, especially along and immediately adjacent to Mount Vernon Avenue. The evaluation of the system and development of recommendations is advised by policies contained in the City's Master Plan, including the Comprehensive Transportation Master Plan and the 2005 Mount Vernon Avenue Business Area Plan.

This study report presents existing parking conditions and identifies recommendations that would improve parking conditions in the study area.

### Study Purpose

The study was performed to document existing public parking conditions in the Del Ray Neighborhood, compare to the previous parking studies, and to develop parking system recommendations to improve parking operations and address the continued concern of business owners and residents. The previous studies analyzed include:

- Parking Analysis of Mount Vernon Corridor (City of Alexandria, 2002) – referred to as the 2002 study
- Mount Vernon Parking Study (Kimley-Horn and Associates, 2003) – referred to as the 2003 study
- Mount Vernon Avenue Corridor Parking Demand Study (Kimley-Horn and Associates, 2004) – referred to as the 2004 study.

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This study contains the following:

- Detailed parking data that can be used in ongoing and future planning efforts, as well as future coordination with stakeholders as opportunities to implement new parking management policies are considered.
- Identification of existing parking issues within the Del Ray Neighborhood study area identified through data analysis and information provided by the City.
- Comparison of the 2010 parking conditions with the 2004 study parking conditions.
- Recommendations to minimize concerns, better manage the parking system, and better provide customer and residential service throughout the area.
- Recommendations for implementing possible measures to resolve parking system issues.

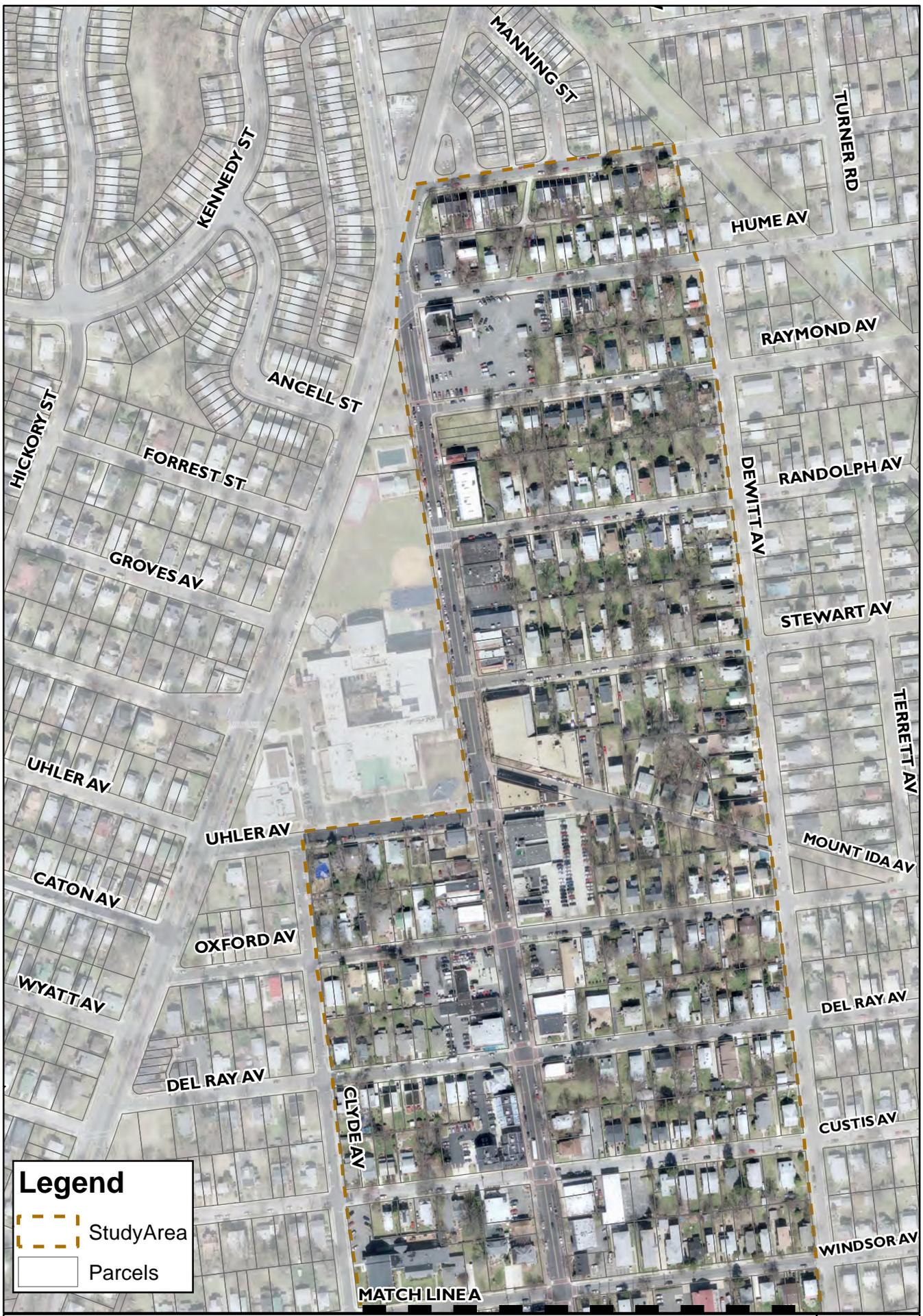
## Study Area

The study area consisted of approximately 30 city blocks and is bordered by Commonwealth Avenue to the north, East Glendale Avenue to the south, and one block to both the east and west of Mount Vernon Avenue. The Del Ray Neighborhood project study area is shown in Figure 1-1, Study Area.

## Area Land Use and Development

The buildings in this area consist of a wide range of uses including retail shops, restaurants, offices, institutional uses, and residences. Most of the commercial and office space is found along Mount Vernon Avenue, with most of the buildings along the corridor oriented parallel to the street with doors that open to sidewalks and the street. This pattern calls for most of the surface parking to be found in the rear of the building. Most businesses are also served by on-street parking along Mount Vernon Avenue and overflow parking along the side streets (entering the neighborhood areas).

The land uses found along Mount Vernon Avenue vary by section, and include a mix of retail, restaurant, office, and residential use. The northern section of Mount Vernon Avenue (north of Bellefonte Avenue) is primarily small boutique retail shops, family restaurants, coffee shops, and small office uses. Mount Vernon Community School is located at the northernmost point along the corridor. The southern section of the corridor (south of Bellefonte Avenue) contains businesses with larger footprints, including auto dealerships, home renovation stores, and service stations. George Washington Middle School is located just south of the southernmost boundary of the study area. East and west of the corridor, along the area side streets, are single family residences.



**Legend**

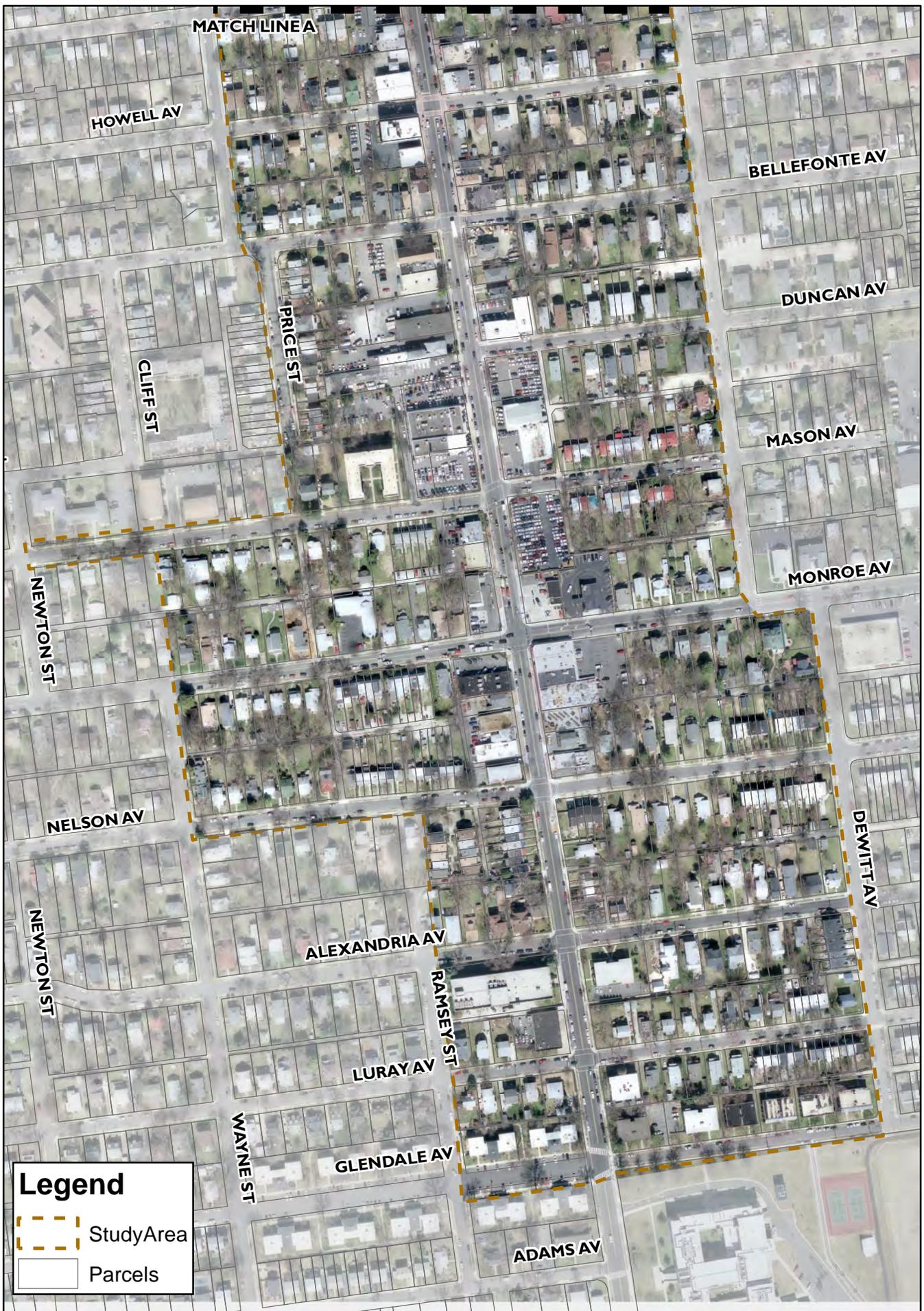
-  Study Area
-  Parcels



*Del Ray Neighborhood Parking Study*  
**Figure 1-1:**  
**Study Area**



FIGURE  
**1-1a**



MATCH LINE

HOWELL AV

BELLEFONTE AV

DUNCAN AV

PRICE ST

CLIFF ST

MASON AV

NEWTON ST

MONROE AV

NELSON AV

DEWITT AV

NEWTON ST

ALEXANDRIA AV

LURAY AV

RAMSEY ST

GLENDALE AV

ADAMS AV

WAYNE ST

**Legend**

-  Study Area
-  Parcels



*Del Ray Neighborhood Parking Study*

Figure 1-1:  
Study Area



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FIGURE

1-1b

# DEL RAY Parking Study



## Community Input

In an effort to ensure that input from the community was gathered and considered in this study, City staff held meetings with representatives of both business owners and residents of the Del Ray neighborhood. This section summarizes the concerns and comments gathered from these meetings as provided by city staff.

Initially, before the Del Ray Parking Study began, in April/May 2010, staff met with a group of citizen and business representatives together to ensure that the questions City staff was asking of Kimley-Horn and Associates, the parking consultant, reflected the concerns of the neighborhood. The following questions were deemed appropriate:

- What is the best way to implement a shared parking program and acknowledge the shared parking arrangements already in place?
- Has increased activity/parking utilization resulting from new development changed the balance of supply/demand since the 2005 study?
- What are the opportunities and issues that might arise from consideration of removing the parking requirement for retail and restaurant on Mount Vernon Avenue?
- Are there any outstanding implementation strategies or recommendations from the 2005 study that deserve reconsideration now? If so, which ones could be implemented in the short term? Are there others that require consensus-building?

In addition, City staff has met with a small group of business and citizen representatives separately at key stages of the Del Ray Parking Study. In October 2010, staff discussed the inventory findings generally, explaining that they were similar to the findings in the 2004 study. In March 2011 City staff shared the draft short term recommendations for changing curb management. Throughout the meetings, a series of issues was discussed as concerns of the community:

*Parking Meters.* Both groups discussed the idea of adding meters on Mount Vernon Avenue. Citizens thought it should at least be investigated, especially to deter the problem of long term parking in prime locations. However, the business community is opposed to requiring shoppers and diners to pay for parking, and suggests that the parking issue is not a great enough problem to warrant a solution that they view as unfriendly to businesses.

*Zoning parking requirement.* The groups also disagree with regard to whether the zoning ordinance parking requirement should be eliminated for some uses on Mount Vernon Avenue. Originally suggested by the business community as part of the small business zoning discussion, the idea was again raised as part of this parking study by business

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representatives. The business community's proposal is to not require offsite parking for restaurants, retail and similar uses, and to fashion a zoning ordinance change similar to the way the issue is handled for King Street businesses in Old Town. Business representatives cite the unfairness and difficulty for new businesses to find parking when older buildings and sites do not have any parking on site, and there is little or no offsite parking to be found in the neighborhood. The requirement for a parking reduction Special Use Permit adds time and money to a difficult process and, businesses argue, puts Del Ray at a competitive disadvantage when compared to opportunities in Old Town.

Citizens on the other hand are understandably wary about doing away with a protection against uses that add to parking demand. The parking reduction SUP process, they submit, allows the community to review a proposed use and to come to agreement about its potential benefits and harm to the area before it is allowed to open. While not clearly opposed to investigating the idea, citizen representatives suggest careful consideration of consequences. They also suggest that removal of the parking requirement should not be considered unless and until there is a good, solid program for a communal parking solution, such as shared parking, with adequate signage and advertising.

*Enforcement.* There is unanimous agreement about the need for more, consistent and effective enforcement of existing parking time limits, in order to deter long term parking in two hour spaces.

*Education and signage.* There is also agreement that better, less complex signage is important to attract parkers to existing spaces. Existing shared arrangements, such as at Los Tios and La Strada, should also be better advertised. Advertising can help dispel the perception that parking is not available. Especially if there is a shared program in the future for public parking, then branding and advertising the positive availability of parking for the public is very important.

*Parking Management.* Both groups had various specific suggestions to maximize existing parking areas in order to expand and manage existing parking better, including:

- Allowing parking at curb cuts that are no longer used. Space at La Strada and Artfully Chocolate are examples.
- Removal of the taxi cab stand in front of Anne Welsh salon.
- Providing loading zones in carefully chosen, well-spaced locations to serve multiple users.
- Removing "no parking" signs where their purpose and utility is questionable. The 7-Eleven store and the church on Custis were cited as examples.
- Allowing public parking in the school and library lots after hours.

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- Bus stops should be studied to make sure they are all necessary. WMATA and DASH facilities should be combined to reduce the number of stops.
- Add short term parking at key locations.
- Businesses suggest that the two hour parking limit is too short for diners who also shop in retail stores and suggest a three hour limit, at least in certain areas.

*Shared Parking.* There is general eagerness among both residents and businesses to organize and implement a shared parking program. There remain questions about how to best use private parking lots that are unoccupied at peak times, how to convince landowners to participate, how many spaces are necessary and desirable at peak times, and whether to allow or encourage pay parking in those lots. However, both the business and residential communities support the concept and are willing to assist with a shared parking program. They cite the Human Services lot as an example of shared parking which has helped the business and residential community both. And they suggested specific lots to be added for the program: Sun Trust, Salvation Army and the Antiques/laundromat lot at Monroe as a start, with the Mind and Media, Post Office and Fire Station as potential lots in an expanded program. Advertising was discussed as an essential component to any shared parking program with the potential, through internet, mobile applications, and other media, to promote Del Ray generally as well as parking opportunities.

*Pedestrian Safety.* Pedestrian safety at intersections was raised as an issue. One suggestion was to add signs within intersection crosswalks to alert vehicles to the need to slow or stop.

*Residential Parking Permits.* Citizens suggested that there may be a need to protect residential streets from restaurant and business spillover parking. They cited the existing code on permit parking districts as not helpful to Del Ray, and suggested that it could be revised to protect against spillover parking as well as outsider, commuter parking. On the other hand, is important not to prohibit teachers, and other employees, including Human Services employees from parking in the area during the day.

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## Existing Del Ray Neighborhood Parking Conditions

The majority of public parking in the study area is located on-street, either in the designated spaces along Mount Vernon Avenue or the designated curb faces along the residential streets. Mount Vernon Avenue accommodates parallel on-street parking on both sides of the street. Most residential streets have only one lane of parking, as street widths are too narrow to accommodate two lanes of traffic and two parking lanes. Along Mount Vernon Avenue, parking is generally unrestricted, with two hour time limits to promote turnover. There is one residential street that is restricted to residential permit parking.

There are a handful of publicly accessible parking lots after normal business hours. In addition to these shared lots, there are a number of private lots that serve local businesses. This chapter summarizes parking inventory, conditions and type of public on- and off-street parking, counts from field surveys performed as part of this study, and occupancy and turnover data.

### Parking Inventory

Spaces included in the parking inventory consisted of both on- and off-street spaces. The areas studied for each study years (2002, 2003, 2004, and 2011) varied. The changes in the study area boundaries resulted in varied number of total spaces being analyzed in each study. Considering the changes in the study area boundaries, the total available public parking in the Del Ray neighborhood has not changed dramatically since 2002. The 2011 study analyzed 1,909 total spaces, 1,099 on-street spaces and 810, off-street.

#### On-Street Parking

As part of this study, an inventory of publicly available on-street parking was performed. The inventory included counting the number of available parking spaces and noting each space's type. Types of on-street parking included residential permit, unrestricted, handicap, and special parking. During the inventory process, areas not available for parking due to fire hydrants, driveways, bicycle parking, bus stops, etc. were noted as "no parking" areas. However, there are several bus stops on the street where parking is permitted. On-street parking locations by type are shown in Figure 1-2, On-Street and Residential Parking. The following describes each parking type:

- Residential Permit. This type of parking includes spaces where a City-issued residential parking permit is required to park a vehicle without time restriction. For vehicles parking in a permit district without a permit, parking is restricted to two hours on weekdays during specific hours of the day. With or without a residential permit in permit districts, City ordinances prohibit parking a vehicle in the same location for more than 72 consecutive hours.

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- Handicap. Handicap parking consists of those spaces designated for vehicles displaying a handicap decal, license plate, or hanging tag. Within the study area, few (approximately 1 percent) on-street parking spaces are designated for handicap use specifically. Illegally parking within a handicap zone is enforced through fines and towing.
- Special Parking. There are a variety of special on-street parking spaces throughout the study area including school drop off, school bus, taxi stand, police vehicle, and loading and unloading only. These areas represent a small percentage (less than 1 percent) of all on-street space and they are not available to the general public.

On-street parking spaces were counted during the field inventory. This inventory was performed for each block face by counting the number of parking spaces and noting any sign restrictions and parking prohibitions. Where parking spaces were not delineated by pavement markings, the number of parking spaces was estimated by one of the following methods:

- If all of the available on-street parking spaces were occupied, the number of spaces was assumed to be the number of legally parked vehicles.
- If the available on-street parking was unoccupied, it was assumed that on-street parking spaces are 20-22 feet in length.

The field inventory revealed that there are approximately 1,099 on-street parking spaces in the study area. Table 1-1, Number of On-Street Parking Spaces per Street, shows numbers of on-street parking spaces along each block, including both sides of the street.



**Legend**

- Study Area
- Existing On-Street Parking**
- Bus stop
- Taxi stand
- General parking except bus parking only M-F, 7-9 AM
- Handicap parking
- Handicap parking with time limit
- General parking
- General parking with time limit
- Permit parking, General parking with time limit
- Residential permit parking only
- Sunday parking only



Del Ray Neighborhood Parking Study  
 Figure 1-2:  
 On-Street and Residential Parking

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1

FIGURE  
 1-2a



**Legend**

- Study Area
- Existing On-Street Parking**
- Bus stop
- Taxi stand
- General parking except bus parking only M-F, 7-9 AM
- Handicap parking
- Handicap parking with time limit
- General parking
- General parking with time limit
- Permit parking, General parking with time limit
- Residential permit parking only
- Sunday parking only



*Del Ray Neighborhood Parking Study*  
 Figure 1-2:  
 On-Street and Residential Parking



1

FIGURE  
 1-2b

# DEL RAY Parking Study



Table 1-1 – Number of On-Street Parking Spaces per Street

On-Street Parking	Available Spaces
Mount Vernon Avenue <i>Commonwealth Ave to Raymond Ave</i>	8
Mount Vernon Avenue <i>Raymond Avenue to Randolph Avenue</i>	22
Mount Vernon Avenue <i>Randolph Avenue to Stewart Avenue</i>	24
Mount Vernon Avenue <i>Stewart Avenue to Uhler Avenue</i>	8
Mount Vernon Avenue <i>Uhler Avenue to Oxford Avenue</i>	14
Mount Vernon Avenue <i>Oxford Avenue to Del Ray Avenue</i>	13
Mount Vernon Avenue <i>Del Ray Avenue to Custis Avenue</i>	12
Mount Vernon Avenue <i>Custis Avenue to Windsor Avenue</i>	14
Mount Vernon Avenue <i>Windsor Avenue to Howell Avenue</i>	18
Mount Vernon Avenue <i>Howell Avenue to Bellefonte Avenue</i>	14
Mount Vernon Avenue <i>Bellefonte Avenue to Duncan Avenue</i>	19
Mount Vernon Avenue <i>Duncan Avenue to Mason Avenue</i>	17
Mount Vernon Avenue <i>Mason Avenue to Monroe Avenue</i>	11
Mount Vernon Avenue <i>Monroe Avenue to Nelson Avenue</i>	19
Mount Vernon Avenue <i>Nelson Avenue to Alexandria Avenue</i>	25
Mount Vernon Avenue <i>Alexandria Avenue to Luray Avenue</i>	18

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On-Street Parking	Available Spaces
Mount Vernon Avenue <i>Luray Avenue to Glendale Avenue</i>	14
Clifford Avenue <i>Commonwealth Avenue to Dewitt Avenue</i>	40
Hume Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	27
Raymond Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	25
Randolph Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	25
Stewart Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	25
Mount Ida Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	23
Uhler Avenue <i>Clyde Avenue to Mount Vernon Avenue</i>	26
Uhler Avenue <i>Mount Vernon Avenue to Mount Ida Avenue</i>	7
Oxford Avenue <i>Clyde Avenue to Mount Vernon Avenue</i>	13
Oxford Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	22
Del Ray Avenue <i>Clyde Avenue to Mount Vernon Avenue</i>	14
Del Ray Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	22
Custis Avenue <i>Clyde Avenue to Mount Vernon Avenue</i>	14
Custis Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	16
Windsor Avenue <i>Clyde Avenue to Mount Vernon Avenue</i>	15
Windsor Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	15

# DEL RAY Parking Study



On-Street Parking	Available Spaces
Howell Avenue <i>Clyde Avenue to Mount Vernon Avenue</i>	15
Howell Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	17
Bellefonte Avenue <i>Price St to Mount Vernon Avenue</i>	18
Bellefonte Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	22
Duncan Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	20
Mason Avenue <i>Newton St to Mount Vernon Avenue</i>	50
Mason Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	41
Monroe Avenue <i>Wayne St to Mount Vernon Avenue</i>	32
Monroe Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	10
Nelson Avenue <i>Wayne St to Mount Vernon Avenue</i>	56
Nelson Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	35
Alexandria Avenue <i>Ramsey St to Mount Vernon Avenue</i>	23
Alexandria Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	39
Luray Avenue <i>Ramsey St to Mount Vernon Avenue</i>	13
Luray Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	25
Glendale Avenue <i>Ramsey St to Mount Vernon Avenue</i>	57
Glendale Avenue <i>Mount Vernon Avenue to Dewitt Avenue</i>	27

# DEL RAY Parking Study



On-Street Parking	Available Spaces
TOTAL ON-STREET PARKING	1,099

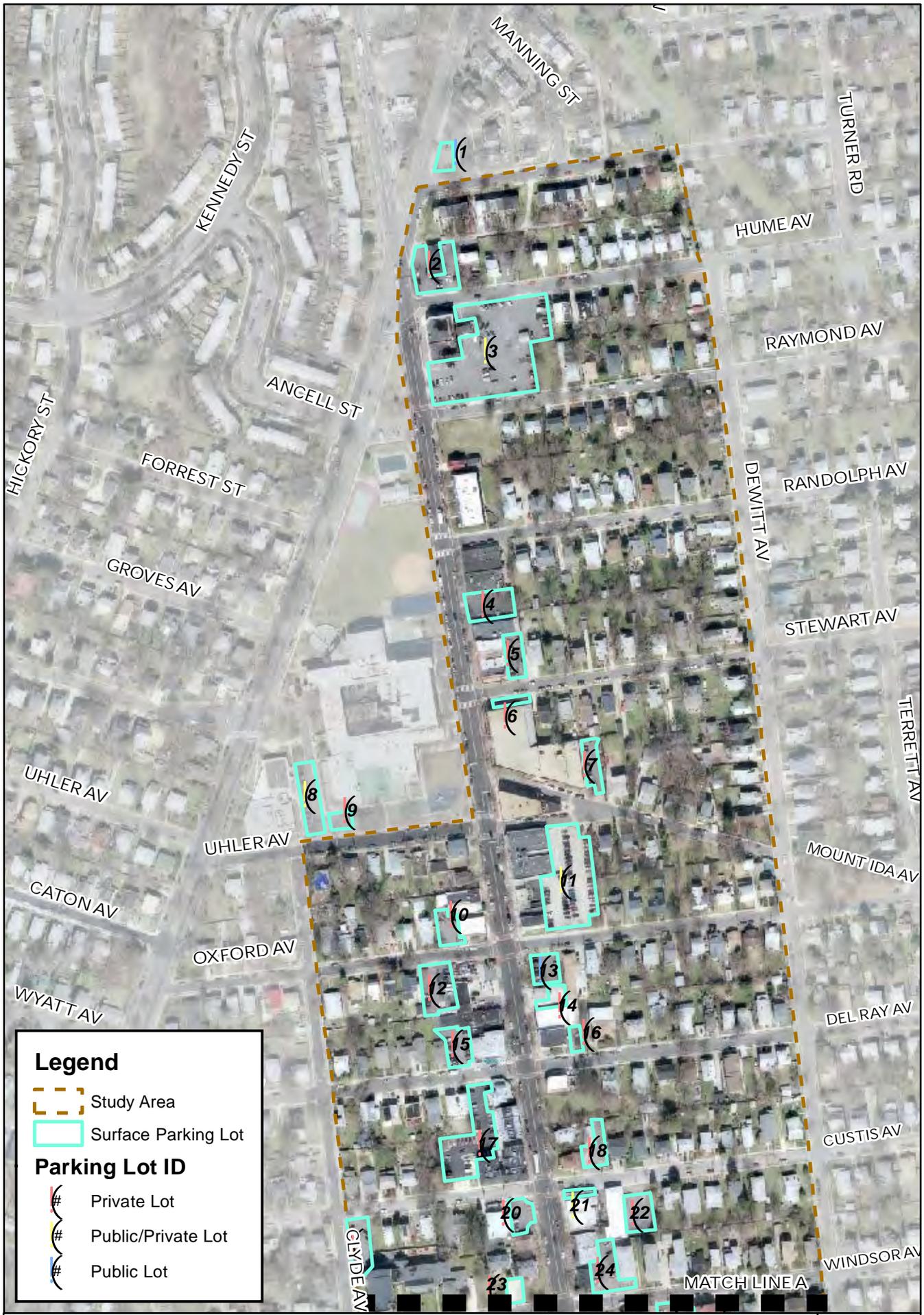
## Off-Street Parking

Off-street parking studied included publicly accessible surface parking lots. Privately owned and private-only-use parking facilities were not studied. Privately owned facilities that offer public use during specific times and days were studied. Data for these facilities was collected only during periods when the facility was available to the public.

