

Commuter Needs for the  
Hartford-Lebanon-Hanover Employment Center:  
An Assessment of Park and Ride Facilities in the Upper Valley

Prepared by:  
Upper Valley Lake Sunapee Regional Planning Commission  
for the  
Vermont Agency of Transportation  
November 26, 2003



## INTRODUCTION

This report is an update to the 1998 Upper Valley Lake Sunapee Regional Planning Commission (UVLSRPC) Park and Ride needs and priorities for Vermont communities. The report describes existing conditions for Park and Rides within the UVLSRPC Region and identifies needs and strategies to improve the system. The report is organized to include needs and priorities for both New Hampshire and Vermont communities which comprise the Hartford-Lebanon-Hanover Labor Market Area.

It is an objective of UVLSRPC to plan for an integrated, seamless, region-wide transportation network that would provide frequent service and connectivity between employment centers, commercial service areas and large residential areas. The Park and Ride lot system is an integral part of carpooling and public transit. Park and Ride lots facilitate intermodal connections and encourage transit use. Inbound commuters and their Park and Ride needs and priorities are the focus of this report.

## BACKGROUND

The three Vermont communities within the UVLSRPC Region are within the Hartford-Lebanon-Hanover Labor Market Area (LMA). One of the Park and Ride lots which serves this LMA is located in the Town of Hartland at Exit 9, Interstate 91. It is the only Park and Ride facility in the Vermont portion of the UVLSRPC Region. Two additional formal park-and-ride lot facilities, listed below (Table), are located within the NH portion of the Region. Other facilities outside of the Region also serve commuter traffic to UVLSRPC's Hartford-Lebanon-Hanover employment center. See map.

The LMA has experienced steady growth in employment which has increased demands on the region's transportation network. In addition to those who commute to Hartford, many Vermont residents are crossing state lines to employment opportunities in NH. This places significant peak hour impacts on the roads that act as gateways into NH (Ledyard Bridge, US Route 4 and Interstate 89). These pressures negatively impact Vermont communities in many ways including reducing highway capacity and increasing air pollution.

Possibly exacerbating commuting pressures, is the fact that the NH portion of the LMA has had a larger share of the job growth, while housing development is split nearly 50-50 between New Hampshire and Vermont communities. This job/housing imbalance is contributing to increasingly decentralized land uses and traffic congestion within the employment center.

**Formal Park-and-Ride Facilities Serving the Hartford-Lebanon-Hanover Labor Market Area**

| TOWN                      | LOCATION                     |
|---------------------------|------------------------------|
| Ascutney, Vermont         | VT 131, I-91 Exit 8          |
| Hartland, Vermont         | US 5, I-91 Exit 9            |
| Lyme, New Hampshire       | NH 10, Village               |
| New London, New Hampshire | NH 103A, I-89 Exit 12        |
| Royalton, Vermont         | VT 14, at junction of VT 110 |
| Sharon, Vermont           | VT 132, I-89 Exit 2          |
| Springfield, Vermont      | US 5, I-91 Exit 7            |
| Thetford, Vermont         | VT 113, I-91 Exit 14         |



The Region's largest employers are experiencing significant growth and the resulting parking needs are proving difficult and costly to address. A number of employers, most notably Dartmouth College and Dartmouth-Hitchcock Medical Center, are relying much more heavily on transit services to reduce employee usage of single-occupant vehicles. Dartmouth College is exploring the possibility of developing satellite parking lots serviced by bus for employees rather than building additional parking spaces on valuable land. The Upper Valley Transportation Management Association (UVTMA) was formed as a mechanism to foster cooperation among employers, local government and other public agencies to facilitate actions to lessen the demands on the region's roads. Additional Park and Ride facilities have been identified as a high priority to satisfy the region's commuting needs.

