

University of New Hampshire Transportation Policy Committee

2005 Status Report

December 2005



Synopsis

In the fall of 2000, the Transportation Policy Committee renewed its efforts to improve the transportation system at UNH through adoption of new policies, practices and procedures. That process resulted in the approval by President Hart of a new transportation policy at UNH in the spring of 2003. This report will serve to document progress and identify areas for change or additional effort.

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Abbreviated History of the TPC Process

A Transportation Policy Committee (TPC) had been in existence at UNH from the early 1990s (albeit under different names) with limited affect on the overall system. By 2000, a community consensus existed that transportation and parking systems were unacceptable and hindered the mission of the University. The TPC was to include a broad range of University and Town representatives under a charter with a stated mission:

[To] guide the University toward a systemic transportation management plan that emphasizes health and safety, efficiency, cost-effectiveness, and fairness for all University constituents, consistent with priorities set by the Strategic Academic Plan and the Master Plan, and that focuses on both the supply and demand characteristics of transportation.

After a two year period of community dialog, system fact-finding and critical evaluation the Committee came to a conclusion that, *“the current status of parking and transportation at UNH is structurally irrational and unacceptable and must change. The system produces congestion, frustration, limited accessibility, negative air quality impacts and safety deficiencies.”* The Committee developed recommendations that balanced “increasing the supply of parking and transportation services to account for growth and reducing unnecessary demand for parking...recognizing that the single-occupancy vehicle will remain the primary mode of access to and from the campus, but seeing a number of real opportunities to attract more faculty, staff, and students to alternative modes of access”.

The Committee recommended a series of systemic and integrated changes to the campus parking, land-use and transit operations based on principles of “Transportation Demand Management” (TDM). The approach was to offer a wider range of incentive-based transportation choices for users of the system and to holistically address the challenges of parking and transportation using tools such as price, convenience, housing location, class scheduling and campus policies. The overriding goal was the creation of a transportation system which:

- reduced inefficiencies and personal time lost
- expanded transportation options
- enhanced campus movement without penalty or inhibition
- enhanced visitor and community member access and participation in the University
- reduced the negative impacts of our transportation system on the environment and wider community
- supported sustainable development patterns and fosters a ‘sense of place and identity’ in the community and region

In spring 2003, a set of final recommendations were submitted to and approved by the President. These recommendations called for an increase in fiscal resources through a range of parking permit system changes (a locationally tiered pricing system); increased student cost sharing for non-parking transportation services and an increase in resources that would encourage non-vehicular transit choices. The Committee also acknowledged a deficit of locationally acceptable parking spaces during peak periods and laid out potential solutions, including a parking structure(s), for consideration in the Campus Master Plan process which began in 2004.

The Committee generated a series of short (1-3 year) and long-term improvements. The overall proposed plan, (with permit price changes) generated the necessary funds (projected at that time) for construction of a parking structure and redesign of the parking and transit systems.

Discussions of parking pricing were subject to collective bargaining underway for the FY 2004 fiscal year. Neither the complete tiered pricing scheme nor the parking rate schedule were approved in their entirety. A marginal increase in faculty/staff permit fees (from \$32 to \$50 pre-tax) was approved along with more significant increases for commuter and resident student fees (the latter of which were in a tiered pricing scheme). Other limited fee and permit increases were also approved.

It is clear that the parking improvements recommended in the report (primarily the construction of one or more centralized parking structures) are not financially feasible without the revenue stream provided by higher permit prices. In order to provide some of the expanded transit and transportation options recommended in the Committee's final report, University Transportation Services (UTS) requested and received funding through the Student Fee process. The Student Senate began a \$40 mandatory fee in 2003 which generated funding to provide for expanded transit services. In 2004 the Senate increased this fee to \$50.

In 2004-2005 the updated Campus Master Plan (CMP) and its associated transportation studies supported the need for a tiered, proximity-based parking system with consolidated parking in two primary structures within a 10 minute walk of the core campus. If fully implemented, this system, combined with planned changes in the network of streets and transit routes and additional on-campus housing, will provide a functional and balanced transportation system through the 20 year horizon of the master plan accommodating all projected campus growth and development.

Since 2003, many recommended changes have been made; some have been modified based on financial or contractual constraints and others have been implemented with varying degrees of success. The following sections of this report attempt to quantify our success in implementing the adopted policy and programmatic changes; document the additional dynamics that have occurred and provide benchmarks. The intent of this report is to permit the UNH community to continue its discussions regarding transportation at UNH in a thoughtful manner that allows for continued progress.

Readers should refer TPC web page (hosted on the University Transportation Services site www.unh.edu/transportation) for archives of all original Committee reports, findings and materials