The following describes surface parking lots located within the study area:

- Surface Parking Lots. Within the study area, there are two surface parking lots (~2% of the off-street supply) specifically for public use only. Eight other lots (~28% of the off-street supply) are “shared” and designated as both public and private lots. Most of the aforementioned lots are open to the public for parking during typical weekdays; however, a limited number have weekday restrictions. A majority of the surface parking lots (~70% of the off-street supply) in the Del Ray Neighborhood are private.

Figure 1-3, Off-Street Parking, shows the locations of off-street public parking facilities in the study area.



**Legend**

- Study Area
- Surface Parking Lot

**Parking Lot ID**

- Private Lot
- Public/Private Lot
- Public Lot

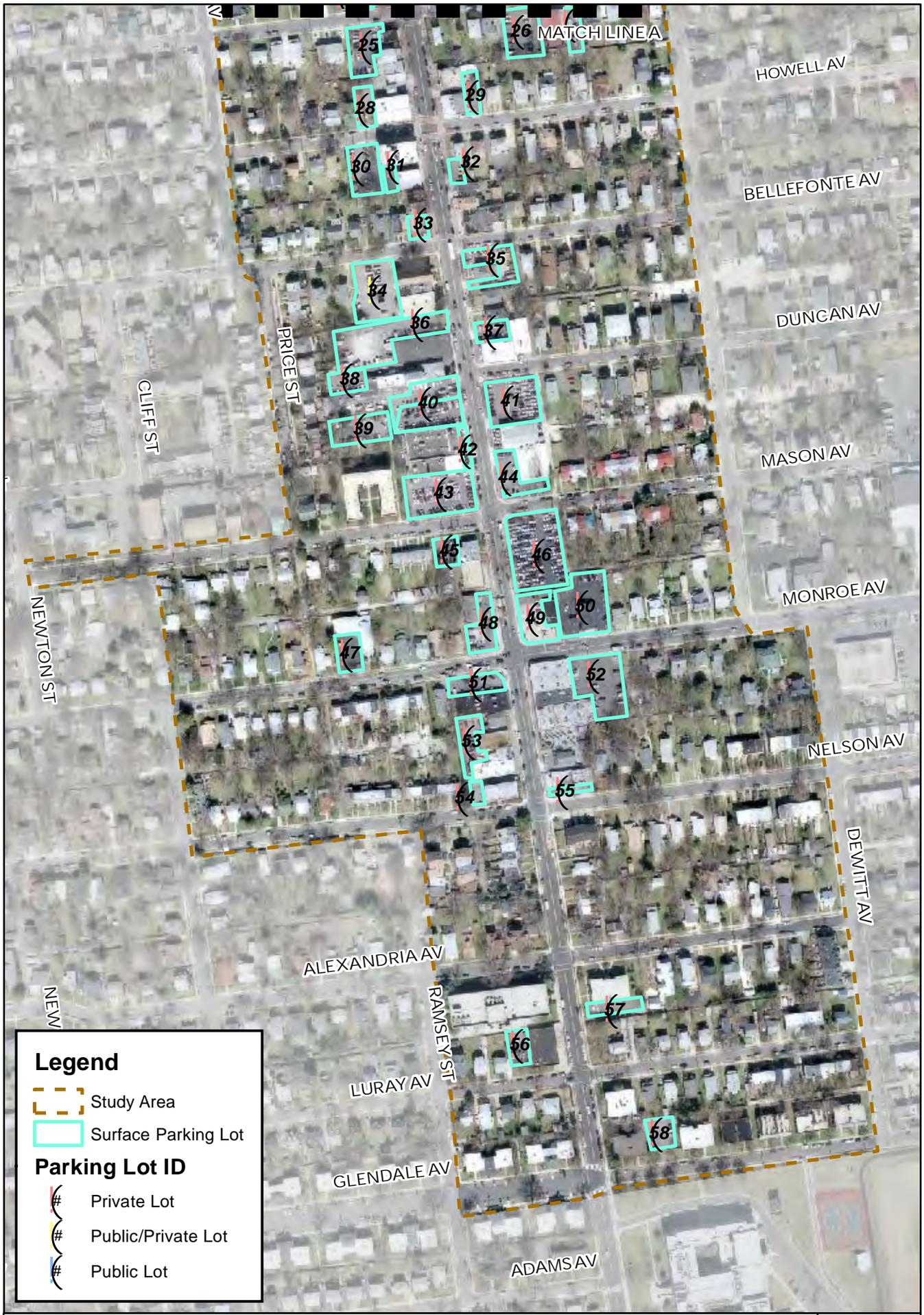


Del Ray Neighborhood Parking Study  
 Figure 1-3:  
 Off-Street Parking

Kimley-Horn  
and Associates, Inc.

1

FIGURE  
1-3a



**Legend**

- Study Area
- Surface Parking Lot

**Parking Lot ID**

- Private Lot
- Public/Private Lot
- Public Lot



Del Ray Neighborhood Parking Study  
 Figure 1-3:  
 Off-Street Parking

Kimley-Horn and Associates, Inc.



# DEL RAY Parking Study



Based on the field inventory collected in June (see the Parking Occupancy Counts section for more details on the collection process) there are 810 off-street parking spaces in the Del Ray Neighborhood study area. Table 1-2 presents a summary of the off-street parking supply by lot. For the purpose of this study, the following definitions were used to designate lot types:

- Public – publicly owned and available for public use
- Private – privately owned and not open for public use
- Public/Private – privately owned but available for public use

Table 1-2 – Number of Off-Street Parking Spaces by Lot

Parking Lot	Available Spaces	Lot Type
1 Residential area	8	Public
2 Auto Facility	10	Private
3 SunTrust Bank	79	Public/Private
4 Curves studio	21	Private
5 Natures Nibbles Pet Store	9	Private
6 Department of Human Services	4	Private
7 Department of Human Services	8	Private
8 Library**	16	Public/Private
9 Mount Vernon Community School	6	Public/Private
10 All at Once Hair	9	Private
11 Parking for DHS Employees	71	Public/Private
12 2312 Building	23	Private
13 Farmer's Market City Lot	11	Public
14 State Farm Insurance/Ultimate Results/Hatha yoga	6	Public/Private
15 St. Elmos	15	Private
16 Pottery Store	5	Private
17 AGA	51	Private
18 Vital	10	Private
19 Church	17	Private
20 7-11	8	Private
21 BodyMindSole, Artifacts, Elegant Nails, and Zumba/Ballet studio	4	Public/Private

# DEL RAY Parking Study



Parking Lot	Available Spaces	Lot Type
22 Church	18	Private
23 Anne Welsh Salon	6	Private
24a The Healing Tree	6	Private
24b Private Residential	18	Private
25 Thai place / Mind & Media	21	Private
26 Fire Station	18	Private
27 Fire Station	7	Private
28 Evening star/majestic lounge	11	Private
29 MacGuire-Reeder	9	Public/Private
30 Lot with arm gate/no building	22	Private
31 Suhko Thai	10	Private
32 Private Commercial	6	Private
33 Octomeron Associates	6	Private
34 Salvation Army	33	Public/Private
35 Kesterson Plumbing	11	Private
36 Arlandria Floors	6	Private
37 Used car lot	-	Private
38 Printing facility	9	Private
39 Residential		
40a R & B Inc Heating and Air	16	Private
40b Audi Dealership	-	Private
41 Auto Sales	-	Private
42 Auto Sales	-	Private
43 Auto Sales	-	Private
44 Auto Service Center	14	Private
45 Behind deli/next to residential	10	Private
46 Auto Sales	-	Private
47 St Paul Christian Center	9	Private
48 Gas Station	15	Private
49 Del Ray Service Center	8	Private
50 Burke & Hurbert Bank	18	Private

# DEL RAY Parking Study



Parking Lot		Available Spaces	Lot Type
51	Mancini's Cafe	12	Private
52	Antiques Store	45	Private
53	Private Commercial	11	Private
54	Nelson House	4	Private
55	Fireflies	6	Private
56	Verizon	8	Private
57	Residential	10	Private
58	Residential	16	Private
Total Spaces*^		810	19 Public
			567 Private
			224 Public/Private

\*Lots shaded in blue (180 spaces) excluded from supply because they are related to auto sales/service/fueling stations, are private-gated and not available to any public use, or were not included in the June 2010 data collection effort.

^Public, private, and public/private designations are based on existing inventory and review by the City of Alexandria.

\*\*The library has both publicly available spaces and private spaces

## Parking Rates

On-street parking revenue is created by residents who purchase a residential parking permit or by those that receive parking tickets at meters and other locations. On-street parking spaces in the Del Ray neighborhood area are not metered and all parking lots are free.

Residential permit fees are assessed annually. Currently, residential permit holders must pay \$30 per year for the first vehicle, \$40 per year for the second vehicle, and \$100 per year for each additional vehicle.

## Time Restrictions

On-street parking along and near Mount Vernon Avenue within the study area is generally limited to two-hour duration. All other on-street parking has no time restriction. In residential permit districts, permit-holders are allowed to park within the district for which their permit was issued without a time restriction. The lone caveat to this restriction is that City ordinance prohibits any vehicle from being parked—permit or not—in the same location for more than 72 consecutive hours. Non-permit parking is allowed in residential

# DEL RAY Parking Study



districts. The general duration restriction for non-permit parkers in residential permit districts is two to three hours.

## Parking Occupancy Counts

Parking occupancy counts were conducted in the study area in June 2010 for on-street parking and off-street surface parking lots. The following is a summary of the methodology used and the results of the data collection. The parking occupancy count results are contained in the Parking Utilization section below.

### On- and Off-Street Parking Occupancy Counts

On- and Off-street occupancy parking counts were collected for the following four, two-hour periods:

1. Wednesday, June 16, 2010, 12:00 to 2:00 PM
2. Wednesday, June 16, 2010, 6:00 to 8:00 PM
3. Saturday, June 19, 2010, 11:00 to 1:00 PM
4. Saturday, June 19, 2010, 7:00 to 9:00 PM

These periods were selected to capture times of the day and days of the week when peak parking demand is likely to occur for different activities in the Del Ray Neighborhood study area. Occupancy counts were performed once per hour during each time period. The counts noted the number of occupied handicapped, reserved, and general use parking spaces along the street and within public surface parking lots.

A detailed summary of the on-street parking occupancy counts by curb face, and off-street parking by lot, is included in the following section related to Parking Utilization. It should be noted that along some curb faces where data was collected, the number of parked vehicles exceeds the number of reported parking spaces. This can be attributed to the methodology used to determine the on-street parking inventory (previously described in Parking Inventory – On-Street Parking section) which assumed a standard space size. The presence of a significant number of smaller vehicles would allow more cars to be parked in a smaller area.

## Parking Utilization

To determine parking utilization for both on- and off-street vehicles parked in the study area, the parking occupancy count data was compared to the number of available parking spaces during each period studied. Generally, off-street parking facilities are considered full when they reach occupancies of 85 percent to 90 percent; however, in very large parking facilities with technology to guide parkers to available spaces, the measure of full can often

# DEL RAY Parking Study



be increased to 90 percent to 95 percent. In the same manner, a large parking system—the combination of lots and on-street parking—is viewed as full when it reaches the same 85 percent to 90 percent range. The reason that full occupancy—100 percent of spaces occupied—is not used in parking planning is that as occupancies rise above 85 percent, it is increasingly difficult for parkers to find the spaces that remain open within the system. In areas that employ comprehensive parking guidance systems with real-time parking system information for users, effective full occupancy assumptions can be increased to in-excess of 90 percent.

The narratives, tables, and figures on the following pages describe on- and off-street parking utilization and substantive conclusions that can be drawn from the evaluation of utilization information. Figures 1-4 through 1-11 show a summary of parking utilization by day (weekday or Saturday), time period (mid-day or evening), and for all parking types (on-street and lots) within the study area.



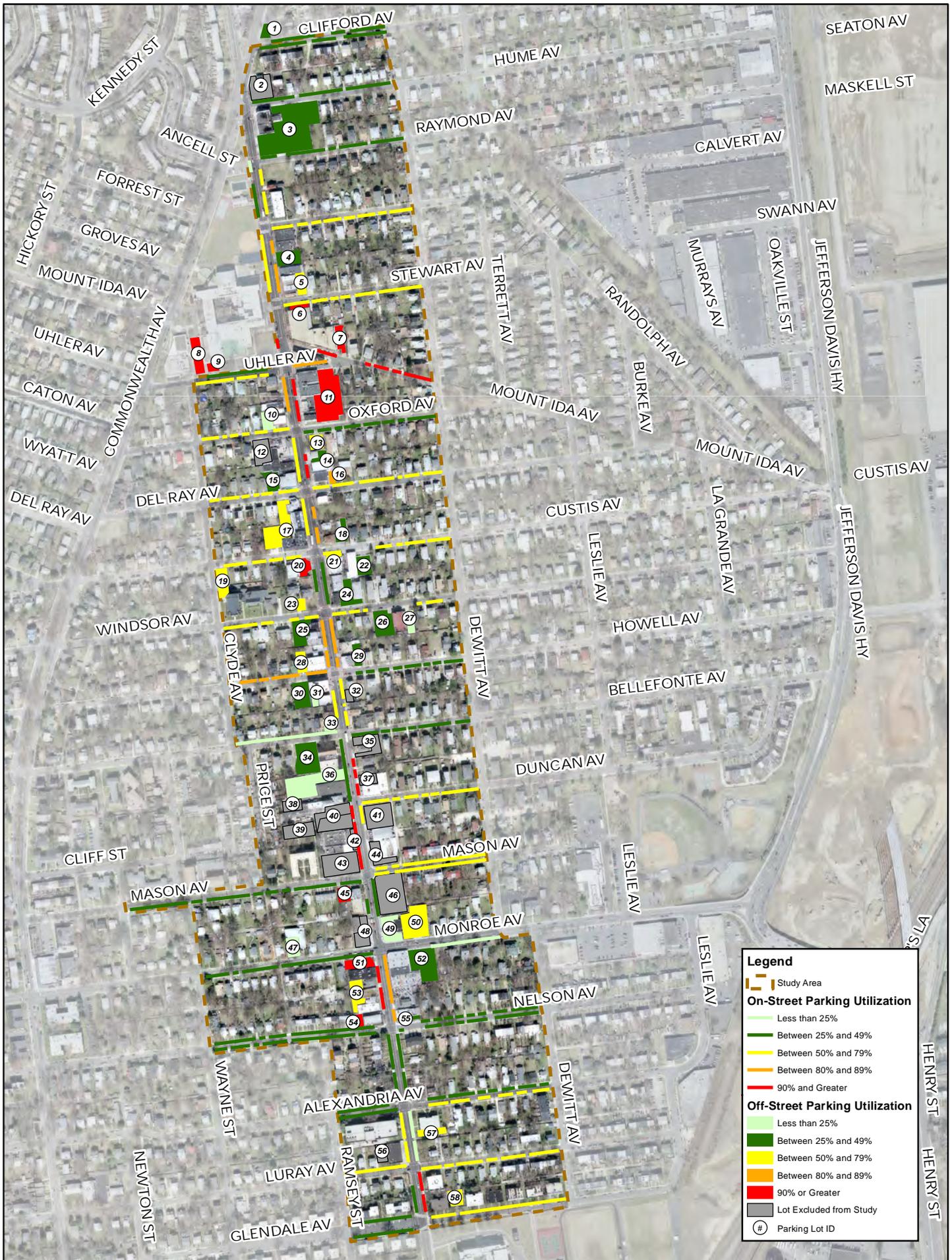
Del Ray Neighborhood Parking Study  
 Figure 1-4:  
 Parking Utilization Weekday 12PM - 1PM



375 187.5 0 375 Feet

1

FIGURE  
1-4

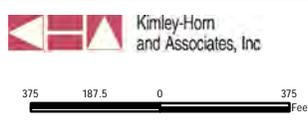


**Legend**

- Study Area
- On-Street Parking Utilization**
  - Less than 25%
  - Between 25% and 49%
  - Between 50% and 79%
  - Between 80% and 89%
  - 90% and Greater
- Off-Street Parking Utilization**
  - Less than 25%
  - Between 25% and 49%
  - Between 50% and 79%
  - Between 80% and 89%
  - 90% or Greater
- Lot Excluded from Study
- Parking Lot ID



Del Ray Neighborhood Parking Study  
 Figure 1-5:  
 Parking Utilization Weekday 1PM - 2PM





Del Ray Neighborhood Parking Study  
 Figure 1-6:  
 Parking Utilization Weekday 6PM - 7PM



375 187.5 0 375 Feet



**Legend**

**Study Area**

**On-Street Parking Utilization**

- Less than 25%
- Between 25% and 49%
- Between 50% and 79%
- Between 80% and 89%
- 90% and Greater

**Off-Street Parking Utilization**

- Less than 25%
- Between 25% and 49%
- Between 50% and 79%
- Between 80% and 89%
- 90% or Greater

Lot Excluded from Study

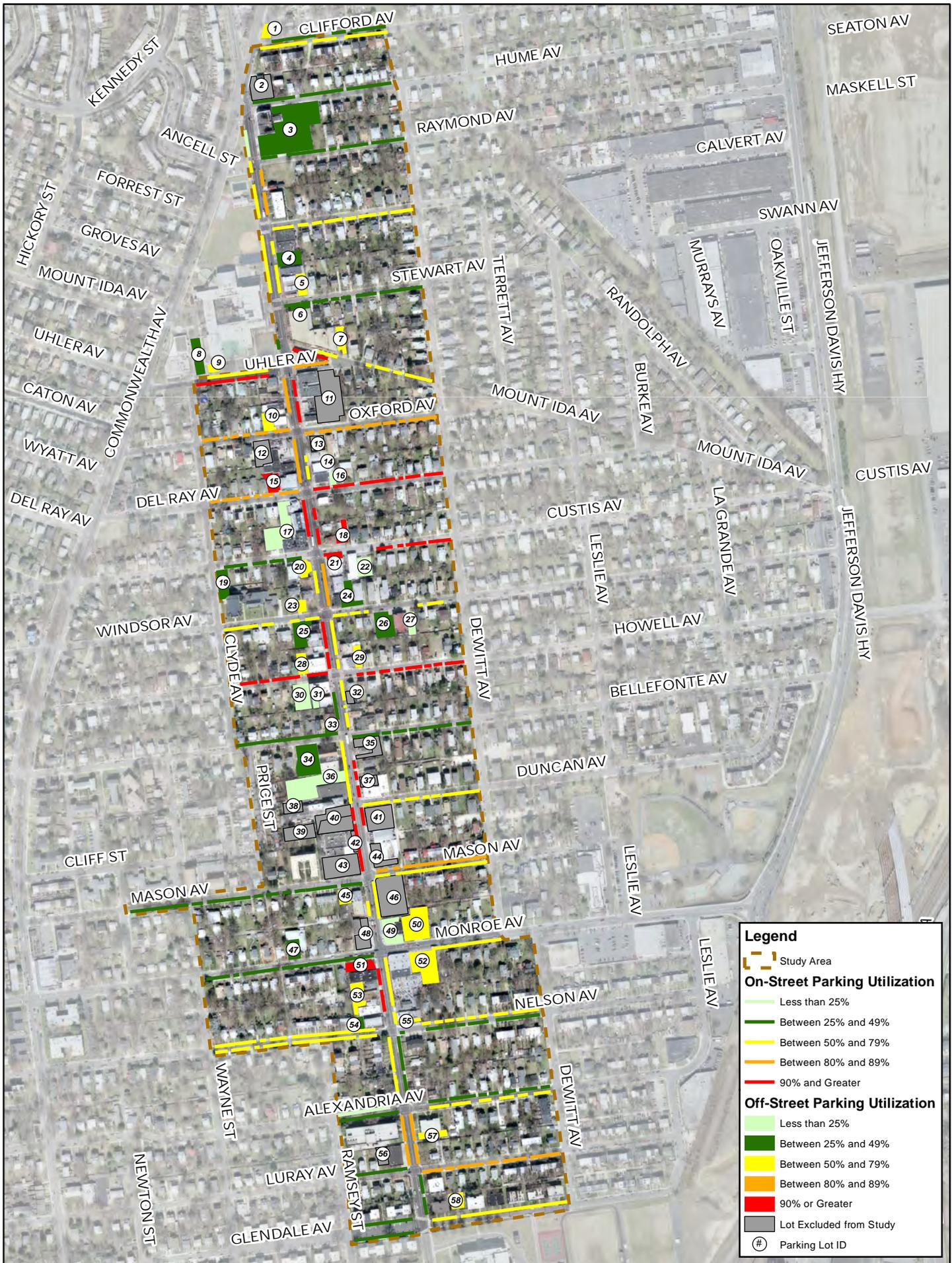
Parking Lot ID



Del Ray Neighborhood Parking Study  
 Figure 1-7:  
 Parking Utilization Weekday 7PM - 8PM

Kimley-Horn and Associates, Inc.

