

Harvard University Cambridge Campus Parking and Transportation Demand Management Plan



Submitted by: Harvard Planning
and Allston Initiative
Holyoke Center, 912
1350 Massachusetts Avenue
Cambridge, MA 02138

Harvard University
Transportation Services
175 North Harvard Street
Boston, MA 02134

**Amended
September 2003**

TABLE OF CONTENTS

Executive Summary 1

Section I. Parking Facility Inventory Summary 4

Section II. Baseline Mode Split Process..... 8

Section III. Demand Management Program17

Section IV. Monitoring27

Section V. Certification29

Section VI. Appendix30

Executive Summary

Harvard University is the largest employer in the City of Cambridge and it is a complex decentralized educational institution that is naturally geared toward flexible work and academic schedules. Therefore it is a less intensive traffic generator than other traditional businesses. For example, fully one third of Harvard's Cambridge-based employees are non-peak-hour commuters. Non-peak commuters reduce traffic congestion by naturally spreading out all traffic impacts, including transit, vehicular and pedestrian. Just in the past year and as a result of expanded transportation demand management initiatives, the University has reaped significant improvements in its single occupant vehicle use translating into a reduction of 2,579 commuter trips into the campus area. The other significant modal-split improvement relates to a 5.5 percent increase in public transit usage.¹

Recent surveys show that 77 percent of Harvard's employee population lives within greater Boston's Inner Ring suburbs. Of that number almost 75 percent are Harvard University commuters who use alternative transportation modes to work. Conversely, national and Massachusetts' commuting trends show that approximately 75 percent of the population drive-alone to work. The high rate of alternative mode used by Harvard's employees demonstrates the University's commitment to reduce the number of auto trips made by single occupant vehicles (SOVs) into its Cambridge Campus and to increase trips by high occupancy vehicles (HOVs) such as trains, buses, vans, carpools. In fact, according to a recent transportation survey more than 25 percent of Harvard's commuting population uses public transit to get to work, leaving their cars at home. In addition, Harvard has relatively high bicycle and walk-to-work rates, 8 and 34 percent respectively. Harvard's walk rate is nearly eight times the Massachusetts' walk rate.

Harvard University's use of alternatives to driving alone is an excellent example of the partnership between a proactive employer and its receptive and responsible employees. For over twenty-five years its employee and graduate student populations have acted responsibly in choosing among the various commuting alternatives made available to them as evidenced in the records maintained since 1975 when the University completed its first Rideshare Report for the Department of Environmental Protection (DEP). Over time, the University has consistently maintained an exceptionally low SOV rate ranging between 27 to 34 percent. In addition, Harvard recently announced a goal to reduce the number of commuting students by increasing the percentage of students housed in on-campus facilities. Harvard currently houses approximately one third of graduate students and the University aspires to house one half of graduate

¹ Harvard DEP 2000 Rideshare Update Report.

students within 10 years. The University believes this will further reduce transportation impacts. A 2001 Graduate Student Survey showed that less than 1 percent of graduate students, who are housed by Harvard, drive alone to their campus destinations. Instead, nearly 90 percent of graduate students, who are housed by Harvard, walk to their campus destinations.

To ensure that this twenty-five year trend continues to be positive, Harvard has implemented extensive transportation demand management (TDM) policies and programs. The TDM policies and programs are incorporated into Harvard's *CommuterChoice* program initiated in October 2000, which is available to all employees. Harvard seeks to achieve two goals through its *CommuterChoice* program. They are:

1. Address transportation supply and demand problems.
2. Improve access to and mobility around the Harvard campus.

Harvard aims to achieve these goals through education and outreach, and by providing a menu of transportation services and cost-effective financial incentives that are outlined in Section III of the Parking and Transportation Demand Management (PTDM) Plan. In each category for Section III, Harvard has described its additional plans for making a reasonable effort to reduce its SOV rate from an exceedingly low rate of 27.4^o percent (Cambridge and Allston employees and graduate students) to 24.7 percent a (10 percent reduction).

The goal of Harvard's PTDM plan is to provide the City of Cambridge with an accurate baseline assessment of Harvard's current parking supply and how it is managing its vehicle trips through the TDM measures and strategies offered by the *CommuterChoice* Program. The PTDM plan not only constitutes a base line for the Cambridge Campus but also outlines programs that will help increase the use of alternative modes to driving alone. The PTDM plan relies on data collected through a statistically significant random sample survey process used by Harvard University to satisfy the requirements set forth by the DEP in their 2000 Rideshare Report Guidelines. The DEP 2000 Rideshare Report not only documents Harvard's implementation of various TDM programs and measures, it compares those results to the mode split from its DEP 1998 Rideshare Baseline Report. Between the baseline and the update, Harvard's mode split for SOVs decreased from 33.8 percent to 27.4 percent.² This is a significant change and demonstrates the extent to which Harvard has been successful at reducing SOV trips, which impacts positively on traffic congestion and air pollution.

The PTDM plan is an extensive report on Harvard's existing TDM programs, the University's Cambridge parking supply, and the total population of employees and graduate students who travel to the University. It is presented to the City of Cambridge in compliance with the requirements established in the 1998 Parking

^o The SOV was revised from 24.9 percent to 24.7 percent in September 2003 to reflect both Cambridge and Allston.

