DRAFT REPORT

RESIDENTIAL PARKING MANAGEMENT PLAN

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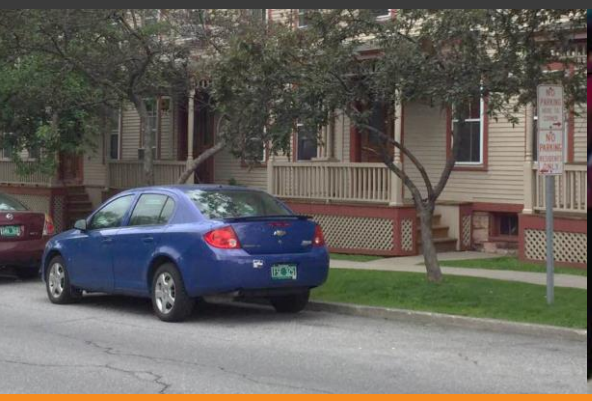
10.16.2015



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RESIDENTIAL PARKING MANAGEMENT PLAN

PREPARED FOR:
CITY OF BURLINGTON

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EXECUTIVE SUMMARY

The City of Burlington started its residential parking program in the 1990s to regulate on-street parking in the neighborhoods around Centennial Field. Since then, streets with resident parking restrictions have expanded to over eight miles of curbside parking, located predominantly in neighborhoods adjacent to high parking generators such as the University of Vermont (UVM), the UVM Medical Center, and portions of downtown.

The 2011 Burlington Municipal Development Plan (PlanBTV) recommended that a Residential Parking Study be conducted to formally review the existing program and recommend revisions to management, administration, and enforcement of on-street parking in residential areas. The Study is jointly sponsored by the City and the Chittenden County Regional Planning Commission (CCRPC), and consisted of the following tasks:

- Analysis of the current residential parking streets, regulations, and trends;
- Review of residential parking practices in comparable cities;
- Comprehensive analysis of parking supply and demand in three representative Burlington neighborhoods;
- Extensive public outreach, including two public meetings, four Advisory Committee meetings, Neighborhood Planning Assembly meetings, and online comment tools.
- Recommend approaches and strategies that allow for flexibility to improve residential area parking management.

The Plan strives to achieve the following objectives to improve parking in residential areas:

- Balance parking needs of residents, visitors, and commuters.
- Account for neighborhood need and quality of life.
- Administer a program that is fair and transparent.
- Consider the highest and best use of the public right-of-way.
- Streamline the administrative process.
- Apply a data driven approach.
- Utilize market-responsive feedback.
- Address the need to maintain city transportation infrastructure.

The Plan recommends the continuation of seven general parking management approaches, in which the City is currently engaged, and recommends nine strategies that are new or important modifications of the existing residential permit program (RPP). The over-arching goal is to achieve an optimal parking management approach that preserves the livability of Burlington neighborhoods while finding the best use of the public Right-of-Way. **None of the strategies proposes removing existing resident-only parking restrictions.**

To improve parking in residential areas, this Plan recommends a menu of strategies that can be in-lieu of or in addition to residential parking permits. General parking management

strategies can be implemented at any time. To improve the residential permit program, nine strategies are recommended for implementation over the short-term (0-1 year), mid-term (1-3 years), and long-term (3+ years). The table below provides a summary description of the residential parking toolbox with seven General Parking Management Approaches and nine Strategies for the residential permit program, the time frame for implementation, and the City departments (or other agencies) responsible for spearheading and supporting the strategies.

		Description	Responsible City Department/Agency	
			Lead	Supporting Department/Agency
General Parking Management Approaches	Strategic Approaches	Encourage and Improve Sustainable Transportation Modes	DPW	CEDO, Planning, CATMA, CCTA, CCRPC, CarShareVT, Institutions
		Encourage Satellite Parking and Incentivize Parking in Remote Lots	DPW	CEDO, Planning, CATMA, Institutions, CCTA
		Improve Signage and Wayfinding	DPW	
	Tactical Approaches	Install Parking Meters/Paystations	DPW	Burlington Police Department
		Implement Parking Time Limits in Non-RPP Areas	DPW	
		Stripe Parking Stalls	DPW	Burlington Police Department
		Improve Lawn Parking Ban Enforcement	BPD	DPW, Code Enforcement
Short-Term Residential Permit Program Strategies				
0-1 year	1	Provide Online Residential Permit Resources: Downloadable Application and Renewal Documents	BPD	DPW
	2	Establish Commuter Parking Permit Program (3-Year Pilot Program)	DPW	Burlington Police Department
	3	Establish Residential Parking Permit Periods Based on Supply and Demand	DPW	Burlington Police Department
	4	Evaluate Residential Parking Areas Rather Than Streets	DPW	Burlington Police Department
	5	Streamline the Process for Petitioning for Resident-Only Parking	DPW	Burlington Police Department
	6	Establish Process for Removing or Reallocating Residential Parking	DPW	Burlington Police Department
Mid-Term Residential Permit Program Strategies				
1-3 years	1 (mid-term)	Provide Online Residential Permit Resources: Comprehensive Program Information	DPW	Burlington Police Department
	7	Revise Program to Incorporate Fee Structure and to Allocate a Maximum of 4 Permits per Dwelling Unit	BPD	DPW, Planning
	8	Establish Construction and In-Home Care Permits	BPD	DPW, Planning
Long-Term Residential Permit Program Strategies				
>3 years	1 (long-term)	Provide Online Residential Permit Resources: Online Payment of Permits and Fines	DPW	Burlington Police Department
	9	Improve Enforcement Technology	BPD	DPW

The Study recommends that the City review the residential parking program every five years to determine whether modifications are necessary to better address community goals.

1.0 INTRODUCTION

In 2014, the City of Burlington and Chittenden County Regional Planning Commission (CCRPC) conducted an evaluation of the City's current residential parking program. The City contracted with the consulting firm RSG to work collaboratively with the City and CCRPC to evaluate the existing residential parking program and identify comprehensive improvements. The team engaged in four meetings with a Community Advisory Committee and hosted two public meetings to solicit public comments and regularly receive feedback about the progress of the plan. The Committee consisted of representatives from five wards that contain residential parking as well as relevant City departments and institutions. The team also coordinated with the Downtown Burlington Parking Plan team throughout the course of the project to ensure that recommendations to the residential parking plan would complement ongoing downtown parking initiatives.

1.1 I RESIDENTIAL PARKING

The Residential Permit Program (RPP) in Burlington began as a response to concerns about the availability of parking for residents within their neighborhoods. Streets that are designated for resident parking limit the locations where non-residents may park on residential streets.

Neighborhoods located near parking generators, such as downtown business districts, schools, colleges, universities, and hospitals, are prone to spillover parking effects with demand from non-residents to park in front of residential homes. This tends to happen during weekday hours while people are at work or when there are large events on nights and weekends. Demand for parking in residential areas is also influenced by car ownership, proximity to available public transportation, dedicated parking, bicycle and pedestrian facilities, and a mix and density of land uses that are conducive to shared parking.

A residential parking permit system is one tool to help provide residents with adequate curbside parking space in front of their homes. It can also encourage non-residents to park in more appropriate locations, such as off-street lots, garages, or metered parking, which often helps generate parking revenue for the city while reducing circling traffic in residential areas.

A residential parking permit system can also be controversial among residents, visitors, and the city. Residents who are required to obtain permission from the City to park their own vehicles and their guests' vehicles in front of their own home can see the residential permit system as a bureaucratic annoyance. Visitors may feel frustration at being prohibited from parking on streets that have ample curbside parking. The City must consider and budget for the costs of administering a residential parking program, which includes additional staff time and enforcement, as well as tangible costs such as parking signage, vehicle decals, forms, envelopes, and postage.

The RPP is one of many tools that the City currently uses to manage parking and maintain livability in residential areas. Other tools include meters, ~~striping parking stalls and driveway~~,

lawn parking bans, and various parking regulations. The City employs these parking management strategies to create convenient visitor parking, encourage turnover, and generate funds for neighborhood/transportation improvements. These non-RPP strategies all essential elements of an effective long-term parking program.

1.2 | PROJECT GOALS

As part of this study, the consultant team looked at the current citywide and residential parking zones, regulations, and trends. Over the course of analyzing existing conditions, best practices, and receiving public feedback, the study's primary focus is to develop a comprehensive understanding of parking supply and demands by analyzing three representative sample area neighborhoods, and also understand the greater residential parking concerns from the point of view of residents, visitors, and city officials. More precisely, the goal of the study is to identify an optimal parking management strategy that preserves the livability of Burlington neighborhoods while finding the best use of the public Right-of-Way.

This project strives to achieve the following objectives to improve parking in residential areas:

- **Balance Parking Needs:** Balance the needs of those who park on Burlington's streets, including residents, visitors, and commuters.
- **Account for Neighborhood Need and Quality of Life:** Recognize that each neighborhood and block is unique and the parking management tools used should account for an area's character and needs.
- **Administer a Program that is Fair and Transparent:** Provide clear guidance to the City, the Public Works Commission, and to all Burlington residents and visitors on how residential permit areas are objectively established and how to allocate for future residential permit areas.
- **Consider the Highest and Best Use of the Public Right-of-Way:** Given limited land resources, consider best use of the space that public on-street parking occupies, including accommodating multi-modal transportation options.
- **Streamline the Administrative Process:** Create clear rules and guidance, and implement technologies to simplify the administration of the system.
- **Apply a Data Driven Approach:** Use empirical metrics to measure parking trends and the utilization of parking spaces within neighborhoods.
- **Utilize Market-Responsive Feedback**: Develop a residential parking management plan that is sensitive to changing demographics, land uses, and built character.
- **Address the Need to Maintain City Transportation Infrastructure:** Consider polices, programs, and improvements related to parking residential neighborhoods that can reduce maintenance and administrative costs or generate revenues to help fund capital needs.

1.3 I REPORT ORGANIZATION

This report is organized in the following manner:

- **Citywide Parking Data Summary:** This section summarizes the existing data from the City of Burlington and contains information on current residential parking regulations and parking permit zones, as well as an overall snapshot of parking violations and permit usage.
- **Parking Inventory and Analysis for Three Sample areas:** This section details the findings from three representative sample area neighborhoods selected by the Advisory Committee to demonstrate the range of parking issues in the City of Burlington. The majority of the focus is centered on the parking demands stemming from housing and land use and how residential parking is used, managed, and enforced currently in the three geographically specific sample areas.
- **Best Practices:** This section compares the City of Burlington's residential parking program with those of four other cities that are similar in size, population, and have major institutions and universities.
- **Actions and Recommendations:** The final section builds on the findings from the parking inventory study, public outreach feedback, and precedents from other comparable towns to arrive at a recommended residential parking management plan. The actions and recommendations detail revisions to the existing parking permit program, regulations for defining future residential parking areas, and ways to better manage and enforce on-street parking in highly utilized areas.
- **Appendix A-Citywide Parking Rates**: Appendix A details the existing fees for public parking (metered, garage, and parks) in the City of Burlington, as well as parking regulations for University of Vermont and Champlain College students and staff. This information is included as a benchmark for market-rate parking pricing at larger parking generator sites adjacent to sample areas and within Burlington.
- **Appendix B- Public Outreach:** This section summarizes the outcomes from the two public meetings in this study. The first public meeting includes the joint Downtown and Residential Parking Public Meeting held on November 19, 2014 as well as the findings from the online web map made available following the public meeting. The second public meeting, held on April 14, 2015, includes the findings on the preliminary recommendations.
- **Appendix C- Neighborhood Outreach:** Department of Public Works staff conducted meetings with various neighborhoods around the City. This section summarizes the outcomes of those two meetings.
- **Appendix D- City Mapping Tool:** This section summarizes the results of the City's mapping tool.

2.0 RESIDENTIAL PARKING OVERVIEW

The City of Burlington is a vibrant city with an active downtown and waterfront, as well as a thriving college town with deep community roots. Though it is a small city, Burlington has the benefits—and challenges—of a complex urban area.

The purpose of Burlington's existing residential parking program is to regulate on-street parking in neighborhoods adjacent to high parking generators, such as Centennial Field, UVM, Champlain College, and downtown. The focus of the 1990 Burlington Parking Program was to prevent drivers from parking in certain areas. In essence, the current Burlington resident permit parking program allows resident permit-holders and their guests to store vehicles on-street near their home, within the public right of way. The resident parking program also prevents visitors and other residents without permits from parking on a specified street or block during set times of day or days of the week.

To further Burlington as one of America's most livable and sustainable communities, the City continues to strive towards the goals stated in the 2010 PlanBTV, the City's comprehensive land use and development master plan for the Downtown and Waterfront. One of the key transportation goals is to provide a comprehensive parking allocation and management system that meets visitor, business, and resident needs, while increasing public transit and reducing dependence on the single-passenger automobile.

The City of Burlington started their residential permit program (RPP) in the 1990's as a response to regulating on-street parking in the neighborhoods around Centennial Field. Since then, the length of restricted residential permit streets has expanded to cover over eight miles of curbside parking, located predominantly in neighborhoods adjacent to high parking generators such as the University of Vermont (UVM), Champlain College, and portions of downtown.

To develop a comprehensive understanding of the parking network and rates in the City of Burlington, the consultant team studied the following items:

- Public opinions on residential parking and the residential permit program
- Existing residential parking areas and regulations;
- Parking management;
- Parking enforcement trends;
- Car share locations; and
- Zoning parking requirements.

2.1 I PUBLIC OPINION ON RESIDENTIAL PARKING IN BURLINGTON AND THE RESIDENTIAL PERMIT PROGRAM

To document public opinion about residential parking in general and the residential permit program specifically (explained below), the project team held an initial public workshop to gather information. This workshop gave residents to express their opinions and concerns

about the state of residential parking in Burlington. The workshop made it clear that the initial reasons for starting the RPP are still relevant today.

Residential neighborhoods near large parking generators, including Downtown, institutions, major parks, and new developments, have experienced quality of life impacts as people associated with these places look for parking in the neighborhoods. In some cases the issues were traffic related such as increased vehicle volume, people circling for parking, and residents not having a place to park. Other issues included people frequently using residents' lawns as a cut through, a loss of privacy, and a reduced sense of security. Residents who lived in areas with RPP designation expressed the importance of the permit program in maintaining a positive neighborhood feel, a sense of place, and quality of life.

As steps are taken to implement the City's Master plan, which includes more mixed-use, pedestrian-accessible development, there has been public calls for better parking management strategies. This plan provides a framework for the City to assist residents in both RPP and non-RPP areas handle the impact of parking on their neighborhoods.

2.2 | EXISTING RESIDENTIAL PARKING ADMINISTRATION, AREAS, AND REGULATIONS

RESIDENTIAL PARKING PROGRAM COSTS

The current Residential Parking Program (RPP) is financed from the City's General Fund and any revenue generated from the program, including resident parking citations, are allocated back to the General Fund and not earmarked for specific parking programs. Therefore, it is difficult to estimate the actual cost or revenue generated for administering, monitoring, and enforcing the existing program. However, an approximate breakdown of the staff and material resources needed include:

Staff time to manage requests for new parking areas

DPW staff spend approximately 15 hours to manage straightforward requests for a new RPP block. The breakdown of hours includes:

- Resident Petition, Submission, and Meeting with DPW Parking staff: 30 minutes
- DPW conducts petition process to ensure 50% participation agreement: 2 hours
- Once there is at least 50% participation from residents, DPW staff conduct a license place count over the course of one or two typical weekday periods at 7am, 10am, and 2pm: 7 hours
- Memorandum write-up and meeting with City Engineer: 4 hours
- Presentation to the Public Works Commission: 30 minutes to an hour, depending on amount of public presence

The amount of staff time can be much greater in cases of diverse public opinion or if staff's recommendations are not supported by the residents.

Staff time to manage requests for a residential permit

Burlington Police Department (BPD) has two staff, working five hours a week, to manage residential parking permits. The two staff alternate between roles: one runs the register paying tickets, while one is servicing the window.

Staff time to issue permits

It takes about 15 minutes for BPD staff to issue each permit. This includes putting information into the database and issuing the permit in person.

Staff time to manage/issue citations

Five full-time BPD officers monitor and enforce Burlington's citywide parking permits. Of the five, four are typically on foot and the fifth officer patrols in a vehicle outside the foot patrol area. They work five days a week, on a staggered schedule, with the first officer beginning duty at 7 AM and the last officer ending duty at 10 PM.

It takes staff about three minutes to issue a parking citation. In 2014, there were 6,593 residential parking violations, amounting to roughly 330 officer hours for citation issues alone.

Vehicles for enforcement

BPD has two unmarked vehicles for enforcement, but normally only one is used at a time.

Signage

Currently in Burlington, on a typical 500' block with good visibility and parking on one-side of the street, sign installation costs roughly $506 for small signs and $606 for larger signs. Department of Public Works (DPW) staff installs five 12-foot sign poles with five resident parking signs. The signs are either 12" x 18" or 18" x 24" depending on the amount of text. The cost of each 12-foot pole is $32 for a 12" x 18" sign, $19 for 18 x 24" sign, and $39 to $45 an hour for each employee. It typically takes two employees two and a half hours for a sign installation job on a block and truck equipment is billed at $13 an hour.[i]

Residential Parking and Property Taxes

During public meetings, the question of the relationship between RPP designation and property taxes has arisen. Members of the public have stated that homeowners in RPP areas pay higher property taxes than homeowners in non-RPP areas, and it has been pointed out that home value is tied to parking availability.

Every tax payer in the City of Burlington, whether in a residential parking area or not, contributes to the residential parking program, as they do for all other municipal services - street maintenance, police, fire, etc. While perhaps desirable and transparent to do so, it is difficult to show precisely how every property tax dollar, from every Burlington property, is allocated to each municipal service. This study has not assessed how RPP influences property taxes or how much residents in non-RPP areas contribute to the RPP program. Such an assessment is beyond the scope of this work.

CURRENT RESIDENTIAL PARKING PROGRAM LOCATIONS

Burlington residents may petition the Public Works Commission (PWC) to have their street designated as resident parking-only, which allows only those who live on that street and their guests to park curbside on the street. In 2013, there were a total of 3,233 active resident and guest permits issued in the City of Burlington. As shown in Figure 2.2, the majority of resident parking-only streets in Burlington have restrictions at all times, but there is also a small portion that limits non-resident parking during other hours, including:

- Weekday hours only - Monday through Friday, 6 AM to 6 PM: These are located on blocks adjacent to Champlain College (Spruce Street and S Union); UVM (Henry Street and Loomis Street); and the north side of downtown (around Peru Street, Monroe Street, and George Street neighborhood).
- Warmer weather months only -May through October months: This is focused on streets next to Oakledge Park (Southwind Dr. and Oak Beach Dr.).
- Warmer weather nights only -May through October 12 AM to 6 PM: This is limited to a portion of S. Prospect Street next to Redstone Green and UVM's Redstone Apartments.

Currently, all Burlington residents who live on a restricted street can apply and be issued a one-year or two-year parking permit for free. Homeowners and renters may apply for two-year permits, whereas students may only apply for one-year permits. The residential parking permits are issued bumper stickers from the Burlington Police Department's Parking and Parking Enforcement division. Resident-only parking is enforced by issuance of parking tickets.

FIGURE 2.1: RESIDENTIAL PARKING RESTRICTIONS LOCATIONS

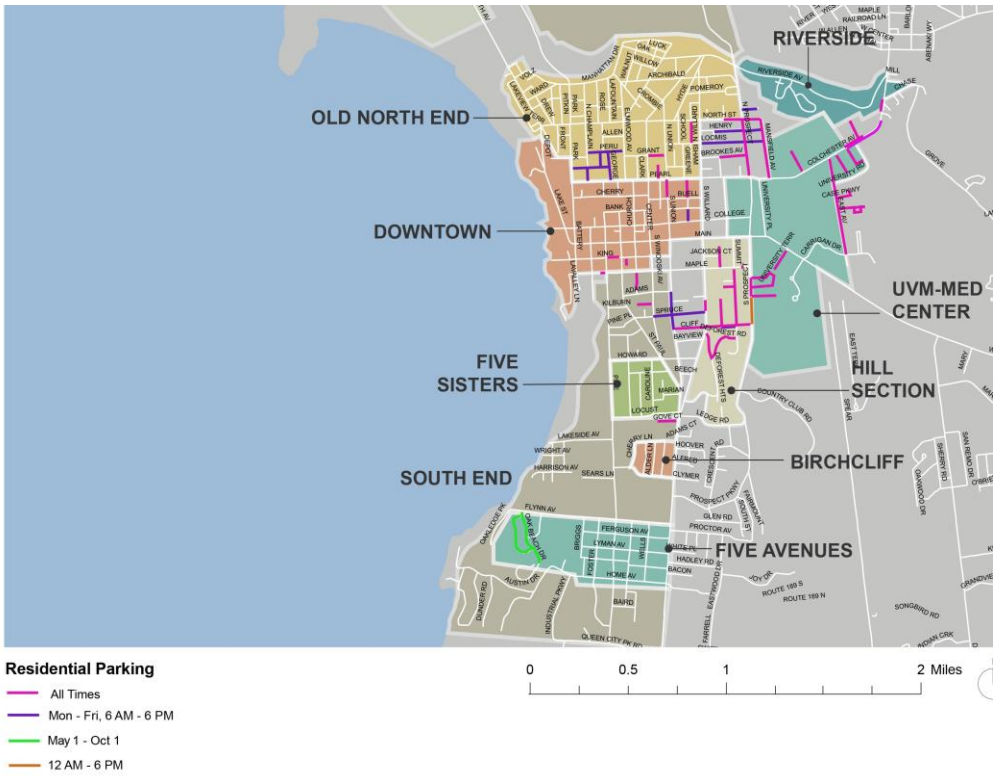
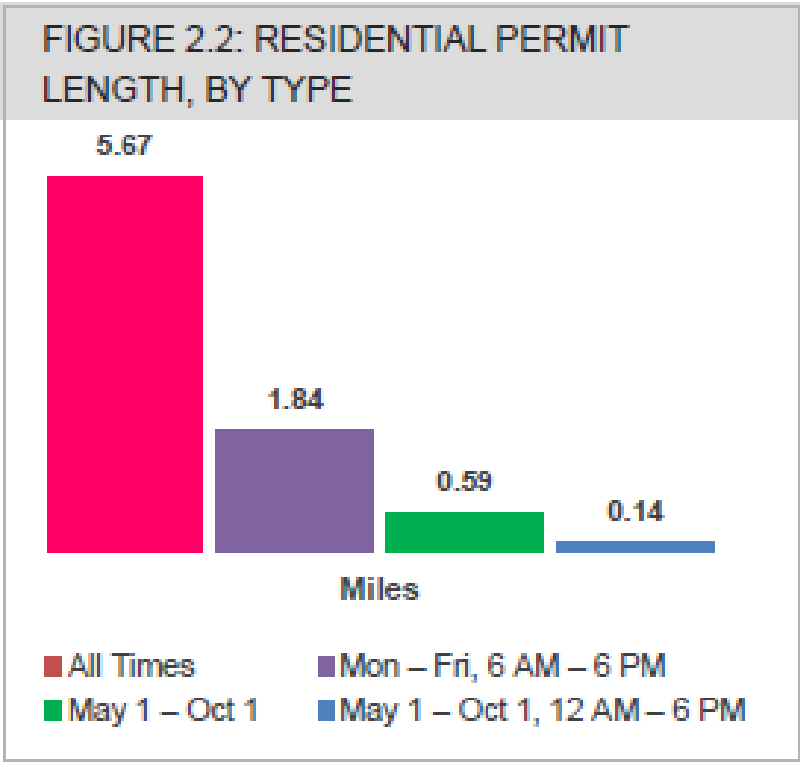


FIGURE 2.2: RESIDENTIAL PERMIT LENGTH, BY TYPE



GUEST PARKING

Residents are currently entitled to register for two guest passes per dwelling unit. Guest parking permits are only for use by persons visiting a residence. Guest permits must be displayed on the dashboard of their vehicle. Residents must go to the Police Department in person in order to apply for guest passes. These passes are good for one or two years, depending on whether the resident is a student (one-year guest passes) or renter/homeowner (two-year guest passes).

The City of Burlington, similar to many college towns, has a large rental and subletting community. One key problem with the current system is that when people move out, their guest passes are not accounted for, and the Police Department continues to grant new resident applicants additional guest passes. There have also been issues of unresponsive landlords who are not held accountable to parking concerns that occur on their property's premises.

Additionally, every year between June 1st and August 31st, Burlington experiences a significant turnover between student and subletter population. Currently, there is no defined method for keeping track of how parking permits are shared between academic year residents and summer subletters.