Park and Ride facilities that are currently served by transit are heavily used by commuters. Many lots are over capacity, pointing to unmet demand for facilities. In fact, during the recent evaluation for a Park and Ride lot in White River Junction, it was estimated that the maximum daily demand for the commutershed was between 48-145 vehicles. The UVLSRPC Transportation Advisory Committee (TAC) identified the expansion of the Hartland Exit 9 Park and Ride, and additional lots to serve the employment center, as high priorities.

Still, funding for the construction of Park and Ride facilities is limited. This has caused some communities such as Hartford, to address some of the unmet need by planning for municipal parking facilities that provide spaces for commuters as well.

#### EXIT 9 PARK AND RIDE, HARTLAND

The Hartland Park and Ride is located in the southeastern quadrant of the I-91 Exit 9 interchange. It is a paved lot with a capacity of 20 vehicles, two of which are reserved for the handicapped. There is an information kiosk and lighting. The lot is accessed from US Route 5 and is served by commuter transit service.

This facility has been over capacity for some time. Recent usage counts conducted during November 2003 show the facility is operating between 15-65 percent over capacity. Vehicles tandem park within the facility and park on the shoulder of US Route 5 creating safety and maintenance problems. The Hartland Interchange Study completed by UVLSRPC in January 2003 identified the expansion of the Exit 9 Park and Ride as a priority to improve safety and support alternative transportation. Expansion of the Park and Ride lot and the addition of a shelter and bicycle racks are generally supported by the Town of Hartland. Landscaping improvements were identified as a way to improve the appearance of the Park and Ride from Route 5 (Scenic Byway) in keeping with the general scenic qualities of the interchange area.

An Exit 9 Park and Ride user survey completed by Deerfield Valley Transit is appended to this report.

#### NEEDS RELATED TO PARK AND RIDES

Using available information from the Regional Transportation Plan and the transportation needs identification process completed by UVLSRPC in January 2003, the following commuter Park and Ride-related needs were identified.



- Decrease the number of individuals who commute to work in a single occupant vehicle and thereby reduce congestion and lessen transportation impacts to the natural and social environment.
- Enhance the transportation infrastructure to better enable the use of alternative transportation modes and ridesharing.
- Support development patterns that allow alternative transportation use.
- Provide better linkages between existing transit providers, existing Park and Ride lots, and bicycle facilities.

It is widely accepted that additional Park and Ride lots, if located appropriately, would encourage greater transit ridership and vehicle sharing, thereby satisfying our identified needs. Ideally, Park and Ride lots should be located along transit routes and be convenient to residential areas so that they could serve commuters to the Hartford-Lebanon-Hanover employment center. The size and use of Park and Ride lots differ. Providing parking for shared automobile use can be achieved either with several small lots or one large lot for each commuting corridor, depending upon the circumstances. Both have strengths and weakness; either can serve the LMA's needs.

Many of the existing Park and Rides in Vermont are designed to serve long-distance commuting and are often used for recreational purposes like a day trip to the ball game or skiing. The nature of the Park and Ride facility is driven by the demands of its users. Given the LMA's demographics, it is estimated that the primary users of our Park and Ride facilities are commuters who use the lots as satellite parking to allow car sharing or access to transit service to the employment center. This is supported by recent surveys of the Hartland and Ascutney Park and Ride lot users. The VTrans priority for the deployment of Park and Rides is to serve 'outbound' commuters who travel long distances. The primary demand for Park and Ride lots is to serve 'inbound' commuters to the Hartford-Lebanon-Hanover employment center.

Additional Park and Ride capacity will satisfy the region's transportation needs only to a point. Once the demands for parking within the commutershed are met, coordination among transit providers, employers and public agencies will be paramount in achieving an integrated and seamless region-wide transportation network.

