## APPENDICES

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</tr>
</tbody>
</table>
APPENDIX A

Presentations to Campus

February 28, 2011    Steering Committee Workshop
March 18, 2011      College Council
May 2, 2011         Transportation Committee
May 12, 2011        Transportation Committee Workshop-Developing Guiding Principles
June 23, 2011       Transportation Committee-Preliminary Alternatives
August 4, 2011      Transportation Committee
September 19, 2011  Transportation Committee
September 27, 2011  Transportation Committee
October 3, 2011     College Council
October 13, 2011    Transportation Committee-Alternatives Revisions
December 2, 2011    Town Meeting
December 5, 2011    Faculty Senate
December 22, 2011   Staff Council
March 7, 2012       Transportation Committee Progress Report
Agenda

- Review scope of work
  - Verify working assumptions
- Develop plan vision and goals
- Verify existing conditions
  - Travel characteristics
  - Parking
  - Transit
  - Roadway
  - Pedestrian and bicycle
- Begin to identify necessary components of alternatives
- Next Steps
Scope of Work: Purpose and Tasks

- **Purpose**
  - Prepare the campus for recent and upcoming changes in pursuit of the Master Plan’s implementation

- **Tasks**
  1. Summarize current conditions
     - Steering Committee
  2. Evaluate future conditions and develop parking & transit system alternatives
     - Steering Committee
  3. Finalize alternatives analysis and refine preferred Phase I and Phase II alternatives
     - Steering Committee
     - College Council
     - Senior Administrative
  4. Prepare draft and final Transportation Vision Plan
     - Steering Committee
     - Senior Administrative
Scope of Work: Assumptions

- **Phase I: immediate/start of 2011-2012 academic year**
  - Lakeside Avenue (staff relocation from 212 Battery, +50 parking spaces)
  - Res Tri (Phase 1, 90 new beds, -60 parking spaces)
  - Hauke Addition/Communication and Creative Media/Campus Transit Hub (~43,000 sq ft, -26 parking spaces)
  - Spinner Place?
  - Quarry Hill?

- **Phase II: through 2020/full implementation of Campus Master Plan**
  - Res Tri (Phase 2, ~180 new beds, -94 parking spaces)
  - Information Technology System/Miller Information Commons Addition
  - Ethan Allen Club and Eagles Club (~500 beds each)
  - Spinner Place (~270 beds) and Quarry Hill (# of beds?) (leases to be terminated)
GOALS
Plan Vision

- Support Champlain’s future growth as a flexible, desirable, and attractive institution, while also supporting the historic, residential, quality of life and aesthetic character of the Hill.

Planning Themes

- Enhance the positive impacts and mitigate the negative impacts of the College on the neighborhood
- Sustainable accommodation of growth/change
- Address parking and transportation needs
- Build sustainability into day-to-day operations
- More effective and efficient use of space
- Inclusive planning approach with neighbors
Transportation Vision Plan Objectives

**Parking**
- Reduce overall demand for parking through CATMA’s TDM programs
- Provide a sufficient number of parking spaces to meet peak demand while reducing the number of off-street parking spaces on the core campus
- Provide parking spaces in a system of on-campus and off-campus parking lots connected to the College’s academic, residential and administrative facilities with a convenient and efficient shuttle service
- Incorporate as appropriate spaces in regional park-and-ride and intercept parking facilities
- Utilize a parking permit system that allocates spaces consistent with user needs

**Roadway**
- Minimize traffic congestion by reducing the number of vehicles travelling to, within and between College facilities on and beyond the core campus
- Provide safe and efficient access from the public road network to all parking facilities
- Support efforts to reduce traffic speeds on public streets adjacent to College facilities

Continued....
Transportation Vision Plan Objectives (continued)

- **Transit and Shuttle System**
  - Provide a cost effective and convenient service
  - Size vehicles as appropriate to meet ridership demand
  - Use efficient and safe routes
  - Minimize noise and air quality impacts
  - Coordinate shuttle service with other CATMA services and programs and CCTA
  - Incorporate intelligent transportation system technology to enhance operations and traveler information

- **Bicycle and Pedestrian**
  - Provide safe, well-designed roadway crossings
  - Provide pedestrian connections to all transit stops
  - Provide bicycle facility connections to transit stops where appropriate
  - Provide for pedestrian and bicycle access, circulation and amenities in site planning for specific facilities
EXISTING CONDITIONS
## Champlain College Affiliates

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Campus Residential Students</td>
<td></td>
</tr>
<tr>
<td>Spinner Place Residential Students</td>
<td></td>
</tr>
<tr>
<td>Quarry Hill Residential Students</td>
<td></td>
</tr>
<tr>
<td>Commuter Students</td>
<td></td>
</tr>
<tr>
<td>Faculty/Staff</td>
<td></td>
</tr>
</tbody>
</table>
## Transportation Demand Management

<table>
<thead>
<tr>
<th>Service</th>
<th># of Champlain Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Ride Home</td>
<td>66</td>
</tr>
<tr>
<td>Bike/Walk Rewards</td>
<td>28</td>
</tr>
<tr>
<td>Bus</td>
<td>24</td>
</tr>
<tr>
<td>Carpooling</td>
<td>9</td>
</tr>
<tr>
<td>CarShare Vermont</td>
<td>16-40</td>
</tr>
</tbody>
</table>
Employee Travel Characteristics: CATMA Survey Results

- Drive Alone
- CCTA Bus
- Park & Ride
- Bike/ walk
- Carpool/Vanpool
- Other (generally carpools, multiple modes, scooter)

Yearly breakdown for modes of travel:
- 2004: Drive Alone 70%, Other 3%
- 2006: Drive Alone 60%, Bike/ walk 10%, Other 2%
- 2008: Drive Alone 50%, Bike/ walk 20%, Other 5%
- 2009: Drive Alone 40%, Bike/ walk 15%, Other 5%
- 2010: Drive Alone 30%, Bike/ walk 10%, Other 5%
% of Champlain's residential students who brought a car for the semester

- 2003: 80.6%
- 2004: 51.4%
- 2005: 40.7%
- 2006: 37.4%
- 2007: 39.4%
- 2008: 35.6%
- 2009: 32.3%
- 2010: 37.3%
Student Travel Characteristics: CATMA Survey Results

Drive Alone

- Residential Students
- Students within 1/2 mile of campus
- Students outside 1/2 mile of campus
Travel Characteristics: PM peak hour volumes at S. Willard & Maple

Source: RSG turning movement counts
Student Travel Characteristics: CATMA Survey Results

Bike/Walk

- Residential Students
- Students within 1/2 mile of campus
- Students outside 1/2 mile of campus
Planned Intercept Parking Facilities

- South End Transit Center
- Champlain College
- Exit 14
- Exit 16
- VT 15 - Barnes Ave
# Parking Supply

<table>
<thead>
<tr>
<th></th>
<th>Core Campus, Off-Street Parking Supply</th>
<th>Off-Site Parking Supply</th>
<th>Total Off-Street Parking Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing</strong></td>
<td>484</td>
<td>438</td>
<td>922</td>
</tr>
<tr>
<td><strong>Phase 1</strong></td>
<td>484 - 60 - 26 = 398</td>
<td>438 + 50 = 488</td>
<td>886</td>
</tr>
<tr>
<td>(Lakeside, Res Tri 1, Hauke/CCM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phase 2</strong></td>
<td>398 - 94 = 304</td>
<td>488 + 30 + 110 = 628</td>
<td>932</td>
</tr>
<tr>
<td>(Res Tri 2, Eagles, Ethan Allen, MIC)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Project site plans and 2009 JIPMP.
## Existing Parking Demand: Estimated

<table>
<thead>
<tr>
<th>Affiliate Group</th>
<th>Permits Issued</th>
<th>% on Campus during Peak $^2$</th>
<th>Estimated Peak Parking Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daytime Commuters $^1$</td>
<td>373</td>
<td>44%</td>
<td>164</td>
</tr>
<tr>
<td>Residential Students</td>
<td>246</td>
<td>100%</td>
<td>246</td>
</tr>
<tr>
<td>Faculty/Staff Full-Time</td>
<td>262</td>
<td>90%</td>
<td>236</td>
</tr>
<tr>
<td>Faculty/Staff Part-Time</td>
<td>96</td>
<td>6%</td>
<td>6</td>
</tr>
</tbody>
</table>

Peak Parking Demand 652
Vehicle Fleet 12

Total Parking Spaces Required during Peak 664
Available Off-Street Parking Inventory 922

**Difference (Inventory - Total Required)** 258

---

$^1$ The percentage of daytime commuters on campus during the peak is derived from Figure 2 of the 2009-2014 JIPMP. The 44% used here is a weighted average of commuters within 1/2 mile of campus (100% are on campus during the peak) and commuters outside 1/2 mile of campus (34% are on campus during the peak).