FIGURE 2.3 RESIDENTIAL PERMITS ISSUED ON SEPTEMBER 4, 2014

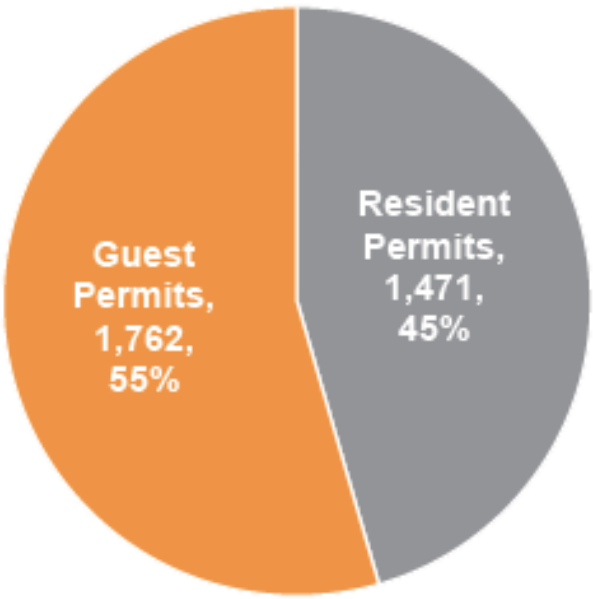


FIGURE 2.4 RESIDENT BUMPER DECAL AND GUEST PARKING PASS

TABLE 2.1: RESIDENTIAL AND GUEST PERMIT DOCUMENTS

STUDENTS: ONE YEAR PERMIT	NON-STUDENTS - RENTERS/RESIDENTS: TWO YEAR PERMIT
• Valid Student ID • Current Lease • Driver's License • Vehicle Registration	• Driver's License with address of Resident parking street • Vehicle Registration

DEFINING NEW RESIDENTIAL PARKING LOCATIONS

The Public Works Commission makes the final decision on a case-by-case basis to determine which residential street locations are granted restricted residential parking designation. In advance of the commission meeting, Department of Public Works (DPW) staff receives a written request from one or more residents and sends out direct mass mailings in the area to alert neighbors of the upcoming parking permit restriction meeting. The Commission makes their decision based on the following aspects:

- Location;
- Other parking restrictions in the area; and
- Reasons why residents are asking for restricted parking.

The PWC decisions are situation-specific and the public turnout can vary greatly. The Commission compiles their own notes and meeting minutes for all of the parking restriction cases and makes them available online.

However, transparency in the residential parking petitioning process has been an ongoing issue for the City. Currently, there is no uniform checklist or threshold criteria that must be met in order for Burlington residents to petition and receive restricted parking in their

neighborhood. This has resulted in the perception of unfairness or arbitrariness in the decisions for where parking restrictions are located.

PASSES ISSUED

The consultant team examined the number of passes issued in 2013 and the location to which these passes were issued. 3,233 passes (including residential parking and guest passes) were issued to 971 different units. Fourteen percent of these units had over four passes.

2.3 I PARKING MANAGEMENT

There are several agencies that must coordinate on parking issues throughout Burlington's residential areas.

- Burlington Police Department (BPD): BPD enforces on-street parking, issues tickets and fines for violations that occur on the street, and administers residential and guest permits.
- Burlington Code Enforcement (BCE): BCE is responsible for ensuring housing and occupancy requirements are met; parking violations that occur on private properties are issued civil tickets through the Code Enforcement Department.
- Burlington Department of Public Works (DPW): DPW operates and maintains the City's public parking facilities, including metered parking both on-street and in surface lots, and staffs the Public Works Commission.
- Institutions: University of Vermont (UVM), UVM Medical Center, and Champlain College have their own set of parking regulations on their campuses and some require staff and students to park off-site in remote lots.
- City Attorneys: Attorneys represent the City in legal disputes arising from parking issues.
- Burlington Department of Parks and Recreation (DPR): DPR manages parking at the various City-owned parks, some of which generate parking demand that spills onto residential streets.

The Police Department maintains links to the UVM student database in order to verify that students applying for resident permits are eligible and enrolled students.

2.4 I PARKING ENFORCEMENT

Unless the parking ticket is being contested in court, no permits are issued to residents who have an outstanding parking ticket. In 2013, the Burlington Police Department issued 55,699 parking citations and over $1.5 million in fines, which amounts to an average of $28.34 in fines issued per citation. Of these violations, 4,316 were residential parking violations, which totaled approximately $324,000. Although residential parking violations are only 8% of the total violations, they make up 21% of the total revenue. For comparison, meter violation are 81% of the total violation an make up 43% of the total revenue.

The revenue from parking citations currently goes towards the City's general revenue and operating expenses. The City does not tow for residential parking violations because each

dwelling receives two guest passes and are informed that if they have more than two guests, their other guests may send in their parking violations to be voided. The process to void tickets is handled by the City Attorney's office and has been perceived by some as inconsistent and cumbersome.

2.5 | CAR SHARE AND RESIDENTIAL PARKING

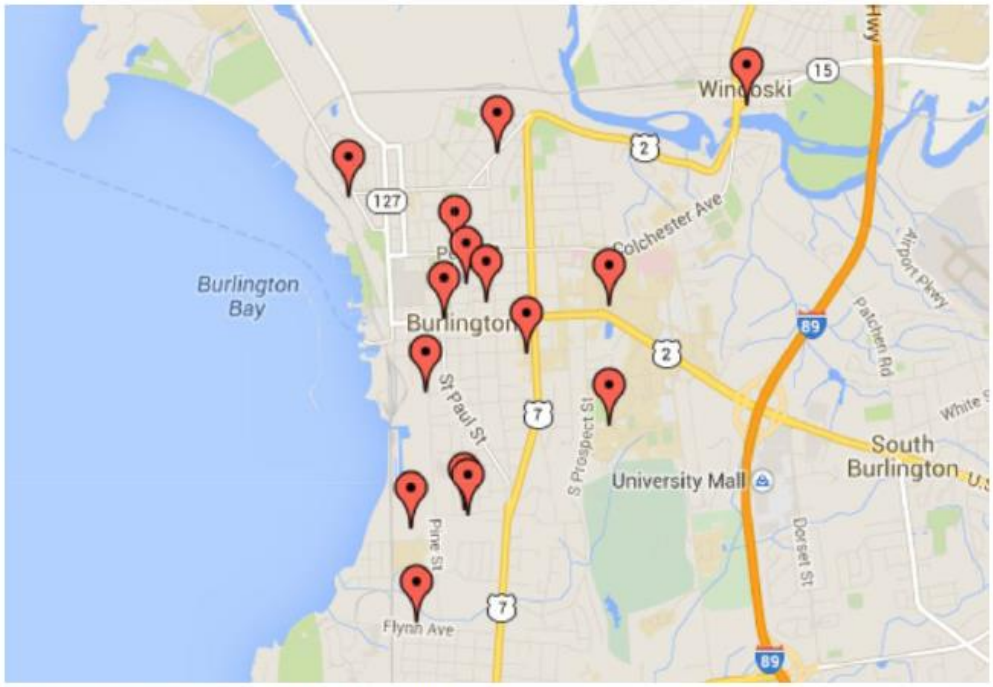
Access to car share is a notable consideration for residential parking, particularly in Burlington where there are currently 15 CarShare Vermont (CSVT) pods. Based on the rate at which Burlington members shed their personal vehicles or opt not to acquire them, CSVT estimates that each car share vehicle removes 16 from the road—and the need for individual residential parking spots. In the City Ordinance, there are currently six city-owned parking spaces designated for car share vehicles:

- On Street-Main Street/St. Paul Street, adjacent to City Hall Park
- On Street-Pearl Street at the top of Church Street
- On Street-Locust Street, Adjacent to Callahan Park (2)
- Church Street Garage
- Metered Surface Lot, Adjacent to Fletcher Free Library

The other 9 CSVT pods are not located in city-owned spaces. These vehicles are allotted one residential street sticker each. As part of the City's effort to discourage users from driving more than necessary, Burlington amended their City's ordinance to include designated residential parking for car-sharing in Appendix C, Chapter 27, Section 4: Requirements of Carshare Organizations. Upon showing proof of a valid Vermont registration for the vehicle(s) involved, car share organizations meeting the appropriate criteria will be issued one residential street sticker per vehicle. This sticker will be valid on all streets, or portions thereof, that are designated "resident parking only". CSVT presents their requests to DPW staff, which are then put forward to the Commission for approval.

Additionally, in Article 8.1.9, the city ordinance notes that car-share parking shall count towards the maximum number of spots allotted in a parking district.

FIGURE 2.5: CARSHARE VERMONT POD LOCATIONS



from http://www.carsharevt.org/locations/, November 14, 2014.

2.6 I ZONING PARKING REQUIREMENTS

The demand for on-street parking can be greatly affected by the availability of on-site parking, and determining the need for on-site parking is a complex function of land use type, density and proximity to other uses, land and development economics, and the availability of multiple modes of transportation. Burlington's Comprehensive Development Ordinance (BCDO) divides the city into three Parking Districts in order to regulate on-site (i.e. off-street) parking through the process for reviewing and approving applications for zoning permits. The purpose of the three districts - which are largely based on zoning districts - is to account for varying demands for parking based on proximity to other related uses and thus the ability to share parking with nearby uses, the availability of public transportation and other modes of transportation, and the density of land uses (Section 8.1.3 Parking Districts). These Parking Districts, shown in Figure 2.6, are:

- Neighborhood (N): The Neighborhood Parking District establishes the baseline for parking requirements throughout the city. In this area, the demand for offsite parking is understood to be largely dependent on the needs and characteristics of an individual site or land use. This district is predominantly comprised of the residential areas of the city.
- Shared Use (SU): The Shared Use Parking District provides an initial reduction in the parking requirement baseline established by the Neighborhood district. This area recognizes that there are opportunities to share parking demand on and off-site and the availability of other modes of transportation. This district is predominantly comprised of the neighborhood mixed use areas of the city.

- Downtown (D): The Downtown Parking District requires the least amount of required on-site parking, understanding that this area provides the highest concentration of mixed use development thereby enabling significant opportunities for sharing parking demand across individual sites and land uses, the availability of public parking resources, and a high frequency of transit service and access to other transportation modes. This district is comprised of the city urban mixed use core.

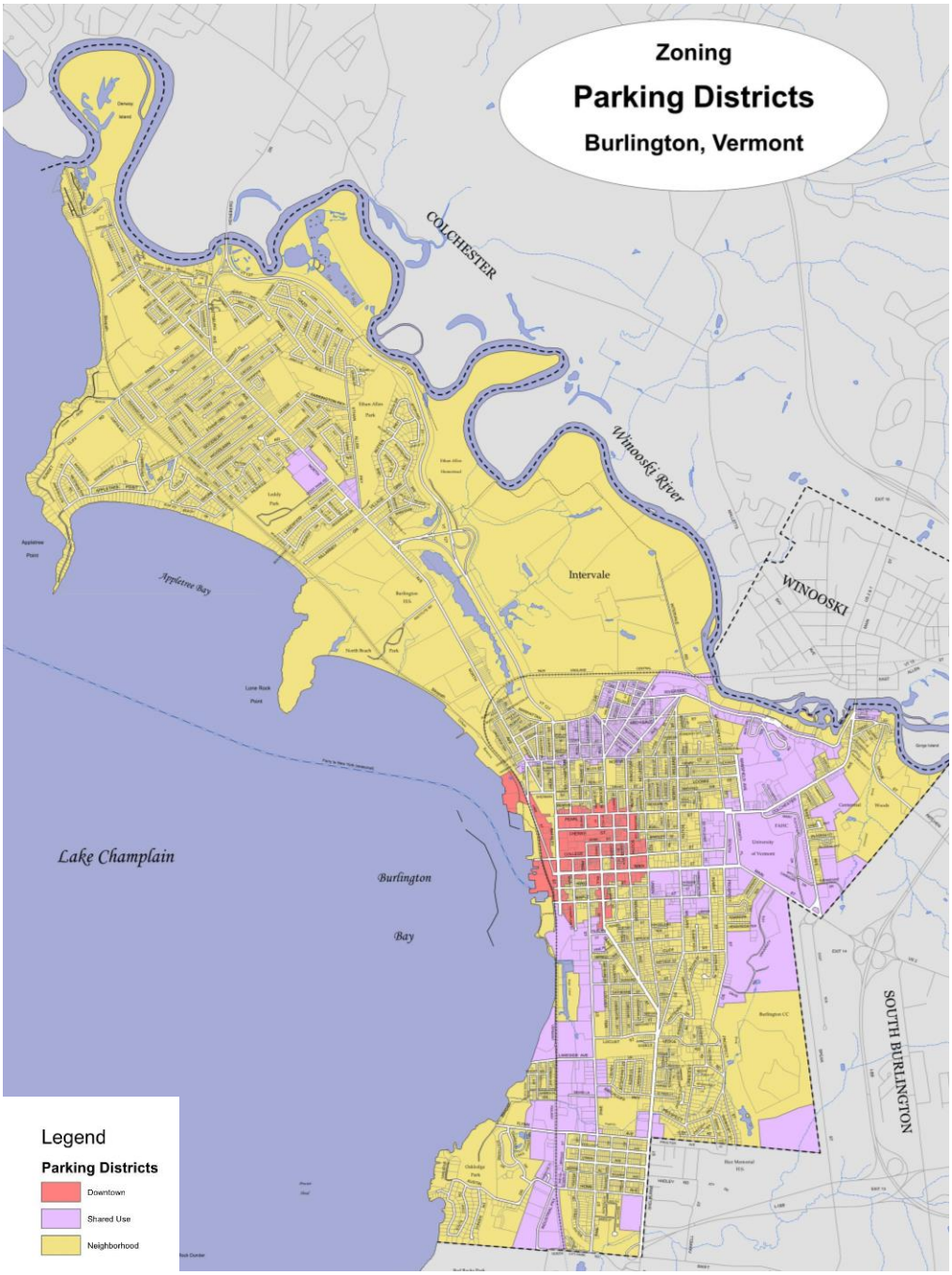
The *Burlington Comprehensive Development Ordinance* also includes provisions for further reductions to required on-site parking (up to a 100% reduction in mixed use districts and 50% elsewhere) through the development and approval of a Parking Management Plan that demonstrates a commitment to transportation demand management (TDM) (Section 8.1.15 Waivers from Parking Requirements).

On-site parking requirements are recognized as having the potential to place a significant economic burden on prospective development, reducing the affordability of housing, and consuming valuable land that could otherwise be put to more productive use. As a result, the City is regularly evaluating the efficacy and practicality of its requirements in order to try to balance the economic constraints of development with the risk of off-site impacts of spill-over parking demand into and across residential areas. Two specific examples include:

- **Reduce or eliminate off-street parking requirements in the Downtown Parking District:** Following the example of hundreds of other communities across the country, this change would enable greater flexibility for both existing and new development to "right-size" their parking supply with actual market demand, allow unused parking to be made available to others, help promote greater use of alternate transportation services, increase the affordability of development by unbundling parking costs from development costs, and help restore the city's urban fabric. This proposal is closely associated with the Downtown Parking Study currently underway that is looking at how the City will implement a parking management system which can help to ensure parking demand is contained managed within the Downtown area and does not spill over into adjacent residential areas.
- **Change the parking requirement to be based on the number of bedrooms rather than on number of units:** The purpose of this change is to more accurately reflect the actual parking demand generated by a dwelling unit. The current one-size-fits-all does not account for the fact that parking demand generated by a single bedroom or studio unit is very different than for a dwelling unit containing five bedrooms. The 1-bedroom/studio may be occupied by an individual or couple who may have chosen not to own a car at all, while each of occupants of the 5-bedroom unit may each own a car. By reducing the parking required for studio/1-bedroom units to recognize actual parking demand rates for small units, it can also serve as an incentive for their creation and thereby support a greater diversity of household types in residential areas. Ultimately, this proposal should help to reduce on-street parking demand in residential areas of the city.

Upon the completion of the Downtown and Residential Parking Plans, these proposals will be presented to the Planning Commission and City Council for their consideration.

FIGURE 2.6: CITY OF BURLINGTON PARKING DISTRICTS



SOURCES

- Burlington Residential Parking. http://www.burlingtonvt.gov/Police/Residential-Parking
- Burlington Comprehensive Development Ordinance, Article 8: Parking. Updated July 18, 2014. http://www.burlingtonvt.gov/sites/default/files/PZ/CDO/20140718%20ART08-Parking_0.pdf

- Burlington Comprehensive Development Ordinance, as approved by the Planning Commission on January 14, 2014. http://www.burlingtonvt.gov/assets/0/122/318/302/702/738/a48baf49-4fd0-4f34-9864-bd3551b99c82.pdf
- Citation Violations by Location Summary. January 1, 2013 to December 31, 2013. Provided by John King, BPD. October 15, 2015.
- Appendix A Article 8.1.9: Parking: http://www.codepublishing.com/VT/burlington/?BurlingtonAxA/BurlingtonAxA08.html&?f
- Appendix C, Chapter 27, Section 4: Requirements of Carshare Organizations http://www.codepublishing.com/VT/burlington/?BurlingtonAxA/BurlingtonAxA08.html&?f

3.0 THREE SAMPLE AREAS

To better understand the range of residential parking issues in Burlington, the Advisory Committee selected three sample areas that demonstrated a representative sampling of neighborhood demographics, land uses, and built character in order to conduct a more detailed parking analysis. The consultant team conducted a parking inventory in these three sample areas and also analyzed their usage of on-street parking, residential permits, and driveway spaces and compared this to neighborhood demographics and land uses. The three sample areas selected, shown in Figure 3.1, were:

- **Sample Area 1 - Downtown South Union and Willard**
- **Sample Area 2 - Downtown King Street**
- **Sample Area 3 - South Prospect and Summit**

FIGURE 3.1 MAP OF THE THREE SAMPLE AREAS

Sample Area 1 - Downtown South Union and Willard: This area is located in the eastern portion of the Downtown neighborhood and contains a diverse population, including young professionals, students, and visitors to local retailers and community centers. This area's proximity to both the downtown and to UVM make this location a high demand parking area for both residents and visitors. The area is 0.05 square miles in size and bounded by Pearl Street on the north, S Willard Street/VT 2 on the east, Main Street on the south, and S Union Street on the west. There are few parking restrictions and few meters.

Sample Area 2 - Downtown King Street: This area is located in the southwestern portion of the Downtown district and includes commercial blocks on Main Street and Battery Street. Unlike Sample Area 1, the area contains several higher density apartment buildings, many of

which are rented by residents who are eligible for lower income housing through the Burlington Housing Authority. This area is 0.06 square miles in size and bounded by Main Street on the north, S Winooski Avenue on the east, Maple Street on the south, and Battery Street on the west. There are few parking restrictions but meters are common.

Sample Area 3 - South Prospect and Summit: This area is located in the northern part of the Hill Section, surrounding Champlain College and just southwest of UVM's main campus. Unlike the other sample areas, this neighborhood consists largely of single-family homes, with sizeable setbacks from the road, and individual driveways on each parcel. Several roads loop or end in cul-de-sacs, resulting in a more suburban character. Many of the streets in this area currently have residential parking restrictions. Sample Area 3 is 0.11 square miles and bounded by Main Street on the north, S Prospect and Robinson Pkwy on the east, Cliff Street on the south, and S Willard Street on the west. There are no meters but parking restrictions are common.

3.1 | SAMPLE AREA POPULATION

The population in each sample area ranged between 772 to 1094 people, based on 2010 Census data. Sample Area 1 had the highest population and Sample Area 3 had the fewest, as shown in

Figure 3.2. The population density is somewhat correlated with the total number of people in each of the sample areas, although Sample Area 3 is far less dense than the other two. Sample Area 3 was also the largest study area, nearly twice the size of the other two sample areas.

Figure 3.4 shows the variation in population density by block, with very few people living the core downtown, but several dense residential blocks in areas surrounding it, particularly in Sample Area 1. All three sample areas have a higher population density than the overall average for the city, which is 4,003 people per square mile. Sample Area 1 had the highest population density at 20,260 people per square mile, which is five times the average for the City of Burlington.

FIGURE 3.2 POPULATION AND POPULATION DENSITY

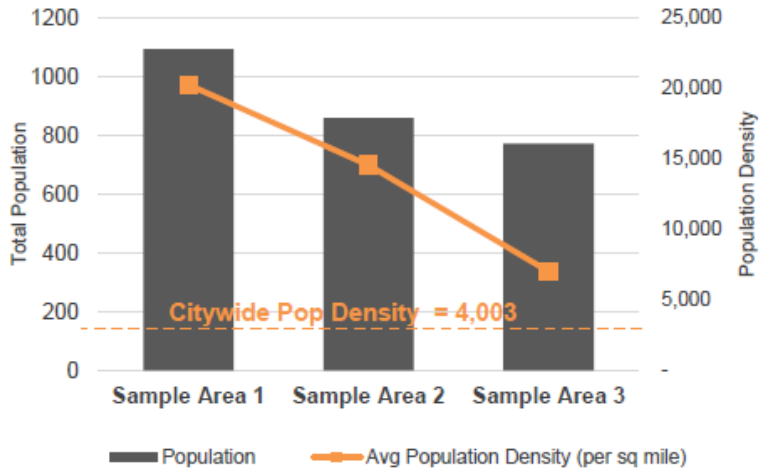


FIGURE 3.3 SAMPLE AREA (SQ MILES)

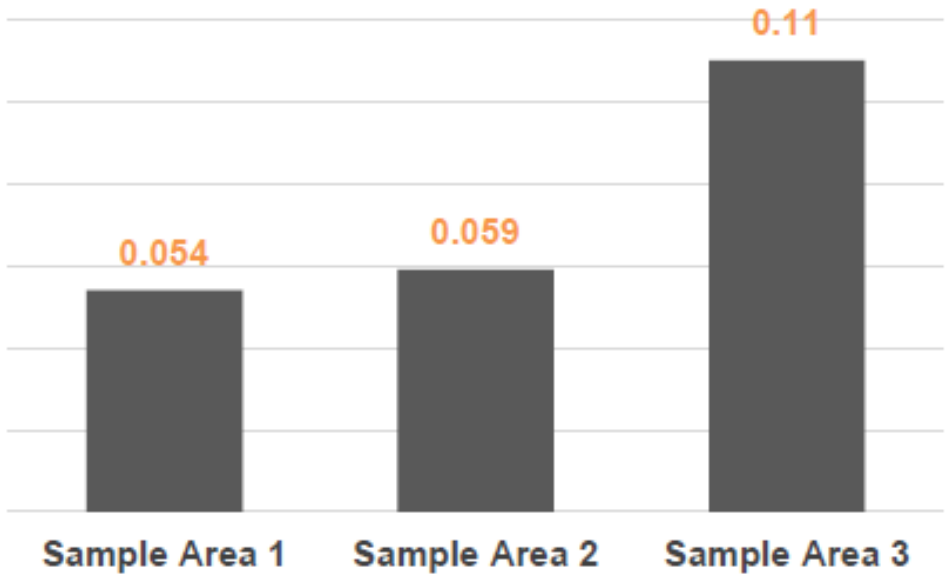
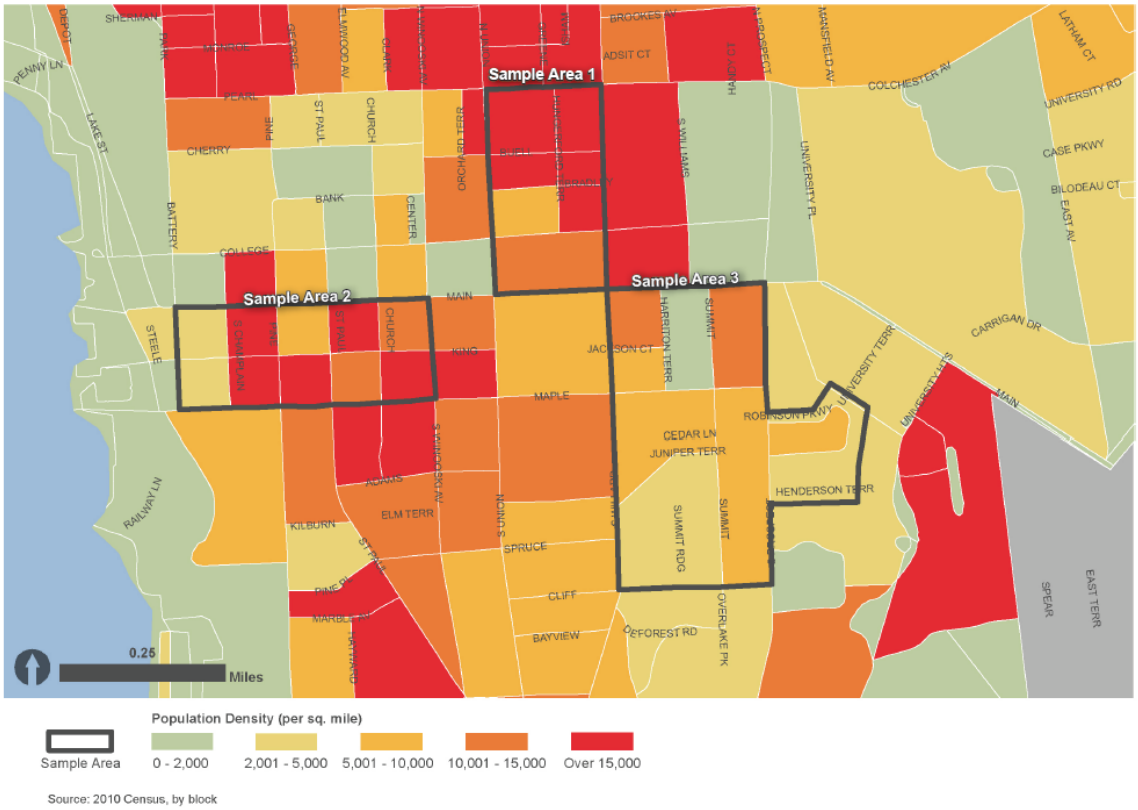


FIGURE 3.4 POPULATION DENSITY, BY BLOCK (PER SQ MILE)



3.2 | ZONING AND LAND USE

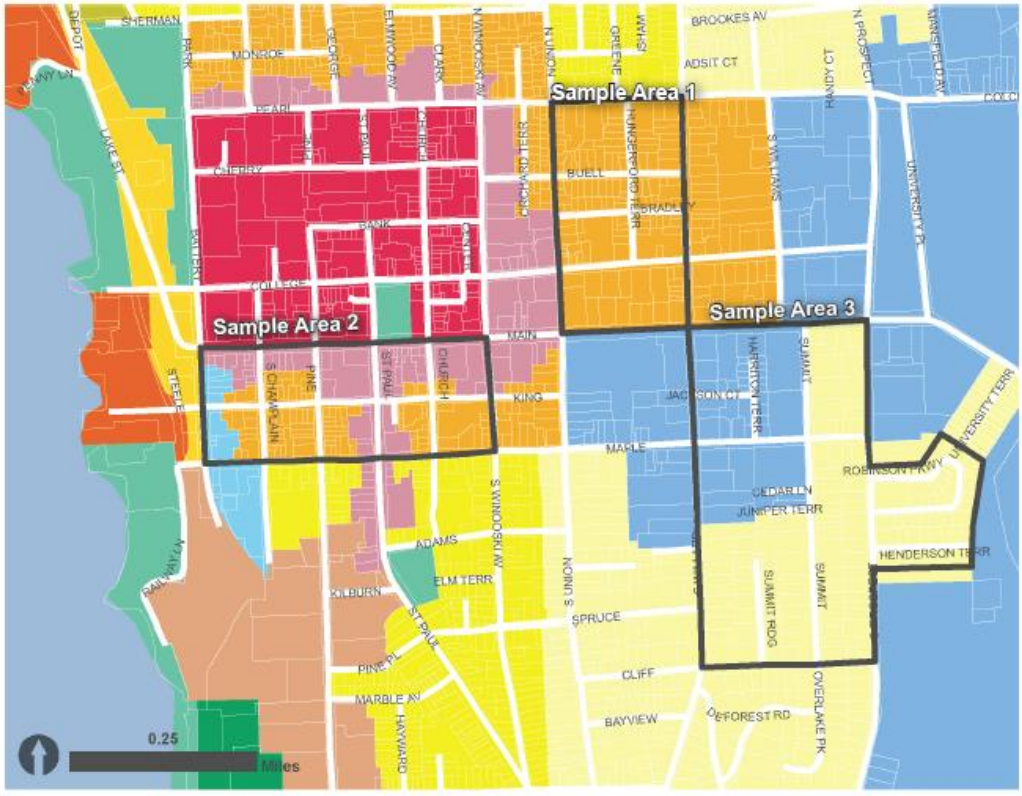
The three sample areas varied in their zoning designations and land uses. Sample Area 2 is the only study area containing mixed-use commercial zoning, while Sample Area 3 has a substantial portion zoned Institutional. Sample Area 1 is zoned entirely for high density residential, whereas much of Sample Area 3 is zoned for low density residential south of Juniper Terrace and east of Summit Street.

