

Burlington Planning Commission

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*Andy Montroll, Chair
Bruce Baker, Vice-Chair
Yves Bradley
Alexander Friend
Michael Gaughan
Emily Lee
Julia Randall*

Burlington Planning Commission

Tuesday, May 9, 2023, 6:30 pm

Remote & Virtual Meeting via Zoom

In-Person Option Available:

Bushor Conference Room (Room 102), 1st Floor of City Hall, 149 Church St.

To Join the Meeting on a Computer

Link: <https://zoom.us/j/93943167252>

To Join the Meeting on a Phone

Number: +1 312 626 6799 **Meeting ID:** 939 4316 7252

AGENDA

I. Agenda

II. Public Forum *See details on pg. 2 of packet for participating remotely.*

III. Chair's Report

IV. Director's Report

V. 2023-2028 Joint Institutional Parking Management Plan (JIPMP)

Representatives from CATMA will return to continue discussion of the 2023-2028 Joint Institutional Parking Management Plan, produced for and in coordination with Champlain College, the University of Vermont, and UVM Medical Center. The cover letter for this item is in the agenda packet on page 3, with the full [Joint Institutional Parking Management Plan](#) and [Instititonal Supplement](#) available on the Planning Commission [website](#) and in the packet.

VI. Commissioner Items

- a. Committee Reports

VII. Minutes & Communications

- a. The minutes of the April 25 meeting are enclosed in the agenda packet on page 106.
- b. Communications are enclosed in the agenda packet.

VIII. Adjourn

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, crime victim 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 (802) 540-2505. Written comments on items may be directed to the Planning Commission at 149 Church Street, Burlington, VT 05401, or at mtuttle@burlingtonvt.gov

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City of Burlington, VT
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Phone: (802) 865-7144

www.burlingtonvt.gov/plan

Guidance for Participating in a Virtual Planning Commission Meeting

As social distancing measures to preserve public health and safety continue to be required to prevent the spread of COVID-19, or are recommended as a standard practice, the Office of City Planning will be supporting the Planning Commission to conduct their meetings online via Zoom. Here is information about how to join a virtual meeting, and what to expect while participating.

General Guidance for Public Participation

Please remember that in this digital meeting environment, meetings are open to the public and anyone may be watching or listening even if you cannot see them. Meetings will be recorded, and both the recording and chat content of the meeting will be maintained as a public record.

Please ensure your display photo and screen name are professional, such as using your first and last name. Please test your audio and video prior to the start of a meeting, and familiarize yourself with how to join a meeting by your chosen method. And finally, please be patient with us. Technology doesn't always work as planned, and we are all learning how to hold a successful virtual meeting!

How to Join a Virtual Meeting

Zoom allows participation via either computer or telephone. Each agenda for a meeting that will be conducted virtually will include details about how to join via either of these options, including a web address, phone number, Meeting ID, and password.

If you participate via computer, you have the option of seeing Commissioner videos and any presentation materials that may be shared. If you use either a standard phone or cell phone to call in, you will only hear the audio portion of the meeting. If you join via a smartphone, you may have the option to download the Zoom app, which will enable you to see and hear the meeting.

How to Participate in a Virtual Meeting

During meetings, only Planning Commission members and limited staff members will be viewed on video. Members of the public attending a meeting will be muted, except when invited to speak during public forum or a public hearing. Whether members of the public can speak at other times during the meeting is the discretion of the Chair.

If you want to speak during public forum, please take the following steps to assist us in making this process run as smoothly as possible:

- Email staff at cdillard@burlingtonvt.gov by 5pm on the day before a meeting to indicate your interest in speaking. You do not need to provide your comments. Staff will enable your microphone as your name is called from a list of interested speakers.
- During a meeting, you can use the "Raise Hand" feature, or indicate in a chat message that you wish to speak during public forum. Staff will enable your microphone as your name is called.
- If you are interested in submitting your comments in writing instead of speaking during the meeting, you may do so by 5pm the day before a meeting, they will be forwarded to the Commissioners ahead of the meeting.



April 19, 2023

Charles Dillard & Meagan Tuttle
Burlington Office of City Planning
City Hall, 3rd Floor
149 Church Street
Burlington, VT 05401

Re: 2023-2028 Joint Institutional Parking Management Plan

Dear Charles and Meagan:

Attached is the final 2023-2028 Joint Institutional Parking Management Plan (JIPMP), along with the Institutional Supplement, which CATMA is to present to the Burlington Planning Commission on April 25th, 2023. This is the first iteration of the JIPMP responding to the updated Comprehensive Development Ordinance (CDO). With the update to the CDO (adopted January 25th, 2023) came the elimination of minimum parking requirements. As such, the intent of this report is no longer to request a parking waiver from the City of Burlington, but rather to demonstrate the Institutions' ability to meet the goals as outlined in Section 8.3.1 of the CDO:

- a. Ensure that city streets in nearby neighborhoods are not unfairly burdened by parking demands from post-secondary educational or medical institutions; and,
- b. Recognize the unique ability of institutions to manage their own parking resources in a comprehensive and creative way.

In order to meet the requirements of the ordinance and satisfy the intent of Article 8, the JIPMP is organized into chapters summarizing parking management collectively for the "Hill" institutions and individually for each institution. The collective institutional chapter reviews the current parking management policy landscape, acknowledges the influence of the COVID pandemic on parking, observes travel behavior trends, addresses on street parking activity, reviews demand management strategies, highlights institutional climate initiatives, and demonstrates multimodal infrastructure connections that will influence transportation and access for the institutions. Each individual institutional chapter summarizes the existing and anticipated infrastructure, development plans, community populations, parking demand, fleet characteristics, parking and demand management strategies, and monitoring, compliance, and enforcement. These chapters collectively demonstrate the ability of the institutions to meet the demand for parking now and in the near term based on demand estimates derived from survey data and parking counts.

CATMA intends, in the 2024 annual update, to continue to track parking utilization on campus to demonstrate that parking supply continues to meet demand for the institutions.

Sincerely,

Sandy Thibault & Josh Katz, CATMA



Attachments:

- Joint Institutional Parking Management Plan 2023-2028
- Joint Institutional Parking Management Plan *Institutional Supplement*



CHAMPLAIN
COLLEGE



The University of Vermont

THE
University of Vermont
MEDICAL CENTER

Joint Institutional Parking Management Plan

2023-2028

Prepared For: Planning Commission

Date: April 25th, 2023

Acknowledgements

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University of Vermont Medical Center

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Executive Summary

The Joint Institutional Parking Management Plan (JIPMP) submitted demonstrates current and anticipated parking demand for Burlington’s “Hill” Institutions to meet the requirements set forth in Article 8 of the Comprehensive Development Ordinance. Comprised of Champlain College, University of Vermont (UVM), and University of Vermont Medical Center (UVMMC), the “Hill” Institutions’ parking supply and demand are summarized within this 2023-2028 JIPMP based on data gathered during the Fall of 2022. This assembled data informs the analysis that demonstrates that the existing parking supply meets current demand for each institution. In addition, anticipated development and growth on each campus informs the anticipated parking supply and demand out to 2028, with a 5-year projection that coincides with the anticipated approval interval of this document.

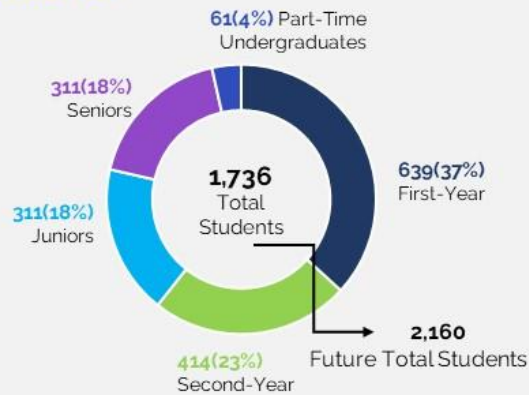
Each institution’s current and anticipated infrastructure, user populations, parking demand, fleet, and strategies to keep parking supply and demand in balance are summarized below as outlined in Article 8. These facts and figures are further detailed within the report and supplemental documentation.

CHAMPLAIN FACT SHEET



**CHAMPLAIN
COLLEGE**

STUDENTS



EMPLOYEES



CURRENT PEAK PARKING DEMAND

642

Total Parking
Supply

741

Estimated Demand
(based on Survey¹)

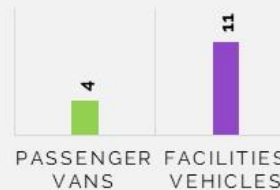
427

Utilization
(based on Counts)

833

ITE
Estimate²

FLEET VEHICLES



15 Fleet Vehicles

- All Fleet Vehicles parked in designated spaces

FUTURE DEVELOPMENT



39,000 gsf (approx.) will be added with future development projects and 30 residential beds

Future Projects

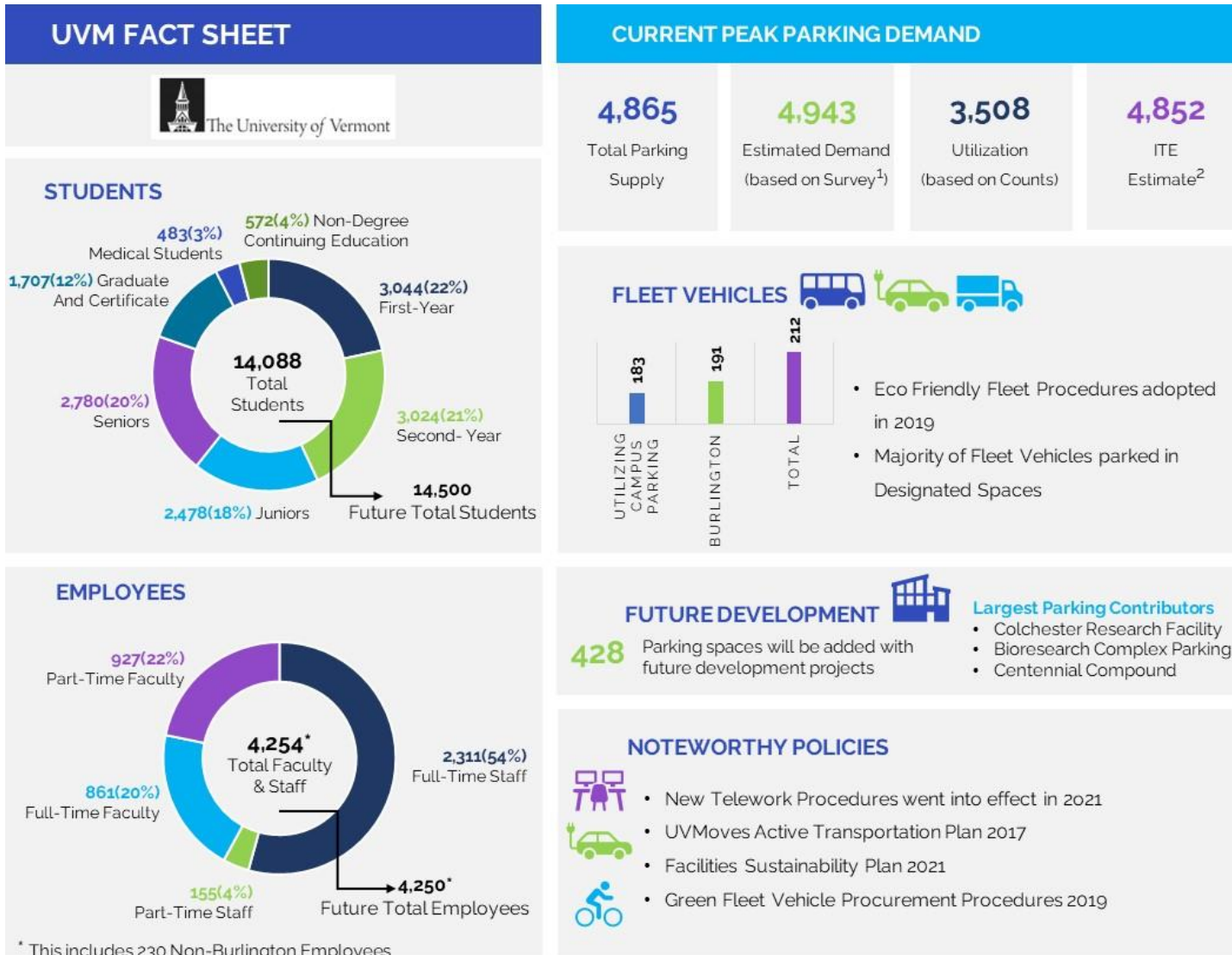
- Foster Hall Addition
- New ITS Building
- Conversion of Building to Residential Hall

NOTEWORTHY POLICIES

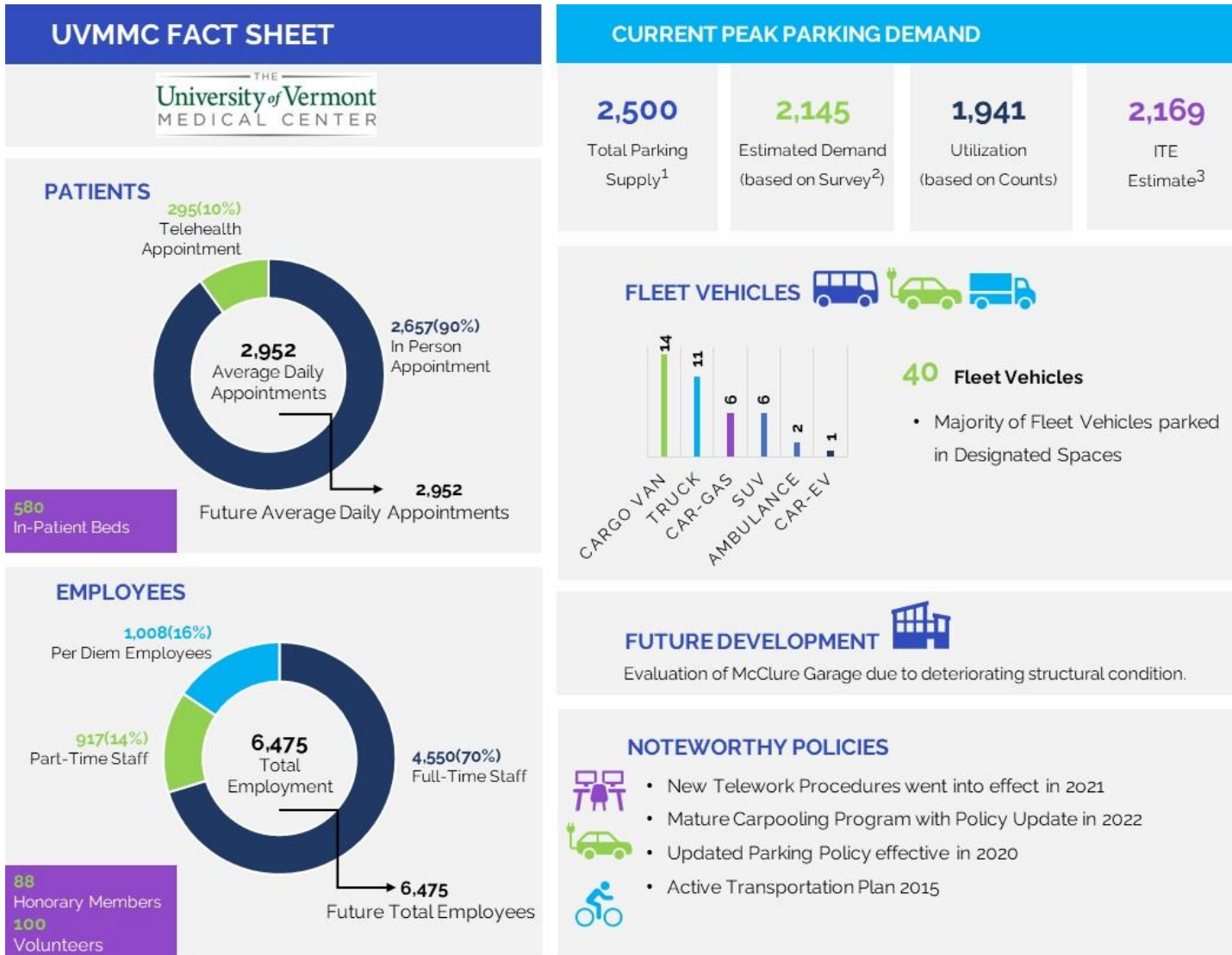


- New Interim Workplace Flexibility People Center effective in 2022
- Sustainability Action Plan completed in 2013
- Active Transportation Plans effective in 2015
- Parking Policies effective in 2017
- Sustain Champlain Campaign

1. Estimated parking demand based on survey of employees and students reporting predominantly driving alone or carpooling to serve their transportation to campus and typically on campus at peak time, thus likely overestimating actual peak parking demand.
2. Estimated parking generation based on the total campus population fitted to the curve for a sample of institutions from the Institute of Transportation Engineers *Parking Generation Manual 5th Edition*.



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2. Estimated parking generation based on the total campus population fitted to the curve for a sample of institutions from the Institute of Transportation Engineers *Parking Generation Manual 5th Edition*.



1. Total parking supply based on on-site parking spaces.
2. Estimated parking demand representing on-site parking based on survey of employees reporting predominantly driving alone or carpooling to serve their transportation to campus, typically on campus at peak time, and parking in on-site lots during peak times.
3. Estimated parking generation based on the number of in-patient beds sampled from the average trip rate for similar institutions from the Institute of Transportation Engineers *Parking Generation Manual 5th Edition*.

1

Introduction

The Joint Institutional Parking Management Plan (JIPMP) is submitted to the Planning Commission and Development Review Board to demonstrate current and anticipated parking demand for Burlington’s “Hill” Institutions to meet the requirements set forth in Article 8 of the Comprehensive Development Ordinance. Burlington’s “Hill” Institutions, comprised of Champlain College, University of Vermont (UVM), and University of Vermont Medical Center (UVMHC), are the founding members of the Chittenden Area Transportation Management Association (CATMA). CATMA has submitted Joint Institutional Parking Management Plan and annual updates to the City of Burlington on behalf of the “Hill” Institutions since 2009. This JIPMP may be approved by Burlington’s Planning Commission and Development Review Board (DRB) for a period of up to five years with annual updates reported to the City’s Office of City Planning and Department of Permitting & Inspections.

This introductory chapter summarizes the purpose and content of the JIPMP and provides a high-level overview of CATMA and their role in jointly supporting institutional transportation management.

Purpose & Content

The Joint Institutional Parking Management Plan advances the intent of PlanBTV by demonstrating the commitment of the Institutions to grow sustainably in support of the vision of Burlington as a *distinctive city*¹. Recognized for their contributions to the *unique economic identity* of the City as a center for education and healthcare, the Institutions serve a key role in advancing

¹ [Plan for Action](#) | [planBTV: Burlington's Comprehensive Plan \(arcgis.com\)](#)

the core principles of PlanBTV by planning for well-connected, human-scale environments that integrate new development with the existing campus character. More specifically, the 5-Year JIPMP and its annual updates are intended to:

- › Recognize the need to manage parking demand and resources holistically and creatively, employing transportation demand management (TDM) practices as well as supplying adequate parking facilities;
- › Recognize the efficiencies gained when several neighboring institutions share resources and collaboratively participate in parking and TDM programs; and,
- › Ensure that city streets in nearby neighborhoods are not unfairly burdened by parking demands from post-secondary education or medical institutions.

Based on the City of Burlington's Comprehensive Development Ordinance Article 8 Section 8.3.3², *an Institutional Parking Management Plan shall include the following:*

- (a) A narrative that outlines how the proposed parking management plan addresses the specific needs of existing and anticipated development and effectively satisfies the intent of this Article and the goals of the Municipal Development Plan.*
- (b) Information specifying the current and anticipated numbers over the ensuing 5 year period for: number of students of all academic programs (full-time, part-time, commuter, on-campus, off-campus, and continuing education), faculty and staff (full-time and part-time), patients and visitors being served by the institution.*
- (c) An analysis of the anticipated parking demand by user group, time of day and/or demand by use and parking provided to meet that demand currently and anticipated over the ensuing five-year period;*
- (d) Information specifying the number and composition of the institution's vehicle fleet, where these vehicles are regularly kept, and designated "service vehicle-only" parking;*
- (e) Strategies used to reduce or manage the demand for parking which may include but are not limited to:*
 - 1. Policies which restrict and/or prohibit the bringing of vehicles to the institution for various users or groups of users;*
 - 2. A telecommuting program;*
 - 3. Programs and employee and student subsidies to encourage the use of public transit, car-share, walking, and bicycling;*

² [Zoning Ordinance](#) | [City of Burlington, Vermont \(burlingtonvt.gov\)](#)

4. *Implementation of a shuttle service system serving off-site parking;*
 5. *Implementation of a parking permit system to allocate parking throughout the system; and,*
- (f) *Implementation of a monitoring, compliance and enforcement system to measure and ensure compliance with the plan.*

In order to convey the documented purpose, meet the requirements of the ordinance, and satisfy the intent of Article 8, the JIPMP is organized into chapters summarizing the parking management environment collectively for the institutions and individually for each institution. In an effort to streamline the content of this document, each institutional chapter contains the elements outlined in the ordinance above. The chapters are organized into existing and anticipated infrastructure and development (Section 8.3.3 (a)), existing and anticipated community population (Section 8.3.3 (b)), existing and anticipated parking demand (Section 8.3.3 (c)), fleet characteristics (Section 8.3.3 (d)), highlighted strategies (Section 8.3.3 (e)), and monitoring, compliance, and enforcement (Section 8.3.3 (f)). In addition, a *JIPMP Institutional Supplement* includes further detail but is not essential to the document.

CATMA

Originally established in 1992 by the “Hill” Institutions and expanded in 2015 to serve as a regional transportation management association, CATMA has served Chittenden County with transportation demand management services, incentives, and programs for over 30 years. CATMA’s mission is to work with members and community partners to plan and manage safe, convenient, and economical transportation and parking options with the aim of reducing environmental impacts and improving coordination of land use. More information on CATMA can be found at catmavt.org.

Transportation Management Associations (TMA)

TMAs are associations, organizations, or cooperatives that provide transportation services and education to businesses, property owners, residents, and employees in a defined geographic area, combining their efforts to expand transportation options and reduce program costs. They are not-for-profit collaborations of private and public sector entities working together towards common goals, such as congestion mitigation, transportation services and pollution reduction.

Transportation Demand Management (TDM)

The term *transportation demand management* means the use of strategies to inform and encourage travelers to maximize the efficiency of a transportation system, leading to improved mobility, reduced congestion, and lower vehicle emissions, including strategies that use planning, programs, policies, marketing, communications, incentives, pricing, data and technology."³

³ Association for Commuter Transportation. 2023, "What is TDM?" [What is TDM - Association for Commuter Transportation \(actweb.org\)](https://actweb.org/what-is-tdm/)

2

Collective Institutional Summary

Each of the institutions' parking supply and demand are summarized within based on data gathered during the Fall of 2022. This assembled data informs the analysis that demonstrates that the existing parking supply meets current demand for each institution. In addition, information regarding the anticipated development and growth on each campus informs the anticipated parking supply and demand out to 2028, a time horizon of approximately 5 years. The 5-year projections coincide with the anticipated approval interval of this document.

The intent of the JIPMP, and parking management planning more generally, is to demonstrate the policies and programs that enable utilization of parking resources more efficiently. For the institutions, this has and continues to entail many strategies employed collectively, through CATMA and agreements among the institutions, as well as individually, to best utilize resources given the transportation mobility and parking needs of each institution's population.

Peak Parking Demand

Two primary methods were used to estimate the current peak parking demand for each institution: count and survey data. The methods employed have been utilized previously and are referenced in the *2020-2022 JIPMP*⁴. As has been noted in previous

⁴ CATMA, *2020-2022 Joint Institutional Parking Management Plan*, Appendix A. https://catmavt.org/sites/default/files/uploads/2020-2022_jipmp.pdf

JIPMP documents, there are limitations to both methods of estimating parking demand, however, it is reasonable to assume that these two methodologies provide low and high estimates to represent the book ends of actual peak parking demand on each campus. It is noted that previous JIPMP documents had fewer counts to rely on, however, the representation of peak utilization via count data is considered reliable given the count programming that has been instituted.

Table 1 Current Institutional Parking Demand Summary

	Champlain College	UVM	UVM Medical Center
Current Conditions			
Potential Users¹	2,348	17,540	9,427
Peak Parking Demand Survey	741	4,943	2,145
Peak Parking Utilization Counts	427	3,508	1,941
Total Parking Supply	642	4,865	2,500
Net Spaces Peak Demand	-99	-78	355
Net Spaces Peak Utilization	215	1,357	559

1. Potential users include students and employees for Champlain College and UVM and employees and patients at UVMHC.

Consistent, quarterly lot counts provided a ground truth during limited time windows (i.e. three days during peak periods at four times throughout the year) to demonstrate the utilization of the institutionally controlled lots. Although these time windows are targeted to capture peak times, it is recognized that these count data may slightly underestimate the typical peak parking demand as they only represent a limited time frame and may not capture peak parking demand due to variability. The peak of the utilization counts was used to represent peak parking based on lot counts.

Survey data provide samples from which estimates of peak parking demand can be derived based on user groups, mode trends, and other reported travel behaviors. These data summarize reported, typical patterns for different user groups but may not capture the daily variability that lot counts

Table 2 Future Institutional Parking Demand Summary

	Champlain College	UVM	UVM Medical Center
Future Conditions			
Potential Users	2,990	17,820	9,427
Total Peak Parking Demand	992	4,988	2,145
Total Parking Supply	642	5,693	2,500
Net Spaces Peak Demand	-350	705	355

are able to, thus providing an overestimate of typical peak demand. In addition, these trends by user group can be applied to future cases providing a reasonable means for forecasting peak parking demand.

Collectively, the institution's parking supply meets parking demand based on the peak parking utilization according to count data and are within the margin of error for the peak parking demand estimates based on survey data. Future parking supply similarly meet the anticipated parking demand out to forecasted 2028 conditions. These results are summarized in Tables 1 and 2, and further detailed in each institution's chapter below. It is noted that both current and future peak demand are likely inflated estimates based on the survey data. This is discussed in further detail below.

Trends & Patterns

This section outlines the context that influences the parking environment for the institutions collectively, including policy changes, pandemic disruptions, and surveyed and observed transportation behaviors. These trends and patterns, and their implications, are discussed within.

Policy Shift

Updates to the Article 8 Ordinance were approved by City Council on January 9th, 2023. These updates codify the shift away from parking minimums while adopting parking maximums, expanded transportation demand management, and updated institutional parking management plan requirements. It is important to note that with the amended ordinance moving away from parking minimums, the need for waiver requests when supply does not meet the minimum have been eliminated. Historically, the institutions have maintained a parking supply that was below previously mandated minimums and utilized the parking management plan to request a waiver for this discrepancy by demonstrating the supplied parking meets current and anticipated demand and enumerating the many mechanisms by which the institutions actively seek to reduce demand for parking on each respective campus. Although the waiver is no longer necessary in this shift towards a new parking paradigm, the 5-year JIPMP and annual updates will continue to demonstrate the current and anticipated parking supply and demand for each institution as well the strategies employed to continue towards more efficient utilization of parking resources. This policy step towards the City's climate action goals is expected to be bolstered in the near term by an upcoming transportation options study, which will recommend the policy framework for a comprehensive, citywide transportation demand management plan.

The updated ordinance and recommitment to broader transportation demand management at the city scale represent a shift towards efficiency-based standards. In parking management, efficiency-based standards refer to provision of optimal parking

supply in an efficiently managed system⁵. These systems avoid the tendency to supply parking in excess while balancing appropriate pricing structures and recognizing the costs associated with oversupply. With efficiency-based standards, assessing “optimal” parking utilization based on 85th percentile occupancy has fallen out of favor. Instead, optimal parking utilization allows for spaces to fill to lot capacity on the condition that sufficient parking to serve demand is available elsewhere in close proximity and any potential spillover issues are addressed or managed. Recent parking policy reforms and their strategies are well documented in resources like the searchable case study database assembled by the Urban Land Institute containing parking policy innovations across a multitude of jurisdictions⁶.

COVID-19 Pandemic

A global pandemic significantly disrupted the typical operations of all three of these institutions when it arrived locally in March of 2020. There were many lessons learned in how each of these institutions continued to meet their mission while adapting to the situation as waves of increasing infections and different variants demanded a dynamic approach. During the height of the pandemic, this meant social distancing, masking, limiting in person gathering, and using technology to enable remote work, learning, and health appointments where feasible. The prevalence of hybrid virtual and in person environments to conduct work, enable learning, and deliver healthcare consultation during the pandemic have carried into the current landscape.

Telecommuting, telework, telelearning, and telehealth have all proven to be mainstays for the institutions at a baseline level. Each institution has its own policies around how this is enacted for employees, students, providers, and patients. Each institution also anticipates that with the ubiquity of these tools and protocols in place, this approach will continue to serve some portion of what might otherwise be demand for in person activities on each respective campus and thus demand for parking.

Survey Trends on Travel Behavior

CATMA administers a survey annually to track the longitudinal travel behavior trends of the membership that it serves. In Fall of 2022, the survey was administered to CATMA membership including the institutional partners. The survey revealed the drive alone rates for the institutional user groups, including employees, students within a half mile, and students greater than a half mile from campus. Year over year trends of the drive alone behavior of these groups are depicted in Figures 1, 2, and 3. Overall, drive alone rates have declined over the period of monitoring starting in 2000. It is noted that students within a short distance of their respective campus (i.e. less than a half mile) have the lowest drive alone rates. Within these distances, walking, biking, and campus transit modes meet the transportation demand effectively. Students with home locations outside of a half-mile radius of

⁵ Littman, T. (2022). *Parking Management: Strategies, Evaluation and Planning*. Victoria Transport Policy Institute (www.vtpi.org).

⁶ ULI. (2021). *Parking Policy Innovations in the United States*

campus drive alone to campus at higher rates than their close to campus counterparts, but below the rates of employees. Employees of each institution have similar drive alone rates, between 61% and 66%.

Similarly, the survey revealed the mode split for each institution. Accompanying the drive alone trends over time in Figures 1, 2, and 3 are the mode splits for the different user groups. Drive alone, carpool, and telework rates as the primary mode and alternative mode are depicted for each user group. At Champlain College, over 30% of employees telework as an alternative mode and 8% as a primary mode. At UVM, students carpool at a rate of about 30% as an alternative mode while employees carpool as an alternative mode at a rate 11% and telework as an alternative mode at a rate of 34%. At UVMHC, employees at the Medical Center Campus and 1 South Prospect Street carpool as an alternative mode at rates of about 10% and telework at rates of 8% and 18%, respectively. That does not account for the 12% of 1 South Prospect employees that telework as a primary mode.

Figure 1 Champlain College Drive Alone Trends & Mode Split

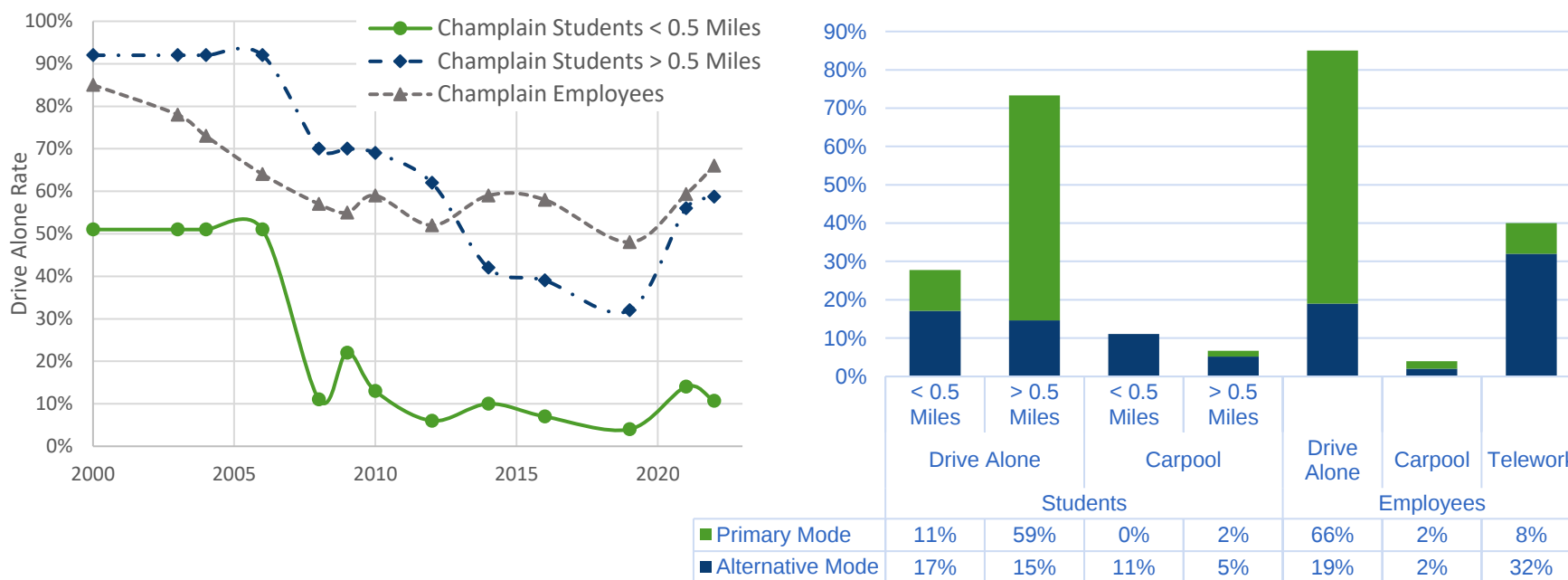


Figure 2 University of Vermont Drive Alone Trends & Mode Split

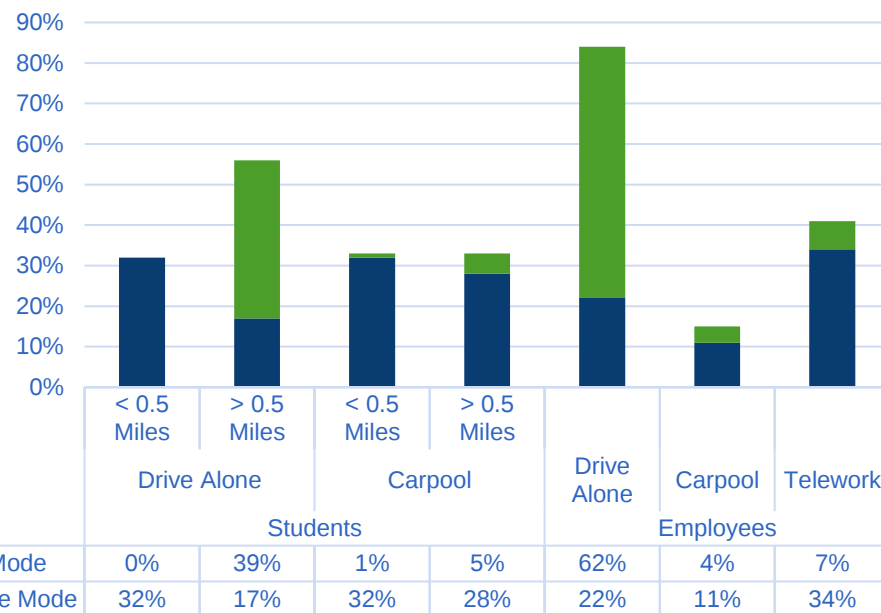
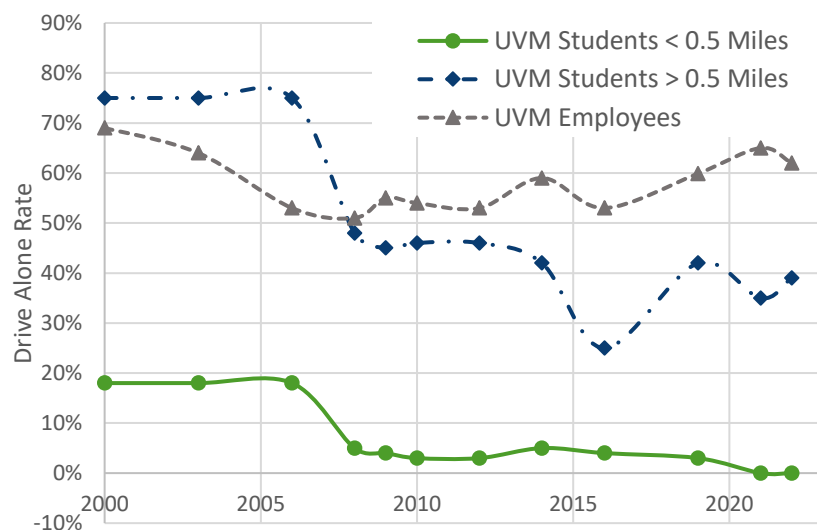
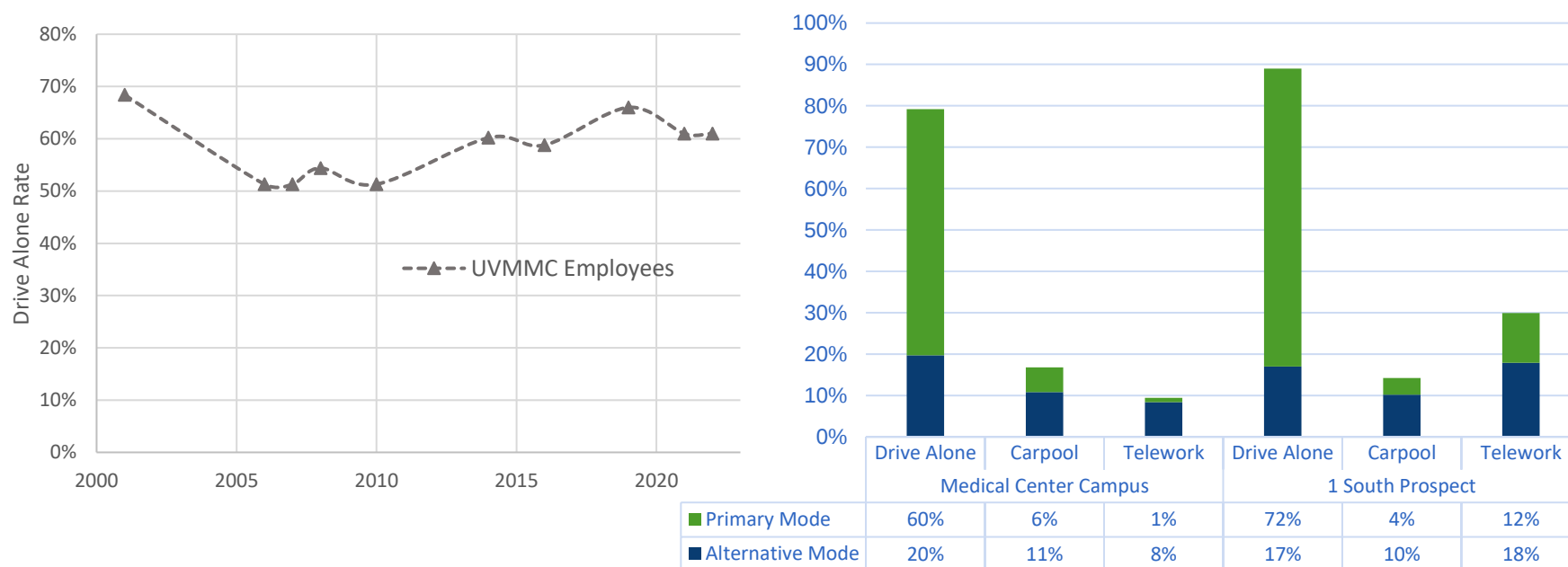


Figure 3 University of Vermont Medical Center Drive Alone Trends & Mode Split



On-Street Parking Adjacent to Institutions

There are some institutional affiliates who park on-street during peak time according to the survey administered to users in the Fall of 2022. Table 3 demonstrates the percent of students and/or employees that drive and are parking on-street during peak parking demand times. Additionally, the survey asks participants what streets they typically park on when they park on-street. Champlain College employee and student survey participants both indicated that they primarily park on South Willard Street, Maple Street, and Summit Street. UVM employee survey participants indicated that they park on Prospect Street and Williams Street. UVM student survey participants did not have a popular street that is utilized. UVMHC survey participants indicated that they park on Colchester Avenue, and the other two popular streets were North Prospect and South Prospect. These streets in proximity to the campus areas are generally unregulated, making them free and open to public parking.

To prevent institutional affiliates from parking on the city streets in residential areas, Champlain College made an agreement with the City of Burlington to allow a small number of locations where on-street parking was permitted for Champlain affiliates. It was agreed that all other streets on the “Hill” in Burlington are prohibited to affiliate parking. Champlain College has been increasing their parking enforcement to discourage the misuse of parking around campus. It should be noted that the three streets that are being frequently utilized by Champlain College employees and students are streets that fall within the campus. Parking on these segments is open to the public Monday through Friday 8:00 am to 4:00 pm and institution affiliates with a Zone 1 or MC parking permit are allowed to park in those spaces.

Table 3 On-Street Parking at Peak Time

	Champlain College	UVM	UVMCC
Students	5.6%	2.9%	N/A
Employees	11.6%	3.8%	1.1%

Collective Highlights & Strategies

This section outlines the collective institutional strategies that influence parking demand and transportation behavior more generally. Although the specific efficacy of a given strategy to offset demand for parking may not be known, these strategies collectively provide more viable transportation options to the populations accessing each campus. As demonstrated in the mode trends above, even if these options may not be used as primary means of accessing the campuses, they present feasible alternatives to driving and parking on site that can infrequently or frequently be used to offset parking demand, among other co-benefits. The individual institutional chapters delve further into the strategies on each campus regarding parking and demand management.

Transportation Demand Management

CATMA offers the member institutions a full menu of transportation demand management (TDM) programs to serve each community’s mobility needs and provide sustainable transportation options. These services and incentives are intended to expand use of alternative modes and have demonstrated participation by the membership in pursuit of reducing single occupancy vehicle use to access the institutional campuses. These programs, incentives, and services include:

- › Bike Share Discounts
- › Bike / Walk Rewards Program
- › Carpool and Vanpool Services
- › CarShare Vermont Campus Program

- › Commuter Champion Prize Drawings
- › Education, Awareness, and Outreach
- › Guaranteed Ride Home
- › Off-site Parking
- › Transit Discount Programs (i.e. Unlimited Access)

The TMA programming above represents just a portion of the collective opportunities for efficiently managed parking for the institutions. Other opportunities include shared parking, off-site parking, and shuttle services. For instance, UVM Medical Center leases parking from UVM to afford additional parking in close proximity to their campus. Off-site parking at 125 Lakeside Avenue affords just over 350 spaces of off-site parking for the institutions through CATMA contracting. UVMMC and Champlain College lease spaces to serve their users parking needs in the arrangement and provide shuttles to the off-site lot for their users. Each institution runs or contracts shuttle services to best meet the needs of their respective populations, however, employees across institutions can utilize other institutions shuttles as needed, provided there is capacity for the institution's employees to utilize the service. This sharing arrangement effectively increases shuttle service for all institutional partners.

Campus Shuttles and Transit

Green Mountain Transit (GMT) offers a multitude of options for local and regional transit service for Champlain, UVM, and UVMMC affiliates. Local and some regional routes are available with stops on or in close proximity to each campus, with additional connections to the Downtown Transit Center for transfers to a broader range of destinations. Local and regional GMT routes remain fare free through 2023 as part of the response to the COVID pandemic. Funding contributions from the institutions have continued as part of the Unlimited Access Program, in part enabling GMT to remain fare free for the general public. Should fares be implemented again in 2023, it is anticipated that Champlain and UVM will continue contributions to support their affiliates eligibility for free transit rides on any local or regional route with valid campus affiliation identification (i.e. the Unlimited Access Program) and UVMMC employees will be eligible for transit discounts. In general, ridership on GMT local routes have rebounded to near pre-pandemic levels and systemwide are down 18% compared to pre-pandemic averages.

Beyond the public transit system, each campus provides shuttle services to serve the campus and satellite facilities. These are detailed in each institution's section below.

Bike Share

In 2018 Greenride Bikeshare became Vermont's first public bike sharing system serving the greater Burlington area. There were over one hundred electric bikes in circulation across 30 hubs in Burlington, South Burlington, and Winooski through an expansion of the original system in 2021. These bikes could be accessed by a mobile app. Bolt, the e-bike vendor, ceased operations in July 2022 and the bikes were pulled from public use. Prior to their removal, there were many Greenride hub locations that helped to serve the micro-mobility needs of institutional affiliates including six located on UVM's campus, two on Champlain's campus, and one on the UVMMC campus. CATMA has issued a request for proposal (RFP) for a new bike share program which is anticipated to begin prior to Summer 2023. This bikeshare system will similarly provide another means of mobility for Champlain, UVM, and UVMMC affiliates with subsidized membership offerings.

CarShare

CarShare Vermont is a mission driven, local non-profit that aims to “provide an affordable, convenient, and reliable alternative to private car ownership.” The network of 22 vehicles shared by members are located at pods throughout Burlington and in neighboring South Burlington with future plans to add vehicles in Winooski. Affiliates of UVM and Champlain College are eligible to subscribe to CarShare through a subsidized Campus Plan. Of CarShare's current 1,155 members, approximately 20% are subscribed to the subsidized Campus Plan and do not have a permit to park on their respective campus⁷. This plan provides a generous discount on annual membership. There are additionally campus affiliates that have membership through alternate rate plans (e.g. free membership for income-eligible households). It is noted that campus affiliates use all 22 CarShare vehicles in service.