#### REGIONAL PRIORITIES RELATED TO PARK AND RIDES

To mitigate the increasing use of single occupant commuting vehicles, the following measures are proposed:

- Construct a Park and Ride facility in the vicinity of Norwich to serve commuters crossing the Ledyard Bridge.
- Construct one or more Park and Ride facility in the vicinity of White River Junction, beginning with the reevaluation of the options contained the 2000 Park and Ride scoping report to identify suitable sites.
- Construct one or more Park and Ride facility along the Vermont US Route 4 corridor between Rutland and White River Junction.
- Expansion of the Exit 9 Park and Ride lot in Hartland to include shelter, bicycle racks and landscaping.
- Construct a Park and Ride in Claremont, NH.
- Construct a Park and Ride facility between Lebanon and Claremont, NH.
- Study and better understand the nature of Park and Ride demand.
- Support for Advance Transit and Community Transportation Services in Claremont, NH.



- Support Stagecoach Transportation Services in the development of the I-89 commuter service from Randolph to the VA Hospital and the DHMC; and connections with Advance Transit.
- Support the Upper Valley Transportation Demand Management Association and Upper Valley Rideshare.

Note: 'Construction' of a Park and Ride facility includes the evaluation process required to find a suitable site.

The UVLSRPC Transportation Advisory Committee (TAC) reviewed these regional Park and Ride priorities and needs at their November 25, 2003 meeting. At that time, the TAC supported these mitigation measures (above) as the region's top priorities in terms of Park and Ride facilities and commuter needs. Emphasis was added to facilities or functions that support enhanced transit use.



## SOURCES

UVLSRPC Regional Transportation Plan, 2003

Hartland Interchange Study, 2003

Dartmouth College Commuter Survey, 2001

Deerfield Valley Transit Commuter Survey, 2003

Upper Valley Housing Study, 2001

UVLSRPC Evaluation of Transportation Needs, January 2003

Hartland, Exit 9 Park and Ride Usage Counts, November 2003

VTrans TAMS Report, 1991

Hartford Park and Ride Alternatives Study Report, January 2000



# Appendix



# Public Transit Fixed Routes and Employers in the Upper Valley Lake Sunapee Region

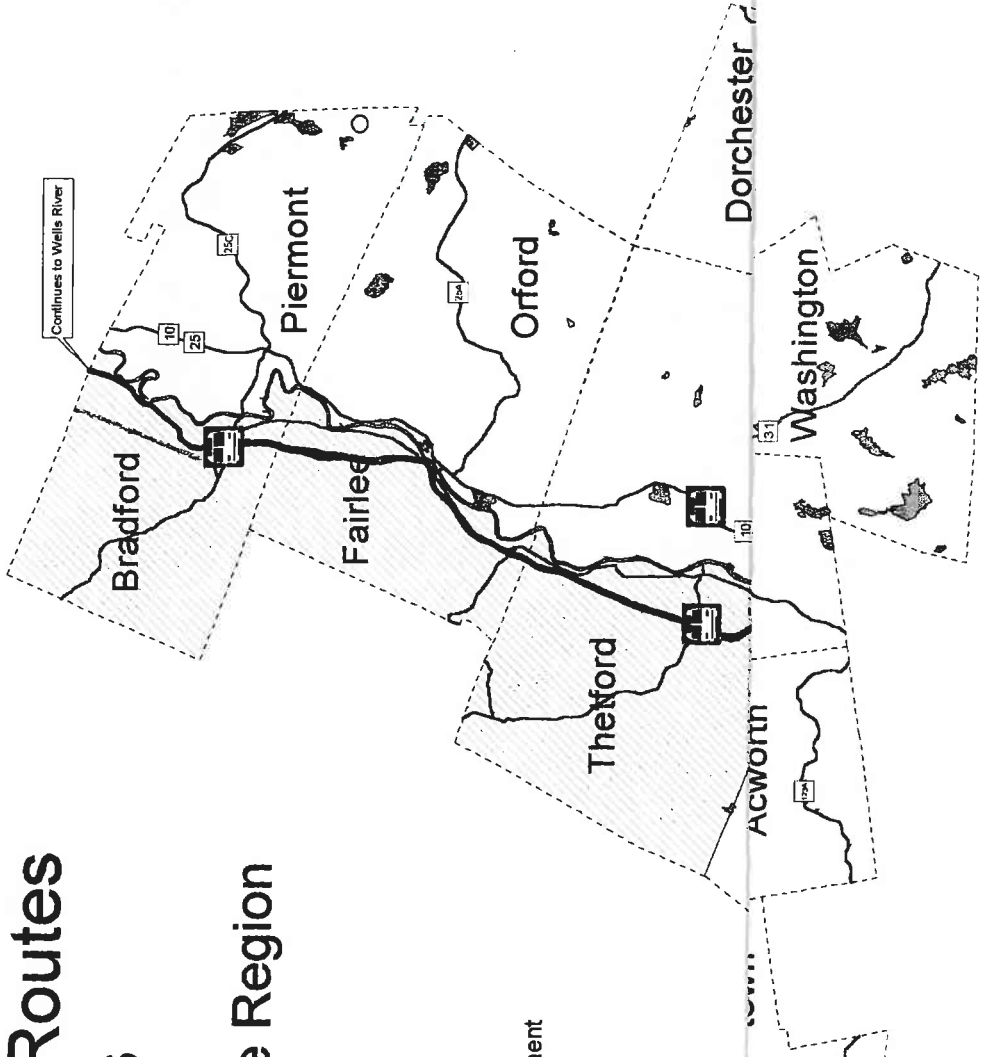
Map Created by Upper Valley Lake Sunapee  
Regional Planning Commission, March 2003.  
SOURCES:

NH Base map features from USGS 1:24,000 scale Digital  
Line Graphs, distributed by Complex Systems Research  
Center, Durham, NH.

Official NH Park and Ride locations distributed by NH Department  
of Transportation, modified by UVLSRPC.

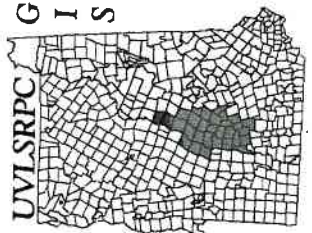
VT roads from E911 based on 1:5000 orthophotos and GPS.  
Other VT base map features from 1:5000 orthophotos,  
distributed by Vermont Center for Geographic Information.

VT Park and Ride locations provided by Vermont Agency of  
Transportation.



### Legend

|  |                                       |  |                       |
|--|---------------------------------------|--|-----------------------|
|  | Town Boundaries                       |  | Roads                 |
|  | Municipalities outside<br>UVLS Region |  | Interstate Highways   |
|  | Great Ponds and<br>Major Rivers       |  | Secondary Highways    |
|  |                                       |  | Transit Routes        |
|  |                                       |  | Park & Ride Locations |
|  |                                       |  | Major Employers       |
|  |                                       |  | 65 - 160 Employees    |
|  |                                       |  | 161 - 450 Employees   |
|  |                                       |  | 451 - 1200 Employees  |
|  |                                       |  | > 1200 Employees      |





Vermont Agency of Transportation  
Park & Ride Lot  
Inventory Sheet

Lot:

Location: (Town & Route) Hartland I-91 exit 9  
Area: Length: \_\_\_\_\_ Width: \_\_\_\_\_  
Size: (Number of Spaces) 20  
Handicap Spaces: Yes  No \_\_\_\_\_ Number of Spaces 1  
Parking Scheme: Diagonal  Perpendicular:   
Parking Space: Sufficient \_\_\_\_\_ Insufficient   
Surface: Gravel \_\_\_\_\_ Asphalt  Other \_\_\_\_\_  
Curbing: Yes  No \_\_\_\_\_  
Lighting: Yes  If Yes then: Sufficient \_\_\_\_\_ Insufficient \_\_\_\_\_  
No \_\_\_\_\_

Delineation:

Off-Site Directional Signage: X *Not observed @ night  
3 Cobra lights (see sketch)*  
On-Site Signage: X  
Pavement Markings: Traffic Flow \_\_\_\_\_ Parking Spaces  N/A \_\_\_\_\_

Amenities:

|                     |           |  |
|---------------------|-----------|--|
| Telephone:          | Yes _____ | No <input checked="" type="checkbox"/> |
| Shelter:            | Yes _____ | No <input checked="" type="checkbox"/> |
| Bicycle Rack:       | Yes _____ | No <input checked="" type="checkbox"/> |
| Trash Receptacle:   | Yes _____ | No <input checked="" type="checkbox"/> |
| Vending (Newspaper) | Yes _____ | No <input checked="" type="checkbox"/> |
| Toilet/Wash Room    | Yes _____ | No <input checked="" type="checkbox"/> |

Landscaping:

|                |           |  |
|----------------|-----------|--|
| Fencing:       | Yes _____ | No <input checked="" type="checkbox"/> |
| Trees & Shrubs | Yes _____ | No <input checked="" type="checkbox"/> |
| Other:         | Yes _____ | No <input checked="" type="checkbox"/> |

Security Devices:

|          |           |  |
|----------|-----------|--|
| Active:  | Yes _____ | No <input checked="" type="checkbox"/> |
| Passive: | Yes _____ | No <input checked="" type="checkbox"/> |

Please provide a sketch of the existing lot on reverse side of sheet.

\*Information Kiosk ✓



**Vermont Agency of Transportation  
Transit Provider  
Park & Ride Lot  
Inventory Sheet**

Name:

Transit Provider: Deerfield Valley Transit

Park & Ride Lot Serviced:

Location: (Town & Route) Hartland Exit 9

Type of Service:

Public Transit: Personal  Ride to work   
Chartered: Business  Recreational

Frequency of Service:

Public Transit: Daily 9 Monthly  Other   
Charter: None Daily  Monthly  Other

Number of Patrons:

Public Transit: Personal  Ride to work 12-22 per day   
Chartered: None Business  Recreational

Accessibility:

Bus can enter lot:  Bus can not enter lot:   
Pick up and drop off space available: No  
Pick up and drop off space not available: No

\* difficult turn-around maneuver  
for buses returning to I91

95%

from NH  
(per survey below)

Randy Schoonmaker,  
Deerfield Valley Transit  
(see attached data)



Deerfield Valley  
Transit Survey

## 1 What is your hometown?

|                 |    |      |
|-----------------|----|------|
| Claremont, NH   | 18 | 30%  |
| Windsor         | 13 | 22%  |
| Charlestown, NH | 8  | 13%  |
| Brownsville     | 3  | 5%   |
| Springfield     | 6  | 10%  |
| Ascutney        | 6  | 10%  |
| Perkinsville    | 2  | 3%   |
| Weathersfield   | 2  | 3%   |
| Hartland        | 1  | 2%   |
| Westminster     | 1  | 2%   |
| Total           | 60 | 100% |

## 2 Where do you get on the bus in the morning now?

|  |    |      |
|--|----|------|
| Exit 9                                 | 37 | 61%  |
| Exit 8                                 | 11 | 18%  |
| Exit 7                                 | 4  | 7%   |
| Have not ridden in a while             | 5  | 8%   |
| Route 5 Windsor-Ascutney               | 1  | 2%   |
| Exit 6                                 | 2  | 3%   |
| Can't find a place to park, don't ride | 1  | 2%   |
| Total                                  | 61 | 100% |

## 3 Is this a convenient place for you?

|       |    |      |
|-------|----|------|
| Yes   | 33 | 55%  |
| No    | 27 | 45%  |
| Total | 60 | 100% |

If no, where would be more convenient?