Benchmarks and Metrics

Table 1: Overall TPC Recommendations and Status

| | Recommendation | Accomplishments-Status |
|----------------|--|---|
| Parking | Increase the price of parking permits in context of a tiered, proximity based system which also offers reduced cost alternatives for those choosing not to bring a car to campus. | <ul style="list-style-type: none"> Faculty union negotiations yielded an \$18 increase in standard permit prices for faculty/staff – far short of the \$200 zone 1 goal Commuter and resident student permit prices were increased more significantly with limited tiering Where practical, differentiation in parking permits prices have been made for visitor, resident car storage and other non faculty/staff related fees. |
| | Review/tighten eligibility requirements to assure intelligent, fair and energetic enforcement | <ul style="list-style-type: none"> Ongoing refinement of rules per TPC review Enforcement staffing, standards and mechanisms increased |
| | Create ‘ Infrequent User’ parking passes | <ul style="list-style-type: none"> Not yet implemented |
| | Limit eligibility for Faculty permits | <ul style="list-style-type: none"> In FY 05 Graduate students excluded from F/S lots. Permits now available for commuter student lots only |
| | Enhance planning and management tools by collecting local address info and maintaining ongoing benchmark and peer institution data | <ul style="list-style-type: none"> Local address Information is not easily or adequately available. This inhibits strong enforcement of 1 mile restriction and planning efforts for other services. Peer institution data is collected at infrequent intervals as issues warrant. |
| | Derive new revenue from permits not fines | <ul style="list-style-type: none"> UTS will document 2001 versus 2005 revenue source split |
| | Develop or coordinate with other entities for free remote lots served by Wildcat Transit or Campus Connector | <ul style="list-style-type: none"> Exploration of this strategy in initial stages |
| Infrastructure | Complete feasibility studies for construction of a multi-level parking facility(ies) that would be integrated into system wide improvements consistent with TDM principles, providing for current needs and future campus growth | <ul style="list-style-type: none"> In 2004-2005, UNH completed preliminary fiscal, design/traffic and environmental analyses for the proposed A and B Lot structures. The latter two reports done by outside consultants CMP affirms project locations and concept. Transportation Study quantifies impacts and mitigation strategies, |
| | Upgrade informational/directional and regulatory signage | <ul style="list-style-type: none"> Primary recommendation in CMP. New sign standards have been developed and approved Starting in summer 2006, UTS is prepared to begin to regulatory sign replacement Campus Planning has developed general campus information/directional signage standards |
| | Secure funding for south and north underpasses | <ul style="list-style-type: none"> South underpass tunnel construction underway. Mc Daniel Dr. Ext, North Underpass and Strafford Ave Ext Funding not identified Campus network of streets layout complete – Gables Way and other components underway. Funding required for completion. |
| | Consider transit/ped ways on core campus | <ul style="list-style-type: none"> CMP calls for transit/ped ways on College Way, College Road and expanded facilities on Concord Rd and Main Street |

Benchmarks and Metrics

| | | |
|-----------------|---|---|
| Alternatives | Develop efficient and effective emergency ride, carpooling, and vanpooling | <ul style="list-style-type: none"> Guaranteed Ride Home Implemented 2003 Carpool Lot implemented 2003 – relocated and expanded 2004 (C-Lot) Vanpooling program evaluated – cancelled due to fiscal and liability issues – DOT funding returned |
| | Use web based technologies for ridematching and transit services | <ul style="list-style-type: none"> UTS is presently exploring enhanced web based service. UTS web page redesigned and upgraded in Summer 2005 |
| | Expand Wildcat Bike Programs | <ul style="list-style-type: none"> Minor fleet expansion in 2004 and 2005. |
| | Pursue outside funding for rail station/transit center enhancement | <ul style="list-style-type: none"> UNH has secured CMAQ and TE funding to cover 80% of transportation facility expansion costs. Project starts in 2006 |
| | Develop safe bike route system | <ul style="list-style-type: none"> CMP and new construction projects incorporate bike lanes. UNH working with MPO on regional bike routes. |
| Transit Systems | Dedicate significant investment to improve the frequency, dependability, and accessibility of the Campus Shuttle and Wildcat Transit...address aging fleet and staffing | <ul style="list-style-type: none"> 2003-2004 student fee provided boost in funding and marginal increase in services and switch to free-fare system for all university community members 2004-2005 student fee continued service level and offset dramatically higher fuel, insurance and labor costs Fleet replacement accelerated with grant funding. System has shown over 4 years of 10% year growth to over 900,000 trips/year |
| | Solicit municipal/private support for UNH Transit | <ul style="list-style-type: none"> Limited efforts to date with no success. |
| | Evaluate fiscal benefits of new COAST relationship | <ul style="list-style-type: none"> Evaluation complete. Continued cooperation planned – UNH approved as direct FTA grantee for non-formula funding |
| | Implement student activity fee for services | <ul style="list-style-type: none"> Implemented in 2003-2004 and expanded in 2004-2005 and 2005-2006. |
| | Increase east-west accessibility with express shuttles | <ul style="list-style-type: none"> West Edge Express implemented in 2004 – Shuttle Routes streamlined in 2004 and adjusted annually |
| | Increase resources for fleet replacement. Where feasible, pursue alternative fuel fleet. | <ul style="list-style-type: none"> UNH applied for and received over \$2.5 million in capital funds. New procurement in 2005-2007. UNH match identified |
| Traffic | Improvements to traffic flow on Main Street through investments in better traffic signals, intersection design, and manual traffic control | <ul style="list-style-type: none"> Main Street plans well established in CMP UNH has successfully applied for and received over \$1.2 million of funding to improve Main Street in coordination with the Town. Additional planning underway to complete entire corridor west to Leavitt Lane |
| | Utilize UNH police for traffic control | <ul style="list-style-type: none"> Implemented successfully at Garrison and Main Street and McConnell zone during peak hours |
| | Improve Main Street for pedestrians, bikes | <ul style="list-style-type: none"> Two Main Street projects are funded. Main Street East 2006 and Main Street West 2008. |

