

Burlington Planning Commission

149 Church Street
Burlington, VT 05401
www.burlingtonvt.gov/pz
Phone: (802) 865-7144

Andy Montroll, Chair
Bruce Baker, Vice Chair
Yves Bradley
Alex Friend
Emily Lee
Harris Roen
Jennifer Wallace-Brodeur

PUBLIC HEARING NOTICE

Burlington Comprehensive Development Ordinance **ZA-21-01 Daycares & Preschools in RCO** **ZA-21-02 Temporary Tents**

Pursuant to 24 V.S.A. §4441 and §4444, notice is hereby given of a public hearing by the Burlington Planning Commission to hear comments on the following proposed amendments to the City of Burlington's *Comprehensive Development Ordinance* (CDO). Per Act 92, Secs. 5 and 6, the public hearing will take place during the Planning Commission meeting on **Wednesday, September 23, 2020 beginning at 6:45pm. You may access the hearing/meeting as follows:**

To join from a Computer, please click this URL to join, and enter the password if prompted:

<https://us02web.zoom.us/j/87568033583>

To join by phone, dial this number and enter the Webinar ID when prompted:

Number: +1 312 626 6799 Webinar ID: 875 6803 3583

Pursuant to the requirements of 24 V.S.A. §4444(b):

Statement of purpose:

The purpose of the proposed amendments are as follows:

- **ZA-21-01:** To eliminate the distinction between small and large Day Care Centers and small and large Preschools, and to eliminate the GFA limit on these facilities in RCO districts.
- **ZA-21-02:** To allow for placement of structural tents for non-residential purposes without review or zoning permit required for up to 180 days with Fire Marshal permit.

Geographic areas affected:

These amendments apply to the following areas of the city:

- **ZA-21-01:** Eliminating the distinction between small and large facilities applies to all zoning districts, but changes what is presently allowed in RCO and E-AE zoning districts. Change to footnote 8 impacts only RCO zoned areas.
- **ZA-21-02:** Applies to all parts of the city.

List of section headings affected:

The proposed amendments modify the following sections of the *Burlington Comprehensive Development Ordinance*:

- **ZA-21-01:** Modifies *Sec. 5.4.1, Table 8.1.8-1*, some definitions in *Article 13*, and *Appendix-A Use Table*
- **ZA-21-02:** Modifies *Sec. 5.1.2 (f) Temporary Structures*

The full text of the *Burlington Comprehensive Development Ordinance* is available online at www.burlingtonvt.gov/DPI/CDO. The proposed amendment can be reviewed in hard copy posted on the first floor of City Hall, 149 Church Street, Burlington or on the department's website at <https://www.burlingtonvt.gov/DPI/CDO/Proposed-Amendments-Before-the-Planning-Commission>

Burlington Planning Commission

149 Church Street
Burlington, VT 05401
Telephone: (802) 865-7188
(802) 865-7195 (FAX)
(802) 865-7144 (TTY)

www.burlingtonvt.gov/pz

Andy Montroll, Chair
Bruce Baker, Vice-Chair
Yves Bradley
Alexander Friend
Emily Lee
Harris Roen
Jennifer Wallace-Brodeur

Burlington Planning Commission

Tuesday, October 13, 2020, 6:30 P.M.

Remote Meeting via Zoom

To Join the Meeting on a Computer

Link: <https://us02web.zoom.us/j/87057586208>

To Join the Meeting on a Phone

Number: +1 312 626 6799 Meeting ID: 870 5758 6208

AGENDA

I. Agenda

II. Chair's Report

III. Director's Report

IV. Public Forum - Time Certain 6:35 p.m.

See pg. 3 of the Agenda Packet for details on how to participate in the public forum for this meeting.

V. Public Hearing: CDO Amendment ZA-21-01 Daycare & Preschool in RCO Districts Time Certain 6:45 p.m.

The Commission will hold a public hearing on a proposed amendment to the *Comprehensive Development Ordinance* regarding daycare and preschools within RCO and EAE zones. Information related to this item is included in the agenda packet on page 5.

Staff Recommendation: Following public hearing, approve municipal bylaw amendment report and forward to City Council with recommendation.

VI. Public Hearing: CDO Amendment ZA-21-02 Temporary Tents

The Commission will hold a public hearing on a proposed amendment to the *Comprehensive Development Ordinance* regarding temporary tents erected on private property. Information related to this item is included in the agenda packet on page 10.

Staff Recommendation: Following public hearing, approve municipal bylaw amendment report and forward to City Council with recommendation.

VII. Joint Institutional Parking Management Plan 2020-2025

On behalf of the University of Vermont, Champlain College, and UVM Medical Center, CATMA will attend present the revised JIPMP 2020-2025. Information related to this item is included in the agenda packet on page 16.

Staff Recommendation: Provide any additional feedback to staff regarding the plan, for transmission to the Development Review Board.

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

Tuesday, October 13, 2020

VIII. Commissioner Items

- a. Upcoming Meetings –Joint Meeting with City Council Ordinance Committee, via Zoom
 - i. Wednesday, October 28, 2020 at 6:45 p.m.

I. Minutes & Communications

- a. The minutes of the September 23 meeting are enclosed in the agenda packet on page 88.

II. Adjourn

Burlington Planning Commission

149 Church Street
Burlington, VT 05401
Telephone: (802) 865-7188
(802) 865-7195 (FAX)
(802) 865-7144 (TTY)

www.burlingtonvt.gov/pz

Andy Montroll, Chair
Bruce Baker, Vice-Chair
Yves Bradley
Alexander Friend
Emily Lee
Harris Roen
Jennifer Wallace-Brodeur

Burlington Planning Commission

Tuesday, October 13, 2020, 6:30 P.M.

Remote Meeting via Zoom

To Join the Meeting on a Computer

Link: <https://us02web.zoom.us/j/87057586208>

To Join the Meeting on a Phone

Number: +1 312 626 6799 Meeting ID: 870 5758 6208

AGENDA

I. Agenda

II. Chair's Report

III. Director's Report

IV. Public Forum - Time Certain 6:35 p.m.

See pg. 3 of the Agenda Packet for details on how to participate in the public forum for this meeting.

V. Public Hearing: CDO Amendment ZA-21-01 Daycare & Preschool in RCO Districts Time Certain 6:45 p.m.

The Commission will hold a public hearing on a proposed amendment to the *Comprehensive Development Ordinance* regarding daycare and preschools within RCO and EAE zones. Information related to this item is included in the agenda packet on page 5.

Staff Recommendation: Following public hearing, approve municipal bylaw amendment report and forward to City Council with recommendation.

VI. Public Hearing: CDO Amendment ZA-21-02 Temporary Tents

The Commission will hold a public hearing on a proposed amendment to the *Comprehensive Development Ordinance* regarding temporary tents erected on private property. Information related to this item is included in the agenda packet on page 10.

Staff Recommendation: Following public hearing, approve municipal bylaw amendment report and forward to City Council with recommendation.

VII. Joint Institutional Parking Management Plan 2020-2025

On behalf of the University of Vermont, Champlain College, and UVM Medical Center, CATMA will attend present the revised JIPMP 2020-2025. Information related to this item is included in the agenda packet on page 16.

Staff Recommendation: Provide any additional feedback to staff regarding the plan, for transmission to the Development Review Board.

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

VIII. Commissioner Items

- a. Upcoming Meetings –Joint Meeting with City Council Ordinance Committee, via Zoom
 - i. Wednesday, October 28, 2020 at 6:45 p.m.

I. Minutes & Communications

- a. The minutes of the September 23 meeting are enclosed in the agenda packet on page 88.

II. Adjourn

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 mtuttle@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.

Burlington Planning Commission

149 Church Street
Burlington, VT 05401
www.burlingtonvt.gov/pz
Phone: (802) 865-7144

Andy Montroll, Chair
Bruce Baker, Vice Chair
Yves Bradley
Alex Friend
Emily Lee
Harris Roen
Jennifer Wallace-Brodeur

PUBLIC HEARING NOTICE

Burlington Comprehensive Development Ordinance **ZA-21-01 Daycares & Preschools in RCO** **ZA-21-02 Temporary Tents**

Pursuant to 24 V.S.A. §4441 and §4444, notice is hereby given of a public hearing by the Burlington Planning Commission to hear comments on the following proposed amendments to the City of Burlington's *Comprehensive Development Ordinance* (CDO). Per Act 92, Secs. 5 and 6, the public hearing will take place during the Planning Commission meeting on **Tuesday, October 13, 2020 beginning at 6:45pm. You may access the hearing/meeting as follows:**

To join from a Computer, please click this URL to join, and enter the password if prompted:
<https://us02web.zoom.us/j/87057586208>

To join by phone, dial this number and enter the Webinar ID when prompted:
Number: +1 312 626 6799 Webinar ID: 870 5758 6208

Pursuant to the requirements of 24 V.S.A. §4444(b):

Statement of purpose:

The purpose of the proposed amendments are as follows:

- **ZA-21-01:** To eliminate the distinction between small and large Day Care Centers and small and large Preschools, and to eliminate the GFA limit on these facilities in RCO districts.
- **ZA-21-02:** To allow for placement of structural tents for non-residential purposes without review or zoning permit required for up to 180 days with Fire Marshal permit.

Geographic areas affected:

These amendments apply to the following areas of the city:

- **ZA-21-01:** Eliminating the distinction between small and large facilities applies to all zoning districts, but changes what is presently allowed in RCO and E-AE zoning districts. Change to footnote 8 impacts only RCO zoned areas.
- **ZA-21-02:** Applies to all parts of the city.

List of section headings affected:

The proposed amendments modify the following sections of the *Burlington Comprehensive Development Ordinance*:

- **ZA-21-01:** Modifies *Sec. 5.4.1, Table 8.1.8-1*, some definitions in *Article 13*, and *Appendix-A Use Table*
- **ZA-21-02:** Modifies *Sec. 5.1.2 (f) Temporary Structures*

The full text of the *Burlington Comprehensive Development Ordinance* is available online at www.burlingtonvt.gov/DPI/CDO. The proposed amendment can be reviewed in hard copy posted on the first floor of City Hall, 149 Church Street, Burlington or on the department's website at <https://www.burlingtonvt.gov/DPI/CDO/Proposed-Amendments-Before-the-Planning-Commission>



City of Burlington, VT
149 Church Street, 3rd Floor
Burlington, VT 05401
Phone: (802) 865-7144

www.burlingtonvt.gov/plan

TO: Burlington Planning Commission
FROM: Meagan Tuttle, Comprehensive Planner, City Planning
DATE: August 27, 2020
RE: Proposed CDO Amendment: ZA-21-01 Day Care & Preschool in RCO Districts

Overview & Background

This amendment originates from a request made by the Winooski Valley Parks District (WVPD) on behalf of its tenants, the Ethan Allen Museum and the Forest Preschool. The preschool has operated at the Homestead Barn and WVPD property since 2015. Due to the critical need for childcare in the City and state, the preschool has maintained a waiting list for enrollment. As a result of COVID-19, the preschool is experiencing a significant increase in the demand for space in the program, as well new standards to re-open under modified guidelines for staff and classroom space. While the WVPD has space to expand to meet both the increased need for space at the current enrollment, as well as the preschool's needs under expanded enrollment, the zoning ordinance presently limits this expansion in two ways—by limiting the gross floor area (GFA) of the facility and the enrollment to 20 children.

Presently, the CDO separately defines Small Day Care Center and Large Day Care Center and Small Preschool and Large Preschool. The distinction between large and small facilities in both of these cases is based on the number of children served in a facility—small is limited to 20 children, while large is more than 20 children. A zoning amendment that predates the current 2008 CDO made the distinction between Small and Large Daycares. An amendment to enable a small childcare to operate in conjunction with the facilities at the WVPD property was approved in 2015. These thresholds then informed a series of more recent amendments which established the same distinction between Large and Small Preschools, and a series of other changes related to these uses.

The distinction between large and small facilities is relevant only within the RCO and E-AE zoning districts. Within these districts, Small Day Cares and Small Preschools are allowed as a Conditional Use, but only in conjunction with Small Museums and are limited to 50% of the GFA of the museum. However, neither Large Day Care nor Large Preschool are permitted in these districts. Within all other zoning districts, large and small facilities of both types are treated exactly the same in terms of where they are allowed, any applicable footnotes, and their minimum parking requirements (as proposed by ZA-20-04, which is scheduled for public hearing before the Council).

In order to enable the preschool to respond to its underlying and COVID-19 driven needs for expanded enrollment, the WVPD has requested an amendment to the ordinance to address these limitations. It is staff's recommendation that the CDO be amended to eliminate the distinction between large and small day care and preschool facilities, as there is no material difference between them except for within the RCO and Enterprise-Ag districts, and to remove the 50% GFA limit on their size relative to museums within the RCO districts.

Proposed Amendment

Amendment Type

Text Amendment	Map Amendment	Text & Map Amendment
----------------	---------------	----------------------

Purpose Statement

This amendment proposes to eliminate the distinction between small and large Day Care Centers and small and large Preschools, and to eliminate the gross floor area limitation on these facilities within the RCO zoning districts.

Proposed Amendments

To achieve the goals identified above, the proposed amendment affects the following sections of the *Burlington Comprehensive Development Ordinance*:

- 1. Update Sec. 5.4.1 to reflect updated uses**
 - Remove references to small and large day care centers and preschools, and replace with "Day Care Center" and "Preschool."
- 2. Update Table 8.1.8-1 regarding minimum parking for updated uses**
 - Remove references to small and large day care centers and preschools, and replace with "Day Care Center" and "Preschool." Utilize minimum parking standards as proposed by ZA-20-04, which are consistent across all uses.
- 3. Modify definitions in Article 13 to change uses**
 - Revise Small Day Care Center and Large Day Care Center to Day Care Center
 - Revise Small Preschool and Large Preschool to Preschool
- 4. Update Appendix A- Use Table to reflect updated uses, amend Footnote 8 (attached to this memo)**
 - Update the uses within Appendix A to be consistent with the above changes
 - Utilize existing Small Day Care Center provision for new Day Care Center use, and existing Small Preschool provisions for new Preschool use regarding where facilities are permitted or conditional use.
 - Amend Footnote 8 to remove the 50% GFA limit for Daycares and Preschools within the RCO Districts relative to Small Museums

****BEGIN PROPOSED AMENDMENTS****

Changes shown (underline to be added, ~~strike out~~ to be deleted) are proposed changes to the *Burlington Comprehensive Development Ordinance*.

Sec. 5.4.1 ~~Small and Large~~ Day Care Centers and ~~Small and Large~~ Preschools

In addition to the provisions of Art 3, Part 5 for conditional uses, and applicable site and design review standards in Art 6, the following additional regulations shall be applicable to an application involving a ~~small~~ day care center or, large day care center, small preschool, ~~or large preschool~~ where such uses are treated as conditional uses pursuant to Appendix A – Use Table:

- (a) No playground equipment shall be located within the front yard;
- (b) [Reserved]
- (c) The site plan review shall insure adequate and safe drop-off and pickup space is provided and that traffic problems are not created;
- (d) Any additions, signage, or site improvements shall be residential in character;
- (e) The facility shall be licensed by the State of Vermont;

- (f) No more than one residential unit may be converted for the creation of a single ~~small~~ day care center, ~~large day care center~~, ~~small preschool~~, or ~~large~~ preschool. Such a conversion shall be exempt from the requirements of **Article 9, Part 2- Housing Replacement**; and,
- (g) The neighborhood is not overburdened with other ~~small~~ day care centers, ~~large day care centers~~, ~~small preschools~~, or ~~large~~ preschools.

Sec. 8.1.8 Minimum Parking Requirements

Parking for all uses and structures shall be provided in accordance with Table 8.1.8-1.

- (a) – (c) As written.

Table 8.1.8-1 Minimum Off-Street Parking Requirements			
	Neighborhood Districts	Shared Use Districts	Downtown Districts
NON-RESIDENTIAL USES	Per 1,000 square feet of gross floor area (gfa) except as noted		
<i>**All prior uses As Written**</i>			
Daycare Large (Over 20 children) (per two (2) employees)	1 plus 1 drop-off per 5 children	1 plus 1 drop-off per 5 children	2 drop-off <u>0</u>
Daycare Small (20 children or less) (per two (2) employees)	<u>1</u>	<u>1</u>	<u>1</u>
School – Preschool Large (over 20 children) (per two (2) employees)	1 plus 1 drop-off per 5 children	1 plus 1 drop-off per 5 children	1 plus 1 per 5 children <u>0</u>
School Preschool Small (up to 20 children) (per two (2) employees)	<u>1</u>	<u>1</u>	<u>1</u>
<i>**All following uses As Written**</i>			

Sec. 13.1.2 Definitions

All other definitions as written.

Day Care Center: (See **Article 5** for specific provisions.)

- (a) **Family Day Care Home:** For the purposes of this ordinance, family day care home shall have the same meaning as that set forth in 24 V.S.A. sec. 4412 (5).
- (b) **Small Day Care Center:** A state licensed daycare facility, ~~serving no more than twenty (20) full-time children in total.~~
- ~~(c) **Large Day Care Center:** A state licensed facility providing day care services for more than twenty (20) full-time children.~~

School: The academic space and accessory uses for the teaching of children or adults.

- (a) **Primary:** elementary school, inclusive of grades K-8.
- (b) **Secondary:** a high school and/or vocational center for attendance after elementary/primary school, granting a high school diploma for levels of education inclusive of grades 9-12.

- (c) **Post-Secondary:** after high school, including colleges, community colleges, universities, or continuing education.
- (d) **Trade or Professional:** a school that offers instruction in skilled trades.
- (e) **Small Preschool:** a school providing educational services for children from 3 years of age until their admission to first grade and that may include kindergarten, ~~serving no more than twenty (20) full-time children in total.~~
- (f) ~~**Large Preschool:** a school providing educational services to children from 3 years of age until their admission to first grade and that may include kindergarten, for more than twenty (20) full-time children in total.~~

****END PROPOSED AMENDMENTS****

Relationship to planBTV

This following discussion of conformance with the goals and policies of planBTV is prepared in accordance with the provisions of 24 V.S.A. §4441(c).

Impact on Safe & Affordable Housing

The proposed amendment has no impact on the provision of safe and affordable housing.

Compatibility with Proposed Future Land Use & Density

The proposed amendment removes arbitrary standards limiting the size of a day care or preschool facility in an area of the city where these uses are otherwise permitted as a conditional use. This change is consistent with *planBTV* policy 14.4 which identifies the need to "expand the number and quality of spaces available for, and funding sources to support, child care close to where residents live and work in order to ensure that all Burlington families have access to these services regardless of income or background."

Planned Community Facilities

The proposed amendment has no impact on planned community facilities.

Process Overview

The following chart summarizes the current stage in the zoning amendment process, and identifies any recommended actions:

Planning Commission Process				
Draft Amendment prepared by: Staff, resident request	Planning Commission Discussion 8/26/2020	Approved for Public Hearing 8/26/2020	Public Hearing 9/23/2020	Approve & forward to Council
				Continue discussion
City Council Process				
First Read & Referral to Ordinance Cmte	Ordinance Committee discussion	Ordinance Cmte recommends to Council	Second Read & Public Hearing	Approval & Adoption
				Rejected

Excerpt of Appendix A-Use Table for Proposed ZA-21-01

	Urban Reserve	Recreation, Conservation & Open Space			Institutional	Residential			Downtown Mixed Use ⁱ	Neighborhood Mixed Use				Enterprise	
USES	UR	RCO - A	RCO - RG	RCO - C	I	RL/W	RM/W	RH	DW-PT ¹⁶	NMU	NAC	NAC-RC	NAC-CR	E-AE	E-LM
RESIDENTIAL USES	UR	RCO - A ¹	RCO - RG	RCO - C	I	RL/W	RM/W	RH	DW-PT ¹⁶	NMU	NAC	NAC-RC	NAC-CR	E-AE	E-LM
**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
RESIDENTIAL SPECIAL USES	UR	RCO – A	RCO - RG	RCO - C	I	RL/W	RM/W	RH	DW-PT ¹⁶	NMU	NAC	NAC-RC	NAC-CR	E-AE	E-LM
**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
NON-RESIDENTIAL USES	UR ²¹	RCO - A	RCO - RG	RCO - C	I	RL/W	RM	RH	DW-PT ¹⁶	NMU	NAC	NAC-RC	NAC-CR	E-AE	E-LM
**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Daycare – Large (Over 20 children) (see Sec. 5.4.1)	N	N	N	N	CU	CU¹³	CU¹³	CU¹³	N	Y	Y	Y	Y	N	CU^{17,27}
Daycare – Small (up to 20 children) Day Care Center (See Sec. 5.4.1)	N	CU ⁸	CU ⁸	CU ⁸	CU	CU ¹³	CU ¹³	CU ¹³	N	Y	Y	Y	Y	CU	CU ^{17,27}
Daycare – Family Home	N	N	N	N	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N
**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
School – Preschool Large (over 20 children) (see Sec. 5.4.1)	N	N	N	N	CU	CU¹³	CU¹³	CU¹³	N	Y	Y	Y	Y	N	CU^{17,27}
School – Preschool Small (up to 20 children) (see Sec. 5.4.1)	N	CU ⁸	CU ⁸	CU ⁸	CU	CU ¹³	CU ¹³	CU ¹³	N	Y	Y	Y	Y	CU	CU ^{17,27}
**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**

Footnotes (1) – (7) As Written.

~~8.—8. Small daycare Day Care~~ centers and ~~small~~ preschools in the RCO zones shall only be allowed ~~as part of when a~~ small museum ~~is the principal uses, and shall constitute less than 50% of the gross floor area of the museum.~~

Footnotes (9) – (32) As Written.

ⁱ For permitted and conditional uses within the Downtown and Waterfront Form Districts, refer to Article 14.

Legend:	
Y	Permitted Use in this district
CU	Conditional Use in this district
N	Use not permitted in this district
Abbreviation	Zoning District
RCO – A	RCO - Agriculture
RCO – RG	RCO – Recreation/Greenspace
RCO – C	RCO - Conservation
I	Institutional
RL/W	Residential Low Density, Waterfront Residential Low Density
RM/W	Residential Medium Density, Waterfront Residential Medium Density
RH	Residential High Density
DW-PT	Downtown Waterfront-Public Trust
NMU	Neighborhood Mixed Use
NAC	Neighborhood Activity Center
NAC-RC	NAC – Riverside Corridor
NAC-CR	NAC – Cambrian Rise
E-AE	Enterprise – Agricultural Processing and Energy
E-LM	Enterprise – Light Manufacturing

TO: Burlington Planning Commission
FROM: Meagan Tuttle, Comprehensive Planner, City Planning
DATE: August 27, 2020
RE: Proposed CDO Amendment: ZA-21-02 Temporary Tents

Overview & Background

During the COVID-19 State of Emergency, since mid-March of this year, the City has established programs such as the "Making Space" initiative to expand areas of public rights of way available for restaurant and retail recovery to occur safely, and to adhere to social distancing requirements. This effort has included the installation of temporary tents, awnings, tables and chairs, parklets, and other infrastructure to create designated spaces for commercial activity. Many other programs and establishments have moved their activities outdoors into what is considered a safer environment to reduce the risk of COVID-19 transmission. As these activities have taken place within public rights of way, the Burlington CDO has not applied, and a streamlined process for review and approval by the Department of Public Works has been established.

As we move into the fall and winter months, and particularly as we prepare for the anticipated return of in-person classes both in the Burlington School District and the higher education institutions, we expect that temporary outdoor venues will play an even more significant role in the safe and successful operations of commercial and civic establishments. Through the City's COVID-19 Analytics Team, we understand that the Burlington School District, and other childcare and youth programming providers are planning to utilize outdoor spaces as a complement to their indoor facilities and programming. Over the summer, the Permitting & Inspections Department has received zoning permit applications from Burlington City Arts, churches and other establishments in the city seeking to erect tents on private property where the CDO does apply.

As such, this amendment seeks to amend the zoning ordinance to provide additional flexibility in the Temporary Structure Provisions to exempt Tents as defined in Chapter 3 of NFPA 101 from requiring a zoning permit for up to 180 days, contingent upon the Fire Marshal issuance of a temporary tent permit.

Proposed Amendment

Amendment Type

Text Amendment	Map Amendment	Text & Map Amendment
----------------	---------------	----------------------

Purpose Statement

The proposed amendment provides for the placement of structural tents for non-residential purposes without review or required zoning permit for up to 180 days, provided that the tent is approved by the Burlington Fire Marshal.

Proposed Amendments

To achieve the goals identified above, the proposed amendment affects the following sections of the *Burlington Comprehensive Development Ordinance*:

1. Amend Sec. 5.1.2 (f) Temporary Structures

- Add an exemption for Tents from review and required permit for up to 180 days within any 12-month period.

****BEGIN PROPOSED AMENDMENTS****

Changes shown (underline to be added, ~~strike out~~ to be deleted) are proposed changes to the Burlington Comprehensive Development Ordinance.

Sec. 5.1.2 Structures

Except as otherwise provided by law or by this ordinance, no structure in any district shall be created, removed or altered except in conformance with the provisions of this Article and the requirements of the district in which such land or structure is located.

(a) - (e) *As Written.*

(f) Temporary Structures:

The administrative officer may approve a temporary structure that is incidental and accessory to a principal use subject to the following:

No Review or Permit Required	Site Plan Review: Zoning Permit & COA	Review as per Underlying Zoning
A structure placed up to 10 consecutive days or 30 days within any 12-month period at the same location.	A structure placed from 11-31 consecutive days or 31-60 days within any 12 month period at the same location.	A structure placed over 31 consecutive days or more within any 12 month period at the same location, is no longer considered a temporary structure.
Tents used for recreational non-commercial camping purposes.		
<u>Tents as defined in Chapter 3 of NFPA 101 for non-residential purposes, as approved by the Burlington Fire Marshal, placed up to 180 days within any 12-month period at the same location.</u>		

****END PROPOSED AMENDMENTS****

Relationship to planBTV

This following discussion of conformance with the goals and policies of planBTV is prepared in accordance with the provisions of 24 V.S.A. §4441(c).

Impact on Safe & Affordable Housing

The proposed amendment has no impact on the provision of safe and affordable housing.

Compatibility with Proposed Future Land Use & Density

The proposed amendment has no impact on proposed future land use and densities in *planBTV*.

Planned Community Facilities

The proposed amendment has no impact on planned community facilities.

Process Overview

The following chart summarizes the current stage in the zoning amendment process, and identifies any recommended actions:

Planning Commission Process				
Draft Amendment prepared by: Staff, resident request	Planning Commission Discussion 8/26/2020	Approved for Public Hearing 8/26/2020	Public Hearing 9/23/2020	Approve & forward to Council
				Continue discussion
City Council Process				
First Read & Referral to Ordinance Cmte	Ordinance Committee discussion	Ordinance Cmte recommends to Council	Second Read & Public Hearing	Approval & Adoption
				Rejected

11.10.5 Air-Supported and Air-Inflated Structures.

11.10.5.1 General. In addition to the general provisions of 11.10.1, the requirements of 11.10.5 shall apply to air-supported and air-inflated structures.

11.10.5.2 Pressurization (Inflation) System. The pressurization system shall consist of one or more operating blower units. The system shall include automatic control of auxiliary blower units to maintain the required operating pressure. Such equipment shall meet the following requirements:

- (1) Blowers shall be powered by continuous-rated motors at the maximum power required.
- (2) Blowers shall have personnel protection, such as inlet screens and belt guards.
- (3) Blower systems shall be weather protected.
- (4) Blower systems shall be equipped with backdraft check dampers.
- (5) Not less than two blower units shall be provided, each of which has capacity to maintain full inflation pressure with normal leakage.
- (6) Blowers shall be designed to be incapable of overpressurization.
- (7) The auxiliary blower unit(s) shall operate automatically if there is any loss of internal pressure or if an operating blower unit becomes inoperative.
- (8) The design inflation pressure and the capacity of each blower system shall be certified by a professional engineer.

11.10.5.3 Standby Power System.

11.10.5.3.1 A fully automatic standby power system shall be provided. The system shall be either an auxiliary engine generator set capable of running the blower system or a supplementary blower unit that is sized for 1 times the normal operating capacity and is powered by an internal combustion engine.

11.10.5.3.2 The standby power system shall be fully automatic to ensure continuous inflation in the event of any failure of the primary power. The system shall be capable of operating continuously for a minimum of 4 hours.

11.10.5.3.3 The sizing and capacity of the standby power system shall be certified by a professional engineer.

11.10.6 Maintenance and Operation.

11.10.6.1 Instructions in both operation and maintenance shall be transmitted to the owner by the manufacturer of the tensioned-membrane, air-supported, or air-inflated structure.

11.10.6.2 Annual inspection and required maintenance of each structure shall be performed to ensure safety conditions. At least biennially, the inspection shall be performed by a professional engineer, registered architect, or individual certified by the manufacturer.

11.10.7 Services.

11.10.7.1 Fired Heaters.

11.10.7.1.1 Only labeled heating devices shall be used.

11.10.7.1.2 Fuel-fired heaters and their installation shall be approved by the authority having jurisdiction.

11.10.7.1.3 Containers for liquefied petroleum gases shall be installed not less than 60 in. (1525 mm) from any temporary membrane structure and shall be in accordance with the provisions of NFPA 58, *Liquefied Petroleum Gas Code*.

