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DRAFT REPORT

DRAFT: RESIDENTIAL PARKING MANAGEMENT PLAN

7.3.2015



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BURLINGTON RESIDENTIAL PARKING MANAGEMENT PLAN

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PLAN**

**PREPARED FOR:
CITY OF BURLINGTON**

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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 develop a comprehensive residential parking plan. The team also coordinated with the Community Advisory Committee and 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 | RESIDENTIAL PARKING

The residential parking permit program 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.

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 in 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:

- **Balance Parking Needs:** Balance the needs of those who park on Burlington's streets, including residents, visitors, and commuters.
- **Consider Limited Land Resources:** Consider the highest and best use of the space that public on-street parking occupies.
- **Account of Neighborhood Need:** Recognize that each neighborhood and block is unique and the residential public parking program accounts for the area's character and needs.
- **Apply a Data Driven Approach:** Use empirical metrics to measure parking trends and the utilization of parking spaces within neighborhoods.
- **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.
- **Is Market-Responsive:** Develop a residential parking management plan that is sensitive to changing demographics, land uses, and built character.
- **Consider Financial Needs:** Determine most appropriate way to fund improvements to the Residential Parking Program and consider the value of parking permits as a potential tool for funding community/city transportation infrastructure.

1.3 | 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.

- **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.
- **For the Final Report, the following appendices will be provided:**
 - **Appendix A-Citywide Parking Rates:** Appendix 1 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 parking program 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:

- Existing residential parking areas and regulations;
- Parking management;
- Parking enforcement trends;
- Car share locations; and
- Zoning parking requirements.

2.1 | 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 materials resources needed include:

Staff time to manage requests for new parking areas

DPW staff spend roughly 14 to 15 hours to manage any requests for a new parking 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

Staff time to manage requests

Burlington Police Department (BPD) have 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

There are five full-time BPD officers who 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 a total of 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

Residents are not the only contributors to the administration, maintenance, and enforcement of a residential parking program. 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.

There is no way to demonstrate that residential parking translates to higher valuation without a specific residential parking checkbox on the assessor's form with a corresponding value. Many factors go into determining a property's assessed value and not all are quantifiable. Desirable location, and other tangible and intangible qualities make a place attractive, leading to higher property values and resulting in higher taxes. For example, streets in the Hill section that do not have residential parking but are high in value e.g. Overlake Park and Summit Street north of Maple, do not demonstrate a lower tax burden because they lack a residential parking privilege.

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 are 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 and is enforced by issuance of parking tickets.

FIGURE 2.1: RESIDENTIAL PARKING RESTRICTIONS LOCATIONS

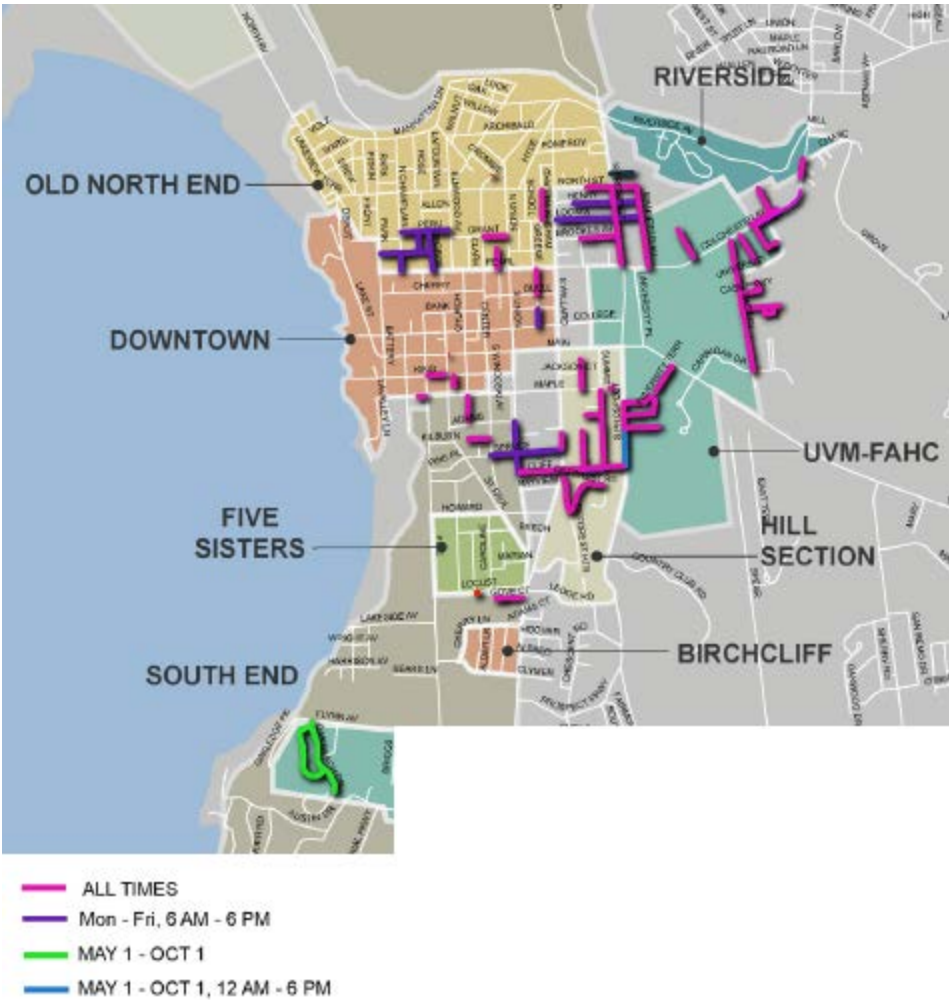
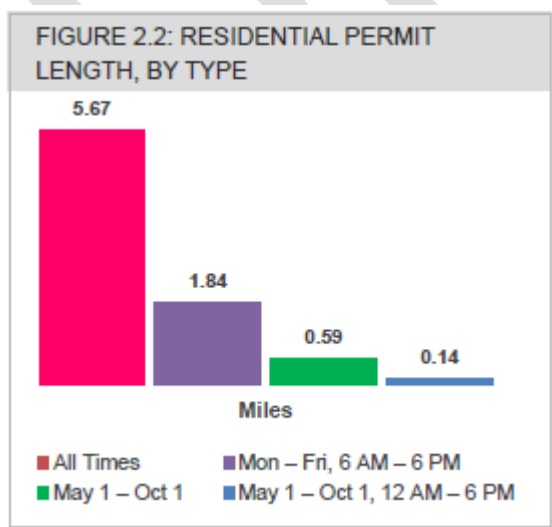


FIGURE 2.2: RESIDENTIAL PERMIT LENGTH, BY TYPE



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 and must display their guest parking card on the front window 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

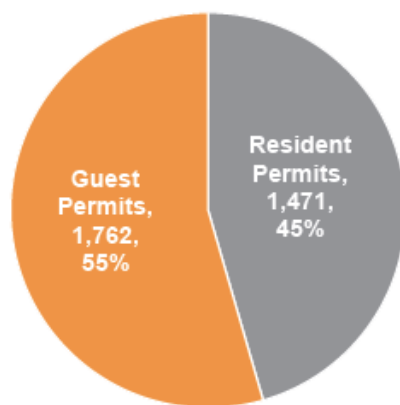


FIGURE 2.4 RESIDENT BUMPER DECAL AND GUEST PARKING PASS



TABLE 2.1: RESIDENTIAL AND GUEST PERMIT DOCUMENTS

STUDENTS: ONE YEAR PERMIT	RENTERS/HOMEOWNERS: TWO YEAR PERMIT
• Completed Current Lease • Valid Driver's License • Valid Registration • Valid School ID	• Valid Driver's License with address of Resident parking street • Valid 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 receive 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.

2.2 | PARKING MANAGEMENT

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

- Burlington Police Department (BPD): BPD manages 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.

2.3 | PARKING ENFORCEMENT

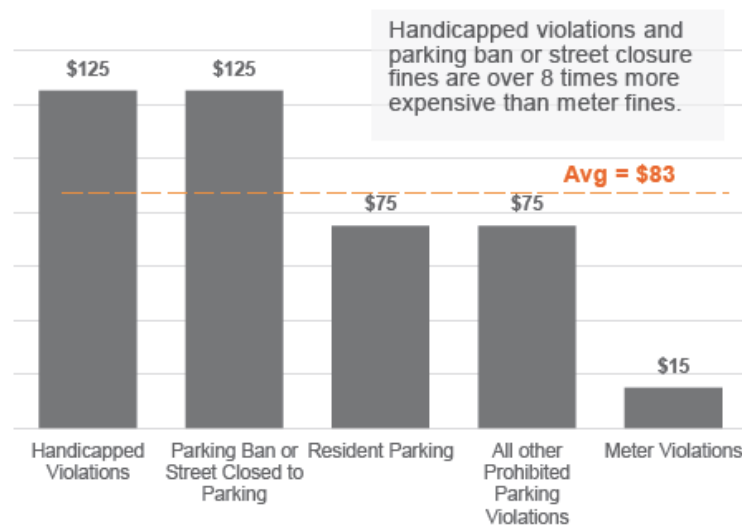
Unless the parking ticket is being contested in court, no permits are issued to residents who have an outstanding parking ticket. In 2013, the Burlington Police Department issued 88,522 parking citations and over \$2.5 million in fines. This amounts to an average of \$28.34 in fines issued per citation, although the average Burlington fine is much greater, at \$83.

Figure 2.5 summarizes the five categories of parking violation fines in Burlington. The data suggests that there are many more meter violations than other forms of parking violation occurring in the city.

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. Since the City allows more than two guests to park, they do not tow for resident parking violations. Chapter 3 goes into further detail on the specific types of parking violations that are occurring in each sample area.

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FIGURE 2.5: FINES BY VIOLATION TYPE (\$)



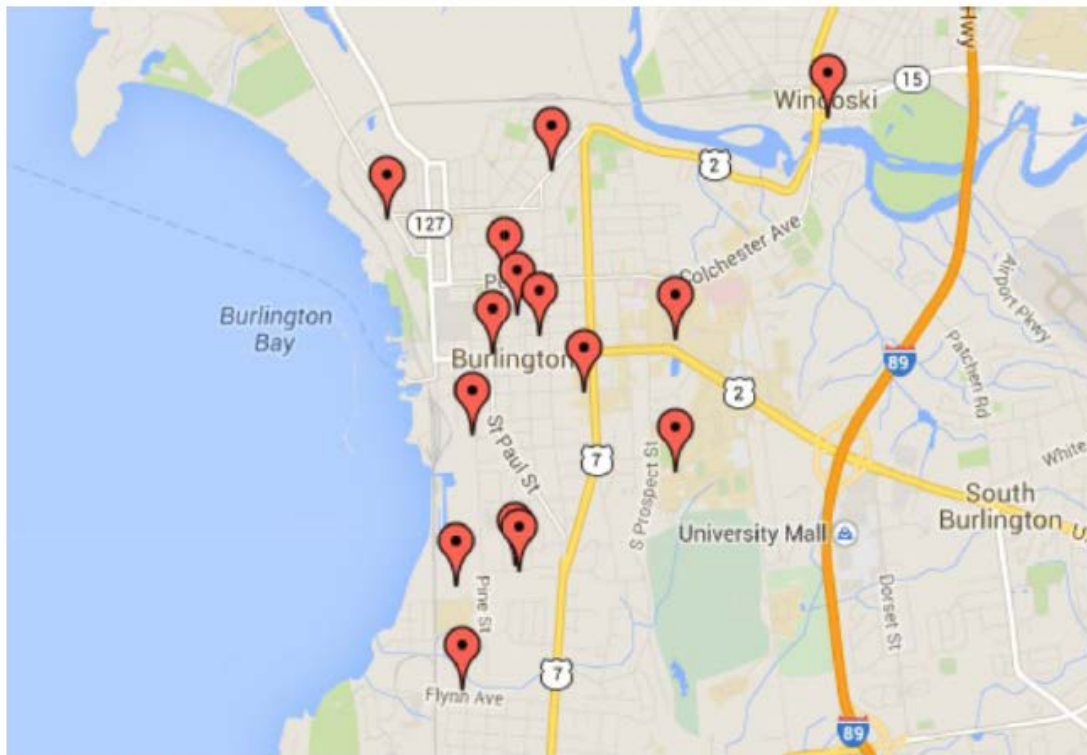
2.4 | CAR SHARE AND RESIDENTIAL PARKING

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

While the majority of CSVT pods are not located in city-owned spaces, their vehicles are entitled to one residential street sticker per vehicle. 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 not be counted towards the maximum number of spots allotted in a parking district.

FIGURE 2.6: CARSHARE VERMONT POD LOCATIONS



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

2.5 | ZONING PARKING REQUIREMENTS

There are currently three Parking Districts in the City of Burlington, as shown in

Figure 2.7, as part of Burlington's Comprehensive Development Ordinance. These account for varying demands on parking based on proximity to other related uses, availability of public transportation, the density of land uses, and the ability to share parking with nearby uses (Section 8.1.3 Parking Districts).

- **Neighborhood (N):** The Neighborhood Parking District establishes the baseline for parking requirements throughout the city. The demand for offsite parking is largely dependent on the needs and characteristics of an individual site or land use.
- **Shared Use (SU):** The Shared Use Parking District establishes a reduction in the parking requirement baseline, recognizing the opportunities to share parking demand and rely on non-vehicular transportation in these areas.
- **Downtown (D):** The Downtown Parking District requires the least amount of parking, recognizing the availability of shared parking, frequent transit service, and higher rates of other non-vehicular transportation in these areas.

Parking Districts:

- Downtown (D)
- Shared Use (SU)
- Neighborhood (N)

Map of Colchester, Vermont, showing parking districts. The map is color-coded: red for Downtown (D), purple for Shared Use (SU), and yellow for Neighborhood (N). Key features include Lake Champlain to the west, the Winooski River to the east, and various streets like VT-102 and VT-100. A legend in the top right corner defines the color coding. A north arrow is in the bottom left corner. The map shows a mix of districts, with Downtown (D) concentrated in the central urban area, Shared Use (SU) along major corridors and near the river, and Neighborhood (N) covering the surrounding areas.

With Amendments Effective December 4, 2013 (ZA-14-04)

There are currently three zoning changes under consideration in the City that may potentially affect residential parking:

-

costs. However, there is also potential that this change may create a greater need for street parking or use of public lots and garages.

- 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 incentivize development of smaller units and increase housing affordability. This change reduces the minimum off-street parking requirement for all studio and 1 bedroom apartments in the three parking districts.
- Expand Shared Use Parking District: As shown in Figure 2.8, areas directly north, south, and east of downtown would change from a neighborhood parking district to a shared use parking district to allow for reduced minimum parking requirements. Similarly in this case, the reduced minimum requirement may create greater demand for places to park on-street.

The existing and proposed changes to the minimum parking requirement are shown in

Figure 2.9 and Figure 2.10.

FIGURE 2.8: PROPOSED PARKING DISTRICTS (APPROVED BY PLANNING COMMISSION ON 1/14/14)

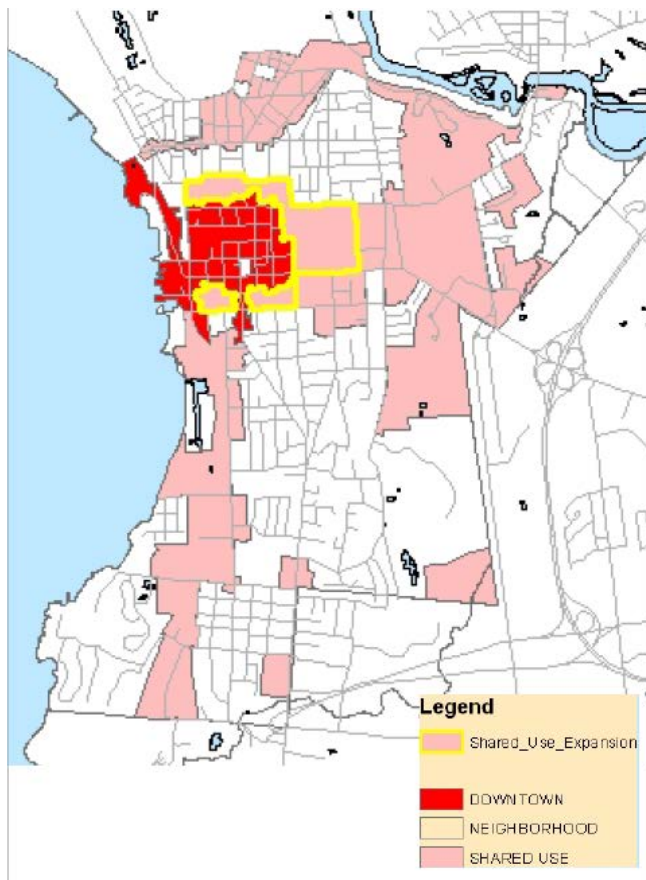
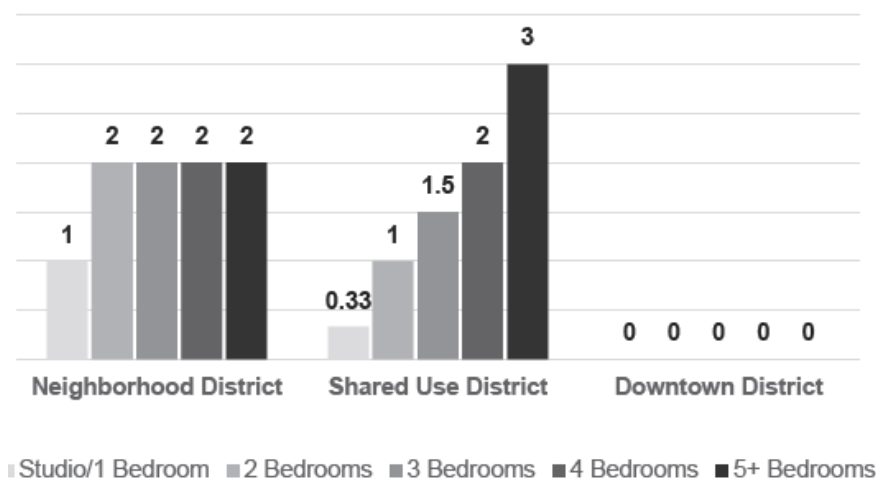


FIGURE 2.9: MINIMUM OFF-STREET PARKING REQUIREMENTS, BY PARKING DISTRICT



FIGURE 2.10: MINIMUM PROPOSED OFF-STREET PARKING REQUIREMENTS, BY PARKING DISTRICT



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. September 4, 2014.
- 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. The three sample areas selected were:

- **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.
- **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.
- **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.

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 3.1. 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 3.3 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 3.1 POPULATION AND POPULATION DENSITY

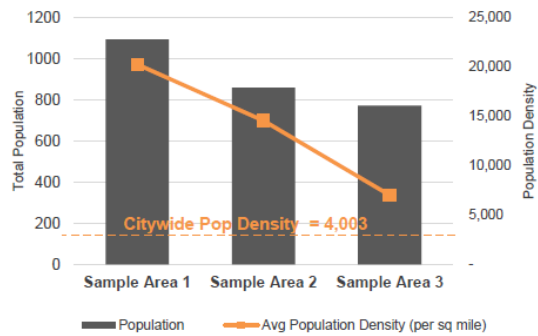


FIGURE 3.2 SAMPLE AREA (SQ MILES)

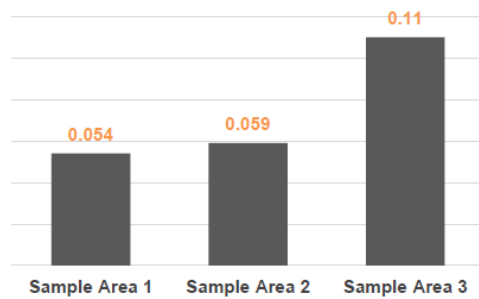
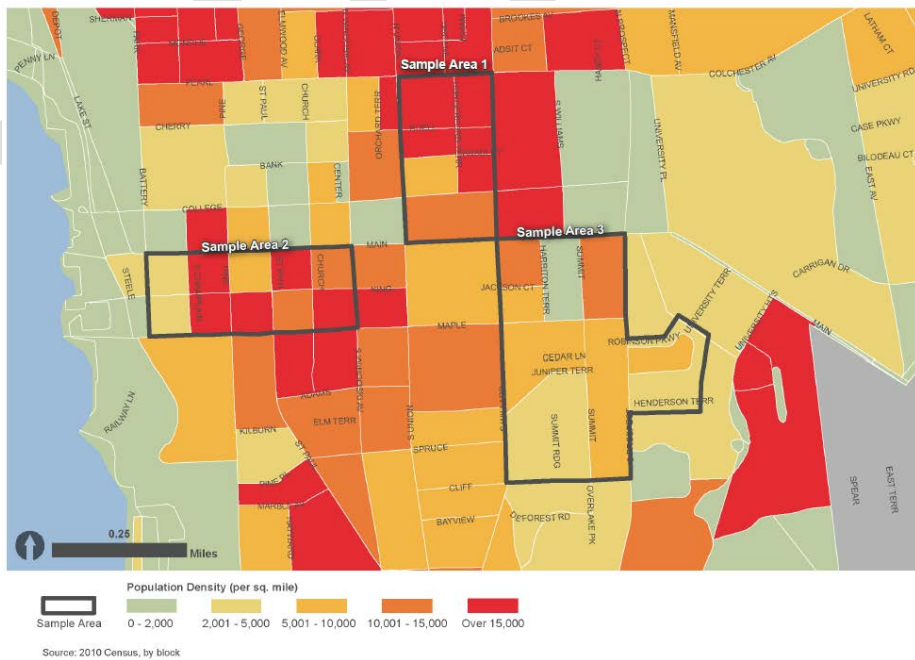


FIGURE 3.3 POPULATION DENSITY, BY BLOCK (PER SQ MILE)



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 of institutional zones. 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 3.5, 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 3.4 ZONING

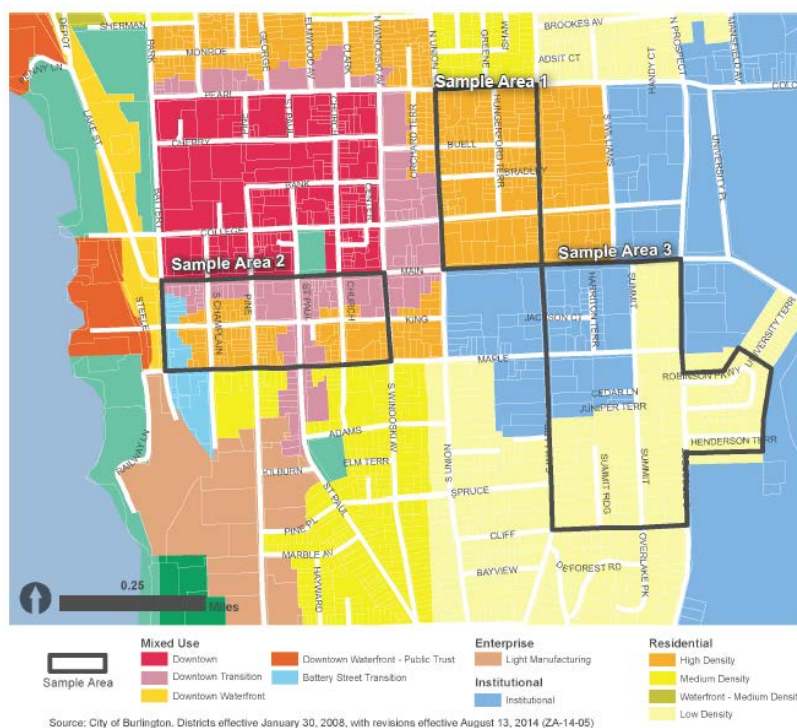
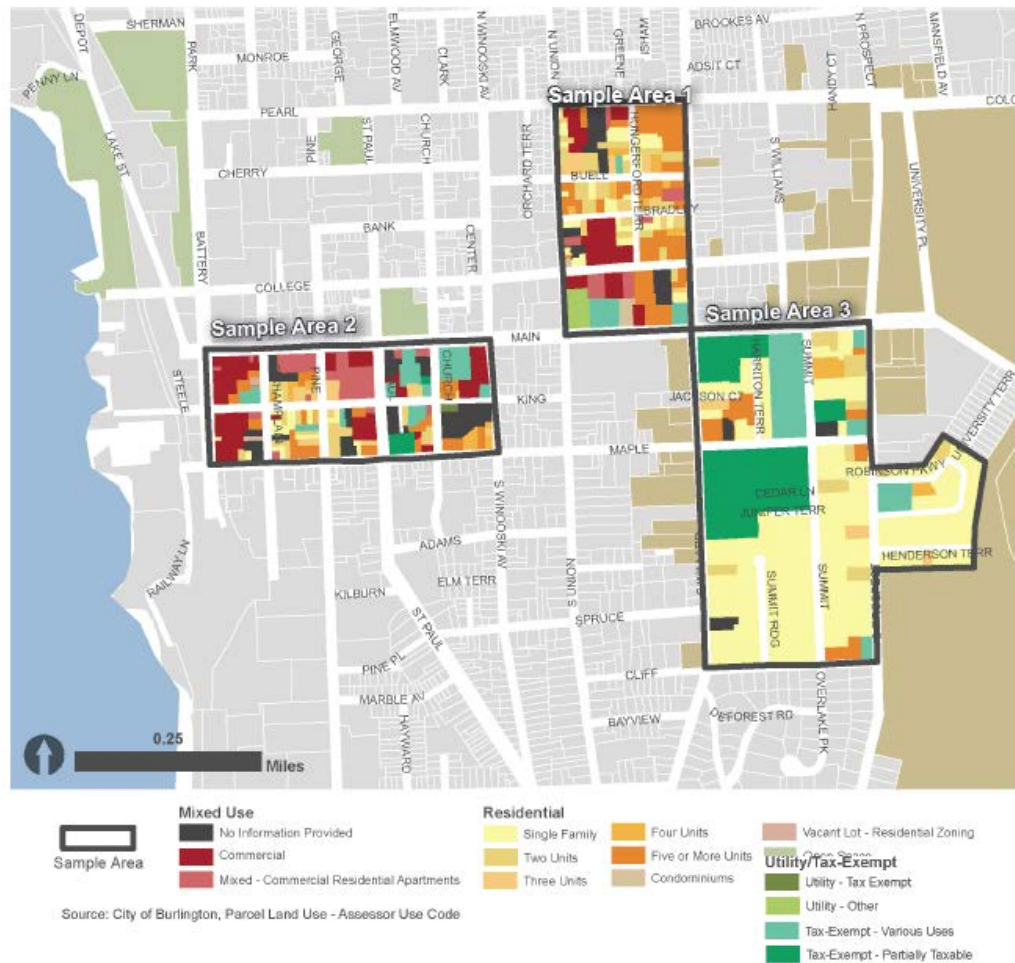


FIGURE 3.5 LAND USE (ASSESSOR USE CODE)



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 3.6 HOUSING UNITS (2010 CENSUS)

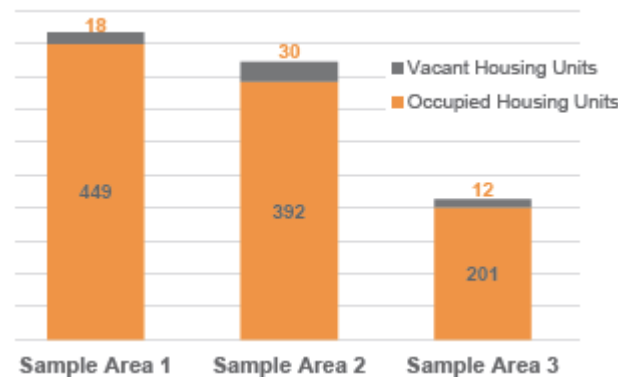
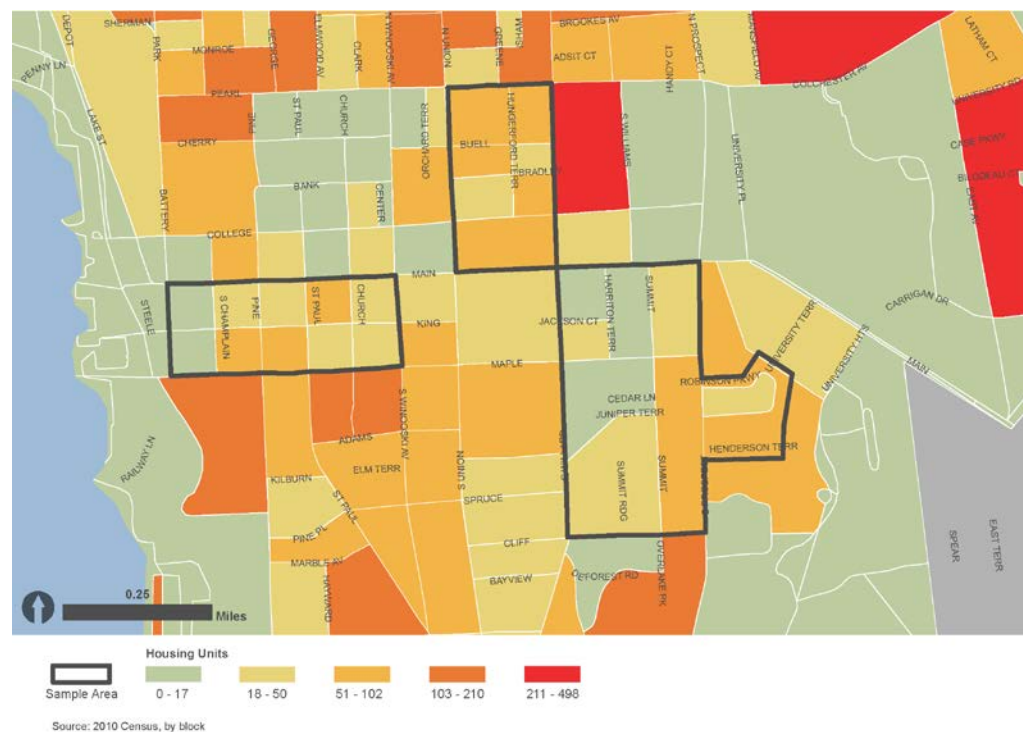


FIGURE 3.7 HOUSING UNITS, BY BLOCK (2010 CENSUS)



3.4 | 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, with rental rates of 85% and 83% overall rental housing per block, respectively, 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 below a 75% rental housing rates 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% owned.

FIGURE 3.8 RENTAL HOUSING (%), BY BLOCK (2010 CENSUS)

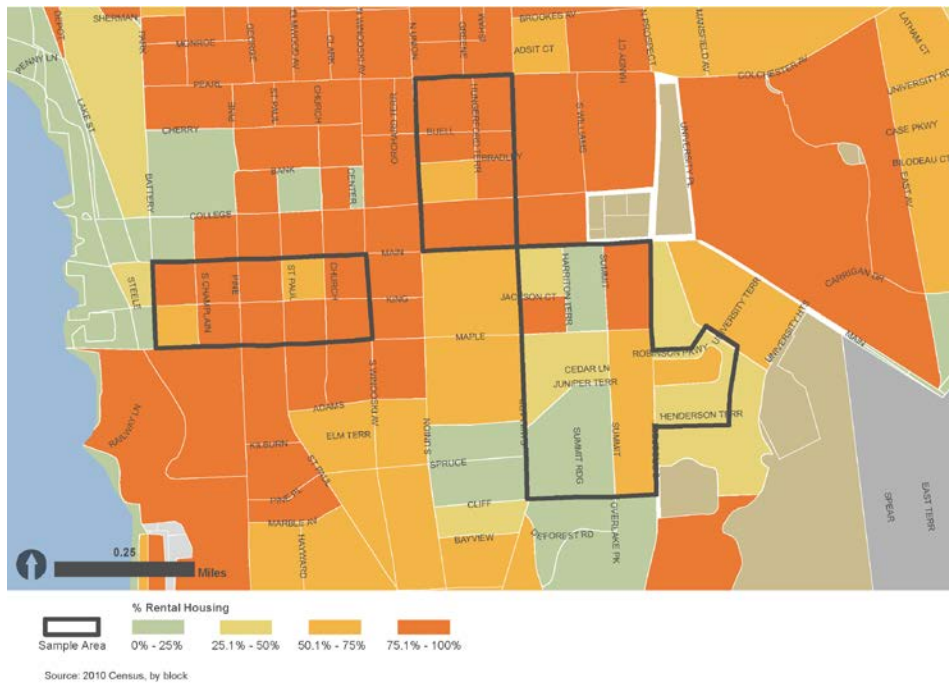
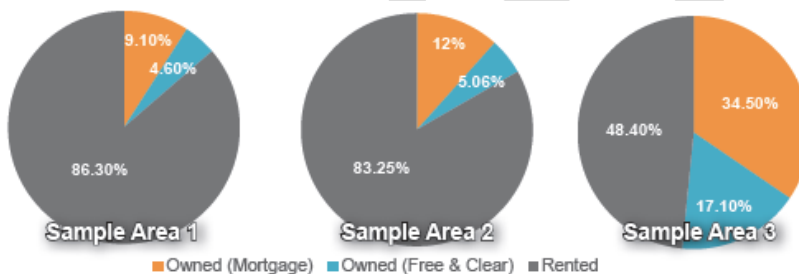


FIGURE 3.9 RENTAL VS. OWNERSHIP (2010 CENSUS)



3.5 | 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 occupancy rate for three time periods: AM before work (7am to 8am); Midday (11am to noon); and PM after work (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 3.10 maps the locations of on-street parking in the three sample areas, as well as their total supply of parking spaces.

FIGURE 3.10 ON-STREET PARKING SUPPLY

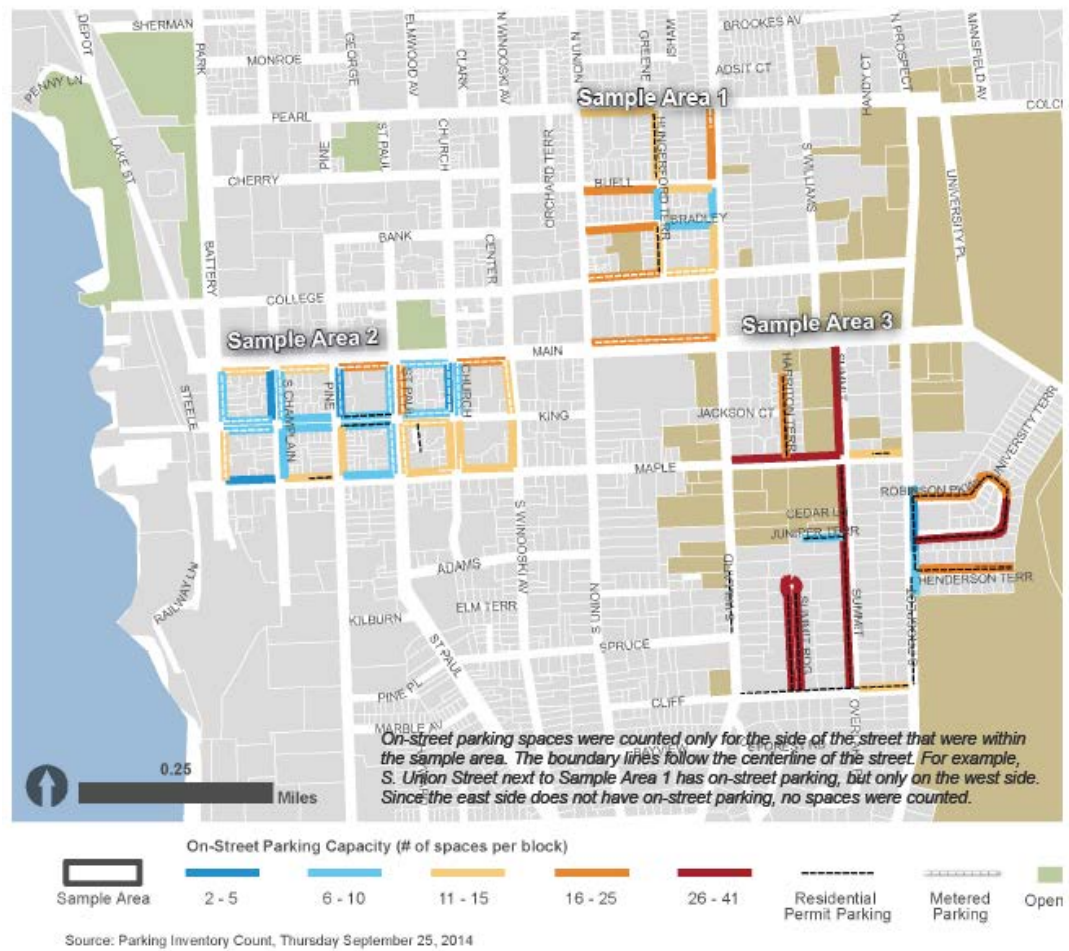


FIGURE 3.11 TOTAL ON-STREET PARKING SUPPLY

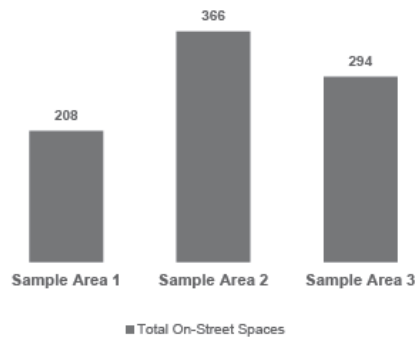


Figure 3.12 maps the locations of the various types of meters and residential permit parking in the greater downtown area. Meters are in effect throughout the City between 8 AM and 6 PM, Mondays through Saturdays, excluding Sundays and holidays. The more commercial streets in Sample Area 1 are lined with 10-hour meters, in contrast with Sample Area 2, which has a significantly greater number of 3 hours meters.

Figure 3.13 totals the length of on-street parking restrictions 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.