|                          |    |      |
|--------------------------|----|------|
| Exit 8                   | 16 | 62%  |
| Exit 7                   | 4  | 15%  |
| Route 5 Windsor-Ascutney | 6  | 23%  |
| Total                    | 26 | 100% |

## 4 Where do you get off the bus in the morning?

|                      |    |      |
|----------------------|----|------|
| DHMC                 | 45 | 75%  |
| Hanover Inn          | 9  | 15%  |
| GDT Centerra Park    | 2  | 3%   |
| Talley Centerra Park | 3  | 5%   |
| Maynard St Hanover   | 1  | 2%   |
| Total                | 60 | 100% |



|   |                                       |    |      |
|---|---------------------------------------|----|------|
| 5 | What days of the week do you commute? |    |      |
|   | Monday-Friday                         | 50 | 82%  |
|   | Monday                                | 2  | 3%   |
|   | Tuesday                               | 3  | 5%   |
|   | Wednesday                             | 1  | 2%   |
|   | Thursday                              | 3  | 5%   |
|   | Friday                                | 2  | 3%   |
|   | <hr/> Total                           | 61 | 100% |

|   |  |    |      |
|---|--|----|------|
| 6 | What days of the week would you ride the bus if it ran when you needed it? |    |      |
|   | Monday-Friday  | 52 | 79%  |
|   | Monday   | 2  | 3%   |
|   | Tuesday  | 4  | 6%   |
|   | Wednesday  | 2  | 3%   |
|   | Thursday   | 3  | 5%   |
|   | Friday   | 3  | 5%   |
|   | <hr/> Total  | 66 | 100% |

|   |                                |    |      |
|---|--------------------------------|----|------|
| 7 | What time must you be at work? |    |      |
|   | 7 am                           | 27 | 33%  |
|   | 7:30 am                        | 6  | 7%   |
|   | 7:45 am                        | 22 | 27%  |
|   | 8 am                           | 25 | 30%  |
|   | 9 am                           | 1  | 1%   |
|   | 6 pm                           | 1  | 1%   |
|   | <hr/> Total                    | 82 | 100% |

|   |   |    |      |
|---|---|----|------|
| 8 | What time do you normally finish work?? |    |      |
|   | 4 pm                                    | 28 | 47%  |
|   | 4-5 pm                                  | 8  | 13%  |
|   | 5 pm                                    | 23 | 38%  |
|   | 6 am                                    | 1  | 2%   |
|   | <hr/> Total                             | 60 | 100% |

9 Please say yes if our proposed schedule meets your needs  
Yes 38 63%

|    |  |                    |
|----|--|--------------------|
| 10 | What route or service would you like to see added?                   | <u># Responses</u> |
|    | Depart DHMC 11 am and/or 3 pm for sick child, dialysis patient, etc. | 7                  |
|    | Delete going down Route 5 Windsor-Ascutney                           | 5                  |
|    | Need a 3:55 pm GDT departure   | 1                  |
|    | Need an Exit 7 7:45 am departure                                     | 1                  |