$^2$ Based on 2008 CATMA survey results.
Existing Parking Demand: Measured

Champlain College Peak Demand-Fall 2010

<table>
<thead>
<tr>
<th>Location</th>
<th>Capacity of areas included in count</th>
<th>Champlain Occupied Spaces-Peak Demand</th>
<th>Empty Spaces/Not occupied by Champlain</th>
<th>Percent full</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Street</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Campus: off-street</td>
<td>484</td>
<td>301</td>
<td>183</td>
<td>62%</td>
</tr>
<tr>
<td>Off-site spaces (Champlain permits only)</td>
<td>438</td>
<td>180</td>
<td>258</td>
<td>41%</td>
</tr>
<tr>
<td><strong>Off-Street Total</strong></td>
<td><strong>922</strong></td>
<td><strong>481</strong></td>
<td><strong>441</strong></td>
<td><strong>52%</strong></td>
</tr>
<tr>
<td>On-Street</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Campus: on-street (Champlain permits only)</td>
<td>167</td>
<td>45</td>
<td>122</td>
<td>27%</td>
</tr>
</tbody>
</table>

Estimated demand (664 spaces) vs. measured demand (526 spaces) still less than supply of 922 spaces (Demand/Supply = 57% to 72%)
# Champlain Shuttles

<table>
<thead>
<tr>
<th>Route</th>
<th>Days</th>
<th>Time</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gilbane/Lakeside Ave</td>
<td>M-F</td>
<td>7AM to 9PM</td>
<td>No info available</td>
</tr>
<tr>
<td>Quarry Hill</td>
<td>M-F</td>
<td>7:05AM to 9:05PM</td>
<td>Every 30 min</td>
</tr>
<tr>
<td>Spinner Place</td>
<td>M-Th</td>
<td>7:05AM to 9:10PM</td>
<td>Every 15 min until 3:40PM, then every 30 min</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>7:05AM to 6:10PM</td>
<td></td>
</tr>
<tr>
<td>Late night and weekends:</td>
<td>M-Th</td>
<td>9:10PM to 12:00AM</td>
<td>Every 50 min</td>
</tr>
<tr>
<td>Champlain-Spinner-Quarry-Lakeside</td>
<td>Sat-Sun</td>
<td>11AM to 8:30PM</td>
<td>Every hour</td>
</tr>
</tbody>
</table>

What about Friday nights?
Champlain Shuttles

Spinner Place

Lakeside/Gilbane and Quarry Hill
CCTA and UVM CATS

CCTA

UVM CATS
Average Daily Ridership

- Gilbane/Lakeside: 94
- Quarry Hill: 243
- Spinner: 605
- Campus Late Night: 30
- Campus Weekend: 147
South Willard Street-Maple Street Intersection

2011 raw counts adjusted to 2011

<table>
<thead>
<tr>
<th>2011 Delay (s)/ LOS</th>
<th>AM</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>12.9 / B</td>
<td>12.9 / B</td>
</tr>
<tr>
<td>Eastbound Maple St</td>
<td>10.8 / B</td>
<td>13.0 / B</td>
</tr>
<tr>
<td>Westbound Maple St</td>
<td>12.3 / B</td>
<td>11.8 / B</td>
</tr>
<tr>
<td>Northbound S. Willard St</td>
<td>14.6 / B</td>
<td>13.1 / B</td>
</tr>
<tr>
<td>Southbound S. Willard St</td>
<td>12.0 / B</td>
<td>13.4 / B</td>
</tr>
</tbody>
</table>
Main Street-South Willard Street Intersection

2007 raw counts adjusted to 2011

<table>
<thead>
<tr>
<th></th>
<th>2011 Delay (s)/ LOS</th>
<th>AM</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>14.4 / B</td>
<td>18.7 / B</td>
<td></td>
</tr>
<tr>
<td>Eastbound Maple St</td>
<td>6.9 / A</td>
<td>10.7 / B</td>
<td></td>
</tr>
<tr>
<td>Westbound Maple St</td>
<td>9.0 / A</td>
<td>8.5 / A</td>
<td></td>
</tr>
<tr>
<td>Northbound S. Willard St</td>
<td>24.8 / C</td>
<td>39.4 / D</td>
<td></td>
</tr>
<tr>
<td>Southbound S. Willard St</td>
<td>29.5 / C</td>
<td>39.7 / D</td>
<td></td>
</tr>
</tbody>
</table>
Walking and Bicycling: Campus Connectivity

1/2 mile radius = ~10 min walk

- Church St
- Ethan Allen Club
- UVM
- UVM South Campus
- Eagles Club
- Champlain College Core Campus
- Quarry Hill
- Lakeside Ave

Map showing walking and bicycling connectivity.
Issues and Opportunities

Opportunity:
Loss of core campus parking decreases impacts to neighborhood, increases use of alternative transportation modes, improves campus sustainability. Under existing conditions, the parking supply is greater than the demand.

Issue:
Maintaining an effective and efficient shuttle system to support loss of parking and changes to residential locations (that is, taking Quarry Hill and Spinner Place off line and developing Eagles and Ethan Allen Clubs): need to optimize vehicle size, schedules and passenger experience/convenience.

Opportunity:
Potential for CCTA-CATMA/UVM/FAHC/Champlain transit system.

Opportunity:
Improving bicycle and pedestrian connectivity will improve accessibility, safety, quality of life, and campus cohesion.
ALTERNATIVES
Alternative Variables

- **Phase**
  - Phase I-A
  - Phase I-B
  - Phase II

- **Parking**
  - Locations
  - Lease terms (i.e., length)
  - Allocation to user groups

- **Transit**
  - Vehicle types
  - Frequencies
  - Routes & Stops
APPENDIX:
MASTER PLAN
PLANNING PRINCIPLES
Are there any Master Plan projects that are not accounted for?
2007 Champlain College Master Plan Vision and Goals

Plan Vision

Support Champlain’s future growth as a flexible, desirable, and attractive institution, while also supporting the historic, residential, quality-of-life and aesthetic character of the Hill.

Goals and Objectives

- Fulfill the City of Burlington’s request that the College create a campus master plan, answering the question of “what’s next?”
  - Enable the College to grow sustainably.
  - Provide a workable plan to house 90% of Champlain’s 2,000 traditional students in College facilities.
  - Ensure that existing and planned facilities are sufficient to accommodate Champlain’s academic, student life, support, and physical plant needs over the next ten to fifteen years.
  - Find locally acceptable locations and design approaches to growth and change.
- Preserve the historic assets, predominantly residential character, and high quality of life on the Hill.

Items that may relate to the Transportation Vision Plan are italicized and underlined.
Champlain College Master Plan Principles

- Champlain should use every new investment to enhance its role as...
  - A learning community;
  - A responsible member of the Hill neighborhood;
  - An asset to Burlington’s and Vermont’s economies.

- Champlain should meet the needs of the future through...
  - Mixed-use facilities in locations nearer downtown Burlington;
  - *More effective use of existing space on the Hill that also reflects sensitivity to the neighborhood;*
  - *New collaborations with other institutions where possible.*

- Champlain’s buildings and spaces should play many roles...
  - Providing indoor and outdoor gathering places and “commons” for the College and the neighborhood;
  - Adding to the character of the Hill neighborhood;
  - Mixing informal and formal learning opportunities;
  - Exploring ways to use individual spaces multiple times, in multiple ways, by as many different people as possible, throughout the day.
Champlain should celebrate diversity by...
- Offering community members access to facilities and programs;
- Being child- and family-friendly;
- Enhancing accessibility for all.

Champlain should improve its infrastructure as it improves its facilities by...
- *Incorporating appropriate technology in every project*;
- *Addressing evolving parking and transportation needs*;
- *Building in sustainability*;
- Implementing the Stormwater Management Plan.

Champlain should build on this planning effort by...
- *Continuing its inclusive planning approach with neighbors*;
- *Enhancing the positive impacts and mitigating the negative impacts of the College*;
- Committing to improved information exchange and accessibility to information about the College and its activity with the neighborhood.
Agenda

- Plan overview
- Working assumptions
- Background
- Phase 1 discussion
- Next steps

Photo source: ebolton on Flickr
Plan Overview

Purpose

- Prepare the campus for recent and upcoming changes in pursuit of the Master Plan’s implementation

Tasks

1. Summarize current conditions
2. Evaluate future conditions and develop parking & transit system recommendations
   1. Immediate: 2011-2013
   2. Mid-Term: Through 2015
   3. Long-Term: 2020 Master Plan Implementation
3. Finalize and refine recommendations with Steering Committee
4. Prepare draft and final Transportation Vision Plan
Transportation Vision Plan Objectives

- **Parking**
  - Recommend allocation and assignment
  - Reduce overall demand
  - Provide a sufficient number of spaces while reducing spaces on the core campus
  - Utilize a parking permit system consistent with user needs

- **Transit and Shuttle System**
  - Provide a safe, attractive, cost effective, and convenient service
  - Coordinate shuttle service with CATMA and CCTA
  - Incorporate intelligent transportation system technology to enhance operations and traveler information

- **ADA, Bicycle and Pedestrian**
  - Improve ADA accessibility to and on campus
  - Provide connections to all transit stops
  - Work with City during site planning to provide for pedestrian and bicycle access

- **Roadway**
  - Minimize the College’s impact on traffic congestion
Working Assumptions

- **Phase 1: immediate/2011-2013**
  - Lakeside Avenue
  - Res Tri
  - Hauke Addition/Communication and Creative Media/Campus Transit Hub
  - Perkins Pier and Pecor parking lots
  - Additional 100+ beds off-site; location to be determined

- **Phase 2: mid-term/through 2015**
  - Ethan Allen Club and Eagles Club (~500 beds total)
  - Spinner Place (270 beds) and Quarry Hill (112 beds) leases to be terminated

- **Phase 3: long-term/through 2020/full implementation of Campus Master Plan**
  - Information Technology System/Miller Information Commons Addition
Parking Supply
Dec 2010

Core Campus Parking
484 spaces

Perkins Pier
238 spaces

Gilbane
200 spaces

Total Supply = 922 spaces
(does not include on-street spaces at core campus)
Phase 1: 2011-2013

- 180 Core Campus Spaces
- 154 spaces (Skiff & McD-W/all of Zone 3)
- 238 spaces (Pier/Pecor lots)
- 26 spaces (Bader)
- +266 spaces (Hauke Addition/Campus Transit Hub)

Zone 1: Perkins Pier/Pecor lots
100+ new beds off-site (location to be determined)
Phase 2
2015

-180 Core Campus Spaces

Ethan Allen Club
+110 spaces (assumed)

Eagles Club
(assumed no change in parking supply)

Spinner Place & Quarry Hill leases end
(no change in parking supply)
Phase 3
2020

Miller Information Commons
-42 spaces
(assumed)

-222 Core Campus Spaces
BACKGROUND
Campus Distribution

Spinner Place
Student beds: 272

Quarry Hill
Student beds: 112

UVM

S Pierce St

Colchester Av

N Willard St

N Winooski Ave

Church St

Maple St

S Willard St

S Prospect St

Spear St

Campus Core
Student beds: 918
Commuting students: 1155
Full-time Fac/Staff: 249
Part-time Fac/Staff: 24
Adjunct: 243
Temp Staff: 37

Lakeside Ave
Staff: 72

Lake Champlain
Campus Connectivity

- Bike path
- Quarry Hill
- Champlain College Core Campus
- 1/2 mile radius ~10 min walk
- Ethan Allen Club
- Church St
- Eagles Club
- Lakeside Ave/Gilbane

