

# ADDENDUM TO THE RESIDENTIAL PERMIT PARKING SURVEY ON KINGSTON AVENUE AND VICINITY

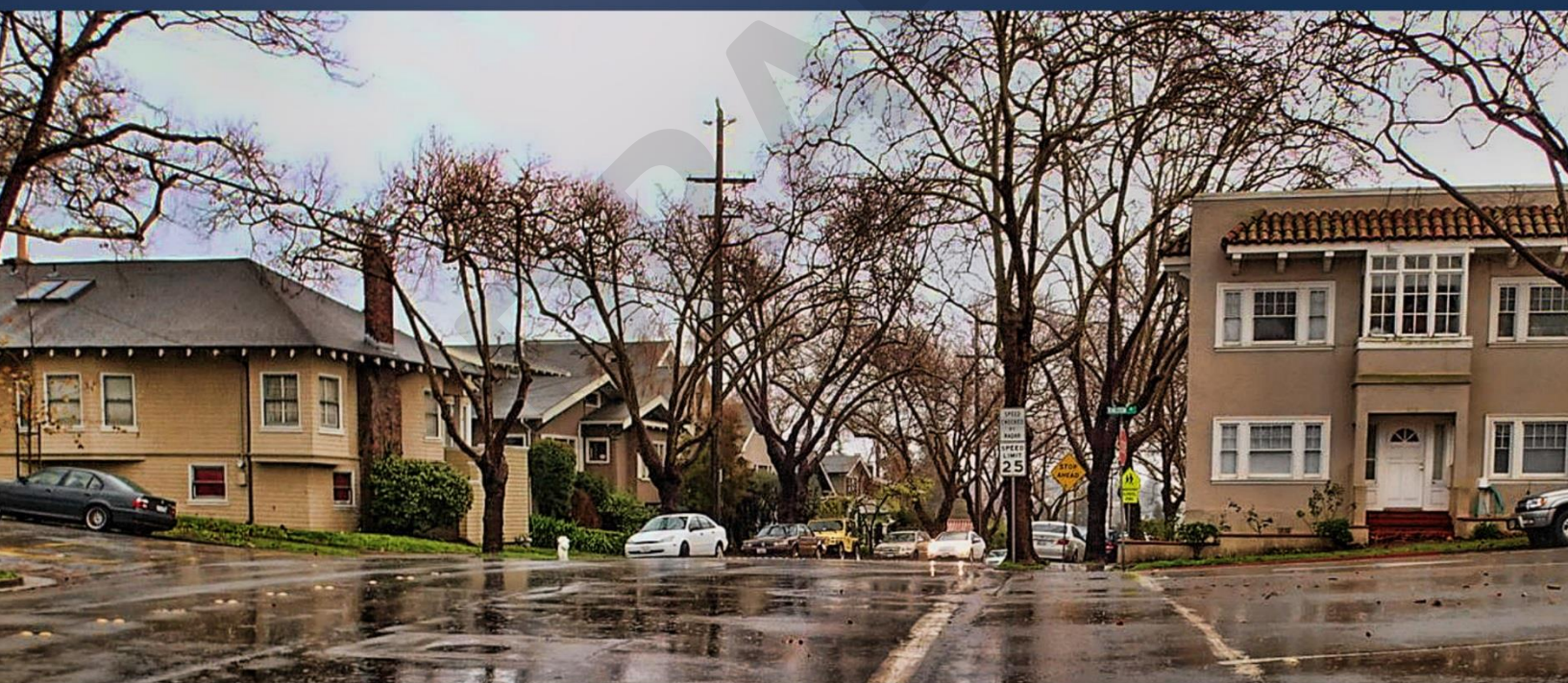
Piedmont, California  
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Prepared for:

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## SUMMARY

This addendum builds upon a residential permit parking (RPP) survey conducted in February 2016 at the request of residents of Kingston Avenue and adjacent streets. The RPP survey—which was documented in a May 2016 [report](#) presented to the City of Piedmont and study area residents—found that on-street parking in the study area is constrained during middays on weekdays, and that non-residents are a large contributor to the scarcity of parking spots.

The study recommended that the City of Piedmont work with residents of the study area to find the right mix of rules for an RPP program. To be consistent with parking enforcement in nearby cities, the study advised that an RPP program be enforced Monday through Friday from 8 AM to 6 PM. The City of Piedmont held a town hall meeting on September 8, 2016 to present the findings to the residents of the study area. During the town hall and subsequent conversations, residents brought up the following two questions:

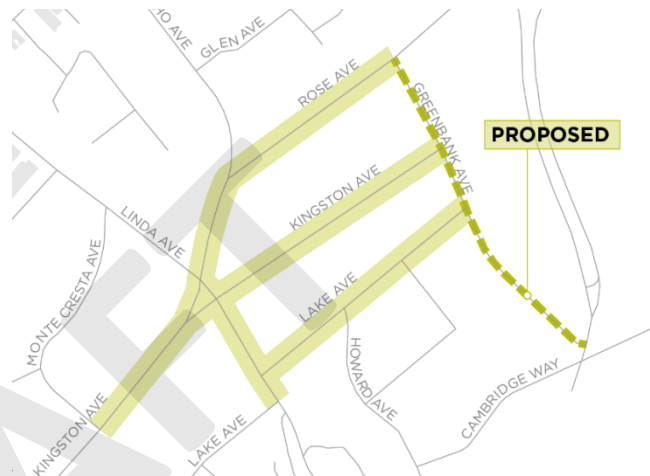
1. Is the inclusion of Greenbank Avenue to the RPP program area justified? How would parking supply and demand change if the study area were expanded to include Greenbank Avenue?
2. Is overnight enforcement of a potential RPP program necessary?





Additional data collection—which included working with the California DMV for license plate matching—helped shed light on these questions. The inclusion of Greenbank Avenue into the study area is not justified as parking was easy to find, and most parked vehicles belonged to residents of the study area. Although Greenback Avenue would increase the supply and the availability of parking if included in the study area, parking spots there are likely to be perceived as a poor substitute to parking on Kingston Avenue or Rose Avenue.

On the matter of overnight enforcement, it appears to be a borderline scenario with busy nights like Friday falling just over the threshold of justification and normal nights like Wednesday falling under the threshold. Nevertheless, it is clear that a substantial share of overnight parking (about one quarter) is due to non-residents. The decision to enforce an RPP program 24/7 should consider impacts to evening guests in need of parking, lower visibility of signs leading to visitors not being aware of the parking restrictions, and nighttime enforcement duties for Piedmont Police Department staff.

A comparison of potential RPP strategies is included on the following page and described in more detail in the rest of the report.

Figure 1: Study Area



				
	<b>Option A – Do Nothing</b>	<b>Option B – Permit Required to Park 2+ Hours</b>	<b>Option C – Permit Required to Park 24/7</b>	<b>Option X – Paid Parking with Permit Exception</b>

<b>RPP Features</b>				
<i>Enforcement</i>	None	Monday through Friday 9 AM to 6 PM	24/7	Monday through Friday 9 AM to 6 PM
<i>Free Permits</i> <small>Additional permits available for purchase, subject to availability.</small>	N/A	One per dwelling unit	One per dwelling unit	One per dwelling unit
<i>Dwelling Unit Eligibility</i>	N/A	Single-family homes; multifamily units with less than code-required spaces	Single-family homes; multifamily units with less than code-required spaces	Single-family homes; multifamily units with less than code-required spaces
<i>Visitor Permits</i>	N/A	One day and 14-day	One day and 14-day	One day and 14-day
<i>Special Permits</i> <small>For BES staff, landlords, and similar.</small>	N/A	Available for purchase on a case-by-case basis	Available for purchase on a case-by-case basis	Available for purchase on a case-by-case basis

<b>RPP Goals</b>				
<i>Increase parking availability</i>	☆☆☆☆☆	★★★★☆	★★★★★	★★★★☆
<i>Encourage better use of parking</i>	☆☆☆☆☆	★★★★☆	★★★★★	★★★★★
<i>Maintain access to guests</i>	★★★★★	★★★☆☆	★★★☆☆	★★★☆☆
<i>Avoid adverse impacts to BES staff</i>	★★★★★	★★★☆☆	★★★☆☆	★★★☆☆
<i>Avoid excessive admin/enforcement efforts</i>	★★★★★	★★★☆☆	★★★☆☆	★★★★☆ (1)

(1) Revenue from non-resident parking could be used to offset administrative and enforcement efforts, as well as general parking improvements (striping, red curbs, etc.)

## COMMUNITY CONTEXT

This section summarizes the community outreach effort conducted as part of the additional research summarized in this addendum.

## FEEDBACK FROM RESIDENTS

The City of Piedmont followed through on the recommendation to engage the residents of the study area and held a town hall meeting on September 8, 2016 to present the March 2016 report findings. In addition, the City has maintained an open line of communication since the town hall meeting to allow for comments from residents who were not present at the meeting. Although the residents of the study area have not reached a unanimous consensus on the terms of the RPP program, the following general themes for the purpose and goals of the RPP program have been voiced consistently:

- Increase availability of on-street parking for study area residents
- Encourage residents to make better use of on-street parking as a shared resource
- Maintain availability of parking for guests and occasional users such as providers of child care, landscaping, and similar services
- Avoid adverse impacts to Beach Elementary School faculty and staff
- Avoid excessive increases to administrative or enforcement duties for the City of Piedmont or the Piedmont Police Department

## PARKING REQUIREMENTS

Table 1 summarizes the minimum parking requirements in the Piedmont and Oakland zoning codes. (Oakland parking requirements are included because some of the multifamily properties in the study area fall within the city limits of Oakland.) These requirements inform the City's understanding of the potential need for securing on-street parking spaces for study area residents.