FIGURE 3.12 PARKING RESTRICTIONS: METERED AND PARKING

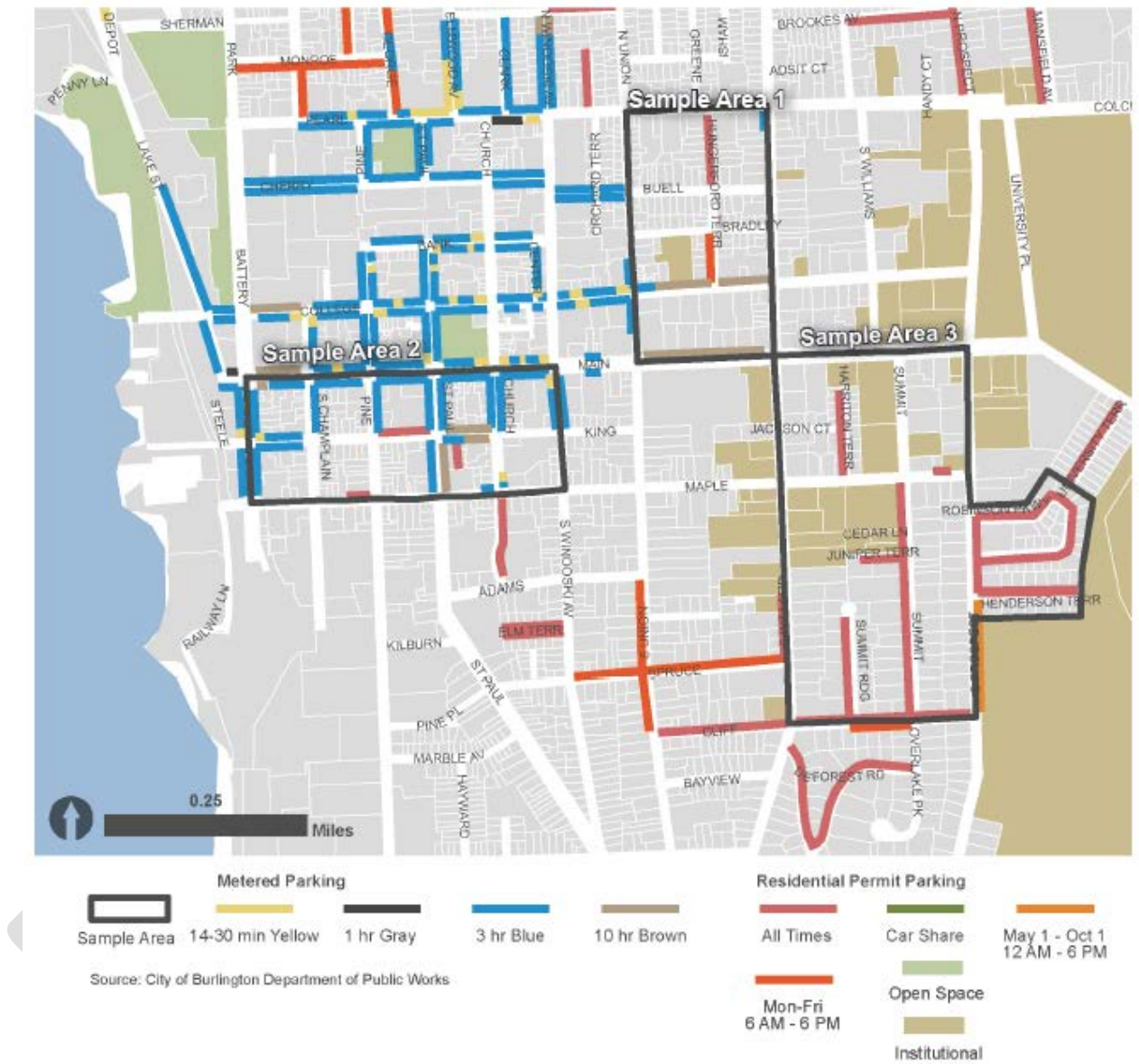
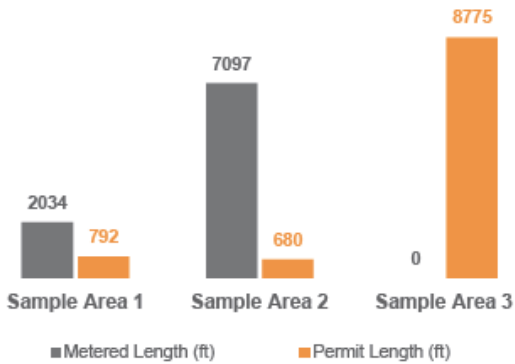


FIGURE 3.13 PARKING RESTRICTIONS: METERED VS. PERMITTED LENGTH (FEET)

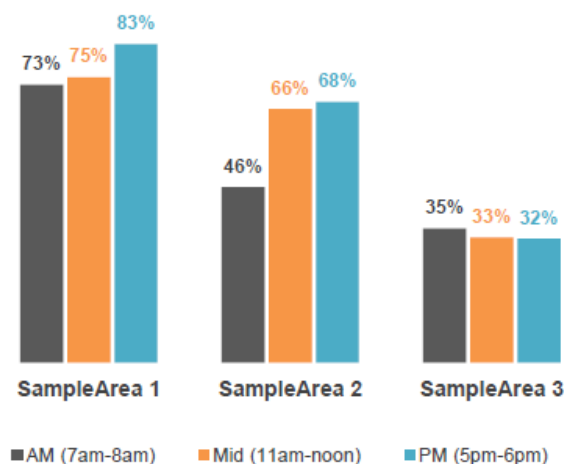


This estimate is based on measured curbside length and does not subtract for curb cuts.

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 3.14 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 3.15 ON-STREET PARKING UTILIZATION (7 AM-8 AM)



MIDDAY (11AM TO NOON)

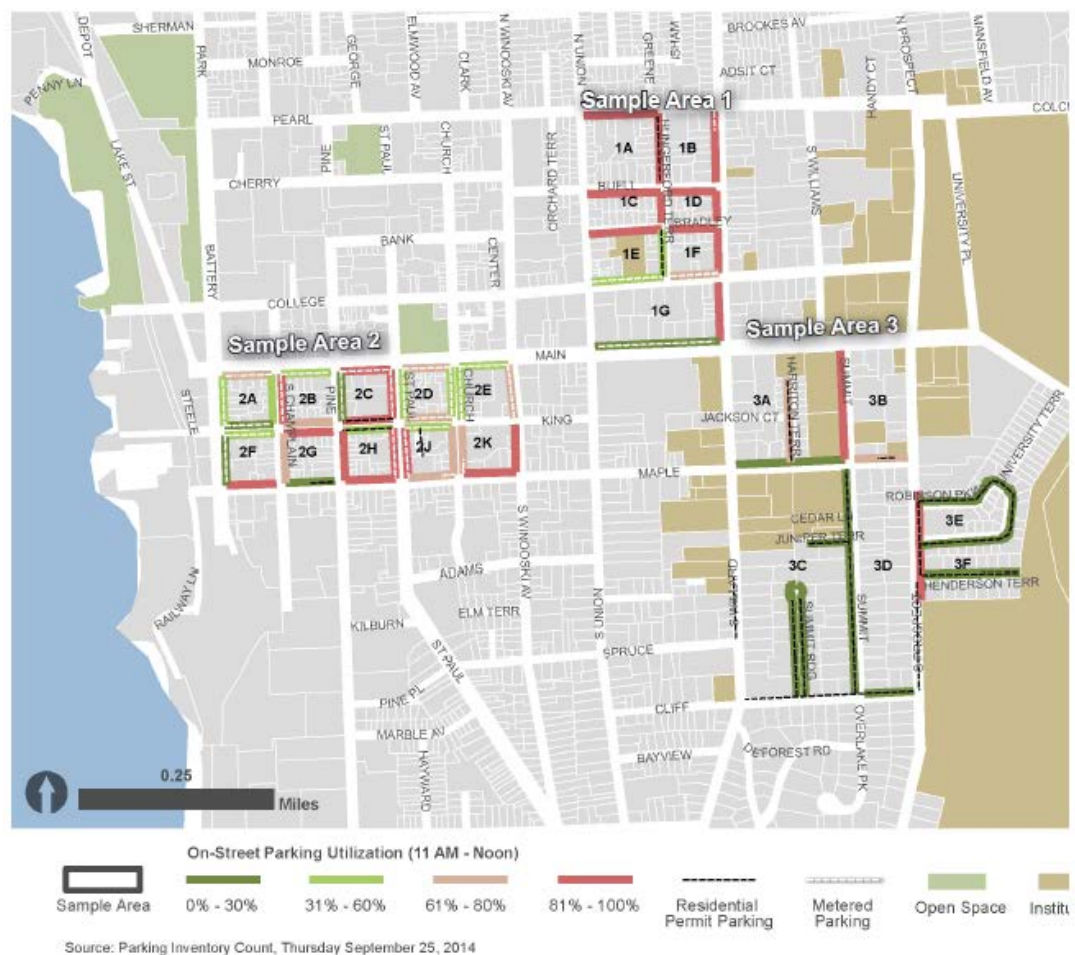
The counts from this time period account for the typical weekday parking situation, with meters and residential parking restrictions in effect, with the exception of nighttime resident-only restrictions.

- 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 3.16 ON-STREET PARKING UTILIZATION (11 AM–NOON)



AFTER WORK (5PM TO 6PM)

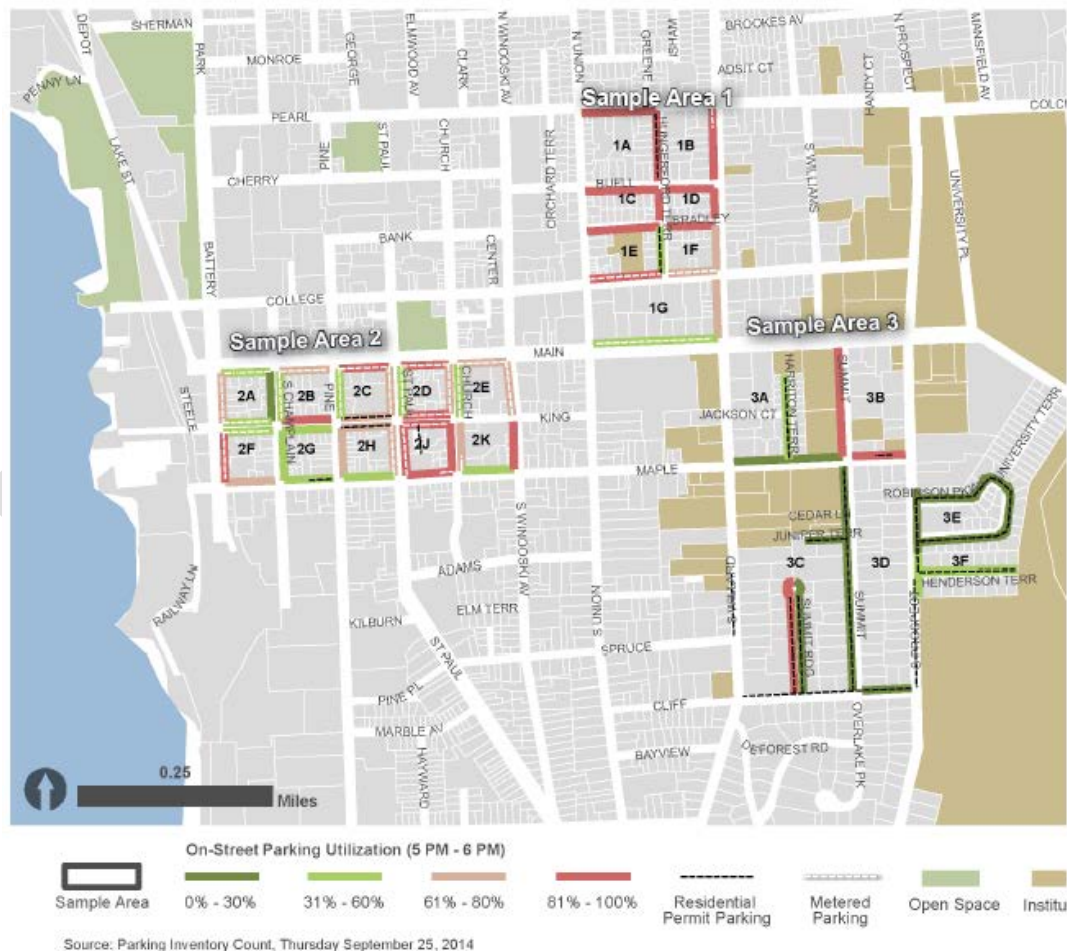
The counts from this time period account for vehicle occupancy just after normal work hours.

- 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 over 40% unoccupied.

- 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, as the count was conducted on Rosh Hashanah.

FIGURE 3.17 ON-STREET PARKING UTILIZATION (5 PM-6 PM)



3.6 | DRIVEWAYS

Driveways are important features in studying residential parking because their presence indicates two salient features:

- Some or all of the residents have the ability to park off-street and on their private property. The resident may have a guaranteed parking spot and therefore may not need to apply for a parking permit.
- The driveway creates a curb cut that prevents other vehicles from parking on-street in front of the driveway, thereby reducing the total number of on-street parking opportunities.

The consultant team collected parking inventory counts on Thursday, September 25, 2014 and estimated the number of driveway spaces and their utilization. Where there were not clearly defined lines, the team took their best guess at estimating how many vehicles would fit in a given residential driveway. Figure 3.18 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 3.20 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 3.18 ESTIMATED DRIVEWAY SPACES

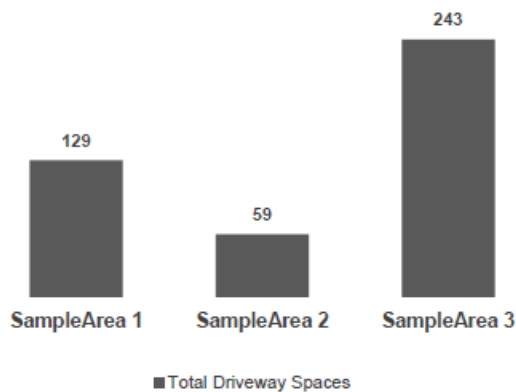


FIGURE 3.19 APPROXIMATE DRIVEWAY SPACE UTILIZATION

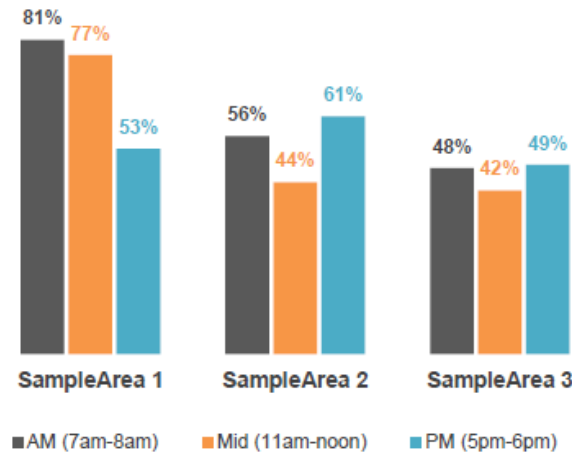
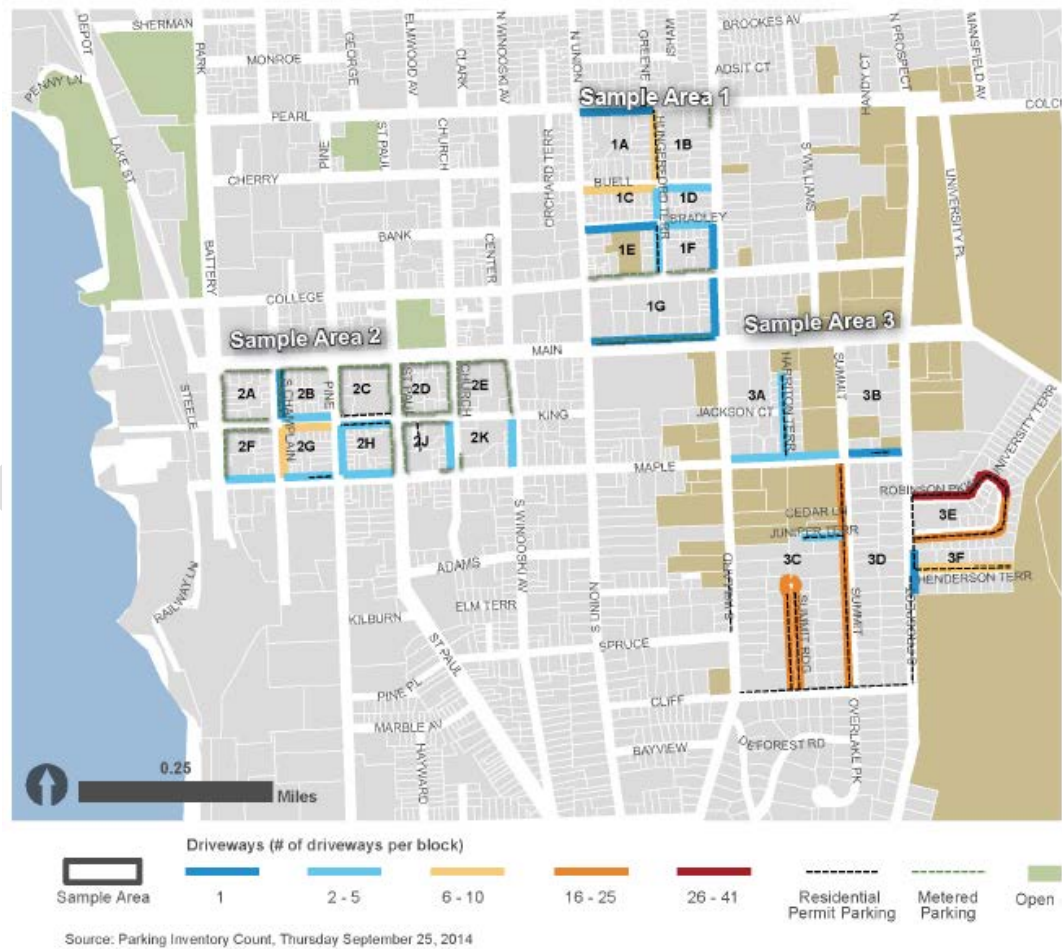


FIGURE 3.20 DRIVEWAYS CURB CUTS PER BLOCK

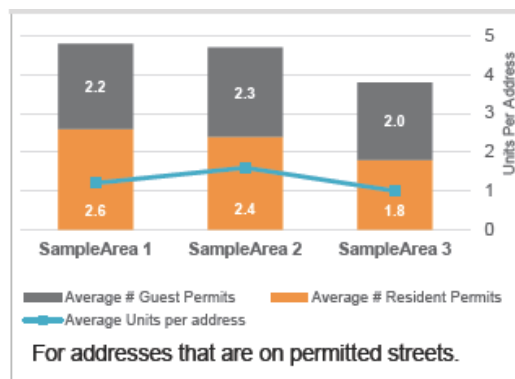


3.7 | RESIDENTIAL PERMITS

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 3.22 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.

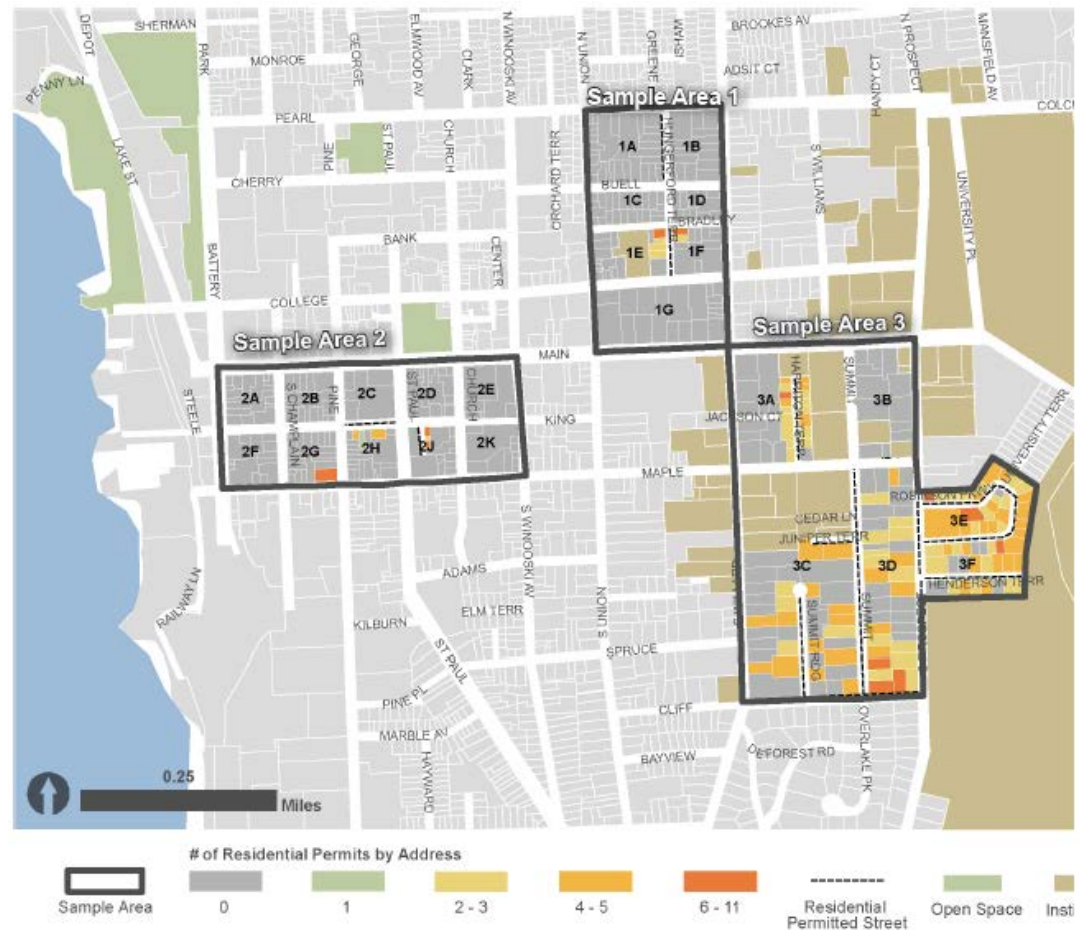
FIGURE 3.21 AVERAGE PERMITS ISSUED BY ADDRESS



For addresses that are on permitted 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 and renters and students, 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 and no owners, and 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, and the average residence holds 2 resident parking passes and 1.8 guest parking permits per address.

FIGURE 3.22 RESIDENTIAL PERMITS, BY ADDRESS



As shown in Figure 3.23, 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.

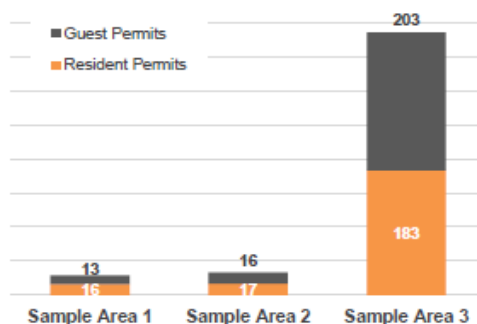


Figure 3.24 shows the amount of permits issued, both guest and resident over the total supply of on-street parking spaces in each sample area. All of the sample areas have issued more residential parking permits than there is supply of permitted on-street spaces, with the largest parking disparity in Sample Area 2 and a larger absolute difference in Sample Area 3.

FIGURE 3.23 RESIDENTIAL PERMITS ISSUED, BY TYPE

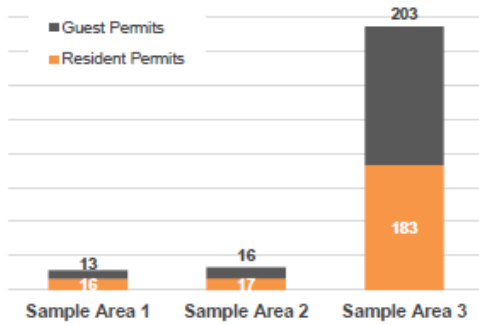


FIGURE 3.24 PERMITTED ON-STREET PARKING: SUPPLY VS. PERMITTED

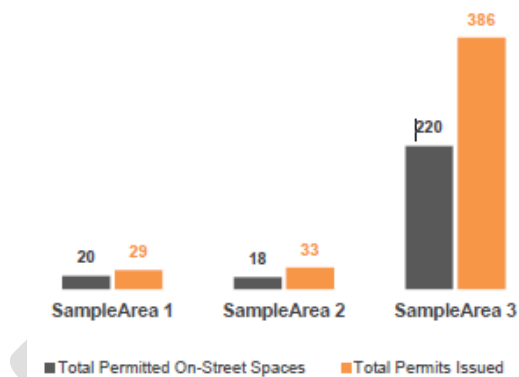
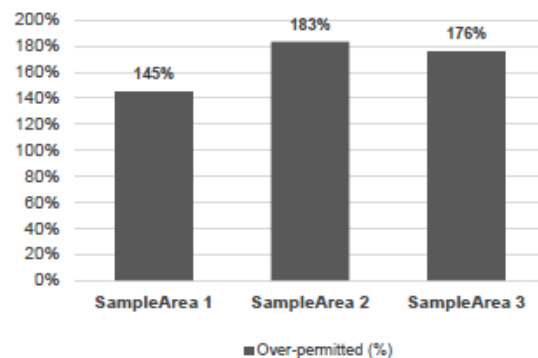


FIGURE 3.25 OVER-PERMITTED (%): SUPPLY VS. PERMITS ISSUED



3.8 | PARKING VIOLATIONS

The consultant team received and analyzed data from Burlington Police Department for Citation Violations by Location Summary for the period between January 1, 2013 and December 31, 2013. There were a total of 6,593 residential parking violations city-wide in 2013, which generated \$494,475 in fines. The parking violation data was sorted by street and not block; therefore, the consultant team extracted data for those streets that intersected with the three sample areas for further analysis.

Although more violations typically led to more fines, certain streets within the sample study areas generate a greater number of parking ban, resident parking, or other prohibited parking violations, resulting in high revenues for the city while incurring fewer actual number of parking tickets. Both handicap and winter parking ban violations were among the highest fines by violation type, at \$125 per violation fine. For example, South Union Street, despite generating the tenth highest number of violations, incurred \$56,440 worth of fines, the sixth highest of the streets studied.

The impact that more expensive fines had on streets when fines and violations were normalized by their length revealed that Harrington Terrace, Browns Court, and Hungerford Terrace generated more fines due to more expensive fines for parking bans, resident parking violations, and lawn parking. The resident parking violations generated 575 fines in 2013 on Harrington Terrace, Browns Court, and Hungerford Terrace, which total 0.36 miles in length. S Union Street, three times the length of those streets combined, generated 420 fines in 2013.

FIGURE 3.26 SAMPLE AREA STREETS ANALYZED FOR VIOLATIONS

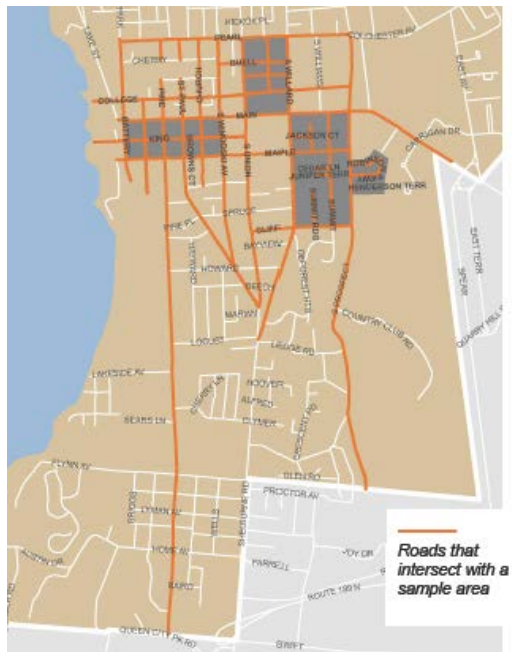


FIGURE 3.27 SAMPLE AREA STREETS: TOTAL VIOLATIONS AND FINES

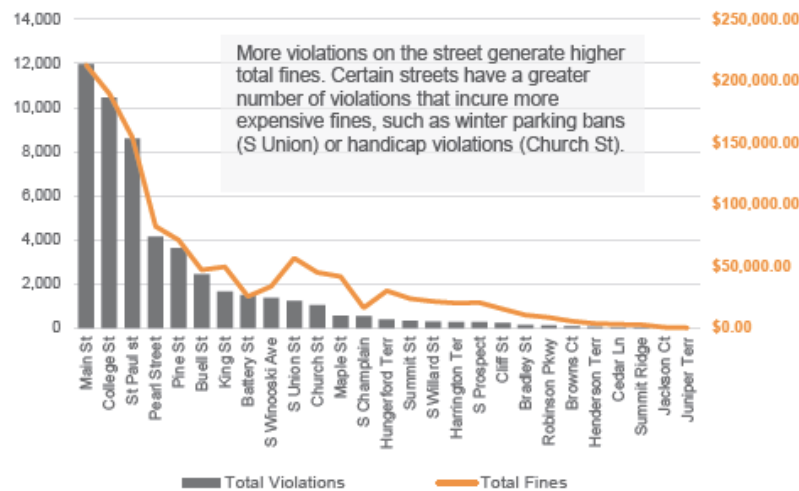


FIGURE 3.28 SAMPLE AREA STREETS: VIOLATIONS AND FINES PER MILE

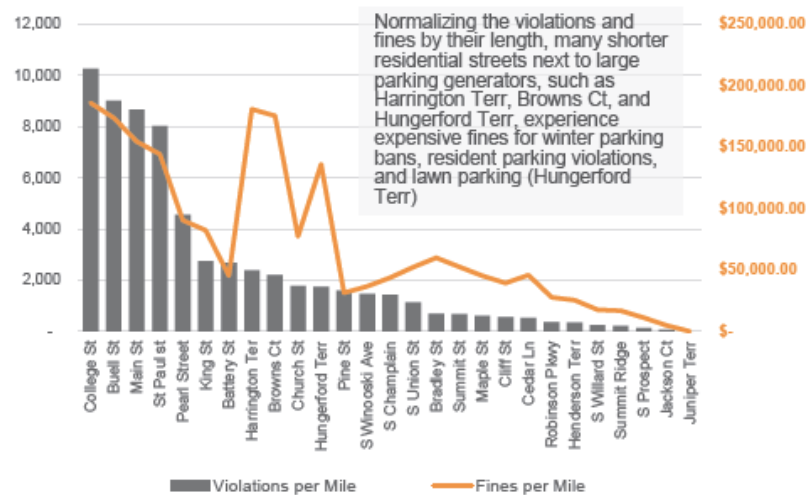


FIGURE 3.29 SAMPLE AREA STREETS: METER AND RESIDENTIAL VIOLATIONS

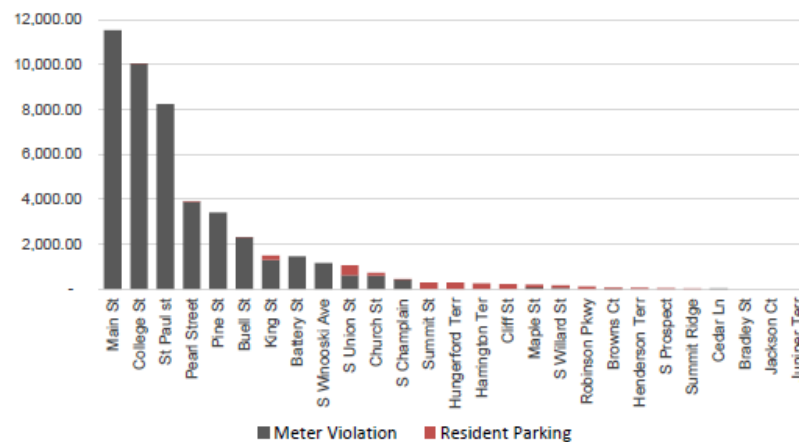
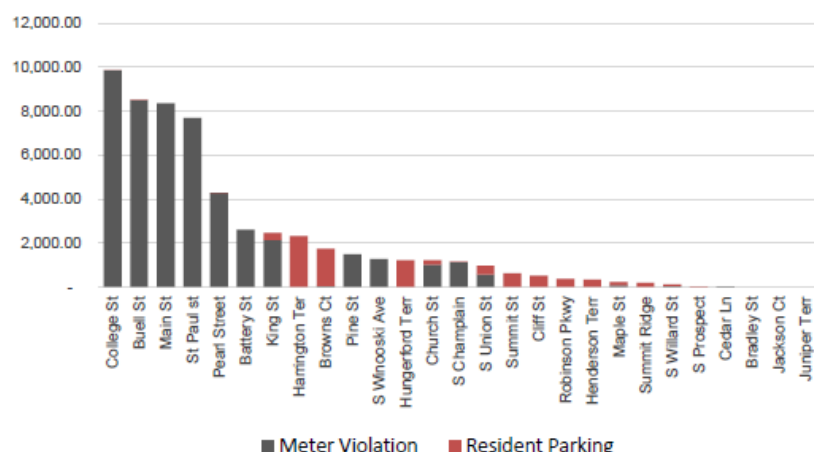


FIGURE 3.30 SAMPLE AREA STREETS: METER AND RESIDENTIAL VIOLATIONS, PER MILE



3.9 | CARSHARE VERMONT

The Car Share Vermont (CSVt) locations benefit the city by increasing access to automobile transportation for the people of Burlington. There are nine total car share locations surrounding the sample areas, with several 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 3.32, 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 3.31 CAR SHARE VERMONT

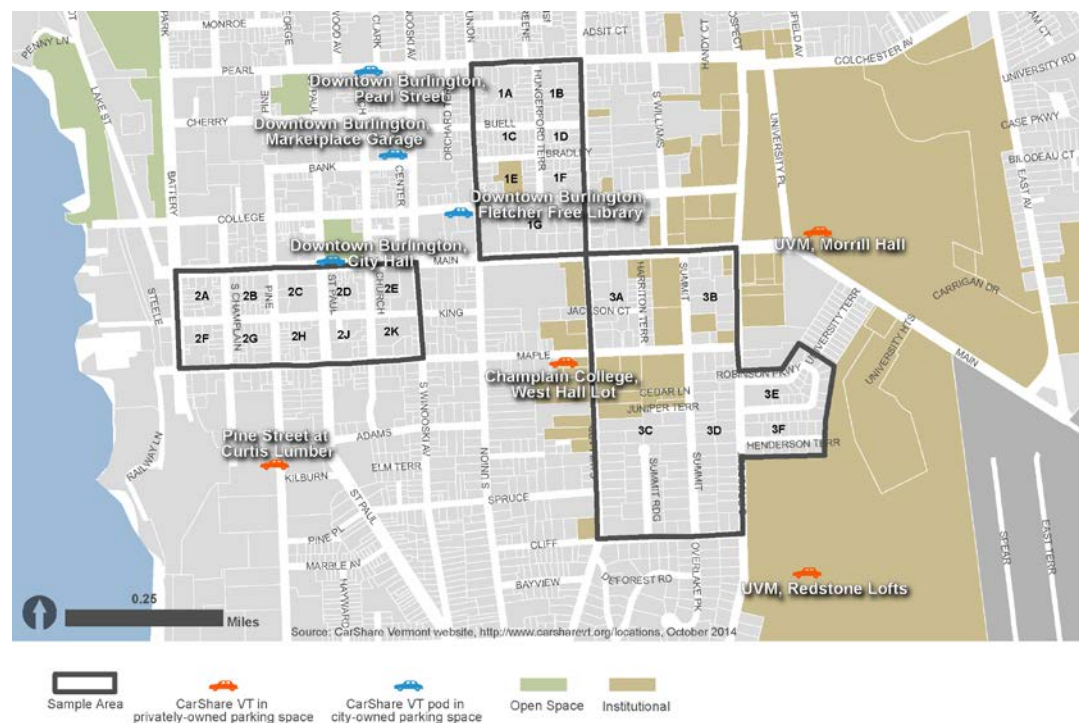
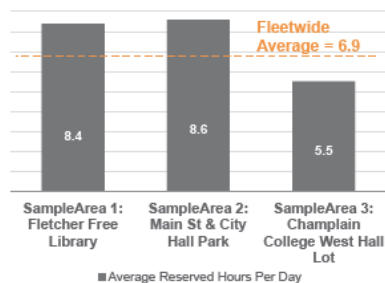


FIGURE 3.32 CAR SHARE POD YEAR-TO-DATE UTILIZATION



3.10 | SUMMARY FINDINGS

The following is a brief summary of the key findings from each of the three sample areas studied and feedback from the public meetings.

- 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. Hungerford Terrace, the only permitted street in the Sample Area, produced 384 violations in 2013, 70% due to resident parking violations.

- **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 are 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. Despite this, on-street parking is largely restricted by resident-only permits and there remains ample available on-street parking throughout the day for those with resident or guest permits. In 2013, Harrington Terrace, at the heart of the Champlain College campus, incurred the second highest amount of fines per mile in all three sample areas, with 255 resident parking violations issued. This suggests a desire for non-residents to park in portions of this sample area.
- **Public Feedback:** Residents who currently live within a residential parking program area were generally enthusiastic about the benefits that the RPP provides their neighborhood and were concerned with the possibility of changes to the program. Some Burlington residents were concerned that their neighborhood would not qualify for the RPP.

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.

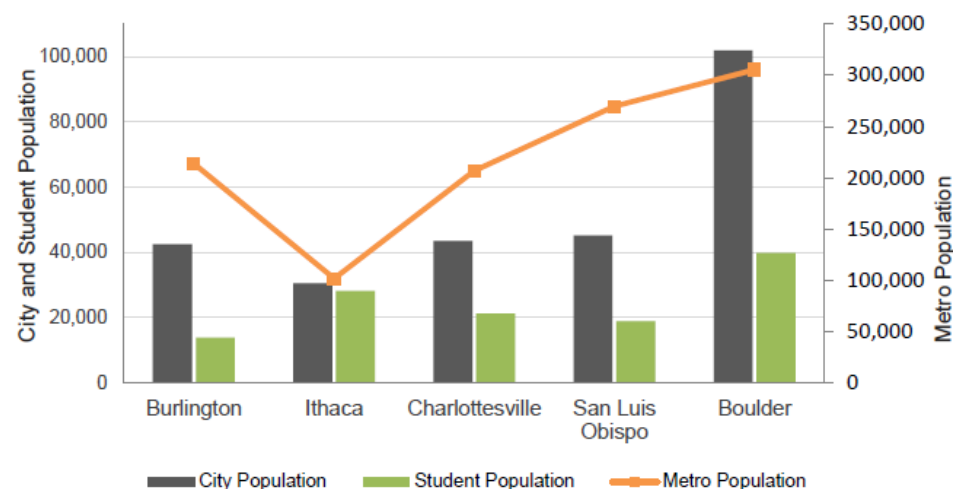
4.0 RESIDENTIAL PARKING BEST PRACTICES

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. They included: 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 | 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 PERMIT COSTS

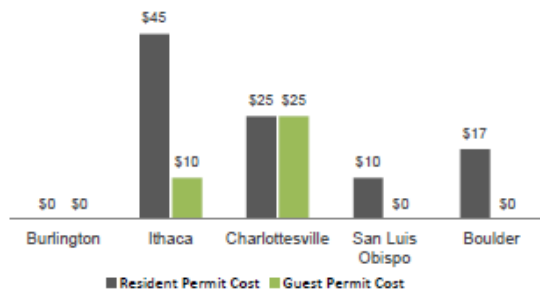


FIGURE 4.3: # OF RESIDENT AND GUEST PERMITS ALLOWED PER HOUSEHOLD OR UNIT

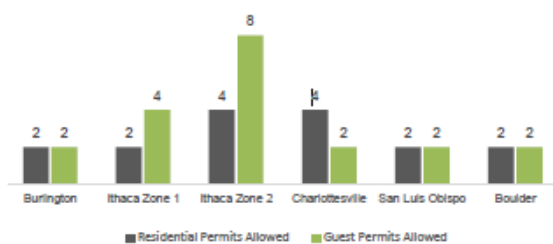
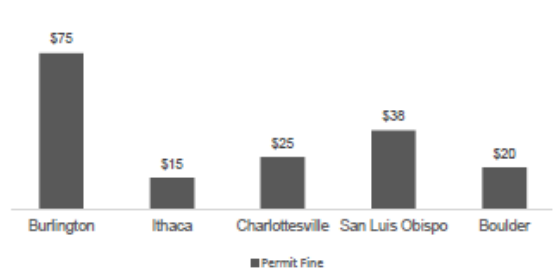


FIGURE 4.4: RESIDENT PERMIT VIOLATION FINES



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 city generated \$166,350 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.** 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.