11.10.7.1.4 Tanks shall be secured in the upright position and protected from vehicular traffic.

11.10.7.2 Electric Heaters.

11.10.7.2.1 Only labeled heaters shall be permitted.

11.10.7.2.2 Heaters used inside a temporary membrane structure shall be approved.

11.10.7.2.3 Heaters shall be connected to electricity by electric cable that is suitable for outside use and is of sufficient size to handle the electrical load.

11.11 Tents.

11.11.1 General.

11.11.1.1 The provisions of Section 11.1 shall apply.

11.11.1.2 Tents shall be permitted only on a temporary basis.

11.11.1.3 Tents shall be erected to cover not more than 75 percent of the premises, unless otherwise approved by the authority having jurisdiction.

11.11.2 Flame Propagation Performance.

11.11.2.1 All tent fabric shall meet the flame propagation performance criteria contained in Test Method 2 of NFPA 701, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films*.

11.11.2.2 One of the following shall serve as evidence that the tent fabric materials have the required flame propagation performance:

- (1) The authority having jurisdiction shall require a certificate or other evidence of acceptance by an organization acceptable to the authority having jurisdiction.
- (2) The authority having jurisdiction shall require a report of tests made by other inspection authorities or organizations acceptable to the authority having jurisdiction.

11.11.2.3 Where required by the authority having jurisdiction, confirmatory field tests shall be conducted using test specimens from the original material, which shall have been affixed at the time of manufacture to the exterior of the tent.

11.11.3 Location and Spacing.

11.11.3.1 There shall be a minimum of 10 ft (3050 mm) between stake lines.

11.11.3.2 Adjacent tents shall be spaced to provide an area to be used as a means of emergency egress. Where 10 ft (3050 mm) between stake lines does not meet the requirements for means of egress, the distance necessary for means of egress shall govern.

11.11.3.3 Tents not occupied by the public and not used for the storage of combustible material shall be permitted to be erected less than 10 ft (3050 mm) from other structures where the authority having jurisdiction deems such close spacing to be safe from hazard to the public.

11.11.3.4 Tents, each not exceeding 1200 ft² (112 m²) in finished ground level area and located in fairgrounds or similar open spaces, shall not be required to be separated from each other, provided that safety precautions meet the approval of the authority having jurisdiction.

11.11.3.5 The placement of tents relative to other structures shall be at the discretion of the authority having jurisdiction, with consideration given to occupancy, use, opening, exposure, and other similar factors.



3.3.262 Specification.

3.3.262.1* Design Specification. A building characteristic and other conditions that are under the control of the design team. (SAF-FUN)

3.3.262.2 Input Data Specification. Information required by the verification method. (SAF-FUN)

3.3.263 Staff (Residential Board and Care). Persons who provide personal care services, supervision, or assistance. (SAF-BCF)

3.3.264 Stage. A space within a building used for entertainment and utilizing drops or scenery or other stage effects. (SAF-AXM)

3.3.264.1 Legitimate Stage. A stage with a height greater than 50 ft (15 m) measured from the lowest point on the stage floor to the highest point of the roof or floor deck above. (SAF-AXM)

3.3.264.2 Regular Stage. A stage with a height of 50 ft (15 m) or less measured from the lowest point on the stage floor to the highest point of the roof or floor deck above. (SAF-AXM)

3.3.265* Stair.

3.3.265.1 Aisle Stair. A stair within a seating area of an assembly occupancy that directly serves rows of seats to the side of the stair, including transition stairs that connect to an aisle or a landing. (SAF-AXM)

3.3.265.2 Outside Stair. A stair with not less than one side open to the outer air. (SAF-MEA)

3.3.266 Stakeholder. An individual, or representative of same, having an interest in the successful completion of a project. (SAF-FUN)

3.3.267 Storage Occupancy. See 3.3.190.15.

3.3.268* Stories in Height. The story count starting with the level of exit discharge and ending with the highest occupiable story containing the occupancy considered. (SAF-FUN)

3.3.269* Story. The portion of a building located between the upper surface of a floor and the upper surface of the floor or roof next above. (SAF-FUN)

3.3.269.1 Occupiable Story. A story occupied by people on a regular basis. (SAF-FUN)

3.3.270 Street. A public thoroughfare that has been dedicated for vehicular use by the public and can be used for access by fire department vehicles. (SAF-MEA)

3.3.271* Street Floor. A story or floor level accessible from the street or from outside the building at the finished ground level, with the floor level at the main entrance located not more than three risers above or below the finished ground level, and arranged and utilized to qualify as the main floor. (SAF-MER)

3.3.272* Structure. That which is built or constructed. (SAF-FUN)

3.3.272.1 Air-Inflated Structure. A structure whose shape is maintained by air pressure in cells or tubes forming all or part of the enclosure of the usable area and in which the occupants are not within the pressurized area used to support the structure. (SAF-IND)

3.3.272.2* Air-Supported Structure. A structure where shape is maintained by air pressure and in which occupants are within the elevated pressure area. (SAF-IND)

3.3.272.3 Limited Access Structure. A structure or portion of a structure lacking emergency openings. (SAF-IND)

3.3.272.4 Membrane Structure. A building or portion of a building incorporating an air-inflated, air-supported, tensioned-membrane structure; a membrane roof; or a membrane-covered rigid frame to protect habitable or usable space. (SAF-IND)

3.3.272.5 Multilevel Play Structure. A structure that consists of tubes, slides, crawling areas, and jumping areas that is located within a building and is used for climbing and entertainment, generally by children. (SAF-AXM)

3.3.272.6* Open Structure. A structure that supports equipment and operations not enclosed within building walls. (SAF-IND)

3.3.272.7* Parking Structure. A building, structure, or portion thereof used for the parking, storage, or both, of motor vehicles. [88A, 2015] (SAF-IND)

3.3.272.7.1 Assisted Mechanical Type Parking Structure. A parking structure that uses lifts or other mechanical devices to transport vehicles to the floors of a parking structure, where the vehicles are then parked by a person. [88A, 2015] (SAF-IND)

3.3.272.7.2 Automated Type Parking Structure. A parking structure that uses computer controlled machines to store and retrieve vehicles, without drivers, in multi-level storage racks with no floors. [88A, 2015] (SAF-IND)

3.3.272.7.3 Enclosed Parking Structure. Any parking structure that is not an open parking structure. [88A, 2015] (SAF-IND)

3.3.272.7.4 Open Parking Structure. A parking structure that meets the requirements of 42.8.1.3 (SAF-IND).

3.3.272.7.5 Ramp Type Parking Structure. A parking structure that utilizes sloped floors for vertical vehicle circulation. [88A, 2015] (SAF-IND)

3.3.272.8 Permanent Structure. A building or structure that is intended to remain in place for a period of more than 180 days in any consecutive 12-month period. (SAF-FUN)

3.3.272.9 Temporary Structure. A building or structure not meeting the definition of *permanent structure*. (See also 3.3.272.8, *Permanent Structure*.) (SAF-FUN)

3.3.272.10 Tensioned-Membrane Structure. A membrane structure incorporating a membrane and a structural support system such as arches, columns and cables, or beams wherein the stresses developed in the tensioned membrane interact with those in the structural support so that the entire assembly acts together to resist the applied loads. (SAF-IND)

3.3.272.11* Underground Structure. A structure or portions of a structure in which the floor level is below the level of exit discharge. (SAF-IND)

3.3.272.12 Water-Surrounded Structure. A structure fully surrounded by water. (SAF-IND)

3.3.273 Suite.

3.3.273.1 Guest Suite. An accommodation with two or more contiguous rooms comprising a compartment, with or without doors between such rooms, that provides living, sleeping, sanitary, and storage facilities. (SAF-RES)



3.3.273.2 Non-Patient-Care Suite (Health Care Occupancies). A suite within a health care occupancy that is not intended for sleeping or treating patients. (SAF-HEA)

3.3.273.3 Patient Care Non-Sleeping Suite (Health Care Occupancies). A suite for treating patients with or without patient beds not intended for overnight sleeping. (SAF-HEA)

3.3.273.4 Patient Care Sleeping Suite (Health Care Occupancies). A suite containing one or more patient beds intended for overnight sleeping. (SAF-HEA)

3.3.273.5 Patient Care Suite (Health Care Occupancies). A series of rooms or spaces or a subdivided room separated from the remainder of the building by walls and doors. (SAF-HEA)

3.3.274 System.

3.3.274.1 Elevator Evacuation System. A system, including a vertical series of elevator lobbies and associated elevator lobby doors, an elevator shaft(s), and a machine room(s), that provides protection from fire effects for elevator passengers, people waiting to use elevators, and elevator equipment so that elevators can be used safely for egress. (SAF-MEA)

3.3.274.2 Site-Fabricated Stretch System. A system, fabricated on-site, and intended for acoustical, tackable, or aesthetic purposes, that is comprised of three elements: (1) a frame (constructed of plastic, wood, metal, or other material) used to hold fabric in place, (2) a core material (infill, with the correct properties for the application), and (3) an outside layer, comprised of a textile, fabric, or vinyl, that is stretched taut and held in place by tension or mechanical fasteners via the frame. (SAF-INT)

3.3.275 Technically Infeasible. A change to a building that has little likelihood of being accomplished because the existing structural conditions require the removal or alteration of a load-bearing member that is an essential part of the structural frame, or because other existing physical or site constraints prohibit modification or addition of elements, spaces, or features that are in full and strict compliance with applicable requirements. (SAF-FUN)

3.3.276 Temporary Platform. See 3.3.211.1.

3.3.277 Temporary Structure. See 3.3.272.9.

3.3.278 Tensioned-Membrane Structure. See 3.3.272.10.

3.3.279* Tent. A temporary structure, the covering of which is made of pliable material that achieves its support by mechanical means such as beams, columns, poles, or arches, or by rope or cables, or both. (SAF-IND)

3.3.279.1 Private Party Tent. A tent erected in the yard of a private residence for entertainment, recreation, dining, a reception, or similar function. (SAF-AXM)

3.3.280 Thermal Barrier. See 3.3.31.3.

3.3.281 Tower. An enclosed independent structure or portion of a building with elevated levels for support of equipment or occupied for observation, control, operation, signaling, or similar limited use. (SAF-IND)

3.3.281.1 Air Traffic Control Tower. An enclosed structure or building at airports with elevated levels for support of equipment and occupied for observation, control, operation, and signaling of aircraft in flight and on the ground. (SAF-IND)

3.3.282 Two-Family Dwelling Unit. See 3.3.66.3.

3.3.283 Uncertainty Analysis. See 3.3.17.2.

3.3.284 Underground Structure. See 3.3.272.11.

3.3.285 Verification Method. A procedure or process used to demonstrate or confirm that the proposed design meets the specified criteria. (SAF-FUN)

3.3.286* Vertical Opening. An opening through a floor or roof. (SAF-FIR)

3.3.287 Vomitory. An entrance to a means of egress from an assembly seating area that pierces the seating rows. (SAF-AXM)

3.3.288 Wall.

3.3.288.1 Fire Barrier Wall. A wall, other than a fire wall, that has a fire resistance rating. (SAF-FIR)

3.3.288.2 Proscenium Wall. The wall that separates the stage from the auditorium or house. (SAF-AXM)

3.3.289* Wall or Ceiling Covering. A textile-, paper-, or polymeric-based product designed to be attached to a wall or ceiling surface for decorative or acoustical purposes. (SAF-INT)

3.3.290 Water-Surrounded Structure. See 3.3.272.12.

3.3.291 Weathered-Membrane Material. See 3.3.171.5.

3.3.292 Yard. An open, unoccupied space other than a court, unobstructed from the finished ground level to the sky on the lot on which a building is situated. (SAF-MEA)

Chapter 4 General

4.1* Goals.

4.1.1* Fire. A goal of this *Code* is to provide an environment for the occupants that is reasonably safe from fire by the following means:

- (1)*Protection of occupants not intimate with the initial fire development
- (2) Improvement of the survivability of occupants intimate with the initial fire development

4.1.2* Comparable Emergencies. An additional goal is to provide life safety during emergencies that can be mitigated using methods comparable to those used in case of fire.

4.1.3* Crowd Movement. An additional goal is to provide for reasonably safe emergency crowd movement and, where required, reasonably safe nonemergency crowd movement.

4.2 Objectives.

4.2.1 Occupant Protection. A structure shall be designed, constructed, and maintained to protect occupants who are not intimate with the initial fire development for the time needed to evacuate, relocate, or defend in place.

4.2.2 Structural Integrity. Structural integrity shall be maintained for the time needed to evacuate, relocate, or defend in place occupants who are not intimate with the initial fire development.

4.2.3 Systems Effectiveness. Systems utilized to achieve the goals of Section 4.1 shall be effective in mitigating the hazard or condition for which they are being used, shall be reliable, shall be maintained to the level at which they were designed to operate, and shall remain operational.

TO: Burlington Planning Commission
FROM: Meagan Tuttle, Comprehensive Planner, City Planning
DATE: October 8, 2020
RE: Joint Institutional Parking Management Plan 2020-2025

The Joint Institutional Parking Management Plan (JIPMP) is prepared by CATMA on behalf of the University of Vermont (UVM), Champlain College (CC), and the UVM Medical Center (UVMHC). The Planning Commission received presentations on earlier versions of this report between March and June 2019. Staff has engaged with CATMA over the last 18 months to review and provide feedback.

Initial reports projected significant deficits for parking supply for UVM and CC over the course of the planning period. Subsequent updates demonstrated improving forecasts, but ongoing deficits for UVM. Due to this forecast, as well as ongoing planning and data collection by CATMA and UVM, staff and the Planning Commission recommended that the JIPMP be approved for only one year and that its applicability be limited to projects with a minor impact to parking. This draft also included a number of further recommendations.

In the fall of 2019, CATMA withdrew the previously submitted 2019-2024 JIPMP, and has worked over the last 9 months on a new survey and methodology, additional data collection, and a comprehensive overhaul to the report. At the meeting on October 13, 2020, CATMA will present the 2020-2025 JIPMP.

In reviewing the update, staff evaluated it for not only its conclusions regarding future parking supply relative to demand, but also for the applicability of previous recommendations. Those recommendations have been addressed by the updated report in the following ways. Based on the updated report and the following review, staff has provided a new draft recommendation memo for the Planning Commission's consideration.

Data Collection

- CATMA work with the Institutions to administer a fall 2019 member survey that addresses gaps in the 2018 survey methodology, to create an updated baseline dataset to project demand. The survey should include questions that enable CATMA to more confidently predict primary mode and peak demand windows.
 - *The updated report is based on CATMA's fall 2019 member survey, which included updated questions to predict primary mode. Additionally, a new methodology was used to estimate peak demand times.*
- CATMA should coordinate the administration of this survey with DPW so that on-street parking usage data in neighborhoods surrounding campus can be collected during the same window of time (streets without any parking regulations).
 - *CATMA attempted to coordinate with the City, but the City was unable to complete counts during the same period of time.*
- CATMA should work with UVMHC to develop and implement a process for routinely collecting, storing and reporting parking utilization data, and to develop a methodology for estimating patient and visitor parking demand.
 - *Lot counts were coordinated for the update and for future quarterly monitoring.*
 - *It is staff's impression that this report does not address patient and visitor demand, but rather focuses on managing employee demand & behavior.*

Transportation Trends

- Both CC and UVM saw increases in drive-alone trips by students that live within half a mile of campus from 2016-2018. CATMA should work with the Institutions and the City to identify specific measures to significantly reduce this number over the next five years. Further, additional surveying or data analysis uncovering factors contributing to this trend should be provided (e.g. Changes to routes, frequency, or predictability of campus shuttle or GMT service; lack of safe bike/pedestrian routes; availability of inexpensive or free parking resources in close proximity to campus destinations; etc.)
 - *2019 survey indicated that Drive Alone rates among students within ½ mile of campus declined; however, report notes that statewide, and across all CATMA members surveyed, Drive Alone rates have been increasing.*

Managing Supply

- The report does not discuss any anticipated change in parking supply at the Lakeside Avenue Lot resulting from the construction of the Champlain Parkway. By the 2020 update, this should be analyzed and if a loss of parking supply is anticipated, specific strategies should be offered.
 - *CATMA has indicated that there is not an anticipated loss of supply.*
- If the Institutions pursue additional on-campus housing that is not anticipated in the current JIPMP that will further increase the parking deficit, the Institutions should accommodate that increased demand through additional supply of satellite parking.
 - *While the update does not project a deficit, this recommendation continues to be applicable, as well as employing additional TDM measures.*

Champlain College

- There is some disagreement with the assertion that the projected parking deficit for CC does not warrant specific demand-reduction strategies. However, CC's current commitments to parking management and enforcement are noted. If monitoring demonstrates that demand does exceed supply, then CC should offer specific demand-reduction strategies or additional parking supply.
 - *The updated report does not indicate a deficit. However, monitoring and making changes to supply/TDM measures in the annual reports will still be applicable.*

University of Vermont

- UVM suggests that it could discontinue parking space leases to UVMMC, to eliminate a substantial portion of its future deficit. Given the projected surplus for UVMMC, the Commission strongly recommends that UVM deploy this strategy, which underscores the importance of this joint planning process and the power of the Institutions' collective action to manage parking. If utilized, the spring 2020 update should include an update on impact to UVMMC's supply.
 - *The updated report has refined the scope of UVMMC parking facilities counted in the supply to more accurately reflect the demand in the core campus areas. The projected surplus for UVMMC is, therefore, much lower and this strategy is not included in UVM's approach to increasing supply. Even without this strategy, UVM has identified an additional 400 spaces of parking supply.*
- Further, UVM should consider implementing a policy that either prohibits sophomores from bringing cars to campus, or requires their storage in new/expanded satellite parking areas, and consider changes to staff parking areas to maximize capacity such as through valet or tandem parking.
 - *UVM may consider additional strategies following the Campus Transportation Plan.*
- If annual monitoring for UVM demonstrates that demand exceeds supply, then UVM should employ additional demand-reduction strategies or offer new parking supply to its members.
 - *This is the purpose of the annual reporting to the City on JIPMP performance.*

Burlington Planning Commission

149 Church Street
Burlington, VT 05401
Telephone: (802) 865-7188
(802) 865-7195 (FAX)
(802) 865-7144 (TTY)

www.burlingtonvt.gov/pz

*Andy Montroll, Chair
Bruce Baker, Vice-Chair
Yves Bradley
Alexander Friend
Emily Lee
Harris Roen
Jennifer Wallace-Brodeur*



TO: Burlington Development Review Board
FROM: Burlington Planning Commission
DATE: DATE
RE: 2020-2025 Joint Institutional Parking Management Plan

Draft for Discussion

The Joint Institutional Parking Management Plan (JIPMP) is prepared by CATMA on behalf of the University of Vermont (UVM), Champlain College (CC), and the UVM Medical Center (UVMHC). It is a parking supply and demand planning tool, enabled by the *Burlington Comprehensive Development Ordinance (CDO)*, for the purpose of ensuring that streets in nearby neighborhoods are not unfairly burdened by the parking demands of the Institutions, and to recognize the ability for the Institutions to manage parking in a comprehensive and creative way. This report allows the Institutions to demonstrate parking demand and, when lower than requirements outlined in the *CDO*, receive what amounts to a parking waiver from those standards when permitting projects listed in the report. This report may be approved by the DRB for a period of up to five years, with annual updates reported to the City.

The Planning Commission first received a presentation on the 2019-2024 JIPMP in March 2019, where future parking deficits were projected for both UVM and CC. During the spring and summer 2019, City staff and the Commission provided feedback that informed a number of revisions to this plan. However, based on concerns about applicability of survey data and outstanding planning and data collection efforts by CATMA and the institutions, the 2019-2014 report was withdrawn and substantially revised.

On October 13, CATMA presented a comprehensively revised 2020-2025 JIPMP and addressed the Commission's earlier concerns. Most notably, an updated survey instrument and new survey data, a coordinated process for collecting parking utilization counts, and refinements to methodologies for calculating peak demand have improved the clarity and foundation of the future demand projections. On the supply side, the scope of off-site parking facilities has been narrowed to better reflect the Hill Area for UVMHC, and additional parking supply has been identified by UVM.

With these updates, all institutions project that they will be able to meet future parking demand. However, it is noted that UVM is still in the process of updating both its campus transportation and housing plans. Further, while the report does address strategies for managing UVMHC staff demand, it does not estimate or project any change to the number or behaviors of patients and visitors. These are incredibly important pieces of information to answer key questions about future parking supply and demand.

CATMA also noted that this report is based on pre-COVID-19 conditions. It remains committed to providing an update in spring of 2021, but the Planning Commission recognizes that this may not fully represent a permanent future condition. The 2021 report will provide updated data on any COVID-related impacts to enrollment, employment, parking demand, and telehealth, telework, and remote learning to the extent that it is available. However, it may be several years before the lasting impacts of any changes are fully understood.

As such, annual monitoring and reporting to the City continues to be an important tool for evaluating the actual conditions against the report's projections. If monitoring demonstrates that demand exceeds these projections, or the available supply, CATMA and the institutions should offer specific responses, demand-reduction strategies, or additional parking supply. The Commission requests updates from staff if the annual updates from CATMA indicate that ongoing performance differs significantly from the plan.

Because campus planning efforts remain underway, if the institutions pursue any additional on-campus housing that is not planned for in the 2020-2025 JIPMP that will generate additional parking demand, the institutions should offer new or expanded TDM measures to offset this demand, and if new parking supply is warranted, it should be provided through satellite parking facilities.

Finally, while the updated report indicates that UVM expects it will be able to meet future demand, the Commission continues to recommend that it consider implementing a policy that either prohibits sophomores from bringing cars to campus, or requires their storage in new/expanded satellite parking areas, and consider changes to staff parking areas to maximize capacity (such as through valet or tandem parking).

With these specific points for your consideration, the Planning Commission recommends that the Development Review Board approve the 2020-2025 JIPMP.



2020 - 2025

Joint Institutional Parking Management Plan



Submitted on: October 13, 2020

Prepared for: City of Burlington
Planning Commission

Submitted by: Chittenden Area
Transportation Management
Association

In Cooperation with: Champlain
College, University of Vermont,
and University of Vermont Medical
Center

Table of Contents

Table of Contents.....	i
List of Tables.....	iii
List of Figures.....	iii
1. Introduction	1
Joint Institutional Parking Management Plan	1
About CATMA	2
2. Collective Summary	4
Collective Institutional Results	4
Nearby On-Street Parking	5
Collective Trends.....	6
Collective TDM Strategies/Highlights.....	6
3. Champlain College.....	8
Current Conditions.....	8
Future Conditions	10
Unique Trends & TDM Strategies	12
4. University of Vermont.....	16
Current Conditions.....	16
Future Conditions	19
Unique Trends & TDM Strategies	22
5. University of Vermont Medical Center	28
Current Conditions.....	28
Future Conditions	31
Unique Trends & TDM Strategies	32
6. Conclusion	36
Appendix A: Methodology	37
Lot Counts.....	37
Survey Administration.....	37
Survey Weighting	37
Demand Calculation	38
Margin of Error	38
Appendix B: Parking Demand Estimation Overview	40
Parking Demand Overview	40
Parking Demand Concepts and Terminology.....	40

State of Practice for Institutional Parking Plans in Higher Education.....41

Advantages and Drawbacks of Lot Counts42

Advantages and Drawbacks of User Surveys42

Conclusions.....43

References43

List of Tables

Collective Summary

Table 2-1. Summary of current parking conditions and CDO requirements. ----- 4

Table 2-2. Summary of future (2025) parking conditions, CDO requirements, and requested parking waiver. ----- 5

Table 2-3. Institutional on-street parking demand at peak time. ----- 5

Champlain College

Table 3-1. Current GSF, parking requirements, and parking supply for Champlain College. ----- 8

Table 3-2. List and completion status of all projects mentioned in the 2014-2019 JIPMP. ----- 8

Table 3-3. Current parking demand calculation for Champlain College. ----- 9

Table 3-4. Champlain College survey respondents reporting on-street parking at peak hours. 10

Table 3-5. Future construction plans for Champlain College.----- 11

Table 3-6. Future GSF, parking requirements, and parking supply for Champlain College. ---- 11

Table 3-7. Estimated future parking demand for Champlain College. ----- 11

Table 3-8. Champlain campus shuttle schedule. ----- 14

University of Vermont

Table 4-1. Current GSF, parking requirements, and parking supply available at UVM. ----- 16

Table 4-2. List and completion status of all projects mentioned in the 2014-2019 JIPMP. ----- 16

Table 4-3. List of projects completed in past year that were not included in 2014-2019 JIPMP. 17

Table 4-4. Current demand calculation for UVM. ----- 19

Table 4-5. UVM survey respondents reporting parking on-street at peak time. ----- 19

Table 4-6. Future construction plans for UVM with associated changes of building area and parking requirements.----- 19

Table 4-7. Future GSF, parking requirements, and parking supply for UVM.----- 20

Table 4-8. Estimated future parking demand for UVM ----- 21

Table 4-9. CATS Shuttle Schedule.----- 26

University of Vermont Medical Center

Table 5-1. Current GSF, parking requirements, and parking supply available at UVM Medical Center (Medical Center Campus and 1 South Prospect).----- 29

Table 5-2. Current demand calculation for UVM Medical Center (Medical Center Campus and 1 South Prospect). ----- **Error! Bookmark not defined.**

Table 5-3. Future GSF, parking requirements, and parking supply for UVM Medical Center (Medical Center Campus and 1 South Prospect). ----- 31

Table 5-4. Estimated future parking demand for UVM Medical Center (Medical Center Campus and 1 South Prospect).----- 31

Table 5-5. UVM Medical Center shuttle schedule. ----- 34

Table 5-6. Average number of transit passes sold monthly by UVM Medical Center for selected years (2014 & 2019).----- 35

List of Figures

Champlain College

Figure 3-1. Map of average parking utilization rates by lot on Champlain College campus. ---- 10

Figure 3-2. Mode split (2019) for Champlain employees and off-campus students (by distance of home from campus).----- 12

Figure 3-3. Collective mode split (2019) (including sustainable modes) for Champlain College employees and students. ----- 13

Figure 3-4. Drive alone rate for Champlain College employees and off-campus students (by distance of home from campus) (2001 – 2019).-----	13
Figure 3-5. Vehicle ownership trend for Champlain on-campus students (2003-2019). -----	14
Figure 3-6. UA Trips by Champlain students, faculty, and staff with associated cost (2008 - 2019).-----	15
<u>University of Vermont</u>	
Figure 4-1. Map of average parking utilizations rates by lot on University of Vermont campus. 18	
Figure 4-2. Mode split (2019) for UVM employees and off-campus students (by distance of home from campus). -----	22
Figure 4-3. Collective mode split (2019) (including sustainable modes) for UVM employees and students. -----	22
Figure 4-4. Drive alone rate trend for UVM employees and off-campus students (by distance of home from campus) (2001 – 2019).-----	24
Figure 4-5. Vehicle ownership trend for UVM on-campus students (2003-2019). -----	24
Figure 4-6. UA Trips by UVM students, faculty, and staff with associated cost (2008 -2019).--	25
<u>University of Vermont Medical Center</u>	
Figure 5-1. Map of average parking utilizations rates by lot on UVM Medical Center campus. 30	
Figure 5-2. Mode Split (2019) for UVM Medical Center Employees by Campus.-----	32
Figure 5-3. Collective mode split (2019) (including sustainable modes) for UVM Medical Center employees. -----	33
Figure 5-4. Drive Alone rate trend for UVM Medical Center Employees (2001-2019). -----	33

I. Introduction

The Chittenden Area Transportation Management Association (aka CATMA) has been submitting a 5-year Joint Institutional Parking Management Plan (JIPMP) to the City of Burlington since 2009, along with annual updates under [Article 8 of the Burlington Comprehensive Development Ordinance \(CDO\)](#). This report allows the institutions to demonstrate parking demand and, when lower than parking requirements outlined in Article 8 of the CDO, receive what amounts to a parking waiver from those standards when applying for zoning permits for projects listed in this report. This report 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 Planning and Zoning office. This Plan is submitted by CATMA on behalf of its founding institutional members: Champlain College, University of Vermont, and the University of Vermont Medical Center.

Joint Institutional Parking Management Plan

Purpose

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
- Ensure that city streets in nearby neighborhoods are not unfairly burdened by parking demands from post-secondary education or medical institutions.

In addition to the requirements of Burlington ordinance Article 8 Section 8.1.15 Waivers from Parking Requirements, an Institutional Parking Management Plan shall include the following:

- a) Information specifying the proposed number of students (full-time, part-time, commuter, on campus, off campus, and continued education), faculty and staff (full time and part time), patients and visitors being served by the institution and anticipated over the ensuing five year period;
- b) An analysis of the anticipated parking demand by user group, time of day and / or demand by use;
- c) Information specifying the number and composition of the institution's vehicle fleet, where these vehicles are regularly kept, and designated "service vehicle only" parking;
- d) Programs, policies or incentives used to reduce or manage the demand for parking which may include but are not limited to:
 - policies which restrict and/or prohibit the bringing of vehicles to the institution for various users or groups of users
 - transportation demand management programs to encourage the use of public transit, walking, bicycling, carpooling, vanpooling and telecommuting
 - implementation of a parking permit system to allocate parking throughout the system;
- e) Implementation of a monitoring, compliance, and enforcement system to measure and ensure compliance with the plan.