² Harvard's DEP 2000 Rideshare Update Report is on file with the City of Cambridge PTDM Officer.

and Transportation Demand Ordinance. The information was prepared using the instructions and guidance offered in Chapter 10.18 entitled "Parking and Transportation Demand Management Planning: Parking Space Registration" of the City of Cambridge entitled "Municipal Code of the City of Cambridge". In addition, verbal communications with the City of Cambridge PTDM Officer clarified specific concerns regarding reporting procedures, data to include, and the permission to use the DEP 2000 Update Report mode split results as baseline statistical data.^o

The Harvard PTDM Plan parking inventory is based on extensive conversations and numerous meetings with the City of Cambridge PTDM Office, review of and comparison with the MIT Parking Facilities 2000-2001 Inventory submitted to the City of Cambridge in October of 2000, and detailed data provided by the Harvard Parking Office and Planning and Real Estate Department. The data reflects the total number of non-commercial supporting parking spaces (defined as "the stock of parking spaces maintained within the City by the University which supports university activities within the City") that includes employee/student/visitor and resident for "institutional use".

The PTDM plan is Harvard's documentation for establishing a base year statistical report, which includes current programs and plans for achieving a proposed mode-split reduction over time. The programs and measures put forward in this plan are extensive in breadth and depth and thus support Harvard's ability to reduce SOV by the required amount in this Plan. In addition, after careful review of the requirements outlined in the PTDM Ordinance, Harvard is fully participating in all requirements put forward in the re-certified PTDM Ordinance document of June 2001. In fact Harvard believes no other employer of comparable size has the breadth and depth of what is put forward in their PTDM plan. Some employers may be greater in one area but not in all.

With all efforts taken together and including Harvard's intense promotion of a greener campus through the Harvard Green Campus Initiative (HGCI), the University is clearly acting responsibly to improve the quality of life within the community of Cambridge.

^o Revised September 2003 to remove reference to Cambridge Only.

Section I. Parking Facility Inventory Summary

Definitions:

Parking facility. ""Parking Facility" means any lot, garage, building or structure or combination or portion thereof, on or in which motor vehicles are parked and in the case of university or college campuses, the stock of parking spaces maintained within the City by the university or college which supports university or college activities within the City."

Registration of all parking spaces. "No person shall build, expand, or reconfigure a parking facility for non-residential parking spaces resulting in a net increase in the number of parking spaces or a change in the use of such spaces based on the categories of use listed below at paragraphs b(v) and (vi) [of Chapter 10.18.040], without first submitting a parking registration form to, and obtaining acceptance from, the Director [of Traffic, Parking and Transportation]."

Commercial Parking Space. "Commercial Parking Space" means a parking space available for use by the general public at any time for a fee. The term shall not include (i) parking spaces which are owned or operated by a commercial entity whose primary business is other than the operation of parking facilities, for the exclusive use of its lessees, employees, patrons, customers, clients, patients, guests or residents but which are not available for use by the general public; (ii) parking spaces restricted for the use of the residents of a specific residential building or group of buildings; (iii) spaces located on public streets; or (iv) spaces located at a park-and-ride facility operated in conjunction with the Massachusetts Bay Transportation Authority."

Summary:

In the context of PTDM, Harvard University summarized "Non-commercial Spaces" to be those that do not meet the PTDM definition of "Commercial Parking Spaces" (10.18.020). The University's stock of non-commercial parking spaces are those that are maintained by the University and supporting its activities in the city, (by an entity whose primary business is other than the operation of parking facilities), for the exclusive use of its, employees, students, guests, lessees, customers, patrons, and/or residents. These spaces are not available for uses by the general public. This definition is commensurate with the definitions in Chapter 10:18. The categories for Non-commercial Use include: employee/student/guest and residential.³ The complete Harvard University Cambridge Campus Parking Inventory has been registered with the City of Cambridge Parking Office.

Total Number of existing parking spaces:

Non-commercial Supporting Use: 4,536

Institutional Parking Facility Owner and Operator:

President and Fellows of Harvard College
Holyoke Center, 912
1350 Massachusetts Avenue
Cambridge, MA 02138

³ Numbers taken from the 2002 Parking Inventory included in Section V, December, 2002.

Existing permits for parking facility:

All existing permits for parking facilities are on file at

Harvard University Parking Office
3 Bow Street, 2nd Floor
Cambridge, MA 02138

Enforcement actions: None

Harvard's Overarching Philosophy

Perhaps most importantly, the University does not increase its parking inventory with each new capital project and the twenty-five year trends show that the effects associated with incremental increases in the campus population are minimal. Instead, Harvard maintains a stable parking inventory, and manages all new demand for parking and transportation services. The University transportation demand management strategies work to reduce congestion, improve air quality, and maintain its very low drive-alone rate. Approximately 75 percent of Harvard employees commute to campus using alternative modes such as public transit, walking and bicycling. The commute modes are supported by Harvard's well-established planning principles of preservation of open space, minimization of vehicular circulation and optimization of pedestrian orientation.