WHO GETS A RESIDENTIAL PERMIT?		
In Burlington, VT: • Homeowners, Renters, and Students • Guests of Residents 	In San Francisco, CA: • Special permits for contractors, vanpoolers, medical and child caregivers In Pittsburgh, PA: • Allows each business in a residential area one resident pass and one visitor pass.	In Boulder, CO • Allows non-resident commuters to buy a permit for \$82 per quarter (\$328 per year) In Berkeley, CA: • Does not have to be a guest of a resident. Visitor passes are \$2.25 for one day or \$23 for 14 consecutive days

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 through fines.** 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.
- **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 plate 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 license plate number and uses license plate 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 grad 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. 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. Near the downtown, there are 3-hour limitations to account for business needs. 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. Costs \$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

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 on-street parking needs in residential neighborhoods.

This chapter presents the 14 residential parking strategies, three of which are block-specific strategies that require further analysis for implementation. Of the recommended strategies, 15 are new to the City of Burlington. This study also recommends strategies and methods for establishing or reallocating new residential blocks, but **does not propose removing any current resident-only permitted streets**.

The strategies are intended to allow for flexibility over time, with general improvements at the citywide level, as well as block-specific strategies to address particular parking needs in specific neighborhoods. Each strategy contributes to addressing one or more community objectives, which are:

- **Balance Parking Needs:** Balance the needs of those who park on Burlington's streets, including residents, visitors, and commuters.
- **Consider Limited Land Resources:** Consider the highest and best use of the space that public on-street parking occupies.
- **Account for Unique Neighborhood Needs:** Recognize that each neighborhood and block is unique and the residential public parking program accounts for the area's character and needs.
- **Apply a Data Driven Approach:** Use empirical metrics to measure parking trends and the utilization of parking spaces within neighborhoods.
- **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.
- **Is Market-Responsive:** Develop a residential parking management plan that is sensitive to changing demographics, land uses, and the character of the built environment.

5.1 | CATEGORIES OF RESIDENTIAL PARKING STRATEGIES

The recommended residential parking strategies generally fall into four categories. They are:

Technology

These are systems or technological applications that are designed and developed to enhance residential parking communications and simplify the parking administration process.

Parking Experience

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

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 on some RPP designated streets and the potential revenue that can be generated from parking in the public right of way.

Administration and Petition Process

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 objectively established and provide a methodology for allocating or reallocating future residential permit areas.

5.2 | EXISTING RESIDENTIAL PARKING STRATEGIES TO MAINTAIN

The City must continue to make physical, administrative, and capital improvements in order to maintain the success of the program. The following four existing strategies are crucial to an effective long-term parking program. Each strategy includes a description of case studies from other cities where similar strategies are successfully deployed.

STRATEGY #1: 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 to reduce traffic and demand for on-street parking.

Category

Parking Experience

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, and bicycle routes to encourage a sustainable transportation system that does not rely on SOV's and on-street parking. Increased membership in CarShareVT will help reduce car ownership. The City must also continue to plan for long-

term multi-modal transportation and parking coordination. High ridership facilitates a transit system that is comprehensive, frequent, and economical.

To this end, the Chittenden Area Transportation Management Association (CATMA) is a partner to the City, area institutions, and local transit and transportation organizations 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 a Transportation Demand Management (TDM) Action Plan in order to identify employee strategies and policies to decrease SOV commutes. For example, one strategy is to allow City employees to relinquish their City-provided parking permit in exchange for cash. This reduces City costs and opens up a parking space for someone else. These strategies should be expanded to provide comprehensive TDM services across all major employment centers, including the institutions, Downtown, and the South End, and a portion of ticket revenue should be allocated to fund TDM, transit, and active transportation modes.

A frequent complaint is that parking related to the institutions spills over into nearby residential neighborhoods. The institutions should continue to discourage SOV trips through work with CATMA and other TDM policies.

The City is also exploring an expansion of the Downtown Improvement District, which would encourage active transportation and a move away from SOV trips. This effort should be coordinated with parking and transportation services to reduce parking burdens on residential neighborhoods.

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}

STRATEGY #2: ENCOURAGE SATELLITE PARKING ON CAMPUS AND INCENTIVIZE PARKING IN REMOTE LOTS

Incentivize use of satellite parking as part of a long-term transportation demand management strategy. This strategy is especially important for managing student parking demand. Students typically use their car infrequently, and should be encouraged to park in a remote lot, instead of long-term, on street.

Category

Parking Experience

Primary Goals

- Balance Parking Needs
- Consider Limited Land Resources

Discussion

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 student populated 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 the institutions to provide convenient satellite parking

options, shuttle/bus service to downtown or campus, and financial incentives (such as gift certificates to the campus store) to encourage student participation.

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. There is also no free parking on the University campus, with the exception of handicapped parking, and the policies are designed to encourage use of other transportation modes besides driving. 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}

Similar to the institutions, downtown businesses should encourage their employees and customers to utilize park-and-rides and satellite lots. Shuttles from these lots or free transit passes would likely be needed to bring people the last mile. The City's Downtown Parking Study will have additional information on reducing parking needs downtown.

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 to 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 “shuttle lots” offers free parking and shuttle service through Denver’s RTD park-n-ride service. This lot is usually over 50% empty.^x

Denver, CO

Denver’s RTD offers over 70 Park-n-Ride locations that provide cheap transportation from parking lots throughout the metropolitan area, including locations in Boulder. Over half of the lots are free for residents who are parking for 24 hours or less.^{xi}

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

Specifying hours, days, and/or months when residential parking permits apply addresses local variation in parking demand.

Category

Administration

Primary Goals

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

Discussion

The time limits, by hours or days or the week, should account for the particular needs of its residents, visitors, and commuters. 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.

The parking generators throughout the City vary by time of day, and day of week. Therefore, the residential parking permit hours must correspondingly 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.

It is important to acknowledge other parking management approaches outside the RPP that can be useful in areas with high parking demand, especially those residential areas proximate to commercial activity, or mixed-use areas (see Section 5.4 |).

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.^{xii}

Charlottesville, VA

Hours restricted to only 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.^{xiii}

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.^{xiv}

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.^{xv} For example, in the newly implemented Mission Orchard district, Parking Services staff conducted car 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 areas they may not be familiar with. The system also ensures resident buy-in, and thus, they are more likely to be satisfied with the permit hours.^{xvi}

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.^{xvii}

STRATEGY #4: CLEAR SIGNAGE

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.

Category

Parking Experience

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, particularly for visitors and other non-residents, to find suitable parking elsewhere. 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.^{xviii}



FIGURE 5.1: EXAMPLE CLEAR PARKING SIGNAGE

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.^{xix}

Boulder, CO

Boulder's city manager appoints a traffic engineer who is responsible for constructing residential parking signs, among other duties.^{xx} It typically costs \$100 per sign, and two signs on block faces.^{xxi}

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.^{xxii}

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, sign posts, installation labor, permit printing, and any miscellaneous items for the newly installed district.^{xxiii}

5.3 | RECOMMENDED NEW RESIDENTIAL PARKING STRATEGIES

Nine new **citywide** residential parking strategies were developed through the course of this study through analysis and public input. They are based on the City's goals to better manage Burlington's on-street parking assets in order to balance the needs of residents, visitors, and businesses. They are designed so that each strategy can be applied independently to allow for flexibility and phasing based on resources and political will.

It is important to note that the parking recommendations are intended to be implemented as part of the City's comprehensive plan to reduce overall dependence on the SOV and be thoughtful about the use of on-street parking. The overarching comprehensive goal is a sustainable and desirable transportation network throughout Burlington.

STRATEGY #5: ONLINE AND/OR MAILED RESIDENTIAL PARKING RESOURCES

In the short-term, allow residents living in residential parking areas to download the RPP Application and Renewal Form online. To save time for both residents and BPD staff, residents may print, fill out, and mail the forms from home. In the long-term, develop an online system for residents to renew their parking permits—as well as pay for parking citations—with payment by credit card or banking account.

Category

Technology

Primary Goals

- Fair and Transparent

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 over the phone. With a secure and comprehensive parking website, the City should also allow users to go online and pay for parking fines. 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.

In the short-term, allow residents to apply for a parking permit through the mail or by visiting the Burlington Police Department. From the BPD website, provide a link to a Residential Parking Permit Application form that residents can download, print, fill, and

mail-out from home. Applicants would also need to provide copies of the following documents:

- Students and Renters: Proof of residence (i.e. a current lease or utility bill)
- Students: Valid School ID
- Valid Driver's License with address of Resident parking street
- Proof of Valid Vehicle Registration
- Credit Card Number or Check payable to "Burlington Police Department"

In the longer term, when a more comprehensive parking website is developed, allow existing residents to renew their parking permits online, with a scanned copy of a valid proof of residence, such as a utility bill.

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. They sell about 15,00 permits per year and moving the system online has significantly relieved labor of physically issuing permits. The 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. Though T2's eBusiness Solution, students can also pay citations online and manage their personal accounts, which provide information for UVA's electronic permit database.^{xxiv} Thirty-five percent of citations are paid online.^{xxv}

The City of Charlottesville's 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.^{xxvi}

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.^{xxvii}

STRATEGY #6: USER-FRIENDLY WEBSITE AND PRINTED MATERIALS

Construct a web page that provides information on why residential permits are established and how to petition for new residential parking blocks. The City's website should also provide clear guidance on how to get a permit for an existing residential parking block, a map of existing permitted areas and their restrictions, as

well as all necessary forms and documents needed to apply for resident parking permits.

Category

Technology

Primary Goals

- Is Fair and Transparent

Discussion

The City of Burlington should provide one webpage where comprehensive information on the residential parking 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 DPW and parking enforcement staff through the burlingtonvt.gov website. Basic features that should be included on the website are:

- What is the Residential Parking Program?
- Map of Residential Parking Permit Blocks
 - Rationale for why particular blocks received residential parking restrictions
 - Time limits of residential parking
- Eligibility
 - To be eligible for a Residential Permit, all vehicles must be registered and residents must provide proof of residence on a permit-restricted block.
- How to apply for a Residential Parking Permit?
- Terms and Fees
- Permit Expiration Dates (Annual or Quarterly, based on the academic calendar)
- How to petition for a new Residential Parking Permit Area?
- Restrictions and Exclusions
- Pay Citations
- Frequently Asked Questions

STRATEGY #7: COORDINATED VIRTUAL PARKING PERMITS

As a long term capital investment, the City of Burlington should consider License Plate Recognition (LPR) technology to eliminate the need for paper parking permits, offer a web-based application system for residents to manage their parking options, and allow City administrators to oversee the database system and user accounts. 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.

Category

Technology

Primary Goals

- Apply for a Data Driven Approach
- Is Fair and Transparent
- Is Market-Responsive

Discussion

Currently, 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. BPD also currently do not drive marked police vehicles and do not have the technology installed in their vehicles that would be compatible with LPR technology. Federal regulation does not allow for the City of Burlington to access information from institutions' parking databases. Therefore, while the City of Burlington can check if a student ID is valid, there is not an easy system for verifying whether or not the student is currently living on or off-campus.

However, as a long-term strategy, the City should move towards using 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 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 would reduce or eliminate the need for distributing physical permits, saving on permit supplies as well as staff time needed to administer and distribute parking permits. Within a coordinated T2 parking database, parking permits can track back to code enforcement data, detailing the number of dwelling units—and even number of bedrooms—per building. This detailed information will help parking enforcement and the City of Burlington better understand the population densities and correlated parking requirements in a specific neighborhood area.

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 the BPD end, allowing them to focus resources on monitoring and improving the residential parking program.

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.

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.^{xxviii}

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.^{xxix}

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.^{xxx}

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.^{xxxi}

STRATEGY #8: CHARGE FOR RESIDENTIAL PARKING PERMITS

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 cost structure for residential permit fees that encourages residents to use on-street permits judiciously and use revenue generated towards administering and improving the residential parking program.

Category

Permits & Pricing

Primary Goals

- Balance Parking Needs
- Consider Limited Land Resources
- Is Fair and Transparent

Discussion

In the study of comparable communities, Burlington is unique in that the City currently administers and enforces residential parking permits without a fee. In line with the study's goals to help manage valuable on-street public parking, charging for parking stands out as a key lever to encourage residents to be more thoughtful about the use public on-street spaces.

As a recommended best practice, the City should charge residents for on-street sticker permits. To be sensitive to households at all income levels, residents would be charged a

nominal fee for their first permit, with a cost structure that includes incremental increases for each additional permit 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 short-term, residents may also have the option to purchase a quarterly permit that is good for three months, based on the established expiration cycle. The quarterly permit is priced at half the annual rate to encourage residents to purchase the annual permit in order to reduce administrative costs associated with issuing and renewing permits.

TABLE 5.1: PROPOSED RESIDENTIAL PARKING PERMIT FEE STRUCTURE

PERMIT #	RESIDENTIAL PERMIT DESCRIPTION	ANNUAL RESIDENT PERMIT COST	QUARTERLY RESIDENT PERMIT COST
1	The first permit in the dwelling unit	\$10	\$5
2	The second permit in the dwelling unit	\$40	\$20
3	The third permit in the dwelling unit	\$80	\$40
4	The fourth and final permit in the dwelling unit	\$130	\$65

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.^{xxxii}

Charlottesville, VA

Residential parking permits costs \$25 each, and the City generates approximately \$10,000 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.^{xxxiii}

San Luis Obispo, CA

The City of San Luis Obispo'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.^{xxxiv} The permits generate approximately \$15,000 in revenue that goes towards Parking Services' annual budget of about four million dollars.^{xxxv} 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. The cost-benefit

analysis estimated that the enforcement component of the Residential Parking Districts was approximately \$36,000.^{xxxvi}

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.^{xxxvii}

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.^{xxxviii} The increased cost for additional permits ensures that residents only buy permits that they absolutely need.^{xxxix}

STRATEGY #9: ESTABLISH MAXIMUM NUMBER OF TRANSFERABLE PARKING PASSES PER DWELLING UNIT

Establish a maximum of up to four transferable residential parking passes per dwelling unit, with incremental cost increases for each additional permit sticker. As the parking passes are transferable, visitors can be accommodated.

Category

Parking Experience

Primary Goals

- Balance parking needs
- Consider limited land resources
- Is market-responsive

Discussion

The City of Burlington currently does not have a maximum number of residential permits issued to each household. 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 a 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.

Similar to all other comparable cities studied, Burlington's existing RPP does not guarantee on-street parking spots for residents with parking passes. None of the cities studied limit the total number of permits issued by street or by neighborhood area, because doing so would create unfairness towards new residents and be burdensome on City staff to administer a waitlist.

In order to control the number of active on-street parking passes, particularly on streets with limited spaces, resident passes should be limited to a maximum of four transferable permits per dwelling unit, with a cost structure that charges incrementally increasing rates in order to discourage residents from having more permits than needed (Table 5.1). BPD staff would need to verify that each new applicant's address does not already exceed the maximum number of permits allows per the dwelling unit.

The existing visitor permit system allows for two parking passes per dwelling unit. In 2013, there were a total of 1,762 active guest permits, 291 more than resident permits issued. The visitor passes are good for one or two years and are provided at no cost. As the parking passes proposed with Strategy #9 are transferable, visitors can be accommodated.

Case Studies

Ithaca, NY

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.^{xi} 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.^{xii}

Charlottesville, VA

The City of Charlottesville's Residential Permit Parking System usually allows for up to four residential permits per single-family households. 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.^{xiii}

Residential parking permits costs \$25 each, and the City generates approximately \$35,000 annually in permit sales. This revenue goes into the General Fund, and the General Fund budgets money to many different City departments, including the ones involved in the residential parking program.^{xiiii}

San Luis Obispo, CA

The City of San Luis Obispo's Residential Parking Districts allow up to two permits per residence.

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.

STRATEGY #10: RESTRUCTURE VISITOR PASSES

Strategy #9 accommodates visitors with transferable permits. To allow parking for people who have business at a residence (e.g. contractors, at-home care professionals), a 30-day and one year pass system will be established.

Category

Permits & Pricing

Primary Goals

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

Discussion

To accommodate the parking demand for contractors and Home Care professionals 30-day contractor parking passes and one-year Home Care parking passes should be established.

Table 5.2 details the proposed fee structure for each type of visitor pass.

The intent of this recommendation ties back to the original goal of managing and balancing the city’s valuable on-street public parking. By placing a value on the visitor pass, the City encourages residents to purchase and use visitor passes judiciously. For residential areas close to large off-street parking, such as garages and surface lots near downtown, a paid visitor pass encourages a more balanced use of the City’s existing parking lots.

TABLE 5.2: PROPOSED VISITOR PARKING PERMIT FEE STRUCTURE

RESIDENTIAL PERMIT DESCRIPTION	30-DAY PERMIT	ANNUAL PERMIT
Contractor Pass	\$10	n/a
In-Home Care Pass	n/a	\$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 eight 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.^{xliv}

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.^{xlv} 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.^{xlvi}

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.^{xlvi} These temporary permits must be picked up at the Parking Services Office, and there is a limit per individual household. They apply to guest and commercial vehicles, and they can last up to a month.^{xlvi}

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.^{xlix}

STRATEGY #11: ESTABLISH FIXED EXPIRATION/RENEWAL DATES, PRO-RATED BY ACADEMIC CALENDAR

Simplify the administration, renewing, tracking, and enforcing of residential permits by establishing fixed expiration and renewal dates on an annual and quarterly cycle, based on the highest turnover period. To provide flexibility for short-term residents, subletters, or those that only need street parking for part of the year, provide quarterly permits at a lower cost.

Category

Administration

Primary Goals

- Is Fair and Transparent
- Is Market-Responsive

Discussion

Currently residential parking permits are valid for one year for students and two years for renters and homeowners, on a rolling cycle that begins when the resident successfully applies for their permit. Student permits have a set expiration date of May 31 each year.

The two-year rolling timeline was initially established because the bumper sticker lifespan is two years and a two-year renewal period reduced overall staff and resident time. However, when residents move, and especially during high turnover periods, the number of "active" permits increases, making enforcement more difficult given the influx of new resident permits.

As a recommended practice based on other comparable cities, residential permits should have fixed expiration and renewal dates, based on the academic calendar when the City experiences its highest resident turnover. All annual permits potentially should start on

August 1 and expire the following year on July 31, corresponding with high population turnover periods, particularly when many students move during mid to late August each year.

To allow flexibility for short-term residents, the City should also offer a quarterly permit. The start and expiration dates would need to be coordinated with the institution schedules. One potential schedule is:

- August 1 to October 31
- November 1 to January 31
- February 1 to April 31
- May 1 to July 31

Having set expiration dates helps streamline the administrative process, making it predictable when the City should anticipate receiving larger volumes of permit applications. It also ensures that permits “reset” each year to curtail improper use of permits over long periods of time. The City currently structures their truck permits on an annual and quarterly cycle; a similar system can be implemented for the residential parking program.

Case Studies

Ithaca, NY

Ithaca’s City Clerk’s Office sells permits starting on July 1, and the permits expire on June 31 of the following year.ⁱ Currently, there are three clerks with knowledge of residential permits and the electronic database. The Director of Parking would like to switch to one clerk for the majority of the year, with an influx of staffing in July, when permit sales are busiest.ⁱⁱ

Charlottesville, VA

Old permits expire on August 31 of each year, and new permits go on sale beginning July 28 in the main lobby of the Treasurer’s Office on the first floor of City Hall. The Treasurer’s typically have 3 cashiers who are in charge of customer service and permit sales, among other responsibilities.ⁱⁱⁱ With Charlottesville’s schools beginning in mid to late August, the Treasurer’s Office is usually busiest with permit sales in the first few weeks of August. During these weeks, the Office may shift more staffing to the main lobby to help with permit sales, inputting data into the electronic permit database, and sending renewal applications.ⁱⁱⁱⁱ

San Luis Obispo, CA

All Residential Parking Permit Districts have the same permit expiration date, September 15th. Parking Services begins issuing new permits about a month in advance, and their Administrative Assistants usually do not require additional help serving residents coming into the office during that time. However, if there are abnormally busy periods, other Parking Services Staff, including Parking Enforcement Officers, will help out.^{liv}

Boulder, CO

Boulder’s Parking Services sells neighborhood parking permits throughout the year, and the renewal dates vary depending on which neighborhood residents live in. Renewal dates

include August 31st, September 30th, October 31st, November 30th, and January 30th.^{lv} Staff at the front desk is in charge of permit sales and inputting information into the electronic database, among many other responsibilities.^{lvi}

STRATEGY #12: ALLOW APPROVED LANDLORDS AND PROPERTY OWNERS TO ADMINISTER PARKING PASSES TO TENANTS

For rental properties, approved property owners or landlords may apply for, distribute, and enforce a set number of passes from the City to distribute to their tenants. An owner-agent residential parking pass system helps relieve the administrative burden on the City and encourages owners to be active and involved with their tenants' parking situation.

Category

Administration

Primary Goals

- Balance Parking Needs
- Account for Neighborhood Need
- Is Market-Responsive

Discussion

All renters, including off-campus students, currently apply individually for their residential permit stickers at BPD. In 2013, there were a total of 1,471 active residential permits. To streamline the number of individual permit applications, particularly given the high proportion of rental housing in parts of the City (see Chapter 3, Figure 3.8), create a program that allows a set of approved landlords and property owners to be able to apply for, distribute, and enforce the parking permits for their tenants. This system is attractive to tenants because it eliminates an additional step in gathering documentation and applying for a residential permit themselves. Property owners will be held accountable for unfair distribution or overcharging for permits.

This strategy may be best implemented as a one-year pilot program initially, giving a handful of reputable landlords the option to control a set number of parking permits based on total residents and units in their building. Over time, the City may formalize the owner-agent system by developing a criteria for maximum number of permits per complex and standards that property owners must meet in order to become approved for permit distribution.

Case Studies

Charlottesville, VA

Property owners in Charlottesville have the option of buying all the permits for their tenants and distributing them. This owner-agent system gives landlords control over the process so that they can fairly distribute the permits among the people who live in their property.

Owner-agents must report which vehicles are registered to the City Treasurer's Office, and in the City's electronic permit database, a red flag appears next to these permits, indicating that they were distributed by an owner-agent. The system is somewhat institutionalized, as

many owners choose to distribute permits, some distributing up to 40-50 permits per complex. If the City learns that owners overcharging or unfairly distributing permits, they will send a strongly worded letter that prevents further corruption.^{lvii}

STRATEGY #13: ESTABLISH RESIDENTIAL PARKING AREAS RATHER THAN STREETS

Establish residential permits by a walkable area, rather than individual blocks or streets, to balance parking demands throughout a close neighborhood area.

Category

Administration

Primary Goals

- Balance Parking Needs
- Account for Neighborhood Need

Discussion

When the Burlington residential parking program was first formalized in 1990, 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. This system has created issues for corner properties, who have received mixed information on whether they can get a permit for either street or only the street which their front door faces onto. The City has also received complaints that residential parking overcrowds non-permitted areas from residents who live on unrestricted streets adjacent to permitted streets.

To alleviate these concerns, create tightly bounded parking areas on resident-only blocks to allow residents to park not only on their street, but within a walkable radius of their home. 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.

The areas may be of varying sizes, based on existing residential permit areas, topography, and location of major corridors. The residential parking areas are 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, will widen the geographic scope of restricted residential parking in Burlington. However, enforcement can be simplified through a color-coded system, coupled with fixed expiration dates.

STRATEGY #14: ESTABLISH COMMUTER PERMIT PROGRAM (PILOT PROGRAM)

To balance parking needs and generate funds for neighborhood/transportation improvements, offer a limited number of commuter permits on specific permit-

restricted blocks that have demonstrated surplus parking during complementary times.

Category

Permits & Pricing

Primary Goals

- Balance Parking Needs
- 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 at a block level 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 to allot a specific number of commuter permits on a specific block or neighborhood area. This strategy is considered only for areas that have a parking surplus largely during daytime business hours.

A parking surplus is demonstrated when BPD Parking Enforcement staff notice a pattern over the course of a fall or spring month where less than 50 percent of on-street spaces are occupied at specific times of day or days of the week. This information should be relayed to DPW staff who would then conduct a parking count on those blocks, during the specific period where parking counts are low, to verify utilization.

DPW staff then prepares a memorandum documenting the parking count and analysis to the Public Works Commission. The Public Works Commission then decides 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 (such as DPW and DPZ) would determine:

- The geographic, time, and capacity limits for commuter passes;
- Cost-benefit analysis for implementing a commuter pass system for specific blocks, including potential revenues.
- Proposed neighborhood 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.

To ensure neighborhood livability, key elements of a commuter parking pass 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 zones, 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.
- 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 unit in RPP zones participating in the commuter permit pilot will have the opportunity to get their first three residential parking passes free of charge — up to an \$130/year savings.

Implementation Process

It is recommended that this strategy be implemented as a pilot program, to allow residents to adjust and for the City to determine whether additional adjustments are needed. The City recognizes that the proposal for a commuter permit program has generated a lot of concern from residents in existing Residential Parking Program zones.

Given this concern and given the need to better understand the commuter permit opportunities and challenges, **this report does not recommend RPP-wide commuter permit implementation at this time**. A 2-3 year commuter permit pilot program is recommended to help the City understand the opportunities and challenges.

Pricing for commuter permits would be significantly higher than for residential permits. Pricing will also 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 the permits would be 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 street and sidewalk capital needs.

The pilot would be reviewed at 2-3 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 considerations 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 will consider an expansion of the commuter permit program into all RPP areas.

Case Studies

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.^{lviii} Parking Services' website has a dynamic map that displays which commuter spots have been sold and which are still available.^{lix} 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.^{lx}

5.4 | GENERAL PARKING MANAGEMENT APPROACHES

Several parking management strategies outside of the formal RPP should continue to be pursued by the City to create convenient visitor parking, encourage turnover, and generate funds for neighborhood/transportation improvements.

Category

Permits & Pricing

Primary Goals

- Balance Parking Needs
- Account for Neighborhood Need
- Is Market-Responsive

Discussion

Three general parking management strategies can be applied city-wide under appropriate conditions:

- Install parking meters and/or paystations.
- Establish parking time limits in mixed-use areas or along arterial roadways.
- Striping parking stalls/areas.

Parking meters or pay stations may be added to specific areas of the City that would allow visitors to pay to use excess on-street parking spaces in mixed-use areas, or in areas adjacent to commercial zones. This strategy may be attractive to some residents in non-RPP areas because they avoid the costs and restrictions associated with the RPP. This strategy is attractive to the City as it avoids the RPP approval process and provides a source of revenue.

This strategy can also be considered in RPP areas, particularly for the downtown transition zone, mixed-use areas, and residential areas immediately adjacent to commercial and/or employment centers. 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, 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.

Parking time limits encourage turnover on streets during the day and free up spaces in the early evening when residents come back from work. Time limits can be associated with metering or not.

Striping of parking stalls can optimize parking spaces on a block while minimizing the potential for blocking driveways.

5.5 | PETITION PROCESS

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 Parking 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 plate 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 commuter. 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 to instill a fair and transparent process, the petition process should include well-defined thresholds and be supported by parking data and counts. 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 resident property owners' signatures to order to initiate the resident permit parking process.

Primary Goals

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

Discussion

Adopt a streamlined petition process, with one step involved for DPW Parking staff and minimal administrative effort from the Department of Planning and Zoning (DPZ). In order to start the residential parking petition process, the petition(s) would go to the DPZ at City Hall to request the names of all property owners on their block and build their petition. The residents would be responsible for getting 51 percent support from their neighbors, the property owners listed on their block. Tenants should be encouraged to talk to their landlords in order to gain their support for residential permit parking. Student renters particularly have a higher turnover rate than other types of residents, so the City wants to ensure that there is agreement from the long-term owners of the building.

Petitioners will have the option to request for full-time residential parking restrictions (all times), overnight parking restrictions (5 PM to 8 AM), or daytime and weekday parking restrictions (Monday – Friday, 8 AM to 5 PM). 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.

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.^{lxi}

In addition to this one-time parking survey, the Parking Director and the Traffic Engineer conduct daily inventory in residential parking zones using License Plate Recognition technology, which allows them to conveniently conduct counts from their vehicles. They use data from the daily counts to inform them how many permits they can sell to ensure that utilization is at 80 percent.^{lxii}

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. The Director of Neighborhood Development is in charge of conducting the survey, which not only measures total utilization rate, but it also measures the percentage of parked vehicles owned by residents in the parked area.

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 hour.^{lxiii} This information will inform a draft proposal that the residents can choose to contribute to. Next, a public hearing before the Transportation Advisory Board to review the proposal is held. The Board's recommendations and residents' comments are forwarded to the City Manager to make a final decision regarding the zone.^{lxiv}

DEMONSTRATED PARKING DEMAND

Assess that there is a demonstrated parking problem. Following demonstrated property owner support, DPW Parking staff conducts a parking survey over the course of two peak periods to determine the occupancy levels. Minimum threshold is 75 percent occupancy, which demonstrates that there is sufficient parking demand and possible increased traffic due to people circling for a parking spot.

Primary Goals

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

Discussion

Currently, 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.

DPW Parking staff will continue to conduct a parking survey to ensure that there is demonstrated parking demand on a given block or neighborhood area. Seasons play a large factor in Burlington's parking demand, particularly when school is in or out of session.^{lxv} In the past, DPW parking occupancy counts during the summer time would reveal low parking occupancy and resident petitions would be rejected. Therefore, residents will be 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 parking survey count will vary depending on the requested timeframe of the parking petition and the times and days of week with the highest perceived parking demand. While residents will not know the exact days that the counts will be conducted on, to prevent biased counts, they will be aware that the occupancy counts must reflect a minimum threshold of 75 percent during the peak demand periods.

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.^{lxvi} In addition to this one-time parking survey, the Parking Director and the Traffic Engineer do daily inventory in residential parking zones using License Plate Recognition technology, which allows them to conveniently conduct counts from their vehicles. They use data from the daily counts to ensure that parking utilization is optimized at around 80 percent.^{lxvii}

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 spaces are occupied by vehicles with owners that do not reside within the new proposed area.^{lxviii} The General Fund allocates money to Neighborhood Development Services, which is in charge of conducting the on-street survey.^{lxix}

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.

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.^{lxx} 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.^{lxxi}

ESTABLISH A PROCESS FOR REMOVING OR REALLOCATING RESIDENTIAL PARKING

Establish a neighborhood-driven process to remove or reallocate existing residential parking restricts. The process should mirror the petition and parking survey count method used to establish new residential parking restrictions.

Primary Goals

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

Discussion

Although it has been rare, the City should also establish a process that allows resident property owners to reverse or change their existing residential parking restriction. Residents may wish to change the hours or days of the week that public parking is restricted on their block. Similar to the petition process to establish residential parking, residents and property owners must request a property owner list from DPZ and collect 51 percent of their neighbors' signatures, showing support for either removing resident parking restrictions altogether or choosing their preferred terms of public parking restrictions.

For the parking survey counts, the City would cover parking restriction signs in the neighborhood over the course of a two-day period. This allows the parking count to more accurately assess the parking demands were there no restrictions in place. DPW staff would conduct a parking survey at perceived peak periods over the course of the two-day period to ensure that occupancy is less than 75 percent in all hours of the peak counts.

Case Studies

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.^{lxxii} The City Traffic Engineer is a member of Charlottesville's Neighborhood Development Services, which is funded through the City's General Fund.^{lxxiii}

5.6 | PARKING BANS

Code Enforcement currently allows lawn parking overnight during winter parking ban. However, in certain neighborhoods, lawn parking has become an issue during the daytime. Illegal lawn parking has stemmed in part from a lack of available and appropriate on-and off-street parking in residential areas.

Lawn parking during the day creates a visual blight in the neighborhood and in some cases, creates safety concerns and blocks driveway 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 illegal parked on the lawn.

Recommendation

Continue to encourage residents to park overnight in the City's downtown garages for free during winter parking bans, rather than parking on green spaces. For households that receive more than three parking ban fines per year, all permit holders in the unit automatically lose their residential parking permits for the remainder of the year. If it remains a significant issue, the BPD will consider raising the fine from \$75 to \$125.

5.7 | PARKING AND ZONING DISTRICTS

Changes made to pricing and management of downtown parking may impact the on-street parking in adjacent residential neighborhoods. Many of the impacts are addressed by a number of the recommended strategies presented, including:

- Establishing a clear process for creating new residential parking areas in the future
- Considerations for block-specific strategies that would allow non-residential access during off-peak hours, such as meters, pay stations, time of day restrictions, 2-hour free parking, and/or commuter permits. A portion of the revenue from these block-specific strategies could directly go back towards neighborhood/transportation improvements.
- Signage to identify more suitable parking locations for non-residents, including students and commuters.

PARKING OVERLAY DISTRICTS

There are currently three Parking Districts in the City of Burlington as part of the City's Comprehensive Development Ordinance that account for varying demands on parking based on proximity to other related uses, availability of public transportation, the density of land uses, and the ability to shared parking with nearby uses (Section 8.1.3 Parking Districts, Burlington Comprehensive Development Ordinance).

- **Neighborhood (N):** The Neighborhood Parking District establishes the baseline for parking requirements throughout the city. The demand for offsite parking is largely dependent on the needs and characteristics of an individual site or land use.
- **Shared Use (SU):** The Shared Use Parking District establishes a reduction in the parking requirement baseline, recognizing the opportunities to share parking demand and rely on non vehicular transportation in these areas.
- **Downtown (D):** The Downtown Parking District requires the least amount of parking, recognizing the availability of shared parking, frequent transit service, and higher rates of other non-vehicular transportation in these areas.

The City is proposing to extend the boundaries of the Shared Use Parking District to include neighborhoods that wrap the downtown area. (Figure 5.3)

FIGURE 5.2: EXISTING PARKING DISTRICTS MAP

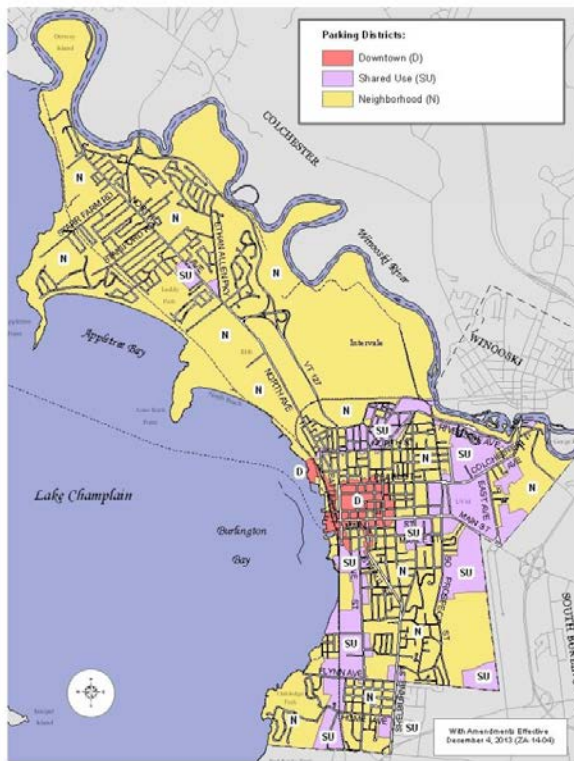
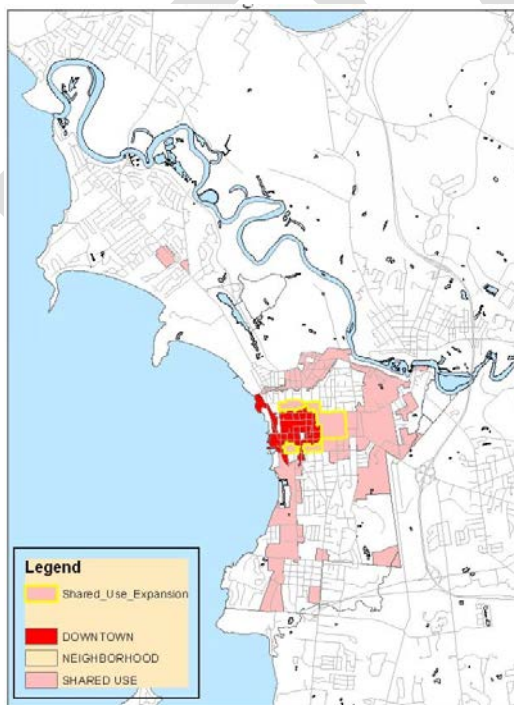


FIGURE 5.3: PROPOSED NEW PARKING DISTRICTS MAP



MINIMUM PARKING REQUIREMENT

The City is also currently exploring the idea of changing the minimum parking requirements in order to respond to the number of bedrooms in a unit, as opposed to the type of dwelling unit, which can vary widely in resident headcount. (

Figure 5.4 and Figure 5.5) The purpose of revisiting the minimum parking requirements in the zoning ordinance is to making downtown development more affordable, while reducing the amount of under used parking spaces. The Downtown Parking study revealed that 35 percent of downtown parking spots are empty during peak periods.^{lxxiv}

There remains community concern in Burlington that if minimum residential parking requirements are lifted in the Downtown Parking District, the resulting problem will be “spillover parking” into nearby neighborhoods and additional traffic. However, other studies have shown that minimum parking requirements, particularly in walkable, transit-accessible areas, instead increase overall congestion by encouraging driving and decreasing the usage of other modes.

Ithaca, NY eliminated minimum parking requirements in their downtown and Collegetown, which resulted in new denser development within its walkable and transit-accessible core. From the City’s financial perspective, the property values of a developed use are much higher than a parking lot; commercial developments provide employment prospects and denser housing provide more homes to residents. Ithaca was able to close their \$3 million structural budget and eventually was able to cut taxes by incentivizing smart growth.^{lxxv}

Parking requirements can have a powerful effect on the architectural form, urban character, affordability, and level of traffic on Burlington’s street. On-site and off-street parking requirements can inadvertently create inefficient pockets of surface lots, each parcel with its own individual driveway. Particularly in multi-unit dwellings, surface lots are unevenly used throughout the day and create impediments to the pedestrian and bicycle infrastructure. Minimum parking requirements can also make it impossible for affordable housing to be financially feasible to develop. When parking is included free of charge as part of a residential development, people are encouraged to drive more, which increases overall traffic and discourages use of transit and other sustainable modes. The cost of bundling the parking with the housing is ultimately passed along to the residents, whether or not they own a car.