Benchmarks and Metrics

| | | |
|-----------------------------|---|---|
| Funding | Provide 1.5% share of permit/enforcement fine revenue for ongoing upgrades to pedestrian and bicycle systems on campus | <ul style="list-style-type: none"> • Programs receive sporadic investment in infrastructure and no promotion • limited bike/pedestrian integration of modes into University Transportation Services program |
| | Direct Athletics and Whittemore Center event parking revenues to transportation system | <ul style="list-style-type: none"> • Initial analysis completed. Necessary discussions yet to be had. |
| Other TDM Strategies | Promote aggressive efforts to expand UNH community housing with primary transit and walking connection to core campus | <ul style="list-style-type: none"> • CMP sets aggressive goal of minimum 60% and long-term vision of 70% on-campus housing (up from 55%). • Projects include transit - accessibility planning from initial concepts |
| | Off-campus housing should be on existing Wildcat, high frequency transit corridors | <ul style="list-style-type: none"> • No University sponsored off-campus housing is planned at this time. |
| | Promote even distribution of classes throughout week to ease peak demand | <ul style="list-style-type: none"> • No progress |
| | Exploration of course offerings on west campus locations for commuting students | <ul style="list-style-type: none"> • No progress |
| | Reduce intra-campus UNH fleet trips on campus | <ul style="list-style-type: none"> • Implementation of Cat Courier – Limited departmental promotion thus far. |
| | Ensure review of transit or non-vehicular access for all new building placement and relocations | <ul style="list-style-type: none"> • Campus Planning, Housing and UTS now coordinate on design review of all projects. CMP incorporated this ideal. |
| | Ensure new projects include adequate funding for transportation infrastructure including transit, bike and pedestrian needs | <ul style="list-style-type: none"> • Transportation elements including transit amenities and limited bike/ped infrastructure is incorporated into design to the fullest extent possible. |
| | Develop telecommuting guidelines for faculty/staff | <ul style="list-style-type: none"> • Draft guidelines have been developed by Human Resources and await further Administration discussion |
| | Transfer maintenance to zone based system. Where feasible, substitute fleet with alternative fuel vehicles | <ul style="list-style-type: none"> • Zone system is implemented – UNH moving aggressively into alternative fuels in new fleet procurement |

Benchmarks and Metrics

Table 2: Proposed Parking Permit Fee versus fall 2005 Actual

| Permit Type | Zone 1 Core | | Zone 2 Perimeter | | Zone 3 Remote Campus | |
|--------------------------------|-------------|---------|------------------|---------|----------------------|---------|
| | Proposed | 2005 | Proposed | 2005 | Proposed | 2005 |
| Departmental Reserved | \$1,000 | \$1,000 | \$750 | \$1,000 | \$500 | \$1,000 |
| Faculty/Staff | \$200 | \$50 | \$125 | \$50 | \$50 | - |
| Commuter | \$200 | \$50 | \$125 | \$50 | \$50 | - |
| Summer Only | \$200 | \$35 | \$50 | \$35 | \$25 | \$35 |
| Resident Hall Directors | \$450 | \$450 | \$350 | NA | \$250 | - |
| Resident Student Lots | \$650 | \$350 | \$550 | \$200 | \$250 | - |
| Visitor- Pay per Day | \$12 | \$8 | \$8 | \$8 | \$4 | \$6 |
| Third Shift Employees | \$50 | \$50 | NA | NA | - | - |

Table 3.1 Parking/Headcount 2002-2022 – Campus Master Plan

| | Fall 2002 | TPC Stated Deficit | Projected 2022 | Change 02-22 |
|---|-----------|--------------------|----------------|--------------|
| Campus Population | | | | |
| Undergrad HC | 10,850 | | 12,000 | 1,150 |
| Graduate HC | 2,150 | | 2,500 | 350 |
| Subtotal Students | 13,000 | | 14,500 | 1,500 |
| Faculty HC | 1,060 | | 1,160 | 100 |
| Staff HC | 2,260 | | 2,260 | 100 |
| Total Campus HC | 16,230 | | 18,020 | 1,700 |
| Parking | | | | |
| Parking Spaces | 6,450 | 7,050 | 7,050 | 600 |
| % Spaces to Total Campus HC | 40% | 43% | 39% | |
| Generalized Student FTE to parking | 1.9 | 1.7 | 1.9 | |

Table 3.2 Selected Parking Ratio Analyses By Category (Spaces to Permits)

| | 2003-2004 Academic Year | | | 2005-2006 Academic Year** | | |
|--------------------------|-------------------------|---------|--------|---------------------------|---------|--------|
| | Spaces | Permits | Ratios | Spaces | Permits | Ratios |
| Commuter Students | 1,298 | 3,676 | 2.8 | 1,418 | 3,260 | 2.3 |
| Faculty/Staff | 2,344 | 3,742 | 1.6 | 2,344 | 2,840 | 1.2 |

* provided by UTS Spring 2004

** provided by UTS 10/15/2005

Eligible Spaces includes shared use spaces

Benchmarks and Metrics

Table 3.3 Select Parking Ratio/Inventories

| Year (Nov 1) | Total Spaces | Documented Permits | Gross Gap (Permits-Spaces) | Gross Permit: Space Ratio | Commuter: Eligible Space Ratio* | Fac/Staff: Eligible Space Ratio** |
|----------------------|--------------------|----------------------|----------------------------|---------------------------|---------------------------------|-----------------------------------|
| 1997 | 6,128 | n/a | n/a | n/a | n/a | n/a |
| 2001 | 6,424 | 8,493 | 2,069 | 1.32 | n/a | n/a |
| 2002 | 6,450 | 9,116 | 2,666 | 1.41 | n/a | n/a |
| 2004 | 6,662 | 8,870 | 2,208 | 1.33 | 3.1 | 1.31 |
| 2005 Oct | 6,921 | 8,844 | 1,923 | 1.27 | 3.5 | 1.30 |
| Trend>> | Up slightly | Down slightly | Down significantly | Down significantly | Up slightly | Down slightly |