General Definition of Parking Management

Parking management is the implementation of measures that encourage alternative mode use, which can include parking charges, preferential parking for car and vanpools, reduced parking costs for car and vanpools, and reduced parking supply. The availability, accessibility and cost of parking are factors in determining how and when an employee makes a trip to work. Parking management is a solution to a problem. The problem usually is too many cars (people/demand) and not enough spaces (supply). Parking management involves the allocation of spaces to meet the needs and goals of the employer, the adjacent community and other specified city or town ordinances or regulations.

Harvard Specific Parking Management Goals

The goal of Harvard's parking management is to encourage alternative mode use and serve as many people as possible by optimizing the current parking supply. This goal is achieved through parking pricing, preferential parking, and reduced parking fees for ridesharing vehicles. Harvard University parking management measures include the following:

Parking Pricing: a specific parking management strategy of an established pricing mechanism that encourages carpool and vanpool use at its parking

facilities. This includes higher rates for single occupant vehicles, and reduced rates for carpools. Harvard employees receive a 50 percent reduction in the yearly parking rate for two-person carpool, a 75 percent reduction for three or more persons, and free parking for vanpools.

Preferential Parking: the designation of the most desirable parking spaces closest to the building entrances for the exclusive use of carpools and vanpools as the space becomes available.

Description of the management of various parking facilities:

A comprehensive description can be reviewed on line at www.uos.harvard.edu/transportation/par.shtml. In general, the effects associated with incremental increases in the campus population are minimal on overall parking demand. Harvard has a limited amount of assigned/reserved spaces. Based on historical practice, Harvard has been moving away from this type of management. Over 90 percent of the spaces are available on a “pooled” designation which is on a “first come, first serve” basis.

Parking Permits:

Harvard University Parking Rate Classifications	FY01 Permit Fees	FY02 Permit Fees
Pooled – Faculty/Staff	\$420	\$450
Assigned – Faculty/Staff	\$775	\$830
Reserved Area – Faculty/Staff	N/A	\$635
Resident – Faculty/Staff	\$725	\$775
Metered – Part-time Faculty/Staff	\$120	\$130
Resident – Student <i>(FY02 figures represent 10-month permit cost)</i>	\$725	\$775 – \$1,620
Commuter – Student <i>(FY02 figures represent 10-month permit cost)</i>	\$330	\$375
Night Rate – Student and Faculty Staff	\$100	\$125
Visitors	\$5/day	\$5/day

The University recently supplemented its traditional menu of permits with new, flexible-schedule permit types. Because many of Harvard's employees have non-traditional work schedules, the University is offering permit types that better coincide with employees' flexible schedules, which will allow them to continue to take transit yet park on an occasional basis. The Morning, Afternoon, and 3-day Permits are intended to fill this need.

Additionally, Harvard is committed to increasing its rideshare numbers. To do this, Harvard is offering a tiered system of financial incentives associated with ridesharing.

Harvard University Parking Rate Classifications	FY01 Permit Fees	FY02 Annual Permit Fees
Morning or Afternoon Permit	<u>N/A</u>	\$315
3-day Permit	<u>N/A</u>	\$315
2-person Carpool Permit	<u>N/A</u>	50% reduced rate
3-person Carpool Permit	<u>N/A</u>	75% reduced rate
Vanpools (with 5 or more Harvard Affiliates)	<u>N/A</u>	Free

Section II. Baseline Mode Split Process

The objective of transportation demand management is to apply cost-effective measures to address parking supply and demand, the goal is to reduce congestion and improve air quality. Harvard University has demonstrated a commitment to reduce its parking demand and SOV trips throughout the Cambridge campus. Harvard's Transportation Services Department has periodically surveyed employees' and students' to determine trends in travel since 1975. The following is a description of the University's survey process developed for the Massachusetts Department of Environmental Protection (DEP) Rideshare Update requirements in preparation for compliance with the "1998 Rideshare Program Report for facilities and institutions with 1000 or more employees and students." It is put forward as Harvard University's baseline mode split for the PTDM plan.

Standardized Methods

Harvard University standardized methods for both the 1999 and 2000 DEP Rideshare surveys. The Harvard Human Resources Department generated the master list of graduate students and full-time employees from which the representative sample was derived to determine the "applicable population." The random selection process of skip intervals of 1-in-10, and stratification by four categories was the same in both the April 1999 and November 2000 surveys. Although the DEP does not require stratification, Harvard chose to stratify for additional statistical analysis. Distribution and collection of the surveys was handled the same in both years. Comparative analysis was made easier by standardizing the methods. The high rate of return was due to careful monitoring and tracking, and verification of all returned surveys. Because of the large increase in numbers required to sample for the 2000 DEP Survey Report and a need to standardize the process, a database was developed in Microsoft Access to track survey progress.

April 1999 Survey: Harvard's Transportation Services Department conducted a transportation survey as required by the Massachusetts DEP. At that time Harvard's total applicable employee and graduate student population was 22,666. Harvard University followed the DEP's Recommended Sample Selection Steps, section G in the "Finding Out How Employees Get To Work: Random Sample Survey Guidance (January 1999)--DRAFT Document." The guidelines suggested 394 as the sample size for an institution with 25,000+ employees and students in order to achieve a 95 percent margin of error and reliability in its random survey. The response rate achieved was 98.2 percent.