Content

The 2020-2025 JIPMP contains a collective summary chapter which highlights the current and future parking conditions of each institution, on-street parking trends, collective transportation trends, and collective TDM strategies in place for all of the institutions.

Each institution (Champlain College, University of Vermont (UVM), and University of Vermont Medical Center (UVM Medical Center) have their own chapter which contains the following information:

- Current parking requirements per Burlington's Comprehensive Development Ordinance (CDO)
- Updates on construction projects reported in the previous [2014-2019 JIPMP](#)
- Current parking demand estimates and on-street parking
- Planned construction projects for the next five years
- Future parking demand estimates
- Institutional mode trends reported from the 2019 CATMA Employee and Student Transportation Surveys
- Update on status of institution-specific TDM strategies

The data provided in the 2020-2025 JIPMP has been streamlined from previous versions to only include the most relevant information.

A new Supplement document was created for reasons of space and is not essential for inclusion in the full text of this report but might benefit the reader for further detail.

About CATMA

CATMA was established in April 1992 by the three “Hill” institutions in Burlington: Champlain College, University of Vermont, and the University of Vermont Medical Center. In January 2015, CATMA expanded to a regional TMA serving Chittenden County with transportation demand management services, incentives, and programs. Its mission is to work with members and community partners to plan and manage safe, convenient, and economical transportation and parking options in ways that better coordinate land use and reduce environmental impacts. In addition to collective parking management among the Hill institutions, they have also invested and committed to TDM strategies for over 27 years. An overview and information on CATMA can be found at catmavt.org.

Transportation Management Associations (TMA)

TMA's 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)

Transportation Demand Management is defined as, “ the acts of creating a most efficient multimodal transportation system that moves people with the goal of reducing congestion, improving air quality, and stimulating economic activity.”¹ It is the use of planning, programs, policy,

¹ Association for Commuter Transportation. 2020. “Benefits of TDM.” <https://www.actweb.org/i4a/pages/index.cfm?pageID=3473>

marketing, communications, incentives, pricing and technology to shift travel mode, routes used, departure times, number of trips and location and design work space or public attractions.”

2. Collective Summary

Collective Institutional Results

The findings below provide an overview of the parking supply and demand data collection and analysis effort conducted by CATMA with guidance from the UVM Transportation Research Center. Parking demand is calculated by determining the peak proportion of automobile users that park on campus using data from CATMA's 2019 Employee and Student Transportation Surveys. For the purpose of this report, demand is defined as the number of automobile users who park on campus at the peak time. A more detailed explanation of the demand calculation can be found in [Appendix A](#). Detailed findings can be found in the individual institutional sections.

Each institution's employment and enrollment numbers refer to employees working on the "Hill" and students who attend classes within the City of Burlington.

Table 2-1 is a summary of all information required to apply for a parking waiver per the Burlington Comprehensive Development Ordinances, which will be referred to as CDO throughout this document. The CDO outlines both the minimum required number and maximum allowed number of parking spaces any development can have based on size and use, but because the institutions are uniquely positioned to manage their parking demands in collective and creative ways, they can request a parking waiver from the City of Burlington if they demonstrate their ability to manage parking demand. **The waiver requested will be the minimum parking required per CDO minus the institution's parking supply.**

As seen in Table 2-1, there is often a discrepancy between the maximum utilization recorded and the estimated demand. The discrepancy between utilization and demand simply means that all people who may want to park on campus at a given time did not park on campus when counts were conducted. These individuals may find alternative locations (such as the street or a non-campus parking lot) to park their vehicle or may utilize other transportation modes during peak time. For a more in-depth explanation of this, please see [Appendix B](#).

It should be noted that all information in this report reflects data predating the COVID-19 crisis. All Hill institutions foresee changes in future policies and trends, which may reduce users and parking demand. Champlain College and UVM enrollment numbers may change. Over the past four months, the Hill institutions have expanded telework, online learning, and telehealth options. It is also likely for at least the next year, large events typically hosted on campus by the institutions will not be possible due to physical distancing guidelines which will reduce demand for visitor parking. The impacts of these conditions will be addressed in 2021 Annual JIPMP Update.

Table 2-1. Summary of current parking conditions and CDO requirements.

	Champlain College	UVM	UVM Medical Center
Current Conditions			
Current Potential Users¹	2,967	17,468	6,197
Current Demand²	612	4,754	2,330
Current Maximum Parking Utilization³	599	3,958	2,408
Minimum Parking Required by CDO⁴	1,677	11,159	3,284

Current Parking Supply	710	4,939	2,509
-------------------------------	-----	-------	-------

¹Current users includes students and employees. Due to insufficient mode data for patients/visitors, demand created by them is added to the demand calculation based on institutional estimates.

²Determined using CATMA 2019 Employee and Student Transportation Survey.

³This is the maximum count recorded between 10 AM and 2 PM on Oct. 22-24, 2019 or Feb. 18-20, 2020.

⁴Requirements based on gross square footage (GSF) calculations found in Burlington CDO.

Table 2-2. Summary of future (2025) parking conditions, CDO requirements, and requested parking waiver.

	Champlain College	UVM	UVM Medical Center
Future Conditions			
Future Potential Users¹	2,910	17,931	6,197
Future Demand²	591	4,867	2,330
Minimum Parking Required by CDO³	1,754	11,313	3,284
Net Impact of Planned Projects (2020-2025)	-	128	-
Future Parking Supply	660	5,045	2,509
Waiver Request⁴	1,094	6,268	775

¹Future users includes students, employees in Burlington and visitor/patient estimates.

² Determined using CATMA 2019 Employee and Student Transportation Survey.

³Requirements based on gross square footage (GSF) calculations found in Burlington CDO.

⁴The waiver request is equal to the minimum parking required by the CDO minus the future parking supply.

On-Street Parking Adjacent to Institutions

For the first time in CATMA's history, the 2019 Employee and Student Transportation Surveys attempted to understand who from the three institutions parks on city streets adjacent to the campuses. There are 283 institutional affiliates who may park on-street during peak time (Table 2-3). This estimation is most likely higher than actual use for two reasons: 1) off-campus students may have said they park off-campus but their car is parked by their residences and 2) it is unlikely every single day each of these people are parking on the street due to nearby street parking availability and restrictions.

Table 2-3. Institutional on-street parking demand at peak time¹.

	Champlain College	UVM	UVM Medical Center	All
Students				
<i>On-Campus</i>	6	13	N/A	19
<i>Off-Campus</i>	12	99	N/A	111
Employees	22	80	51	153
Total	40	192	51	283

¹Peak time for each institution can be found in Appendix A, Table A-2.

Collective Trends

The 2019 CATMA Employee Transportation Survey saw an increase in drive alone rates not only for employees of the three Hill institutions, but for all of CATMA membership. This collective increase is most likely due to a combination of factors such as lower gas prices and more affordable housing outside of Burlington. It is also consistent with a gradual increase in single-occupancy vehicle commuting that has been documented at the state level². The 2019 CATMA Student Transportation Survey showed that for students living within a half mile of their respective campus, drive alone rates decreased. Because housing distance remained constant, existing TDM strategies could continue to decrease the drive alone rate amongst this group.

Collective TDM Strategies/Highlights

CATMA offers its members a comprehensive suite of TDM incentives, programs and services that are essential to support and encourage sustainable mobility options rather than driving alone.

A comprehensive suite of TDM programs is essential to provide a commuter with connectivity options. The following is a list of TDM programs available to CATMA members:

- Transit Discounts and Subsidies
 - Unlimited Access: Applicable for UVM and Champlain College
 - Discount Passes : Applicable for UVM Medical Center
 - Employee Transit Pass Program: Applicable for CATMA members
CATMA's Unlimited Access Program is GMT's second largest customer.
- [CATMA Bike/Walk Rewards Program](#)
- [Greenride Bikeshare System Access/Member Discounts](#)
- [Carpool/Vanpool Services](#)
- [CarShare Vermont System Access/Campus Discounts](#)
- [Guaranteed Ride Home](#)
- Education, Outreach and Awareness

The following demonstrates the collective efforts of the Hill institutions to share parking and TDM resources. In addition, each institution has individual TDM and Parking initiatives in place which are described in their respective chapters.

- Off-Site Parking and Shuttles: CATMA, on behalf of its members, contracts with Ride Your Bike, LLC for 403 spaces at 115 Lakeside Avenue lot. Of these, UVM Medical Center leases 252 spaces, Champlain College leases 150 spaces although Champlain will reduce to 100 effective 9/1/20. Each member operates their own shuttles in order to provide direct and efficient service and meet employees work schedules.
- Campus Shuttles: Each institution has its own self-operated or contracted shuttle service. These shuttles are used on/around campus and also between campus and off-site lots. Employees of all Hill institutions can ride any of the shuttles, if needed. However, for UVM Medical Center shuttles, there must be capacity for its employees before allowing other riders to board. UVM allows Ruggles House constituents to ride the CATS shuttle as a good neighbor gesture.
- Shared Campus Parking and Shuttles: UVM Medical Center leases parking from UVM (South Lot of Jeffords).

² Vermont Agency of Transportation. 2019. "The Vermont Transportation Energy Profile."
https://vtrans.vermont.gov/sites/aot/files/planning/documents/planning/The%20Vermont%20Transportation%20Energy%20Profile_2019_Final.pdf

- Green Mountain Bike/Walkway: There are numerous pedestrian and bikeways throughout the UVM Medical Center and UVM medical and academic campuses which their constituents, visitors, neighbors and general public utilize. The Green Mountain Bike/Walkway represents a new active transportation project that was constructed in collaboration with both institutions and has created a thoroughfare through UVM's main campus, across a portion of UVM Medical Center's campus to Colchester Avenue, giving users a safe and clear north/south route through the campuses.
- Real-Time Shuttle App:
 - In Winter 2019-2020, Champlain College joined the TransLoc Real-Time Shuttle App contracted by UVM.
 - UVM Medical Center contracts with Premier Bus Company for its employee intra-campus shuttles effective 1/1/2020. A real-time shuttle app locator is available for employees, and this shuttle info is on display screens in key shuttle pick up and drop off locations.

3. Champlain College

Founded in 1878, Champlain College is a small, not-for-profit, private college overlooking Lake Champlain and Burlington with additional campuses in Montreal, Canada and Dublin, Ireland. Their career driven approach to higher education prepares students for their professional life from their very first semester.

For the fifth year in a row, Champlain was named a “Most Innovative School” in the North by *U.S. News & World Reports* “America’s Best Colleges” 2020 regional rankings and listed among The Princeton Review’s “The Best 385 Colleges” in 2020. Champlain is also featured in the 2020 Fiske Guide to Colleges as one of the “best and most interesting schools” in the United States, Canada and Great Britain as well as recognized as a 2020 College of Distinction for its “Engagement, Teaching, Community and Outcomes”.

Current Conditions

Users (Students, Employees, & Visitors)

Champlain College is a small college with 4,419 current enrollments. Only 2,087 students are based on the Burlington campus, with over half of Champlain’s total enrollment based abroad or online. Of the Burlington students there are 2,078 undergraduate students and 9 graduate students. Champlain employs 1,194 staff members, but only 880 are based on the Burlington campus. Champlain has 377 full-time employees, 415 part-time employees, and 88 contracted employees.

GSF Requirements and Parking Supply

Champlain College is in the Shared Use Parking District and the Downtown Parking District. Champlain has a total of 47 buildings that influence the parking inventory. The gross square footage (GSF), associated required parking, and the current parking supply are included in Table 3-1 with further details in Supplement. Both Champlain College’s on-site and offsite parking supply contribute to the parking supply discussed in this JIPMP. Champlain’s current parking supply of 710 spaces is 967 spaces below the minimum parking required per Burlington’s CDO and 1,387 below the maximum.

Table 3-1. Current GSF, parking requirements, and parking supply for Champlain College.

	Champlain College
GSF	838,191
Minimum CDO Parking Requirement	1,677
Current Parking Supply	710
<i>On-Site</i>	560
<i>Leased Offsite Parking Supply</i>	150

Table 3-2. List and completion status of all projects mentioned in the 2014-2019 JIPMP.

Building Project	Completion Status
Butler Hall (ResTri)	Completed
Valcour Hall (Res-Tri)	
194 St Paul St	

CCM Project	
Miller Information Commons Addition	Carried forward to 2020-2025 JIPMP
Foster Hall Addition	
Information Technology & Sciences Building	
Ethan Allen Center	No longer planned
Summit & Maple Res Hall	
West Hall/Perry Lawn Res Hall	
Career Center/Durick Hall Addition	
IDX Student Life Addition	

Demand

Using data collected from the 2019 CATMA Transportation Surveys, Champlain College's current estimated peak parking demand is 612 spaces (margin of error ± 60 spaces) which is 98 spaces under their parking supply (see Table 3-3). During peak time, it is estimated 40 on-street parking spaces are occupied by Champlain College affiliates (see Table 3-4).

To complement the peak demand estimate from the 2019 CATMA Transportation Survey, Champlain College conducted parking lot utilization counts at 10 AM, 12PM, and 2 PM one week in October 2019 (12PM counts were not conducted in October) and a week in February 2020. Champlain's highest parking utilization was on Tuesday, October 22, 2019 at 2:00 PM with 599 occupied spaces, equating to an 84% utilization rate. This is very close to the peak demand (85% utilization) estimated from the survey data. Champlain College averaged a 73% utilization rate (517 spaces) for the 13 counts conducted. Figure 3-1 shows the average utilization by lot.

Table 3-3. Current parking demand calculation for Champlain College.

Champlain College			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces
Employees	880	40%	352
On-Campus Students	1479	14%	208
Off-Campus Students	608	5%	31
Visitors			15
Fleet ²			6
Total Peak Parking Demand³			612
Total Parking Supply			710
Net Spaces			98

¹Peak parking demand is calculated from data collected in the 2019 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.

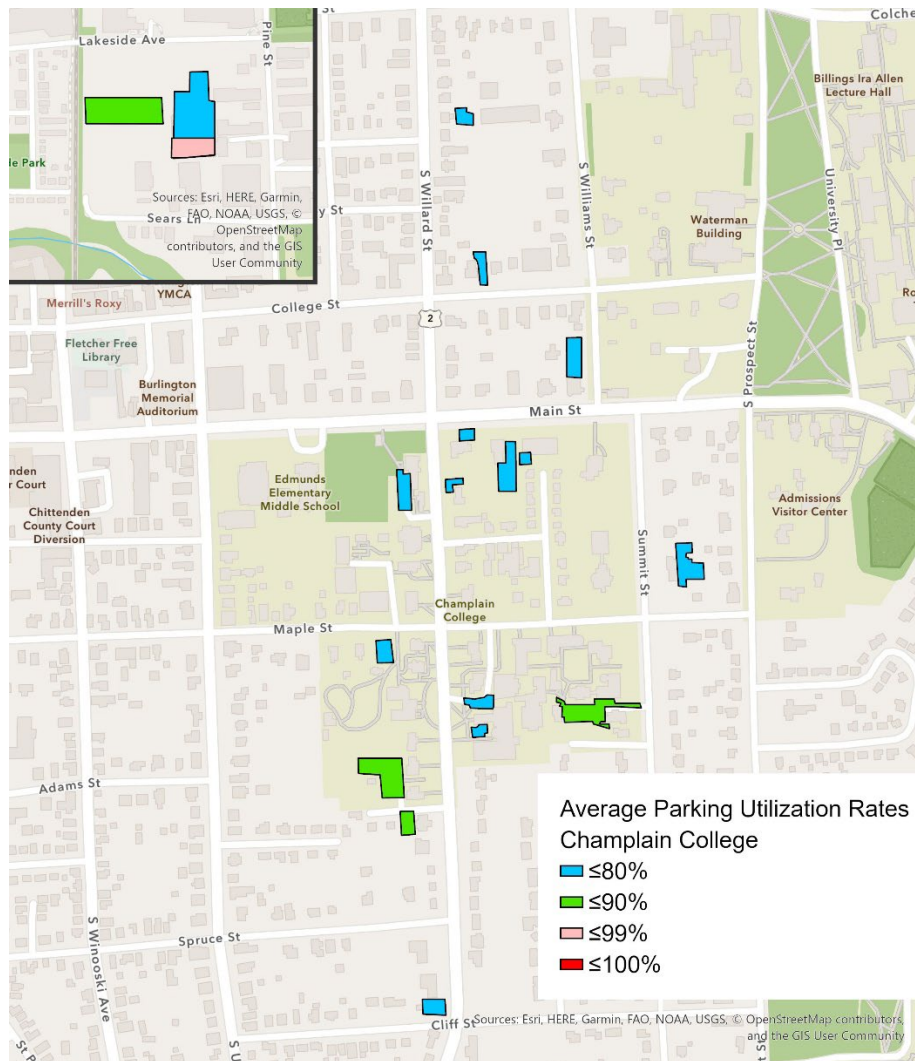
²Champlain has 16 fleet vehicles but estimates only 40% would attempt to park on campus at peak time. However, this estimation is not included as a peak parking demand percentage because it was not calculated from 2019 CATMA Employee Transportation Survey data.

³Total peak parking demand has a margin of error of ± 60 spaces.

Table 3-4. Champlain College survey respondents reporting on-street parking at peak hours.

	Within 2 Blocks of Campus	More Than 2 Blocks of Campus	Total
On-Campus Students	4	2	6
Off-Campus Students	6	6	12
Employees			22
Total			40

Figure 3-1. Map of average parking utilization rates by lot on Champlain College campus.



Future Conditions

Users (Students, Employees, & Visitors)

Champlain College expects a slight increase in enrollment and slight decrease in employment in the coming years. Total enrollment will increase to 4,430, but enrollment on the Burlington

campus will decrease slightly to 2,080 due to a lack of in-person graduate students. Full-time employment will remain at 380, part-time employment will decrease to 350 employees, and contracted employees will increase to 100.

GSF Requirements and Parking Supply

Champlain intends to complete the following projects by 2025 (Table 3-5). These projects are all academic buildings and thus no new residential beds will be added.

Table 3-5. Future construction plans for Champlain College.

Project Name	Change in Building Area	Associated Change in Parking Requirements	Est. Completion
MIC Addition	8,000	0	2025
Foster Hall Addition	3,500	0	
New ITS Building	27,000	0	

Champlain's GSF is expected to increase because of the new construction (Table 3-5). The maximum parking allowed would be 2,192 spaces. Champlain's inventory of 660 spaces is 1,094 spaces below the CDO required minimum and 1,532 below the maximum.

Table 3-6. Future GSF, parking requirements, and parking supply for Champlain College.

	Champlain College
GSF	876,691
Future CDO Required Parking	1,754
Future Parking Supply	660
<i>On-Site</i>	560
<i>Leased Offsite Parking Supply</i>	100

Estimated Demand

Using the same demand generator calculated by the 2019 CATMA Transportation Surveys for Champlain College, it is expected overall parking demand will decrease by 2025 (see Table 3-7). This decrease is mostly due to reduction of employees from 880 in 2020 to a projected 830 in 2025. Champlain, in collaboration with the City of Burlington, CATMA, Gotcha Bike, and others is bringing 200 electric-assist bikes to the regional bikeshare program and adding two bikeshare hubs to Champlain's campus (totaling seven campus bikeshare hubs which are conveniently accessible to all members regardless of campus affiliation). E-bike use has been shown to decrease drive alone rates year round by 10%³.

Table 3-7. Estimated future parking demand for Champlain College.

Champlain College			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces

³ McQueen, Michael, John MacArthur, and Christopher Cherry, PhD. 2019. "The E-Bike Potential: Estimating the Effect of E-bikes on Person Miles Travelled and Greenhouse Gas Emissions." Portland State University and University of Tennessee, Knoxville. https://wsd-pfb-sparkinfluence.s3.amazonaws.com/uploads/2019/05/E-bike-Potential-Paper-05_15_19-Final.pdf

Employees	830	40%	332
On-Campus Students	1474	14%	207
Off-Campus Students	606	5%	31
Visitors			15
Fleet ²			6
Total Peak Parking Demand³			591
Total Parking Supply			660
Estimated TDM Effects⁴			-25
Net Spaces			94

¹Peak parking demand is calculated from data collected in the 2019 CATAMA 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 Champlain has 16 fleet vehicles but estimates only 40% would attempt to park on campus at peak time. However, this estimation is not included as a peak parking demand percentage because it was not calculated from 2019 CATMA Employee Transportation Survey data.

³ Total peak parking demand has a margin of error of ±58 spaces.

⁴This value is only representative of new TDM strategies that have not yet affected current demand. The explanation of how this value was determined can be found in the narrative above.

Unique Trends & TDM Strategies

Trends

Employees and students at Champlain College are both more likely to drive alone than carpool as their primary mode to campus. Just over 40% of employees drive alone as their primary commute, though 68% report driving alone to campus sometimes. All user groups at Champlain have low use of carpool as a primary mode, though students are much more likely than employees to sometimes carpool to campus. Students within a half-mile of campus report a very low drive alone rate of only 4% (Figure 3-2). There are 39% of Champlain students and employees who choose an active mode of transportation as their primary mode and 24% who choose the public bus or campus shuttle instead of relying on an automobile (Figure 3-3).

Figure 3-2. Mode split (2019) for Champlain employees and off-campus students (by distance of home from campus).

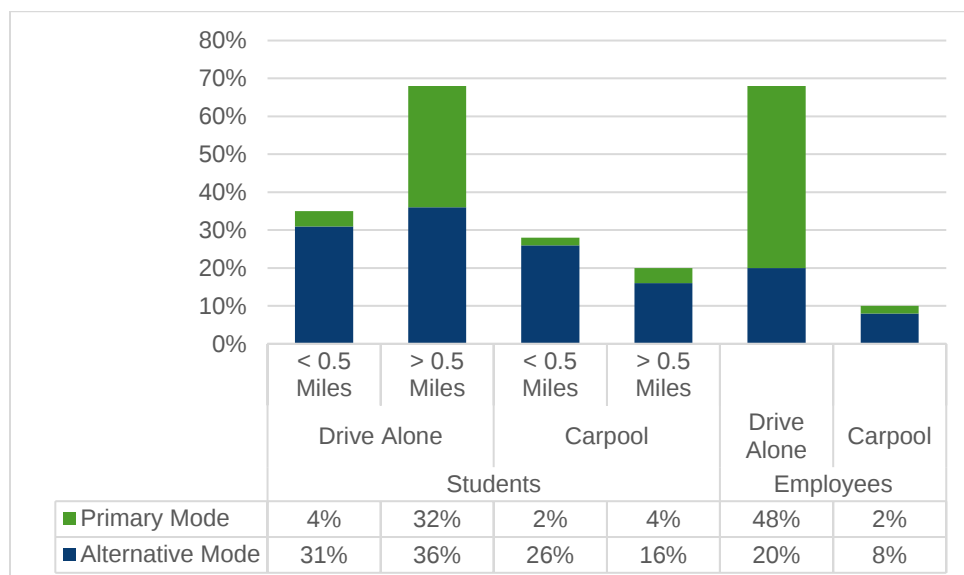
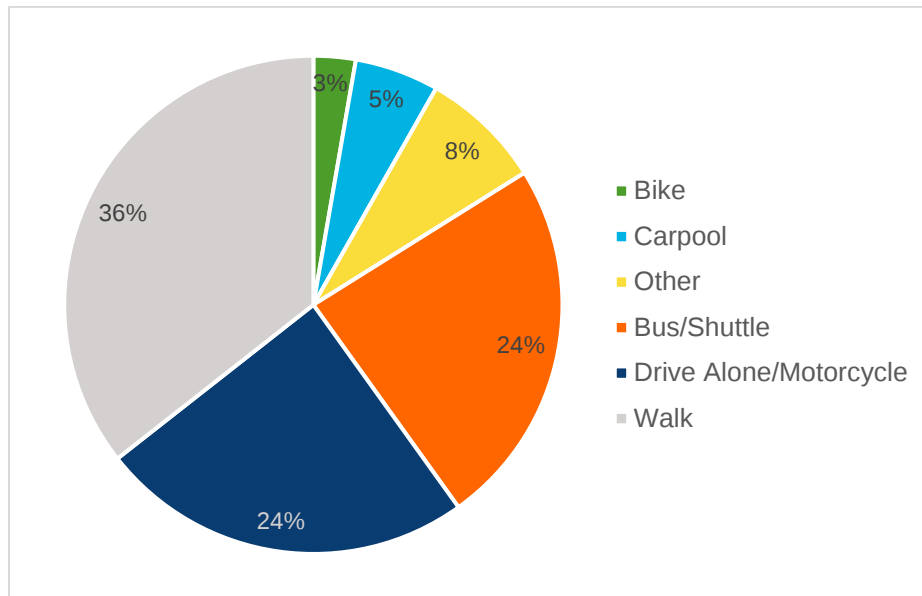


Figure 3-3. Collective mode split (2019) (including sustainable modes) for Champlain College employees and students.



Over time, students, regardless of their distance from campus, have relied on automobiles less and less, with 2019 seeing the lowest drive alone rate yet. The drive alone rate for employees raised slightly from the 2016 CATMA survey, but it has remained relatively stagnant for the past decade (Figure 3-4). Similarly to off-campus students, automobile reliance for on-campus students (as measured by vehicle ownership) has continued to decline, reaching an all-time low in 2019 (Figure 3-5). This new low can be attributed to Champlain's Fall 2018 policy prohibiting first years from bringing a car to campus (though some exceptions are allowed).

Figure 3-4. Drive alone rate for Champlain College employees and off-campus students (by distance of home from campus) (2001 – 2019).

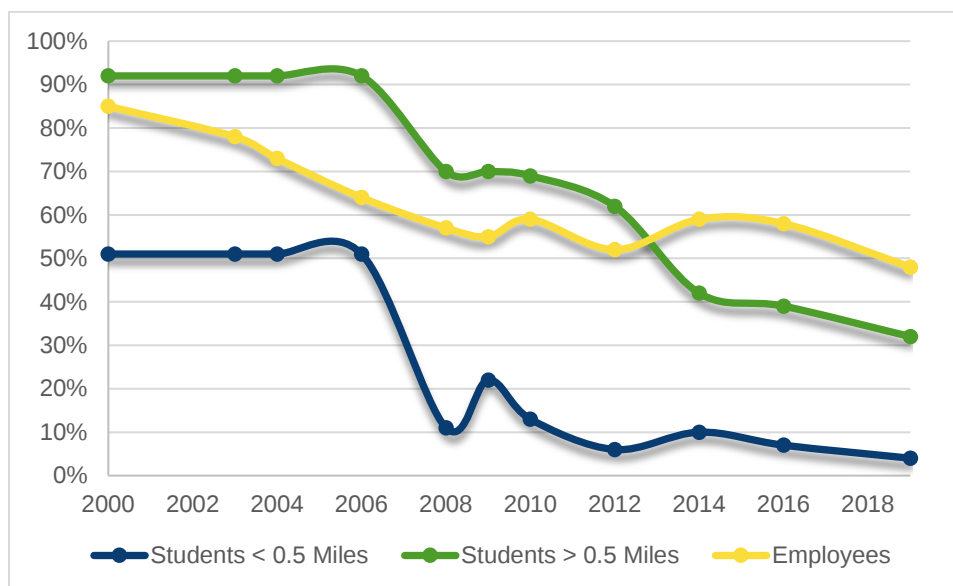
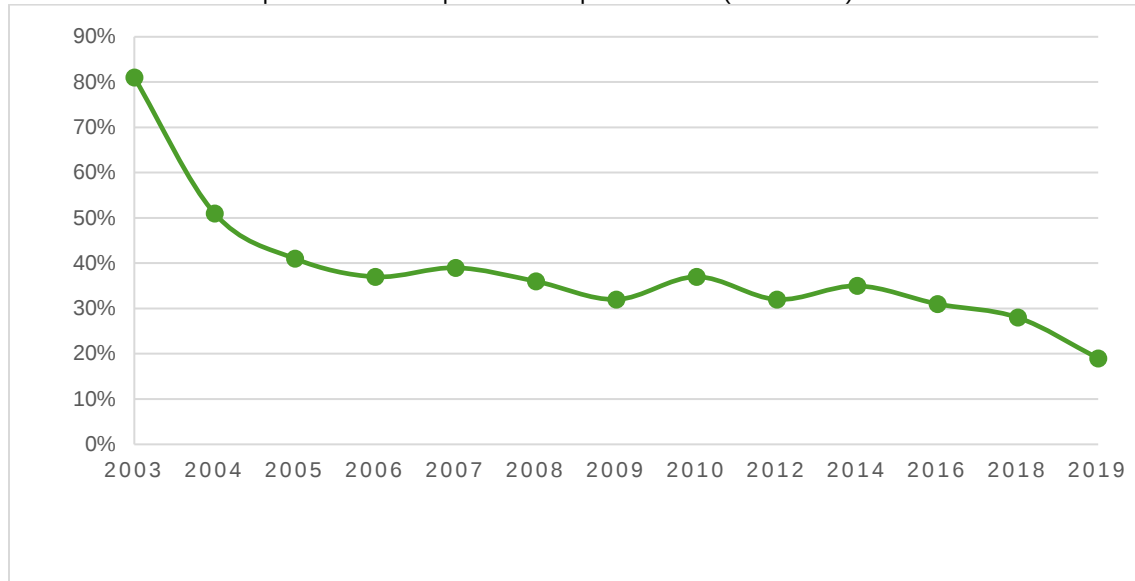


Figure 3-5. Vehicle ownership trend for Champlain on-campus students (2003-2019).