375 187.5 0 375 Feet



Del Ray Neighborhood Parking Study  
 Figure 1-8:  
 Parking Utilization Saturday 11AM - 12PM



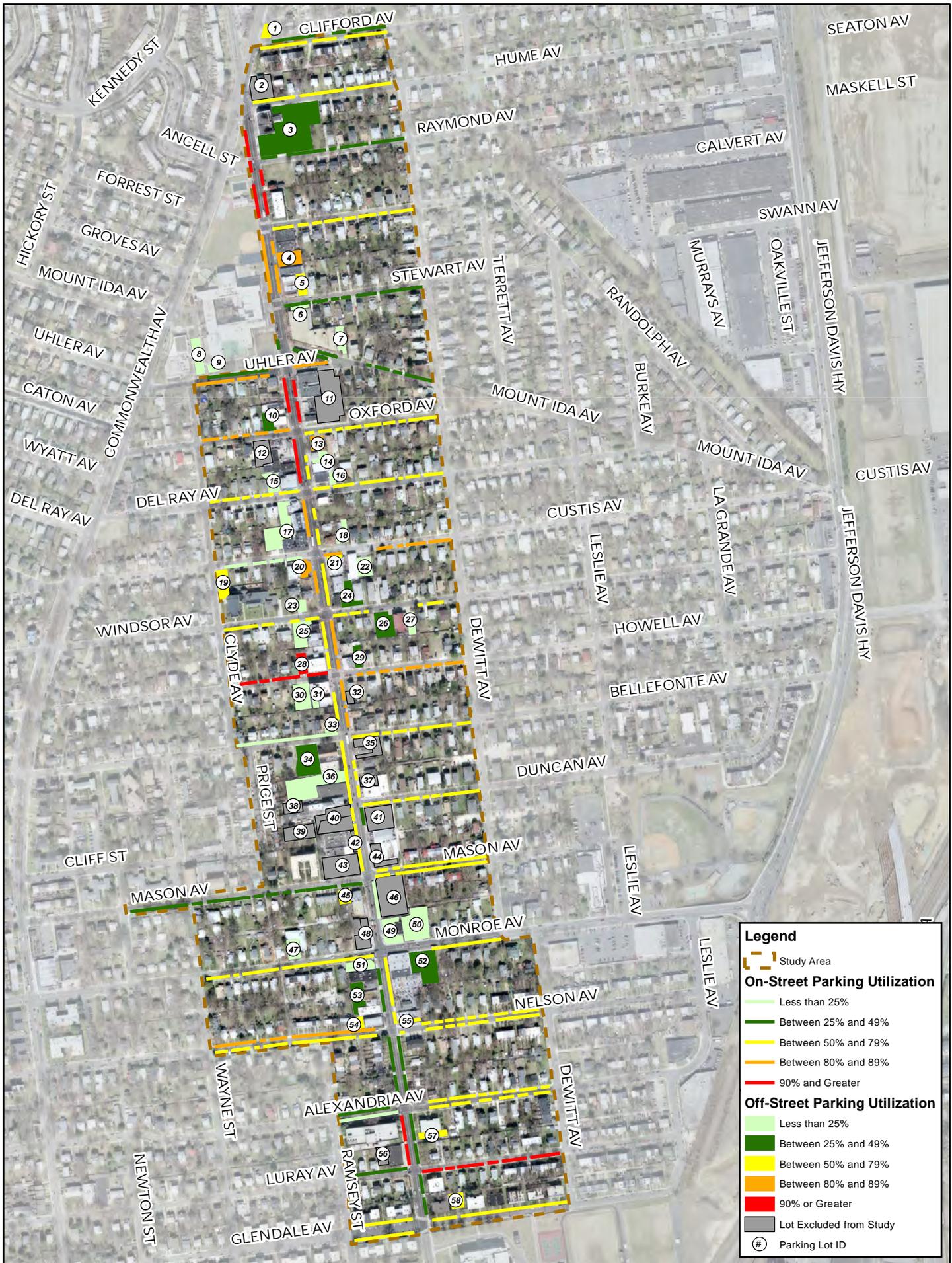
375 187.5 0 375 Feet



Del Ray Neighborhood Parking Study  
 Figure 1-9:  
 Parking Utilization Saturday 12PM - 1PM



375 187.5 0 375 Feet



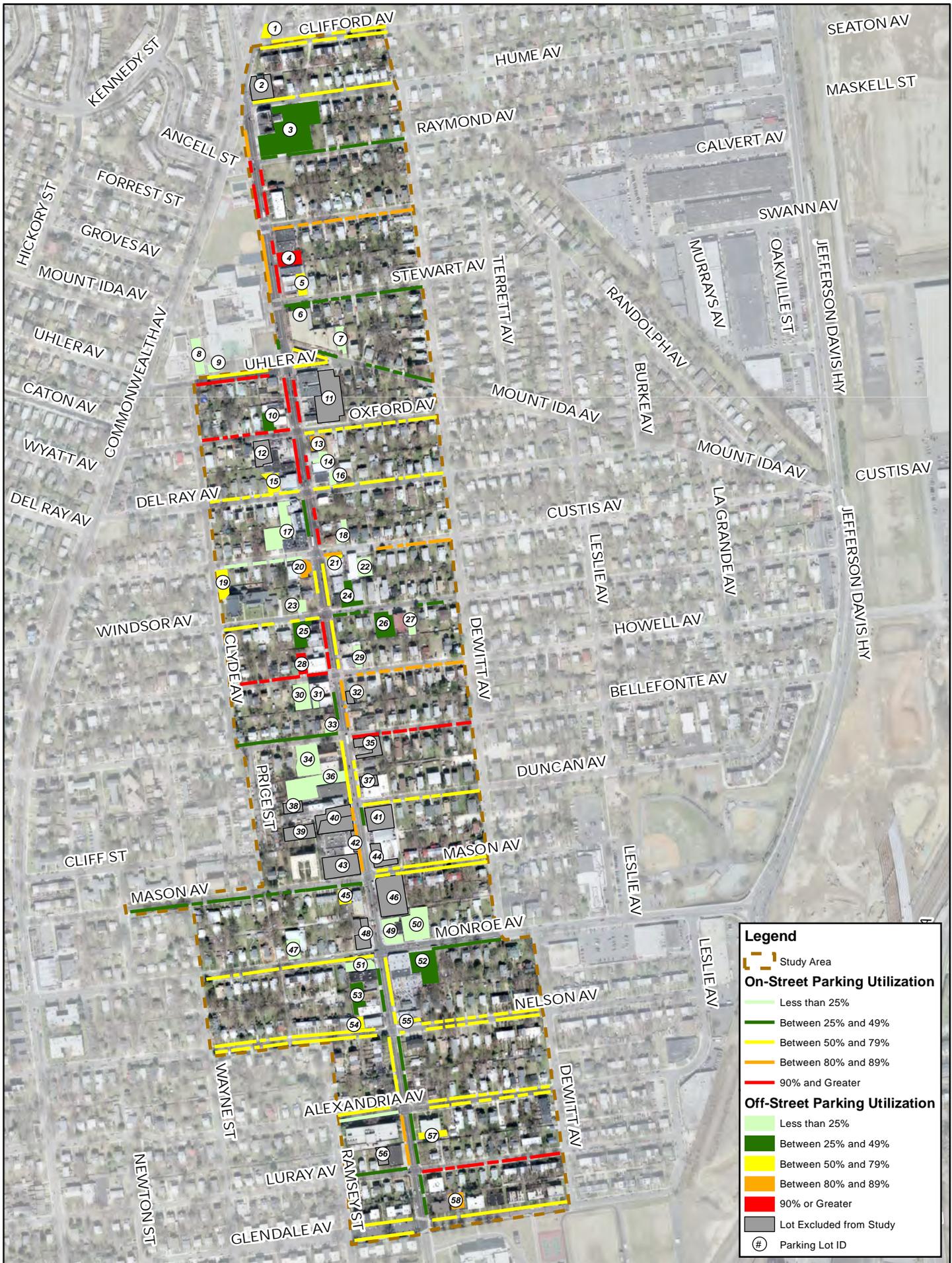
Del Ray Neighborhood Parking Study  
 Figure 1-10:  
 Parking Utilization Saturday 7PM - 8PM



375 187.5 0 375 Feet

1

FIGURE  
 1-10



Del Ray Neighborhood Parking Study  
 Figure 1-11:  
 Parking Utilization Saturday 8PM - 9PM



375 187.5 0 375 Feet

1

FIGURE  
1-11

# DEL RAY Parking Study



## On-Street Parking Utilization

Utilization was calculated for each curb face for on-street parking. Table 1-3 shows a summary of the number of available spaces, the number of parked vehicles, and the percent utilization for each street during each time period counted. Occupancies in-excess of 85 percent are highlighted.

Table 1-3: On-Street Parking Utilization Summary

On-Street Parking	Available Spaces	Weekday Afternoon (12:00PM to 1:00PM)	Weekday Afternoon (1:00PM to 2:00PM)	Weekday Evening (6:00PM to 7:00PM)	Weekday Evening (7:00PM to 8:00PM)	Saturday Afternoon (11:00AM to 12:00PM)	Saturday Afternoon (12:00PM to 1:00PM)	Saturday Evening (7:00PM to 8:00PM)	Saturday Evening (8:00PM to 9:00PM)
Mount Vernon Avenue <i>Commonwealth Ave to Raymond Ave</i>	8	0 0%	0 0%	0 0%	0 0%	1 13%	1 13%	8 100%	7 88%
Mount Vernon Avenue <i>Raymond Ave to Randolph Ave</i>	22	11 50%	5 23%	16 73%	23 105%	13 59%	14 64%	25 114%	22 100%
Mount Vernon Avenue <i>Randolph Ave to Stewart Ave</i>	24	15 63%	16 67%	27 113%	23 96%	13 54%	19 79%	20 83%	22 92%
Mount Vernon Avenue <i>Stewart Ave to Uhler Ave</i>	8	2 25%	9 113%	6 75%	7 88%	3 38%	3 38%	4 50%	3 38%
Mount Vernon Avenue <i>Uhler Ave to Oxford Ave</i>	14	14 100%	14 100%	14 100%	16 114%	13 93%	12 86%	16 114%	15 107%
Mount Vernon Avenue <i>Oxford Ave to Del Ray Ave</i>	13	5 38%	9 69%	10 77%	13 100%	11 85%	12 92%	13 100%	14 108%
Mount Vernon Avenue <i>Del Ray Ave to Custis Ave</i>	12	11 92%	9 75%	14 117%	14 117%	13 108%	15 125%	9 75%	7 58%
Mount Vernon Avenue <i>Custis Ave to Windsor Ave</i>	14	7 50%	6 43%	12 86%	10 71%	11 79%	9 64%	9 64%	8 57%
Mount Vernon Avenue <i>Windsor Ave to Howell Ave</i>	18	17 94%	16 89%	17 94%	18 100%	18 100%	21 117%	15 83%	19 106%
Mount Vernon Avenue <i>Howell Ave to Bellefonte Ave</i>	14	8 57%	8 57%	10 71%	16 114%	7 50%	7 50%	10 71%	9 64%
Mount Vernon Avenue <i>Bellefonte Ave to Duncan Ave</i>	19	16 84%	13 68%	10 53%	11 58%	15 79%	16 84%	13 68%	10 53%

# DEL RAY Parking Study



On-Street Parking	Available Spaces	Weekday Afternoon (12:00PM to 1:00PM)	Weekday Afternoon (1:00PM to 2:00PM)	Weekday Evening (6:00PM to 7:00PM)	Weekday Evening (7:00PM to 8:00PM)	Saturday Afternoon (11:00AM to 12:00PM)	Saturday Afternoon (12:00PM to 1:00PM)	Saturday Evening (7:00PM to 8:00PM)	Saturday Evening (8:00PM to 9:00PM)
Mount Vernon Avenue <i>Duncan Ave to Mason Ave</i>	17	14 84%	16 68%	13 53%	15 58%	18 79%	16 84%	11 68%	12 53%
Mount Vernon Avenue <i>Mason Ave to Monroe Ave</i>	11	4 36%	4 36%	1 9%	1 9%	6 55%	5 45%	1 9%	0 0%
Mount Vernon Avenue <i>Monroe Ave to Nelson Ave</i>	19	14 74%	17 89%	8 42%	13 68%	16 84%	14 74%	11 58%	11 58%
Mount Vernon Avenue <i>Nelson Ave to Alexandria Ave</i>	25	7 28%	10 40%	11 44%	14 56%	12 48%	12 48%	10 40%	10 40%
Mount Vernon Avenue <i>Alexandria Ave to Luray Ave</i>	18	10 56%	9 50%	13 72%	8 44%	16 89%	13 72%	12 67%	11 61%
Mount Vernon Avenue <i>Luray Ave to Glendale Ave</i>	14	9 64%	10 71%	6 43%	3 21%	3 21%	3 21%	3 21%	2 14%
Clifford Avenue <i>Commonwealth Ave to Dewitt Ave</i>	40	12 30%	18 45%	21 53%	20 50%	20 50%	24 60%	21 53%	22 55%
Hume Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	27	7 26%	7 26%	18 67%	16 59%	8 30%	11 41%	15 56%	16 59%
Raymond Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	25	8 32%	8 32%	9 36%	10 40%	10 40%	12 48%	9 36%	11 44%
Randolph Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	25	13 52%	15 60%	17 68%	20 80%	14 56%	12 48%	19 76%	21 84%
Stewart Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	25	17 68%	17 68%	14 56%	13 52%	8 32%	9 36%	9 36%	10 40%
Mount Ida Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	23	14 61%	17 74%	11 48%	16 70%	17 74%	17 74%	10 43%	11 48%
Uhler Avenue <i>Clyde Ave to Mount Vernon Ave</i>	26	19 73%	16 62%	19 73%	23 88%	23 88%	20 77%	17 65%	20 77%
Uhler Avenue <i>Mount Vernon Ave to Mount Ida Ave</i>	7	6 86%	6 86%	4 57%	5 71%	6 86%	6 86%	6 86%	4 57%

# DEL RAY Parking Study



On-Street Parking	Available Spaces	Weekday Afternoon (12:00PM to 1:00PM)	Weekday Afternoon (1:00PM to 2:00PM)	Weekday Evening (6:00PM to 7:00PM)	Weekday Evening (7:00PM to 8:00PM)	Saturday Afternoon (11:00AM to 12:00PM)	Saturday Afternoon (12:00PM to 1:00PM)	Saturday Evening (7:00PM to 8:00PM)	Saturday Evening (8:00PM to 9:00PM)
Oxford Avenue <i>Clyde Ave to Mount Vernon Ave</i>	13	9 69%	7 54%	12 92%	7 54%	11 85%	12 92%	11 85%	12 92%
Oxford Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	22	7 32%	10 45%	14 64%	15 68%	19 86%	13 59%	16 73%	14 64%
Del Ray Avenue <i>Clyde Ave to Mount Vernon Ave</i>	14	9 64%	10 71%	11 79%	11 79%	12 86%	13 93%	11 79%	9 64%
Del Ray Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	22	9 64%	10 55%	11 41%	11 64%	12 91%	13 77%	11 64%	9 73%
Custis Avenue <i>Clyde Ave to Mount Vernon Ave</i>	14	8 57%	10 71%	1 7%	2 14%	5 36%	5 36%	2 14%	3 21%
Custis Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	16	9 56%	11 69%	12 75%	11 69%	15 94%	14 88%	14 88%	13 81%
Windsor Avenue <i>Clyde Ave to Mount Vernon Ave</i>	15	8 53%	11 73%	9 60%	8 53%	11 73%	10 67%	10 67%	10 67%
Windsor Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	15	7 47%	10 67%	13 87%	13 87%	10 67%	11 73%	11 73%	7 47%
Howell Avenue <i>Clyde Ave to Mount Vernon Ave</i>	15	10 67%	12 80%	14 93%	16 107%	14 93%	12 80%	17 113%	16 107%
Howell Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	17	11 65%	7 41%	10 59%	12 71%	16 94%	16 94%	15 88%	15 88%
Bellefonte Avenue <i>Price St to Mount Vernon Ave</i>	18	5 28%	4 22%	7 39%	8 44%	5 28%	5 28%	4 22%	5 28%
Bellefonte Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	22	9 41%	10 45%	12 55%	16 73%	10 45%	14 64%	16 73%	20 91%
Duncan Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	20	12 60%	12 60%	16 80%	14 70%	13 65%	13 65%	10 50%	11 55%
Mason Avenue <i>Newton St to Mount Vernon Ave</i>	50	20 40%	19 38%	11 22%	17 34%	24 48%	25 50%	24 48%	20 40%

# DEL RAY Parking Study



On-Street Parking	Available Spaces	Weekday Afternoon (12:00PM to 1:00PM)	Weekday Afternoon (1:00PM to 2:00PM)	Weekday Evening (6:00PM to 7:00PM)	Weekday Evening (7:00PM to 8:00PM)	Saturday Afternoon (11:00AM to 12:00PM)	Saturday Afternoon (12:00PM to 1:00PM)	Saturday Evening (7:00PM to 8:00PM)	Saturday Evening (8:00PM to 9:00PM)
Mason Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	41	27 66%	26 63%	27 66%	26 63%	30 73%	28 68%	29 71%	29 71%
Monroe Avenue <i>Wayne St to Mount Vernon Ave</i>	32	15 47%	11 34%	13 41%	8 25%	15 47%	16 50%	16 50%	16 50%
Monroe Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	10	2 20%	2 20%	3 30%	4 40%	5 50%	8 80%	5 50%	4 40%
Nelson Avenue <i>Wayne St to Mount Vernon Ave</i>	56	19 34%	22 39%	31 55%	34 61%	35 63%	28 50%	44 79%	37 66%
Nelson Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	35	14 40%	14 40%	16 46%	19 54%	18 51%	20 57%	24 69%	27 77%
Alexandria Avenue <i>Ramsey St to Mount Vernon Ave</i>	23	26 <b>113%</b>	9 39%	4 17%	4 17%	6 26%	8 35%	5 22%	9 39%
Alexandria Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	39	16 41%	18 46%	21 54%	22 56%	19 49%	19 49%	25 64%	24 62%
Luray Avenue <i>Ramsey St to Mount Vernon Ave</i>	13	11 <b>85%</b>	9 69%	4 31%	4 31%	6 46%	4 31%	6 46%	6 46%
Luray Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	25	19 76%	19 76%	21 84%	25 <b>100%</b>	20 80%	19 76%	26 <b>104%</b>	26 <b>104%</b>
Glendale Avenue <i>Ramsey St to Mount Vernon Ave</i>	57	24 42%	25 44%	35 61%	33 58%	26 46%	24 42%	31 54%	32 56%
Glendale Avenue <i>Mount Vernon Ave to Dewitt Ave</i>	27	14 52%	16 59%	15 56%	17 63%	17 63%	16 59%	18 67%	19 70%
TOTAL	1,099	585 53%	591 54%	642 58%	688 63%	677 62%	673 61%	700 64%	697 63%

# DEL RAY Parking Study



The following identifies the peak hours of the on-street parking during each time period studied:

- Weekday afternoon, 1:00 to 2:00 PM
- Weekday evening, 7:00 to 8:00 PM
- Saturday afternoon, 11:00 to 12:00 PM
- Saturday evening, 7:00 to 8:00 PM

As shown in Table 1-3, on-street parking utilization is between 53 percent and 64 percent for all time periods studied. This would indicate that on-street parking is available within the study area during each time period; however, parking may not be proximate to people's desired destinations. Typical of any parking system, utilization is uneven throughout the overall on-street system and parking nearest to popular destinations is the most utilized. This condition of high utilization in high demand areas is likely to give some the impression that there is not parking available. Locations and time periods where parking utilization was in excess of 85 percent are summarized in the following:

- Mount Vernon Avenue from Commonwealth Avenue to Bellefonte Avenue, with the exception of Custis Avenue to Windsor Avenue, at some point during all time periods
- Oxford Avenue from Clyde Avenue to Mount Vernon Avenue on Weekday evenings, and Saturdays
- Del Ray Avenue from Clyde Avenue to Dewitt Avenue on Saturday afternoons
- Custis Avenue from Mount Vernon Avenue to Dewitt Avenue on Saturdays
- Windsor Avenue from Mount Vernon Avenue to Dewitt Avenue on weekday evenings
- Howell Avenue from Clyde Avenue to Dewitt Avenue on weekday evenings and Saturdays
- Bellefonte Avenue from Mount Vernon Avenue to Dewitt Avenue on Saturday evenings
- Alexandria Avenue from Ramsey Street to Mount Vernon Avenue on weekday afternoons
- Luray Avenue from Ramsey Street to Mount Vernon Avenue on weekday afternoons
- Luray Avenue from Mount Vernon Avenue to Dewitt Avenue on weekday evenings and Saturday evenings

# DEL RAY Parking Study



## Off-Street Parking Utilization

Utilization was calculated for each surface parking lot that is available for public use and that was included in the June 2010 data collection (see Table 1-2 for a list of lots included or excluded from the study). The exclusion of certain lots because they are private or because there is no available count data resulted in 630 spaces of the 810 total off-street parking spaces to be included in the utilization analysis. Table 1-4 shows a summary of available spaces, the number of parked vehicles, and the percent utilization for each time period counted for surface lots. It should be noted that the Department of Human Services lots (lots 6 and 7) were closed on the date of the survey). Occupancies of 85 percent or greater are also highlighted.

Table 1-4: Off-Street Surface Lot Utilization Summary

Parking Lot	Available Spaces	Weekday Afternoon (12:00PM to 1:00PM)	Weekday Afternoon (1:00PM to 2:00PM)	Weekday Evening (6:00PM to 7:00PM)	Weekday Evening (7:00PM to 8:00PM)	Saturday Afternoon (11:00AM to 12:00PM)	Saturday Afternoon (12:00PM to 1:00PM)	Saturday Evening (7:00PM to 8:00PM)	Saturday Evening (8:00PM to 9:00PM)
1. Residential area	8	3 38%	3 38%	7 88%	7 88%	4 50%	6 75%	5 63%	5 63%
3. SunTrust Bank	79	29 37%	32 41%	21 27%	25 32%	33 42%	36 46%	24 30%	27 34%
4. Curves studio/Los Tios	21	6 29%	7 33%	6 29%	5 24%	6 29%	9 43%	18 86%	19 90%
5. Natures Nibbles Pet Store	9	6 67%	6 67%	8 89%	7 78%	6 67%	6 67%	6 67%	5 56%
6. Department of Human Services	4	4 100%	4 100%	0 0%	0 0%	1 25%	1 25%	0 0%	1 25%
7. Department of Human Services	8	7 88%	8 100%	5 63%	5 63%	6 75%	6 75%	0 0%	0 0%
8. Duncan Jr. Branch Library	16	12 75%	15 94%	13 81%	13 81%	5 31%	12 75%	0 0%	0 0%
9. Mount Vernon Community School	6	6 100%	6 100%	5 83%	5 83%	3 50%	3 50%	0 0%	0 0%

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Parking Lot	Available Spaces	Weekday Afternoon (12:00PM to 1:00PM)	Weekday Afternoon (1:00PM to 2:00PM)	Weekday Evening (6:00PM to 7:00PM)	Weekday Evening (7:00PM to 8:00PM)	Saturday Afternoon (11:00AM to 12:00PM)	Saturday Afternoon (12:00PM to 1:00PM)	Saturday Evening (7:00PM to 8:00PM)	Saturday Evening (8:00PM to 9:00PM)
10. All at Once Hair	9	2 22%	2 22%	1 11%	1 11%	7 78%	8 89%	3 33%	3 33%
11. Parking for DHS Employees	71	69 97%	68 96%	65 92%	68 96%	--	--	--	--
13. Farmer's Market City Lot	11	9 82%	7 64%	12 109%	11 100%	--	--	9 82%	9 82%
14. State Farm Insurance/Ultime Results/Hatha Yoga	6	0 0%	5 83%	0 0%	1 17%	2 33%	3 50%	0 0%	0 0%
15. St Elmo's	15	10 67%	7 47%	5 33%	8 53%	14 93%	13 87%	3 20%	9 60%
16. Clay Queen Pottery Store	5	4 80%	4 80%	0 0%	1 20%	0 0%	2 40%	0 0%	0 0%
17. AGA	51	30 59%	30 59%	15 29%	11 22%	8 16%	9 18%	5 10%	4 8%
18. Vital	10	2 20%	3 30%	5 50%	3 30%	10 100%	7 70%	0 0%	1 10%
19. Del Ray United Methodist	17	11 65%	11 65%	1 6%	12 71%	5 29%	6 35%	13 76%	13 76%
20. 7-11	8	4 50%	9 113%	9 113%	7 88%	6 75%	7 88%	7 88%	7 88%
21. BodyMindSole, Artifacts, Elegant Nails, and Zumba/Ballet studio	4	2 50%	2 50%	4 100%	2 50%	4 100%	4 100%	2 50%	2 50%
22. Christian Community Center	18	7 39%	7 39%	14 78%	19 106%	1 6%	1 6%	1 6%	1 6%
23. Anne Welsh Salon	6	4 67%	3 50%	5 83%	3 50%	4 67%	4 67%	0 0%	0 0%

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Parking Lot	Available Spaces	Weekday Afternoon (12:00PM to 1:00PM)	Weekday Afternoon (1:00PM to 2:00PM)	Weekday Evening (6:00PM to 7:00PM)	Weekday Evening (7:00PM to 8:00PM)	Saturday Afternoon (11:00AM to 12:00PM)	Saturday Afternoon (12:00PM to 1:00PM)	Saturday Evening (7:00PM to 8:00PM)	Saturday Evening (8:00PM to 9:00PM)
25. Thai Peppers	21	9 43%	8 38%	3 14%	5 24%	7 33%	5 24%	3 14%	7 33%
26. Fire Station	18	5 28%	5 28%	8 44%	11 61%	7 39%	6 33%	7 39%	7 39%
27. Fire Station	7	0 0%	0 0%	1 14%	2 29%	0 0%	0 0%	0 0%	0 0%
28. Evening Star/Majestic Lounge	11	8 73%	7 64%	10 91%	11 100%	6 55%	5 45%	12 109%	11 100%
29. MacGuire - Reeder	9	4 44%	4 44%	2 22%	2 22%	6 67%	5 56%	3 33%	2 22%
30. Behind USPS	22	8 36%	9 41%	0 0%	2 9%	1 5%	1 5%	0 0%	0 0%
31. Suhko Thai	10	2 20%	2 20%	1 10%	1 10%	1 10%	1 10%	1 10%	0 0%
33. Octomeron Associates	6	0 0%	0 0%	0 0%	0 0%	2 33%	2 33%	0 0%	0 0%
34. Salvation Army	33	27 82%	14 42%	6 18%	6 18%	14 42%	11 33%	10 30%	7 21%
45. Behind Deli/Next to Residential	10	9 90%	10 100%	6 60%	6 60%	5 50%	5 50%	5 50%	5 50%
47. St. Paul Christian Center	9	1 11%	1 11%	1 11%	2 22%	3 33%	3 33%	2 22%	3 33%
50. Burke & Herbert Bank	18	11 61%	10 56%	0 0%	0 0%	11 61%	7 39%	0 0%	0 0%
51. Mancini's Cafe	12	10 83%	11 92%	1 8%	0 0%	12 100%	3 25%	0 0%	0 0%
52. Antiques Store	45	20 44%	22 49%	21 47%	15 33%	32 71%	34 76%	17 38%	17 38%

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Parking Lot	Available Spaces	Weekday Afternoon (12:00PM to 1:00PM)	Weekday Afternoon (1:00PM to 2:00PM)	Weekday Evening (6:00PM to 7:00PM)	Weekday Evening (7:00PM to 8:00PM)	Saturday Afternoon (11:00AM to 12:00PM)	Saturday Afternoon (12:00PM to 1:00PM)	Saturday Evening (7:00PM to 8:00PM)	Saturday Evening (8:00PM to 9:00PM)
53. Private Commercial	11	8 73%	8 73%	3 27%	3 27%	8 73%	5 45%	4 36%	5 45%
55. Fireflies	6	0 0%	2 33%	5 83%	5 83%	3 50%	2 33%	3 50%	3 50%
TOTAL <sup>1,2,3,4</sup>	630	349 55%	352 56%	269 43%	285 45%	243 39%	238 38%	163 26%	173 27%

<sup>1</sup> Lots #24b, 35, 37, 39, 40b, 41, 42, 43, 44, 46, 48, 49, 54, 57, and 58 excluded from supply because they are related to auto sales/service/fueling stations or are private-gated and not available to any public use.

<sup>2</sup> Lots #2, 12, 24a, 32, 36, 38, 40a, and 56 were excluded from calculations because no data was collected at these locations during the June 2010 inventory and occupancy field collection.

<sup>3</sup> Lot 11 was removed from Saturday calculations since the lot was closed the day of data collection.

<sup>4</sup> Lot 13 was removed from Saturday mid-day calculations due to non-parking use the day of data collection.