November 2000 Survey: Harvard University was again required to survey full-time employees and students to be in compliance with the DEP Rideshare Program for 2000. Its applicable population was approximately 20,931 employees and graduate students, an 8 percent decrease since the previous survey. Of that number, 40 percent or 8,382 were commuting graduate students.

The remaining 60 percent or 12,549 were full time employees. The 2000 guidelines suggested 1014 as the sample size or a 61 percent increase over the required 1999 survey sample size for an institution with 25,000+ employees and students in order to achieve a 95 percent margin of error and reliability in its random survey. The response rate achieved was 96.1 percent.

Mode Split: The data was summarized into the commute mode chart provided below. The chart is a comparison of the mode data from the April 1999 survey to the November 2000 survey, both of which were included in the respectively filed DEP reports. The statistics represent both the Allston and Cambridge campuses.

Comparison Commute Mode Chart - April 1999 to November 2000

Commute Mode	2000 Percent	1999 Percent	Percent Change
Adjusted Drive Alone*	27.4 %	33.8 %	6.4
Carpool	4.8 %	5.0 %	.2
Vanpool	0	0	N/A
Public Transit	28.3 %	22.8 %	5.5
Bicycle	7.8 %	8.0 %	.2
Walk	31.7 %	34.0 %	2.3

* Adjusted Drive Alone rate includes the non-response rate, which the DEP automatically assigns as a drive alone mode.

Data collection tools and analysis for PTDM Plan modal split: The baseline modal split for only the Cambridge campus assumes that the City of Cambridge is accepting the Harvard Year 2000 DEP Rideshare Update Plan's modal split with adjustments. The adjustments agreed to are based on a meeting with the City of Cambridge's PTDM Officer. At that meeting it was agreed that the 2000 DEP Rideshare Update Report statistics and TDM measures would be used for the baseline PTDM plan.

To arrive at the campus wide modal split Harvard University followed DEP's recommended stratified Random Sample Survey Method, per the June 2000 packet, "Guidance on Collecting Commute Data for Educational Facilities." All results were stratified as well.

In the table below^o, the Total 2000 Percent column includes employees and graduate students from Allston and Cambridge. The Projected PTDM Goal column reflects a 10 percent reduction of the Adjusted Drive Alone rate.

Commute Mode	Total 2000 Percent	Projected PTDM Goal
Adjusted Drive Alone	27.4 %	24.7
Carpool	4.8 %	5.0
Vanpool	0	0
Public Transit	28.3 %	29.3
Bicycle	7.8 %	8.3
Walk	31.7 %	32.7

^o Table revised September 2003.

The goal for the modal split for the Year 2002 PTDM Plan has been established by the City of Cambridge PTDM Officer as a reduction of 10 percent from the DEP 2000 survey for Cambridge and Allston employees and graduate students^o. The PTDM plan baseline is presented in the above chart in the second column "Total DEP 2000 Percent". The "Adjusted Drive Alone" rate is 27.4 percent. A 10 percent reduction would be 2.74 percent. The third column "Projected PTDM Goal" distributes the 2.74 percent reduction goal into five of the six mode categories. Thus, to decrease the SOV rate to 24.7 percent, Harvard will work to increase the use of the other modes represented in the third column.

Modal split comparisons are only as good as the survey method applied, response rate and population representation, and put in the context of parking costs, and availability and accessibility of public transit. These factors must be put in a context for each survey year. Although these factors are the most important ones that influence the numbers, there are other factors that should be included such as incentives and disincentives available to the employees. However, it is also important to note that the lower the SOV rate the more difficult it is to achieve reductions. To this end, Harvard University through its *CommuterChoice* program is committed to investigating additional TDM measures (incentives and disincentives) and programs that will move toward achieving the 2002 SOV goal.

Harvard is committed to "make a reasonable effort" to achieve a reduction in its SOV rate of 2.74 percentage points from its current baseline for the Cambridge PTDM. Harvard has one of the best SOV rates in the city and should not be penalized for its historic effort to have such a desirable SOV rate. However, Harvard remains convinced that maintaining an SOV rate of 27.4 percent, which is already a low SOV rate, is consistent with our historical data and consistent with the City's TDM goals. In fact, according to the latest 2000 Census statistics for MA, carpooling has dropped from 10 percent in the 1980's and 90's to only 9 percent of all commuters in 2000 and SOV has increased in MA from 72 percent to 74 percent (Boston Globe, 5/22/2002). In addition, we submit that it is difficult to change behavior to the degree the City is requesting when national studies indicate that any significant reduction in SOV is directly tied to parking pricing. To this end, Harvard has already increased its parking rate 21 percent over the past several years. This increase has had an impact on our SOV rate as reported in the trip reduction chart below.

Vehicle Trips: In addition to surveying to determine the mode split, Harvard University's DEP Rideshare Report established number of vehicle trips. Harvard's overall drive alone rate decreased 6.36 percent. This decrease translated into a reduction of 2,579 trips since the 1998 baseline report.

^o Revised September 2003 to include Cambridge and Allston employees and graduate students.

Following the instructions from the DEP guidelines developed for institutions required to survey and submit a Rideshare 2000 Update Report, Harvard presents the following table from its 2000 DEP Rideshare Update Report chart as an illustration of trips made to the University's Cambridge and Allston Campuses^o.