In looking at the more fine-grained land uses by parcel, Sample Areas 1 and 2 have a much greater diversity in land uses. Shown in Figure 3.6, in Sample Area 1 the residential parcels vary greatly, with single-family homes directly adjacent to apartments with five or more units. Sample Area 2 has a much greater proportion of commercial uses, particularly along Main Street (retail, dining, and the Flynn Theater) and fronting on Battery (retail, commercial office, and dining). Sample Area 3 is predominantly single-family south of Juniper Terrace and west of Summit, with large pockets north and south of Maple Street dedicated to institutional and residential buildings for Champlain College.

Block sizes also vary between the sample areas. Longer blocks without any street crossings are perceived to be farther distances than the same distance of blocks that are bisected by several street crossings. Sample Area 2 has uniform 400 foot by 400 foot blocks, which equates to roughly a 1.5 minute walk along each block. Sample Area 1 has blocks that range

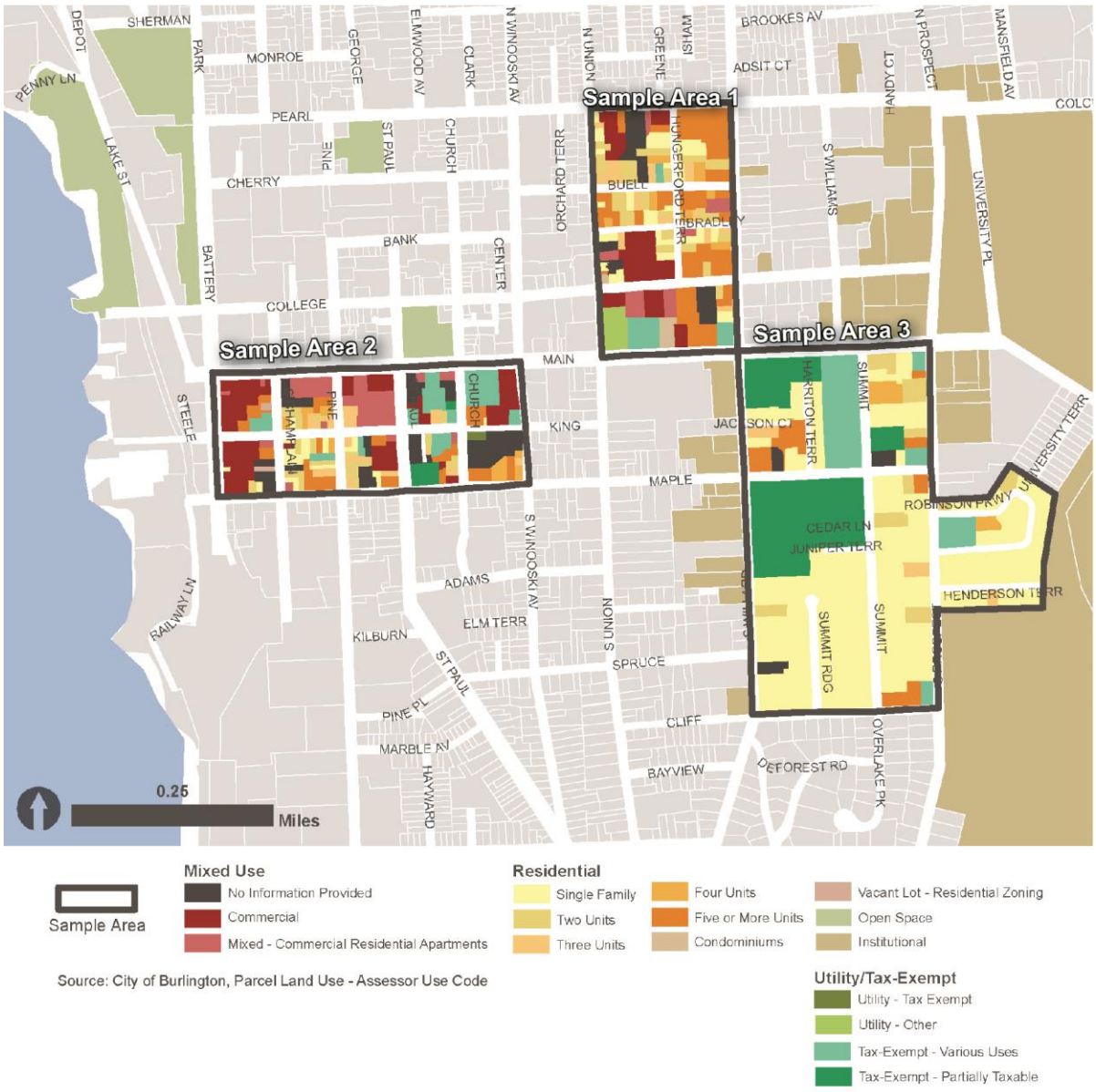
between 370 feet and 920 feet along College Street. Sample Area 3, with its dead-end streets, has blocks that range between 400 feet and 1,560 feet along Summit Street.

FIGURE 3.5 ZONING



Source: City of Burlington. Districts effective January 30, 2008, with revisions effective August 13, 2014 (ZA-14-05)

FIGURE 3.6 LAND USE (ASSESSOR USE CODE)



3.3 | HOUSING UNITS

Based on 2010 Census data, the number of housing units in each sample area is generally consistent with population density, where Sample Area 1 has the highest number of housing units (467 units). Sample Area 2 has the highest vacancy rate out of the three study areas, with nearly double that of Sample Area 1, while Sample Area 3 had the lowest vacancy rate.

Champlain College buildings and their residence halls fill up a large portion of the northwest blocks in Sample Area 3, which skew the total housing unit count in the census data. For the residential blocks south of Juniper Terrace and east of Summit Street, the number of

housing units here are higher due to the larger block sizes in this area as compared to Sample Area 1 and 2.

FIGURE 3.7 HOUSING UNITS (2010 CENSUS)

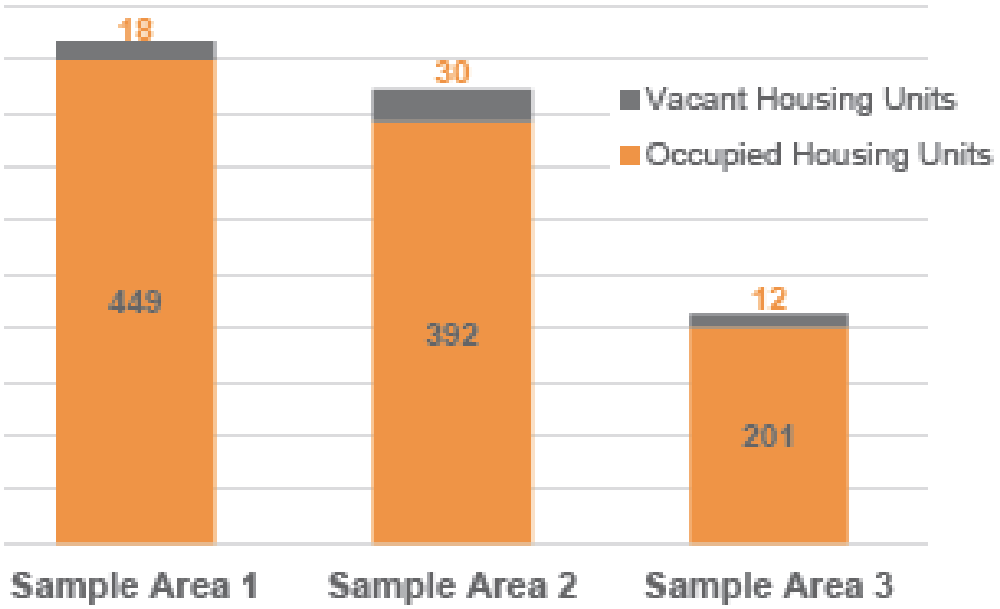
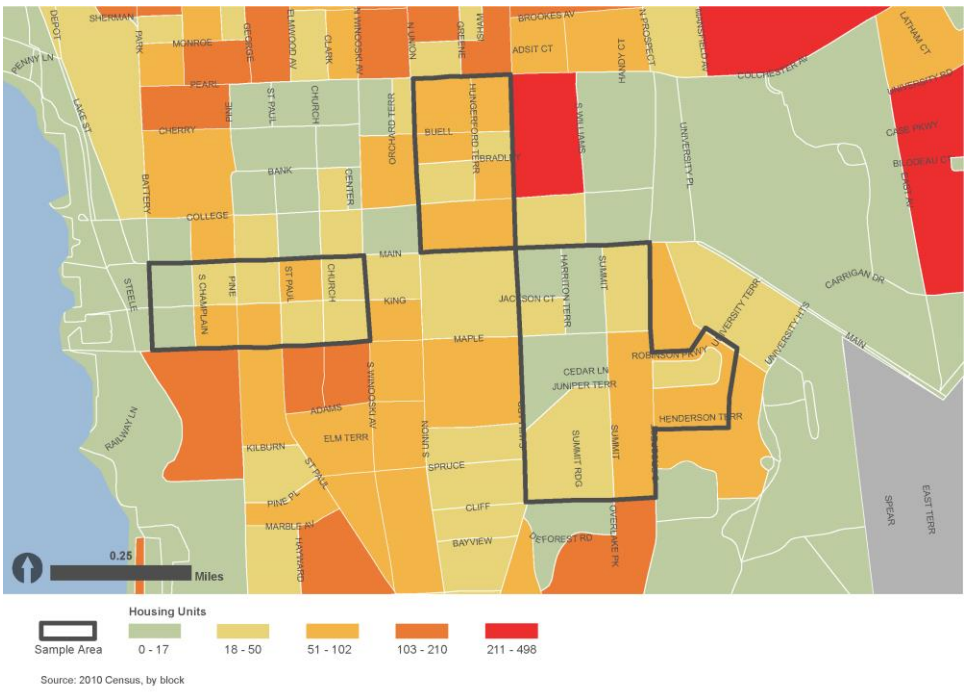


FIGURE 3.8 HOUSING UNITS, BY BLOCK (2010 CENSUS)



3.4 I HOUSING TENURE

Based on 2010 Census block data, which separates housing tenure by three categories (owned with mortgage, owned free and clear, and rented), Sample Areas 1 and 2 contain a substantial proportion of rental housing, where rental housing constitutes over 80% of all housing on most blocks, based on 2010 Census block data. Sample Area 3 is more evenly split between rental and owned housing units, although a considerably higher number of the homes in the neighborhood are owned without mortgage (17%) compared to the other study areas. The only blocks in Sample Area 1 and 2 which have less than a 75% rental housing rate are those that are largely commercial. This is in contrast with the single-family blocks south of Juniper Terrace and east of Summit Street that are over 75% owner occupied.

FIGURE 3.9 RENTAL HOUSING (%), BY BLOCK (2010 CENSUS)

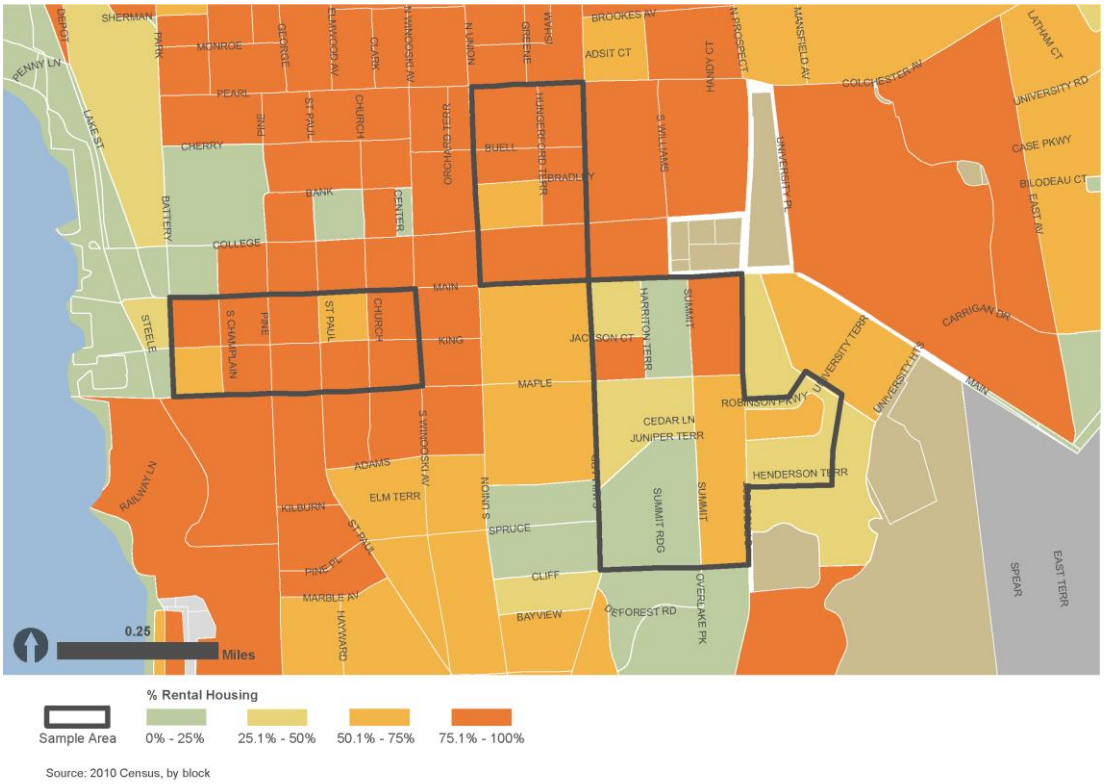
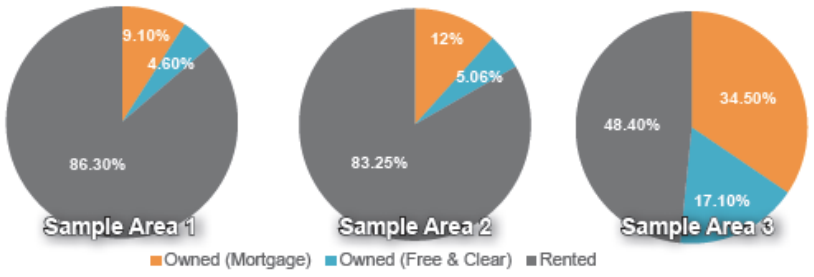


FIGURE 3.10 RENTAL VS. OWNERSHIP (2010 CENSUS)

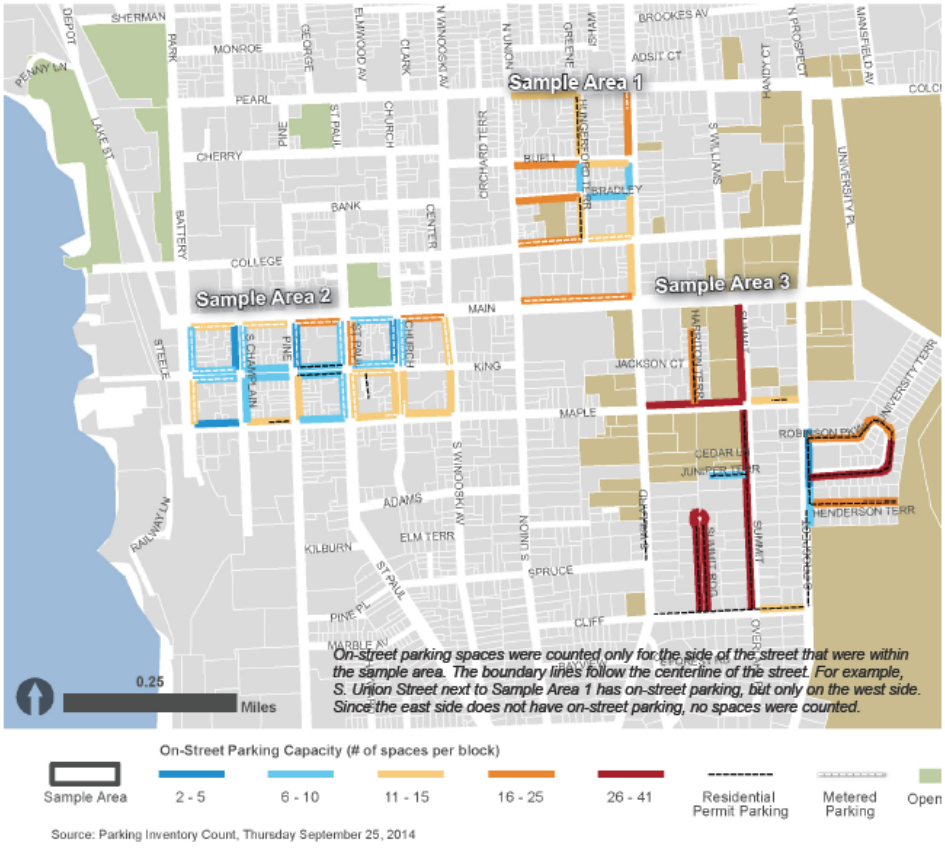


3.5 I ON-STREET PARKING

There are a total of 868 on-street parking spaces within the three sample areas. During the parking inventory count on September 25, 2014, the consultant team was on-site to record the total number of on-street parking spaces on each block, as well as its hourly occupancy rate for three time periods: 7am to 8am; 11am to noon; and 5pm to 6pm.

Based on the parking inventory, Sample Area 2 has the largest on-street parking supply (366 spaces), while Sample Area 1 has just a little more than half that amount because many of the blocks allow on-street parking only on one side. Figure 3.11 maps the locations of on-street parking in the three sample areas, as well as their total supply of parking spaces.

FIGURE 3.11 ON-STREET PARKING SUPPLY



Source: Parking Inventory Count, Thursday September 25, 2014

FIGURE 3.12 TOTAL ON-STREET PARKING SUPPLY

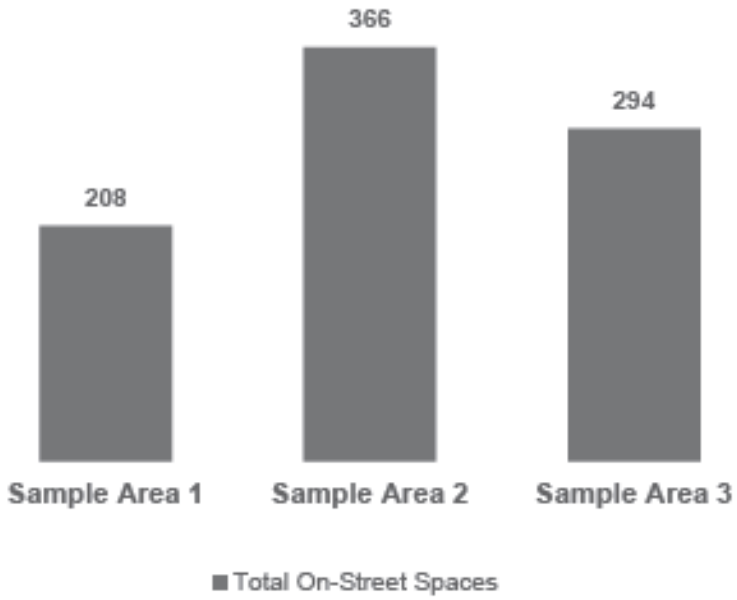


Figure 3.13 maps the locations of the various types of meters and residential permit parking in the greater downtown area. On the day of observation, meters were in effect throughout the City between 8 AM and 6 PM. The more commercial streets in Sample Area 1 are lined with 10-hour meters, in contrast with Sample Area 2, which has a significantly greater number of 3-hour meters.

FIGURE 3.13 PARKING RESTRICTIONS: METERED AND RESIDENTIAL PERMIT PARKING

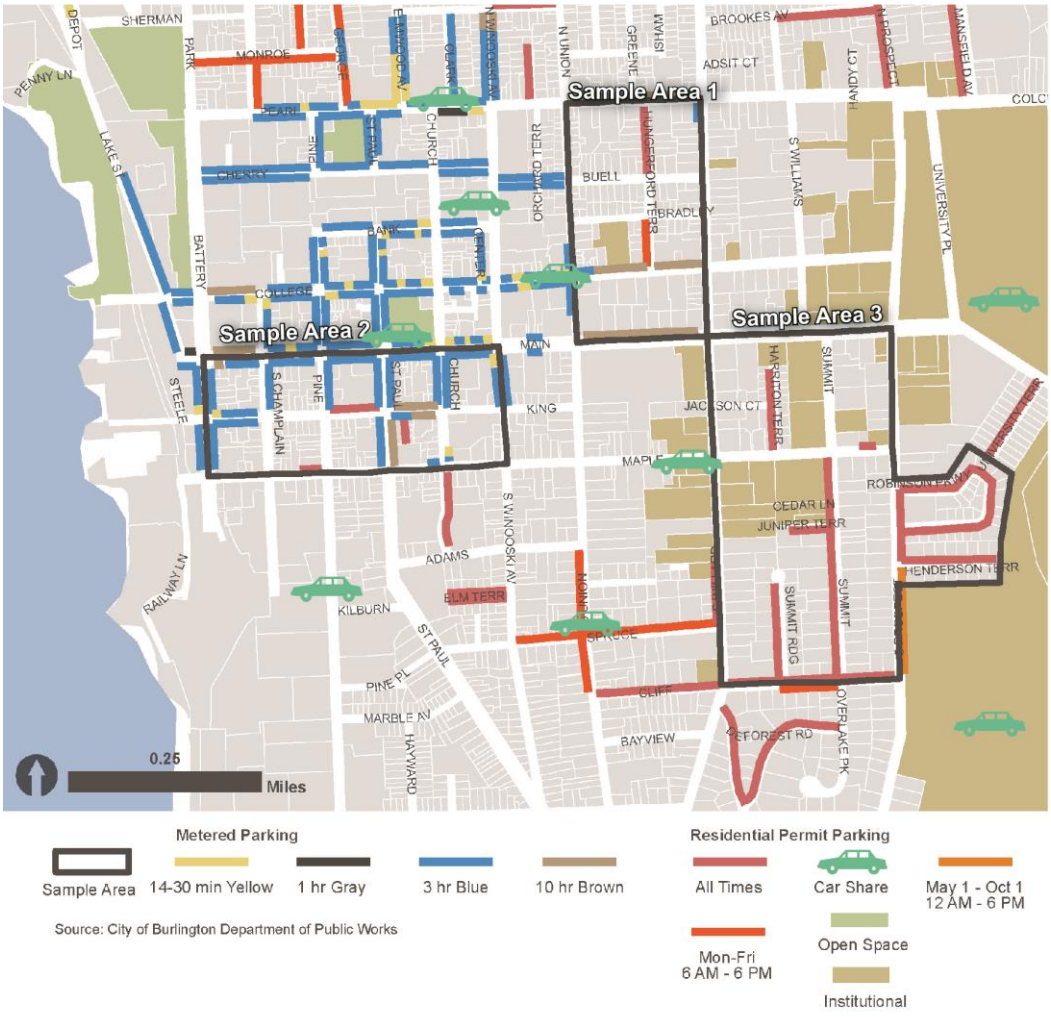
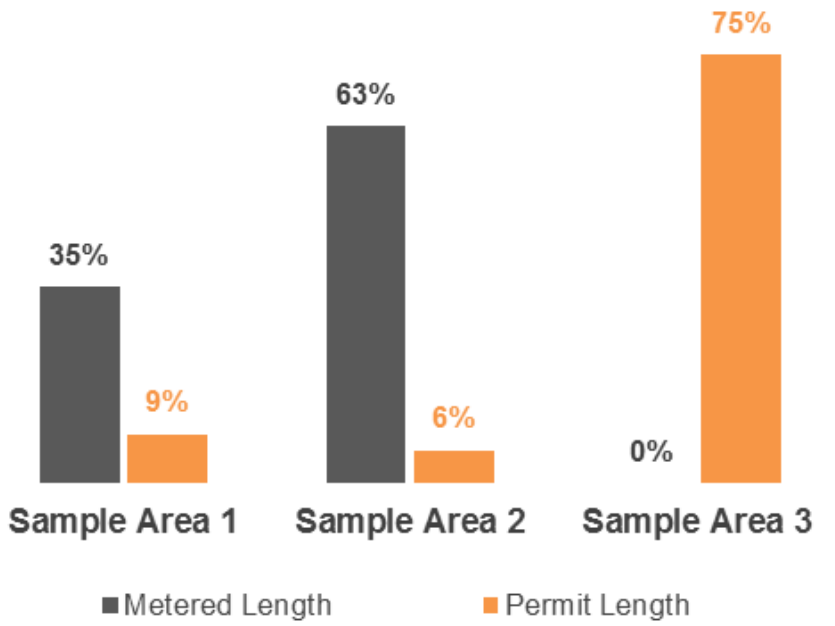


Figure 3.14 shows the percentage of on-street parking that contains a meter or RPP restriction in each sample area, both metered parking and permit-only parking. Parking restrictions can influence which on-street parking blocks are more highly utilized. Sample Areas 1 and 2 have relatively few residential permit restrictions, but have metered spaces. Sample Area 2 has nearly 1.3 miles of metered on-street parking located over 20 blocks. On-street parking in Sample Area 3 is 75% residential and there are no metered spaces.