** based on 3,068 and 3,049 fac staffing 04 and 05 respectively

Table 3.4 Costs of Parking (2002 TPC versus recent observed)

| | 2002 Estimate | 2005 Observed |
|--|----------------|-----------------|
| Total Capital construction Cost of Surface Parking per space (excluding land) | \$2,000 | \$4,500* |

*based on actual combined average West Edge, S-Lot and Mast Road construction projects 2004-2005 excluding land value and alternate use value. This contrasts to the 2002 estimate that was based on perceptions of cost at that time.

Table 3.5 Aggregate Transit System Ridership/Typical Frequency**

| Transit Service | FY 00 | FY 02 | FY 03 | FY 04 | FY 05 | 00-05 Change % |
|--------------------------------|---------|---------|---------|---------|---------|---------------------|
| Wildcat Transit | | | | | | |
| Ridership | 97,010 | 127,754 | 128,929 | 157,949 | 174,889 | +80% |
| Runs/week – academic year | 205 | 210 | 195 | 250 | 250 | +21% |
| Campus Connector | | | | | | |
| Ridership | 518,950 | 480,684 | 495,166 | 530,134 | 600,506 | +16% |
| Runs/month – academic year | 5,805 | 4,630 | 5,692 | 11,504 | 9,852 | +69% |
| Amtrak Downeaster | | | | | | 01-05 Change |
| Ridership | - | 4,413 | 10,939 | 28,863 | 32,725 | +640% |
| Runs/week year-round | - | 18 | 26 | 56 | 56 | +211% |
| Carpool Permits*** | | | | 100 | 170 | +70% |
| Cat Courier trips | | | | 42 | 79 | +64% |
| Safe Rides - passengers | | | | 1,749 | 5,554 | +212% |

** Frequency is average during specified period

*** Estimated permit/participant data: permit is shared by/represents 2 or more commuters

Table 4 - University Transportation Services (UTS)

| | TPC Report FY2006 FORECAST (made in 2002) | UTS FY2006 APPROVED BUDGET | VARIANCE INCREASE (DECREASE) |
|---|--|---|---|
| <u>SOURCE OF FUNDS</u> | | | |
| OPERATING REVENUES | | | |
| Parking Permits | 1,757,030 | 1,059,220 | (697,810) |
| Parking Fines | 812,725 | 679,715 | (133,010) |
| Special Event Parking | 49,875 | 12,000 | (37,875) |
| Short term Garage Parking and Events | 108,750 | - | (108,750) |
| Student Transportation Fee | 529,442 | 578,750 | 49,308 |
| Automotive Services | 454,717 | - | (454,717) |
| RCM-University Fund Allocation | - | 305,458 | 305,458 |
| All Other | 632,883 | 704,308 (1) | 71,425 |
| | <u>4,345,422</u> | <u>3,339,451</u> | <u>(1,005,971)</u> |
| OTHER SOURCES OF FUNDS | | | |
| Space Repair and Renovation Committee Request | 137,500 | - | (137,500) |
| External grants | 760,000 | 1,698,832 | 938,832 |
| | <u>897,500</u> | <u>1,698,832</u> | <u>801,332</u> |
| TOTAL SOURCE OF FUNDS | 5,242,922 | 5,038,283 | (204,639) |
| <u>USE OF FUNDS</u> | | | |
| OPERATING EXPENSES | | | |
| Labor and Fringes | 1,925,334 | 1,240,757 | (684,577) |
| RCM General Assessment | - | 214,919 | 214,919 |
| Other | 886,856 | 1,083,775 (2) | 196,919 |
| Parking Structure | 85,000 | - | (85,000) |
| Key Initiatives | 33,082 | - | (33,082) |
| | <u>2,930,272</u> | <u>2,539,451</u> | <u>(390,821)</u> |
| CAPITAL EXPENDITURES | | | |
| Key Initiatives | 628,546 | 375,292 | (253,254) |
| UTS Grants Match | - | 424,708 | 424,708 |
| Student Transportation Fee | - | - | - |
| | <u>628,546</u> | <u>800,000 (3)</u> | <u>171,454</u> |
| EXTERNAL GRANTS | 1,050,000 | 1,698,832 | 648,832 |
| OPERATING RESERVES | | | |
| Parking Facility-Debt Amortization | 890,808 | - | (890,808) |
| Student Transportation Fee | 18,297 | - | (18,297) |
| | <u>909,105</u> | <u>-</u> | <u>(909,105)</u> |
| Total use of Funds | 5,517,923 | 5,038,283 | (479,640) |
| Net Funds Flow | (275,001) | - | 275,001 |
| OPENING UTS FUND BALANCE | 638,979 | 661,239 | 22,260 |
| ENDING UTS FUND BALANCE | 363,978 | 661,239 | 297,261 |

NOTES:

(1) Parking Meter Revenue \$270,808, Transit Revenue from Departments \$368,500, Cash fares and Shuttle Revenue \$65,000.