For campus affiliates, CarShare Vermont has contributed to limited vehicle ownership. According to CarShare Vermont's 2022 Member Survey, 78% of student members reported that they avoided bringing a vehicle to campus and were using CarShare Vermont instead. Of those faculty and staff members, 30% reported not owning a vehicle and joining CarShare Vermont instead of acquiring one and an additional 30% reported avoiding the addition of a second household vehicle. Twenty-five percent of faculty and staff reported shedding a vehicle because of CarShare Vermont and an additional 15% reported not replacing a vehicle that stopped working.

CarShare has also contributed to the reduction of driving and increase in alternate modes among campus affiliate membership. According to the survey, 56% of students reported driving less since joining CarShare Vermont and 48% reported walking and biking more. Student members, at a rate of 76%, reported combining errands into a single trip. It is estimated that for every

⁷ The membership numbers reflect data up to March 2023.

vehicle CarShare Vermont puts in service, 15 privately owned vehicles are removed⁸. This provides many communal benefits, including reduced demand for parking.

Climate Initiatives

Each institution has set out to tackle their environmental footprint and climate implications, particularly in regard to transportation and parking.

Sustain Champlain is the overarching campaign for Champlain College to integrate sustainability into the entire campus⁹. Sustain Champlain focuses on institution, operations, academics, and culture. Under their operations section they provide resources for transportation initiatives such as CATMA memberships, access to free rides on GMT buses, shower facilities for bicyclists, additionally locations to access bike parking, shuttle stops, and CarShare vehicles. In 2015, Champlain College revisited their Active Transportation Plan which sets out to reduce motorized vehicle use for Champlain affiliates, create an active transportation culture, decrease CO₂ emissions, and create safe, functional, and environmentally friendly transportation options for employees and students.

The University of Vermont has recently published their Facilities Sustainability Plan (FSP)¹⁰. This plan entails reducing the environmental footprint of all aspects of facilities management across the campus including transportation. The plan recognizes and builds upon the planning and programming foundation for limiting or reducing the climate implications of transportation including the Active Transportation Plan, Green Fleet Vehicle Procurement Procedures, Sustainable Transportation Module for parking pass acquisition, free on-campus and local bus transit, carpool matching, and electric vehicle charging infrastructure. Building on this foundation, the Facilities Sustainability Plan aims to enhance convenient, accessible, affordable, low-carbon transportation options, reduce single occupancy vehicles; increase use of alternatives and shared modes, and ensure that fleet vehicles are rightsized, shared, and alternatively fueled. The strategies that accompany these goals are further detailed in the UVM Chapter below. UVM has released a Comprehensive Sustainability Plan, integrating the goals identified in the FSP and including academics, research, and planning for the University¹¹.

UVMCMC is committed to reducing its carbon footprint and mitigating health issues caused by climate change¹². UVMCMC has received recognition from local and national organizations for limiting onsite parking, encouraging carpooling, and providing

⁸ See Appendix B: CarShare Vermont Parking Demand Impacts of the 2021 Joint Institutional Parking Management Plan Annual Update, [jipmp_2021_annual_update.pdf \(catmavt.org\)](#).

⁹ <https://www.champlain.edu/student-life/campus-and-community-programs/sustain-champlain>

¹⁰ University of Vermont, *Facilities Sustainability Plan 2021-2030*, https://www.uvm.edu/sites/default/files/Facilities-Management/pdf-docs/exec/Facilities_Sustainability_Plan_October_2021.pdf

¹¹ The Comprehensive Sustainability Plan was released on Earth Day 2023, [Comprehensive Sustainability Plan | The University of Vermont \(uvm.edu\)](#).

¹² [Climate Change Initiatives \(uvmhealth.org\)](#)

incentives for use of public transit. Additionally, UVMMC has partnerships with CATMA, Burlington 2030, and Vermont Climate Pledge Coalition. In 2017, their alternative transportation programs helped employees avoid 1,171,082 pounds of carbon. The Burlington 2030 initiative aims to reduce transportation emissions, energy use, and water consumption by 2030. Additionally, the Climate Pledge Coalition aims to uphold greenhouse gas emission reductions established by the Paris Climate Agreement.

Multimodal Connections

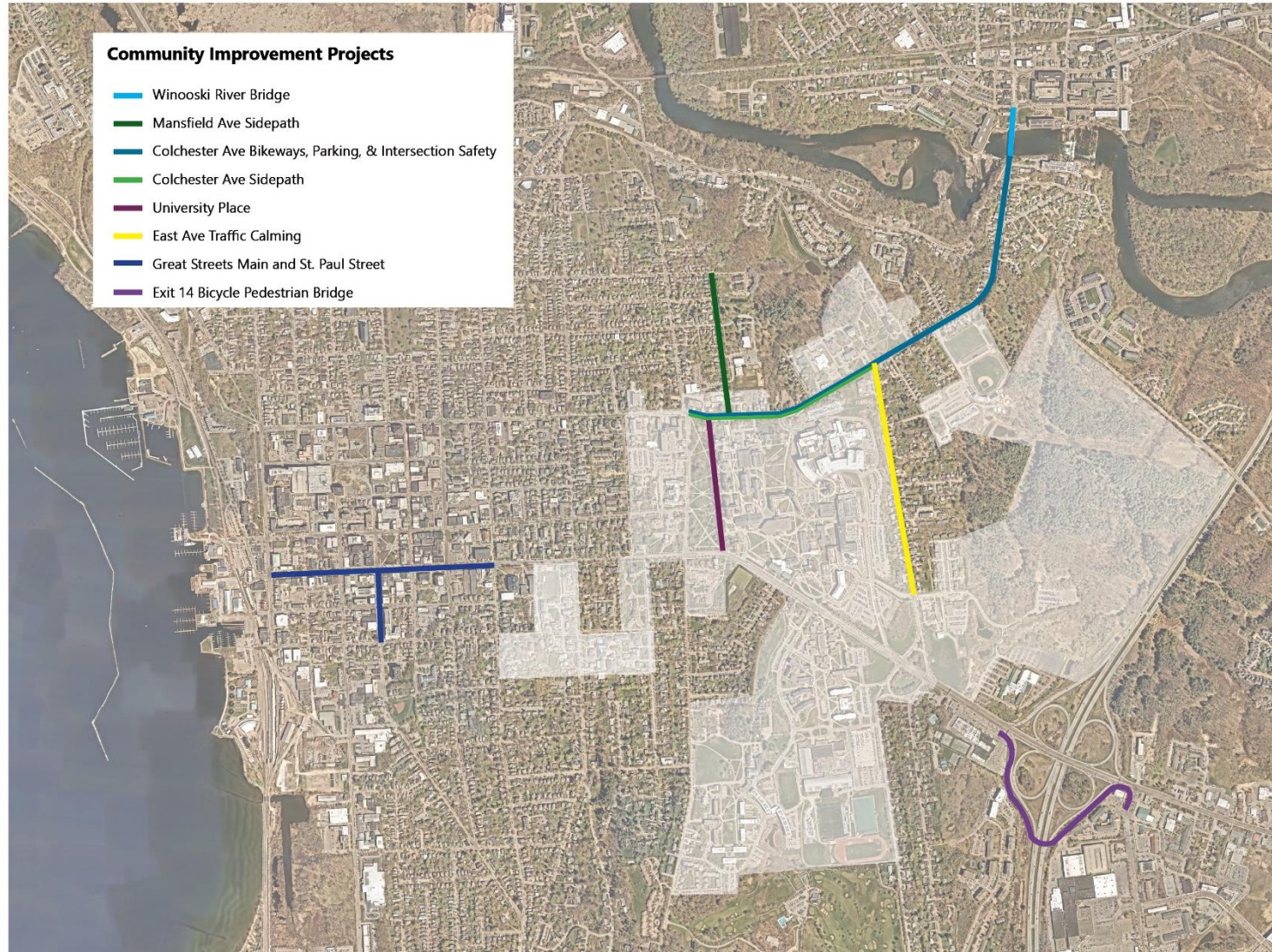
A critical focus on multimodal connections has emerged as Burlington and the surrounding communities tackle the climate emergency, demand management, and equitable transportation outcomes. In particular, places that have historically been barriers to or hostile to active modes of transportation have been under scrutiny as these areas hinder shifts towards more active transportation modes. This is evidenced in many high profile walking and biking infrastructure projects that have recently been constructed or are imminent in the planning, design, or construction phases. These projects in Burlington, South Burlington, and Winooski will improve the connectivity for residents and visitors, as well as serve the employees, students, patients, and visitors of each of the institutions. The improvement in connectivity and accommodations will provide safe and accessible routes to and from the institutions utilizing alternative modes of transportation. Some of the key projects are:

- › **Winooski River Bridge:** The purpose of the project is to improve safety while maintaining structural integrity and continuity of this integral link between Winooski and Burlington across the Winooski River. The project will address deficiencies in the bridge while improving multi-modal (bike, pedestrian, vehicular) travel for people and goods. Scoping has been completed and the project is expected to move into design.
- › **Mansfield Avenue Sidepath:** The sidepath replaced the existing sidewalk on the eastern side of Mansfield Avenue from Colchester Avenue to North Street with a wider asphalt path and markings. The project also included crossing improvements at the intersection of Colchester Avenue and Mansfield Avenue. This project is complete.
- › **Colchester Avenue Bikeways, Parking, & Intersection Safety:** The purpose of the Colchester Avenue: Bikeways, Parking, & Intersection Safety Study was to identify and prioritize improvements that align with the City's vision for sustainable transportation infrastructure and enable a continuous, connected, and livable multimodal transportation corridor. This includes proposed improvements to the intersection of Colchester Avenue and East Avenue as well as creation of separated bike infrastructure along the length of Colchester Avenue. Scoping was completed.
- › **Colchester Avenue Sidepath:** The existing Colchester Avenue southern Sidepath was removed and replaced to meet accessibility design criteria and widened to meet current design guidelines for shared bicycle & pedestrian paths. The project included a new 10' wide concrete sidepath to replace the sections of 8' wide sidepath east of Mansfield Avenue and the 5' wide sidepath west of Mansfield Avenue. The project is complete.

- › **University Place:** The purpose of improvements to University Place were to enhance safety on the street for pedestrians, bicyclists, and other active transportation users. University Place is at the heart of UVM's central campus. As part of the project, buffered bike lanes in each direction and prioritized and comfortable pedestrian crossings were constructed. UVM and the City of Burlington shared the costs of this project on the city-owned street. The project is complete.
- › **East Avenue Traffic Calming:** The purpose of the East Ave Traffic Calming project is to improve the safety along the corridor. There are currently issues of speeding and unsafe crossings for pedestrians. The project will implement traffic calming measures and create more conspicuity for crossings to improve connections along and across this critical corridor adjacent to UVM and UVMMC. Planning is complete and the project is in the design phase.
- › **Great Streets Main and St. Paul Street:** Main Street is an important gateway into downtown Burlington and a vital connection from the waterfront to the Hill institute campuses. The goal of Great Streets Main Street project is to balance the use of the public right of way to provide wide sidewalks, protected bike accommodations, activation space, and parking. St. Paul Street similarly aimed to enhance the use of the public right-of-way for multimodal use. St. Paul Street construction is complete and Main Street is in the design phase.
- › **Exit 14 Bicycle Pedestrian Bridge:** The goal of the project is to create a bicycle and pedestrian bridge across I-89 in the vicinity of the Exit 14 Interchange in South Burlington. While existing sidewalks, bicycle lanes, and transit service provide alternative transportation accommodations along US Route 2, these modes are likely underutilized due to the speed, numerous conflict points, and volume of traffic at this key regional junction. A scoping study was completed and the project is in the design phase.
- › **South End Multimodal Center:** A collaborative study with the Chittenden County Regional Planning Commission, City of Burlington, and VHB evaluated the feasibility of constructing a multimodal transportation center and supporting uses on a City-owned parcel in the City's South End. Following the completion of the multimodal center feasibility study, VHB is currently assisting the City of Burlington, Champlain College, and Ride Your Bike, LLC to envision and evaluate various design concepts for three parcels in the City's south end, inclusive of the parcel evaluated for the multimodal transportation center.

Although it is anticipated that the infrastructure projects above will improve transportation options to and from the campuses, contributing to a shift towards active and transit modes of transportation, these potential mode shifts were not accounted for in future parking demand projections. As parking demand continues to be monitored through survey and count methods, the influence of these infrastructure projects on the Institutional populations' resulting travel behavior may be estimated.

Figure 4 Highlighted Project Corridors Addressing Multimodal Connectivity (institutional areas highlighted in white)



3

Champlain College

Champlain College is a small, private, not-for-profit college in Burlington with sister campuses in Montreal, Canada and Dublin, Ireland. Champlain College prides itself on preparing students for top fields through career-oriented programming, earning accolades such as Princeton Review’s “Top Schools for Game Design,” the Broadcast Education Association’s “Top Documentary Programs,” and one of Niche.com’s top 30 “Best Schools for Information Technology.” Champlain College has been named “Most Innovative School” in the North seven years in a row by U.S. News & World Report’s “America’s Best Colleges.”

Champlain College’s main campus sits atop the hill overlooking downtown Burlington and Lake Champlain. The main campus is primarily concentrated between Main Street and Cliff Street to the north and south and Summit Street and South Union Street to the east and west. There are additional residence halls just north of Main Street and east of Summit Street as well as downtown apartments at the corner of St. Paul Street and Maple Street, four-tenths of a mile from the main campus. In addition, there are academic and facility buildings located approximately 1.3 miles from main campus off of Lakeside Avenue and Sears Lane.

Existing & Anticipated Infrastructure and Development

There are 47 buildings that provide Champlain College just over 850,000 gsf of academic, administrative, residential, athletic, dining, and facility space across the campus. Over half of the buildings are small residential halls with an average of just over 50 beds per location. These residential beds serve the majority of students that are enrolled in on campus programming. The campus infrastructure includes 642 spaces for parking, serving the range of users that access the campus or reside on campus.

The previous two-year JIPMP identified four projects that require status updates in the current JIPMP. At this point, there are no plans to carry forward the Miller Information Commons Addition, however there are three projects that were identified in the previous JIPMP that are anticipated to be carried

forward into the next 5-year development plan and will contribute additional building square footage. See Table 4 for preliminary estimates on building area changes and estimated completion dates for these projects. Champlain College additionally anticipates converting a building to residential use, contributing an additional 30 beds. The South End will be a very active area in the future around redevelopment. At this time, there are no plans to change Champlain College's parking supply or location.

Table 4 Existing and Anticipated Champlain College Infrastructure

Infrastructure	Existing ⁴	Anticipated ⁵	Units
Number of Buildings	47	48	buildings
Gross Square Footage ¹	851,517	890,517	gsf
Residential Beds ²	1,418	1,448	beds
Parking Supply ³	642	642	spaces

1. Leased facilities do not contribute to the number of buildings or total GSF.
2. Residential beds in leased facilities included in total.
3. Parking spaces from leased facilities included.
4. Existing data based on data from Fall 2022 to represent base year 2023.
5. Anticipated data based on estimates for 5-year plan to represent 2028.

Table 5 Champlain College Status of Previously Identified Projects

Building Project	Completion Status
Miller Information Commons Addition	No Longer Planned
Foster Hall Addition	Move Forward to 2023-2028 JIPMP
Information Technology & Sciences Building	
Career Center	

Existing & Anticipated Community Population

Champlain College is considered a small college, a category with a ceiling student population of 5,000 enrollments. The on-campus undergraduate population includes 1,675 full time and

61 part-time students. Of the full-time students, 30 are enrolled in the study abroad programming offered on the Montreal and Dublin sister campuses and therefore not included in the user

population accessing Burlington’s campus. Over half of the College’s enrollments are through Champlain College Online. This programming currently serves 559 graduate and 1,439 undergraduate students, totaling nearly 2,000 enrollees in the online programming. These students are similarly not counted towards the population accessing campus.

Champlain College employs just over 900 faculty, staff, and contractors split between the on-campus programming and off-campus and online programming. There are 353 full-time, 193 part-time, and 66 contracted employees that serve the Burlington campus. Additionally, there are 26 full-time, 263 part-time, and 22 abroad employees serving the off-campus and online programming that do not contribute to the user population accessing the Burlington campus.

It is anticipated that in the coming 5 years, the Champlain College student and employee populations will grow. Enrollment in on-campus programming is anticipated to expand to serve 2,080 full-time and 80 part-time undergraduate students. The Dublin and Montreal programs are expected to expand to serve 40 students. Similarly, the online programming is expected to expand to serve 740 graduate and 1,750 undergraduate students remotely, bringing the online programming to just under 2,500 students. Details on current and projected populations are further detailed in the Supplemental Materials.

Table 6 Anticipated Champlain College Building Development Program

Project Name	Change in Building Area (gsf)	Associated Change in Parking (spaces)	Estimated Completion
Foster Hall Addition	3,500	0	2026
New ITS Building	31,500	0	2026
Career Center Addition	4,000	0	2025
Conversion of Building to Res Hall	N/A	0	2024

Existing & Anticipated Parking Demand

As previously discussed, the peak parking demand was estimated using two methodologies: utilization counts and survey data. The parking supply for the campus is currently at 642 spaces. These spaces are spread across the College lots as depicted in Figure 6. In addition, Figure 6 demonstrates the average parking utilization rates for each Champlain College owned lot. These rates are based on the quarterly lot counts conducted by Champlain College across three days during peak periods. Although it is not accounted for in the parking supply, it is noted that there are 145 on-street spaces in designated zones adjacent to campus that Champlain College affiliates are allowed to park in, contributing informally to the supply of parking in the immediate adjacency of campus activities.

The maximum parking utilization was compared across the available data from previous peak period observations to demonstrate changes over time. The parking utilization trends in Figure 5 show there was significantly diminished utilization through the Fall 2020 to Summer 2021 period, resulting in peak period utilization of approximately 30%. The utilization, starting in Fall 2021, rebounded to a maximum peak utilization of 67% in Fall 2021 and again in Fall 2022. This remains below the peak utilization demonstrated in Fall 2019 of 84% and Winter 2020 of 75% (prior to the COVID pandemic).

Figure 5 Champlain College Parking Utilization Trends

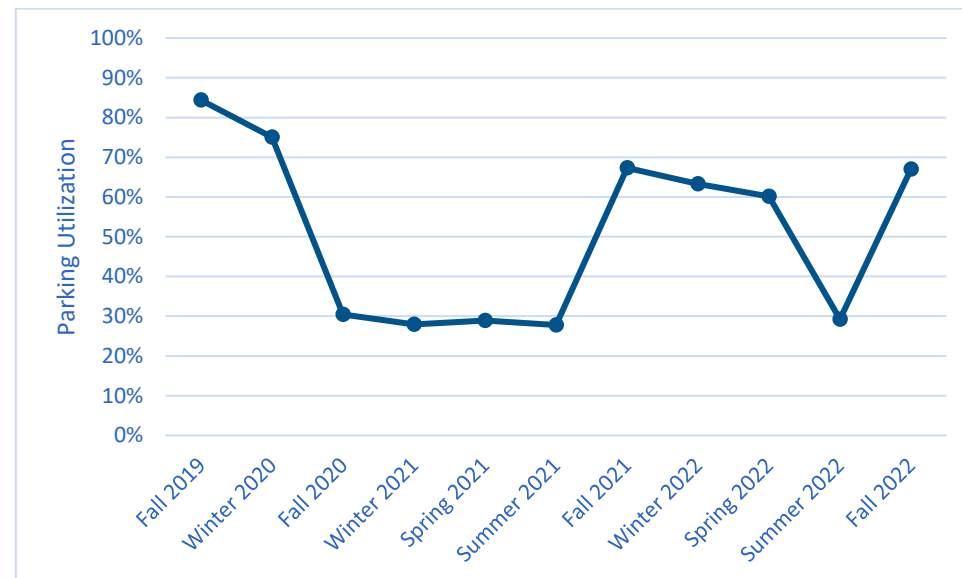
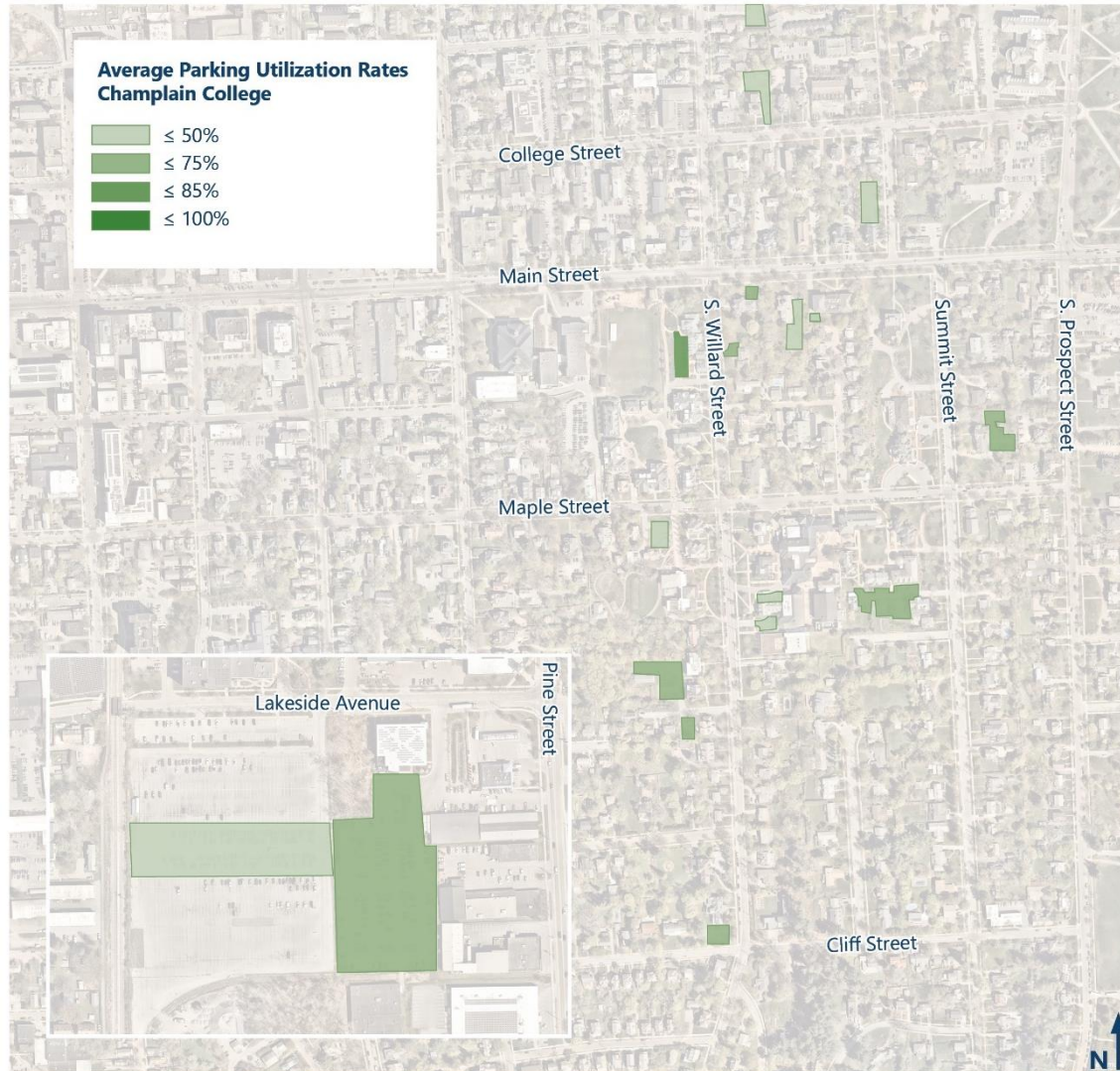


Figure 6 Champlain College Average Parking Utilization Rates



The current peak parking demand for Champlain College is estimated to be 427 vehicle spaces based on observed peak parking utilization counts, demonstrating a net available parking supply of 215 spaces. Peak parking demand based on survey data indicates peak parking demand of 741 spaces, or a net shortfall of 99 spaces. It is noted that this estimate and its future projections represent a likely overestimation of peak parking demand. The percent of users for each user group was estimated based on those that reported predominantly driving alone or carpooling to serve their transportation to campus and reported typically being on campus at the peak time. They may be using secondary modes at other times during a typical week, including teleworking. As such, it can be assumed that these estimates inflate the demand to represent an artificially high peak parking demand.

Future parking demand was estimated from the surveyed mode trends by user groups, accounting for the anticipated changes to infrastructure and user populations described above. For Champlain College, there are anticipated increases in population that

Table 7 Champlain College Current Parking Demand

Champlain College			
User Group	Number of Potential Users	Peak Parking Demand¹	
		% of Users	Spaces
Employees	612	58.0%	355
On-Campus Students	1418	18.9%	269
Off-Campus Students	318	29.9%	96
Visitors			15
Fleet ²			6
Peak Parking Demand			
Demand Based on Survey³			741
Utilization Based on Counts⁴			427
Parking Supply			
Total Spaces⁵			642
Net Spaces			
Peak Demand			-99
Peak Utilization			+215

1. Peak parking demand is calculated from data collected in the 2022 CATMA Survey where “% of Users” consists only of car users who are on campus at peak time.

2. Champlain has 15 fleet vehicles but estimates only ~40% attempt to park on campus at peak time.

3. Total peak parking demand has a margin of error of ±89 spaces.

4. Peak observed utilization occurred on October 6th, 2022 at 2 PM and has a margin of error of ±31 spaces based on 2022 count data.

5. Total Parking Supply does not include 145 on-street parking spaces in Designated Zones.

account for the increased peak parking demand, assuming the mode trends remain consistent with current behavior for each user group.

Table 8 Champlain College Future Parking Demand 2028

Champlain College			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces
Employees	830	58.0%	482
On-Campus Students	1448	18.9%	275
Off-Campus Students	712	29.9%	214
Visitors			15
Fleet ²			6
Peak Parking Demand			
Future Demand Based on Survey			992
Parking Supply			
Total Spaces³			642
Net Spaces			
Peak Demand			-350

1. Peak parking demand is calculated from data collected in the 2022 CATMA Survey where “% of Users” consists only of car users who are on campus at peak time.

2. Champlain has 15 fleet vehicles but estimates only ~40% attempt to park on campus at peak time.

3. Total Parking Supply does not include 145 on-street parking spaces in Designated Zones.

Fleet

Champlain College has a total of 15 fleet vehicles on their campus in designated “Service Only” spaces. Four passenger vans are typically parked in Rowell and Cushing, and eleven pick-up trucks and facilities vehicles are typically parked in the Sears Lane lot near the facilities building. There are no current plans to grow the fleet.

Highlighted Strategies

Parking Restrictions and Permits

Champlain College provides clear guidance for all campus community members to follow regarding parking policies. It is mandatory that all Champlain College affiliates obtain a permit for their vehicles each semester. Permits are affiliated with particular parking zones.

First year students are restricted from bringing vehicles to campus. This policy was approved in 2018 to align with the Master Plan and Sustainability Vision. There are waivers available for demonstrated need based on strict criteria around employment, medical conditions, long-distance travel, and transfer students from other institutions.

Telework

Champlain College provides an Interim Workplace Flexibility policy that was updated in December 2022. The workplace flexibility is opportunity to support employees' safety, work life, along with their personal and family responsibilities while still supporting the College's need for coverage, efficiency, and productivity. The workplace flexibility assesses the job and employee's suitability prior to approving a work arrangement. This varies depending upon the employee's role and the specific nature of the work required. The work arrangement can be occasional, hybrid, or fully remote and approval is at the supervisor's discretion and must be reviewed with the functional area's Dean, Vice President, COO, or Provost.

Transportation Demand Management

Champlain College encourages all employees and students to register for CATMA membership which provides carpool and vanpool matching, bike/walk rewards program, Guaranteed Ride Home Program, unlimited access free rides on local and regional bus routes, CarShare Vermont membership discounts, Park and Ride options, and commuter workshops.

CarShare Vermont

Champlain College has a partnership with CarShare Vermont via CATMA's Campus Programs Contract and provides funding to CarShare Vermont for program support. Through this contract with CATMA, CarShare Vermont provides significantly discounted membership to any campus affiliate that does not hold a parking permit¹³. As of December 2022, there were a total of

¹³ Rates for CarShare Vermont Campus Programs can be viewed here: <https://www.carsharevt.org/memberships/campus/>

45 members (28 students and 17 employees) registered to CarShare Vermont through Champlain College. There are CarShare Vermont pods located on Maple Street near West Hall, on College Street near Sanders Hall, and on St. Paul Street near 194 St. Paul Street Apartments¹⁴.

Shuttles

There is free commuter parking at 175 Lakeside Avenue for Zone 1 permit holders. Champlain operates a free shuttle service seven days a week between Lakeside Campus, 194 Saint Paul Street, and Main Campus. All Zone 2 permit holders are automatically enrolled in CATMA's Guaranteed Ride Home program, which provides a free cab ride if the shuttles are not operating. All Zone 1 permit holders are also eligible to enroll. Locations of the Champlain shuttles can be tracked in real-time providing up to date information to users via website or mobile app¹⁵.

Monitoring, Compliance, and Enforcement

Champlain College diligently monitors and enforces the parking plan through the year, with parking enforced 24 hours per day, 7 days per week. Further, every Champlain College affiliate, employees and students alike, are required to get a parking pass for their vehicle every semester. Lots on the main campus in close proximity to academic buildings are either designated for main campus employees with an appropriate permit (i.e. Zone 1 permit holders) or pay per use on weekdays between 8 AM and 4 PM for appropriate permit holders. It is noted that the pricing is structured to be most expensive in the lots closest to the core of campus and in the highest demand, with lots further out becoming less expensive.

Further, on city streets that have not been identified as eligible locations for Champlain College affiliates to park, Champlain affiliated vehicles can be ticketed in accordance with Champlain College's parking policy. The College's lots are monitored and patrolled daily. The College issued 1,223 citations and 1,296 warnings during the 2021-2022 school year and 2022 summer programming. This enforcement action represents an average of nearly 7 warned or ticketed infractions per day. It also represents an increase in enforcement action of over three times the warned or ticketed infractions from the previous year (2020-2021).

In addition to the daily monitoring, quarterly counts are conducted for a three-day period at every lot during peak times (i.e. intervals starting at 10AM, 12PM, and 2PM). Champlain College also counts City streets in the vicinity of campus, which is likely capturing other users of these public streets, like on Main Street and Summit Street, beyond their affiliate use.

¹⁴ Locations for CarShare Vermont vehicles can be viewed here: <https://www.carsharevt.org/locations/>

¹⁵ <https://shuttle.champlain.edu/>

4

University of Vermont

Founded in 1791, the University of Vermont has been a cornerstone of Burlington throughout the period following European settlement of the area, established prior to the founding of the City itself. The University is a medium sized public university and land grant institution that is considered a “Public Ivy.” This designation is based on the strength of selective and rigorous undergraduate educational programming as well as renowned research. Known as UVM, or University of the Green Mountains in Latin, the University prides itself on being the ideal size to foster academic and research prominence while encouraging close faculty-student mentorships across all levels of study. The location of UVM as part of the fabric of Burlington and the state of Vermont, and in close proximity to Lake Champlain and the Green Mountains, enriches student educational experience and enables service to the state’s communities through its land grant mission.

The University of Vermont is situated at the top of the hill overlooking the City of Burlington and Lake Champlain to the west and the Green Mountains to the east. The Main Campus extends approximately 460 acres inclusive of central, athletic, Redstone, and Trinity campuses, as well as Centennial Woods. These areas are predominantly within Burlington with a small, connected land area that crosses over into South Burlington. One satellite site to this contiguous campus area is the Rubenstein Ecosystem Laboratory, which is situated directly on Burlington’s waterfront and serves as a research and teaching laboratory regarding the Lake Champlain basin. Main Campus areas are generally accessed from Main Street, East Avenue, Colchester Avenue, Prospect Street, Spear Street, University Place, and Williams Street, as well as many additional roadways and pathways.

In addition to Main Campus, UVM has land holdings in South Burlington, Colchester, Essex, and many other areas across the state. South Campus includes land holdings predominantly in South Burlington with a small area in Burlington made up of mostly agricultural, horticultural, and natural areas. The Colchester Research Campus serves research purposes associated with

the College of Medicine. Fort Ethan Allen in Colchester/Essex includes facilities for maintenance purposes, including fleet services.

Existing & Anticipated Infrastructure and Development

There are 200 buildings and an additional 29 accessory buildings that serve the University, accounting for over 5.6M gross square footage. The buildings serve academic, research, residential, administrative, athletic, student support, facilities, and other purposes. Of these buildings, over 75 support academic and research purposes and over 50 support residential purposes. The residential buildings support 5,775 beds for students to reside on campus with an additional 617 beds for students and 164 beds for faculty and staff provided through third party partnerships. Primarily the on campus residential beds are for first- and second-year undergraduate students, as they are generally required to live on campus.

Table 9 Existing UVM Campus Building Data

Building Use	Accessory Buildings	Total Buildings	GSF	Residential Beds
Mixed Uses				
Academic / Administrative / Student Support	0	3	242,857	5,775
Academic / Research	7	69	1,937,764	
UVM / UVMAC Academic Research	1	7	253,501	
Administration	10	33	510,524	
Athletics	6	17	475,948	
Student Support	3	20	501,978	
Residential				
Residential Academic	0	3	110,961	5,775
Residential Dining	0	4	260,602	
Residential Central Campus	2	7	209,342	
Residential Redstone Campus	0	14	408,954	
Residential Trinity Campus	0	12	147,174	
Residential Athletic Campus	0	11	591,503	
Total	29	200	5,651,108	5,775

Parking spaces are available across the various segments of campus. Athletic commuter lots make up the majority of spaces available, with over 1,700 spaces. Core campus areas account for over 1,600 additional parking spaces. There are commuter lots that are largely leased out to other entities. And finally, there are Redstone and Trinity campus lots that primarily serve residential second-year students with vehicles on campus as well as some employee use. The off-site spaces reflect satellite parking within and outside of Burlington. The off-site parking within Burlington does not account for the 200 spaces at 351 Pine Street, as a project has been identified to remove that parking from UVM's inventory.

The previous two-year JIPMP identified many projects that require status updates in the current JIPMP. There were projects that were completed from the last JIPMP including the Music Building Recital Hall Addition, Jeffords East Lower Lot, University Heights Road (Southwick), Pomeroy Barn & 172 South Prospect Buildings, and a New Research Facility for the College of Medicine. In addition, there are projects that were previously identified that no longer have plans to move forward, including Fleming Museum Parking, Outing Club Relocation, Southwick Hall Parking, Future Structured Parking, Colchester Avenue / Dewey Buildings, Back 5 & Cottages (Trinity Campus) Buildings. There are 22 other projects that have been identified for the next 5 years, including 9 newly identified projects that are not carried forward from the previous JIPMP. One of these projects, discussed above, includes the removal of the satellite spaces at 351 Pine Street. This 200-space lot at 351 Pine Street was originally leased in 2019 to comply with permit conditions for the Firestone addition. At the time of permitting that project, there was not an approved JIPMP in place, which meant that the City could not consider UVM's extensive system of TDM and had to apply the minimum parking requirements identified in the ordinance without considering a waiver as would be normally considered under an approved JIPMP. This temporary condition was later resolved by approval of the 2020-2022 JIPMP. This JIPMP included the lot at 351 Pine Street however the lot was never actually needed or used. For the past two years, UVM has completed campus wide monthly lot counts, which have consistently shown that UVM has adequate on-

Table 10 Existing UVM Parking Capacity

Parking Lot Location	Capacity	Leased Spaces	Usable Spaces
Athletic Commuter	1,733		1,733
Core Central	50		50
Core East	767	-100	667
Core North	369		369
Core South	135		135
Core West	431	-47	384
Commuter Lots	808	-485	323
Redstone Campus	626		626
Trinity Campus	314		314
Off-Site: Burlington ¹	54		54
Off-Site: Outside Burlington ²	210		210
Total in Burlington	5,287	-632	4,655
Total	5,497	-632	4,865

1. Includes parking at the Rubenstein Laboratory and Bioresearch Complex (South Campus).
2. Includes parking spaces at the Colchester Research Facility, Forestry Laboratory, and Miller Barn.

campus parking space, and this remote parking lot is not needed. UVM intends to apply to amend the permit requirement for this lot and remove this lot from campus inventory. UVM will continue quarterly campus wide lot counts at peak times, to ensure ongoing management of parking spaces. Other projects will include future student housing, potentially increasing the number of residential beds by approximately 600-1200 beds, located at Trinity or elsewhere on campus as noted in Table 11 and footnote 3. It is anticipated that the full list of identified projects will have a limited impact on the gross square footage of building area on campus but will result in a net gain of approximately 628 parking spaces. See Table 11 for preliminary estimates on building area changes and estimated completion dates for these projects.

Table 11 UVM Campus Building Program Data (completed and future)

Project Name	Included in Previous JIPMP	Change in Building Area (gsf)	Associated Change in Parking (spaces)	Estimated Completion
Music Building Recital Hall Addition	Yes	3,942	3	Completed
Jeffords East Lower Lot	Yes		67	
University Heights Road (Southwick)	Yes		5	
Pomeroy Barn & 172 South Prospect Buildings	Yes	-6,067	-3	
New Research Facility for COM (Firestone)	Yes	75,000	-121	
Bioresearch Complex Parking	Yes		153	2023
Hills	No	6,408	1	
Centennial Compound	No		40	
ADA Code Compliance	Yes		-20	2024
284 East Avenue	No		30	
Waterman	No	3,000	-10	
Votey Lot	Yes		-10	
Future Student Housing ³	No	100,000	0	2025
Future Additional Parking to Accommodate New Housing	No		200	
Colchester Research Facility Lot 1 Parking ²	Yes		200	
University Road (East Ave to Compound)	Yes		15	
Interfaith Center Parking Lot	Yes		30	
Future Student Housing ³	No	150,000-500,000	-25	2026
Future Additional Parking to Accommodate New Housing	No		200	
Villa	No	12,618	-7	
Future Compound Expansion	No		66	
Virtue Field Phase 3	Yes	5,000	0	2027
Blundell Parking	Yes		5	
Tarrant (Multi-Purpose) Event Center Building	Yes	119,099	0	

Torrey Hall Addition	Yes	2,860	-6	Unknown
Miscellaneous Parking Adjustments ¹	Yes		25	
Coolidge Hall Building	Yes	-30,510	0	
Residential Housing	No		190	
351 Pine Street	Yes		-200	
Fleming Museum Parking	Yes			Not moving forward at this time
Outing Club Relocation	Yes	13,250		
Southwick Hall Parking	Yes			
Future Structured Parking	Yes			
Colchester Ave/Dewey Buildings	Yes	-82,622		
Back 5 & Cottages (Trinity Campus) Buildings	Yes	-64,907		
Total		307,071	828	

1. Where possible UVM attempts to reallocate space to create more parking. It is estimated this will result in ~25 spaces over 5-years based on previous experience.
2. This facility is estimated to house between 200 and 400 parking spaces. Though it is off-site it will impact on-campus demand depending on UVM policy.
3. UVM and the City of Burlington have engaged in a process to rezone Trinity Campus in order to enable the creation of additional student housing on campus. As of this report, City Council has tabled the proposed rezoning language and it is unclear whether housing at Trinity Campus will move forward. UVM is actively exploring options to increase student housing on Trinity and/or elsewhere. The low end of range of potential gsf estimates was used for totaling change in area.

Existing & Anticipated Community Population

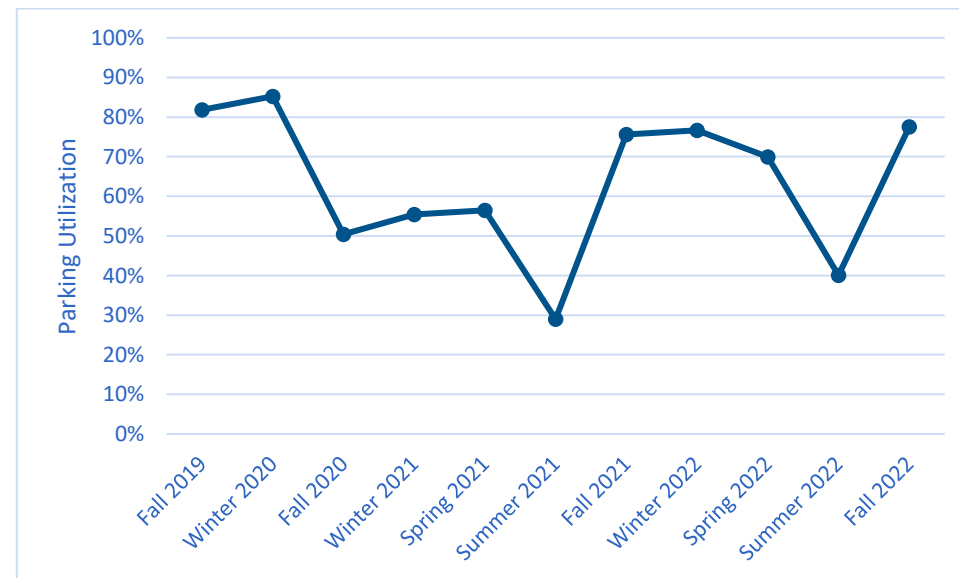
The UVM campus currently serves a total population of just over 18,000 on Burlington's Main Campus, inclusive of faculty, staff, and students. Employees include 2,311 full- and 155 part-time staff and 861 full- and 927 part-time faculty. These numbers include approximately 230 employees that are not Burlington based and therefore deducted from the employee users contributing to parking demand, which total approximately 4,024 employees. Student enrollment includes 11,326 undergraduate students, 1,707 graduate students, 483 medical students, and 572 continuing education students, totaling approximately 14,088 students. The majority of the first- and second-year undergraduate students reside on campus in the University's 5,775 residential beds.

The UVM campus population is expected to stay relatively consistent over the next five years based on projections from the date of this document. A slight increase in graduate and continuing education student enrollment are projected to account for the approximate 3% increase in student population. The undergraduate, staff, and faculty numbers are expected to remain largely consistent with present population levels.

Existing & Anticipated Parking Demand

As previously discussed, the peak parking demand was estimated using two methodologies: utilization counts and survey data. The parking supply for the campus is currently at 4,865 spaces. Sites within the campus that UVM ground-leases (and their associated parking spaces), such as Redstone Lofts, Redstone Commons, and Centennial Court Faculty/Staff Apartments, are not included in this total. When accounting for these additional 379 spaces that are nestled within the campus and utilized by students in Redstone Lofts & Apartments,

Figure 7 University of Vermont Parking Utilization Trends

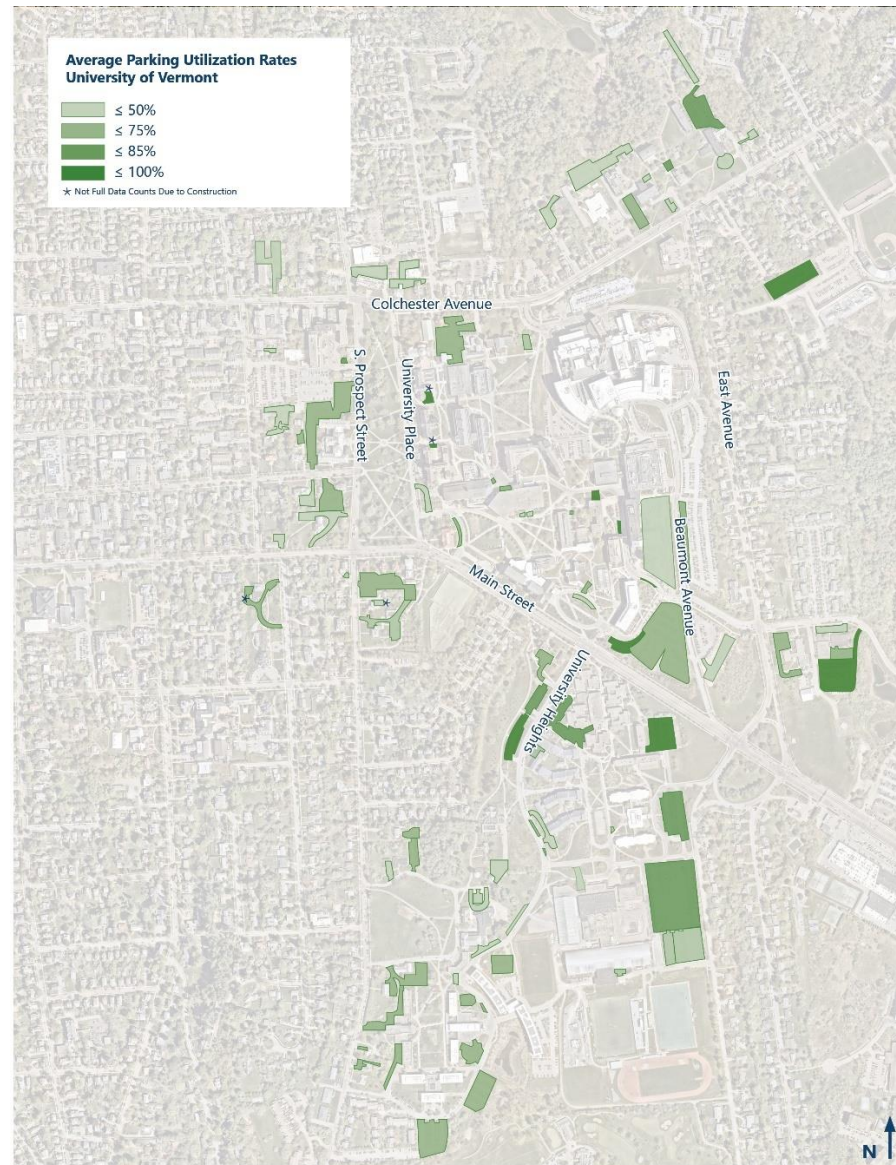


but not part of UVM's parking supply for their exclusive use, there are 5,244 spaces. As such, there are two net parking space estimates provided to account for the UVM parking supply, and the UVM parking supply with consideration for these on site and student utilized spaces.