The following identifies the peak hours of the surface parking lots during each time period studied:

- Weekday afternoon, 1:00 to 2:00 PM
- Weekday evening, 7:00 to 8:00 PM
- Saturday afternoon, 11:00 to 12:00 PM
- Saturday evening, 8:00 to 9:00 PM

As shown in Table 1-4, surface parking lot utilization is between 26 percent and 56 percent for all periods studied. This would indicate that surface lot parking is available within the study area during each time period. However, this does not mean that parking is available in all lots or areas of the study area. The data indicates that the following surface lots are effectively full during one or more periods:

- Residential Area (#1) on weekday evenings (88% occupancy)
- Curves Studio (#4) on Saturday evenings (90% occupancy)
- Natures Nibbles Pet Store (#5) on weekday evenings (89% occupancy)
- Department of Human Services (#6 and #7) on weekday afternoons (both at 100% occupancy)

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- Library (#8) on weekday mornings (94% occupancy)
- Mount Vernon Community School (#9) on weekday afternoons (100% occupancy)
- All at Once Hair (#10) on Saturday afternoons (89% occupancy)
- Parking for DHS Employees (#11) on weekday afternoons and evenings (99% occupancy)
- Farmer's Market City Lot (#13) on weekday evenings and Saturday afternoons (109% occupancy)
- St Elmos (#15) on Saturday afternoons (93% occupancy)
- Vital (#18) on Saturday afternoons (100% occupancy)
- 7-11 (#20) on weekdays and Saturdays (113% occupancy)
- BodyMindSole, Artifacts, Elegant Nails, and Zumba/Ballet studio (#21) on weekday evenings and Saturday afternoons (100% occupancy)
- Christian Community Center (#22) on weekday evenings (106% occupancy)
- Evening Star/Majestic Lounge (#28) on weekday and Saturday evenings (109% occupancy)
- Behind Deli/Next to Residential (#45), on weekday afternoons (100% occupancy)
- Mancini's Café (#51) on weekday and Saturday afternoons (100% occupancy)

## Parking Utilization Summary

The previous sections described the utilization observations on a lot by lot basis, for both the on-street and off-street systems. Table 1-5 below provides a summary of the off-street and on-street utilization. The lots included in this table include only the 630 parking spaces that were included in the utilization analysis. The final portion of the table includes the combined on-street and off-street utilization, as measured in June 2010.

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Table 1-5: Del-Ray Neighborhood Utilization Summary

Category	Total Spaces	Weekday				Weekend			
		12 to 1pm	1 to 2pm	6 to 7pm	7 to 8pm	11 to 12pm	12 to 1pm	7 to 8pm	8 to 9pm
Off-Street Parking Utilization									
Overall <sup>1,2</sup>	630	55%	56%	43%	45%	39%	38%	26%	27%
Current Public Parking	19	63%	53%	100%	95%	50%	75%	74%	74%
On-Street Parking Utilization									
Overall <sup>3</sup>	1,099	53%	54%	58%	63%	62%	61%	64%	63%
Mount Vernon Avenue Parking	270	61%	63%	70%	76%	70%	71%	70%	67%
Side Street Parking	829	51%	51%	55%	58%	59%	58%	62%	62%
Overall Utilization									
Entire System	1,729	54%	55%	53%	56%	56%	55%	52%	53%

<sup>1</sup> Overall off-street parking total space count does not include locations that are related to auto sales/service/fueling stations or are private-gated and not available to any public use.

<sup>2</sup> Utilization counts are based on observed locations from June 2010 inventory and occupancy field collection.

<sup>3</sup> Overall on-street count includes Mount Vernon Avenue and side street spaces

## Historic Utilization Comparison

The 2003 study utilized land-use parking requirement ratios to determine demand within the study area. This, when compared to supply in the same area, resulted in 96% utilization. Just one year later, in 2004, the peak demand and utilization of parking was based on actual field counts and was drastically lower at only 61%. In addition, the data gathered as part of this study, based on actual field counts, similar to the 2004 study, yields a peak utilization of 56%.

## General Utilization Summary

Reviewing the utilization data presented in Figures 1-4 through 1-11, parking utilization appears to be highest along Mount Vernon Avenue, with pockets of high utilization at the southern extent of the study area, as well as the northern middle from Raymond Avenue to

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Bellefonte Avenue. Utilization decreases further to the east and west from Mount Vernon Avenue.

The parking utilization percentages from the 2003, 2004, and this current study suggest that the land-use parking requirement ratios per City ordinance are too high, when compared to actual conditions. While the study area in the 2003 and 2004 reports vary from each other and with the area used in this study, the overall utilization percentages can be used to draw comparisons regarding land-use ratios because overall supply is not compared independently.

## Parking Turnover Counts

Parking turnover was measured for two block faces along Mount Vernon Avenue in June 2010 and two additional block faces were measured in November 2010. Turnover data was collected to verify whether time restrictions along the block were being obeyed and enforced. The monitored sections along Mount Vernon Avenue were:

- Howell Avenue to Windsor Avenue (June 2010)
- Windsor Avenue to Custis Avenue (June 2010)
- Del Ray Avenue to Oxford Avenue (November 2010)
- Oxford Avenue to Uhler Avenue (November 2010)

These sections of Mount Vernon Avenue were selected because the density and use patterns from adjacent retail and restaurant uses generate high demands for short term and proximal parking. The turnover counts were collected for the following time periods:

- Weekday Mid-Day 11:00 to 3:00 pm (June 16, 2010 and November 10, 2010)
- Weekday Evening 5:00 to 9:00 pm (June 16, 2010 and November 10, 2010)
- Weekend Mid-Day 10:00 to 2:00 pm (June 19, 2010 and November 13, 2010)
- Weekend Evening 6:00 to 10:00 pm (June 19, 2010 and November 13, 2010)

Turnover counts were collected every ten minutes during the collection periods. The process for collecting the turnover data included recording license plate information for each space along the block faces. Table 1-6 below provides a summary of the June and November observation periods, as well as a combination of both periods.

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Table 1-6: Del-Ray Neighborhood Average Turnover Data

Location	Average Vehicles per Space	Average Duration (min)	Average Duration (hours)
Howell to Windsor NB	3.39	79.35	1.32
Howell to Windsor SB	3.32	64.26	1.07
Windsor to Custis, NB	3.90	66.66	1.11
Windsor to Custis, SB	2.74	90.82	1.51
Del Ray to Oxford, NB	4.10	62.00	1.03
Del Ray to Oxford, SB	5.17	51.27	0.85
Oxford to Uhler, NB	3.90	71.68	1.19
Oxford to Uhler, SB	3.63	90.60	1.51
Combination - Overall	3.76	72.08	1.20

Overall, the turnover data indicated that the average length of stay was below the two-hour time limit. However, there were nearly a dozen occurrences where someone was parked in one space for the entire four hour observation period. These observations indicate that there were some long-term parking issues that need to be addressed through better enforcement or management of parking. Table's 1-7a-h on the following pages provides a more defined breakdown of each observation period.

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Table 1-7a: Turnover Summary (Wednesday AM-June 2010)

Date: 6/16/2010 (Wednesday) Recorder: Robin Fitch

Space #	Start Time														# Vehicles	# Hours Parked												
	11:00	11:10	11:20	11:30	11:40	11:50	12:00	12:10	12:20	12:30	12:40	12:50	1:00	1:10			1:20	1:30	1:40	1:50	2:00	2:10	2:20	2:30	2:40	2:50		
E Howell Avenue to E Windsor Avenue, Spaces along the Northbound Curb																												
1	MC	-	-	9YZ	-	-	-	KPR	-	489	TEZ	TEZ	-	640	637	637	94M	-	102	J80	-	815	815	815	12	2.50		
2	-	-	-	-	339	339	339	339	419	-	-	9YZ	9YZ	9YZ	9YZ	9YZ	9YZ	9YZ	9YZ	9YZ	9YZ	9YZ	9YZ	321	321	4	3.00	
3	129	129	129	129	129	129	124	124	124	124	124	302/124	124	124	124	124	124	124	124	124	124	124	124	850		4	4.00	
4	216	216		587	162	162	162	-	-	990	312	312	I2L/312	I2L/312	I2L/312	I2L/312	I2L/312	I2L/312	I2L/312	I2L	129	-	124	124	8	4.50		
5	G2N	G2N	G2N	G2N	-	-	-	-	673	R35	R35	R35	R35	R35	-	-	-	-	-	-	-	-	9M4	530	5	2.00		
6	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	1	4.00	
7	-	-	-	-	-	-	-	AR4	AR4	AR4	AR4	AR4	AR4	AR4	AR4	AR4	AR4	AR4	AR4	AR4	AR4	AR4	-	479	479	2	2.67	
8	-	-	-	-	-	189	-	-	-	-	-	USPS	USPS	USPS	USPS	USPS	USPS	-	-	534	-	-	-	-	3	1.33		
Total number of vehicles/Total number of hours parked																									39	24.00		
Average Turnover Rate (Number of Vehicles per Number of Spaces)																									4.88			
Average Duration (Hours)																									0.62			
E Howell Avenue to E Windsor Avenue, Spaces along the Southbound Curb																												
1	-	SAR	SAR	SAR	SAR	001/SAR	SAR	-	DOG/564	564	564	564	564	564	725	-	-	-	-	-	-	-	397	397	6	2.67		
2	829	829	829	829	829	829	-	750	750	750	750	750	750	750	-	954	954	954	954	-	313	313	-	723	-	5	3.17	
3	-	-	335	-	-	463	463	463	463	463	463	463	463	-	-	723	525	-	48	48	48	48	48	48	48	5	2.67	
4	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	1	4.00	
5	94	94	94	94	94	939	939	-	-	-	-	-	-	479	479	479	479	479	479	479	479	479	479	479	479	3	3.17	
6	-	-	-	-	-	854	-	157	157	157	157	157	157	-	-	-	-	-	-	-	-	-	-	-	-	2	1.00	
7	437	437	437	437	437	437	437	437	437	437	437	437	437	437	914	-	821	821	821	821	821	821	821	821	821	3	3.50	
8	979	979	979	979	979	979	979	979	979	979	979	979	979	-	-	-	5W4	5W4	5W4	5W4	5W4	5W4	5W4	5W4	5W4	400	3	3.50
9	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	-	T70	2	3.83
10	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	1	4.00	
Total number of vehicles/Total number of hours parked																									31	31.51		
Average Turnover Rate (Number of Vehicles per Number of Spaces)																									3.10			
Average Duration (Hours)																									1.02			
E Windsor Avenue to E Custis Avenue, Spaces along the Northbound Curb																												
1	480	480	480	480	480	085/480	085/480	085/480	085/480	085/480	480	480	480	480	480	480	2YT/480	480	-	872	872	872	872	872	872	4	4.83	
2	286	286	286	286	286	286	286	286	368	368	368	368	368	368	368	368	368	368	434	434	434	434	434	434	434	3	4.00	
3	793	793	793	793	793	793	-	-	-	-	898	898	898	898	898	-	-	-	-	-	-	-	-	-	-	2	1.67	
4	-	-	-	-	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	ILF	1	3.33	
5	738	738	738	738	-	-	-	-	-	-	-	-	-	-	-	-	-	585	-	-	-	-	-	-	-	2	0.83	
6	793	793	793	793	793	-	834	834	-	-	-	-	-	-	-	-	UPS	UPS	UPS	UPS	UPS	-	-	26	4	2.17		
7	379	379	379	379	379	379	379	379	379	327	327	-	-	334	-	-	-	-	-	-	-	-	-	243	243	4	2.33	
8	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	TME	1	4.00	
Total number of vehicles/Total number of hours parked																									21	23.16		
Average Turnover Rate (Number of Vehicles per Number of Spaces)																									2.63			
Average Duration (Hours)																									1.10			
E Custis Avenue to E Windsor Avenue, Spaces along the Southbound Curb																												
1	-	-	-	5	854/DWI	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	DWD	3	3.67	
2	638	139	139	139	139	139	139	139	-	-	-	-	-	-	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	3	2.83	
3	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	257	257	257	257	257	257	257	257	257	2	4.00	
4 (Taxi)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00	
5 (Taxi)	-	-	-	717	717	-	-	-	-	-	294	294	-	813	-	-	-	-	-	-	-	-	-	-	-	3	0.83	
Total number of vehicles/Total number of hours parked																									11	11.33		
Average Turnover Rate (Number of Vehicles per Number of Spaces)																									2.20			
Average Duration (Hours)																									1.03			

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Table 1-7b: Turnover Summary (Wednesday PM-June 2010)

Date: 6/16/2010 (Wednesday) Recorder: Robin Fitch

Space #	Start Time										Start Time										# Vehicles	# Hours Parked					
	17:00	17:10	17:20	17:30	17:40	17:50	18:00	18:10	18:20	18:30	18:40	18:50	19:00	19:10	19:20	19:30	19:40	19:50	20:00	20:10			20:20	20:30	20:40	20:50	
E Howell Avenue to E Windsor Avenue, Spaces along the Northbound Curb																											
1	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	933	933	933	2	4.00		
2	879	879	879	879	879	879	-	352	352/514	952	952	952	952	952	-	-	056	056	056	056	056	056	056	5	3.67		
3	124	124	124	124	124	124	124	124	124	124	124	393	393	393	393	-	-	-	WEL	WEL	WEL	WEL	WEL	3	3.50		
4	-	-	-	632	632	514	-	-	-	623	623	623	623	623	CA2	CA2	CA2	4	3.00								
5	673	673	-	455	455	455	455	389	578	566	566	566	566	566	566/623	566/623	623	623	623	623	623	623	623	6	4.17		
6	-	9AX	-	-	-	-	3AX	3AX/A95	3AX/A95	3AX	3AX	3AX	3AX	3AX	3AX	3AX	3AX	3AX	3AX	A24/3AX	A24/3AX	A24/3AX	A24/3AX	A24/3AX	4	4.67	
7	-	002	-	-	-	224	224	-	484	481/484	481/484	481/484	481/484	481/484	481/484	481/484	484	484	484	484	484	484	484	4	4.17		
8	437	437	437	437	437	437	437	437	437	437	437/737	437	-	-	291	291	291	291	291	291	-	-	-	3	3.17		
Total number of vehicles/Total number of hours parked																							31	30.35			
Average Turnover Rate (Number of Vehicles per Number of Spaces)																							3.88				
Average Duration (Hours)																							0.98				
E Howell Avenue to E Windsor Avenue, Spaces along the Southbound Curb																											
1	988	988	267/973	267	-	685	685	685	685	461	461	461	461	461	461	461	461	461	461	461	461	-	-	889	7	3.67	
2	048	048	048	048	048	048	048	048	048	685	685	685	685	685	685	685	685	685	685	685	685	685	685	-	-	2	3.67
3	730	730	730	730	730	730	730	730	730	730	730	-	835	835	835	835	835	835	835	835	835	835	835	317	317	3	3.83
4	850	850	850	850	850	850	850	850	850	850	850	850	498/850	498/850	498/850	498/850	498/850	850	195/850	195/850	195/850	195/850	195/850	195/850	195/850	3	5.83
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
6	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	1	4.00
7	-	-	857	857	857	857	857	857	857	857	135	135	135	22	864	864	864	864	864	864	864	864	864	864	864	4	3.67
8	629	629	629	-	OCF	OCF	OCF	OCF	OCF	-	146	146	146	522	-	-	657	657	657	657	657	657	657	657	657	5	3.33
9	289	289	289	289	289	289	289	289	289	NCE	NCE	NCE	NCE	NCE	NCE	NCE	NCE	-	929	929	929	929	929	929	929	3	3.83
10	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	916	-	-	-	484	484	-	-	2	3.17	
Total number of vehicles/Total number of hours parked																							30	35.00			
Average Turnover Rate (Number of Vehicles per Number of Spaces)																							3.00				
Average Duration (Hours)																							1.17				
E Windsor Avenue to E Custis Avenue, Spaces along the Northbound Curb																											
1	-	-	-	-	-	-	-	-	-	-	844	-	-	-	-	-	538	538	538	538	538	538	538	538	2	1.33	
2	-	-	-	-	198	198	198	198	198	198	198	-	-	278	278	278	278	278	278	278	278	278	278	278	278	2	3.00
3	-	-	607	607	607	607	607	AUG	AUG	AUG	AUG	AUG	AUG	AUG	AUG	AUG	AUG	AUG	AUG	AUG	AUG	AUG	AUG	AUG	AUG	2	3.67
4	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	-	E44	E44	E44	E44	E44	E44	E44	E44	E44	2	3.67
5	-	-	-	-	-	414	414	414	414	414	725/414	725/414	725	725	725/006	725/006	725/006	725/006	725/006	725/006	725/006	725/006	725/006	725/006	725/006	3	5.17
6	-	C72	-	-	-	738	738	738	738	738	738/772	738/772	772	772	772	772	989	989	989	989	989	989	989	989	989	4	3.67
7	-	379	379	379	379	379	379	379	379	785	785	785	785	785	-	-	CWZ	CWZ	CWZ	CWZ	CWZ	CWZ	CWZ	CWZ	-	3	3.33
8	122	-	-	-	-	-	-	684	684	684	684	684	684	684	684	684	684	684	304	304	304/356	304/356	304/356	304/356	4	3.67	
Total number of vehicles/Total number of hours parked																							22	27.51			
Average Turnover Rate (Number of Vehicles per Number of Spaces)																							2.75				
Average Duration (Hours)																							1.25				
E Custis Avenue to E Windsor Avenue, Spaces along the Southbound Curb																											
1	930	930	-	147	-	-	-	074	-	870/110	870	870	870	870	870	870	870	870	870	870	870	870	696	-	6	3.17	
2	-	-	-	-	-	-	-	620	620	089	089	089	089	089	089	089	-	613	613	613	613	613	613	613	613	3	2.67
3	-	-	637	637	637	637	637	637	637	637	637	637	637	637	637	-	173	173	173	173/194	173	173	173	173	3	3.67	
4 (Taxi)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
5 (Taxi)	-	-	-	826T	-	-	-	-	-	-	-	-	-	-	-	-	702T	-	-	-	-	-	-	-	-	2	0.33
Total number of vehicles/Total number of hours parked																							14	9.84			
Average Turnover Rate (Number of Vehicles per Number of Spaces)																							2.80				
Average Duration (Hours)																							0.70				

# DEL RAY Parking Study



Table 1-7c: Turnover Summary (Saturday AM-June 2010)

Date: 6/19/2010 (Saturday) Recorder: Robin Fitch

Space #	Start Time															# Vehicles	# Hours Parked											
	10:00	10:10	10:20	10:30	10:40	10:50	11:00	11:10	11:20	11:30	11:40	11:50	12:00	12:10	12:20			12:30	12:40	12:50	1:00	1:10	1:20	1:30	1:40	1:50		
E Howell Avenue to E Windsor Avenue, Spaces along the Northbound Curb																												
1	325	325	325	325	325	325	-	179	179	282	282	282	282	282	282	282	282	282	-	-	281	-	TBL	TBL	5	3.33		
2	643	643	-	-	-	473	188	188	188	H41	-	-	-	663	701	701	701	701	701	701	701	701	701	701/527	701/527	7	3.33	
3	NBJ	-	-	035	670	670	789/401	705/789	233	233	233	233	233	233	233	347	424	424	424	424	424	424	424	424	85E	10	4.00	
4	612	-	-	ESQ	ESQ	ESQ	ESQ	ENG	ENG	ENG	ENG	ENG	ENG	ENG	ENG	ENG	128	128	-	-	535	535	535	535	535	5	3.33	
5	890	890	890	890	890	-	-	258	258	858/258	858/258	858/258	858	858	858	858/685	020	F86/46L	F86/46L	F86/2FJ	F86/2FJ	F86/2FJ	F86/2FJ	F86/2FJ	F86/2FJ	8	5.50	
6	05D	05D	05D	-	481	481	481	481	481	559	-	-	-	592	215	215	215	215	215	215	215	215	215	215	215	5	3.33	
7	689	689	689	689	USPS	USPS	USPS	USPS	USPS	USPS	USPS	ADR	ADR	834	834	834	834	834	834	561	561	-	274	274	-	6	3.50	
8	067	067	067	067	067	067	067	067	067	-	-	-	048	048	048	048	048	048	048	048	048	048	048	048	-	2	3.33	
Total number of vehicles/Total number of hours parked																									48	29.65		
Average Turnover Rate (Number of Vehicles per Number of Spaces)																									6.00			
Average Duration (Hours)																									0.62			
E Howell Avenue to E Windsor Avenue, Spaces along the Southbound Curb																												
1	-	-	-	-	-	154	154	154	-	339	BBH	BBH	BBH	BBH	BBH	BBH	BBH	626	626	-	-	-	126	126	5	2.50		
2	-	-	-	-	952	952	952	952	952	952	952	952	952	952	952	952	656	656	656	656	CK4	CK4	CK4	-	3	3.17		
3	923	923	923	923	-	841	841	841	841	841	-	775	775	122	122	122	122	122	HAT	HAT	HAT	HAT	HAT	HAT	5	3.67		
4	230	230	230	230	230	-	1UF	1UF	1UF	1UF	1UF	1UF	1UF	1UF	1UF	1UF	402	110	110	110	391	391	391	391	5	3.83		
5	8CX	8CX	8CX	-	4C4	4C4	4C4	-	881	881	881	881	881	881	881	-	916	916	916	916	916	916	916	916	4	3.50		
6	634	634	634	634	634	634	634	634	472	472	472	472	472	472	472	472	472	472	472	472	472	472	472	472	2	4.00		
7	207	207	207	207	207	207	-	-	-	009	375	375	375	375	375	375	-	5CX	581	581	581	581	581	581	581	5	3.33	
8	913	913	913	913	913	913	-	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	2	3.83		
9	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	289	3	3.83		
10	644	281	281	425	220	220/200	220/200	220/200	220/200	220/200	200	200	200	200	200	200	200	200	593	593	593	593	593	593	593	6	4.83	
Total number of vehicles/Total number of hours parked																									40	36.49		
Average Turnover Rate (Number of Vehicles per Number of Spaces)																									4.00			
Average Duration (Hours)																									0.91			
E Windsor Avenue to E Custis Avenue, Spaces along the Northbound Curb																												
1	4BH	4BH	-	-	-	225	225	225	225	225	W13	W13	W13	W13	W13	W13	W13	W13	5FB	5FB	5FB	5FB	465	465	465	5	3.50	
2	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	1	4.00	
3	646	646	646	646	646	-	-	836	836	836	836	836	836	836	-	603	603	603	603	603	603	603	603	603	603	3	3.50	
4	920	920	920	920	920	810	810	810	810	810	810	-	-	-	-	4NB	808	808	229/808	229/808	808	808	808	808	808	5	3.67	
5	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	F45	1	4.00	
6	842	842	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	715	715	715	715	2	1.00
7	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171/875	171/875	875	875	875	875	875	2	4.33	
8	659	659	659	659	659	659	659	659	659	659	659	-	-	616	616	616	616	616	616	616	-	239	239/153	239/153	239/153	4	4.00	
Total number of vehicles/Total number of hours parked																									23	28.00		
Average Turnover Rate (Number of Vehicles per Number of Spaces)																									2.88			
Average Duration (Hours)																									1.22			
E Custis Avenue to E Windsor Avenue, Spaces along the Southbound Curb																												
1	621	621	621	621	621	621	621	621	621	621	621	946	946	946	946	946	946	946	946	946	946	946	946	946	946	2	4.00	
2	885	-	-	-	289	289	289	289	289	289	-	637	637	637	637	637	637	547	547	547	547	547	547	547	547	4	3.33	
3	169	169	169	169	169	169	169	169	-	-	513	513	513	513	513	513	513	513	368	368	368	368	H17	H17	H17	4	3.67	
4 (Taxi)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00	
5 (Taxi)	-	-	-	-	-	414	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.17	
Total number of vehicles/Total number of hours parked																									11	11.17		
Average Turnover Rate (Number of Vehicles per Number of Spaces)																									2.20			
Average Duration (Hours)																									1.02			

# DEL RAY Parking Study



Table 1-7d: Turnover Summary (Saturday PM-June 2010)

Date: 6/19/2010 (Saturday) Recorder: Robin Fitch

Space #	Start Time															# Vehicles	# Hours Parked										
	18:00	18:10	18:20	18:30	18:40	18:50	19:00	19:10	19:20	19:30	19:40	19:50	20:00	20:10	20:20			20:30	20:40	20:50	21:00	21:10	21:20	21:30	21:40	21:50	
E Howell Avenue to E Windsor Avenue, Spaces along the Northbound Curb																											
1	JAC	JAC	JAC	JAC	JAC	JAC	JAC	JAC	JAC	JAC	JAC	JAC	-	-	-	-	-	-	MOR	-	-	-	-	-	2	2.17	
2	048	048	048	048	048	048	048	048	048	048	048	048	048	048	048	048	048	048	048	048	048	-	-	-	1	3.50	
3	493	493	493	493	493/744	493	493	493	2ES	2ES	348/2ES	348/2ES	2ES	-	046	046	046	288/046	288/046	046	-	065	-	-	7	4.17	
4	-	4CF	4CF	4CF	4CF	4CF	4CF	4CF	4CF	4CF	4CF	4CF	4CF	334	334	334	-	-	938	938	938	938	938	938	3	3.50	
5	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	547	1	4.00	
6	496	496	496	496	496	496	-	-	LSS	LSS	LSS	LSS	LSS	LSS	LSS	LSS	LSS	LSS	LSS	LSS	LSS	LSS	LSS	LSS	2	3.67	
7	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	482	1	4.00	
8	-	-	-	-	682	-	DOX	DOX	DOX	DOX	DOX	DOX	-	-	-	-	-	-	-	041	041	041	041	041	3	2.00	
Total number of vehicles/Total number of hours parked																									20	27.01	
Average Turnover Rate (Number of Vehicles per Number of Spaces)																									2.50		
Average Duration (Hours)																									1.35		
E Howell Avenue to E Windsor Avenue, Spaces along the Southbound Curb																											
1	6AX	6AX	-	-	688	-	-	849	-	118	118	118	118	118	118	118	118	118	-	250	-	-	-	-	5	2.33	
2	750	750	750	-	777	777	777	777	777	777	777	777	777	777	777	-	-	-	-	396	396	-	-	-	3	2.83	
3	245	245	245	245	245	-	-	-	-	-	-	415	415	415	415	415	415	415	415	415	-	710	710	710	3	2.83	
4	812	812	812	812	812	812	812	812	812	812	812	812	799	799	799	799	799	799	799	799	799	799	799	799	2	4.00	
5	898	898	898	898	-	863	-	-	-	128	128	128	128	128	128	128	128	751	751	751	751	751	751	751	4	3.33	
6	714	714	714	714	714	714	714	714	276	276	276	276	276	276	276	276	276	276	276	276	-	-	-	-	2	3.33	
7	435	435	435	435	496	496	496	496	-	-	-	827	827	827	827	827	827	827	827	827	827	827	827	827	3	3.50	
8	GNG	GNG	GNG	GNG	GNG	GNG	GNG	-	XMR	XMR	XMR	XMR	XMR	XMR	XMR	XMR	XMR	XMR	XMR	XMR	-	-	-	-	2	3.17	
9	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	1	4.00	
10	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	050	1	4.00	
Total number of vehicles/Total number of hours parked																									26	33.32	
Average Turnover Rate (Number of Vehicles per Number of Spaces)																									2.60		
Average Duration (Hours)																									1.28		
E Windsor Avenue to E Custis Avenue, Spaces along the Northbound Curb																											
1	674	-	-	024	-	-	-	-	-	-	-	417	-	-	146	146	146	146	146	146	146	146	146	146	4	1.67	
2	-	-	-	-	-	-	-	MUT	MUT	MUT	-	-	067	067	067	067	067	067	067	067	067	067	067	067	2	2.33	
3	788	788	788	788	788	788	788	788	788	788	788	788	688	688	688	688	688	688	688	688	-	-	-	-	2	3.17	
4	440	440	440	440	440	440	-	-	-	-	-	-	NUT	NUT	NUT	NUT	NUT	NUT	NUT	NUT	NUT	NUT	NUT	NUT	2	2.50	
5	-	-	-	-	-	-	-	N87	-	732	732	732	450/732	450/732	450/732	450/732	450/732	450	-	-	-	832	832	832	4	3.00	
6	-	-	-	-	-	468	468	468	468	468	468	468	468	468	325	325	325	325	325	325	325	325	325	325	2	3.00	
7	E06	E06	E06	E06	E06	603	603	603	603	603	603	603	603	603	603	603	603	603	603	603	603	603	603	603	2	4.00	
8	RGO	RGO	RGO	RGO	-	-	-	JZV	JZV	JZV	JZV	JZV	VJA	VJA	VJA	VJA	-	041	304	-	-	-	-	-	5	2.50	
Total number of vehicles/Total number of hours parked																									23	22.17	
Average Turnover Rate (Number of Vehicles per Number of Spaces)																									2.88		
Average Duration (Hours)																									0.96		
E Custis Avenue to E Windsor Avenue, Spaces along the Southbound Curb																											
1	-	-	-	-	-	-	-	-	070	-	-	-	308	308	356/308	356/308	356/308	356/308	356/308	356/308	356/308	356/308	356/308	356/308	3	3.17	
2	-	668	-	-	-	-	394	394	-	-	415	415	415	415	415	415	415	415	415	415	415	415	415	415	3	2.83	
3	831	831	-	-	B40	B40	-	-	307	-	ANE	ANE	ANE	ANE	ANE	ANE	ANE	ANE	ANE	ANE	ANE	ANE	ANE	832	832	5	2.83
4 (Taxi)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00	
5 (Taxi)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00	
Total number of vehicles/Total number of hours parked																									11	8.83	
Average Turnover Rate (Number of Vehicles per Number of Spaces)																									2.20		
Average Duration (Hours)																									0.80		