Lake Champlain
# Parking Management

<table>
<thead>
<tr>
<th>Zones 1-5</th>
<th>Faculty/Staff and Commuting Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permits are $100/semester for full-time affiliates, $50/semester for part-time</td>
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</table>

<table>
<thead>
<tr>
<th>Zone 6</th>
<th>Residential Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Free parking, served by shuttle every 10-12 minutes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone 7</th>
<th>Residential Students w/ Special Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permits are $100/semester</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone 9</th>
<th>Evening Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Free parking in Zone 1 &amp; 6 or any lot after 4PM</td>
</tr>
</tbody>
</table>
## Existing Parking Demand

<table>
<thead>
<tr>
<th>Affiliate Group</th>
<th>Peak Parking Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daytime Commuters</td>
<td>164</td>
</tr>
<tr>
<td>Residential Students</td>
<td>246 (Gilbane)</td>
</tr>
<tr>
<td>Faculty/Staff Full-Time</td>
<td>236</td>
</tr>
<tr>
<td>Faculty/Staff Part-Time</td>
<td>6</td>
</tr>
<tr>
<td>Campus Service Vehicles</td>
<td>12</td>
</tr>
<tr>
<td><strong>Peak Parking Demand</strong></td>
<td><strong>664 total</strong></td>
</tr>
<tr>
<td></td>
<td><strong>418 core + 246 off-site</strong></td>
</tr>
</tbody>
</table>
Parking Supply
Dec 2010

Core Campus Parking
484 spaces

Perkins Pier
238 spaces

Gilbane
200 spaces

Total Supply = 922 spaces
(does not include on-street spaces at core campus)
PHASE 1:
WHAT DOES PARKING LOOK LIKE AT THE START OF THE 2011-2012 YEAR?
Phase 1: 2011-2013

- 180 Core Campus Spaces

Res Tri
- 154 spaces
(Skiff & McD-W/ all of Zone 3)

Hauke Addition/Campus Transit Hub
- 26 spaces
(Bader)

Lakeside Ave
+ 266 spaces

- 238 spaces

Zone 1: Perkins Pier/Pecor lots

100+ new beds off-site
(location to be determined)
Phase 1
Parking Supply

Core Campus Parking
304 spaces

Off-Site Parking
466 spaces

Supply of 770 spaces is still adequate to meet estimated demand of 664 spaces.
## Demand versus Supply

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
<th>Phase 1: 2011-2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Campus Parking Spaces</td>
<td>484</td>
<td>304</td>
</tr>
<tr>
<td>Off-Site Parking Spaces</td>
<td>438</td>
<td>466</td>
</tr>
<tr>
<td>Total Supply</td>
<td>922</td>
<td>770</td>
</tr>
<tr>
<td>Parking Demand</td>
<td>664</td>
<td>664</td>
</tr>
<tr>
<td><strong>Excess</strong></td>
<td>258</td>
<td>106</td>
</tr>
</tbody>
</table>
Our Ideas

- **Offer short-term parking options in addition to semester-long permits.**
  - Such as day permits. This encourages people to drive less because they can use alternative transportation some days even if they can’t commit to it 100% of the time.
  - For example, 5 day permits per semester when register in a CATMA program.
  - Implement 60-90 minute parking zones.

- **Rezone the parking system to increase occupancy in under-utilized zones.**
  - Fall 2010 peak occupancy in Zone 2 was ~50% and in Zone 4 was ~35% (meaning there are about ~70 unused parking spaces total in the core). Particular lots within those zones are never used because they are the least desirable within their zone.

- **Create a new zone (Zone 10) for faculty/staff at Lakeside Ave (266 spaces); no charge for permit.**
Your Ideas: How should parking be managed?

1. Should all of Zone 3 go off-line at once, or Skiff in Fall 2011 and McDonald-Whiting in Fall 2012?

2. Who should be permitted to park on core campus?
   - Move day-long parkers off site and prioritize core campus for quick turnover, short-term parkers (such as adjunct professors and commuter students)?
   - Charge a premium for core campus parking permits?
   - Hold a parking permit lottery?
   - Restrict permit eligibility to those who live more than ½ mile from core campus?

3. What should be the structure to manage parking?
   - Offer short-term parking options in addition to semester-long permits?
   - Implement 30-minute, 2-hour, etc. parking zones?
   - Meters? On-street? Campus parking lots?
NEXT STEPS
Next Steps

- Summarize current conditions
  - Complete

- Evaluate future conditions and develop recommendations
  - In progress

- Review and refine recommendations with Steering Committee and College Council

- Prepare draft and final Transportation Vision Plan
Agenda

- Plan overview
- Background
- Expectations for Fall 2011
- Strategies Discussion

Photo source: ebolton on Flickr
Plan Overview

- **Purpose**
  - Prepare the campus for recent and upcoming changes in pursuit of the Master Plan’s implementation

- **Phases**
  1. Immediate: 2011-2013
  2. Mid-Term: Through 2015
  3. Long-Term: 2020 Master Plan Implementation
Transportation Vision Plan Objectives

- **Parking**
  - Recommend allocation and assignment
  - Reduce overall demand
  - Provide a sufficient number of spaces while reducing spaces on the core campus
  - Utilize a parking permit system consistent with user needs

- **Transit and Shuttle System**
  - Provide a safe, attractive, cost effective, and convenient service
  - Coordinate shuttle service with CATMA and CCTA
  - Incorporate intelligent transportation system technology to enhance operations and traveler information

- **ADA, Bicycle and Pedestrian**
  - Improve ADA accessibility to and on campus
  - Provide connections to all transit stops
  - Work with City during site planning to provide for pedestrian and bicycle access

- **Roadway**
  - Minimize the College’s impact on traffic congestion
Working Assumptions

- **Phase 1: immediate/2011-2013**
  - Lakeside Avenue
  - Res Tri
  - Hauke Addition/Communication and Creative Media/Campus Transit Hub
  - Perkins Pier and Pecor parking lots
  - Additional 100+ beds off-site; location to be determined

- **Phase 2: mid-term/through 2015**
  - Ethan Allen Club and Eagles Club (~500 beds total)
  - Spinner Place (270 beds) and Quarry Hill (112 beds) leases to be terminated

- **Phase 3: long-term/through 2020/full implementation of Campus Master Plan**
  - Information Technology System/Miller Information Commons Addition
Parking Supply
Dec 2010

Core Campus Parking
484 spaces

Perkins Pier
238 spaces

Gilbane
200 spaces

Total Supply = 922 spaces
(does not include on-street spaces at core campus)
Phase 1: 2011-2013

- Lakeside Ave +266 spaces
- Res Tri -154 spaces (Skiff & McD-W/all of Zone 3)
- Zone 1: Perkins Pier/Pecor lots -238 spaces
- Hauke Addition/Campus Transit Hub -26 spaces (Bader)

100+ new beds off-site (location to be determined)
Phase 2 2015

Ethan Allen Club +110 spaces (assumed)

Eagles Club (assumed no change in parking supply)

Spinner Place & Quarry Hill leases end (no change in parking supply)
Phase 3
2020

Miller Information Commons
-42 spaces (assumed)
BACKGROUND
# Parking Management

<table>
<thead>
<tr>
<th>Zones 1-5</th>
<th>Faculty/Staff and Commuting Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permits are $100/semester for full-time affiliates, $50/semester for part-time</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Zone 6</th>
<th>Residential Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Free parking, served by shuttle every 10-12 minutes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone 7</th>
<th>Residential Students w/ Special Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permits are $100/semester</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone 9</th>
<th>Evening Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Free parking in Zone 1 &amp; 6 or any lot after 4PM</td>
</tr>
</tbody>
</table>
## Existing Parking Demand

<table>
<thead>
<tr>
<th>Affiliate Group</th>
<th>Peak Parking Demand</th>
</tr>
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<tbody>
<tr>
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<td>Faculty/Staff Full-Time</td>
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<td>6</td>
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<tr>
<td>Campus Service Vehicles</td>
<td>12</td>
</tr>
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<td><strong>Peak Parking Demand</strong></td>
<td><strong>664 total</strong></td>
</tr>
<tr>
<td></td>
<td><strong>418 core + 246 off-site</strong></td>
</tr>
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PHASE 1: WHAT DOES PARKING LOOK LIKE AT THE START OF THE 2011-2012 YEAR?
Parking Supply
Dec 2010

Core Campus Parking
484 spaces

Perkins Pier
238 spaces

Gilbane
200 spaces

Total Supply = 922 spaces
(does not include on-street spaces at core campus)
Phase 1: 2011-2013

Hauke Addition/Campus Transit Hub
-26 spaces
(Bader)

Res Tri
-154 spaces
(Skiff & McD-W/ all of Zone 3)

Zone 1: Perkins Pier/Pecor lots
-238 spaces

100+ new beds off-site
(location to be determined)

Lakeside Ave
+266 spaces
Phase 1 Parking Supply

Core Campus Parking
304 spaces

Off-Site Parking
466 spaces

Supply of 770 spaces is still adequate to meet estimated demand of 664 spaces.
## Demand versus Supply

<table>
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<tr>
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<th>Existing</th>
<th>Phase 1: 2011-2013</th>
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</thead>
<tbody>
<tr>
<td>Core Campus Parking Spaces</td>
<td>484</td>
<td>304</td>
</tr>
<tr>
<td>Off-Site Parking Spaces</td>
<td>438</td>
<td>466</td>
</tr>
<tr>
<td>Total Supply</td>
<td>922</td>
<td>770</td>
</tr>
<tr>
<td>Parking Demand</td>
<td>664</td>
<td>664</td>
</tr>
<tr>
<td><strong>Excess</strong></td>
<td>258</td>
<td>106</td>
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Fall 2011 Management

- Leave McDonald-Whiting open for Fall 2011.
  - Skiff and ARC lots will closed for first phase of Res Tri construction.
  - Communicate that McDonald-Whiting will be closed beginning in Fall 2012 for second phase of Res Tri construction.