The UVM managed spaces are spread across the lots as depicted in Figure 8. In addition, Figure 8 demonstrates the average parking utilization rates for each UVM owned lot. These rates are based on the quarterly lot counts conducted by UVM across three days during peak periods.

The maximum parking utilization was compared across the available data from previous peak period observations to demonstrate changes over time. The parking utilization trends in Figure 7 demonstrate slightly reduced demand through the Fall 2020 to Summer 2021 period, where utilization ranged from 29% to 56%. Parking utilization rebounded starting in Fall 2021 with an in session (i.e. not summer) maximum utilization between 70% and 78% consistently. This more recent data falls below utilization observations made prior to the COVID pandemic, which were above 80%.

Figure 8 University of Vermont Average Utilization Rates



The current peak parking demand for UVM is estimated to be 3,508 vehicle spaces based on observed peak parking utilization counts, demonstrating a net available parking supply of 1,357 spaces. Peak parking demand based on survey data indicates peak parking demand of 4,943 spaces, or a net shortfall of 78 spaces. It is noted that this estimate and its future projections represent a likely overestimation of peak parking demand. The percent of users for each user group was estimated based on those that reported predominantly driving alone or carpooling to serve their transportation to campus and reported typically being on campus at the peak time. They may be using secondary modes at other times during a typical week, including carpooling, biking, and/or teleworking. As such, it can be assumed that these estimates inflate the demand to represent an artificially high peak parking demand.

Table 12 University of Vermont Current Parking Demand

University of Vermont			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces
Employees ²	4,024	55.4%	2,228
On-Campus Students	5,775	16.8%	971
Off-Campus Students ³	7,741	17.8%	1,376
Visitors			185
Fleet ⁴			183
Peak Parking Demand			
Demand Based on Survey⁵			4,943
Utilization Based on Counts⁶			3,508
Parking Supply			
Total UVM Managed			4,865
Total UVM + Ground-Lease Spaces⁷			5,244
Net Spaces			
Peak Demand in UVM Managed Spaces			-78
Peak Demand in UVM + Ground-Lease Spaces			+301
Peak Utilization in UVM Managed Spaces			+1,357

1. Peak parking demand is calculated from data collected in the 2022 CATMA Employee and Student Transportation Survey using the methodology described in Appendix A. "% of Users" consists only of car users who are on campus at peak time.
2. Employees not located on Main Campus are not included in this count.
3. Off-Campus Students does not include Continuing Education students.
4. Fleet vehicles not located on Main Campus or in Burlington not included in this count.
5. Total peak parking demand has a margin of error of ± 1046 spaces.
6. October 4, 2022 at noon was the peak utilization count and has a margin of error of ± 217 spaces based on 2022 count data.
7. Ground-lease spaces include spaces that are interior to the campus but exclusively used by Redstone Lofts and Apartments.

Future parking demand was estimated from the surveyed mode trends by user groups, accounting for the anticipated changes to infrastructure and user populations described above. For UVM, the undergraduate population is expected to remain consistent with population increases coming largely from increased graduate student enrollment. An increase in the number of beds available for on-campus students was provided with a range of 600 to 1200 beds projected. For the purposes of calculating demand, the low end of the anticipated range of new beds was assumed at 600 beds. These assumptions provided a conservative estimate even though additional housing is being contemplated and may contribute to further increases in on-campus housing for students. Parking supply is expected to increase in the future condition, contributing to the estimate of a 705-space surplus of parking anticipated in the projection to 2028. This estimate assumes the mode trends remain consistent with current behavior for each user group.

Table 13 University of Vermont Future Parking Demand 2028

University of Vermont			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces
Employees ²	4,020	55.4%	2,226
On-Campus Students	6,375	16.8%	1,073
Off-Campus Students ³	7,425	17.8%	1,321
Visitors			185
Fleet ⁴			183
Peak Parking Demand			
Demand Based on Survey			4,988
Total Parking Supply			
Total UVM Managed			5,693
Total UVM + Ground-Lease Spaces			6,072
Net Spaces			
Peak Demand in UVM Managed Spaces			+705
Peak Demand in UVM + Ground-Lease Spaces			+1,084

1. Peak parking demand is calculated from data collected in the 2022 CATMA Employee and Student Transportation Survey using the methodology described in Appendix A. "% of Users" consists only of car users who are on campus at peak time.

2. Employees not located on Main Campus are not included in this count.

3. Off-Campus Students does not include Continuing Education students.

4. Fleet vehicles not located on Main Campus or in Burlington not included in this count.

Fleet

In 2019, UVM created a Fleet Vehicle Procurement Procedure to attempt to achieve a high level of fiscal, social, and environmental responsibility in fleet vehicle procurement. This procedure defines the process for purchasing new or replacement vehicles. The University will prioritize alternative fuel vehicles (AFVs) and vehicles with high fuel economies relative to their market class.

UVM has 212 fleet vehicles that park throughout the main campus and other off campus locations. The fleet vehicles parked in Howe and Votey parking lots have designated “Service Only” spaces. The other lots the fleet vehicles are parked in have a combination of spaces, including designated “Service Only” spaces. Ambulances are parked in the Rescue Building and CATS shuttle buses are parked in Catamount West when not in use. CATS shuttle buses may be parked at the Bioresearch Complex in the future.

Highlighted Strategies

Parking Restrictions and Permits

The University of Vermont provides clear guidance for all campus community members to follow regarding parking policies. It is mandatory that all UVM affiliates obtain a permit for their vehicles each semester. Permits are affiliated with specific parking zones.

First year students living in residential halls are prohibited from registering a vehicle for campus parking. The University has determined approved, eligible employment and documented medical needs to be the only exceptions. Students are required to take a parking permit course prior to receiving a parking permit. This course is designed to educate potential permit holders on the alternatives to and impact of driving alone.

UVM has a virtual permit system that uses license plate recognition (LPR) technology to capture the vehicle's license plate to confirm your vehicle is registered. Parking regulations are enforced on campus 24 hours a day, seven days a week using a system of warnings, citations, and/or removal of vehicles by towing.

Telework

UVM offers flexible working arrangements and telework policies. Telework requests are reviewed on a case-by-case basis in the context of established and consistent guidelines. Telework requests are approved or denied at the discretion of the appropriate Dean, Vice President or Vice Provost and may be discontinued at any time at the University's sole discretion.

Transportation Demand Management

UVM partners with CATMA to offer employees and students bike/walk rewards, personalized trip planning assistance, and Guaranteed Ride home. UVM affiliates have access to Go! Vermont resources and Carpool and Van Pool matching to find greener travel options. In addition, UVM provides funding to GMT through the Unlimited Access Program to offer affiliates free bus transit rides on GMT routes.

CarShare Vermont

UVM has a partnership with CarShare Vermont via CATMA's Campus Programs Contract and provides funding to CarShare Vermont for program support. Through this contract with CATMA, CarShare Vermont provides discounted membership to any campus affiliate that does not hold a parking permit¹⁶. As of December 2022, there were a total of 251 members (194 students and 57 employees registered to CarShare Vermont through UVM). There are two CarShare pods on the UVM campus including locations just off of University Place and on University Heights. Currently there are two cars located on UVM campus¹⁷.

Shuttles

UVM provides an on-campus shuttle (CATS) for students that runs 7:30 am until 5:30 pm. On the weekdays, these shuttles generally run every 15 minutes between Redstone and Central campus, every 15-20 minutes on the on-campus route during the daytime, and every 15-30 minutes on-campus during the evening. Weekend service of the on-campus shuttle runs every 30 minutes in the evenings. Locations of the CATS shuttles can be tracked with the Real-Time CATS Shuttle Locations¹⁸ providing up to date information to users via website or mobile app. In addition to the on-campus and Redstone Express routes, there has historically been an off-campus bus that serves key destinations beyond campus focused shuttle routes; however, it is not currently running due to driver shortages.

¹⁶ Rates for CarShare Vermont Campus Programs can be viewed here: <https://www.carsharevt.org/memberships/campus/>

¹⁷ A map of CarShare Vermont locations can be viewed here: <https://www.carsharevt.org/locations/>

¹⁸ <https://uvm.transloc.com/>

UVM also offers CATSride as a shuttle service on a first come, first serve basis. The intent of this shuttle service is to provide transportation between UVM sites within 10 miles of central campus. UVM employees and students can reserve a ride with the demand response-based service by scheduling in advance or can reach out directly to the shuttle for same day service.

Local and regional bus routes via GMT serve students and employees beyond the on-campus routes, with fare free transit available to all users tentatively until later in 2023. It is anticipated that UVM will continue to provide funding to enable their affiliates to ride GMT bus routes for free with a valid UVM ID should fares be reinstated.

A key to limiting the need for students to come to campus with a vehicle is connecting students to transportation options around break times. UVM provides shuttle services between campus and Downtown Transit Center for connections to regional bus services, Amtrak stations in Burlington and Essex Junction, and Burlington International Airport prior to and following school recess periods. Shared shuttle services with Champlain College around break times are also offered.

Monitoring, Compliance, and Enforcement

UVM has enabled technology to assist their diligent efforts in monitoring and enforcing the parking plan on campus. UVM has implemented a virtual parking permit system that utilizes license plate reader technology. Permit holders no longer use hang tags, but rather their registered vehicle's license plate serves as the key to the permit they hold. LPR equipped service vehicles monitor all of the parking areas on campus routinely, identifying the vehicles parked on campus and whether they are parked appropriately given the permit type.

In 2022, over 8,000 citations were issued, with the most common violations of parking with no valid permit (2,994), in a restricted area (1,781), or parking in an expired space (1,268). Fines for expired metered spaces are \$25, for parking in restricted areas are \$30, and for parking with no valid permit are \$50. Habitual offender fines go up significantly, with habitual offenders in expired spaces fined \$80, in restricted areas fined \$90, and without a valid permit \$110. These fines act as a significant deterrent to improper parking on campus.

In addition to the daily monitoring, quarterly counts are conducted for a three-day period at every lot during peak times (i.e. intervals starting at 10AM, 12PM, and 2PM).

Other Key Areas of Concern

Although the JIPMP is generally focused on the peak demand for parking, it is recognized that concerns regarding special event parking have been raised. UVM has a clear set of procedures for accommodating events with significant parking demand on

campus. Event parking areas can be dedicated for an event or commingled, depending on the size of the event. These events tend to fall outside of the typical peak demand times, relegated generally to the evenings and weekends when many of the employee and student commuters accessing campus are not parked in campus spaces. In the efficiency-based standards framework, this opportunity to share parking resources during periods of underutilization for other purposes (i.e. daytime commuter parking) would be viewed positively. In alignment with efficiency-based standards, the written protocol for events allows for the parking in closest proximity to the event to fill up first. Should that primary parking fill, the assigned officer and staff will shift to reroute parking demand to overflow parking designated for the event. This overflow parking is served by shuttles to and from the main entrance of the event. For events that regularly utilize the overflow parking, like major sports events, attendees are encouraged to utilize the overflow parking and shuttle service. During Commencement, UVM's largest event annually, the University is able to manage the demand within the institution's resources to meet the needs of the event.

5

University of Vermont Medical Center

The University of Vermont Medical Center (UVMMC) is designated as a Level I Trauma Center situated in an academic teaching and research hospital serving the Vermont and Northern New York region. The campus in Burlington is the hub of a large, integrated healthcare system in partnership with an extensive network of hospitals and healthcare facilities throughout the region. Partnership with the Larner College of Medicine and College of Nursing and Health Sciences at UVM enables training for the next generation of healthcare professionals and innovation through advancing research.

The UVMMC campus sits prominently on the hill in Burlington adjacent to the UVM core campus area. Founded in 1879, the original hospital was partially housed in the Mary Fletcher Hospital building that still sits on the site today. The hospital's campus has expanded significantly over the years, adding buildings and square footage to support the hospital's mission and growing role in serving the communities of Vermont and Northern New York.

UVMMC campus is flanked on three sides by Colchester Avenue, East Avenue, and Main Street. Each of these three perimeter roadways provide entrance access points to the campus. Additional internal roadways and pathways, including Carrigan Drive and Beaumont Avenue, allow for circulation within the site.

Existing & Anticipated Infrastructure and Development Plan

The main medical center campus has 786,057 gsf serving the hospital's in-patient units, 35,597 gsf serving educational purposes, and an additional 877,085 gsf serving other purposes. Satellite sites within Burlington account for an additional 197,922 gsf of building space, with 1 South Prospect making up the majority of that area with 149,404 gsf. The hospital's infrastructure is served by 3,788 parking spaces, with 2,500 of the spaces in on-site facilities including the ACC Garage, Emergency Room Lot,

McClure Garage, South Lot, and 1 South Prospect. Off-site lots include 1,276 additional spaces with 86 spaces available at other off-site Burlington satellite facilities¹⁹ and the remaining at lots served by shuttle services.

At the time of this document, projects being contemplated include evaluation of the McClure Parking Garage due to deteriorating structural conditions and potential adjustments to leased satellite parking. There are no plans for projects within Burlington that would alter building square footage. The previously approved JIPMP had no plans for changes to building or parking footprints for UVMMC.

Existing & Anticipated Community Population

The UVMMC is a hospital with 580 licensed in-patient beds. In 2022, the average daily number of appointments and procedures was approximately 2,952 per day across the Medical Center Campus, 1 South Prospect, and other Burlington sites, including in person and telehealth visits. That accounts for nearly 675,000 in person appointments or procedures across the year or over 750,000 total visits. One practice that continues to serve the patient population of UVMMC is telehealth visits. With a significant rise in telehealth visits during the COVID pandemic, data from 2022 indicates that this practice will continue to serve some baseline portion of visits that would otherwise be in person. For 2022, approximately 10% of appointments were served via telehealth, amounting to over 75,000 additional patient appointments over the year served without a need for patient transportation to or parking on campus.

There are a total of 6,475 employees of UVMMC that report to sites within Burlington. The main medical center campus accounts for 5,725 of those employees with another 646 at 1 South Prospect and the remaining 104 at other sites in Burlington. In addition to the paid staff, there are also honorary members of the medical staff and volunteers that are regularly on campus to serve the patients and visitors, with 188 total individuals that fill these roles.

Existing & Anticipated Parking Demand

As previously discussed, the peak parking demand was estimated using two methodologies: utilization counts and survey data. The parking supply for UVMMC is currently at 2,500 on-site spaces. The demand was evaluated based on the employees that report to sites within Burlington and are parking on-site, as well as patients and visitors accessing the facilities and parking on-site. The analysis here focused on the on-site parking supply and demand, however, the full system parking including off-site and satellite parking was included in the *Institutional Supplement*. These spaces within Burlington are spread across the lots as

¹⁹ These additional spaces do not include 184 Peel Street, which is leased by UVMMC, but staffed by others with no UVMMC affiliated parking.

depicted in Figure 9. In addition, Figure 9 demonstrates the average parking utilization rates for each UVMMC lot. These rates are based on the quarterly lot counts conducted across three days during peak periods.

Figure 9 University of Vermont Medical Center Average Utilization Rates



The maximum parking utilization was compared across the available data from previous peak period observations to demonstrate changes over time. The parking utilization trends in Figure 10 demonstrate slightly reduced demand through the Fall 2020 to Summer 2021 period, but still remained above 73%. Parking utilization has not returned to the above 90% peak utilization like that observed prior to the COVID pandemic. The maximum peak utilization is most recently hovering in the mid-80% range.

The current peak parking demand for UVMMC is estimated to be 1,941 vehicle spaces based on observed peak parking utilization counts for on-site facilities, demonstrating a net available parking supply of 559 spaces. Peak parking demand based on survey data indicates peak parking demand of 2,145 spaces in on-site facilities, or a net surplus of 355 spaces. It is noted that this estimate and its future projections represent a likely overestimation of peak parking demand.

Future parking demand was estimated from the surveyed mode trends by user groups, accounting for any anticipated changes to infrastructure and user populations described above. For UVMMC, the employee population, patients served, and visitor activity are expected to remain consistent with the current status. The infrastructure is also anticipated to remain consistent with no changes to buildings and limited changes to on-site parking supply. Assuming mode trends remain consistent with current behavior for each user group, the on-site parking surplus is anticipated to be 355 spaces projected to 2028.

Figure 10 University of Vermont Medical Center Parking Utilization Trends

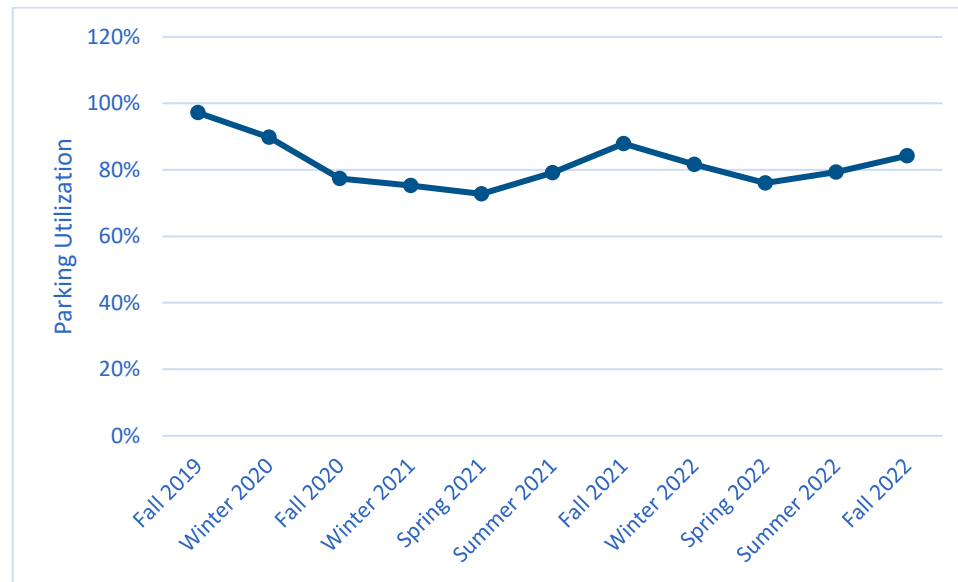


Table 14 University of Vermont Medical Center Current Parking Demand

UVM Medical Center			
User Group	Number of Users	Peak Parking Demand ¹	
		% of Users	Spaces
Medical Center Campus			
Employees	5725	13.7%	785
Out-Patients ⁴	2388		700
In-Patients ⁴			75
Visitors ²			250
Fleet			11
Subtotal			1,821
1 South Prospect			
Employees ³	646	11.7%	75
Out-Patients ⁴	563		230
Fleet			10
Subtotal			315
Other			
Employees	104	8.3%	9
Subtotal			9
Peak Parking Demand Based on Survey ⁵			2,145
Peak Parking Utilization Based on Counts ⁶			1,941
Total Parking Supply			2,500
Net Spaces Peak Demand			+355
Net Spaces Peak Utilization			+559

1. Peak parking demand is calculated from data collected in the 2022 CATMA Employee and Student Transportation Survey using the methodology described in Appendix A. "% of Users" consists only of car users who are on campus at peak time.

2. UVMMC volunteers are included in visitor parking demand, as volunteers park in the ACC Garage and get a voucher to avoid paying upon their departure.

3. Employees of 1 South Prospect assigned to Centennial have been allowed to park on-site due to suspended shuttle service.

4. Average daily patient estimates are based on total annual in person and telehealth appointments and procedures by location for 2022 at the Medical Center and 1 South Prospect facilities. Patient and visitor parking is allocated to 50% of the parking supply on-site. Policies are in place should the patient parking demand exceed this supply.

5. Total peak parking demand has a margin of error of ± 122 spaces.

6. Peak observed parking utilization occurred on October 4th, 2022 at 10 AM and has a margin of error of ± 65 spaces based on 2022 count data.

Table 15 University of Vermont Medical Center Future Parking Demand 2028

UVM Medical Center			
User Group	Number of Users	Peak Parking Demand ¹	
		% of Users	Spaces
Medical Center Campus			
Employees	5725	13.7%	785
Out-Patients ⁴	2388		700
In-Patients ⁴			75
Visitors ²			250
Fleet			11
Subtotal			1821
1 South Prospect			
Employees ³	646	11.7%	75
Out-Patients ⁴	563		230
Fleet			10
Subtotal			315
Other			
Employees	104	8.3%	9
Subtotal			9
Peak Parking Demand Based on Survey			2,145
Total Parking Supply			2,500
Net Spaces Peak Demand			+355

1. Peak parking demand is calculated from data collected in the 2022 CATMA Employee and Student Transportation Survey using the methodology described in Appendix A. "% of Users" consists only of car users who are on campus at peak time.

2. Average daily patient estimates are based on total annual in person and telehealth appointments and procedures by location for 2022 at the Medical Center and 1 South Prospect facilities. Patient and visitor parking is allocated to 50% of the parking supply on-site. Policies are in place should the patient parking demand exceed this supply.

3. Employees of 1 South Prospect assigned to Centennial have been allowed to park on-site due to suspended shuttle service.

4. Patient parking is allocated to 50% of the parking supply on-site. Policies are in place should the patient parking demand exceed this supply.

Fleet

UVMMC fleet is comprised of 40 vehicles total and 28 are typically circulating in Burlington. The fleet includes cargo vans, ambulances, trucks, SUVs, and other vehicles. All but five of UVMMC fleet vehicles are typically parked in designated “Service Only” spaces.

Highlighted Strategies

Parking Restrictions and Permits

There are clear directions and information regarding parking locations and prices for UVMMC patients and visitors on the UVMMC website. For patients and visitors, on-site parking is available in a garage adjacent to the main campus with entrances to the hospital at each garage level. There is also curbside service including assistance to patients and valet parking service. Valet service is available for \$8 per vehicle Monday through Friday from 6 AM to 5 PM, with the ability to retrieve vehicles until 9 PM. Patients or visitors with valid handicapped parking placard or plate displayed can park for free in the parking garage.

For employees, UVMMC has a detailed parking policy that outlines parking requirements based on job title and shift. All UVMMC staff and affiliates who wish to park their vehicles in a UVMMC controlled parking lot must register their vehicle with the UVMMC Security Department. The hang tags are color coded based on parking assignment (on-site lot or satellite lot). The satellite lots include a free shuttle to the main campus. Generally on-site parking is limited to permits reserved for senior staff, physicians, residents, business needs, and medical needs. For on-call employees, parking is also available on site. In 2022, there were 1,773 permits issued for parking on-site of the 8,138 permits issued total.

Telework & Telehealth

UVMMC has a Remote and Hybrid Work Policy to increase employee engagement and job satisfaction. By allowing remote work, UVM Medical Center expects to realize the efficiencies of decreased turnover, reduced office and parking space needs, and increased work productivity. There are several remote designations, On-site Flex (0-30%), Hybrid Flex (31-70%), Remote Flex (71-100%). The amount of time spent remote is indicated by the numerical values.

Telehealth continues to serve some of the patient and visitor demand for parking on the Medical Center Campus. As previously discussed, telehealth visits represented approximately 10% of patient appointments and procedures for UVMMC based on 2022

figures. It is anticipated that this trend will continue to serve a baseline need in the community and effectively reduce the daily demand for patient and visitor parking on site.

Carpool

UVMHC has a robust and mature carpooling policy for employees with a strong incentive program. Employees who carpool are provided with the opportunity to park in more desirable parking lots, receive gas coupons, and utilize the guaranteed ride home program from CATMA. Employees who wish to carpool must register as a carpool group with the UVMHC Security Department. The carpool program issued 427 carpool permits for 854 participants in 2022, demonstrating the program's popularity.

Bike parking, in particular covered bike parking, is also an area receiving some attention from UVMHC. Re-envisioning of the covered bike parking just outside of the McClure building, which is often full, to maximize the space available and accommodate more bike parking in close proximity to a key entrance of the facility. UVMHC is exploring making this area secure bike parking with fencing for employee bike parking. This project is just one example of the multimodal enhancements taking place to better serve active or alternative modes of transportation to and from UVMHC.

Shuttle and Transit Services

For employees accessing the Medical Center Campus through off-site parking, UVMHC contracts with a bus company to serve the off-site lots with shuttle service. The shuttles serve AM and PM peaks with more frequency of service and more shuttle buses in circulation to serve start and end of shift transit. The off-site lots generally have between 59 and 76 shuttle runs per day serving trips between the hours of 4:15 AM and 9:20 PM. The exception to this is the shuttle serving Centennial and 1 South Prospect, which typically operates with 30 shuttle runs per day serving the AM and PM peaks and on demand service midday. These two lots are in close proximity of the Medical Center Campus, with many users choosing to walk between parking and campus. This Centennial and South Prospect shuttle service is currently suspended due to COVID, and 1 South Prospect staff assigned to Centennial are allowed to park on-site in the interim.

UVMHC has supported discounted local and regional bus transit service for employees in the past. With fare free transit in place, this subsidy has not been tracked through the pandemic. This discounted transit opportunity would return and be tracked should fares return as tentatively planned in 2023. UVMHC has continued to support subsidized ferry service for employees that reside in New York to utilize Lake Champlain Ferries for commuting purposes. For October 2021 through September 2022, an average of 93 monthly car and driver passes and 13 passenger ten ride passes were discounted through this program.

For patients, UVMHC and Special Services Transportation Agency (SSTA) have partnered to provide shuttle services between the Downtown Transit Center and practices within the UVMHC network, like the Tilley Drive and Hinesburg Road locations.

The shuttle service is a free, scheduled service running weekdays between 7:30AM and 4:25PM with reliable and accessible service. UVMMC continues to identify ways like the Tilley Drive Shuttle to serve employees and patients with more efficient transportation options.

Monitoring, Compliance, and Enforcement

The parking on-site and off-site that serves UVMMC is diligently monitored and regulated parking is enforced by UVMMC Security staff per the procedures set forth in the University of Vermont Medical Center Parking and Parking Enforcement Policy documents. UVMMC has a strict vehicle registration and parking permit system that employees are expected to comply with. There are penalties of \$10 for violating any of the parking policies. Repeat offenders are subject to towing/booting at owner's expense with violation notifications to direct supervisors for corrective action. Repeat offenses may result in forfeiture of future parking in UVMMC facilities.

6

Conclusions

This JIPMP demonstrates the ability of the Hill institutions collectively and individually to meet parking demand both currently and in the near-term future. Champlain College, UVM, and UVMMC are jointly committed to continued progress on reducing drive alone, single occupancy vehicle access to their campuses rooted in overarching commitments to climate initiatives. They have demonstrated pursuit of efficiency-based parking management, enabling various TDM strategies to actively manage and mitigate parking demand and encourage alternative mode use.

Two different methodologies demonstrated that the parking supply will serve the peak demand for parking on each institution's campus both currently and into the future. It is noted that the more robust count program that is now in place serves to provide the ground truth for observed parking demand on each respective campus. This data is invaluable to demonstrating the ability of each institution to meet the peak parking demands of their populations. Given these data can only provide a look back at how the demand was served, it is important to have the secondary method of estimating demand based on survey data to demonstrate both current and future peak parking demand, even if these estimates are notably inflated compared to the demonstrated parking utilization. These two methods likely provide the book ends of the actual parking demand on campus at peak times.

The findings shared here will be supplemented over the next five years with annual updates to track demand trends and efficacy of demand management strategies employed.

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A

Appendix A

Lot Counts

The institutions continue conducting quarterly lot counts for three days (Tuesday, Wednesday, and Thursday) and three times (10:00 AM, 12:00 PM, 2:00 PM) to support the 5-year and annual JIPMPs. This constant and consistent data collection has strengthened our demand estimations in the 5-year JIPMP.

There are advantages and drawbacks to using lot counts or survey data to estimate demand. Though lot counts are an inexpensive method to calculate parking demand, they are also usually only representative of a limited time frame. This limitation means typical peak demand may not be captured due to variability (i.e. seasonal mode change, time-off, etc.), and may underestimate demand. Survey data may overestimate demand because it fails to capture daily variation seen in lot counts. However, survey data can break down demand by user group, understand different mode trends, and can forecast future demand patterns. For more information about the advantages and drawbacks of lot counts and survey data for estimating demand, please see the 2020-2022 JIPMP Appendix B which was provided by Jonathan Dowds formerly with UVM's Transportation Research Center.

Survey Administration

The 2022 CATMA Student & Employee Transportation Surveys were launched on October 4, 2022. Direct solicitation emails were sent to employees and students. Table A-1 describes the solicitation process in more detail.

Table A-1. Overview of CATMA's 2022 Transportation Survey solicitation and responses.

	Launch Date	Population Total	Solicitation Total	Total Responses	Response Rate	Margin of Error
Student Survey						
Champlain	10/4/2022	1,736	1,781	416	24%	4%
UVM	10/4/2022	14,088	1,000	189	19%	7%
Employee Survey						
Champlain	10/4/2022	612	944	175	19%	6%
UVM	10/4/2022	4,254	1,000	304	30%	5%
UVMCC	10/4/2022	6,371	8,572	2,279	27%	2%

Survey Weighting

With guidance from UVM's Transportation Research Center, the results of CATMA's 2022 surveys were weighted using population parameters provided by the institutions. Survey weighting is intended to weight survey responses in a way that is reflective of the actual population. This process corrects for segments in population who are either under or overrepresented by those who answered the survey.

Demand Calculation

The demand estimation calculation used in the 2020-2022 JIPMP was provided by UVM's Transportation Research Center. Rather than finding the peak time on campus for all users and the demand for parking of all users, this calculation relies on the peak time on campus for auto-users. This adjustment is reflected by the **peak parking demand percent** listed in each demand calculation (see Table A-2). By making this slight distinction, some overestimation of demand is reduced as well as a reduction in the margin of error.

Peak parking demand percent is calculated by first finding the time the most auto users are on each campus. For employees and off-campus students, auto users are either those who drive alone and half of those carpool as their main mode. For on-campus students, auto users are all individuals who own a car. Then, a proportion is created for each user group (employees, on-campus students, and off-campus students) by taking the number of auto users on campus at peak time and dividing it by the total number of individuals in that user group in the survey. That percentage (which is the peak parking demand percentage) is

multiplied by the total number of users in that group given by the institution which results in demand (see Figure A-1 for formulas).

Table A-2. Summary of peak parking demand on each campus as identified by the 2022 CATMA Employee and Student Transportation Surveys.

Champlain College	Thursday	12:00 PM – 2:00 PM
UVM	Wednesday	2:00 PM – 4:00 PM
UVM Medical Center	Monday	2:00 PM – 4:00 PM

Figure A-1. Top: Formula for calculating peak parking demand percent for employees and off-campus students. Bottom: Formula for calculating peak parking demand percent for on-campus students.

$$\text{Peak Parking Demand \%} = \frac{\text{Drive Alone at Peak Time} + \frac{1}{2}(\text{Carpool at Peak Time})}{\text{All Users}}$$

$$\text{Peak Parking Demand \%} = \frac{\text{Own Vehicle}}{\text{All Users}}$$

Margin of Error

The margin of error is the range within which a true value may be found given a certain confidence interval. All margins of error reported in the 2023-2028 JIPMP are within a 95% confidence interval. The margins of error were calculated using the Complex Samples modules in SPSS and were found for the peak parking demand percent for each user group. For each of the institutions, the composite margin of error was found by summing the squares of each user group's margin of error and taking the square of root of the sum. Knowing the margin of error is useful, because within a 95% confidence interval, we can know the total parking demand for any institution is above or below a certain percentage of the estimated demand given.

B

Appendix B

Comprehensive Development Ordinance – Parking

Sec. 8.3.3 Institutional Parking Management Plans

An Institutional Parking Management Plan shall include the following:

- (a) A narrative that outlines how the proposed parking management plan addresses the specific needs of existing and anticipated development and effectively satisfies the intent of this Article and the goals of the Municipal Development Plan.
- (b) Information specifying the current and anticipated numbers over the ensuing 5 year period for: number of students of all academic programs (full-time, part-time, commuter, on-campus, off-campus, and continuing education), faculty and staff (full-time and part-time), patients and visitors being served by the institution.
- (c) An analysis of the anticipated parking demand by user group, time of day and/or demand by use and parking provided to meet that demand currently and anticipated over the ensuing five-year period;
- (d) Information specifying the number and composition of the institution's vehicle fleet, where these vehicles are regularly kept, and designated "service vehicle-only" parking;
- (e) Strategies used to reduce or manage the demand for parking which may include but are not limited to:
 - 1. Policies which restrict and/or prohibit the bringing of vehicles to the institution for various users or groups of users;

2. A telecommuting program;
 3. Programs and employee and student subsidies to encourage the use of public transit, car-share, walking, and bicycling;
 4. Implementation of a shuttle service system serving off-site parking;
 5. Implementation of a parking permit system to allocate parking throughout the system; and,
- (f) Implementation of a monitoring, compliance and enforcement system to measure and ensure compliance with the plan.

Sec. 8.3.4 Review and Approval of Institutional Parking Management Plans

(a) Plan Approval

Such a plan shall require review and approval by the DRB, after consultation with the planning commission, and after a public hearing. In order to approve a proposed Institutional Parking Plan, the DRB shall find:

- a. the proposed Institutional Parking Plan adequately serves existing and proposed development and user groups by the institution(s);
- b. the proposed Institutional Parking Plan effectively meets the intent of this Article and the goals of the municipal development plan.

Such a plan, if approved by the DRB, shall be applicable for a period not to exceed five (5) years, and may be amended as necessary pursuant to the requirements of this Part. The DRB may approve one extension of up to six (6) months so long as the extension is requested prior to the Plan's expiration.

(b) Annual Reporting

The institution shall provide a report annually to the administrative officer regarding the implementation and performance of the approved plan and any significant changes in the size or makeup of user groups, parking supply, travel by mode for user groups, availability and utilization of parking management strategies, anticipated development activity, and any other conditions impacting supply and/or demand.

Failure to submit such annual report shall be a violation of this ordinance.

Sec. 8.3.5 Review and Approval of Applications for Future Development

Pursuant to Sec. 2.7.8 of this ordinance, no zoning permit or certificate of occupancy may be granted for projects which will impact the supply of or demand for parking without an approved or amended plan. Projects such as routine maintenance, repair, equipment installation, walkways, landscaping, installation of public art, and the like are exempt from this requirement so long as they do not result in a change of use, habitable area, or parking facilities upon which a plan's supply and demand calculations are based.

- (a) In reviewing any application for development from a post-secondary educational or medical institution within the Institutional district, the DRB shall find that the proposal is included and addressed within an approved Institutional Parking Plan and that the proposal is consistent with the approved Plan.
- (b) Any development proposed by a post-secondary educational or medical institution within the Institutional district that is not included and addressed within an approved Institutional Parking Plan shall only be approved pursuant to the underlying parking requirements of Parts 1 and 2 of this Article and upon approval of an amendment to an approved plan.

In addition to application requirements specified in Article 3 and this Part, the Institutions(s) shall submit an amendment to an approved plan that addresses how the development is consistent with or modifies supply and demand calculations and applicable TDM strategies contained in the approved Plan. Amendments may be in the form of an addendum that addresses any relevant sections of an approved Plan. The amendment shall be approved by either the administrative officer or DRB based on the underlying application type. Such developments shall be reflected in subsequent annual reports submitted to the administrative officer, and future plan updates.

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CHAMPLAIN
COLLEGE



The University of Vermont

THE
University of Vermont
MEDICAL CENTER

Joint Institutional Parking Management Plan Institutional Supplement

2023-2028

Prepared For: Planning Commission

Date: April 25th, 2023

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Purpose

The *Institutional Supplement* is intended to further detail the data gathered and analyzed in support of the *Joint Institutional Parking Management Plan* (JIPMP). These data are either further summarized within the JIPMP or not required by the JIPMP and instead documented here in support of the JIPMP and institutional planning purposes.

Champlain College

Table 1 Champlain College Parking Lot Counts

	10:00 AM	12:00 PM	2:00 PM
Winter 2022			
2/8/2022	394	396	390
2/9/2022	187	297	299
2/10/2022	386	403	392
Average	350	55%	
Maximum	403	63%	
Spring 2022			
4/19/2022	309	320	347
4/20/2022	273	279	310
4/21/2022	352	383	382
Average	329	52%	
Maximum	383	60%	
Summer 2022			
7/19/2022	185	181	186
7/20/2022	172	157	150
7/21/2022	166	176	170
Average	172	27%	
Maximum	186	29%	
Fall 2022			
10/4/2022	418	418	409
10/5/2022	363	362	380
10/6/2022	376	419	427
Average	397	62%	
Maximum	427	67%	
Total			
Average	312	49%	
Maximum	427	67%	

Table 2 Champlain College Infrastructure (included in GSF calculation and parking supply)

Name	Primary Use	GSF	Residential Beds	Parking Spaces
194 St Paul Street	Residential/Retail	175000	312	0
	(4,455 GSF Retail)			
308 Maple	Residential	5223	13	0
371 Main	Residential	13326	36	22
396 Main	Residential	8801	36	21
Adirondack Hall	Residential	4631	19	0
Aiken Hall	Administrative/Academic	13701	0	0
Bader Hall	Residential	8140	21	0
Bankus Hall	Residential	10432	45	0
Butler Hall	Residential	26730	89	0
Carriage House	Residential	2376	10	0
Center for Communications and Creative Media (formerly Hauke/Alumni)	Administrative/Academic	87187	0	0
Cushing Hall	Residential	9095	27	7
Durick Hall	Administrative	4036	0	3
Foster Hall	Administrative/Academic	7008	0	0
Freeman Hall	Administrative/Academic	11992	0	0
Garden House (ARC)	Administrative	4371	0	0
Goodhue Coolidge House	Administrative/Academic	4054	0	0
Hill Hall	Residential	9203	37	0
IDX Student Life Center	Administrative/Athletic/	49939	0	5
	Dining			
Jensen Hall	Residential	9972	36	9
Joyce Learning Center	Academic	20483	0	0
Juniper	Residential	28732	95	0
Lakeside Campus	Administrative	39552	0	267
(Miller Center at Lakeside)			0	
Lakeview Hall	Residential	18033	81	0
Lyman Hall	Residential	8550	36	0
Boardman Hall	Residential	31932	59	28

Name	Primary Use	GSF	Residential Beds	Parking Spaces
McDonald Hall	Residential	10922	45	0
Miller Information Commons	Academic	29860	0	42
North House	Residential	5402	16	10
Pearl Hall	Residential	10874	49	0
Perry Caretaker's Cottage	Residential	444	0	0
Perry Carriage Barn	Academic	5546	0	0
Perry Hall	Administrative/Academic	27847	0	16
Rowell Annex	Administrative	2882	0	0
Rowell Hall	Residential	9954	44	36
Sanders Hall	Residential	9716	36	8
Schillhammer Hall	Residential	7836	26	0
SD Ireland Family Center for Global Bus & Tech	Administrative/Academic	24390	0	0
Skiff Hall	Administrative	12493	0	15
Skiff Annex	Administrative/Academic	3354	0	0
South House	Residential	12608	47	12
Summit Hall	Residential	15271	48	30
The Skiff Gallery	Academic	633	0	0
Valcour Hall	Residential	30028	91	0
West House	Administrative	3718	0	0
Whiting Hall	Residential	9975	31	0
Wick Hall	Administrative/Academic	5265	0	0
Subtotal		851517	1385	531
Leased Facilities/Lots				
115 Lakeside Lot				100
158 South Willard	Residential (temporary)	10900	33	11
Total included in GSF		862417	1418	642
Total				717

1. Leased facilities do not contribute to the number of buildings or total GSF of Champlain College.
2. Residential beds in leased facilities included in total.
3. Includes leased spaces but not Maximum Parking

Table 3 Additional Champlain College Infrastructure (not included in GSF calculation or parking supply)

Name	Primary Use	GSF	Parking Spaces
194 St Paul St	Retail	N/A	67
390 Maple St	Residential	3,768	2
436 Maple St	Residential	4,297	2
115 Summit St (President's House)	Residential	3,487	2
270 South Willard St (Provost's House)	Residential	7,478	2
Total		19,030	75

Table 4 Current and Future Employment and Enrollment for Champlain College

	Current (2022)	Future (2028)
Employment		
On-Campus		
Full-time	353	380
Part-time	193	350
Contracted	66	100
<i>Subtotal</i>	<i>612</i>	<i>830</i>
Off-Campus		
Full-time	26	30
Part-time	263	280
Dublin and Montreal Campuses	22	25
Total in Burlington	901	1,140
Total	923	1,165
Enrollment		
On-Campus		
Full-time Undergraduates	1,675	2,080
First-Year	639	

	Current (2022)	Future (2028)
Second-Year	414	
Junior	311	
Senior	311	
Part-time Undergraduates	61	80
First-Year	13	
Second-Year	8	
Junior	10	
Senior	30	
Full-time Graduates	0	0
Part-time Graduates	0	0
<i>Subtotal</i>	<i>1,736</i>	<i>2,160</i>
Study Abroad		
Dublin, Montreal, & Third Party	30	40
<i>Subtotal</i>	<i>30</i>	<i>40</i>
Champlain College Online		
Full-Time Graduates	407	590
Part-Time Graduates	152	150
Full-time Undergraduate	550	500
Part-time Undergraduate	889	1250
<i>Subtotal</i>	<i>1,998</i>	<i>2,490</i>
Total	3,764	4,690

Table 5 Champlain College permit types, cost, and number of permits issued

Type	Users	Cost Per Semester	Permits Issued
Zone 1	Employees	Free / Pay-per-use	277
	Off-Campus Students	Free / Pay-per-use	202
Zone 2	On Campus Students	\$175	197
Main Campus	Main Campus Employee	\$200	76
Zone 5	Education majors & other students with work requirements	\$250	15
	Disabled	Free	17
	Contractor	Free	9
Total			793

Table 6 Citations given by Champlain College Transportation

Year/Semester	# of Valid Citations Issued	# of Warnings	Funds Collected	Cumulative Funds (Since 2004)
2006-2007	-	-	\$ 57,390	\$ 113,390
2007-2008	-	-	\$ 44,175	\$ 157,565
2008-2009	-	-	\$ 57,195	\$ 214,760
2009-2010	-	-	\$ 42,165	\$ 256,925
2010-2011	-	-	\$ 38,550	\$ 295,475
2011-2012	-	-	\$ 51,065	\$ 346,540
2012-2013	1,574		\$ 43,840	\$ 390,380
2013-2014	1,519		\$ 41,680	\$ 432,060
2014-2015	1,069		\$ 30,600	\$ 462,660
Summer 2015	111		\$ 5,585	\$ 468,245
2015-2016	1,326	105	\$ 31,475	\$ 499,720
Summer 2016	32		\$ 2,300	\$ 502,020
2016-2017	1,935	467	\$ 26,481	\$ 528,501
Summer 2017	156	46	\$ 995	\$ 529,496
2017-2018	2,073	274	\$ 28,502	\$ 557,998
Summer 2018	261	44	\$ 2,795	\$ 560,793
2018-2019	1,435		\$ 20,625	\$ 581,418
Summer 2019	245		\$ 2,575	\$ 583,993
2019-2020	1,113	92	\$ 16,963	\$ 600,956
Summer 2020	0		\$ -	\$ 600,956
2020-2021	456	335	\$ 13,100	\$ 614,056
Summer 2021	2		\$ 25	\$ 614,081
2021-2022	1201	1268	\$ 22,402	\$ 636,483
Summer 2022	22	28	\$ 200	\$ 636,683

University of Vermont

Table 7 University of Vermont Parking Lot Counts

	10:00 AM	12:00 PM	2:00 PM
Winter 2022			
2/8/2022	3,301	3,405	3,248
2/9/2022	3,387	3,469	3,219
2/10/2022	3,110	3,357	3,047
Average	3,283	73%	
Maximum	3,469	77%	
Spring 2022			
4/19/2022	2,882	2,868	2,801
4/20/2022	3,158	3,166	3,109
4/21/2022	3,058	3,038	3,033
Average	3,013	67%	
Maximum	3,166	70%	
Summer 2022			
7/19/2022	1,704	1,602	1,605
7/20/2022	1,788	1,790	1,736
7/21/2022	1,785	1,811	1,801
Average	1,736	38%	
Maximum	1,811	40%	
Fall 2022			
10/4/2022	3,320	3,508	3,331
10/5/2022	3,131	3,367	3,188
10/6/2022	3,432	3,342	3,174
Average	3,311	73%	
Maximum	3,508	78%	
Total			
Average	2,836	63%	
Maximum	3,508	78%	

Table 8 Infrastructure (by building use) included in UVM's GSF Calculation

Building Use	Accessory Buildings	Total Buildings	GSF	Residential Beds
Mixed Uses				
Academic / Administrative / Student Support	0	3	242,857	
Academic / Research	7	69	1,937,764	
UVM / UVMMC Academic Research	1	7	253,501	
Administration	10	33	510,524	
Athletics	6	17	475,948	
Student Support	3	20	501,978	
Residential				
Residential Academic	0	3	110,961	5,775
Residential Dining	0	4	260,602	
Residential Central Campus	2	7	209,342	
Residential Redstone Campus	0	14	408,954	
Residential Trinity Campus	0	12	147,174	
Residential Athletic Campus	0	11	591,503	
Total	29	200	5,651,108	5,775

Table 9 UVM Parking Supply by Campus Area

Parking Lot Location	Capacity	Leased Spaces	Usable Spaces
Athletic Commuter	1,733		1,733
Core Central	50		50
Core East	767	-100	667
Core North	369		369
Core South	135		135
Core West	431	-47	384
Commuter Lots	808	-485	323
Redstone Campus	626		626
Trinity Campus	314		314
Off-Site: Burlington ¹	54		54
Off-Site: Outside Burlington ²	210		210
Total in Burlington	5,287	-632	4,655
Total	5,497	-632	4,865

1. Includes parking at the Rubenstein Laboratory and Bioresearch Complex (South Campus).

2. Includes parking spaces at the Colchester Research Facility, Forestry Laboratory, and Miller Barn.

Table 10 Current and Future Employment and Enrollment for UVM

	Current (2022)	Future ¹ (2028)
Employment		
Staff		
Full-time	2,311	2,300
Part-time	155	160
Faculty		
Full-time	861	860
Part-time	927	930
<i>Non-Burlington Employees²</i>	<i>230</i>	<i>230</i>
<i>Subtotal</i>	<i>4,024</i>	<i>4,020</i>
Enrollment		
<i>Undergraduate</i>	<i>11,326</i>	<i>11,300</i>
First-Year	3,044	3,000
Second-Year	3,024	3,000
Junior	2,478	2,800
Senior	2,780	2,500
Graduate and Certificate	1,707	2,000
Medical Student	483	500
Non-Degree Continuing Education ³	572	700
<i>Subtotal</i>	<i>14,088</i>	<i>14,500</i>
Total	18,112	18,520

1. These numbers are projections only, based on UVM's current estimates as of the date of this document.

2. These employees are subtracted when determining the subtotal of employees because it is unknown whether these employees are faculty/staff or part-time/full-time.