In Piedmont, dwelling units greater than 700 square feet are required to have two off-street spaces regardless of whether the dwelling units are detached or part of a multifamily building. In Oakland, multifamily dwellings are required to have a minimum of one off-street space. Note that these are current parking requirements and may not reflect the requirements in place when the properties in the study area were built.

**Table 1: Parking Requirements**

Residential Facility Type	Zone	Piedmont Minimum Parking Requirement	Oakland Minimum Parking Requirement
Single Family Residential	Zones A and E	One (1) off-street space for dwelling units under 700 sq. ft. Two (2) off-street, non-tandem spaces for all other dwelling units. (Additional space required for the 5 <sup>th</sup> , 7 <sup>th</sup> , 9 <sup>th</sup> , etc. bedrooms.)	
Two-Family Dwelling Multifamily Dwelling	Any other zone, except when combined with the S-12 Zone.	One (1) space for dwelling units under 700 sq. ft. Two (2) spaces for all other dwelling units.	One (1) space for each dwelling unit.

Sources: Piedmont – SEC. 17.16 PARKING REQUIREMENTS; Oakland – 17.116.060 - Off-street parking—Residential Activities

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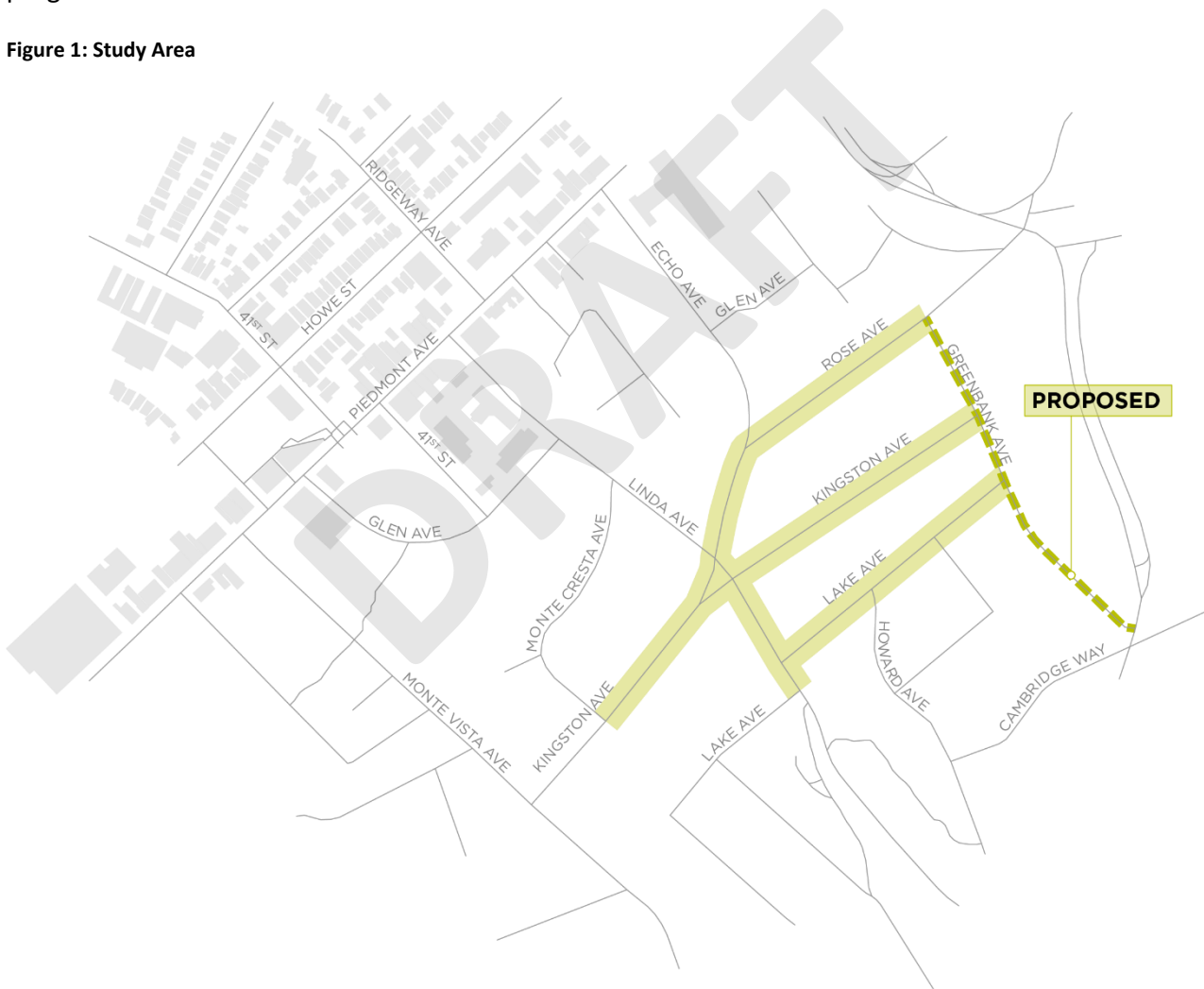
## DATA COLLECTION

This section describes the data collection process, which included manual license plate surveys, obtaining vehicle registration data from the California Department of Motor Vehicles (DMV), and counting dwelling units on the study streets.