# DEL RAY Parking Study



Table 1-7e: Turnover Summary (Wednesday AM-November 2010)

Date: 11/10/2010 (Wednesday) Recorder: MEGAN DOUGHTY

Space #	Start Time												Start Time												# Vehicles	# Hours Parked		
	11:00	11:10	11:20	11:30	11:40	11:50	12:00	12:10	12:20	12:30	12:40	12:50	1:00	1:10	1:20	1:30	1:40	1:50	2:00	2:10	2:20	2:30	2:40	2:50				
Del Ray Avenue to Oxford Avenue, Spaces along the Northbound Curb																												
1	109	109	109	109	109	-	-	-	953	953	953	953	953	953	953	-	-	426	CCA	995	-	-	-	107	6	2.67		
2	215	-	-	766	766	766	766	-	592	-	957	957	957	-	701	701	701	701	701	701	701	701	701	701	5	3.17		
3	535	535	535	535	535	535	535	535	535	535	535	535	535	535	535	535	535	535	535	318	318	318	318	-	2	3.83		
4	764	305	305	305	305	-	724	724	724	724	724	724	724	724	724	724	724	724	724	P44	P44	-	230	-	5	3.50		
Total number of vehicles/Total number of hours parked																								18	13.17			
Average Turnover Rate (Number of Vehicles per Number of Spaces)																								4.50				
Average Duration (Hours)																								0.73				
Oxford Avenue to Uhler Avenue, Spaces along the Northbound Curb																												
1	-	-	-	-	669	669	-	-	725	725	725	725	725	-	-	-	-	-	-	-	-	1M8	1M8	-	3	1.50		
2	697	697	697	697	-	-	313	313	313	313	313	313	313	313	313	313	313	313	313	M14	M14	M14	-	026	4	3.50		
3	YST	YST	YST	YST	-	958	-	MEO	MEO	MEO	MEO	MEO	MEO	MEO	MEO	-	509	509	509	509	509	509	509	509	509	4	3.50	
4	036	036	036	036	036	036	036	036	036	036	036	036	036	036	036	036	036	036	036	036	036	036	036	036	1	4.00		
5	248	248	248	248	248	-	144	144	144	144	144	144	144	144	144	144	144	144	144	Y06	-	-	389	ATE	ATE	ATE	5	3.50
6	-	-	-	-	-	-	OOM	OOM	OOM	OOM	OOM	OOM	OOM	-	OER	OER	OER	OER	306	3	2.83							
7	741	741	741	741	323	323	323	323	323	323	323	582	582	582	582	-	-	-	-	-	-	-	-	OLK	OLK	4	2.83	
8	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434	599	-	-	904	904	904	904	904	461	4	3.67	
9	438	438	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548	2	4.00	
Total number of vehicles/Total number of hours parked																								30	29.33			
Average Turnover Rate (Number of Vehicles per Number of Spaces)																								3.33				
Average Duration (Hours)																								0.98				
Uhler Avenue to Oxford Avenue, Spaces along the Southbound Curb																												
1	-	415	959	959	959	959	959	959	959	959	959	959	959	959	959	959	959	959	959	959	959	959	959	959	959	2	3.83	
2	ADE	ADE	ADE	ADE	ADE	ADE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1.00	
3	AAA	AAA	AAA	AAA	AAA	AAA	-	UCH	UCH	UCH	UCH	UCH	UCH	UCH	UCH	UCH	UCH	238	-	758	758	758	758	758	4	3.67		
4	166	-	NRD	NRD	NRD	-	-	EOW	EOW	EOW	EOW	EOW	EOW	EOW	EOW	EOW	EOW	EOW	EOW	EOW	EOW	EOW	EOW	EOW	EOW	3	3.50	
5	325	325	325	-	595	-	099	099	099	099	980	980	-	306	306	306	306	306	-	-	-	685	685	IWL	7	3.00		
6	93CX	93CX	93CX	93CX	-	818	818	818	818	818	818	-	-	-	-	363	363	363	363	400	400	-	-	-	4	2.67		
7	53CX	53CX	-	-	905	905	905	905	905	905	19T	19T	19T	19T	696	696	696	696	696	696	696	696	696	696	4	3.67		
8	460	460	460	460	-	-	467	467	467	467	467	467	467	467	467	467	467	467	467	467	467	467	467	467	2	3.67		
Total number of vehicles/Total number of hours parked																								27	25.01			
Average Turnover Rate (Number of Vehicles per Number of Spaces)																								3.38				
Average Duration (Hours)																								0.93				
Oxford Avenue to Del Ray Avenue, Spaces along the Southbound Curb																												
1	6AE	6AE	528	KWM	-	-	134	018	007	007	780	780	155	155	875/155	155	155	155	998/155	155	155	155	-	-	10	3.33		
2	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	820	323	-	2	3.83	
3	-	586	586	586	-	D68	D68	D68	D68	D68	-	-	-	-	-	-	-	-	-	-	-	-	-	710	3	1.50		
4	720	720	720	720	720	720	-	944	-	419	-	-	034	034	541	541	541	541	-	181	-	-	-	-	6	2.50		
5	ELV	ELV	ELV	ELV	ELV	ELV	ELV	ELV	-	380	060	060	060	060	060	060	-	VTV	331	361	361	850	850	T07	8	3.67		
6	415	415	415	415	705	-	103	103	103	103	MMB	MMB	MMB	MMB	MMB	MMB	MMB	MMB	MMB	-	506	188	188	188	6	3.67		
7	562	562	562	562	562	562	562	562	562	562	-	007	-	-	104	-	800	800	800	800	800	800	800	800	4	3.33		
8	51	51	51	51	51	51	-	-	-	-	-	3MO	725	725	904	904	904	904	904	904	904	-	828	828	828	5	3.00	
9	897	-	764	764	764	764	-	569	-	-	-	052	052	052	052	052	052	052	-	LTY	LTY	LTY	LTY	LTY	5	3.00		
Total number of vehicles/Total number of hours parked																								49	27.83			
Average Turnover Rate (Number of Vehicles per Number of Spaces)																								5.44				
Average Duration (Hours)																								0.57				

# DEL RAY Parking Study



Table 1-7f: Turnover Summary (Wednesday PM-November 2010)

Date: 11/10/2010 (Wednesday) Recorder: ANDREA THOMPSON

Space #	Start Time																							# Vehicles	# Hours Parked		
	17:00	17:10	17:20	17:30	17:40	17:50	18:00	18:10	18:20	18:30	18:40	18:50	19:00	19:10	19:20	19:30	19:40	19:50	20:00	20:10	20:20	20:30	20:40			20:50	
Del Ray Avenue to Oxford Avenue, Spaces along the Northbound Curb																											
1	-	-	-	960	960	960	960	960	960	960	-	371	371	371	371	371	371	371	371	371	371	371	371	-	2	3.17	
2	458	458	458	458	458	458	458	458	458	458	458	458	458	458	458	458	458	458	458	458	458	458	458	458	1	4.00	
3	599	599	-	806	806	806	806	806	806	806	806	806	806	637	637	637	637	997	161	-	-	7BC	7BC	7BC	6	3.50	
4	000	-	628	628	628	628	628	628	628	628	095	037	037	037	037	037	037	037	037	037	037	037	037	037	5	3.83	
Total number of vehicles/Total number of hours parked																							14	14.50			
Average Turnover Rate (Number of Vehicles per Number of Spaces)																							3.50				
Average Duration (Hours)																							1.04				
Oxford Avenue to Uhler Avenue, Spaces along the Northbound Curb																											
1	-	328	328	328	329	818	056	056	056	056	255	635	635	635	635	635	635	635	-	-	-	-	-	-	6	2.83	
2	920	920	920	920	920	920	805	805	805	805	805	805	805	805	805	805	805	805	V2G	V2G	V2G	V2G	V2G	642	4	4.00	
3	509	509	509	509	509	509	509	509	509	509	509	509	509	509	509	509	509	509	-	143	143	143	143	143	2	3.83	
4	036	036	036	036	036	036	036	036	036	-	TWX	522	917	917	917	917	917	917	917	917	917	917	917	917	4	3.83	
5	423	423	423	423	423	423	423	695	695	695	695	695	695	-	752	752	752	752	752	752	752	752	752	752	3	3.83	
6	539	539	-	399	332	332	332	332	332	332	332	332	332	332	332	332	332	332	-	-	-	-	-	687	4	3.00	
7	639	639	639	812	812	-	194	194	194	194	194	L67	-	-	220	220	220	220	220	-	-	708	708	708	6	3.17	
8	818	818	818	818	-	-	ADB	ADB	ADB	ADB	ADB	ADB	ADB	ADB	ARD	ARD	ARD	ARD	3	3.67							
9	548	548	548	548	548	548	548	548	548	548	548	548	-	9MA	9MA/548	9MA	9MA	9MA	2	3.83							
Total number of vehicles/Total number of hours parked																							34	31.99			
Average Turnover Rate (Number of Vehicles per Number of Spaces)																							3.78				
Average Duration (Hours)																							0.94				
Uhler Avenue to Oxford Avenue, Spaces along the Southbound Curb																											
1	-	-	-	-	-	-	9KG	659	659	659	659	659	659	659	659	659	659	659	659	659	-	-	-	-	2	2.33	
2	-	435	435	435	435	435	435	435	435	435	435	435	435	435	-	-	939	939	939	939	939	939	-	258	258	3	3.33
3	-	7CY	975	975	975	975	975	6HC	6HC	6HC	6HC	6HC	6HC	-	772	772	-	4	3.50								
4	ITE	ITE	ITE	ITE	ITE	ITE	ITE	ITE	ITE	ITE	ITE/683	ITE	ITE	ITE	ITE/LUV	ITE	3	4.00									
5	079	-	504	504	504	504	504	504	504	504	504	504	504	504	504	504	504	504	504	504	504	504	504	504	2	3.83	
6	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	CTN	1	4.00	
7	874	874	874	874	874	874	874	AV6	AV6	AV6	AV6	AV6	AV6	-	692	692	692	692	692	692	692	-	-	060	4	3.50	
8(BUS)	111	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.33	
Total number of vehicles/Total number of hours parked																							20	24.82			
Average Turnover Rate (Number of Vehicles per Number of Spaces)																							2.50				
Average Duration (Hours)																							1.24				
Oxford Avenue to Del Ray Avenue, Spaces along the Southbound Curb																											
1	-	-	-	-	091	892	243	243	243	-	-	805	805	805	805	805	805	805	805	805	319	334	-	-	6	2.67	
2	-	-	-	718	718	718	718	-	-	316	316	316	316	316	316	316	-	-	707	707	-	326	326	326	4	2.67	
3	-	-	628	628	628	628	628	628	628	147	147	147	147	919	919	919	919	919	919	919	357	357	357	357	4	3.67	
4	WCY	WCY	WCY	-	-	-	228	-	775	-	-	246	246	039	039	-	496	137	733	733	733	733	733	733	8	2.83	
5	616	868	868	-	886	854	854	854	854	854	854	854	854	854	854	-	-	-	253	389	410	410	-	597	8	3.17	
6	492	-	-	-	313	313	313	313	668	668	668	668	668	668	668	668	107	107	107	107	107	107	107	107	4	3.50	
7	-	-	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	373	373	373	373	2	3.67	
8	794	794	794	794	794	794	-	-	115	115	115	115	115	115	115	115	115	115	115	115	421	421	-	502	502	4	3.50
9	-	-	-	-	150	-	-	H11	H11	H11	-	-	486	486	-	577	577	577	577	577	577	577	393	IND	IND	6	2.50
Total number of vehicles/Total number of hours parked																							46	28.18			
Average Turnover Rate (Number of Vehicles per Number of Spaces)																							5.11				
Average Duration (Hours)																							0.61				

# DEL RAY Parking Study



Table 1-7g: Turnover Summary (Saturday AM-November 2010)

Date: 11/13/2010 (Saturday) Recorder: MEGHAN MISIAG

Space #	Start Time															# Vehicles	# Hours Parked													
	10:00	10:10	10:20	10:30	10:40	10:50	11:00	11:10	11:20	11:30	11:40	11:50	12:00	12:10	12:20			12:30	12:40	12:50	1:00	1:10	1:20	1:30	1:40	1:50				
<b>Del Ray Avenue to Oxford Avenue, Spaces along the Northbound Curb</b>																														
1	519	519	519	519	519	519	519	519	519	519	519	519	250	250	250	250	250	250	250	250	913	913	913	913	3	4.00				
2	385	385	-	204	788	788	737	737	737	-	277	277	277	277	277	-	-	-	555	555	555	555	555	555	6	3.17				
3	822	822	822	822	822	822	822	822	822	822	822	822	822	822	822	822	822	822	822	822	8BC	274	537	537	UTH	917	917	23B	7	4.00
4	339	339	339	339	339	339	339	339	339	339	339	339	339	339	339	339	339	339	339	339	339	221	221	476	476	3	4.00			
																									Total number of vehicles/Total number of hours parked		19	15.17		
																									Average Turnover Rate (Number of Vehicles per Number of Spaces)		4.75			
																									Average Duration (Hours)		0.80			
<b>Oxford Avenue to Uhler Avenue, Spaces along the Northbound Curb</b>																														
1	-	-	-	-	4CY	4CY	-	IRL	IRL	IRL	-	123	123	777	777	777	777	777	-	-	-	-	119	-	5	2.17				
2	614	614	IPA	683	683	683	560	560	560	560	560	560	560	-	-	-	-	-	192	NZS	281	L48	L48	119	9	3.17				
3	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	1	4.00				
4	241	241	241	241	241	241	241	241	241	311	2YE	079	MXR	MXR	MXR	MXR	MXR	012	012	012	-	B22	B22	B22	7	3.83				
5	-	-	-	-	-	-	-	-	-	-	-	-	219	219	219	219	219	219	219	219	219	219	219	219	1	2.17				
6	691	691	691	691	691	691	691	691	691	691	TY9	-	828	828	828	828	828	828	828	-	-	445	445	445	4	3.50				
7	727	727	727	727	727	727	727	368	368	368	368	-	-	769	769	769	769	769	769	769	769	286	286	286	286	4	3.67			
8	YST	YST	YST	YST	YST	YST	-	1VS	-	-	939	939	939	939	939	939	939	939	-	-	379	379	379	379	379	4	3.17			
9	526	526	526	526	526	526	526	526	526	207	207	207	207	207	207	207	207	207	207	207	FUN	FUN	FUN	FUN	FUN	3	4.00			
																									Total number of vehicles/Total number of hours parked		38	29.68		
																									Average Turnover Rate (Number of Vehicles per Number of Spaces)		4.22			
																									Average Duration (Hours)		0.78			
<b>Uhler Avenue to Oxford Avenue, Spaces along the Southbound Curb</b>																														
1	806	-	-	-	076	-	-	-	-	-	238	238	238	-	242	242	242	242	242	242	242	242	242	242	4	2.50				
2	549	549	549	549	549	549	732	-	-	520	520	520	-	886	886	886	175	175	175	175	175	175	175	175	5	3.50				
3	874	874	874	874	874	874	874	874	682	682	-	379	051	051	051	051	051	051	051	051	-	430	430	IPY	6	3.67				
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	104	104	104	104	-	-	-	-	-	1	0.83				
5	319	871	871	871	871	871	871	630	630	630	630	630	630	630	707	707	707	-	-	-	8CL	8CL	8CL	8CL	8CL	5	3.50			
6	474	474	474	474	474	474	474	-	-	956	956	956	956	956	956	956	-	81B	81B	-	136	136	136	136	136	4	3.33			
7	9CX	9CX	9CX	9CX	9CX	9CX	128	128	303	7TI	7TI	-	905	905	905	905	905	905	905	905	822	822	822	822	822	6	3.83			
8	763	763	763	763	763	121	121	306	306	306	306	306	-	355	259	259	259	259	259	259	259	071	071	071	071	6	3.83			
																									Total number of vehicles/Total number of hours parked		37	24.99		
																									Average Turnover Rate (Number of Vehicles per Number of Spaces)		4.63			
																									Average Duration (Hours)		0.68			
<b>Oxford Avenue to Del Ray Avenue, Spaces along the Southbound Curb</b>																														
1	410	987	987	987	-	307	-	29X	29X	225	-	-	MCS	MCS	HEF	-	154	154	154	154	692	-	857	857	10	3.00				
2	-	985	985	985	985	985	985	985	985	833	833	447	-	584	014	014	014	014	014	014	014	014	014	014	5	3.50				
3	392	392	392	392	392	392	392	057	057	057	057	057	057	057	057	057	057	057	057	984	-	-	519	519	519	4	3.50			
4	650	650	650	650	-	530	530	564	LFY	LFY	LFY	-	2MH	2MH	2MH	2MH	-	939	302	302	302	302	302	302	7	3.50				
5	875	875	875	875	411	411	411	411	411	411	411	924	-	854	854	854	-	472	472	-	-	-	961	961	6	3.17				
6	191	191	191	191	191	191	191	191	191	-	377	377	-	878	032	032	-	004	004	004	004	004	004	-	-	5	3.17			
7	789	470	1RL	-	-	316	316	-	652	772	772	772	MAIL	498	100	100	100	100	100	100	-	-	-	-	9	2.67				
8	-	868	868	831	186	186	186	186	186	186	186	186	186	186	979	979	-	2CY	2CY	2CY	917	-	547	547	7	3.33				
9	846/057	846/057	846/057	846/057	846/057	846/057	846/057	846/057	846/057	846/586	846/586	846/586	846/264	846/264	846/264	767/264	264	264/019	264/019	264/019	019	019	GIRL/836	GIRL/836	GIRL/836	6	7.50			
																									Total number of vehicles/Total number of hours parked		59	33.34		
																									Average Turnover Rate (Number of Vehicles per Number of Spaces)		6.56			
																									Average Duration (Hours)		0.57			

# DEL RAY Parking Study



Table 1-7h: Turnover Summary (Saturday PM-November 2010)

Date: 11/13/2010 (Saturday) Recorder: ANDY SMITH

Space #	Start Time										Start Time										# Vehicles	# Hours Parked						
	18:00	18:10	18:20	18:30	18:40	18:50	19:00	19:10	19:20	19:30	19:40	19:50	20:00	20:10	20:20	20:30	20:40	20:50	21:00	21:10			21:20	21:30	21:40	21:50		
Del Ray Avenue to Oxford Avenue, Spaces along the Northbound Curb																												
1	-	KCC	KCC	KCC	KCC	KCC	KCC	KCC	KCC	KCC	430	430	430	430	430	-	JKC	JKC	JKC	JKC	JKC	JKC	-	XHE	4	3.50		
2	2BX	2BX	2BX	2BX	2BX	2BX	2BX	2BX	2BX	2BX	154	154	-	-	356	356	356	356	356	356	356	356	356	356	3	3.67		
3	DRK	DRK	-	UCM	UCM	XMR	XMR	XMR	XMR	XMR	-	NVY	NVY	-	390	390	-	QIE	QIE	QIE	-	CX6	CX6	XJV	8	3.17		
4	DTG	DTG	DTG	DTG	DTG	DTG	DTG	DTG	DTG	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	KNB	2	4.00		
																									Total number of vehicles/Total number of hours parked		17	14.34
																									Average Turnover Rate (Number of Vehicles per Number of Spaces)		4.25	
																									Average Duration (Hours)		0.84	
Oxford Avenue to Uhler Avenue, Spaces along the Northbound Curb																												
1	-	-	-	-	JND	JND	JND	JND	JND	JND	-	-	XMZ	963	-	XBC	KBC	-	-	-	-	-	-	XNX	6	1.83		
2	XWT	-	-	JRX	JRX	JRX	JRX	JRX	JRX	JRX	JRX	JRX	JRX	JRX	JRX	JRX	JRX	445	445	445	445	445	445	445	3	3.67		
3	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	JZM	1	4.00		
4	ZK1	ZK1	ZK1	ZK1	ZK1	ZK1	ZK1	KEN	KEN	KEN	KEN	KEN	KEN	-	-	-	-	814	814	814	814	814	-	-	3	3.00		
5	XKE	XKE	XKE	XKE	XKE	XKE	JUC	JUC	KNC	KNC	KNC	KNC	KNC	KNC	-	-	-	-	-	-	-	-	-	-	3	2.33		
6	187	187	187	187	187	187	187	187	187	187	187	187	-	XMF	XMF	XMF	XMF	XMF	XMF	-	-	-	JAZ	JAZ	3	3.33		
7	ADH	ADH	ADH	ADH	ADH	ADH	ADH	ADH	-	KMB	XGR	XGR	XGR	-	-	-	XGR	XGR	XGR	-	-	-	-	-	3	2.50		
8	KFF	KFF	KFF	KFF	KFF	KFF	KFF	-	-	-	-	XNU	XNU	XNU	XNU	XNU	XNU	XNU	XNU	XNU	XNU	XNU	-	-	2	3.00		
9	519	519	-	JWC	JWC	JWC	JWC	JWC	JWC	JYW	JYW	JYW	JYW	JYW	JYW	JYW	JYW	JYW	XKT	-	-	-	-	-	4	3.00		
																									Total number of vehicles/Total number of hours parked		28	26.66
																									Average Turnover Rate (Number of Vehicles per Number of Spaces)		3.11	
																									Average Duration (Hours)		0.95	
Uhler Avenue to Oxford Avenue, Spaces along the Southbound Curb																												
1	JYS	JYS	JYS	JYS	JYS	JYS	JYS	JYS	JYS	JYS	JYS	JYS	JYS	JYS	JYS	JYS	JYS	JYS	-	-	-	-	-	-	1	3.00		
2	YXR	YEB	YEB	YEB	YEB	YEB	YEB	YEB	YEB	-	-	-	-	JTK	JTK	JTK	JTK	JTK	JTK	JTK	JTK	JTK	JTK	JTK	3	2.67		
3	DNO	-	-	SFZ	SFZ	SFZ	SFZ	SFZ	SFZ	SFZ	SFZ	ZC5	ZC5	ZC5	ZC5	ZC5	ZC5	-	-	-	KAL	-	-	-	4	2.50		
4	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	47J	1	3.33		
5	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	YLT	1	4.00		
6	-	-	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	ZL3	1	3.67		
7	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	TMA	1	4.00		
8	ADR	ADR	ADR	ADR	ADR	ADR	ADR	-	AGN	AGN	AGN	AGN	AGN	AGN	AGN	AGN	AGN	AGN	AGN	AGN	XJY	-	-	-	3	3.17		
																									Total number of vehicles/Total number of hours parked		15	26.34
																									Average Turnover Rate (Number of Vehicles per Number of Spaces)		1.88	
																									Average Duration (Hours)		1.76	
Oxford Avenue to Del Ray Avenue, Spaces along the Southbound Curb																												
1	YXR	YXR	YXR	YXR	YXR	-	XTA/XPN	XTA	-	XTJ	XTJ	XHC	XHC	XRF	XRF	KLW	LW/XGV	KLW	KLW/AD	-	Z31	Z31	ZBR	-	11	3.50		
2	XGJ	-	XPB	XPB	KGZ	KGZ	KGZ	-	-	XPA	XPA	JJA	XNV	XNV	XNV	XNV	XNV	XNV	-	LZC	LZC	LZC	LZC	LZC	7	3.33		
3	CY9	CY9	CY9	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	KGE	2	4.00		
4	-	CV9	CV9	790	790	YEL/790	790	790	790	790	790	JXJ	XSH	XSH	XSH	XSH	XSH	7ED	7ED	-	ND1	-	PHT	PHT	8	3.50		
5	XWH	XWH	XWH	XWH	-	-	-	MEL	-	-	JCF	JCF	JCF	JCF	JCF	JCF	JCF	JCF	JCF	JCF	JCF	JCF	JCF	JCF	3	3.17		
6	ZPA	ZPA	ZPA	ZPA	ZPA	ZPA	-	-	JWC	DCT	DCT	-	-	-	-	XUK	XUK	XUK	XUK	XUK	XUK	XUK	XUK	XUK	4	3.00		
7	RTC	RTC	RTC	JMV	4PW	4PW	4PW	STA	STA	-	749	KDV	KDV	KDV	KDV	KDV	KDV	LDG	LDG	LDG	LDG	LDG	LDG	LDG	7	3.83		
8	-	-	-	XSK	XSK	XSK	XSK	XSK	XSK	XSK	XSK	JAB	-	4AJ	4AJ	XHM	XHM	XHM	XHM	XHM	XHM	XHM	XHM	XHM	4	3.33		
9	KJE	KJE	KJE	KJE	KJE	KJE	KJE	KJE	CV2	CV2	CV2	CV2	CV2	CV2	CV2	CV2	CV2	CV2	CV2	CV2	CV2	CV2	CV2	CV2	2	4.00		
																									Total number of vehicles/Total number of hours parked		48	31.66
																									Average Turnover Rate (Number of Vehicles per Number of Spaces)		5.33	
																									Average Duration (Hours)		0.66	

# DEL RAY Parking Study



## Parking Demand

Several studies have been performed in years past for the Del Ray neighborhood in Alexandria, VA. Specifically, studies were performed in 2002, 2003, and 2004. This section provides a brief description of each and draws comparisons to this study to aid in the development of issues and recommendations, as a result of land use changes and corresponding demand. Refer to the original study reports for more detail regarding findings, conclusions, and recommendations.