FIGURE 5.4: EXISTING PARKING MINIMUMS, BY DISTRICT (GRAPH)

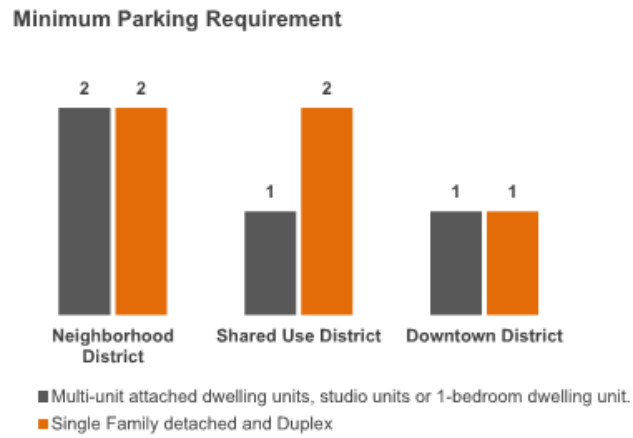
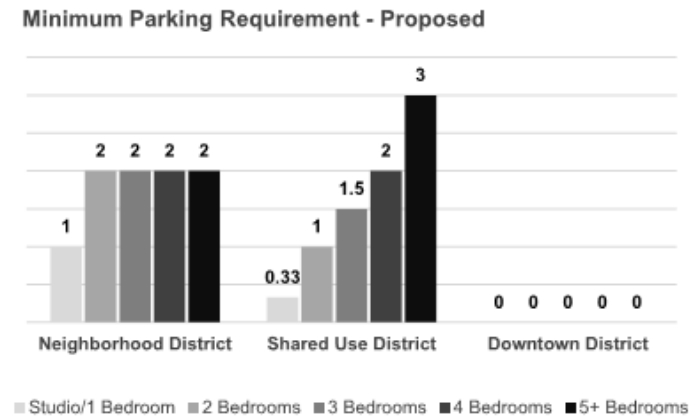


FIGURE 5.5: PROPOSED NEW PARKING MINIMUMS, BY DISTRICT (GRAPH)



DISTRICT

- DOWNTOWN
- SHARED USE
- NEIGHBORHOOD

Zoning

- Downtown
- Downtown Transition
- Downtown Waterfront
- Downtown Waterfront - Public Trust
- Battery Street Transition
- Enterprise - Light Manufacturing
- Institutional
- Neighborhood Activity Center - Riverside
- Neighborhood Mixed Use
- RCO - Conservation
- RCO - Recreation/Greenspace
- Residential - High Density
- Residential - Medium Density
- Residential - Low Density
- Urban Reserve
- Waterfront Residential - Medium Density
- Waterfront Residential - Low Density

0.25 Miles

Map of Downtown Portland, Oregon, showing various districts and their zoning. The map includes a legend for District, Zoning, and Neighborhood, a scale bar (0.25 miles), and a north arrow. The map is color-coded and pattern-coded to represent different urban areas and their intended uses.

Based on the three sample areas studied, these are the summary findings:

- ## RECOMMENDATION

- **Parking in-lieu fees:** Eliminate minimum parking requirement in downtown. Lower parking minimums in Shared Use and Neighborhood Parking Districts – if developers contribute to a parking in-lieu fee. Similar to the “fair share model” for transportation impact fees, this allows the City to pool monies towards a future parking garage or consolidated lot, as opposed to having several individual off-street

spaces serving individual parcels. The in-lieu parking fee would need to be carefully structured so that the fee per space does not preclude developers from being able to finance new projects.

5.8 | IMPLEMENTATION

	RECOMMENDATIONS	LEAD DEPARTMENT/AGENCY AND PARTNERS	TIMELINE
CITYWIDE RESIDENTIAL PARKING STRATEGIES			
1	Encourage and Improve Sustainable Transportation Modes	DPW Streets, Traffic & Parking, CCRPC, CATMA, Go! Burlington	Ongoing
2	Encourage Satellite Parking on Campus and Incentivize Parking in Remote Lots	BPD Parking Enforcement, UVM, UVM Medical Center, Champlain College, CATMA	Ongoing
3	Establish residential parking permit hours based on parking demand, by hours or days of the week	DPW Traffic & Parking, BPD Parking Enforcement	Ongoing
4	Clear signage	DPW Equipment Maintenance	Ongoing
5	Online or mailed residential parking resources	BPD Parking Enforcement	2017-2018
6	More information on a user-friendly website and printed materials	BPD Parking Enforcement, Go! Burlington	2018-2020
7	Coordinated Virtual Parking Permits	BPD Parking Enforcement	2020-2025
8	Charge for residential parking permits	BPD Parking Enforcement	2018-2020
9	Establish maximum number of transferable parking passes per dwelling unit	BPD Parking Enforcement	2017-2018
10	Restructure visitor passes	BPD Parking Enforcement	2018-2020
11	Establish fixed expiration/renewal dates, pro-rated by academic calendar	BPD Parking Enforcement	2017-2018

12	Allow approved landlords to administer permits to tenants	BPD Parking Enforcement, Planning & Zoning, Code Enforcement	2017-2018
13	Establish residential parking areas rather than streets	DPW Traffic & Parking, BPD Parking Enforcement	2018-2020
14	Pilot commuting parking program	BPD Parking Enforcement, Planning & Zoning, CEDO(?)	Varies
PETITION PROCESS FOR NEW RESIDENTIAL PARKING AREA			
1	Demonstrated Community Support	DPW Traffic & Parking	2017-2018
2	Demonstrated Parking Demand	DPW Traffic & Parking	2017-2018
3	To Remove or Reallocate Residential Parking	DPW Traffic & Parking	2017-2018

ⁱ William Burns. DPW Traffic Foreman. May 18, 2015 email correspondence.

ⁱⁱ Commuter and Parking Services.

<http://transportation.fs.cornell.edu/commuting/busservices/employees.cfm>

ⁱⁱⁱ Westerson, Shelley. "Where Does All that Parking Money Go?" *Mustang News* 4 Mar. 2015.

<http://mustangnews.net/where-does-all-that-parking-money-go/#sthash.rNPizTKw.dpuf>

^{iv} Manager of Parking Services at the City of Boulder. May 6, 2015 phone correspondence.

^v Gustafson, Thomas. UVM Vice President for University Relations & Administration. City of Burlington, Draft Action Plan for Expanding and Improving Burlington's Housing Stock.

http://www.burlingtonvt.gov/sites/default/files/u116/UVM%20Housing%20plan%20response%20SIGNED%2010_07_2014.pdf October 7, 2014.

^{vi} CATMA Off-site Parking. <http://catmavt.org/program/site-parking>

^{vii} McClure, Ann. "Go with the Flow: Campus Traffic and Parking Solutions." *University Business* May 2010. <http://www.universitybusiness.com/article/go-flow-campus-traffic-and-parking-solutions>

^{viii} Commuter and Parking Services. <http://transportation.fs.cornell.edu/parking/default.cfm>

^{ix} University Transit Service. <http://www.virginia.edu/parking/uts/index.html>

^x Parking Permits. <http://www.colorado.edu/pts/parking-permits>

^{xi} How to Park. <http://www.rtd-denver.com/HowToPark.shtml>

^{xii} Residential Parking Permit System. <http://www.cityofithaca.org/187/Residential-Parking-Permit-System>

^{xiii} City Treasurer at the City of Charlottesville. October 30, 2014 email correspondence.

^{xiv} Charlottesville Municipal Code, 15-203.

https://www.municode.com/library/va/charlottesville/codes/code_of_ordinances?nodeId=CO_CH15MOVE&ARTVSTSTPA_DIV3REPEPAZOREPABL_S15-208PEREHO

^{xv} Residential Parking Districts. <http://www.slocity.org/government/departments-directory/public-works/parking-services/residential-parking-districts>

^{xvi} Assistant Parking Services Manager at the City of San Luis Obispo. May 26, 2015 email correspondence.

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- xvii Neighborhood Parking Program. <https://bouldercolorado.gov/parking-services/neighborhood-parking-program>
- xviii William Burns. DPW Traffic Foreman. May 18, 2015 email correspondence.
- xix Director of Parking at the City of Ithaca. May 1, 2015 phone correspondence.
- xx Boulder Municipal Code, 2-2-11.
https://www.municode.com/library/co/boulder/codes/municipal_code?nodeId=TTT2GOOR_CH2_GEAD_2-2-15NEPEPAZO#
- xxi Manager of Parking Services at the City of Boulder. May 6, 2015 phone correspondence.
- xxii City Treasurer at the City of Charlottesville. May 13, 2015 phone correspondence.
- xxiii Assistant Parking Services Manager at the City of San Luis Obispo. May 26, 2015 email correspondence.
- xxiv T2 University of Virginia Case Study. <http://www.t2systems.com/customer-successes/parking-software-case-studies.aspx>
- xxv T2 University of Virginia Case Study. <http://www.t2systems.com/customer-successes/parking-software-case-studies.aspx>
- xxvi City Treasurer at the City of Charlottesville. May 26, 2015 email correspondence.
- xxvii Assistant Parking Services Manager at the City of San Luis Obispo. May 26, 2015 email correspondence.
- xxviii Community Liaison at the City of Fort Collins. May 21, 2015 phone correspondence.
- xxix Residential Parking Services Coordinator at the City of Fort Collins. May 26, 2015 email correspondence.
- xxx Parking Services, Enforcement. <http://www.fcgov.com/parking/methods.php>
- xxxi Tanabe, Kyle. UC Irvine Parking & Transportation Services. Permitless Parking. <
<http://www.ucop.edu/information-technology-services/award-winners-and-applications/filessharing.pdf>>
- xxxii Director of Parking at the City of Ithaca. May 1, 2015 phone correspondence.
- xxxiii City Treasurer at the City of Charlottesville. May 26, 2015 email correspondence.
- xxxiv Assistant Parking Services Manager at the City of San Luis Obispo. May 1, 2015 phone correspondence.
- xxxv Boulder Municipal Code, 2-2-11.
https://www.municode.com/library/co/boulder/codes/municipal_code?nodeId=TTT2GOOR_CH2_GEAD_2-2-15NEPEPAZO#
- xxxvi Assistant Parking Services Manager at the City of San Luis Obispo. May 1, 2015 phone correspondence.
- xxxvii Manager of Parking Services at the City of Boulder. May 6, 2015 phone correspondence.
- xxxviii RP3 Permits. <http://www.fcgov.com/parking/residential-parking-permit/permits.php>
- xxxix Residential Parking Services Coordinator at the City of Fort Collins. May 26, 2015 email correspondence.
- xl Residential Parking Permit System. <http://www.cityofithaca.org/187/Residential-Parking-Permit-System>
- xli Director of Parking at the City of Ithaca. May 1, 2015 phone correspondence.
- xlii Zone Parking Permits. <http://www.charlottesville.org/Index.aspx?page=430>
- xliii City Treasurer at the City of Charlottesville. May 13, 2015 phone correspondence.
- xliv Residential Parking Permit System. <http://www.cityofithaca.org/187/Residential-Parking-Permit-System>
- xlvi Zone Parking Permits. <http://www.charlottesville.org/Index.aspx?page=430>
- xlvi City Treasurer at the City of Charlottesville. May 13, 2015 phone correspondence.
- xlvii Residential Parking Permit District Information Guide.
<http://www.slocity.org/home/showdocument?id=3642>
- xlviii Assistant Parking Services Manager at the City of San Luis Obispo. May 26, 2015 email correspondence.
- xlvi NPP Resident Information and Application. https://www-static.bouldercolorado.gov/docs/NPP_Resident-1-201304101154.pdf
- ¹ Residential Parking Permit System. <http://www.cityofithaca.org/187/Residential-Parking-Permit-System>

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- li Director of Parking at the City of Ithaca. May 1, 2015 phone correspondence.
- lii Zone Parking Permits. <http://www.charlottesville.org/Index.aspx?page=430>
- liii City Treasurer at the City of Charlottesville. May 13, 2015 phone correspondence.
- liv Assistant Parking Services Manager at the City of San Luis Obispo. May 26, 2015 email correspondence.
- lv NPP Resident Information and Application, https://www-static.bouldercolorado.gov/docs/NPP_Resident-1-201304101154.pdf.
- lvi Manager of Parking Services at the City of Boulder. May 6, 2015 phone correspondence.
- lvii City Treasurer at the City of Charlottesville. May 13, 2015 phone correspondence.
- lviii Manager of Parking Services at the City of Boulder. May 6, 2015 phone correspondence.
- lix Parking Zones. http://gisweb.ci.boulder.co.us/pds_parking/
- lx Commuter Information and Application. https://www-static.bouldercolorado.gov/docs/Commuter_2014-1-201312061117.pdf
- lxi Residential Parking Permit System. <http://www.cityofithaca.org/187/Residential-Parking-Permit-System>
- lxii Director of Parking at the City of Ithaca. May 1, 2015 phone correspondence.
- lxiii Manager of Parking Services at the City of Boulder. May 6, 2015 phone correspondence.
- lxiv Neighborhood Parking Program. <https://bouldercolorado.gov/parking-services/neighborhood-parking-program>
- lxv King, John. Meeting May 20, 2015.
- lxvi Residential Parking Permit System. <http://www.cityofithaca.org/187/Residential-Parking-Permit-System>
- lxvii Director of Parking at the City of Ithaca. May 1, 2015 phone correspondence.
- lxviii Charlottesville Municipal Code, 15-203. https://www.municode.com/library/va/charlottesville/codes/code_of_ordinances?nodeId=CO_CH15MOVE&TR_ARTVSTSTPA_DIV3REPEPAZOREPABL_S15-208PEREHO
- lxix City Treasurer at the City of Charlottesville. May 26, 2015 email correspondence.
- lxx Manager of Parking Services at the City of Boulder. May 6, 2015 phone correspondence.
- lxxi Neighborhood Parking Program. <https://bouldercolorado.gov/parking-services/neighborhood-parking-program>
- lxxii Charlottesville Municipal Code, 15-203.1. https://www.municode.com/library/va/charlottesville/codes/code_of_ordinances?nodeId=CO_CH15MOVE&TR_ARTVSTSTPA_DIV3REPEPAZOREPABL_S15-203ESREPA
- lxxiii City Treasurer at the City of Charlottesville. May 26, 2015 email correspondence.
- lxxiv Costa, Jennifer. Burlington considers easing parking requirements. <<http://www.wcax.com/story/21964583/burlington-planning-commision>> April 16, 2013.
- lxxv Guo, Jeff. The future of urbanism according to the 27-year-old mayor of Ithaca. <<http://www.washingtonpost.com/blogs/govbeat/wp/2015/02/27/the-future-of-urbanism-according-to-the-27-year-old-mayor-of-ithaca/>> February 27, 2015.



**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

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Chapin Spencer
DIRECTOR OF PUBLIC WORKS

M E M O R A N D U M

To: Amy Bovee, Clerks Office
From: Chapin Spencer, Director
Date: July 9, 2015
Re: Public Works Commission Agenda

Please find information below regarding the next Commission Meeting.

Date: **July 15, 2015**
Time: 6:30 – 9:00 p.m.
Place: **585 Pine Street – Auditorium**

A G E N D A

ITEM

- 1 Agenda
- 2 5 Min Elect Chair, Vice Chair & Clerk
- 3 10 Min Public Forum
- 4 5 Min Consent Agenda
 - 4.10 Champlain College Temporary Bus Stop
 - 4.20 3-Way Stop Control at Shore Road & Balsam Street
 - 4.30 439 College Street Shuttle Stop Request
 - 4.40 Relocation of Three Accessible Spaces on St. Paul St for New CCTA Transit Station
 - 4.50 Driveway Encroachment/Loading Zone Requests for North Winooski Ave
- 5 55 Min Residential Parking Management Study
 - 5.10 Communication, N. Losch
 - 5.20 Conflicts of Interest, G. Bergman
 - 5.30 Discussion

Non-Discrimination

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- 6 30 Min Review Downtown Parking
 - 6.10 Communication, C. Spencer
 - 6.20 Discussion

- 7 5 Min 2015 VTrans Bicycle & Pedestrian Program Grant Candidates
 - 7.10 Communication, N. Losch
 - 7.20 Discussion

- 8 5 Min Increasing Driver Awareness of Yield Condition
 - 8.10 Communication, D. Roy
 - 8.20 Discussion
 - 8.30 Decision

- 9 5 Min Minutes of 6-17-15

- 10 10 Min Director's Report – August Meeting Date?

- 11 10 Min Commissioner Communications

- 12 **Adjournment & Next Meeting Date – August 19 & September 16, 2015**



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Chapin Spencer
DIRECTOR OF PUBLIC WORKS

MEMORANDUM

TO: PUBLIC WORKS COMMISSION
FM: CHAPIN SPENCER, DIRECTOR
DATE: JULY 9, 2015
RE: PUBLIC WORKS COMMISSION MEETING

Enclosed is the following information for the meeting on July 15, 2015 at 6:30 PM at **585 Pine St – Auditorium**

1. Agenda
2. Consent Agenda
3. Residential Parking Management Study
4. Review Downtown Parking
5. 2015 VTrans Bicycle & Pedestrian Program Grant Candidates
6. Increase Driver Awareness of Yield Condition
7. Minutes of 6-17-15

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Chapin Spencer
DIRECTOR OF PUBLIC WORKS

M E M O R A N D U M

To: Amy Bovee, Clerks Office
From: Chapin Spencer, Director
Date: July 9, 2015
Re: Public Works Commission Agenda

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- 9 5 Min Minutes of 6-17-15

- 10 10 Min Director's Report – August Meeting Date?

- 11 10 Min Commissioner Communications

- 12 **Adjournment & Next Meeting Date – August 19 & September 16, 2015**



MEMORANDUM

July 9, 2015

TO: Public Works Commission

FROM: Damian Roy, DPW Engineering Technician *DER*

CC: Norman Baldwin, City Engineer
Chapin Spencer, Director of Public Works

RE: Champlain College Temporary Bus Stop

Background:

Staff received a request from Mr. John Caulo, Vice President of Campus Planning & Auxiliary Services for Champlain College, regarding the colleges need to remove the temporary bus stop on Maple Street that was installed last summer. In the July 2014 Commission, approval was given to install a sixty-five (65) foot temporary bus stop in front of the Hauke Campus Center at 375 Maple Street due to the Communications and Creative Media building (CCM) construction making the existing bus stop unavailable. This temporary bus stop serves the Spinner Place shuttle which runs on a half-hour schedule between 7:00am and 9:00pm during the school year.

Observations:

The restored bus stop will be sixty-five (65) feet long, the same length as the temporary bus stop. This will leave one hundred ten (110) feet of curb for installing five (5) unrestricted parking spaces westerly of the bus stop. *Please see the attached drawing, picture, emails, and the July 2014 Commission item documenting this request.*

Conclusions:

Construction of the CCM is scheduled for completion this August. At this time it will be necessary to remove the temporary bus stop and restore the bus stop to its previous location

approximately one hundred (100) feet westerly along Maple Street. No negative impact to on-street parking is anticipated.

Recommendations:

Staff recommends that the Commission adopt:

- The removal of the temporary bus stop in front of 375 Maple Street in favor of unrestricted parking.
- The installation of a sixty-five (65) foot bus stop on Maple Street one-hundred (100) feet westerly of its existing location.

Damian Roy

From: Caulo, John <jcaulo@ Champlain.edu>
Sent: Wednesday, June 24, 2015 1:57 PM
To: Chapin Spencer; Norm Baldwin; Damian Roy
Cc: Nic Anderson
Subject: Champlain College: Shuttle Bus Stop on Maple Street
Attachments: MapleStreetTempShuttle060314.pdf; ProposedBusStopChanges-Images.pdf

Gentlemen:

Thanks for taking the time Tuesday to discuss various items of common interest at Champlain College with Nic and myself. We will be following up with you on the various items, as required and/or requested.

With specific regard to the above-referenced matter, let this correspondence serve as written notice to the Public Works Commission that the temporary bus stop permitted by the City last summer (see attached letter request dated 6/3/14) will no longer be needed, as of Friday August 21st. Further, we request the College's shuttle bus stop resume operations at the previously permitted location at the existing campus bus shelter along Maple Street as of Monday, August 24th.

As we discussed at the meeting, the construction of the new *Communications and Creative Media* building (CCM) required us to relocate the campus bus stop from the existing shelter location to one approximately 100 feet easterly along Maple Street. With construction slated to be completed by mid-August, the shuttle bus stop should return to the general shelter location, as originally contemplated by the College, and approved through the Development Review Board process (see attached images).

We are available to work with you and your staff to clearly layout the dimensions of the bus stop at your earliest convenience. Ideally this area would also be striped, if possible, to make it clear for the public. Again, thank you for your consideration of this matter.

-john

--

John Caulo - *Associate Vice President I Campus Planning & Auxiliary Services*

802.865.5470 (direct)
802.233.6640 (mobile)

Champlain College | PO Box 670 | BTV | 05402-0670

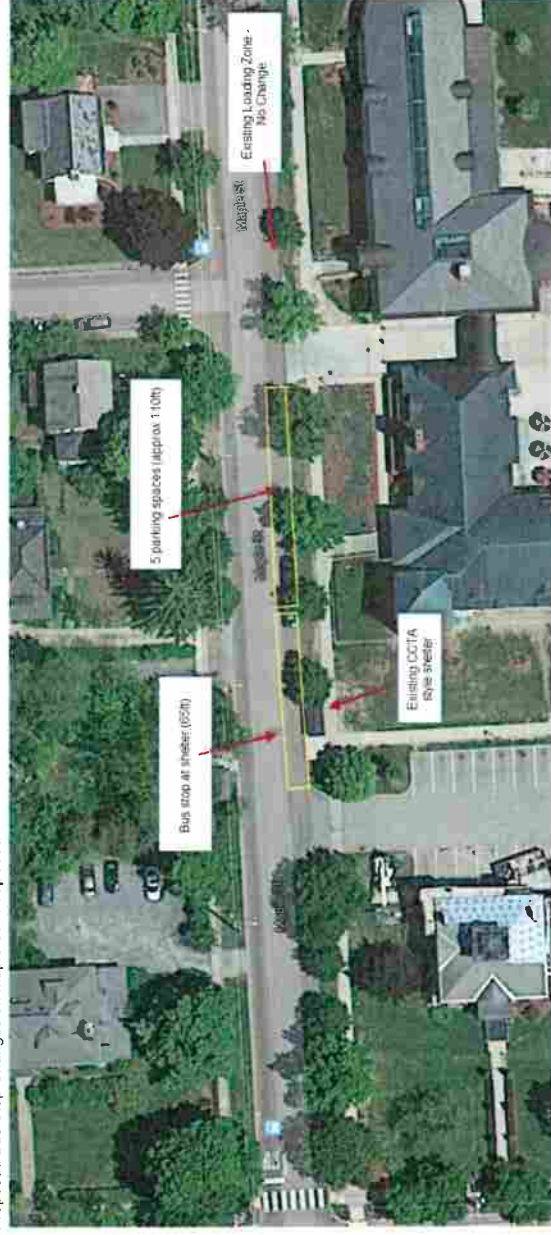
www.champlain.edu



Proposed Bus Stop Changes on Maple St - Existing



Proposed Bus Stop Changes on Maple St - Proposed





Panoramic Photograph



MEMORANDUM

July 10, 2014

TO: Public Works Commission
FROM: Colin Brett *CB*
RE: Champlain College Shuttle stop request

Background:

Staff received a request from John Caulo of Champlain College for a shuttle drop off/pick-up space on Maple Street. The normal shuttle stop is currently unavailable due to construction. Champlain College is requesting that a temporary (for the calendar school year 2014/2015) shuttle space be implemented in order to accommodate the shuttle. The Spinner Place Shuttle runs during the Champlain College school year (late August through May), transporting students back and forth from off-campus housing in Winooski. The shuttle runs on a half-hour schedule between 7am and 9pm daily. The shuttle stops on the south side of Maple Street between South Willard Street and Summit Street.

Observations:

The current shuttle stop is unavailable due to construction. With construction underway the shuttle stops mid-block in traffic to drop off/pick up students. This can cause unnecessary traffic back-ups, especially during peak hour times. In order to allow unobstructed traffic circulation the shuttle needs a bus stop established out of the lane of travel along the curbline further west. The proposed shuttle stop will begin on the west side of the driveway (west of the loading zone) and extend 60' west down the south side of Maple Street. Three parking spaces will need to be removed to allow for the shuttle space to be implemented. This will result in a sixty foot space that will accommodate a forty-five foot long bus.

Conclusions:

The current drop off/pick-up is not effective and should be altered. A shuttle running with a half hour frequency at this high volume location should have a designated drop off/pick-up area.

NB 7/10/14

Recommendations:

Staff recommends that the commission adopts the proposed shuttle drop off/pick-up space.



CHAMPLAIN COLLEGE

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fax (802) 860-2767
www.champlain.edu

3 June 2014

Mr. Norm Baldwin, City Engineer
Burlington Department of Public Works
PO Box 849 – 645 Pine Street
Burlington, VT 05401

RE: Champlain College
Temporary Shuttle Bus Drop-Off along Maple Street

Dear Norm:

As a follow up to our recent conversations, let this correspondence confirm a request by Champlain College to create a shuttle bus drop-off area along the south side (eastward bound) of Maple Street mid-point between South Willard Street and Summit Street. As we discussed, we would like to appropriate 2-to-3 unmetered parking spaces across from Harrington Terrace for this purpose. Specifics follow:

The *Spinner Place* shuttle bus currently operates approximately nine (9) months per year (between late August and the following early May), carrying undergraduate students to/from off-campus housing located in downtown Winooski. The daily bus schedule (M-F) generally operates on the ½ hour, between 7am and 9pm.

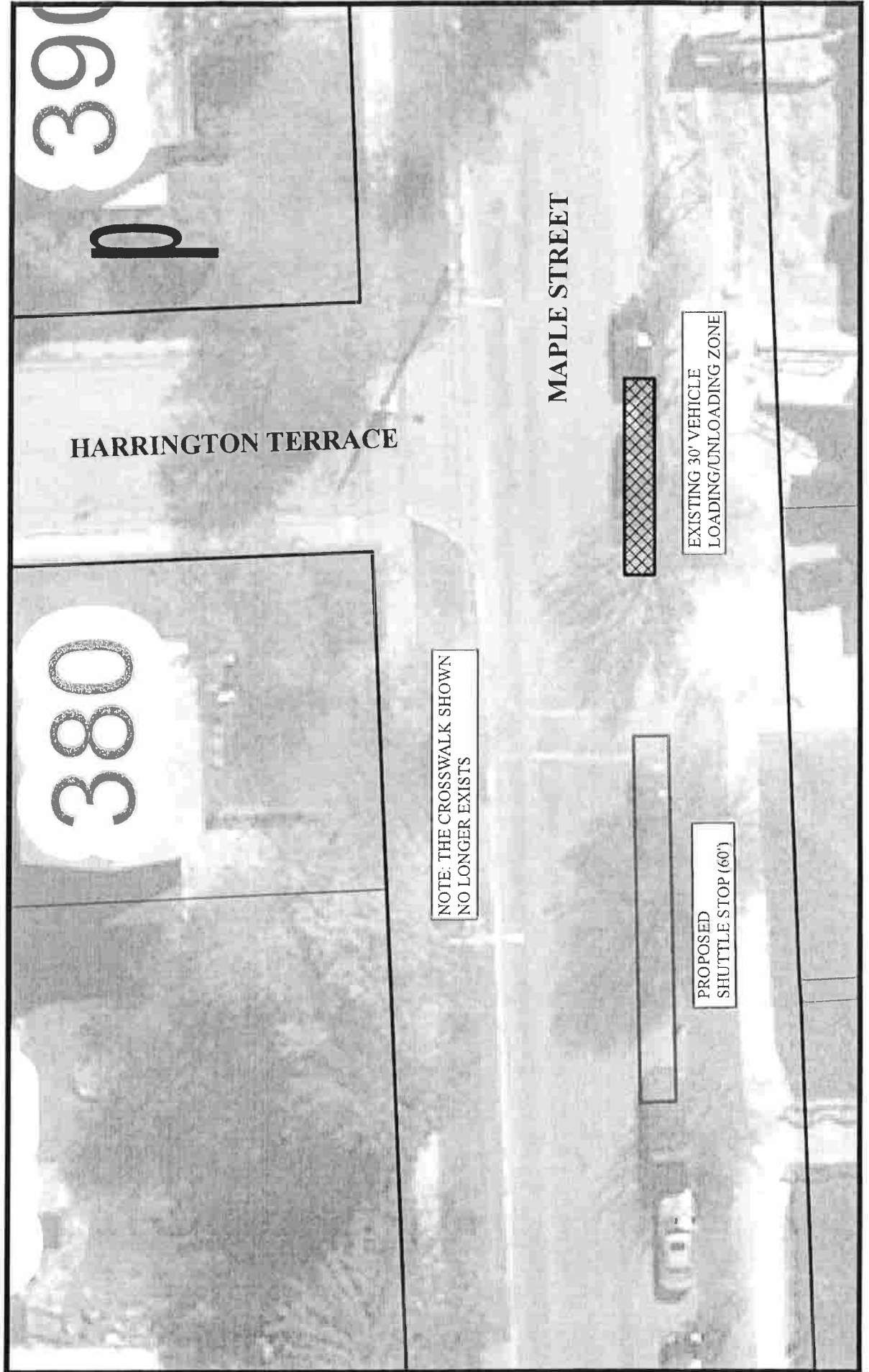
Currently, the bus stops mid-block in traffic to allow students to disembark. The proposed drop off area would more safely accommodate onboarding without interfering with ongoing maple Street traffic.

Our desire is to have a solution in place before mid-August, so we are prepared for the fall semester and run through the 2014/2015 academic year. We appreciate the City's consideration of this request. If additional information is required, please advise.

Sincerely,

John Caulo
Associate Vice President – Campus Planning & Auxiliary Services

City of Burlington
1 in = 20 ft





MEMORANDUM

July 2, 2015

TO: Public Works Commission

FROM: Damian Roy, DPW Engineer Technician *DRR*

CC: Norman Baldwin, City Engineer *NB*

RE: 3-Way Stop Sign Request at Shore Road and Balsam Street

Background:

The Department of Public Works received a request from Mark Fraser of 140 Shore Road to install 3-Way stop control at the intersection of Shore Road and Balsam Street. This request was presented to the June 2015 Commission and where it was decided that the installation of 3-way stop control at this intersection was not warranted. This decision was in line with staff's recommendation. In the weeks preceding this, staff failed to notify Mr. Fraser and the nearby residents who may be affected by his request. Therefore this request is being presented again this month after a full public process has been conducted.

In 2003 DPW evaluated a citizen driven request to install multi-way stop control at Balsam Street and Shore Road. Staff performed the Multi-Way Stop Warrant Analysis per MUTCD 2B.07 and determined the installation of multi-way stop control was not warranted or recommended given it did not meet volume thresholds and the intersection did not have balanced entering volumes from the Balsam and Shore approaches as a three-way stop.

Shore Road is a collector street with various local streets feeding into it. Balsam Street is one of these local streets with less traffic. On Balsam and Shore there are many homes who's only means of accessing the street network is by entering and passing through the intersection.

Observations:

Staff visited the Shore Road/Balsam Street intersection on the morning and evening of May 27th from 7:00am to 9:00am, and from 4:00pm to 6:00pm to conduct a Stop Sign Warrant Analysis as prescribed by MUTCD 2B.07 Multi-way Stop Applications (see attached). This

form is the first step in determining if stop control is warranted at an intersection as adopted by DPW. Traffic volumes were observed at these times and are as follows:

- 7:00am through 9:00am
 - Shore Road: 233 Vehicles, 17 Pedestrians, 13 bicyclists
 - Balsam Street: 14 Vehicles, 3 Pedestrians, 0 bicyclists
- 4:00pm through 6:00pm
 - Shore Road: 276 Vehicles, 6 Pedestrians, 2 bicyclists
 - Balsam Street: 4 Vehicles, 0 Pedestrians, 0 bicyclists

The MUTCD Multi-way Stop Application states that vehicular volumes entering the intersection from the major street approaches (total of both approaches) must average at least 300 vehicles per hour for any 8 hours on an average day, for traffic approaching from the minor streets the average vehicles per hour must meet at least 200 vehicles. Traffic counts for vehicles approaching the intersection from Shore Road and from Balsam Street averages 127 vehicles per hour and 5 vehicles per hour during peak times respectively. Staff contacted the Burlington Police Department to request all accident reports for the intersection within the previous twelve month period. BPD responded with a report indicating that no accidents have taken place at this location which falls below the minimum 5 or more reported crashes within a 12-month period required to warrant a stop sign as indicated by the MUTCD Multi-way Stop Application.

Conclusions:

The Stop Sign Warrant Analysis takes into account the volume of entering traffic from both major and minor street approaches to determine if stop signs are necessary to provide safe and clear right of way assignments. Multi-way stop control is applied in conditions where there are nearly balanced entering volumes of traffic for both major and minor street approaches. Our traffic counts during peak hours were well below the warrant threshold without performing counts throughout the full 8-hour period. In addition there is no accident history that would suggest the need for stop control. Staff is recommending the denial of Mr. Fraser's request to adopt multi-way stop control at Shore Road and Balsam Street.

Recommendations:

Staff recommends that the Commission:

- Deny Mr. Fraser's request to install 3-way Stop Control at the intersection of Shore Road and Balsam Street.

Shore Rd + Balsam St

STOP SIGN WARRANT

MUTCD 2B.07 Multi-way Stop Application

01. Multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multi-way stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal.

02. The restrictions on the use of STOP signs described in Section 2B.04 also apply to Multi-way stop applications.

03. The decision to install multi-way stop control should be based on an engineering study.

04. The following criteria should be considered in the engineering study for a multi-way STOP sign installation:

A. Where the traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.

n/a

B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.

Zero accidents reported

C. Minimum Volumes:

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages 300 vehicles per hour for any 8 hours of an average day; and

7-9am = 233 4-6pm = 276

2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but

7-9am = 17 4-6pm = 4

3. If the 85th percentile approach speed of the major street exceeds 40 MPH, the minimum vehicular volume warrants are 70 percent of the volumes provided in Items 1 and 2.

D. Where no single criterion is satisfied, but criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this criterion.

n/a

Option:

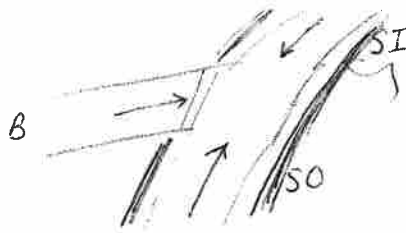
Other criteria that may be considered in an engineering study include:

A. The need to control left-turn conflicts

B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;

C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and

D. In intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve operational characteristics of the intersection.



91544319

7a-9a

Shore Road - Vehicles

Bikes

Peds

233 vehicles

100

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|||||

|||||

|||||

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|||||

|||||

|||||

17 units

Balsam St - Vehicles

Bikes

Peds

|||||

|||

Damian Roy

From: Hackley, Jane R. <jhackley@bpdvt.org>
Sent: Wednesday, May 27, 2015 10:21 AM
To: Damian Roy
Subject: RE: Accident Reports.

Good morning,
No reports of accidents at that location. I ran the search for one year.

Jane

From: Damian Roy [<mailto:droy@burlingtonvt.gov>]
Sent: Friday, May 22, 2015 10:16 AM
To: Hackley, Jane R.
Subject: RE: Accident Reports.

Apologies Jane, one more location, same criteria:

- The intersection of Shore Road and Balsam Street.

Thank you!

Damian Roy, Engineering Technician
Burlington Public Works Department
645 Pine St. Burlington VT 05401
Desk: 802.865.5832
Cell: 802.598.8356
Email: droy@burlingtonvt.gov
Web: www.burlingtonvt.gov/dpw

From: Damian Roy
Sent: Friday, May 22, 2015 10:00 AM
To: Hackley, Jane
Subject: Accident Reports.

Hi Jane,

I am in need of accident reports in two locations for the last two years:

- Shelburne Road between Home Avenue and the on-ramp to 189
- Pine Street between South Crest Drive and Queen City Park Road

I'll need the full reports to be able to determine cause.

Thanks Jane, and have a great long weekend!

Damian Roy, Engineering Technician
Burlington Public Works Department
645 Pine St. Burlington VT 05401

Damian Roy

From: Clint Erb <clinterb@comcast.net>
Sent: Friday, July 03, 2015 1:58 PM
To: Damian Roy
Subject: stop signs at Balsam and Shore

Dear Mr. Roy:

I received your notice regarding the potential stop signs at the intersection of Balsam and Shore Roads in the New North End. I have lived at the corner of Shore and Holly for almost 11 years. I think this idea is a bad one. The amount of traffic leaving and entering Balsam is minimal. If I encounter one car a week on Balsam it is a lot. Shore Road is a main street that connects various side streets in the neighborhood. Putting stop signs up only inhibits the direct flow of traffic. If the issue is speeding traffic, then there are better ways to address that issue, i.e. speed bumps. There is a stop sign one block East of the Balsam intersection so putting another so close will not slow the traffic for the lower half of Shore Road. It will just become a nuisance for drivers as well as increasing noise and pollution of cars stopping and starting.

I hope your department can come up with a better solution to whatever the problem may be.

Sincerely,
Clint Erb
6 Holly Lane

Damian Roy

From: Gus Buchanan <gbuchanan@rockpoint.org>
Sent: Monday, July 06, 2015 1:45 PM
To: Damian Roy
Cc: Kara Buchanan
Subject: Balsam / Shore Stop sign proposal

I have a home at 4 Balsam street, which is on the corner of Shore Rd and have lived her 15 years. My wife served on a council that worked extensively on traffic calming on Shore rd during 2002, and I attended all the relevant meeting pertaining to proposed measures. We worked hard to look at many alternatives to address the speed and volume of traffic on Shore Rd and came up with a number of possibilities to address the range of concerns of the neighbors. In the end the only enhancements that were applied were textured and painted crosswalks at intersections and the bike path.

During the course of the work the committee did look at stop signage at various points along Shore Rd. It became very clear that this type of traffic calming measure was the least appropriate and actually caused more problems. (braking noise, start up noise, gas use, exhaust to name a few) The group did not recommend any stop signs in the final proposal.

I **do not support** the installation of 3 Stop signs at the intersection of Balsam and Shore Rds.

Thanks for taking input on the request.

--

Gus Buchanan
4 Balsam St, Burlington

Damian Roy

From: James Whitehouse <hollylane15@hotmail.com>
Sent: Tuesday, July 07, 2015 4:11 AM
To: Damian Roy
Subject: Balsam & Shore Rd

Hi Damian

My name is James Whitehouse and I moved on Holly Lane in 1980. I have never seen a accident at that intersection, or even a close call. I don't know why there needs to be a 3 way stop sign when there is very few cars coming off Balsam turning onto Shore Rd. There is a lot more traffic on Shore Rd, but I don't think the traffic on Balsam has to wait more than 5 seconds to get on Shore Rd most the time. And if it's supposed to be a safety issue I would think there would be some accidents at that intersection. I don't remember any accidents there. Also if the person who requested the stop signs thinks that intersection is not safe they can go up Brierwood Lane to the stop sign at Fern and Shore Rd.