Commute mode for Cambridge	Column I	÷	Column II	=	Column III	x	Column IV	=	Column V
	# of trips in mode taken by applicable employees in sample		Total # trips taken by applicable employees in sample		Proportion of trips taken in mode by applicable employees in sample***		Estimated total # of trips taken by <u>all</u> applicable employees at facility		Estimated total # of trips in mode taken by <u>all</u> applicable employees at facility
Adjusted total # of drive-alone trips*	1,315	÷	4,809	=	.273	x	104,655	=	28,570
Carpool	233	÷	4,809	=	.048	x	104,655	=	5,023
Vanpool	0	÷	0	=	0	x	0	=	0
Public transit	1,361	÷	4,809	=	.283	x	104,655	=	29,617
Bicycle	377	÷	4,809	=	.078	x	104,655	=	8,163
Walk	1,523	÷	4,809	=	.317	x	104,655	=	33,176
TOTAL	4,809								104,549

* Note: Non-respondents to the survey are counted as drive-alone commuters. This is what is meant by "adjusted drive-alone trips. A carpool carries 2 to 7 passengers, including the driver. A vanpool carries 8 or more passengers.

In sum, in base year 2000, a total of 104,549 trips were made by all modes into the Cambridge and Allston Campuses.

Zip Code Summary

Harvard's Cambridge-based faculty and staff live predominantly in greater Boston's Inner Ring suburbs. The summary-level, point of origin data provided below illustrates that many faculty and staff live in communities that are located close to Harvard Square. Almost 75 percent of Harvard's employee commuting population use alternative transportation modes. According to the May 2001 Human Resources data, 43 percent live within 5 miles of the Harvard campus. This data is supported by Harvard's high walk-to-work and bicycle commuting rates.

^o Revised September 2003 to include Cambridge and Allston employees and graduate students.

Cambridge and Boston data represent aggregates of neighborhoods and zip codes.

Cambridge-based Faculty and Staff⁴	
City of Residence	Percent of Total
CAMBRIDGE	27.7%
BOSTON	12.8%
SOMERVILLE	12.4%
ARLINGTON	4.9%
MEDFORD	3.0%
BELMONT	2.9%
NEWTON	2.9%
WATERTOWN	2.6%
BROOKLINE	2.5%
LEXINGTON	2.1%
MALDEN	1.2%
QUINCY	1.1%
WALTHAM	1.0%
OTHER	22.9%
TOTAL:	100.0%

Description of Transportation Access

The Harvard University campus is located in two different cities with the Charles River bisecting the campus. The buildings in Cambridge are within walking distance of the MBTA Red Line through which employees and students have easy access to the Green, Blue, or Orange Lines and to both the North and South Station Commuter Rail lines.

Harvard University employees have a variety of bus options available to them for commuting purposes depending on where they work or go to class.

The following MBTA buses can be accessed on nearby streets from the:

West: #62, 67, 71, 72, 73, 74/75, 76, 70A.

North: #77, 77a, 78, 79, 80, 83, 84, 87, 96, 350, 351.

South: #1, 47, 66, 70, 86, ct1, ct2.

East: #64, 68, 69, 85, 88, 91.

⁴May 2001 data was used for this analysis. Harvard-housed faculty and staff were not included in the analysis. Addresses and post office boxes were used for this zip-code analysis. Affiliates, who provided campus addresses, foreign addresses or did not provide an address, were excluded from this analysis. Seven percent of the total Cambridge-based population were excluded for these reasons. Zipcode Table revised September 2003.

However, employees using the Commuter Rail lines from Lowell, Haverhill/Reading and Newbury/Rockport have no direct access to the Red Line in to Harvard Square. Also, even though employees may live close to campus they are not necessarily well served by direct bus routes to campus. For example, many neighborhoods in Somerville, the area with the third largest Harvard employee population, do not have direct public transit to Harvard Square. Harvard is also aware that Davis Square is on the RED line, however, in the mapping of employee addresses, Harvard found a majority of its employees were not within walking distance of Davis Square, and that there were inadequate connections available to Davis Square. Somerville is an area identified where Harvard would work with the MBTA for possible improvements in bus service.

Plus, employees who live farther from campus are not necessarily as well served by public transit either. This could be the result of work hours that do not correspond with transit schedules, inadequate parking facilities at transit stations and/or employees who are not within walking distance of stations.

Harvard understands that Route #350/351 terminates at Alewife and considers this route as a possible commute alternative for employees and students who live in Belmont and Lexington near the local stops. Alewife is the RED Line and the trains go to Harvard Square.

Multi-modal TDM Programs

Harvard University has three campuses and a number of affiliated institutions in the greater Boston area. The University environment is dynamic and requires employees to travel within discrete campus areas and among campuses and affiliated institutions. To reduce employees' reliance on automobiles and increase the University's commitment to multi-modalism, the University operates a Cambridge and Allston shuttle system, a Cambridge and Longwood Medical Area shuttle system, and is a corporate host for the Zipcar program.

In addition, Harvard will be providing a bus shelter at the Center for Government and International Studies (CGIS) at 1730 Cambridge Street. Harvard will also seek to provide improved amenities, such as shelters and benches, at bus stops bordering Harvard properties as major new development or significant renovations are undertaken throughout the Cambridge Campus and approved by the City of Cambridge.