3. Most students in Professional and Continuing Education programs either participate virtually or are on campus for limited amounts of time.

Table 11 UVM permit types, cost, and number of permits issued

Category	Type	Cost	Permits Issued
Employee Permits			
Green	Pre-Tax Payroll Deduction	0.64%	2,939
	Affiliate	\$ 329	
	Affiliate 30-Day	\$ 41	
White	Pre-Tax Payroll Deduction	0.48%	
	Affiliate	\$ 247	
	Affiliate 30-Day	\$ 31	
Brown	Pre-Tax Payroll Deduction	0.32%	
	Affiliate	\$ 165	
	Affiliate 30-Day	\$ 21	
Silver (Off-Site)	Pre-Tax Payroll Deduction	N/A	
	Affiliate		
	Affiliate 30-Day		
Occasional Use	Permit 6-12 Days	N/A	193
	Brown (Peripheral)	\$ 12	
	White (Proximate)	\$ 18	
	Green (Main)	\$ 24	
Carpool (All carpools are paid through Pre-Tax Payroll Deduction)	Green - 2 Person	0.32%	
	Green - 3 Person	0.21%	
	Green - 4 Person	0.16%	
	White - 2 Person	0.24%	
	White - 3 Person	0.16%	
	White - 4 Person	0.12%	
Student Permits			
Residential	30-Day Black, Blue, Purple, and Red	N/A	1,186
	Temporary (1 Semester)	\$ 180	
	Black, Blue, Purple, and Red	\$ 330	
	30-Day Brown	N/A	1,333

Category	Type	Cost	Permits Issued
Commuter and Graduate Students/Medical Students (1st & 2nd Year)	30-Day Gold	N/A	
	Gold - Evening	\$ 69	
	Gold - Evening (1 Semester)	\$ 45	
	Brown - Day & Evening	\$ 115	
	Brown - Day & Evening (1 Semester)	\$ 73	
Medical Students (3rd & 4th Year)	Yellow - Day & Evening	\$ 329	303
	30-Day Yellow	\$ 30	
Occasional Use	Brown	\$ 12	11
	White	N/A	0
	Yellow	N/A	0

Table 12 Citations given by UVM Transportation and Parking Services

Violation	Fine	Citations Issued	Funds Collected
No Valid Permit	\$ 50	2994	\$ 149,700
Habituals/Warning-No Permit	\$ 50	347	\$ 17,350
Habitual Offender-No Permit	\$ 110	409	\$ 44,990
Restricted Area	\$ 30	1781	\$ 53,430
Habituals/Warning Restricted Area	\$ 30	216	\$ 6,480
Habitual Offender- Restricted Area	\$ 90	307	\$ 27,630
Expired Space	\$ 25	1268	\$ 31,700
Habituals/Warning-Expired Space	\$ 25	206	\$ 5,150
Habitual Offender-Expired Space	\$ 85	351	\$ 29,835
Unauthorized Permit	\$ 80	101	\$ 8,080
Habitual Offender Unauthorized Permit	\$ 140	4	\$ 560
Falsified Information	\$ 80	0	-
Handicap Space	\$ 80	21	\$ 1,680
Relocating at Owner's Expense			
Roadway			
Total		8,005	\$ 376,585

University of Vermont Medical Center

Table 13 University of Vermont Parking Lot Counts – All Lots

	10:00 AM	12:00 PM	2:00 PM
Winter 2022			
2/8/2022	2,861	2,873	3,369
2/9/2022	2,886	2,944	3,306
2/10/2022	2,903	2,939	3,262
Average	3,039	75%	
Maximum	3,369	84%	
Spring 2022			
4/19/2022	2,828	N/A	2,865
4/20/2022	2,781	N/A	2,803
4/21/2022¹	950	N/A	1,066
Average	2,216	55%	
Maximum	2,865	71%	
Summer 2022			
7/19/2022	3,098	N/A	3,141
7/20/2022	3,000	N/A	3,060
7/21/2022	2,892	N/A	2,997
Average	3,032	75%	
Maximum	3,141	78%	
Fall 2022			
10/4/2022	3,082	N/A	3,029
10/5/2022	2,897	N/A	2,944
10/6/2022	2,849	N/A	3,023
Average	2,971	74%	
Maximum	3,082	76%	
Total			
Average	2,839	70%	
Maximum	3,369	84%	

¹ Only satellite lots counted.

Table 14 University of Vermont Parking Lot Counts – On-Site Lots Only

	10:00 AM	12:00 PM	2:00 PM
Winter 2022			
2/8/2022	1,398	1,411	1,881
2/9/2022	1,458	1,482	1,804
2/10/2022	1,434	1,480	1,871
Average	1,580	69%	
Maximum	1,881	82%	
Spring 2022			
4/19/2022	1,697	N/A	1,753
4/20/2022	1,684	N/A	1,723
4/21/2022	N/A	N/A	N/A
Average	1,715	74%	
Maximum	1,753	76%	
Summer 2022			
7/19/2022	1,765	N/A	1,828
7/20/2022	1,681	N/A	1,774
7/21/2022	1,684	N/A	1,732
Average	1,744	76%	
Maximum	1,828	79%	
Fall 2022			
10/4/2022	1,941	N/A	1,885
10/5/2022	1,774	N/A	1,804
10/6/2022	1,728	N/A	1,929
Average	1,844	80%	
Maximum	1,941	84%	
Total			
Average	1,705	74%	
Maximum	1,941	84%	

Table 15 GSF of UVM Medical Center buildings.

Building Use	GSF
Medical Center Campus	
Hospital (In-Patient)	786,057
Education	35,597
Other	877,085
<i>Subtotal</i>	<i>1,698,739</i>
1 South Prospect	
Other	149,404
Other Burlington Sites¹	
Other	48,518
Total	1,896,661

Notes

1. Not included in GSF for JIPMP calculations

Table 16 UVM Medical Center parking supply included in JIPMP.

Location	Number of Spaces
On-Site Parking	
Medical Center Campus	
ACC Garage	1,224
ACC Loading Dock	21
ER Lot	47
McClure Parking Garage	317
Patrick Loading Dock	9
South Lot	425
<i>Subtotal</i>	<i>2,043</i>
1 South Prospect	
Lot A	47
Lot B	178
Lot D	197
Pearl Street Lot	35
<i>Subtotal</i>	<i>457</i>
On-Site Total	2,500

Table 17 UVM Medical Center off-site parking supply (not included in JIPMP calculations for on-site parking).

Location	Number of Spaces
Off-Site Parking	
Other Burlington Sites	
95 St. Paul Street	0
112 Colchester Avenue	8
128 Lakeside Avenue	38
184 Pearl Street	12
195 Colchester Ave	40
199 Main Street	0
<i>Subtotal</i>	<i>98</i>
Off-Site Lots	
UVM Catamount East	285
UVM Centennial	200
UVM Jeffords Lot	100
UVM Core West	0
Fanny Allen Campus	155
Technology Park	200
115 Lakeside Ave	250
<i>Subtotal</i>	<i>1,190</i>
Off-Site Total	1,288

Table 18 Current and Future employment UVM Medical Center.

	Medical Center Campus	1 South Prospect	Other Burlington Sites	Total
Current (2022)				
Day Shift	2382	418	88	2888
Evening Shift	261	10	0	271
Night Shift	599	6	0	605
Rotating Shift	744	37	5	786
Day Shift	548	68	7	623
Evening Shift	55	3	0	58
Night Shift	78	0	0	78
Rotating Shift	138	19	1	158
Per Diem Employees	920	85	3	1008
<i>Employee Subtotal</i>	5,725	646	104	6,475
Current Total	5,725	646	104	6,475
Future (2028)				
Day Shift	2382	418	88	2888
Evening Shift	261	10	0	271
Night Shift	599	6	0	605
Rotating Shift	744	37	5	786
Day Shift	548	68	7	623
Evening Shift	55	3	0	58
Night Shift	78	0	0	78
Rotating Shift	138	19	1	158
Per Diem Employees	920	85	3	1008
<i>Employee Subtotal</i>				
Future Total	5,725	646	104	6,475

Table 19 Annual Daily Appointments and Procedures at UVM Medical Center

	2022 Annual Daily Appointments & Procedures	2022 Average Daily Appointments & Procedures (254 business days)
Medical Center Campus	566,847	2,232
1 South Prospect	108,061	425
Other Burlington Sites	23	-
Total	674,931	2,657

Table 20 Annual Daily Telehealth Appointments and Procedures at UVM Medical Center

	2022 Annual Daily Telehealth Appointments	2022 Average Daily Telehealth Appointments (254 business days)
Medical Center Campus	39,715	156
1 South Prospect	35,158	138
Other Burlington Sites	284	1
Total	75,157	295

Table 21 Total permits issued by UVM Medical Center

Location	Number of Permits
Medical Center Campus	
ACC permits	341
McClure Residents, Nurse practitioners, Phys Assistants, Midwives	565
Physicians (ACC permits)	138
Physicians (South Lot permits)	84
Carpools (854 Participants)	427
Business Needs	134
115 Lakeside, Day Shift	969
115 Lakeside, Rotator	593
Technology Park, Day Shift	418
Technology Park, Rotator Shift	178
Fanny Allen Shuttle Lot, Day Shift	368
Fanny Allen, Rotators	136
Centennial, Day Shift	302
Centennial, Rotators	241
South Lot	84
UVM Catamount East, Day Shift	407
UVM Catamount East ,Rotators	163
UVM Jeffords Lot, Day Shift	164
UVM Jeffords Lot, Rotators	101
Evening/Night	1240
1 South Prospect	
Centennial, Day Shift	679
Centennial, Rotator	129
Pearl	19
Taft	69
Main	189
Total Medical Center Campus	7,053
Total South Prospect	1,085
Total	8,138

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Meagan Tuttle

From: Barbara Headrick <barbara.headrick@gmail.com>
Sent: Sunday, April 23, 2023 5:59 PM
To: Meagan Tuttle
Subject: Fwd:

[WARNING]: This email was sent from someone outside of the City of Burlington.

Megan,
I am sending this to you so it can be forwarded to the DRB with the JIPMP if/when the Planning Commission approves the JIPMP.
Thank you.
Barbara

----- Forwarded message -----

From: **Barbara Headrick** <barbara.headrick@gmail.com>

Date: Sun, Apr 23, 2023 at 5:47 PM

Subject:

To: <amontroll@burlingtonvt.gov>, Emily Lee <elee@burlingtonvt.gov>, Alexander Friend <afriend@burlingtonvt.gov>, Julia Randall <jrandall@burlingtonvt.gov>, <mgaughan@burlingtonvt.gov>

4/23/23

Dear Planning Commissioners:

Thank you for your work. Please, when you review the 2023-2028 JIPMP at this week's meeting, will you keep these comments and requests in mind? It would be good for the Commission to postpone its approval of the JIPMP until after:

- CATMA makes necessary corrections to the JIPMP data and analysis
- CATMA includes critically important information that is missing. (explained below)
- UVM reduces the number of cars coming to campus sufficiently to eliminate its current and forecasted parking deficits.

Key findings:

1. The JIPMP needs to be modified because the data in the report is incorrect. For example, the 600 students who live in Redstone Commons Apartments and Redstone Lofts live on campus but are included in the off-campus student count. At least 60% of these students have cars on campus. They have dedicated parking lots that only they can access. The incorrect classification of these students resulted in an incorrect estimation of UVM's parking demand and supply. After the correction is made for these students, the analysis will show that UVM has a parking deficit under both methodologies for estimating parking demand.

2. The margin of error (+/- 1046 parking spaces) that UVM describes on page 47 in footnote #5 also indicates that UVM (more often than not) has a parking space deficit.

The JIPMP is not supposed to be approved if UVM shows a parking space deficit. Furthermore, this JIPMP does not present a high confidence plan to eliminate this parking deficit.

3. On pages 52 and 62, UVM makes vague reference to an efficiency-based parking management strategy. However, in this JIPMP, UVM entirely fails to describe this parking efficiency strategy and how it will impact the surrounding neighborhoods. The lack of full disclosure and discussion of this strategy indicates that UVM is trying to hide the details of their plans from us and trick the Planning Commission and public into not protesting UVM's plans for garages on the edge of campus that will create drive-through traffic in adjacent neighborhoods. The intent of the JIPMP is for UVM to accurately present where UVM employees, students and event visitors are going to park their cars and other ways of getting to campus; who is going to use the on and off campus UVM parking spaces and when; and how UVM can do better at reducing the number of cars coming to campus (commuter and residential student cars, reduce traffic, and pollution. The purpose of the review is not only to make sure that UVM's parking doesn't overflow campus, but as included in our city master plan, also to make sure that UVM is being effective with TDM to reduce pollution and not causing harmful traffic impacts on nearby residential neighborhoods. In this JIPMP, UVM has failed in all regards because the data shows a parking deficit before and after including analysis corrections and the margin of error that UVM footnotes. Furthermore, UVM has failed to provide a clear explanation of its 5-year strategy. The information provided also does create confidence in UVM having serious interest in reducing cars coming to campus and pollution. The "Parking Efficiency" strategy, if and when explained, will probably show that UVM, as usual, is largely interested in doing the minimum possible to serve its own interests even if the UVM strategy harms the surrounding community with more traffic and more pollution. UVM seems to think it is okay for its commuters cars to park in parking structures to be built bordering residential neighborhoods rather than building structure parking lots on Main Street (behind the hotels or underground at Jeffords lot). UVM's parking efficiency strategy prioritizes the polluting commuter driver's interests and convenience ahead of the nearby residential neighborhood's health and safety. (It's a bad strategy.)

Listed below are additional questions that I would like the Planning Commission to consider asking CATMA and the relevant institution:

A highly effective way to reduce pollution is for commuters to use their local town's park and ride lots (or other out of town parking lots) and then use buses (or preferably UVM direct shuttles) for their multi-mile commute into Burlington.

Pollution is not reduced if commuters drive to a parking structure on the edge of campus and then UVM uses all day circulating shuttles to drive commuters the last ½ mile to their destination.

Hence, please ask UVM to:

1. Explain what else (not more of the same) UVM can do to keep most commuter cars closer to home (and not commuting into Burlington). Can UVM start providing direct shuttle service from each town's park and ride lot to campus in order to reduce SOV rates, parking demand, traffic and pollution?
2. Explain with full transparency and truth the UVM (environmentally irresponsible and quality of life damaging) strategy to build multiple parking structures around the edge of campus (with traffic driving through residential neighborhoods to reach the parking structures). And double this harm on adjacent neighborhoods by increasing the number of (usually empty) UVM shuttles so commuters can avoid walking or biking a half mile across campus. Shuttle service on the relatively small UVM campus is a stupid way to get people around since there are many hours during the day that demand is near zero but the empty buses keep cycling their route and causing more pollution and bus traffic/noise.

Also ask:

3. On pages 43 and 44 of the JIPMP, UVM lists new projects to be built. This includes new on campus housing with a low estimate ranging from 250,000 to 500,000 square feet. Typically, there is 1 student bed for every 209 sq feet in a student residence hall. (Example: Coolidge Hall is 30,510 sq feet and houses 146 students, which means 209 sq ft / bed.) If UVM actually builds 350K to 500K square feet of housing on campus, that equates to 1200 to 2400 more students on campus. Can UVM reconcile this with UVM forecasting that its total enrollment will only increase by 284 students?
4. Coolidge Hall is a 1st year student dorm that UVM plans on demolishing before building a much larger dorm. The schematics online (since removed) show a large parking garage on the 1st level. The table on page 44 in the report indicates that the new parking structure may hold 190 cars. This will drastically increase car and UVM shuttle traffic in the Hill Section. Why does UVM want a parking structure on this beautiful historic site that abuts a residential neighborhood when there are better locations, such as the Jeffords parking lot on Main Street, for a parking structure that can keep UVM traffic out of residential neighborhoods? Isn't a parking garage on the Redstone Green campus contradictory to the goal of reducing the number of cars that students bring to campus and reducing the number of commuters who drive to Burlington? Wouldn't it be better overall and for the adjacent neighborhood if visitors to PFG Complex events parked in parking lots and parking structures on Main Street, near Spear Street and the I89 intersection?
5. In a prior JIPMP, UVM said it would create 200 to 400 parking spaces at the Colchester. How many of these spaces have since been created and how many are in use? What is the plan for the future number of parking spaces at this location?
6. In the 2023 JIPMP, UVM reports that it is currently has 210 spaces outside of Burlington, but these parking spaces are spread among three locations: the Colchester Research Facility, the UVM Barn, and UVM's Forestry Laboratory. How many parking spaces are at each of these locations? What are the rules regarding who can use these parking spaces? Can permit holder park there all day, every day?
7. Are there other lots that UVM can create or lease to keep more cars outside of Burlington and reduce commuter pollution by significantly reducing the number of miles they drive? What has UVM done to scope and negotiate these arrangements?
8. Does UVM's parking capacity of 4,655 in Burlington include spots that are restricted, such as ADA parking spaces, 15-minute parking spaces, UVM Fleet parking spaces? All together these total to about

400 spaces and since these spaces are restricted, they shouldn't be included in the supply calculation to determine the net balance when looking at commuter, residential student and event visitor parking demand.

9. Top of page 43 says the 200 parking spaces on Pine Street were not needed. Wasn't the low demand due to the lot being for only long-term storage (fenced in and locked) and needed to call someone to unlock the gate and the lack of direct transport between the lot and UVM campus? Didn't UVM give up on this pretty fast because of lack of interest and the operational pain of managing access to locked up car lot?

10. How many on-campus students were denied an on-campus parking permit even though they qualified for one? Same question for off-campus students. How is this different from 5 years ago? This is relevant because these students park on-street when they can't obtain an on-campus permit. This negatively affects the community while it helps UVM (incorrectly) claim it has a parking surplus.

If the Planning Commission decides to approve the report, I'd like to see that vote be contingent on some edits to the report please.

A. All references to the efficiency parking standards and methodologies need to be removed from pages 52, 62 (and elsewhere) in the report until after UVM has fully disclosed the actual location and sizes of the new parking structures and thoroughly vetted these projects with well the surrounding neighborhoods and residents who will be most impacted.

B. The data and analysis in this JIPMP report corrected to separate out the Redstone Lofts and Redstone Apartments student numbers and their parking supply and demand since only these residents are allowed to use the parking lots associated with these residential buildings.

C. The 2023-2028 JIPMP report modified to include the information that the DRB requested when they reviewed the Year 2019 JIPMP and approved it for only 2 years because they wanted to see the requested data.

D. A full strategy on how UVM will significantly reduce the number of cars coming to campus without having the drivers park on-street.

E. Require UVM to include in its table the CDO required number of parking spaces for adding 2000 new seats to the Tarrant/Gutterson Event space. These new seats mean that UVM should be required to provide 500 more parking spaces near I89 and Main Street for visitors going to the PFG complex. UVM failed to disclose the 2000 new seats to the Planning Commission and the DRB. UVM also failed to disclose that it intends to host events (like conferences) up to 7300 people at one time (versus the largest events now are 4000 people and when that happens there is a parking shortage. Because this project has been postponed due to COVID, higher material and labor costs, and financial constraints, UVM will probably have to ask for a permit renewal. The JIPMP should at least be made accurate to reflect the truth regardless of what corrections to permit requirements can be made.

Burlington Planning Commission

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www.burlingtonvt.gov/pz

Andy Montroll, Chair
Bruce Baker, Vice-Chair
Yves Bradley
Alexander Friend
Michael Gaughan
Emily Lee
Julia Randall

Burlington Planning Commission

Tuesday, April 25, 2023, 6:30 P.M.

Hybrid Meeting via Zoom and in the Bushor Conference Room

Draft Minutes

Members Present	A. Montroll, Y. Bradley, A. Friend, E. Lee, J. Randall
Staff Present	C. Dillard, S. Morgan, M. Tuttle
Public Attendance	S. Bushor, C. Forbes, E. Fox, J. Smith, L. Ravin, M. Young, S. Gustin, B. Hedrick

I. Agenda

Call to Order	Time: 6:30pm
Agenda	No changes.

II. Public Forum

Name(s)	Comment
S. Bushor	
B. Hedrick	

III. Chair's Report

A. Montroll	
-------------	--

I. Directors Report

M. Tuttle	
-----------	--

I. 2023-2028 Joint Institutional Parking Management Plan (JIPMP)

II. Proposed CDO Amendment: ZA-23-04 Temporary Structures

Action: Approve for future public hearing with statutory report as amended		
Motion By: A. Friend	Seconded by: J. Randall	Unanimous
The Commission will discussed the proposed amendment, which would provide additional flexibility in the Temporary Structure provisions to exempt non-residential Temporary Structures from requiring a zoning permit for up to 60 days in Civic Spaces as well as all enumerated City of Burlington Parks.		

III. Commissioner Items

Action: None
- J. Randall joined the youth board for the Champlain Adirondack Biosphere Network

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IV. Minutes and Communications

Action: Approve the minutes and accept the communications		
Motion by: A. Friend	Second by: J. Randall	Approved: Unanimous

V. Adjourn

Adjournment	Time: 8:29pm	
Motion: J. Randall	Second: A. Friend	Vote:

DRAFT



CHAMPLAIN
COLLEGE



The University of Vermont

THE
University of Vermont
MEDICAL CENTER

Joint Institutional Parking Management Plan

2023-2028

Prepared For: Planning Commission

Date: April 25th, 2023

Acknowledgements

Institutional Partners

Champlain College

Nic Anderson	Senior Director of Planning and Operations
Eliana Fox	Sustainable Transportation Coordinator



University of Vermont

Lani Ravin	Associate Planner
Lisa Kingsbury	Associate Director of Planning
Abby Bleything	Sustainable Transportation Program Manager
Taylor Page	Business Manager
Claire Forbes	Associate Planner
James Smith	Director of Transportation and Parking Services



University of Vermont Medical Center

Ashley Bond	Director of Real Estate
Mike-Ann Young	Director Security, Parking and Transportation



Chittenden Area Transportation Management Association

Sandy Thibault	Executive Director
Joshua Katz	Program Analyst



Consultant Team

Karen Sentoff	VHB
Elisabeth Sundberg	VHB
Jenn Conley	VHB



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Executive Summary

The Joint Institutional Parking Management Plan (JIPMP) submitted demonstrates current and anticipated parking demand for Burlington’s “Hill” Institutions to meet the requirements set forth in Article 8 of the Comprehensive Development Ordinance. Comprised of Champlain College, University of Vermont (UVM), and University of Vermont Medical Center (UVMMC), the “Hill” Institutions’ parking supply and demand are summarized within this 2023-2028 JIPMP based on data gathered during the Fall of 2022. This assembled data informs the analysis that demonstrates that the existing parking supply meets current demand for each institution. In addition, anticipated development and growth on each campus informs the anticipated parking supply and demand out to 2028, with a 5-year projection that coincides with the anticipated approval interval of this document.

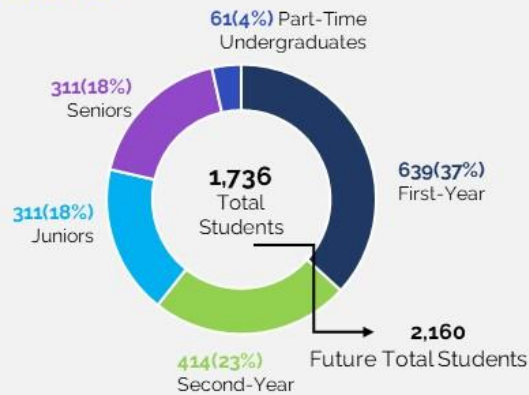
Each institution’s current and anticipated infrastructure, user populations, parking demand, fleet, and strategies to keep parking supply and demand in balance are summarized below as outlined in Article 8. These facts and figures are further detailed within the report and supplemental documentation.

CHAMPLAIN FACT SHEET



**CHAMPLAIN
COLLEGE**

STUDENTS



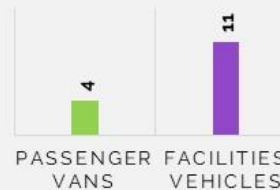
EMPLOYEES



CURRENT PEAK PARKING DEMAND

642	741	427	833
Total Parking Supply	Estimated Demand (based on Survey ¹)	Utilization (based on Counts)	ITE Estimate ²

FLEET VEHICLES



15 Fleet Vehicles

- All Fleet Vehicles parked in designated spaces

FUTURE DEVELOPMENT



39,000 gsf (approx.) will be added with future development projects and 30 residential beds

Future Projects

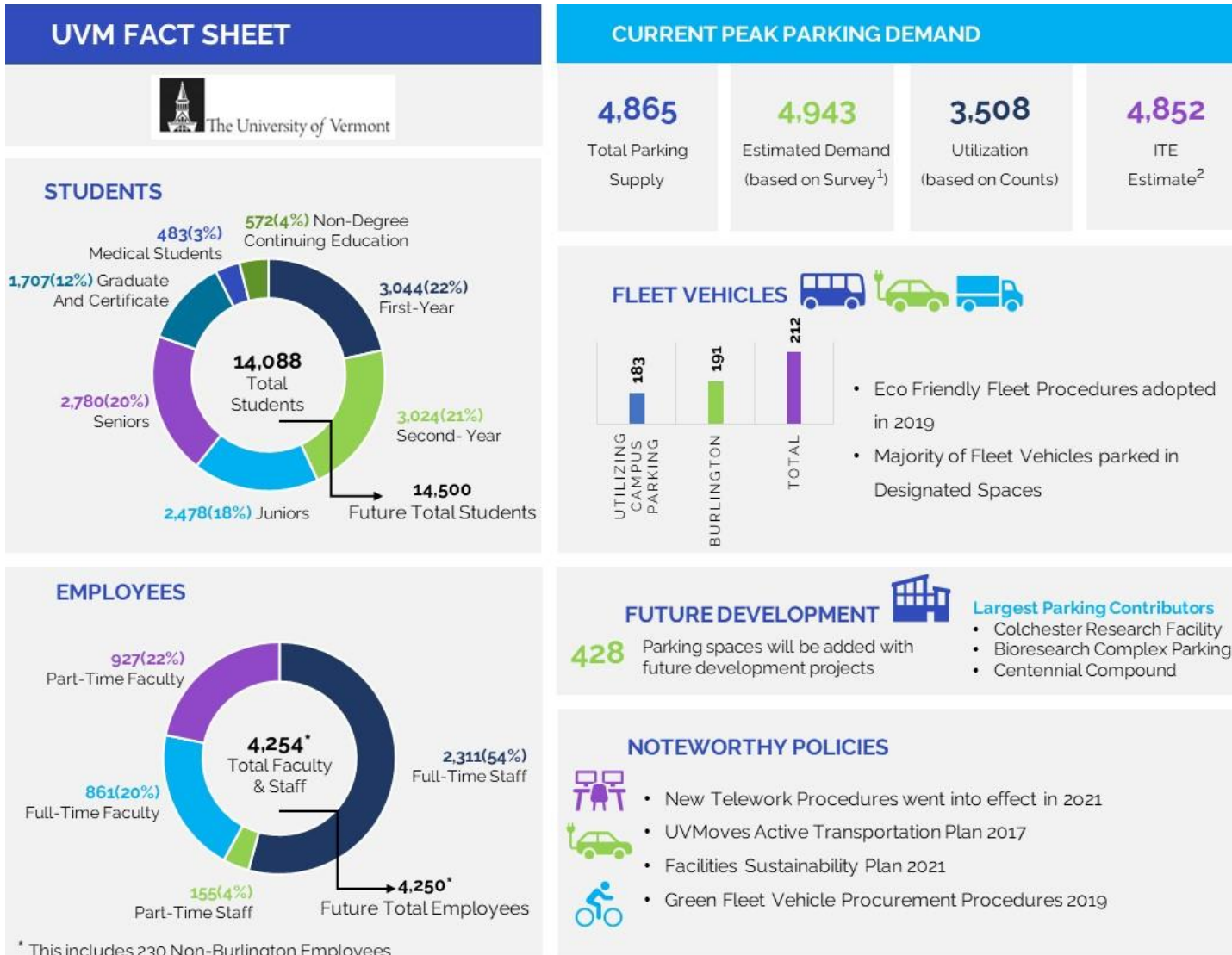
- Foster Hall Addition
- New ITS Building
- Conversion of Building to Residential Hall

NOTEWORTHY POLICIES

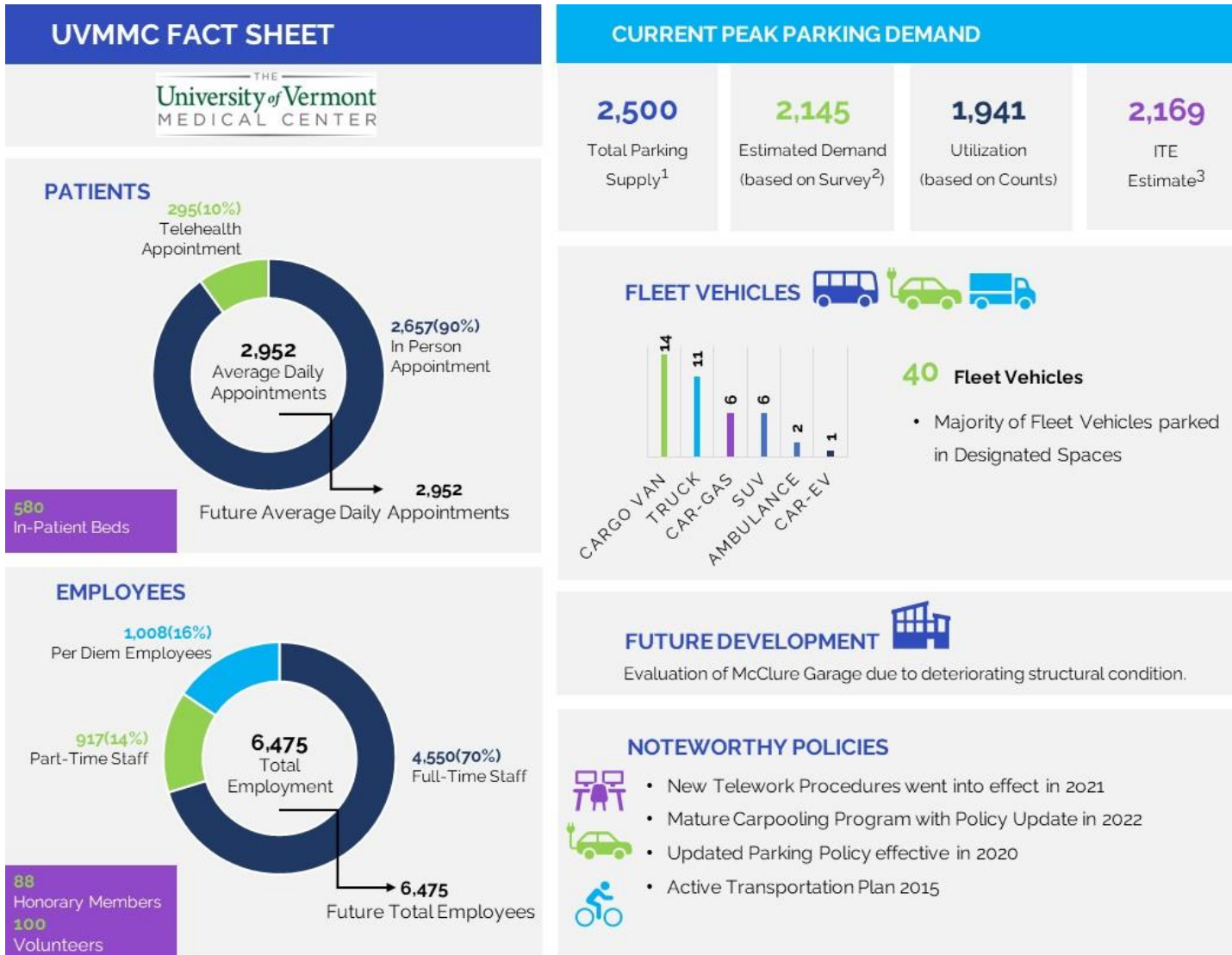


- New Interim Workplace Flexibility People Center effective in 2022
- Sustainability Action Plan completed in 2013
- Active Transportation Plans effective in 2015
- Parking Policies effective in 2017
- Sustain Champlain Campaign

1. Estimated parking demand based on survey of employees and students reporting predominantly driving alone or carpooling to serve their transportation to campus and typically on campus at peak time, thus likely overestimating actual peak parking demand.
2. Estimated parking generation based on the total campus population fitted to the curve for a sample of institutions from the Institute of Transportation Engineers *Parking Generation Manual 5th Edition*.



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1. Total parking supply based on on-site parking spaces.
2. Estimated parking demand representing on-site parking based on survey of employees reporting predominantly driving alone or carpooling to serve their transportation to campus, typically on campus at peak time, and parking in on-site lots during peak times.
3. Estimated parking generation based on the number of in-patient beds sampled from the average trip rate for similar institutions from the Institute of Transportation Engineers *Parking Generation Manual 5th Edition*.

1

Introduction

The Joint Institutional Parking Management Plan (JIPMP) is submitted to the Planning Commission and Development Review Board to demonstrate current and anticipated parking demand for Burlington’s “Hill” Institutions to meet the requirements set forth in Article 8 of the Comprehensive Development Ordinance. Burlington’s “Hill” Institutions, comprised of Champlain College, University of Vermont (UVM), and University of Vermont Medical Center (UVMC), are the founding members of the Chittenden Area Transportation Management Association (CATMA). CATMA has submitted Joint Institutional Parking Management Plan and annual updates to the City of Burlington on behalf of the “Hill” Institutions since 2009. This JIPMP may be approved by Burlington’s Planning Commission and Development Review Board (DRB) for a period of up to five years with annual updates reported to the City’s Office of City Planning and Department of Permitting & Inspections.

This introductory chapter summarizes the purpose and content of the JIPMP and provides a high-level overview of CATMA and their role in jointly supporting institutional transportation management.

Purpose & Content

The Joint Institutional Parking Management Plan advances the intent of PlanBTV by demonstrating the commitment of the Institutions to grow sustainably in support of the vision of Burlington as a *distinctive city*¹. Recognized for their contributions to the *unique economic identity* of the City as a center for education and healthcare, the Institutions serve a key role in advancing

¹ [Plan for Action](#) | [planBTV: Burlington's Comprehensive Plan \(arcgis.com\)](#)

the core principles of PlanBTV by planning for well-connected, human-scale environments that integrate new development with the existing campus character. More specifically, the 5-Year JIPMP and its annual updates are intended to:

- › Recognize the need to manage parking demand and resources holistically and creatively, employing transportation demand management (TDM) practices as well as supplying adequate parking facilities;
- › Recognize the efficiencies gained when several neighboring institutions share resources and collaboratively participate in parking and TDM programs; and,
- › Ensure that city streets in nearby neighborhoods are not unfairly burdened by parking demands from post-secondary education or medical institutions.

Based on the City of Burlington's Comprehensive Development Ordinance Article 8 Section 8.3.3², *an Institutional Parking Management Plan shall include the following:*

- (a) *A narrative that outlines how the proposed parking management plan addresses the specific needs of existing and anticipated development and effectively satisfies the intent of this Article and the goals of the Municipal Development Plan.*
- (b) *Information specifying the current and anticipated numbers over the ensuing 5 year period for: number of students of all academic programs (full-time, part-time, commuter, on-campus, off-campus, and continuing education), faculty and staff (full-time and part-time), patients and visitors being served by the institution.*
- (c) *An analysis of the anticipated parking demand by user group, time of day and/or demand by use and parking provided to meet that demand currently and anticipated over the ensuing five-year period;*
- (d) *Information specifying the number and composition of the institution's vehicle fleet, where these vehicles are regularly kept, and designated "service vehicle-only" parking;*
- (e) *Strategies used to reduce or manage the demand for parking which may include but are not limited to:*
 - 1. *Policies which restrict and/or prohibit the bringing of vehicles to the institution for various users or groups of users;*
 - 2. *A telecommuting program;*
 - 3. *Programs and employee and student subsidies to encourage the use of public transit, car-share, walking, and bicycling;*

² [Zoning Ordinance | City of Burlington, Vermont \(burlingtonvt.gov\)](#)

4. *Implementation of a shuttle service system serving off-site parking;*
 5. *Implementation of a parking permit system to allocate parking throughout the system; and,*
- (f) *Implementation of a monitoring, compliance and enforcement system to measure and ensure compliance with the plan.*

In order to convey the documented purpose, meet the requirements of the ordinance, and satisfy the intent of Article 8, the JIPMP is organized into chapters summarizing the parking management environment collectively for the institutions and individually for each institution. In an effort to streamline the content of this document, each institutional chapter contains the elements outlined in the ordinance above. The chapters are organized into existing and anticipated infrastructure and development (Section 8.3.3 (a)), existing and anticipated community population (Section 8.3.3 (b)), existing and anticipated parking demand (Section 8.3.3 (c)), fleet characteristics (Section 8.3.3 (d)), highlighted strategies (Section 8.3.3 (e)), and monitoring, compliance, and enforcement (Section 8.3.3 (f)). In addition, a *JIPMP Institutional Supplement* includes further detail but is not essential to the document.

CATMA

Originally established in 1992 by the “Hill” Institutions and expanded in 2015 to serve as a regional transportation management association, CATMA has served Chittenden County with transportation demand management services, incentives, and programs for over 30 years. CATMA’s mission is to work with members and community partners to plan and manage safe, convenient, and economical transportation and parking options with the aim of reducing environmental impacts and improving coordination of land use. More information on CATMA can be found at catmavt.org.

Transportation Management Associations (TMA)

TMAs are associations, organizations, or cooperatives that provide transportation services and education to businesses, property owners, residents, and employees in a defined geographic area, combining their efforts to expand transportation options and reduce program costs. They are not-for-profit collaborations of private and public sector entities working together towards common goals, such as congestion mitigation, transportation services and pollution reduction.

Transportation Demand Management (TDM)

The term *transportation demand management* means the use of strategies to inform and encourage travelers to maximize the efficiency of a transportation system, leading to improved mobility, reduced congestion, and lower vehicle emissions, including strategies that use planning, programs, policies, marketing, communications, incentives, pricing, data and technology."³

³ Association for Commuter Transportation. 2023, "What is TDM?" [What is TDM - Association for Commuter Transportation \(actweb.org\)](https://actweb.org/what-is-tdm/)

2

Collective Institutional Summary

Each of the institutions' parking supply and demand are summarized within based on data gathered during the Fall of 2022. This assembled data informs the analysis that demonstrates that the existing parking supply meets current demand for each institution. In addition, information regarding the anticipated development and growth on each campus informs the anticipated parking supply and demand out to 2028, a time horizon of approximately 5 years. The 5-year projections coincide with the anticipated approval interval of this document.

The intent of the JIPMP, and parking management planning more generally, is to demonstrate the policies and programs that enable utilization of parking resources more efficiently. For the institutions, this has and continues to entail many strategies employed collectively, through CATMA and agreements among the institutions, as well as individually, to best utilize resources given the transportation mobility and parking needs of each institution's population.

Peak Parking Demand

Two primary methods were used to estimate the current peak parking demand for each institution: count and survey data. The methods employed have been utilized previously and are referenced in the *2020-2022 JIPMP*⁴. As has been noted in previous

⁴ CATMA, *2020-2022 Joint Institutional Parking Management Plan*, Appendix A. https://catmavt.org/sites/default/files/uploads/2020-2022_jipmp.pdf

JIPMP documents, there are limitations to both methods of estimating parking demand, however, it is reasonable to assume that these two methodologies provide low and high estimates to represent the book ends of actual peak parking demand on each campus. It is noted that previous JIPMP documents had fewer counts to rely on, however, the representation of peak utilization via count data is considered reliable given the count programming that has been instituted.

Table 1 Current Institutional Parking Demand Summary

	Champlain College	UVM	UVM Medical Center
Current Conditions			
Potential Users¹	2,348	17,540	9,427
Peak Parking Demand Survey	741	4,943	2,145
Peak Parking Utilization Counts	427	3,508	1,941
Total Parking Supply	642	4,865	2,500
Net Spaces Peak Demand	-99	-78	355
Net Spaces Peak Utilization	215	1,357	559

1. Potential users include students and employees for Champlain College and UVM and employees and patients at UVMHC.

Consistent, quarterly lot counts provided a ground truth during limited time windows (i.e. three days during peak periods at four times throughout the year) to demonstrate the utilization of the institutionally controlled lots. Although these time windows are targeted to capture peak times, it is recognized that these count data may slightly underestimate the typical peak parking demand as they only represent a limited time frame and may not capture peak parking demand due to variability. The peak of the utilization counts was used to represent peak parking based on lot counts.

Survey data provide samples from which estimates of peak parking demand can be derived based on user groups, mode trends, and other reported travel behaviors. These data summarize reported, typical patterns for different user groups but may not capture the daily variability that lot counts

Table 2 Future Institutional Parking Demand Summary

	Champlain College	UVM	UVM Medical Center
Future Conditions			
Potential Users	2,990	17,820	9,427
Total Peak Parking Demand	992	4,988	2,145
Total Parking Supply	642	5,693	2,500
Net Spaces Peak Demand	-350	705	355

are able to, thus providing an overestimate of typical peak demand. In addition, these trends by user group can be applied to future cases providing a reasonable means for forecasting peak parking demand.

Collectively, the institution's parking supply meets parking demand based on the peak parking utilization according to count data and are within the margin of error for the peak parking demand estimates based on survey data. Future parking supply similarly meet the anticipated parking demand out to forecasted 2028 conditions. These results are summarized in Tables 1 and 2, and further detailed in each institution's chapter below. It is noted that both current and future peak demand are likely inflated estimates based on the survey data. This is discussed in further detail below.

Trends & Patterns

This section outlines the context that influences the parking environment for the institutions collectively, including policy changes, pandemic disruptions, and surveyed and observed transportation behaviors. These trends and patterns, and their implications, are discussed within.

Policy Shift

Updates to the Article 8 Ordinance were approved by City Council on January 9th, 2023. These updates codify the shift away from parking minimums while adopting parking maximums, expanded transportation demand management, and updated institutional parking management plan requirements. It is important to note that with the amended ordinance moving away from parking minimums, the need for waiver requests when supply does not meet the minimum have been eliminated. Historically, the institutions have maintained a parking supply that was below previously mandated minimums and utilized the parking management plan to request a waiver for this discrepancy by demonstrating the supplied parking meets current and anticipated demand and enumerating the many mechanisms by which the institutions actively seek to reduce demand for parking on each respective campus. Although the waiver is no longer necessary in this shift towards a new parking paradigm, the 5-year JIPMP and annual updates will continue to demonstrate the current and anticipated parking supply and demand for each institution as well the strategies employed to continue towards more efficient utilization of parking resources. This policy step towards the City's climate action goals is expected to be bolstered in the near term by an upcoming transportation options study, which will recommend the policy framework for a comprehensive, citywide transportation demand management plan.

The updated ordinance and recommitment to broader transportation demand management at the city scale represent a shift towards efficiency-based standards. In parking management, efficiency-based standards refer to provision of optimal parking

supply in an efficiently managed system⁵. These systems avoid the tendency to supply parking in excess while balancing appropriate pricing structures and recognizing the costs associated with oversupply. With efficiency-based standards, assessing “optimal” parking utilization based on 85th percentile occupancy has fallen out of favor. Instead, optimal parking utilization allows for spaces to fill to lot capacity on the condition that sufficient parking to serve demand is available elsewhere in close proximity and any potential spillover issues are addressed or managed. Recent parking policy reforms and their strategies are well documented in resources like the searchable case study database assembled by the Urban Land Institute containing parking policy innovations across a multitude of jurisdictions⁶.

COVID-19 Pandemic

A global pandemic significantly disrupted the typical operations of all three of these institutions when it arrived locally in March of 2020. There were many lessons learned in how each of these institutions continued to meet their mission while adapting to the situation as waves of increasing infections and different variants demanded a dynamic approach. During the height of the pandemic, this meant social distancing, masking, limiting in person gathering, and using technology to enable remote work, learning, and health appointments where feasible. The prevalence of hybrid virtual and in person environments to conduct work, enable learning, and deliver healthcare consultation during the pandemic have carried into the current landscape.