TDM Strategies

Permits & Other Regulated Uses

All vehicles parked on Champlain's campus must be permitted. Commuter students and employees have access to a free Zone 1 permit (located off-site at Champlain's 175 Lakeside Avenue campus). Employees can receive one permit per semester which can have two associated vehicles. Residential students can purchase a permit to park in the off-site lot at 115 Lakeside Avenue. All other permits allow users to park at the main Burlington campus have an associated fee ranging from \$90 - \$225 per semester. As of December 2019, Champlain College has issued 858 active permits.

Champlain Transportation's Parking Coordinator conducts daily counts and monitors lots. Individuals found in violation of parking rules will be given a citation with fines ranging from \$10 - \$100. Certain citations have a higher fee associated with them if it is not a user's first offense. City streets surrounding Champlain are also monitored by college staff as per an agreement made between Champlain and the City of Burlington. Cars parked on street without proper permitting and who are suspected of being Champlain College affiliates are issued a citation from the college. Tickets are issued via a commonly used ticketing management company, IPARQ.

On-Campus Shuttles

The Champlain campus shuttle system runs between the CCM Center on Main Campus, 194 Saint Paul Street Apartments, the Miller Center at 175 Lakeside Avenue, and the 115 Lakeside Avenue resident student parking lot. The shuttle system is operated in conjunction with Mountain Transit.

Table 3-8. Champlain campus shuttle schedule.

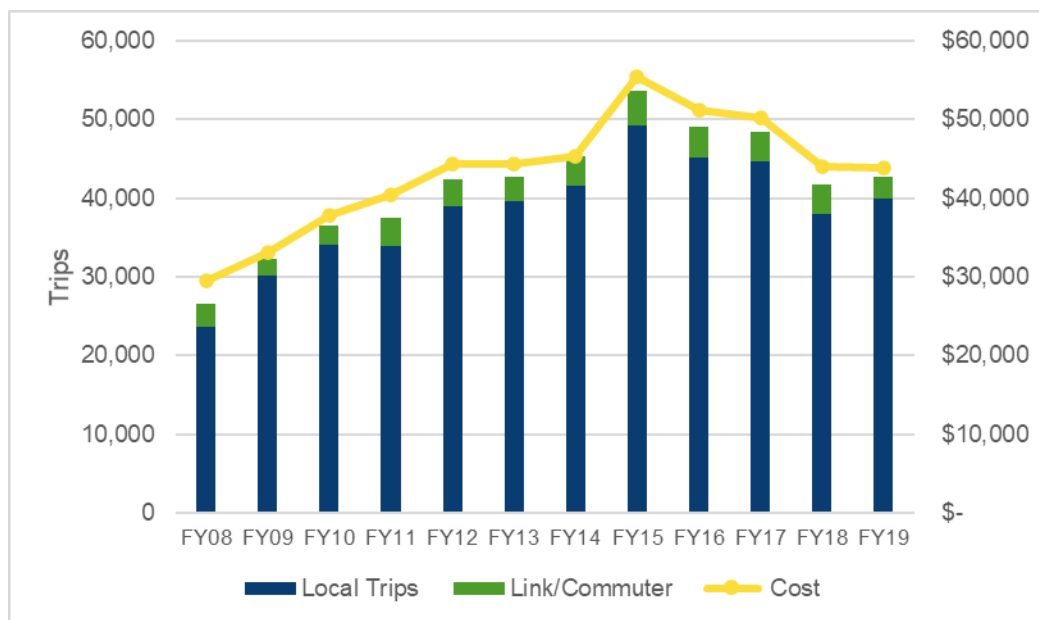
Routes	Days	Times	Runs Every (Minutes)	Buses Running
--------	------	-------	----------------------	---------------

Weekday	Mon - Fri	6:30am - 11pm	8-10	2
Weekend	Sat - Sun	10am - 9pm	15-17	1

Transit

In 2006, Champlain College joined the CATMA Unlimited Access Program, which provides unlimited free access on existing GMT public transit services to staff, faculty, and students. Champlain receives a 28% discount per ride from GMT by being a part of this program. Ridership and associated costs are displayed in Figure 3-6.

Figure 3-6. UA Trips by Champlain students, faculty, and staff with associated cost (2008 -2019).



Bicycle Infrastructure & Parking

Champlain College is nationally recognized as a Silver-level Bicycle Friendly Campus as of 2015. Champlain employees and students have access to bike racks throughout campus as well as covered bike storage in the CCM building. There are accessible showers on campus for those who bike. Bicycle pumps and other tools are located throughout campus. Champlain affiliates are eligible for a 50% discount on annual Greenride Bikeshare Membership through CATMA.

Car Sharing

Champlain College has a partnership with CarShare Vermont via CATMA's Campus Programs Contract. Champlain contributes between \$7,500 and \$10,000 annually to CarShare Vermont so that students and employees without long-term parking permits can receive a subsidized membership to CarShare services. The Campus Programs Contract accounts for about 30% of CarShare Vermont's total membership. There are two pods on Champlain's campus: 194 St. Paul Street and West Hall Lot.

NOTE: The Supplement provides more detailed data referred to in this report.

4. University of Vermont

Since 1791 the University of Vermont has worked to move humankind forward. Today, UVM is a Public Ivy and top research university of a perfect size, large enough to offer a breadth of ideas, resources and opportunities, yet small enough to enable close faculty-student mentorship across all levels of study, from bachelor's to M.D. programs. Students' educational experience and activities are enriched by its location- from the energy and innovation of Burlington to the forests, farms and independent spirit of Vermont. UVM provides students endless ways to explore the world, challenge ideas and dig in on the most pressing issues of our time.

Current Conditions

Users (Students, Employees, & Visitors)

The University of Vermont is the largest academic institution in the state with 13,548 total enrollments. In Fall 2019, UVM had 10,700 undergraduate students, 1,627 graduate/certificate students, 478 medical students, and 743 non-degree continuing education students. Employment at UVM currently in Fall 2019 was 4,139 faculty and staff. There were 3,570 full-time employees and 569 part-time employees. Excluding non-Burlington employees, UVM's total current employment is 3,920.

GSF Requirements and Parking Supply

The University of Vermont is in the Shared Use Parking District. UVM has a total of 232 buildings and accessory buildings. Sites UVM ground-leases (and their associated parking spaces), such as Redstone Lofts, Redstone Student Apartments, and Centennial Court Faculty/Staff Apartments are not included in this total. The gross square footage (GSF), associated required parking, and the current parking supply are included in Table 4-1. For the purposes of the JIPMP, all UVM's parking (on and off-site), except for parking it leases to the UVM Medical Center, count towards its current parking supply. UVM's current parking supply of 4,939 spaces is 6,220 below the CDO minimum and 9,009 below the maximum.

Table 4-1. Current GSF, parking requirements, and parking supply available at UVM.

	UVM
GSF	5,579,076
Minimum Parking Requirement	11,159
Current Available Parking Supply¹	4,939
<i>On-Site</i>	5,351
<i>Off-Site²</i>	200
<i>Leased Parking</i>	-612

¹On-site, off-site, and leased parking are used to calculate the current available parking supply.

²Off-Site parking is located at 351 Pine Street and is used for long term parking.

Table 4-2. List and completion status of all projects mentioned in the 2014-2019 JIPMP.

Building Project	Completion Status
STEM	Yes
Kalkin Addition (Ifshin Hall)	

61 Summit (Alumni House & Silver Pavilion)	Carried forward to 2020-2025 JIPMP
UVM Rescue Building	
Billings	
Housing Master Plan - Phase 1	
Virtue Field Outdoor Seating - Phases 1 & 2	
Virtue Field Outdoor Seating - Phase 3	
Multi-Purpose Event Center	
Athletic Recreation Center	

Table 4-3. List of projects completed in past year that were not included in 2014-2019 JIPMP.

Building Project	Associated Change in Parking
Cohen Hall	10
Library Addition	1
439 College Street	19
Pine Street Parking Lot	200

Demand

Using the Fall 2019 CATMA Employee and Student Surveys, along with the information above, it was determined the current parking demand for the University of Vermont is 4754, putting it at a 185-space surplus (margin of error ± 210 spaces)(Table 4-4). This estimated demand is higher than the recorded maximum parking utilization rate (observed on Thursday, February 20, 2020 at 12:00 PM) which was 83%. UVM averaged an 80% utilization rate for the counts conducted. Figure 4-1 shows the average utilization by lot. 80 employees and 112 students indicated they prefer to park on the street during peak time when driving to campus (Table 4-5).

Figure 4-1. Map of average parking utilizations rates by lot on University of Vermont campus.

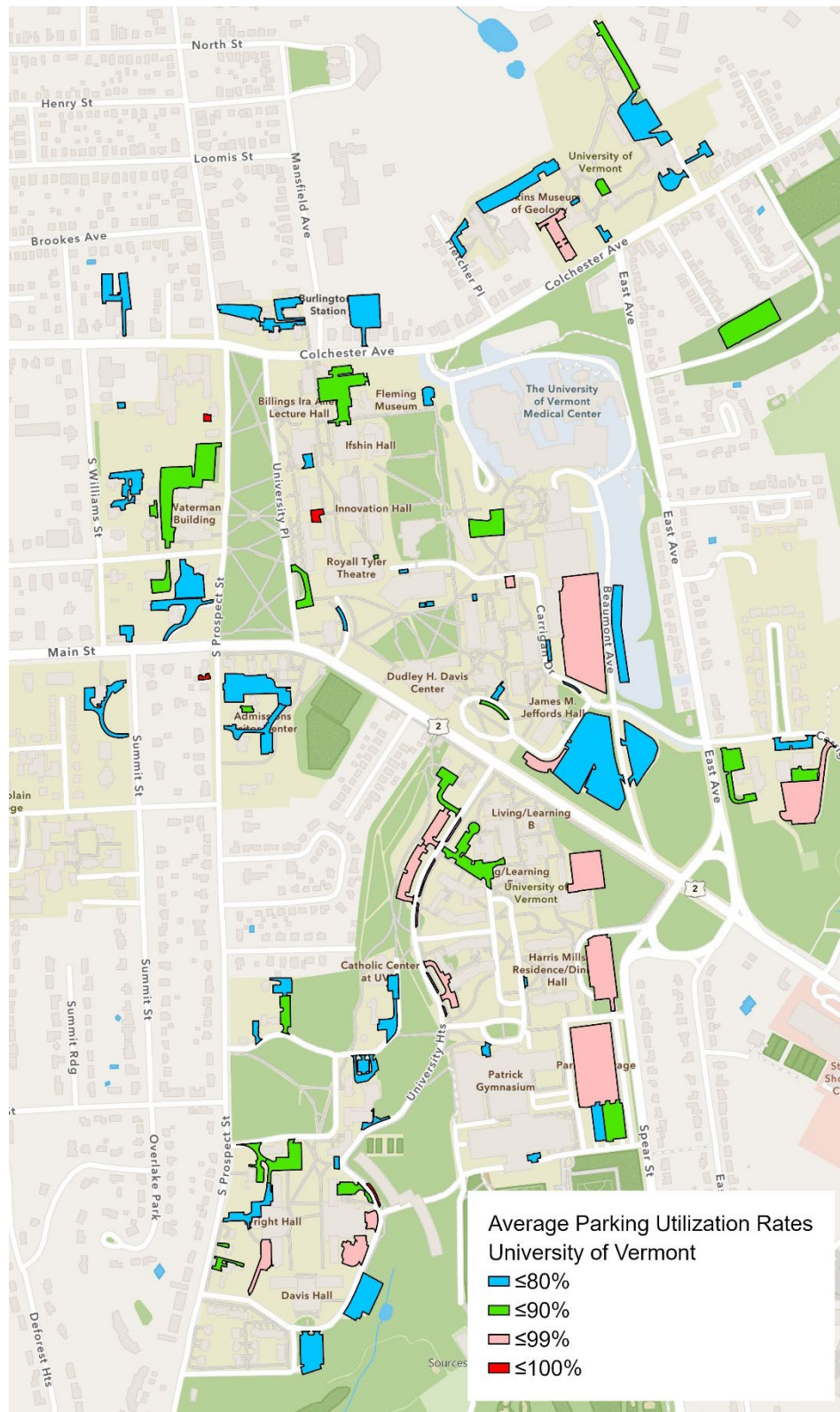


Table 4-4. Current demand calculation for UVM.

University of Vermont			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces
Employees ²	3,920	60.6%	2,376
On-Campus Students	5,366	13.3%	714
Off-Campus Students	8,182	15.4%	1,261
Visitors			185
Fleet			218
Total Peak Parking Demand³			4,754
Total Parking Supply			4,939
Net Spaces			185

¹Peak parking demand is calculated from data collected in the 2019 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.

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

³Total peak parking demand has a margin of error of ±210 spaces.

Table 4-5. UVM survey respondents reporting parking on-street at peak time.

	Within 2 Blocks of Campus	More Than 2 Blocks of Campus	Total
On-Campus Students	6	7	13
Off-Campus Students	59	40	99
Employees			80
Total			192

Future Conditions

Users (Employees, Patients, & Visitors)

UVM expects a slight increase in both employment and enrollment by 2025. Projected enrollment is 13,850, a 302-student increase from 2020. This increase is expected to occur equally among all student groups. Projected employment is 4,081 for UVM's Burlington sites.

GSF Requirements and Parking Supply

UVM intends to complete the following projects by 2025 (Table 4-6). These projects will grow the university by over 35,000 GSF and 128 parking spaces.

Table 4-6. Future construction plans for UVM with associated changes of building area and parking requirements.

Project Name	Change in Building Area	Associated Change in Parking	Est. Completion
Music Building Recital Hall Addition	4,544	3	2022

New Research Facility for COM ¹	75,000	-121	
Jeffords East Lower Lot	0	67	
University Road (East Ave to Compound)	0	15	
University Heights Road (Southwick)	0	7	
Pomeroy Barn & 172 South Prospect	-6,067	15	
Virtue Field Phase 2	5,000	0	
ADA Code Compliance	0	-20	
Blundell	0	5	
Fleming Museum	0	20	2024
Outing Club Relocation	13,250	5	
Southwick Hall	0	3	
Tarrant (Multi-Purpose) Event Center	119,099	0	
Interfaith Center Parking Lot	0	40	2025
Torrey Hall Addition	2,860	0	
Miscellaneous Parking Adjustments ²		25	
Bioresearch Complex	0	200	
Future Structured Parking	0	TBD	
Coolidge Hall	-30,510	-10	
Colchester Ave/Dewey	-82,622	-83	Unknown
Back 5 & Cottages (Trinity Campus)	-64,907	-243	
Colchester Research Facility ³	0	200	
Total	35,647	128	

¹New Research Facility for COM has a separate Parking Plan which has been approved by the DRB in 2019. It is included in this project list to provide an accurate list of expected changes to UVM's parking supply.

²Wherever possible UVM will attempt to reallocate space to create more parking. It is estimated this will result in ~25 spaces over 5-years based on previous experience.

³This 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.

The future parking inventory for UVM is provided in Table 4-7. UVM plans to continue leasing a portion of its parking supply to other institutions for revenue. UVM's future parking supply of 5,045 is 6,268 spaces below the CDO minimum and 8,705 spaces below the maximum.

Table 4-7. Future GSF, parking requirements, and parking supply for UVM.

	Main Campus
GSF	5,656,447
Minimum Parking Requirement	11,313

Future Available Parking Supply¹	5,045
<i>On-Site</i>	5,257
<i>Off-Site²</i>	400
<i>Leased Parking</i>	-612

¹On-site, off-site, and leased parking are used to calculate Future Available Parking Supply.

²The 200 off-site parking spaces located at 351 Pine St and the Colchester Research Facility are used for long term parking.

Estimated Demand

Assuming constant commute trends between 2020 and 2025, the estimated future demand for UVM will rise. However, this increased demand will be met with an increased parking supply and a reduction in fleet vehicles, which will increase UVM's estimated future parking surplus to 255 (margin of error $\pm$ 204 spaces)(Table 4-8). To reduce this demand, UVM will employ the following strategies:

UVM, in collaboration with the City of Burlington, CATMA, Gotcha Bike, and others is bringing 200 electric-assist bikes to the regional bikeshare program and adding five bikeshare hubs to UVM's campus (totaling seven campus bikeshare hubs which are accessible to all members regardless of campus affiliation). E-bike use has been shown to decrease drive alone rates year round by 10%⁴. UVM will be adding MDC (Motor Drive Cycles) parking options in safe, non-vehicle spaces. This will free up parking currently being occupied by MDCs for conventional vehicles. UVM estimates this will add 27 SOV spaces. Finally, in the 2019-2020 academic year, the Center for Research on Vermont launched an initiative which incentivizes UVM employees to turn in their parking permit. This pilot project resulted in 30 permits being turned in. If these three strategies continue in the future, this will reduce UVM's parking demand by 77 spaces giving UVM a 255-space surplus.

In addition, the potential post-COVID impacts on telework and online courses would reduce demand.

Table 4-8. Estimated future parking demand for UVM

University of Vermont			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces
Employees ²	4,081	60.6%	2,474
On-Campus Students	5,516	13.3%	734
Off-Campus Students	8,334	15.4%	1,284
Visitors			185
Fleet			190
Total Peak Parking Demand³			4,867
Total Parking Supply			5,045

⁴ McQueen, Michael, John MacArthur, and Christopher Cherry, PhD. 2019. "The E-Bike Potential: Estimating the Effect of E-bikes on Person Miles Travelled and Greenhouse Gas Emissions." Portland State University and University of Tennessee, Knoxville. https://wsd-pfb-sparkinfluence.s3.amazonaws.com/uploads/2019/05/E-bike-Potential-Paper-05_15_19-Final.pdf

Estimated TDM Effects⁴	-77
Net Spaces	255

¹Peak parking demand is calculated from data collected in the 2019 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.

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

³Total peak parking demand has a margin of error of ± 204 spaces.

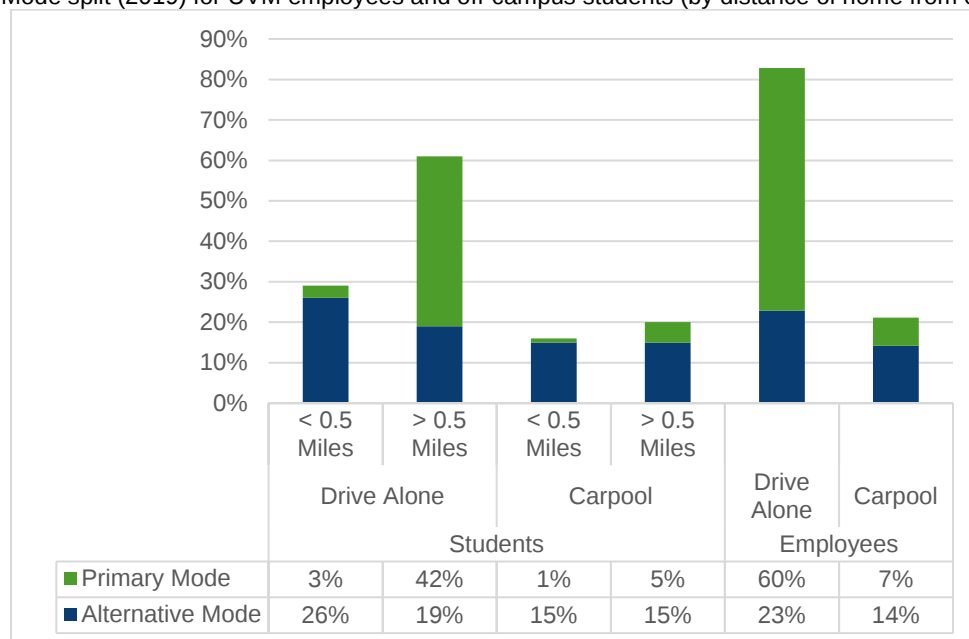
⁴This value is only representative of new TDM strategies that have not yet affected current demand. The explanation of how this value was determined can be found in the narrative above.

Unique Trends & TDM Strategies

Trends

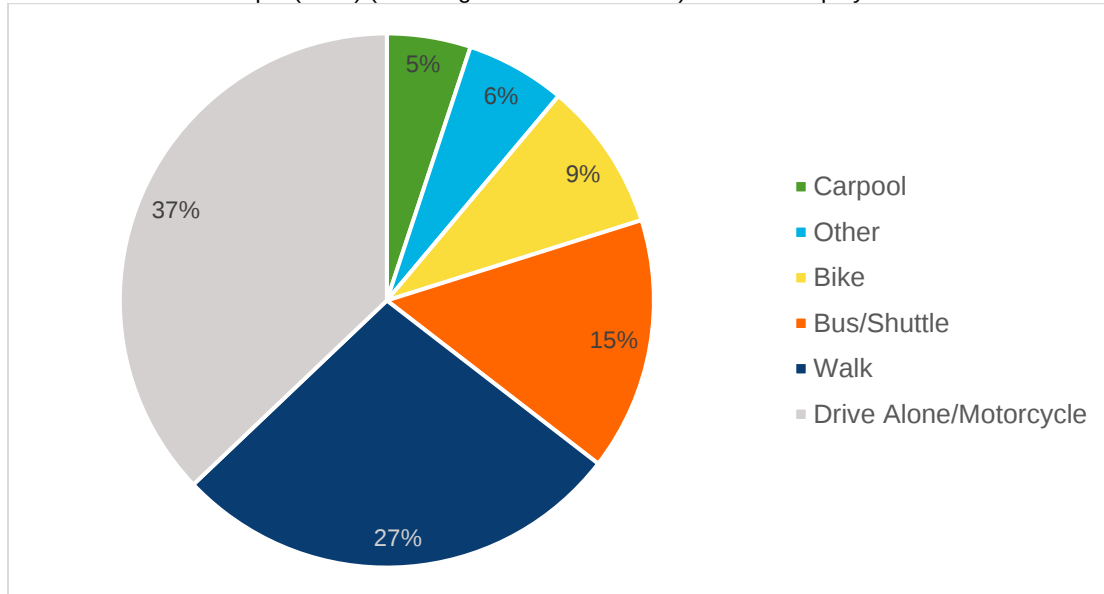
Although UVM's employee drive alone rate is much lower than the state average of 82%⁵, it is the main mode for 60% of employees and 42% of off-campus students who live farther than a half-mile from campus. Off-campus students within a half-mile of campus prefer other commute modes, with only 3% of those students reporting drive alone as their primary mode (Figure 4-2).

Figure 4-2. Mode split (2019) for UVM employees and off-campus students (by distance of home from campus).



⁵ Vermont Agency of Transportation. 2019. "The Vermont Transportation Energy Profile." https://vtrans.vermont.gov/sites/aot/files/planning/documents/planning/The%20Vermont%20Transportation%20Energy%20Profile_2019_Final.pdf

Figure 4-3. Collective mode split (2019) (including sustainable modes) for UVM employees and students.



Over the past four years, the drive alone rate for employees and off-campus students living farther than a half-mile from campus has increased, but both remain lower than the first recorded rate (Figure 4-4). Students living within a half-mile of campus have returned to their lowest drive alone rate. For on-campus students, automobile-reliance is measured by vehicle ownership, which has risen 6% since the previous year's survey (Figure 4-5). However, this number remains much lower than the first recorded ownership statistic.

Figure 4-4. Drive alone rate trend for UVM employees and off-campus students (by distance of home from campus) (2001 – 2019).

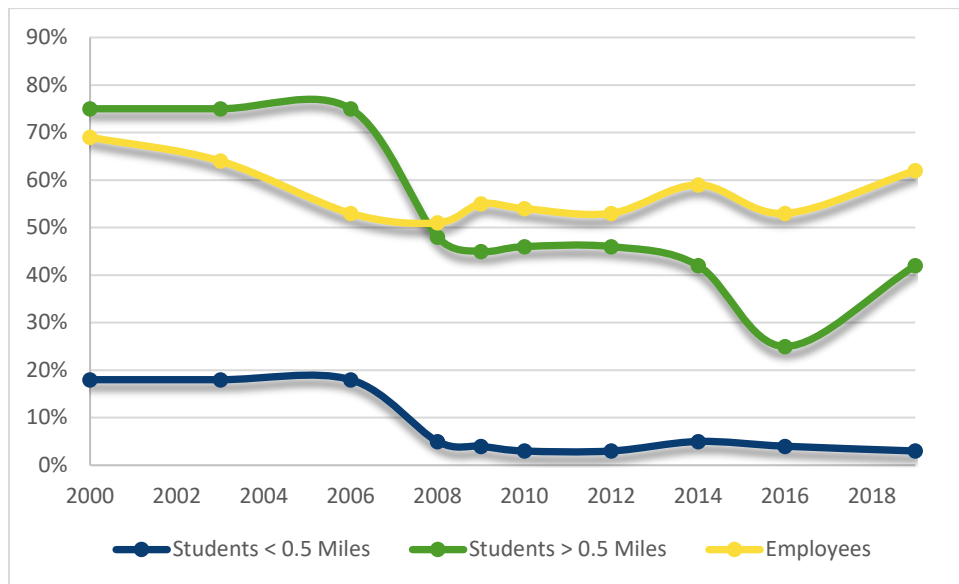
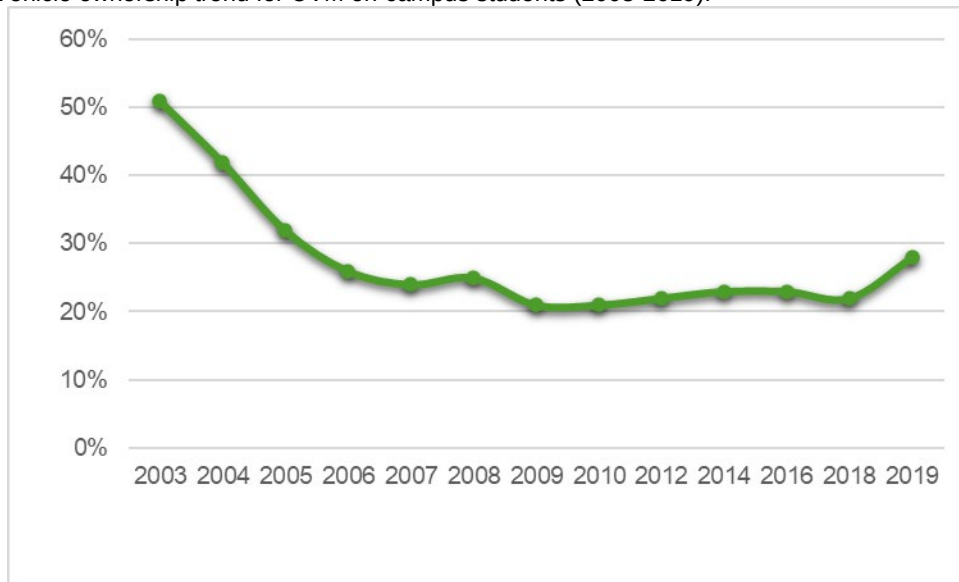


Figure 4-5. Vehicle ownership trend for UVM on-campus students (2003-2019).



TDM Strategies

Permits & Other Regulated Uses

UVM uses a permit allocation system designed to regulate demand in core areas. As of December 2019, UVM issued 6,953 permits for single occupancy vehicles (3,720 for employees, 3,233 for students). UVM also issued 36 carpool permits, with 75 total participants. Employee permits within the core campus are more expensive than permits for outer areas and are assigned based on seniority. Cost of employee permits is progressive, meaning higher paid

employees pay a higher cost for their parking permit (up to a certain point). All on-campus students are discouraged from bringing cars to campus and first-year students are prohibited from bringing cars to campus unless the student can prove a need such as work or medical reasons. Resident student permits are priced higher than commuter student permits. Only students living farther than a half-mile of CATS shuttle stops are eligible for a commuter permit. Off-campus students within a half-mile of CATS shuttle stops may be eligible for an evening commuter permit.