- Perkins Pier & Pecor are under-utilized: terminate lease.
  - Pecor lot is currently closed.
  - Perkins Pier had the lowest occupancy of any lot or parking zone in the Champlain system.
  - Staff from 212 Battery have moved to Lakeside.
  - No longer served by shuttle.
POTENTIAL STRATEGIES
Potential Strategies

Shuttles

- Add one or two stops between origin and destination.
  - Currently they operate as express routes that pass by potential riders.
  - Where should they stop?
- What improvements could be made to the shuttle system?

Parking

- Redefine “Resident Student” (for parking permit purposes) as any student who lives within 1 mile of the core campus.
  - To prevent students who live close to campus from unnecessarily driving and using a Commuter Student parking permit.
- Implement policy allowing only fac/staff/students living more than ½ mile from core campus to be eligible to purchase a parking permit.
Potential Strategies

- Re-zone parking system to maximize use of existing capacity

<table>
<thead>
<tr>
<th>Category</th>
<th>Type</th>
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</thead>
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<tr>
<td>Inner Core</td>
<td>Premium</td>
</tr>
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<td>Outer Core South</td>
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Potential Strategies

- Offer short-term parking options in addition to semester-long permits.
  - Encourages people to drive less because they can use alternative transportation some times even if they can’t commit to it 100% of the time.

- How?
  - Half-day or daily permits purchased in person.
  - Coupon book or scratch/punch card: coupon displays date and time at which vehicle is parked and is displayed on dashboard or hung from rearview mirror.
  - Implement parking zones with time limitations (such as 2-hour parking).
  - Meters
Potential Strategies

- Meters: debit cards, price variable, multi-space meters, pay & display, in-vehicle parking meters (IVPMs)
NEXT STEPS
Next Steps

- **Summarize current conditions**
  - Complete

- **Evaluate future conditions and develop recommendations**
  - In progress

- **Review and refine recommendations with Steering Committee and College Council**
  - In progress

- **Prepare draft and final Transportation Vision Plan**
Transportation Thoughts and Ideas

Overarching Themes/Issues

- Equity
- Flexibility
- Time
- Convenience versus necessity: parking on the core is convenient, but not necessary for everyone.
- Incentives
Transportation Thoughts and Ideas

Demand Management

- Connect gaps.
- Provide incentives.
- Educate/remind people about Guaranteed Ride Home Program and CarShare VT
  - accommodates mid-day trips, emergencies, etc.
- Flexible work environments: flex-time, telecommuting, and carpool.
- Need campus education and outreach/communication of changes to parking and transportation.
Transportation Thoughts and Ideas

Parking

- Consider installing meters.
- Base system on length of time
  - those who park for all day park off-site
  - those who just need to park for one class or a couple of hours can park at the core.
- Re-zone the parking system to re-allocate permits and reflect that the most convenient areas are premium.
- Reserve parking spaces for carpools.
- Include spaces for motorcycles/scooters.
- Day of week parking permits, such as a ‘Monday permit.’
- Day passes (different from day-of-week permits), such as five day permits per semester. (Reduces parking demand further than the day-of-week permits.)
Transportation Thoughts and Ideas

Bicycles
- Increase and improve bike racks/storage/parking.

Shuttles
- Shuttle to intercept lots throughout the area/vanpool system.
- Maintain the 10-12 minute shuttle to/from Gilbane.
- Run the Gilbane shuttle in the summer.
- Use biodiesel shuttle vehicles.
Champlain College Transportation Vision

College Council-Transportation Committee
23 June 2011

Prepared for:
Champlain College
Agenda

- Review upcoming campus parking changes
- Discuss draft recommendations/core improvements
- Present and discuss parking management alternatives
Plan Overview

Purpose

- Prepare the campus for recent and upcoming changes in pursuit of the Master Plan’s implementation

Phases

1. Immediate: 2011-2013
2. Mid-Term: Through 2015
3. Long-Term: 2020 Master Plan Implementation
Transportation Vision Plan Objectives

- **Parking**
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- **Transit and Shuttle System**
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  - Incorporate intelligent transportation system technology to enhance operations and traveler information

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  - Improve ADA accessibility to and on campus
  - Provide connections to all transit stops
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484 spaces

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200 spaces

Total Supply = 922 spaces
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Working Assumptions

- **Phase 1: immediate/2011-2013**
  - Lakeside Avenue/Miller Center (complete)
  - Perkins Pier and Pecor parking lots (now)
  - Res Tri (Phase 1 now; Phase 2 pre-May 2012?)
  - Hauke Addition/Communication and Creative Media/Campus Transit Hub (May 2012?)
  - Additional 100+ beds off-site; location to be determined

- **Phase 2: mid-term/through 2015**
  - Ethan Allen Club and Eagles Club (~500 beds total; parking underneath buildings?)
  - Spinner Place (270 beds) and Quarry Hill (112 beds) leases to be terminated

- **Phase 3: long-term/through 2020/full implementation of Campus Master Plan**
  - Information Technology System/Miller Information Commons Addition
Phase 1: Immediate through 2013

Res Tri
-154 spaces
(Skiff & McD-W/all of Zone 3)

Hauke Addition/Campus Transit Hub
-26 spaces
(Bader)

Zone 1: Perkins Pier/Pecor lots
-238 spaces

Lakeside Ave
+266 spaces

100+ new beds off-site
(location to be determined)
Phase 2
2015

Eagles Club
~90 spaces (under building footprint)

Ethan Allen Club
~90 spaces (under building footprint)

Spinner Place & Quarry Hill leases end
(no change in parking supply)
## Demand versus Supply

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**DRAFT**

Numbers are based on assumptions of future plans and are likely to change.
DRAFT RECOMMENDATIONS
Transportation Committee Discussions

Overarching Themes/Issues

- Equity
- Flexibility
- Time
- Convenience versus necessity: parking on the core is convenient, but not necessary for everyone.
- Incentives
- Simplicity
TRANSPORTATION ALTERNATIVES MUST BE SUPPLIED BEFORE ATTEMPTING TO MANAGE DEMAND

- Shuttle system enhancements
  - Connect gaps (e.g. Cherry St. to Campus, others?)
  - High frequency
  - Smaller, more comfortable, efficient/potentially alternatively fueled vehicles
  - Bike racks on vehicles
  - More stops—not express route
  - Friendly drivers
  - Real-time GPS to choose fastest/least congested route
Core Items

- Pursue more off-site parking locations
  - To intercept VT 15 traffic (Winooski/Spinner Place)
  - North Avenue-Church/Lodge/other
  - Connect new locations to campus with shuttle

- Continue to improve bicycle facilities
  - Covered, secure, lit bicycle parking
  - Showers & lockers
  - Storage: racks, lockers, indoor storage
  - Racks on shuttle vehicles

- Continue to improve ADA, bicycling, and walking accessibility and connectivity
Core Items

- **CAMPUS INFORMATION CAMPAIGN**
  - Provide info on programs/services
    - CCTA
    - CarShare Vermont
    - Guaranteed Ride Home
    - Bike/Walk Rewards
    - Campus shuttles
  - Advertise incentives
  - Address perceived barriers
  - Convey information about upcoming changes to parking

- Add parking cash-out program as an incentive
- Other incentives?
MANAGEMENT OPTIONS
Alternative 1: Parking Meters

- Core campus lots (Champlain manages) versus on-street (City manages)
- Equitable, convenient, flexible, easy to enforce and manage
- Accept credit cards, cash, or debit to campus account
- Variable pricing: $1 first hour, $2 second hour, etc.
- Peak period pricing: higher rates during the peak hour
- Meter options: multi-space, pay & display, in-vehicle
Alternative 2: Restrict core campus parking eligibility

- **Time-based system**
  - Those who park for all day park off-site
  - Those who just need to park for one class or a couple of hours can park at the core
  - Commuter students and adjunct professors: parking hours related to credit hours

- **Continue to accommodate**
  - ADA
  - Loading and unloading
  - Visitors
  - Scooters/motorcycles? more environmentally friendly, seasonal, consume less space

- **Need to continue issuing permits and enforcing parking**
Alternative 3: Rezone permit system and offer shorter permits

- Re-zone parking system to maximize use of existing capacity

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Lots within the Inner Core area have peak occupancies > 50%.
Alternative 3: Rezone permit system and offer shorter permits

- Offer short-term parking options in addition to semester-long permits.
  - Encourages people to drive less because they can use alternative transportation some times even if they can’t commit to it 100% of the time.

- How?
  - Half-day or daily permits purchased in person.
  - Coupon book or scratch/punch card: coupon displays date and time at which vehicle is parked and is displayed on dashboard or hung from rearview mirror.
### Alternative 4: Update parking rates

#### Parking rate comparison

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<tr>
<th>Institution</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Champlain College</td>
<td>$50 (PT) - $100 (FT)/semester</td>
</tr>
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Next Steps

- Discuss preferred alternative/combination of alternatives

- Present to
  - College Council
  - Senior Management
  - Staff Council
  - Faculty Senate
  - Student Government
  - Etc.

- Prepare draft & final Transportation Plan
Champlain College
Transportation Vision

College Council-Transportation Committee
August 4, 2011

Prepared for:
Champlain College
Agenda

- Victoria Transport Policy Institute slides
- Review and begin to identify preferred alternative
Transportation Committee Discussions

Overarching Themes/Issues

- Equity
- Flexibility
- Time
- Convenience versus necessity: parking on the core is convenient, but not necessary for everyone.
- Incentives
- Simplicity
Core Items

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- Shuttle system enhancements
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  - Real-time GPS to choose fastest/least congested route
Core Items

- **Pursue more off-site parking locations**
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  - North Avenue-Church/Lodge/other
  - Connect new locations to campus with shuttle

- **Continue to improve bicycle facilities**
  - Covered, secure, lit bicycle parking
  - Showers & lockers
  - Storage: racks, lockers, indoor storage
  - Racks on shuttle vehicles

- **Continue to improve ADA, bicycling, and walking accessibility and connectivity**
Core Items

- **CAMPUS INFORMATION CAMPAIGN**
  - Provide info on programs/services
    - CCTA
    - CarShare Vermont
    - Guaranteed Ride Home
    - Bike/Walk Rewards
    - Campus shuttles
  - Advertise incentives
  - Address perceived barriers
  - Convey information about upcoming changes to parking
Core Items

- Flexibility of work schedules
- If possible, make parking transferrable
- Offer incentives, possibly:
  - Parking cash-out
  - Coffee cards
  - Covering off-site parking to protect cars from sun/snow
  - Electric bicycles for the uphill ride to core campus
MANAGEMENT OPTIONS
Core campus lots (Champlain manages) versus on-street (City manages)

Equitable, convenient, flexible, easy to enforce and manage

Accept credit cards, cash, or debit to campus account

Variable pricing: $1 first hour, $2 second hour, etc.