(2) Insurance \$350,000, Maintenance and Repairs \$451,788, Telecommunications \$16,000, Printing and Mailing \$61,000, Facilities Assessment \$135,510, and miscellaneous operating expense \$69,477.

(3) Capital Expenditures: Rolling Stock \$424,708, Key Initiatives \$375,292 (pedestrian improvements-lot barriers/control-attendant kiosks-signage).

Where We Are Headed

Parking Garage Feasibility Studies

Three parking structure feasibility studies were completed during 2003-2004 at the instruction of the Chair of the TPC. In addition the VPFA and Office of Business Affairs completed internal cash flow analyses of capital and operational requirements for construction of one or more parking structures on the UNH campus.

The first two feasibility studies quantified the constructability and capital construction cost projections of proposed structures in A-lot and B-lot.

| Parking Structure Summary | | |
|---|--|----------------------------|
| <u>A-Lot – (Two Phase Structure)</u> | | |
| Phase 1: | 840/544 total/net spaces at +/- \$28k cost per net space | Total Project: \$17.3 Mill |
| Phase 2: | 848/525 total/net spaces at +/- \$24k cost per net space | Total Project: \$14.9 Mill |
| <u>B-Lot (Single Phase Construction)</u> | | |
| Phase 2: | 735/538 total/net spaces at +/- \$25k cost per net space | Total Project: \$13.3 Mill |

In both cases, annual operational costs of between \$300-400 per net space were affirmed by the consultants. (Approximately 2-3 times the annual cost of a surface lot space) Copies of these studies are available from the Campus Planning Office

College Road/Main Street Intersection

This intersection was identified as a high priority in summer 2001. In fall 2002, the intersection was redesigned with improved vehicular capacity and upgraded signals/crosswalks as well as fully actuated phasing. In addition, a new bus pullout was installed at Depot Street along with new crosswalks and pavement markings. This project (approximately \$120,000) was paid for entirely by the University of New Hampshire.

The intersection improvements provided immediate congestion reduction – with typical eastbound Main Street traffic queue during peak being reduced dramatically. The Main Street East project will continue these improvements and potentially lengthen the bus pullout.

Mast Road Gate

In summer 2003, Campus Planning officially requested that the Town of Durham permit the university to install a transit vehicle activated gate – permitting rerouting of connector buses along this road. After a public meeting in which abutters raised objections and an obvious lack of town support, the University withdrew the request. The gate remains closed and Connector buses must exit via Concord Road. Available federal funding was reallocated to shelter improvements. In addition, the Mast Road lot redesign project improved the transit/vehicular pattern to a one-way loop and installed upgraded shelters and bus pullouts.

Downeaster Rail Service Costs

The success of the Amtrak Downeaster at UNH has resulted in an increase in the UNH share for platform and service liability costs. Annual insurance, platform lease and liability costs in FY 2006 will be approximately \$35,000. Per the instruction of the VPFA these costs are being transitioned from Facilities to University Transportation Services on a 3 year cost transition formula. FY 2008 will represent the first year of UTS cost coverage.

In 2002 an Amtrak Quik-Trak machine was installed. This \$20,000 long-term lease was paid for 80% with USDOT funds. The VPFA paid required match. The ticketing service costs the Univer-

Where We Are Headed

sity approximately \$2,400 per year in maintenance fees. These fees are currently incorporated in the annual Student Transportation fee.

Main Street (East-West) Bike Lanes/Pedestrian Improvements

One of the highlighted corridors needing pedestrian and bike improvements is the Main Street corridor running from downtown to the West Edge of campus. These improvements are being designed in two projects:

- **Main Street East** (downtown to A-Lot stairway) is currently in final design with the Town and University about to commence review of alternatives. A USDOT funding assisted project for engineering and final design will commence this fall with construction to start as early as Summer 2006
- **Main Street West** (A-Lot stairway-West Edge) was selected for funding to be available in fall 2007. The Campus Master Plan has highlighted a conceptual corridor design which includes a stand alone bicycle and pedestrian trail parallel to Main Street

South Underpass/Mc Daniel Drive Extension

In 2005, UNH procured necessary funding and completed negotiations with Guilford Transportation for the easements and construction plan to begin the underpass portion of this project. The tunnel construction began in fall 2005. Additional funding (\$1-2 mill) is required to complete to extension of McDaniel Drive to Main Street and the required intersection or roundabout construction.

North Underpass/Craig Supply/Transportation Center

In 2004, the Town of Durham took sole title to the Craig Supply property. During the summer of 2005, the Town of Durham demolished eyesore structures and received plans for an interim surface parking facility to 'cap' the Brownfields site prior to final mitigation.

No funding has been identified for the North Underpass at this time – that project is estimated at \$7+ million including Brownfields mitigation.

The Transportation Center (rail station) improvement project is scheduled to become active and begin engineering/design in Fall 2006. Plans call for development of transit user space, building renovation and full intercity bus access development. This project will include improvements to bus/rail ticketing and waiting areas.

Community Education – Alternative Modes

The TPC report encouraged Transportation Services to expand services that would reduce the use of single occupancy vehicles on or accessing campus. The establishment of carpool lots, infrequent user passes, guaranteed ride home for transit users, Cat Courier and enhanced pedestrian and bicycle facilities was encouraged. Some of these services have been established and marketing/advertising has been done with an expanded web page. More awareness activities to promote these services are needed. Increased awareness efforts prior to student matriculation and/or permit purchase should be pursued.