## STUDY AREA

Figure 1 below shows the boundaries of the study area. The addition of Greenbank Avenue was proposed by residents during the neighborhood outreach process. This street was included in the additional data collection plan to develop a recommendation on its potential inclusion in the RPP program.

Figure 1: Study Area



## PARKING DATA

Following the town hall meeting in September 2016, an objective and robust data collection plan was carried out. The plan consisted of five (5) one-hour data collection periods, as shown in Figure 2. To ensure the data set would be representative of different parking conditions during the week, data collection tours were conducted during a busy time when non-residents are believed to park in the area late at night (i.e., Friday), and a set of data collection tours were conducted during a “normal” evening time (i.e., Wednesday).

**Figure 2: Dates and Times for Parking Data Collection**

<b>Friday, February 10</b>	
9:00pm	Kingston - Busy Night
<b>Saturday, February 11</b>	
5:00am	Kingston - Busy Night
<b>Wednesday, February 15</b>	
9:00pm	Kingston - Normal Night
<b>Thursday, February 16</b>	
5:00am	Kingston - Normal Night
12:00pm	Kingston - Heavy Non Resident

Quality Counts, LLC (Quality Counts), a subconsultant to Kittelson & Associates, Inc. (Kittelson), performed most of the field data collection. Quality Counts staff inventoried the supply of legal on-street parking spaces on the streets in the study area. This information is contained in Appendix A.

During the study periods shown in Figure 3, Quality Counts staff documented the license plate number and location of all vehicles parked on the streets in the study area. Table 2 presents a sample of the data collection format.

**Table 2: Data Sample**

Submission Date	License Plate <sup>1</sup>	State	Study Street	Geolocation <sup>2</sup>
2/16/2017 5:51	7----7	CA	Kingston Avenue	37.82575, -122.24654
2/16/2017 5:17	6----3	CA	Rose Avenue	37.82684, -122.24678
2/16/2017 5:22	7----3	CA	Rose Avenue	37.82500, -122.22989

<sup>1</sup> License plates truncated for privacy

<sup>2</sup> Geolocation was obtained from the data collection device’s GPS unit

## VEHICLE REGISTRATION DATA

The registered addresses of vehicles parked on-street during the data collection tours were obtained from the California Department of Motor Vehicles (DMV) through the Piedmont Police Department. The license plate “scan” returned addresses for approximately 80 percent of the observed vehicles. Of the license plates for which matching addresses were identified, about 10 percent are registered more than 30 miles from Piedmont, with many registered in Southern California. The share of registered addresses far from Piedmont can be attributed to people delaying updating their vehicle registration or people driving a vehicle owned by a friend or relative. The quality of the data obtained through this DMV scan is reflected in the moderate number of vehicles with “unknown” residency (see Figures 4, 6 and 7 later in the addendum).





## PARKING SUPPLY INVENTORY

As discussed in the May 2016 report, on-street parking spaces were inventoried to determine the amount of on-street parking available in the neighborhood. Within the study area, and excluding Greenbank Avenue, 278 on-street parking spaces are available. Neighborhood-wide parking is considered accessible and useful for all neighborhood residents. Appendix A presents the parking supply data collected in the field.

## DWELLING UNITS

The dwelling units in the study area were classified into three groups: single family home (no accessory units were observed), units in a small multifamily building (up to four dwelling units), and units in a larger multifamily building (five or more dwelling units). These dwelling unit counts help inform the understanding of parking supply and demand across the study area.

The study area, excluding Greenbank Avenue, has 285 dwelling units, 158 (55%) of which are single-family homes. Table 3 summarizes the building and dwelling unit counts collected in the field.

**Table 3: Dwelling Unit Summary**

Building Type	Buildings	Dwelling Units
Single Family Home	158	158
Multifamily Building	15	127
<b>Totals</b>	<b>173</b>	<b>285</b>

Note: Greenback Avenue was excluded from the dwelling unit analysis.

Appendix B presents detailed building and dwelling unit data.

## FINDINGS

The following two questions—expressed by residents of the study area following the September 8, 2016 town hall—formed the basis for the additional research summarized in this addendum:

1. Is the inclusion of Greenbank Avenue to the RPP program area justified? How would parking supply and demand change if the study area were expanded to include Greenbank Avenue?
2. Is overnight enforcement of a potential RPP program necessary?