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Meter options: multi-space, pay & display, in-vehicle
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Lots within this area have peak occupancies > 50%
Alternative 3: Rezone permit system and offer shorter permits

- **Offer short-term parking options in addition to semester-long permits.**
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Alternative 4: Update parking rates

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Alternative 4: Update parking rates

**Parking rate comparison**

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<td>Champlain College</td>
<td>Daily</td>
<td>Free</td>
</tr>
<tr>
<td></td>
<td>Annually</td>
<td>$200</td>
</tr>
<tr>
<td>University of Vermont</td>
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<td>$12</td>
</tr>
<tr>
<td></td>
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</tr>
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</tr>
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  - College Council
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  - Etc.
TRANSPORTATION ALTERNATIVES MUST BE SUPPLIED BEFORE ATTEMPTING TO MANAGE DEMAND

Shuttle system enhancements

- Connect gaps (e.g. Cherry St. to Campus, others?)
- High frequency
- Smaller, more comfortable, efficient/potentially alternatively fueled vehicles
- Bike racks on vehicles
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Core Items

- **Pursue more off-site parking locations**
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Champlain College Transportation Plan

September 27, 2011

Prepared for:
Champlain College
Plan Overview

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Champlain College Transportation Plan

October 13, 2011

Prepared for:
Champlain College
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<tr>
<td></td>
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</table>
Next Steps

- Prepare draft & final Transportation Plan
- Present to
  - Senior Management
  - Staff Council
  - Faculty Senate
  - Student Government
  - Etc.
Plan Overview

Purpose

- Prepare the campus for recent and upcoming changes in pursuit of the Master Plan’s implementation

Elements

- Parking
- Campus shuttle system
- Disabled, bicycle and pedestrian access & connectivity
- Traffic on adjacent roads
Core campus parking is going away

But there is enough capacity off-site to meet parking demand.
Transportation Committee

- Identified key values that the transportation system needs to reflect:
  - Equitable, flexible, respectful of personal time, simple to use, incentivized

- Charged with communicating to campus that core campus parking is going away and people will need to park off-site or take alternative transportation

- How to make this a seamless transition?
Committee Recommendations

- Parking on core campus should be set aside for short-term while all-day/longer term parking should be off-site
  - Investigate meters or half-day/daily permits to manage core campus parking
- Secure more off-site parking to intercept traffic
- Allow for flexible work schedules
- Enhance shuttle service
- Communicate options
  - Many people are not aware of existing programs like CarShare Vermont, CATMA Walk/Bike Rewards, Guaranteed Ride Home, etc..
- Improve bicycle facilities
  - showers/lockers, bike racks on shuttles, etc.
"What if I need my car during the day?"

What barriers haven’t we thought of?

How do the transportation alternatives work in different situations?

For example, “what if I take the bus to work but have to leave to pick up my sick child at school?”

"Why should I park off-site?"

What incentives would people like that are feasible for the College to provide?
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- Communicate options
  - Many people are not aware of existing programs like CarShare Vermont, CATMA Walk/Bike Rewards, Guaranteed Ride Home, etc..
- Improve bicycle facilities
  - Showers/lockers, bike racks on shuttles, etc.
Next Steps: continuing to gather campus input

"What if I need my car during the day?"

What barriers haven’t we thought of?

How do the transportation alternatives work in different situations?

For example, “what if I take the bus to work but have to leave to pick up my sick child at school?”

"Why should I park off-site?"

What incentives would people like that are feasible for the College to provide?

Email: bisler@rsginc.com
Plan Overview

Purpose

- Prepare the campus for recent and upcoming changes in pursuit of the Master Plan’s implementation

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- Campus shuttle system
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How do the transportation alternatives work in different situations?

For example, “what if I take the bus to work but have to leave to pick up my sick child at school?”

"Why should I park off-site?"

What incentives would people like that are feasible for the College to provide?

Email: bisler@rsginc.com
Core Parking

- At this time, McDonald-Whiting and Hauke lots are expected to be open in Fall 2012

- There is enough parking between core and off-site areas to accommodate total campus demand both now and in the future (2020)
  - including all special needs parking (visitors, loading/unloading, special events, IT, physical plant, moped/motorcycle, res life, etc.)

- Have compared alternative management strategies
<table>
<thead>
<tr>
<th>Alternative</th>
<th>Pros</th>
<th>Cons</th>
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</thead>
<tbody>
<tr>
<td>Re-zone parking lots</td>
<td>- Improve efficiency of underused core lots</td>
<td>- Administration, enforcement, and management needs are high&lt;br&gt;- College still responsible for managing and enforcing on-street parking&lt;br&gt;- Still requires permit system</td>
</tr>
<tr>
<td>Restrict eligibility</td>
<td>- Simple&lt;br&gt;- Reduces parking demand</td>
<td>- Might not be perceived as equitable&lt;br&gt;- Not flexible</td>
</tr>
<tr>
<td>Short-term parking permits</td>
<td>- Equitable, flexible, simple&lt;br&gt;- Offers more flexibility than a semester long permit&lt;br&gt;- Potentially less expensive for college affiliates than semester long permit (see below)&lt;br&gt;- Reduces parking demand because of greater flexibility</td>
<td>- Still requires significant staff and budget resources from College&lt;br&gt;- Administration, enforcement, and management needs are high&lt;br&gt;- Still requires permit system</td>
</tr>
<tr>
<td>Update permit prices</td>
<td>- Creates a market economy&lt;br&gt;- Reduces parking demand&lt;br&gt;- Simple</td>
<td>- Not be perceived as equitable&lt;br&gt;- Not flexible&lt;br&gt;- Administration, enforcement, and management needs are high&lt;br&gt;- College still responsible for managing and enforcing on-street parking&lt;br&gt;- Still requires permit system</td>
</tr>
<tr>
<td>Meters</td>
<td>- Equitable, flexible, simple&lt;br&gt;- Offers more flexibility than a semester long permit&lt;br&gt;- Requires less resources on the part of the College to administer, enforce, and manage&lt;br&gt;- Potentially less expensive for college affiliates than semester long permit&lt;br&gt;- Accommodates visitor parking easily&lt;br&gt;- Reduces parking demand because of greater flexibility&lt;br&gt;- Revenue potential that could be reinvested into college</td>
<td>- Requires City to assume responsibility of on-street parking</td>
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<tr>
<td>Time limit signs</td>
<td>- Equitable, flexible, simple&lt;br&gt;- Offers more flexibility than a semester long permit&lt;br&gt;- Requires slightly less resources on the part of the College to enforce and manage&lt;br&gt;- Less expensive for college affiliates</td>
<td>- Requires City to assume responsibility of on-street parking&lt;br&gt;- No disincentive to drive / parking demand may not decrease</td>
</tr>
</tbody>
</table>
Total core spaces with McD-W & Hauke: 361
Total core spaces w/o McD-W & Hauke: 236
Total off-site spaces: 466
Totals do not include Ethan Allen Club
Progress Report

Off-Site Parking

- Working with Mountain Transit to secure a second shuttle between Lakeside and core beginning in April (less than 10 minutes between shuttles)

- Extending service hours to 6AM to midnight
  - Lakeside Ave transit lounge open during these hours

- CATMA is developing parking facilities at Exit 14 and Exit 16 (long-term)

On-Street Parking

- Met with City to discuss transferring management
Progress Report

Shuttle System (long-term)

- Comparing management options: Champlain or private contractor?
  - Service responsibilities (drivers/staffing)
  - Capital costs
  - Annual maintenance
  - Operating costs

- Comparing vehicles:
  - Passenger capacities
  - Gasoline
  - Diesel
  - Compressed Natural Gas
  - Wheelchair accessible
Progress Report

Possible Incentives

- Free on-campus meal for early adopters
- Additional vacation time
- Alternative work schedules / telecommuting
- On-site amenities, such as child-care
- Preferred parking or reduced parking costs for car/vanpools
- Covering off-site parking to protect cars from sun/snow

- Coffee cards
- Lunchtime shuttles to/from Church Street
- Provide on-campus bike center with spare tubes, pumps, tools, etc.
- Electric bicycles for the uphill ride to core campus
- Electric bicycle recharging stations
- $50 towards a bike tune-up each year that you ride to work 20 times

- Reward every participant with a small gift (like a box of candy) and hand-deliver it so that it is visible and raises awareness of programs
- Discounts to local merchants (already in place with CATMA)
- Parking cash-out
- Incentives to encourage employees to live closer to work, (e.g. homebuyer downpayment assistance)
Next Steps

- Decide whether the short-term parking should be limited to 2 or 3 hours.
- Continue to work with the City of Burlington to mitigate on-street parking impacts around the core campus.
- Determine whether to continue working with Mountain Transit for Fall 2012 or purchase shuttle vehicles.
- Decide how to manage the McDonald-Whiting and Hauke lots.
Next Steps (continued)

- Release an RFP for parking meter vendors.
- Implement the incentives program. Continue to work with CATMA to market programs.
- Continue working with CATMA to secure off-site parking to the north and east of campus.
- Continue to communicate parking and transportation changes to campus.
APPENDIX B

Projects Identified in Campus Master Plan
Future conditions are considered to 2020, which is the expected date of full implementation of the campus master plan and includes the following changes:

Near term (present to 2013)

- Res Tri (270 new beds, -154 parking spaces)
- Hauke Addition/Communication and Creative Media/Campus Transit Hub (~43,000 sq ft, -26 parking spaces)
- Additional 100+ beds off-site; location to be determined

Mid-term (2013-2015)

- Residential projects at the Ethan Allen Club and Eagles Club, resulting in approximately 500 beds total
- Residential leases at Spinner Place (270 beds) and Quarry Hill (112 beds) are to be terminated (this will not affect parking, but represents the relocation of residential students to the core campus).
- It is assumed that there will be 110 new parking spaces at the Ethan Allen Club and no change in the number of spaces at the Eagles Club, Although this is an increase of parking spaces, the Ethan Allen Club facility is likely to be priced according to market demand in order to help pay for its construction and operation.