### Previous Neighborhood Studies

The 2002 study focused on the Mount Vernon Corridor from East Glendale Avenue extending north to Clifford Avenue, and one block to the east and west of Mount Vernon Avenue. The purpose of the study was to develop an inventory of parking along the main corridor and the side roads extending to the east and west.

The 2003 study focused on the Mount Vernon Corridor from Oak Street extending north to Glebe Road. This study area is significantly larger than the 2002 study, as well as the study update provided in this report. The purpose of the 2003 study was to expand on the 2002 study by comparing the inventory data to required parking. To determine required parking, each land use is paired with a required parking ratio that is defined in the City of Alexandria Zoning Ordinance, which ultimately provides a required number of spaces for the size of that particular land use. For specific land uses that were not defined in City ordinance, alternative sources were utilized.

The 2004 study focused on the Mount Vernon Corridor from Nelson Avenue extending north to Hume Avenue. This study area is similar to the 2002 study, as well as the study update provided in this report. The 2004 study used physical parking counts on a weekday, Friday, and Saturday to determine parking utilization and demand throughout the study area, as opposed to the ordinance ratios in the 2003 study. This process was also followed for the study update provided in this report. The 2004 study then estimated future parking demand, based on floor-to-area ratios of potential future development. Conclusions from this study led to the following recommendations:

- Implement shared parking concepts by making arrangements with private lot owners to use their parking for public purposes on evenings and weekends.
- Require that future development provide parking as part of that development. Evaluate on a site-by-site basis.
- Provide new parking facilities in the area to be used by all development.
- Introduce residential parking permits along the east/west intersecting streets and/or install parking meters along Mount Vernon Avenue.

# DEL RAY Parking Study



As evidenced in the above descriptions, each of the three studies previously performed used different methodology when determining supply versus demand for their study areas. The information provided in this report most closely resembles the 2004 study, in which demand is based on actual field counts of parking utilization.

## Land Use Changes and Corresponding Demand

As previously mentioned, the 2003 study determined parking demand by applying City ordinance parking requirement ratios to homes and businesses. When applying that concept to the 2003 study area (larger than the current study area) the parking demand totaled 3,643 spaces, against a capacity of 3,807 spaces; resulting in 96% occupancy.

Since the 2003 study, some land uses have changed, which would ultimately affect the projected demand. These changes are considered infill redevelopment and are listed below:

- Shops at Del Ray (2312 Mount Vernon Avenue)
  - Replaced an existing Citgo service station. This development totals 11,784 square feet, of which 6,527 square feet of ground level retail/restaurant, 5,903 square feet of office, and 3,871 square feet of open space. An existing 24 space parking lot was retained.
- Three New Retail Spaces (1901 Mount Vernon Avenue)
  - Replaced an existing laundry and dry cleaning facility.
- New Restaurant Seats (throughout this reports study area)
  - A total of 144 new restaurant seats in 5 restaurants have been added. In addition, 80 seats have been approved for seasonal outdoor seating.
- Curve's Women's Exercise Facility (2609 Mount Vernon Avenue)
  - Replaced an existing office. An existing 21 space parking lot was retained.

Table 1-8 summarizes the parking demand generated from the above land use changes.

# DEL RAY Parking Study



**Table 1-8: Land-Use Change Impacts**

Land Use	Land Use	Size	Parking Requirement <sup>1</sup>	New Demand (Net)	Provided Supply	Net Surplus/Deficit
<b>Shops at Del Ray</b>	Retail/ Restaurant	6,527 sq. ft.	1 / 440 sq. ft. <sup>2</sup>	15 spaces	17 spaces	+2 spaces
	Office	5,903 sq. ft.	1 / 900 sq. ft. <sup>2</sup>	7 spaces	7 spaces	0 spaces
<b>Three New Retail Spaces</b>	Retail	1500 sq. ft. <sup>3</sup>	1 / 200 sq. ft.	0 spaces	0 spaces	0 spaces
<b>New Restaurants</b>	Restaurant	188 seats <sup>4</sup>	1 space / 4 seats	47 spaces	40 spaces	-7 spaces
<b>Curves</b>	Health Center	2,000 sq. ft.	1 / 200 sq. ft.	10 spaces	21 spaces	+11 spaces
<b>Total Parking Impact</b>				<b>79 spaces</b>	<b>85 spaces</b>	<b>+6 spaces</b>

<sup>1</sup> Based on City Zone Requirements, updated August 2007

<sup>2</sup> 50% Reduction allowed as part of SUP process

<sup>3</sup> Estimate 500 sq. ft. per retail space

<sup>4</sup> 188 seats represent the number of seats that must be parked. This figure excludes the first 20 outdoor seats at each restaurant

As shown in the above data, there is an increase in parking demand in the Del Ray neighborhood as a result of land use changes. While the overall demand does increase, more supply was added to the neighborhood to meet the increase, based on data collected as part of this study. The overall parking utilization in the Del Ray neighborhood is 64% of the total supply. Specific detail is provided in previous sections of this report regarding current parking supply versus demand.



## Chapter 2 – Best Management Practices

This chapter is designed to provide the City with several Best Management Practices related to specific parking management strategies identified in previous studies in the Del Ray neighborhood. The described practices included in this chapter are:

- Shared Parking
- Residential Parking Spillover Mitigation
- Implementation of Paid Parking

The following sections describe each area of practice.

### Shared Parking

Shared parking is a parking management technique that allows off-street parking facilities to be used more efficiently for the benefit of both the users and property owners. Shared parking works on the basis that most privately dedicated parking facilities are only used at certain times of the day and are severely underutilized during other times of the day. For example, a bank might have busier hours during the daytime, but the associated parking lot is most likely vacant after the bank closes for the evening, whereas an adjacent restaurant becomes busier at night. The two adjacent uses can share their parking spaces to provide sufficient parking supply for the bank during the day and for the restaurant at night, without creating the need for two disjointed parking facilities. Shared parking works best in areas where land uses are within relatively easy walking distances.

Parking requirements in most communities typically favor private parking lots for individual businesses because they create a large amount of readily available supply, making it more likely that there won't be overflow parking problems when demand is high. These same private lots, however, contribute to inefficient use of parking resources and conflict with other community goals, such as promoting the use of alternative modes of transportation and implementing continuous development. Shared parking promotes higher density development which in turn encourages the use of alternate modes of transportation. Other community benefits include:

- Provides an alternative where land values and parking facility costs are high
- Works with other Transportation Demand Management strategies to reduce traffic congestion and vehicle emissions
- Reduction of paved areas

# DEL RAY Parking Study



Shared parking is not always embraced by everyone. Many times, property owners aren't willing to share their available spaces due to the perception of security issues or vandalism to their businesses. Other common objections are:

- Creation of spillover into adjacent areas
- Difficult to administer since it requires flexible parking standards
- Verification and enforcement in shared lots
- Equity issues related to some properties benefiting more than others based on land use.

To overcome these objections, the City must work with the community and stakeholders to educate and to identify specific problems.

## Shared Parking Strategies

There are a few traditional shared parking strategies that are in use today. Three of the better documented approaches are the Zoning Approach, Adjacent Site Approach, and the Shared Centralized Parking Approach, which are described below<sup>1</sup>.

- **Zoning Approach** – shared parking for a similar group (e.g., residents or employees) can be achieved without assigning individual spaces. A group of 100 can share 60-80 parking spaces, since everyone will not park at the same times. This concept assumes that each parking user has their own peak usage tendencies. For example, some office employees work a nine to five shift, while others may only be in the office for a few hours and out at meetings for the remainder of the day.
- **Adjacent Site Approach** – Under this approach, adjacent land uses with offsetting peak conditions share parking to take advantage of different peak periods. Studies have shown that, on average, the total amount of parking can be reduced 40-60% compared with standard off-street parking requirements for each land use. Table 2-1 compares parking demand peaks for different land uses. Table 2-2 on the following page provides a typical hourly breakdown for various uses.

Table 2-1: Comparison of Parking Demand Peaks

Weekday Peaks	Evening Peaks	Weekend Peaks
Banks	Auditoriums	Religious
Schools	Bars and Clubs	Institutions
Medical Clinics	Meeting Halls	Parks
Offices	Restaurants	Shops and Malls
Professional Services	Theaters	

<sup>1</sup> Victoria Transport Policy Institute Online TDM Encyclopedia – *Shared Parking*  
<http://www.vtpi.org/tdm/tdm89.htm>

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Table 2-2: Comparison of Parking Occupancy Rates

Uses	M-F	M-F	M-F	Sat. & Sun.	Sat. & Sun.	Sat. & Sun.
	8am-5pm	6pm-12am	12am-6am	8am-5pm	6pm-12am	12am-6am
Residential	60%	100%	100%	80%	100%	100%
Office/ Warehouse /Industrial	100%	20%	5%	5%	5%	5%
Commercial	90%	80%	5%	100%	70%	5%
Hotel	70%	100%	100%	70%	100%	100%
Restaurant	70%	100%	10%	70%	100%	20%
Movie Theater	40%	80%	10%	80%	100%	10%
Entertainment	40%	100%	10%	80%	100%	50%
Conference/Convention	100%	100%	5%	100%	100%	5%
Institutional (non-church)	100%	20%	5%	10%	10%	5%
Institutional (church)	10%	5%	5%	100%	50%	5%

- Shared Centralized Parking Approach – Under this approach, the municipality provides a centralized parking that is shared by adjacent uses. This approach cuts down on the surface area devoted to parking, and can allow for much denser development around the shared facility. The municipality can require or allow property owners to pay in-lieu fees that fund public parking facilities. This strategy reduces the reliance on private parking lots for each business while opening up spaces that can serve multiple users and destinations.

## Shared Parking Best Management Practices

When implementing shared parking within the community, some of the best management practices that should be employed include:

- Establish standard procedures for implementing shared parking that specify:
  - Acceptable walking distances
  - Agreement requirements
  - Verification
  - Enforcement
  - How to calculate minimum parking requirements for different combinations of land uses
- Educate planning staff, elected officials, and developers on shared parking benefits and implementation strategies.
- Provide a maximum amount of on-street parking, to buffer the lessening of off-street parking facilities. If parking problems occur, public off-street parking and use of in-lieu fees can substitute for additional private off-street parking.

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- Insure that there is acceptable pedestrian access and appropriate signage for pedestrian and vehicular users. Signage and wayfinding to shared off-street parking facilities is critical to the successful use of the parking facility.
- Perform regular parking studies and solicit input from local stakeholders to gain a clear understanding of how the system is working and how it is perceived by the users.
- Be cognizant of potential spillover into adjacent areas. Addressing spillover issues may require additional regulations and/or enforcement.

The Capital Region Council of Governments has a Shared Parking Fact Sheet<sup>2</sup> (included in the Appendix of this document) that provides several keys to success for various types of shared parking agreements. The two primary agreement types in this document are the Contractual Agreement (much like the Adjacent Site Approach) and the Parking Management District (much like the Shared Centralized parking Approach).

## Contractual Agreements

For a contractual agreement between two adjacent property owners, several steps need to be taken to document the need for shared parking and insure proper and successful implementation. These tools include:

- Special Permit Approval – during the development review process, planning staff and the developers who are agreeing to the shared parking agreement should formalize the shared parking agreement, document differences in peak demand, and pursue special permit approval for singular shared parking facilities.
- Parking Study – the developers will need to conduct a parking study to document the off-setting peaks and actual parking needs based on shared parking methodology. Urban Land Institute’s Shared Parking Methodology is a good resource for this step.
- Contractual Agreement – the sharing property owners will need to enter into a development agreement that formalizes the shared parking arrangement. Your ordinance should require such an agreement. Several examples are included in the Appendix of this document.

There are several keys to successful implementation, including targeting the right type of development for shared parking, understanding the true parking needs of the development,

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<sup>2</sup> Capital Region Council of Governments (Hartford, CT) Best Management Practices - <http://www.crcog.org/>

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ensuring walkability within the shared uses, and creating synergy for the shared approach through pilot studies.

- The right type of development for the shared parking approach is one with off-setting uses (i.e. a hotel and an office). The most optimal mixture of uses is the “Main Street” environment, with diverse mixed uses, walkability, and a varied mixture of uses that creates enough peaks to balance demand throughout the day while providing reductions in parking supply and overall area dedicated to parking facilities.
- To truly understand the parking needs of the developments in question, a parking study will need to be conducted that documents the singular needs of each of the facilities and the shared needs between them. By knowing the difference in the two values, the development can document and argue for shared parking reductions that will provide ample parking for the site.
- The site must be walkable enough that motorists are comfortable parking once and walking between multiple destinations. Generally the walking distance would be around 600 feet between parking and destination. In more urban settings, with continuous development, the distance could go as high as 1,200 feet.
- One direct way to promote the use of shared parking agreements in the community is to conduct a pilot study that can show area property owners and developers the true benefits of shared parking. The municipality can lead this effort. If the agreement works successfully, it will be easier to sell to other area property owners.

## Parking Management Districts

For a parking management districts, several steps need to be taken to successfully implement shared parking. These tools include:

- Collection of Fees – each property will pay into an in-lieu fund, which goes towards the development of a centralized parking facility that serves multiple properties and businesses. The fund could also go to maintenance, security, taxes, enforcement, utilities, signage, etc.
- Implement an Oversight Committee – a governing body will need to be established to oversee the district and ensure that member concerns are addressed and parking is managed adequately.

There are several keys to successful implementation, including targeting the right type of development for shared parking, proper design of parking facilities, collecting revenue, and managing and maintaining on-street parking.

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- The right type of development for the shared parking approach is one with compact, pedestrian-oriented developments that promote walkability and diversity of uses.
- The parking facilities in a management district should be designed to accommodate more vehicles, because they will be the primary resource for multiple developments. These facilities will need to be centrally located to serve multiple properties.
- In order to maintain the management district, parking cannot be free. This will provide revenue for the ongoing upkeep of the system. Secondly, paid parking may act as a transportation demand management strategy that promotes alternative modes of transport.
- The provision of on-street parking is critical to the effective management of a parking management district. These spaces provide important short-turnover spaces for business and are used to manage the separation between short-term and long-term parking. These spaces should be priced or enforced appropriately to ensure proper balance between on- and off-street supply.

## Steps for Implementing Shared Parking

The process for implementing shared parking varies by community and circumstance, but generally follows the following steps. We have indicated throughout these steps where the City can begin to focus to realize a more cohesive and communal shared parking system in the Del Ray neighborhood.

1. *Identify groups of business and property owners who would benefit from the use of shared parking* – the City can utilize the data outlined in [Chapter 1](#) and the recommendations from [Chapter 3](#) to identify parking lots with available supply and businesses with additional parking needs.
2. *Modify zoning codes and ordinances that restrict shared parking* – the City will need to re-evaluate the current zoning codes and ordinances that restrict or prohibit shared parking arrangements today. One primary example is the current SUP restrictions in place, which are a major hurdle to a shared parking system. The City should remove or restructure language such as this to make the move to a shared parking system easier to implement and manage.

A successful shared parking ordinance typically includes language that clearly enables shared parking, by allowing for off-street parking facilities to be located off-site. An ordinance of this type will usually specify a maximum distance from the structure or use within which the off-site parking facility must be located. These location requirements are often based on acceptable walking distances for a typical

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user, such as 600 feet. Ordinances may also allow for a reduction in required spaces if a development site is accessible by public transit or close to a public parking lot.

The City currently has ordinance language that allows for shared parking, but should revisit that language to make sure that the policies and measures are supportive of the Del Ray Neighborhood. It may be necessary to develop specific language for this area as part of an overlay amendment to the ordinance.

Additionally, the City should work with private developers to ensure that shared parking arrangements put in place between private entities are in line with the policies and regulations in their shared parking ordinance, and allow for open, accessible use of the available parking supply.

3. *Develop appropriate standards and practices that local transportation planners can use to evaluate, manage and enforce shared parking arrangements* – the City will need to use the best management practices outlined in this chapter, along with the recommendations in [Chapter 3](#) and baseline data presented in [Chapter 1](#), to develop specific metrics that define the use, location, and operations of shared parking facilities. The business owners and local stakeholders need to buy into these standards and policies for the implementation of an effective shared parking system.

Policies that encourage successful shared parking typically have some or all of the following elements:

- Provisions for the maximum amount of off-street parking that can be provided
- Provision of public off-street parking facilities
- Encouraging more clustered development to make multiple destinations easily accessible from a central parking location
- Establish an enterprise fund that allows or requires 'in-lieu' parking fees from developers instead of dedicated private off-street parking to help fund public shared parking facilities

## Shared Parking in Small Communities

Shared parking implementation in small communities can sometimes be more challenging than in denser areas where parking capacities allow for a more varied and overlapping use of the spaces. In a community like the Del Ray neighborhood, the small quantity of parking is either typically accounted for or inaccessible during the times of highest need.

Additionally, successful shared parking implementation is based on the right mixture of land uses that can provide non-competing peak conditions. For example, if an area is primarily made up of office uses and retail, it is not likely that the area will have sufficiently off-setting peaks to be able to share a common pool of parking.

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However, small communities have distinct advantages that might not be present in larger communities. There are typically less competing interests, meaning that a partnership between two or more entities can have a much greater effect than a similar partnership in a larger community. If two uses in a small town agree to share a pool of parking, it could represent a sizable percentage of the overall demand in the area. Additionally, shared parking agreements in a small community can be easier to broker between adjacent land or property owners, who have a vested interest in the successful management of the area and its impacts on their businesses.

## Shared Parking Implementation Case Studies

There are numerous examples throughout the country of successful shared parking programs that have helped communities and mixed-use developments reduce parking footprints, lessen parking demand, and create more walkable and sustainable development patterns.

Shared parking in an urban setting is no new concept, as the price and unavailability of land often forced property owners and business to share common parking supplies. As the country moved into the dawn of the automobile age and suburban sprawl ensued, the notion that each land use needed to have its own dedicated parking supply began to create the principle of the single use parking demand methodology. However, in recent years urban and suburban mixed-use developments have begun to adopt the theory of shared parking methodologies, both as a resource to minimize land costs and maximize developable area.

As urban centers begin to thrive again, the principles of shared parking are quickly becoming primary strategies to combat parking demands and promote thriving, high density development. The following two case studies provide success stories of smaller communities who have implemented shared parking successfully and to the benefit of both the community and business owners.

### *Marlborough, MA*

Marlborough is a medium-sized community located along Interstate 495 in the heart of Massachusetts. Marlborough is quickly becoming an attractive destination for electronics and computer firms that can utilize quick access to the interstate to serve the northeast region. To accommodate its workforce and residential parking needs, Marlborough recently enacted several parking management measures, including shared parking, that promote a smart parking approach. The city has taken steps to decrease the oversupply of parking through provisions for shared parking, compact car spaces, and temporary reserve parking.

Marlborough's shared parking program is primarily used within the core of downtown, which is heavy with mixed-use development. The program is focused on taking advantage

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of the off-setting parking needs among its residential and commercial uses. The provision of a large parking capacity is limited by geographic and topographic boundaries, so the City can only provide public parking supply on the southern portion of its core. Due to lack of space for parking behind the buildings, the need for off-site shared facilities on the south side became apparent. As Marlborough's parking needs grew, the city enacted a provision for shared parking to account for 100 percent of developments parking requirements. This was largely possible because the City invested in large public parking structures, and used in lieu funding as a replacement to parking requirements for its new developments.

The program has been effective in balancing the needs of new developments with existing businesses. The City has encountered minor conflicts related to residential parking within the downtown structured facilities. Businesses that want their parking to be as close as possible to their buildings are concerned with long-term residential parking taking up the nearby spaces. Additionally, the Marlborough public works department requires that all parking lots be unoccupied overnight for purposes of snow removal; creating an obvious conflict with the needs of residential parking. The City is currently working with its stakeholders to develop solutions, including nested residential parking and reserved shopper zones on the lower levels of its facilities.

Although the City of Marlborough has experienced some difficulties with its shared parking regulation, overall the result has been largely positive. The program supports a functional, accessible mixed-used city center featuring a more efficient use of its downtown parking facilities.

## *Monrovia, CA*

Old Town Monrovia, CA is a small mixed-use district surrounded by residential neighborhoods on all sides. The area includes thriving commercial uses, as well as medium and high density residential developments. The downtown is served by transit services, with moderate ridership. The area was redeveloped in the 1970's as a pedestrian friendly main street concept.

The area is served by more than 1,200 parking spaces, both on-street and off-street, with occupancies rarely exceeding 80 percent of the supply. The parking is free throughout the area. Even during the highest peak demands, including seasonal events that drew thousands of people into the area, occupancy was never really an issue and residential spillover was only a minor problem. Adding to that, most of the uses in the area were daytime uses that ended at 5pm. After that time, most of the parking sat largely unused.

A local developer proposed the construction of a 2,400 seat movie theater in the middle of the downtown area – with the caveat that he did not want to build the typical adjacent parking structure or sea of parking. The proposed theater was going to be built on one of the

# DEL RAY Parking Study



existing surface lots. The City deemed that the parking in that lot would be replaced by expanding a smaller lot and adding some street parking. However, the overall parking supply did not grow to the level that would have typically been required by a parking demand study or typical city parking requirements.

The initial result was sufficient parking within the downtown core area, because the existing uses all had compatible and off-setting peaks to allow for nighttime demands. The City is exploring the addition of more nighttime development to promote downtown use and take advantage of the available capacity it has on hand. They recognize that at some point, parking will need to be developed, but because of the success of their shared parking plan, they are more than willing to partner with businesses to developed shared, centralized parking for future endeavors.

## Residential Parking Spillover Mitigation

Spillover occurs when motorists look for other nearby, cheaper parking than what is provided in the primary parking facility or along the main street. Typically, inadequate parking supply, high parking rates, and time restrictions lead to spillover parking in adjacent areas. When managing parking, there is always a balance between creating an efficient, well-managed system and preventing spillover into adjacent areas. Many communities feel that ample free parking prevents spillover and is therefore encouraged. However, spillover problems can be avoided using other means that do not require an overabundance of free parking such as increased regulation and enforcement.

Increasing regulations and enforcement means a greater complexity administrating the program. Increased administrative responsibilities may add costs and increased enforcement will pacify residents but may frustrate other users. These issues can be overcome by working with residents, users, business owners, and other stakeholders in the area.

## Spillover Best Management Practices

When addressing spillover problems within your community, some of the best management practices that should be employed include:

- Restrict on-street parking to residents. A residential permit program can be established where residents are issued permits. This approach requires expanding enforcement into the residential areas.
- Designate the residential areas as Parking Benefit Districts. Users must pay to park on-street in residential areas (residents are exempted with a permit). Parking revenues from those meters are then used for neighborhood enhancements or reducing property taxes.

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- Provide compensation to the residents for spillover impacts. For instance, a large street event could cause spillover into adjacent streets. Free passes to the event or coupons could be given to the residents to compensate them for the inconvenience of the spillover issues.

## Implementing Paid Parking

Requiring motorists to pay for parking reduces vehicular traffic, mitigates parking problems, and generates revenues to fund improvements. The intent of paid parking is to alleviate congestion on the roads, make parking spaces available, and encourage use of alternate modes of transportation.

The typical drawback of paid parking is that it is typically unpopular within the community. Motorists prefer free parking and business owners perceive paid parking as a deterrent for customers. Implementing agencies should strive to work extensively with the community when deciding to implement parking rates. This not only gives the public a chance to be heard, but provides an opportunity to educate the public on the complexities of parking and the need for paid parking.

For example, where parking is free it may be costing the community in other ways that aren't apparent, such as higher taxes, higher retail prices, higher lease prices for business, and reduced wages. In addition, underpriced parking allows for inefficient use of parking facilities and leads to excessive demand. When parking is free, vehicles can occupy the most convenient spaces for a long period of time. This reduces motorist convenience and increases congestion. Surveys indicate that as much as 74% of congestion is caused by vehicles circling the blocks looking for available parking. Implementing a successful paid parking program will improve parking management and could alleviate driver frustrations, congestion, and associated pollution. Table 2-3 illustrates the relationship between parking rates and vehicle trips. As parking prices increase, percent that vehicle trips are reduced also increases.