Telecommuting, telework, telelearning, and telehealth have all proven to be mainstays for the institutions at a baseline level. Each institution has its own policies around how this is enacted for employees, students, providers, and patients. Each institution also anticipates that with the ubiquity of these tools and protocols in place, this approach will continue to serve some portion of what might otherwise be demand for in person activities on each respective campus and thus demand for parking.

Survey Trends on Travel Behavior

CATMA administers a survey annually to track the longitudinal travel behavior trends of the membership that it serves. In Fall of 2022, the survey was administered to CATMA membership including the institutional partners. The survey revealed the drive alone rates for the institutional user groups, including employees, students within a half mile, and students greater than a half mile from campus. Year over year trends of the drive alone behavior of these groups are depicted in Figures 1, 2, and 3. Overall, drive alone rates have declined over the period of monitoring starting in 2000. It is noted that students within a short distance of their respective campus (i.e. less than a half mile) have the lowest drive alone rates. Within these distances, walking, biking, and campus transit modes meet the transportation demand effectively. Students with home locations outside of a half-mile radius of

⁵ Littman, T. (2022). *Parking Management: Strategies, Evaluation and Planning*. Victoria Transport Policy Institute (www.vtpi.org).

⁶ ULI. (2021). *Parking Policy Innovations in the United States*

campus drive alone to campus at higher rates than their close to campus counterparts, but below the rates of employees. Employees of each institution have similar drive alone rates, between 61% and 66%.

Similarly, the survey revealed the mode split for each institution. Accompanying the drive alone trends over time in Figures 1, 2, and 3 are the mode splits for the different user groups. Drive alone, carpool, and telework rates as the primary mode and alternative mode are depicted for each user group. At Champlain College, over 30% of employees telework as an alternative mode and 8% as a primary mode. At UVM, students carpool at a rate of about 30% as an alternative mode while employees carpool as an alternative mode at a rate 11% and telework as an alternative mode at a rate of 34%. At UVMCC, employees at the Medical Center Campus and 1 South Prospect Street carpool as an alternative mode at rates of about 10% and telework at rates of 8% and 18%, respectively. That does not account for the 12% of 1 South Prospect employees that telework as a primary mode.

Figure 1 Champlain College Drive Alone Trends & Mode Split

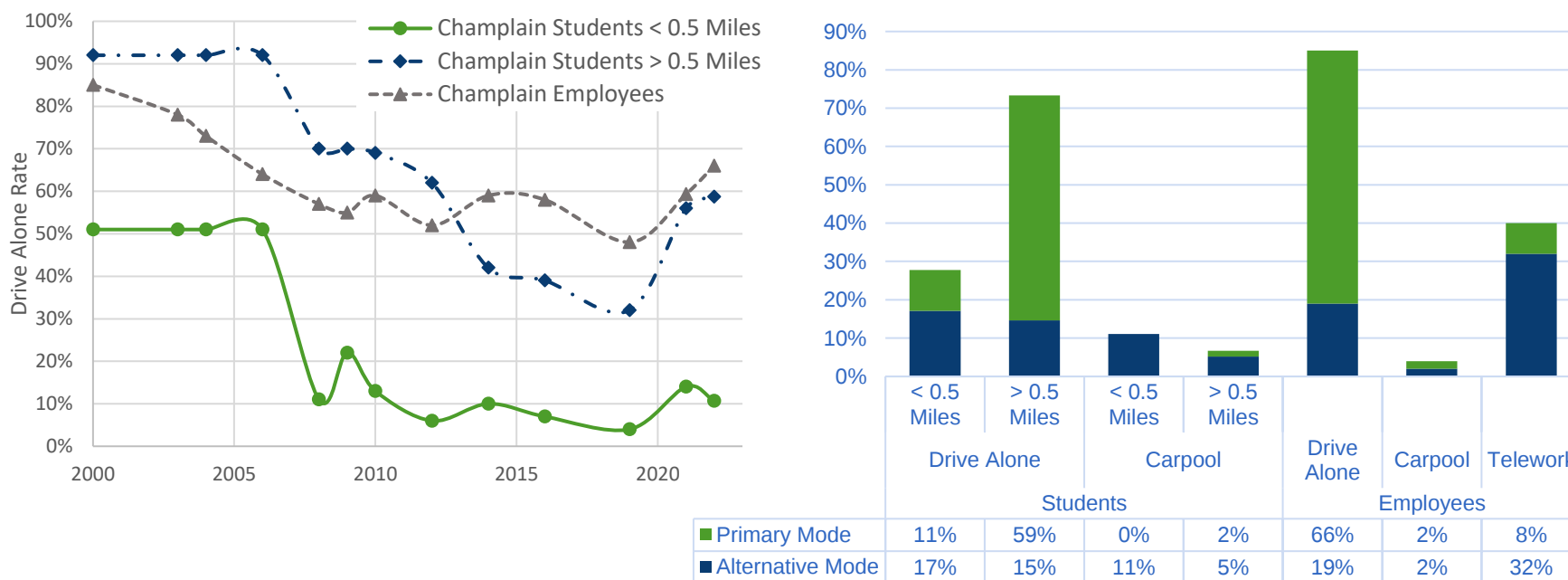


Figure 2 University of Vermont Drive Alone Trends & Mode Split

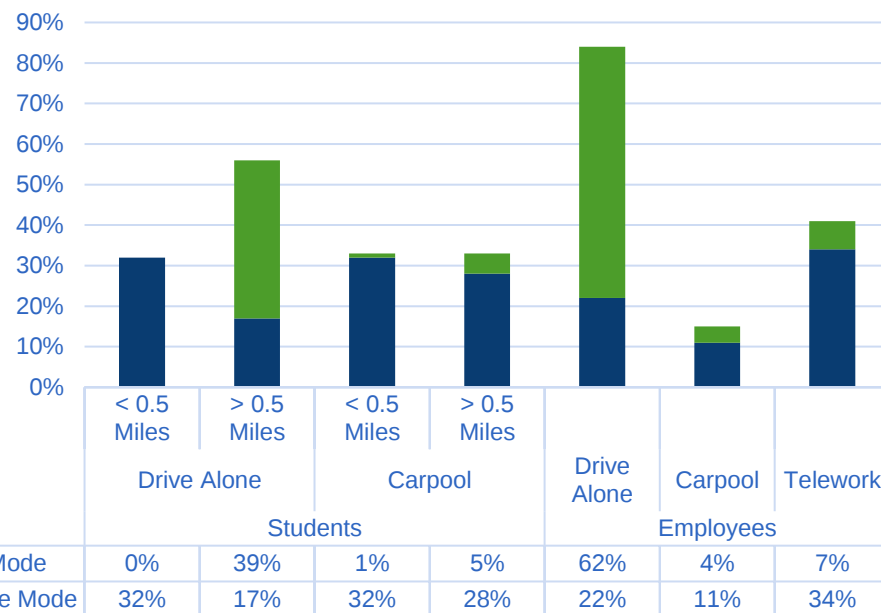
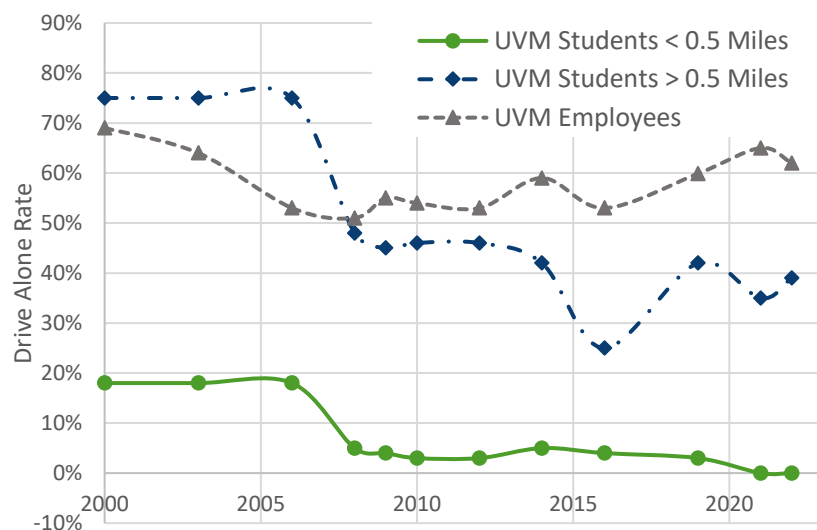
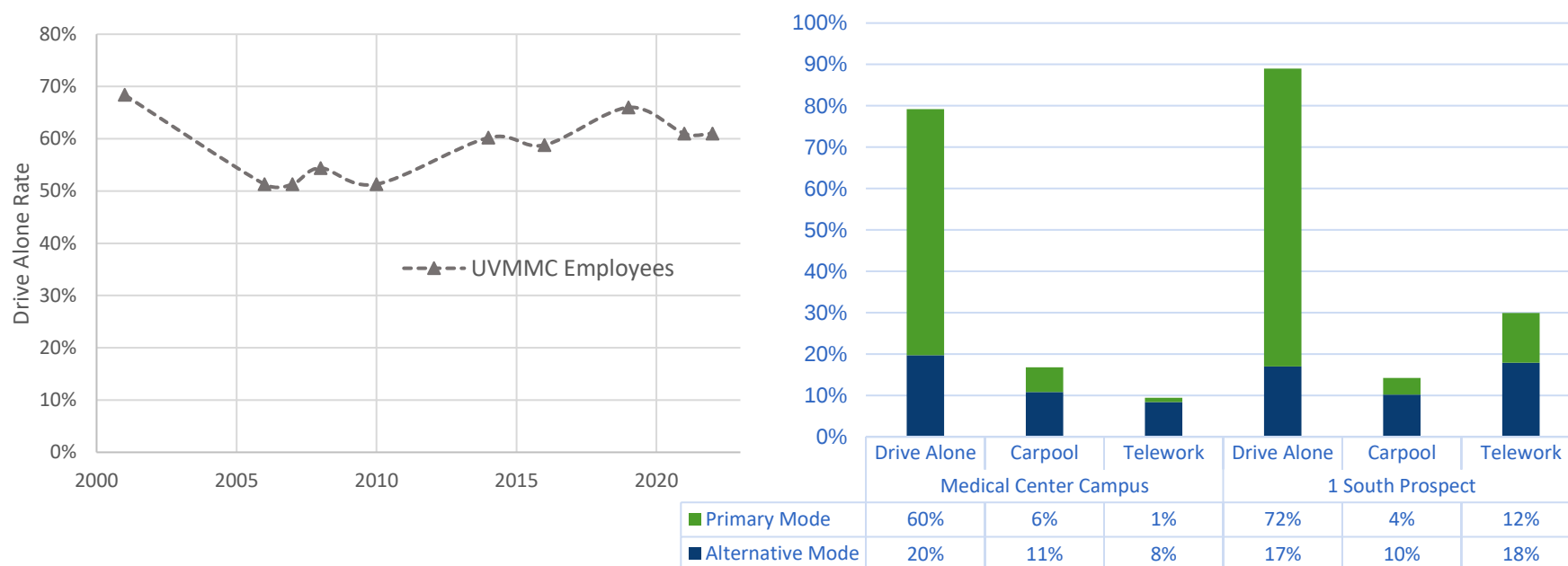


Figure 3 University of Vermont Medical Center Drive Alone Trends & Mode Split



On-Street Parking Adjacent to Institutions

There are some institutional affiliates who park on-street during peak time according to the survey administered to users in the Fall of 2022. Table 3 demonstrates the percent of students and/or employees that drive and are parking on-street during peak parking demand times. Additionally, the survey asks participants what streets they typically park on when they park on-street. Champlain College employee and student survey participants both indicated that they primarily park on South Willard Street, Maple Street, and Summit Street. UVM employee survey participants indicated that they park on Prospect Street and Williams Street. UVM student survey participants did not have a popular street that is utilized. UVMHC survey participants indicated that they park on Colchester Avenue, and the other two popular streets were North Prospect and South Prospect. These streets in proximity to the campus areas are generally unregulated, making them free and open to public parking.

To prevent institutional affiliates from parking on the city streets in residential areas, Champlain College made an agreement with the City of Burlington to allow a small number of locations where on-street parking was permitted for Champlain affiliates. It was agreed that all other streets on the “Hill” in Burlington are prohibited to affiliate parking. Champlain College has been increasing their parking enforcement to discourage the misuse of parking around campus. It should be noted that the three streets that are being frequently utilized by Champlain College employees and students are streets that fall within the campus. Parking on these segments is open to the public Monday through Friday 8:00 am to 4:00 pm and institution affiliates with a Zone 1 or MC parking permit are allowed to park in those spaces.

Table 3 On-Street Parking at Peak Time

	Champlain College	UVM	UVMCC
Students	5.6%	2.9%	N/A
Employees	11.6%	3.8%	1.1%

Collective Highlights & Strategies

This section outlines the collective institutional strategies that influence parking demand and transportation behavior more generally. Although the specific efficacy of a given strategy to offset demand for parking may not be known, these strategies collectively provide more viable transportation options to the populations accessing each campus. As demonstrated in the mode trends above, even if these options may not be used as primary means of accessing the campuses, they present feasible alternatives to driving and parking on site that can infrequently or frequently be used to offset parking demand, among other co-benefits. The individual institutional chapters delve further into the strategies on each campus regarding parking and demand management.

Transportation Demand Management

CATMA offers the member institutions a full menu of transportation demand management (TDM) programs to serve each community’s mobility needs and provide sustainable transportation options. These services and incentives are intended to expand use of alternative modes and have demonstrated participation by the membership in pursuit of reducing single occupancy vehicle use to access the institutional campuses. These programs, incentives, and services include:

- › Bike Share Discounts
- › Bike / Walk Rewards Program
- › Carpool and Vanpool Services
- › CarShare Vermont Campus Program

- › Commuter Champion Prize Drawings
- › Education, Awareness, and Outreach
- › Guaranteed Ride Home
- › Off-site Parking
- › Transit Discount Programs (i.e. Unlimited Access)

The TMA programming above represents just a portion of the collective opportunities for efficiently managed parking for the institutions. Other opportunities include shared parking, off-site parking, and shuttle services. For instance, UVM Medical Center leases parking from UVM to afford additional parking in close proximity to their campus. Off-site parking at 125 Lakeside Avenue affords just over 350 spaces of off-site parking for the institutions through CATMA contracting. UVMMC and Champlain College lease spaces to serve their users parking needs in the arrangement and provide shuttles to the off-site lot for their users. Each institution runs or contracts shuttle services to best meet the needs of their respective populations, however, employees across institutions can utilize other institutions shuttles as needed, provided there is capacity for the institution's employees to utilize the service. This sharing arrangement effectively increases shuttle service for all institutional partners.

Campus Shuttles and Transit

Green Mountain Transit (GMT) offers a multitude of options for local and regional transit service for Champlain, UVM, and UVMMC affiliates. Local and some regional routes are available with stops on or in close proximity to each campus, with additional connections to the Downtown Transit Center for transfers to a broader range of destinations. Local and regional GMT routes remain fare free through 2023 as part of the response to the COVID pandemic. Funding contributions from the institutions have continued as part of the Unlimited Access Program, in part enabling GMT to remain fare free for the general public. Should fares be implemented again in 2023, it is anticipated that Champlain and UVM will continue contributions to support their affiliates eligibility for free transit rides on any local or regional route with valid campus affiliation identification (i.e. the Unlimited Access Program) and UVMMC employees will be eligible for transit discounts. In general, ridership on GMT local routes have rebounded to near pre-pandemic levels and systemwide are down 18% compared to pre-pandemic averages.

Beyond the public transit system, each campus provides shuttle services to serve the campus and satellite facilities. These are detailed in each institution's section below.

Bike Share

In 2018 Greenride Bikeshare became Vermont's first public bike sharing system serving the greater Burlington area. There were over one hundred electric bikes in circulation across 30 hubs in Burlington, South Burlington, and Winooski through an expansion of the original system in 2021. These bikes could be accessed by a mobile app. Bolt, the e-bike vendor, ceased operations in July 2022 and the bikes were pulled from public use. Prior to their removal, there were many Greenride hub locations that helped to serve the micro-mobility needs of institutional affiliates including six located on UVM's campus, two on Champlain's campus, and one on the UVMMC campus. CATMA has issued a request for proposal (RFP) for a new bike share program which is anticipated to begin prior to Summer 2023. This bikeshare system will similarly provide another means of mobility for Champlain, UVM, and UVMMC affiliates with subsidized membership offerings.

CarShare

CarShare Vermont is a mission driven, local non-profit that aims to “provide an affordable, convenient, and reliable alternative to private car ownership.” The network of 22 vehicles shared by members are located at pods throughout Burlington and in neighboring South Burlington with future plans to add vehicles in Winooski. Affiliates of UVM and Champlain College are eligible to subscribe to CarShare through a subsidized Campus Plan. Of CarShare's current 1,155 members, approximately 20% are subscribed to the subsidized Campus Plan and do not have a permit to park on their respective campus⁷. This plan provides a generous discount on annual membership. There are additionally campus affiliates that have membership through alternate rate plans (e.g. free membership for income-eligible households). It is noted that campus affiliates use all 22 CarShare vehicles in service.

For campus affiliates, CarShare Vermont has contributed to limited vehicle ownership. According to CarShare Vermont's 2022 Member Survey, 78% of student members reported that they avoided bringing a vehicle to campus and were using CarShare Vermont instead. Of those faculty and staff members, 30% reported not owning a vehicle and joining CarShare Vermont instead of acquiring one and an additional 30% reported avoiding the addition of a second household vehicle. Twenty-five percent of faculty and staff reported shedding a vehicle because of CarShare Vermont and an additional 15% reported not replacing a vehicle that stopped working.

CarShare has also contributed to the reduction of driving and increase in alternate modes among campus affiliate membership. According to the survey, 56% of students reported driving less since joining CarShare Vermont and 48% reported walking and biking more. Student members, at a rate of 76%, reported combining errands into a single trip. It is estimated that for every

⁷ The membership numbers reflect data up to March 2023.

vehicle CarShare Vermont puts in service, 15 privately owned vehicles are removed⁸. This provides many communal benefits, including reduced demand for parking.

Climate Initiatives

Each institution has set out to tackle their environmental footprint and climate implications, particularly in regard to transportation and parking.

Sustain Champlain is the overarching campaign for Champlain College to integrate sustainability into the entire campus⁹. Sustain Champlain focuses on institution, operations, academics, and culture. Under their operations section they provide resources for transportation initiatives such as CATMA memberships, access to free rides on GMT buses, shower facilities for bicyclists, additionally locations to access bike parking, shuttle stops, and CarShare vehicles. In 2015, Champlain College revisited their Active Transportation Plan which sets out to reduce motorized vehicle use for Champlain affiliates, create an active transportation culture, decrease CO₂ emissions, and create safe, functional, and environmentally friendly transportation options for employees and students.

The University of Vermont has recently published their Facilities Sustainability Plan (FSP)¹⁰. This plan entails reducing the environmental footprint of all aspects of facilities management across the campus including transportation. The plan recognizes and builds upon the planning and programming foundation for limiting or reducing the climate implications of transportation including the Active Transportation Plan, Green Fleet Vehicle Procurement Procedures, Sustainable Transportation Module for parking pass acquisition, free on-campus and local bus transit, carpool matching, and electric vehicle charging infrastructure. Building on this foundation, the Facilities Sustainability Plan aims to enhance convenient, accessible, affordable, low-carbon transportation options, reduce single occupancy vehicles; increase use of alternatives and shared modes, and ensure that fleet vehicles are rightsized, shared, and alternatively fueled. The strategies that accompany these goals are further detailed in the UVM Chapter below. UVM has released a Comprehensive Sustainability Plan, integrating the goals identified in the FSP and including academics, research, and planning for the University¹¹.

UVMCMC is committed to reducing its carbon footprint and mitigating health issues caused by climate change¹². UVMCMC has received recognition from local and national organizations for limiting onsite parking, encouraging carpooling, and providing

⁸ See Appendix B: CarShare Vermont Parking Demand Impacts of the 2021 Joint Institutional Parking Management Plan Annual Update, [jipmp_2021_annual_update.pdf \(catmavt.org\)](#).

⁹ <https://www.champlain.edu/student-life/campus-and-community-programs/sustain-champlain>

¹⁰ University of Vermont, *Facilities Sustainability Plan 2021-2030*, https://www.uvm.edu/sites/default/files/Facilities-Management/pdf-docs/exec/Facilities_Sustainability_Plan_October_2021.pdf

¹¹ The Comprehensive Sustainability Plan was released on Earth Day 2023, [Comprehensive Sustainability Plan | The University of Vermont \(uvm.edu\)](#).

¹² [Climate Change Initiatives \(uvmhealth.org\)](#)

incentives for use of public transit. Additionally, UVMMC has partnerships with CATMA, Burlington 2030, and Vermont Climate Pledge Coalition. In 2017, their alternative transportation programs helped employees avoid 1,171,082 pounds of carbon. The Burlington 2030 initiative aims to reduce transportation emissions, energy use, and water consumption by 2030. Additionally, the Climate Pledge Coalition aims to uphold greenhouse gas emission reductions established by the Paris Climate Agreement.

Multimodal Connections

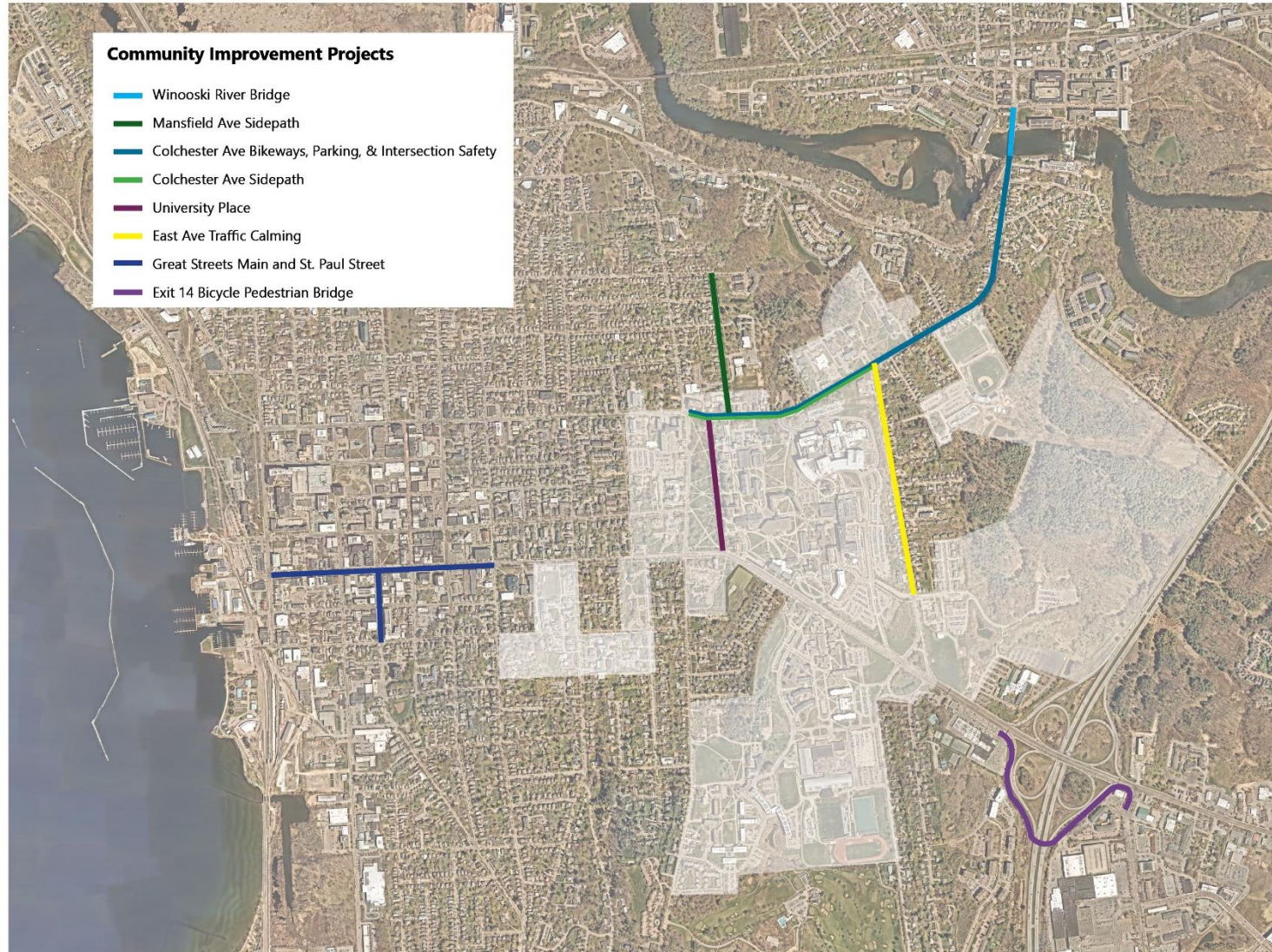
A critical focus on multimodal connections has emerged as Burlington and the surrounding communities tackle the climate emergency, demand management, and equitable transportation outcomes. In particular, places that have historically been barriers to or hostile to active modes of transportation have been under scrutiny as these areas hinder shifts towards more active transportation modes. This is evidenced in many high profile walking and biking infrastructure projects that have recently been constructed or are imminent in the planning, design, or construction phases. These projects in Burlington, South Burlington, and Winooski will improve the connectivity for residents and visitors, as well as serve the employees, students, patients, and visitors of each of the institutions. The improvement in connectivity and accommodations will provide safe and accessible routes to and from the institutions utilizing alternative modes of transportation. Some of the key projects are:

- › **Winooski River Bridge:** The purpose of the project is to improve safety while maintaining structural integrity and continuity of this integral link between Winooski and Burlington across the Winooski River. The project will address deficiencies in the bridge while improving multi-modal (bike, pedestrian, vehicular) travel for people and goods. Scoping has been completed and the project is expected to move into design.
- › **Mansfield Avenue Sidepath:** The sidepath replaced the existing sidewalk on the eastern side of Mansfield Avenue from Colchester Avenue to North Street with a wider asphalt path and markings. The project also included crossing improvements at the intersection of Colchester Avenue and Mansfield Avenue. This project is complete.
- › **Colchester Avenue Bikeways, Parking, & Intersection Safety:** The purpose of the Colchester Avenue: Bikeways, Parking, & Intersection Safety Study was to identify and prioritize improvements that align with the City's vision for sustainable transportation infrastructure and enable a continuous, connected, and livable multimodal transportation corridor. This includes proposed improvements to the intersection of Colchester Avenue and East Avenue as well as creation of separated bike infrastructure along the length of Colchester Avenue. Scoping was completed.
- › **Colchester Avenue Sidepath:** The existing Colchester Avenue southern Sidepath was removed and replaced to meet accessibility design criteria and widened to meet current design guidelines for shared bicycle & pedestrian paths. The project included a new 10' wide concrete sidepath to replace the sections of 8' wide sidepath east of Mansfield Avenue and the 5' wide sidepath west of Mansfield Avenue. The project is complete.

- › **University Place:** The purpose of improvements to University Place were to enhance safety on the street for pedestrians, bicyclists, and other active transportation users. University Place is at the heart of UVM's central campus. As part of the project, buffered bike lanes in each direction and prioritized and comfortable pedestrian crossings were constructed. UVM and the City of Burlington shared the costs of this project on the city-owned street. The project is complete.
- › **East Avenue Traffic Calming:** The purpose of the East Ave Traffic Calming project is to improve the safety along the corridor. There are currently issues of speeding and unsafe crossings for pedestrians. The project will implement traffic calming measures and create more conspicuity for crossings to improve connections along and across this critical corridor adjacent to UVM and UVMMC. Planning is complete and the project is in the design phase.
- › **Great Streets Main and St. Paul Street:** Main Street is an important gateway into downtown Burlington and a vital connection from the waterfront to the Hill institute campuses. The goal of Great Streets Main Street project is to balance the use of the public right of way to provide wide sidewalks, protected bike accommodations, activation space, and parking. St. Paul Street similarly aimed to enhance the use of the public right-of-way for multimodal use. St. Paul Street construction is complete and Main Street is in the design phase.
- › **Exit 14 Bicycle Pedestrian Bridge:** The goal of the project is to create a bicycle and pedestrian bridge across I-89 in the vicinity of the Exit 14 Interchange in South Burlington. While existing sidewalks, bicycle lanes, and transit service provide alternative transportation accommodations along US Route 2, these modes are likely underutilized due to the speed, numerous conflict points, and volume of traffic at this key regional junction. A scoping study was completed and the project is in the design phase.
- › **South End Multimodal Center:** A collaborative study with the Chittenden County Regional Planning Commission, City of Burlington, and VHB evaluated the feasibility of constructing a multimodal transportation center and supporting uses on a City-owned parcel in the City's South End. Following the completion of the multimodal center feasibility study, VHB is currently assisting the City of Burlington, Champlain College, and Ride Your Bike, LLC to envision and evaluate various design concepts for three parcels in the City's south end, inclusive of the parcel evaluated for the multimodal transportation center.

Although it is anticipated that the infrastructure projects above will improve transportation options to and from the campuses, contributing to a shift towards active and transit modes of transportation, these potential mode shifts were not accounted for in future parking demand projections. As parking demand continues to be monitored through survey and count methods, the influence of these infrastructure projects on the Institutional populations' resulting travel behavior may be estimated.

Figure 4 Highlighted Project Corridors Addressing Multimodal Connectivity (institutional areas highlighted in white)



3

Champlain College

Champlain College is a small, private, not-for-profit college in Burlington with sister campuses in Montreal, Canada and Dublin, Ireland. Champlain College prides itself on preparing students for top fields through career-oriented programming, earning accolades such as Princeton Review’s “Top Schools for Game Design,” the Broadcast Education Association’s “Top Documentary Programs,” and one of Niche.com’s top 30 “Best Schools for Information Technology.” Champlain College has been named “Most Innovative School” in the North seven years in a row by U.S. News & World Report’s “America’s Best Colleges.”

Champlain College’s main campus sits atop the hill overlooking downtown Burlington and Lake Champlain. The main campus is primarily concentrated between Main Street and Cliff Street to the north and south and Summit Street and South Union Street to the east and west. There are additional residence halls just north of Main Street and east of Summit Street as well as downtown apartments at the corner of St. Paul Street and Maple Street, four-tenths of a mile from the main campus. In addition, there are academic and facility buildings located approximately 1.3 miles from main campus off of Lakeside Avenue and Sears Lane.

Existing & Anticipated Infrastructure and Development

There are 47 buildings that provide Champlain College just over 850,000 gsf of academic, administrative, residential, athletic, dining, and facility space across the campus. Over half of the buildings are small residential halls with an average of just over 50 beds per location. These residential beds serve the majority of students that are enrolled in on campus programming. The campus infrastructure includes 642 spaces for parking, serving the range of users that access the campus or reside on campus.

The previous two-year JIPMP identified four projects that require status updates in the current JIPMP. At this point, there are no plans to carry forward the Miller Information Commons Addition, however there are three projects that were identified in the previous JIPMP that are anticipated to be carried

forward into the next 5-year development plan and will contribute additional building square footage. See Table 4 for preliminary estimates on building area changes and estimated completion dates for these projects. Champlain College additionally anticipates converting a building to residential use, contributing an additional 30 beds. The South End will be a very active area in the future around redevelopment. At this time, there are no plans to change Champlain College's parking supply or location.

Table 4 Existing and Anticipated Champlain College Infrastructure

Infrastructure	Existing ⁴	Anticipated ⁵	Units
Number of Buildings	47	48	buildings
Gross Square Footage ¹	851,517	890,517	gsf
Residential Beds ²	1,418	1,448	beds
Parking Supply ³	642	642	spaces

1. Leased facilities do not contribute to the number of buildings or total GSF.
2. Residential beds in leased facilities included in total.
3. Parking spaces from leased facilities included.
4. Existing data based on data from Fall 2022 to represent base year 2023.
5. Anticipated data based on estimates for 5-year plan to represent 2028.

Table 5 Champlain College Status of Previously Identified Projects

Building Project	Completion Status
Miller Information Commons Addition	No Longer Planned
Foster Hall Addition	Move Forward to 2023-2028 JIPMP
Information Technology & Sciences Building	
Career Center	

Existing & Anticipated Community Population

Champlain College is considered a small college, a category with a ceiling student population of 5,000 enrollments. The on-campus undergraduate population includes 1,675 full time and

61 part-time students. Of the full-time students, 30 are enrolled in the study abroad programming offered on the Montreal and Dublin sister campuses and therefore not included in the user

population accessing Burlington’s campus. Over half of the College’s enrollments are through Champlain College Online. This programming currently serves 559 graduate and 1,439 undergraduate students, totaling nearly 2,000 enrollees in the online programming. These students are similarly not counted towards the population accessing campus.

Champlain College employs just over 900 faculty, staff, and contractors split between the on-campus programming and off-campus and online programming. There are 353 full-time, 193 part-time, and 66 contracted employees that serve the Burlington campus. Additionally, there are 26 full-time, 263 part-time, and 22 abroad employees serving the off-campus and online programming that do not contribute to the user population accessing the Burlington campus.

It is anticipated that in the coming 5 years, the Champlain College student and employee populations will grow. Enrollment in on-campus programming is anticipated to expand to serve 2,080 full-time and 80 part-time undergraduate students. The Dublin and Montreal programs are expected to expand to serve 40 students. Similarly, the online programming is expected to expand to serve 740 graduate and 1,750 undergraduate students remotely, bringing the online programming to just under 2,500 students. Details on current and projected populations are further detailed in the Supplemental Materials.

Table 6 Anticipated Champlain College Building Development Program

Project Name	Change in Building Area (gsf)	Associated Change in Parking (spaces)	Estimated Completion
Foster Hall Addition	3,500	0	2026
New ITS Building	31,500	0	2026
Career Center Addition	4,000	0	2025
Conversion of Building to Res Hall	N/A	0	2024

Existing & Anticipated Parking Demand

As previously discussed, the peak parking demand was estimated using two methodologies: utilization counts and survey data. The parking supply for the campus is currently at 642 spaces. These spaces are spread across the College lots as depicted in Figure 6. In addition, Figure 6 demonstrates the average parking utilization rates for each Champlain College owned lot. These rates are based on the quarterly lot counts conducted by Champlain College across three days during peak periods. Although it is not accounted for in the parking supply, it is noted that there are 145 on-street spaces in designated zones adjacent to campus that Champlain College affiliates are allowed to park in, contributing informally to the supply of parking in the immediate adjacency of campus activities.

The maximum parking utilization was compared across the available data from previous peak period observations to demonstrate changes over time. The parking utilization trends in Figure 5 show there was significantly diminished utilization through the Fall 2020 to Summer 2021 period, resulting in peak period utilization of approximately 30%. The utilization, starting in Fall 2021, rebounded to a maximum peak utilization of 67% in Fall 2021 and again in Fall 2022. This remains below the peak utilization demonstrated in Fall 2019 of 84% and Winter 2020 of 75% (prior to the COVID pandemic).

Figure 5 Champlain College Parking Utilization Trends

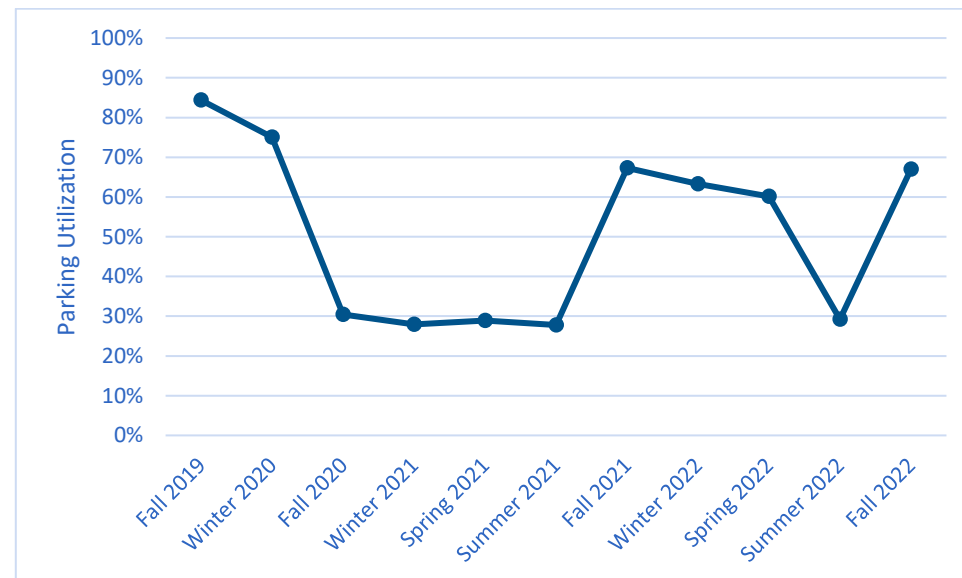
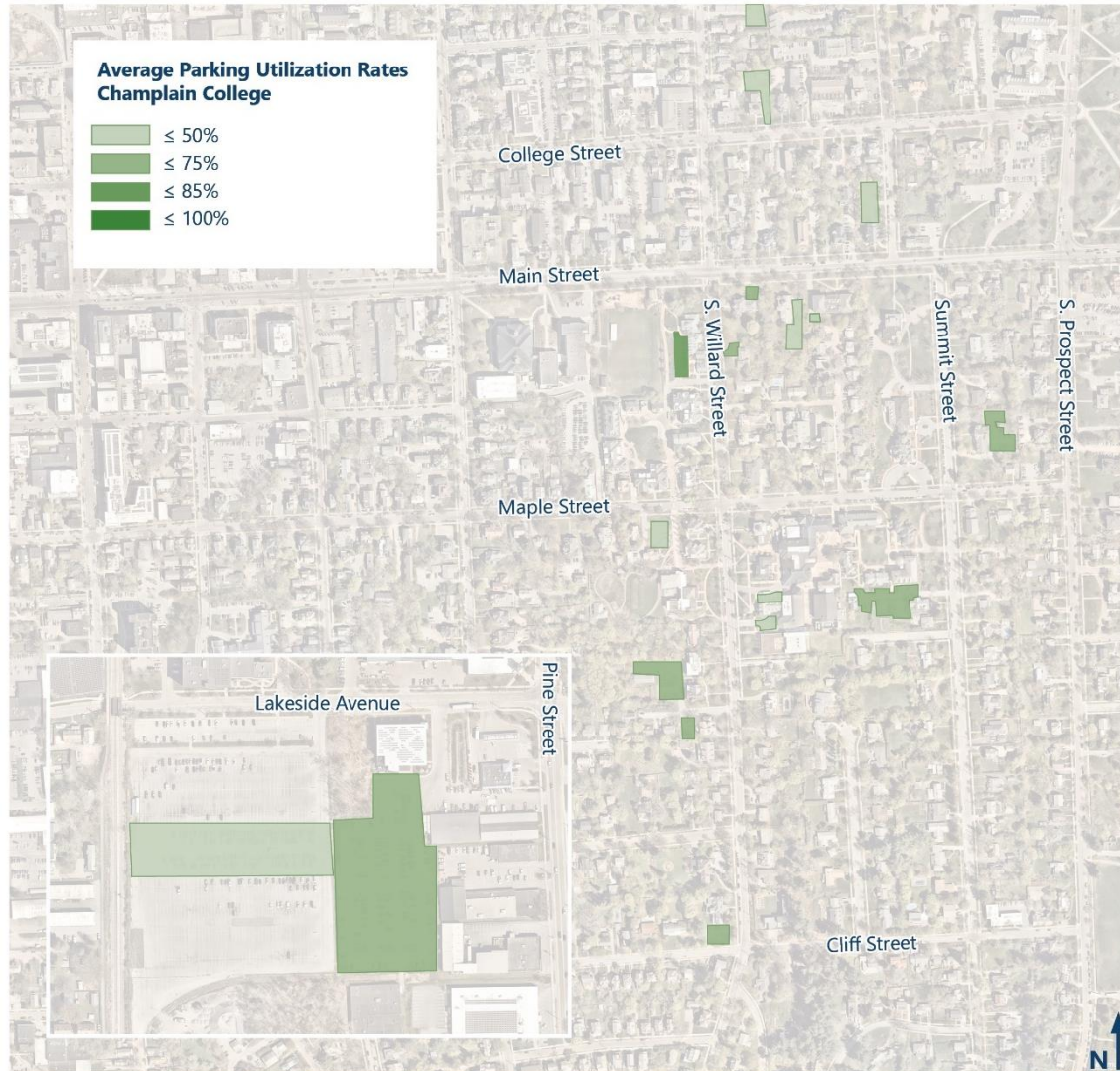


Figure 6 Champlain College Average Parking Utilization Rates



The current peak parking demand for Champlain College is estimated to be 427 vehicle spaces based on observed peak parking utilization counts, demonstrating a net available parking supply of 215 spaces. Peak parking demand based on survey data indicates peak parking demand of 741 spaces, or a net shortfall of 99 spaces. It is noted that this estimate and its future projections represent a likely overestimation of peak parking demand. The percent of users for each user group was estimated based on those that reported predominantly driving alone or carpooling to serve their transportation to campus and reported typically being on campus at the peak time. They may be using secondary modes at other times during a typical week, including teleworking. As such, it can be assumed that these estimates inflate the demand to represent an artificially high peak parking demand.

Future parking demand was estimated from the surveyed mode trends by user groups, accounting for the anticipated changes to infrastructure and user populations described above. For Champlain College, there are anticipated increases in population that

Table 7 Champlain College Current Parking Demand

Champlain College			
User Group	Number of Potential Users	Peak Parking Demand¹	
		% of Users	Spaces
Employees	612	58.0%	355
On-Campus Students	1418	18.9%	269
Off-Campus Students	318	29.9%	96
Visitors			15
Fleet ²			6
Peak Parking Demand			
Demand Based on Survey³			741
Utilization Based on Counts⁴			427
Parking Supply			
Total Spaces⁵			642
Net Spaces			
Peak Demand			-99
Peak Utilization			+215

1. Peak parking demand is calculated from data collected in the 2022 CATMA Survey where “% of Users” consists only of car users who are on campus at peak time.

2. Champlain has 15 fleet vehicles but estimates only ~40% attempt to park on campus at peak time.

3. Total peak parking demand has a margin of error of ±89 spaces.

4. Peak observed utilization occurred on October 6th, 2022 at 2 PM and has a margin of error of ±31 spaces based on 2022 count data.

5. Total Parking Supply does not include 145 on-street parking spaces in Designated Zones.

account for the increased peak parking demand, assuming the mode trends remain consistent with current behavior for each user group.

Table 8 Champlain College Future Parking Demand 2028

Champlain College			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces
Employees	830	58.0%	482
On-Campus Students	1448	18.9%	275
Off-Campus Students	712	29.9%	214
Visitors			15
Fleet ²			6
Peak Parking Demand			
Future Demand Based on Survey			992
Parking Supply			
Total Spaces³			642
Net Spaces			
Peak Demand			-350

1. Peak parking demand is calculated from data collected in the 2022 CATMA Survey where “% of Users” consists only of car users who are on campus at peak time.

2. Champlain has 15 fleet vehicles but estimates only ~40% attempt to park on campus at peak time.

3. Total Parking Supply does not include 145 on-street parking spaces in Designated Zones.

Fleet

Champlain College has a total of 15 fleet vehicles on their campus in designated “Service Only” spaces. Four passenger vans are typically parked in Rowell and Cushing, and eleven pick-up trucks and facilities vehicles are typically parked in the Sears Lane lot near the facilities building. There are no current plans to grow the fleet.

Highlighted Strategies

Parking Restrictions and Permits

Champlain College provides clear guidance for all campus community members to follow regarding parking policies. It is mandatory that all Champlain College affiliates obtain a permit for their vehicles each semester. Permits are affiliated with particular parking zones.

First year students are restricted from bringing vehicles to campus. This policy was approved in 2018 to align with the Master Plan and Sustainability Vision. There are waivers available for demonstrated need based on strict criteria around employment, medical conditions, long-distance travel, and transfer students from other institutions.

Telework

Champlain College provides an Interim Workplace Flexibility policy that was updated in December 2022. The workplace flexibility is opportunity to support employees' safety, work life, along with their personal and family responsibilities while still supporting the College's need for coverage, efficiency, and productivity. The workplace flexibility assesses the job and employee's suitability prior to approving a work arrangement. This varies depending upon the employee's role and the specific nature of the work required. The work arrangement can be occasional, hybrid, or fully remote and approval is at the supervisor's discretion and must be reviewed with the functional area's Dean, Vice President, COO, or Provost.

Transportation Demand Management

Champlain College encourages all employees and students to register for CATMA membership which provides carpool and vanpool matching, bike/walk rewards program, Guaranteed Ride Home Program, unlimited access free rides on local and regional bus routes, CarShare Vermont membership discounts, Park and Ride options, and commuter workshops.

CarShare Vermont

Champlain College has a partnership with CarShare Vermont via CATMA's Campus Programs Contract and provides funding to CarShare Vermont for program support. Through this contract with CATMA, CarShare Vermont provides significantly discounted membership to any campus affiliate that does not hold a parking permit¹³. As of December 2022, there were a total of

¹³ Rates for CarShare Vermont Campus Programs can be viewed here: <https://www.carsharevt.org/memberships/campus/>

45 members (28 students and 17 employees) registered to CarShare Vermont through Champlain College. There are CarShare Vermont pods located on Maple Street near West Hall, on College Street near Sanders Hall, and on St. Paul Street near 194 St. Paul Street Apartments¹⁴.