FIGURE 3.14 PARKING RESTRICTIONS: PERCENTAGE OF PARKING THAT IS METERED OR PERMITTED

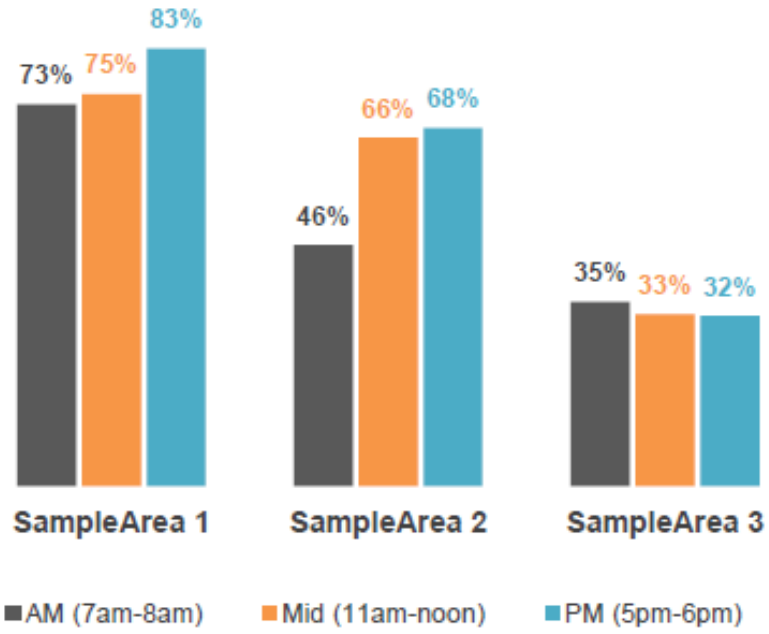


This estimate is based on measured curbside length and does not subtract for curb cuts.

Sample Area 1 had the highest on-street parking utilization observed during the inventory, averaging 77% occupancy over the course of the day, with higher rates in the late afternoon/evening than during the day. Sample Area 2 and 3 averaged 60% and 33% occupancy, respectively, over the course of the day. Sample Area 2 experienced higher rates of on-street parking during midday and late afternoon/evening than in the early morning, suggesting that many of the people parking there live outside the area. Sample Area 3 had a fairly consistent occupancy rate throughout the day, with only a third of the on-street spaces occupied during the three count periods.

The blocks with meters or permit parking generally had lower utilization rates than blocks that did not have any restrictions. Sample Area 1 had the highest on-street parking utilization out of the three sample areas and the least amount of restricted parking supply.

FIGURE 3.15 ON-STREET PARKING UTILIZATION (SEPTEMBER 25, 2014)



BEFORE WORK (7AM TO 8AM)

The parking inventory from this time period accounts for parking occupancy before metered parking restrictions go into effect.

- Sample Area 1: The on-street parking in the mostly residential blocks on and north of Bradley Street are over 80% occupied before work, including the resident parking-only block on Hungerford Terrace between Buell Street and Pearl Street. The permitted section just south two blocks is less than 30% occupied, as are the metered spaces.
- Sample Area 2: The on-street parking on largely residential blocks are all over 60% occupied, with many over 80% occupied during this period. The commercial blocks, including much of Main Street, Battery Street, and St. Paul Street, are largely unoccupied in the early mornings, despite no overnight meter fees and proximity to fully occupied residential blocks.
- Sample Area 3: Much of the curbside parking is largely unoccupied during the morning period, with the exception of northern Summit Street and eastern Maple Street, which have few if any restrictions on them. Although nearly all of the curbside parking is restricted, Maple Street between S Willard Street and Summit Street does not have restrictions and remained less than 30% occupied.

FIGURE 3.16 ON-STREET PARKING UTILIZATION (7 AM-8 AM)

Source: Parking Inventory Count, Thursday September 25, 2014

MIDDAY (11AM TO NOON)

The counts from this time period account for the typical weekday parking situation, with meters and residential parking restrictions in effect, with the exception of nighttime resident-only restrictions.

- Sample Area 1: Blocks that were over 80% occupied in the morning remained full and other blocks also became more heavily utilized particularly towards S Willard Street, with the exception of metered parking on Main Street, which remained mostly available.
- Sample Area 2: The overall utilization increased midday, with metered parking at least partially filled, with the heaviest utilization along St. Paul Street and around TD Bank and the Flynn Theater. In general, unrestricted streets were more heavily occupied than metered sections, particularly on commercial blocks.
- Sample Area 3: Two segments became more heavily occupied during the daytime: Harrington Terrace and S Prospect Street, despite being resident-only parking at all times. Similarly restricted blocks on Robinson Parkway and Cliff Street went from

between 31% and 60% occupied in the morning to less than 30% occupied during the midday. Unrestricted portions of Summit Street and Maple Street remained heavily used. All other blocks remained largely unutilized.

FIGURE 3.17 ON-STREET PARKING UTILIZATION (11 AM–NOON)

Source: Parking Inventory Count, Thursday September 25, 2014

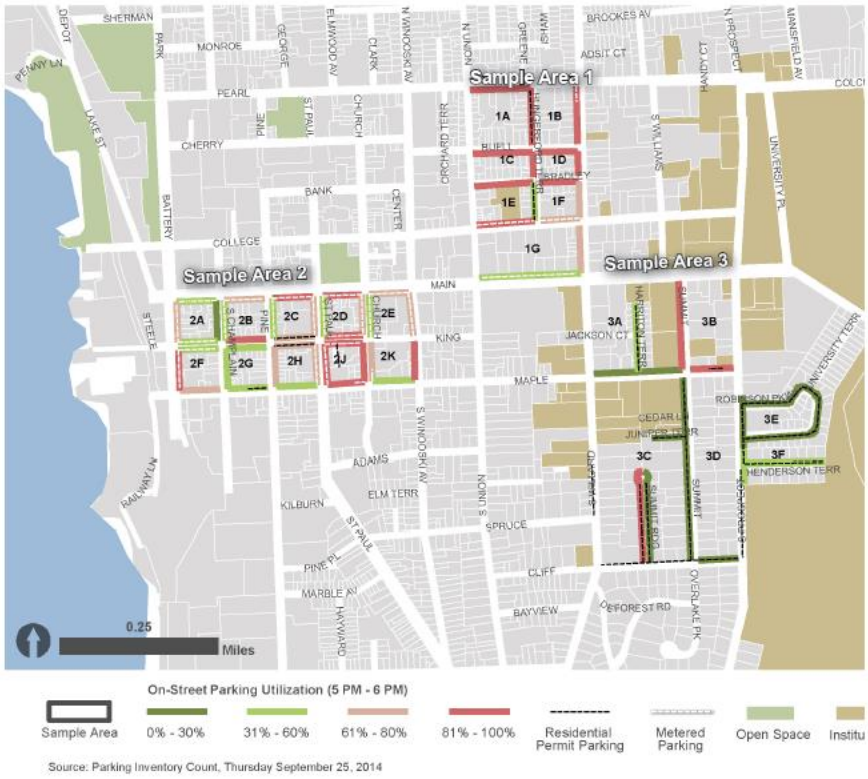
AFTER WORK (5PM TO 6PM)

The counts from this time period account for vehicle occupancy just after normal work hours.

- Sample Area 1: In the last hour of metered time, demand for metered on-street parking increased on College Street and Main Street after work, likely due to its proximity to the YMCA and City Market. The on-street parking in blocks on and north of Bradley remained over 80% occupied, as they had been since the morning, while the permitted block between Bradley Street and College Street was 60% occupied.
- Sample Area 2: There is a slight increase in overall on-street parking utilization after work, with greater demand for the metered spaces on Battery Street and Main Street. In contrast, many of the residential blocks that were heavily occupied in the morning and midday are utilized less during this period, though the permit-restricted block is over 60% filled.

- Sample Area 3: S Prospect Street parking reverts to being largely available, while mostly unrestricted portions of Summit Street and Maple Street are over 80% occupied. One striking difference is Summit Ridge, a residential cul-de-sac street, jumped from over 70% available midday to over 80% occupied after work, mostly on the west side. This may be an anomaly due to one or more residences having a larger number of guests than usual.

FIGURE 3.18 ON-STREET PARKING UTILIZATION (5 PM-6 PM)



3.6 | DRIVEWAYS

Driveways are important features in studying residential parking because their presence indicates that some or all of the residents have the ability to park off-street and on their private property, and therefore may not need to apply for a parking permit.

The consultant team collected parking inventory counts on Thursday, September 25, 2014 and estimated the number of driveway spaces and their utilization. In some locations, spaces were not clearly defined by striping, and the team took their best guess at estimating how many vehicles would fit in a given residential driveway. Figure 3.19 shows the variation in the amount of driveway spaces within each sample area, with Sample Area 3 containing nearly double the amount of driveway spaces as in Sample Area 1 and four times more driveway spaces than Sample Area 2.

Sample Area 1 had the highest average utilization of driveway spaces, with more than 75% of their spaces occupied in the morning and midday periods. Driveways in Sample Areas 2

and 3 were less well-utilized, at 54% and 46% respectively, with a dip in occupied driveways during the midday period.

Figure 3.21 shows the blocks that contain residential driveways and the number of curb-cuts along each block face. For the most part, Sample Area 3 had longer block faces and a correspondingly higher number of curb cuts, particularly on Summit Street and Summit Ridge. In Sample Areas 1 and 2, the blocks with more single-family homes had a higher number of curb-cuts for driveways, but also were not restricted by meters or residential permits. Sample Area 3 contained a higher number of single-family homes with driveways, but also had curbside parking that was largely restricted by residential permits.

FIGURE 3.19 ESTIMATED DRIVEWAY SPACES

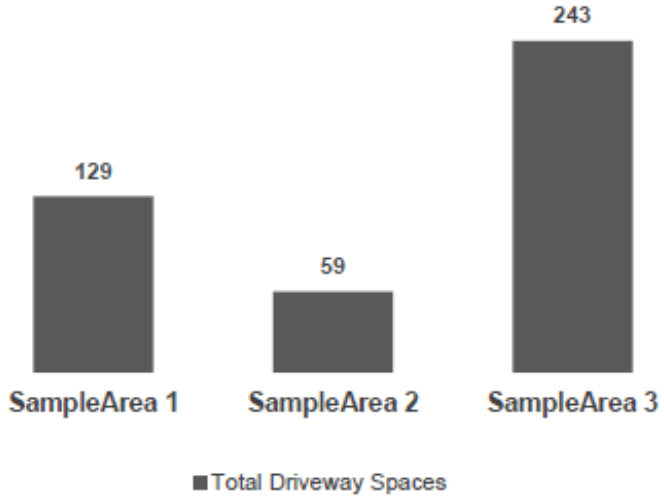


FIGURE 3.20 APPROXIMATE DRIVEWAY SPACE UTILIZATION

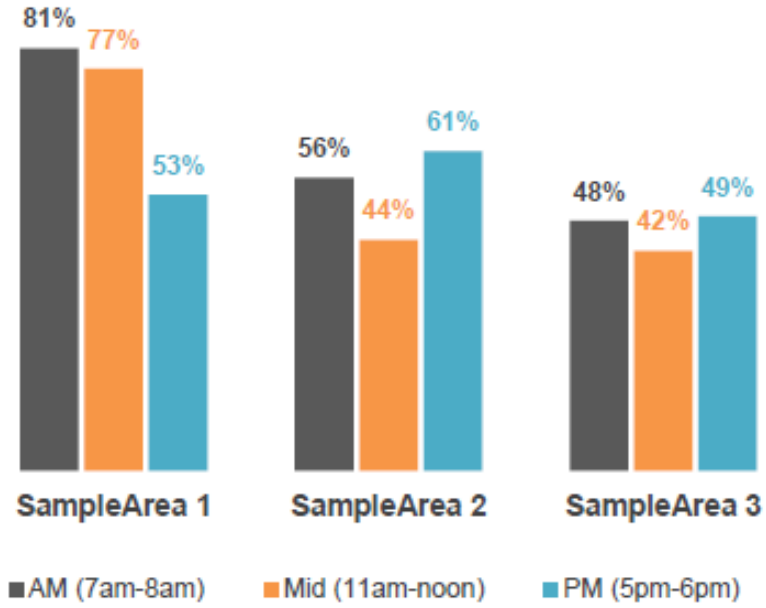
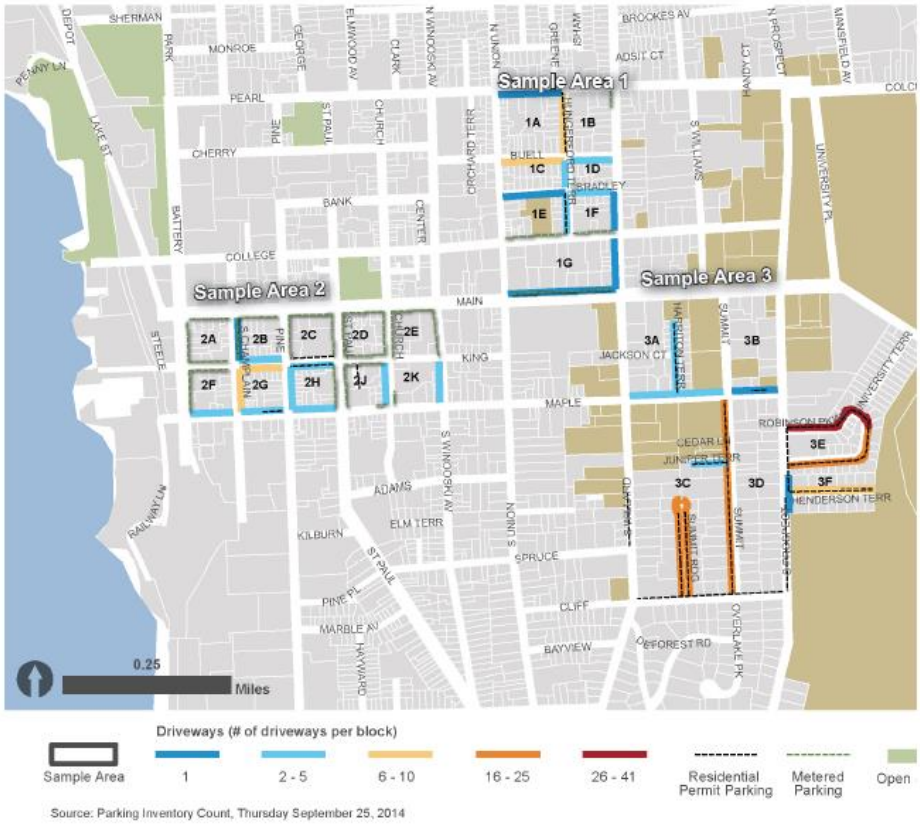


FIGURE 3.21 DRIVEWAY CURB CUTS PER BLOCK

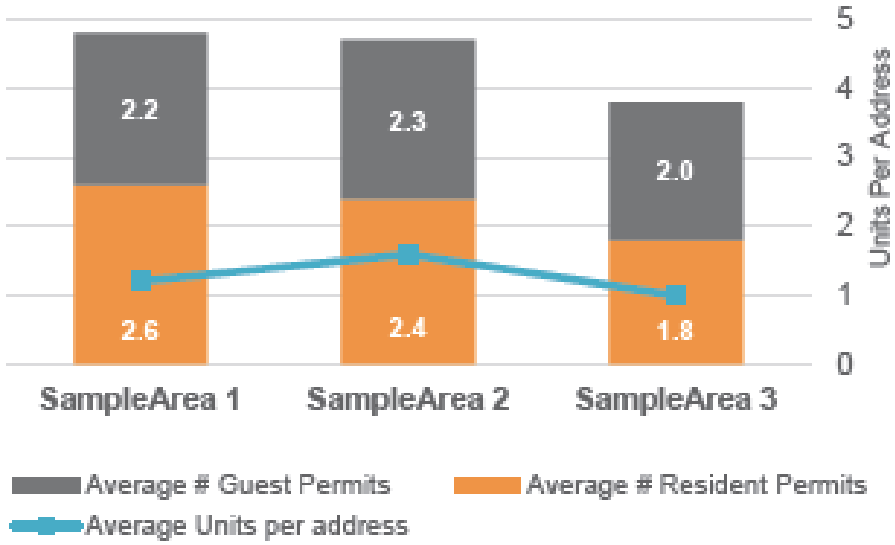


3.7 | RESIDENTIAL PERMITS

The consultant team analyzed residential parking permit data provided by the Burlington Police Department for permits issued during the period of January 2013 through the end of December 2013. The information provided the number of resident and guest permits issued and resident type by address. Although some blocks require permits for parking on-street, residents who live there do not necessarily apply for on-street parking, such as on the north end of Hungerford Terrace. This may be because the residents do not own vehicles or they have sufficient off-street options available, such as driveways, parking lots, or garages.

Figure 3.23 shows the number of resident and guest permits issued by address. Some addresses contain several apartment units, which accounts for why there are parcels that contain upwards of six permits.

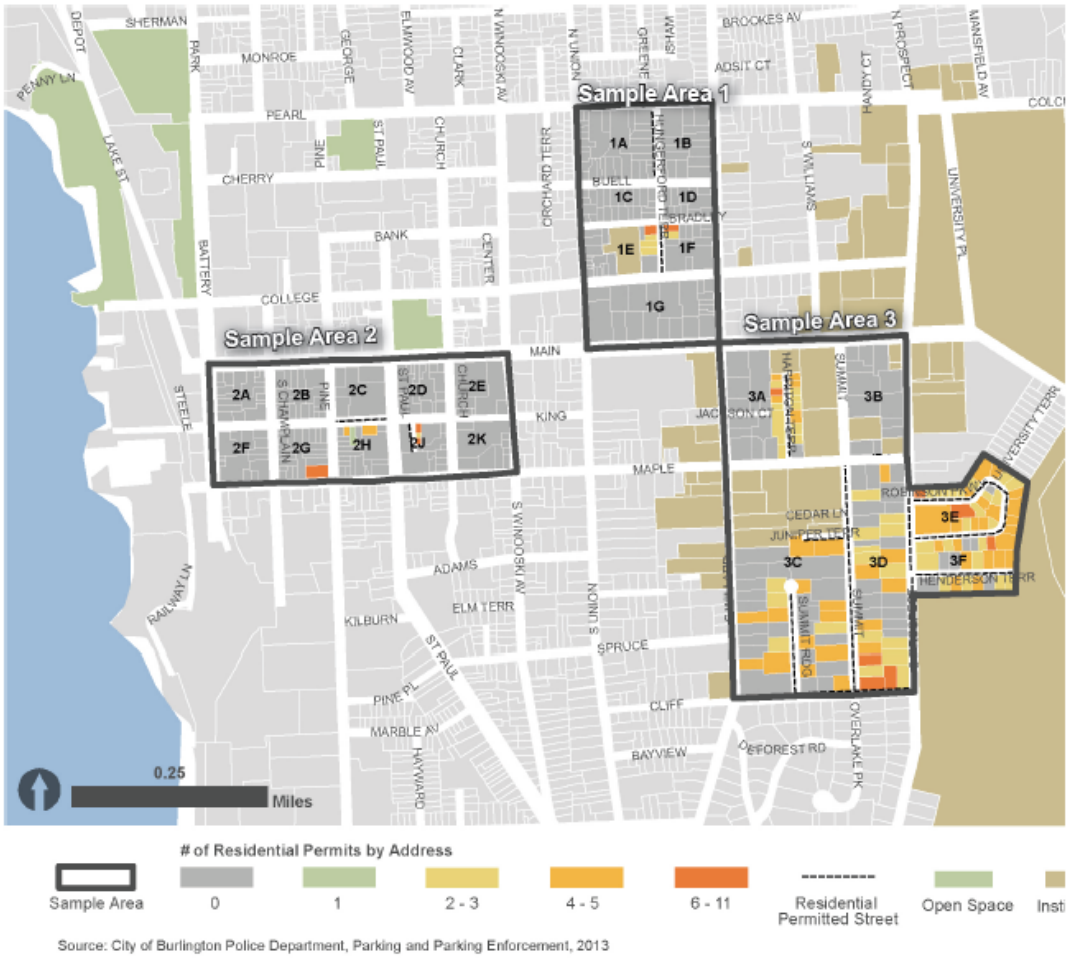
FIGURE 3.22 AVERAGE PERMITS ISSUED BY ADDRESS



For addresses that are on permit restricted streets.

- **Sample Area 1:** This area requires parking permits only along Hungerford Terrace, totaling approximately 792 feet in permitted length, with on-street parking allowed only on the west side. The permit holders include a mix of owners, student renters and non-student renters, and among the permit-holders, the average residence holds 2.6 resident parking passes and 2.2 guest parking passes per address.
- **Sample Area 2:** This area requires permits on three block segments. In total, this area has 680 feet of permitted parking length. The permit holders are predominantly renters. The average residence holds 2.4 resident permits and 2.3 guest parking permits per address.
- **Sample Area 3:** This area has the most extensive residential parking permit program, with a total of 8,775 feet of permitted parking length in the sample area. The permit holders are primarily owners, with some renters, and a combination of both owners who live on-premises with renters. The average residence holds 2 resident parking passes and 1.8 guest parking permits per address.

FIGURE 3.23 RESIDENTIAL PERMITS, BY ADDRESS



Source: City of Burlington Police Department, Parking and Parking Enforcement, 2013

As shown in Figure 3.24, Sample Area 3 has the greatest amount of residential parking permits issued out of the three study areas; this correlates with Sample Area 3 also having the highest supply of permitted on-street parking spaces. In Sample Areas 1 and 2, the number of resident and guest permits issued are roughly equal, with slightly more resident permits than guest. Sample Area 3 has a slightly larger share of guest permits than resident permits.

FIGURE 3.24 RESIDENTIAL PERMITS ISSUED, BY TYPE

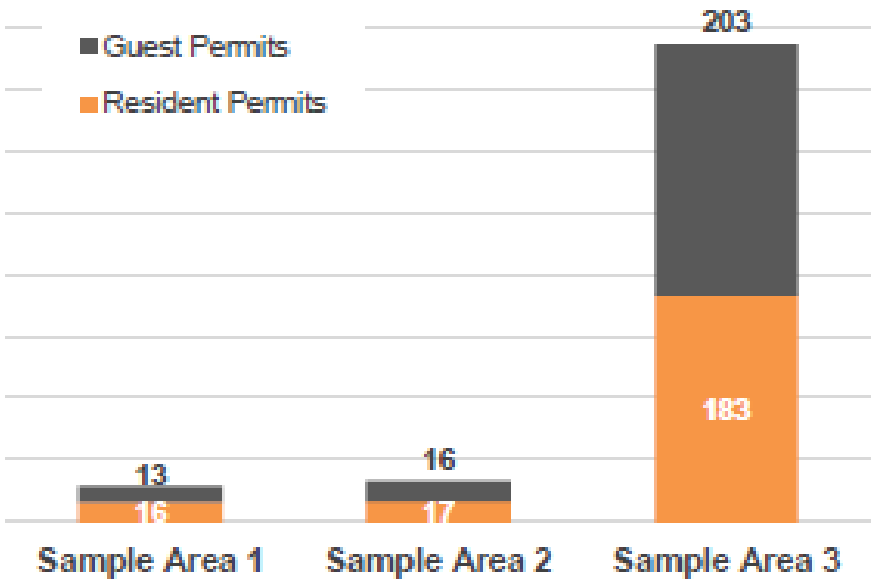


Figure 3.25 shows the amount of permits issued, both guest and resident over the total supply of on-street parking spaces in each sample area. All of the sample areas have issued more residential parking permits than there is supply of permitted on-street spaces, with the largest parking disparity in Sample Area 2 and a larger absolute difference in Sample Area 3.