Thank You
James Whitehouse

Shore Rd. Traffic Calming
Steering Committee Meeting – 1/7/03
Submitted by Kara Buchanan

Attendees:

Kara Buchanan
Michael Crane
Pat Davis
Margaret Gallant
Robert Montgomery
Joel Fitzgerald
Renee Vincent
Larry Walters
Tom McKeown
Bart Sponseller

Norm Baldwin, DPW
Bruce _____, facilitator

Agenda:

- 1) To finish last segment of Shore Rd. proposal
- 2) Put together written proposal to send to larger neighborhood
- 3) Next Steps - Discuss plan for large group meeting and how vote will work

Finishing Shore Road Proposal:

Balsam/Shore Intersection

Norm B. presented results of Balsam St. survey.

9 residences were surveyed. 1 was in favor of the proposal, 2 were in favor of a modified plan, 6 believed that proposed installation was unnecessary.

Renee V. explained her process of conducting the survey and the materials provided to residents.

Kara B. commented that she felt that residents' responses were not based on an understanding of how this intersection fit into the bigger picture and that they were not well educated about the traffic calming measures proposed. She spoke to two neighbors after reading the survey results to better understand their points of view against the proposal. She believes that this section of Shore road needs to be slowed and to be consistent with a plan for keeping traffic slowed throughout the route.

Larry W. felt that this corner really needed measures installed because drivers' vision was impeded here. Rob M. and Bart S. agreed.

Renee V. proposed rejecting Norm's proposal as stated in survey and putting no measures at this intersection in order to honor the wishes of Balsam St. residents. Kara pointed out that residents she'd spoken to deemed the proposal unnecessary, they were not

necessarily opposed. Renee disagreed with this and said that a 3-way stop sign there was also mentioned as an acceptable option to most residents.

Larry W. proposed that the steering committee accept Norm's proposal as part of overall plan without consensus of entire group, as 8 to 3 of those at the previous meeting were in favor of the proposal. (See 12/2/03 minutes)

Joel F. suggested taking the proposal apart to find pieces we could compromise on.

Three proposals were then drafted:

- 1) 3-way stop sign at intersection
- 2) textured median on Shore rd. either side of Balsam intersection running between Wildwood and Glenwood Streets.
- 3) A similar median starting further away from Balsam intersection in either direction.

There was much discussion about the pros and cons of each proposal.

Pat Davis arrived late to the meeting at this point and was brought up to speed.

The group facilitator suggested a straw pole to get each persons opinion on the options:

Bart S. – A stop sign would make Brierwood more susceptible to cut-off drivers. Therefore he was not in favor or else we would need to adjust measures there.

Kara B. – In lieu of Norm's proposal being accepted, stop sign seemed like only other acceptable option to slow traffic turning onto Balsam from Shore, but thought that medians are still needed on this section of Shore as well.

Joel F. – Questioned whether medians would be in line with (affective enough) compared to rest of neighborhood measures proposed (such as on Dale).

Larry W. – Finds Balsam intersection treacherous

Pat D. – Wants nothing done here.

The group questioned Norm at this time about whether a stop sign here would be approved by the commission. He replied that this intersection did not meet the requirements for installation. He wouldn't recommend it to them. They might be inclined to consider it if the entire neighborhood was clearly in favor of it. Tom M. expressed his concern that the neighborhood (particularly those living west of this point) would NOT be in favor and that we might be risking acceptance of the proposal so far by inserting this. Kara B. suggested that we should have a back up plan for this intersection should stop sign not go through.

After some time, the moderator suggested that we move on to try to finish our agenda. The group finally resigned to include the 3-way stop at Balsam St. as this was the only proposal the group was able to compromise on in order to finish the proposal.

Bart expressed opposition to the 3-way stop at Balsam 3-way stop at Balsam but so as not to stifle the greater plan, agreed to compromise on this point. Bart, as a result of the decision to accept the 3-way stop at Balsam St, will go back to his Brierwood and Fern street neighbors to discuss options to modify the original Brierwood/Fern proposal. The original plan for Brierwood and Fern consisted of 3 rumble strips and a median on the corner of Brierwood and Fern.

 At this point, Norm brought up the commission's plan to include a much larger group than previously involved in the large group decision making. The plan was to send flyers to the Woodlawn, Woodbury and Staniford Rd. neighborhoods as well. The committee was shocked, confused and angered by this unexpected and ill-timed information. Heated conversation ensued about the inequity of these people being involved in our decisions when we had not been included in theirs and that the whole project we had undertaken here was to correct those previous inequities and the resulting negative effect on traffic in our own neighborhood. Some committee members expressed feeling that all this hard work and all the time at these meeting was in vain if these other neighborhood s were included as they could not be in favor of any measures that might send more traffic back onto their streets even if it was fairly spreading the burden. Members explained that they were in support of the DPW having a more comprehensive approach to traffic calming but that this was not at all the right time to instate this policy.

The group refocused and moved on to discuss the next steps of the process.

First on the list was writing a description of the proposal to be sent out to all residents. Tom M. had drafted an initial draft and outline of such a document. Members talked of the need to have a map of good quality and large enough detail and that people needed a couple of weeks to digest the material before the meeting. It was suggested that a large map, such as we had been using, should be on display somewhere. It was agreed that the best venue would be to have it at St. Marks on town meeting day.

Tom M. agreed to take on writing the mailing. He planned to finish a draft by Jan. 21st in order to send it to all steering committee members for comments which need ed to be returned to him by Jan. 28th.

The committee discussed an appropriate timeline of events working backward from a large group meeting date. The date chosen for this meeting was March 10th or 11th. Residents should receive a reminder of the meeting @ March 2nd and alerted to check out the map on display at town meeting day.

It was deemed that residents should receive the mailing at least 2 weeks prior to meeting which would be @ Feb. 24th. This is during the school winter vacation, therefore receiving the mailing a little earlier would be good for those leaving town. One week earlier would be Feb. 17th. It was not discussed just how long would be needed to print, assemble and distribute these mailings. But it appears that the document should be ready @ Feb. 10th.

Next discussed was how the large neighborhood meeting will actually work.

- 1) All committee members should be present and a spokes person or persons would present our proposal
- 2) Committee would be seated up front to address questions and comments.
- 3) Steve Goodkind and Norm Baldwin should be present
- 4) Bruce ? should be present as group moderator.

Lastly, the group questioned what would constitute a clear majority when the group voted on acceptance of the proposal.

Tom. M. suggested 70-80%

Margaret and Renee felt it should be more like 90%

Kara suggested that the government goes on 2/3 majority = 67%

Norm suggested that 60 % was the figure DPW was looking at.

The meeting concluded approximately 55 minutes late.



MEMORANDUM

July 2, 2015

TO: Public Works Commission

FROM: Kara Yelinek, DPW Engineering Intern *KBY*
Damian Roy, DPW Engineering Technician *DR*

CC: Norman Baldwin, Asst. Director/City Engineer *NB*

RE: College Street Shuttle Stop Request – 439 College St

Background:

Staff received a request from Mr. Jon Moore, Planning Manager for the Chittenden County Transportation Authority, requesting a new bus stop to be installed on College Street. This new stop would service the College Street Shuttle. This route is largely used by UVM students and staff, making the top of College Street near The Waterman Building one of its most populated stops. Currently, there is an official stop at UVM Waterman for downhill service, but there is not an official stop for eastbound, uphill service. According to Mr. Moore, the College Street route was modified in the late summer of 2013 to travel uphill to UHC along South Prospect Street, providing service along the UVM green. Mr. Moore says that the College Street Shuttle will generally pick-up and drop-off passengers at any safe location along the route, however, drivers have raised concerns about stopping along the UVM green due to the high pedestrian volumes and a lack of sidewalk parallel to the roadway onto which passengers can off-load. There has also been passenger confusion due to the lack of a signed bus stop in the area. As a result, a formal bus stop at 439 College Street would ease passenger confusion and increase passenger safety, while still allowing access to the highly desired area.

Observations:

Staff has ridden the route and observed the safety concerns surrounding an informal bus stop along the UVM green as the bus travels North on Prospect toward UHC. Uphill service stops are frequently requested at the top of College Street. There is no sidewalk parallel to the South Prospect roadway at this location on the green where the bus typically stops, therefore nowhere onto which passengers can safely off-load. The bus typically stops to off-load

NB 7/2/15

passengers shortly after turning North onto Prospect Street, before the two mid-block crosswalks that service the UVM green and The Waterman Building. A large volume of pedestrians utilize the crosswalks in this area in front of The Waterman Building. The newly proposed location does not interfere with mid-block pedestrian crosswalk to its East, nor the Waterman parking lot entrance on the opposite side of the road. This location provides ample time and distance for the bus to safely merge into the left turning lane and continue its scheduled route. Vehicles passing the stopped bus at this location will be able to do so and reach their desired turning lane safely. Bicyclists using the bike lane will have to navigate around the bus while the bus is stopped as they do at other locations around the city. The greenspace that separates the road and sidewalk at this location is approximately ten feet wide, providing ample space for a future bus stop shelter if desired within the city's right of way.

Conclusions:

Installing a new bus stop in front of 439 College Street would enable the CCTA buses servicing the nearby areas to load/off-load passengers safely and efficiently. This would also allow traffic to flow more efficiently along South Prospect Street in this area, as it would eliminate temporary lane blockages created by the informal bus stop along the busy roadway.

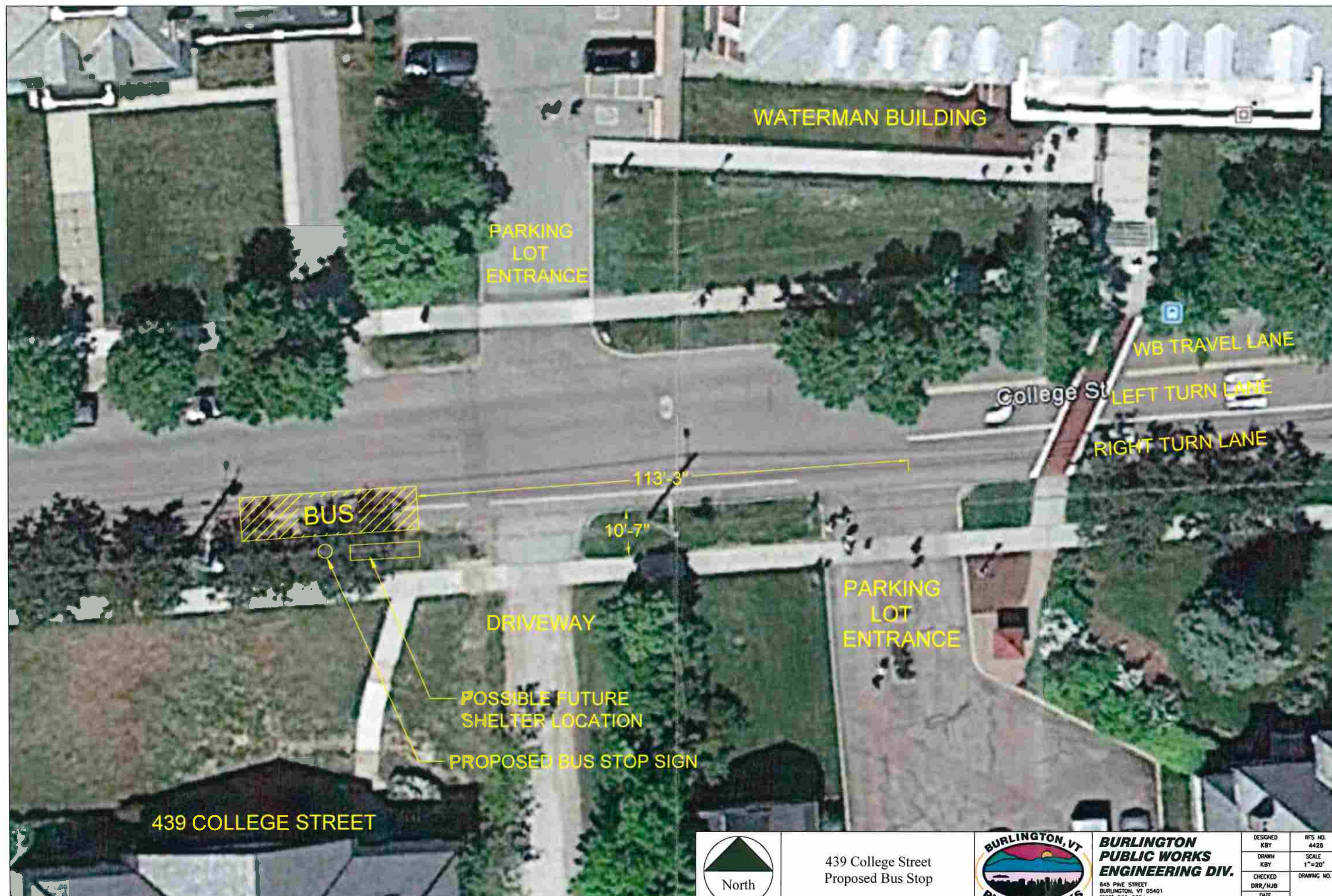
Recommendations:

Staff recommends that the Commission adopt:

- The addition of a CCTA bus stop in front of 439 College Street.

Attachments:

- AutoCAD rendering of street geometry and proposed location
- CCTA Route map for College Street Shuttle route
- Email correspondence



WATERMAN BUILDING

PARKING
LOT
ENTRANCE

College St
WB TRAVEL LANE
LEFT TURN LANE
RIGHT TURN LANE

BUS

113'-3"

10'-7"

DRIVEWAY

PARKING
LOT
ENTRANCE

POSSIBLE FUTURE
SHELTER LOCATION

PROPOSED BUS STOP SIGN

439 COLLEGE STREET



439 College Street
Proposed Bus Stop



**BURLINGTON
PUBLIC WORKS
ENGINEERING DIV.**

645 PINE STREET
BURLINGTON, VT 05401

DESIGNED KBY	RFS NO. 4428
DRAWN KBY	SCALE 1"=20'
CHECKED DRR/HJB	DRAWING NO.
DATE	

College Street Shuttle

THIS SHUTTLE IS
FREE!



Specific events held at Burlington's waterfront will require the temporary relocation of the College Street Shuttle waterfront stop from the shelter at the bus stop to the Union Station at One Main Street on special event dates. Signage at the waterfront during these events will direct passengers to the correct pick-up location.

For additional information regarding event delays, visit our website at cctaride.org

MONDAY-FRIDAY

Waterfront / Boathouse 1	Church St. Marketplace 2	UHC Main Lobby 3	UVM Medical Center (FAHC) 4	UVM Waterman 5	Church St. Marketplace 2	Waterfront / Boathouse 1
—	—	—	6:15	6:19	6:24	6:30
6:30	6:34	6:39	6:45	6:49	6:54	7:00
7:00	7:04	7:09	7:15	7:19	7:24	7:30
—	—	—	7:30	7:34	7:39	7:45
7:30	7:34	7:39	7:45	7:49	7:54	8:00
7:45	7:49	7:54	8:00	8:04	8:09	8:15
8:00	8:04	8:09	8:15	8:19	8:24	8:30
8:15	8:19	8:24	8:30	8:34	8:39	8:45
8:30	8:34	8:39	8:45	8:49	8:54	9:00
8:45	8:49	8:54	9:00	9:04	9:09	9:15
15-minute service continues UNTIL 6:00 p.m.						
5:45	5:49	5:54	6:00	—	—	—
6:00	6:04	6:09	6:15	6:19	6:24	6:30
6:30	6:34	6:39	6:45	6:49	6:54	7:00
7:00	7:04	7:09	7:15	7:19	7:24	7:30
7:30	7:34	7:39	7:45	7:49	7:54	8:00
8:00	8:04	8:09	8:15	8:19	8:24	8:30
8:30	8:34	8:39	8:45	8:49	8:54	9:00

SATURDAY-SUNDAY

Waterfront / Boathouse 1	Church St. Marketplace 2	UHC Main Lobby 3	UVM Medical Center (FAHC) 4	UVM Waterman 5	Church St. Marketplace 2	Waterfront / Boathouse 1
—	—	—	8:45	8:50	8:54	9:00
9:00	9:04	—	9:15	9:20	9:24	9:30
9:30	9:34	—	9:45	9:50	9:54	10:00
10:00	10:04	—	10:15	10:20	10:24	10:30
10:30	10:34	—	10:45	10:50	10:54	11:00
11:00	11:04	—	11:15	11:20	11:24	11:30
11:15	11:19	—	11:30	11:35	11:39	11:45
15-minute service continues UNTIL 6:00 p.m.						
6:00	6:04	—	6:15	6:19	6:24	6:30
6:30	6:34	—	6:45	6:49	6:54	7:00
7:00	7:04	—	7:15	7:19	7:24	7:30
7:30	7:34	—	7:45	7:49	7:54	8:00
8:00	8:04	—	8:15	8:19	8:24	8:30
8:30	8:34	—	8:45	8:49	8:54	9:00

Shaded and weekend trips operate Memorial Day Weekend through Columbus Day Weekend ONLY.

Nicole Losch

From: Jon Moore <jmoore@cctaride.org>
Sent: Thursday, May 29, 2014 9:15 AM
To: Nicole Losch
Subject: Re: College Street Bus Stop
Attachments: 439 College.docx

Hi Nicole,

Thanks for looking into this. See below in red for responses to your questions.

- Was this requested by passengers, UVM or others, or was this identified as a gap by CCTA? A combination of all the above. We modified the College Street route late last summer so that the bus travels uphill to UHC via Prospect instead of the previous routing via Williams. This created new uphill service on Prospect between College and the UHC entrance along the UVM green. The College Street route will generally pick-up and drop-off passengers at any safe location along the route but drivers have raised concerns about stopping along the UVM green due to the high pedestrian volumes. There has also been passenger confusion due to the lack of a signed bus stop in the area.

We initially wanted to instal a bus stop on the UVM green about half way between College and Pearl so that the bus could clear the pedestrian crossings to Waterman and the College St. intersection. UVM has expressed the desire to minimize signage on the green and we jointly (with CATMA) identified the 439 College location as an area which could still serve the Waterman area without having to stop along the UVM green.

- Is there any reason to not move the new stop closer to the mid-block crosswalk (east of 439 College), but before the turn lanes begin? The location identified is east of the 439 College driveway so it is relatively close to the mid-block crosswalk. We chose this location so that the bus has time to safely merge into the left hand turn lane onto Prospect and to minimize conflicts with the UVM parking lot located just west of the crosswalk. There is also an existing pole with no signage currently attached at the location identified which would negate the need for an additional pole in the area and allow us to get a new stop installed quickly.

Thanks again for looking into this and please let me know if you have any further questions. Please also find a Googlemaps street view of the proposed location and pole referenced above.

Jon

On Thu, May 29, 2014 at 8:33 AM, Nicole Losch <NLosch@burlingtonvt.gov> wrote:

Hi Jon,

We have a staff meeting this afternoon -- I'll run this by a couple of others then.

To help answer some potential questions:

- Was this requested by passengers, UVM or others, or was this identified as a gap by CCTA?
- Is there any reason to not move the new stop closer to the mid-block crosswalk (east of 439 College), but before the turn lanes begin?

Thanks!

Nicole Losch, PTP
Transportation Planner :: Bicycle & Pedestrian Program Manager
ph [802.865.5833](tel:802.865.5833) :: f [802.863.0466](tel:802.863.0466) :: nlosch@burlingtonvt.gov
645 Pine Street Suite A, Burlington VT 05401 ::
www.burlingtonvt.gov/DPW

From: Jon Moore <jmoore@cctaride.org>
Sent: Wednesday, May 28, 2014 3:59 PM
To: Nicole Losch
Subject: College Street Bus Stop

Hi Nicole,

We have identified a location for a new bus stop at 439 College Street. I met with CATMA and UVM last week and they requested we contact DPW prior to installing the stop due to the high traffic volume (vehicle and pedestrian) of the area.

Can you please let me know if you see any issues with the location or direct me to someone else who may want to provide feedback?

Thanks,

Jon Moore
Planning Manager
Chittenden County Transportation Authority
[802-540-2445](tel:802-540-2445) (Direct Line)
[802-864-2282](tel:802-864-2282) (CCTA Main Office)

--

Jon Moore
Planning Manager
Chittenden County Transportation Authority





MEMORANDUM

July 2, 2015

TO: Public Works Commission

FROM: Damian Roy, DPW Engineering Technician *DR*

CC: Norman Baldwin, Asst. Director/City Engineer *NB*

RE: Relocation of Three Accessible Spaces for New CCTA Transit Station

Background:

Staff received a communication from Brian Lowe, Projects Coordinator to the Mayor of Burlington, and from Henry Mays of the Vermont Department of Buildings & General Services (BGS) and Steve Carlson of CCTA to relocate three van accessible spaces currently located on Saint Paul Street serving the Zampieri State Office Building. The Zampieri Building is divided by two tenants to the north and south, each of these tenants offer services to the disabled community and require accessible parking spaces within reasonable distance to their entrances. The existing accessible spaces are designated van accessible spaces to help encourage vans to use these spaces instead of cars as the nearby parking garages cannot accommodate accessible vans.

The three existing accessible spaces must be relocated to accommodate the new CCTA Transit Station that removes all non-CCTA related on-street parking from this section of Saint Paul between Pearl Street and Cherry Street. In an effort to facilitate the project which is currently underway, DPW has placed temporary accessible space bags over nearby metered spaces to serve the disabled community and the Zampieri Building until permanent spaces are established.

Observations:

The three existing accessible spaces are located on the north and south end of the east side of Saint Paul Street. Two spaces are located on the southern end and are situated back to back immediate to the north east corner of Saint Paul and Cherry. The third space is located on the northern end and is the last available space before the intersection with Pearl Street. Staff reviewed the new CCTA Transit Station final design plans to determine the extent of the

redesign within the City's Right of Way and to identify where the closest locations for the three accessible spaces to be relocated might be. Staff also visited the area to observe these locations and how they would best serve the disabled community in accordance with the Public Right-of-Way Accessibility Guidelines (PROWAG). Staff has identified two locations suitable:

- On south side of Pearl Street immediately in front of the Masonic Temple entrance at 151 Pearl Street. This space offers clear side and rear ramp unloading due to the bump out behind the space and reasonable distance to ramp to access the sidewalk.
- At the intersection of Cherry and Saint Paul, the existing second and third metered spaces from the north east corner on the north side of Cherry Street. The first space from this corner will be removed by a bump out as part of the CCTA project. The next two spaces on the north side offer clear sidewalk for side exiting ramps. The Cherry Street accessible ramp to the Zampieri Building is at this location to provide immediate access for these two spaces.

Please refer to the attached pictures and drawings showing the three existing spaces to be removed and their three proposed locations.

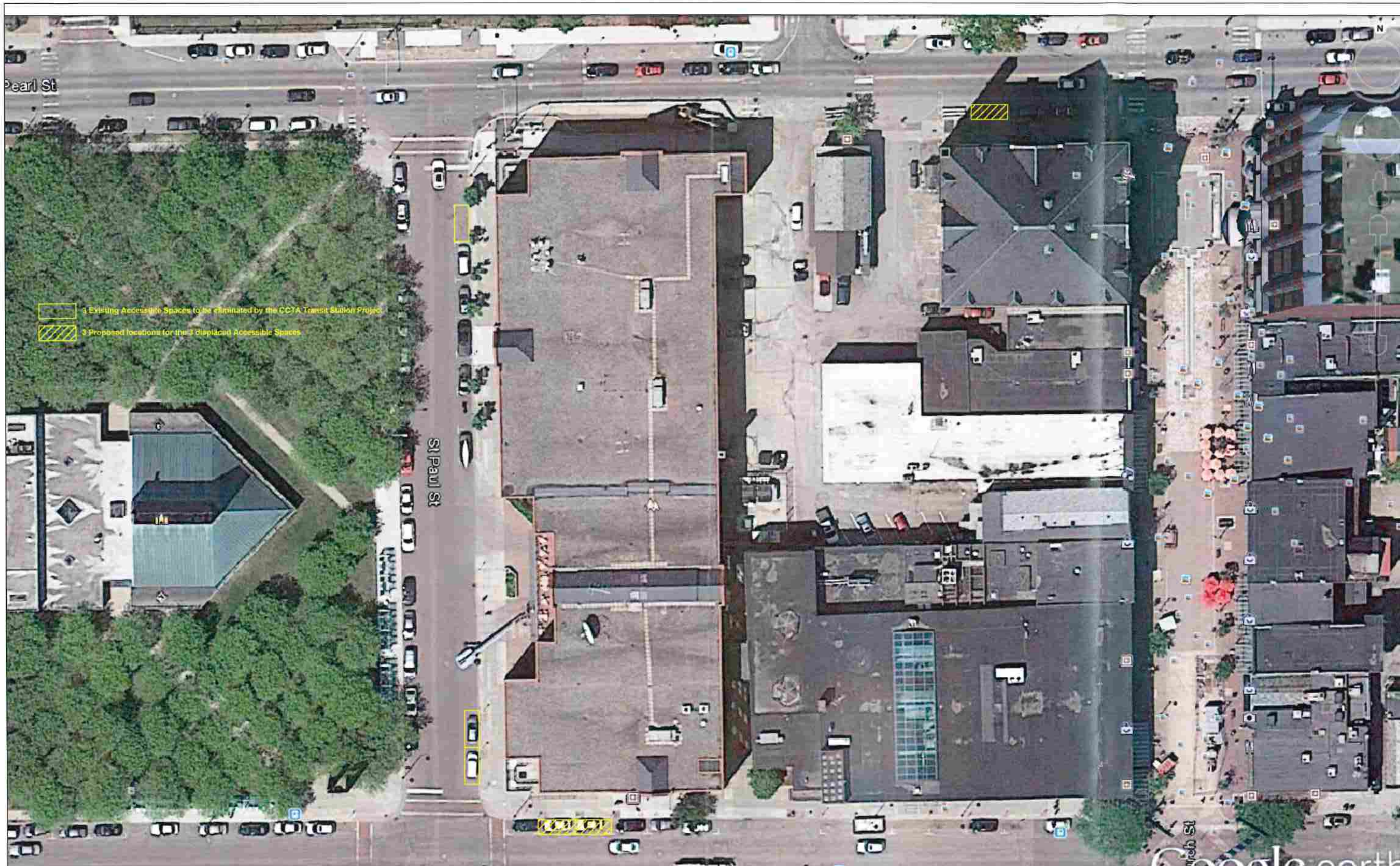
Conclusions:

The city has established transit services as a priority. Given its degree of importance the proposed Downtown Transit Center was approved by council to be located on St. Paul Street. To accommodate the facility public on-street parking needed to be displaced. Of particular importance is the need to accommodate people with disabilities, especially those seeking to access the state office building on St. Paul Street. Working closely with the State of Vermont Buildings and Ground we have prepared a proposed solution to accommodate the disabled community. We are seeking your approval and support for the proposed solution.

Recommendations:

Staff recommends that the Commission adopt the relocation of the three van accessible spaces on Saint Paul Street to the following locations:

- On the south side of Pearl Street in front of 151 Pearl Street.
- On the north side of Cherry Street in the first space east of Saint Paul Street after the completion of the CCTA Transit Station construction.
- On the north side of Cherry Street in the second space east of Saint Paul Street after the completion of the CCTA Transit Station construction.



- Existing Accessible Spaces to be eliminated by the CCTA Transit Station Project
- Proposed locations for the 3 displaced Accessible Spaces



The relocation of 3 Accessible Spaces on Saint Paul Street.



**BURLINGTON
PUBLIC WORKS
ENGINEERING DIV.**
645 PINE STREET
BURLINGTON, VT 05401

DESIGNED DRR	RFS NO. N/A
DRAWN DRR	SCALE 1"=50'
CHECKED NJB	DRAWING NO.



Proposed Accessible Space in
front of 151 Pearl Street



**BURLINGTON
PUBLIC WORKS
ENGINEERING DIV.**

645 PINE STREET
BURLINGTON, VT 05401

DESIGNED DRR	RFS NO. N/A
DRAWN DRR	SCALE NTS
CHECKED HJB	DRAWING NO.
DATE	



DESIGNED DRR	RFS NO. N/A
DRAWN DRR	SCALE NTS
CHECKED NJB	DRAWING NO.
DATE	

Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way

July 26, 2011

UNITED STATES ACCESS BOARD
A FEDERAL AGENCY COMMITTED TO ACCESSIBLE DESIGN

shall provide a minimum clear space complying with R404 entirely within the shelter. Where seating is provided within transit shelters, the clear space shall be located either at one end of a seat or shall not overlap the area within 460 mm (1.5 ft) from the front edge of the seat. Environmental controls within transit shelters shall be proximity-actuated. Protruding objects within transit shelters shall comply with R402.

Advisory R308.2 Transit Shelters. The clear space must be located entirely within the transit shelter and not interfere with other persons using the seating.

R309 On-Street Parking Spaces

R309.1 General. On-street parking spaces shall comply with R309.

Advisory R309.1 General. R214 specifies how many accessible parking spaces must be provided on the block perimeter where on-street parking is marked or metered. Accessible parking spaces must be identified by signs displaying the International Symbol of Accessibility (see R211.3 and R411). Accessible parking spaces should be located where the street has the least crown and grade and close to key destinations.

R309.2 Parallel Parking Spaces. Parallel parking spaces shall comply with R309.2.

Advisory R309.2 Parallel Parking Spaces. The sidewalk adjacent to accessible parallel parking spaces should be free of signs, street furniture, and other obstructions to permit deployment of a van side-lift or ramp or the vehicle occupant to transfer to a wheelchair or scooter. Accessible parallel parking spaces located at the end of the block face are usable by vans that have rear lifts and cars that have scooter platforms.

R309.2.1 Wide Sidewalks. Where the width of the adjacent sidewalk or available right-of-way exceeds 4.3 m (14.0 ft), an access aisle 1.5 m (5.0 ft) wide minimum shall be provided at street level the full length of the parking space and shall connect to a pedestrian access route. The access aisle shall comply with R302.7 and shall not encroach on the vehicular travel lane.

Advisory R309.2.1 Wide Sidewalks. Vehicles may park at the curb or at the parking lane boundary and use the space required by R309.2.1 on either the driver or passenger side of the vehicle to serve as the access aisle.

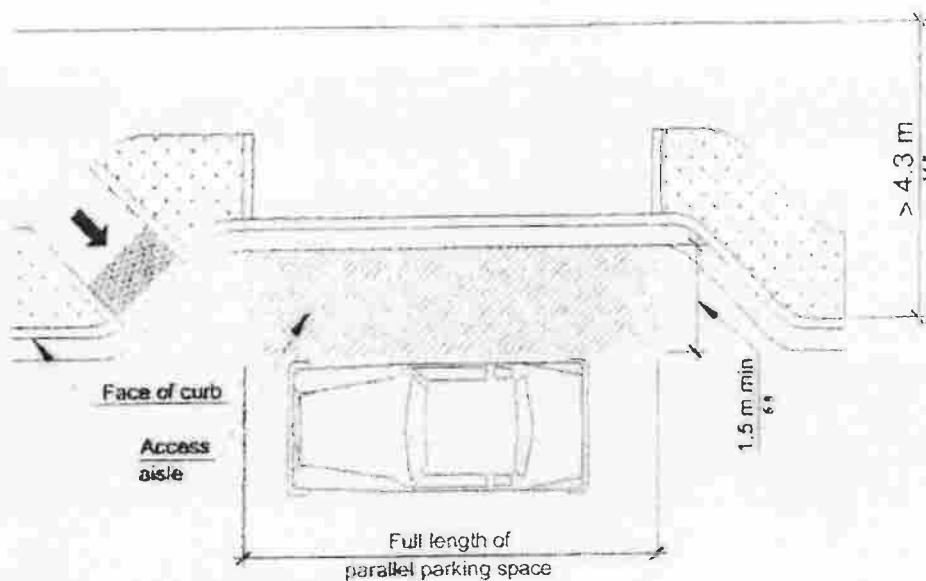


Figure R309.2.1
Wide Sidewalks

R309.2.1.1 Alterations. In alterations where the street or sidewalk adjacent to the parking spaces is not altered, an access aisle shall not be required provided the parking spaces are located at the end of the block face.

R309.2.2 Narrow Sidewalks. An access aisle is not required where the width of the adjacent sidewalk or the available right-of-way is less than or equal to 4.3 m (14.0 ft). When an access aisle is not provided, the parking spaces shall be located at the end of the block face.

Advisory R309.2.2 Narrow Sidewalks. Vehicle lifts or ramps can be deployed on a 2.4 m (8.0 ft) sidewalk if there are no obstructions.

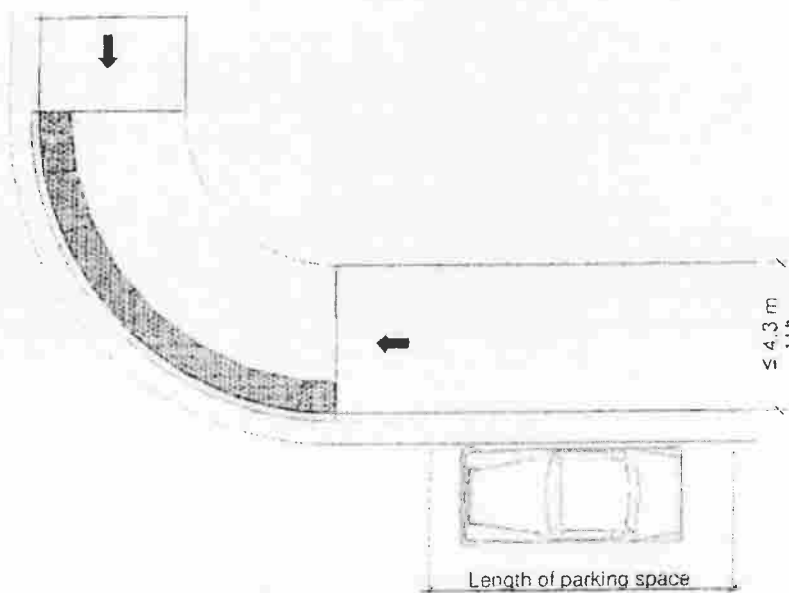


Figure R309.2.2
Narrow Sidewalks

R309.3 Perpendicular or Angled Parking Spaces. Where perpendicular or angled parking is provided, an access aisle 2.4 m (8.0 ft) wide minimum shall be provided at street level the full length of the parking space and shall connect to a pedestrian access route. The access aisle shall comply with R302.7 and shall be marked so as to discourage parking in the access aisle. Two parking spaces are permitted to share a common access aisle.

Advisory R309.3 Perpendicular or Angled Parking Spaces. Perpendicular and angled parking spaces permit the deployment of a van side-lift or ramp.



MEMORANDUM

June 7, 2015

TO: Public Works Commission

FROM: Damian Roy, DPW Engineering Technician *DR12*

CC: Norman Baldwin, City Engineer
Chapin Spencer, Director of Public Works

RE: 257 Driveway Encroachment and 258 North Winooski Loading Zone Requests

Background:

The Department of Public Works received a request from Pamela Smith of 257 North Winooski Avenue regarding inadequate site distances when exiting her driveway. This driveway is adjacent to, and in shared use with, the McClure Multi-Generational Center which houses Champlain Senior Center and Outright Vermont. Ms. Smith states that vehicles parked on the street tend to park too close the driveway making exiting the driveway challenging as there are inadequate site distances between the exiting vehicle and oncoming traffic causing an unsafe condition. This condition is most prevalent to the northeast where cars parked on the left when exiting create the greatest hazard. Ms. Smith would like to restrict on-street parking adjacent to the driveway at 257 North Street in order to increase the site distances when exiting the driveway.

Staff also received a call from Justin Dextradeur of Redstone Vermont Developers representing Kortnee Bush, owner of Butch & Babes restaurant located on the first floor of 258 North Winooski Avenue, requesting the installation of a Loading/Unloading Zone in front of her business on the east side of the street. Ms. Bush states that delivery trucks serving her business have been using the parking lot between 258 N. Winooski Ave and the Vermont Legal Aid building at 264 N. Winooski Ave causing challenges for upstairs tenants of 258 N. Winooski Ave and employees of Vermont Legal Aid. 264 N. Winooski Ave is a historic building and delivery trucks parking adjacent to it has raised concern for possible damage to the building. Ms. Bush states that within the first two weeks opening her business that an incident occurred with a delivery truck striking the historic building resulting in property damage. As Vt. Legal Aid owns a portion of the parking lot next to their building they will no longer allow commercial delivery trucks to enter the parking lot.

210 7-8-15

Staff presented Ms. Smith's request to the May 2015 Commission where the Commission agreed with staff's recommendation to restrict parking adjacent to the driveway. However Ms. Smith's request is being re-evaluated as it was not considered within the scope of the loading zone request directly across the street. These two requests represent significant changes to on-street parking for this block of N. Winooski Ave. and should be considered simultaneously when balancing the different parking needs for residents and businesses.

Observations:

North Winooski Ave is a mixed use, forty (40) foot wide two-way arterial street running in a southwest to northeast direction with moderate to high traffic volumes with mainly unrestricted parking on both sides. On-street parking is heavily utilized by residents and area businesses. There are seven (7) commercial buildings on the block of North Winooski Avenue between Decatur Street and Archibald Street and ten (10) residential buildings. One of these residential buildings includes twenty-four (24) units and provides twenty-four (24) off-street parking spaces for the tenants. Another similar residential building is currently in construction with the same number of units and provides the same number of off-street parking. All on-street parking on this block is unrestricted with the exception of two (2) accessible spaces and one (1) 15-minute space. There is no existing loading zone to serve the businesses on this block of North Winooski Avenue.

The parking lot between 258 and 264 North Winooski Avenue has a twenty-four (24) foot travel lane which immediately abuts the Vt. Legal Aid building. Vt. Legal Aid's property line is located nine (9) feet from the building accounting for nine (9) feet of this travel lane. Champlain Housing who owns 264 N. Winooski had initially agreed to let delivery trucks enter the parking lot and park on their portion of the travel lane. When delivery trucks parked as close as possible to the Vt. Legal Aid building tenants of 258 N. Winooski could just barely manage to enter and exit their parking spaces. The Butch & Babes restaurant has been in operation for one year, in this time there has been one incident where a delivery truck has struck the Vt. Legal Aid building causing damage. This has resulted in Champlain Housing no longer allowing delivery trucks to use their portion of the parking lot. Ms. Bush states that her business receives four (4) to five (5) deliveries a day from eight (8) different vendors, some vendors using large delivery trucks over fifty (50) feet long.

Initial public outreach showed a mix of support and opposition for an on-street loading/unloading zone from both residents and businesses. On June 30th staff held a community meeting at the Champlain Senior Center with residents and business representatives from this block of N. Winooski Ave. During the meeting participants respectfully voiced their concerns and perspectives. By the end of the meeting staff, residents, and business representatives reached a resolution that was agreeable to all present parties. *Please see the attached drawings showing the current on-street parking, parking lot layout, and the attached email documents from residents.*

Conclusion:

This block of N. Winooski Ave. provides access to residential and commercial properties. Most commercial properties on the block have expressed support for installing a loading zone

with Butch & Babe's Restaurant and Dolan's Automotive expressing dire need. Currently delivery trucks must double park in the travel lanes creating traffic congestion and safety hazards. Due to the mixed-use nature of this section of North Winooski Ave, Staff concludes that on-street parking should reflect the balance of residential and commercial use. Given the level of positive community support, Staff recommends installing the truck loading zone in front of 258 North Winooski Avenue with the specified time limits agreed upon by the residents and businesses of North Winooski Avenue.