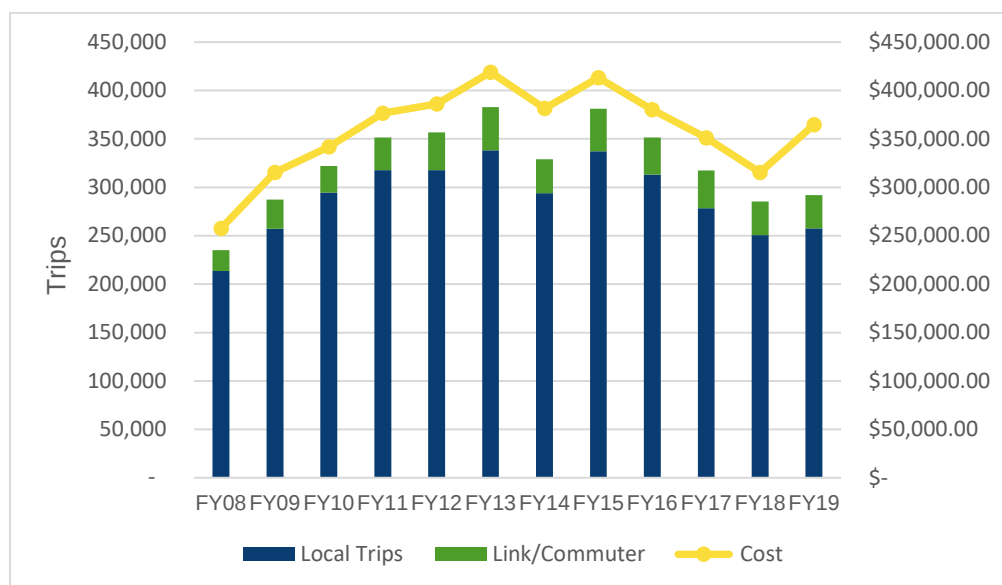
Starting in Fall 2020, anyone requesting a permit will be required to complete a TDM module, which outlines all possible alternative modes available to university affiliates. The intention of this module is to educate those driving about other transportation options that reduce parking demand. The impact of this module will be assessed in the 2021 JIPMP Annual Update. Throughout UVM's campus there are visitor parking lots that are paid for via the ParkMobile app. UVM students are prohibited from parking in these spaces during metered hours. All parking lots are monitored by UVM Transportation and Parking Services and citations are issued for vehicles found incompliant with regulation.

Currently, UVM has 218 fleet vehicles. These vehicles are identifiable by parking stickers and are kept at their respective department location. Temporary business placards are provided to other service/vendor vehicles as needed during the day. Over time, UVM has reduced their fleet, and projects this trend to continue into 2025.

Transit

In 2003, UVM joined the CATMA Unlimited Access Program, which provides unlimited free access on existing GMT public transit services to staff, faculty, and students. UVM receives a 28% discount per ride from GMT by being a part of this program. Ridership and associated cost to the university are displayed in Figure 4-6.

Figure 4-6. UA Trips by UVM students, faculty, and staff with associated cost (2008 -2019).



On-Campus Shuttles

UVM also provides free access to the CATS campus shuttle system to all university affiliates to promote safety and more energy-efficient transportation. The CATS service schedule is depicted in Table 4-9.

Table 4-9. CATS Shuttle Schedule.

Routes	Days	Times	Runs Every (Minutes)	Buses Running
Redstone Express	Mon - Fri	7:45am - 4:45pm	15	1-2
Daytime	Mon - Fri	7:30am - 6:30pm	10	3
Evening	Mon - Thurs	6:15pm - 11:45pm	30	1
Weekend	Sat - Sun	11:30am - 6:30pm	30	1
Off-Campus	Sun - Thurs	6:30pm - Midnight	30	1
Off-Campus (Weekend)	Fri - Sat	6:30 pm - 10:00pm	15	2
Off-Campus (Late-Night)	Fri - Sat	10:00pm - 3:00am	10	3

Bicycle Infrastructure & Parking

UVM is one of only 25 universities nationally recognized as a Gold-level Bicycle Friendly University as of November 2018. UVM has bike racks located throughout campus, indoor bicycle parking and pumps in most residence halls, and three fix-it stations. UVM Bikes, a student club, operates a bike co-op on campus overseen by TPS advisors. The co-op leases bikes and offers bike mechanic services to UVM students and employees.

Car Sharing Service

UVM has a partnership with CarShare Vermont via CATMA's Campus Programs Contract. UVM contributes \$20,000 annually to CarShare Vermont so that students and employees without long-term parking permits can receive a subsidized membership to CarShare services. The Campus Programs Contract is responsible for about 30% of CarShare Vermont's total membership. There are two CarShare hubs located on UVM's campus at the Royal Tyler Theater and the Redstone Lofts.

Parking Cash Out

During the 2019-2020 academic year, the Center for Research on Vermont ran the Give Up Your Permit Program, which encouraged 30 UVM employees to give up their parking permit in exchange for a \$75 gift card and a parking pass allowing for 12 uses for emergencies/occasional use. There are plans to continue and expand this program in the future.

Planning Studies

The University of Vermont has a dedicated commitment to sustainably and creatively planning transportation for the campus. Over recent years, UVM has undergone multiple planning studies

which all have a goal of reducing the number of SOVs on campus. The following are the most recent and relevant studies:

- [UVM Active Transportation Plan](#)
- Nelson Nygaard Parking & Transportation Plan

NOTE: The Supplement provides more detailed data referred to in this report.

5. University of Vermont Medical Center

The UVM Medical Center is an academic medical center providing high quality care and regional referral services for patients throughout Vermont and Northern New York. UVM Medical Center is a member of the UVM Health Network, which includes facilities in Burlington, as well as other communities in Chittenden, Addison, Fairfax, Washington and Orleans Counties, the Central Vermont Medical Center, Champlain Valley Physicians Hospital, Elizabethtown Community Hospital, Alice Hyde Medical Center, Canton-Potsdam Hospital, Inter-Lakes Health, Home, Health & Hospice (formerly Visiting Nurses Association of Chittenden and Grand Isle Counties), and the UVM Health Network Medical Group. The UVM Medical Center consists of approximately 50 patient care and administrative support sites and 100 outreach clinics, employs over 8,000 people, serves a population of over a million people, and conducts around 1.4 million out-patient procedures every year.

Current Conditions

Users (Employees, Patients, & Visitors)

UVM Medical Center employs a total of 6,338 individuals in Burlington. 6,197 of these employees are assigned to the Medical Center Campus or 1 South Prospect Street. On any given day, 50 Community Based Members, 1-2 Honorary Members and 25-35 Volunteers are on campus. For the purposes of estimating parking demand, institutional staff expect that non-paid staff demand no more than 100 parking spaces on any given day.

In 2019, UVM Medical Center Campus performed approximately 627,777 outpatient procedures, and 1 South Prospect performed approximately 92,917 outpatient procedures. This equates to approximately 2,511 outpatient procedures per day at the Medical Center Campus and 372 outpatient procedures per day at 1 South Prospect.

These requirements will be considered during the planning and design of individual projects. UVM Medical Center provides an optional valet parking service for its Medical Center Campus patients and visitors. This service is available at the patient and visitor entrance Monday thru Friday from 6:00am to 5:00pm. Cars can be retrieved with the valet until 9:00pm.

GSF Requirements and Parking Supply

The Medical Center Campus and 1 South Prospect are in the Shared Used Parking District.

The Medical Center Campus is currently licensed for 580 patient beds or bassinets. Since the number of staffed or occupied beds may vary, the number of licensed beds is used as the basis for this Plan as it is a maximum and invariable number that leads to a conservative estimate. To account for the diverse healthcare functions provided by UVM Medical Center, an effort has been made to distinguish between hospital/ in-patient uses, educational uses, and other uses (e.g. cafeteria, medical office, administrative office, support space, common areas). While there is not a precise method to distinguish between these uses and the square footage associated with each, a reasonable estimate was produced. The GSF, associated required parking, and the current parking supply of both Medical Center Campus and 1 South Prospect are included in Table 5-1. Though UVM Medical Center has a total parking supply of 3,746 spaces, only 2,509 of those spaces are located on-site at the Medical Center Campus and 1 South Prospect. For the purposes of the JIPMP only the on-site supply will be referenced when estimating demand for the UVM Medical Center because it is where there is most concern for parking management.

UVM Medical Center's current on-site parking supply is 2,509 which is 775 spaces less than the minimum required by the CDO and 1,596 spaces less than the maximum allowed.

Table 5-1. Current GSF, parking requirements, and parking supply available at UVM Medical Center (Medical Center Campus and 1 South Prospect).

	Medical Center Campus	1 South Prospect	Total
GSF¹	1,698,739	149,404	1,848,143
In-Patient Beds	580	-	580
Minimum Parking Required	2,985	299	3,284
Current Parking Supply			
On-Site²	2,052	457	2,509
Leased/Offsite Parking Supply	-	-	1,237

¹For Medical Center Campus, only 912,682 GSF counts towards calculating CDO parking requirements because the rest of the GSF accounts for in-patient uses.

²Only on-site parking is counted towards the parking supply.

Demand

Using data collected in the 2019 CATMA Employee Survey and requirements above, it was determined the current parking demand for the UVM Medical Center and 1 South Prospect campuses is 2,330 spaces putting it at a 179-space surplus (margin of error ± 42 spaces)(Table 5-2). The aggregate average of parking counts for UVM Medical Center and 1 South Prospect lots from October 2019 and February 2020 show utilization at 81% (Supplement Figure 4-1) with a maximum utilization rate of 96%. Employees without permits for on-site lots, must park in one of the off-site parking lots, which provide UVM Medical Center employees with an additional 1,237 parking spaces. UVM Medical Center's off-site parking lots average an 84% utilization with a maximum 89%. These off-site lots are a crucial tool through which the UVM Medical Center manages parking demand. It should be noted, UVM Medical Center's satellite lots did not undergo the same lot count process as its on-site lots, but from November 2019 to February 2020, UVM Medical Center's off-site lots were counted at least weekly to get the above utilization rate. The 2019 CATMA Employee Survey asked employees where they prefer to park, and 51 UVM Medical Center employees reported parking on the street.

Table 5-2. Current demand calculation for UVM Medical Center (Medical Center Campus and 1 South Prospect).

UVM Medical Center			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces
Medical Center Campus			
Employees	5,567	17.8%	991
Out-Patients			708
In-Patients			75
Visitors ²			250
Fleet			38
Subtotal			2,062

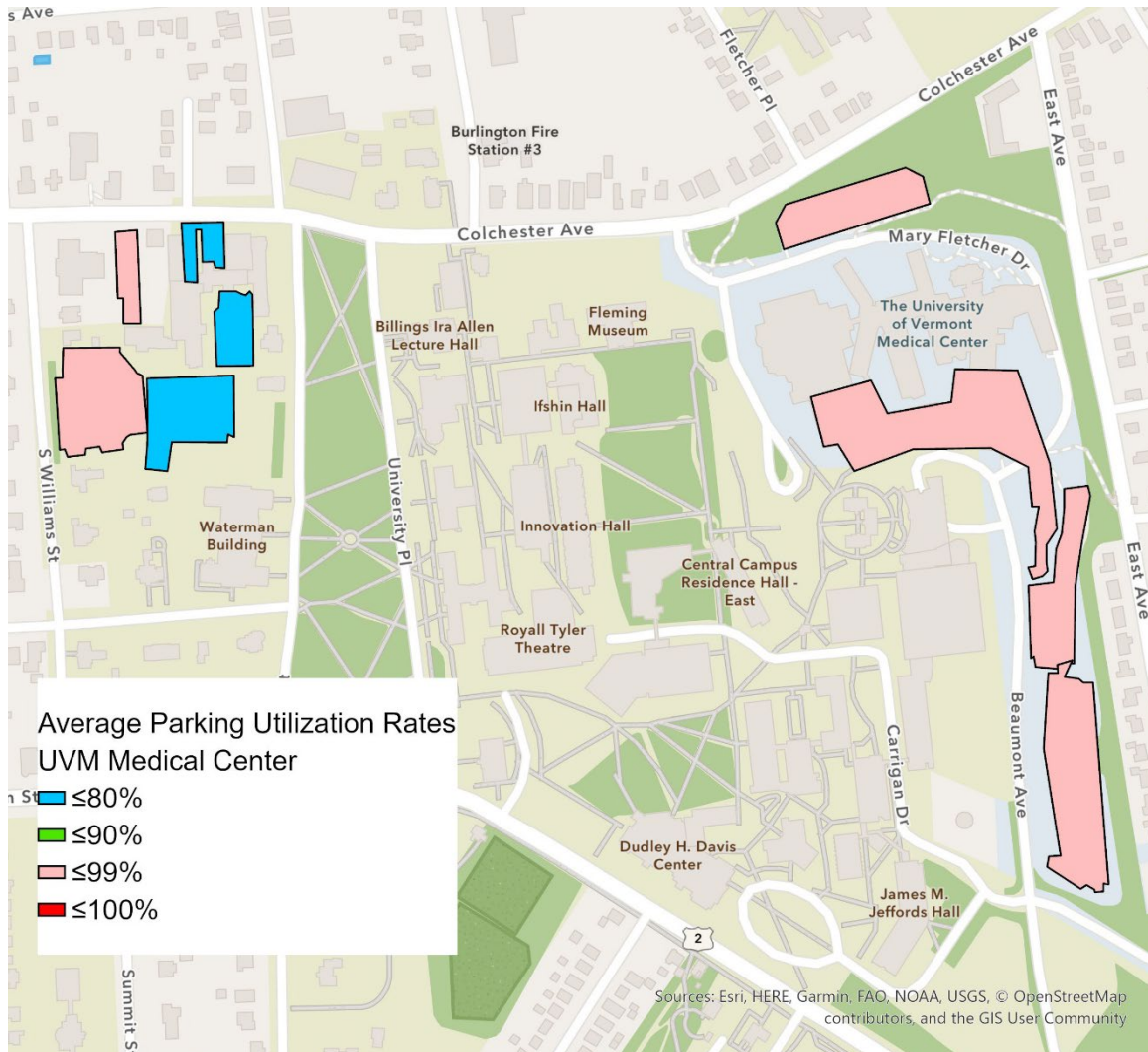
1 South Prospect			
Employees	630	3.7%	24
Out-Patients			236
Fleet			8
<i>Subtotal</i>			268
Total Peak Parking Demand³			2,330
Total Parking Supply			2,509
Net Spaces			179

¹Peak parking demand is calculated from data collected in the 2019 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.

²UVM Medical Center volunteers are included in visitor parking demand, because in the 2019 CATMA Employee Survey, volunteers identified they park in the ACC Garage and get a voucher to avoid paying upon their departure.

³Total peak parking demand has a margin of error of ± 42 spaces.

Figure 5-1. Map of average parking utilization rates by lot on UVM Medical Center campus.



Future Conditions

Users (Employees, Patients, & Visitors)

UVM Medical Center expects there to be no significant change in employees, patients, or visitors. As new space needs on the Medical Center Campus are identified, that need is offset by moving existing space users to a satellite location that have a lower need for proximity to the Medical Center Campus. A total of 6,338 full-time, part-time, and per diem UVM Medical Center employees are expected to work across the Medical Center Campus, 1 South Prospect, and other Burlington sites through 2025. There are no expected changes for in-patient and out-patient numbers at any of the UVM Medical Center sites.

GSF Requirements and Parking Supply

UVM Medical Center does not intend to complete any construction projects that would add to the Burlington facilities for the next five years. Employment and procedures are expected to remain at the current conditions.

The future parking inventory for UVM Medical Center across Burlington sites is provided in Table 5-3. UVM Medical Center's future on-site parking inventory of 2,509 is 775 spaces less than the CDO minimum required and 3,067 spaces less than the maximum allowed.

Table 5-3. Future GSF, parking requirements, and parking supply for UVM Medical Center (Medical Center Campus and 1 South Prospect).

	Medical Center Campus	1 South Prospect	Total
GSF	1,698,739	149,404	1,848,143
In-Patient Beds	580	-	580
Minimum Parking Required	2,985	299	3,284
Future Parking Supply			
<i>On-Site¹</i>	2,052	457	2,509
<i>Leased/Offsite Parking Supply</i>	-	-	1,237

¹For Medical Center Campus, only 912,682 GSF counts towards calculating CDO parking requirements.

²Future parking supply is the sum of on-site parking and leased/offsite parking

Estimated Demand

Assuming commute trends stay constant between 2020 and 2025, the estimated future demand for the UVM Medical Center will remain as it is in 2020. It is estimated the Medical Center will have a surplus of 179 parking spaces by 2025 (margin of error of ±42 spaces) (Table 5-4).

Table 5-4. Estimated future parking demand for UVM Medical Center (Medical Center Campus and 1 South Prospect).

UVM Medical Center			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces
Medical Center Campus			
Employees	5,567	17.8%	991
Out-Patients			708

In-Patients			75
Visitors ²			250
Fleet			38
<i>Subtotal</i>			2,062
1 South Prospect			
Employees	630	3.7%	24
Out-Patients			236
Fleet			8
<i>Subtotal</i>			268
Total Peak Parking Demand³			2,330
Total Parking Supply			2,509
Net Spaces			179

¹Peak parking demand is calculated from data collected in the 2019 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.

²UVM Medical Center volunteers are included in visitor parking demand, because in the 2019 CATMA Employee Survey, volunteers identified they park in the ACC Garage and get a voucher to avoid paying upon their departure.

³Total peak parking demand has a margin of error of ±42 spaces.

Unique Trends & TDM Strategies

Trends

Driving alone continues to be the primary mode of the majority of UVM Medical Center employees at both the Medical Center Campus and 1 South Prospect (Figure 5-3). Medical Center Campus employees are more likely to use UVM Medical Center shuttles from satellite lots than their colleagues at 1 South Prospect. Carpooling is not a highly utilized mode, but over 10% of employees at both locations are carpooling sometimes, which would be an easy population to work with to increase carpooling as primary mode. Unfortunately, the drive alone rate continues to rise following an all-time low in 2010 (Figure 5-4). This rise can be explained by a multitude of factors including lower gas prices and more affordable housing outside of Burlington.

Figure 5-2. Mode Split (2019) for UVM Medical Center Employees by Campus.

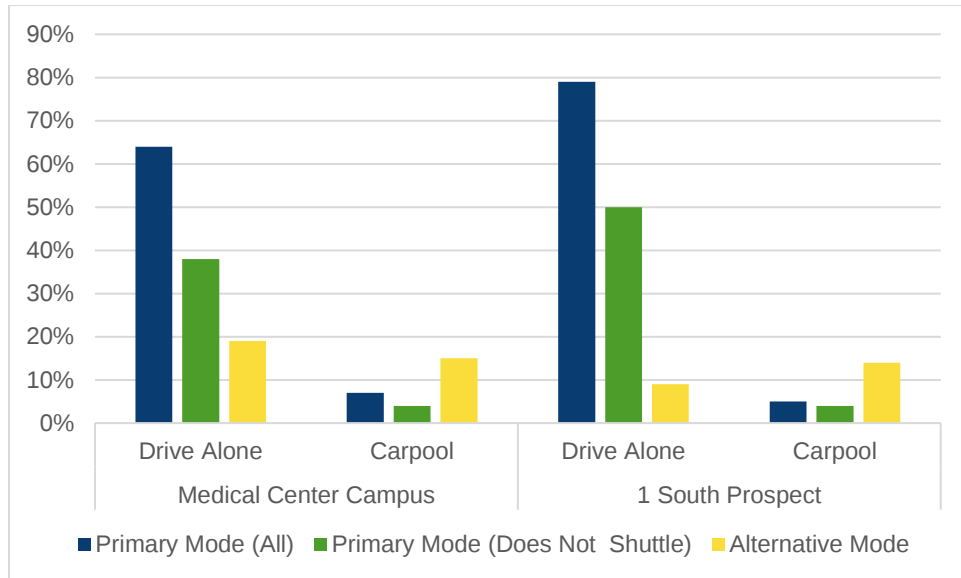


Figure 5-3. Collective mode split (2019) (including sustainable modes) for UVM Medical Center employees.

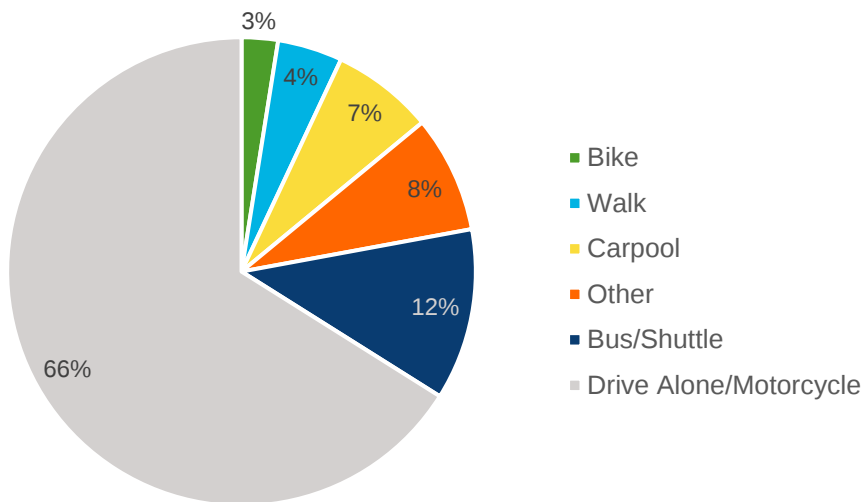
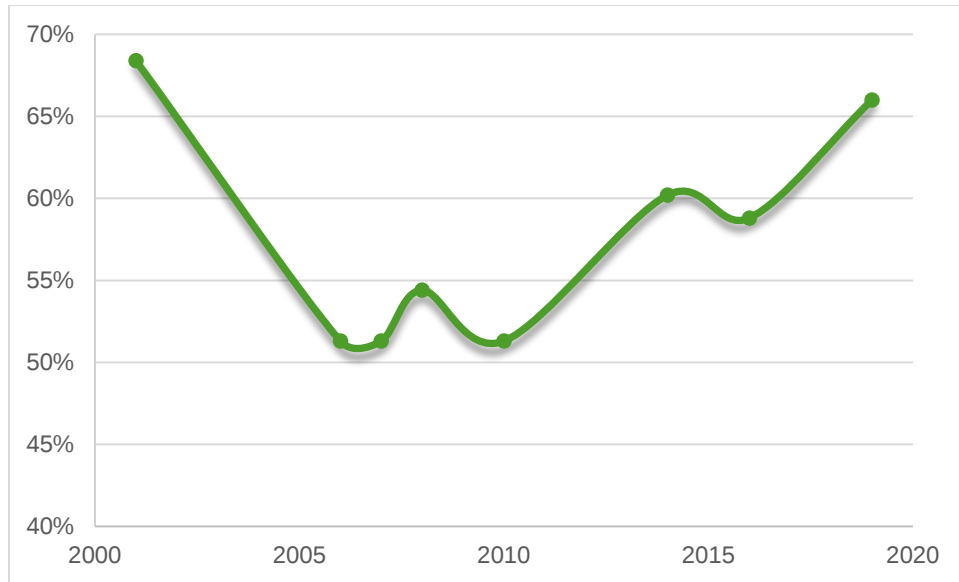


Figure 5-4. Drive Alone rate trend for UVM Medical Center Employees (2001-2019).



TDM Strategies

Permits

During peak demand periods, convenient onsite parking assignments are limited to senior staff, physicians, residents, and those with “business needs” or “medical needs” permits.

Shuttles & Remote Off-Site Lots

UVM Medical Center also uses off-site lots and an effective shuttle system to manage on-site parking demand. Staff without on-site parking permits are required to park in a satellite lot served by a shuttle or use an alternate transportation mode. UVM Medical Center provides off-site parking at Fanny Allen (Colchester), 115 Lakeside Avenue (Burlington), and Technology Park (South Burlington) with regular service direct to the Medical Center Campus. The shuttles summarized in Table 5-6 result in a combined 254 shuttles that operate 254 days per year that equal 74,676 shuttle trips per year.

Table 5-5. UVM Medical Center shuttle schedule.

Shuttle Locations	AM Runs	Midday Runs	PM Runs	Total Runs/Day
Tech Park/Medical Center	21	11	28	60
Lakeside/Medical Center	21	11	28	60
Fanny Allen/Medical Center	21	11	28	60
Catamount/Medical Center	16	14	14	44
Centennial/1 South Prospect	15	0	15	30

Transit

UVM Medical Center has offered a discount on GMT local (50%), commuter and LINK passes (25%) since 1995 (Table 5-7). Employees can purchase these passes via a payroll deduction. Since the early 1980s, GMT buses have served UVM Medical Center well with the Burlington/Essex route, and most recently GMT implemented its Next Gen Plan which included direct service from key originations and destinations in the region. There are 10 GMT transit routes that stop at the Medical Center Campus.

A 25% discount on ferry tickets for employees who live in New York is also provided by UVM Medical Center.

Table 5-6. Average number of transit passes sold monthly by UVM Medical Center for selected years (2014 & 2019).

	2019	2014
GMT Monthly		
Local	93	34
Local ADA	0	9
LINK Express	3	8
LINK Express/Commuter	3	3
GMT 10 Ride Pass		
Local	36	98
Local ADA	0	15
LINK Express	72	74
LINK Express/Commuter	34	27
Champlain Ferry		
Car & Driver Monthly Pass	121	110
Passenger 10 Ride Pass	23	28
Motorcycle 10 Ride Pass	0	5

Bike Infrastructure & Parking

UVM Medical Center supports bicycle travel by investing in local and regional bicycle networks. It is recognized as a Bicycle Friendly Employer by the League of American Bicyclists. For example, UVM Medical Center widened the sidewalk along Colchester Avenue between East Avenue and Mansfield Avenue to interconnect with UVM bike paths. The sidewalk along Beaumont Drive is 10 feet wide to function as a shared use path. UVM Medical Center provides on-site shower facilities and over 100-spaces of bicycle parking (covered and uncovered) for its cyclists.

A bikeshare hub is located at the ACC Circle, adjacent to transit stop on main campus, and there is a hub at Waterman Building nearby 1 South Prospect Street.

Carpool Incentive

A carpool parking incentive (on campus parking permit) is available to employees at the Medical Center Campus, Fanny Allen Campus and 1 South Prospect who have two or more employees who commute to work together. There are approximately 1,000 UVM Medical Center employees registered with CATMA as carpoolers.

NOTE: The Supplement provides more detailed data referred to in this report.

6. Conclusion

This JIPMP demonstrates the Hill institutions' ability to actively and collaboratively manage the demand for parking for each of their campuses. All three institutions are well equipped with various TDM strategies provided through CATMA and individually to mitigate changes in demand and mode use.

The projects included in the 2020-2025 JIPMP are likely to be over-estimating parking demand now that policy shifts are occurring as a result of the COVID-19 crisis. All of the institutions will be implementing firmer telework policies for their employees. UVM and Champlain may see a decline in students coming to campus in Fall 2020 with potentially more online courses offered. As employees and students gain the skills to work and learn remotely, the demand for on-campus parking is likely to decrease. At this point, the impact of COVID-19 on parking demand is unknown, but it will be acknowledged further in the Spring 2021 JIPMP Update.

Appendix A: Methodology

Lot Counts

In the data collection process of the 2020-2025 JIPMP, CATMA and the institutions defined a lot count inventory process. In October 2019, the institutions agreed to conduct counts on the same days and times (Tuesday and Thursday at 10:00 AM and 2:00 PM), to control for regular variation in day-to-day travel habits. Following a winter meeting of the institutions and CATMA, these counts were extended for three days (Tuesday, Wednesday, and Thursday) and three times (10:00 AM, 12:00 PM, 2:00 PM). These adjustments were made as a reflection of peak time determined by the CATMA survey data. Moving forward, the institutions will each conduct counts quarterly on these three days and times so that CATMA can have a growing log of utilization rates. This constant and consistent data collection will strengthen our demand estimations in future JIPMPs.

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 easily forecast future demand patterns. For more information about the advantages and drawbacks of lot counts and survey data for estimating demand, please see Appendix B which was provided by Jonathan Dowds with UVM's Transportation Research Center.

Survey Administration

The 2019 CATMA Student Transportation Survey was launched on October 28, 2019. The 2019 CATMA Employee Transportation Survey was launched on October 29 and October 30, 2019. 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 2019 Transportation Survey solicitation and responses.

	Launch Date	Population Total	Solicitation Total	Total Responses	Margin of Error
Student Survey					
Champlain	10/28/2019	2087	2059	515	4%
UVM	10/28/2019	13850	13960	2892	2%
Employee Survey					
Champlain	10/29/2019	880	705	190	6%
UVM	10/30/2019	4205	4289	1299	2%
UVM Medical Center	10/29/2019	4670	8631	2678	1%

Survey Weighting

With guidance from UVM's Transportation Research Center, the results of CATMA's 2019 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 2020-2025 JIPMP is very different from that used in previous JIPMPs. This modified calculation 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 modified 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 2019 CATMA Employee and Student Transportation Surveys.

Champlain College	Wednesday	11:30 - 1:30 PM
UVM	Tuesday	11:30 - 1:30 PM
UVM Medical Center	Monday	12:00 -1:00 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.

Peak Parking Demand % =	$\frac{\text{Drive Alone at Peak Time} + \frac{1}{2}(\text{Carpool at Peak Time})}{\text{All Users}}$
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 2020-2025 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 institution, 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.