FIGURE 3.25 PERMITTED ON-STREET PARKING: SUPPLY VS. PERMITTED

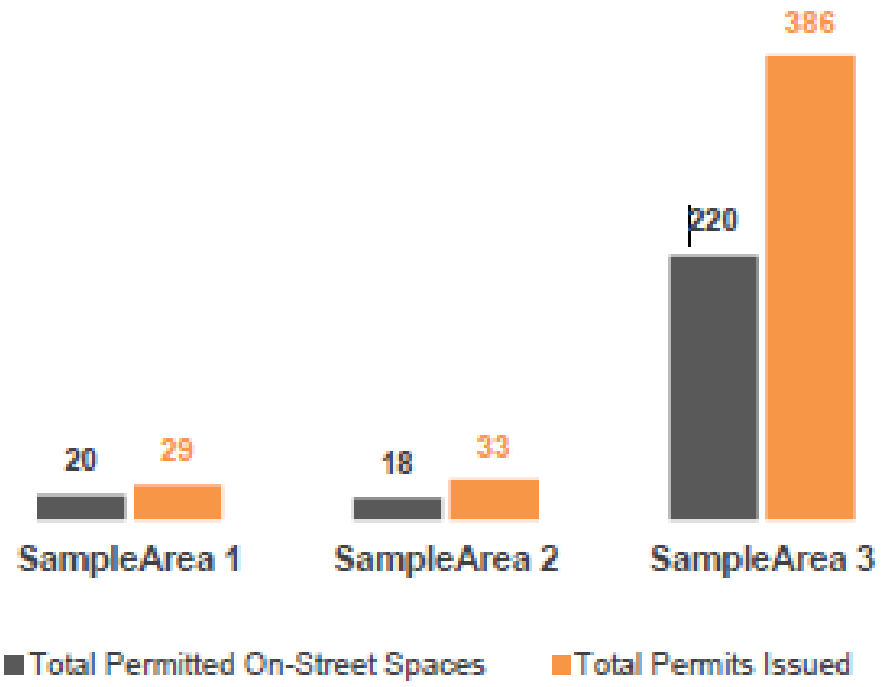
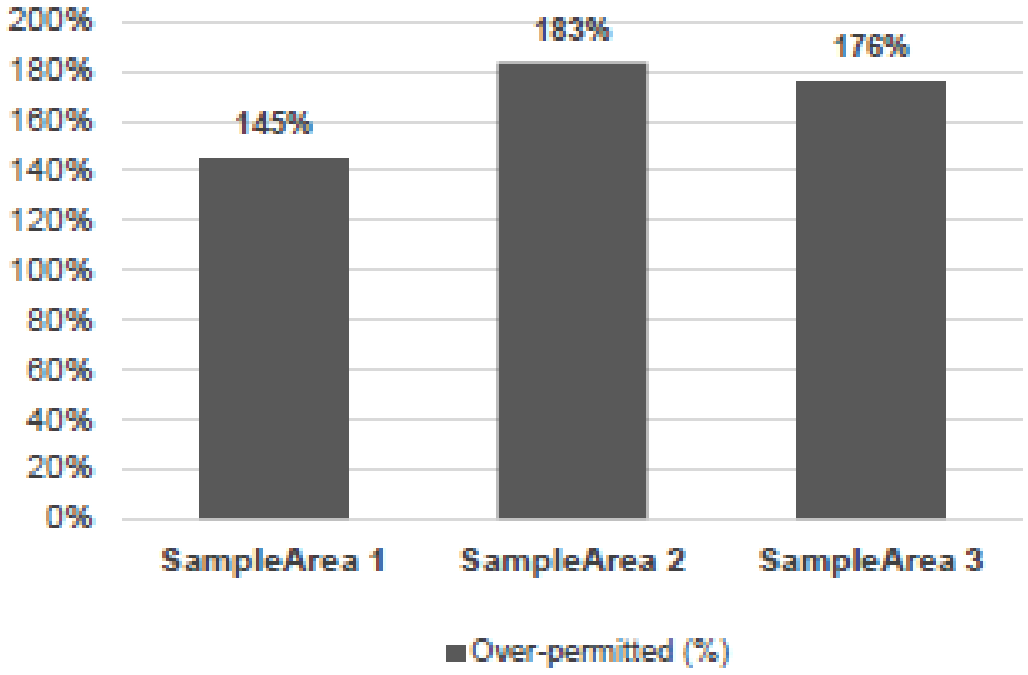


FIGURE 3.26 OVER-PERMITTED (%): SUPPLY VS. PERMITS ISSUED



3.8 | CARSHARE VERMONT

The Car Share Vermont (CSVT) locations benefit the city by increasing access to automobile transportation for the people of Burlington while decreasing the number of automobiles per household. There are nine total car share locations surrounding the sample areas, with eight located within walking distance of multiple sample areas. While there are no car share pods currently inside the three sample areas, there are four car share locations within a thousand feet of each sample area and three directly across the street from a sample area location. With several car share pods located less than a five-minute walk away for residents in each sample area, car share offers a viable option for students and other residents in the area.

CSVT provided car share utilization data from January 1 to November 3, 2014 that revealed a fleetwide average utilization of nearly seven hours per day. Shown in Figure 3.28, the car share vehicles adjacent to Sample Areas 1 and 2 were utilized for more hours on average than the pod located next to Champlain College in Sample Area 3. Car share members could reduce the parking burden in the sample areas by relying on car share vehicles for short-term, local trips, as opposed to adding additional vehicles to a residence.

FIGURE 3.27 CAR SHARE VERMONT

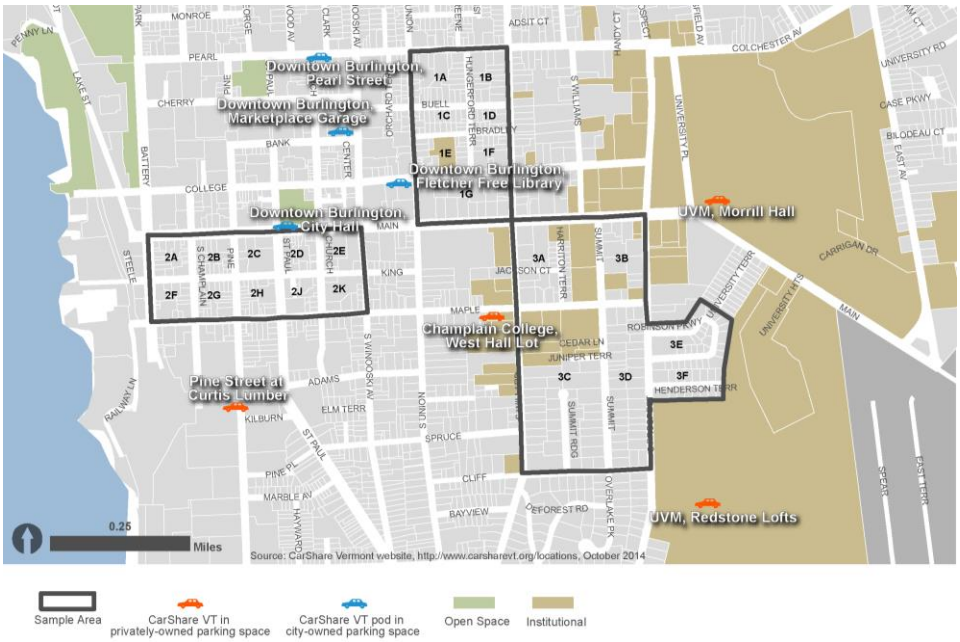
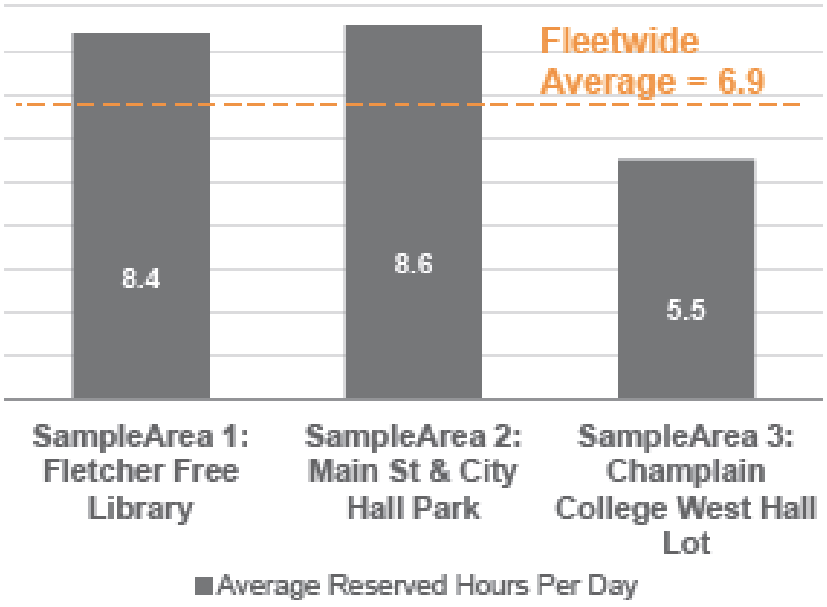


FIGURE 3.28 CAR SHARE POD YEAR-TO-DATE UTILIZATION



3.9 I SUMMARY FINDINGS

The three sample areas represent three neighborhoods with different characters. Sample Area 1 is the most dense and Sample Area 3 is the least dense. Sample Areas 1 and 2 have a mix of commercial, single family, and multi-family buildings and are zoned high density residential or downtown transition. On the other hand, Sample Area 3 is mostly single-family

homes and is zoned low density residential. Sample Areas 1 and 2 are mostly renter-occupied while Sample Area 3 is approximately half owner-occupied. All three areas had little vacancy. On-street parking in Sample Area 2 is mostly metered and is part of the downtown while on-street parking in Sample Area 3 is mostly restricted by RPP and is more influenced by the institutions. Figure 3.29 summarizes the sample areas' characteristics and the study's findings.

FIGURE 3.29 SUMMARY OF SAMPLE AREAS AND FINDINGS

	Sample Area 1	Sample Area 2	Sample Area 3
Population Density	Highest		Lowest
Land Use	Commercial, Single and Multi- Family	Commercial, Single and Multi- Family	Mostly Single Family
Zoning	High Density Residential	High Dens. Res/ Downton Transition	Low Density Residential
Nearby Parking Generators	Downtown/ Institutions	Downtown	Institutions
Home Ownership	14%	17%	52%
Vacancy	Low vacancy in all three Sample Areas		
Metered Spaces	35%	63%	0%
Res. Permit Spaces	9%	6%	75%
Utilization	~80%	~60%	~35%
Res. Permits Issued	29	33	368
Over-Permitted	145%	183%	176%

In all of the areas studied, streets with some type of restriction, metering of RPP, tended to have lower utilization than the unrestricted nearby streets. Sample Area 3 tended to have the lowest utilization even though it was the most over permitted. This is largely because residents in this area are able to park in their driveways or garages, and the other two areas have few streets with residential permit restrictions. Sample Area 3 residents may have a residential pass, but they may not use it frequently. There is also little demand for parking in

this area beyond the institutions. Alternatively, the other two Sample Areas, especially 2, are close enough to the downtown area that their streets may serve downtown demand as well as residential demand. Additionally, the high density of residences in Sample Areas 1 and 2 create more demand for parking than in the low density Sample Area 3.

- **Sample Area 1 - Downtown South Union and Willard:** This largely residential area has the highest average population density of the three sample areas and the majority of residents are renters. Sample Area 1 experienced the highest on-street parking utilization among the three areas studied, with over 80 percent of the residential on-street parking occupied throughout the day. The nearby Fletcher Free Library car share pod was also used for more hours per day than the average car share pod in Burlington, suggesting a demand for access to vehicles from this area. The findings are unsurprising given its proximity to downtown and UVM, combined with relatively few on-street parking restrictions.
- **Sample Area 2 - Downtown King Street:** Sample Area 2 has the greatest mix in land uses, with a combination of large commercial blocks and retail activity wrapping around the edges of a dense residential neighborhood. This results in an area that has demand for on-street parking at various hours of the day at varying locations. Most of the on-street parking on commercial blocks is metered with 3-hour limits, which helps create turnover and limits overall occupancy. However, blocks with few or no parking restrictions continue to experience higher utilization rates during the day. Despite the walkable urban grid character, there is a clear desire for people to park directly in front of their destination. In the parking inventory count, despite equal costs, metered blocks alternated between being nearly fully occupied and virtually fully available depending on time of day.
- **Sample Area 3 - South Prospect and Summit:** Sample Area 3 is located adjacent to UVM and includes Champlain College, but has a far lower average population density and number of housing units compared to the other sample areas. This neighborhood consists mostly of single-family homes, and residents generally have access to available off-street parking in individual garages and driveways. As a result, there remains ample available on-street parking throughout the day for those with resident or guest permits.

These sample areas were chosen because they represent typical neighborhoods in Burlington. The findings suggest that denser neighborhoods and neighborhoods near downtown will have higher parking utilization rates than less dense neighborhoods. Neighborhoods with long driveways and garages and a high percentage of residential permit restricted streets will tend to have lower on-street parking usage than unrestricted streets or places with less on-site residential parking.

SOURCES

- Property Active Permit Counts by Street. January 1, 2013 to December 31, 2013. Provided by John King, BPD. September 4, 2014.
- Resident Parking Permits & Guest Passes by Address. January 1, 2013 to December 31, 2013. Provided by John King, BPD. September 4, 2014.

- CarShare VT. http://www.carsharevt.org/ and conversations with Annie Bourdon, Executive Director of CarShare Vermont, on 10/5/2014 and 11/3/2014.

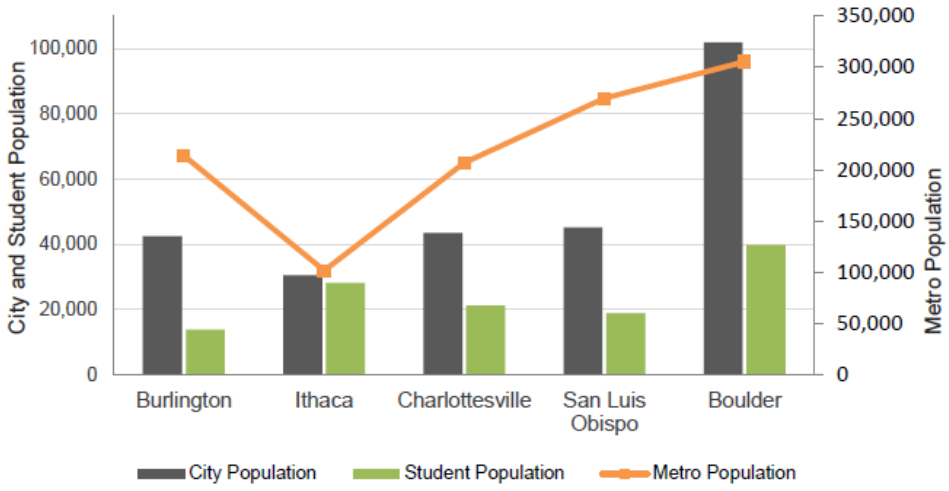
4.0 RESIDENTIAL PARKING BEST PRACTICES

This chapter summarizes the parking management strategies of other cities that were studied to highlight best practices in various innovative places around the country. Four cities were evaluated in further detail because they are comparable in population, size, and/or character to Burlington: Ithaca, New York; Charlottesville, Virginia; San Luis Obispo, California; and Boulder, Colorado. All four of these cities have active downtowns adjacent to large academic institutions and share similar residential parking challenges as Burlington.

Burlington has a population of 42,282 in the city and 213,700 in the metro area, covering 15.5 square miles. The city is home to three major institutions: University of Vermont (UVM), UVM Medical Center, and Champlain College. In 2014, the total student population was 13,788:

- UVM (2014): 11,329 total (9,958 undergrad and 1,371 graduate)
- UVM Medical Center: 459 medical students
- Champlain College (2014): 2000 students

FIGURE 4.1: COMPARISON OF BEST PRACTICE CITIES



4.1 I KEY LESSONS LEARNED

RESIDENT AND GUEST PERMIT COST

- **Burlington is unique in offering free residential parking permits.** Of all the cities studied, Burlington's residential permit system is the only one that offers free permits for residents and guests. All four other cities evaluated charged an annual fee for resident permits.

FIGURE 4.2: RESIDENT AND GUEST ANNUAL PERMIT COSTS

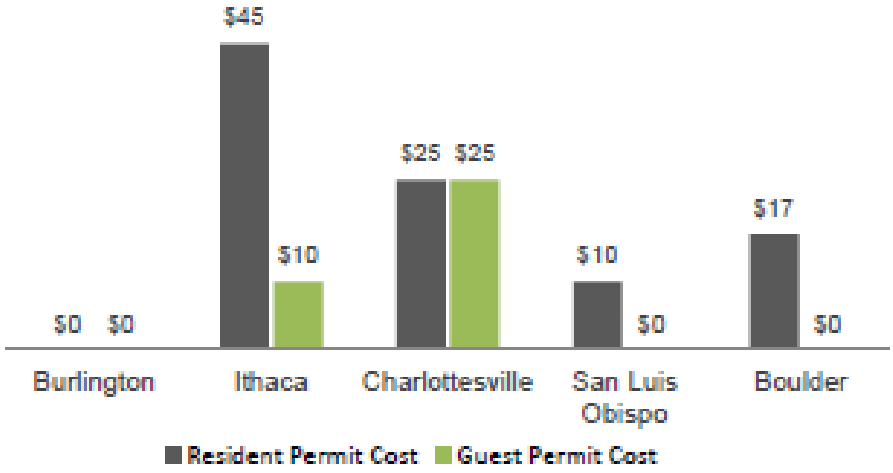


FIGURE 4.3: # OF RESIDENT AND GUEST PERMITS ALLOWED PER HOUSEHOLD OR UNIT

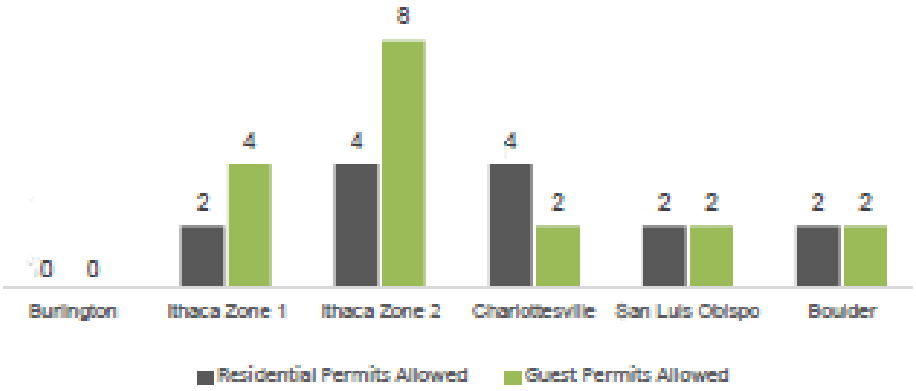
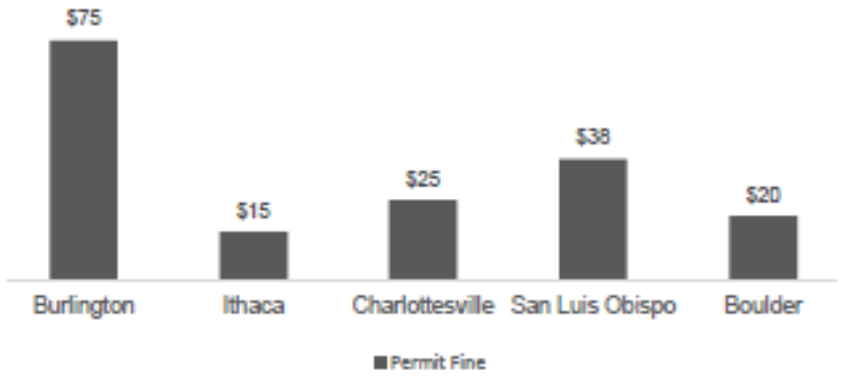


FIGURE 4.4: RESIDENT PERMIT VIOLATION FINES



NUMBER OF RESIDENT AND GUEST PERMITS ISSUED

- **Burlington is on par with other cities on number of permits issued per household.** The other cities in our best practices study also allowed for two to four resident permits per household or dwelling unit, and the majority allowed two guest permits per household or dwelling unit.

RESIDENTIAL PERMIT VIOLATIONS

- **Of the cities studied, Burlington has the highest fine for parking in a residential zone without a permit.** At $75, Burlington's residential permit violation is almost double that of San Luis Obispo's (Figure 4.3). In 2013, the Burlington generated $323,700 in resident parking violation fines.

RESIDENTIAL PERMIT HOURS

- **Although most cities limit parking during business hours on weekdays, each city varies in the specific times when residential permits are in effect**. The pricing is unrelated to the amount of time restrictions. For instance, San Luis Obispo permits, despite being the cheapest, offer the most time for residential parking restrictions, as they also limit parking on weekends.
- **Permit hours generally address local variation in parking demand.** Permit hours tend to reflect times when parking preference should go to residents. For instance, most cities give preference to residents during working hours on weekdays in response to an overflow of business and/or visitor vehicles that were using neighborhood streets as all-day parking areas. San Luis Obispo has eight different parking times for the different residential districts in order to address varying parking demand, as determined by the city traffic engineer.

Several cities allow for two-hour visitor parking in non-metered residential zones. Olympia, WA, Boulder, San Francisco, and Washington DC all allow free two-hour parking in residential zones that do not have meters so that visitors or students may make park for a limited amount of time to run an errand, pay a visit, or perform a task. Figure **4.5** shows a sign from Olympia that allows 2-hour parking in residential a zone.

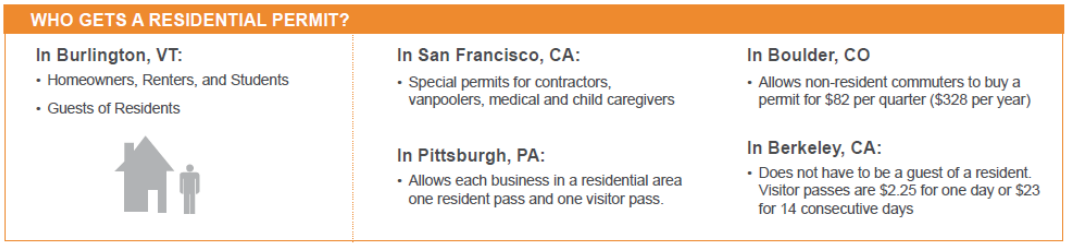


FIGURE 4.5: 2-HOUR PARKING DURING BUSINESS HOURS IN A RESIDENTIAL ZONE, FROM OLYMPIA, WA

ESTABLISHING RESIDENTIAL PARKING DESIGNATION

- **Several cities have a system of implementation for residential parking zones that involves a minimum resident participation requirement.** The city government also undergoes a formal process in order to approve the implementation of residential parking areas. Since parking regulations impact residents, citizen participation is essential. Endorsement from more than half of participating residents is generally required to support changes to the parking process in their communities.

WHEN IS A RESIDENTIAL PERMIT REQUIRED AND HOW LONG DO THEY LAST?

In Burlington, VT:

- Majority of residential parking prohibits non-residents from parking at all times.
- Residential Permits last 1 or 2 years from date of issue

In Washington, DC:

- Allows visitors to park for 2 hours free in one residential zone

In Ithaca, San Luis Obispo, Pittsburgh, Charlottesville:

- Have set expiration dates every year, based on the academic calendar

In Boulder, CO

- Allows 2-hour visitor parking near academic institutions and 3-hour visitor parking near downtown for businesses.

In San Francisco, CA:

- Allows part-year parking permits at a pro-rated rate

ADMINISTRATION AND ENFORCEMENT

- **Many college towns issue permits based on the academic calendar year.** From an administrative perspective, it is easier to have all permits expire at the same time every year. For example, Ithaca's parking permits are good from August 1 through July 31. Charlottesville issues their permits beginning on September 1.
- **Residential permits are enforced by patrolling the streets and issuing fines to vehicles in violation.** Several cities studied also issue a residential permit similar to Burlington, with a bumper sticker or a pass in the car that is numbered and coded by zone or street, which allows officers to easily recognize when a vehicle is illegally parked. Officers will leave a ticket with the illegally parked vehicle. Towing is also an option, but, if the illegally parked vehicle is a guest of a resident, a vehicle may be towed unnecessarily.
- **Some cities issue residential permits that are directly tied to the vehicle, while others are tied to the owner and can be transferred between vehicles.** For example, Ithaca's database allows police to use license place recognition to identify whether a car is permitted or not simply by driving past them. This technology enables easier enforcement of permit parking. San Luis Obispo allows residents to transfer their permit between vehicles. A system like Ithaca's enforcement through an electronic database of vehicles registered with a permit would not be possible for transfer between vehicles.
- **Charlottesville has an owner-agent system for student parking permits.** By allowing the option to give property owners a number of permits for distribution to their tenants, the city gives owners increased responsibility and does not have to account for student permits.