Shuttles

The shuttle service transports 2,428 people a day and it is open to anyone with a University I.D. The Shuttle services provide a useful link in getting employees and students from public transit stops and carpool/vanpool spaces to their final destination. This coordinated service enhances the option to leave the car at home. Complete information on the Harvard University Shuttle System is available from the *CommuterChoice* office and persons interested in getting on-

line information can access the Shuttle Service through Harvard's main web page, www.harvard.edu (following the CAMPUS LIFE link) and the University Operations Services (UOS) website at www.uos.harvard.edu. Shuttle services include:

Harvard Shuttle Bus: This is a year-round comprehensive shuttle bus system operating throughout the Cambridge and Allston campuses. It is a fixed-route service with over 15 stops in Cambridge and 3 stops in Allston (at soldiers Field Park, the Business School Rotary, and North Harvard Street between Morgan Way and Gate 3). Service operates seven days a week between 7:35 a.m. and 12:35 a.m. on approximately 30-minute headways. This service is free to all members of the Harvard community.

Harvard Shuttle Van: The Harvard Shuttle Van is designed for persons who, because of mobility impairment or medical condition, find it difficult to use the regular shuttle bus system. Transportation is provided door-to-door within the Cambridge and Allston campuses.

Evening Shuttle Van: The Evening Shuttle is a free, on-call, taxi-style service that operates between 7:00 p.m. and 3:00 a.m. nightly in the Allston and Cambridge campus areas (including both on-and-off campuses).

Home Run Shuttle Transport: Supplementing the evening shuttle service is an on-call service that provides safe, one-directional evening transportation to home addresses in Somerville for students and employees on the Law School campus.

Longwood Medical Area Shuttle - the M2: Harvard operates a year-round, Monday through Saturday shuttle service to facilitate transportation between the Cambridge/Allston campuses and the Longwood Medical Area campus. The first bus leaves Cambridge each morning at 7 a.m. with the last bus leaving the Longwood Medical Area at 11:30 p.m. Students affiliated with the Harvard Medical School, Harvard School of Dental Medicine, School of Public Health, and the GSAS/HMS Medical Sciences programs are eligible for free fares. All other students can purchase tickets at a discounted fare.

Almost 30 percent of the Affiliates who ride the M2 shuttle are enrolled in Cambridge-based academic programs. Therefore, the M2 shuttle significantly reduces vehicular traffic to and from the Cambridge campus. A shuttle schedule is in the appendix.

Harvard is committed to evaluating the shuttle service and continues to study ways to improve its shuttle services at numerous inter-modal sites including inter and intra-modal campus sites. For example, a recent study of a Harvard sponsored North Station shuttle showed that Harvard could not significantly improve on the existing MBTA service even though Commuter Rail users had to

change modes and walk some distance. Harvard also investigated the possibility of coordinating with the Charles River TMA to extend their EZRide, but the same outcome rendered the extension neither time saving, or cost saving for the commuter.

Zipcar

Harvard University is participating in the Zipcar Corporate program by setting aside four parking spaces for Zipcars at low cost at the following locations: the Business School, the Akron lot, the Grant Street lot and the North Hall lot. These three Zipcars are available to community members and Harvard Affiliates, and represent one quarter of Cambridge's inventory of Zipcars.

The allocation of on-campus spaces to Zipcar is an efficient use of its parking. National car-sharing statistics indicate that each Zipcar removes approximately 8 cars from the road and frees up as many as 24 parking spaces. Harvard's allocation of spaces to Zipcar has potentially reduced demand for 120 on- and off-campus parking spaces. As of August 2002, 242 Harvard Affiliates were registered with Zipcar.⁵ 118 of Harvard total members are Cambridge-based employees or residents.

Cambridge Zipcar Statistics⁶			
	2001	2002	Percent Change
Zipcar members in Cambridge	259	605	Harvard Affiliates comprise 40% of total membership.
Harvard-affiliated, Cambridge-based Zipcar members	146	242	+ 65%
Zipcars in Cambridge	12	33	+ 175%
Zipcars parked on Harvard campus	3	5	+ 66%

Zipcars are for employees and graduate students at Harvard who need regular 24-hour access to a vehicle, and are particularly good for employees who leave their car at home. Zipcars are available for use by members for as little as one hour—or as long as they need it. Harvard employees can access a car whenever they want without the hassles of owning one. Benefits to Harvard employees include:

- On-site 24-hour access to cars.
- Use of car for as little as one hour

⁵ Zipcar participation statistics are provided by Zipcar; 9/2002. Harvard's participation in the corporate program entitles Affiliates to reduced initiation fees, easy access to Zipcars located on campus and reserved for Affiliate use only.

⁶ Statistics provided by Zipcar in September 2002. Statistics represent August 1, 2002 data.

- Access to other Zipcars in Allston/Brighton, Boston, Brookline, Cambridge, Charlestown, Dorchester, Jamaica Plain, Somerville and Watertown.
- Efficient use of on-site parking (each vehicle replaces three to four private vehicles).
- Compelling environmental benefit.
- On-line reservation and smart card access eliminate annoying and time consuming paperwork of traditional car-rental agencies (or leasing).
- Car use can be billed to specific accounts or cost-centers.
- Hassle Free Program: Zipcar handles all customer service issues. Cars are fully insured.