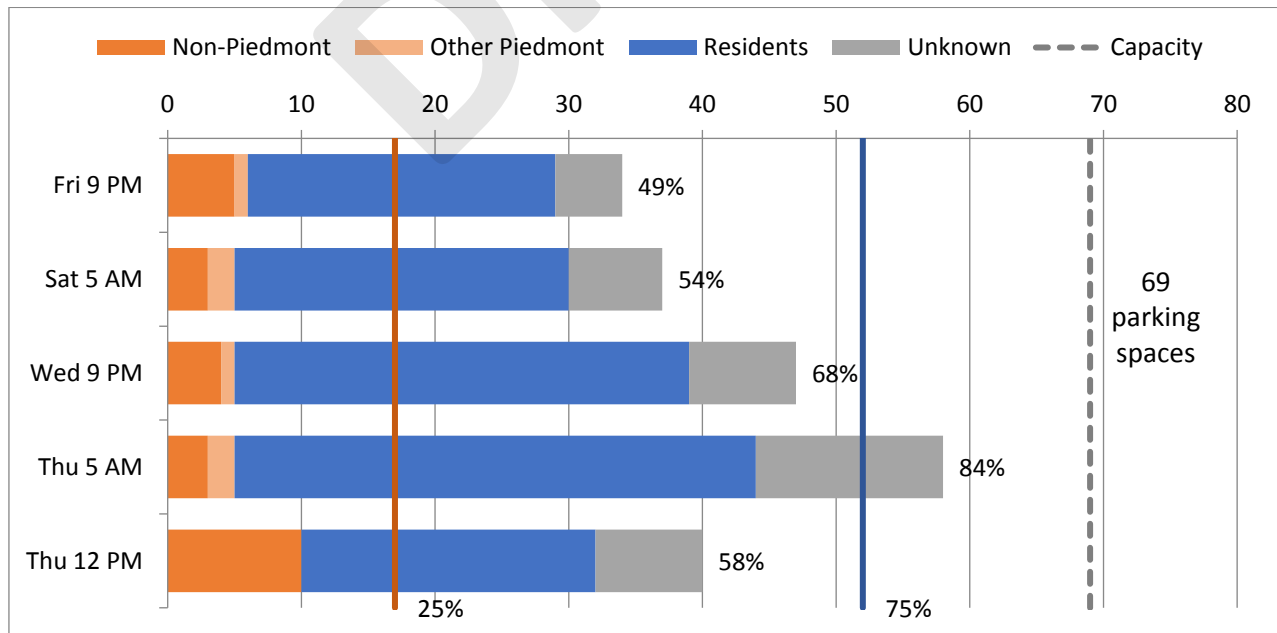
As with the original RPP evaluation, the following thresholds were used to determine whether parking is sufficiently constrained by non-residents:

- At least 75 percent of the available parking on the block should be occupied, and
- At least 25 percent of the available parking on the block should be occupied by out-of-area vehicles such as commuters, shoppers, students, etc.

### GREENBACK AVENUE

Greenback Avenue has space for approximately 69 on-street parked vehicles, compared to 278 in the original study area. Relative to the parking supply, fewer vehicles are parked on Greenbank Avenue than in the rest of the study area, and a small number of these vehicles are registered outside of the study area. Figure 3 shows Greenbank Avenue does not meet the occupancy thresholds used to justify inclusion in an RPP program. Only in one observation—Thursday 2/16 at 5 AM—did Greenbank Avenue exhibit occupancy above 75 percent, primarily due to residents of the study area.

Figure 3: Greenbank Avenue Parking Utilization

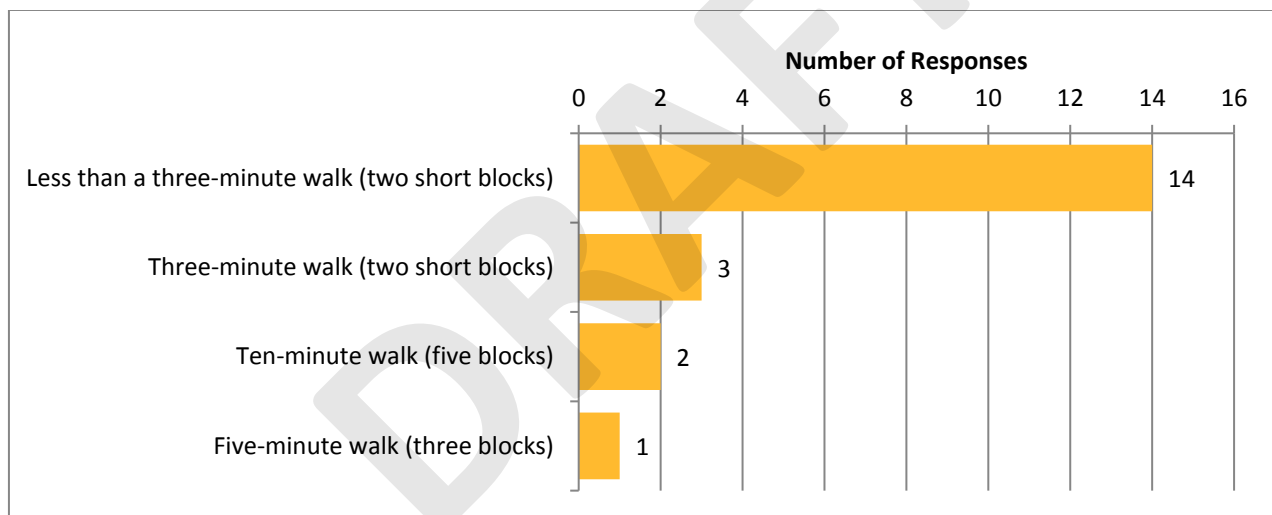


Unknown vehicles are those for which residency could not be confidently established.