WHAT DOES A RESIDENTIAL PERMIT LOOK LIKE?

In Burlington, VT:

- A bumper sticker that expires in 1 to 2 years from date of issue
- A windshield guest pass that expires in 1 to 2 years from date of issue

In Ithaca, NY:

- Assigns a permit to a unique vehicle licenses plate number and uses license place readers for permit enforcement.

In San Luis Obispo, CA

- Issues annual permits that become property of the owner and can be transferred between vehicles.

In Boulder, CO

- Enforces by examining permits, which are numbered and color coded by zone.

TRANSPORTATION DEMAND MANAGEMENT MATTERS

Transitioning a street to a residential permit street or zone will likely go more smoothly if the city and/or institutions have a well-developed transportation demand management strategy that may include improved transit and pedestrian and bicycle infrastructure. For example, the creation of Ithaca's residential permit system forced many Cornell students and faculty to find alternative transportation methods instead of parking in residential neighborhoods near campus. The bus system offered by the university offered students and faculty a reliable alternative to driving.

SIGNAGE AND WAYFINDING MATTER, TOO

In order to successfully deter non-residents, clearly marked signage is necessary in residential permit areas. Ithaca, Boulder, and San Luis Obispo all address the importance of adequate signage in their residential parking documentation.

4.2 | ITHACA, NEW YORK

The City of Ithaca has a population of 30,000 (2010) and 101,560 in the greater metro region. The City covers 6 square miles and is similar in climate to Burlington. The student population in 2014 was 27,400 (21,000 at Cornell and 6,400 at Ithaca College).

REASON FOR RESIDENTIAL PERMIT PARKING SYSTEM

A main reason for the development of Ithaca's Residential Permit Parking System (RPPS) was to alleviate the burden placed on Ithaca's residents that resulted from Cornell students and faculty. Students and employees avoided the costs of Cornell parking lots by parking in nearby residential neighborhoods and walking to campus. With many Ithaca residents lacking driveways, the shortage of on-street parking negatively influenced their quality of life. The RPPS has helped these residents by restricting the usage of residential on-street parking, encouraging Cornell students and staff to utilize the effective bus system that the University offers. Another motivation of the program was to incentivize property owners to provide off-street parking for their tenants. However, at $45, the permits offered through the RPPS have been the least expensive parking option since its implementation. The program has actually taken pressure off of property owners, as their tenants have relied on the new permit system.

PETITION PROCESS

- The petition may be requested from the City Clerk's Office, and when returned must be signed by at least 51% of the eligible residents in the proposed permit block in order to qualify for inclusion in the permit system. All eligible residents signing the petition must be at least 18 years of age.
- In an R1 zone, not more than one resident per tax parcel shall be permitted to sign the petition for the establishment of the permit system. In an R2 zone, not more than one resident per dwelling unit or two residents per tax parcel, whichever is fewer, shall be permitted to sign the petition for the establishment of the permit system.

- A block petitioning for the permit system must hereby meet certain minimum requirements with respect to parking occupancy. The City Traffic Engineer will conduct a parking survey over two separate days during average weekly peak hours to determine that at least 75% of the legally available parking spaces are being utilized.

IMPLEMENTATION

To keep track of permits, Ithaca has a database that records the information of vehicles with a permit. This database has a dual purpose, as it links to a license plate reader system that allows enforcement vehicles to determine whether a car has a permit or not simply by driving past the vehicle. Permitted vehicles also have a permit sticker affixed to their window.

Residents hope to discourage long-term parkers. Signs prohibit the public from parking in residential zones during certain hours of the day, on Monday through Friday. For instance, only residents with permits may park from 9 AM to 1 PM on certain streets. The prohibited parking times vary from street to street based on the size of the streets. If a street is only large enough for parking on one side, then half of the block will be signed "No Parking 9 am – 1 pm" and the other half of the block will be signed "No Parking 1 pm – 5 pm." This unique signage system gives residents priority parking on different sized streets during the workday. There are progressive tickets for violators so that the fines rise based on how frequently a vehicle illegally parks.

Ithaca has two different residential zones, based on housing density. In residential zone 1, two permits are allowed, and in residential zone 2, four permits per property are allowed. Each resident may have four guest permits at a price of ten dollars each. Residential zone 1 may have up to eight guest permits, and residential zone may have up to sixteen guest permits.

SOURCES

- http://www.cityofithaca.org/departments/clerk/resparking.cfm
- Email correspondence with Julie Holcomb, City Clerk, City of Ithaca.

4.3 | CHARLOTTESVILLE, VIRGINIA

The City of Charlottesville has a population of 43,475 in the city and 206,615 in the greater metro region. The City is 10 square miles.

Student Population: 21,238 (14,898 undergrad, 6,340 grad) at University of Virginia and 5,684 undergrads at Piedmont Virginia Community College

REASON FOR RESIDENTIAL PERMIT PARKING ZONES

The City of Charlottesville instituted residential parking zones in order to address issues of traffic, pollution, noise levels, and other negative environmental impacts. By establishing these nine parking zones, the city also intended to maintain the character of the residential areas. With this dual mission, citizens and city officials worked together to determine the areas that would best benefit from the implementation of these permit parking zones.

PETITION PROCESS

The city does not have a formalized process for petitioning for permit parking.

ADDRESSING STUDENT PARKING

Charlottesville instituted a unique owner-agent system specifically to address student parking. The system allows property owners to pick up and control the distribution of up to 50 permits for their building. The owner gives the city a list of people whom they issue permits to, and the city gives the owner responsibility to issue permits. The city is not responsible for validating who receives permits and whether or not they are qualified to receive one. Not all owners choose this process, but the owner-agent option allows property owners to have more control over their tenants, while alleviating the city of additional administrative burden.

IMPLEMENTATION

Residents may apply through the city treasurer's office for a $25 annual permit. No more than four permits are issued per household, with some exemptions for multi-family units. Permits enable residents to park from 6 AM to 5 PM from Monday to Friday, unless otherwise stated. Most streets have significantly less demand after 5 PM, as permits are meant to restrict commuters and students who park during normal business hours. However, there are a few areas in which parking demand is high throughout the day that the permit restrictions apply at all times because there are few parking spots available. Permits are issued annually, starting on September 1st to coincide with the academic calendar. Office administrators in the treasurer's office keep track of residential permits in a parking database.

SOURCES

- Code of ordinances (Section 15-201 to Section 15-205)
- Charlottesville Zone Parking Permits: http://www.charlottesville.org/Index.aspx?page=430
- Email and phone correspondence with Jason Vandever, Charlottesville City Treasurer

4.4 | SAN LUIS OBISPO, CALIFORNIA

The City of San Luis Obispo has a population of 45,119 in the city and covers nearly 13 square miles. It is the home of Cal Poly San Luis Obispo, which has a total student population of 18,762 with an undergrad population of 17,725 and graduate student population of 1,037.

REASON FOR A RESIDENTIAL PARKING DISTRICT

The city created residential parking districts for two main reasons. One is if residents live in an area that is predominantly residential and the availability of on-street parking is limited due to the high demand from users who do not reside in the neighborhood. A second is if

residents want to preserve the character of the existing neighborhood by limiting the on-street parking to only residents in the neighborhood.

The City Council considers the negative impact of the vehicles parked by persons not residing in the area on: a) environmental characteristics such as ambient noise levels and air pollution levels; b) pedestrian and vehicular traffic safety in the area; and c) the burden on persons residing in the area gaining access to their residences.

PETITION PROCESS

- At least three neighborhood residents interested in forming a parking district schedule a meeting with Parking Services to obtain assistance.
- If warranted, the three residents begin an informal survey in the neighborhood.
- If there are more than 50% of the households in favor of pursuing a parking district the City will hold a meeting to answer questions asked by the residents. The City will then mail out a formal survey with self-addressed envelopes to determine the final percentage of those in favor and those who are not in favor of the Residential Parking District. It takes a 60% majority of the households in the affected area. If you fail to answer the survey it will not be counted in the determination of the percentage of those in favor of or against the Residential Parking District.
- If that threshold is met during the formal survey, the Residential Parking District will be forwarded to City Council for consideration.

IMPLEMENTATION

If the City Council grants permission for a Residential Parking District, then the city traffic engineer will direct the posting of signs. These signs will indicate the limitation on the parking of vehicles in the area and the times and days in which this limitation will be in effect. Different areas of the city have different time requirements, with many areas enforcing seven days a week. The Director of Public Works issues permits annually, with no more than two permits issued per dwelling unit. These permits become property of the owner, and they can transfer parking permits between whichever vehicle they wish. Police enforce parking permits on a routine basis, as well as on a complaint basis by residents. Fines to park in a residential zone during limited hours are $38.

SOURCES

- San Luis Obispo Parking Services: http://www.slocity.org/publicworks/resdist.asp
- Email and phone correspondence with Rebecca Cox, San Luis Obispo Parking Services

4.5 | BOULDER, COLORADO

The City of Boulder is slightly more than double the size of Burlington, but maintains a small college town character and often share the top college town lists with Burlington. The City of Boulder has a population of 100,230 in the City and the average work commute is 15 minutes. The total student population at University of Colorado Boulder is 31,702.

REASON FOR THE NEIGHBORHOOD PERMIT PARKING PROGRAM

Neighborhoods with Neighborhood Permit Parking (NPP) zones balance residential parking with visitors and commuters. Parking demand from commuters, members of local universities, hospital staff, and public high school students make it difficult for residents to park in their neighborhoods. Through varying enforcement times and diverse parking areas, restrictions of each NPP zone are unique to specific areas. By accurately balancing parking needs, these NPP zones make Boulder neighborhoods ideal residential areas.

PETITION

To be eligible for a NPP zone, neighborhoods must have a minimum of 25 residents apply by petition. This petition enables action from the city to initiate the process for creation of a new zone. The process involves these actions from the city:

- A parking survey and collection of information that assess the need for an NPP zone
- A draft proposal that includes zone boundaries, the type of zone, recommended parking restrictions, permits available, and other details
- A potential neighborhood meeting to give input towards the proposal
- A modified proposal, after input from the public
- A public hearing before the Transportation Advisory Board in order to review the proposal
- Board recommendations and public hearing comments forwarded to the City Manager for review
- A final decision from the City Manager regarding the zone, which will be given to the City Council

IMPLEMENTATION

Each zone has a different time of enforcement, but most zones operate during business hours or weekdays. In NPP zones, those without a permit may park, but only once during the day for no longer than a specified time limit. In zones near academic institutions, there are 2-hour limitations to account for students with a typical class schedule, and near the downtown, there are 3-hour limitations to account for business needs. Boulder uses automated license plate readers to enforce these time restrictions. The downtown also has parking lots to account for higher parking demand in this area. Law enforcement can check a vehicles' eligibility to park by examining their permits, which are numbered and color coded by zone. Signs should indicate the type of permit required, based on which zone they are in, the hours of enforcement, and the parking time limit.

Businesses located in a Neighborhood Permit Parking zone may purchase up to three business permits for use by its employees for $75 per year. Large businesses may apply for additional employee parking permits. Nonresident commuter permits are available on a limited basis and specific to one neighborhood parking zone block. Commuter permits cost $82 per quarter for each permit.

SOURCES

- Boulder Neighborhood Parking Program: https://bouldercolorado.gov/parking-services/neighborhood-parking-program
- Email and phone correspondence with Kurt Matthews, Boulder Parking Services
- T2 Boulder Case Study: http://www.t2systems.com/customer-success/city-of-boulder,-co

5.0 RESIDENTIAL PARKING RECOMMENDATIONS

The residential parking study recommends maintaining Burlington's Residential Parking Program (RPP), and making improvements so the program is more transparent, manageable, and responsive to unique parking needs in residential neighborhoods.

This chapter describes general parking management approaches and nine strategies for advancing the community goals listed in Section 1.2, and restated here:

- **Balance Parking Needs:** Balance the needs of those who park on Burlington's streets, including residents, visitors, and commuters.
- **Account for Neighborhood Need and Quality of Life:** Recognize that each neighborhood and block is unique and the parking management tools used should account for an area's character and needs.
- **Administer a Program that is Fair and Transparent:** Provide clear guidance to the City, the Public Works Commission, and to all Burlington residents and visitors on how residential permit areas are objectively established and how to allocate for future residential permit areas.
- **Consider the Highest and Best Use of the Public Right-of-Way:** Given limited land resources, consider best use of the space that public on-street parking occupies, including accommodating multi-modal transportation options.
- **Streamline the Administrative Process:** Create clear rules and guidance, and implement technologies to simplify the administration of the system.
- **Apply a Data Driven Approach:** Use empirical metrics to measure parking trends and the utilization of parking spaces within neighborhoods.
- **Utilize Market-Responsive Feedback**: Develop a residential parking management plan that is sensitive to changing demographics, land uses, and built character.
- **Address the Need to Maintain City Transportation Infrastructure:** Consider polices, programs, and improvements related to parking residential neighborhoods that can reduce maintenance and administrative costs or generate revenues to help fund capital needs.

"General Parking Management Approaches" describe several efforts the City is currently engaged in to improve residential parking management. Effectively supporting these general approaches will help reduce parking demand in residential areas and may present, in many cases, simpler solutions than the Residential Parking Program for achieving community goals.

In addition to the General Parking Management Approaches, this chapter recommends 9 strategies, which can enable an optimal parking management system that preserves the livability of Burlington neighborhoods while finding the best use of the public Right-of-Way. **None of the strategies proposes removing existing resident-only parking restrictions.**

The recommended strategies are new or important modifications to the existing program. Each strategy is accompanied by a short description of how it would be implemented, and a

time frame for implementation. The strategies are intended to allow for flexibility over time to address the unique situations in each neighborhood.

5.1 I GENERAL PARKING MANAGEMENT APPROACHES

The City should continue to pursue several parking management strategies outside of the formal RPP to create convenient visitor parking, encourage turnover, and generate funds for neighborhood/transportation improvements.

Primary Goals

- Balance Parking Needs
- Address the Need to Maintain City Transportation Infrastructure
- Account for Neighborhood Need
- Is Market-Responsive

Discussion

Seven general parking management approaches are described in this section, which represent a mix of strategic and tactical approaches. All seven approaches are necessary elements of an effective long-term parking program.

Strategic approaches currently pursued by the City include:

- Encourage and Improve Sustainable Transportation Modes.
- Encourage Satellite Parking and Incentivize Parking in Remote Lots
- Improve Signage and Wayfinding.

In addition, four tactical approaches optimize parking resources:

- Install Parking Meters and/or Paystations.
- Implement parking time limits in non-RPP areas.
- Stripe Parking Stalls/Areas.
- Lawn Parking Bans.

ENCOURAGE AND IMPROVE SUSTAINABLE TRANSPORTATION MODES

In order to provide the foundation for sustainable growth and transportation, the City must provide options for non-single occupancy vehicle (SOV) trips, which will reduce demand for on-street parking.

Primary Goals

- Balance Parking Needs
- Consider Limited Land Resources

Discussion

The City of Burlington should continue to enhance its comprehensive system of transit routes, pedestrian facilities, bicycle routes, CarShare pods, and TDM measures to encourage a sustainable transportation system that does not rely on SOV's and on-street parking. The City must also continue to coordinate multi-modal transportation and parking. On major

corridors through residential neighborhoods, the City should consider whether sustainable transportation facilities, such as bicycle lanes, would be more appropriate than parking spaces.

Many current initiatives and programs within the City and region align with this strategy:

- Plan BTV – The City's comprehensive land use and development plan defines broad city-wide goals for sustainable development that are distilled into actionable strategies. The PlanBTV initiatives emphasize sustainable transportation and parking management.
- Active Transportation Initiatives:
    - Burlington Bicycle/Pedestrian Master Plan – In June 2015, the City of Burlington initiated an update of the City's Bicycle/Pedestrian Master Plan. The Master Plan will identify and prioritize walking and biking improvements based on existing conditions, adopted plans, and community feedback.
    - Chittenden County Active Transportation Plan – In July 2015, the Chittenden County Regional Planning Commission (CCRPC) initiated an update to their Active Transportation Plan to develop a regional long-term vision for future active transportation, and identify and prioritize bike/ped improvements for the region.
    - University of Vermont Active Transportation Plan – In April 2015 UVM initiated its Active Transportation Plan to guide the institution in developing a comprehensive system of routes, circulation, storage, signage and related facilities to facilitate and encourage active transportation to, from, and throughout the campus.
- Burlington Wayfinding – The City, through the Department of Public Works, is updating a wayfinding system that will improve signs throughout the city, including signs for public parking facilities.
- Burlington Travel Demand Management Plan – The City is formulating a Travel Demand Management (TDM) plan for the approximately 650 City employees. The TDM plan encourages City employees to use alternative (non-SOV) forms of travel when commuting, and to use fewer parking spaces. Over time, these TDM strategies will serve as a model for other downtown businesses to provide sustainable commuting options for their employees.
- Climate Action Plans:
    - Burlington adopted its Climate Action Plan in 2011. Key elements of the Plan address transportation such as reducing per capita and city employee Vehicle Miles Traveled (VMT) by 10% by 2025, and promoting compact mixed-use development.
    - In May 2014, the CCRPC adopted its Regional Climate Action Guide, which points to several transportation strategies designed to reduce carbon emissions, including supporting employer trip reduction programs;

increasing transit service and investing in transit facilities; improving Park & Ride facilities; funding bike/ped facilities; and promoting electric vehicle charging stations.

- The City is a core community within the Chittenden County Transportation Authority's (CCTA) service area. Several significant investments and service upgrades are described in CCTA's 2010 Transit Development Plan that directly impact transit effectiveness in Burlington. Key among these are the Downtown Transit Center, on St. Paul Street, currently under construction.
- The City has been a supporter of CarShareVT to help reduce car ownership and thereby reduce pressure on public parking. Of note is the City ordinance allowing CarShare vehicles to park within resident-only parking areas (Appendix C, Section 27 (g)(4)).
- The City is a partner with the Chittenden Area Transportation Management Association (CATMA) to coordinate TDM strategies. In 2014, the City received grants from the High Meadows Fund and the Chittenden County Regional Planning Commission (CCRPC) to prepare and implement the Transportation Demand Management (TDM) Action Plan referenced above in order to identify employee strategies and policies to decrease SOV commuting across all major employment centers, including the campus district, downtown, and the South End.
- Together with CATMA, the City works with UVM, the UVM Medical Center, and Champlain College in developing the 5-year **Joint Institution Parking Management Plan (JIPMP)** to address parking demand and coordinate parking resources. The Plan has a chapter that is updated annually based on new information gathered by CATMA from its member institutions and online surveys. Major revisions to the Plan occur every 5 years, the last of which was in 2014 for the 2014-2019 period.
- Downtown Improvement District – this area which is bounded by Lake Champlain, Pearl Street, South Winooski Avenue, and Maple Street encompasses the Downtown Improvement District which was created to provide a revenue source for 2 hours of free parking in the downtown. A benefit of this initiative is relieving parking pressure on residential neighborhoods adjacent to the downtown.

In addition to the initiatives described above, the City implements a transportation improvement program on an annual basis, much of which includes investments in alternative modes. Current examples include the construction/improvement of sidewalks throughout the city, upgrades to the Burlington Bike Path, and the development of the Downtown Transit Center, described above.

Case Studies

Ithaca, NY

Cornell University offers their regular employees the option to forego or relinquish and return a parking permit and join the OmniRide commuter program instead. OmniRiders receive free, unlimited travel on any transit bus within the county, a $600 value annually. Transit riders outside of the county can also join OmniRide by paying a discounted rate for a

pass for use on their county's transit system. OmniRiders can take advantage of park-and-ride lots that offer bus services from 11 parking lots to campus.[ii]

San Luis Obispo, CA

At California Polytechnic State University, a certain portion of parking ticket revenue must go towards TDM solutions. In the 2014-2015 academic year, there was approximately $650,000 total revenue from parking tickets, according to the Assistant Director of Business Services at University Police Department (UPD) Marlene Cramer. A majority of the revenue, approximately $400,000 (62 percent), is paid to San Luis Obispo (SLO) Transit, which allows students, faculty and staff to ride the buses for free.

"A lot of people think that the city is providing transit as a gift to the university," Associate Director of UPD Cindy Campbell said. "The city actually works with us to provide convenient service to Cal Poly. We contract with the city for the service, but we pay for it with parking citation revenue. It's not free."

In the parking fines, there is a $13 charge toward state-mandated fees, so $188,000 (29 percent) goes to the state and does not go to the institution, Cal Poly. After that, the school is left with approximately $60,000 (9 percent) in citation revenue. Most of this is used for TDM at Cal Poly, such as the escort van, Regional Transit Authority (RTA), rideshare and vanpool.[iii]

By mandating that a portion of parking revenue go towards transportation demand management solutions, the university starts the shift towards more sustainable options than SOV travel. The mandate both discourages car users by enforcing parking rules and encourages healthier transportation options through investment.

Boulder, CO

Similarly, Boulder uses parking revenue to fund TDM solutions—although the process is not as direct. In Boulder, revenue generated from permit fines goes towards the City's general fund. Over a million dollars out of the General Fund go towards TDM including transit passes for people who live in the residential permit districts. Therefore, people who are paying to park through permit fines pay for people who choose healthier transportation options, discouraging on-street parking and investing in TDM options.[iv]

Implementation and Time Frame

The City of Burlington is consistently engaged in transportation/land use planning studies, often in partnership with the CCRPC. All of these studies are required to engage the public for input. Therefore, this strategy is ongoing and pursued consistently. Specific initiatives to consider in the future include incentives for area employees to return or forego a parking pass and to direct a portion of parking ticket revenues towards TDM solutions.

ENCOURAGE SATELLITE PARKING AND INCENTIVIZE PARKING IN REMOTE LOTS

Incentivize use of satellite parking as part of a long-term transportation demand management strategy for both commuters and students. This strategy is especially

important for managing student parking demand and is increasingly important for managing commuter parking.

Primary Goals

- Balance Parking Needs
- Consider Limited Land Resources

Discussion

In addition to being an employment center drawing significant commuting traffic, Burlington has a significant college/university presence, with major institutions including Champlain College, University of Vermont (UVM), and UVM Medical Center. UVM has 3,650 undergraduate students who live off-campus, with an estimated 2,200 of those students living in Burlington.[v]

While student renters have the same residential parking rights as any other renter living in the City, one key way to manage on-street residential parking, particularly in densely populated student areas, is to discourage students from bringing their cars in the first place. Students tend to use their cars less frequently than residents who drive for work on a daily basis, so their cars end up sitting on neighborhood blocks for long periods at a time, preventing needed turnover of spaces for other users. To this end, the City should continue to coordinate with CCTA and the institutions to provide convenient satellite parking options, free shuttle service to downtown or campus, and financial incentives (such as gift certificates to the campus store) to encourage student participation. CCTA's Unlimited Access program is a successful example of coordination with area universities and should continue to limit parking pressures adjacent to the institutions.

UVM, UVM Medical Center, and Champlain College currently all provide park and ride facilities at Lakeside Ave Lot (formerly the Gilbane Lot). All three campuses provide free off-site parking for their employees, staff, and students and CATMA coordinates with CCTA on its satellite commuter routes.[vi] UVM currently prohibits all first-year students from bringing a car to campus, with the exception of a proven medical need. Parking on the University campus, with the exception of handicapped parking, is available through a permit/fee structure, with more distant spaces (Brown permit) priced at $165/year and the closest spaces (Green permit) priced at $329/year. UVM has developed an integrated policy to encourage use of alternative transportation. The University and colleges provide free transit passes, CATMA memberships, car share privileges, and up to eight emergency taxi rides home. It is important to keep these practices in place.

According to Association for the Advancement of Sustainability in Higher Education, one of the most popular ways to cut down on congestion is to close off central areas of campus to cars. This isolates traffic flow around the perimeter of the campus, where satellite parking lots are located. An investment must be made in alternative parking areas, and larger schools may need a public transit option, which UVM currently has. In the long term, there are likely significant savings in reducing the need for road maintenance within the campus.[vii]

The CCRPC completed a Regional Park and Ride Plan in 2011, which presented a prioritized list of new Park & Ride and Intercept Facilities; and evaluated and recommended upgrades to existing facilities. A park and ride study was completed in 2014 considering a facility proximate to Exit 14. The construction of new park and ride lots, and the improvements to existing park and ride lots, as outlined in the forthcoming State of Vermont Park and Ride Plan, can help to meet the commuter parking demand of downtown businesses. Shuttles from these lots or free transit passes would likely be needed to bring people the last mile.

Case Studies

Ithaca, NY

Cornell University offers its faculty and staff a tiered, permit parking system, where employees pay different rates based on the privileges they receive. The outer tier is free, and it grants permit holders access to outer lots with free bus service, which comes every ten minutes. However, there are only limited spots at this tier. The perimeter tier costs $359.85 annually, and it grants permit holders access to slightly closer perimeter lots. The mid-campus tier permits cost $575.02 annually for mid-campus locations, in addition to perimeter and outer lots. The central tier costs $806.32 annually for access to perimeter and outer permit lots, student residential permit areas, and a complimentary 30-minute loading permit. These prices are significantly more than UVM's parking prices; however, due to their differing pricing structure, a direct cost comparison is not possible.