The driveway exiting the Champlain Senior Center is challenged by inadequate sight distances while being used heavily by residents sharing the driveway along with patrons and staff of the McClure Multi-Generational Center. In the May Commission, Staff recommended restricting two parking spaces on either side of this driveway to create 120 feet of sight distance to the north and 105 feet of sight distance to the south. After the community meeting it became clear that the main challenges when exiting this driveway was to the north and that only restricting parking by one space to the north and not restricting any spaces to the south would be sufficient in creating a safe exiting condition. This alteration was discussed and approved of by Ms. Smith and the rest of the community and is seen as a balance between creating a safe condition for those using the driveway and maintaining unrestricted on-street parking for other residents and businesses.

Recommendation:

Staff recommends that the commission adopt:

- The installation of a sixty (60) foot Truck Loading Zone in effect from 8:00am to 10:00am and again from 2:00pm to 4:00pm Monday through Friday on the east side of North Winooski Avenue in front of 258 North Winooski Avenue.
- The prohibition of one on-street parking space immediately north of the driveway serving 257 North Winooski Avenue and the Champlain Senior Center.

SCS 7-8-15

Requests for Service (/Main.aspx)

#4843 Assigned

Investigation

Technical Services

Traffic Requests

Location: 257 North Winooski Ave

Ms. Smith called to express concern that she has very limited visibility when pulling out of her driveway. She'd like the city to evaluate the situation and place "No Parking" signs adjacent to her drive so there is greater visibility.

Attachments

No Attachments

Browse... No file selected.

Upload Attachment

Assigned to: Damian Roy **Requested by:** Pamela Smith**Opened:** 7/25/2014**Entered By:** Chapin Spencer**Due:** 8/24/2014**Work History**

Add Work History

Date	Staff Person	Description
07/08/2015	Damian Roy	This request has been bundled with the loading zone request on N Winooski Ave. Both requests are to be presented at the July Commission. Details
05/21/2015	Damian Roy	Request Status Changed from New to In Construction Details
05/21/2015	Damian Roy	Staff presented this item to the May Commission where it was approved to restrict parking adjacent to this driveway. Will close out when signs are installed. Details
04/29/2015	Damian Roy	Staff visited the site at the recommended time indicated by Ms. Smith. Warrants were not met during this time frame. Staff visited the site again to observe the peak hours of 4:00pm to 6:00. Within this time frame there were 27 vehicles observed exiting during a 60 minute period. Details

4/28/15

Vehicles exiting 205 N. Wiaoski Avenue

Start time: 4:00 pm

done
in 30

4:04 - 1

5:32 - 1

4:22 - 1

5:34 - 1

4:26 - 1

5:35 - 1

4:29 - 1

5:36 - 11

4:30 - 1

5:39 - 1

4:31 - 1

5:41 - 11 ↑

4:32 - 11

5:58 - 1

4:33 - 1

4:43 - 11 ↓

End time: 6:00 pm

4:44 - 111

4:52 - 1

4:59 - 1

5:07 - 1

5:09 - 1

5:14 - 1

5:17 - 11

5:18 - 1

5:20 - 1

5:22 - 1

5:29 - 11

5:30 - 1

5:31 - 1

27 vehicles observed exiting between
4:43 pm and 5:41 pm.

TABLE 5-B. BURLINGTON STREET CLASSIFICATION

STREET	LOCATION	STREET	LOCATION
Major Streets			
<i>Arterials</i>			
Champlain Park Way	South Burlington line to Battery Street	South Prospect Street	Pearl Street to Ledge Road
Winooski Valley Park Way ..	Manhattan Drive to Heineberg Bridge	South Union Street	Pearl Street to Saint Paul Street
<i>Other Major Streets</i>			
Battery Street	Park Street to Maple Street	South Willard Street	Shelburne Street to Hyde Street
Barrett Street	Colchester Avenue to Grove Street	South Winooski Avenue	Pearl Street to Saint Paul Street
Colchester Avenue	North Prospect Street to city limits	Collector Streets	
East Avenue	Colchester Avenue to Main Street	Appletree Point Road	Stanford Road to private road
Elmwood Avenue	North Street to Pearl Street	Archibald Street	Spring Street to North Prospect Street
Flynn Avenue	Pine Street to Shelburne Street	Austin Drive	South Cove Road to Home Avenue
Grove Street	Barrett Street to city limits	Bank Street	South Winooski Avenue to Pine Street
Hyde Street	South Willard Street to Riverside Avenue	Birchcliff Parkway	Pine Street to Shelburne Street
Intervale Avenue	Riverside Avenue to North Street	Cherry Street	Battery Street to South Winooski Avenue
Ledge Road	South Prospect Street to Shelburne Road	College Street	Lake Street to South Prospect Street
Main Street/U.S. 2	Battery Street to city limits	Ethan Allen Parkway	North Avenue to Gazo Avenue
Manhattan Drive	Park Street to Spring Street	Flynn Avenue	Oakledge Park to Pine Street
Mansfield Avenue	North Street to Colchester Avenue	Heineberg Road	North Avenue to Farrington Parkway
Maple Street	Battery Street to South Prospect Street	Home Avenue	Austin Drive to Shelburne Street
North Avenue	Plattsburg Avenue to Sherman Street	Howard Street	Pine Street to Saint Paul Street
North Champlain Street	Manhattan Drive to Pearl Street	Industrial Drive	Queen City Park Road to Home Avenue
North Prospect Street	Riverside Avenue to Pearl Street	Lakeside Avenue	Central Avenue to Pine Street
North Union Street	North Winooski Avenue to Pearl Street	Locus Street	Pine Street to Shelburne Street
North Willard Street	Shelburne Street to Hyde Street	North Avenue	Plattsburg Avenue to Derway Drive
North Winooski Avenue	Riverside Avenue to Pearl Street	North Street	Mansfield Avenue to North Avenue
Oak Street	Manhattan Drive to Intervale Avenue	Pine Street	Bank Street to Main Street
Park Street	Manhattan Drive to Pearl Street	Prospect Parkway	South Prospect Street to Shelburne Street
Pearl Street	Battery Street to North Prospect Street	Saint Paul Street	Bank Street to Main Street
Pine Street	Main Street to Queen City Park Road	Shore Road	North Avenue to Crescent Beach Road
Plattsburg Avenue	North Avenue to Heineberg Bridge	Spring Street	Manhattan Drive to Archibald Street
Riverside Avenue	Intervale Avenue to Winooski Bridge	Stanford Road	North Avenue to Cumberland Road
Saint Paul Street	Main Street to South Union Street	Start Farm Road	North Avenue to Curtis Avenue
Shelburne Street/U.S. 7	South Union Street to city limits	Village Green	North Avenue to Rivermount Terrace
Local Streets			

CITY OF BURLINGTON DEPARTMENT OF PUBLIC WORKS

Guidelines to Prohibiting Parking Around Residential and Commercial Driveways

11/28/2012

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1.0 Introduction

1.1 Use of Guideline

The purpose of this guideline is to ensure that driveways are treated consistently throughout the city of Burlington, by providing guidance on prohibiting of on street parking.

It must be recognized that not all situations can be adequately addressed in this guideline; therefore engineering judgment must be used at all times.

Before any parking is prohibited on any street, the engineer must review the plan of the proposed prohibition to ensure that it conforms to this guideline. Parking prohibitions shall only go into effect after they are passed by the Department of Public Works Commission. Petitions or requests to prohibit parking to improve sight distance will only consider for the direction of travel being requested.

2.0 Prohibiting Parking

2.1 Arterial Roadways

Arterial Roadways are moderate to high-capacity roadways that are immediately below a highway's level of service. They are main entry and exits to the City and have many intersections with collector and local roads. Vehicles travel faster on arterial roadways than on collector and local roads. Some examples of arterial roadways in the City of Burlington are Main Street, Pine Street, and North Avenue.

2.1.1 Prohibiting Parking

This standard is applicable for all driveways on Arterial Roadways serving 20 or more vehicles in the peak hour. An engineering study, using the accepted criterion, will be done to determine the parking setback around the driveway. Once a study is completed the engineer has the authority to recommend the correct sight distance setbacks in the direction of travel seeking consideration.

2.2 Collector Roadways

Collector roadways are low to moderate-capacity roadways which are below highways and arterial roadways in level of service. Collector roadways usually bring traffic from local roadways to arterial roadways. Some examples of collector roadways in the City of Burlington are Maple Street, Loomis Street, and Ethan Allen Parkway.

2.2.1 Prohibiting Parking

This standard is applicable for all driveways on collector roadways serving 40 or more vehicles in the peak hour. An engineering study, using the accepted criterion, will be done to determine the parking setback around the driveway. Once a study is complete the engineer has the authority to recommend the correct sight distance setbacks in the direction of travel seeking consideration.

3.0 Sight Distance Setbacks

3.1 Sight Distance Triangle

When determining the correct sight distance setback for each driveway one must conduct a sight distance study. In Figure 1, below, X represents the needed stopping sight distance for a street with a specific speed limit. From the 2004 AASHTO "A policy on Geometric Design of Highways and Streets," a roadway with a speed limit of 25 MPH requires a stopping sight distance, X, of 155 ft. As the speed limit increases the required stopping sight distance increases. The figure below shows that the shorter the sight distance setback is the shorter the stopping sight distance.

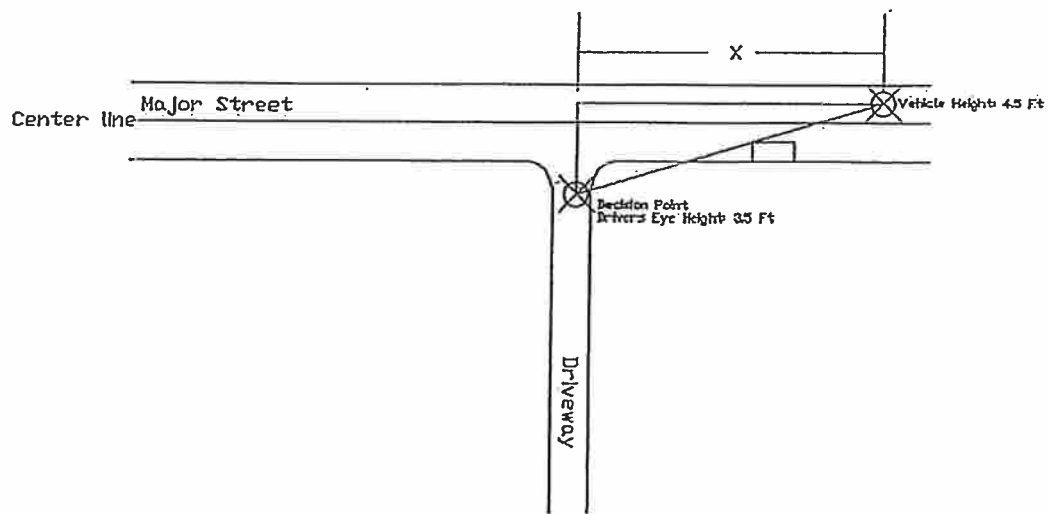


Figure 1: Sight Distance Triangle

4.0 Exceptions

4.1 Downtown Corridor

This guideline includes all of the city of Burlington but the downtown corridor. This section includes the interior of Pearl Street, South Winooski Avenue, Main Street to Battery Street. See the Figure below.



Figure 2: The Downtown Corridor

The parking guidelines described would be applied in all areas of the city except downtown core described above. The streets bounding this area of exception will be included in these guidelines.

Damian Roy

From: Pamela J. Smith <psmith58vt@comcast.net>
Sent: Tuesday, May 12, 2015 6:46 AM
To: Damian Roy
Subject: Re: Driveway Encroachment @ 257 N. Winooski Ave.

Dear Damian,

How wonderful of you for caring to make sure our bikers and pedestrians are safer. Over the ten years I have been living in my lovely apartment I have witnessed several very close dangerous encounters at this driveway. Thank you for your cooperation in protecting the citizens of our active community.

Pamela J. Smith

From: "Damian Roy" <droy@burlingtonvt.gov>
To: psmith58vt@comcast.net
Sent: Monday, May 11, 2015 10:40:20 AM
Subject: Driveway Encroachment @ 257 N. Winooski Ave.

Dear Pam,

I wanted to write to inform you that your request to restrict parking adjacent to your driveway will be presented to the Public Works Commission on Wednesday May 20th at 6:30pm at the 645 Pine Street Public Works building. I am please to tell you that I visited the site a second time on April 28th during the peak hours of 4:00pm and 6:00pm and observed 27 vehicles exiting the driveway within a one hour time frame. Because this meets DPW's warrants, I plan to recommend that the Commission approves restricting on-street parking adjacent to the driveway thus increasing sight distances to oncoming traffic.

You are welcome to attend the Commission Meeting if you wish. In addition to your request, driveway encroachment in the city as a whole will be examined as well.

Best,
Damian

Damian Roy, Engineering Technician
Burlington Public Works Department
645 Pine St. Burlington VT 05401
Desk: 802.865.5832
Cell: 802.598.8356
Email: droy@burlingtonvt.gov
Web: www.burlingtonvt.gov/dpw

Damian Roy

From: Pamela J. Smith <psmith58vt@comcast.net>
Sent: Wednesday, May 13, 2015 7:56 AM
To: Damian Roy
Subject: SIGN

I would like to attend the meeting on 5/20 at 6:30 however, I am at a DAT meeting with American Red Cross and I work at the Red Cross all day Thursdays as a volunteer in finance. It would be difficult for me to attend. The sign of "NO PARKING HERE TO CORNER" is such an important safety feature for me that I am worried that if I do not attend the meeting to voice my concerns the sign might not be approved. I did write a letter prompting the investigation into the safety which could be read on my behalf during this meeting. Is it necessary for me to attend in person for the approval of the sign or do you need me to change my plans and attend next week?

If you require more written request from me I would be willing is needed to approve the sign. Let me know please if you have everything you need from me as an active citizen of my neighborhood.

Thank You for all your cooperation.

Pamela J. Smith
259 N. Winooski Avenue #3
Burlington, VT

Damian Roy

From: Pamela J. Smith <psmith58vt@comcast.net>
Sent: Thursday, May 21, 2015 6:45 AM
To: Damian Roy

Dear Damian,

I am reaching out to you this morning to see how the meeting went last night. Was the sign stating NO PARKING HERE TO CORNER approved? I am anxious to know if our task of making the neighborhood safe has been realized. I am at the Red Cross Disaster volunteering as I do twice a week so if you could please let me know when you have the decision I would appreciate. Enjoy your day.

Pamela J Smith
259 N Winooski Avenue
Burlington VT

Damian Roy

From: Pamela J. Smith <psmith58vt@comcast.net>
Sent: Wednesday, June 17, 2015 7:57 AM
To: Damian Roy
Cc: Norm Baldwin
Subject: Re: "No Parking Here to Corner: signs @ 257 N Winooski Ave

Damian,

I am extremely disappointed and concerned. The requirement of making this access of 20 plus vehicles an hour far me the requirement of a safe place. I must inform you officially that I will be holding the City Burlington legally responsible of any injury to myself or any damage to my vehicle due to the inability to see any oncoming vehicles, bicycles, wheelchairs, skateboarders that are in the street at the shared exit and entrance next to the McClure Multifunctional Center. As you yourself stated that the NO PARKING HERE TO CORNER sign is needed in this area as the count of vehicles meet the requirements of putting this sign here. I will keep all my correspondence regarding this extremely dangerous exit and entrance drive and hope that no one is either killed or injured.

Rest assured that I will not hesitate to take legal action in the unfortunate situation of any bodily or property damage that is related to the neglect of the City of Burlington actually recognizing and recommending a NO PARKING HERE TO CORNER sign. Regardless of any "checking with the neighbors" this hazardous drive has already met the requirements the city. The City of Burlington has an obligation to putting this sign that has already been deemed necessary by the admission of the Public works department.

I will be giving all this information to the City of Burlington Mayor and the City Attorney for them to review and keep on record as the City will be responsible financially if anyone is injured due to the neglect of not putting the sign that has been committed to the residents that exit and enter 24 hours a day, seven days a week at this very dangerous drive that the City has documented and proven to be so

Let this be a official notification to the City of Burlington that I will hold the city responsible to take action immediately to prevent any further possibility of bodily and property injury.

Pamela J. Smith
259 North Winooski Avenue #3
Burlington Vermont 05401

RESIDENCE SINCE 4/2005

From: "Damian Roy" <droy@burlingtonvt.gov>
To: "Pamela J. Smith" <psmith58vt@comcast.net>
Cc: "Norm Baldwin" <nbaldwin@burlingtonvt.gov>, "Chapin Spencer" <cspencer@burlingtonvt.gov>
Sent: Tuesday, June 16, 2015 9:39:53 AM
Subject: "No Parking Here to Corner: signs @ 257 N Winooski Ave

Good morning Pamela,

I wanted to write you prior to anyone else concerning this as your request was evaluated first. It has been an exciting few weeks for me at DPW dealing with traffic requests for N Winooski Ave. It hasn't all gone smoothly or as planned. Friday I met with the City Engineer Norm Baldwin and the Director of Public Works Chapin Spencer regarding the loading zone request across the street from the Senior Center and how it relates to your driveway encroachment

request. Both requests were evaluated separately based on type of request. For your request, I did not notify other residents of N Winooski (between Archibald and Decatur) due to there being a pre-existing policy to evaluate such requests that did not include a public process. This was an error of judgement on my part. Regardless of there being a policy governing driveway encroachment requests I should have notified all interested parties so that a full public process could commence.

For the loading zone request, residents were notified and a significant debate for and against ensued. At this time, the other residents are unaware of your driveway request. So I think that you can begin to see the issue. With hot debate over losing 3 spaces on one side, we can't blind-side the same residents with a restriction right across the street which will cause them to lose 4 spaces.

The Public process must be restarted which will include your request into the conversation. Until we can have a communication with the residents on this block, your driveway request and the loading zone request will have to be put on hold. My goal is to complete this process and be ready to present to the July Public Works Commission.

I sincerely apologize for the delay and for my error in this process. I'm reminded of a saying "calm seas does not make a skilled sailor".

Write or call to discuss. I will be emailing the other residents I have email addresses for and flyer the neighborhood this week to possibly set up a public meeting if necessary.

Regards,
Damian

Damian Roy, Engineering Technician
Burlington Public Works Department
645 Pine St. Burlington VT 05401
Desk: 802.865.5832
Cell: 802.598.8356
Email: droy@burlingtonvt.gov
Web: www.burlingtonvt.gov/dpw

Damian Roy

From: Pamela J. Smith <psmith58vt@comcast.net>
Sent: Wednesday, June 24, 2015 12:08 PM
To: Damian Roy
Cc: Norm Baldwin
Subject: REQUEST FOR ALL RECORDS

Damian Roy,

I am requesting all the information that you have in your files of all my correspondence with Burlington Public Works regarding request of sign stating NO PARKING HERE TO CORNER in front of 257 North Winooski Avenue Burlington, Vermont.

It is important that the information includes the survey that you conducted of the access drive at McClure Multifunctional that revealed the amount of traffic meeting the criteria of putting up the requested sign due to the hazardous access.

It is important that the information includes the meeting of the the Burlington Public Works board that in fact approved the request of the NO PARKING HERE TO CORNER sign recognizing the hazard of this access drive by your own survey and approval.

This information has all been relayed to me by you Damian Roy and I wish to this up for my records going forward as these are admissions of the hazardous issues of this access drive.

I am requesting to pick this up on Friday, June 26, 2015 at Burlington Public Works. Let me know the time and where to go to obtain this requested information.

Thank You for your cooperation.

Pamela J. Smith
259 N. Winooski Avenue #3
Burlington, VT 05401



CITY OF BURLINGTON

SERVICE REQUEST

Name and Address

Name: Justin Dextradeur

Request Date: 04/06/2015

10:28 AM

Due Date: 4/13/2015

Address: 210 College St, Ste 201

Phone Number: 734-9217

Email Address: justin@redstonevt.com

Request

Location: 258 No. Winooski Ave

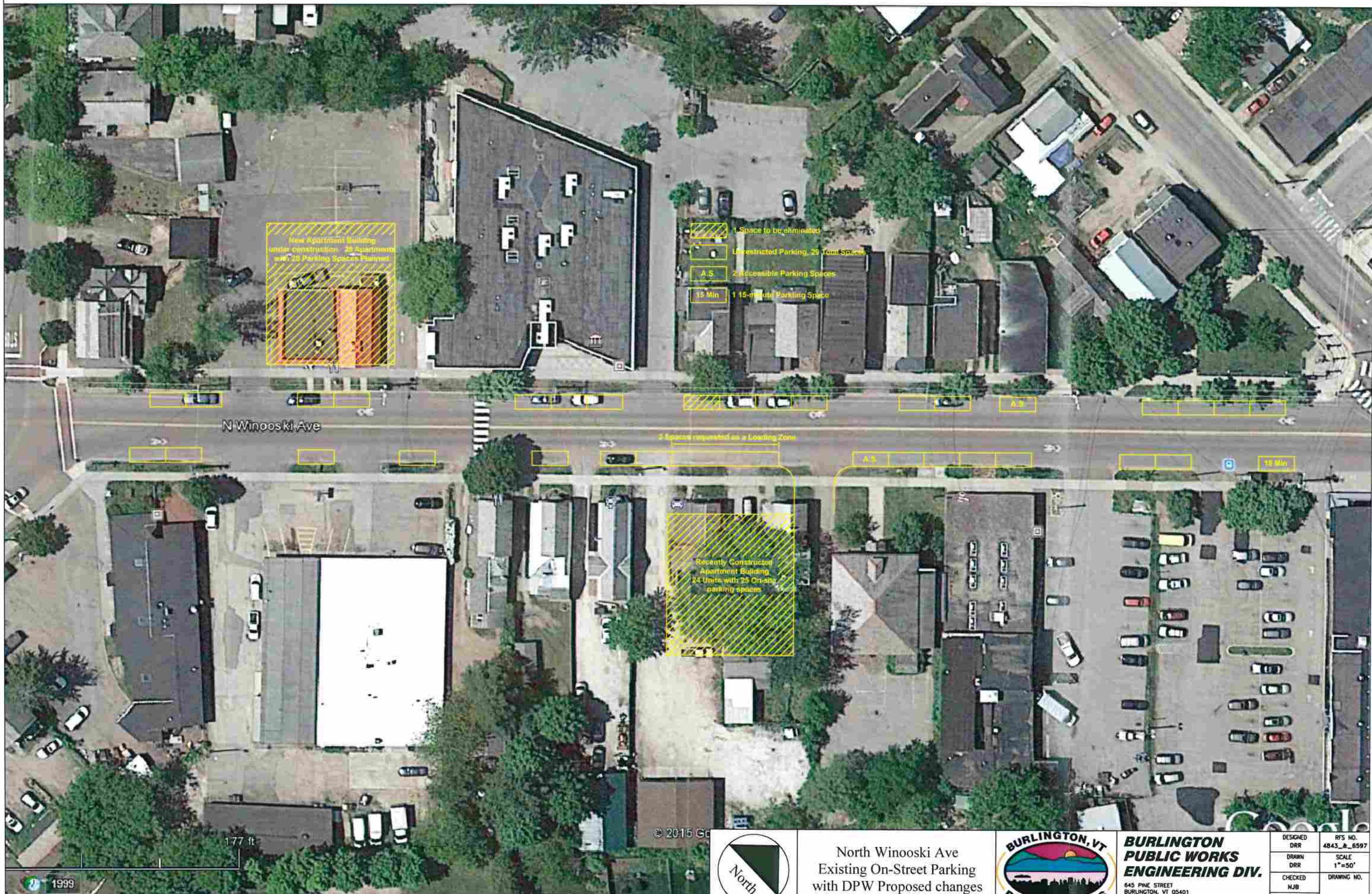
Request Description: Hi Joel – I'm writing because one of Redstone's new retail tenants (Butch & Babe's Restaurant) would like to request a part-day (8-2pm) truck loading space designated in front of their business at 258 North Winooski Avenue. The larger delivery trucks are finding it difficult to find contiguous street parking spaces near the building, and with a historic brick building sitting right up against our shared driveway with Vermont Legal Aid so it's not ideal to receive deliveries there (one careless driver could do some real damage). The tenant currently has two deliveries per week from a 52 ft long trailer and 8 deliveries from smaller vehicles 32 & 42ft each week, almost all of which are during the morning, with only the beer deliveries happening in the early afternoon. I've attached a site plan with the street parking in front of the building highlighted for context but hoping you can confirm the next steps for us to formally make this request of the Public Works Commission. Thanks – Justin

Assign History

Date	Assigned To	Description
4/6/2015 10:28:49 AM	Damian Roy	Request Assigned

Work History

Date	Staff Person	Description
05/26/2015	Damian Roy	Staff has been in contact with Mr. Dextradeur via email (attached). Staff will work to have this item presented to the June PWC (Entered on 5/26/2015 10:57:24 AM by Damian Roy)



North Winooski Ave
Existing On-Street Parking
with DPW Proposed changes



**BURLINGTON
PUBLIC WORKS
ENGINEERING DIV.**

645 PINE STREET
BURLINGTON, VT 05401
(802) 863-9094
(802) 863-9094 (Fax)

DESIGNED DRR	RFS NO. 4843_6597
DRAWN DRR	SCALE 1"=50'
CHECKED NJB	DRAWING NO.
DATE 7/8/2015	

Please Sign In

Print Name	Email	Phone Number
Bonnie Campero	bonniecamperonier.org	658-3585
Sarah Adams-Kollitz	Sadamskollitz@berlintonchildrensspace	
Kim Ianello	Kianelli@berlinton.gov	658-1500 x 13
Justin Redshaw	justinredshawt.com	802-734-9217
Kortnee Bush	kortneebush@gmail.com	773 919-9916
Jennifer Andrews	jandrews@vtlegalaid.org	802-863-5620
Carol Jenkins	cjenkins@vtlegalaid.org	802-863-5620
Pamela Smith	PSmith-SBVT@comcast.net	802-658-26
Paul Schnabel	PSchnabel@gmail.com	802-862-57
Chris Adams	adam.Donnell19@gmail.com	802-373-3452
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Kelly Meunier	elmwoodmeunier@yahoo.com	802-363-77



City of Burlington
Department of Public Works

Technical Services Engineering Division
645 Pine Street, Suite A
Burlington, VT 05402
P 802-863-9094 / F 802-863-0466 / TTY 802-863-0450
www.burlingtonvt.gov/DPW

Memo

Date: July 8, 2015

To: Public Works Commission

From: Nicole Losch, Transportation Planner

Subject: Draft Residential Parking Management Plan – discussion

INTRODUCTION

Last February the Commission received an introduction to the Residential Parking Management Study, the goals of the effort, the results of our fall 2014 data collection efforts, examples of best practices from comparable communities, and an overview of the general strategies that were being considered.

Since February, we have refined the general strategies based on feedback from the Advisory Committee and the public. These strategies are included in our draft Residential Parking Management Plan, which will be introduced to the Commission for discussion and feedback.

The draft Residential Parking Management Plan is available to be downloaded or viewed online at <http://parkburlington.com/residential-parking/residential-parking-management-plan/> (Chapter 5 contains the draft recommendations).

STATUS AND NEXT STEPS

1. At tonight's meeting the Commission will have an opportunity to react to the draft Plan and the draft recommendations and hear from the community who have helped shape and refine these concepts.
 2. We will take the Commission's feedback, along with feedback from the Advisory Committee's July 7, 2015 meeting and public comments, and will revise the draft report.
 3. The revised draft will be reviewed by the Advisory Committee at their final meeting.
 4. The revised draft will be presented to the Commission for a decision at an upcoming meeting.
-



**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

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www.burlingtonvt.gov/dpw

To: DPW Commissioners
Fr: Chapin Spencer, Director
Re: **Downtown Parking & Transportation Plan**
Date: July 9, 2015

SUMMARY:

The draft plan recommendations are online on the DPW Commission webpage and at: <http://parkburlington.com/downtown-parking-study/>. Representatives from BBA, CEDO and DPW will present an overview of the report's main recommendations at the Commission's July meeting and seek Commission input at the meeting and following the meeting.

BACKGROUND:

A unanimous City Council resolution in November 2013 established "a collaborative public/private Downtown Parking Improvement Initiative with a vision of a managed parking system that delivers a positive experience for customers and reinforces the downtown's and waterfront's vitality well into the future."

With the financial support from the Chittenden County Regional Planning Commission, Burlington Business Association (BBA) member contributions and the City's Traffic Fund, the consulting team of Desman Associates and Stantec was selected to develop the Downtown Parking & Transportation Plan.

The mission of the Initiative set in the Council resolution is "to listen, learn, and experiment so that stakeholders can identify and propose new and improved ways to manage, operate and maintain Burlington's public and private parking assets in the city's core." As a key strategy to engage stakeholders, the Council resolution established an advisory committee to provide stakeholder input in the plan's development. The following individuals served on the Parking Advisory Committee:

- **Dan Bradley**, Former DPW Planner (Chair)
- **Jim Barr**, UVM Transportation & Parking Services, DPW Commissioner
- **Charlie Baker**, Chittenden County RPC
- **Chuck DesLauriers**, Hotel Owner & Developer
- **Asa Hopkins**, Former DPW Commissioner
- **John Killackey**, Flynn Center for the Performing Arts
- **Phil Merrick**, August First
- **Jeff Nick**, Church Street Marketplace Commission
- **Kevin Owens**, Select Design
- **Kathy Ryan**, Landscape Architect
- **Max Tracy**, Burlington City Council

The Parking Advisory Committee has met 10 times and has provided valuable guidance. Agendas, minutes and more are at: <http://parkburlington.com/parking-advisory-committee/>. Former Chair Matt Chabot stepped down as Chair in January 2015 due to his departure from the Burlington Town Center. Vice Chair Dan Bradley graciously stepped up into the Chair role at the following meeting.

In addition to the Parking Advisory Committee's input, we've sought additional public and stakeholder input through a number of outreach strategies including public forums, online input, stakeholder meetings and one-on-one meetings.

The draft plan recommendations are online at: <http://parkburlington.com/downtown-parking-study/>. Representatives from BBA, CEDO and DPW will present an overview of the report's main recommendations at the Commission's July meeting and seek Commission input at the meeting and following the meeting.

During the pilot, it is proposed to have the DPW Commission retain all current authority over parking downtown policy. After this plan is completed, any proposed ordinance changes relating to parking regulation would still need to be vetted and approved by the Commission.

After the July presentation to the Commission, we will:

- Present to the City Council Transportation Energy & Utilities Committee
- Present to key stakeholder groups
- Have Parking Advisory Committee vote to send the study to the full City Council
- Present to City Council

Don't hesitate to contact me should have any questions.



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Memo

Date: July 7, 2015
To: Public Works Commission
From: DPW Transportation Planning
Subject: 2015 VTrans Bicycle and Pedestrian Grant Application

Background:

The intent of the VTrans Bicycle and Pedestrian Program is to improve access and safety for bicyclists and/or pedestrians through the planning, design and construction of infrastructure projects. Eligible projects for funding through the Bike/Ped Program include the scoping, design, and/or construction of bike lanes, shoulders, pedestrian crossing improvements, sidewalks, pedestrian signals, improvements that address ADA requirements, and shared-use paths. In this year's program, there are three categories of projects defined to be considered for project funding: scoping studies, design/construction projects, and small-scale construction projects. The grant application specifies the need for a public forum with the decision makers so that the public can weigh in on and provide feedback on the project plans.

Project Plans:

A scoping study will include the definition of the purpose and need of a project, review of right-of-way needs, selecting preferred solutions or phased project, and estimating project management, design, and construction costs. The City is seeking to apply for funding for a scoping study to be completed at the five-way intersection where St. Paul Street and South Winooski Avenue intersects Howard Street. Pedestrian safety is of large concern in this area. There are currently no pedestrian crossing signals to regulate crossing patterns, and existing crosswalks that currently cross multiple traffic lanes and are high-risk for vehicle/pedestrian collisions; the crossing connecting the north side of Howard Street is located in the middle of the intersection, forcing pedestrians to cross the equivalent of three lanes of traffic.

The design/construction project category is defined by VTrans to include all of the necessary steps to move a concept through the design, permitting and right of way process to advance to construction. The City plans to construct an additional segment of the Colchester Avenue Sidepath. This new addition would continue the sidepath from Mansfield Avenue (where the

current sidepath ends) west to South Prospect Street. Grant funding has been received previously to renovate and update the sidepath between East Avenue and Mansfield Avenue; this project would complete that vision and provide safe, consistent space for pedestrians along Colchester Avenue.

The small-scale construction designation includes projects to address simple, but critical, improvements that will increase access and/or safety of people choosing to bike or walk. These projects will be funded with all State dollars, lessening the requirements to be met before construction can take place. These projects must be small stand-alone improvements. The City is seeking to make several crosswalk improvements on Colchester Avenue, which was a recommendation in the Colchester Avenue Corridor Study completed by the CCRPC in 2011. The project would construct a midblock crosswalk with a pedestrian bump out and RRFBs on Colchester Avenue, midway between Mansfield Avenue and East Avenue, to aid pedestrians in safely crossing to and from UVM central campus, Trinity campus, and the UVM Medical Center. It was noted in the corridor study that a considerable number of pedestrians choose to cross free-flowing traffic along this part of the roadway rather than cross at the East Avenue or Mansfield Avenue intersections. Additionally, the midblock cross walk that provides pedestrian access to Centennial Field and the Southern sidewalk along Colchester Avenue is currently situated half in a driveway and does not meet ADA standards. This is a heavily trafficked crosswalk, with hospital employees and Lake Monsters fans regularly using the Centennial Field parking lots. We are seeking to relocate this sidewalk to a new location, about 60 ft. east where new, ADA compliant curb ramps can be installed as well as greenspace for the installation of new RRFBs to increase the safety and visibility of crossing pedestrians.

These projects discussed above were selected for application after having been identified after meeting with several city departments including Public Works, CEDO, Parks and Recreation, City Arts, Planning and Zoning, and the Library.



Figure 1: 5-way intersection at Howard Street.



Figure 2: Current crosswalk conditions at Colchester Avenue/Centennial Field.



MEMORANDUM

July 2, 2015

TO: Public Works Commission
FROM: Damian Roy, Engineer Technician *DER*
CC: Norman Baldwin, City Engineer *NB*
RE: Increasing Driver Awareness of Yield Condition

Background:

Staff received a request from resident Charles Kalanges on May 23rd 2014 regarding the channelized lane addition which occurs on Shelburne Road in front of Price Chopper. Mr. Kalanges states that vehicles exiting the Price Chopper parking lot southbound are not adequately yielding to the established southbound traffic wishing to make a lane change. Mr. Kalanges further states that this creates an unsafe condition where vehicles exiting Price Chopper fail to yield and hastily try to continue into the new lane and/or merge onto traffic in the established lane. Mr. Kalanges asserts that installing a stop sign with pavement markings indicating that drivers leaving Price Chopper do not have the Right of Way would solve the issue.

This request was presented to the May Commission where staff recommended installing two MUTCD W4-3 Added Lane Signs, one for the Route 7 southbound lane and one on the channelized ramp. The Commission was divided with this recommendation and asked staff to re-evaluate.

Observations:

Patrons of the shopping center, which includes Price Chopper, who wish to travel south on Shelburne Road do so by exiting the parking lot via a channelized ramp that continues into a new western-most lane. Under normal traffic conditions, vehicles exiting the parking lot using this channelized ramp would have the right of way to continue south as they are already in the newly added lane, however due to the high prevalence of southbound traffic wishing to make a lane change into the western-most lane in preparation to use the 189 entrance ramp, it has been established that restricting the shopping center's exiting traffic by the addition of a yield sign creates a better traffic flow during peak hours and also keeps lane-changing conflicts to a

NB 7/2/15

minimum. While this creates improved traffic flow it is an unusual traffic condition where the exiting lane would, under usual conditions, have the right of way to continue yet does not. Due to this unusual yet necessary traffic flow, Staff feels a greater driver awareness to yield when exiting the ramp may be warranted. Mr. Kalanges suggests installing a Stop Sign causing vehicle exiting the shopping center to stop will increase safety at this location. This is an inappropriate application of a Stop Sign as there is no reason to come to a complete stop when active lane changing isn't present. After coming to a stop there is a high probability that the operator will then proceed forward assuming they now have the right-of-way over the lane-changing traffic flow which has been proven that they should not. There is also the increased possibility of rear-end collisions in a stop condition when it is installed in such an unusual location. The application of a yield condition in this location is set forth by the MUTCD section 2B.09 Yield Sign Applications and should be followed.