If Greenback Avenue were added to the study area, on-street parking capacity would increase by approximately 25 percent. Because of Greenbank Avenue’s higher parking availability, the share of available parking spots in the study area would also go up. Based on one weekday, noontime scenario, the increase in availability would result in more than 25 percent of spots being available. In other words, by adding Greenbank Avenue into the study area, it would—as a whole—have enough availability to accommodate the existing parking demand without an RPP program.

On the other hand, residents of the study area are accustomed to parking close to their residences. As part of the online survey conducted in support of the March 2016 report, study area residents were asked about their parking patterns, and specifically about the farthest they have had to park their cars in the last month (see Figure 4). Based on these responses, it can be interpreted that residents rarely seek parking outside of a two-block distance from their residence. As a result, Greenback Avenue, particularly the steeper section closer to Grand Avenue, is likely to be perceived as a poor substitute for parking on Kingston Avenue or Rose Avenue.

Figure 4: Answers to "In the last month, what is the farthest you’ve had to park from your house?"

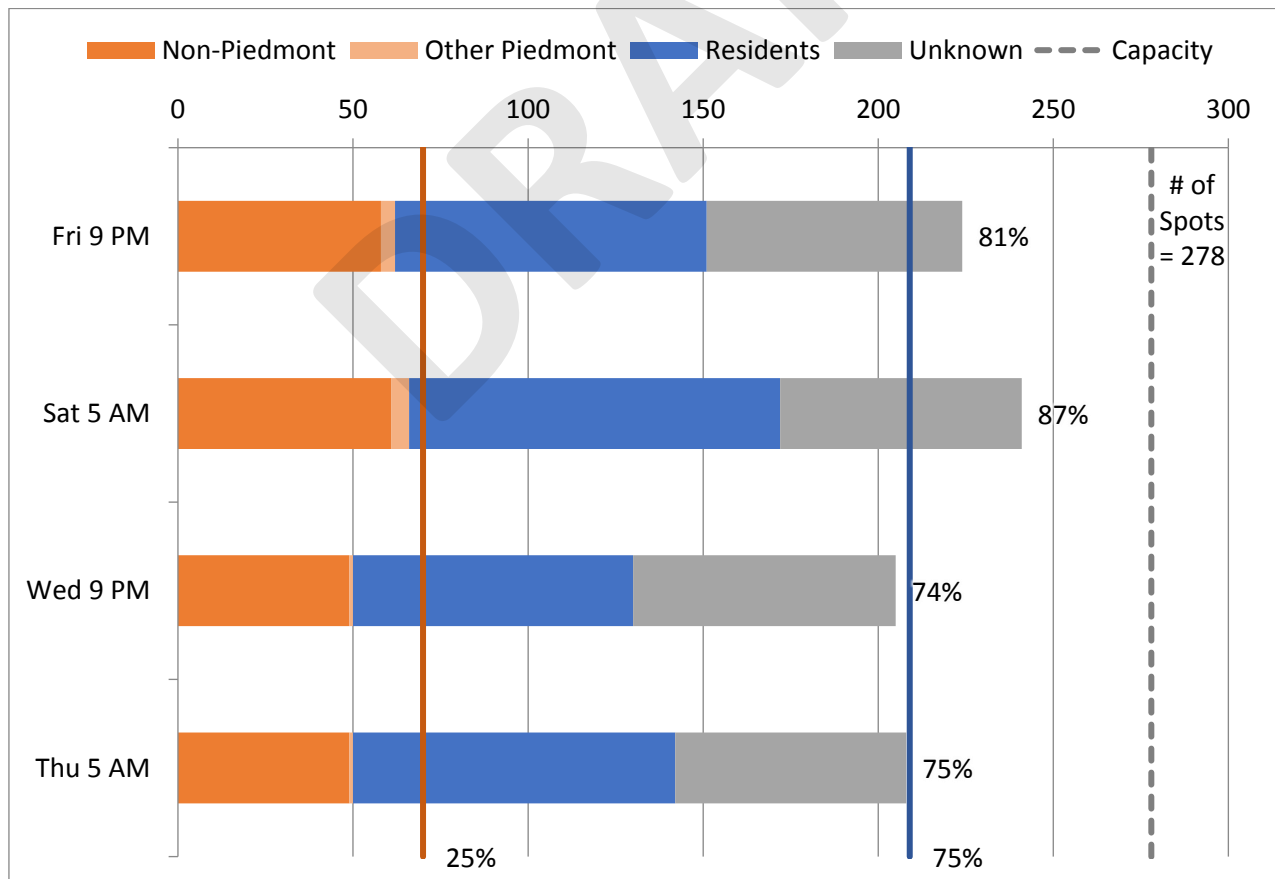


## OVERNIGHT ENFORCEMENT

The question of whether parking enforcement is necessary 24/7 to deter non-residents from parking overnight in the study area was evaluated through the matching of license plates late at night and early in the morning. This analysis was performed for the original study area (i.e., without Greenbank Avenue). Two figures were developed as part of this analysis and are presented below:

- Figure 5 shows that parking was constrained in the study area during Friday night and Saturday morning, with more than 4 out of 5 spaces occupied. Although the share of non-resident vehicles shown in this figure is lower than 25 percent of the parking supply, it is likely that there are enough non-resident vehicles in the unknown category to put the “real” share above 25 percent. This is not likely to hold true for Wednesday night or Thursday morning.
- Figure 6 shows only vehicles that were observed both late at night *and* early in the morning, meaning that they likely stayed overnight as opposed to just being present at 9 PM or 5 AM. Out of these overnight stay vehicles, roughly a quarter are registered outside the study area. This analysis suggests that the percentage share of non-residents parking overnight is high and constant throughout the week.

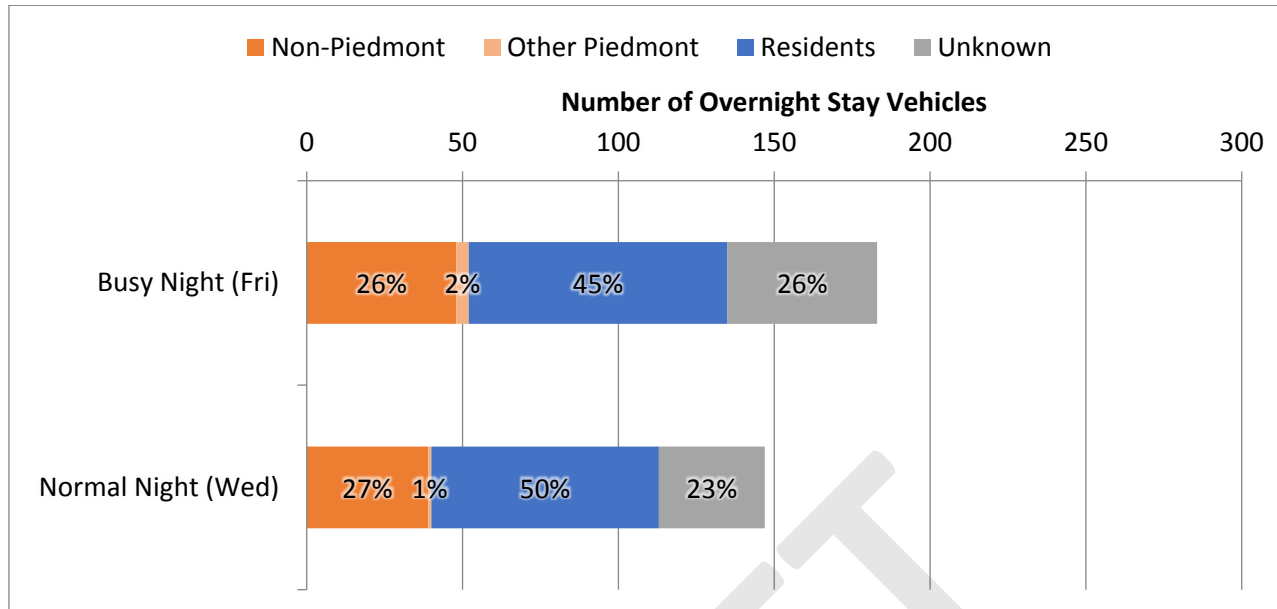
Figure 5: Parking Occupancy at Late Night and Early Morning



Unknown vehicles are those for which residency could not be confidently established.



**Figure 6: Overnight Stay Vehicles by Category**



Unknown vehicles are those for which residency could not be confidently established.

## NUMBER OF FREE PERMITS PER DWELLING UNIT

Another question regarding the potential implementation of an RPP program is how many permits would be made available for free to each dwelling unit in the study area (excluding Greenbank Avenue). A balance of permits to on-street parking spaces is desirable to maintain easy access to parking. This analysis is based on the parking inventory and dwelling unit counts performed as part of this additional research, with the assumption that dwelling units are code-compliant regarding off-street parking provisions (unless known to be otherwise). Table 4 presents potential permit scenarios.

**Table 4: Permits per Dwelling Unit Relative to Total Parking Supply**

Potential RPP Eligibility	# Dwelling Units Eligible	% of Total Spaces
All Dwelling Units	285	103%
All Dwelling Units Except Multifamily Units with more than four units	183	66%
Single Family Dwelling Units + Multifamily Units without Minimum Required Parking*	166 (or higher)	60% (or higher)
Only Single Family Dwelling Units	158	57%

\*203 Linda Avenue, with 8 dwelling units, is known to lack off-street parking. There may be other multifamily buildings with less than code-required off-street spaces.