For Cornell students, parking is mostly limited to perimeter lots. Resident students pay $752.86 annually, and commuting students living off campus can opt for a cheaper permit, which offers less flexibility in lot choice at $359.85 annually. Some permits that resident students can buy also provide OmniRide services that provide free use of public transit. OmniRiders can take advantage of the 11 park-and-ride lots that have bus routes that pass through them on the way to campus.[viii]

Charlottesville, VA

University of Virginia (UVA) uses T2 Flex to manage its 16,000 parking spaces in 11 garages and its large surface lot inventory. UVA students living on campus have the option to purchase a $228 annual permit, which grants them access to free transit and a 1,200-space, satellite lot. Students living off campus can purchase a $228 annual permit, which grants them access to free transit and a choice between several lots.[ix]

Boulder, CO

University of Colorado at Boulder offers its employees four "shuttle lots" that have a tiered proximity pricing system that charges different prices based on the distance between an employee's office and their parking lot. Even though pricing discourages faculty and staff from parking closer to their office, still two-thirds of campus permit holders pay the highest rate, $53/month, to park relatively close to their primary workplace. One-third pay a lower rate, as low as $13/month, to park further away – some out of choice to save money or because they don't drive very often, others because there is not enough close-in parking near their workplace to accommodate them. Employees apply for shuttle lots through a parking

liaison, and parking fees come directly out of employee's salaries. Shuttle trips typically last 7 minutes, and the shuttles arrive every 10-15 minutes. One of the four UC-Boulder "shuttle lots" offers free parking and shuttle service through Denver's RTD park-n-ride service. This lot is usually over 50% empty.[x]

Implementation and Time Frame

On an annual basis, the City of Burlington should evaluate the progress of Park & Ride lot construction and improvement, and engage with CATMA and CCTA in encouraging commuters and students to use these facilities. Through its 5-year review of the Joint Institution Parking Management Plan, the City should continue to encourage the Hill institutions to support park and ride strategies and make park and ride opportunities available to downtown employees. The City and the institutions should explore the feasibility of closing central areas of campus to cars to discourage SOV trips around campus.

IMPROVE SIGNAGE AND WAYFINDING

Install user-friendly signage to explain residential parking restrictions by time, day, and/or location. Signage can also help point drivers to suitable alternative public parking areas.

Primary Goals

- Is Fair and Transparent

Discussion

Clear signage is instrumental to ensuring that all drivers understand the parking restrictions, time limits, and location of regulated on-street spaces. Wayfinding signs can also make it easier to find suitable parking elsewhere, particularly for visitors and other non-residents. Signage can help reduce the need for heavy enforcement by preventing non-residents from accidentally parking on restricted residential blocks in the first place and redirecting them to appropriate locations where possible.

Signage and pole maintenance is also a relatively inexpensive way to improve residential parking management. Currently in Burlington, on a typical 500' block with good visibility and parking on one-side of the street, sign installation costs roughly $506 for small signs and $606 for larger signs.[xi]

The City is currently updating its citywide wayfinding system by installing new signs directing the public to key areas such as the Waterfront and Church Street. As part of the Wayfinding upgrade, new parking signs are being installed to improve the guidance provided to motorists for finding available public parking.

Case Studies

Ithaca, NY

Ithaca's Public Works Department is in charge of sign construction. Through the General Fund, the department puts about four signs on each street. Each sign costs $25 and typically lasts 5 years.[xii]

Boulder, CO

Boulder's city manager appoints a traffic engineer who is responsible for constructing residential parking signs, among other duties.[xiii] It typically costs $100 per sign, and two signs on block faces.[xiv]

Charlottesville, VA

Charlottesville's Public Works Department designs and installs signs with funding from the General Fund. Because most of their signs are simply replacements of signs that have already been designed, costs are minimal.[xv]

San Luis Obispo, CA

The City's Streets Maintenance Division installs and maintains all road signs in San Luis Obispo, including those that designate restricted parking hours in Residential Parking Districts. The Streets Maintenance Division bills Parking Services for the installation and payment of physical signage. In May 2014, the residents of Mission Orchard successfully petitioned to become a Residential Parking District. This parking district includes portions of a five-block area. Parking Services paid $21,000 to buy signs, signposts, installation labor, permit printing, and any miscellaneous items for the newly installed district.[xvi]

Implementation and Time Frame

The City is improving wayfinding and signage through ongoing City projects. However, with the implementation of all other recommended Strategies, the City, through the Department of Public Works, should conduct a five-year review the appropriateness of the current signage to determine whether improvements can be made to improve information clarity and reduce confusion.

TACTICAL APPROACHES TO IMPROVE PARKING MANAGEMENT

The suite of management tools described below can be used in both RPP and non-RPP areas were parking is degrading quality of life. They can be employed now or in the future should parking changes create burdensome neighborhood impacts, and they can be implemented more quickly than changes to the RPP or creating an RPP designation.

Parking meters or pay stations may be added to specific areas of the City, including within some RPP areas, which would allow visitors to pay to use excess on-street parking spaces in mixed-use areas or in areas adjacent to recreational, commercial or downtown-transition zones. This strategy may be attractive to some residents in non-RPP areas because they avoid the costs and restrictions associated with the RPP. It balances the needs of residents to have a place to park at the end of the day while sharing those spaces with the broader public while adjacent shops, offices, or schools are open. To ensure that the goals of the City are met, RPP permit holders would be required to pay for meters during enforcement hours.

Implementing parking time limits can be an effective way of managing parking demand within residential areas, particularly those adjacent to commercial areas where spillover parking effects may occur. Parking time limits (e.g. two hour parking, 8am-5pm) can address local variations in parking demand and manage times when parking preference should go to

residents. Some cities give preference to residents during working hours on weekdays in response to an overflow of business and/or visitor vehicles that were using neighborhood streets as all-day parking areas.

Striping of parking stalls can optimize parking spaces on a block while minimizing the potential for blocking driveways. This approach should be considered in cases where illegal parking chronically occurs, such as blocking private driveways.

Parking on lawns has stemmed in part from a lack of available and appropriate on-and off-street parking in residential areas. Parking on lawns is currently allowed overnight during parking bans. However, in certain neighborhoods, lawn parking has become an issue at other times. Lawn parking during the day creates a visual blight in the neighborhood and in some cases, creates safety concerns and blocks driveways or pedestrian access. The fine in Burlington for lawn parking is $75, where a new citation may be issued every day that the vehicle is discovered illegally parked on the lawn.

Implementation and Time Frame

It is recommended that parking meters/pay stations and striping of parking stalls be implemented in the short-term, upon the request of residents or initiated by the City DPW, as appropriate. Code Enforcement and BPD should continue to enforce lawn parking violations and investigate ways to strengthen enforcement.

This plan proposes that, for dwelling units that receive more than three parking ban fines per year in an RPP area, all permit holders in the unit should automatically lose their residential parking permits for the remainder of the year. This change should be implemented in the short-term. If it remains a significant issue, the BPD will consider raising the fine from $75 to $125. It is recommended that the City continue to encourage residents to park overnight in the City's downtown garages for free during parking bans.

5.2 I RECOMMENDED PARKING MANAGEMENT STRATEGIES

Nine new or modified strategies were developed for the residential permit program through the course of this study through analysis and public input. They are based on the City's goal to better manage Burlington's on-street parking assets in order to balance the needs of residents, visitors, and businesses. The overarching goal is a sustainable transportation system in Burlington.

The recommended residential parking strategies fall into four categories:

Technology

Technologies that are designed and developed to enhance residential parking communications and streamline administration.

Parking Experience

These are part of ongoing physical infrastructure and transportation demand management (TDM) improvements that will improve wayfinding or help reduce parking demand near high parking generators.

Permits & Pricing

These are recommendations to account for administration and enforcement costs from those who benefit from the program, as well as encourage residents to be thoughtful about parking as a limited land resource. They also take into account the parking needs of non-residents and the potential revenue that can be generated from parking in the public right of way.

Administration

These are recommendations to enhance the governance and management of residential parking permits in order to streamline the registration, renewal, monitoring, and enforcement of residential parking. They also provide clear guidance on how residential permit areas are established and provide a means for allocating or reallocating future residential permit areas.

STRATEGY #1: DEVELOP ONLINE RESIDENTIAL PERMIT RESOURCES

Improve online residential parking resources as a phased strategy. In the short-term (0-1 year), install downloadable RPP Application and Renewal Forms online. To save time for both residents and BPD staff, residents may print, fill out, and mail the forms from home.

In the mid-term (1-3 years), develop a web page providing comprehensive information on the residential parking program. Information would address the rationale for the program, the process for acquiring permits and petitioning for residential parking as well as provide all necessary forms and documents.

In the long-term (>3 years) establish online payment systems for permits and fines by credit card or banking account.

Primary Goals

- Fair and Transparent
- Streamlines the Administration Process

Discussion

Burlington residents must currently apply or renew their permits in-person at the Burlington Police Department (BPD) counter during business hours, between Monday and Friday, 8 AM to 4:15 PM. While not publicized, residents may also mail in their resident permit application if they first call ahead to verify with a BPD staff that they have all copies of their supporting documents and have no outstanding citations on record.

Currently BPD Parking Enforcement accepts checks, VISA, MasterCard, or Discover credit cards for citation payments. Payments may be mailed to BPD, dropped off during business hours, or administered over the phone. In the short-term, these processes will be continued.

The City of Burlington should initiate the development of a residential parking webpage where comprehensive information on the program can be found in one place. The webpage would serve as an information resource, as well as a library for downloadable forms, maps,

and brochures. The Residential Parking website can be hosted through ParkBurlington.com or by the BPD and parking enforcement staff through the burlingtonvt.gov website.

The website should provide basic information about the residential permit program including:

- A description of the Residential Parking Program is
- A map of permitted blocks as well as
  - a rationale for why particular blocks received residential parking restrictions
  - time limits of residential parking
- Who is eligible for the RPP and how to prove eligibility
- How to apply for a Residential Parking Permit
- Terms and Fees
- How to petition for a new Residential Parking Permit Area
- Restrictions and Exclusions
- How to Pay Citations
- Frequently Asked Questions

In the longer term, after the informational parking website is developed, allow existing residents to renew and pay for their parking permits online. Within the comprehensive website, a link to a Residential Parking Permit Application form should be provided for download or completing online. In all cases, and consistent with current practice, applicants will also need to provide copies of at least 2 of the following documents:

- Students: valid student ID, current lease, driver's license, vehicle registration
- Non-students: driver's license with address of resident-parking street and vehicle registration (for decal permits associated with a specific vehicle; not transferable)

With a secure and comprehensive parking website, the City should also allow users to go online and pay for parking fines or provide parking fine vouchers (see Strategy #7, below). This saves staff time and resources and can encourage prompt payment by making the system easier for users. Users would enter their citation number, vehicle license plate number, and the date the ticket was issued, along with the user's credit card information. It is estimated that an online system that enables users to buy parking permits and pay citations will cost about $12,500 to purchase and about $8,000 per year to license, not including City staff's time related to installation, training, and maintenance.

Additionally, with a coordinated online application system, residents can log in and manage their parking accounts online, such as changing their vehicle information. This feature helps streamline the data processing needed from BPD. The permit owners database should be configured to provide the BPD with an easy way to send relevant information to permit owners. This may be mailing residents when their permits are about to expire or mailing all permit owners about changes in policy or enforcement.

Case Studies

Charlottesville, VA

At the University of Virginia, usage of T2 Flex software has significantly eased the administrative burden of selling permits and collecting citation fines. Online payments, citations, permit sales, events, and garage transactions are all integrated in one system using T2. In 2014, they sold 2,211 permits. Moving the system online has significantly streamlined the process of issuing permits. With the old system, wait time in line could last almost four hours, and over 12 staff were needed to sell the permits. Now, with almost 80% of permits ordered and fulfilled online, three cashiers are needed, and the line's maximum has been nine people. Through T2's eBusiness Solution, students can also pay citations online and manage their personal accounts, which provide information for UVA's electronic permit database.[xxiii] Thirty-five percent of citations are paid online.[xxiv]

The City of Charlottesville Treasurer's Office relies on mailing to inform residents that it is time to renew their permits. Residents who have already purchased a permit and are thus already in the system receive renewal applications with their names, addresses, and permitted vehicles already filled out. In the weeks leading up to August 31, the expiration date of annual permits, the office uses approximately six staff to prepare and send out several thousand reminders of permit renewals, with their electronic database automatically generating information for renewal applications. Residents can mail in these applications, and they will then receive permits by mail, saving them a trip the Treasurer's Office.[xxv]

San Luis Obispo, CA

In the weeks before residential permits expire, Parking Services' Administrative Assistants send out notices to all residents in the Residential Parking Permit Districts. Residents have the option of renewing over the phone, via mail, or via email.[xxvi]

Implementation and Time Frame

The City, through the Burlington Police Department and Department of Public Works, should phase in this strategy by providing online downloadable forms in the short-term (0-1 year), a comprehensive residential parking informational website in the medium-term (1-3 years), and online payments in the long-term (>3 years). The online payment system should be made operational within one year of the implementation of Strategy #7, which will initiate permit fees and other new features.

STRATEGY #2: ESTABLISH THREE-YEAR COMMUTER PERMIT PILOT PROGRAM

To balance parking needs and generate funds for neighborhood/transportation improvements, implement a 3-year pilot program to offer a limited number of commuter permits on specific permit-restricted blocks that have demonstrated surplus parking during working hours. For existing RPP zones, property owners can petition to opt-in to the commuter permit pilot through a petitioning process.

Primary Goals

- Balance Parking Needs
- Address the Need to Maintain City Transportation Infrastructure
- Account for Neighborhood Need
- Is Market-Responsive

Discussion

A critical component to the success of the Residential Parking Program is to recognize that each neighborhood and block has unique parking needs and demands. Some form of targeted strategy may be necessary to allow flexibility for custom-tailored solutions. One of the goals of the Residential Parking Program is to be market-responsive and recognize that land uses may change over time and parking management will need to evolve to respond to new parking demands.

To manage the City's on-street public spaces, particularly in areas that are appropriate for shared parking opportunities between residents and commuters, the City may propose, within a three-year pilot program, to allot a specific number of commuter permits on a specific block or neighborhood area. This strategy may be considered for areas that have a parking surplus largely during daytime business hours or which are currently satisfying parking demand from commuters or the public in a way that is harmonious with parking demand from residents.

After an area receives RPP designations, DPW staff would conduct a parking inventory over the course of a fall or spring month to determine if less than 85 percent of on-street spaces are occupied at specific times of day or days of the week. This inventory would consist of observing utilization rates during working hours, identifying parking constraints such as emergency vehicle access, and identifying the source of non-resident parking demand. To ensure that Strategy #2 will not impact the JIPMP, commuter permits should not be issued on streets where demand is projected to come primarily from one of the institutions.

DPW staff would then prepare a memorandum documenting the parking count and analysis to the Public Works Commission. The Public Works Commission would then decide whether or not they would like to propose an add-on strategy to use the excess parking spaces in the specific residential area or block for commuter parking passes. With data on the availability of parking and the number of surplus on-street public spaces in a given residential area or block, the Public Works Commission and other City staff will propose:

- The geographic, time, and capacity limits for commuter passes;
- Cost-benefit analysis for implementing a commuter pass system for specific blocks, including potential revenues.
- Improvements that could be made using the generated revenues (if applicable).

All of this information would be posted and followed up by a Commission hearing that is open to the public for feedback. The Public Works Commission and other City staff then meet following the public hearing and petition process to determine whether to adopt the strategy. If the commuter permit option is adopted in a particular area, it should last for two

years from the date of adoption and then be reevaluated based on how performance in that neighborhood.

To ensure neighborhood livability, key elements of a commuter parking pilot program are:

- The number of commuter permits per zone or block (existing or future) would be limited to attain approximately 85% on-street parking occupancy during peak daytime periods. The City would conduct counts during peak periods in the identified area to determine the 85% occupancy inventory.
- **For existing RPP areas, property owners can petition to opt-in to the commuter permit pilot through a process where 51% of property owners on the block vote to participate.**
- For newly proposed RPP zones, commuter permit pilot participation can be required should the DPW staff and Commission determine that the street/zone has additional daytime capacity up to the 85% occupancy goal either before or after RPP designation.
- Commuter permits would be limited to daytime work hours (e.g. 7:30am to 5:30pm) to provide more on-street availability for residents during the evening and overnight.
- Each dwelling unit in RPP zones participating in the commuter permit pilot will have the opportunity to purchase permits at a discounted rate.
- It is recommended that commuter permits be issued quarterly at a cost of $120 per quarter, or at a cost determined by the Public Works Commission.

Case Study

Boulder, CO

As part of its petition process, Boulder's Parking Services determines how many commuter permits are allowed per each neighborhood based on how many a street could handle after residential needs are met. If residents are unhappy with parking availability, they can call Parking Services and the number of commuter permits may be reduced.

Revenue generated from commuter permits funds the general budget for the Neighborhood Parking Program. This budget is set up to be cost-neutral so that commuter permit and residential permit sales fund the material costs of issuing permits. [xxvii] Parking Services' website has a dynamic map that displays which commuter spots have been sold and which are still available.[xxviii] Commuter permits are sold for $82 per quarter, with quarters lasting from January until March, April until June, July until September, and October until December. Commuters are responsible for renewing their permits before the quarterly renewal deadlines, and they have the option to make renewal payments by mail, phone with credit card, or in person. Businesses, property managers, property owners, and individuals can apply for permits. Permits are only transferrable if the permit is leased by a business or a property manager and is part of the sale of that business or property.[xxix]

Implementation and Time Frame

The City recognizes that some residents in existing RPP zones are concerned about the proposal for a commuter permit program. Given this concern, this report recommends a 3-

year commuter permit pilot program to help the City understand the opportunities and challenges and to allow both residents and the City to make adjustments as needed.

At $120 per quarter, pricing for commuter permits is proposed at a level significantly higher than for residential permits, and will be coordinated with institutions that have their own parking pricing systems so as not to compete. A fixed number of permits would be available on a quarterly basis and sold on a first-come, first-serve basis.

A pilot program would reveal the following:

- Determine how effectively this approach balances neighborhood livability and non-residential parking needs in the city.
- Determine the operational issues with such a program and the public's demand for commuter permits.
- Determine how much additional revenue from out-of-town commuters could be generated for the City's capital needs.

The Public Works Commission would review the pilot after three years to determine whether to terminate, continue, or modify it.

The Commission could exempt new proposed RPP zones from participating if there were street design or other considerations that would make such implementation unsafe.

Following adoption of a commuter parking program if parking availability drops considerably for residents and becomes problematic, residents may alert DPW staff, who would follow-up with a parking count and adjust the boundary, time, or number of commuter permits accordingly. If the pilot goes well, City staff could consider an expansion of the program.

STRATEGY #3: ESTABLISH RESIDENTIAL PARKING PERMIT PERIODS BASED ON PARKING SUPPLY AND DEMAND

Within RPP areas, specifying hours, days, and/or months when residential parking permits apply addresses local variation in parking supply and demand. Hybrid solutions to address parking supply and demand, harmonizing residential parking demand with public parking demand should be explored.

Primary Goals

- Balance Parking Needs
- Consider Limited Land Resources
- Account for Neighborhood Need
- Apply for a Data Driven Approach

Discussion

The recommendations of the residential parking program are intended to manage the City's limited public parking resource. Central to the goal is the need to balance the demands of all those who wish to park on Burlington's public streets. Time limits -- by hours, days of the week, or months of the year -- should account for the particular needs of its residents,

visitors, and commuters. Time limits should logically link to the most prevalent parking generators in the City to address the unique parking patterns of each neighborhood. At times when there is not a high demand for parking from non-residents, the City would not need to expend additional staff time and resources to enforce parking restrictions in those areas.

For example, in residential areas that are adjacent to large commercial businesses, where non-resident parking demand is primarily an issue during business hours, the time limits for resident-only parking could correspond to a 9am to 5pm period. Similarly, in areas that have seasonal demand, such as near public spaces like Oakledge Park or Centennial Field, seasonal restrictions may make the most sense.

Currently, the City ordinance governing resident permit parking contains the following time-based categories:

- All times (24 hours per day, 7 days per week, 365 days per year);
- May 1 to October 1;
- 12am to 6pm
- 6am to 6pm, Monday through Friday

These time periods, and the areas they apply to, should be reviewed periodically to ensure that they are appropriate given the main sources of parking demand in the resident-only areas and opportunities to integrate public parking within RPP areas in mixed use and transition areas.

Other time periods may be reasonable in some resident-only parking areas, such as overnight resident-only parking (e.g. from 6pm to 6am). Ongoing parking surpluses in residential restriction neighborhoods, which are proximate to mixed-use and transition areas may present opportunities to integrate public parking during periods when residential parking demand is light. As mentioned previously several cities allow for two-hour visitor parking in non-metered residential zones. Olympia, WA, Boulder, San Francisco, and Washington DC all allow free two-hour parking in residential zones that do not have meters so that visitors or students may make park for a limited amount of time to run an errand, pay a visit, or perform a task.

Case Studies

Ithaca, NY

The City of Ithaca only enforces permit requirements from Monday to Friday between 9 AM and 5 PM, excluding holidays. Street signage displays the restricted hours. Alternatively, residents can petition the City Traffic Engineer to install restriction signage on their streets. This petition process is appropriate for blocks that would like the benefits of time-restricted parking for their street without being involved in the permit system.[xxx]

Charlottesville, VA

Hours restricted to permit holders vary based on location. Most downtown areas authorize restricted parking regulations from 6 AM until 5 PM as parking demand is highest during

normal business hours. However, the hours are extended in some zones that have limited spots at any point of the day.[xxxi]

City Council ultimately approves or denies proposed restricted parking areas, and they determine if the proposed area necessitates extended hours. To make their decision, the council considers recommendations provided by the traffic engineer based on a three-day parking survey, the director of neighborhood development services, the city manager, or other individuals. After the traffic engineer mails residents living in the restricted area about their decision, new permit parking areas will be marked with signs indicating the restricted hours.[xxxii]

San Luis Obispo, CA

San Luis Obispo has nine Residential Parking Districts, all with different restricted hours. Hours can even vary within the district based on specific demands.[xxxiii] For example, in the newly implemented Mission Orchard district, Parking Services staff conducted parking occupancy counts various times throughout a random weekday. They found that the proposed hours of 6 am to 6 pm on weekdays would be best because of the non-resident students, teachers, and employees that typically parked in the district. Since the residents play a large role in determining which times are peak hours, the City is alleviated of the costs associated with conducting extensive parking counts in unfamiliar areas. The system also ensures resident buy-in, and thus, they are more likely to be satisfied with the permit hours.[xxxiv]

Boulder, CO

Boulder has ten different neighborhoods with permit parking that have slightly different enforcement hours. Most are from Monday to Friday between 8 AM and 6 PM or between 9 AM and 5 PM. The petition process, which involves conducting a parking survey and formulating a draft proposal with permit times, takes at least 7 hours of staff time at $20 an hour.[xxxv]

Implementation and Time Frame

The City, through the Department of Public Works and the Police Department, should review the appropriateness of the time limitations every five years. If changes to existing time limitations are appropriate, DPW staff should coordinate with residents and the Public Works Commission on communicating the rationale for any changes and in engaging in the process of revising the ordinance as appropriate.

STRATEGY #4: EVALUATE RESIDENTIAL PARKING AREAS RATHER THAN STREETS

Have the flexibility to establish residential permits by a small walkable area, rather than individual blocks or streets, to balance parking demands throughout a close neighborhood area and manage corner lots.

Primary Goals

- Balance Parking Needs

- Account for Neighborhood Need
- Streamline the Administrative Process
- Is Market-Responsive

Discussion

When the Burlington residential parking program was first formalized in the 1990s, the City established residential permit areas by ward, which did not resolve issues of high parking demand given the large geographic extent of the ward areas. The City then changed the permit areas to a street level system, where residents may only receive permits for the street that their property faces.

To alleviate these concerns, this strategy allows the designation of parking areas encompassing multiple resident-only blocks. Major streets should serve as boundary edges between two adjacent residential parking areas to discourage residents from crossing major corridors to get from their parking space to their home. This system will allow residents to park not only on their street, but also within a walkable radius of their home.

The areas may be of varying sizes, based on existing residential permit areas, topography, and location of major corridors. The residential parking areas would be designed to best serve residents' parking needs within their neighborhood and better distribute parking around a walkable and convenient set of blocks. A parking area strategy, as opposed to a street-by-street arrangement, could widen the geographic scope of restricted residential parking in Burlington. However, enforcement can be simplified through a color-coded system.

A special case in the Resident Parking Program is the corner property. Under the current system, some corner property residents are confused as to whether they can get a permit for either street their dwelling fronts on, for the street where their driveway is accessed, or for the street with their locatable address. The City has also received complaints that residential parking overcrowds non-permitted areas from residents who live on unrestricted streets adjacent to permitted streets.

Strategy #4 could partially address this issue; however, to clarify the situation with corner lots, it is recommended that owners of corner lots with frontage on an RPP street, streets, or area be given the choice of which street or area to have their permit associated with. The onus should be on the homeowner to prove that their lot has frontage on the street or area they request, and this proof should be furnished along with evidence of eligibility for the RPP in general. The City should determine what forms of proof are acceptable and easy to process. Examples include a copy the corner lot's tax map or a print out from computer mapping software.