Appendix B: Parking Demand Estimation Overview

Jonathan Dowds
6/1/2020

Parking Demand Overview

Parking demand is a measure of the number of parking spaces required to serve all vehicle trips ending at a given destination over a given period of time, typically measured in space-hours. The parking demand associated with a specific destination depends on a variety of factors, including the number of people traveling to that destination at a given point in time, the modes of travel that are available for travel to that destination, parking prices and other variables that influence the relative attractiveness of available modes. Mode choices are influenced by travel time, cost, reliability, and parking availability among other factors. Thus, parking demand is not static and can increase or decrease with changing circumstances. Deliberate Transportation Demand Management (TDM) policies, utilizing incentives, education and other strategies to alter travel behavior, are one method for reducing parking demand.

Current parking demand can be estimated using parking lot counts or user surveys that collect mode share data.⁶ The Metropolitan Area Planning Council, the regional planning agency serving the Boston Metropolitan area, provides a toolkit for member cities to conduct count-based parking studies for the purpose of determining parking utilization rates and whether demand exceeds supply (MAPC 2019). Both parking counts and user surveys can be used to calculate a per-user parking demand ratio – the ratio of the number of parking spaces used to the total number of users of a destination. Using parking counts to estimate demand becomes less accurate as parking utilization approaches the effective parking capacity. Depending on how the data are collected, the parking demand ratio may be further broken out but sub-groups such as faculty, staff, and students. Future demand can be forecasted by applying these demand ratios to a projection of the future user base (potentially with adjustments for planned changes that are expected to impact the demand rate such as new transit or bike options). For planning purposes, parking demand has frequently been estimated using parking generation factors from the Institute of Transportation Engineers (ITE) and Urban Land Institute (ULI) but these figures have been criticized for their lack of geographic specificity and tendency to over-estimate parking needs (Litman 2016; Kimberly-Horn 2016). Other methods for forecasting parking demand include the use of land use or gravity models.

Parking Demand Concepts and Terminology

Capacity/Supply: The capacity, or supply, of parking is equal to the number of parking spaces within a lot or study area.

Effective capacity: A parking lot's effective capacity is the number of vehicles can practically be expected to park at that lot. It is lower than the raw number of spaces in a lot to account for spaces that are blocked by other vehicles or obstacles and for users' finite willingness to search for a free parking space. Estimates for "effective capacity" vary but several sources consider 85-90% to be the highest practical utilization rate (MAPC 2019; UVA 2019).

⁶ Note that the terms "parking counts" and "parking surveys" are often used interchangeably to refer to a tally of the number of vehicles parked within a specific study area. To avoid confusion with respect to the CATMA Student and Employee Transportation Surveys, this memo will refer to counts of parked vehicles as "parking counts" or "lot counts" and reserve the word "survey" for user surveys similar to the 2019 CATMA student and employee survey efforts.

Latent parking demand: Latent parking demand refers to the additional number of parking spaces that would be utilized if the price were lower or if more parking capacity was available. Waitlists for permits and on-street parking or illegal parking in nearby neighborhoods are two indicators of latent demand. Latent demand can be reduced by TDM measures that increase the attractiveness of modes that do not require parking.

Parking demand ratio: The parking demand ratio is equal to the proportion of users of a destination that utilize parking. It can be used to forecast future parking demand in conjunction with estimates of the number of users that will travel to a destination.

Parking utilization/occupancy rate: The parking utilization rate is the percentage of parking spaces that are being used at a particular time.

State of Practice for Institutional Parking Plans in Higher Education

There is no single standard for parking demand estimation used by institutions of higher education. For university parking plans, lot counts appear to be the most common method for estimating current parking utilization but user survey are also used for this purpose. Examples of different approaches to developing institutional parking plans are described below.

The University of Virginia (UVA) completed a parking master plan in July of 2019 that utilizes a similar set of methodologies to the JIPMP (UVA 2019). The UVA parking plan covers the UVA student body, faculty and staff and UVA Health. Primary modes share usage for faculty and staff were collected with a survey conducted by the UVA Center for Survey Research and were used to calculate parking demand ratios for these user groups. Student parking demand ratios were calculated based on vehicle counts. These parking demand ratios were applied to population projections developed by the University based on historical trends and other factors. For additional context, parking occupancy rates for individual lots and across the UVA campus are also reported. The plan includes 18 strategies for addressing expected parking shortfalls. Salem State University (SSU) also completed a campus parking study in 2018 (Salem State University 2018). This study used lot counts as the basis for estimating current and future parking demand. It complemented these data with an online survey for the SSU community and surrounding neighborhoods to collect mode choice data as well as feedback on parking problem areas. Parking counts were conducted for two days in September of 2017 and included a count of the type of permit displayed by each vehicle. Parking counts were also conducted on a section of adjacent roadway, with all vehicles parked on-street assumed to be associated with SSU. Future parking demand was forecasted by applying a 2% annual growth rate (the projected rate of growth in enrollment) to the peak demand seen in the lot counts. The University of Rhode Island's (URI) "Transportation and Parking Master Plan" for its Kingston Campus, completed in 2018 (VHB 2018), and Michigan Tech's "Campus Transportation & Parking Plan," completed in 2011 (Carl Walker, Inc. 2011), are additional examples of parking plans created primarily using lot count data but neither includes a strong demand forecast element. In addition to on-campus lots, 159 on-street parking spaces in the immediate vicinity of campus are included in the parking inventory and parking counts in the Michigan Tech study.

Colorado State University and North Carolina State University both utilized a parking gravity model, Park+, developed by the consulting firm Kimberly-Horn (Kimberly-Horn 2014; 2017). Park+ uses parking occupancy data collected via lot counts to calibrate a model that estimates the parking demand associated with each building on campus.

Advantages and Drawbacks of Lot Counts

Lot counts are a relatively straightforward and inexpensive method for collecting data about parking demand. Counts are suitable for the direct calculation of the average parking demand ratio across all users when the utilization is below effective capacity. When lots are limited to a single user group or when permit type information is also collected, demand ratios may be calculated separately for different user sub-groups. It is likely that the comparatively low cost of collecting this data contributes to its widespread use in parking planning.

There are a number of drawbacks to using lot counts as the sole sources of parking demand data, however. Lot counts tend to be collected over a limited time frame (one to two days in the examples above). Because of daily, weekly, and seasonal variability in travel behavior, the peak demand recorded in one or two days of observations may not be representative of typical peak demand. Seasonal impacts are likely to be particularly important in Vermont with users whose primary commute mode is a SOV are more likely to opt to use secondary modes such as walking and biking when the weather is favorable. Additionally, lot counts have a limited capacity to accurately capture circumstances where demand approaches or exceeds supply. Vehicle queuing, snow buildup, poorly parked vehicles, and vehicles parked illegally reduce the amount of parking capacity that is available at a given time, creating a reduced *effective* parking capacity. Therefore, parking counts that result in a utilization of 85-95% may indicate that supply is insufficient and latent demand exists. Counts that do not account for parking on surrounding streets or users who chose not to park due to capacity issues will fail to fully capture the entire demand for parking.

This combination of factors suggests that short duration lot counts will tend to under-estimate parking demand. Over time, continuing lot counting programs, such as the one implemented by the Hill Institutions, are less likely to suffer from these short-comings than one-off lot counts and will more accurately reflect parking demand.

Finally, lot counts also fail to provide information about mode splits, latent parking demand, and users perceptions of their transportation options. While this information may not be essential to estimate current parking demand, it is very valuable for understanding and managing future parking demand.

Advantages and Drawbacks of User Surveys

As with parking lot counts, user surveys offer both advantages and drawbacks for estimating current and future parking demand. Advantages to user surveys include improved ability to differentiate between the parking demand for different user groups and to capture on-street parking as well as to collect information on user satisfaction and latent parking demand. For calculating current total parking demand, surveys are especially valuable because they can easily and comprehensively be used to estimate the parking demand that is being met using parking spaces outside of the count area. While lot counts are highly effective at capturing the total demand for parking at isolated lots and lots that are far below capacity, they are less effective when the area of study is embedded within an environment that includes other parking options, such as on-street parking or parking lots for unaffiliated entities. In these circumstances, especially when parking utilization is high, parking prices are high, or the effective capacity is reduced by something like snow buildup, lot counts will miss users who opt to park on nearby streets rather than within institutionally provided parking areas or who choose not to park at all due to the capacity issues. While it is possible to conduct parking counts on nearby streets, in a setting like Burlington it would difficult to determine with certainty what vehicles are affiliated with one of the Hill institutions. By contrast, a user survey such as that

conducted by CATMA can ask directly about parking at locations other than institutionally provided parking lots, enabling a direct estimation of the entire parking demand.

Surveys also offer advantages for forecasting future parking demand because demand can be tracked by user group with greater specificity that can be achieved with most lot counts. Within the university context, for example, the percentage of users that require parking is likely to vary among faculty, staff and students. When parking lots are not restricted to a single user group, a simple lot count will only produce a single, overall estimate of the percentage of users that require parking but will not capture difference in parking demand between different user groups. If these different user groups are projected to increase at different rates, using this overall parking demand ratio to estimate future parking demand will be less accurate than applying user-group specific parking demand ratios.

Conversely, because the CATMA Survey asks respondents about their *typical* travel/parking behavior, it does not fully capture the day-to-day variations in behavior that impact total parking demand.⁷ For example, on any specific day, some employees/student will be sick or traveling and will not be on campus or need parking. Users whose primary mode is driving alone will sometime use other modes (decreasing the need for parking) and users whose primary mode is not driving will sometimes drive (increasing the need for parking). The net effect is that this survey method may overstate parking demand.

Finally, survey offer the advantage of providing information about user satisfaction and latent parking demand as well as the modes share data used to collect parking demand. While this information may not be essential to estimate current parking demand, it is very valuable for understanding and managing future parking demand.

Conclusions

Both parking counts and survey data have advantages and disadvantages for estimating parking demand and there is a degree of uncertainty associated with each. Under these circumstances, it is highly desirable to be able to present parking demand estimates using both methodologies. Demand estimated by the user survey captures parking usage that is met in the surrounding neighborhoods and does not reduce demand to account for share users who are not on campus due illness, vacation or other occasional telecommuting. Consequently, it will provide an estimate of the highest, annual peak parking demand. Overtime, on-going lot counts will provide an increasingly accurate representation of peaking parking utilization but will not capture parking in the surrounding neighborhoods so will provide a lower bound estimate of parking demand.

References

Carl Walker, Inc. 2011. "Campus Transportation & Parking Plan Final Report." Michigan Tech. <https://www.mtu.edu/transportation/campus-transportation-and-parking-plan-for-michigan-tech-final-report-1-.pdf>.

⁷ Other travel surveys, such as the National Household Travel Survey, ask respondents about their behavior on a specific day (e.g. "how did you get to work on XX/YY?"). With a sufficiently large sample, this approach would capture day-to-day variation.

Kimberly-Horn. 2014. "Colorado State University Parking and Transportation Master Plan." Colorado State University.
https://www.fm.colostate.edu/files/forms/Parking_Transportation_Master_Plan_Study.pdf.

———. 2016. "Parking Generation - Replacing Flawed Standards with the Custom Realities of Park+." White Paper Series Vol. #3. Kimberly-Horn. https://www.kimley-horn.com/wp-content/uploads/2017/02/PARK_Plus_ParkingGen.pdf.

———. 2017. "NCSU Transportation Master Plan." November 2017.
<https://transportation.ncsu.edu/wp-content/uploads/2019/01/18Transportation-Master-Plan.pdf>.

Litman, Todd Alexander. 2016. "Parking Management." Victoria Transport Policy Institute.
https://www.vtpi.org/park_man.pdf.

MAPC. 2019. "How to Do a Parking Study." <https://www.mapc.org/resource-library/how-to-do-a-parking-study/>.

Salem State University. 2018. "Campus Parking Study." Salem State University.
<https://records.salemstate.edu/sites/records/files/reports/2018-05/Campus%20Parking%20Study%20Final%20Report-April%202018.pdf>.

UVA. 2019. "UVA Parking and Transportation Master Plan." University of Virginia.
<https://officearchitect.virginia.edu/pdfs/UVATPPlan2019.pdf>.

VHB. 2018. "Transportation and Parking Master Plan." The University of Rhode Island.
<https://web.uri.edu/planning/files/TransportationParking-Master-Plan-Final-by-VHB-March-2018.pdf>.



2020 - 2025

Institutional Parking Management Plan

Institutional Supplement



Submitted on: October 13, 2020

Prepared for: City of Burlington
Planning Commission

Submitted by: Chittenden Area
Transportation Management
Association

In Cooperation with: Champlain
College, University of Vermont,
and University of Vermont Medical
Center

Table of Contents

1. Purpose	1
2. Champlain College.....	1
3. University of Vermont.....	6
4. UVM Medical Center	10

List of Tables

Table 2-1. Champlain College parking lot counts.	1
Table 2-2. All infrastructure included in Champlain College's GSF calculation and parking supply.	1
Table 2-3. Additional Champlain College infrastructure that is not included in GSF calculation or parking supply.	3
Table 2-4. Current & Future Employment and Enrollment for Champlain College.	4
Table 2-5. Champlain College permit types, cost, and number of permits issues (December 2019).	4
Table 2-6. Citations given by Champlain College Transportation.	5
Table 3-1. University of Vermont parking lot counts.	6
Table 3-2. Infrastructure (by building use) included in UVM's GSF calculation.	6
Table 3-3. UVM's parking supply by campus.	7
Table 3-4. Current & Future Employment and Enrollment for UVM.	7
Table 3-5. UVM permit types, cost, and number of permits issues (December 2019).	8
Table 3-6. Citations given by UVM Transportation & Parking Services.	9
Table 4-1. UVM Medical Center parking lot counts.	10
Table 4-2. Maximum and average lot utilization for UVM Medical Center off-site lots (November 2019 – February 2020).	10
Table 4-3. GSF of UVM Medical Center buildings.	10
Table 4-4. UVM Medical Center parking supply included in JIPMP.	11
Table 4-5. UVM Medical Center parking supply not included in JIPMP.	11
Table 4-6. Current & Future employment and patient/visitor for UVM Medical Center.	12
Table 4-7. Total permits issued by UVM Medical Center (December 2019).	13

I. Purpose

This document serves as a supplement to the 2020-2025 Joint Institutional Parking Management Plan (JIPMP). Historically, the data in this document has been provided within the JIPMP, but in an effort to streamline the JIPMP, the supplement holds data that is not required by the JIPMP but is useful and informative for the institutions' sustainable planning purposes.

2. Champlain College

Table 2-1. Champlain College parking lot counts.

	10:00 AM	12:00 PM	2:00 PM
10/22/2019	489	-	599
10/24/2019	492	-	532
2/18/2020	494	518	501
2/19/2020	502	500	501
2/20/2020	523	533	528
Average	517		73%
Maximum	599		84%

Table 2-2. All infrastructure included in Champlain College's GSF calculation and parking supply.

Name	Primary Use	GSF	Residential Beds	Parking Spaces
194 St Paul Street	Residential/Retail (4,455 GSF Retail)	175,000	314	0
308 Maple	Residential	5,223	14	0
396 Main	Residential	8,801	39	20
Adirondack House	Residential	4,631	20	0
Aiken Hall	Administrative/Academic	13,701	0	0
Bader Hall	Residential	8,140	22	0
Bankus Hall	Residential	10,432	50	0
Butler Hall	Residential	26,730	89	0
Carriage House	Residential	2,376	15	0

Center for Communications and Creative Media (formerly Hauke/Alumni)	Administrative/Academic	87,187	0	0
Cushing Hall	Residential	9,095	30	7
Durick Hall	Administrative	4,036	0	3
Foster Hall	Administrative/Academic	7,008	0	0
Freeman Hall	Administrative/Academic	11,992	0	0
Garden House (ARC)	Administrative	4,371	0	0
Goodhue Coolidge House	Administrative/Academic	4,054	0	0
Hill Hall	Residential	9,203	40	0
IDX Student Life Center	Administrative/Athletic/ Dining	49,939	0	5
Jensen Hall	Residential	9,972	41	9
Joyce Learning Center	Academic	20,483	0	0
Juniper	Residential	28,732	90	0
Lakeside Campus (Miller Center at Lakeside)	Administrative	39,552	0	267
Lakeview Hall	Residential	18,033	81	0
Lyman Hall	Residential	8,550	44	0
Boardman Hall	Residential	31,932	59	28
McDonald Hall	Residential	10,922	50	0
Miller Information Commons	Academic	29,860	0	42
North House	Residential	5,402	21	10
Pearl Hall	Residential	10,874	50	0
Perry Caretaker's Cottage	Residential	444	1	0
Perry Carriage Barn	Academic	5,546	0	0

Perry Hall	Administrative/Academic	27,847	0	16
Rowell Annex	Administrative	2,882	0	0
Rowell Hall	Residential	9,954	52	33
Sanders Hall	Residential	9,716	37	8
Schillhammer Hall	Residential	7,836	27	0
SD Ireland Family Center for Global Bus & Tech	Administrative/Academic	24,390	0	0
Skiff Hall	Administrative	12,493	0	15
Skiff	Administrative/Academic	3,354	0	0
South House	Residential	12,608	51	12
Summit Hall	Residential	15,271	51	28
The Gallery	Academic	633	0	0
Valcour Hall	Residential	30,028	91	0
West House	Administrative	3,718	0	0
Whiting Hall	Residential	9,975	44	0
Wick Hall	Administrative/Academic	5,265	0	0
Subtotal		838,191	1,453	503
Leased Facilities¹/Lots				
115 Lakeside Lot				175
371 Main	Residential (temporary)	13,326	30	21
158 South Willard	Residential (temporary)	10,900	29	11
Total Campus Parking Spaces				710

Table 2-3. Additional Champlain College infrastructure that is 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 2-4. Current & Future Employment and Enrollment for Champlain College.

	Current (2020)	Future (2025)
Employment		
On-Campus		
Full-time	377	380
Part-time	415	350
Contracted	88	100
<i>Subtotal</i>	<i>880</i>	<i>830</i>
Off-Campus		
Full-time	2	380
Part-time	244	350
Dublin and Montreal Campuses	68	100
Total	1,194	1,660
Enrollment		
On-Campus		
Full-time Undergraduates	2,024	2,020
Part-time Undergraduates	54	60
Full-time Graduates	4	0
Part-time Graduates	5	0
<i>Subtotal</i>	<i>2,087</i>	<i>2,080</i>
Off-Campus		
Full-Time Graduates	543	590
Part-Time Graduates	85	100
Full-time Undergraduate Continuing Professional Studies	451	410
Part-time Undergraduate Continuing Professional Students	1,253	1250
Total	4,419	4,430

Table 2-5. Champlain College permit types, cost, and number of permits issues (December 2019).

Type	Users	Cost Per Semester	Permits Issued
Zone 1	Employees	Free	264
	Off-Campus Students		165

Zone 2	On Campus Students	\$150	233
Zone 3	Full-Time Off Campus Students		27
	Full-Time Employee	\$170	61
	Part-Time Off Campus Student		2
	Part-Time Employee	\$75	12
Zone 4	Full-Time Off Campus Students		14
	Full-Time Employee	\$200	50
	Part-Time Off Campus Student		2
	Part-Time Employee	\$90	5
Zone 5	Education majors & other students with work requirements	\$225	23

Table 2-6. Citations given by Champlain College Transportation.

Year/Semester	# of Valid Citations Issued	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 warnings	\$ 31,475	\$ 499,720
Summer 2016	32	\$ 2,300	\$ 502,020
2016-2017	1,935 467 warnings	\$ 26,481	\$ 528,501
Summer 2017	156 46 warnings	\$ 995	\$ 529,496
2017-2018	2,073	\$ 28,502	\$ 557,998

	274 warnings		
Summer 2018	261 44 warnings	\$ 2,795	\$ 560,793
2018-2019	1,435	\$ 20,625	\$ 581,418
Summer 2019	245	\$ 2,575	\$ 583,993

3. University of Vermont

Table 3-1. University of Vermont parking lot counts.

	10:00 AM	12:00 PM	2:00 PM
10/22/2019	3799	-	3706
10/24/2019	3696	-	3651
2/18/2020	3831	3893	3795
2/19/2020	3888	3942	3833
2/20/2020	3846	3958	3819
Average	3820		80%
Maximum	3958		83%

Table 3-2. 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	0
Academic/Research	9	71	1,927,762	
UVM/UVMMC Academic Research	1	7	253,458	
Administration	8	31	509,030	
Athletics	8	17	406,252	
Student Support	3	20	507,179	
Residential				
Residential Academic	0	3	110,961	5,906
Residential Dining	0	4	260,062	
Residential Central Campus	2	8	212,341	
Residential Redstone Campus	0	14	409,117	
Residential Trinity Campus	0	12	147,174	
Residential University Heights Campus	0	11	592,343	

Total	31	201	5,578,536	5,906
--------------	-----------	------------	------------------	--------------

Table 3-3. UVM's parking supply by campus.

Parking Lot	Capacity	Leased Spaces	Usable Spaces
Athletic Commuter	1,674	0	1,674
Core Central	56	0	56
Core East	884	-100	784
Core North	369	0	369
Core South	193	0	193
Core West	434	-47	387
Commuter Lots	808	-485	323
Redstone Campus	619	0	619
Trinity	314	20	334
Off-Site	200	0	200
Total	5,551	-612	4,939

Table 3-4. Current & Future Employment and Enrollment for UVM.

	Current (2020)	Future (2025)
Employment		
Staff		
Full-time	2,218	2,335
Part-time	158	170
Faculty		
Full-time	1,352	1,375
Part-time	411	420
<i>Non-Burlington Employees¹</i>	<i>219</i>	<i>219</i>
<i>Subtotal</i>	<i>3,920</i>	<i>4,081</i>
Enrollment		
Undergraduate	10,700	10,800
Graduate and Certificate	1,627	1,800
Medical Student	478	500
Non-Degree Continuing Education	743	750
<i>Subtotal</i>	<i>13,548</i>	<i>13,850</i>
Total	17,468	17,931

¹These employees are subtracted when determining the subtotal of employees because it is unknown whether these employees are faculty/staff or part-time/full-time.

Table 3-5. UVM permit types, cost, and number of permits issues (December 2019).

Category	Type	Cost	Permits Issued
Employee Permits			
Green	Pre-Tax Payroll Deduction	0.64%	2,848
	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	Free	
	Affiliate		
	Affiliate 30-Day		
Occasional Use	Permit 6-12 Days	Free	872
	Brown (Peripheral)	\$ 2	
	White (Proximate)	\$ 3	
	Green (Main)	\$ 4	
Student Permits			
Residential	30-Day Black, Blue, Purple, and Red	\$ 55	1,442
	Temporary (1 Semester)	\$ 180	
	Black, Blue, Purple, and Red	\$ 330	
Commuter and Graduate Students/Medical Students (1st & 2nd Year)	30-Day Brown	\$ 19	1,540
	30-Day Gold	\$ 12	
	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	67
	30-Day Yellow	\$ 27	
Occasional Use			174
Carpool	Green		26
	White		6

Table 3-6. Citations given by UVM Transportation & Parking Services.

Violation	Fine	Citations Issued	Funds Collected
No Valid Permit	\$ 50	2,460	\$ 123,000
Habitual/Warning-No Permit	\$ 50	309	\$ 15,450
Habitual Offender-No Permit	\$ 110	360	\$ 39,600
Restricted Area	\$ 30	1,825	\$ 54,750
Habitual/Warning Restricted Area	\$ 30	266	\$ 7,980
Habitual Offender- Restricted Area	\$ 90	373	\$ 33,570
Expired Space	\$ 25	1,020	\$ 25,500
Habitual/Warning-Expired Space	\$ 25	166	\$ 4,150
Habitual Offender-Expired Space	\$ 85	231	\$ 19,635
Unauthorized Permit	\$ 80	42	\$ 3,360
Habitual Offender Unauthorized Permit	\$ 140	2	\$ 280
Falsified Information	\$ 80	1	\$ 80
Handicap Space	\$ 80	35	\$ 2,800
Permit Not Displayed	\$ 30	39	\$ 1,170
Relocating at Owner's Expense	\$ 55	2	\$ 110
Roadway	\$ 80	2	\$ 160
Total		7,133	\$ 331,595

4. University of Vermont Medical Center

Table 4-1. UVM Medical Center parking lot counts.

Medical Center Campus			
	10:00 AM	12:00 PM	2:00 PM
10/22/2019	1,983	-	1,121
10/24/2019	1,970	-	1,169
2/18/2020	1,549	1,590	1,608
2/19/2020	1,560	1,575	1,633
2/20/2020	1,540	1,601	1,636
Average		1,580	77%
Maximum		1,983	97%
1 South Prospect			
10/22/2019	425	-	432
10/24/2019	412	-	403
2/18/2020	414	422	434
2/19/2020	433	423	410
2/20/2020	393	375	411
Average		415	91%
Maximum		434	95%
Both Campuses			
Average		2,043	81%
Maximum		2,408	96%

Table 4-2. Maximum and average lot utilization for UVM Medical Center off-site lots (November 2019 – February 2020).

Lot Name ¹	Maximum Utilization	Average Utilization
UVM Catamount East	100%	90%
UVM Centennial	92%	77%
UVM Jeffords Lot	100%	93%
Technology Park	100%	84%
115 Lakeside Lot	92%	80%
Fanny Allen	100%	96%
Daily Aggregate of All Satellite Lots	89%	84%

¹Counts for the UVM Commuter West could not be provided. These lots are counted in UVM Medical Center's supply but are not used in lot utilization due to lack of data.

²These lot counts were not a part of the formalized process instituted by CATMA in October 2019. These counts reflect the average and maximum lot counts from November 2019 to February 2020. In the future, satellite lots will follow the same lot count process as on-site lots.

Table 4-3. 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>	1,698,739
1 South Prospect	
Other	149,404
Other Burlington Sites¹	
Other	58,477
Total	1,906,620

¹Other building sites are not included in GSF for JIPMP calculations.

Table 4-4. UVM Medical Center parking supply included in JIPMP.

Location	Number of Spaces
Medical Center Campus	
ACC Garage	1,224
ACC Loading Dock	21
ER Lot	47
ED Ambulance Bay	5
ED Ambulance Parking	4
McClure Parking Garage	317
Patrick Loading Dock	9
South Lot	425
<i>Subtotal</i>	2,052
1 South Prospect	
Lot A	47
Lot B	178
Lot D	197
Pearl Street Lot	35
<i>Subtotal</i>	457
On-Site Total	2,509

Table 4-5. UVM Medical Center parking supply not included in JIPMP.

Location	Number of Spaces
Other Burlington Sites	
95 St. Paul Street	18
112 Colchester Avenue	8
128 Lakeside Avenue	38
184 Pearl Street	12
195 Colchester Ave	40
199 Main Street	24
<i>Subtotal</i>	140
Off-Site Lots	

UVM Catamount East	285
UVM Centennial	200
UVM Jeffords Lot	100
UVM Core West	47
Fanny Allen Campus	155
Technology Park	200
115 Lakeside Ave	250
<i>Subtotal</i>	<i>1,237</i>
Off-Site Total	1,377

Table 4-6. Current & Future employment and patient/visitor for UVM Medical Center.

	Main Campus	1 South Prospect	Other Burlington Sites	Total
Current (2020)				
Full-time				
Day Shift	2,382	423	113	2,918
Evening Shift	300	9	0	309
Night Shift	595	8	0	603
Rotating Shift	794	39	7	840
Part-time				
Day Shift	492	68	10	570
Evening Shift	63	3	0	66
Night Shift	76	0	0	76
Rotating Shift	139	14	3	156
Other				
Per Diem Employees	726	66	8	800
<i>Employee Subtotal</i>	<i>5,567</i>	<i>630</i>	<i>141</i>	<i>6,338</i>
Non-Employee Users				
Out-patients	1,381	460		
In-Patients	500			
Visitors	360			
Current Total	7,808	1,090	141	9,039
Future (2025)				
Full-time				
Day Shift	2,382	423	113	2,918
Evening Shift	300	9	0	309
Night Shift	595	8	0	603
Rotating Shift	794	39	7	840
Part-time				

Day Shift	492	68	10	570
Evening Shift	63	3	0	66
Night Shift	76	0	0	76
Rotating Shift	139	14	3	156
Other				
Per Diem Employees	726	66	8	800
<i>Employee Subtotal</i>	<i>5,567</i>	<i>630</i>	<i>141</i>	<i>6,338</i>
Non-Employee Users				
Out-patients	1,381	460	0	1,841
In-Patients	500	0	0	500
Visitors	360	0	0	360
Future Total	7,808	1,090	141	9,039

Table 4-7. Total permits issued by UVM Medical Center (December 2019).