- A **Carpool** lot and system was established and expanded – now in C-lot
- A **Guaranteed Ride Home** program was established in 2003
- **Cat Courier** was established in 2003 – for general and departmental use
- **Ridematching**: demonstration of *VivaCommute*[®], a web based system, in 2004. UTS is currently working to replicate this service or coordinate for similar functionality on a regional basis with Seacoast Commutes.Org or the NHDOT.
- **Infrequent user permit system** – No system is in place as of October 2005

Where We Are Headed

Transportation Study completed for Campus Master Plan Update

In June 2005, Howard-Stein/Hudson completed a full Transportation Study coordinated with the assumptions and projections in the approved 2004 Campus Master Plan update. This Study quantified the transportation system improvements envisioned as part of the 20 year growth plan for the University. The study utilized the overall TDM and development policies established by the University. The study also affirmed the planned reinforcement of the walking campus, the plans for consolidation of parking in centralized lots and structures, an expanded network of streets and proposed changes to traffic and transit route patterns. The report includes a full traffic model for the 2010 and 2020 build horizon years.

Synchro Traffic Model-Capacity Analysis

During the 2003-2005 fiscal years the UNH Campus Planning office worked with our transportation consultant to complete a traffic model for use in determining existing and planned traffic impacts of growth envisioned in the Campus Master Plan update. This model allows us to look at critical intersections and determine capacity levels and required improvements. This objective tool was utilized to present traffic impacts and plans to the Town of Durham. When combined with the analyses completed in the Master Plan, UNH is able to demonstrate a net reduction in commuter trips to campus (fulfillment of primary TDM goal) if planned housing and street network changes are completed while maintaining existing transit services.

Parking System Infrastructure and Phasing


UNH continues a coordinated program of parking lot redesign and consolidation with phased expansion based on the approved plan of the CMP (**Appendix 1**) and the policies of the TPC. These plans will lead to a coordinated system of efficient lots connected to core campus by transit reinforcing the walking campus concept. This coordinate program calls for both the construction of new lots and the reclamation of inefficient, poorly located lots. Since 2001, approximately 350 net new spaces have been added – the most recent projects being a redesigned Mast Road and S-Lot.

Where We Are Headed

Great strides have been made since the Transportation Policy Committee began its latest phase of work in the summer of 2001. Real progress has been made in a balanced management of parking supply and expansion (Appendix 2); expanded transit services and providing new transportation options. The data we have shows trends in the right direction. The Master Plan has set forth a solid plan for a new network of streets; consolidated parking closer to core campus and improved bicycle and pedestrian infrastructure. That Plan, when completed with the planned increase in on-campus housing is expected to result in a decrease in the total private vehicle commute traffic to Durham (Figure below). These accomplishments have occurred in a difficult fiscal climate thanks to aggressive pursuit of outside funding; the support of the student body via a transportation fee and faculty and staff acceptance of increases in parking fees.

| Population Component | 2003 Base | 2013 Build Projection | 2023 Build Projection |
|---|---------------|-----------------------|-----------------------|
| Faculty/staff (all commute) | 3,320 | 3,400 | 3,520 |
| Graduate (all commute) | 2,150 | 2,325 | 2,500 |
| Undergraduate Population: | 10,850 | 11,450 | 12,000 |
| <i>On-Campus undergraduate housing</i> | 5,610 | 6,400 | 7,200 |
| <i>On-Campus family/graduate housing</i> | 333 | 420 | 566 |
| Commute population faculty/staff plus students minus on-campus housing | 10,377 | 10,355 | 10,254 |

Stable due to significant increases in on-campus housing and limited UNH enrollment and staff growth....


UNIVERSITY of NEW HAMPSHIRE

We must continue our community dialog regarding finding the resources necessary to complete these infrastructure changes - including the parking structures envisioned in the Campus Master Plan. All will play a part in that dialog. Certainly, the dynamic has changed since we began our discussions in 2001. Although not wonderful, parking conditions, transit services and traffic congestion have improved. The TDM principles first developed through this committee are now part of our approved Campus Master Plan. It is our vision that these principles will result not only in improved mobility and accessibility of our campus – but also in reduced emissions; and an improved campus landscape.

Where We Are Headed

In the opinion of the Committee, the highest priorities we must focus our energies on in the new two years are:

- Assuring continued adequate funding for transit and transportation infrastructure investment that accommodates campus growth and neutralizes the increased costs of energy and labor. This effort will require:
 - ongoing community discussions regarding parking permit price system increases consistent with TDM principles
 - continued support by students for University Transportation Services in an annual fee system
 - aggressive pursuit of outside funding sources
- Implementation of the Campus Master Plan lot reconfiguration and consolidation plans to reinforce the walking campus and promote mobility and accessibility:
 - continued efforts, as resources allow, with planned, incremental lot reconfigurations to maximize the utilization of our existing parking resources within the context of our TDM based program.
 - continued efforts to promote equitable, efficient and fair enforcement of our community established parking regulations
- Funding and implementation of infrastructure improvements to enhance the network of streets and campus intermodal transportation facilities such as the south and north underpass, Main Street enhancements and the University Community Transportation Center at the rail station.
- Development and promotion of alternative transportation and other programs which can reduce the demand for parking and vehicle access to and use on campus.
- Continued cooperation with the Town of Durham and state and regional transportation organizations to share resources and coordinate efforts to improve the transportation system and reduce environmental impacts and traffic impacts on our home community:
 - maintain our EPA certification as a 'Best Workplace for Commuters' by our existing and proposed transportation programs
 - continue our participation in the Granite State Clean Cities Coalition