The Zipcar program compliments the use of alternative transportation and encourages commuters to leave their car at home because it provides extra mobility during the day. Harvard is in the planning stages with Zipcar to increase on campus parking for Zipcars. Faculty, staff and students, over 21, can be a member of Harvard's Corporate Zipcar program. In addition, Harvard is committed to waiving the security deposit for Harvard graduate student's who wish to be a member of Zipcar. This initiative will help remove a financial barrier for graduate students wanting to use a Zipcar.

Motorist Assistance Program (MAP): MAP is offered to employees who find they need help with a flat tire on their car, or other minor emergency automobile repairs. Harvard does not have the facilities at this time to expand the MAP program to bicyclist as bicycle repair is another whole skill and business. However, Harvard does post on its website numerous bicycle shops and services for its biking population. In addition Harvard provides free bicycle "tune-ups" at commuter events.

Section III. Demand Management Program

Harvard University's Demand Management Program is incorporated into its *CommuterChoice* Program. Harvard University's Transportation Services Department introduced the *CommuterChoice* Program to faculty and staff in October 2000. The components of the *CommuterChoice* program take into consideration all elements of "choice." The objective of the *CommuterChoice* program is to apply cost-effective measures that will address supply and demand problems and generally improve access to and mobility around Harvard University's Campus. When commuters make a choice it involves costs both in dollars and in a "sense" (perception) of travel time. Many commuters weigh convenience, cost and time when choosing an alternative.

Since filing its 1998 DEP Report Harvard has:

- Decreased its overall drive alone rate by 6.36 percent.
- Reduced SOV trips by 2,579 since the 1998 baseline report.

In the three years since Harvard formalized its TDM measures into a commuter mobility program, Harvard has:

- Implemented an on-site CommuterChoice Program.
- Increased the MBTA Pass direct subsidy from 10 percent to 40 percent.
- Increased T pass sales by 19 percent increase in T pass.
- Increased shuttle ridership, by 24 percent (which is 2,428 people a day).
- Implemented a car sharing incentive program.
- Implemented an on-line web based rideshare registration (including registration for finding a cycling partner).
- Held five different commuting events.

In addition to the required DEP questions, Harvard University's survey instrument included 12 additional questions, which provides the University with more comprehensive comparative data. The questionnaire included both quantitative data for DEP and qualitative data to use as supportive information for implementing additional campus-wide transportation demand measures. These programs have been continuously documented and monitored by the Transportation Services Department.

CommuterChoice Program

As a direct result of recommendations outlined in Harvard's 1999 DEP Rideshare Report, the Transportation Services Department is now hosting the *CommuterChoice* Program, which is committed to providing up-to-date commuting information and planning services to Harvard University employees.

The Harvard University *CommuterChoice* Office acts as a clearinghouse for all transportation demand management information and programs and coordinates with the Parking Office among other departments. The new office employs a full time *CommuterChoice* Manager, and a full time office administrator. Both work five days a week. *CommuterChoice* staff:

- Implement the programs.
- Post and distribute announcements.
- Hold promotional events to encourage ridesharing, public transit, bicycling and walking.
- Monitor the program and assists in evaluation.
- Act as a resource and provides transit schedules and other up-to-date information about the program's services.

Specific TDM strategies offered through the *CommuterChoice* Program

Ridematching: Harvard University has been offering a ridesharing program to employees and students who are interested in carpooling since 1975 through the Parking Office. However, Harvard employees can now receive information for carpool and vanpool matching through the new *CommuterChoice* office located in the Parking Services Department at 3 Bow Street in Cambridge. Registration can easily be completed through the *CommuterChoice* website at www.commuterchoice.harvard.edu or by telephone at 617-384-RIDE. All employees receive a registration form that includes carpool registration. Registration enables *CommuterChoice* staff to locate riders who are interested in sharing their commute. In addition, the form includes options for transit and bicycling. A carpool registration form is in the appendix.

Emergency Ride Home Program: Harvard University employees participating in some form of ridesharing program (carpool or vanpool) five days a week are eligible for the Emergency Ride Home Program. All employees must register for the program with the *CommuterChoice* Office. An Emergency Ride Home is supplied during the following situations, and when regular transportation is not available:

- Illness or crisis of the participant or of a family member (note: this does not include injuries sustained at work that would fall under a Workers' Compensation Claim).
- Unexpected request of a supervisor to work past regular scheduled hours without advance notice. Unexpected is defined as not knowing before the morning of the request.
- Stranded at work because the driver of your carpool or vanpool had to leave because of an emergency. If the driver of a vanpool is unable to drive home, the driver will receive an emergency ride home and a designated alternate driver will drive remaining van riders home.

Harvard's ERH (same as GRH) policy and form is located in the appendix. Expanding GRH programs to students is not required in the ordinance. Students are strongly encouraged not to bring cars to the University and parking for students is minimal. However, if Harvard is able to bring about a centrally administered pass program at each graduate school, and funding becomes available, Harvard will actively seek ways of expanding the Emergency Ride Home program so as to further encourage the use of alternative modes.