Shuttles

There is free commuter parking at 175 Lakeside Avenue for Zone 1 permit holders. Champlain operates a free shuttle service seven days a week between Lakeside Campus, 194 Saint Paul Street, and Main Campus. All Zone 2 permit holders are automatically enrolled in CATMA's Guaranteed Ride Home program, which provides a free cab ride if the shuttles are not operating. All Zone 1 permit holders are also eligible to enroll. Locations of the Champlain shuttles can be tracked in real-time providing up to date information to users via website or mobile app¹⁵.

Monitoring, Compliance, and Enforcement

Champlain College diligently monitors and enforces the parking plan through the year, with parking enforced 24 hours per day, 7 days per week. Further, every Champlain College affiliate, employees and students alike, are required to get a parking pass for their vehicle every semester. Lots on the main campus in close proximity to academic buildings are either designated for main campus employees with an appropriate permit (i.e. Zone 1 permit holders) or pay per use on weekdays between 8 AM and 4 PM for appropriate permit holders. It is noted that the pricing is structured to be most expensive in the lots closest to the core of campus and in the highest demand, with lots further out becoming less expensive.

Further, on city streets that have not been identified as eligible locations for Champlain College affiliates to park, Champlain affiliated vehicles can be ticketed in accordance with Champlain College's parking policy. The College's lots are monitored and patrolled daily. The College issued 1,223 citations and 1,296 warnings during the 2021-2022 school year and 2022 summer programming. This enforcement action represents an average of nearly 7 warned or ticketed infractions per day. It also represents an increase in enforcement action of over three times the warned or ticketed infractions from the previous year (2020-2021).

In addition to the daily monitoring, quarterly counts are conducted for a three-day period at every lot during peak times (i.e. intervals starting at 10AM, 12PM, and 2PM). Champlain College also counts City streets in the vicinity of campus, which is likely capturing other users of these public streets, like on Main Street and Summit Street, beyond their affiliate use.

¹⁴ Locations for CarShare Vermont vehicles can be viewed here: <https://www.carsharevt.org/locations/>

¹⁵ <https://shuttle.champlain.edu/>

4

University of Vermont

Founded in 1791, the University of Vermont has been a cornerstone of Burlington throughout the period following European settlement of the area, established prior to the founding of the City itself. The University is a medium sized public university and land grant institution that is considered a “Public Ivy.” This designation is based on the strength of selective and rigorous undergraduate educational programming as well as renowned research. Known as UVM, or University of the Green Mountains in Latin, the University prides itself on being the ideal size to foster academic and research prominence while encouraging close faculty-student mentorships across all levels of study. The location of UVM as part of the fabric of Burlington and the state of Vermont, and in close proximity to Lake Champlain and the Green Mountains, enriches student educational experience and enables service to the state’s communities through its land grant mission.

The University of Vermont is situated at the top of the hill overlooking the City of Burlington and Lake Champlain to the west and the Green Mountains to the east. The Main Campus extends approximately 460 acres inclusive of central, athletic, Redstone, and Trinity campuses, as well as Centennial Woods. These areas are predominantly within Burlington with a small, connected land area that crosses over into South Burlington. One satellite site to this contiguous campus area is the Rubenstein Ecosystem Laboratory, which is situated directly on Burlington’s waterfront and serves as a research and teaching laboratory regarding the Lake Champlain basin. Main Campus areas are generally accessed from Main Street, East Avenue, Colchester Avenue, Prospect Street, Spear Street, University Place, and Williams Street, as well as many additional roadways and pathways.

In addition to Main Campus, UVM has land holdings in South Burlington, Colchester, Essex, and many other areas across the state. South Campus includes land holdings predominantly in South Burlington with a small area in Burlington made up of mostly agricultural, horticultural, and natural areas. The Colchester Research Campus serves research purposes associated with

the College of Medicine. Fort Ethan Allen in Colchester/Essex includes facilities for maintenance purposes, including fleet services.

Existing & Anticipated Infrastructure and Development

There are 200 buildings and an additional 29 accessory buildings that serve the University, accounting for over 5.6M gross square footage. The buildings serve academic, research, residential, administrative, athletic, student support, facilities, and other purposes. Of these buildings, over 75 support academic and research purposes and over 50 support residential purposes. The residential buildings support 5,775 beds for students to reside on campus with an additional 617 beds for students and 164 beds for faculty and staff provided through third party partnerships. Primarily the on campus residential beds are for first- and second-year undergraduate students, as they are generally required to live on campus.

Table 9 Existing UVM Campus Building Data

Building Use	Accessory Buildings	Total Buildings	GSF	Residential Beds
Mixed Uses				
Academic / Administrative / Student Support	0	3	242,857	
Academic / Research	7	69	1,937,764	
UVM / UVMMC Academic Research	1	7	253,501	
Administration	10	33	510,524	
Athletics	6	17	475,948	
Student Support	3	20	501,978	
Residential				
Residential Academic	0	3	110,961	5,775
Residential Dining	0	4	260,602	
Residential Central Campus	2	7	209,342	
Residential Redstone Campus	0	14	408,954	
Residential Trinity Campus	0	12	147,174	
Residential Athletic Campus	0	11	591,503	
Total	29	200	5,651,108	5,775

Parking spaces are available across the various segments of campus. Athletic commuter lots make up the majority of spaces available, with over 1,700 spaces. Core campus areas account for over 1,600 additional parking spaces. There are commuter lots that are largely leased out to other entities. And finally, there are Redstone and Trinity campus lots that primarily serve residential second-year students with vehicles on campus as well as some employee use. The off-site spaces reflect satellite parking within and outside of Burlington. The off-site parking within Burlington does not account for the 200 spaces at 351 Pine Street, as a project has been identified to remove that parking from UVM's inventory.

The previous two-year JIPMP identified many projects that require status updates in the current JIPMP. There were projects that were completed from the last JIPMP including the Music Building Recital Hall Addition, Jeffords East Lower Lot, University Heights Road (Southwick), Pomeroy Barn & 172 South Prospect Buildings, and a New Research Facility for the College of Medicine. In addition, there are projects that were previously identified that no longer have plans to move forward, including Fleming Museum Parking, Outing Club Relocation, Southwick Hall Parking, Future Structured Parking, Colchester Avenue / Dewey Buildings, Back 5 & Cottages (Trinity Campus) Buildings. There are 22 other projects that have been identified for the next 5 years, including 9 newly identified projects that are not carried forward from the previous JIPMP. One of these projects, discussed above, includes the removal of the satellite spaces at 351 Pine Street. This 200-space lot at 351 Pine Street was originally leased in 2019 to comply with permit conditions for the Firestone addition. At the time of permitting that project, there was not an approved JIPMP in place, which meant that the City could not consider UVM's extensive system of TDM and had to apply the minimum parking requirements identified in the ordinance without considering a waiver as would be normally considered under an approved JIPMP. This temporary condition was later resolved by approval of the 2020-2022 JIPMP. This JIPMP included the lot at 351 Pine Street however the lot was never actually needed or used. For the past two years, UVM has completed campus wide monthly lot counts, which have consistently shown that UVM has adequate on-

Table 10 Existing UVM Parking Capacity

Parking Lot Location	Capacity	Leased Spaces	Usable Spaces
Athletic Commuter	1,733		1,733
Core Central	50		50
Core East	767	-100	667
Core North	369		369
Core South	135		135
Core West	431	-47	384
Commuter Lots	808	-485	323
Redstone Campus	626		626
Trinity Campus	314		314
Off-Site: Burlington ¹	54		54
Off-Site: Outside Burlington ²	210		210
Total in Burlington	5,287	-632	4,655
Total	5,497	-632	4,865

1. Includes parking at the Rubenstein Laboratory and Bioresearch Complex (South Campus).
2. Includes parking spaces at the Colchester Research Facility, Forestry Laboratory, and Miller Barn.

campus parking space, and this remote parking lot is not needed. UVM intends to apply to amend the permit requirement for this lot and remove this lot from campus inventory. UVM will continue quarterly campus wide lot counts at peak times, to ensure ongoing management of parking spaces. Other projects will include future student housing, potentially increasing the number of residential beds by approximately 600-1200 beds, located at Trinity or elsewhere on campus as noted in Table 11 and footnote 3. It is anticipated that the full list of identified projects will have a limited impact on the gross square footage of building area on campus but will result in a net gain of approximately 628 parking spaces. See Table 11 for preliminary estimates on building area changes and estimated completion dates for these projects.

Table 11 UVM Campus Building Program Data (completed and future)

Project Name	Included in Previous JIPMP	Change in Building Area (gsf)	Associated Change in Parking (spaces)	Estimated Completion
Music Building Recital Hall Addition	Yes	3,942	3	Completed
Jeffords East Lower Lot	Yes		67	
University Heights Road (Southwick)	Yes		5	
Pomeroy Barn & 172 South Prospect Buildings	Yes	-6,067	-3	
New Research Facility for COM (Firestone)	Yes	75,000	-121	
Bioresearch Complex Parking	Yes		153	2023
Hills	No	6,408	1	
Centennial Compound	No		40	
ADA Code Compliance	Yes		-20	2024
284 East Avenue	No		30	
Waterman	No	3,000	-10	
Votey Lot	Yes		-10	
Future Student Housing ³	No	100,000	0	2025
Future Additional Parking to Accommodate New Housing	No		200	
Colchester Research Facility Lot 1 Parking ²	Yes		200	
University Road (East Ave to Compound)	Yes		15	
Interfaith Center Parking Lot	Yes		30	
Future Student Housing ³	No	150,000-500,000	-25	2026
Future Additional Parking to Accommodate New Housing	No		200	
Villa	No	12,618	-7	
Future Compound Expansion	No		66	
Virtue Field Phase 3	Yes	5,000	0	2027
Blundell Parking	Yes		5	
Tarrant (Multi-Purpose) Event Center Building	Yes	119,099	0	

Torrey Hall Addition	Yes	2,860	-6	Unknown
Miscellaneous Parking Adjustments ¹	Yes		25	
Coolidge Hall Building	Yes	-30,510	0	
Residential Housing	No		190	
351 Pine Street	Yes		-200	
Fleming Museum Parking	Yes			Not moving forward at this time
Outing Club Relocation	Yes	13,250		
Southwick Hall Parking	Yes			
Future Structured Parking	Yes			
Colchester Ave/Dewey Buildings	Yes	-82,622		
Back 5 & Cottages (Trinity Campus) Buildings	Yes	-64,907		
Total		307,071	828	

1. Where possible UVM attempts to reallocate space to create more parking. It is estimated this will result in ~25 spaces over 5-years based on previous experience.
2. This facility is estimated to house between 200 and 400 parking spaces. Though it is off-site it will impact on-campus demand depending on UVM policy.
3. UVM and the City of Burlington have engaged in a process to rezone Trinity Campus in order to enable the creation of additional student housing on campus. As of this report, City Council has tabled the proposed rezoning language and it is unclear whether housing at Trinity Campus will move forward. UVM is actively exploring options to increase student housing on Trinity and/or elsewhere. The low end of range of potential gsf estimates was used for totaling change in area.

Existing & Anticipated Community Population

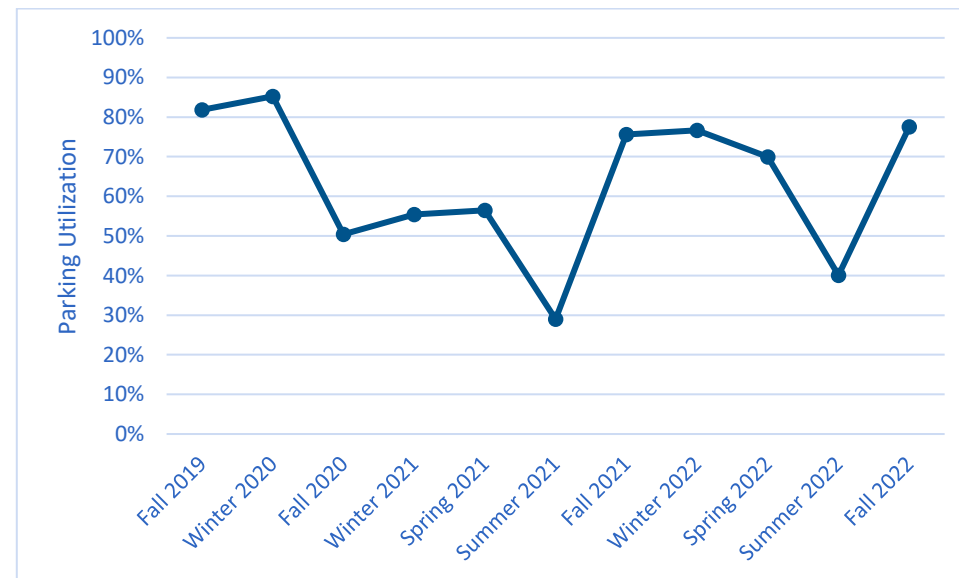
The UVM campus currently serves a total population of just over 18,000 on Burlington's Main Campus, inclusive of faculty, staff, and students. Employees include 2,311 full- and 155 part-time staff and 861 full- and 927 part-time faculty. These numbers include approximately 230 employees that are not Burlington based and therefore deducted from the employee users contributing to parking demand, which total approximately 4,024 employees. Student enrollment includes 11,326 undergraduate students, 1,707 graduate students, 483 medical students, and 572 continuing education students, totaling approximately 14,088 students. The majority of the first- and second-year undergraduate students reside on campus in the University's 5,775 residential beds.

The UVM campus population is expected to stay relatively consistent over the next five years based on projections from the date of this document. A slight increase in graduate and continuing education student enrollment are projected to account for the approximate 3% increase in student population. The undergraduate, staff, and faculty numbers are expected to remain largely consistent with present population levels.

Existing & Anticipated Parking Demand

As previously discussed, the peak parking demand was estimated using two methodologies: utilization counts and survey data. The parking supply for the campus is currently at 4,865 spaces. Sites within the campus that UVM ground-leases (and their associated parking spaces), such as Redstone Lofts, Redstone Commons, and Centennial Court Faculty/Staff Apartments, are not included in this total. When accounting for these additional 379 spaces that are nestled within the campus and utilized by students in Redstone Lofts & Apartments,

Figure 7 University of Vermont Parking Utilization Trends

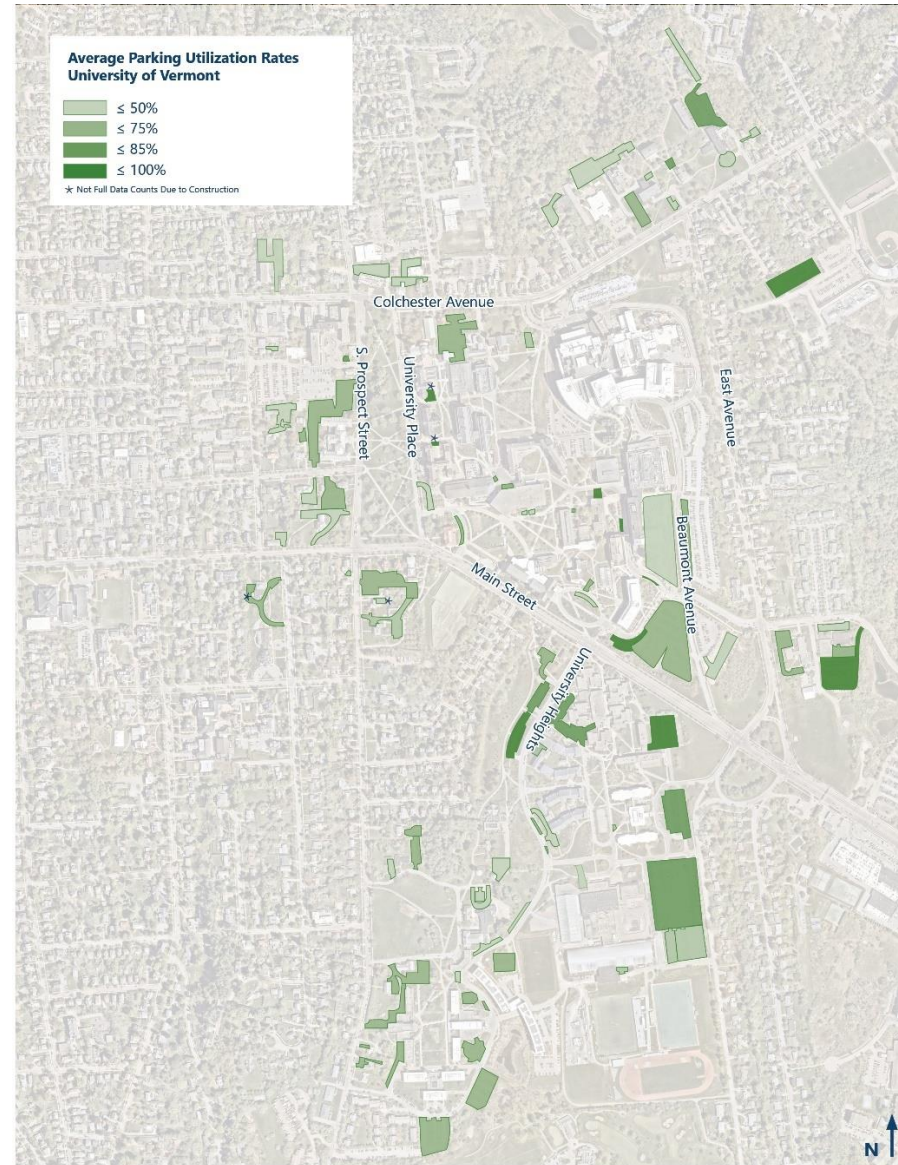


but not part of UVM's parking supply for their exclusive use, there are 5,244 spaces. As such, there are two net parking space estimates provided to account for the UVM parking supply, and the UVM parking supply with consideration for these on site and student utilized spaces.

The UVM managed spaces are spread across the lots as depicted in Figure 8. In addition, Figure 8 demonstrates the average parking utilization rates for each UVM owned lot. These rates are based on the quarterly lot counts conducted by UVM across three days during peak periods.

The maximum parking utilization was compared across the available data from previous peak period observations to demonstrate changes over time. The parking utilization trends in Figure 7 demonstrate slightly reduced demand through the Fall 2020 to Summer 2021 period, where utilization ranged from 29% to 56%. Parking utilization rebounded starting in Fall 2021 with an in session (i.e. not summer) maximum utilization between 70% and 78% consistently. This more recent data falls below utilization observations made prior to the COVID pandemic, which were above 80%.

Figure 8 University of Vermont Average Utilization Rates



The current peak parking demand for UVM is estimated to be 3,508 vehicle spaces based on observed peak parking utilization counts, demonstrating a net available parking supply of 1,357 spaces. Peak parking demand based on survey data indicates peak parking demand of 4,943 spaces, or a net shortfall of 78 spaces. It is noted that this estimate and its future projections represent a likely overestimation of peak parking demand. The percent of users for each user group was estimated based on those that reported predominantly driving alone or carpooling to serve their transportation to campus and reported typically being on campus at the peak time. They may be using secondary modes at other times during a typical week, including carpooling, biking, and/or teleworking. As such, it can be assumed that these estimates inflate the demand to represent an artificially high peak parking demand.

Table 12 University of Vermont Current Parking Demand

University of Vermont			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces
Employees ²	4,024	55.4%	2,228
On-Campus Students	5,775	16.8%	971
Off-Campus Students ³	7,741	17.8%	1,376
Visitors			185
Fleet ⁴			183
Peak Parking Demand			
Demand Based on Survey⁵			4,943
Utilization Based on Counts⁶			3,508
Parking Supply			
Total UVM Managed			4,865
Total UVM + Ground-Lease Spaces⁷			5,244
Net Spaces			
Peak Demand in UVM Managed Spaces			-78
Peak Demand in UVM + Ground-Lease Spaces			+301
Peak Utilization in UVM Managed Spaces			+1,357

1. Peak parking demand is calculated from data collected in the 2022 CATMA Employee and Student Transportation Survey using the methodology described in Appendix A. "% of Users" consists only of car users who are on campus at peak time.
2. Employees not located on Main Campus are not included in this count.
3. Off-Campus Students does not include Continuing Education students.
4. Fleet vehicles not located on Main Campus or in Burlington not included in this count.
5. Total peak parking demand has a margin of error of ± 1046 spaces.
6. October 4, 2022 at noon was the peak utilization count and has a margin of error of ± 217 spaces based on 2022 count data.
7. Ground-lease spaces include spaces that are interior to the campus but exclusively used by Redstone Lofts and Apartments.

Future parking demand was estimated from the surveyed mode trends by user groups, accounting for the anticipated changes to infrastructure and user populations described above. For UVM, the undergraduate population is expected to remain consistent with population increases coming largely from increased graduate student enrollment. An increase in the number of beds available for on-campus students was provided with a range of 600 to 1200 beds projected. For the purposes of calculating demand, the low end of the anticipated range of new beds was assumed at 600 beds. These assumptions provided a conservative estimate even though additional housing is being contemplated and may contribute to further increases in on-campus housing for students. Parking supply is expected to increase in the future condition, contributing to the estimate of a 705-space surplus of parking anticipated in the projection to 2028. This estimate assumes the mode trends remain consistent with current behavior for each user group.

Table 13 University of Vermont Future Parking Demand 2028

University of Vermont			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces
Employees ²	4,020	55.4%	2,226
On-Campus Students	6,375	16.8%	1,073
Off-Campus Students ³	7,425	17.8%	1,321
Visitors			185
Fleet ⁴			183
Peak Parking Demand			
Demand Based on Survey			4,988
Total Parking Supply			
Total UVM Managed			5,693
Total UVM + Ground-Lease Spaces			6,072
Net Spaces			
Peak Demand in UVM Managed Spaces			+705
Peak Demand in UVM + Ground-Lease Spaces			+1,084

1. Peak parking demand is calculated from data collected in the 2022 CATMA Employee and Student Transportation Survey using the methodology described in Appendix A. "% of Users" consists only of car users who are on campus at peak time.

2. Employees not located on Main Campus are not included in this count.

3. Off-Campus Students does not include Continuing Education students.

4. Fleet vehicles not located on Main Campus or in Burlington not included in this count.

Fleet

In 2019, UVM created a Fleet Vehicle Procurement Procedure to attempt to achieve a high level of fiscal, social, and environmental responsibility in fleet vehicle procurement. This procedure defines the process for purchasing new or replacement vehicles. The University will prioritize alternative fuel vehicles (AFVs) and vehicles with high fuel economies relative to their market class.

UVM has 212 fleet vehicles that park throughout the main campus and other off campus locations. The fleet vehicles parked in Howe and Votey parking lots have designated “Service Only” spaces. The other lots the fleet vehicles are parked in have a combination of spaces, including designated “Service Only” spaces. Ambulances are parked in the Rescue Building and CATS shuttle buses are parked in Catamount West when not in use. CATS shuttle buses may be parked at the Bioresearch Complex in the future.

Highlighted Strategies

Parking Restrictions and Permits

The University of Vermont provides clear guidance for all campus community members to follow regarding parking policies. It is mandatory that all UVM affiliates obtain a permit for their vehicles each semester. Permits are affiliated with specific parking zones.

First year students living in residential halls are prohibited from registering a vehicle for campus parking. The University has determined approved, eligible employment and documented medical needs to be the only exceptions. Students are required to take a parking permit course prior to receiving a parking permit. This course is designed to educate potential permit holders on the alternatives to and impact of driving alone.

UVM has a virtual permit system that uses license plate recognition (LPR) technology to capture the vehicle's license plate to confirm your vehicle is registered. Parking regulations are enforced on campus 24 hours a day, seven days a week using a system of warnings, citations, and/or removal of vehicles by towing.

Telework

UVM offers flexible working arrangements and telework policies. Telework requests are reviewed on a case-by-case basis in the context of established and consistent guidelines. Telework requests are approved or denied at the discretion of the appropriate Dean, Vice President or Vice Provost and may be discontinued at any time at the University's sole discretion.

Transportation Demand Management

UVM partners with CATMA to offer employees and students bike/walk rewards, personalized trip planning assistance, and Guaranteed Ride home. UVM affiliates have access to Go! Vermont resources and Carpool and Van Pool matching to find greener travel options. In addition, UVM provides funding to GMT through the Unlimited Access Program to offer affiliates free bus transit rides on GMT routes.

CarShare Vermont

UVM has a partnership with CarShare Vermont via CATMA's Campus Programs Contract and provides funding to CarShare Vermont for program support. Through this contract with CATMA, CarShare Vermont provides discounted membership to any campus affiliate that does not hold a parking permit¹⁶. As of December 2022, there were a total of 251 members (194 students and 57 employees registered to CarShare Vermont through UVM). There are two CarShare pods on the UVM campus including locations just off of University Place and on University Heights. Currently there are two cars located on UVM campus¹⁷.

Shuttles

UVM provides an on-campus shuttle (CATS) for students that runs 7:30 am until 5:30 pm. On the weekdays, these shuttles generally run every 15 minutes between Redstone and Central campus, every 15-20 minutes on the on-campus route during the daytime, and every 15-30 minutes on-campus during the evening. Weekend service of the on-campus shuttle runs every 30 minutes in the evenings. Locations of the CATS shuttles can be tracked with the Real-Time CATS Shuttle Locations¹⁸ providing up to date information to users via website or mobile app. In addition to the on-campus and Redstone Express routes, there has historically been an off-campus bus that serves key destinations beyond campus focused shuttle routes; however, it is not currently running due to driver shortages.

¹⁶ Rates for CarShare Vermont Campus Programs can be viewed here: <https://www.carsharevt.org/memberships/campus/>

¹⁷ A map of CarShare Vermont locations can be viewed here: <https://www.carsharevt.org/locations/>

¹⁸ <https://uvm.transloc.com/>

UVM also offers CATSride as a shuttle service on a first come, first serve basis. The intent of this shuttle service is to provide transportation between UVM sites within 10 miles of central campus. UVM employees and students can reserve a ride with the demand response-based service by scheduling in advance or can reach out directly to the shuttle for same day service.

Local and regional bus routes via GMT serve students and employees beyond the on-campus routes, with fare free transit available to all users tentatively until later in 2023. It is anticipated that UVM will continue to provide funding to enable their affiliates to ride GMT bus routes for free with a valid UVM ID should fares be reinstated.

A key to limiting the need for students to come to campus with a vehicle is connecting students to transportation options around break times. UVM provides shuttle services between campus and Downtown Transit Center for connections to regional bus services, Amtrak stations in Burlington and Essex Junction, and Burlington International Airport prior to and following school recess periods. Shared shuttle services with Champlain College around break times are also offered.

Monitoring, Compliance, and Enforcement

UVM has enabled technology to assist their diligent efforts in monitoring and enforcing the parking plan on campus. UVM has implemented a virtual parking permit system that utilizes license plate reader technology. Permit holders no longer use hang tags, but rather their registered vehicle's license plate serves as the key to the permit they hold. LPR equipped service vehicles monitor all of the parking areas on campus routinely, identifying the vehicles parked on campus and whether they are parked appropriately given the permit type.

In 2022, over 8,000 citations were issued, with the most common violations of parking with no valid permit (2,994), in a restricted area (1,781), or parking in an expired space (1,268). Fines for expired metered spaces are \$25, for parking in restricted areas are \$30, and for parking with no valid permit are \$50. Habitual offender fines go up significantly, with habitual offenders in expired spaces fined \$80, in restricted areas fined \$90, and without a valid permit \$110. These fines act as a significant deterrent to improper parking on campus.

In addition to the daily monitoring, quarterly counts are conducted for a three-day period at every lot during peak times (i.e. intervals starting at 10AM, 12PM, and 2PM).

Other Key Areas of Concern

Although the JIPMP is generally focused on the peak demand for parking, it is recognized that concerns regarding special event parking have been raised. UVM has a clear set of procedures for accommodating events with significant parking demand on

campus. Event parking areas can be dedicated for an event or commingled, depending on the size of the event. These events tend to fall outside of the typical peak demand times, relegated generally to the evenings and weekends when many of the employee and student commuters accessing campus are not parked in campus spaces. In the efficiency-based standards framework, this opportunity to share parking resources during periods of underutilization for other purposes (i.e. daytime commuter parking) would be viewed positively. In alignment with efficiency-based standards, the written protocol for events allows for the parking in closest proximity to the event to fill up first. Should that primary parking fill, the assigned officer and staff will shift to reroute parking demand to overflow parking designated for the event. This overflow parking is served by shuttles to and from the main entrance of the event. For events that regularly utilize the overflow parking, like major sports events, attendees are encouraged to utilize the overflow parking and shuttle service. During Commencement, UVM's largest event annually, the University is able to manage the demand within the institution's resources to meet the needs of the event.

5

University of Vermont Medical Center

The University of Vermont Medical Center (UVMMC) is designated as a Level I Trauma Center situated in an academic teaching and research hospital serving the Vermont and Northern New York region. The campus in Burlington is the hub of a large, integrated healthcare system in partnership with an extensive network of hospitals and healthcare facilities throughout the region. Partnership with the Larner College of Medicine and College of Nursing and Health Sciences at UVM enables training for the next generation of healthcare professionals and innovation through advancing research.

The UVMMC campus sits prominently on the hill in Burlington adjacent to the UVM core campus area. Founded in 1879, the original hospital was partially housed in the Mary Fletcher Hospital building that still sits on the site today. The hospital's campus has expanded significantly over the years, adding buildings and square footage to support the hospital's mission and growing role in serving the communities of Vermont and Northern New York.

UVMMC campus is flanked on three sides by Colchester Avenue, East Avenue, and Main Street. Each of these three perimeter roadways provide entrance access points to the campus. Additional internal roadways and pathways, including Carrigan Drive and Beaumont Avenue, allow for circulation within the site.

Existing & Anticipated Infrastructure and Development Plan

The main medical center campus has 786,057 gsf serving the hospital's in-patient units, 35,597 gsf serving educational purposes, and an additional 877,085 gsf serving other purposes. Satellite sites within Burlington account for an additional 197,922 gsf of building space, with 1 South Prospect making up the majority of that area with 149,404 gsf. The hospital's infrastructure is served by 3,788 parking spaces, with 2,500 of the spaces in on-site facilities including the ACC Garage, Emergency Room Lot,

McClure Garage, South Lot, and 1 South Prospect. Off-site lots include 1,276 additional spaces with 86 spaces available at other off-site Burlington satellite facilities¹⁹ and the remaining at lots served by shuttle services.

At the time of this document, projects being contemplated include evaluation of the McClure Parking Garage due to deteriorating structural conditions and potential adjustments to leased satellite parking. There are no plans for projects within Burlington that would alter building square footage. The previously approved JIPMP had no plans for changes to building or parking footprints for UVMMC.

Existing & Anticipated Community Population

The UVMMC is a hospital with 580 licensed in-patient beds. In 2022, the average daily number of appointments and procedures was approximately 2,952 per day across the Medical Center Campus, 1 South Prospect, and other Burlington sites, including in person and telehealth visits. That accounts for nearly 675,000 in person appointments or procedures across the year or over 750,000 total visits. One practice that continues to serve the patient population of UVMMC is telehealth visits. With a significant rise in telehealth visits during the COVID pandemic, data from 2022 indicates that this practice will continue to serve some baseline portion of visits that would otherwise be in person. For 2022, approximately 10% of appointments were served via telehealth, amounting to over 75,000 additional patient appointments over the year served without a need for patient transportation to or parking on campus.

There are a total of 6,475 employees of UVMMC that report to sites within Burlington. The main medical center campus accounts for 5,725 of those employees with another 646 at 1 South Prospect and the remaining 104 at other sites in Burlington. In addition to the paid staff, there are also honorary members of the medical staff and volunteers that are regularly on campus to serve the patients and visitors, with 188 total individuals that fill these roles.

Existing & Anticipated Parking Demand

As previously discussed, the peak parking demand was estimated using two methodologies: utilization counts and survey data. The parking supply for UVMMC is currently at 2,500 on-site spaces. The demand was evaluated based on the employees that report to sites within Burlington and are parking on-site, as well as patients and visitors accessing the facilities and parking on-site. The analysis here focused on the on-site parking supply and demand, however, the full system parking including off-site and satellite parking was included in the *Institutional Supplement*. These spaces within Burlington are spread across the lots as

¹⁹ These additional spaces do not include 184 Peel Street, which is leased by UVMMC, but staffed by others with no UVMMC affiliated parking.

depicted in Figure 9. In addition, Figure 9 demonstrates the average parking utilization rates for each UVMMC lot. These rates are based on the quarterly lot counts conducted across three days during peak periods.

Figure 9 University of Vermont Medical Center Average Utilization Rates



The maximum parking utilization was compared across the available data from previous peak period observations to demonstrate changes over time. The parking utilization trends in Figure 10 demonstrate slightly reduced demand through the Fall 2020 to Summer 2021 period, but still remained above 73%. Parking utilization has not returned to the above 90% peak utilization like that observed prior to the COVID pandemic. The maximum peak utilization is most recently hovering in the mid-80% range.

The current peak parking demand for UVMMC is estimated to be 1,941 vehicle spaces based on observed peak parking utilization counts for on-site facilities, demonstrating a net available parking supply of 559 spaces. Peak parking demand based on survey data indicates peak parking demand of 2,145 spaces in on-site facilities, or a net surplus of 355 spaces. It is noted that this estimate and its future projections represent a likely overestimation of peak parking demand.

Future parking demand was estimated from the surveyed mode trends by user groups, accounting for any anticipated changes to infrastructure and user populations described above. For UVMMC, the employee population, patients served, and visitor activity are expected to remain consistent with the current status. The infrastructure is also anticipated to remain consistent with no changes to buildings and limited changes to on-site parking supply. Assuming mode trends remain consistent with current behavior for each user group, the on-site parking surplus is anticipated to be 355 spaces projected to 2028.

Figure 10 University of Vermont Medical Center Parking Utilization Trends

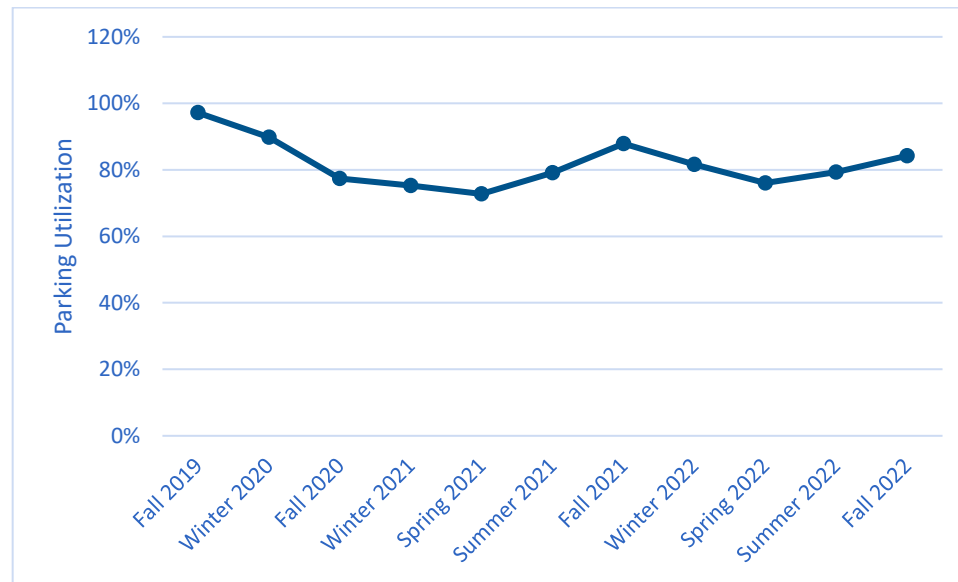


Table 14 University of Vermont Medical Center Current Parking Demand

UVM Medical Center			
User Group	Number of Users	Peak Parking Demand ¹	
		% of Users	Spaces
Medical Center Campus			
Employees	5725	13.7%	785
Out-Patients ⁴	2388		700
In-Patients ⁴			75
Visitors ²			250
Fleet			11
Subtotal			1,821
1 South Prospect			
Employees ³	646	11.7%	75
Out-Patients ⁴	563		230
Fleet			10
Subtotal			315
Other			
Employees	104	8.3%	9
Subtotal			9
Peak Parking Demand Based on Survey ⁵			2,145
Peak Parking Utilization Based on Counts ⁶			1,941
Total Parking Supply			2,500
Net Spaces Peak Demand			+355
Net Spaces Peak Utilization			+559

1. Peak parking demand is calculated from data collected in the 2022 CATMA Employee and Student Transportation Survey using the methodology described in Appendix A. "% of Users" consists only of car users who are on campus at peak time.

2. UVMCC volunteers are included in visitor parking demand, as volunteers park in the ACC Garage and get a voucher to avoid paying upon their departure.

3. Employees of 1 South Prospect assigned to Centennial have been allowed to park on-site due to suspended shuttle service.

4. Average daily patient estimates are based on total annual in person and telehealth appointments and procedures by location for 2022 at the Medical Center and 1 South Prospect facilities. Patient and visitor parking is allocated to 50% of the parking supply on-site. Policies are in place should the patient parking demand exceed this supply.

5. Total peak parking demand has a margin of error of ± 122 spaces.

6. Peak observed parking utilization occurred on October 4th, 2022 at 10 AM and has a margin of error of ± 65 spaces based on 2022 count data.

Table 15 University of Vermont Medical Center Future Parking Demand 2028

UVM Medical Center			
User Group	Number of Users	Peak Parking Demand ¹	
		% of Users	Spaces
Medical Center Campus			
Employees	5725	13.7%	785
Out-Patients ⁴	2388		700
In-Patients ⁴			75
Visitors ²			250
Fleet			11
<i>Subtotal</i>			<i>1821</i>
1 South Prospect			
Employees ³	646	11.7%	75
Out-Patients ⁴	563		230
Fleet			10
<i>Subtotal</i>			<i>315</i>
Other			
Employees	104	8.3%	9
<i>Subtotal</i>			<i>9</i>
Peak Parking Demand Based on Survey			2,145
Total Parking Supply			2,500
Net Spaces Peak Demand			+355

1. Peak parking demand is calculated from data collected in the 2022 CATMA Employee and Student Transportation Survey using the methodology described in Appendix A. "% of Users" consists only of car users who are on campus at peak time.

2. Average daily patient estimates are based on total annual in person and telehealth appointments and procedures by location for 2022 at the Medical Center and 1 South Prospect facilities. Patient and visitor parking is allocated to 50% of the parking supply on-site. Policies are in place should the patient parking demand exceed this supply.

3. Employees of 1 South Prospect assigned to Centennial have been allowed to park on-site due to suspended shuttle service.

4. Patient parking is allocated to 50% of the parking supply on-site. Policies are in place should the patient parking demand exceed this supply.

Fleet

UVMMC fleet is comprised of 40 vehicles total and 28 are typically circulating in Burlington. The fleet includes cargo vans, ambulances, trucks, SUVs, and other vehicles. All but five of UVMMC fleet vehicles are typically parked in designated “Service Only” spaces.

Highlighted Strategies

Parking Restrictions and Permits

There are clear directions and information regarding parking locations and prices for UVMMC patients and visitors on the UVMMC website. For patients and visitors, on-site parking is available in a garage adjacent to the main campus with entrances to the hospital at each garage level. There is also curbside service including assistance to patients and valet parking service. Valet service is available for \$8 per vehicle Monday through Friday from 6 AM to 5 PM, with the ability to retrieve vehicles until 9 PM. Patients or visitors with valid handicapped parking placard or plate displayed can park for free in the parking garage.

For employees, UVMMC has a detailed parking policy that outlines parking requirements based on job title and shift. All UVMMC staff and affiliates who wish to park their vehicles in a UVMMC controlled parking lot must register their vehicle with the UVMMC Security Department. The hang tags are color coded based on parking assignment (on-site lot or satellite lot). The satellite lots include a free shuttle to the main campus. Generally on-site parking is limited to permits reserved for senior staff, physicians, residents, business needs, and medical needs. For on-call employees, parking is also available on site. In 2022, there were 1,773 permits issued for parking on-site of the 8,138 permits issued total.

Telework & Telehealth

UVMMC has a Remote and Hybrid Work Policy to increase employee engagement and job satisfaction. By allowing remote work, UVM Medical Center expects to realize the efficiencies of decreased turnover, reduced office and parking space needs, and increased work productivity. There are several remote designations, On-site Flex (0-30%), Hybrid Flex (31-70%), Remote Flex (71-100%). The amount of time spent remote is indicated by the numerical values.

Telehealth continues to serve some of the patient and visitor demand for parking on the Medical Center Campus. As previously discussed, telehealth visits represented approximately 10% of patient appointments and procedures for UVMMC based on 2022

figures. It is anticipated that this trend will continue to serve a baseline need in the community and effectively reduce the daily demand for patient and visitor parking on site.

Carpool

UVMHC has a robust and mature carpooling policy for employees with a strong incentive program. Employees who carpool are provided with the opportunity to park in more desirable parking lots, receive gas coupons, and utilize the guaranteed ride home program from CATMA. Employees who wish to carpool must register as a carpool group with the UVMHC Security Department. The carpool program issued 427 carpool permits for 854 participants in 2022, demonstrating the program's popularity.

Bike parking, in particular covered bike parking, is also an area receiving some attention from UVMHC. Re-envisioning of the covered bike parking just outside of the McClure building, which is often full, to maximize the space available and accommodate more bike parking in close proximity to a key entrance of the facility. UVMHC is exploring making this area secure bike parking with fencing for employee bike parking. This project is just one example of the multimodal enhancements taking place to better serve active or alternative modes of transportation to and from UVMHC.

Shuttle and Transit Services

For employees accessing the Medical Center Campus through off-site parking, UVMHC contracts with a bus company to serve the off-site lots with shuttle service. The shuttles serve AM and PM peaks with more frequency of service and more shuttle buses in circulation to serve start and end of shift transit. The off-site lots generally have between 59 and 76 shuttle runs per day serving trips between the hours of 4:15 AM and 9:20 PM. The exception to this is the shuttle serving Centennial and 1 South Prospect, which typically operates with 30 shuttle runs per day serving the AM and PM peaks and on demand service midday. These two lots are in close proximity of the Medical Center Campus, with many users choosing to walk between parking and campus. This Centennial and South Prospect shuttle service is currently suspended due to COVID, and 1 South Prospect staff assigned to Centennial are allowed to park on-site in the interim.

UVMHC has supported discounted local and regional bus transit service for employees in the past. With fare free transit in place, this subsidy has not been tracked through the pandemic. This discounted transit opportunity would return and be tracked should fares return as tentatively planned in 2023. UVMHC has continued to support subsidized ferry service for employees that reside in New York to utilize Lake Champlain Ferries for commuting purposes. For October 2021 through September 2022, an average of 93 monthly car and driver passes and 13 passenger ten ride passes were discounted through this program.

For patients, UVMHC and Special Services Transportation Agency (SSTA) have partnered to provide shuttle services between the Downtown Transit Center and practices within the UVMHC network, like the Tilley Drive and Hinesburg Road locations.

The shuttle service is a free, scheduled service running weekdays between 7:30AM and 4:25PM with reliable and accessible service. UVMMC continues to identify ways like the Tilley Drive Shuttle to serve employees and patients with more efficient transportation options.

Monitoring, Compliance, and Enforcement

The parking on-site and off-site that serves UVMMC is diligently monitored and regulated parking is enforced by UVMMC Security staff per the procedures set forth in the University of Vermont Medical Center Parking and Parking Enforcement Policy documents. UVMMC has a strict vehicle registration and parking permit system that employees are expected to comply with. There are penalties of \$10 for violating any of the parking policies. Repeat offenders are subject to towing/booting at owner's expense with violation notifications to direct supervisors for corrective action. Repeat offenses may result in forfeiture of future parking in UVMMC facilities.

6

Conclusions

This JIPMP demonstrates the ability of the Hill institutions collectively and individually to meet parking demand both currently and in the near-term future. Champlain College, UVM, and UVMMC are jointly committed to continued progress on reducing drive alone, single occupancy vehicle access to their campuses rooted in overarching commitments to climate initiatives. They have demonstrated pursuit of efficiency-based parking management, enabling various TDM strategies to actively manage and mitigate parking demand and encourage alternative mode use.

Two different methodologies demonstrated that the parking supply will serve the peak demand for parking on each institution's campus both currently and into the future. It is noted that the more robust count program that is now in place serves to provide the ground truth for observed parking demand on each respective campus. This data is invaluable to demonstrating the ability of each institution to meet the peak parking demands of their populations. Given these data can only provide a look back at how the demand was served, it is important to have the secondary method of estimating demand based on survey data to demonstrate both current and future peak parking demand, even if these estimates are notably inflated compared to the demonstrated parking utilization. These two methods likely provide the book ends of the actual parking demand on campus at peak times.

The findings shared here will be supplemented over the next five years with annual updates to track demand trends and efficacy of demand management strategies employed.

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A

Appendix A

Lot Counts

The institutions continue conducting quarterly lot counts for three days (Tuesday, Wednesday, and Thursday) and three times (10:00 AM, 12:00 PM, 2:00 PM) to support the 5-year and annual JIPMPs. This constant and consistent data collection has strengthened our demand estimations in the 5-year JIPMP.

There are advantages and drawbacks to using lot counts or survey data to estimate demand. Though lot counts are an inexpensive method to calculate parking demand, they are also usually only representative of a limited time frame. This limitation means typical peak demand may not be captured due to variability (i.e. seasonal mode change, time-off, etc.), and may underestimate demand. Survey data may overestimate demand because it fails to capture daily variation seen in lot counts. However, survey data can break down demand by user group, understand different mode trends, and can forecast future demand patterns. For more information about the advantages and drawbacks of lot counts and survey data for estimating demand, please see the 2020-2022 JIPMP Appendix B which was provided by Jonathan Dowds formerly with UVM's Transportation Research Center.