Appendix 1 - Parking System Inventory and Phasing October 05

| | Location or Site | Proposal/Issue | Net Loss/Gain | Running Total | Net Space Cost | Full Project Cost | Notes |
|--|--|--|---------------|---------------|------------------------------|-------------------------|---------------------------------------|
| Recently Completed | Base 2002-2003 Academic Year Start | | | 6,450 | | | |
| | C-Lot | C-Lot Reopen with short-term and carpool | 75 | 6,525 | NA | NA | Completed |
| | Dirt Lot | Mast Road Dirt Lot | 147 | 6,672 | NA | NA | Completed |
| | South Underpass Construction | Relocated Forest Park demolish spaces to addition onto Z-Lot | 0 | 6,672 | NA | NA | Completed |
| | Kingsbury Renovation | Loss Due to South /Kingsbury Construction | -80 | 6,592 | NA | NA | Completed |
| | Lot Reconfigurations and Restriping Efficiencies | Transportation Service Lot Restripings - Meter Installs - Changes | 10 | 6,602 | NA | NA | Completed |
| | Departmental Reserve Cash Out | Non-Renewed Departmental and Reserved Spaces returned to general pool | 26 | 6,628 | NA | NA | Completed |
| Start of 2004-2005 Academic Year - net parking from base year is: | | | 178 | 6,628 | | | |
| Fall 04 2004-2005 | West Edge Expansion | Tom Ballesteri Permeable Pavement Trial Lot | 34 | 6,662 | pending | pending | Completed - Final Cost info requested |
| | Mast Road Lot Interconnect | Interconnect two existing lots; improve transit link and shelter zone. | 70 | 6,732 | \$ 6,057 | \$ 424,000 | Completed Aug 2005 |
| | S-Lot Expansion | Complete Construction to original plans - redesign transit circulation plan and improve transit shelter area create trailer storage zone | 52 | 6,784 | \$ 2,380 | \$ 123,750 | Completed August 2005 |
| | FD&C | Facilities Relocation remove 9 reserved and facilities vehicle and move 7 to Rizman area (reserve cash out). Redesign Ritzman area to include 4 additional meter (short-term) spaces | 6 | 6,790 | \$ - | \$ - | Completed May 2005 |
| | Gables Parking | Create new parking to accommodate 400 new residential units. Parking expected approx 2:1 bed:space ratio | 195 | 6,985 | \$ 4,000 projected | | Completed Summer 2005 |
| Start of 2005-2006 Academic Year - net parking from base year is: | | | 357 | 6,985 | <-----OCTOBER 2005 | | |
| Summer 2006 | J-Lot (between Hood and Ham Smith) | Remove all fac/staff general permits spaces and shift to ADA 6/Service 3/Loading 2 | -9 | 6,976 | \$ - | \$ 50,000 | Proposal Pending |
| | Conant Courtyard | Remove Parking Zone (excluding Service) | -3 | 6,973 | NA | NA | Funded through other channels |
| Start of CMP Phase 1 - net parking from base year is: | | | -12 | 6,973 | | | |
| CMP Phase 1 | Forest Park first 1/2 demolition | Remove Parking Associated with Unit demolition - green space/building sites | -54 | 6,919 | NA | Part of Housing Project | Funded through other channels |
| | James Hall (College Road) | Reclaim expanded pavement area | -10 | 6,909 | \$ 1,000 | \$ 10,000 | Funded through other channels |
| | Water Works Road/ETB | Per CMP, install new parking along road after completion of south underpass. | 150 | 7,059 | \$ 3,400 | \$ 510,000 | |
| | Woodside Apartment Lot | Convert apts to Family (permit spaces (200) become 105 resident spaces) remaining 95 spaces for visitors | 0 | 7,059 | NA | NA | |
| | Carpool Spaces on West Campus | Additional Capacity provided by dual passenger | 0 | 7,059 | \$ - | \$ 5,000 | Needs Location and install |
| | East College Way Closure | Close Mill Road Access (or 1 way access into campus only) for temporary trailer or spaces. Add meters? | 5 | 7,064 | - | NA | |
| | Grant House and R-Lot | Consolidate per CMP - minor landscpe | -10 | 7,054 | \$ 1,500 | \$ (15,000) | |
| | College Way ReConstruction | Redesign College Way/McConnell - remove meter spaces with the exception of PCAC dropoff and ADA area. | -20 | 7,034 | NA | Part of Larger Project | |
| | Rec Field Lot | Field Access Parking (permit and meter) for public facility access | 45 | 7,079 | \$ 4,000 | \$ 180,000 | |
| C-Lot | Removal of Trailers - Return Spaces to use | 25 | 7,104 | \$ 300 | \$ 7,500 | | |
| Start of CMP Phase 2 - net parking from previous phase is: | | | 131 | 7,104 | | | |
| CMP Phase 2 | A Lot Structure - First Half | Construct first half structure with associated street network changes (pre north underpass) [total -footprint] | 544 | 7,648 | \$ 17,397 | \$ 17,375,000 | |
| | Craig Supply | No University Parking (town projects not included) | 0 | 7,648 | \$ 2,000 | \$ - | |
| | Remove Core/Adjacent Interstitial | Goal removal per CMP | -163 | 7,485 | NA | \$ - | |
| | Carpool Spaces on West Campus | Additional Capacity provided by dual passenger | 0 | 7,485 | \$ - | \$ - | No Location Defined at this time |
| | Verette House | Remove Rosemary Lane scattered parking - redesign with R-Lot Expansion | 0 | 7,485 | \$ - | \$ - | |
| | Forest Park second 1/2 demolition | Remove balance of parking at this site - replaced with parking at new family housing area | 0 | 7,485 | \$ - | Part of Housing Project | |
| | North Underpass (A-Lot 1) | loss due to construction of tunnel | -80 | 7,405 | NA | \$ - | |
| | Remove Surface (A-Lot 1) | after component 1 A Lot structure construction per CMP reuse [site for student apts] | -120 | 7,285 | NA | \$ - | |
| Start of CMP Phase 3 - net parking from previous phase is: | | | 181 | 7,285 | | | |
| CMP Phase 3 | B Lot Structure | Construct Full Structure - maintain surrounding surface | 538 | 7,823 | \$ 15,823 | \$ 13,260,135 | |
| | Remove Core | Goal removal per CMP | -100 | 7,723 | NA | \$ - | |
| | Carpool Spaces on West Campus | Additional Capacity provided by dual passenger | 0 | 7,723 | \$ - | \$ - | Needs Location and install |
| | College Road Closure | Close College Road and remove (Service/Hewitt Annex/Street/Colovos) | -90 | 7,633 | NA | \$ - | |
| | Remove Surface B-Lot | after structure construction per CMP and traffic balance | -150 | 7,483 | NA | \$ - | |
| | Rec Field Lot | New permit and meter parking associated with rec fields | 45 | 7,528 | \$ 4,000 | \$ 180,000 | |
| | Remove Mast Road Lot 2 'Dirt' Lot | Remove to provide rec field space | -200 | 7,328 | NA | \$ - | |
| Start of CMP Phase 4 - net parking from previous phase is: | | | 43 | 7,328 | | | |
| CMP Phase 4 | A Lot Structure - Component 2 | Construct second half structure with associated street network changes (post north underpass) | 525 | 7,853 | \$ 16,409 | \$ 14,850,000 | |
| | Remove Core Interstitial/Temp Lots | Goal removal per CMP | -100 | 7,753 | NA | \$ - | |
| | Remove Surface Lot Second Half (A- | after phase 2 structure construction per CMP reuse | -321 | 7,432 | NA | \$ - | |
| | C-Lot - Expose Ravine | Remove spaces for brook restoration - keep some spaces for carpool and short-term meter (MUB-Holloway) access | -50 | 7,382 | | | |
| net parking from previous phase is: | | | 54 | 7,382 | | | |