Location	Permits Issued
Medical Center Campus	
ACC permits	481
McClure Residents, Nurse practitioners, Phys Assistants, Midwives	564
Physicians (ACC permits)	1,458
Carpools (956 participants)	478
Business Needs	347
115 Lakeside, day shift	790
115 Lakeside, rotator	492
Fanny Allen Shuttle Lot	467
Fanny Allen/Rotators	163
Centennial/Day	106
Centennial/Rotators	36
South Lot	443
UVM Catamount East/Day	505
UVM Catamount East/Rotators	125
UVM Jeffords Lot/Day	184
UVM Jeffords Lot/Rotators	18
Evening/Night	1,417
1 South Prospect	
Centennial Day	512
Centennial Rotator	81
Pearl	17
Taft	70



MEMORANDUM: October 8, 2020

To: David White, Meagan Tuttle, and Scott Gustin at City of Burlington
From: Sandy Thibault and Kim Furtado at CATMA
Subj: UVM's Potential Leasing of 351 Pine Street in relation to the CATMA 2020-2025 JIPMP

In the 2020-2025 CATMA Joint Institutional Parking Management Plan (JIPMP), the University of Vermont's current and future parking supply contain a new 200-space parking lot located at 351 Pine Street. 351 Pine Street was approved by the Development Review Board for a Conditional Use E-LM permit on December 3, 2019. The utilization of 351 Pine Street for residential student long-term parking/storage was a necessary requirement for approval of the 149 Beaumont Avenue Firestone addition due to the project's impact to on-site parking.

At the time of approval, UVM's on-site lots averaged an 83% occupancy rate at peak time. However, both approval for 351 Pine Street and 149 Beaumont Avenue preceded the COVID-19 pandemic which has dramatically altered parking occupancy on UVM's campus. As of September 30, 2020, UVM's on-site lots averaged a 61% utilization rate (*Attachment 1*). Due to this low utilization, using 351 Pine Street as vehicle storage is unnecessary for the 2020-2021 academic year. The City of Burlington's Planning and Zoning Department has permitted UVM to sublease its 351 Pine Street from October 1, 2020 through August 2021, pending Act 250 approval and acknowledgement within the 2020-2025 JIPMP vis-à-vis this memo. The lot will be used for vehicle storage by a local car dealership and will not result in any increase in traffic.

The analysis contained within the CATMA 2020-2025 JIPMP was produced using data collected in Fall 2019, and it would be inconsistent to amend the JIPMP with partial data collected under different pretenses. However, to provide the City with as accurate conditions as possible given existing data, a demand estimate using updated enrollment numbers and without the 351 Pine Street parking lot was created (*Attachment 2*). With a new supply of 4,740 spaces and reduced in-person student enrollment numbers, UVM's estimated demand for Fall 2020 is 4,401 leaving them a 339-space surplus. This demand estimate is not as accurate as that provided within the JIPMP due to expected differences in peak time on-campus and clearly overestimates demand when compared to current utilization. CATMA is confident UVM has the on-site parking capacity to manage demand without the 200 spaces at 351 Pine Street until August 2021. The Spring 2021 JIPMP Annual Update will address this change in more detail, as both CATMA and UVM will closely monitor on-site utilization over the coming months.

If you have any questions, please reach out to Kim or me. Thank you.



Attachment 1: Average occupancy counts for UVM's parking lots in September 2020.

UVM PEAK DEMAND LOT COUNTS - September 2020				
Location	Usable Spaces	Occupied Spaces	Empty Spaces	Percent Full
Athletic Commuter	1,674	867	807	52%
Core Central	57	44	13	77%
Core East	784	577	207	74%
Core North	369	219	150	59%
Core South	193	50	143	26%
Core West	387	163	224	42%
Commuter Lots	323	249	74	77%
Redstone	619	498	121	80%
Trinity	334	214	120	64%
Total	4,740	2,881	1859	61%

Attachment 2: Estimated demand for UVM's parking lots for Fall 2020 Semester.

University of Vermont			
User Group	Number of Potential Users	Peak Parking Demand ¹	
		% of Users	Spaces
Employees ²	3,920	60.6%	2,376
On-Campus Students ³	5,227	13.3%	696
Off-Campus Students ⁴	6,010	15.4%	926
Visitors			185
Fleet			218
Total Peak Parking Demand⁵			4,401
Total Parking Supply			4,740
Net Spaces			339

1. Peak parking demand is calculated from data collected in the 2019 CATAMA 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. These numbers have not been changed. UVM will have updated numbers in November 2020.
3. UVM converted Jeanne Mance, Slade, and the Cottages for quarantine/isolation spaces.
4. This number only includes students with in-person access to UVM. 2,055 students have chosen the At Home/Online option for Fall 2020 and have no access to on-campus facilities.
5. Total peak parking demand has a margin of error of ± 210 spaces.

Burlington Planning Commission

149 Church Street
Burlington, VT 05401
Telephone: (802) 865-7188
(802) 865-7195 (FAX)
(802) 865-7144 (TTY)

www.burlingtonvt.gov/pz

Andy Montroll, Chair
Bruce Baker, Vice-Chair
Yves Bradley
Alexander Friend
Emily Lee
Harris Roen
Jennifer Wallace-Brodeur

Burlington Planning Commission with the City Council Ordinance Committee Wednesday, September 23, 2020, 6:30 P.M. Remote Meeting via Zoom Draft Minutes

Commissioners:	A Montroll, B Baker, Y Bradley, A Friend, E Lee, H Roen, J Wallace-Brodeur
Councilors:	C Mason, J Hanson, Z Hightower
Staff Present: D White, M Tuttle, S Gustin, K Sturtevant	

I. Agenda

Call to Order	Time: 6:32pm
Agenda	No change

II. Public Forum

Name	Comment
	There were no members of the public who spoke during public forum.

III. Proposed CDO Amendment: Short Term Rentals

No action.		
Motion:	Second:	Vote: N/A
Slides and details about the Short Term Rental scenarios discussed in this meeting can be found online at: https://www.burlingtonvt.gov/CityPlan/PC/Agendas		
Commission discussion: Regarding STR Scenario 1: no further changes		
Regarding STR Scenario 6: - Clarify that 4+ STR units in a building are included in this scenario, and that Housing Replacement replies whether 4 or all units are used as STRs.		
Regarding STR Scenario 5: - Questions and ideas were shared regarding limiting a cap on the total number of STR's citywide, and of incentivizing empty student rentals to be STRs during peak tourism season. Staff discussed the limitations of zoning to achieve these ideas. Regarding limiting the number, licensure may be a more direct way to achieve this. - The Committee recommended changing the allowable number of STRs on a property to 1 STR in buildings up to 4 units, 2 STRs in a buildings up to 6 units, and 3 STRs in buildings of 7+ units. Also reflect that 4+ STRs becomes Scenario 6. - In future, discuss as two scenarios: host on-site, vs. host off-site to help clarify what is permitted vs conditional use.		

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) 865-7144.

Wednesday, September 23, 2020

- Committee members asked about options to revoke zoning permits for STRs if too many are created. City attorney will provide further information about how S. Burlington amortized signs, as requested.

Regarding STR Scenario 4:

- Committee generally agreed that host does not need to live on site, and that Housing Replacement is not an appropriate mechanism for this scenario.
- Committee members asked about how rooms and meals tax would work for STRs; City Attorney will provide more information about whether a different rate of tax could be applied to STRs in RL zoning districts vs in other districts.

Regarding STR Scenario 3:

- Committee felt parking requirements were onerous. Suggested that the parking ratio is equal to the number of bedrooms rented minus one.

IV. Commissioner Items

Action: N/A		
Motion: NA	Second: NA	Vote: NA
- Next meeting is Tuesday, October 13 at 6:30pm on Zoom for the Planning Commission. - September 22 meeting will be moved to September 23 at 6:45pm on Zoom. This will be a joint meeting with the Council Ordinance Committee to discuss Short Term Rentals		

V. Minutes & Communications

Action: Approved the minutes and accepted the communications		
Motion by: H Roen	Second: A Friend	Vote: Approved Unanimously
Minutes Approved: August 25, 2020 Planning Commission Meeting		
Communications Filed:		
- See agenda packet		

VI. Adjourn

Adjournment		Time: 8:09pm	
Motion: H Roen	Second: J Wallace-Brodeur	Vote: Approved Unanimously	



City of Burlington, VT
149 Church Street, 3rd Floor
Burlington, VT 05401
Phone: (802) 865-7144

www.burlingtonvt.gov/plan

TO: Burlington City Council
Mayor Weinberger
FROM: Scott Gustin, Principal Planner & Zoning Division Manager
DATE: **DATE**
RE: Convalescent Homes Parking & Lot Coverage

Overview & Background

At their September 10, 2019 meeting, the Planning Commission considered a zoning amendment request from Birchwood Terrace nursing facility. The zoning amendment request contained two parts:

- Adjust the maximum permissible lot coverage to 44% (same as the IZ allowance).
- Adjust the minimum parking requirement to 1 parking space per 2 patient beds.

The requested lot coverage amendment is simple and was supported by the Planning Commission. Within the RL zone (wherein the facility is located), 35% is the typical lot coverage limit. Developments containing inclusionary housing units benefit from a higher permissible lot coverage of 44%. The Senior Housing bonus of Sec. 4.4.5 (d) 7 A, which Birchwood Terrace qualifies for, affords a 40% permissible lot coverage limit. The amendment would simply make the lot coverage associated with the senior housing bonus the same as that associated with inclusionary zoning (44%).

The requested parking amendment was the subject of debate. Presently, the CDO requires 1 parking space per 4 beds for convalescent (nursing) homes in all parking districts. Birchwood is seeking to double that minimum requirement to 1 space per 2 patient beds. By comparison, hospitals require 2 parking spaces per patient bed in all parking districts. The Birchwood facility contains 144 beds (but is permitted for 160 beds) and is seeking a total of 96 parking spaces. The Planning Commission requested that staff look at four potential alternatives:

- Remove the 125% upper parking limit for convalescent homes.
- Eliminate the minimum parking requirement for convalescent homes (therefore no maximum).
- Adjust the minimum parking requirement for convalescent homes per Birchwood's request or per the hospital standard.
- Do nothing.

Staff and the Commission discussed these options extensively. Ultimately, it was recommended that the minimum parking requirement be amended to be consistent with hospital standards. The Planning Commission expressed a preference that management of on-street parking resources and nearby shared parking opportunities were re-evaluated to meet these parking needs, but also considered the evidence shared by Birchwood regarding the factors leading to increased parking demand for these types of facilities.

The Council Ordinance Committee discussed this amendment during its September 28 meeting. After discussion, the Committee forwarded the amendment back to Council for public hearing without the change to the minimum parking requirements for the convalescent homes. The Committee cited discomfort with 1) the application of this new standard city-wide, and 2) the perspective that the change seems to contradict the recent parking amendments adopted in ZA-20-04. The Committee's preference is for Birchwood to pursue its options under the DRB's waiver process.

~~Note that lot coverage, even amended as requested, limits the amount of parking that can be provided onsite to 93 spaces.~~

~~Sec. 8.1.9, Maximum Parking Spaces, limits onsite surface parking to 125% of the minimum parking requirement. There are several exemptions to this standard predicated on the type of parking (i.e. structured, public, carpool, and alternative fuel vehicle) but none related to use. Picking a single use and exempting it from this standard runs counter to equal application of the law for all development in the city and is not good land use policy. Doing so also begs the question: Why not others?~~

~~Eliminating the minimum parking requirement for convalescent homes could arguably have the effect of eliminating the 125% maximum parking limitation. However, doing so plainly disregards the well-documented need for onsite parking at such facilities.~~

~~Amending the present 1 space to 4 beds minimum parking requirement for convalescent homes to 1 space per 2 beds as requested by Birchwood would result in a minimum requirement of 72 spaces for 144 beds (and a maximum of 90 spaces) or 80 spaces for 160 beds (and a maximum of 100 spaces). The rationale for the requested change is well documented in Birchwood's September 10 submission to the Planning Commission. Importantly, the change in minimum parking requirement to 1 space per 2 beds would not result in a parking nonconformity. A change to the hospital standard of at least 2 spaces per bed would result in a parking nonconformity. There is simply no feasible way to provide 288 or more parking spaces on Birchwood's property.~~

~~Leaving the present parking standard of 1 space per 4 beds unchanged could still allow Birchwood to achieve nearly all of its desired parking. Under an amended lot coverage maximum of 44%, Birchwood could apply again to the Development Review Board for a maximum parking waiver. Birchwood has already obtained a maximum parking waiver from the DRB for 75 spaces, limited only by lot coverage. An increase in permissible lot coverage would enable Birchwood to seek another maximum parking waiver for additional parking within the revised lot coverage limit. While possible, the maximum parking waiver involves a discretionary process by the Development Review Board.~~

~~Of the four possible alternatives, adjusting the onsite parking minimum requirement to 1 space per 2 beds is the best. The need is well supported by the documentation provided to the Planning Commission on September 10, whereas the rationale for the present standard of 1 space per 4 beds is unknown. This change would retain parking conformity and would avoid the need for a discretionary waiver process before the DRB. At their June 9, 2002 meeting, the Planning Commission moved the proposed amendment along to public hearing with this recommended course of action. As noted at the June 9 meeting, the amendment has been revised to make NAC and NMU changes to make the senior housing lot coverage bonus consistent with the inclusionary bonus in those zones as well.~~

Proposed Amendment

Amendment Type

Text Amendment	Map Amendment	Text & Map Amendment
----------------	---------------	----------------------

Purpose Statement

The purpose of this proposed amendment is to ~~better reflect the actual parking needs of convalescent homes in Burlington. The proposed amendment is twofold. In the residential and neighborhood mixed use zones, it will change~~ align the allowable lot coverage associated with the senior housing bonus to be identical to the allowable lot coverage associated with inclusionary housing ~~in residential and neighborhood mixed use zones.~~ The amendment will also change the minimum parking requirement for convalescent homes of 1 space per 4 beds in all parking districts to 1 space per 2 beds in all parking districts.

Proposed Amendments

To achieve the purpose identified above, the proposed amendment affects Table 4.4.5-5, *Senior Housing Bonus*, ~~and Table 8.1.8-1, *Minimum Off-Street Parking Requirements*~~. It also affects Sec. 4.4.2 (d) 3 B.

Relationship to planBTV

This following discussion of conformance with the goals and policies of planBTV is prepared in accordance with the provisions of 24 V.S.A. §4441(c).

Compatibility with Proposed Future Land Use & Density

This amendment has no impact on proposed future land use. It impacts density only insofar as it increases allowable lot coverage for senior housing facilities to be consistent with that allowed for developments containing inclusionary housing.

Impact on Safe & Affordable Housing

Convalescent homes provide a place to live for some of our most elderly and frail residents. This amendment is intended to better address the ~~parking~~ needs of such facilities – in large part to accommodate the staff necessary to care for, and support, residents in convalescent homes. As such, the amendment will contribute to the functionality of such homes in our community.

Planned Community Facilities

The proposed amendment has no impact on planned community facilities.

Process Overview

The following chart summarizes the current stage in the zoning amendment process, and identifies any recommended actions:

Planning Commission Process				
Draft Amendment prepared by: Staff, based on discussion with the Planning Commission	Presentation to & discussion by Commission 9/10/19, 6/9/20	Approve for Public Hearing 6/9/20	Public Hearing 7/14/20	Approved & forwarded to Council 7/14/20
				Continue discussion
City Council Process				
First Read & Referral to Ordinance Cmte 8/10/2020	Ordinance Cmte discussion 9/28/2020	Ordinance Cmte recommend as modified 9/28/2020	Second Read & Public Hearing	CCOC Recommends Approval & Adoption
				Rejected

Sec. 4.4.2 Neighborhood Mixed Use Districts

(d) District Specific Regulations

3. Development Bonuses / Additional Allowances

A. Inclusionary Housing

As written.

B. Senior Housing

A maximum of an additional 10-feet of building height, and corresponding FAR, may be permitted at the discretion of the DRB in the NAC and NAC-Riverside districts where no less than twenty-five per cent (25%) of the total number of onsite units are reserved for low-moderate income senior households as defined by state or federal guidelines, including no less than ten percent (10%) reserved for low-income households. The total gross floor area dedicated to the senior housing shall be equivalent to the gross floor area resulting from the additional allowance. Increased lot coverage allowance for senior housing in these districts shall be the same as for inclusionary housing (See Sec. 9.1.12).

C. Maximum Bonus

As written.

Sec. 4.4.5 Residential Districts

(d) District Specific Regulations

7, Residential Development Bonuses

A. Senior Housing Bonus

Residential development in excess of the density, lot coverage and building height limits specified in Tables 4.4.5-2 and 4.4.5-3 may be permitted by the DRB for senior housing provided the following conditions are met:

- (i) No less than twenty-five (25) per cent of the total number of units shall be reserved for low-moderate income households as defined by state or federal guidelines, including no less than ten (10) per cent reserved for low-income households. (Projects taking advantage of this bonus are exempt from the Inclusionary Zoning requirements of Article 9, Part 1.);
- (ii) The proposal shall be subject to the design review provisions of Art. 6;
- (iii) A maximum of an additional 10-feet of building height may be permitted in the RH District; and,
- (iv) Lot coverage and residential densities shall not exceed the following:

Table 4.4.5-5: Senior Housing Bonus

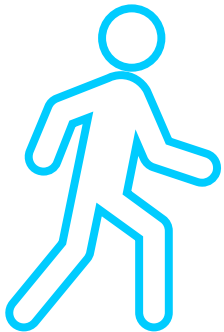
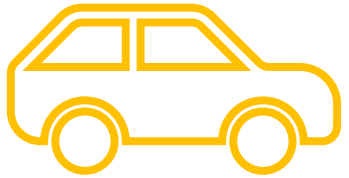
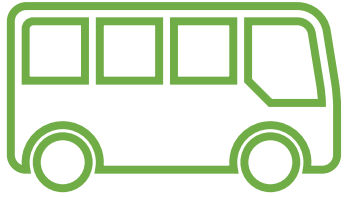
District	Maximum Coverage	Maximum Density
RL / RL-W	40 44%	20 du / ac
RM	50 48%	40 du / ac
RM-W	60 72%	40 du / ac
RH	80 92%	80 du / ac

Sec. 8.1.8. Minimum Off-Street Parking Requirements

~~(a) — (c) As written.~~

Table 8.1.8-1 Minimum Off-Street Parking Requirements			
	Neighborhood Districts	Shared-Use Districts	Downtown Districts
RESIDENTIAL USES¹ As written.	Per Dwelling Unit except as noted		
RESIDENTIAL USES – SPECIAL	Per Dwelling Unit except as noted		
Assisted Living	0.5	0.5	0.4
Bed and Breakfast (per room, in addition to single-family residence)	1	0.75	0.5
Boarding House (per two (2) beds)	1	0.75	0.5
Community House	1	0.75	0.5
Convalescent Home (per four (4) two (2) beds)	1	1	1
Dormitory (per two (2) beds)	1	1	1
Emergency Shelter	0	0	0
Group Home (per two (2) beds)	1	1	1
Historic Inn (per room, in addition to single-family residence)	1	0.75	0.5
Sorority & Fraternity (per two (2) beds)	1	1	1
NON-RESIDENTIAL USES As written.	Per 1,000-square feet of gross floor area (gfa) except as noted		

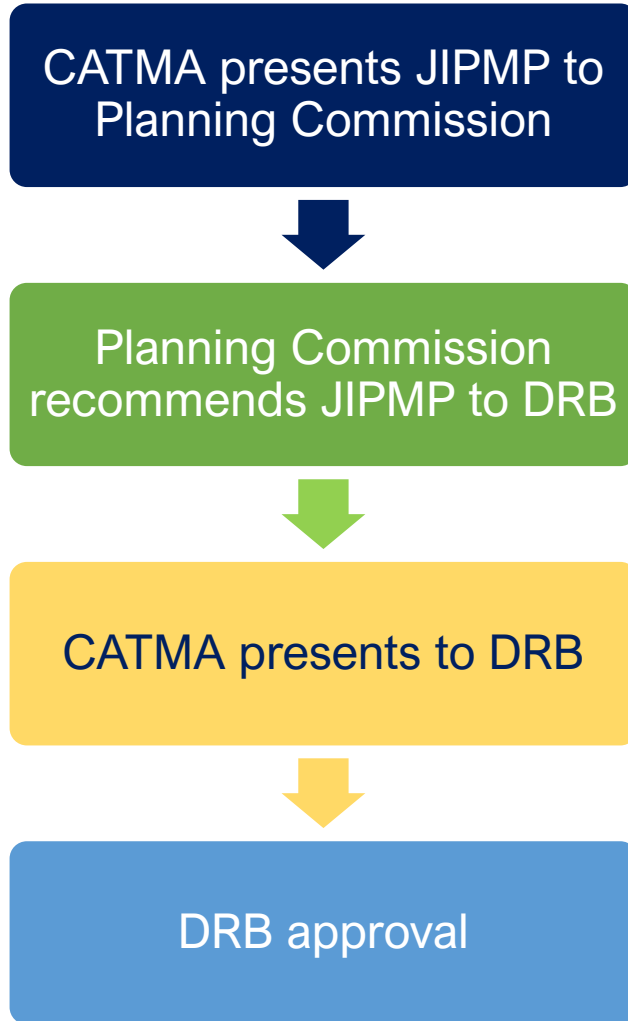
[End text amendment]



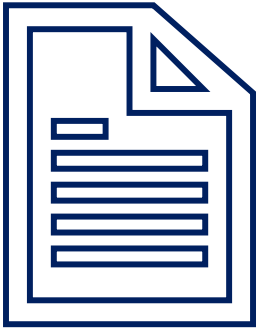
2020-2025 JOINT INSTITUTION PARKING MANAGEMENT PLAN

BURLINGTON PLANNING COMMISSION
October 13, 2020

PROCESS



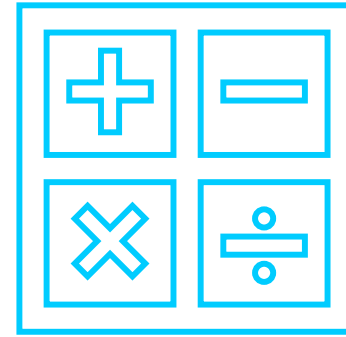
UPDATES FROM LAST REPORT



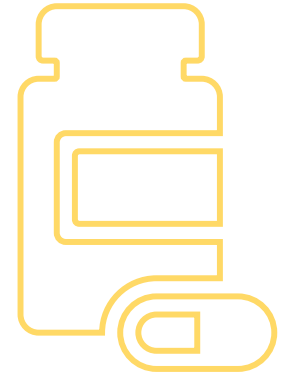
**NEW
FORMAT**



**UPDATED
SURVEY
QUESTIONS &
LOT COUNT
PROCEDURES**



**NEW PARKING
DEMAND
ESTIMATE
FORMULA
(GUIDANCE FROM
TRC)**



**COVID-19
IMPACTS**

COMPLEMENTARY METHODS

LOT COUNTS

- Low cost and methodologically straight forward
- Effective for calculating demand ratio when utilization is below effective capacity
- Does not capture on-street parking or latent demand,
- One-off counts have a small sample size and miss seasonal variability
- Tendency to provide a lower estimate parking demand

USER SURVEYS

- Effective for capturing entire parking demand (including on-street)
- Easy to track for different user groups (e.g. faculty vs staff)
- Provides additional information on latent demand, mode choices, etc.
- Does not capture day-to-day variations in demand related to illness, travel, etc.
- Tendency to provide a higher estimate of parking demand



EMPLOYEE & STUDENT TRANSPORTATION SURVEYS

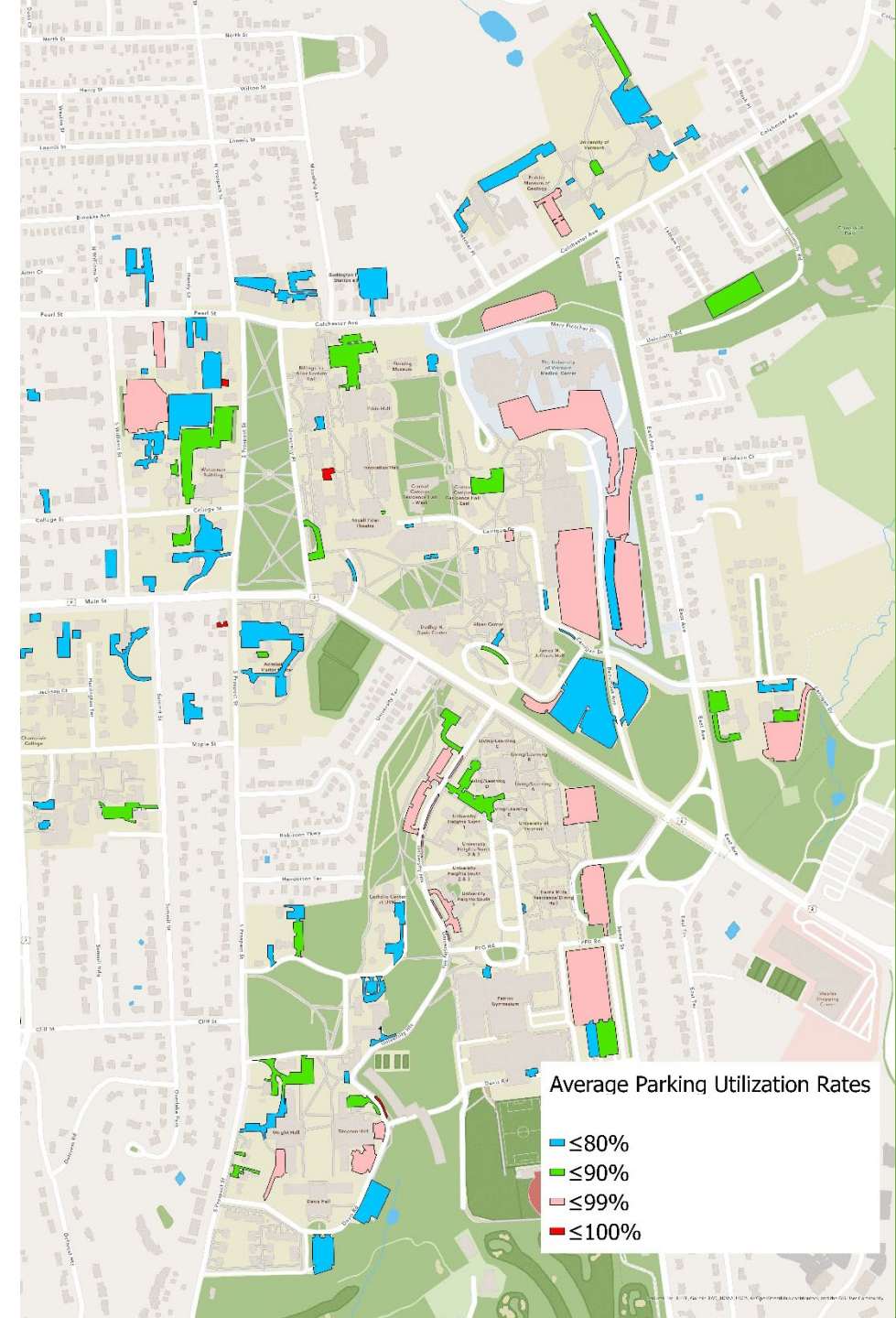
- Survey conducted in October/November of 2019
- Updated survey questions to collect key data points:
 - Primary commute mode
 - Time on campus
 - On-street parking details
- Weighted survey data to better represent populations

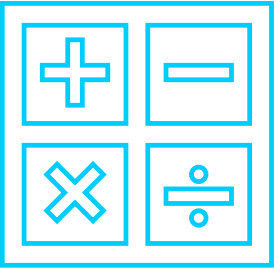
	Launch Date	Population Total	Solicitation Total	Total Responses	Response Rate
Student Survey					
Champlain	10/28/2019	2087	2059	515	25%
UVM	10/28/2019	13850	13960	2892	21%
Employee Survey					
Champlain	10/29/2019	880	705	190	22%
UVM	10/30/2019	4205	4289	1299	31%
UVMMC	10/29/2019	4670	8631	2678	57%



INSTITUTIONAL LOT COUNTS

- Standardized lot count procedure
- Each institution conducts quarterly counts on the same time and dates for consistent data
- Campus lots
- New satellite lot counts
- Data informs utilization trends





PARKING DEMAND ESTIMATES

Employees & Off-Campus Students

$$\text{Demand} = \text{All Potential Group Users} \times \frac{[\text{Group Respondents Driving Alone at Peak Time} + \frac{1}{2}(\text{Group Respondents Carpool at Peak Time})]}{\text{All Group Respondents}}$$

On-Campus Students

$$\text{Demand} = \text{All Potential Group Users} \times \frac{\text{Group Respondents who Own Vehicle}}{\text{All Group Respondents}}$$

EXECUTIVE SUMMARY



Table 2-1: Current parking conditions and CDO requirements for all institutions.

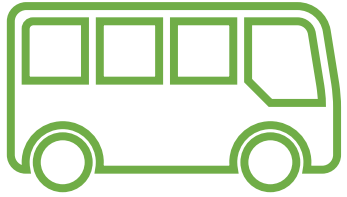
	Champlain College	UVM	UVM Medical Center
Current Conditions			
Current Potential Users	2,967	17,468	6,197
Current Demand (Survey)	612	4,754	2,330
Current Maximum Parking Utilization (Lot Counts)	599	3,958	2,408
Minimum Parking Required by CDO	1,677	11,159	3,284
Current Parking Supply	685	4,939	2,509

Table 2-2: Future parking conditions and CDO requirements for all institutions.