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Table 2-3: Relationship between Parking Rates and Commuting Trips

Worksite Setting	\$1	\$2	\$3	\$4
	Percent Reduction of Vehicle Trips			
Low Density Suburb	6.5%	15.1%	25.3%	36.1%
Activity Center	12.3%	25.1%	37.0%	46.8%
Regional CBD/Corridor	17.5%	31.8%	42.6%	50.0%

## Paid Parking Best Management Practices

When considering paid parking in your community, the following best management practices help with successful implementation:

- Charge motorists directly. If it must be subsidized, offer comparable benefits for use of other travel modes (e.g., cash out payments).
- Charge higher prices and use shorter time periods for spaces in high demand locations. High prices and shorter durations increases turnover. Less desirable spaces on the fringe are appropriate for longer term parking at lower rates.
- Use a progressive rate structure to encourage short term parking in high demand areas. For instance, charge \$1.00 for the first hour and the longer a user stays, the price increases accordingly.
- Allow for flexible payment methods by allowing users to pay for exactly the amount of time they wish to stay (charge by the minute in short term areas and by the hour in long term areas). Provide multiple payment options to create an easier payment environment.
- Set parking prices to equal or exceed transit prices. The intent is to encourage use of alternate modes of transportation.
- Use legislation and incentives to encourage businesses to opt for cash out programs so that they only pay for the spaces they need.
- In the event that parking must be subsidized, avoid offering free parking to everybody. Instead, consider validation programs where businesses can validate tickets for customers.
- Tax parking and require that this cost be passed to users.
- Designate the residential areas as Parking Benefit Districts. Users must pay to park on-street in residential areas (residents are exempt with a permit). Parking revenues from those meters are then used for neighborhood enhancements or reducing property taxes.

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## Chapter 3 – Parking Observations and Recommendations

Chapter 1 of this report focused on existing parking conditions, including data collected in June and November 2010. The data collected included parking inventory, utilization, and turnover both along Mount Vernon Avenue and in the residential sections east and west of the corridor. The general consensus from reviewing the data is that the Mount Vernon Avenue corridor and surrounding neighborhoods do not have a specific parking problem. However, as the data is analyzed further, it is apparent that sections of Mount Vernon Avenue are deficient today. In addition, this deficiency creates the potential for spillover problems into the adjacent neighborhood. This section summarizes these potential deficiencies and provides resulting recommendations for the Del Ray Neighborhood study area.

### General Observations

The recommendations in this section are based on a few general observations from the existing conditions analysis and basic tenets of parking management decisions. These are summarized below.

### Capacity and Utilization

The recommendations in this chapter are based on the utilization and capacity analysis performed in Chapter 1. In general, the parking system should have an overall utilization of 85 percent. Areas with occupancies above this threshold are typically perceived as being full because the few open spaces are difficult to locate. The analysis in Chapter 1 found that overall utilization was below the 85 percent threshold, but there are specific areas that are above or approaching the threshold. The recommendations made in this chapter are intended to manage the system to maintain the appropriate utilization.

### Ongoing Parking Data and Monitoring

The recommendations in the following sections are based on data collected as part of the Del Ray Neighborhood Parking Study – this data represents measured conditions along the corridor. As time progresses it may benefit the City to monitor additional occupancy or turnover data to ensure that recommendations are appropriate. A few of the strategies outlined in the following sections recommend the collection of additional data prior to implementing improvements. This data can easily be collected by City staff and should be used to verify assumed conditions.

At a minimum, the City should collect occupancy and turnover data annually, preferably for the same time period each year. This metric will allow the City to understand how parking demands and patterns are changing over time. Occupancy and turnover data can be collected

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by parking enforcement officers as they are patrolling their route. The more data that is collected, the better understanding the City will have of its system. If paid parking is ever implemented along Mount Vernon Avenue, ongoing revenue data from meters or pay stations will provide a better snapshot of how parking demands change seasonally and annually.

## Paid Parking

The implementation of paid parking is recommended as a long term solution – in general, paid parking should not be implemented until utilization is in excess of 85 percent for a majority of the Mount Vernon Avenue corridor. Currently, the overall off-street utilization ranges between 26 percent and 56 percent. The overall on-street utilization currently ranges between 53 percent and 64 percent. Even though there are specific lots and areas that experience higher occupancies, the overall system is not yet at the 85 percent threshold. The monitoring and accumulation of parking data, as described in the previous section, are important for understanding how the actual parking system is performing and can identify when the system is approaching the 85 percent threshold.

Once this threshold is reached, paid parking should be implemented along the entire Mount Vernon corridor. In addition, the use of multi-space meters or credit card enabled single space meters is recommended to provide the highest level of customer service along the corridor. Initially, prices should be set low and raised gradually to ease the community into paid parking. Again, this is a long term solution and should only take place after utilization reaches the 85 percent threshold and other recommendations have been implemented.

## Consistency

Finally, recommendations should be implemented consistently along the corridor – that is, signage improvements should be consistent from north to south, residential permit programs should be implemented in the same fashion throughout the area, and paid parking should be implemented consistently (i.e. along the entire corridor, rather than sections).

Recommendations generally follow the form of customer service over enforcement and a movement from free parking to paid parking over time. Recommendations were generated to ensure that parking is available in the areas of greatest demand and easily accessible. Recommendations like additional public parking capacity through shared parking are intended to take advantage of existing supply that is underutilized in some of the times of greatest demand.

## Recommendations from Previous Studies

Prior to providing recommendations for the Del Ray Neighborhood study, it is important to recognize that previous studies indicated specific recommendations along the Mount Vernon

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Avenue corridor. The previous studies were described in detail in [Chapter 1](#). The following recommendations were taken from those studies:

- Implement shared parking concepts by making arrangements with private lot owners to use their parking for public purposes on evenings and weekends.
- Require that future development provide parking as part of that development. This has already been implemented, and evaluations are done on a site-by-site basis.
- Provide new parking facilities in the area to be used by all development.
- Introduce residential parking permits along the east/west intersecting streets and/or install parking meters along Mount Vernon Avenue.

The recommendations presented above are generally focused on providing additional parking capacity through new facilities or shared parking. The most recent study was completed in 2004. However, the problems with lack of shared parking and perception of parking capacity persist today. The recommendations in the following sections (as well as the best management practices outlined in [Chapter 2](#)) provide additional guidance to help the City realize the implementation of shared parking.

One of the recommendations above focused on requiring future development to provide parking as part of the development. This recommendation is somewhat counter to the suggestion to implement shared parking. The pure benefit of shared parking is to devote less square footage to parking, allowing for more developable areas, and denser development. By requiring each development to provide its own parking, the development pattern will remain fragmented and the parking system will continue to be disjointed. The recommendations in the following section re-evaluate this approach.

Finally the last recommendation was for the introduction of residential parking permits along the east/west side streets. Residential parking permits have already been implemented successfully along Glendale Avenue, which responds to the commuter spillover from the Braddock Road Metrorail station. While the spillover problems in that area deal with commuter parking, there is a potential concern for patron parking to spill over into the neighborhoods from Del Ray if parking occupancies get too high, or parking management strategies (such as enhanced enforcement or paid parking) are implemented along the Mount Vernon Avenue corridor. The recommendations in the following sections build off of this success.

## Recommendations

There are three levels of recommendations provided in this study, including:

- Immediate recommendations that are intended to re-organize curb space and provide immediate relief to the parking problems currently experienced.

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- General area recommendations that can be phased into the area as needed.
- Specific area recommendations that are tied to specific locations along the corridor.

The following sections provide a summary of each type of recommendation.

## Immediate Recommendations

Figure 3-1 on the following pages provides a quick overview of the immediate recommendations for the corridor. These recommendations have been presented to certain stakeholder representatives in the Del Ray neighborhood, including business owners and area residents, and have been modified and finalized based on these discussions.

The general recommendations shown on these maps include the following:

- Addition of general parking (with the existing two hour time limits) along the northwest corner of Mount Vernon Avenue and Windsor Avenue.
- Implementing additional loading zones to support local business at various locations along Mount Vernon Avenue, north of Custis Avenue.
- Creating *Customer Convenience Zones*, which are intended to be short-term (an hour or less), high-turnover spaces to serve businesses with quick turnaround transactions
  - Two locations on the west side of Mount Vernon Avenue between Custis Avenue and Oxford Avenue
  - One location on the southwest corner of Mount Vernon Avenue and Howell Avenue
  - Two locations on the east side of Mount Vernon Avenue between Bellefonte Avenue and Windsor Avenue
  - In one location, these *Customer Convenience Zones* will be shared with loading zones to minimize general parking losses and to account for off-setting peaks between loading and parking needs. This shared zone is located at the northeast corner of Mount Vernon Avenue and Howell Avenue
- Addition of residential permit zones in areas where parking utilization data dictates additional parking restrictions.
- Removal of some taxi stands to add general parking (this recommended approach occurs in very minimal areas).

The figures on the following pages provide the exact locations of these specific immediate recommendations.

**Legend**

Study Area

**Recommendations**

- Loading Zone
- Shared Customer Convenience Zone and Loading Zone
- New General Parking
- Proposed Residential Permit Zone
- Remove Bus Stop - Add Parking
- Remove Taxi Stand - Add Parking
- Customer Convenience Zone (60 min time limit)

**Existing On-Street Parking**

- Bus stop
- Taxi stand
- General parking except bus parking only M-F, 7-9 AM
- Handicap parking
- Handicap parking with time limit
- General parking
- General parking with time limit
- Permit parking, General parking with time limit
- Residential permit parking only
- Sunday parking only



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Figure 3-1:

Short-Term Recommendations

Kimley-Horn and Associates, Inc.



1

FIGURE  
3-1a



**Legend**

- Study Area
- Recommendations**
- Loading Zone
- Shared Customer Convenience Zone and Loading Zone
- New General Parking
- Proposed Residential Permit Zone
- Remove Bus Stop - Add Parking
- Remove Taxi Stand - Add Parking
- Customer Convenience Zone (60 min time limit)
- Existing On-Street Parking**
- Bus stop
- Taxi stand
- General parking except bus parking only M-F, 7-9 AM
- Handicap parking
- Handicap parking with time limit
- General parking
- General parking with time limit
- Permit parking, General parking with time limit
- Residential permit parking only
- Sunday parking only



Del Ray Neighborhood Parking Study  
 Figure 3-1:  
 Short-Term Recommendations



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## General Area Recommendations

The following recommendations were developed specifically for the entire corridor and/or neighborhood area. These recommendations are not intended for the immediate implementation time frame, but rather medium or long-term planning horizons. Additionally these recommendations do not have specific areas for implementation, but rather are general concepts and should be implemented either corridor-wide or where necessary when the timeframe and demand dictates.

### Capacity and Utilization Recommendations

Generally, the parking system (primarily the on-street system) should be managed to 85 percent utilization. This threshold always assures that parking spaces are available, which allows for easy access. Currently, the on-street system falls below this threshold, but there are sections of the corridor that experience heavy volumes, even into the low-80th percentile. There are several tools available to manage the system effectively – the recommendations that follow are intended to maintain this threshold.

#### *Consistent Enforcement of Two-Hour Limits*

The current on-street system along Mount Vernon Avenue is regulated to two-hour parking limitations. Turnover data indicated that the average parking duration was only 1.5 hours, which falls under the prescribed threshold. However, based on the turnover analysis discussed in [Chapter 1](#), there were at least a dozen instances of vehicles maximizing or eclipsing the two-hour time limits. It is important that enforcement officials manage this time restriction, as it is the only tool in place to ensure proper turnover and utilization of parking spaces along Mount Vernon Avenue. It is equally important for business owners to educate their employees (and possibly themselves) of the importance of not parking in front of their own business. If the average shopper parks and shops for 1.5 hours and spends \$10 during their stay, then an illegally parked employee who stays for 6 hours could cost the business owner \$40 in revenue for that one space. If this trend is followed on a daily basis for an entire year, that total is nearly \$15,000 per parking space.

#### *Additional Public Parking Capacity*

As utilization along Mount Vernon Avenue increases, and the supply of close, easy, and accessible parking becomes more constrained, it may become more important to provide additional capacity without providing dedicated City owned parking facilities. One way to accomplish this is to move to a paid parking system. However, the step from unpaid parking to paid parking is the biggest rate increase hurdle a parking system will experience. Furthermore, as previously mentioned, and discussed in detail below, paid parking at this point in time is not appropriate for the Del Ray neighborhood. It would be easier and more appropriate at this time

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to introduce another form of parking management that bridges the gap between unpaid and paid. There are two general approaches to addressing capacity issues:

- A. Shared Parking Arrangements – facilitate shared parking agreements with private business and property owners whose parking lots are underutilized in the evening peaks. Throughout the specific location recommendations in the following section, we identify several locations where this type of arrangement could exist. However, sometimes private owners are hesitant to enter into these agreements due to the liability and potential for security issues, vandalism, or impacts to their tenants or employees. These concerns should be identified through the shared parking agreement and addressed through additional enforcement. Examples of shared parking arrangements are included in the Appendix.

In general, shared parking arrangements could be a very valuable tool in managing perceptions of public parking issues and potential utilization issues in the future. Based on the data presented in Chapter 1, off-street public surface lots experienced moderately high utilizations during both the weekday (53% - 100%) and weekend (50% - 75%) survey hours. Should a portion of the off-street lots not currently designated for shared parking be converted for both public and private use throughout different hours of the day and days of the week, utilization of the parking supply would balance throughout the system. Table 3-1 shows the ratings used to determine lots potentially appropriate for shared parking. (*Lots that were identified for exclusion in Table 1-2 were removed from this table because they were inappropriate for shared parking.*)

**Key**

- 1 = Current Public Parking
- 2 = Potential for Shared Parking
- 3 = Not Practical for Shared Parking

Table 3-1 –Shared Parking Lots

Parking Lot	Lot Type	Lot Sharing Rating	No. of Spaces
1 Residential area	Public	1	8
3 SunTrust Bank	Public/Private	2	79
4 Curves studio	Private	2	21
5 Natures Nibbles Pet Store	Private	3	9
6 Department of Human Services	Private	3	4
7 Department of Human Services	Private	2	8
8 Library	Private and Public	2	16

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Parking Lot	Lot Type	Lot Sharing Rating	No. of Spaces
9 Mount Vernon Community School	Public/Private	2	6
10 All at Once Hair	Private	3	9
11 Parking for DHS Employees	Public/Private	2	71
13 Farmer's Market City Lot	Public	1	11
14 State Farm Insurance /Ultimate Results/Hatha yoga	Public/Private	2	6
15 St. Elmos	Private	3	15
16 Pottery Store	Private	2	5
17 AGA	Private	2	51
18 Vital	Private	2	10
19 Church	Private	2	17
20 7-11	Private	3	8
21 BodyMindSole, Artifacts, Elegant Nails, and Zumba/Ballet studio	Public/Private	3	4
22 Church	Private	2	18
23 Anne Welsh Salon	Private	3	6
25 Thai place / Mind & Media	Private	2	21
26 Fire Station	Private	2	18
27 Fire Station	Private	2	7
28 Evening star/majestic lounge	Private	3	11
29 MacGuire-Reeder	Public/Private	1 / 2	9
30 Lot with arm gate/no building	Private	2	22
31 Suhko Thai	Private	3	10
33 Octomeron Associates	Private	2	6
34 Salvation Army	Public/Private	2	33
45 Behind deli/next to residential	Private	3	10
47 St Paul Christian Center	Private	3	9
50 Burke & Hurbert Bank	Private	2	18
51 Mancini's Cafe	Private	3	12
52 Antiques Store	Private	2	45
53 Private Commercial	Private	3	11
55 Fireflies	Private	3	6

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Parking Lot	Lot Type	Lot Sharing Rating	No. of Spaces
Total Current Public Parking		19	
Total Potential for Shared Parking		487	
Total Not Practical for Shared Parking		124	
Total Spaces Evaluated		630	

The locations identified were selected based on the capacity and utilization data analyses. However, the implementation of shared parking must also consider SUP restrictions that currently prevent some business owners from entering into a shared parking agreement (e.g. the Salvation Army and SunTrust lots). Therefore, even though the analysis may indicate unused capacity and an opportunity to share between two lots, the SUP restrictions may prohibit parking in a lot when it would be needed. The issue of parking restrictions has been discussed at the Business Association meetings and the general consensus is to remove parking restrictions to allow for shared parking opportunities.

Table 3-2 below shows the utilization of those lots with potential to share parking and those where shared parking is not practical. The values based on the occupancy counts conducted in June 2010 and the assigned lot sharing ratings shown in Table 3-1.

Table 3-2 –Off-Street Shared Parking Utilization

Category	Total Spaces	Weekday				Weekend			
		12 to 1pm	1 to 2pm	6 to 7pm	7 to 8pm	11 to 12pm	12 to 1pm	7 to 8pm	8 to 9pm
Potential Shared Parking	487	56%	56%	41%	45%	39%	42%	26%	27%
Not Practical For Shared Parking	124	56%	60%	48%	45%	65%	54%	39%	44%

The result of converting strategically located private lots to shared use could result in weekday utilization ranging from 41%-56% (down from 53% - 100%) and weekend utilization ranging from 26% - 40% (down from 50% - 75%). This ultimately results in a parking system that can more efficiently meet demand due to increased supply in areas of need throughout the system, thus residents and visitors of the Del Ray Neighborhood perceive a system that is more inviting and useable.

In addition to removing restrictions, the City could even go a step further and allow businesses to pay into an in-lieu fund, to finance future improvements. The revenue

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from this in-lieu fund could be used to pay for improvements to the parking system, maintenance and security for shared parking facilities, or the provision of new, centralized public parking facilities.

- B. Build New Parking Facilities – the other alternative for the City is to provide additional public parking capacity through the construction of new public parking facilities, most likely in the form of a surface parking lot. If demands become high enough along the corridor (i.e. a major trip generator is located within the neighborhood) a parking garage may be feasible. However, given the existing development levels, as well as the small lot sizes along the corridor, this may not be the most feasible option. It is not recommended that the City invest in any new public parking at this time – however, future development changes may necessitate this move.

## *Paid Parking*

The final approach to balancing utilization and turnover along the Mount Vernon Avenue corridor is to implement paid parking. As stated before, the step from free parking to paid parking is often the hardest, and good community involvement is key for implementing parking charges. Once the decision to implement paid parking has been made (after the 85 percent occupancy threshold is eclipsed on a regular basis, especially during night and weekend peaks), the City should begin a public information campaign at least six months out from the first day of charging. The public campaign should include information on where revenues go after collection, education on how to utilize revenue collection equipment, and how paid parking violations will be enforced. We recommend that paid parking be introduced when occupancy is above 85 percent on-street and the adjacent surface lots are also reaching threshold occupancy.

## Signage, Wayfinding, and Branding

In general, signage along the corridor needs to be more consistent, especially related to off-street public parking. Signage needs to be consistent, especially in off-street shared use lots. Cluttered signage that indicates numerous business types and overlapping restrictions can be problematic and potentially cause visitors to look for other parking options. The City has adopted a wayfinding program, which funds have been used for wayfinding implementation in Old Town. It would be beneficial for the City to implement the wayfinding program in the Del Ray neighborhood to lead visitors to public and shared parking areas, and to identify primary destinations. It may be beneficial to develop a specific parking brand for the Mount Vernon corridor and Del Ray neighborhood. This brand could then be used to identify off-street parking easily, especially if a shared parking program with existing private lots is established.

On-street signage should be clear and consistent throughout the corridor, defining time-of-day restrictions, time restrictions, cost (if any), and instructions for payment (if applicable). Off-

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street public or shared parking should be advertised better (along the main travelway), including restrictions, direction to parking, and cost (if any). Parking signage in public/private facilities should clearly define time limits, restrictions, and potential enforcement (towing, etc.). The City should develop this signage with clear branding enforcing the availability of public parking.

## Provision of Short-Term Parking

Most of the parking along Mount Vernon Avenue is designated as two-hour parking. In some locations (dry cleaners, coffee shops, post office) it may be a good idea to include shorter term parking spaces to promote turnover and more availability for those patrons that need to “run-in and run-out”. This parking could be designated as *Customer Convenience Zones*, which would market to visitors as accessible, convenient, and available parking for quick duration trips. As part of the immediate recommendations, several locations have been designated as *Customer Convenience Zones* along the corridor as indicated in Figures 3-1a and b.

These spaces would need to be monitored and enforced effectively to ensure that they were available for their intended use. The time limit in the *Customer Convenience Zones* would be an hour or less, depending on the need. The City and business owners will need to work together to ensure that these limits are enforced appropriately. Since these limits are a direct benefit to business owners with interest in parking turnover, it will be up to them to educate their customers and ensure that spaces are used appropriately.

## Insufficient Loading Zones

One of the secondary issues along the corridor affecting area businesses is the provision of sufficient loading zones to serve business delivery needs. Several business owners commented about the lack of designated loading zones along the Mount Vernon Avenue Corridor. The immediate recommendations in the previous section provided some additional loading zone locations. Beyond these immediate recommendations, the City has several options to better manage loading zones and serve neighborhood businesses.

- A. Variable Loading Zones – on-street utilization observations (provided in [Chapter 1](#)) were relatively low during the weekday mid-day peak. It is safe to assume that early morning peaks are lower than this along Mount Vernon Avenue. Time limits for the loading zone should cater to the needs of the surrounding businesses. Spaces should be designated in groups of two to three spaces to allow for effective movement of freight vehicles.
- B. Offset Delivery Peaks – consistent with the variable loading zone recommendation, offset delivery times should be designated along the corridor. Early morning (7-9am) and late evening (after 9pm) should be designated as delivery hours. However, caution

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should be made with designating late night loading hours as they can have adverse impacts on businesses with evening peaks (e.g. restaurants and bars). Additionally, the designated times should be evaluated for additional noise impacts in the adjacent neighborhood.

- C. Customer Convenience Zones –the customer convenience zone parking could be utilized as loading zone parking, especially in the morning hours, before peak parking demand begins to occur.

Prior to implementing these recommendations, the City should reach out to individual business owners to ensure that specific loading needs are compatible with times and loading periods. The City should work with business owners to educate delivery drivers on the new loading regulations. The City may have to provide increased enforcement in the offset peak hours to ensure that loading zones are properly utilized. Finally, time limits will need to be established based on business type and specific need.

## General Enforcement Improvements

Enforcement along the corridor should strive to promote turnover and accessibility. However, turnover should also strive to project a positive image of the area, and should be friendly and customer centric. First time offenders should be provided warnings and education on the appropriate place to park. Habitual offenders should face graduated fines that punish repeat violations. Enforcement officers should operate as ambassadors for the area providing direction and guidance as much as they provide enforcement.

To better enforce existing and proposed regulations along the Mount Vernon corridor and Del Ray neighborhood, the City should assign one parking enforcement officer to the Del Ray neighborhood area. This officer should be on-foot (or segway) whenever possible and will serve two-fold as an enforcement officer and neighborhood ambassador. As an ambassador, the employee will assist patrons with parking questions, wayfinding, locating destinations, etc. The City should also investigate the use of enhanced enforcement technology (mobile license plate recognition, handheld enforcement devices, etc.). The implementation of a dedicated officer in the area may be an additional cost the City has to bear. However, the additional revenue generated by this officer from improved enforcement should offset some of the cost.

## Parking Requirements

As part of previous studies for the area, recommendations were made that would require new businesses to provide their own parking supply. However, given the typical nature of businesses along the corridor, the provision of four to five spaces for a couple thousand square-foot business may only compound the problems currently facing the corridor – a lack of centralized parking supply that is easily identified as public parking. In lieu of requiring

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smaller businesses to provide parking, the City should consider removing parking requirements for new businesses (or redevelopment along the corridor) under certain threshold levels (e.g., less than 5,000 square-feet). This approach is similar to existing parking requirements in Old Town and would stimulate business in the smaller parcels, while still requiring sufficient parking for larger new development. This recommendation is a specific request of businesses along the corridor, and could potentially assist with the move to a shared parking program throughout the area (e.g. opening up the Sun Trust Bank and Salvation Army parking lots).

When making the decision to reduce or remove parking requirements, there may be some concern that new development will be built without sufficient parking supply to meet its demands. However, developers (and banks that finance development) are savvy enough to understand the inherent relationship between parking needs and business success. They also understand the price to build, operate, and maintain parking. Many cities that have made the decision to reduce or remove parking requirements have found that their parking supply continues to grow and support the local business community, but at a much more sustainable pace. The movement to a centralized shared parking supply is also typically stimulated by this movement, as developers begin to search out partnerships and opportunities to minimize parking construction costs while maintaining a suitable supply for their properties.

## Improving the Perception of Parking

One of the problems facing the Mount Vernon parking system is the perception of a lack of parking, from patrons, business owners, and residents. The City can take several steps to improve the perception of parking, including:

- A. Education – the City could create an easy to understand pamphlet that describes changing rules and regulations, areas for short-term and long-term parking, cost (if any), and where to go for more information about the area or parking in the area. These pamphlets would be distributed throughout the community and given to business owners for distribution.
- B. Create a Del Ray Neighborhood Community Parking Action Committee – as part of the last study, a committee was formed with representative stakeholders that meet with City representatives to discuss ongoing issues within the district and to help develop continuing improvements along the corridor and into the neighborhood. It is recommended that this group continue to meet to identify and discuss issues. Meetings should be open to the public to ensure that residents and business owners have a voice in their community.

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In general, the perception of parking in the area should improve as some of these recommendations are implemented. A few specific recommendations that could affect the perception immediately include:

- Improved signage for off-street lots
- Parking ambassador/enforcement officer
- Better information and communication with the public (pamphlets/signage)

## Funding Parking Improvements

Some of the parking improvements outlined in this study will cost the City money to implement. Without paid parking, this system needs to be low cost for it to be effective, essentially asking the City to subsidize parking recommendations. Without additional funding, many of the recommendations in this study could go unfunded and unrealized. Some additional sources of revenue need to be realized to effectively implement the parking revenue program.

Two options to offset these costs include:

- A. Collect Revenue for Parking– implementing paid parking along Mount Vernon Avenue will provide an additional revenue stream to fund improvements. After improvements are funded, additional revenue should be reinvested in the Del Ray Neighborhood district.
- B. Additional Revenue from Enforcement – enhanced enforcement should lead to the collection of additional revenue from tickets. However, the City should take a customer service approach to enforcement, with first time offenders treated easier than habitual offenders (i.e. graduated fine structures).
- C. Establish an Enterprise Fund – enterprise funds can allow or require ‘in-lieu’ parking fees from developers to fund improvements to or expansion of parking facilities. By establishing an enterprise fund, the City will create the mechanism necessary to store, manage, and distribute funds collected from both in-lieu fees and parking revenues to the construction, operation, and maintenance of parking facilities or infrastructure. The enterprise fund should be designated for use in the Mount Vernon Avenue and Del Ray neighborhood areas only.