Survey Administration

The 2022 CATMA Student & Employee Transportation Surveys were launched on October 4, 2022. Direct solicitation emails were sent to employees and students. Table A-1 describes the solicitation process in more detail.

Table A-1. Overview of CATMA's 2022 Transportation Survey solicitation and responses.

	Launch Date	Population Total	Solicitation Total	Total Responses	Response Rate	Margin of Error
Student Survey						
Champlain	10/4/2022	1,736	1,781	416	24%	4%
UVM	10/4/2022	14,088	1,000	189	19%	7%
Employee Survey						
Champlain	10/4/2022	612	944	175	19%	6%
UVM	10/4/2022	4,254	1,000	304	30%	5%
UVMCC	10/4/2022	6,371	8,572	2,279	27%	2%

Survey Weighting

With guidance from UVM's Transportation Research Center, the results of CATMA's 2022 surveys were weighted using population parameters provided by the institutions. Survey weighting is intended to weight survey responses in a way that is reflective of the actual population. This process corrects for segments in population who are either under or overrepresented by those who answered the survey.

Demand Calculation

The demand estimation calculation used in the 2020-2022 JIPMP was provided by UVM's Transportation Research Center. Rather than finding the peak time on campus for all users and the demand for parking of all users, this calculation relies on the peak time on campus for auto-users. This adjustment is reflected by the **peak parking demand percent** listed in each demand calculation (see Table A-2). By making this slight distinction, some overestimation of demand is reduced as well as a reduction in the margin of error.

Peak parking demand percent is calculated by first finding the time the most auto users are on each campus. For employees and off-campus students, auto users are either those who drive alone and half of those carpool as their main mode. For on-campus students, auto users are all individuals who own a car. Then, a proportion is created for each user group (employees, on-campus students, and off-campus students) by taking the number of auto users on campus at peak time and dividing it by the total number of individuals in that user group in the survey. That percentage (which is the peak parking demand percentage) is

multiplied by the total number of users in that group given by the institution which results in demand (see Figure A-1 for formulas).

Table A-2. Summary of peak parking demand on each campus as identified by the 2022 CATMA Employee and Student Transportation Surveys.

Champlain College	Thursday	12:00 PM – 2:00 PM
UVM	Wednesday	2:00 PM – 4:00 PM
UVM Medical Center	Monday	2:00 PM – 4:00 PM

Figure A-1. Top: Formula for calculating peak parking demand percent for employees and off-campus students. Bottom: Formula for calculating peak parking demand percent for on-campus students.

$$\text{Peak Parking Demand \%} = \frac{\text{Drive Alone at Peak Time} + \frac{1}{2}(\text{Carpool at Peak Time})}{\text{All Users}}$$

$$\text{Peak Parking Demand \%} = \frac{\text{Own Vehicle}}{\text{All Users}}$$

Margin of Error

The margin of error is the range within which a true value may be found given a certain confidence interval. All margins of error reported in the 2023-2028 JIPMP are within a 95% confidence interval. The margins of error were calculated using the Complex Samples modules in SPSS and were found for the peak parking demand percent for each user group. For each of the institutions, the composite margin of error was found by summing the squares of each user group's margin of error and taking the square of root of the sum. Knowing the margin of error is useful, because within a 95% confidence interval, we can know the total parking demand for any institution is above or below a certain percentage of the estimated demand given.

B

Appendix B

Comprehensive Development Ordinance – Parking

Sec. 8.3.3 Institutional Parking Management Plans

An Institutional Parking Management Plan shall include the following:

- (a) A narrative that outlines how the proposed parking management plan addresses the specific needs of existing and anticipated development and effectively satisfies the intent of this Article and the goals of the Municipal Development Plan.
- (b) Information specifying the current and anticipated numbers over the ensuing 5 year period for: number of students of all academic programs (full-time, part-time, commuter, on-campus, off-campus, and continuing education), faculty and staff (full-time and part-time), patients and visitors being served by the institution.
- (c) An analysis of the anticipated parking demand by user group, time of day and/or demand by use and parking provided to meet that demand currently and anticipated over the ensuing five-year period;
- (d) Information specifying the number and composition of the institution's vehicle fleet, where these vehicles are regularly kept, and designated "service vehicle-only" parking;
- (e) Strategies used to reduce or manage the demand for parking which may include but are not limited to:
 - 1. Policies which restrict and/or prohibit the bringing of vehicles to the institution for various users or groups of users;

2. A telecommuting program;
 3. Programs and employee and student subsidies to encourage the use of public transit, car-share, walking, and bicycling;
 4. Implementation of a shuttle service system serving off-site parking;
 5. Implementation of a parking permit system to allocate parking throughout the system; and,
- (f) Implementation of a monitoring, compliance and enforcement system to measure and ensure compliance with the plan.

Sec. 8.3.4 Review and Approval of Institutional Parking Management Plans

(a) Plan Approval

Such a plan shall require review and approval by the DRB, after consultation with the planning commission, and after a public hearing. In order to approve a proposed Institutional Parking Plan, the DRB shall find:

- a. the proposed Institutional Parking Plan adequately serves existing and proposed development and user groups by the institution(s);
- b. the proposed Institutional Parking Plan effectively meets the intent of this Article and the goals of the municipal development plan.

Such a plan, if approved by the DRB, shall be applicable for a period not to exceed five (5) years, and may be amended as necessary pursuant to the requirements of this Part. The DRB may approve one extension of up to six (6) months so long as the extension is requested prior to the Plan's expiration.

(b) Annual Reporting

The institution shall provide a report annually to the administrative officer regarding the implementation and performance of the approved plan and any significant changes in the size or makeup of user groups, parking supply, travel by mode for user groups, availability and utilization of parking management strategies, anticipated development activity, and any other conditions impacting supply and/or demand.

Failure to submit such annual report shall be a violation of this ordinance.

Sec. 8.3.5 Review and Approval of Applications for Future Development

Pursuant to Sec. 2.7.8 of this ordinance, no zoning permit or certificate of occupancy may be granted for projects which will impact the supply of or demand for parking without an approved or amended plan. Projects such as routine maintenance, repair, equipment installation, walkways, landscaping, installation of public art, and the like are exempt from this requirement so long as they do not result in a change of use, habitable area, or parking facilities upon which a plan's supply and demand calculations are based.

- (a) In reviewing any application for development from a post-secondary educational or medical institution within the Institutional district, the DRB shall find that the proposal is included and addressed within an approved Institutional Parking Plan and that the proposal is consistent with the approved Plan.
- (b) Any development proposed by a post-secondary educational or medical institution within the Institutional district that is not included and addressed within an approved Institutional Parking Plan shall only be approved pursuant to the underlying parking requirements of Parts 1 and 2 of this Article and upon approval of an amendment to an approved plan.

In addition to application requirements specified in Article 3 and this Part, the Institutions(s) shall submit an amendment to an approved plan that addresses how the development is consistent with or modifies supply and demand calculations and applicable TDM strategies contained in the approved Plan. Amendments may be in the form of an addendum that addresses any relevant sections of an approved Plan. The amendment shall be approved by either the administrative officer or DRB based on the underlying application type. Such developments shall be reflected in subsequent annual reports submitted to the administrative officer, and future plan updates.

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CHAMPLAIN
COLLEGE



The University of Vermont

THE
University of Vermont
MEDICAL CENTER

Joint Institutional Parking Management Plan Institutional Supplement

2023-2028

Prepared For: Planning Commission

Date: April 25th, 2023

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Purpose

The *Institutional Supplement* is intended to further detail the data gathered and analyzed in support of the *Joint Institutional Parking Management Plan* (JIPMP). These data are either further summarized within the JIPMP or not required by the JIPMP and instead documented here in support of the JIPMP and institutional planning purposes.

Champlain College

Table 1 Champlain College Parking Lot Counts

	10:00 AM	12:00 PM	2:00 PM
Winter 2022			
2/8/2022	394	396	390
2/9/2022	187	297	299
2/10/2022	386	403	392
Average	350	55%	
Maximum	403	63%	
Spring 2022			
4/19/2022	309	320	347
4/20/2022	273	279	310
4/21/2022	352	383	382
Average	329	52%	
Maximum	383	60%	
Summer 2022			
7/19/2022	185	181	186
7/20/2022	172	157	150
7/21/2022	166	176	170
Average	172	27%	
Maximum	186	29%	
Fall 2022			
10/4/2022	418	418	409
10/5/2022	363	362	380
10/6/2022	376	419	427
Average	397	62%	
Maximum	427	67%	
Total			
Average	312	49%	
Maximum	427	67%	

Table 2 Champlain College Infrastructure (included in GSF calculation and parking supply)

Name	Primary Use	GSF	Residential Beds	Parking Spaces
194 St Paul Street	Residential/Retail	175000	312	0
	(4,455 GSF Retail)			
308 Maple	Residential	5223	13	0
371 Main	Residential	13326	36	22
396 Main	Residential	8801	36	21
Adirondack Hall	Residential	4631	19	0
Aiken Hall	Administrative/Academic	13701	0	0
Bader Hall	Residential	8140	21	0
Bankus Hall	Residential	10432	45	0
Butler Hall	Residential	26730	89	0
Carriage House	Residential	2376	10	0
Center for Communications and Creative Media (formerly Hauke/Alumni)	Administrative/Academic	87187	0	0
Cushing Hall	Residential	9095	27	7
Durick Hall	Administrative	4036	0	3
Foster Hall	Administrative/Academic	7008	0	0
Freeman Hall	Administrative/Academic	11992	0	0
Garden House (ARC)	Administrative	4371	0	0
Goodhue Coolidge House	Administrative/Academic	4054	0	0
Hill Hall	Residential	9203	37	0
IDX Student Life Center	Administrative/Athletic/	49939	0	5
	Dining			
Jensen Hall	Residential	9972	36	9
Joyce Learning Center	Academic	20483	0	0
Juniper	Residential	28732	95	0
Lakeside Campus	Administrative	39552	0	267
(Miller Center at Lakeside)			0	
Lakeview Hall	Residential	18033	81	0
Lyman Hall	Residential	8550	36	0
Boardman Hall	Residential	31932	59	28

Name	Primary Use	GSF	Residential Beds	Parking Spaces
McDonald Hall	Residential	10922	45	0
Miller Information Commons	Academic	29860	0	42
North House	Residential	5402	16	10
Pearl Hall	Residential	10874	49	0
Perry Caretaker's Cottage	Residential	444	0	0
Perry Carriage Barn	Academic	5546	0	0
Perry Hall	Administrative/Academic	27847	0	16
Rowell Annex	Administrative	2882	0	0
Rowell Hall	Residential	9954	44	36
Sanders Hall	Residential	9716	36	8
Schillhammer Hall	Residential	7836	26	0
SD Ireland Family Center for Global Bus & Tech	Administrative/Academic	24390	0	0
Skiff Hall	Administrative	12493	0	15
Skiff Annex	Administrative/Academic	3354	0	0
South House	Residential	12608	47	12
Summit Hall	Residential	15271	48	30
The Skiff Gallery	Academic	633	0	0
Valcour Hall	Residential	30028	91	0
West House	Administrative	3718	0	0
Whiting Hall	Residential	9975	31	0
Wick Hall	Administrative/Academic	5265	0	0
Subtotal		851517	1385	531
Leased Facilities/Lots				
115 Lakeside Lot				100
158 South Willard	Residential (temporary)	10900	33	11
Total included in GSF		862417	1418	642
Total				717

1. Leased facilities do not contribute to the number of buildings or total GSF of Champlain College.
2. Residential beds in leased facilities included in total.
3. Includes leased spaces but not Maximum Parking

Table 3 Additional Champlain College Infrastructure (not included in GSF calculation or parking supply)

Name	Primary Use	GSF	Parking Spaces
194 St Paul St	Retail	N/A	67
390 Maple St	Residential	3,768	2
436 Maple St	Residential	4,297	2
115 Summit St (President's House)	Residential	3,487	2
270 South Willard St (Provost's House)	Residential	7,478	2
Total		19,030	75

Table 4 Current and Future Employment and Enrollment for Champlain College

	Current (2022)	Future (2028)
Employment		
On-Campus		
Full-time	353	380
Part-time	193	350
Contracted	66	100
<i>Subtotal</i>	<i>612</i>	<i>830</i>
Off-Campus		
Full-time	26	30
Part-time	263	280
Dublin and Montreal Campuses	22	25
Total in Burlington	901	1,140
Total	923	1,165
Enrollment		
On-Campus		
Full-time Undergraduates	1,675	2,080
First-Year	639	

	Current (2022)	Future (2028)
Second-Year	414	
Junior	311	
Senior	311	
Part-time Undergraduates	61	80
First-Year	13	
Second-Year	8	
Junior	10	
Senior	30	
Full-time Graduates	0	0
Part-time Graduates	0	0
<i>Subtotal</i>	<i>1,736</i>	<i>2,160</i>
Study Abroad		
Dublin, Montreal, & Third Party	30	40
<i>Subtotal</i>	<i>30</i>	<i>40</i>
Champlain College Online		
Full-Time Graduates	407	590
Part-Time Graduates	152	150
Full-time Undergraduate	550	500
Part-time Undergraduate	889	1250
<i>Subtotal</i>	<i>1,998</i>	<i>2,490</i>
Total	3,764	4,690

Table 5 Champlain College permit types, cost, and number of permits issued

Type	Users	Cost Per Semester	Permits Issued
Zone 1	Employees	Free / Pay-per-use	277
	Off-Campus Students	Free / Pay-per-use	202
Zone 2	On Campus Students	\$175	197
Main Campus	Main Campus Employee	\$200	76
Zone 5	Education majors & other students with work requirements	\$250	15
	Disabled	Free	17
	Contractor	Free	9
Total			793

Table 6 Citations given by Champlain College Transportation

Year/Semester	# of Valid Citations Issued	# of Warnings	Funds Collected	Cumulative Funds (Since 2004)
2006-2007	-	-	\$ 57,390	\$ 113,390
2007-2008	-	-	\$ 44,175	\$ 157,565
2008-2009	-	-	\$ 57,195	\$ 214,760
2009-2010	-	-	\$ 42,165	\$ 256,925
2010-2011	-	-	\$ 38,550	\$ 295,475
2011-2012	-	-	\$ 51,065	\$ 346,540
2012-2013	1,574		\$ 43,840	\$ 390,380
2013-2014	1,519		\$ 41,680	\$ 432,060
2014-2015	1,069		\$ 30,600	\$ 462,660
Summer 2015	111		\$ 5,585	\$ 468,245
2015-2016	1,326	105	\$ 31,475	\$ 499,720
Summer 2016	32		\$ 2,300	\$ 502,020
2016-2017	1,935	467	\$ 26,481	\$ 528,501
Summer 2017	156	46	\$ 995	\$ 529,496
2017-2018	2,073	274	\$ 28,502	\$ 557,998
Summer 2018	261	44	\$ 2,795	\$ 560,793
2018-2019	1,435		\$ 20,625	\$ 581,418
Summer 2019	245		\$ 2,575	\$ 583,993
2019-2020	1,113	92	\$ 16,963	\$ 600,956
Summer 2020	0		\$ -	\$ 600,956
2020-2021	456	335	\$ 13,100	\$ 614,056
Summer 2021	2		\$ 25	\$ 614,081
2021-2022	1201	1268	\$ 22,402	\$ 636,483
Summer 2022	22	28	\$ 200	\$ 636,683

University of Vermont

Table 7 University of Vermont Parking Lot Counts

	10:00 AM	12:00 PM	2:00 PM
Winter 2022			
2/8/2022	3,301	3,405	3,248
2/9/2022	3,387	3,469	3,219
2/10/2022	3,110	3,357	3,047
Average	3,283	73%	
Maximum	3,469	77%	
Spring 2022			
4/19/2022	2,882	2,868	2,801
4/20/2022	3,158	3,166	3,109
4/21/2022	3,058	3,038	3,033
Average	3,013	67%	
Maximum	3,166	70%	
Summer 2022			
7/19/2022	1,704	1,602	1,605
7/20/2022	1,788	1,790	1,736
7/21/2022	1,785	1,811	1,801
Average	1,736	38%	
Maximum	1,811	40%	
Fall 2022			
10/4/2022	3,320	3,508	3,331
10/5/2022	3,131	3,367	3,188
10/6/2022	3,432	3,342	3,174
Average	3,311	73%	
Maximum	3,508	78%	
Total			
Average	2,836	63%	
Maximum	3,508	78%	

Table 8 Infrastructure (by building use) included in UVM's GSF Calculation

Building Use	Accessory Buildings	Total Buildings	GSF	Residential Beds
Mixed Uses				
Academic / Administrative / Student Support	0	3	242,857	
Academic / Research	7	69	1,937,764	
UVM / UVMMC Academic Research	1	7	253,501	
Administration	10	33	510,524	
Athletics	6	17	475,948	
Student Support	3	20	501,978	
Residential				
Residential Academic	0	3	110,961	5,775
Residential Dining	0	4	260,602	
Residential Central Campus	2	7	209,342	
Residential Redstone Campus	0	14	408,954	
Residential Trinity Campus	0	12	147,174	
Residential Athletic Campus	0	11	591,503	
Total	29	200	5,651,108	5,775

Table 9 UVM Parking Supply by Campus Area

Parking Lot Location	Capacity	Leased Spaces	Usable Spaces
Athletic Commuter	1,733		1,733
Core Central	50		50
Core East	767	-100	667
Core North	369		369
Core South	135		135
Core West	431	-47	384
Commuter Lots	808	-485	323
Redstone Campus	626		626
Trinity Campus	314		314
Off-Site: Burlington ¹	54		54
Off-Site: Outside Burlington ²	210		210
Total in Burlington	5,287	-632	4,655
Total	5,497	-632	4,865

1. Includes parking at the Rubenstein Laboratory and Bioresearch Complex (South Campus).

2. Includes parking spaces at the Colchester Research Facility, Forestry Laboratory, and Miller Barn.

Table 10 Current and Future Employment and Enrollment for UVM

	Current (2022)	Future ¹ (2028)
Employment		
Staff		
Full-time	2,311	2,300
Part-time	155	160
Faculty		
Full-time	861	860
Part-time	927	930
<i>Non-Burlington Employees²</i>	<i>230</i>	<i>230</i>
<i>Subtotal</i>	<i>4,024</i>	<i>4,020</i>
Enrollment		
<i>Undergraduate</i>	<i>11,326</i>	<i>11,300</i>
First-Year	3,044	3,000
Second-Year	3,024	3,000
Junior	2,478	2,800
Senior	2,780	2,500
Graduate and Certificate	1,707	2,000
Medical Student	483	500
Non-Degree Continuing Education ³	572	700
<i>Subtotal</i>	<i>14,088</i>	<i>14,500</i>
Total	18,112	18,520

1. These numbers are projections only, based on UVM's current estimates as of the date of this document.

2. These employees are subtracted when determining the subtotal of employees because it is unknown whether these employees are faculty/staff or part-time/full-time.

3. Most students in Professional and Continuing Education programs either participate virtually or are on campus for limited amounts of time.

Table 11 UVM permit types, cost, and number of permits issued

Category	Type	Cost	Permits Issued
Employee Permits			
Green	Pre-Tax Payroll Deduction	0.64%	2,939
	Affiliate	\$ 329	
	Affiliate 30-Day	\$ 41	
White	Pre-Tax Payroll Deduction	0.48%	
	Affiliate	\$ 247	
	Affiliate 30-Day	\$ 31	
Brown	Pre-Tax Payroll Deduction	0.32%	
	Affiliate	\$ 165	
	Affiliate 30-Day	\$ 21	
Silver (Off-Site)	Pre-Tax Payroll Deduction	N/A	
	Affiliate		
	Affiliate 30-Day		
Occasional Use	Permit 6-12 Days	N/A	193
	Brown (Peripheral)	\$ 12	
	White (Proximate)	\$ 18	
	Green (Main)	\$ 24	
Carpool (All carpools are paid through Pre-Tax Payroll Deduction)	Green - 2 Person	0.32%	
	Green - 3 Person	0.21%	
	Green - 4 Person	0.16%	
	White - 2 Person	0.24%	
	White - 3 Person	0.16%	
	White - 4 Person	0.12%	
Student Permits			
Residential	30-Day Black, Blue, Purple, and Red	N/A	1,186
	Temporary (1 Semester)	\$ 180	
	Black, Blue, Purple, and Red	\$ 330	
	30-Day Brown	N/A	1,333

Category	Type	Cost	Permits Issued
Commuter and Graduate Students/Medical Students (1st & 2nd Year)	30-Day Gold	N/A	
	Gold - Evening	\$ 69	
	Gold - Evening (1 Semester)	\$ 45	
	Brown - Day & Evening	\$ 115	
	Brown - Day & Evening (1 Semester)	\$ 73	
Medical Students (3rd & 4th Year)	Yellow - Day & Evening	\$ 329	303
	30-Day Yellow	\$ 30	
Occasional Use	Brown	\$ 12	11
	White	N/A	0
	Yellow	N/A	0

Table 12 Citations given by UVM Transportation and Parking Services

Violation	Fine	Citations Issued	Funds Collected
No Valid Permit	\$ 50	2994	\$ 149,700
Habituals/Warning-No Permit	\$ 50	347	\$ 17,350
Habitual Offender-No Permit	\$ 110	409	\$ 44,990
Restricted Area	\$ 30	1781	\$ 53,430
Habituals/Warning Restricted Area	\$ 30	216	\$ 6,480
Habitual Offender- Restricted Area	\$ 90	307	\$ 27,630
Expired Space	\$ 25	1268	\$ 31,700
Habituals/Warning-Expired Space	\$ 25	206	\$ 5,150
Habitual Offdender-Expired Space	\$ 85	351	\$ 29,835
Unauthorized Permit	\$ 80	101	\$ 8,080
Habitual Offender Unauthorized Permit	\$ 140	4	\$ 560
Falsified Information	\$ 80	0	-
Handicap Space	\$ 80	21	\$ 1,680
Relocating at Owner's Expense			
Roadway			
Total		8,005	\$ 376,585

University of Vermont Medical Center

Table 13 University of Vermont Parking Lot Counts – All Lots

	10:00 AM	12:00 PM	2:00 PM
Winter 2022			
2/8/2022	2,861	2,873	3,369
2/9/2022	2,886	2,944	3,306
2/10/2022	2,903	2,939	3,262
Average	3,039	75%	
Maximum	3,369	84%	
Spring 2022			
4/19/2022	2,828	N/A	2,865
4/20/2022	2,781	N/A	2,803
4/21/2022¹	950	N/A	1,066
Average	2,216	55%	
Maximum	2,865	71%	
Summer 2022			
7/19/2022	3,098	N/A	3,141
7/20/2022	3,000	N/A	3,060
7/21/2022	2,892	N/A	2,997
Average	3,032	75%	
Maximum	3,141	78%	
Fall 2022			
10/4/2022	3,082	N/A	3,029
10/5/2022	2,897	N/A	2,944
10/6/2022	2,849	N/A	3,023
Average	2,971	74%	
Maximum	3,082	76%	
Total			
Average	2,839	70%	
Maximum	3,369	84%	

¹ Only satellite lots counted.

Table 14 University of Vermont Parking Lot Counts – On-Site Lots Only

	10:00 AM	12:00 PM	2:00 PM
Winter 2022			
2/8/2022	1,398	1,411	1,881
2/9/2022	1,458	1,482	1,804
2/10/2022	1,434	1,480	1,871
Average	1,580	69%	
Maximum	1,881	82%	
Spring 2022			
4/19/2022	1,697	N/A	1,753
4/20/2022	1,684	N/A	1,723
4/21/2022	N/A	N/A	N/A
Average	1,715	74%	
Maximum	1,753	76%	
Summer 2022			
7/19/2022	1,765	N/A	1,828
7/20/2022	1,681	N/A	1,774
7/21/2022	1,684	N/A	1,732
Average	1,744	76%	
Maximum	1,828	79%	
Fall 2022			
10/4/2022	1,941	N/A	1,885
10/5/2022	1,774	N/A	1,804
10/6/2022	1,728	N/A	1,929
Average	1,844	80%	
Maximum	1,941	84%	
Total			
Average	1,705	74%	
Maximum	1,941	84%	

Table 15 GSF of UVM Medical Center buildings.

Building Use	GSF
Medical Center Campus	
Hospital (In-Patient)	786,057
Education	35,597
Other	877,085
<i>Subtotal</i>	<i>1,698,739</i>
1 South Prospect	
Other	149,404
Other Burlington Sites¹	
Other	48,518
Total	1,896,661

Notes

1. Not included in GSF for JIPMP calculations

Table 16 UVM Medical Center parking supply included in JIPMP.

Location	Number of Spaces
On-Site Parking	
Medical Center Campus	
ACC Garage	1,224
ACC Loading Dock	21
ER Lot	47
McClure Parking Garage	317
Patrick Loading Dock	9
South Lot	425
<i>Subtotal</i>	<i>2,043</i>
1 South Prospect	
Lot A	47
Lot B	178
Lot D	197
Pearl Street Lot	35
<i>Subtotal</i>	<i>457</i>
On-Site Total	2,500

Table 17 UVM Medical Center off-site parking supply (not included in JIPMP calculations for on-site parking).

Location	Number of Spaces
Off-Site Parking	
Other Burlington Sites	
95 St. Paul Street	0
112 Colchester Avenue	8
128 Lakeside Avenue	38
184 Pearl Street	12
195 Colchester Ave	40
199 Main Street	0
<i>Subtotal</i>	<i>98</i>
Off-Site Lots	
UVM Catamount East	285
UVM Centennial	200
UVM Jeffords Lot	100
UVM Core West	0
Fanny Allen Campus	155
Technology Park	200
115 Lakeside Ave	250
<i>Subtotal</i>	<i>1,190</i>
Off-Site Total	1,288

Table 18 Current and Future employment UVM Medical Center.

	Medical Center Campus	1 South Prospect	Other Burlington Sites	Total
Current (2022)				
Day Shift	2382	418	88	2888
Evening Shift	261	10	0	271
Night Shift	599	6	0	605
Rotating Shift	744	37	5	786
Day Shift	548	68	7	623
Evening Shift	55	3	0	58
Night Shift	78	0	0	78
Rotating Shift	138	19	1	158
Per Diem Employees	920	85	3	1008
<i>Employee Subtotal</i>	5,725	646	104	6,475
Current Total	5,725	646	104	6,475
Future (2028)				
Day Shift	2382	418	88	2888
Evening Shift	261	10	0	271
Night Shift	599	6	0	605
Rotating Shift	744	37	5	786
Day Shift	548	68	7	623
Evening Shift	55	3	0	58
Night Shift	78	0	0	78
Rotating Shift	138	19	1	158
Per Diem Employees	920	85	3	1008
<i>Employee Subtotal</i>				
Future Total	5,725	646	104	6,475

Table 19 Annual Daily Appointments and Procedures at UVM Medical Center

	2022 Annual Daily Appointments & Procedures	2022 Average Daily Appointments & Procedures (254 business days)
Medical Center Campus	566,847	2,232
1 South Prospect	108,061	425
Other Burlington Sites	23	-
Total	674,931	2,657

Table 20 Annual Daily Telehealth Appointments and Procedures at UVM Medical Center

	2022 Annual Daily Telehealth Appointments	2022 Average Daily Telehealth Appointments (254 business days)
Medical Center Campus	39,715	156
1 South Prospect	35,158	138
Other Burlington Sites	284	1
Total	75,157	295

Table 21 Total permits issued by UVM Medical Center

Location	Number of Permits
Medical Center Campus	
ACC permits	341
McClure Residents, Nurse practitioners, Phys Assistants, Midwives	565
Physicians (ACC permits)	138
Physicians (South Lot permits)	84
Carpools (854 Participants)	427
Business Needs	134
115 Lakeside, Day Shift	969
115 Lakeside, Rotator	593
Technology Park, Day Shift	418
Technology Park, Rotator Shift	178
Fanny Allen Shuttle Lot, Day Shift	368
Fanny Allen, Rotators	136
Centennial, Day Shift	302
Centennial, Rotators	241
South Lot	84
UVM Catamount East, Day Shift	407
UVM Catamount East ,Rotators	163
UVM Jeffords Lot, Day Shift	164
UVM Jeffords Lot, Rotators	101
Evening/Night	1240
1 South Prospect	
Centennial, Day Shift	679
Centennial, Rotator	129
Pearl	19
Taft	69
Main	189
Total Medical Center Campus	7,053
Total South Prospect	1,085
Total	8,138



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5/8/23

Dear Planning Commissioners,

After the 4/25/23 review of the JIPMP, I spent many hours studying the data in this document and prior JIPMPs to see what has changed in this analysis.

I found the need for more corrections than those I mentioned during the April 25th review.

Attached you'll find my Excel spreadsheet. Here are the highlights:

1. The JIPMP's Parking Lot Car Count Method found 3508 cars on campus at peak demand time; and this count is far too low. The resulting net parking space surplus of 1357 is incorrect and too large. The data provided under this method needs to be ignored because:

- the number of employee cars on campus at peak hour (2228 per JIPMP, or 2443 per my calculations)

plus

- the number of resident student cars on campus at peak demand time (971 per the JIPMP survey results but the more accurate number is 1186 based on the number of parking permits UVM sold to resident students (data from page 16 in the JIPMP supplement))

equals

- 3414 to 3629 cars on campus at peak demand time before considering commuter students cars that are on campus at peak demand time. If we deduct the low end of this range from the total parking car count of 3508, we can see that the car count methodology allows for only 94 student commuter cars on campus at peak demand times. This is unrealistically low given that 1647 permits were sold to off campus students. Also, students who live more than ½ mile away have a 39% SOV rate for their travel to campus (SOV data from page 22 of JIPMP)

2. We also need to ignore the net supply of +301 spaces in the JIPMP on page 47 because this includes the 379 parking spaces that are leased to a 3rd party and managed by this 3rd party at the Redstone Lofts and Redstone Commons. These 379 parking spaces in these Redstone Realty parking lots should not be blended with UVM's managed spaces and supply and demand analysis. The Lofts and Commons parking lots are exclusively available to students who live in those buildings and buy a permit from Redstone Realty. The residents of these buildings cannot buy a permit to park elsewhere on campus. They are an island in terms of parking supply and demand and need to have their own supply and demand analysis, which I've included in the attached Excel spreadsheet. My analysis shows a parking deficit (-32) at Redstone Lofts and a small surplus (+23 spaces) at Redstone Commons.

If we agree to ignore the JIPMP Parking Count method and incorrect net surplus result, then we can focus solely on the CATMA survey method and its supply and demand analysis.

Before any adjustments to reflect what I think needs to be revised, the 4/25/23 version of the JIPMP shows that UVM has a -78 parking space deficit with a +/- 1046 margin of error. This means that UVM may have a parking deficit may be as large as -1124 spaces. This large deficit is within the 95% confidence interval.

My suggested revisions to the JIPMP are listed below. I estimate that UVM has a parking deficit between 1400 and 1900 spaces. The low end of this range (-1400) is about 300 spaces worse than the deficit shown in the JIPMP analysis. The adjustments I made in the revised supply and demand analysis are as follows:

- Deduct very restrictive parking spaces from UVM's parking supply because the vast majority of these spaces are not available for all day parking by most permit holders. This reduces UVM's parking supply by 500 spaces beyond those 368 spaces listed in the JIPMP for Fleet and visitor use. The 500 spaces include: 157 ADA parking spaces; 74 short-term (15 minute) parking spaces; and 269 Business Use spaces (after deducting 183 for Fleet that are already accounted for in the JIPMP. This data comes from the 2014-2019 JIPMP. UVM used to provide a table with a list of all the parking lots and the allocation of all the parking spaces in each lot among different user groups. It is an incredibly helpful table for evaluating UVM's parking management and JIPMP. I wish UVM would resume including this table in the JIPMP.
- Increase resident student parking demand by 215 to reflect the exact number of parking permits sold to resident students. The CATMA survey results under-

estimated this demand by 215 spaces. The gap between the number of parking permits sold and the survey results is because the UVM survey had very few responses in comparison to the size of the UVM population. This is why there is a 1046 margin of error for the Survey method. My adjustments reduce the margin of error.

- Increase employee and student commuter parking demand by the same 215 parking demand adjustment needed for the on-campus students survey results correction. Together this increases parking demand by another 430.
- Add in the 261 UVM commuter cars that are parked on-street. (JIPMP, page 20). This is unmet parking demand and should be included in UVM's parking supply and demand analysis. The number of commuters parking on street is probably 1000 more than this given the size of UVM's parking deficit (per JIPMP and my calculations). To create incentive for UVM to reduce this overflow parking impact, (a violation of CDO Article 8, Section 8.1.1) this unmet parking demand should be factored into the JIPMP parking supply and demand analysis. Giving it more attention will also be useful for measuring the effectiveness of UVM's parking management and TDM programs going forward.
- Cumulatively, these changes increase the JIPMP's estimated parking space deficit by another 1406 spaces. Where the JIPMP survey method shows a parking deficit of -78 parking spaces before considering the +/- 1046 margin of error; my revisions to the analysis results in a parking space deficit of -1420 or worse.

The wrong solution to UVM's parking deficit is to build more parking on-campus. Building more parking is contradictory to stated and agreed upon goals of reducing SOV rates, reducing pollution and traffic, improving street safety to encourage more active transportation, and using land for better purposes than parking.

My understanding of CDO Article 8 is that commissioners should not approve (nor recommend) the JIPMP if there is evidence of a current parking deficit and no evidence of a plan that will eliminate the deficit while also showing progress on TDM effectiveness, SOV reduction, and other goals and objectives mentioned in CDO Article 8.

Hence, I ask the Planning Commission to reject the JIPMP; and if rejection is not an option, then ask UVM to revise it again and bring it back to the Planning Commission for another review.

Although UVM has provided a bullet point list of its TDM programs, that list doesn't meet the expectations of Article 8 TDM requirements, nor does it give us confidence in the effectiveness of these plans in reducing SOV rates.

The JIPMP needs to be modified to include data showing exactly how each TDM program will reduce SOV rates more effectively than these programs have so far.

What is UVM going to do differently to drive down SOV rates?

I believe that TDM data is not in the JIPMP report because UVM's SOV trend is increasing. See chart on page 22 of JIPMP and see tab on this topic in the Excel spreadsheet.

Metrics and data for reduction of parking demand and SOV rates should be a major theme in the JIPMP.

Only by rejecting the JIPMP can we require and encourage UVM to do what it takes to Improve its TDM programs and reduce its SOV trend.

Ideally, starting now and going forward, UVM will do parking management in a way that is environmentally responsible (not building parking structures along residential streets that border campus) and instead focusing on reductions in SOV rates, parking demand, pollution, etc.

Suggestion: we need to ask UVM to re-write the JIPMP to put much more effort into identifying what it can do (new programs, more rigor to existing programs) to reduce its SOV rates and on-campus parking demand, while not pushing its parking demand into nearby neighborhoods and not burdening the surrounding streets with UVM traffic while UVM tries to push traffic off campus in order to create a pedestrian campus. My attached Excel Sheet has a tab that lists Win-Win strategies for UVM to achieve all of these goals.

In a separate email I will provide the Planning Commission with photos and information regarding the JIPMP's Planned Project list and in particular UVM's concept design plans for a dorm that will replace Coolidge Hall. The UVM design concepts show a 400-person dorm that will include a 200-car capacity ground level parking structure.

Discussion of this planned project at this time is relevant because the parking structure will attract UVM traffic into the residential neighborhood and regardless of whether UVM is relocating parking spaces from inside campus to this site or adding parking capacity, UVM will not be reducing SOV rates and pollution if it builds this parking structure at this location.

It's not okay for UVM to treat our community in a way that only benefits UVM and makes others suffer as a result of UVM's self-interest.

Please reject the JIPMP. Have it go back to CATMA for more focus on TDM and strategies that will reduce parking demand, SOV rates and the parking deficit.

Thank you very much for considering my comments.

Best regards,

Barbara

Dear Commissioners,

The following screenshot is from page 44 of the JIPMP. On this planned project iist, UVM shows that it intends to demolish Coolidge Hall and build a replacement dorm that will result in 190 new parking spaces.

Table 11 UVM Campus Building Program Data (completed and future)

Project Name	Included in Previous JIPMP	Change in Building Area (gsf)	Associated Change in Parking (spaces)	Estimated Completion
--------------	----------------------------	-------------------------------	---------------------------------------	----------------------



Joint Institutional Parking Management Plan

Torrey Hall Addition	Yes	2,860	-6	Unknown
Miscellaneous Parking Adjustments ¹	Yes	-30,510	25	
Coolidge Hall Building	Yes	-30,510	0	
Residential Housing	No		190	
351 Pine Street	Yes		-200	Not moving forward at this time
Fleming Museum Parking	Yes			
Outing Club Relocation	Yes	13,250		
Southwick Hall Parking	Yes			
Future Structured Parking	Yes			
Colchester Ave/Dewey Buildings	Yes	-82,622		
Back 5 & Cottages (Trinity Campus) Buildings	Yes	-64,907		
Total		307,071	828	

The total car capacity of the new parking facility will be 200 cars. I know this because in prior versions of the JIPMP, UVM noted that it would lose 10 parking spaces when Coolidge Hall is demolished and the small parking area that is accessed via University Heights road and on the SE side of the building is removed.

While I know that the Planning Commission's review of the JIPMP is not a time to have a DRB hearing on a proposed project, one of the reasons for having a JIPMP review is to make sure that UVM's parking plans don't run afoul of CDO Article 8.

Building a 200 car parking structure on the ground level of the Coolidge Hall replacement dorm will run afoul of CDO Article 8. The relevant sections are listed below. But let me first show you UVM's design concepts of the new dorm as seen in UVM Master Housing Strategy document.

In screenshots below, the

New dorm - orange

Robinson Hall – yellow – between new dorm and South Prospect St

Redstone Lofts – red

Simpson Hall – adjacent to new dorm and Redstone Lofts



Below: Blue (color of air) showing at the foundation of the new dorm in this concept drawing hints at a ground level parking structure. The JIPMP list with 190 new parking spaces for this dorm is consistent with this UVM drawing for the new dorm.



The dorm will probably house 1st and 2nd years, and the parking spaces will probably serve on and off campus students, some employees, and PFG event visitors.



In the last JIPMP, UVM did not disclose in the JIPMP or in its DRB permit review that it was going to add 2000 seats to the PFG renovation project. (See pages 73 of the 2014-2019 JIPMP). UVM included the total increase in square feet for the whole complex but not the increase in number of spectator seats. If it had, UVM would have needed to provide 1 parking space for every 4 visitor seats - which means 500 more parking spaces for 2000 more visitors seats.

This information came out during the Act 250 review when UVM was presented with statements in Trustee Meeting minutes to this effect, and UVM confirmed it was true. But UVM assured the Act 250 Commission that it didn't have a parking space deficit and wouldn't have one as a result of the project. That's TBD because the project has been delayed due to rising construction costs. The Act 250 Commission had a hard time believing UVM and asked UVM to report back in 5 years see if the new venue's parking demand exceeds its parking supply. UVM's project delay may have run out that clock. $2018 + 5 \text{ years} = \text{Year } 2023$.

From what I've read in other UVM strategy documents, UVM wants to build on-campus parking structures around the periphery of campus. That's fine if it isn't in a residential neighborhood where traffic will harm residents. But it would be better for UVM to have commuters leave their cars in their home town park and ride lots and use a direct/non stop UVM shuttle to/from campus. TDM programs that reduce everyday parking demand and reduce SOV rates would free up parking for PFG visitors while also reducing pollution caused by commuters who drive in from surrounding towns.

The historic Redstone Green and its perimeter, or anywhere along South Prospect Street, isn't the appropriate location to build parking for the PFG event visitors, given that there are better locations along Main Street (Jeffords lot parcel), Spear Street, and at the I-89 interchange hotels.

Most event visitors use I-89, Williston Road, or Spear Street to arrive at the PFG complex. The parking for the PFG Complex should instead be at the Jeffords lot (build an underground garage

like UVMMC that holds 1250 cars), or build a parking structure on the surface parking lot that UVM already owns overlooking I-89 and behind the Hilton Hotel (across from Staples Plaza) and/or build parking structures on Spear Street where UVM owns several large parcels of open land. All of these structures should be built to accommodate the 4000 to 7500 person events that UVM has planned for the PFG complex and UVM should not be bringing that traffic into residential neighborhoods.

Also, UVM seems to have the strategy of wanting to increase bus shuttle service on city streets to collect commuters and drive them 1/2 mile to their central campus destination. The UVM shuttle on South Prospect only replaces active transportation, It does not reduce student drive rates or commuter drive rates. This UVM shuttle increases pollution by solely replacing active transportation among on-campus students and encouraging commuters to park along S. Prospect.

Adding a parking structure near or on the South Prospect Street side of the Redstone Campus will encourage SOV driving to this location - and that's the opposite of what's stated as an objective in CDO Section 8, Section 8.1.1 (c) and (d)

- Reduce congestion in the streets and contribute to traffic safety
- Encourage alternate modes of transportation that will reduce dependence on SOV

CDO Article 8, Section 8.1.16 defines TDM goals, such as reducing parking demand, reducing Vehicle Miles Traveled and SOV, and increasing transit and non-motorized travel. Pollution reduction and better land use are the big drivers. It would be helpful to have UVM obliged to pay more attention to the goals of this ordinance section.

CDO Article 8, Section 2, spells out expectations for more bicycle parking. UVM desperately needs to provide more bicycle parking. So it would be good to reject the JIPMP and have UVM pay more attention to the requirements in Parts 1 and 2 of this ordinance.

CDO Article 8, Section 8.3.4 indicates that if the JIPMP is not approved, no permit can be granted for a project that will affect UVM's parking supply and demand. Building a replacement dorm for Coolidge Hall doesn't necessarily affect UVM's parking demand because the goal is to reduce the number of cars that on-campus resident students bring to campus. Therefore, UVM should be able to get a permit for the Coolidge Hall replacement dorm if there is no parking structure associated with it.

CDO Article 8, Section 8.3.4 is very confusing in how it is worded. If the JIPMP is approved, does that mean that UVM does not need to meet the requirements of Parts 1 and 2 of the ordinance?

And does it mean that the DRB will not look at the expectations laid out in Parts 1 and 2 when UVM applies for a construction permit for a project on the planned project list?

I ask because in CDO Article 8, Sections 8.3.4 and 8.3.5, Parts 1 and 2 are only mentioned in the context of UVM wanting to do a project that is not on the project list in an approved JIPMP.

If yes is the response to these two questions, that would be bad for our community because it means that **the JIPMP and its planned project list is being approved with too little detail about the projects and their parking impacts.** and how it and its parking will impact nearby neighborhoods and be counterproductive to our shared interest in the TDM objectives of Part 8.1.16.

I am concerned that it also means that people who are adversely impacted by a project on planned project list in an approved JIPMP, will have a more difficult time getting traffic and parking impacts considered by the DRB during the permit review. It seems to me that the revision of Article 8 weakened residents' rights to protection from UVM impacts.

Prior to the revision of Article 8, an approved JIPMP meant only that the minimum parking table didn't need to be considered for projects on the approved JIPMP planned project list. But now it looks like all of Parts 1 and 2 get to be ignored because these sections are only considered when a project is not on the approved JIPMP list.

If Scott Gustin or Meagan can respond to my questions by sending me an email that would be helpful. Thank you.

Barbara

From: Lisa Kingsbury (she/her) <Lisa.Kingsbury@uvm.edu>

Sent: Tuesday, May 9, 2023 4:43 PM

To: Andrew Montroll <amontroll@burlingtonvt.gov>; Julia Randall <jrandall@burlingtonvt.gov>; Alexander Friend <afriend@burlingtonvt.gov>; Michael Gaughan <mgaughan@burlingtonvt.gov>; Bruce D. Baker <Bdbaker@burlingtonvt.gov>; Yves Bradley <ybradley@burlingtonvt.gov>; Emily Annick Lee <elee@burlingtonvt.gov>

Cc: Karen Sentoff <ksentoff@vhb.com>; Joshua Katz <Josh@catmavt.org>; Sandy Thibault <sandy@catmavt.org>; Claire Forbes (she/her) <Claire.Forbes@uvm.edu>; Lani Ravin <Lani.Ravin@uvm.edu>; James Smith III <James.Smith-III@uvm.edu>; Scott Gustin <SGustin@burlingtonvt.gov>; Meagan Tuttle <mtuttle@burlingtonvt.gov>; Charles Dillard <cdillard@burlingtonvt.gov>

Subject: Clarification on Joint Institutional Parking and Management Plan

Importance: High

Dear Planning Commissioners,

I am writing in advance of tonight's meeting regarding the Joint Institutional Parking and Management Plan (JIPMP) to provide some clarity around UVM's intentions regarding Coolidge Hall as it has come to my attention that there is a misconception based on Table 11 in the JIPMP that UVM intends to replace Coolidge Hall with a parking structure. This is not UVM's intention. To provide some clarity:

1. The removal of Coolidge Hall was in the 2020-2022 JIPMP. As the text before Table 11 indicates, the table is both updating projects from the previous JIPMP (whether they are complete, not moving forward, or planned for the next 5 years) and identifying new projects. Table 11 will be edited to move Coolidge Hall to the "Not moving forward at this time" section of Table 11. That is consistent with other projects identified in the last JIPMP that UVM does not have current plans to move forward.
2. The 190 spaces for "Residential Housing" in the "Unknown" category is an error and will be removed. This was mentioned at the previous Planning Commission Meeting. This is a double count of "Future Additional Parking to Accommodate New Housing" that shows up earlier in the table.
3. The error of the 190 spaces directly under Coolidge Hall is an unfortunate coincidence. Because two items are next to one another does not necessarily mean they are linked together. Most of the projects on this list are not linked to another project by way of where they fall on the table. I do understand the confusion based on the language and the fact that the other housing projects listed have parking directly beneath them, but truly, this was just an error that, as noted at the last meeting, will be rectified. It was my mistake not catching it in the table and I apologize for the confusion it has caused.
4. As noted earlier in Table 11 UVM is considering two housing projects and associated parking with a timeline of one in 2025 and one in 2026. Both of those projects are footnoted to read:

"UVM and the City of Burlington have engaged in a process to rezone Trinity Campus in order to enable the creation of additional student housing on campus. As of this report, City Council has tabled the proposed rezoning language and it is unclear whether the housing at Trinity Campus will move forward. UVM is actively exploring options to

increase student housing on Trinity and/or elsewhere. The low end of range of potential gsf estimates was used for totaling change in area.”