Implementation and Time Frame

In creating a resident-only parking system that is primarily organized by block, the resident-system has become geographically fragmented in some areas. While not an enormous

problem, the fragmented nature of the current system can be confusing and is more expensive to enforce.

At this time, there is not a need to revise the existing geographic structure of the system. However, having the flexibility to implement an "area-wide" resident-only parking area is a useful parking management tool the City should have at its disposal.

It is recommended that the current resident-only parking areas be reviewed to determine whether any efficiencies could be gained by redefinition, and that the DPW conduct a review occur at least once every five years and report to the Public Works Commission whether administrative or user efficiencies could be gained by designating resident parking areas. Strategy #4 is a short-term strategy (0-1 years) to be implemented by the BPD in consultation with DPW and the Public Works Commission.

STRATEGY #5: STREAMLINE THE PETITION PROCESS

To establish a fair and transparent process, the process for petitioning for resident only parking should be based on demonstrated community support and demonstrated parking demand.

Primary Goals

- Streamlines the Administrative Process
- Is Fair and Transparent
- Is Market-Responsive

Discussion

Currently, DPW staff are tasked with managing all requests for new parking permit locations. Residents on a given block are responsible for collecting support from 33 percent of their neighbors and submitting the request to DPW staff. Then DPW follows up with their own petition to ensure that there is 50 percent agreement from residents on the block. Following that, DPW conducts a license place count over the course of a typical weekday, at 7 AM, 10 AM, and 2 PM. There is currently not a minimum occupancy requirement in order to qualify for residential permit designation.

Assumptions are made on the driver type: whether they live on the street, live in Burlington, live outside of Burlington but in Vermont, or out of state. The assumptions are based on the license plate and the time(s) they are parked on the street. For example, someone parked on the street at 7 AM on a Monday morning, but not 2 PM, is an indication of a resident. Previously, DPW has also shared the license plate numbers with BPD, who run the list through the Department of Motor Vehicles (DMV) to assess whether the vehicle owners were largely residents (homeowners and renters) or non-residents, which include any out-of town students, transients, and visitors. However, given that it is not possible to differentiate between student renters and other transient vehicles, the petition process does not use the information as a factor in the memorandum write-up to be presented to the Public Works Commission.

The current petition process for establishing new permitted spaces is not clear to Burlington's residents. In order instill a fair and transparent process, it should include well-defined thresholds and be supported by parking data. The study proposes a two part process that includes community support and recognition of high parking demand.

Demonstrated Community Support

Ensure demonstrated community support via a grass-roots petition process that exhibits majority agreement and support for residential parking restrictions. Require 51 percent of property owners' signatures in order to initiate the resident permit parking process.

Adopt a streamlined petition process, with one-step involved for DPW staff and minimal administrative effort from the Burlington Police Department (BPD). In order to start the petition process, petitioners can go to the City Department of Planning and Zoning at City Hall to request the names and addresses of all property owners on their block. The residents would be responsible for getting 51 percent support from the property owners listed on their block.

Petitioners will have the option to specify time periods for resident-only parking, as allowed with Strategy #3. Once the petition(s) have demonstrated support from the majority of residents on their block, they will meet with DPW staff to review. No further petition process by DPW staff would be necessary.

Demonstrated Parking Supply and Demand

Assess parking supply and demand. Following demonstrated property owner support, DPW Engineering staff conducts a parking survey over the course of two peak periods to determine the occupancy levels. A minimum occupancy threshold to be considered for resident only parking is 85 percent occupancy, which demonstrates that there is sufficient parking demand and possible increased traffic due to people circling for a parking spot.

Currently, DPW Engineering staff conduct a parking survey to ensure that there is demonstrated parking demand on a given block or neighborhood area. However, the City does not have a set minimum occupancy threshold that must be met in order to qualify for residential parking. A quantifiable methodology helps the City make a clear and sound case to explain why certain neighborhoods have resident parking.

Seasons play a large factor in Burlington's parking demand, particularly when school is in or out of session.[xxxix] In the past, DPW parking occupancy counts during the summer time would reveal low parking occupancy and resident petitions would be rejected. Therefore, residents petitioning for residential parking restrictions will be made aware that all parking surveys will be counted between September 1 and April 30 in order to capture peak parking demand.

The timing of the parking survey count will be appropriate to the requested timeframe of the parking petition and the times and days of week with the highest perceived parking demand.

Case Studies

Ithaca, NY

Residents must petition the City Clerk's Office to join the permit program system, and the petition must include at least 51 percent of eligible residents in the proposed permit block. In one zone, no more than one resident per tax parcel shall be permitted to sign the petition. In the other zone, no more than one resident per dwelling unit or two residents per tax parcel, whichever is fewer, shall be permitted to sign the petition. With a petition that has at least 51 percent of residents' signatures, the City Traffic Engineer will conduct a parking survey over two separate days during average weekly peak hours to determine that at least 75 percent of the legally available parking spaces are being utilized. [xl]

In addition to this one-time parking survey, the Parking Director and/or a City Traffic Engineer typically conduct daily parking inventories in residential parking zones using License Plate Recognition (LPR) technology, which allows them to conveniently conduct counts from their vehicles. LPR enables recognition and matching of vehicles that have residential permits and, consequently, enables identification of non-permitted vehicles. City of Ithaca staff also use LPR to determine the amount of time a vehicle has been parked at the same location, enabling enforcement of parking time limits (e.g. 9am – 1pm only; or, 2-hour parking only). The LPR count data informs Ithaca Parking Operations staff on the sources of parking demand, helping them to target a parking utilization of around 80 percent.[xli]

Charlottesville, VA

Charlottesville's City Council will consider establishing new parking zones once a year. To prompt an on-street parking survey, residents must submit a petition that includes signatures from one representative of at least 75% of the affected households. The petition must include a list of the addresses of the affected households and a list of the license plate numbers for each vehicle registered to any person(s) residing at each address. Using this data, the survey not only measures total utilization rate, but it also measures the percentage of parked vehicles owned by residents in the parked area. This information is gathered by comparing the license plates of vehicles parked on the street to the ones gathered from the survey. In order for a zone to be approved as a residential parking zone, the survey must fund that at least 75% of the total number of on-street parking is utilized and that at least 50% of the occupied spaced are occupied by vehicles with owners that do not reside within the new proposed area. [xlii] The General Fund allocates money to Neighborhood Development Services, which is in charge of conducting the on-street survey. [xliii]

Boulder, CO

In order for an area to be eligible for residential parking program, 25 neighbors must submit a petition to Parking Services. The petition prompts the City to conduct a parking survey that assesses the needs for an NPP zone. This survey takes about 6-7 hours of staff time at $20 per staff per hour. [xliv] This information will inform a draft proposal that the residents can choose to contribute to.

A public hearing before the Transportation Advisory Board to review the proposal is held and the Board's recommendations and residents' comments are forwarded to the City Manager to make a final decision regarding the zone. [xlv]

San Luis Obispo, CA

The citizen group that initiates the Residential Parking Permit District process proposes permit hours because they have an understanding of when peak hours are. This citizen group must include individuals from 60 percent of the households in the district. Parking Services staff will then evaluate the parking impacts in that particular district and approve or recommend modifications to the hours.

Implementation and Time Frame

It is recommended that Burlington DPW pursue Strategy #5 with BPD support in the short-term to improve program responsiveness. DPW should draft written document detailing these revised procedures for residents interested in the RPP program.

STRATEGY #6: ESTABLISH A PROCESS FOR REMOVING OR REDEFINING RESIDENTIAL PARKING

Establish a process to remove or redefine existing residential parking restrictions. The process should mirror the petition process used to establish new residential parking restrictions (Strategy #5). This process can be initiated by neighborhood residents or by the City, through the Department of Public Works.

Primary Goals

- Balance Parking Needs
- Account for Neighborhood Need
- Apply for a Data Driven Approach
- Is Fair and Transparent
- Is Market-Responsive

Discussion

The City should establish a process that enables the removal or reallocation of residential parking restrictions. The process can be initiated by residents or by the City, but which, in either case, require demonstrated property owner support as described in Strategy #5 (streamlining the petitioning process).

Residents or the City may wish to propose changes to the hours, or days of the week, that public parking is restricted or allowed on their block, as recommended in Strategy #3.

Case Study

Charlottesville, VA

Residents can sign a petition with signatures from at least 50% of households in a residential parking area to request the removal of the residential permit system. The city traffic engineer can also make recommendations to remove restricted parking hours in a residential permit parking zone. Either of these actions will prompt an on-street parking study from the

director of neighborhood development services to determine if parking restrictions should be discontinued. If the survey finds that 50% or more of the total number of on-street parking space along the block are unoccupied, and that 50% or more of property adjacent thereto is residential, then the parking restrictions may be eligible to be lifted. The city council ultimately decides whether the area should remain part of the residential permit parking zone, and if they decide that it should not, then the traffic engineer shall oversee the removal of permit parking district signs.[xlvi]

Implementation and Time Frame

It is recommended that Burlington DPW pursue this strategy with BPD support in the short-term to improve program responsiveness. Implementing ordinance changes necessary to establish the removal or reallocation process should occur with the development of online resources for the residential parking program.

STRATEGY #7: REVISE RESIDENTIAL PARKING PROGRAM TO INCORPORATE A FEE STRUCTURE AND TO ALLOCATE A MAXIMUM OF 4 PERMITS PER DWELLING UNIT

Recognize that the use of public space for residential on-street parking is not free, but a privilege that is funded in part by all residents in Burlington. Implement a fee structure for residential permits and allocate a maximum number of permits to encourage residents to use on-street parking judiciously.

Primary Goals

- Balance Parking Needs
- Consider Limited Land Resources
- Address the Need to Maintain City Transportation Infrastructure
- Streamline the Administrative Process
- Is Fair and Transparent
- Is Market-Responsive

Discussion

In the study of comparable communities, Burlington is the only one that administers and enforces residential parking permits without a fee. In line with the goals to help manage valuable on-street public parking, charging for parking is a key lever to encourage residents to be more thoughtful about the use of public on-street spaces.

In addition, the City of Burlington currently does not have a maximum number of residential permits issued to each dwelling unit. For example, if a unit has four members who all have vehicles, they may each get a resident bumper sticker for their vehicle. If a building has eight units and each unit has four resident permit stickers and two guest permits, this amounts to 32 resident permits and 16 guest permits from one building address. Bilodeau Court currently has 65 permits issued for 24 on-street public parking spaces. Given that 14 percent of units had more than four passes in 2013, limiting the number of passes to no more than four per dwelling unit will reduce the number of passes in circulation.

Similar to all other comparable cities studied, Burlington's existing RPP does not guarantee on-street parking spots for residents with parking permits. In order to control the number of active on-street parking permits, particularly on streets with limited spaces, resident permits should be limited to a maximum of four per dwelling unit, with a cost structure that charges incrementally increasing rates to discourage residents from having more permits than needed (Table 5.1). BPD staff, or upgraded software, would verify that each new permit application does not exceed the maximum number allowed per the dwelling unit. To ease the introduction of this new system the existing T2 software system can be programmed to track the permits issued per dwelling unit.

The goal is to discourage residents from obtaining more permits than needed and to be able to use generated revenue towards administering, enforcing, and improving the RPP. To allow flexibility and to streamline administration, residents may also have the option to purchase a two-year permit at a discounted priced. Permits will be issued for each "dwelling unit", as defined in the City ordinance.

TABLE 5.1: PROPOSED RESIDENTIAL PARKING PERMIT FEE STRUCTURE

	Annual Resident Permit Cost	Cost of Additional Permit
1 Permit	$10	
2 Permits	$40	$30
3 Permits	$80	$40
4 Permits	$130	$50

There are several operational recommendations that would be introduced simultaneously as part of the recommended fee and permit allocation structure. These operational recommendations include permit technology, permit type, and parking fine vouchers:

Permit technology

The BPD currently uses a combination of sticker permits for resident vehicles and cardboard permits for visitor vehicles. With the current technology, both permit types can be photocopied or counterfeited relatively easily.

With the new permit fee structure of Strategy #7, it is recommended that the BPD invest in a new permit technology that will help minimize counterfeiting. Such permits can be produced as stickers and hangtags, and would incorporate a holographic image that makes photocopying extremely difficult, if not impossible.

Permit type:

As part of Strategy #7, it is recommended to build in flexibility into the mix of permits associated with each dwelling unit. Residents can apply for up to 4 permits, of which 2 can

be transferable. Fixed permits would be associated with a specific vehicle and provided as a bumper decal, as with the current program.

Transferable permits could be printed on hangtags or as a placard to be displayed on the dashboard. As with the decal permits for resident vehicles (which are affixed to the vehicle bumper), the visitor permits would incorporate the holographic image to minimize counterfeiting, which is a problem with the current system.

This recommended technology for transferable permits does not eliminate the possibility that such permits could be re-sold, which is a potential problem with the current system, though not thought to be a major issue according to the BPD. However, to address this potential problem, additional technological approaches should be integrated over time after improved online resources are established (Strategy #1). One potential solution would be to have resident permit holders register visitor vehicles online for the period when the visiting vehicle will be parked. The potential to integrate this capability into online resources should be review periodically.

Parking fine vouchers:

Managing the collection of parking fines can be a cumbersome part of the current program. Currently, there are cases where fines are forgiven for a variety of circumstances. Voiding residential parking violations is usually performed through the City Attorney's office, and it can create a backlog of work. For the revised permit program, it is recommended that parking fine vouchers be issued for each dwelling unit enrolled in the RPP. Two year permits would include two vouchers while one year permits would include one voucher. Vouchers would have the same expiration date as the parking permit(s) they were issued with. When a resident or their guest receives a parking ticket, the voucher and ticket would be sent to the BPD, and the ticket would be voided without questions. This will simplify the administration of the program significantly.

Case Studies

Ithaca, NY

The City of Ithaca's Residential Parking Permit System charges $45 per permit. Permit sales revenue goes towards the costs of administering of the Residential Parking Permit System, such as paying the three clerks who assist residents in the permit renewal process.[xlvii]

The City of Ithaca's Residential Parking Permit System allows properties to buy up to two permits for $45 each. In one zone, they are allowed up to four permits if there are multiple dwelling units within a property.[xlviii]

Charlottesville, VA

Residential parking permits cost $25 each, and the City generates approximately $35,000 annually in permit sales. An additional $40,000 is generated from zone parking violations, with each fine costing $25. This revenue goes into the General Fund, and the General Fund budgets money to many different City departments, including the residential parking program.[xlix]

The City of Charlottesville's Residential Permit Parking System allows for up to four residential permits per single-family household. However, certain households may have different limits based on varying needs. For multi-family properties, the number of units usually influences what the permit limit is per household. Permits are available on a first-come, first service basis for affected households.[l]

San Luis Obispo, CA

The City of San Luis Obispo's Residential Parking Districts allow up to two permits per residence. The City's Residential Parking Districts distributed free residential permits until Parking Services ran a cost-benefit analysis that determined that they should charge $10 per permit in order to be able to continue administering the program.[li] The permits generate approximately $15,000 in revenue.[lii] It is difficult to determine how much of this budget goes towards the Residential Parking Districts because the enforcement component is wrapped up with other enforcement that Parking Services oversees.[liii]

Boulder, CO

Residents who live in a Neighborhood Permit Parking zone may purchase up to two resident permits for each vehicle registered in their name at a cost of $17 each per year. This price was determined in order to ensure that the program is cost-neutral. The revenue generated from permit sales funds the material costs of the program. Commuter permits, which sell at $82 per quarter, also fund the Neighborhood Permit Parking program.[liv]

Fort Collins, CO

The City of Fort Collins' Residential Parking Permit Program uses a tiered pricing system for permits, with a limit of five permits per household. The prices of the permits are free for the first permit, $15 for the second, $40 for the third, $100 for the fourth, and $200 for the fifth.[lv] The increased cost for additional permits ensures that residents only buy permits that they absolutely need.

Implementation and Time Frame

The BPD would lead the initiation of this strategy as a mid-term strategy (1-3 years). In transitioning from the current system, it is recommended that a specific date be set at which point all new applications for resident permits, including renewals, would be subject to the new program rules. Several operational details would need to be worked out after this strategy is approved, including:

- How to transition existing permit holders?
- How to proactively manage education of the new program to all RPP permit holders as some won't return to BPD to update old permits for a year or two. Prior to initiation, ample public information will be provided on the parking webpage and at the window at BPD where in-person parking transactions currently occur.
- Will all permit holders be required to come back to renew under the new program as of a specific date, or should the new program be implemented on a rolling basis as outstanding permits expire?

In addition, to address the concern of the re-selling of transferable permits, the ordinance language should establish strong penalties should this be discovered, including fines and the potential forfeiture of residential parking permits by violators.

This strategy does not address the number of permits allocated to a business. The number and type of permits allocated for businesses in residential areas should be examined one to two years after Strategy #7 has been implemented to ensure that business permits work in conjunction with Strategy #7.

STRATEGY #8: CONSTRUCTION AND IN-HOME CARE PERMITS

Establish short-term parking permits for contractors (30-day) and in-home care professionals (up to one year) who have business at a residence.

Primary Goals

- Balance Parking Needs
- Consider Limited Land Resources
- Account for Neighborhood Need

Discussion

New permitting should be established to accommodate the parking demand for contractors and In-Home Care professionals. It is recommended that 30-day contractor hangtag permits and one-year Home Care hangtag permits be established, each offered at a cost of $10.

Case Studies

Ithaca, NY

Ithaca's City Clerk's Office sells residents up to four visitor passes annually at a price of $10 per pass. Depending on the zone, residents can purchase a maximum of 8 or 16 passes per property. Visitor passes are issued to a specific vehicle, and they allow legal parking in a residential permit area for two weeks.[lvi]

Charlottesville, VA

Charlottesville's City Treasurer's Office sells a maximum of two annual guest permits to residents in single- or two-family households. For multi-family households, the limit is usually four guest permits, with some exceptions for special cases. Guest permits cost $25, the same price as residential permits, and they are intended for someone who visits a household and needs a temporary place to park. Residents purchase the guest permits for their visitors, and in order to buy one, they must provide proof of residency on a residential block and proof of ownership of a vehicle within the residency.[lvii] Guest permits last for a year, with the same expiration date as residential permits. Residents may share and lend out their guest permits throughout the year.

The City generates approximately $25,000 in revenue from guest permit sales, $15,000 more than the amount generated through resident permit sales. The disparity is largely due to the fact that many residents do not have access to off-street parking, which qualifies them for a

free residential permit. In contrast, every household that acquires a guest permit must pay $25. The money raised goes into Charlottesville's General Fund.[lviii]

San Luis Obispo, CA

Since residential permits are transferrable, residents may allow guests to hang their residential permits in guests' windshields. If a resident needs to park more than the two permitted vehicles, they can receive a free, temporary permit from the Parking Services Office.[lix] They apply to guest and commercial vehicles, and they can last up to a month. [lx]

Boulder, CO

Each household that purchases a resident permit may receive two free visitor permits that will last for the calendar year. Visitors must park within a one-block radius of the residence address. Additionally, residents may be issued two two-week guest permits per year.[lxi]

Implementation and Time Frame

Strategy #8 is a mid-term strategy (1-2 years) to be implemented by the BPD simultaneous with Strategy #7, which establishes a fee structure for residential parking.

STRATEGY #9: IMPROVED ENFORCEMENT TECHNOLOGY

As a long-term capital investment, the City of Burlington should consider License Plate Recognition (LPR) technology to reduce the need for physical parking permits, allow City administrators to oversee the database system and user accounts, and integrate with the City's residential parking website. The goal is reduce staff time needed to administer, monitor, and enforce the residential parking program, while allowing permit holders to more easily manage their accounts online.

Primary Goals

- Apply for a Data Driven Approach
- Is Fair and Transparent
- Streamlines the Administrative Process
- Is Market-Responsive

Discussion

The City of Burlington does not use license plate recognition (LPR) technology. The T2 parking system that the City of Burlington currently uses is not compatible with LPR equipment.

However, as a long-term strategy, the City should consider a parking database system that is compatible with LPR enforcement technology. LPR technology uses a camera and a computer to "read" license plates and then automatically verifies the plate number against a list of authorized plates in the parking database, as well as verify whether a specific vehicle has moved since the last "reading" (which would be useful on blocks with time limited non-residential parking). As an enforcement officer drives through a neighborhood, the system will issue an alert if the plate is not found, and the vehicle owner is issued a parking ticket.

Investing in improved technology, which could reduce the need for distributing physical permits, saving on permit supplies as well as staff time needed to administer and distribute parking permits. A parking software system that is compatible with LPR can enable collection of valuable data while greatly improving the efficiency of enforcement. For example, a parking software system that is LPR compatible would enable data correlations of land use (e.g. the number of dwelling units or bedrooms) with parking demand. This type of data would improve the understanding of population densities and correlated parking requirements in a specific neighborhood area. The BPD is aware that this technology has privacy implications, and this concern should be a factor as LPR adoption is evaluated.

Case Studies

Several other comparable cities have invested in LPR technology to streamline their parking management system. As noted, there have been many benefits to utilizing LPR technology, particularly in conjunction with university campuses. However, there are many different layers to the T2 and LPR technology and they vary greatly by municipality. Therefore, the cost estimates are not easily translatable to the cost for integrating the system with Burlington's existing T2 system.

Ithaca, NY

The City of Ithaca has invested in an LPR system, which costs approximately $50,000 per unit, including software integration. They currently use two LPR units, which also carry a $3,000 annual licensing fee. The parking enforcement staff drives resident only streets frequently to enforce time-restricted areas and to capture ongoing data on parking usage (permitted residents and non-residents). These data are very useful for determining the need for more or less regulation of on street parking. The LPR unit also photographs each vehicle's tire stem to establish whether a vehicle has moved within a time-restricted area.

Fort Collins, CO

The City of Fort Collins and Colorado State University employ a Community Liaison, who splits half of her time working with each of the institutions. The role was created as an interface for the City and the university, and part of the job entails addressing town-gown relations, including, but not limited to, parking. The City manages a Residential Permit Parking Program, and the university uses T2 Flex to meet the demands of their students and employees.[lxii]

The City and the University work very closely on many projects, but they do not share databases with each other. Whenever a new residential neighborhood is implemented, the City communicates with the University so that they can pass along relevant information to students and staff.[lxiii]

The City uses T2 Flex software to enhance its administrative and enforcement capabilities. With LPR technology, parking enforcement officers can quickly identify violators while driving their vehicles, providing increased coverage for parking regulations. In addition to LPR technology, Parking Enforcement Officers also use handheld computers to write

citations. The City hopes to use this technology in the future to help collect parking turnover and occupancy data. [lxiv]

Irvine, CA

University of California at Irvine began utilizing LPR technology at two on-campus housing complexes in the fall of 2007, which resulted in a simplified permit process, 75 percent reduction in citation complaints, and significant reduction in staff resources because users could enter their license plate information themselves online.[lxv]

Implementation and Time Frame

This strategy is seen as a long-term strategy (>3 years), to be reviewed on an annual basis. The City can evaluate how well the current system is working and the costs/benefits of integrating LPR into that system.

SUMMARY OF STRATEGIES

Table 5.2 summarizes the Residential Parking Management Strategies by implementation time frame and city department responsible for implementation.

TABLE 5.2: SUMMARY OF RESIDENTIAL PARKING MANAGEMENT PROGRAM STRATEGIES, BY TIME FRAME, AND RESPONSIBLE CITY DEPARTMENT/AGENCY

		Description	Responsible City Department/Agency	
			Lead	Supporting Department/Agency
General Parking Management Approaches	Strategic Approaches	Encourage and Improve Sustainable Transportation Modes	DPW	CEDO, Planning, CATMA, CCTA, CCRPC, CarShareVT, Institutions
		Encourage Satellite Parking and Incentivize Parking in Remote Lots	DPW	CEDO, Planning, CATMA, Institutions, CCTA
		Improve Signage and Wayfinding	DPW	
	Tactical Approaches	Install Parking Meters/Paystations	DPW	Burlington Police Department
		Implement Parking Time Limits in Non-RPP Areas	DPW	
		Stripe Parking Stalls	DPW	Burlington Police Department
		Improve Lawn Parking Ban Enforcement	BPD	DPW, Code Enforcement
Short-Term Residential Permit Program Strategies				
0-1 year	1	Provide Online Residential Permit Resources: Downloadable Application and Renewal Documents	BPD	DPW
	2	Establish Commuter Parking Permit Program (3-Year Pilot Program)	DPW	Burlington Police Department
	3	Establish Residential Parking Permit Periods Based on Supply and Demand	DPW	Burlington Police Department
	4	Evaluate Residential Parking Areas Rather Than Streets	DPW	Burlington Police Department
	5	Streamline the Process for Petitioning for Resident-Only Parking	DPW	Burlington Police Department
	6	Establish Process for Removing or Reallocating Residential Parking	DPW	Burlington Police Department
Mid-Term Residential Permit Program Strategies				
1-3 years	1 (mid-term)	Provide Online Residential Permit Resources: Comprehensive Program Information	DPW	Burlington Police Department
	7	Revise Program to Incorporate Fee Structure and to Allocate a Maximum of 4 Permits per Dwelling Unit	BPD	DPW, Planning
	8	Establish Construction and In-Home Care Permits	BPD	DPW, Planning
Long-Term Residential Permit Program Strategies				
>3 years	1 (long-term)	Provide Online Residential Permit Resources: Online Payment of Permits and Fines	DPW	Burlington Police Department
	9	Improve Enforcement Technology	BPD	DPW

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