## RECOMMENDATIONS

The findings of this additional research confirm the earlier findings that on-street parking in the study area is constrained and that non-residents are a large contributor to the scarcity of parking spots, particularly during midday on weekdays.

The additional data collection and analysis of parking conditions on Greenbank Avenue suggest that it does not exhibit the same scarcity of parking as the original study area. Available spots on Greenbank Avenue do not appear to be sought after by study area residents or non-residents, especially on the steeper section near Grand Avenue.

On the matter of overnight enforcement, it appears to be a borderline scenario with busy nights like Friday slightly exceeding the threshold of justification and normal nights like Wednesday falling under it. The moderate quantity of license plates with unknown or irrelevant registration addresses introduces a considerable margin of error into the assessment. Nevertheless, it is clear that a substantial share of overnight parking (about one quarter) is due to non-residents. However, continuous 24/7 enforcement would introduce challenges, including impacts to evening guests in need of parking, lower visibility of signs leading to visitors not being aware of the parking restrictions, and nighttime enforcement duties for Piedmont Police Department staff.

In terms of dwelling unit eligibility for free permits, it is noted that if every dwelling unit in the study area received one permit, the number of permits would slightly exceed the number of on-street parking spaces. It is recommended that only one permit per dwelling unit be provided at no cost. To achieve a balance in the number of permits to on-street spaces, it is suggested that units in multifamily buildings which already meet their code requirement for off-street parking (see Table 1) be excluded from receiving a free permit. Finally, it is recommended that all residents of the study area have access to additional permits, which can be priced in a manner that would maintain an acceptable level of parking availability.

The following four “bundles” of RPP program rules are proposed for presentation to the study area residents, along with the comparison matrix on page 4.

**Option A – Do Nothing**

This option makes no changes to the status quo. The RPP program would not be implemented.

**Option B — Permit Required to Park 2+ Hours**

Option B would implement the RPP program and enforce it Monday through Friday from 9 AM to 6 PM, consistent with similar programs in Piedmont. During enforcement hours, visitors would be able to park without a permit for a maximum of two hours.

**Option C — Permit Required to Park 24/7**

Option C would implement the RPP program and enforce it seven days a week, 24 hours a day. There would be no exception to park on study area streets without a permit.

**Option X — Paid Parking with RPP Exception**

Option X would implement the RPP program and enforce it Monday through Friday from 9 AM to 6 PM, consistent with similar programs in Piedmont. Visitors would be able to park without a permit during enforcement hours for an unlimited amount of time, provided that they pay for their usage through a mobile app or phone reservation system (e.g., [ParkMobile](#)). The hourly rate(s) would be reviewed on an annual or biannual basis to maintain acceptable parking availability.

## APPENDIX A: PARKING SUPPLY INVENTORY

### Streets in the original Study Area

STREET NAME	TOTAL	SPACE LOCATED				DATE
		N	S	E	W	
Kingston Ave	133	62	71	0	0	12/17/2015
Lake Ave	51	24	27	0	0	12/17/2015
Rose Ave	76	36	40	0	0	12/17/2015
Linda Ave	18	0	0	10	8	12/17/2015
<b>INVENTORY TOTALS:</b>	278					

### Greenbank Avenue

STREET NAME	TOTAL	SPACE LOCATED				DATE
		N	S	E	W	
Greenbank - West	30	17	13	0	0	2/16/2017
Greenbank - East	39	19	20	0	0	2/16/2017
<b>INVENTORY TOTALS:</b>	69					



## APPENDIX B: DWELLING UNIT INVENTORY

Street	Building Type	# Buildings	# Dwelling Units
Kingston Avenue	Single Family Home	58	58
	Three-Unit Multifamily	1	3
	Four-Unit Multifamily	1	4
	12-Unit Multifamily	1	12
	14-Unit Multifamily	1	14
	15-Unit Multifamily	2	30
	38 Unit Multifamily	1	38
	<i>Subtotal</i>	<i>65</i>	<i>159</i>
Rose Avenue	Single Family Home	66	66
	Two-Unit Multifamily	5	10
	Three-Unit Multifamily		0
	Four-Unit Multifamily	1	4
	Eight-Unit Multifamily		0
	12-Unit Multifamily		0
	14-Unit Multifamily		0
	15-Unit Multifamily		0
	38 Unit Multifamily		0
	<i>Subtotal</i>	<i>72</i>	<i>80</i>
Linda Avenue	Single Family Home	8	8
	Four-Unit Multifamily	1	4
	Eight-Unit Multifamily	1	8
	<i>Subtotal</i>	<i>10</i>	<i>20</i>
Lake Avenue	Single Family Home	26	26
	<i>Subtotal</i>	<i>26</i>	<i>26</i>
	<b>TOTAL</b>	<b>173</b>	<b>285</b>