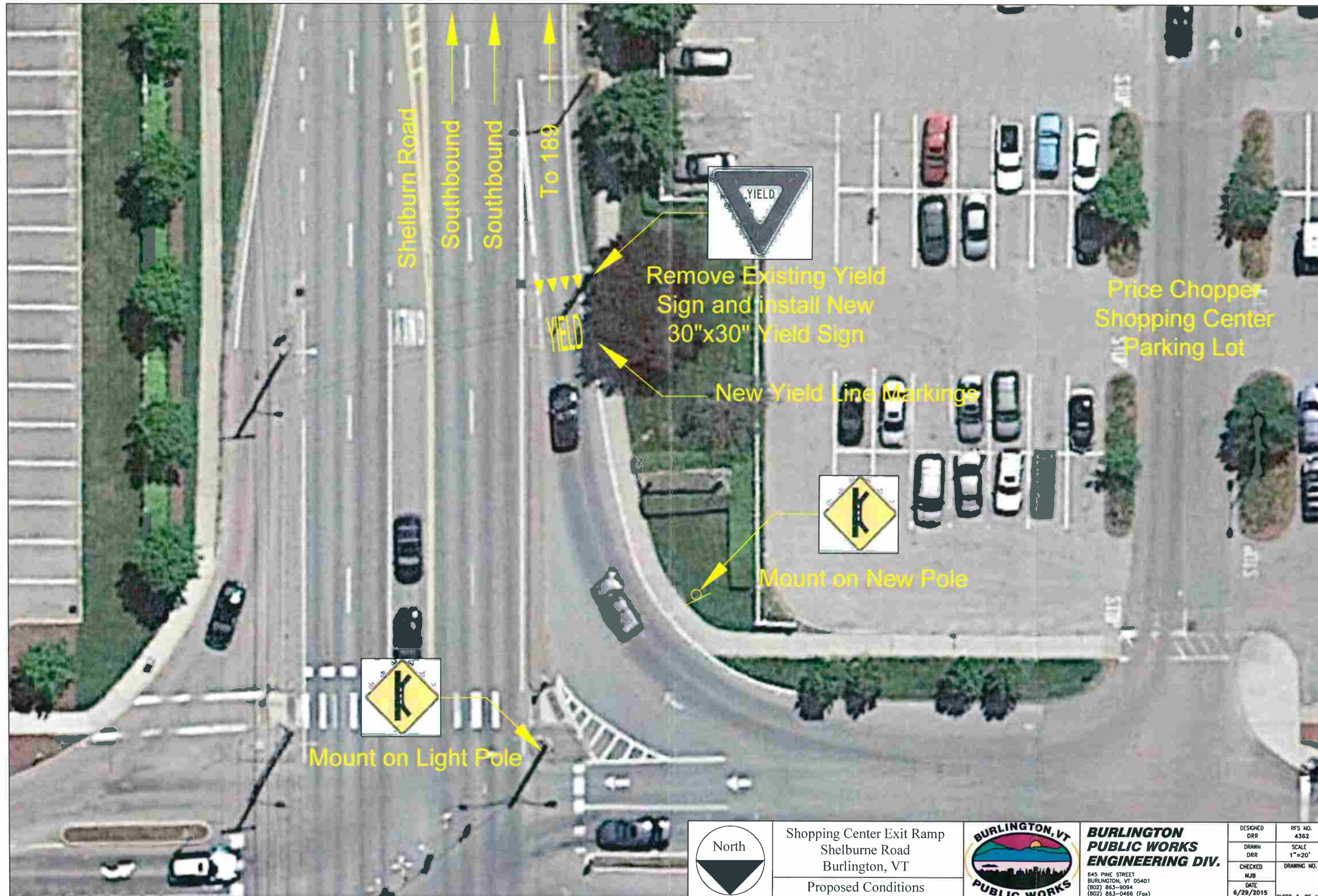
Conclusion:

In an effort to increase driver awareness of the added lane and yield conditions for the channelized ramp, Staff supports the addition of two Weave signs as indicated on the drawing to be visible from each approach with an additional Yield Sign and Yield Pavement Markings where the exit ramp and the existing travel lane meet. This will create a greater awareness to vehicles in each lane that they are entering an area where motorists tend to switch lanes frequently and that the initial right-of-way is given to the existing southbound lane and not the channelized exit ramp. *Please refer to the attached drawing for Staff's recommended signs and their placement, to the MUTCD pages attached for a detailed description of the R1-2 Yield sign, and to the attached Comprehension and Legibility of Selected Symbol Signs Final Report by the Science Applications International Corporation for its study on driver comprehension for Weave Signs.*

Recommendation:

Staff recommends that the commission adopt:

- The addition of two specified Weave Warning signs at the locations indicated by the attached drawing.
- The addition of one R1-2 Yield sign at the location indicated by the attached drawing.
- The addition of Yield Line Pavement Markings at the location indicated by the attached drawing.



Shopping Center Exit Ramp
Shelburne Road
Burlington, VT
Proposed Conditions



**BURLINGTON
PUBLIC WORKS
ENGINEERING DIV.**
645 PINE STREET
BURLINGTON, VT 05401
(802) 863-9094
(802) 863-0466 (Fax)

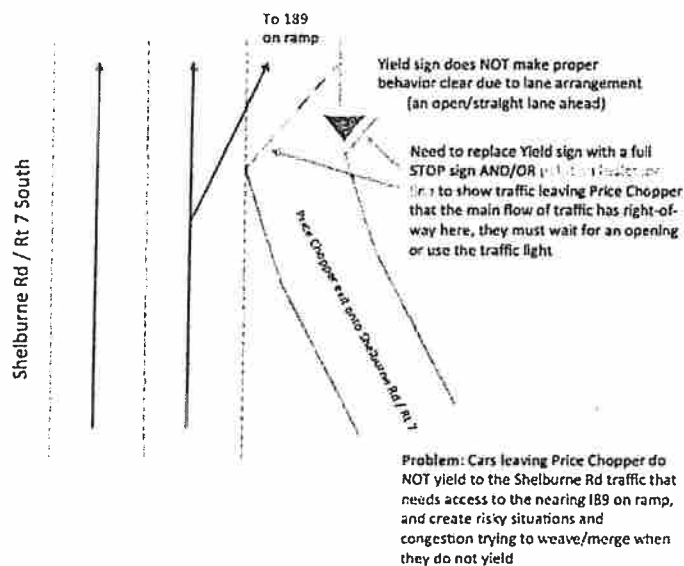
DESIGNED DRR	RFS NO. 4362
DRAWN DRR	SCALE 1"=20'
CHECKED NJB	DRAWING NO.
DATE 6/29/2015	

Helen Plumley

From: Charles Kalanges <ckalange@gmail.com>
Sent: Friday, September 19, 2014 5:20 PM
To: Helen Plumley
Subject: Re: [Public Works Department] Price Chopper Shelburne Rd yielding issue

Hi Helen,

I noticed nothing has happened at all at this intersection since I wrote to the DPW so I wanted to bump the subject. I am including a novice diagram of the problem:



If a petition needs to come to light on this particular intersection then please let me know, it seems like a very easy job to physically carry out, but I assume there are probably planning/administrative roadblocks that could hold it up. Let me know if I need to get more steam behind the idea, as it still plagues this area on a daily basis especially during rush hour, when drivers leaving PC ignore the Yield sign and barrel into the lane, trying to weave into the adjacent lanes.

The system works a littttttle better on the other side of Rt 7 with vehicles leaving Shaw's, because the cars that go to yield/merge into Rt 7 towards downtown don't have their "own" lane ahead, they actually have to merge. It's still messy (would be better off using the traffic light).

Thanks!
Charlie Kalanges

On Fri, May 23, 2014 at 11:24 AM, Helen Plumley <hplumley@burlingtonvt.gov> wrote:

Good morning Mr. Kalanges.

We received your request. I will create a service request and ask our staff to look at the site.

Thank you,

Helen

Customer Service

Department of Public Works

From: RFS [mailto:emailautomation@burlingtonvt.gov]

Sent: Friday, May 23, 2014 9:57 AM

To: Valerie Ducharme; Holly Lane; Helen Plumley

Subject: [Public Works Department] Price Chopper Shelburne Rd yielding issue

This message was sent to you because you are a designated recipient for: Public Works Department

Message ID: 4617

IP Address from: 65.183.159.254

Message from: Charles

Reply to address: ckalange@gmail.com

Message:

Hi, I am writing to request a stronger indicator to cars entering Rt 7/Shelburne Rd from the Price Chopper parking lot to YIELD to the traffic that is already flowing on Rt 7. Although there is a YIELD sign on displayed along the "guided entryway" to Rt 7 from Price Chopper, most oblivious drivers see a clear lane carved out ahead of them and just barreled forward into the flow of traffic without yielding to cars that want to enter the right hand lane leading to the 189 on-ramp. This is ESPECIALLY PROBLEMATIC DURING RUSH HOUR. There is limited space for traffic on Rt 7 to get in the right-hand lane for the 189 on-ramp, and it is further complicated by oblivious morons not yielding to the cars ALREADY IN TRAFFIC ON RT 7 who need to enter the right lane. The priority should be smoothly channeling the hundreds of cars on Rt 7, not allowing the single odd car leaving Price Chopper to completely stop-up the flow because they don't know what "YIELD" means. I would suggest two things - #1, a STOP sign should replace the Yield sign. #2, if possible, paint the pavement by the Price Chopper guided entryway to Rt 7 in a way that enforces the traffic on Rt 7 has right-of-way to enter the right lane heading towards 189, NOT the traffic coming from price chopper. This could mean just painting a stripe that indicates cars coming from Price Chopper do not have "dibs" on the lane in front of them - the cars on Rt 7 do. Thank you for considering my concern - I think if these slight adjustments are made to that area, the flow of traffic will improve and drivers will have a better indication of how to behave. -Charlie Kalanges

Requests for Service (/Main.aspx)

#5762 Assigned

New

Technical Services

Traffic Requests

Location: 573-599 U.S. 7, South Burlington, VT 05403, USA

Per today's e-mail: Apologies if this seems like a waste of your time, and I know that I'm not an expert, but it has occurred to me that traffic congestion along Shelburne Rd. around the intersection with 189 could be reduced dramatically with a relatively simple fix. Currently, the backup is caused when people from the main traffic lanes try to merge into the new right lane which comes out of the Price Chopper parking lot and becomes the exit lane for 189. This holdup could be greatly reduced if an extra lane was added to the exit ramp and traffic was able to exit from the two right lanes of Shelburne road (the right lane would be exit only, the center lane would be exit-optional). This is essentially the same as the traffic pattern entering 189 from Shelburne Rd. northbound. There appears to be plenty of space around the exit ramp for this expansion. I believe that this would solution would reduce delays caused by the merging of 3 lanes into a single exit lane, would reduce the problem caused by people failing to yield coming out of the Price Chopper parking lot, and would go a long way towards alleviating the congestion on Shelburne Rd., all with relatively minor costs. Just my 2 cents, thanks for your attention. Peter Isles

Attachments

No Attachments

 No file selected.**Assigned to:** Damian Roy **Requested by:** Peter Isles**Opened:** 12/11/2014**Entered By:** Helen Plumley**Due:** 1/10/2015

Work History

[Add Work History](#)

No Work History

- 11 Except as provided in Section 2B.09, STOP signs and YIELD signs shall not be installed on different approaches to the same unsignalized intersection if those approaches conflict with or oppose each other.
- 12 Portable or part-time STOP or YIELD signs shall not be used except for emergency and temporary traffic control zone purposes.
- 13 A portable or part-time (folding) STOP sign that is manually placed into view and manually removed from view shall not be used during a power outage to control a signalized approach unless the maintaining agency establishes that the signal indication that will first be displayed to that approach upon restoration of power is a flashing red signal indication and that the portable STOP sign will be manually removed from view prior to stop-and-go operation of the traffic control signal.
- Option:
- 14 A portable or part-time (folding) STOP sign that is electrically or mechanically operated such that it only displays the STOP message during a power outage and ceases to display the STOP message upon restoration of power may be used during a power outage to control a signalized approach.
- Support:
- 15 Section 9B.03 contains provisions regarding the assignment of priority at a shared-use path/roadway intersection.

Section 2B.05 STOP Sign (R1-1) and ALL WAY Plaque (R1-3P)

Standard:

- 01 When it is determined that a full stop is always required on an approach to an intersection, a STOP (R1-1) sign (see Figure 2B-1) shall be used.
- 02 The STOP sign shall be an octagon with a white legend and border on a red background.
- 03 Secondary legends shall not be used on STOP sign faces.
- 04 At intersections where all approaches are controlled by STOP signs (see Section 2B.07), an ALL WAY supplemental plaque (R1-3P) shall be mounted below each STOP sign. The ALL WAY plaque (see Figure 2B-1) shall have a white legend and border on a red background.
- 05 The ALL WAY plaque shall only be used if all intersection approaches are controlled by STOP signs.
- 06 Supplemental plaques with legends such as 2-WAY, 3-WAY, 4-WAY, or other numbers of ways shall not be used with STOP signs.

Support:

- 07 The use of the CROSS TRAFFIC DOES NOT STOP (W4-4P) plaque (and other plaques with variations of this word message) is described in Section 2C.59.

Guidance:

- 08 Plaques with the appropriate alternative messages of TRAFFIC FROM LEFT (RIGHT) DOES NOT STOP (W4-4aP) or ONCOMING TRAFFIC DOES NOT STOP (W4-4bP) should be used at intersections where STOP signs control all but one approach to the intersection, unless the only non-stopped approach is from a one-way street.

Option:

- 09 An EXCEPT RIGHT TURN (R1-10P) plaque (see Figure 2B-1) may be mounted below the STOP sign if an engineering study determines that a special combination of geometry and traffic volumes is present that makes it possible for right-turning traffic on the approach to be permitted to enter the intersection without stopping.

Support:

- 10 The design and application of Stop Beacons are described in Section 4L.05.

Figure 2B-1. STOP and YIELD Signs and Plaques



R1-1



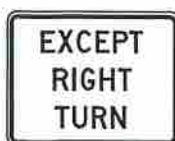
R1-3P



R1-2



R1-2aP



R1-10P

Section 2B.08 YIELD Sign (R1-2)**Standard:**

- 01 The YIELD (R1-2) sign (see Figure 2B-1) shall be a downward-pointing equilateral triangle with a wide red border and the legend YIELD in red on a white background.

Support:

- 02 The YIELD sign assigns right-of-way to traffic on certain approaches to an intersection. Vehicles controlled by a YIELD sign need to slow down to a speed that is reasonable for the existing conditions or stop when necessary to avoid interfering with conflicting traffic.

Section 2B.09 YIELD Sign Applications**Option:**

- 01 YIELD signs may be installed:
- A. On the approaches to a through street or highway where conditions are such that a full stop is not always required.
 - B. At the second crossroad of a divided highway, where the median width at the intersection is 30 feet or greater. In this case, a STOP or YIELD sign may be installed at the entrance to the first roadway of a divided highway, and a YIELD sign may be installed at the entrance to the second roadway.
 - C. For a channelized turn lane that is separated from the adjacent travel lanes by an island, even if the adjacent lanes at the intersection are controlled by a highway traffic control signal or by a STOP sign.
 - D. At an intersection where a special problem exists and where engineering judgment indicates the problem to be susceptible to correction by the use of the YIELD sign.
 - E. Facing the entering roadway for a merge-type movement if engineering judgment indicates that control is needed because acceleration geometry and/or sight distance is not adequate for merging traffic operation.

Standard:

- 02 A YIELD (R1-2) sign shall be used to assign right-of-way at the entrance to a roundabout. YIELD signs at roundabouts shall be used to control the approach roadways and shall not be used to control the circulatory roadway.
- 03 Other than for all of the approaches to a roundabout, YIELD signs shall not be placed on all of the approaches to an intersection.

Section 2B.10 STOP Sign or YIELD Sign Placement**Standard:**

- 01 The STOP or YIELD sign shall be installed on the near side of the intersection on the right-hand side of the approach to which it applies. When the STOP or YIELD sign is installed at this required location and the sign visibility is restricted, a Stop Ahead sign (see Section 2C.36) shall be installed in advance of the STOP sign or a Yield Ahead sign (see Section 2C.36) shall be installed in advance of the YIELD sign.
- 02 The STOP or YIELD sign shall be located as close as practical to the intersection it regulates, while optimizing its visibility to the road user it is intended to regulate.
- 03 STOP signs and YIELD signs shall not be mounted on the same post.
- 04 No items other than inventory stickers, sign installation dates, and bar codes shall be affixed to the fronts of STOP or YIELD signs, and the placement of these items shall be in the border of the sign.
- 05 No items other than official traffic control signs, inventory stickers, sign installation dates, anti-vandalism stickers, and bar codes shall be mounted on the backs of STOP or YIELD signs.
- 06 No items other than retroreflective strips (see Section 2A.21) or official traffic control signs shall be mounted on the fronts or backs of STOP or YIELD signs supports.

Guidance:

- 07 STOP or YIELD signs should not be placed farther than 50 feet from the edge of the pavement of the intersected roadway (see Drawing F in Figure 2A-3).
- 08 A sign that is mounted back-to-back with a STOP or YIELD sign should stay within the edges of the STOP or YIELD sign. If necessary, the size of the STOP or YIELD sign should be increased so that any other sign installed back-to-back with a STOP or YIELD sign remains within the edges of the STOP or YIELD sign.

Option:

- 09 Where drivers proceeding straight ahead must yield to traffic approaching from the opposite direction, such as at a one-lane bridge, a TO ONCOMING TRAFFIC (R1-2aP) plaque may be mounted below the YIELD sign.

Traffic Control Devices Pooled Fund Study

Comprehension and Legibility of Selected Symbol Signs
Phase III

Final Report

June 2012

Prepared by:
Bryan Katz
Erin Dagnall
Mary Anne Bertola

Science Applications International Corporation

INTRODUCTION

Traffic signs provide an important communication tool that is used to convey regulatory, warning, and guidance information to road users. The process of understanding user requirements for new signs is particularly important for symbol signs, which rely on a common non-verbal interpretation by a large and diverse population of drivers.

The Traffic Control Devices Pooled Fund Study (TCD PFS) focuses on a systematic evaluation of novel traffic control devices (TCDs), employing a process that addresses human factors and operations issues for each TCD idea. As part of the TCD PFS effort, the Federal Highway Administration (FHWA) Human Factors Team will evaluate proposed new traffic signs in order to ensure that the signs are effective when taking driver comprehension and legibility requirements into consideration.

The *Manual on Uniform Traffic Control Devices* (MUTCD) is the national standard for traffic control devices.¹ As traffic signs are designed and improved, the Human Factors Team will provide feedback to the MUTCD Team on driver-related characteristics that are observed with the proposed signs.

BACKGROUND

The FHWA produces the MUTCD as a manual which provides standards related to the design and operation of traffic control devices. It contains the basic principles that govern the selection, design, installation, operation and maintenance of traffic control devices. According to the MUTCD, traffic control devices “notify road users of regulations and provide warning and guidance needed for the safe, uniform, and efficient operation of all elements of the traffic stream”.¹ The MUTCD also states that for a traffic control device to be effective it should:

1. Fulfill a need;
2. Command attention;
3. Convey a clear, simple meaning;
4. Command respect from road users; and
5. Give adequate time for proper response.

The comprehension, conspicuity, and legibility properties of highway signs are essential in order for the final four requirements to be met. A device cannot command attention if it is not conspicuous. Additionally, a device cannot convey a clear and simple meaning if the device is not comprehended. If a device is not understood, then the sign will not command respect from road users. If any of the three major driver-related properties are inadequate, then the traffic control device will not be designed to provide an adequate time for a proper response. Providing adequate time for a proper response is critical because without proper response time, drivers will not be able to perceive problems and react to them in an adequate amount of time to maneuver their vehicles, which may ultimately lead to crashes.

The MUTCD also gives guidance for the design of traffic control devices. The MUTCD states in section 1A.03:¹

“Devices should be designed so that size, shape, and color, composition, lighting or retroreflection, and contrast are combined to draw attention to the devices; that size, shape, color, and simplicity of the message combine to produce a clear meaning; that legibility and size combine with placement to permit adequate time for response; and that uniformity, size, legibility, and reasonableness of the message combine to command respect.”

Regarding symbols signs, the MUTCD states the following in Section 2A.12:1

“Symbol designs shall in all cases be unmistakably similar to those shown in this Manual and in the “Standard Highway Signs and Markings” book... New symbol designs are adopted by the Federal Highway Administration based on research evaluations to determine road user comprehension, sign conspicuity, and sign legibility.”

From this language, it is apparent that new sign symbols can be introduced only after being evaluated through research and formal adoption in the MUTCD by the FHWA. Although it is not difficult to design a sign that “seems” to be effective, it is important for transportation engineers to recognize that the driver might perceive the sign to mean something completely different, and may not act in the manner that is intended by the engineer. Therefore, it is essential to research the driver-related issues that exist when new traffic signs are introduced to the roadway environment, which is the focus of the effort presented in this report.

By pooling resources and expertise, rather than performing several independent research studies across the country, the TCD PFS provides local and state agencies faster responses to their needs and new technologies using effective assessment skills and tools which enable consistent TCD idea identification and evaluation. The TCD PFS efforts address TCD issues identified by local and state jurisdictions, industry, and organizations and aid in the compliance to the MUTCD rule-making process and incorporation of novel TCDs into the MUTCD.

The TCD PFS members have selected various sign concepts to include as Phase III of a study to evaluate the effectiveness of concepts for new symbol signs. The current document describes this study effort.

LITERATURE REVIEW

There have been various research studies on the effectiveness of traffic signs, including evaluations of comprehension, legibility, and driver response.

Dewar and Ells identified a need for assessing methods for evaluating signs and other TCDs because there is little to suggest which currently employed methods provide the best information.² They identified several factors that should be evaluated: meaning, attention value, legibility, processing time, learnability, and influence on driver behavior. In a later paper on

symbol signing, Dewar described six criteria as being important in the evaluation and design of symbol signs including understandability, legibility distance, conspicuity, learnability, glance legibility, and reaction time.³

Evaluations of Understandability

Understandability, hereafter referred to as *comprehension*, has been measured a number of different ways by different researchers. Alicandri and Wochinger asked research participants to write their interpretation of the sign meanings and indicate what action they would take if the signs were seen on the roadway.⁴ Katz et al. used a similar procedure except that multiple-choice questions were asked following participants' initial interpretation of sign meanings.^{5,6} The multiple-choice test was used to examine whether participants made problematic inferences about different signs (e.g., whether an animal presence sign with a flashing beacon turned off meant that no deer were present).⁵ Katz et al. also had participants speak their interpretations of the road signs aloud while they were transcribed by researchers.⁶ Speaking aloud may allow participants to provide more natural and complete responses rather than being constrained by the time it takes to write and possibly leaving out important details. In all cases, images of the signs were used without a background or roadway scene.

Picha et al. showed participants a picture of the sign in-context where the roadway background was included in the picture.⁷ Next to this picture, a close-up view of the device was provided along with multiple-choice questions about each sign. In their evaluation of driver comprehension of combined lane-use and destination signing, Golembiewski et al. showed participants images of the signs on basic roadway backgrounds so that each sign assembly was viewed mounted above a 3-lane road.⁸ Because the signs provided directional and lane assignment information, backgrounds were necessary in order to provide the basic contextual information required to evaluate comprehension of the sign messages. Each sign was displayed for 3 seconds before participants were asked which lane(s) they could use to get to their target destination.

Evaluations of the Influence on driver behavior

Dewar and Ells indicated that “before-and-after” studies are one of the most frequently used methods for evaluating signs; however, they also pointed out that there are several problems with this method.² They suggest that three possible methods of evaluating signs include a field study under normal driving conditions, a modified field study using scaled down signs, and a laboratory experiment to determine reaction time. Reaction time was taken to be the amount of time between the onset of the stimulus and the activation of a voice-operated instrument that was triggered when the correct meaning of the sign was spoken. The three techniques were compared and it was determined that the overall trends and relationships were similar; however, the actual distances obtained in the simulator were less than those observed in the field.² The concept of “optimal index” is also described by Dewar and Ells and is stated as “*the degree to which [a sign] conveys the intended message to a driver operating a vehicle in an actual driving situation.*”²

Laboratory Evaluations

Desrosiers performed field and laboratory investigations to determine the effectiveness of traffic signs.⁹ The author stated that laboratory studies eliminate problems dealing with environmental variables (weather, light, and traffic conditions), reduce the time required to gather data, and provide researchers with additional control over the experiment. Stimuli were presented using 16 mm color motion pictures. It was concluded that laboratory tests can replace field tests but to obtain the same legibility distances observed in the field, a correction factor must be applied to distances obtained in the laboratory.⁹

Zwahlen et al. (1991) suggested several factors that contribute to the underestimation of legibility distances by laboratory studies. These include insufficient display resolution, insufficient luminance and contrast representation, no change in depth, small image vibrations, and non-uniform and less sharp symbol or legend contours.¹⁰

Sign research for both comprehension as well as recognition distances have been performed at Turner Fairbank Highway Research Center (TFHRC) in the past as shown in Philips et al.¹¹, Alicandri and Wochinger⁴, and Mahach et al.¹² The Philips et al. study dealt solely with the use of the Sign Simulator (SignSim) Laboratory for determining comprehension and recognition distances. It was determined that relative recognition distances could be found in the simulator but actual recognition distances could not be obtained without further validation. Thus it was concluded that signs could be compared against each other for relative recognition; however the actual recognition distances could not be calculated.¹¹

The Mahach et al. study hoped to test the significance of the differences in recognition distance between the SignSim Laboratory and the natural environment by using actual scaled signs in TFHRC's Photometric and Visibility Laboratory (PVL).¹² The study pointed out that the effect of the light on signs in a natural environment differs from the SignSim because in the SignSim, the light is diffused as a sign approaches. The study indicated significant differences between the recognition distances obtained in the SignSim and recognition differences obtained in the PVL for nearly all signs which were tested.

Summary

Previous research employs both open-ended and multiple choice responses to obtain information about driver comprehension. Signs have been successfully evaluated both with no background where it is not required and with basic roadway backgrounds where it is necessary that signs be viewed in-context. This study will incorporate similar methods in order to determine if participants understand the general meaning of the signs and to determine whether or not they understand certain specific characteristics of the signs.

The research indicates that TFHRC's SignSim Laboratory will provide acceptable data for relative recognition distances; however, scale factors may be required to provide actual recognition distances. A field study would be required to effectively relate the lab results to field results. For comparing alternatives, the SignSim Laboratory is expected to provide the information required.

RESEARCH GOALS

The FHWA Human Factors Team conducted Phase III of the International Symbol Signs study to develop and evaluate proposed alternatives for new traffic signs. The goals of this study were as follows:

- Evaluate driver comprehension of selected signs.
- Measure the legibility distance of selected signs.
- Provide recommendations on signs that merit consideration for addition to the MUTCD.

The TCD PFS panel selected the following sign messages for symbol development and evaluation:

- Alternate Merge
- Bike Symbol
- Grade Crossing (Crossbuck)
- Pedestrian Crossing
- Toll Collection Symbols
- Truck Rollover with Advisory Speed Limit
- Trucks in Roundabouts
- Walk Bikes
- Weave Symbol

RESEARCH APPROACH

The research approach consisted of four major elements: gathering information to develop alternatives, evaluating the understanding of selected alternatives, evaluating legibility of the alternatives, and developing recommendations on use. The specific activities were the following:

- Information gathering to see what various state and international agencies are using to convey the target sign messages.
- Identify candidate text and symbol signs based on current practice and through literature review.
- Develop alternatives selected to be researched.
- Perform a laboratory study to evaluate comprehension of the sign alternatives.
- Determine the legibility distance of the sign alternatives.
- Draft recommendations regarding the implementation of the signs that were evaluated.

SIGN CATEGORIES

Examples of various domestic and international symbol signs were gathered and studied prior to the development of symbol sign designs for this study. The following describes each sign category, the intended purpose of the sign, and background information on potential sign alternatives within each category.

Alternate Merge

While there are some variations that have been evaluated or put to use, the MUTCD (2009) does not currently include a symbol sign to indicate “Alternate Merge”, which is suggested to be used in a situation where two lanes merge into one, without the right-of-way assigned to either lane.

Two proposed symbol signs were evaluated, as well as text signs in order to determine if a symbol would be effective in conveying this message or if a word legend as the primary sign would better serve this purpose.

Bicycle Symbol

The MUTCD (2009) includes a bicycle symbol (W11-1) which may be used to alert road users to locations where expected entries to the road by bicyclists might occur. Supplemental plaques with legends such as “AHEAD”, “NEXT XX MILES” or “SHARE THE ROAD” may be added to provide additional information for notifying road users about the regulations and warnings regarding bicyclists.¹

The research team evaluated the current bike symbol and various proposed bike symbols to determine what the most effective symbol is for notifying road users about regulations and warnings about bicyclists. The team sought to determine if showing a bike and rider will improve comprehension and legibility.

Grade Crossing (Crossbuck)

The Grade Crossing (R15-1) sign in the MUTCD (2009), commonly referred to as the Crossbuck sign, is used on each approach to every highway-rail grade crossing.¹ The research team evaluated the current MUTCD sign, a Canadian Crossbuck sign, and an alternative that combines the two versions.

Pedestrian Crossing

The MUTCD (2009) states that Yield Here to Pedestrians and Stop Here for Pedestrians (R1-5 series) regulatory signs are placed in advance of a marked crosswalk to indicate the point where drivers must yield or stop for a pedestrian in a crosswalk. A Pedestrian Crossing (W11-2) sign may be used in conjunction with a diagonal downward pointing arrow (W16-7P) plaque and post-mounted at the crosswalk location where an R1-5 series sign is used on the approach.¹ In-Street Pedestrian Crossing (R1-6 series) regulatory signs may also be used to remind drivers of the right-of-way, and are placed at the crosswalk location on the center line, a lane line, or on a median island.¹

The research team examined each sign alternative as a stand-alone sign, post-mounted and at the crosswalk location in order to address the following questions:

1. Do drivers understand the meaning of the W11-2+W16-7P assembly and what action they are supposed to take?

2. Does a regulatory sign stating a rule of the road significantly enhance driver understanding of what he is supposed to do when a pedestrian occupies the crosswalk?

Toll Collection Symbols

The MUTCD (2009) includes toll collections symbols such as Toll Collector (M4-17), Exact Change (M4-18) or an example Electronic Toll Collection symbol (as shown in M4-20). These symbols are used as guide sign panels that accompany word messages to indicate payment methods allowed at different toll plaza lanes.¹ Various states use similar methods for toll collection signing, however many of the symbols used differ from those in the MUTCD.

An evaluation of the MUTCD symbols, as well as proposed alternatives, is needed to determine if they can be considered for future independent use without word legends. The team evaluated various symbols to indicate toll collection methods (automatic and attended lanes) without the use of text, and also sought to establish standardized symbols that may be employed throughout the country.

Truck Rollover with Advisory Speed Limit

The MUTCD (2009) includes a Truck Rollover Warning (W1-13) sign that may be used to warn drivers of vehicles with a high center of gravity of a turn, curve, or other type of roadway alignment change which might contribute to a loss of control and rollover. This sign is accompanied by an Advisory Speed (W13-1P) plaque.¹ The MUTCD also states that the Hairpin Curve (W1-11) sign may be used to warn drivers when a curve has a change in horizontal alignment of 135 degrees or more.

The research team investigated how drivers interpret the Truck Rollover Warning and Advisory Speed plaque (W1-13 and W13-1P) sign combination. More specifically, do operators of vehicles which are *not* susceptible to load shifts and tip over also interpret the sign and advisory speed as conveying an alignment change and know to react accordingly? In addition, the W1-13 sign uses a generic 135-degree sweep arrow, as opposed to the hairpin arrow. Therefore, the research team will investigate how drivers interpret each arrow type to determine if the 135-degree sweep arrow can be applied generically at tipping hazard locations.

Trucks in Roundabouts

A sign that indicates to drivers that trucks may use multiple lanes in a roundabout is needed, i.e. that trucks may encroach into lanes other than their own as then enter, proceed through and exit the roundabout. There are currently no signs that meet this need in the MUTCD (2009). The research team identified various options for testing that are either in use by some states currently, or that have been proposed for use pending testing of the signs.

Walk Bikes

There is need for a sign that indicates to bicyclists that they are entering an area where they should dismount their bike and walk it through that area. There are currently no signs for this in

the MUTCD (2009). The research team evaluated proposed signs to determine comprehension of such a sign from the perspective of a bicyclist.

Weave Symbol

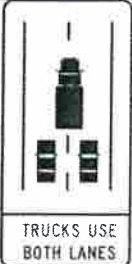
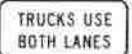
There is currently no symbol sign to accurately warn motorists of a situation where entering and exiting traffic must merge in a short added lane. Therefore, the research team evaluated various proposed symbol signs to depict this message.

SIGN ALTERNATIVES

Table 1 shows the final sign alternatives that were selected for evaluation in each sign category.

Table 1: Sign Alternatives Selected for Evaluation

Sign Category	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
Alternate Merge					
Bike Symbol				None	None
Grade Crossing (Crossbuck)				None	None
Pedestrian Crossing					
Toll Collection Symbols					None

Truck Rollover with Advisory Speed Limit					None
Trucks in Roundabouts					None
Walk Bikes			None	None	None
Weave Symbol (Diverge)					None

METHOD

RESEARCH DESIGN

The research was conducted at the Turner Fairbank Highway Research Center in the Highway Sign Laboratory (Sign Lab). Participants sat approximately 5 feet from a 60" LCD display. Signs were evaluated for comprehension and legibility. The software used for legibility testing is designed to gradually increase the size of the sign, emulating how that sign would appear when driving toward the sign at a specified speed. Sign size, driving speed and start distance were all manipulated to make the representation as accurate as possible. The size of the sign when it becomes legible was then translated into distance. Both the software used for comprehension and for legibility electronically collected the required data and saved output data files for analysis.

Comprehension

The first portion of the study evaluated driver comprehension of each sign alternative in the different sign categories. This was a three stage process in which participants provided open-ended responses, multiple choice responses and subjective rankings of the signs. The open-ended and multiple choice sections were between subjects factors, in which participants saw only one sign alternative from each sign category. Participants were shown one sign at a time, and the sign

remained on the screen for as long as they needed to provide their response. Signs were shown on a basic roadway background, in order to provide roadway context for each particular sign category. In the ranking section, participants were shown all sign alternatives for a given category and then ranked each sign on how well each alternative would work to show the intended meaning of the sign. Participants completed all three comprehension sections for a given sign category before moving on to the next category; i.e., they completed open-ended, multiple choice and rankings for the “Alternate Merge” sign category before moving on to the “Bike Symbol” sign category.

Open-Ended

When a sign first appeared on the screen, participants were asked “What does this sign mean to you?” They responded aloud with what they thought the sign meant, or what message they thought it was trying to convey. A researcher transcribed their responses.

They were then asked follow-up questions such as “Would this sign change your behavior?”, “What action should you take?” or “Where would you expect to see a sign like this?” The follow up questions varied depending on the type of sign and which questions were most applicable in order to further clarify their understanding or to inquire about a different aspect of the sign.

Multiple Choice

Upon completion of the open-ended questions, participants were asked to choose among three or four definitions (only one of which was correct that *best* described the meaning of the sign.

Ranking

Before the ranking section, participants were shown all sign options for the current sign category (e.g. if they had just seen the “Form One Lane” text sign option for the open-ended and multiple choice sections, they would now be shown all five sign alternatives in the Alternate Merge sign category, shown in Table 2. Participants were told the intended meaning of the sign, given time to look over all of the sign alternatives, and were asked to rank each alternative on how well it would work to illustrate the intended meaning. Participants ranked the signs on a scale from 1-7, where 1 represented “would not work at all”, 4 represented “might work” and 7 represented “would work very well”. They were told to rank each sign individually rather than order them; i.e., two signs could have the same ranking, they should not order them from best to worst and vice versa. Participant rankings were not analyzed and did not influence sign recommendations; rankings were used as supplemental subjective information only.

Legibility

The researcher then tested each sign for legibility distance – the maximum distance at which the participant can read text or decipher the elements of the sign. For the legibility distance evaluation, participants viewed each sign alternative of all sign categories, totaling 34 test signs. Distracter signs were also included to minimize guesses by participants. The distracter signs included: Stop, Yield, Fire Station, Slower Traffic Keep Right, No U-turn, Deer Crossing,

Intersection, Hospital, Road Work, Airport, and Dead End. All signs were presented in a different random order to each participant, with the exception of “Stop” “Yield” and “No U-Turn” which were always be presented first as practice signs.

For the test, each sign was shown one at a time and on a black background. The sign presentation began at a simulated distance of 1000 feet (304.8 meters). The sign expanded in size to simulate an approach speed of 30 mi/h. Participants were instructed to keep their eyes on the sign, and to press a button on the table in front of them as soon as the sign became legible (i.e. as soon as they could make out the elements of the sign). When the button was pressed, the sign disappeared and the distance was recorded. The participant then described the sign aloud. If the participant was correct, the researcher began a new trial with a different sign. If they were incorrect, the same sign reappeared and continued to increase in size so the participant had another opportunity to press the button when the sign truly became legible.

Correctness was deemed anything that confirmed that the sign was legible to the participant. If the sign size reached the full screen without a correct response, the trial was terminated and the next trial began.

PARTICIPANTS

One hundred and three participants were recruited from the Washington DC metropolitan area, and were obtained through the Human Factors Team research participant database. Participants were at least 18 years of age, possessed a valid U.S. driver’s license, and passed a visual acuity test with a minimum of 20/40 binocular vision, corrected if necessary. Prior to the start of the experiment, participants were asked to read and sign the Informed Consent form. Participants were paid \$30 for their time.

RESULTS

ALTERNATE MERGE

One hundred and three participants each viewed one of the five Alternate Merge sign alternatives.

Comprehension

The participant answers to the open-ended questions were characterized as providing two responses: (A) Participant understood that two lanes were merging into one; and (B) Participant indicated that drivers should alternate the merge. Results from a Fisher’s Exact Test indicated that comprehension levels for Response A varied significantly by sign alternative ($p < 0.0001$). Statistical analysis was not performed for Response B, as some participants may not have provided this information, i.e. Response B simply indicates the participants who provided additional information; there is no way of knowing whether other participants understood this concept and just chose not to specify. Comprehension results are shown in Table 2.

Table 19. Walk Bikes Signs Evaluated in Study

Alternative 1	Alternative 2
	

Summary Findings for Walk Bikes

Comprehension was significantly higher for alternative 1 (89%) than for alternative 2 (62%), though all participants responded correctly to the multiple choice question. Participant rankings indicated a preference with alternative 1 (7.74) over alternative 2 (5.96).

Recommendations for Walk Bikes

The comprehension results indicate that bicyclists may misinterpret the meaning of the sign without the text, therefore alternative 1 is recommended for use.

WEAVE

Four alternatives were evaluated for Weave signs, shown in Table 19.

Table 19. Weave Signs Evaluated in Study

Alternative 1	Alternative 2	Alternative 3	Alternative 4
			

Summary Findings for Weave

While the differences were not statistically significant, alternative 2 had higher comprehension than alternatives 1, 3 and 4, with 79%, 61%, 43% and 65%, respectively. Alternative 2 also performed the best on the multiple choice response, with 95% correct responses, over the 48%, 43% and 35% for alternatives 1, 3 and 4. Rankings were relatively low for all sign alternatives. Legibility distances varied significantly by alternative, with 506.73, 440.67, 490.80 and 473.71 for alternatives 1, 2, 3 and 4, respectively.

Recommendations for Weave

Alternative 2 is recommended for use.

Table 10. Comprehension Results for Walk Bikes Signs

Walk Bikes Sign Alternatives	Alt 1	Alt 2
		
<u>Open-Ended Response</u>		
Understood	88.64%	61.54%
<u>Multiple Choice Response</u>		
Do not ride your bicycle without a helmet	-	-
Bicycle parking area	-	-
No bikes allowed past this point	-	-
Dismount your bicycle and walk it through this area	100%	100%
<u>Ranking</u>		
1 – Would Not Work at All	-	6.10%
2	1.22%	4.88%
3	-	2.44%
4 – Might Work	2.44%	31.71%
5	2.44%	15.85%
6	19.51%	18.29%
7 – Would Work Very Well	73.71%	19.51%

All participants were correct for the multiple choice question. When asked to rank the signs on how well they would work to show the intended meaning, participants gave a mean ranking of 7.74 for alternative 1 and 5.96 for alternative 2.

Legibility

Legibility distances were not examined for the Walk Bikes sign alternatives since these signs were viewed from the perspective of a bicyclist.

WEAVE

Eighty three participants each viewed one of the four Weave sign alternatives.

Comprehension

For the open-ended responses, participants were considered correct if they understood that merging traffic (entering the roadway) and diverging traffic (exiting the roadway) were going to cross paths. A Fisher's Exact Test indicated that comprehension did not vary significantly by sign alternative ($p = 0.1382$). Comprehension results are shown in Table 11.