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## Specific Area Recommendations

The following recommendations build off the recommendations from the previous two sections, but are specifically applied to areas along the corridor. For the purposes of this study, the Mount Vernon corridor (and surrounding neighborhood streets) was separated into four sections, representing differing uses in the community. These four sections are:

- Commonwealth Avenue to Stewart Avenue – this section serves as the northern gateway into the study area. There are a handful of commercial uses in this section, but the predominant uses are residential dwellings and the Mount Vernon School.
- Stewart Avenue to Howell Avenue – this section represents the area of highest activity along the corridor. There are numerous restaurant and retail uses that create parking demand throughout the day and night. The highest levels of demand were observed in this area.
- Howell Avenue to Mason Avenue – this section is similar in context and demand as the previous section. The parking demands generated are not quite as high, but utilization and occupancy issues are still prevalent throughout this section.
- Mason Avenue to Glendale Avenue – this section serves as the southern gateway into the study area. There are numerous auto dealerships along the corridor and overall parking demands are lower in this area. Most parking demand is handled by off-street parking.

The specific recommendations for these sections are provided in the tables on the following pages (Tables 3-3 through 3-6).

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Table 3-3 – Location Specific Recommendations

Primary Location	Specific Issues	Proposed Recommendation	Potential Issues	Potential Parking Demand Management Benefits	Implementation Timeframe
Commonwealth Avenue to Stewart Avenue	<ul style="list-style-type: none"> <li>During weekday and weekend evening periods, the utilization in this area ranges from 80-98%. The lower values represent weekday peaks, while the higher values represent busier weekend periods.</li> <li>Residential units at the corner of Randolph Avenue and Mount Vernon Avenue have front-door on-street parking that is 2-hour time limited.</li> <li>Some restaurants and retail contribute to the demand generated in this section; some issues may also occur related to spillover demand from points south on Mount Vernon Avenue.</li> </ul>	<p>1. Add Public Parking Capacity –additional capacity should be developed in this section and the section directly south (Stewart Avenue to Howell Avenue). SunTrust bank parking lot has evening utilization between 25-33%. The SunTrust lot already has a formal shared parking agreement in place with several businesses. The City should promote the use of this lot for general public use after hours, through the use of signage and general marketing. The AGA lot has less than 30% utilization during evening and weekend peaks. The City should discuss sharing agreements with ownership of the AGA lot to allow for evening public parking.</p>	<p><u>Parking Enforcement:</u> Efforts will need to be made to ensure that overnight parking does not impede parking for SunTrust and AGA employees and patrons. <i>Potentially implement a specific time restriction after hours (i.e. 4 hours).</i></p> <p><u>Way-finding and Navigation:</u> Neither the SunTrust or AGA lot are particularly visible to Mount Vernon on-street parkers. If shared, the City should create signage that indicates directions to and time restrictions for each location.</p> <p><u>Liability and Management:</u> Parking lot cleanup responsibility will need to be designated as part of the agreement. The agreement will also need to address liability and insurance.</p>	<ul style="list-style-type: none"> <li>81 spaces in the SunTrust lot, with approximately 50-60 available spaces nightly.</li> <li>51 spaces in the AGA lot, with approximately 36-47 available spaces nightly and on the weekend.</li> </ul>	<p>Immediate – parking demands in the evening indicate that parking occupancy is an existing issue. Utilization issues south of this segment contribute to demand issues. The SunTrust lot should be better promoted through signage and marketing. The AGA lot ownership should be contacted about shared parking agreements.</p>
		<p>2. Analyze residential parking on Mount Vernon Avenue between Randolph Avenue and Raymond Avenue –collect parking turnover data for this block segment. This information will indicate whether there is an existing problem with longer duration parking (related to apartment guests). If there is a problem, follow these steps:</p> <ol style="list-style-type: none"> <li>Education and outreach – provide materials to residents/owners that indicate the appropriate places for guests to park (Randolph or SunTrust surface lot).</li> <li>Strictly enforce two-hour time limit – to ensure that valuable Mount Vernon spaces remain available for short-term use, enforce 2-hour limit. Residential parking should be restricted to on-site spaces (underground garage).</li> </ol>	<p><u>Parking Availability:</u> Randolph Avenue already experiences 70-85% utilization. Enforcement and education efforts must be made to ensure that residents of apartment units are parking on-site, while apartment guests should park along Randolph Avenue or in the SunTrust surface lot.</p> <p><u>Public Outreach:</u> Education and outreach are key for this recommendation. Residents along Mount Vernon Avenue need to feel included in resolutions, rather than alienated by the recommendation. Educational materials and opportunities to speak with City staff should provide a bridge between the problem and the solution.</p>	<ul style="list-style-type: none"> <li>8 spaces directly adjacent to apartment complex available for short-term use.</li> <li>Better balancing of parking demand by shifting longer term residential parking to side streets and SunTrust parking lot, which will allow for more effective utilization of Mount Vernon Avenue spaces.</li> </ul>	<p>Mid-term – parking utilization in this area indicates evening demand issues. Evaluate additional turnover data and monitor problem before enhanced enforcement in area. First step should be outreach to tenants/owners and then enhanced enforcement.</p>

# DEL RAY Parking Study



Table 3-4 – Location Specific Recommendations

Primary Location	Specific Issue	Proposed Recommendation	Potential Issues	Potential Parking Demand Management Benefits	Implementation Timeframe
Stewart Avenue to Howell Avenue <ul style="list-style-type: none"> <li>79 parking spaces along Mount Vernon Avenue</li> <li>29% of available parking supply vs. 34-39% of parking demands</li> <li>One public parking lot – for library patrons (16 spaces)</li> <li>Three shared parking facilities:                             <ul style="list-style-type: none"> <li>DHS (71 spaces after 5pm and on weekends)</li> <li>State Farm Insurance (13 spaces, 2-hour parking M-F)</li> <li>Small retail lot (4 spaces)</li> </ul> </li> <li>221 spaces on side streets (6 with a 20-minute time limit near Mount Vernon Community School)</li> </ul>	<ul style="list-style-type: none"> <li>Night and weekend utilizations range from 84-99% occupied. Weekday utilization ranges from 71-80% occupied. <i>This segment is clearly the highest demand segment along Mount Vernon Avenue.</i></li> <li>Many of the adjacent surface lots are less than 50% occupied during peaks.</li> <li>Many of the side streets realize potential spill-over parking during peaks.                             <ul style="list-style-type: none"> <li>Uhler Avenue – 80-88% weeknight and weekend mid-day</li> <li>Del Ray Avenue – 83-89% weekend mid-day</li> <li>Howell Avenue – 88-100% weeknight and all day weekend</li> <li>General parking durations of 1-1.5 hours (with the longest durations exceeding two hours).</li> </ul> </li> </ul>	1. Add Public Parking Capacity – <ul style="list-style-type: none"> <li>a. Surface Lots - the AGA lot has less than 30% capacity during evening and weekend peaks. The City should discuss sharing agreements with owners of the AGA lot to allow for evening public parking.</li> </ul>	<u>Parking Enforcement:</u> Efforts will need to be made that overnight parking does not impede parking for AGA employees and patrons. <i>Potentially implement a specific time restriction after hours (i.e. 4 hours).</i>  <u>Way-finding and Navigation:</u> The AGA lot is not particularly visible to Mount Vernon on-street parkers. If shared, the City should create signage that indicates directions to and time restrictions to the lot.	<ul style="list-style-type: none"> <li>51 spaces in the AGA lot, with approximately 36-47 available spaces nightly and on the weekend.</li> </ul>	Immediate – parking demands in the evening indicate that parking occupancy is an existing issue. AGA should be contacted about a shared parking agreement.
		2. Enforce two-hour time limit – while average durations in the segment were between 1-1.5 hours, there were numerous observations of parking durations exceeding 2-hours. Improvement should include educating employers where employees should park and monitoring on-street durations.	<u>Patron and Business Owner Frustration:</u> Increased enforcement may increase parker frustration. Initial efforts should be made to educate business owners and parkers about available long-term parking locations.	<ul style="list-style-type: none"> <li>Better turnover of on-street spaces along Mount Vernon Avenue.</li> </ul>	Immediate – promoting better turnover of all on-street spaces will provide a better parking experience and more business for area.
		3. Evaluate Residential Parking on Side Streets – collect turnover and resident mix data along side streets. Determine whether heavy weekend peaks represent spillover or residential parking. If the problem is spillover, poll the residents about a residential parking permit program. If utilization is residential parking, then parking isn't an issue in these areas.	<u>Public Outreach:</u> Education and outreach are key for this recommendation. Residents in the Del Ray neighborhood should make the determination whether they need additional enforcement or restrictions. Spillover into the neighborhoods for longer than a couple hours should be avoided.	<ul style="list-style-type: none"> <li>Effective balance between residential parking and commercial demands along Mount Vernon Avenue.</li> </ul>	Mid-term– poll the residents to determine whether they experience any spillover problems. If there are issues, work to resolve through implementing residential permits.
		4. Implement Paid Parking – the on-street parking along Mount Vernon Avenue should serve as the premier parking within the neighborhood. As parking begins to consistently exceed 85%, a move to paid parking should be considered.	<u>Acceptance of Paid Parking:</u> Most businesses and/or patrons will initially argue the benefits of paid parking. Paid parking should not be implemented before utilization is consistently above 85%. Rates should initially be set low as to not detract business. Outreach should begin starting six months prior to implementation.	<ul style="list-style-type: none"> <li>Better turnover and availability of parking along Mount Vernon Avenue.</li> </ul>	Mid- to long-term – implementation should not occur until utilization consistently exceeds 85%.

# DEL RAY Parking Study



Table 3-5 – Location Specific Recommendations

Primary Location	Specific Issue	Proposed Recommendation	Potential Issues	Potential Parking Demand Management Benefits	Implementation Timeframe
<p>Howell Avenue to Mason Avenue</p> <ul style="list-style-type: none"> <li>50 parking spaces along Mount Vernon Avenue</li> <li>19% of available parking supply vs. 17-23% of parking demands</li> <li>210 spaces on side streets (11 with a 2-hour time limit along Duncan Avenue)</li> </ul>	<ul style="list-style-type: none"> <li>Weeknight and weekend day utilizations approach capacity – 66-84%</li> <li>There are no “public” off-street lots in this area, which prohibits effective balancing of on-street and off-street parking.</li> <li>Some of the demand can be attributed to the section north (Stewart Avenue to Howell Avenue)</li> </ul>	<ol style="list-style-type: none"> <li>Add Public Parking Capacity – any additional parking should be recognized in the northern extents of this segment. The southern extents begin to transition into auto dealerships, which should not require additional off-street parking for service. Primary candidates include:                             <ol style="list-style-type: none"> <li>Private gated lot along Howell Avenue (22 spaces, utilization in the evenings and weekend of 0-4%)</li> <li>Post Office parking lot (10 spaces, utilization in the evenings and weekend of 0-10%)</li> <li>Salvation Army lot (33 spaces, utilization in the evenings and weekend of 18-42%) - <i>note: already shares some of its spaces with La Strada Restaurant and Osteria MCMIX in the evenings and weekends</i></li> </ol> </li> </ol>	<p><u>Parking Enforcement:</u> Efforts will need to be made that overnight parking does not impede parking for employees and patrons. <i>Potentially implement a specific time restriction after hours (i.e. 4 hours).</i></p> <p><u>Way-finding and Navigation:</u> The three lots are not particularly visible to Mount Vernon on-street parkers. If shared, the City should create signage that indicates directions to and time restrictions to these lots.</p>	<ul style="list-style-type: none"> <li>65 total spaces in the three described lots, with approximately 49-59 available spaces nightly and on the weekend.</li> </ul>	<p>Mid-term – parking demands in the evening indicate that parking occupancy could be an issue as area attractions increase. This area should be monitored and as utilization begins to exceed capacity, the City should approach the three lot owners with shared parking agreements.</p>



Table 3-6 – Location Specific Recommendations

Primary Location	Specific Issue	Proposed Recommendation	Potential Issues	Potential Parking Demand Management Benefits	Implementation Timeframe
Mason Avenue to Glendale Avenue <ul style="list-style-type: none"> <li>87 parking spaces along Mount Vernon Avenue</li> <li>32% of available parking supply vs. 19-29% of parking demands</li> <li>311 spaces on side streets                             <ul style="list-style-type: none"> <li>27 with a 3-hour time limit (Glendale Avenue, east of Mount Vernon)</li> <li>52 with residential permits (Glendale Avenue, west of Mount Vernon)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Some utilization issues along block faces, but generally parking is available in this section</li> <li>Some residential spillover issues during weekday peaks</li> <li>Most demands are handled by private off-street surface lots</li> </ul>	1. Evaluate Residential Parking on Side Streets – collect turnover and resident mix data along side streets. Determine whether high utilization periods represent spillover or residential parking. If the problem is spillover, poll the residents about a residential parking permit program. If utilization is residential parking, then parking isn't an issue in these areas.	<u>Public Outreach:</u> Education and outreach are key for this recommendation. Residents in the Del Ray neighborhood should make the determination whether they need additional enforcement or restrictions. Spillover into the neighborhoods for longer than a couple hours should be avoided.	<ul style="list-style-type: none"> <li>Effective balance between residential parking and commercial demands along Mount Vernon Avenue.</li> </ul>	Mid-term – poll the residents to determine whether they experience any spillover problems. If there are issues, work to resolve through implementing residential permits.
		2. Extend residential permit parking to both sides of Mount Vernon Avenue – depending upon the results of the residential parking evaluation, it may be necessary to extend the permit parking to both sides, especially if commuters begin to use this area to access the adjacent rail station.	<u>Public Outreach:</u> Education and outreach are key for this recommendation. Residents in the Del Ray neighborhood should make the determination whether they need additional enforcement or restrictions. Spillover into the neighborhoods for longer than a couple hours should be avoided.	<ul style="list-style-type: none"> <li>Effective balance between residential parking and commercial demands along Mount Vernon Avenue.</li> </ul>	Mid-Term to Long-term – evaluate the impacts of spillover parking as immediate recommendations are implemented. Expand residential permit program as necessary.
		3. Implement parking management recommendations consistent with the remainder of the Mount Vernon corridor – This area does not experience some of the same issues that the sections to the north do. This is primarily due to the differences in development type (auto dealership vs. restaurant/retail as an example). However, it is important that as parking management decisions are made (enforcement, paid parking, valet, etc.) that they be implemented consistently along the corridor.	<u>Lack of Consistency:</u> Failure to implement parking management strategies consistently throughout the corridor	<ul style="list-style-type: none"> <li>Consistent and effective parking management strategies create a consistent message to visitors throughout the area</li> </ul>	Ongoing – implement measures in this section as they are implemented in the sections of higher demand.

# DEL RAY Parking Study



## Appendix – Example Shared Parking Agreements

## Model - Shared Use Agreement for Parking Facilities

This Shared Use Agreement for Parking Facilities, entered into this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, between \_\_\_\_\_, hereinafter called lessor and \_\_\_\_\_, hereinafter called lessee. In consideration of the covenants herein, lessor agrees to share with lessee certain parking facilities, as is situated in the City of \_\_\_\_\_, County of \_\_\_\_\_ and State of \_\_\_\_\_, hereinafter called the facilities, described as: [Include legal description of location and spaces to be shared here, and as shown on attachment 1.]

The facilities shall be shared commencing with the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, and ending at 11:59 PM on the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, for [insert negotiated compensation figures, as appropriate]. [The lessee agrees to pay at [insert payment address] to lessor by the \_\_\_\_ day of each month [or other payment arrangements].] Lessor hereby represents that it holds legal title to the facilities

### The parties agree:

#### 1. USE OF FACILITIES

This section should describe the nature of the shared use (exclusive, joint sections, time(s) and day(s) of week of usage.

**-SAMPLE CLAUSE-***[Lessee shall have exclusive use of the facilities. The use shall only be between the hours of 5:30 PM Friday through 5:30 AM Monday and between the hours of 5:30 PM and 5:30 AM Monday through Thursday.]*

#### 2. MAINTENANCE

This section should describe responsibility for aspects of maintenance of the facilities. This could include cleaning, striping, seal coating, asphalt repair and more.

**-SAMPLE CLAUSE-***[Lessor shall provide, as reasonably necessary asphalt repair work. Lessee and Lessor agree to share striping, seal coating and lot sweeping at a 50%/50% split based upon mutually accepted maintenance contracts with outside vendors. Lessor shall maintain lot and landscaping at or above the current condition, at no additional cost to the lessee.]*

#### 3. UTILITIES and TAXES

This section should describe responsibility for utilities and taxes. This could include electrical, water, sewage, and more.

**-SAMPLE CLAUSE-***[Lessor shall pay all taxes and utilities associated with the facilities, including maintenance of existing facility lighting as directed by standard safety practices.]*

#### 4. SIGNAGE

This section should describe signage allowances and restrictions.

**-SAMPLE CLAUSE-***[Lessee may provide signage, meeting with the written approval of lessor, designating usage allowances.]*

## 5. ENFORCEMENT

This section should describe any facility usage enforcement methods.

**-SAMPLE CLAUSE-***[Lessee may provide a surveillance officer(s) for parking safety and usage only for the period of its exclusive use. Lessee and lessor reserve the right to tow, at owners expense, vehicles improperly parked or abandoned. All towing shall be with the approval of the lessor.]*

## 6. COOPERATION

This section should describe communication relationship.

**-SAMPLE CLAUSE-***[Lessor and lessee agree to cooperate to the best of their abilities to mutually use the facilities without disrupting the other party. The parties agree to meet on occasion to work out any problems that may arise to the shared use.]*

## 7. INSURANCE

This section should describe insurance requirements for the facilities.

**-SAMPLE CLAUSE-***[At their own expense, lessor and lessee agree to maintain liability insurance for the facilities as is standard for their own business usage.]*

## 8. INDEMNIFICATION

This section should describe indemnification as applicable and negotiated. This is a very technical section and legal counsel should be consulted for appropriate language to each and every agreement.

**-NO SAMPLE CLAUSE PROVIDED-**

## 9. TERMINATION

This section should describe how to or if this agreement can be terminated and post termination responsibilities.

**-SAMPLE CLAUSE-***[If lessor transfers ownership, or if part of all of the facilities are condemned, or access to the facilities is changed or limited, lessee may, in its sole discretion terminate this agreement without further liability by giving Lessor not less than 60 days prior written notice. Upon termination of this agreement, Lessee agrees to remove all signage and repair damage due to excessive use or abuse. Lessor agrees to give lessee the right of first refusal on subsequent renewal of this agreement.]*

## 10. SUPPLEMENTAL COVENANTS

This section should contain any additional covenants, rights, responsibilities and/or agreements.

**-NO SAMPLE CLAUSE PROVIDED-**

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date Set forth at the outset hereof.

[Signature and notarization as appropriate to a legal document and as appropriate to recording process negotiated between parties.]

Please return to: Administrative Staff, Cary Planning Department, P.O. Box 2008, Cary, NC 27512-8005

**STATE OF NORTH CAROLINA  
COUNTY OF WAKE**

**SAMPLE  
Shared Parking Agreement**

This Shared Parking Agreement ('Agreement') entered into this \_\_\_\_\_ day of \_\_\_\_\_, 200\_\_ by and between \_\_\_\_\_, whose address is \_\_\_\_\_, and Parcel Identification Number (PIN) is \_\_\_\_\_ ('Lessor') and \_\_\_\_\_, whose address is \_\_\_\_\_, and Parcel Identification Number (PIN) is \_\_\_\_\_ ('Lessee').

1. To relieve traffic congestion in the streets, to minimize any detrimental effects of off-street parking areas on adjacent properties, and to ensure the proper and uniform development of parking areas throughout the Town, the Town of Cary Land Development Ordinance ('LDO') establishes minimum number of off-street parking and loading spaces necessary for the various land uses in the Town of Cary; and
2. Lessee owns property at \_\_\_\_\_, Cary, N.C. ('Lessee Property') which property does not have the number of off-street parking spaces required under the LDO for the use to which Lessee Property is put; and
3. Lessor owns property at \_\_\_\_\_, Cary, N.C. ('Lessor Property') which is zoned with the same or more intensive zoning classification than Lessee Property and which is put to a use with different operating hours or different peak business periods than the use on Lessee Property; and
4. Lessee desires to use some of the off-street parking spaces on Lessor Property to satisfy Lessee Property off-street parking requirements, such shared parking being permitted by the Town of Cary LDO, Section 7.8.3; and
5. Town LDO requires that such shared use of parking spaces be done by written agreement.

NOW THEREFORE, in consideration of the premises and the information stated above, the parties agree as follows:

1. SHARED USE OF OFF STREET PARKING FACILITIES

Per Section 7.8.2, Town of Cary Land Development Ordinance (Off-Street Parking Space Requirements), Lessor is required \_\_\_\_\_ off-street parking spaces and has \_\_\_\_\_ existing off-street parking spaces, which results in an excess of \_\_\_\_\_ off-street parking spaces. Lessee is required \_\_\_\_\_ off-street parking spaces and has \_\_\_\_\_ existing off-street parking spaces.

Lessor hereby agrees to share with Lessee a maximum of \_\_\_\_\_ off-street parking spaces associated with Lessor's Property, which is described in more detail on Attachment 1, attached hereto and incorporated herein by reference ('Shared Spaces').

Lessee's interest in such parking spaces is non-exclusive. The Lessee's shared use of parking shall be subject to the following:

*[describe the time, days etc of the use and the nature of the shared use, limits on time vehicles may be parked, etc.]*

2. TERM

This Agreement shall be effective upon execution by both parties and shall be accepted by the Planning Director and shall not be amended and/or terminated without written consent of both parties and the Cary Planning Director, or his/her designee.

3. SIGNAGE

Directional signage in accordance with Chapter 9, Town of Cary Land Development Ordinance and the written approval of Lessor may be added to direct the public to the shared parking spaces.

4. COOPERATION

The parties agree to cooperate and work together in good faith to effectuate the purpose of this Agreement.

5. SUPPLEMENTAL COVENANTS

No private agreement shall be entered into that overrides this agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date Set forth at the outset hereof.

\_\_\_\_\_  
(Lessor)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Lessee)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Planning Director)

\_\_\_\_\_  
(Date)

\_\_\_\_\_ COUNTY, NORTH CAROLINA

**SWORN TO AND SUBSCRIBED** before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

(Official Seal)

\_\_\_\_\_  
Signature of Notary Public

\_\_\_\_\_  
My Commission Expires

\_\_\_\_\_ COUNTY, NORTH CAROLINA

**SWORN TO AND SUBSCRIBED** before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

(Official Seal)

\_\_\_\_\_  
Signature of Notary Public

\_\_\_\_\_  
My Commission Expires



**THE CITY OF SAN DIEGO**

RECORDING REQUESTED BY:  
**THE CITY OF SAN DIEGO**  
AND WHEN RECORDED MAIL TO:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(THIS SPACE IS FOR RECORDER'S USE ONLY)

**SHARED PARKING AGREEMENT**

This SHARED PARKING AGREEMENT ("Agreement") is entered into and effective \_\_\_\_\_, 20\_\_\_\_, by and between \_\_\_\_\_, \_\_\_\_\_ and the City of San Diego.

**RECITALS**

WHEREAS, pursuant to sections 142.0535 and 142.0545 of the Land Development Code, the City of San Diego specifies criteria which must be met in order to utilize off-site shared parking agreements to satisfy on-site parking requirements.

NOW, THEREFORE, in consideration of the recitals and mutual obligations of the parties as herein expressed, \_\_\_\_\_, \_\_\_\_\_ and the City of San Diego agree as follows:

1. \_\_\_\_\_ the owner of the property located at \_\_\_\_\_, agrees to provide \_\_\_\_\_ the owner of the property located at \_\_\_\_\_ with the right to the use of (\_\_\_\_) parking spaces \_\_\_\_\_ from \_\_\_\_\_ as shown on Exhibit A to this Agreement on property located at \_\_\_\_\_.

1.1 Applicant: \_\_\_\_\_ Co-Applicant: \_\_\_\_\_  
Assessor Parcel No: \_\_\_\_\_ Assessor Parcel No: \_\_\_\_\_  
Legal Description: \_\_\_\_\_ Legal Description: \_\_\_\_\_  
\_\_\_\_\_

2. The parking spaces referred to in this Agreement have been determined to conform to current City of San Diego standards for parking spaces, and the parties agree to maintain the parking spaces to meet those standards.

3. The Parties understand and agree that if for any reason the off-site parking spaces are no longer available for use by \_\_\_\_\_, \_\_\_\_\_ will be in violation of the City of San Diego Land Development Code requirements. If the off-site parking spaces are no longer available, Applicant will be required to reduce or cease operation and use of the property at Applicant's address to an intensity approved by the City in order to bring the property into conformance with the Land Development Code requirements for required change for required parking. Applicant agrees to waive any right to contest enforcement of the City's Land Development Code in this manner should this circumstance arise.

Although the Applicant may have recourse against the Party supplying off-site parking spaces for breach of this Agreement, in no circumstance shall the City be obligated by this agreement to remedy such breach. The Parties acknowledge that the sole recourse for the City if this Agreement is breached is against the Applicant in a manner as specified in this paragraph, and the City may invoke any remedy provided for in the Land Development Code to enforce such violation against the Applicant.

**Continued on Page 2**

4. The provisions and conditions of this Agreement shall run with the land for those properties referenced in paragraph 1 of this document and be enforceable against successors in interest and assigns of the signing parties.
5. Title to and the right to use the lots upon which the parking is to be provided will be subservient to the title to the property where the primary use it serves is situated.
6. The property or portion thereof on which the parking spaces are located will not be made subject to any other covenant or contract for use which interferes with the parking use, without prior written consent of the City.
7. This Agreement is in perpetuity and can only be terminated if replacement parking has been approved by the City's Director of the Development Services Department and written notice of termination of this agreement has been provided to the other party at least sixty (60) days prior to the termination date.
8. This Agreement shall be kept on file in the Development Services Department of the City of San Diego in Project Tracking System (PTS) Project Number: \_\_\_\_\_ and shall be recorded on the titles of those properties referenced in paragraph 1 of this document.

In Witness whereof, the undersigned have executed this Agreement.

\_\_\_\_\_  
Applicant

Date: \_\_\_\_\_

\_\_\_\_\_  
Deputy Director

Business and Process Management, Development Services

\_\_\_\_\_  
Party/Parties Supplying Spaces

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**NOTE: ALL SIGNATURES MUST INCLUDE NOTARY ACKNOWLEDGMENTS PER CIVIL CODE SEC. 1180 ET.SEQ.**