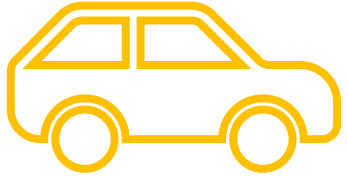
	Champlain College	UVM	UVM Medical Center
Future Conditions			
Future Potential Users	2,910	17,931	6,197
Future Demand (Survey)	591	4,867	2,330
Minimum Parking Required by CDO	1,754	11,313	3,284
Net Impact of Planned Projects (2020-2025)	-	128	-
Future Parking Supply	635	5,067	2,509
Waiver Request	1,119	6,246	775



COLLECTIVE TDM STRATEGIES



- CATMA TDM strategies (programs, incentives, services)
- Electric-assist bikeshare system
- Shared parking (UVM & UVMMC)
- Off-site parking & shuttles
- Vanpools & Microtransit



CHAMPLAIN COLLEGE

Current Conditions

Champlain College			
User Group	Number of Potential Users	Peak Parking Demand	
		% of Users	Spaces
Employees	880	40%	352
On-Campus Students	1479	14%	208
Off-Campus Students	608	5%	31
Visitors	<i>Estimated provided by Champlain.</i>		15
Fleet			6
Total Peak Parking Demand			612
Total Parking Supply			710
Net Spaces			98

Table 3-3: Current parking demand estimate for Champlain College.



CHAMPLAIN
COLLEGE

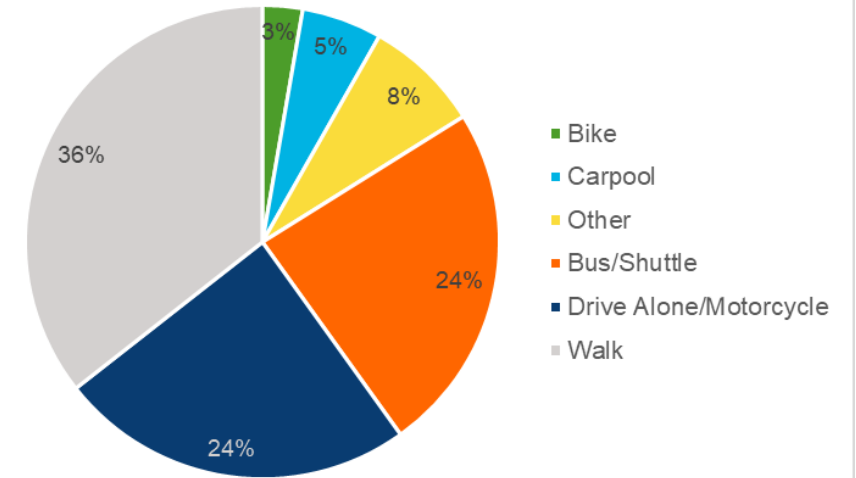


Figure 3-3: Mode breakdown for all Champlain College employees & students.

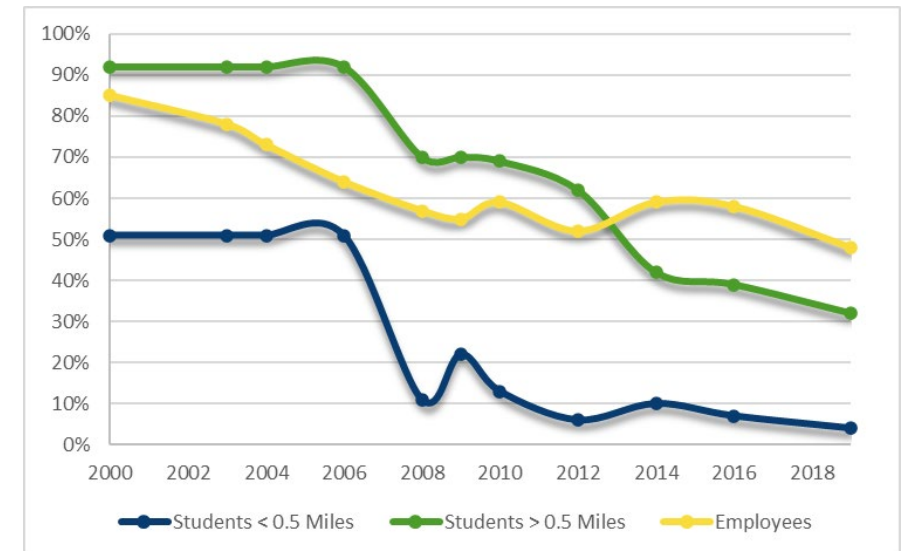


Figure 3-4: Drive Alone trend for Champlain College.



CHAMPLAIN COLLEGE

Future Conditions

Champlain College			
User Group	Number of Potential Users	Peak Parking Demand	
		% of Users	Spaces
Employees	830	40%	332
On-Campus Students	1474	14%	207
Off-Campus Students	606	5%	31
Visitors	<i>Estimated provided by Champlain.</i>		15
Fleet			6
Total Peak Parking Demand			591
Total Parking Supply			660
Estimated TDM Effects			-25
Net Spaces			94

Table 3-6: Future parking demand estimate for Champlain College.

Project Name	Change in Building Area	Associated Change in Parking Requirements	Est. Completion
MIC Addition	8,000	0	2025
Foster Hall Addition	3,500	0	2025
New ITS Building	27,000	0	2025

Table 3-5: Planned construction projects for Champlain College.

CHAMPLAIN COLLEGE

Highlights of TDM Strategies

TDM and COVID-19 Response

- Pay per use parking instead of traditional permit structure
- New shuttle schedule
 - Lakeside Shuttle
 - 194 St. Paul Shuttle

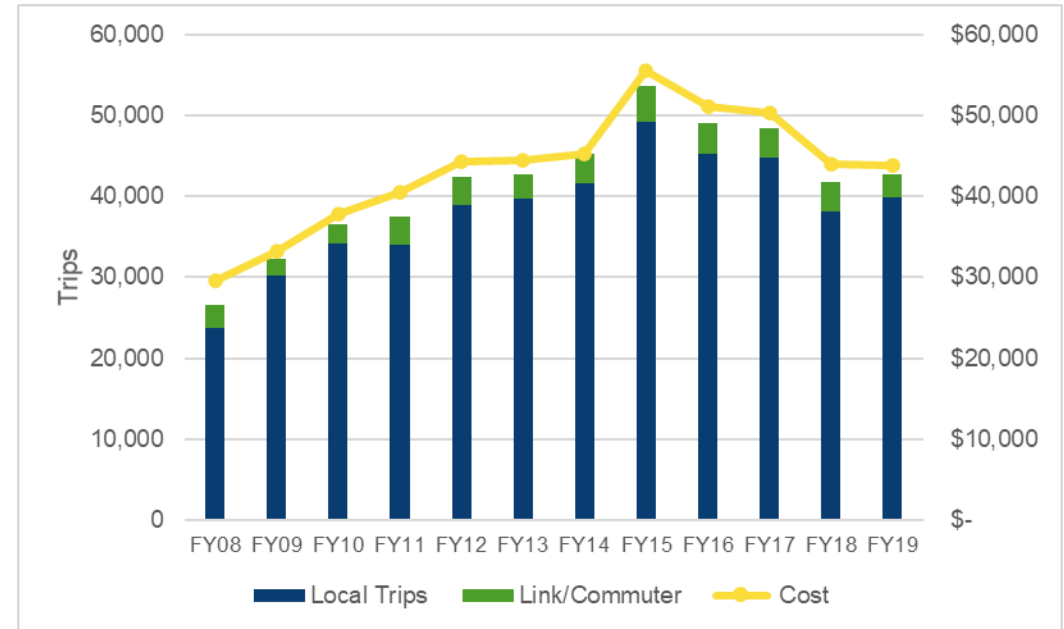


Figure 3-6: Champlain College's GMT Unlimited Access usage over time.

UNIVERSITY OF VERMONT

Current Conditions

University of Vermont			
User Group	Number of Potential Users	Peak Parking Demand	
		% of Users	Spaces
Employees	3,920	60.6%	2,376
On-Campus Students	5,366	13.3%	714
Off-Campus Students	8,182	15.4%	1,261
Visitors	Estimates provided by UVM.		185
Fleet			218
Total Peak Parking Demand			4,754
Total Parking Supply			4,939
Net Spaces			185

Table 4-4: Current parking demand estimate for UVM.

Difference in supply between previous JIPMP and now is due to increase in UVM's supply.

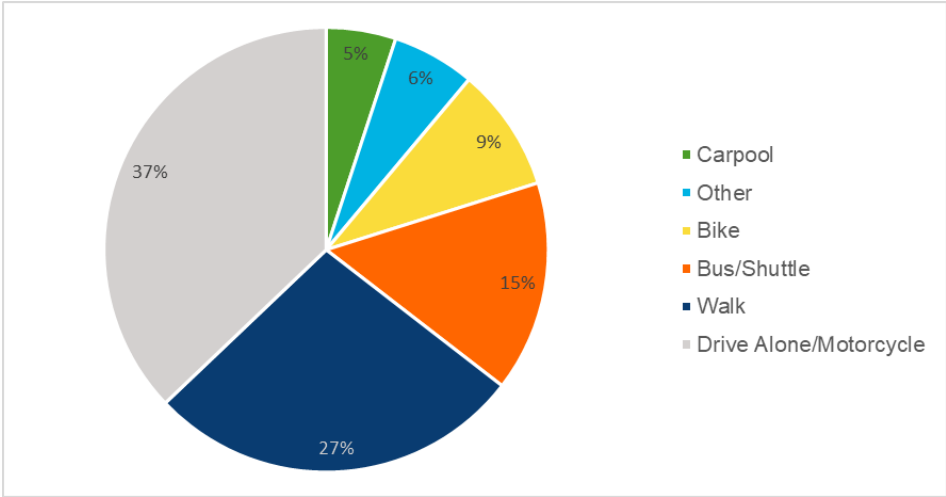


Figure 4-3: Mode breakdown for all UVM employees & students.

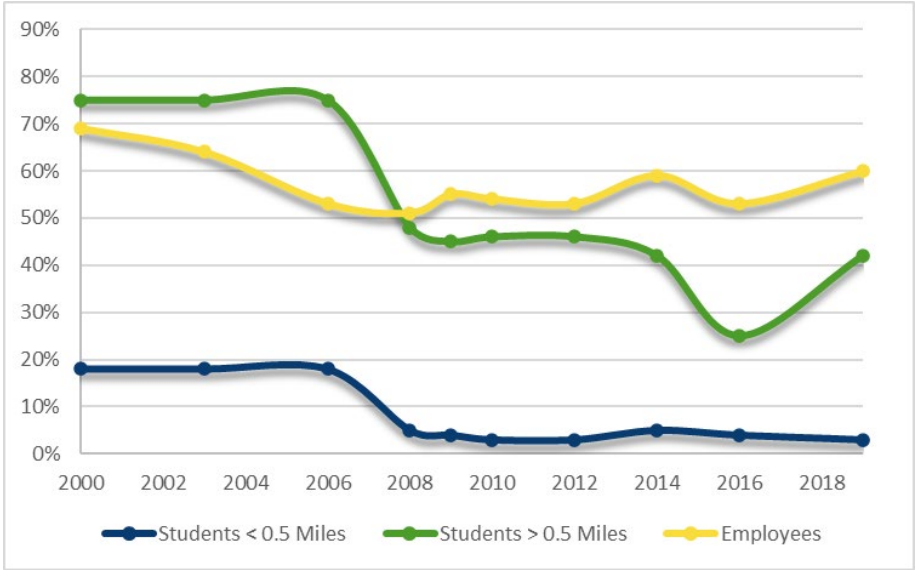


Figure 4-4: Drive Alone trend for UVM.

UNIVERSITY OF VERMONT

Future Conditions

University of Vermont			
User Group	Number of Potential Users	Peak Parking Demand	
		% of Users	Spaces
Employees	4,081	60.6%	2,474
On-Campus Students	5,516	13.3%	734
Off-Campus Students	8,334	15.4%	1,284
Visitors	<i>Estimates provided by UVM.</i>		185
Fleet			190
Total Peak Parking Demand			4,867
Total Parking Supply			5,067
Estimated TDM Effects			-77
Net Spaces			277

Table 4-8: Future parking demand estimate for UVM.

Difference in supply between previous JIPMP and now is due to increase in UVM's supply.

Project Name	Change in Building Area	Associated Change in Parking	Est. Completion
Music Building Recital Hall Addition	4,544	3	2022
New Research Facility for COM	75,000	-121	
Jeffords East Lower Lot	0	67	
University Road (East Ave to Compound)	0	15	
University Heights Road (Southwick)	0	7	
Pomeroy Barn & 172 South Prospect	-6,067	15	
Virtue Field Phase 2	5,000	0	
ADA Code Compliance	0	-20	2024
Blundell	0	5	
Fleming Museum	0	20	
Outing Club Relocation	13,250	5	
Southwick Hall	0	3	
Tarrant (Multi-Purpose) Event Center	119,099	0	2025
Interfaith Center Parking Lot	0	40	
Torrey Hall Addition	2,860	0	
Miscellaneous Parking Adjustments		25	
Bioresearch Complex	0	200	
Future Structured Parking	0	TBD	Unknown
Coolidge Hall	-30,510	-10	
Colchester Ave/Dewey	-82,622	-83	
Back 5 & Cottages (Trinity Campus)	-64,907	-243	
Colchester Research Facility	0	200	
Total	35,647	128	

Table 4-6: Planned construction projects for UVM.

UNIVERSITY OF VERMONT

Highlights of TDM Strategies

- Nelson Nygaard Study
- Off-Site Satellite Lots
 - Pine Street Lot
 - Colchester Research Facility
- TDM Module
- Parking Cash Out Pilot
- COVID Shuttle Updates

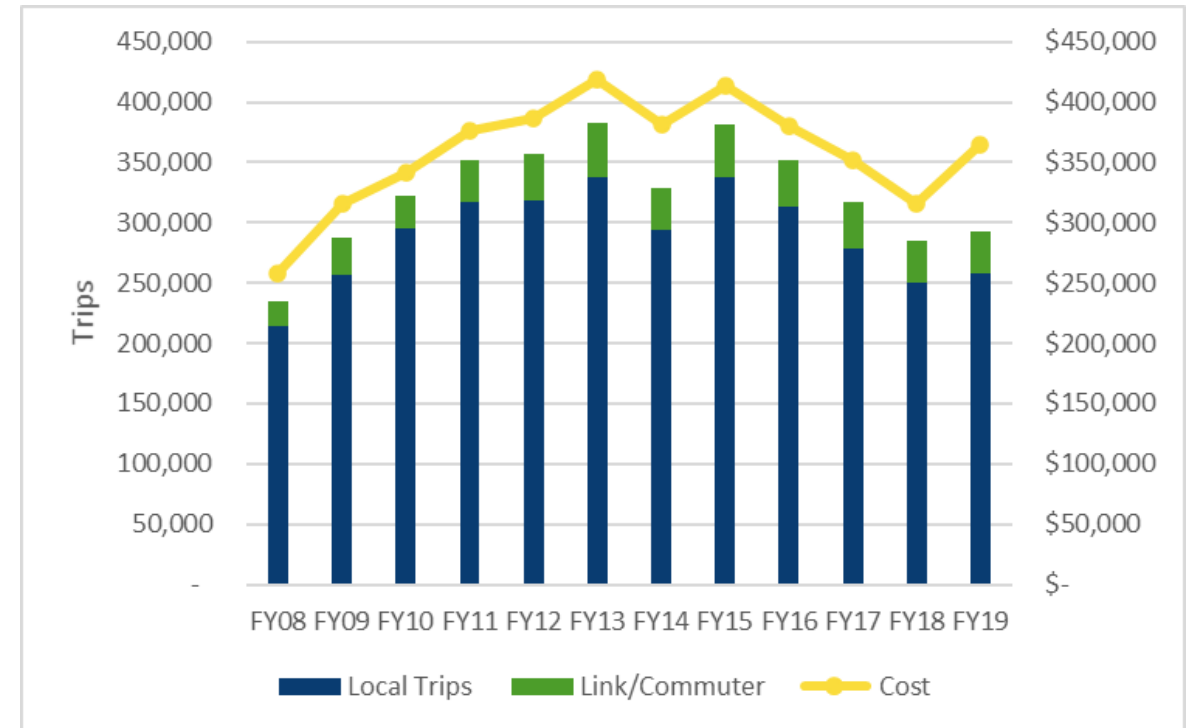


Figure 4-6: UVM's GMT Unlimited Access usage over time.

UVM MEDICAL CENTER

Current Conditions

UVM Medical Center				
User Group		Number of Users	Peak Parking Demand	
			% of Users	Spaces
Medical Center Campus				
Employees		5,567	17.8%	991
Out-Patients		Estimates provided by UVM MC.		708
In-Patients				75
Visitors				250
Fleet				38
Subtotal				2,062
1 South Prospect				
Employees		630	3.7%	24
Out-Patients		Estimates provided by UVM MC.		236
Fleet				8
Subtotal				268
Total Peak Parking Demand				2,330
Total Parking Supply				2,509
Net Spaces				179

Table 5-2: Current parking demand estimate for UVM Medical Center.

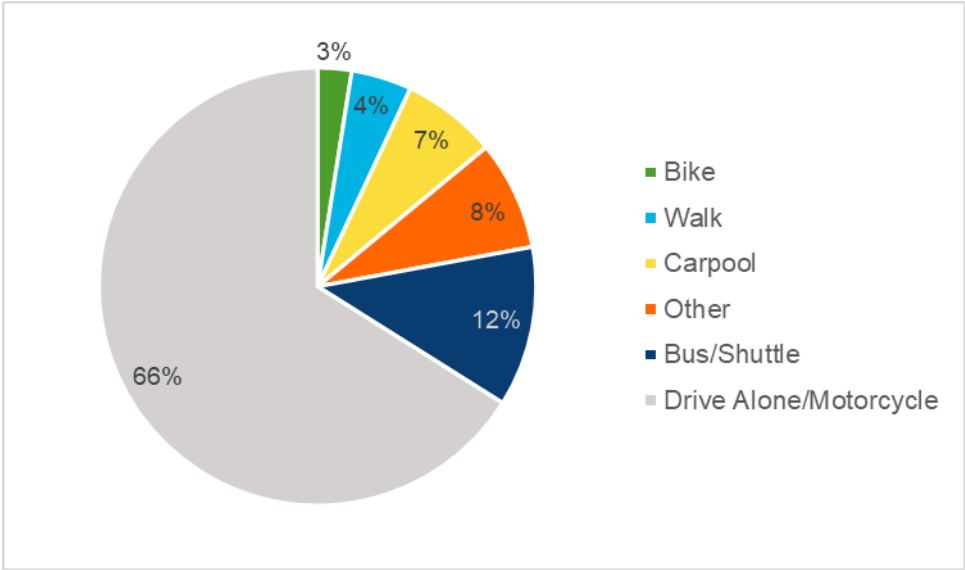


Figure 5-3: Mode breakdown for all UVM Medical Center employees.

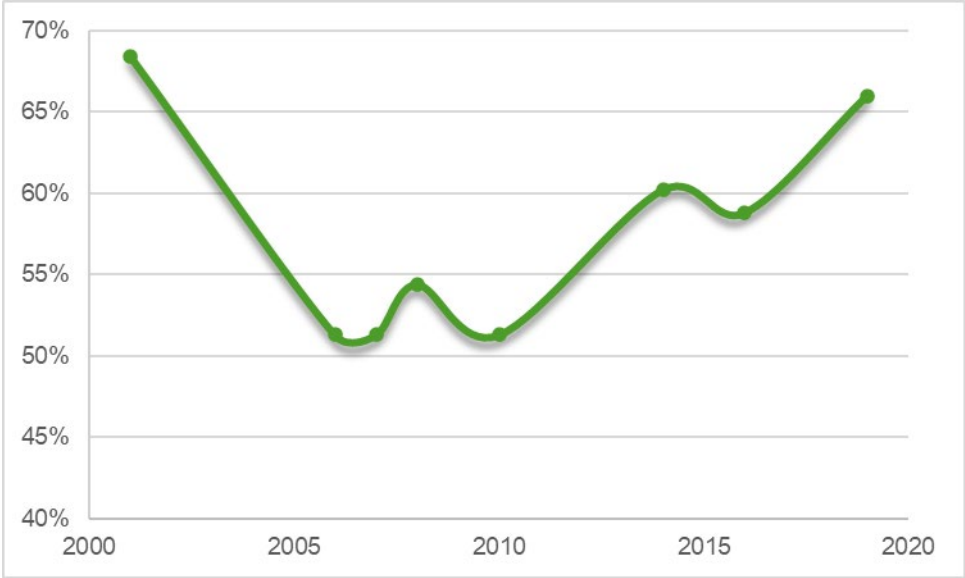
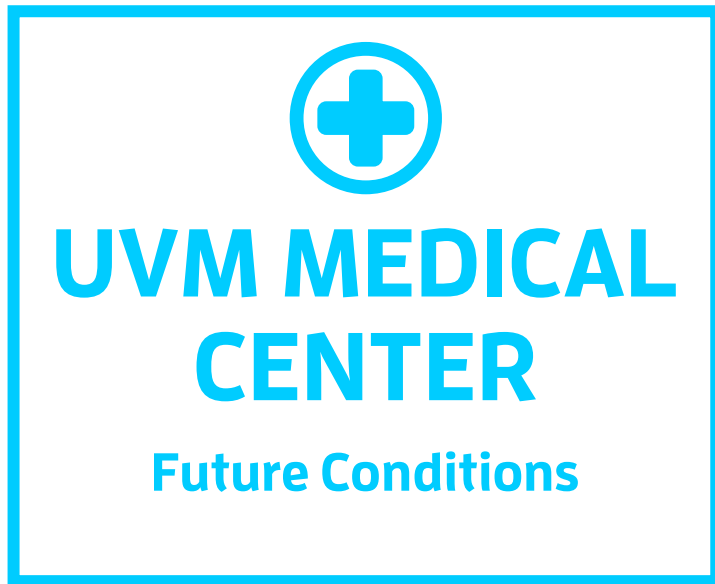


Figure 5-4: Drive Alone trend for UVM Medical Center.



UVM Medical Center			
User Group	Number of Potential Users	Peak Parking Demand	
		% of Users	Spaces
Medical Center Campus			
Employees	5,567	17.8%	991
Out-Patients	Estimates provided by UVM MC.		708
In-Patients			75
Visitors			250
Fleet			38
Subtotal			2,062
1 South Prospect			
Employees	630	3.7%	24
Out-Patients	Estimates provided by UVM MC.		236
Fleet			8
Subtotal			268
Total Peak Parking Demand			2,330
Total Parking Supply			2,509
Net Spaces			179

Table 5-4: Future parking demand estimate for UVM Medical Center.

UVM MEDICAL CENTER

Highlights of TDM Strategies

- TDM and COVID-19 Response
 - UVM Shared Parking
- Off-Site Lots and Shuttles
 - Lakeside Lot
 - Fanny Allen
 - Technology Park

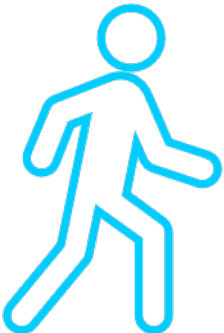




MOVING FORWARD

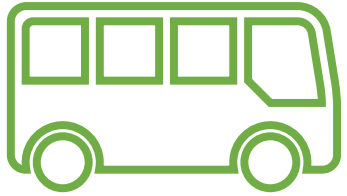


- Created guide for JIPMP for future reference
- Conduct Employee & Student Transportation Survey in Spring (Depending on COVID-19 Status)
- Conduct Lot Counts October 20-22, 2020
- Spring 2021 JIPMP annual update to PC



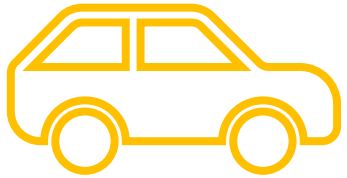


QUESTIONS?



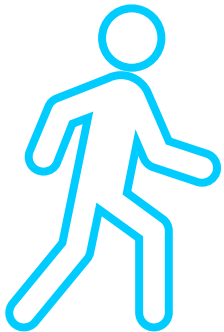
- **CATMA Contacts:**

- Sandy Thibault, sandy@catmavt.org
- Kim Furtado, kim@catmavt.org



- **Transportation Research Center Contacts:**

- Jon Dowds, jdowds@uvm.edu
- Jim Sullivan, james.sullivan@uvm.edu



THANK YOU!

Burlington Planning Commission

149 Church Street
Burlington, VT 05401
Telephone: (802) 865-7188
(802) 865-7195 (FAX)
(802) 865-7144 (TTY)

www.burlingtonvt.gov/pz

Andy Montroll, Chair
Bruce Baker, Vice-Chair
Yves Bradley
Alexander Friend
Emily Lee
Harris Roen
Jennifer Wallace-Brodeur

Burlington Planning Commission

Tuesday, October 13, 2020, 6:30 P.M.

Remote Meeting via Zoom

Minutes

Members Present	A Montroll, A Friend, E Lee, J Wallace-Brodeur
Staff Present:	D White, M Tuttle, S Gustin
Attendance:	Sandy Thibault (CATMA), Kim Furtado (CATMA), Jonathan Dowd (UVM Transportation Research Center), Lani Ravi (UVM)

I. Agenda

Call to Order	Time: 6:34pm
Agenda	Add "Re-approval of Municipal Bylaw Amendment Report ZA-20-08" after Item VI.

II. Chair's Report

A Montroll	No report.
------------	------------

III. Director's Report

D White	Working on an update to the Downtown & Waterfront Code
---------	--

IV. Public Forum

Name	Comment
No comments	

V. Public Hearing: CDO Amendment ZA-21-01 Daycare & Preschool in RCO Districts

Action: Approve the municipal bylaw amendment report and forward to Council with recommendation.		
Motion: E Lee	Second: J Wallace-Brodeur	Vote: Approved Unanimously
M Tuttle described that this amendment emerged from a request by the Winooski Valley Parks District to expand enrollment for preschool due to COVID-19 related, and future, increase in demand.		
The chair opened and closed the public hearing at 6:39pm with no public comments.		

VI. Public Hearing: CDO Amendment ZA-21-02 Temporary Tents

Action: Approve the municipal bylaw amendment report and forward to Council with recommendation.		
Motion: A Friend	Second: J Wallace-Brodeur	Vote: Approved Unanimously
M Tuttle described that this amendment has emerged in part due to COVID-19 measures implemented to enable civic organizations and businesses to operate in a safer format. It also aligns the zoning ordinance with the requirements for a permit for a non-sleeping tent from the Fire Marshal.		
The chair opened and closed the public hearing at 6:42pm with no public comments.		

VII. Reapprove Municipal Bylaw Amendment Report ZA-20-08

Action: Reapprove municipal bylaw amendment report and forward comments regarding on-street parking from Commission Chair to City Council.		
Motion: J Wallace-Brodeur	Second: E Lee	Vote: Approved Unanimously
M Tuttle described changes made to this amendment by the City Council Ordinance Committee, and that the report was coming back to the Commission for its statutory opportunity to comment and reapprove.		
The Commission requested staff and the Chair to share concerns to the Council about restricting nearby on-street parking from being used by the facility through the residential parking designation.		

VIII. Joint Institutional Parking Management Plan 2020-2025

Action: Approve recommendations to forward to Development Review Board.		
Motion:	Second:	Vote: Approved Unanimously
Sandy Thibault, Kim Furtado, and Jonathan Dowd presented the 2020-2025 JIPMP. Details are online at: https://www.burlingtonvt.gov/CityPlan/PC/Agendas .		
Commission comments:		
- Commission had questions about how to sort out how many students that live within ½ mile of campus report driving, and are calculated in future parking demand. Clarify how campus-affiliated housing is accounted (i.e. Redstone Lofts, 194 St. Paul St, etc) as on- or off-campus. - Commissioners discussed what a parking surplus means, and if that means there is too much parking. It was clarified that these spaces represent 5% of the total parking, which means that the lots are effectively full. It was suggested that the report could clarify which lots are pay-to-park vs. permit-only on the parking utilization map. - Commissioners discussed what is being done to discourage students from driving to or near campus, and what factors influence this. CATMA noted that UVM is reviewing the recommendations from its transportation plan, which include evaluating its permit system, and exploring more incentives for sustainable transportation. It was noted that free parking spaces on city streets could be an incentive to drive more. - Add satellite parking for UVMMC back into the tables, but indicate it separately from on-the-hill parking.		

IX. Commissioner Items

Action: N/A		
Motion: NA	Second: NA	Vote: NA
- Next meeting is Wednesday, Oct 28 at 6:45pm, Joint Meeting with Council Ordinance Cmte		

X. Minutes & Communications

Action: Approved the minutes as amended		
Motion by: J Wallace-Brodeur	Second: E Lee	Vote: Approved Unanimously
Minutes Approved as amended by staff: September 23, 2020		
• Change first bullet under scenario 4 to read "generally agree that these should be permitted" rather than "to allow off-site host".		

XI. Adjourn

Adjournment		Time: 8:01 pm	
Motion: A Friend	Second: E Lee	Vote: Approved Unanimously	



Andy Montroll, Chair

Signed: October 30, 2020

Respectfully submitted by:



Meagan Tuttle, Comprehensive Planner