11 Please tell us anything else we need to know.  
*The number after the response is the number of times it was mentioned.*  
Really hope service returns  
Leave exit 9 at 7:10 am instead of 7:15 am to be on time, rides most days  
This schedule would be great, what a help it would be!  
Am bus does not need to go through Windsor  
Pm bus no need to go through Windsor  
Pick up after 4 pm 6  
Invaluable service, we would pay for it, please continue  
Looks great, thank you!  
Need a bus during the day for patients, dialysis 3  
If you run ahead of schedule wait to depart until scheduled time  
Star rating for MOOver clean floors and seats and windows, on time, professional driver attitude, all appreciated  
Need midday service for people with work emergencies 3  
More advertising will bring more riders  
Be at DHMC 6:45 am  
Add a second morning bus  
No stops in Windsor on Route 5 this is not a taxi service 2  
Need dependable service provider. Many people stopped riding because of dependability issues.  
Really need the 4:00 pm bus to go all the way to exit 7 3  
Would like to be picked up along Route 5 between Windsor and Ascutney  
How would we be notified of changes in bad weather?  
Adding second bus would alleviate pressure on Exit 9 park and ride lot  
This schedule would meet my needs, and I would start riding the bus again.  
I stopped riding the bus because it was too unreliable. I would like for it to run through Windsor. I would ride it again if it was reliable and safe.  
Patients need midday service  
Increase awareness of this service to the public  
Great service and I would use it everyday but it would get me to work 2 hours early. In the pm it is great because it stops right at the DHMC front door right when I get out of work  
Keep schedule as is - I need it for medical visits to DHMC  
I haven't been riding lately - no room at the Exit 9 park and ride lot  
Would be great if you picked up at Exit 8 and then drove Route 5 to Exit 9  
Proposed schedule would meet my needs. Windsor stop should be deleted. Route 5 bumpy ride takes toll mechanically on buses.  
I am very happy with your bus service and much appreciate it that your company has taken over this r  
I believe ridership will really increase as people see the stability. Bfore TVB got into trouble even the early bus was full. Your buses are new, clean - thank you again for such a great service.  
I ride one day a week and leave early on the day I ride.





Upper Valley Lake Sunapee  
Regional Planning Commission

November 26, 2003

Hartland Park and Ride Usage Counts  
Exit 9, I-91

Hartland, Vermont

By: Peter Dziewaltowski, UVALSRPC

Notes: All observations the PWR was over capacity.  
Vehicles park on shoulder of US Route 5 resulting  
in safety issues.

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TUESDAY  
Nov 18, 2003

AM (9:30 AM)  
15 VT lic Plates  
8 NH "  

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23 total vehicles

PM (2:30 PM)  
15 VT lic Plates  
8 NH "  

---

23 total vehicles

THURSDAY  
Nov 20, 2003

AM (9:35 AM)  
21 VT lic Plates  
12 NH "  

---

33 Total vehicles

PM (2:40 PM)  
16 VT lic Plates  
12 NH "  

---

28 Total vehicles





Upper Valley Lake Sunapee  
Regional Planning Commission

*PLEASE POST*

## MEETING NOTICE

*November 12, 2003*

TO: UVLSRPC Transportation Advisory Committee (TAC)  
FROM: Jason P. Rasmussen, Regional Planner *JPR*  
SUBJECT: UVLSRPC TAC meeting agenda

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There will be a meeting of the UVLSRPC Transportation Advisory Committee

On Tuesday, November 25, 2003

At 4:30 p.m.

In the Conference Room

At the UVLSRPC,

77 Bank Street, Lebanon, New Hampshire.

## AGENDA

1. Approve TAC meeting minutes for September 23, 2003
2. Discussion of VTrans park and ride study update
3. Presentation of plans for area park and ride lots in Vermont - Wayne Davis, VTrans
4. Presentation of the status of park and ride lots along I-89 - Alan Hanscom, NHDOT (invited)
5. Discussion of proposed amendments to NHDOT Statewide Transportation Improvement Program (STIP) 2003-2005 - Alaina Bailey, NHDOT
5. Updates and Announcements
6. Other business

*Any questions or comments, please contact Jason Rasmussen or Peter Dzewaltowski at (603) 448-1680.*









Upper Valley Lake Sunapee  
Regional Planning Commission

December 3, 2003

Mr. Wayne Davis  
LTF Project Supervisor  
VT Agency of Transportation  
Drawer 33  
Montpelier, Vermont 05633-5001

Dear Wayne:

Please find enclosed the Upper Valley Lake Sunapee Regional Planning Commission update to the 1998 Park and Ride Needs report. Let me know if you have any questions.

I would also like to thank you for taking the time to meet with our Transportation Advisory Committee to discuss the development of this report. Your participation in our process is greatly appreciated.

Regards,

Peter Dzewaltowski  
Regional Planner

Enclosure