This footnote will be updated as follows (additional language noted in red):

“UVM and the City of Burlington have engaged in a process to rezone Trinity Campus in order to enable the creation of additional student housing on campus. As of this report, City Council has tabled the proposed rezoning language and it is unclear whether the housing at Trinity Campus will move forward. UVM is actively exploring options to increase student housing on Trinity and/or elsewhere. **UVM is not in a position to discuss the other sites publicly at this time. None of the sites are associated with a project from the previous JIPMP to remove Coolidge Hall, which is not moving forward at this time.** The low end of range of potential gsf estimates was used for totaling change in area.”

I hope that provides clarity for the Commission as well as concerned neighbors that UVM has no plans within the timeframe of the JIPMP to make any changes to the Coolidge Hall site.

Thank you,
Lisa

Lisa Kingsbury
Associate Director of Planning
Planning, Design and Construction
University of Vermont
(802) 656-1059



4/8/23

To Whom It May Concern:

My name is Kitter Spate, from Burlington VT and will be purchasing the property located at 168 Archibald Street (the corner of Hyde + Archibald) on June 2nd, 2023, and are currently exploring options for future use of the building. The building was the first synagogue in the state of Vermont, is on the state and national historic registry and up until a few years ago was still used as a place of worship but has sat vacant for almost 4 years. The ultimate plan is to remedy several structural issues, update the interior and retain the exterior in its original state. Currently it is zoned as a Neighborhood Commercial building and is located in a medium density zone. We are currently exploring the possibilities of rezoning the building to a mixed-use commercial space to further the range of usages. The building currently abuts the mixed-use zone on North Winooski, and we feel it would make a nice transition landmark for the east end of the Old North End. We welcome suggestions and look forward to working with the city to breath new energy into this beautiful and significant building.

Images included:

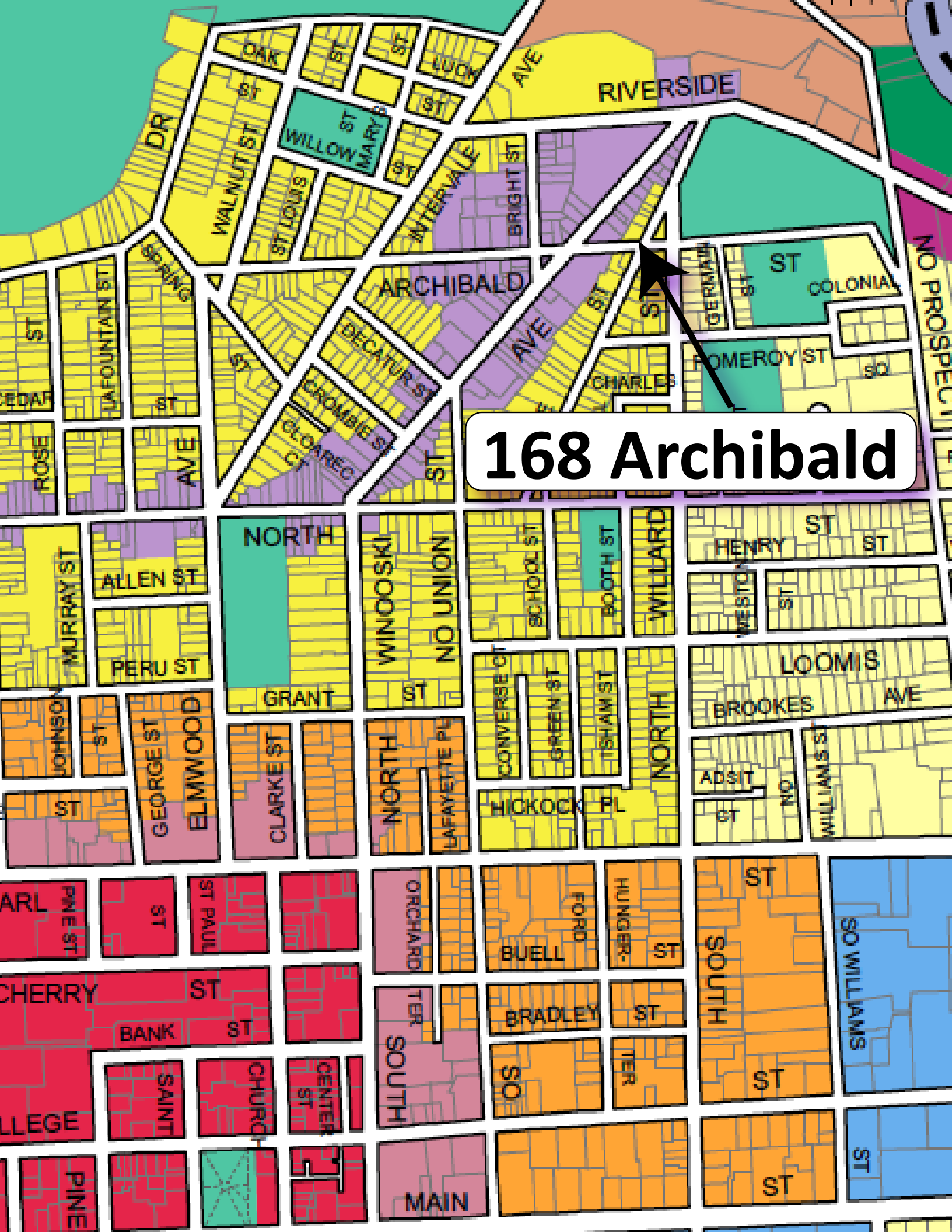
- Current zoning map
- Current photo of the building
- Historic photo of the building

Best regards,

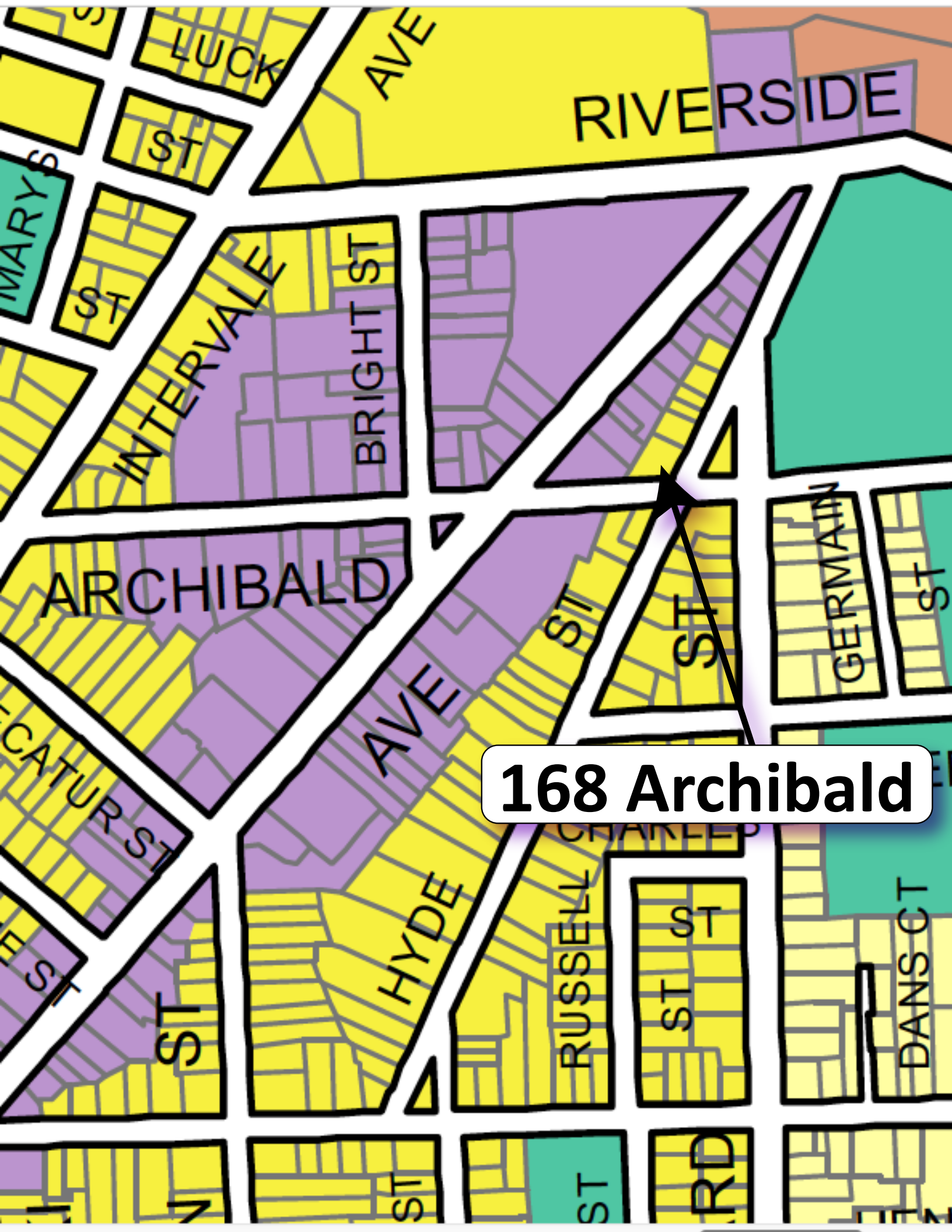
A handwritten signature in black ink, appearing to read "Kitter Spater", with a stylized, flowing script.

Kitter Spater





168 Archibald



168 Archibald

From: Sharon Bushor <sfbushor@gmail.com>

Sent: Tuesday, May 9, 2023 5:59 PM

To: Meagan Tuttle <mtuttle@burlingtonvt.gov>; Charles Dillard <cdillard@burlingtonvt.gov>; Andrew Montroll <amontroll@burlingtonvt.gov>

Subject: Joint Institutions Parking Plan

Good afternoon, I will be joining late and may miss Public Forum. Please attach and potentially read into the record my statement. Thank you

Based on the additional discrepancies noted by Barbara Headrick in her written communication for this meeting, I would respectfully ask that the Planning Commission postpone action and allow the Institutions an opportunity to review her points and either amend their report or refute the statements made. I am particularly concerned with the margin of error and how that relates to a potential large parking deficit.

Sharon Bushor

Ward 1 Resident

Burlington Planning Commission

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*Andy Montroll, Chair
Bruce Baker, Vice-Chair
Yves Bradley
Alexander Friend
Michael Gaughan
Emily Lee
Julia Randall*

Burlington Planning Commission

Tuesday, April 25, 2023, 6:30 P.M.

Hybrid Meeting via Zoom and in the Bushor Conference Room

Draft Minutes

Members Present	A. Montroll, M. Gaughan, B. Baker, A. Friend, J. Randall
Staff Present	C. Dillard, M. Tuttle, S. Gustin
Public Attendance	

I. Agenda

Call to Order	Time: 6:30pm
Agenda	No changes.

II. Public Forum

Name(s)	Comment
K. Spater	I just want to take an opportunity to introduce myself. I'm purchasing the old synagogue at 168 Archibald St. which is the corner of Archibald and Hyde St. and right now it is in a it's in a medium density neighborhood and it's a commercial building. So I am exploring the opportunity of maybe making it into a mixed-use building just to open up further uses for the building. And right now it abuts the mixed-use section of North Winooski Street. So I have given Charles some kind of basic information and like I said, I'm just here to introduce the concept possibly going forward.
B. Headrick	Sent emails with some data analysis but will go over the highlights. First, I wanted to call your attention to page 22 of the Joint Institutional Parking Management plan. Between 2015 and 2022, so over the past seven years, UVM's SOV rate for employees has gone up from 52% to 62%. So that's a 10% increase in SOV rates. For commuter employees or students who live more than a half mile away from campus, their SOV rate has gone from 30% - 39% over the past seven years. So this upward trend in SOV rates is completely contradictory to the city's goals for reducing pollution and reduction SOD, and shows that UVM's TDM programs are ineffective. The report lists or mentions their TDM efforts, but we really need to see effectiveness data on TDM and future if this report gets modified, which I hope and going forward, because TDM is not just ridership numbers, it's how is it replacing SOV traffic, and that's what we need to see UVM do is implement new programs to reduce their SOV rates. So next I'd like to call your attention to page 47 of the Joint Institutional Parking Management plan. This is UVM's current supply and demand analysis. There are two methodologies shown here. One is where the cars are counted in the parking lots, and as one of the commissioners mentioned in the last meeting, that count is very low. I dug into that after the last meeting and that number just has to be wrong. And the reason is because if you take all the cars that students who live on campus have on campus, and they sold more than 1000 permits to students who live on campus with cars. And then you take all the employees who are there during the day and have cars on campus, and that number is 2228 according to the top line and that chart on page 47. You add those two together and there's not enough room left to account for commuter students parking on campus. Which has actually quite high because as I just pointed out, 39% drive SOV to campus and UVM sells more than 1000 permits. It's like 1600 something permits to off campus students. So because of that number, under the counting cars in the parking lot methodology is too low. That means that supply and demand analysis is wrong and we should ignore the result that shows that the bottom line a 1300 parking space surplus. That cannot be correct.

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	So what I'm recommending is that we focus solely on the data that's provided on page 47 using this survey methodology. And even this approach needs to be modified because people with permits can't park all day in short term parking spaces because those are only for 15 minutes. They can't park in business use parking spaces and they most people can't use ADA spaces. So when you take out these restricted parking spaces - and I got this data out of the 2019-2024 JIPMP report and that data was counted was reported by UM in the fall of 2018. That's not so long ago. I don't think there's been a big change in those number of parking spaces across the whole campus system. So that increases the deficit you see on page 47 under this under the survey method, which is like minus 78. That increases it by 500, and then there are some other changes. The survey method has its problems because so few people were surveyed, and there's a large margin of error. I believe UVM's parking deficit is somewhere between 1400 and 1900 parking spaces. It's a huge parking deficit and that means those cars are parking on street. And the data that UVM provides on page 20 that looks at how many, what percent are parking on street? I know that more than 261 cars are parking on the street. You know commuter cars are parking on the street because at least half of them are on my street, and I know other neighborhoods are affected too. The bottom line here is UVM has a parking deficit right now. According to their numbers, it's minus 78, plus or minus a margin of error of 1046. That means that their parking deficit could be as much as 1100 cars, I think it's more than that. And that means that I'm asking the Planning Commission to please recognize that this means you UVM's parking strategy is not meeting the objectives or goals of the City Ordinance section Article 8. I think it would be very helpful for us to reject the JIPMP or send it back for more work so that UVM and CATMA can work together to put in far more information about what is UVM going to do to reduce this SOV rate and that trend. Moving on, the plan project list on page 43 and 44. One, the list doesn't have enough details for us to know exactly what the parking impacts are going to be from each of these projects, but we definitely need to dial down and get more information wherever there's a change in parking. For example, on page 44, Coolidge Hall gets demolished and the very Says a new dorm and it has 190 parking spaces. Well, in the previous jet report when Coolidge Hall was getting demolished, there was a loss of 10 spaces. So that new dorm, which sure looks like it's a replacement dorm for Coolidge, because it's on that list is actually going to have a 200 car parking structure on the ground floor. We need to talk about that with UVM because any parking structure is going to affect the nearby neighborhood and also the overall parking supply and demand and we need to understand, better understand UVM parking strategy. On Pages 52 and 62, UVM mentions its efficiency parking strategy that uses coded words that aren't clear and no explanation of what their efficiency parking strategy is, so those sentences either need to be deleted. Or better yet, UVM needs to spend some considerable chunk of text telling exact us exactly what their efficiency parking strategy is. If there's any report to explain their parking strategy, it's this report. The change that UVM wants to make to the footnote at the bottom of page 44 is not satisfactory because the Coolidge replacement dorm is not on the JIPMP report last year. The replacement dorm for Coolidge Hall is not exactly on the same footprint that Coolidge Hall is. It's a little bit closer to Robinson Hall. So the suggested text coming from UVM is not OK. It needs more work. We need time to get that right before this chips approved because that project is not good for that site. You shouldn't have a parking garage on like you know Redstone Lofts has parking garage from the first floor and then dorms above it. That is not right for the Redstone historic Green area, besides the traffic impacts and it doesn't reduce SOV rates and it doesn't reduce pollution, so it's inconsistent with Section 8.1.16 in the article. I don't think its right for UVM to delete that line on the parking management plan that takes Coolidge out and then say, oh, that projects further up the list. And we can't tell you where that'll be because we haven't decided yet when in fact they already have in their housing strategy document where they want to build dorms.
L. Kingsbury	So I sent a communication to the Planning Commission, but it was at the end of the day. So I just want to speak to it because I'm assuming you probably haven't had a chance to hear it and I wanted other members of the public to hear it as well. And it is regarding this misconception that we are going, that we are intending to take down Coolidge Hall and replace it with another dorm. I know Barbara's getting into semantics of at or near. There's no intention to do that. There's no intention to put 190 space parking structure at or near that site. So I just want to go through a couple of things. The removal of Coolidge Hall was in the previous JIPMP, and as the text before Table 11 indicates that this table both updates projects from that previous JIPMP, whether they're complete, not moving forward or planned for the next five years, and also identifies new projects for the next five years. And we are making an edit to table 11 to move that Coolidge Hall piece to not moving forward at this time. We have no plans for that site in the next five years. That's consistent with the other projects that were identified in the previous JIPMP that we do not have plans to move forward on. The 190 spaces of residential housing that was noted in the unknown

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	category, that is an error I know that was noted at the last meeting and that is getting removed. That is a double count from further up in the table where there are two future housing projects and housing to accommodate looking at those. So that was a double count. That line is coming out. It never should have been there. I apologize. It was my error. I've caused confusion and I didn't mean for that to happen. The fact that that error is directly under Coolidge Hall is simply an unfortunate coincidence. Because they were next to one another does not mean they're linked. Most of the project on this list, projects on the list are not linked to another project just by where they fall on the table. I do understand the confusion based on the based on that language and the fact that the other housing projects have parking directly underneath them, but truly this was simply an error it was noted at the last meeting. It will be rectified. Finally, as noted again earlier in Table 11, there are two future student housing projects and parking to accommodate them in 2005 and 2016. Both of those already have footnotes. I'm not going to read through exactly what the footnotes say, but essentially it talks about where we are in the process of rezoning for Trinity campus and that the City Council has tabled it. At this point, it's unclear where that is going to go, but we are continuing to actively explore options for more housing whether that's on Trinity Campus or elsewhere on our campus lands. What we are adding to that footnote is language that says UVM is not in a position to discuss the other sites publicly at this time. None of the sites are associated with a project from the previous JIPMP to remove Coolidge Hall, which is not moving forward at this time. So I just hope that provides some clarity for the Commission and then for any of our neighbors that have seen this table and have also been confused and thought that we were planning to take down Coolidge Hall and build a new housing project there with 190 spaces that is not in our planning. Thank you for your time and for your work on this.
Livia DeMarchis	Shares Barbara's concerns about more traffic, more noise, more everything in the South Prospect neighborhood if more student housing is built right on Redstone Campus or directly adjacent to it, and I guess I understand that UVM isn't in a position to share other locations at this time, but I guess I just want a better understanding of what our ability to participate in the process would be as neighbors if down the road something was proposed in the immediate vicinity because I don't everything I've heard so far makes me think that this plan that's being discussed tonight doesn't foreclose the neighbors from getting in on the ground floor of discussions of future dorms, which is important to me and I don't want anything that's in the plan tonight to limit our ability to question and raise concerns about future dorms and parking in our immediate vicinity.

III. Chair's Report

A. Montroll	none
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IV. Directors Report

M. Tuttle	(1) Sarah's 1 year anniversary working in the department. (2) City Council is currently accepting applications for appointments. We do have two Commissioners that are up for reappointment this year and we'll be notifying you to let you know, to remind you about that and to let you know the details and deadlines for when applications are due if you intend to reapply. (3) For those Commissioners that have been on for several years, you may remember that before COVID, we used to prepare an annual report of the activities that you have been working on as a body and Andy or the Chair and the staff would present that to the City Council. That's been on pause for several years, but we have been notified that they are going to resume those reports this year. So we anticipate that later this summer or into the fall, we will work with you to draft a report on the activities from the last year. (4) I think you all know that the, this is our only Planning Commission meeting in May. That's in part because both Charles and I are going to be out intermittently over the next, actually really the rest of this month. So just wanted to make sure you're aware of that. I know Charles is working to reschedule the Council Ordinance Committee meeting for early next month, but otherwise we look forward to resuming our work with you in June.
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V. 2023-2028 Joint Institutional Parking Management Plan (JIPMP)

Action: Motion for A. Montroll to review and approve the final report.	
Motion by: A. Friend	Seconded by: J. Randall
Comments & Questions	
A. Montroll: Asks Meagan to remind the commission what their role is and what the impact of the JIPMP is, and what impact does this have on the public's ability to question any future plans?	
M. Tuttle: To start, this is a plan that is prepared up to, at, prepared for and potentially approved by the DRB for up to five years, which documents the sort of unique ability of the institutions to manage their parking resources individually and	

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collectively in ways that are maybe different from our underlying parking requirements that was especially relevant before our zoning ordinance was changed to rely on maximum parking limits rather than minimum on-site parking requirements. So the role of the joint institutional parking management plan has shifted a little bit in that prior joint institutional parking plans were really used to help document what the institutions anticipated parking demand was, what their supply was, and to ultimately serve as a sort of waiver from their minimum on-site parking limits that could be then used to satisfy just the parking requirement component of future zoning permit applications. With us transitioning from minimum to maximum parking requirements in the city, this really functions more as a plan for us to understand what the institutions are anticipating their demand could be and how they are managing that debate. There are standards in the ordinance for what types of information are required to be provided as part of this plan and there are still requirements that the plan be approved by the DRB after consultation with the Planning Commission. So I think Andy to your first question, the role of the Planning Commission is to review this draft plan and to provide comments and or any recommendations you might have to the DRB as they consider this plan. After the plan has been reviewed by the Planning Commission, it will go to the DRB. Ultimately, the DRB will hold a public hearing and then consider approval of the plan for up to five years. If approved by the DRB, the plan is then used as part of the permitting process for the institutions. So I think to the second question, this plan does not in any way approve the individual projects that are listed within the plan. So we were talking about specific residential buildings, whether or not they're going to be built, what they might include. This is simply a record of what the institutions anticipate they will be building in the next five years and how the parking and transportation elements of those projects are being planned for. When an individual project comes in to seek a permit, it's reviewed by Scott and his team, and likely the DRB in most cases given the scale of these projects and the plan is then consulted to determine if that project is consistent with the information that was in the plan. If it's not, a project can still be approved, but ultimately an addendum to the plan needs to be submitted that provides additional information or makes corrections to the information that was presented in an approved plan. So I think any of the mechanisms that exist today in terms of notification about a pending permit, opportunities to weigh in about those permits, opportunities to participate in public hearings before DRB permits are issued, all of that remains. This is just a tool to help us understand the parking and transportation component of those projects.

S. Gustin: Meagan pointed out that nothing about calling out projects and the parking plan entails approval of those projects. As she said, it's really a plan about what's anticipated on a 5 year horizon within the institutions pretty routinely. Not everything in the plan shows up as an actual project for application review, but this serves as a little bit different tool than your typical non institutional application we're in the DRB or staff is the case may be looks at Article 8 and parking management for each standalone project whereas this is a little bit different. This is, as Meagan said, a plan that I hesitate to say pre-approved, but the anticipated projects need to be incorporated into this plan and as part of the plan the institutions need to demonstrate how these projects balance parking supply and demand. So it's a little bit different in that respect.

M. Gaughan: I remember you (S. Gustin) know when we did the parking work that this was a key piece to allowing any kind of future permitting to occur this having the institutional management plan in place. But can you help me, just on background like when we did Trinity. There we removed the major project review. I believe obviously that Trinity amendment has not passed, but as far as it passed the Planning Commission and so for other places on campus what's the sort of standard of review from the DRB? When we looked at Trinity, I remember we took out the major impact review and that was what I believe tied it to DRB. So I guess what I'm trying to get at is if there isn't a zoning amendment that's done what review or sort of vote would otherwise take place of something that happens on campus aside from the parking management plan? What would get a project before the DRB?

S. Gustin: Anything that is a Level 2 project, which is a bigger project based on its threshold articulated in the CDO, or a major impact or a conditional use. All three of those will go to the board. So if right now Trinity wanted to build an outbuilding, that's probably something that's administrative. If they wanted to build a \$50,000 addition, which is still pretty small, but that's big enough to be a level 2 that would likely go to the board. But even that small addition would need to be accounted for in this parking management plan.

M. Tuttle: And just for clarity, the Trinity amendment did not remove Trinity campus from being part of major impact at all. Currently it has its own threshold for when a project on that campus has to go through major impact. So we were removing that specific threshold to just make it consistent with the rest of the institutional campuses. So projects on this campus will still go through major impact if they are above that size. And I think maybe another way to say that last point that Scott made is that we're really focused on the ability of folks to engage or for the DRB to hear projects. But I think it's also important to know that there are notification processes and appeal rights etcetera that people have for administrative permits that it's got issues that aren't hurt by the DRB. So as Scott was saying there at the end the JIPMP standards specifically call out kind of minor work like replacing a sidewalk or roofing that don't necessarily need to be reflected in the JIPMP in order to proceed with a permit. But all of those requirements of public notification and access to the process exist regardless.

S. Gustin: Just a point of clarification at the risk of mission creep – major impact isn't applied to institutional project, but that's different from things going to the DRB. You can have projects go to the DRB independent of whether there's conditional use or major impact. You can go to the board based on their size, and what gets built needs to be addressed in the parking management plan. And if it's not, as Meagan had said earlier, it needs to stand on its own and be incorporated into future parking management plans.

J. Randall: I do have some questions and comments about the draft, but I do have one question about what you just said, Scott. I think I was following until you said that that the institutional projects do not fall under major impact. Can you just explain that again?

S. Gustin: So I'm looking at Section 3 point 5.3 exemptions to major impact and exemption E refers to the statutory limitation in 4413. So the projects where the scope and authority municipal regulation is limited by statute pursuant to 24 VSA 4413. So that includes schools, hospitals, state lands, and solid waste facilities.

M. Tuttle: That's actually a really helpful clarification because that didn't come up at all in the context of our questions. During the Trinity zoning amendment we were looking at the table above that talks about the fact that major impact is applicable in the institutional districts and relying on those underlying thresholds. So there's a difference here between the district itself and the individual entity that's building a project for that purpose. So that's actually I'm, I'm glad that you highlighted that Scott. But yes, I think that's a little bit of Scope Creep.

S. Gustin: I mean typically big UVM projects go to the board, they just don't go through major impact. A major impact is a set of criteria that address the projects impacts on city infrastructure.

J. Randall: It would be helpful to see the UVM plan with the corrections updated. I know there were a couple that we talked about from last time including that table with planned projects and the error and in that, but there were a couple of other things that we mentioned too. So it would just be helpful to see that updated version of the document to make sure that we're looking at the final thing. I did not see the Excel sheets that Barbara was mentioning. Just an FYI, I'm not sure I did see the communication that was in the packet. Barbara brought up efficiency based standards and I think it's important to talk about those and on page 19 and page 20 there's some discussion of that and definitions there. I do think that the definition that's offered here is a little bit circular and not as clear as it could be to try to explain what efficiency based standards are. I know this document is super technical and that's how it's meant to be used. Given that efficiency based standards are the new operative direction here, I feel like there should be a clearer definition given here. Right now it says "efficiency based standards refer to provision of optimal parking supply in an efficiently managed system, so efficient parking is efficient. These systems avoid the tendency to supply parking in excess while balancing appropriate pricing structures and recognizing the costs associated with oversupply" and it continues on. I do think it would just be helpful to provide some sort of example or other definition that's a little bit clearer.

I also have some comments that would be eager to hear other Commissioners thoughts on about how this document could transform in the future to be more inclusive of other modes of travel and parking. I think one of the limitations of this document is that it is so focused on parking and vehicle travel alone and to try to encompass all of the TDM strategies and the document that originally was just intended to figure out the appropriate amount of parking is difficult to begin with, so I know we mentioned the role of the ongoing TDM study and how it relates to this process last time, but I'm hopeful that through that process, that report can offer some recommendations on ways that this parking plan could be more inclusive of other modes and approach transportation more holistically.

I do have one other thought on neighborhood parking that's somewhat related to approaching Parking and transit more holistically in this document and future ones. This document provides very flat numbers for supply and demand for parking and last time we talked about how that kind of glosses over the nuances of different user groups and times a day. I think it also glosses over just the experience of trying to park in these places. I feel like people are often just looking for an available spot, and so some of this pressure on neighborhood parking is a problem of convenience of people wanting to just park in places that are more convenient to them and that are visible to them, as opposed to parking in designated spots. A future version of this document could be more inclusive of TDM strategies by talking about information and wayfinding and other strategies in more detail to illustrate the ways that the institutions can support, not just providing parking at an appropriate level as a whole, but also directing people to the parking that is supposed to be provided for them for their purpose, and then reducing issues and burdens on neighborhoods where people are parking in in residential spots.

M. Gaughan: I thought Julie made a lot of great observations and I was just thinking about how to kind of make some of those actionable. The thing that I observed that I think is similar to your discussion of mode split is that like each institution is running its own shuttles everywhere. The other day I had experience where I was walking to work in the rain and had been hoping to take a bus. And of course like 3 shuttles of three different institutions passed me on the way I couldn't get on any. That holistic approach that Julia is talking about in our TDM efforts to try and tie those in and maybe even using the TDM effort to provide recommendations on this to how most make it effective because it sort of grew out of exemptions to the parking requirements. And that's why it's focused on this narrow supply demand range. But now it clearly has other objectives as we heard in some of the public comment, which is about like you know how many people are driving alone to work or to school. Those are sort of like symptoms that affect supply and demand, but are different in a way. They aren't solved by creating more spaces or less spaces. They're solved by TDM housing that's closer to campus. So maybe not for this realm, but I think it'd be great for us to think about and staff to think about re-envisioning this as a new tool for what I think are now different objectives than it probably started with prior to the zoning change. And I echo a lot of Julia's thoughts.

M. Tuttle: You may remember that this discussion came up a bit in the context of making the changes to Article 8 last year. Both for our overall TDM requirements for non-institutional projects as well as a bit in the context of what are we really trying to achieve in the institutional parking plans. And that was actually something that we specifically recommended that instead of throwing in standards or specific metrics that we want TDM plans to meet, that we actually

use the work that's happening as part of this TDM study to guide us on clarifying our goals and objectives for TDM across the city. So I'm saying that to say I agree with what Julia might be saying.

CATMA and VHB Responses:

J. Katz: I'll start by addressing the questions from the city and then Karen who's our consultant for HP can jump in if she feels like she has anything else to add. Regarding UVM's high margin of error, there is a high margin of error for the demand calculation of around 1000 spaces, give or take. That is mostly due to using a different survey methodology and policy change in UVM and how they allow us to surveying. A random sample of 1000 employees and 1000 students, as opposed to the entire population of UVM which we used to survey. So this does create a large margin of error. However, we do, as mentioned last meeting, have these utilization counts which have been going on since fall 2019. Which are lot counts that happen four times a year. During those four time slots that happen three days for three counts. So we get a whole bunch of utilization data from all the institutions on how many people actually are on the ground using their parking and there's a larger surplus there than our demand calculation calculates. So due to that we feel fairly confident that even though there's a large margin of error, our demand is in good place. In reality, the demand probably lies somewhere between our demand calculation and that utilization number, the true demand, because not everyone who's demanding parking is necessarily on campus during those times. And another answer for why those utilization numbers and demand numbers are a little different is due to the prevalence of telework and how we're still grasping that in our survey and how we ask the primary mode question - How are you getting to work we just ask what is your primary mode? You can give one answer whether it's driving or biking or another answer. And now folks are working different, like hybrid schedules. They're not coming in five days a week. So other main mode might be driving to work, but they're not driving in every day. Those numbers kind of are mismatched because of that and we want to work on how to better capture that telework and our future surveys, which we do every fall. So there will be more work to come with that and hopefully we'll get a better number or something that we find or a different number for that in our update. And then regarding Champlain Colleges parking deficit - Again, I would refer to that demand number which shows a parking deficit as kind of the higher end of what that demand actually is versus the utilization counts, which are showing that Champlain has a surplus of 215 spaces. And so again, while that utilization count cannot be used to project future demand, it does give us a good idea of like what is happening on the ground now, which is showing in actuality a surplus of parking on the ground.

J. Randall: Thanks. Josh. I'm interested in hearing like what do you think is a healthy rate of surplus with this approach going forward?

K. Sento: Julia, I think this gets back a little bit to that concept of efficiency based standards. There's an inherent cost to over supplying parking and we certainly don't want our neighboring institutions to have wide open fields of parking that are not utilized for many reasons. And I think it strikes that idea that you brought up earlier of the experience of trying to park and sort of that convenience factor of finding spaces that are nearby to where your destination is or potentially on campus based on policy of you know where you are intended to park based on the permit that you hold. And so I think this concept of efficiency based standards helps to illuminate the idea that those things should be in close balance and that we wouldn't want to have a significant surplus of parking and to the same tune we wouldn't want to have a significant deficit of parking so that folks aren't able to find spaces. I think there are many mechanisms that can be utilized to make sure that balance is struck and the idea of this plan is in some ways to demonstrate what some of those mechanisms that the institutions are leveraging to make sure that that balance is struck pretty closely without having things tilted one way or the other two significantly.

J. Randall: So do you think each institution is at a healthy point right now?

K. Sento: I would I would say in my opinion yes, given that I've dug into the numbers and looked at them very carefully, you know this idea that the demand evaluation based on the survey information that we do have and the limitations that we've spelled out of that data point and that particular estimate and the other bookend being these counts on the ground that we understand in their own way have some limitations and we feel very confident that what's happening for each institution falls somewhere between those two points - that sort of that peak period of parking demand. And that demonstrates in my mind that we are falling at that nice balance point of having the supply that is needed for parking so that there isn't that spillover effect to significant degree and acknowledging that there, you know. There is always going to be what you sort of speaking to in that experience of folks were wanting to find the most convenient space to where they're landing. So I do think we are in between those two bookends and I think that from what I've seen from the data that the institutions in the current state are striking that balance.

A. Friend: Karen, it's like a confidence interval for parking demand? Would you describe it like that?

K. Sento: I would and I think having multiple estimates that we can look to demonstrate this is helpful and a healthy approach to understanding exactly what's happening on the ground. No estimate is going to be perfect.

S. Gustin: Still hung up on margin of error. I understand why it's there, and I understand that there's two different sources to look at, but when this goes to the DRB, they're effectively looking at a couple of criteria: that the proposed parking plan adequately serves existing and proposed development, and years of groups by the institution. So in other words, have you balanced parking supply and demand and how are you managing it. So that margin of error is so big that? On the plus side, you're meeting your demand. On the other side, you're not. So what am I in the DRB to think of that?

J. Katz: I would point back to those utilization counts which show on the ground, and even though that doesn't measure future demand, it does give us a better idea of what's actually happening right now, especially for the current which shows a large surplus at UVM and all the institutions have a surplus due to that.

S. Gustin: Is there basis for saying that other set of numbers is more valid?

J. Katz: I would say it's a really good indicator of what is happening on the ground right now. I don't know if I would say more valid, but I think it provides another way to look at it, and maybe a better way to put those numbers in the context.

M. Tuttle: When I asked about this before, Josh, you mentioned that you used the same methodology for this report to assign your survey results to different user groups on campus to help you with creating what you anticipate the future demand to look like. And I believe that methodology was created by the folks at the Transportation Research Center. Is that true? Is this something that you consulted with them about? How to use that methodology in a situation where you have a much lower survey result. Do they have any concern about the high margin of error that's produced by that?

J. Katz: I was not at CATMA when we were working with the RC on that. I arrived a year later but I believe that the survey data from 2019 we had a larger sample size so that was something that we didn't have to have to deal with and there's nothing that I've heard that that we've talked about this with the RC but I don't know if I can answer that question fully.

J. Randall: I'm curious about their involvement too. But they were more involved in earlier years, but not with this specific draft?

J. Katz: So to give some background, a few years ago, brought this project in house. We used to consult it out and then we brought in the house for the last for the last JIPMP process and then we consulted with them on just the methodology for the survey and figuring out the weighting and how to get that demand number. So it's the same methodology that we had used in 2019 to find the demand, but they didn't have any direct involvement on this report.

A. Friend: Scott staffs lots of different committees and boards including the DRB so that in presenting this plan to the DRB he has to go and answer questions. So we've talked about this particularly large margin of error and I understand there's a couple of different methodologies involved and we have bookends, but on the other hand it's big. I would have a hard time presenting it myself to the DRB if I were in Scott's position.

M. Tuttle: I will say that we have asked several questions about this to try to make sense of this both in terms of our own understanding of how to read the report and how to present it to you and ultimately how to present it to the DRB as well. I think we understand and have communicated to CATMA that we understand the discussion of these numbers as bookends. I think that in a lot of ways that can make a lot of sense and certainly there are other ways that we're familiar with the uncertainty that margins of error can provide. I think within our office using census data, oftentimes you know when we start to look at cross tabulated data, things like home ownership or renter-ship and race and income, you start to find that the populations that are included in those cross tabulations become so small that you're dealing with large margins of error. So often what we use that data is by presenting it with caution knowing that it is the best thing that we have available to know what's happening, but we know that it could carry a high degree of uncertainty. So maybe not the best example, but I think that that's just one of the ways that we've been trying to contextualize dealing with the large margin of error in this report. But ultimately I think one of the roles of the Planning Commission is to help provide any comments or feedback that you may have or, in the institutions in the preparation of this plan and ultimately for the DRB in their consideration.

A. Montroll: If there's so much uncertainty in that number, how is that number going to be used and what does that uncertainty do to impact on how it's going to be used?

M. Tuttle: That's a great question. And so one thing that we haven't actually talked about is that the institutions are actually required to submit an annual report on their performance of the plan essentially. And one of the things that they're, they report in that is those actual utilization counts. So I think as Josh and Karen have noted several times Those utilization counts help provide a real snapshot of actual user ship I guess on the campus. And so if we were starting to see in those reports that those utilization numbers were rising much further above either where they expected them to be or really were outpacing the supply, that would be one way that we know that the demand was probably much higher than we anticipated that that margin of error was probably in favor of the higher end.

M. Gaughan: I think we really, really need new metrics on this because I don't really know what the consequences of this is. We're going to say, "OK, you need to like go build more parking", which I don't think is an objective that probably most folks would advocate for a number of different reasons. I think we really need to focus on getting objectives that are more actionable, more lines with what people want to see from this in the future. I don't know if that can occur via the annual updates or not, but I think that's kind of where I leave it at this point.

M. Tuttle: Yeah. And I appreciate that point as well. I think that in previous reviews of the plans that have been brought forward, the Planning Commission and maybe even the DRB have made it pretty clear that the goal of trying to balance supply and demand is actually not to see the institutions build significant additional parking. That's not what most people want to see as the outcome. I think the kind of goals and objectives embedded in the Planning Commission, DRB comments have actually been about reducing the demand.

J. Randall: I want to echo what Michael said on that if the goal is to achieve that balance of parking without massively increasing parking. I think it would be great for this report to also address decommissioning parking when there is significant

surplus. It seems from what Karen was saying that the institutions are within a healthy range right now and so that isn't something that might be on the table in the immediate future, especially with some of these planned residential projects, but I do think that should be something that this report considers in the future. Also on the topic of the margin of error, I think it's helpful to have these two different metrics to draw on and I appreciate you know what Josh has been saying about the usefulness of a certain metric in a specific instance. I think given the fact that there's two of them, I think it would be great if UVM is looking to have this random sample as one of the things that they have in there, that's fine. But maybe if it's really increasing the margin of error because there's a smaller sample size than having that survey go out to everyone and have that as also a metric as a part of this plan. It would also be a good way to test the validity of that random sample when it's given, so that's one idea. Or I feel like there's other ways to rebalance and try to draw out of a more representative sample when it's just given to everyone. We're looking at a final draft document here, so it's tough to ask "OK, this number is not functional. We needed a new survey". I know that's not really feasible at this point here, but for future surveys, it would be great to have. Possibly that different approach with multiple other methodologies that account for everybody but then also try to separate people by user group and make sure that it pulls out those specific respondents.

M. Tuttle: There was a question about how Redstone campus is considered in both the supply and demand side that the funding for UVM and I know for the Planning Commission's awareness this is actually something that previous analysts and I have talked quite a bit about and so I'm just wondering if maybe Karen or Josh could confirm whether we should treat Redstone almost as like a satellite campus like you do for other satellite facilities for the institution since the parking at least at one point did seem to be exclusively for the users on the Redstone campus. And so just wondering if you could speak to that piece. Talking about Redstone lofts separate from Redstone apartments, separate from Redstone Lofts. But if there's any reason that any of the parking for Redstone Lofts would be restricted only to those users, I think that would be helpful to know as well.

J. Katz: Just to clarify, Redstone campus and Redstone lofts and apartments are different. They're adjacent to each other, but one is UVM, one is private so. Anyway, we can talk to more about that if we need to get into that, but the parking for the Redstone Lofts and apartments are only for Redstone Lofts and apartment's folks that parked there that live there.

M. Tuttle: So was the parking and the users then calculated as part of the overall supply and demand for the campus or were they held separately similar to other satellite locations that we've talked about previously?

J. Katz: Yeah. So I believe this was something that came up in the last process. Again, not something that I was a part of, but something that Sandy had filled me in on and so we made some changes to how we looked at those folks. So that's why we have those numbers that show. Both the demand calculation with the Redstone lofts and apartments there and also it would so you have a better idea of what that looks like.

This is scheduled to go to public hearing on June 9th or the 20th.

VI. Commissioner Items

Action: None

M. Gaughan: Wondered if C. Dillard has thoughts on the first comment we heard and that was circulated by e-mail on the historic synagogue and what that might look like and what the limitations are of the current zoning versus what's been asked for?

C. Dillard: Property is it the boundary of two districts, neighborhood mixed-use and a medium density residential. The prospective owner K. Spater who spoke has two different plans, one of which would not require a zoning amendment. It involves creating two residential units on the main floor of the former synagogue and in the basement cafe which is a permitted non-residential use in that residential district. I think longer term he has some ideas about that basement level and that would involve a use that's not permitted as a non-residential use in the residential district. And so is his initial question was would this be considered for a zoning amendment and because it borders the neighborhood mixed-use districts, I think there is some merit for at least considering it as it for a zoning amendment. It is a historic building, so there's some things to consider there, but it is in a part of town where I think neighborhood based commercial uses are appropriate based on Jason properties. But that's essentially where he is. I believe his plans are to move forward with what would be permitted today and then simultaneously pursue a zoning amendment for that property.

A. Friend: Did he say what the future use might be?

C. Dillard: He's a business owner himself. That involves fabrication. So a fabrication is not a use that's permitted there. It would be office and fabrication together. Another use he's mentioned was a cocktail bar type place. I don't believe he's anticipating going beyond to residences in any scenario, but I think if you were to successfully achieve a zoning amendment, I think there would be many different uses that could be permitted there. The congregation does maintain use of an accessory structure on the property separate from the main building, so this synagogue would obviously be sort of deconsecrated (it may have already been).

J. Randall: I had a question about if there are any active religious uses on it. So thanks for clarifying that, Charles. I used to live right around the corner from this property. So I was really excited to see this e-mail come in. I think given the fact that this parcel is on a corner lot, it's a really great location for a neighborhood commercial use or residential use, but I think it

would be a suitable location for those types of commercial uses you were mentioning so I'm eager to see this move forward. It would be good to see that area of Archibald Street look a little bit more alive. I think there's the start of some interesting neighborhood commercial where that where there's burly axe throwing and some cafes that are there, but I think it would be great to sort of extend that on the opposite side and this should be a prerequisite for a zoning change here, but it is sort of a burgeoning artistic area. So I think it would be great if this could support the sort of creative activities that are happening in that neighborhood, either directly or indirectly.

M. Tuttle: We're talking internally about what that looks like in terms of when or how we bring it forward to you. As Charles mentioned there is a plan to move forward under the current zoning today, and so the communication is really about some future plans. For the Commission's benefit, I think it's important to note that we hear a lot of requests for pretty discreet changes to zoning often, and we're trying to think through processes that we can use to help us evaluate time sensitivity impact, ability to help us move forward our goals so that we can make sure that we're balancing both the big things that we're working on in our office and these smaller requests. I appreciate that the communication was shared directly with you tonight and to hear your perspectives on it and we'll talk about how and when this gets brought forward.

VII. Minutes and Communications

Action: None		
Motion by:	Second by:	Approved:

VIII. Adjourn

Adjournment	Time: 8:00pm	
Motion: J. Randall	Second: M. Gaughan	Vote: Unanimous