**Net Spaces Over 20 Year Plan Horizon
Masterplan/TPC Original Commitment**

**932 Additional Spaces
602 Additional Spaces**

Appendix 2 - External Funding Summary

The University has aggressively pursued outside funding for its transportation system improvements. These funds have been used for transit fleet replacement, construction of new infrastructure and, transit operations. Since fall 2001, over \$7.0 million of funding – up to 80% of it from the USDOT, USDOE and USEPA have been procured for our improvements.

| Status | Agency | Project -Reference Name | Full Cost | UNH Share |
|------------------|-------------|---|-------------------|------------------|
| Completed | NHDOT | Amtrak Quik-Trak Ticketing | \$ 44,000 | \$ 8,800 |
| Completed | NHDOT | Platform Surface Heating Install | \$ 90,000 | \$ - |
| <i>Cancelled</i> | <i>FHWA</i> | <i>Vanpool Program</i> | <i>\$ 239,000</i> | <i>\$ 47,800</i> |
| Completed | FHWA | Purchase six 15 passenger vans | \$ 330,000 | \$ 90,400 |
| Completed | NHDES | Phase 1 CNG Station Expansion | \$ 60,000 | \$ 5,000 |
| Completed | FTA | Transit Shelters and Lighting | \$ 108,000 | \$ 21,600 |
| Fall 2005 | DOE | Phase 2 CNG Station Expansion | \$ 95,000 | \$ - |
| Fall 2005 | DOE | DOE Funded CNG on-bus education Campaign | \$ 4,200 | \$ - |
| 2006 | FHWA | Main Street East Enhancement | \$ 630,000 | \$ 126,000 |
| 2006 | FTA | Phase II Wildcat Transit Replacement | \$ 1,080,000 | \$ 216,000 |
| 2006 | FHWA | Phase II Rail Station Expansion | \$ 815,000 | \$ 163,000 |
| 2006 | FHWA | Durham Rail Station Historic Enhancements | \$ 98,000 | \$ 19,600 |
| 2006 | FHWA | CNG/Biodiesel Fueling Station and NON-TRANSIT Fleet | \$ 375,000 | \$ 75,000 |
| 2006 | FTA | CNG/Biodiesel Alternative Fuel Infrastructure and Transit Fleet | \$ 1,237,535 | \$ 247,507 |
| 2007 | FTA | Wildcat Transit Shuttle Expansion* | \$ 450,000 | \$ 90,000 |
| 2007 | FHWA | Main Street- NH 155A West Edge Sidewalk- Shoulder | \$ 491,151 | \$ 98,230 |
| 2008 | FTA | Phase III Wildcat Transit Replacement | \$ 1,250,000 | \$ 250,000 |

Total Funding:

\$ 7,396,886 \$ 1,458,937

*May be deferred or foregone since this presumes the development of remote park and ride lots