Long-term: 2015-2020

- Information Technology System/Miller Information Commons (MIC) Addition. This addition would be built on the existing 42 space lot adjacent to MIC.

Based on these planning assumptions, there are expected to be 770 spaces in the campus inventory by the end of Phase 3. This is adequate to meet the estimated peak parking demand of 523-675 spaces.
APPENDIX C

Comments/Input Summary
<table>
<thead>
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<th>Comment</th>
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<td><strong>Bike/Ped</strong></td>
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<td>B/P</td>
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<td>Action Item/Next Step</td>
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<tr>
<td>---------</td>
<td>-----------------------</td>
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<tr>
<td>6 P</td>
<td>Retain motorcycle/scooter parking on core campus, since they are smaller and more fuel efficient</td>
</tr>
<tr>
<td>7 P</td>
<td>Not fair that motorcycles and CSVT cars get to park on campus and other people can’t</td>
</tr>
<tr>
<td>8 P</td>
<td>Day permits for occasional parking would be better than meters because they would be allocated to designated groups; parking meters would just fill up</td>
</tr>
<tr>
<td>9 P</td>
<td>Build more flexibility into parking; provide shorter term parking options</td>
</tr>
<tr>
<td>10 P</td>
<td>Incentivize carpooling by granting carpools the most convenient parking spaces, or provide free parking for carpools</td>
</tr>
<tr>
<td>11 P</td>
<td>Improve utilization of existing parking by eliminating zone/permit types</td>
</tr>
<tr>
<td>12 P</td>
<td>Parking is a recruitment issue; it is inconvenient and used inefficiently</td>
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</table>

**Shuttle**

<table>
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<tr>
<td>1 S</td>
<td>Need to connect intercept lots to campus with shuttle</td>
</tr>
<tr>
<td>2 S</td>
<td>Use more energy efficient, cleaner shuttle vehicles</td>
</tr>
<tr>
<td>3 S</td>
<td>Ensure that part-time/evening workers have safe connections between core campus and off-site parking even during off-peak hours and breaks/holidays; this needs to be a 12-month plan, not a 9-month plan</td>
</tr>
<tr>
<td>4 S</td>
<td>Ensure there is adequate shuttle service for fac/staff even when classes are not in session</td>
</tr>
<tr>
<td>5 S</td>
<td>CCTA buses don’t connect easily to campus; drop off/pick up at FAHC/UVM or Cherry Street Terminal; coordinate shuttle connection to campus</td>
</tr>
<tr>
<td>6 S</td>
<td>Shuttle schedule needs to accommodate peak times, such as Friday afternoons, special Wednesday meetings</td>
</tr>
<tr>
<td>7 S</td>
<td>Use more attractive shuttle vehicles; don’t like yellow school buses; keep vehicles clean</td>
</tr>
<tr>
<td>8 S</td>
<td>Students get stranded because the Spinner bus stops running at 7PM on Friday nights</td>
</tr>
<tr>
<td>9 S</td>
<td>Shuttles are unreliable; they need to stick to the schedules posted on the tv screens</td>
</tr>
<tr>
<td>10 S</td>
<td>Shuttles need to be high frequency, every 5-10 minutes, and operate from at least 6AM to 10PM; Lakeside transit lounge needs to be accessible/unlocked during those times</td>
</tr>
</tbody>
</table>
APPENDIX D

Interim Memo
MEMORANDUM

To: Rich Long, John Caulo, and Carl Riden, Champlain College
From: Beth Isler, PE/PTP
Subject: Champlain College Strategic Transportation Plan: Near-Term Recommendations
Date: February 15, 2012

This memorandum makes near-term recommendations for the Champlain College Strategic Transportation Plan for the campus to begin preparing for the Fall 2012 semester.

Through the campus outreach process, it has been determined that the new parking system will focus short-term (2-3 hours or less) parking at the core while shifting all-day or longer parking to off-site (Lakeside Avenue or Gilbane) facilities which are connected to the core via a high-frequency shuttle.

This interim memorandum identifies next steps for implementation, taking into account input received from the campus through the Transportation Committee, Faculty Senate, Staff Council, and College Council. Specific questions addressed for Fall 2012 are:

1. What is the current state of parking on campus?
2. How to manage on-street parking to avoid displacing parking demand into the neighborhood?
3. How to improve shuttle service between off-site parking and the core campus?
4. How much parking will be left on the core campus, and how should it be allocated and managed?
5. What other campus changes are needed to support this plan?

1. Existing Parking Conditions

RSG monitors Champlain College’s parking demand with annual counts that are reported in CATMA’s Joint Institutional Parking Report. Parking spaces in 1) off-street core campus lots; 2) on-street blocks around the core campus; and 3) off-site parking facilities (Gilbane and Lakeside) are counted.

Based on the November 2011 count data, the peak period for the core campus during the week was 1:00-1:30PM on Tuesday. The total parking demand at this time was 523 vehicles (off-street core campus, on-street adjacent to core campus, and off-site).

Peak parking demand has also been estimated using CATMA survey data; this method applies mode split to the estimated number of people on campus during the peak period. Using this method, 675 total parking spaces are estimated to be needed during the peak period.

If the McDonald-Whiting and Hauke lots are still available in Fall 2012 (that is, Res Tri Phase 2 and Hauke/CCM construction projects have not begun), there will be 361 off-street parking spaces on the core campus and 466 spaces off-site at Gilbane/Lakeside (Figure 1). (The inventory does not include 173 on-street spaces that are used by Champlain constituents.)
2. **On-Street Parking Around Core Campus**

One of the most pressing concerns for the evolving campus parking system is how to avoid displacing the parking demand into the adjacent neighborhoods. Therefore, working with Burlington Public Works to establish an effective management system for on-street parking is the first step to be taken in implementing the campus transportation plan. Possibilities include installing parking meters or signed (2-hour) time limits (such as those along Pine Street adjacent to dealer.com). Champlain College is working with the Burlington Department of Public Works to discuss the prospect of installing on-street parking meters managed and enforced by the City. It is likely that any proposal will need to be approved by the Public Works Commission.

3. **Off-Site Parking and Shuttles**

The most frequently mentioned comment gathered from campus (including Transportation Committee, Faculty Senate, Staff Council, College Council, and general campus outreach) is the need for off-site parking to intercept commuters from the north and east of campus. Frustration was expressed with the inefficiency of having to drive (from the north) past the core campus to park at Lakeside Avenue only to
take a shuttle back to the core. It is thereby recommended that the campus work with CATMA to secure off-site parking to the north and east of campus.

While CATMA is working on developing off-site parking to the north and east of Burlington, these facilities are still a few years away. In the interim, Champlain has decided to enhance shuttle service between the core campus and Lakeside Avenue to address the comments about intercept parking.

It is assumed that those drivers who park at Lakeside/Gilbane will be required to obtain a free permit to park in these areas.

A. Connecting Off-Site Parking to Campus

The Strategic Transportation Plan will include a plan for the shuttle system. In the meantime, the following aspects should be included in the shuttle system:

- Two shuttles at one time to provide less than 10 minute headways
- Extended service hours of 6AM to 12AM (ensure that the Lakeside Avenue transit lounge is unlocked during these hours)
- Attractive, comfortable, clean, alternative-fueled vehicles with ~20-passenger capacity\(^1\)
- Bike racks on vehicles
- Friendly drivers
- Real-time GPS to choose fastest/least congested route

Preliminary estimates have been made to understand whether Champlain College should expand the shuttle service between Lakeside/Gilbane and the core campus using a service provider (Mountain Transit) or purchase or lease vehicles and hire their own drivers. Ridership on this route indicates that currently the largest number of passengers per trip is about 15. The tables below provide the preliminary estimate to compare the alternatives, and suggest that CNG vehicles (which can be refueled at the Burlington Department of Public Works on Lakeside Avenue) would be the most economical alternative.

\(^1\) Pursuing alternative-fueled vehicles would be a long-term goal.
## Vehicle Costs

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<th>Vehicle type or service provider</th>
<th>Vehicle Retail</th>
<th>Passenger Capacity</th>
<th>Interest Rate/yr</th>
<th># of yrs</th>
<th>Capital Cost (annually)</th>
<th>Annual Maintenance</th>
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<td>Mountain Transit</td>
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*Assume maintenance, insurance + other annual costs are 20% of purchase price*
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<th>Hourly cost or driver pay rate $/hr</th>
<th># of vehicles</th>
<th>Service hours per weekday (6AM-12AM, plus 1 hour for start-up &amp; shut-down)</th>
<th># of vehicles</th>
<th>Service hours per weekend (11AM-9PM, plus 1 hour for start-up &amp; shut-down)</th>
<th>Weekly system mileage (assume eight 2 mile trips/hour/shuttle)</th>
<th>mpg (assumed depending on fuel type)</th>
<th>Fuel cost (per gallon of gasoline equivalent) (assumed)</th>
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## Summary

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<td></td>
</tr>
<tr>
<td>Premier</td>
<td>$937,040</td>
<td>$937,040</td>
<td></td>
</tr>
<tr>
<td>2011 Ford F550 ElDorado Aero Elite 290 (Diesel)</td>
<td>$64,658</td>
<td>$485,056</td>
<td>$549,714</td>
</tr>
<tr>
<td>2011 Ford E350</td>
<td>$51,727</td>
<td>$455,659</td>
<td>$507,385</td>
</tr>
<tr>
<td>2011 Ford E450 ElDorado</td>
<td>$38,795</td>
<td>$455,659</td>
<td>$494,454</td>
</tr>
<tr>
<td>2011 Ford E350 ElDorado Aerotech 200 (CNG)</td>
<td>$71,124</td>
<td>$396,864</td>
<td>$467,988</td>
</tr>
</tbody>
</table>

Managing unexpected situations will be a new responsibility to assume if the college purchases its own vehicles. For example:

- An on-call driver could be used in the event of a driver calling in sick, or perhaps the parking enforcement staff could be used if a scheduled driver is unavailable.
- A contract could be negotiated with Mountain Transit, CCTA, or another provider to provide support in the event of a vehicle breaking down.
4. **Core Campus Parking (Lots/Off-Street)**

**A. Meters**

The most equitable, simple, convenient option (both for users and enforcement) to preserve core campus parking for short-term use is through parking meters. Multi-space meters (approximately one per lot) could be installed immediately in core lots (with the exception of McDonald-Whiting and Hauke). The meters would include a maximum time limit (2-3 hours) to prevent ‘feeding the meter’ and all-day parking. Optional features are shown in Table 1 (In-Vehicle Meters are discussed below). The University of Vermont has recently implemented multi-space meters/pay stations in three of their main parking areas. Examples of the meters are shown in Figure 2. A preliminary cost comparison of this meter system to the current permit system is shown in Figure 3.