Table 11. Comprehension Results for Weave Signs

Weave Sign Alternatives	Alt 1	Alt 2	Alt 3	Alt 4
				
Open-Ended Response				
Understood	60.87%	78.95%	42.86%	65%
Multiple Choice Response				
1. Traffic entering and exiting the highway must merge in a short added lane	52.17%	94.74%	57.14%	65%
2. Highway splits ahead and will go in two different directions	47.83%	5.26%	42.86%	35%
3. You will approach a roundabout when you exit	-	-	-	-
4. New traffic pattern ahead due to construction	-	-	-	-
Ranking				
1 – Would Not Work at All	45.12%	19.51%	34.15%	31.71%
2	12.2%	10.98%	15.85%	19.51%
3	4.88%	8.54%	15.85%	10.98%
4 – Might Work	24.39%	30.49%	14.63%	18.29%
5	6.1%	10.98%	9.76%	13.41%
6	7.32%	14.63%	7.32%	4.88%
7 – Would Work Very Well	-	4.88%	2.44%	1.22%

For the multiple choice question, participants performed the best on alternative 2, with nearly 100% correctness. When asked to rank each sign on how well it would work to show the intended meaning, participants gave alternatives 1, 2, 3 and 4 mean rankings of 2.56, 3.66, 2.82 and 2.82, respectively.

Legibility

Sixty two participants viewed each of the Weave sign alternatives. Results from a Mauchly's sphericity test indicated that the variances of the differences between the legibility distances of the sign alternatives were not equal ($\chi^2(5) = 17.25$, $p = 0.004$) so adjusted univariate statistics were used. A Repeated Measures ANOVA indicated that legibility distances differed significantly by sign alternative ($F(3,183) = 16.11$, $p < 0.001$). Mean legibility distances for each sign alternative and corresponding 95% confidence limits about the means are displayed in Figure 6. Multiple comparisons were performed using Tukey's Studentized Range test. Sign 1 had the highest mean legibility distance (506.73 ft), which was significantly different from the mean legibility distance for Sign 2 (440.67 ft) and Sign 4 (473.71 ft). The mean legibility distance for Sign 3 (490.80 ft) and Sign 4 differed significantly from the mean legibility distance for Sign 2.

BURLINGTON DEPARTMENT OF PUBLIC WORKS COMMISSION MEETING
DRAFT MINUTES, JUNE 17, 2015
53 Lavalley Lane (Main Wastewater Treatment Plant)
(DVD of meeting may be on file at DPW)

COMMISSIONERS PRESENT: Bob Alberry, Tiki Archambeau (via cell phone), Jim Barr, Asa Hopkins, Solveig Overby, Jeffrey Padgett and Tom Simon

Commissioner Hopkins called the meeting to order at 6:35 p.m.

ITEM 1 – AGENDA

(Refer to Packet)

Item 9 (Truck Loading Zone Request at 258 No Winooski Ave) was stricken from the Agenda, postponed to the July meeting. **Commissioner Barr moved** to accept the Agenda as amended; Commissioner Padgett seconded. Unanimous.

ITEM 2 – PUBLIC FORUM

Caryn Long: 1) Dissatisfied with lack of parking enforcement in the vicinity of the Henry St Market (vehicles often not using the loading zone and short-term metered parking spaces); has taken several pictures. Ms. Long has spoken with the business owner and called the police department for enforcement. 2) Concerned about lost green space, its contribution to stormwater problems, and the lack of enforcement for non-compliant properties, particularly in Ward 1. Ms. Long has sent pictures of such instances to Director Spencer.

ITEM 3 – PEARL ST CORRIDOR STUDY PREFERRED ALTERNATIVE

(Refer to Packet)

(Communication, Nicole Losch, Transportation Planner)

Ms. Losch's presentation will be on the DPW Web page. The inexpensive, easy-to-administer streetscape improvements to the section of Pearl St between Battery and Saint Paul Sts (e.g., paint/stripping and planters), are in keeping with *Complete Streets* standards, supporting all modes of transportation. Next steps: Finalizing the plans and working up a budget, with all work hopefully completed by next year. Emily Boedecker, Executive Director of LocalMotion, expressed support and gratitude for the project, and encouraged the Commission to accept the use of planters as a physical separation between vehicles and bicyclists. She informed the Commission of the use of stenciling using green paint as a standard visual cue for bicyclists when coming upon congested areas.

ITEM 4 – TOUR OF MAIN WASTEWATER TREATMENT PLANT

(Presentation, Steve Roy, P.E., Project Engineer)

The meeting was paused to allow attendees to participate in a tour of the facility, led by Project Engineer Steve Roy. The meeting resumed at 7:50 p.m.

ITEM 5 – INTEGRATED PLANNING PRESENTATION

(Oral Presentation, Megan Moir, Stormwater Administrator)

Ms. Moir gave a presentation on Integrated Water Quality Planning: Municipal Stormwater and Wastewater. Integrated stormwater/wastewater planning is a mechanism that the Environmental Protection Agency (EPA) has been promoting which allows communities with numerous Clean Water Act obligations to:

- 1) Examine all of the obligations as a whole;
- 2) Identify the community's relative priorities for addressing human health and water quality improvements...and

- 3) Address the priorities through appropriate sequencing and scheduling of work based on implementing the projects with the highest cost benefit...first.

Burlington's grant application for technical assistance, put together by Ms. Moir, was one of five selected for funding out of 28 proposals submitted from communities across the U.S. The EPA is providing Burlington with \$67,000 worth of an EPA contractor's (Tetra Tech) services to support the proposed scope of work.

Opportunities for input include Neighborhood Planning Assembly (NPA) meetings, a public input survey and a stakeholders meeting.

Ms. Moir will try to get a Webinar on public access television/Channel 17.

For more information, click on the following link: www.burlingtonvt.gov/DPW/Stormwater/IMSWP

Commissioner Simon requested a list of all problems caused by stormwater.

ITEM 6 – UPCOMING GARAGE CAPITAL WORK & BORROWING

(Communication, Patrick Buteau, Assistant Director)

(Refer to Packet)

Commissioner Hopkins deferred this Item until later in the meeting.

ITEM 7 – 3-WAY STOP REQUEST AT SHORE RD & BALSAM ST

(Communication, Damian Roy, Engineering Technician)

(Refer to Packet)

Staff recommends that the Commission deny Mr. Fraser's request to install 3-way Stop Control at the intersection of Shore Rd and Balsam St. **Commissioner Alberry moved** to accept staff's recommendation; Commissioner Barr seconded. Unanimous.

This is the second request, the first of which came to DPW in 2003. The conclusion now is the same as in 2003. Commissioner Hopkins encouraged staff to ask more questions about the *reason* behind a specific requested solution to a citizen's request to get to the core issue.

ITEM 8 – INTERSECTION SIGHT DISTANCES AT PEARL ST & GREENE ST

(Communication, Damian Roy, Engineering Technician)

(Refer to Packet)

Staff recommends that the Commission adopt the removal of on-street parking by one space to the east and west, on the north side of Pearl St, to increase the sight distances for vehicles entering Pearl St from Greene St. The addition of a STOP sign had been discussed by Assistant Director Baldwin and Mr. Roy. **Commissioner Overby moved** to accept staff's recommendation, *including the addition of a STOP sign*; Commissioner Simon seconded. Unanimous.

Commissioners Archambeau and Hopkins asked Mr. Roy to provide the Commission with a total number of spaces lost and gained in the past year as a result of ordinance changes (such as this site distance issue).

NOTE: The Commission requested that this particular challenging intersection be noted during the Pearl St Corridor Study.

ITEM 9 – TRUCK LOADING ZONE REQUEST AT 258 NO WINOOSKI AVE

(Communication, Damian Roy, Engineering Technician)

DEFERRED UNTIL THE JULY MEETING.

ITEM 6 – UPCOMING GARAGE CAPITAL WORK & BORROWING

(Communication, Patrick Buteau, Assistant Director)

(Refer to Packet)

The 2016 Traffic Budget was passed by the City Council. Assistant Director Buteau outlined the information in the packet, noting that the highlighted scheduled improvements/repairs have been moved up from their original order. The Commission is being asked for approval with a recommendation to the City Council to borrow the Phase I funds amounting to \$3,435,831. The proposed 2016 Traffic Budget

proposal includes the debt service payments for this borrowing and enhanced garage maintenance funds while providing a balanced budget.

Commissioner Alberry moved to approve with a recommendation to City Council to borrow the Phase I funds in the amount of \$3,435,831; Commissioner Barr seconded. Unanimous.

Note: The funds will be paid back from the traffic and garages revenue.

ITEM 10 – APPROVAL OF FY’16 KEY INITIATIVES & METRICS

(Communication, Chapin Spencer, Director)

(Refer to Packet)

The FY’16 budget was built to deliver on these initiatives. For #11, department-wide customer service, it was noted that some requests for service by nature take longer to implement (e.g., traffic calming requests) than other service requests (e.g., potholes).

The Commission is being asked to approve and endorse the Draft FY’16 Key Initiatives. **Commissioner Barr moved** to accept the Initiatives as written; Commissioner Padgett seconded. Unanimous.

Commissioner Padgett recognized that this is a dynamic document.

ITEM 11 – MINUTES OF 5/20/15

(Refer to Packet)

Director Spencer recommended one correction: Item 11, Director’s Report, 1st bullet: Clean Sweep produced 570 (instead of 57) cubic yards of debris.

Commissioner Barr moved to accept the Minutes as amended; Commissioner Alberry seconded. Unanimous.

ITEM 12 – RECOGNITION OF SERVICE – ASA HOPKINS

Director Spencer and Commissioner Padgett expressed gratitude for Commissioner Hopkins’ leadership, and presented him with a plaque with the following wording: “In grateful appreciation of Asa Hopkins for his dedicated service as Public Works Commissioner from 2012 – 2014 and Commission Chair from 2014 – 2015.”

ITEM 13 – DIRECTOR’S REPORT

(Refer to Packet)

- The City Council passed the FY’16 budget last Monday. The proposed increases in capital funding for the General Fund which the Commission reviewed at the last meeting were included in the Budget *as funding was available*; the \$2.3 million gap was reduced to \$1.2 million, with new funding being secured, so additional sidewalk and bike path work, will get done in addition to the \$18 million worth of projects also reviewed at the last meeting. The rate adjustments and increases for the Water Division were also approved, which will provide sufficient, sustainable capital for improvements.
- Parking Studies: A large portion of the July Commission meeting will be dedicated to the parking studies. Draft reports will be provided in the Commission Packets.
- Cliff Street sidewalk: Under construction.
- Flynn Avenue sidewalk: Underway next month.
- New Engineer has been hired: Martin Lee. The Plangineering group is now fully staffed. The FY ’16 budget includes funding for additional staff for pushing downtown TIF projects forward, as well as enhanced street and sidewalk work.
- DPW will be presenting the 1st Phase of staff reorganization, to the Board of Finance this coming Monday and then to the City Council the following Monday. Oversight of Equipment Maintenance will be transferred from one Assistant Director (Patrick Buteau) to another (Rob Green). This will enable Assistant Director Buteau’s replacement (Mr. Buteau is retiring) to

focus more time on parking changes. The 2nd Phase proposals will be brought before the Commission at a later date.

ITEM 14 – COMMISSIONER COMMUNICATIONS

Commissioner Barr

- Per discussion by Ward 1 attendees, requesting an adjustment in the evening and morning automated flashing of some of the traffic lights: The attendees are asking that this request be considered City-wide.
- See “Residential Parking Program” handout distributed by Commissioner Barr: Many residents are requesting that Commissioner Barr recuse himself from participation in the Residential Parking Study because of his employment with the University of Vermont (Director of Transportation and Parking). The handout explains Commissioner Barr’s presence on the Commission as a Burlingtonian and commissioner (*not* as a UVM employee), and hopefully dispels some of the misinformation some of the residents have about possible benefits to UVM by his participation. Commissioner Barr has not yet decided whether he will recuse himself. Commissioner Simon suggested that the City Attorney be consulted on a possible conflict.

Commissioner Overby

- Would like to see regular reports on the Request for Service (RFS) program used by DPW, indicating open/closed/time-consuming projects, which might assist her when approached by residents about the length of time a request is taking. Assistant Director Baldwin would be glad to provide regular reports for the Commission; however, he cautions that the basic report would lead to questions about the work needed that the commissioners may not be able to explain to their constituents. Commissioner Overby feels that a basic report by category will give people an idea of the magnitude of requests that come through DPW.

Commissioner Simon

- Regarding Caryn Long’s parking concerns Henry Street Market area: Is there anything the Commission can do? Assistant Director Baldwin and former Engineer Joel Fleming had met with the neighborhood and came up with the solution of adding a little more parking in that vicinity by shortening the prohibited sections and adding bump-outs, more 15-minute parking spaces, etc. Unfortunately, due to a lapse between Mr. Fleming’s departure and Damian Roy’s hire, the project is only beginning next week.

ITEM 15 – ADJOURNMENT & NEXT MEETING DATE – JULY 15, 2015

Commissioner Barr moved to adjourn the meeting at 9:30 p.m.; Commissioner Alberry seconded. Unanimous.

Non-Discrimination

The City of Burlington will not tolerate unlawful harassment or discrimination on the basis of political or religious affiliation, race, color, national origin, place of birth, ancestry, age, sex, sexual orientation, gender identity, marital status, veteran status, disability, HIV positive status or genetic information. The City is also committed to providing proper access to services, facilities, and employment opportunities. For accessibility information or alternative formats, please contact Human Resources Department at 865-7145.



**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

645 Pine Street, Suite A
Burlington, VT 05401
802.863.9094 VOICE
802.863.0466 FAX
802.863.0450 TTY
www.burlingtonvt.gov/dpw

To: DPW Commissioners
Fr: Chapin Spencer, Director
Re: **Director's Report**
Date: July 9, 2015

THANK YOU PAT BUTEAU!

After more than three decades of dedicated service to the City, it is hard to imagine the wheels of BTV city government rolling without Pat Buteau. He started as an office manager for the Street Department in 1982 before there was a Department of Public Works. Pat will be retiring July 17. While I try not to panic about losing his financial expertise, creative problem solving and institutional knowledge, Pat's retirement will no doubt be a huge loss for the City. On the other hand, it should be a great benefit to his golf game and I expect to see him on the pro circuit soon. Please join staff in celebrating Pat at his retirement party next Friday:

Friday, July 10th, 3:15pm to 6:30pm

St. Johns Club

9 Central Avenue, Burlington

If you can't make it, feel free to send him a thank you email pbuteau@burlingtonvt.gov.

PLAN BTV WALK/BIKE IS UNDERWAY:

Plan BTV Walk Bike is a public planning process will culminate with the creation of the City's first Bicycle and Pedestrian Master Plan, as well as a scoping study of bicycle and pedestrian improvements that have been recommended in local municipal plans. The kick off was held on Wednesday, July 8th. There is a public workshop on Thursday July 9th from 6:30 to 8:30 at 144 Church Street if any Commissioners would like to join in. More information can be found at: <http://www.planbtvwalkbike.org/>

FY'15 YEAR END

FY'15 just ended on June 30th. Over the next couple of months we will be finalizing the financial reports. We are projecting to meet or beat our budgeted net for our main budgets: Water, Wastewater, Traffic and General Fund. Retail sales for water and wastewater were down a bit this year, but expenses were managed accordingly.

FY'16 PAVING WORK UNDERWAY:

The streets in the FY'16 street paving program can be found on our homepage: <http://www.burlingtonvt.gov/DPW/>

AUGUST COMMISSION MEETING?

Please come to the meeting with your summer schedule so we can discuss whether to have an August meeting – and when. The parking studies will likely require significant Commission attention over the next couple of months. The third Wednesday in August would be August 19th.

**BURLINGTON DEPARTMENT OF PUBLIC WORKS COMMISSION MEETING
DRAFT MINUTES, July 15, 2015
645 Pine Street
(DVD of meeting may be on file at DPW)**

COMMISSIONERS PRESENT: Bob Alberry, Tiki Archambeau, Jim Barr, Chris Gillmann, Tom Simon, Solveig Overby, Jeff Padgett

ITEM 1 - AGENDA

Commissioner Archambeau proposed to move Item 4.4 to 4.6.
Consent agency reviewed. Motion to accept consent agenda.
Unanimously approved.

ITEM 2 - ELECT CHAIR, VICE CHAIR AND CLERK

Commissioner Alberry made a motion to elect Commissioner Jeff Padgett as Chair and Commissioner Tiki Archambeau as Vice Chair. Director Spencer stated that he would like to appoint Valerie Ducharme and Holly Lane as Clerks o designate. Commissioner Barr seconded.
Unanimous approval

Commissioner Padgett welcomed new Commissioner Chris Gillman on board.

ITEM 3 - PUBLIC FORUM

Nic Anderson - 4.10 Champlain College Temporary bus stop - made a request that one of the five unrestricted parking spots be designated handicap spot as this is mid-block which will give people easier access to the courtyard and surrounding buildings.

Commissioner Overby made a motion to pull this off the consent agenda.

Commissioner Alberry seconded.
Unanimous approval.

Phil Merrick - owner of August First Bakery stated that the brown meter on Main Street should be removed as people who work downtown are all parking there during the day as it is cheaper than the garage. Blue meter need to be put in place there as this area of Main Street has more shops now than when the brown meters were installed and shoppers need better access to businesses.

Caryn Long - The water department did an amazing job in the area as when it rained last night the green space is getting greener

and now disappearing. She feels that there has to be more enforcement on the green space. Commissioner Padgett stated that the green space is not our issue.

Chris Hadsel - Willard Street needs a flashing pedestrian light north of the rotary as people can't cross safely. This would be an interim solution until the rotary is fixed.
(See video for further information)

Laura Massel - Lives on Kingsland Terrace which is a residential only parking area. She suggested the city go to the different wards in the city and get the extent of the information from people on parking. People living in residential parking areas should not have to search for parking in the neighborhood.

ITEM 4 - CONSENT AGENDA

4.1 Champlain College Temporary bus stop moved to 4.7.
4.4 Relocation of three handicap accessible spaces on St. Paul Street for new CCTA transit center to 4.6.
4.2 - three way stop at Shore Road and Balsam Street
4.3 439 College Street shuttle stop request
4.5 Driveway encroachment/loading zone requests for North Winooski Avenue.

Commissioner Barr made motion to accept consent agenda.
Commissioner Alberry seconded.
Commissioner Archambeau stated he lives next door to requester and there is no conflict of interest per the City Attorney.
Unanimous approval.

ITEM 4.6 - RELOCATION OF THREE ACCESSIBLE SPACES ON ST. PAUL STREET FOR NEW CCTA TRANSIT STATION

Three representatives from the city, state and CCTA visited the Zampieri Building which is a disabled residence which serves the south side of St. Paul Street and there are two spaces on Cherry Street. We need to bump out the first meter and two accessible spaces are proposed near the ramp adjacent to spaces for the building. On the north side of Pearl Street to Papa John's the first space is available.
(See video for further information.)
Commissioner Archambeau expressed a concern with the rear loading handicap vehicles going in the street to access the closest ramp.

Mr. Baldwin stated they would keep it as close to the ramp as possible.

Commissioner Archambeau made a motion to pass this onto the Accessibility Committee.

Commissioner Simon seconded.

Unanimous approval.

ITEM 4.7 CHAMPLAIN COLLEGE TEMPORARY BUS STOP

Commissioner Overby asked to have a handicap spot moving the bus stop and putting in four unrestricted parking spaces and one handicap space.

Nic Anderson of Champlain Collee stated that the nearest spot was a block away. There is a huge demand for parking in the courtyard and we have two more request for them at the MIC parking lot.

(See video for more information)

Commissioner Archambeau made a motion to accept staff's recommendation.

Commissioner Barr seconded.

Unanimous approval.

ITEM 5 - RESIDENTIAL PARKING MANAGEMENT STUDY - Nicole Losch

Director Spencer stated that this is a draft plan for parking in residential areas. The review is because this has not been reviewed for several years. The concern is the guest passes.

Nicole Losch stated that we are using a universal way to best manage which we feel is using a data driven approach. We are looking at the financial needs of the city and looking to refine the program. We have a good size advisory committee and have held two public meetings, attended NPA meeting and have come to a previous Commission meeting for the introduction to this program and we will be back in September. We have compared parking with other cities about the same size as Burlington, collected data in three areas and found parking over utilized, need more meter in downtown area. The Hill section has the most restrictions and lowest density.

There was a question of conflict of interest with Commissioner Barr voting on the residential parking as he is in charge of parking for the University of Vermont. Gene Bergman, Assistant City Attorney, stated he reviewed the information and found

nothing that should prevent Commissioner Barr from voting on this policy.

Please review the video of the public comments on the residential parking issue as there were numerous people there for this issue. There is also a packet of information available to review on line.

ITEM 6 - DOWNTOWN PARKING REVIEW

Karen Devine stated that this a complex two year study and a plan that retains authority over policy and pay. This plan has to be presented to the city council. There are three goals with this plan:

- Active, engaged parking management
- A system to work together to meet goals
- Document standards of care and operation

DPW will manage the parking meters and the Burlington Business Association will manage the information.

Director Spencer stated that the Commission's approval is not needed but it will be presented to the City Council on August 10th.

ITEM 7 - VTRANS BICYCLE AND PEDESTRIAN PROGRAM GRANT CANDIDATES

The small projects are for sidewalk improvements that will increase access and/or safety of people choosing to walk or ride a bike.

Midblock crosswalk with pedestrian bump outs to cross safely from UVM Central campus to Trinity campus and UVM Medical Center. Will also allow pedestrians to access Centennial Field.

Commissioner Padgett stated he does not support mid-block crosswalks and feels there need to be a policy for this issue.

Please see the video for more information

ITEM 8 - INCREASING DRIVER AWARENESS OF YIELD CONDITION

Damien Roy stated this was referring to Shelburne Street at the Price Chopper where vehicles are exiting the shopping center to get onto Shelburne Street or I189. There is a lot of traffic congestion here especially during rush hour. Drivers are not

yielding exiting the shopping center. There are a few suggestions researched. The suggestion of DPW is to maintain the yield sign.

Commissioner Alberry made a motion for a new yield sign.
Commissioner Simon made motion to go with staff's recommendation.
Commissioner Barr seconded.
Commissioner Padgett opposed
Other commissioner unanimous approval.

Damien Roy also handed out other paperwork showing the open request for services for traffic issues he is dealing with and also parking issue requests.

ITEM 9 - MINUTES OF JUNE 17, 2015 MEETING

Commissioner Alberry made a motion to approve
Commissioner Simon seconded
Unanimous approval

ITEM 10 - DIRECTOR'S REPORT

Director Spencer wished to thank Pat Buteau for 33 years of service as he is retiring. Commissioners also thanked Pat.

ITEM 11 - ADJOURNMENT AND NEXT MEETING DATE

Commissioner Alberry states that we have always taken the month of August off to give staff a well-deserved rest. Next meeting will be September 16, 2015.

Commissioner Barr motioned for adjournment
Commissioner Archambeau seconded
Unanimous approval
Meeting ended 10:30 p.m.

BURLINGTON DEPARTMENT OF PUBLIC WORKS COMMISSION MEETING
DRAFT MINUTES, July 15, 2015
~~645 Pine Street~~585 Pine Street
(DVD of meeting may be on file at DPW)

COMMISSIONERS PRESENT: Bob Alberry, Tiki Archambeau, Jim Barr, Chris Gillmann, Tom Simon, Solveig Overby, Jeff Padgett

ITEM 1 - AGENDA

Commissioner Archambeau proposed to move Item 4.4 to 4.6.
Consent agenda reviewed. Motion to accept consent agenda.
Unanimously approved.

ITEM 2 - ELECT CHAIR, VICE ~~CHAIR~~ CHAIR AND CLERK

Commissioner Alberry made a motion to elect Commissioner Jeff Padgett as Chair and Commissioner Tiki Archambeau as Vice Chair.
Director Spencer ~~stated that he would like to~~suggested the Commission appoint Valerie Ducharme and Holly Lane as Clerks or designate.
Commissioner Barr seconded.
Unanimous approval

Commissioner Padgett welcomed new Commissioner Chris Gillman on board.

ITEM 3 - PUBLIC FORUM

Nic Anderson - 4.10 Champlain College Temporary bus stop - made a request that one of the five unrestricted parking spots be designated handicap spot as this is mid-block which will give people easier access to the courtyard and surrounding buildings.

Commissioner Overby made a motion to pull this off the consent agenda.
Commissioner Alberry seconded.
Unanimous approval.

Phil Merrick - owner of August First Bakery stated that the brown meters on Main Street should be removed as people who work downtown are all parking there during the day as it is cheaper than the garage. Blue meters need to be put in place there as this area of Main Street has more shops now than when the brown meters were installed and shoppers need better access to the businesses.

Caryn Long - The water department did an amazing job in the area as when it rained last night the green space is getting greener and now disappearing. She feels that there has to be more enforcement on the green space.

Commissioner Padgett stated that the green space is not our issue.

Chris Hadsel - Willard Street needs a flashing pedestrian light north of the rotary as people can't cross safely. This would be an interim solution until the rotary is fixed.
(See video for further information)

Laura Massel - Lives on Kingsland Terrace which is a residential only parking area. She suggested the city go to the different wards in the city and get the extent of the information from people on parking. People living in residential parking areas should not have to search for parking in the neighborhood.

ITEM 4 - CONSENT AGENDA

4.1 Champlain College Temporary bus stop moved to 4.7.

~~4.4 Relocation of three handicap accessible spaces on St. Paul Street for new CCTA transit center to 4.6.~~

4.2 - three way stop at Shore Road and Balsam Street

4.3 439 College Street shuttle stop request

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4.5 Driveway encroachment/loading zone requests for North Winooski Avenue.

Commissioner Barr made motion to accept consent agenda.

Commissioner Alberry seconded.

Commissioner Archambeau stated he lives next door to requestor and donated \$100 to a Bush & Babe's Kickstarter campaign. There is no conflict of interest per the City Attorney.

Unanimous approval.

ITEM 4.6 - RELOCATION OF THREE ACCESSIBLE SPACES ON ST. PAUL STREET FOR NEW CCTA TRANSIT STATION

Damien Roy stated that three representatives from the city, state and CCTA visited the Zampieri Building which is a disabled residence which serves the south side of St. Paul Street and there are two spaces on Cherry Street. We need to bump out the first meter and two accessible spaces are proposed near the ramp adjacent to spaces for the building. On the north side of Pearl

Street to Papa John's the first space is available. The commission asked staff review of PROWAG and other applicable standards before committing to a handicap space. Staff will review as part of a normal request process. Staff recommendation - without a handicap space was approved.

(See video for further information.)

Commissioner Archambeau expressed a concern with the rear loading handicap vehicles going in the street to access the closest ramp.

Mr. Baldwin stated they would keep it as close to the ramp as possible.

Commissioner Archambeau made a motion to pass this onto the Accessibility Committee.

Commissioner Simon seconded.

Unanimous approval.

ITEM 4.7 CHAMPLAIN COLLEGE TEMPORARY BUS STOP

Commissioner Overby asked to have a handicap spot moving the bus stop and putting in four unrestricted parking spaces and one handicap space.

Nic Anderson of Champlain Collee stated that the nearest spot was a block away. There is a huge demand for parking in the courtyard and we have two more requests for them at the MIC parking lot.

(See video for more information)

Commissioner Archambeau made a motion to accept staff's recommendation.

Commissioner Barr seconded.

Unanimous approval.

ITEM 5 - RESIDENTIAL PARKING MANAGEMENT STUDY - Nicole Losch

Director Spencer stated that this is a draft plan for parking in residential areas. The review is because this has not been reviewed for several years. The public has expressed concern ~~is with~~ the guest passes, paying of tickets, issuing of tickets and several other issues.

Nicole Losch stated that we are using a universal way to best manage which we feel is using a data driven approach. We are looking at many different city needs with financial only a small

part of the consideration. We have a good size advisory committee and have held two public meetings, attended NPA meetings and have come to a previous Commission meeting for the introduction to this program and we will be back in September. We have compared parking with other cities about the same size as Burlington, collected data in three areas and found parking over utilized, need more meters in downtown area. The Hill section has the most restrictions and lowest density.

There was a question of conflict of interest with Commissioner Barr voting on the residential parking as he is the Director of Transportation of parking for the University of Vermont. Gene Bergman, Assistant City Attorney, stated he reviewed the information and found nothing that should prevent Commissioner Barr from voting on this ~~policy study~~.

~~Many Citizens who had comments to make about on the draft Residential Parking study. The sign in sheet is attached.~~
g:

Please review the video of the public comments on the residential parking issue as there were numerous people there for this issue. There is also a packet of information available to review on--line.

ITEM 6 - DOWNTOWN PARKING REVIEW

Kelly Devine stated that this a complex two year study and a plan that retains authority over policy and pay. This plan has to be presented to the city council. There are three goals with this plan:

~~AActive, engaged parking managementmanagement~~ Vibrant
Downtown

~~Great Customer Service~~

~~A Sustainable System~~

~~A system to work together to meet goals~~

~~Document standards of care and operation~~

DPW will continue to manage the parking meters and and garages.
The Burlington Business Association will manage the communications and other functions during the pilot period. on a temporary basis.

Director Spencer stated that the Commission's approval is not needed--addressed by the Council's November 2013 resolution but

it will be presented to the City Council on August 10th and brought back to the council for a vote later this year.

ITEM 7 - VTRANS BICYCLE AND PEDESTRIAN PROGRAM GRANT CANDIDATES

~~The small projects are for sidewalk improvements that will increase access and/or safety of people choosing to walk or ride a bike.~~

~~Midblock crosswalk with pedestrian bump outs to cross safely from UVM Central campus to Trinity campus and UVM Medical Center. Will also allow pedestrians to access Centennial Field.~~ Staff summarized the projects that they are advancing for the upcoming Vermont Bicycle & Pedestrian Program grant round. They include a scoping study of possible improvements for the Howard/St. Paul and Winooski intersection and pedestrian improvements along Colchester Avenue.

The application requires a public forum before submitting the application. The agenda items serves as that public forum.

Commissioner Padgett stated he does not support mid-block crosswalks and feels there need to be a policy for this issue.

Please see the video for more information

ITEM 8 - INCREASING DRIVER AWARENESS OF YIELD CONDITION

Damien Roy stated this was referring to Shelburne Street at the Price Chopper where vehicles are exiting the shopping center to get onto Shelburne Street or I189. There is a lot of traffic congestion here especially during rush hour. Drivers are not yielding exiting the shopping center. There are a few suggestions researched. The suggestion of DPW is to maintain the yield sign.

Commissioner Simon made motion to go with staff's recommendation.

Commissioner Barr seconded.

Commissioner Padgett opposed

Other commissioner unanimous approval.

Damien Roy also handed out other paperwork showing the open request for services for traffic issues he is dealing with and also parking issue requests.

ITEM 9 - MINUTES OF JUNE 17, 2015 MEETING

Commissioner Alberry made a motion to approve
Commissioner Simon seconded
Unanimous approval

ITEM 10 - DIRECTOR'S REPORT

Director Spencer wished to thank Pat Buteau for 33 years of service as he is retiring. Commissioners also thanked Pat.

ITEM 11 - ADJOURNMENT AND NEXT MEETING DATE

Commissioner Alberry states that we have always taken the month of August off to give staff a well-deserved rest. Next meeting will be September 16, 2015.

Commissioner Barr motioned for adjournment
Commissioner Archambeau seconded
Unanimous approval
Meeting ended 10:30 p.m.

COMMISSION MEETING SIGN IN SHEET

Date: 7.15.15

PLEASE PRINT NAME

LIST ISSUE YOU ARE HERE FOR

NIC ANDERSON

CHAMPLAIN BUS STOP

Phil Merrick

Burlington Parking

Caryn Long

water/purity

Chris Hassel

rotary - crosswalks

Laura Marshall

Kingsland - Res P

Lisa Brighenti

23 Kingsland Terrace

Judy Bach

105 Robison apt

David Marshall

Kingsland Terr.

Michael Long

Henry Street

Richard Hilliard

C. Simpson

Summit Ridge

David Tenenbaum

Kingsland Terrace

Nathan Wildfire

**BURLINGTON DEPARTMENT OF PUBLIC WORKS COMMISSION MEETING
DRAFT MINUTES, July 15, 2015
645 Pine Street
(DVD of meeting may be on file at DPW)**

COMMISSIONERS PRESENT: Bob Alberry, Tiki Archambeau, Jim Barr, Chris Gillmann, Tom Simon, Solveig Overby, Jeff Padgett

ITEM 1 - CONSENT AGENDA

Commissioner Archambeau proposed to move Item 4.4 to 4.6.
Consent agenda reviewed. Jeff Padgett moved forward there was no formal motion, no formal vote.

ITEM 2 - ELECT CHAIR, VICE CHAIR AND CLERK

Commissioner Alberry made a motion to elect Commissioner Jeff Padgett as Chair and Commissioner Tiki Archambeau as Vice Chair. Director Spencer suggested the Commission appoint Valerie Ducharme and Holly Lane as Clerks or designate.
Commissioner Barr seconded
Unanimous approval

Commissioner Padgett welcomed new Commissioner Chris Gillman on board.

ITEM 3 - PUBLIC FORUM

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Commissioner Overby made a motion to pull this off the consent agenda.

Commissioner Alberry seconded.

Unanimous approval.

Phil Merrick - owner of August First Bakery stated that the brown meters on Main Street should be removed as people who work downtown are all parking there during the day as it is cheaper than the garage. Blue meters need to be put in place there as this area of Main Street has more shops now than when the brown meters were installed and shoppers need better access to the businesses.

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Commissioner Barr made motion to accept consent agenda.
Commissioner Alberry seconded.
Commissioner Archambeau stated he lives next door to requestor and donated \$100 to a Bush & Babe's Kickstarter campaign. There is no conflict of interest per the City Attorney.
Unanimous approval.

ITEM 4.6 - RELOCATION OF THREE ACCESSIBLE SPACES ON ST. PAUL STREET FOR NEW CCTA TRANSIT STATION

Damien Roy, Engineer Technician stated that three representatives from the city, state, and CCTA visited the Zampieri Building which is a disabled residence which serves the south side of St. Paul Street and there are two spaces on Cherry Street. We need to bump out the first meter and two accessible spaces are proposed near the ramp adjacent to the spaces for the building. On the north side of Pearl Street next to Papa John's the first space is available. The commission asked staff review of PROWAG and other applicable standards before committing to a handicap space. Staff will review as part of a normal request

process. Staff recommendation without a handicap space was approved.

(See video for further information.)

Commissioner Archambeau expressed a concern with the rear loading handicap vehicles going in the street to access the closest ramp.

Mr. Baldwin, City Engineer, stated they would keep it as close to the ramp as possible.

Commissioner Archambeau made a motion to pass this onto the Accessibility Committee.

Commissioner Simon seconded.

Unanimous approval

ITEM 4.7 CHAMPLAIN COLLEGE TEMPORARY BUS STOP

Commissioner Overby asked to have a handicap spot, moving the bus stop, and putting in four unrestricted parking spaces and one handicap space.

Nic Anderson of Champlain Collee stated that the nearest spot was a block away. There is a huge demand for parking in the courtyard and they have two more requests for them at the MIC parking lot.

(See video for more information)

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Unanimous approval.

ITEM 5 - RESIDENTIAL PARKING MANAGEMENT STUDY - Nicole Losch

Director Spencer stated that this is a draft plan for parking in residential areas. The review is because this has not been reviewed for several years. The public has expressed concern with the guest passes, paying of tickets, issuing of tickets and several other issues.

Nicole Losch, Transportation Planner stated that we are using a universal approach to best manage what we feel is using a data driven approach. We are looking at many different city needs with financials which is only a small part of the consideration. There is a good size advisory committee and we have held two public meetings, attended NPA meetings and have come to a previous Commission meetings for the introduction to this

program and we will be back in September. We have compared parking with other cities about the same size as Burlington, collected data in three areas and found parking over utilized, more meters are needed in the downtown area. The Hill section has the most restrictions and lowest density.

There was a question of conflict of interest with Commissioner Barr voting on the residential parking as he is the Director of Transportation and parking for the University of Vermont. Gene Bergman, Assistant City Attorney, stated he reviewed the information and found nothing that should prevent Commissioner Barr from voting on this study.

Many citizens had comments on the draft Residential Parking study. .

Please review the video of the public comments on the residential parking issue as there were numerous people there for this issue.

ITEM 6 - DOWNTOWN PARKING REVIEW

Kelly Devine stated that this a complex two year study and a plan that retains authority over policy and pay. This plan has to be presented to the city council. There are three goals with this plan: management Vibrant Downtown, great customer service, a sustainable system.

DPW will continue to manage the parking meters and garages. The Burlington Business Association will manage the communications and other functions during the pilot period.

Director Spencer stated that the Commission's approval is not addressed by the Council's November 2013 resolution but it will be presented to the City Council on August 10th and brought back to the council for a vote later this year.

ITEM 7 - VTRANS BICYCLE AND PEDESTRIAN PROGRAM GRANT CANDIDATES

Staff summarized the projects that they are advancing for the upcoming Vermont Bicycle & Pedestrian Program grant round. They include a scoping study of possible improvements for the Howard Street, St. Paul Street and Winooski Avenue intersection and pedestrian improvements along Colchester Avenue.

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ITEM 8 - INCREASING DRIVER AWARENESS OF YIELD CONDITION

Damien Roy, Engineer Technician, stated this was referring to Shelburne Street at Price Chopper where vehicles are exiting the shopping center to get onto Shelburne Street or I189. There is a lot of traffic congestion here especially during rush hour. Drivers are not yielding when exiting the shopping center. . The suggestion of DPW is to maintain the yield sign and to increase driver awareness of yield sign by installing the weave sign.

Commissioner Alberry suggested a new yield sign.

Commissioner Simon made motion to go with staff's recommendation.

Commissioner Barr seconded.

Commissioner Padgett opposed.

Commissioner Archambeau made a motion under Item #8 was to accept staff's recommendation with exception that the Commission selected the double weave sign to be installed by Price Chopper exit onto Route 7.

Commissioner Padgett opposed this idea of the signs at the exit of Price Chopper. All other commissioners were in favor of putting the weave sign at the exit of Price Chopper onto Shelburne Road.

Approval of minutes were tabled for a future meeting.

Commissioner Padgett opposed.

Other commissioners were in favor of this.

Damien Roy also handed out paperwork showing the open request for services for traffic issues he is dealing with and also parking issue requests.

ITEM 9 - MINUTES OF JUNE 17, 2015 MEETING

Commissioner Alberry made a motion to approve

Commissioner Simon seconded

Unanimous approval

ITEM 10 - DIRECTOR'S REPORT

Director Spencer wished to thank Pat Buteau for 33 years of service as he is retiring. Commissioners also thanked Pat.

ITEM 11 - ADJOURNMENT AND NEXT MEETING DATE

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Commissioner Barr motioned for adjournment
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Unanimous approval
Meeting ended 10:30 p.m.