*Table 1: Parking Meter Capabilities*

<table>
<thead>
<tr>
<th>Type</th>
<th>Coin Operated Meter</th>
<th>Coin/Card Operated Meter</th>
<th>Multi-Space Pay Station</th>
<th>In-vehicle Meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepay</td>
<td></td>
<td></td>
<td></td>
<td><strong>X</strong></td>
</tr>
<tr>
<td>Accepts Coins</td>
<td><strong>X</strong></td>
<td><strong>X</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accepts credit/debit</td>
<td></td>
<td><strong>X</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accepts SmartCards</td>
<td></td>
<td><strong>X</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pay &amp; Display</td>
<td></td>
<td></td>
<td><strong>X</strong></td>
<td></td>
</tr>
<tr>
<td>Pay by Space</td>
<td></td>
<td></td>
<td></td>
<td><strong>X</strong></td>
</tr>
<tr>
<td>Pay by Plate</td>
<td></td>
<td></td>
<td></td>
<td><strong>X</strong></td>
</tr>
<tr>
<td>Flexible Pricing</td>
<td></td>
<td></td>
<td></td>
<td><strong>X</strong></td>
</tr>
<tr>
<td>Add Time Anywhere</td>
<td></td>
<td></td>
<td></td>
<td><strong>X</strong></td>
</tr>
<tr>
<td>Mobile Phone</td>
<td></td>
<td></td>
<td></td>
<td><strong>X</strong></td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
<td><strong>X</strong></td>
</tr>
<tr>
<td>Patrolling Enforcement</td>
<td></td>
<td><strong>X</strong></td>
<td><strong>X</strong></td>
<td><strong>X</strong></td>
</tr>
<tr>
<td>In Office Enforcement</td>
<td></td>
<td></td>
<td></td>
<td><strong>Possible</strong></td>
</tr>
</tbody>
</table>
**Figure 2: Examples of multi-space meters/pay stations**

**Figure 3: Preliminary cost comparison of meters and permits**

<table>
<thead>
<tr>
<th>Parking Meters</th>
<th>Expenses</th>
<th>Assumed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lots that would be metered</td>
<td># of spaces</td>
<td># of meters</td>
</tr>
<tr>
<td>North House</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Sanders Hall</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>396 Main</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Summit Hall</td>
<td>29</td>
<td>1</td>
</tr>
<tr>
<td>Miller Information Commons (until Phase 3)</td>
<td>42</td>
<td>1</td>
</tr>
<tr>
<td>Rowell</td>
<td>41</td>
<td>1</td>
</tr>
<tr>
<td>Jensen Hall</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>South House</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Perry Hall (could be signed for visitors only instead of metered)</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>192</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parking Meters</th>
<th>Initial meter cost (assumes $15k per meter; includes installation)</th>
<th>$135,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking Meters</td>
<td>Annual operations (credit card transactions, etc.)</td>
<td>$3,340</td>
</tr>
<tr>
<td>Parking Meters</td>
<td>Annual maintenance (battery replacement, repairs)</td>
<td>$6,750</td>
</tr>
<tr>
<td><strong>Total Annual Operations &amp; Maintenance</strong></td>
<td>$10,000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Permit System</th>
<th>Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expenses</strong></td>
<td>$6,000 Decals</td>
</tr>
<tr>
<td></td>
<td>$500 Hangtag Permits</td>
</tr>
<tr>
<td></td>
<td>$5,000 Staff time to issue permits</td>
</tr>
<tr>
<td></td>
<td>$11,500 Total Annual Supplies, Operations &amp; Maintenance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parking Meters</th>
<th>Annual Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Depending on assumptions</strong>, approximately $75,000 to $175,000</td>
<td></td>
</tr>
</tbody>
</table>

*Low end scenario assumes 50% parking occupancy, 4 hours per day, 5 days per week, 40 weeks per year, $1/hour.
High end scenario assumes 75% parking occupancy, 6 hours per day, 5 days per week, 40 weeks per year, $1/hour.
B. McDonald-Whiting and Hauke Lots

Because construction is planned on these lots in the near future, it is not feasible to install parking meters in them. Therefore, options for managing them are:

1. An occasional use permit (like UVM offers), books of coupons, or scratch or punch cards (Figure 4), which users purchase each semester and then indicate the time and date that they are parking, displaying the coupon/card on the dashboard. Each permit/coupon/card would be good for 2-3 hours at a time and only valid for the date and time which they indicate.

2. Personal/in-vehicle meters (Figure 4), which are individual parking meters located within each user's car. The user purchases or leases the device at the beginning of the semester and activates it with a debit card when they park their car. When they return to their vehicle, they turn it off. The device is displayed on the dashboard or hangs from the rearview mirror.

Additional considerations regarding these options are:

- Residential students or those living within ½ mile of the core campus should be ineligible.
- There should not be eligibility restrictions on part-time faculty/staff or commuter students.
- The number of coupon books/occasional use permits or personal meter hours that full-time faculty/staff and commuter students can purchase per semester should be limited.

C. Special Needs

The campus outreach process revealed several groups that require core campus parking, such as IT support services to transport equipment, cleaning staff vehicles to transport tools/materials, Res Life coordinators who need a car on hand for student emergencies, etc. A list of these groups and their estimated needs is provided below. Spaces can be reserved for these needs with a sign and they would
not be metered. Or these vehicles could be given a hangtag/dashboard permit to exempt them from paying the meters (this is probably the better option so that parking spaces are being used rather than sitting empty; however, a space would not be guaranteed).

Table 2: Special need spaces

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of Core Spaces Needed (at one time)</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Events</td>
<td>Special events will require special management on a case-by-case basis; this includes freshman orientation, commencement, move-in/move-out days, conferences and workshops, etc..</td>
<td></td>
</tr>
<tr>
<td>IT Support Services</td>
<td>5</td>
<td>Close to building</td>
</tr>
<tr>
<td>Cleaning Services</td>
<td>4</td>
<td>Close to dormitories</td>
</tr>
<tr>
<td>Res Life</td>
<td>5</td>
<td>Lakeside (1), Sanders (1), South (1) + 2 floating</td>
</tr>
<tr>
<td>Visitors</td>
<td>16 spaces currently available</td>
<td>Perry Hall</td>
</tr>
<tr>
<td>ADA</td>
<td>1 per 25 spaces (in each lot)</td>
<td>Close to building</td>
</tr>
<tr>
<td>Loading/unloading (deliveries)</td>
<td>1-2 spaces per lot</td>
<td>Close to building</td>
</tr>
<tr>
<td>Motorcycle/Moped/Scooters</td>
<td>Design into existing lots or reserve 1-2 full-size spaces</td>
<td>Include in existing lots; allow mopeds to park at bike racks</td>
</tr>
<tr>
<td>Librarians</td>
<td>1</td>
<td>Library</td>
</tr>
<tr>
<td>Physical Plant</td>
<td>Designated spaces are not needed</td>
<td></td>
</tr>
<tr>
<td>Stern Center</td>
<td>1</td>
<td>Unknown</td>
</tr>
<tr>
<td>Howard Center</td>
<td>1</td>
<td>Skiff Hall</td>
</tr>
<tr>
<td>Wellness Center</td>
<td>1</td>
<td>Student Life Center (SLC)</td>
</tr>
<tr>
<td>Student Health Services</td>
<td>4</td>
<td>Whiting Hall</td>
</tr>
<tr>
<td>medical practitioners</td>
<td>Can be asked to park on-street and/or pay meters</td>
<td></td>
</tr>
<tr>
<td>Consultants</td>
<td>Can be asked to park on-street and/or pay meters</td>
<td></td>
</tr>
<tr>
<td>Sodhexo</td>
<td>Can be asked to park on-street and/or pay meters</td>
<td></td>
</tr>
<tr>
<td>Security Vehicles</td>
<td>2</td>
<td>Durick</td>
</tr>
<tr>
<td>College Vans</td>
<td>2</td>
<td>Student Life Center (SLC)</td>
</tr>
<tr>
<td>CarShare Vermont Pod</td>
<td>2</td>
<td>Work with CSVT to determine most convenient location for users</td>
</tr>
</tbody>
</table>

**D. Proposed Plan for Core Campus Parking**

Figure 5 suggests one way the various lots could be managed. This plan could be further simplified by metering the Perry and IDX lots as well. Spaces identified for special needs in Table 2 above can be allocated throughout this plan by signing a few spaces in each lot as needed, or by providing special permits which exempt the vehicles from having to pay at the meters.
5. **Campus Culture**

Other campuses undergoing similar transitions as Champlain College have noted the need for a shift in campus culture to change transportation modes. For example, scheduling considerations, meeting locations, and overall flexibility will need to be promoted. Although this culture shift will likely happen over time, any efforts to adopt change early will smooth the transition.

A significant part of this transition is communication to ensure that people are aware of transportation alternatives so that they can still easily move about without a private vehicle. For example, one of the comments received during campus outreach was the need for a connection between the CCTA terminal on Cherry Street and the core campus. Yet the College Street Shuttle, which is free and runs every 15 minutes up and down College Street already provides a connection (although it does require walking two blocks along Church Street from Cherry Street to College Street, and then two blocks along Willard Street from College Street to Maple Street). The fact that few people are aware of this existing connection suggests a lack of communication about transportation options.

Similarly, facility amenities such as the availability of lockers to store bicycle gear and clothing would help to promote transportation alternatives such as bicycling.
A. **Incentives**

To help smooth the transition and encourage early adoption, the campus should provide incentives. Several benefits are already in place due to CATMA, but campus outreach indicated that people were unaware of the incentives or had difficulty using them (particularly the Guaranteed Ride Home program). Therefore, improved communication of these existing incentives should take place. In particular, people should be reminded that through CATMA they can ride CCTA buses for free. Transit use will be a critical part of reducing parking demand.

Other possible incentives to encourage people to use transportation alternatives (and which were suggested through the campus outreach process) include:

- Additional vacation time
- Alternative work schedules
- Free meals in Champlain dining halls
- On-site amenities, such as child-care
- Telework program
- Parking cash-out
- Preferred parking or reduced parking costs for car/vanpools
- Provide on-campus bike center with spare tubes, pumps, tools, etc.
- Coffee cards
- Lunchtime shuttles to/from Church Street
- Covering off-site parking to protect cars from sun/snow
- Electric bicycles for the uphill ride to core campus
- Electric bicycle recharging stations
- Free on-campus meal for early adopters
- $50 towards a bike tune-up each year that you ride to work 20 times
- Reward every participant with a small gift (like a box of candy) and hand-deliver it so that it is visible and spurs conversation, raising awareness of programs
- Discounts to local merchants
- Incentives to encourage employees to live closer to work, such as a homebuyer downpayment assistance program for employees:
  - Must be within 5 miles of an office or commit to exclusive use of mass transit or another non-SOV means of commuting
  - Available to first time homebuyers or those relocating to an RSG geography
  - Loan forgiven over 5 years. Early departure requires pro-rate reimbursement at prime rate + 1%; promissory note required
  - Purchase of a sustainable home encouraged
  - Subject to approval
6. **Next Steps**

- Decide whether the short-term parking should be limited to 2 or 3 hours.
- Continue to work with the City of Burlington to mitigate on-street parking impacts around the core campus.
- Determine whether to continue working with Mountain Transit for Fall 2012 or purchase shuttle vehicles.
- Decide how to manage the McDonald-Whiting and Hauke lots.
- Release an RFP for parking meter vendors.
- Implement the incentives program. Continue to work with CATMA to market programs.
- Continue working with CATMA to secure off-site parking to the north and east of campus.
- Continue to communicate parking and transportation changes to campus.
APPENDIX E

On-Street Parking
On-Street Parking at Champlain College

Overview provided for Burlington Department of Public Works
February 22, 2012
Champlain College is developing a Strategic Parking & Transportation Plan to support the implementation of the campus master plan.

As buildings are constructed on core campus surface lots, the parking strategy is to shift long-term (half-day or longer) parking to remote sites (Lakeside/Gilbane) to preserve remaining core campus lots for short term (~2-hour) parking.

These slides present:
- Current campus parking regulations (permit system)
- Current and future campus parking supply and demand
- Measured occupancy of on-street and off-street parking by Champlain
- Possible impacts if the current on-street parking management system (that is, permits for Champlain vehicles) were replaced with meters or signs
Champlain College: Adjacent On-Street Parking

- To facilitate this parking shift, Champlain would end its current system of semester-long permits and use one of the following alternatives:
  - Meters in core campus parking lots
  - Short-term parking permits for core campus lots
  - Time limits (for example, 2-hour parking signs) in core campus parking lots

- However, ending the permit system leaves the on-street spaces unmanaged.

- Champlain affiliates would have no reason not to park in the neighborhood for free.
Champlain College is therefore proposing that the City take over management of on-street parking in the neighborhood, possibly through meters or 2-hour parking signs.

To reduce campus parking demand, Champlain College will continue to be a member of CATMA and use its award-winning transportation demand management programs and services.
Current Campus Parking Regulations

- “Parking on ANY street contiguous to the College without a permit will result in a ticket and/or other college sanctions whether or not that street appears on this map.” [This applies to Champlain affiliates only, not the general public.]

- “All Champlain College students, faculty and staff must register their cars and park in their assigned zones. FAILURE TO PARK IN YOUR ASSIGNED ZONE—INCLUDING CITY STREETS OUTSIDE THE PARKING ZONE MAP—WILL RESULT IN FINES, TOWING, AND/OR ADDITIONAL COLLEGE IMPOSED SANCTIONS.”

- “Permits must be properly displayed while in the College’s assigned parking zones, including designated city streets. Vehicles not displaying the required permit will be cited for a fine and/or towed at the owner’s expense.”

- “Regardless of the permit held, no student, faculty or staff may park on adjacent city streets from 12:30 a.m. to 6:00 a.m.”
Parking Supply
Fall 2012

Total Supply = 827 spaces
does not include on-street spaces
sufficient to accommodate
peak demand +15%

Core Campus
Parking
361 spaces

Off-Site
466 spaces

Weekly parking demand is estimated to peak at 523-675 vehicles
Parking Supply  
Fall 2020

Core Campus Parking
194 spaces

Off-Site Parking
576 spaces

Total Supply = 770 spaces
does not include on-street spaces sufficient to accommodate peak demand +15%

Weekly parking demand is estimated to peak at 523-675 vehicles

Ethan Allen Club
There is currently parking capacity at the core: the majority of lots are well below 85% target occupancy.

Lakeside/Gilbane ~47% occupied during peak
Little on-street parking is used by Champlain College (validated by enforcement practices).
Findings

- During the peak period, most core lots are underused (<85% occupied).

- On-street parking adjacent to campus is not heavily used by Champlain, even during the peak period.

- Champlain does not require on-street parking to accommodate its demand. (But currently manages it to discourage/mitigate impacts to neighborhood.)

Champlain has the capacity (between core campus and Lakeside/Gilbane) to accommodate its parking demand as long as long-term parking shifts to Lakeside/Gilbane.

- If off-street core campus parking is managed by meters, signs, or short-term permits, demand would likely shift to unrestricted on-street spaces (if a new management strategy is not adopted for them).
Possible Options for Managing On-Street Parking

- Meters
- Time limits (for example, 2-hour parking signs)

Consider implementing as a pilot test (signs or meter vendor)

- Maple St. between S. Willard and Summit
- S. Willard between Tower Terrace and Main St.
Justifications

For the City
- Helps neighbors by increasing availability of parking in front of their property.
- Could be combined with resident permits so residents are exempt from meters or time limits, yet parking is not restricted to residents only.
- Opportunity for parking revenue.
- Opportunity to test new parking technology.

For Champlain College
- No longer managing a public asset.
- Shorter time limits will increase turnover and therefore capacity.
- Shorter time limits will be more convenient for anyone needing to park for two hours or less because it will be easier to find a space.
Questions and Assumptions

How would these options impact adjacent neighborhoods?

- Current data suggest that under the current system, Champlain users are parking at Gilbane/Lakeside and taking the shuttle rather than parking on-street or using core parking lots ~3 blocks from campus. Therefore the likelihood of them parking in the adjacent neighborhoods and walking is minimal.

- Shorter time limits will shift long-term parking to Gilbane/Lakeside.

- The campus shuttle will be faster and more convenient than searching for a space in the adjacent neighborhood and walking.
Suggested Next Step

Consider implementing a pilot test this spring:

- Look for a parking meter vendor who would be willing to provide meters for a demonstration project with the potential of securing a larger contract.
- Or install 2-hour time limit signs.
- Start with a small area, perhaps just the blocks of:
  - Maple St. between S. Willard and Summit
  - S. Willard between Tower Terrace and Main St.
- Evaluate after 90-days to develop a better understanding of the impacts. Collect data before installation to compare with how drivers respond to the short-term parking management strategies.
APPENDIX F

Parking Meters
<table>
<thead>
<tr>
<th>Type</th>
<th>Coin Operated Meter</th>
<th>Coin/Card Operated Meter</th>
<th>Multi-Space Pay Station (Cost to Purchase)</th>
<th>Multi-Space Pay Station (Cost to Purchase)</th>
<th>In vehicle GPS Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost to Purchase</td>
<td>$425 (Includes Post)</td>
<td>$800 (Includes Post)</td>
<td>$12,000</td>
<td>$13,000</td>
<td>$200/box</td>
</tr>
<tr>
<td>Cost to Install</td>
<td>$150</td>
<td>$150 (Includes Post)</td>
<td>Included in purchase price</td>
<td>$350</td>
<td>None</td>
</tr>
<tr>
<td>Operation/Maintenance Cost</td>
<td>5% of meters cost/year on repairs &amp; batteries</td>
<td>$5/month/meter for credit card operations. 5% of meters cost/year on repairs &amp; batteries</td>
<td>$30/month/station for credit card operations</td>
<td>$30/month/station for credit card operations</td>
<td>Wireless service contract - depends on service</td>
</tr>
<tr>
<td>Company</td>
<td>Parktel POM (Michael Logue)</td>
<td>Parktel POM</td>
<td>Parktel POM</td>
<td>Digital Payment Technologies (Harry Sangha)</td>
<td>SkyMeter</td>
</tr>
<tr>
<td>Prepay</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Accepts Coins</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Accepts credit/debit</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Accepts SmartCards</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pay &amp; Display</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pay by Space</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pay by Plate</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Flexible Pricing</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Add Time Anywhere</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mobile Phone Communication</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Patrolling Enforcement</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>In Office Enforcement</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>$160 to add &quot;free time&quot; button, SmartLock, and Magnum vault to any model. $30/meter for shipping</td>
<td>Smartcard for students could be purchased $4/card. $160 to add &quot;free time&quot; button, SmartLock, and Magnum vault to any model. $30/meter for shipping</td>
<td>Smartcard could be purchases for students</td>
<td>Vehicle location determined by GPS to ensure proper parking</td>
<td></td>
</tr>
</tbody>
</table>