Preferential parking for carpools and vanpools: Employees who are registered as carpools or vanpools and rideshare five days a week receive preferential parking in designated spaces and lots as they become available. Harvard currently reserves spaces, free of charge, for vanpools as they are organized.

Harvard will sign parking spaces currently used by carpools and vanpools, and add signage as new carpools and vanpools are organized. Should the demand increase, set-aside parking for ridesharing will increase accordingly. In addition, Harvard will indicate how many carpools are currently in the *CommuterChoice* Program and where the parking spaces are located. In order to promote carpooling and to ensure that people who drive alone are aware of our carpool program, Harvard will implement a creative signage program that will identify future carpool spaces in addition to those signed for actual carpools (for example signage saying "If you carpooled, you could park here"). As carpools are formed, Harvard will sign the carpool spaces, as there is demand. Harvard will strategically look at high volume and high demand parking spaces in highly visible areas and create sample signage for these parking spaces. Harvard will send the proposed sample signs to the PTDM Officer in the fall of 2003, followed by a list of key spaces in heavily utilized and coveted lots and garages where the carpool signs will capture the most people.

All HOVs currently register with *CommuterChoice*, which is a component of Harvard's Transportation Services Department, UOS. The *CommuterChoice* program is available to Harvard employees and students and is extended to include new development with Harvard employees and/or students on-site.

Information concerning fees and policies are widely disseminated. They can be found on our website, and at kiosks located in the lobbies of all schools. Plus, Harvard has 141 trained Transportation Coordinators (TC) representing all departments on campus who collect issues, comments and questions, and disseminate materials. The Transportation Coordinator Resource Manual table of contents and a training event agenda is located in the appendix.

Carpool Incentives: Harvard University, through the *CommuterChoice* Program offers carpools of two or more people riding together five days a week, parking at a reduced rate of 50 percent in designated spaces and lots.

Three or more people riding together five days a week are eligible for parking at a reduced rate of 75 percent in designated spots and lots.

Harvard recognizes that it may be possible to attract some new alternative mode commuters if some greater flexibility were built into rideshare program, such as providing incentives for using alternative modes fewer than 5 days a week or for experimenting with alternative modes on a trial basis. Since Harvard does not have the capability to monitor and enforce irregular use of the parking facilities ridesharing fewer than 5 days a week is not an option at this time. However, if this situation should change, Harvard will implement more flexible rideshare programs. Currently Harvard is exploring a host of new incentives for its rideshare programs. These incentives are being evaluated and prioritized as to cost, effectiveness, and ease of implementation.

Vanpool incentives: Harvard University has a vanpool program offered by the *CommuterChoice* office where vanpools of ten or more riders, receive free, preferential parking on-campus in designated lots. At least half of the riders must be Harvard faculty, staff or students. The *CommuterChoice* office also does recruitment, ridematching, and marketing. The University currently utilizes CARAVAN for Commuters to assist them in forming vanpools. Harvard organized a vanpool originating from Methuen, MA. The vanpool incentives for this new van include: subsidized seats for up to six months and a free parking space at Mill Street where the wait list for a parking space is seven years.

Bicycling incentives: Registering through the *CommuterChoice* Program allows commuting cyclists' access to information about cycling around Boston and Cambridge. Bike racks are available in over 200 locations in convenient locations across the Cambridge campus, and can accommodate approximately 1800 bicycles. Bike route maps, and safety information are available free to everyone who registers. In the fall of 2002 Harvard University installed bicycle racks on its shuttles. Lockers and shower locations vary depending on buildings and departments.

Showers and Lockers: Whereas Harvard University is a decentralized organization with numerous schools, the University has designated areas for showers and lockers and access is often allowed between schools. All general athletic facilities are open for use by any employee or student. In addition, each school has its own showers and lockers available to their employees and students. Therefore to understand better where the showers and lockers are located, Harvard surveyed the Transportation Coordinators (TCs) at each school. The survey results contain only partial information. Harvard continues to gather this information from the TCs. When completed this information will be added to the current bike inventory. In addition, Harvard will seek to incorporate new bike racks, showers and lockers into major new development and significant renovation projects when approved by the City. A Harvard bicycle inventory is located in the appendix.

Bike Racks: Harvard is committed to upgrading its substandard racks over time. Additionally, the University is committed to adding 70 additional

covered bicycle spaces in the North Yard area off of Oxford Street and is reviewing conditions at the Kennedy School for the addition of approximately 50 spaces. Harvard is reviewing space for additional bike racks and spaces as new construction is identified. The *CommuterChoice* Program will provide further analysis and inventory of rack conditions, locations and costs by the spring of 2004. However, future funding and implementation is up to the individual schools. For example: Harvard Yard is on the National Register of Historic Places, and as such, cannot be altered without the proposed alteration being accepted by the Cambridge Historical Commission.

Bicycling Safety: To address bicycle safety and access issues throughout the Harvard Campus, the Harvard University Police Department administers a free bicycle sticker/registration program for all employees and students. In addition information on bicycling in Cambridge and Boston is distributed free of charge to all employees through the *CommuterChoice* Office.

Promotional events for bicycling: Harvard is committed to promoting bicycling to work and class. Harvard held a Bike Appreciation Day event in May of 2001, which was coordinated with the City of Cambridge's Go Green Month events. A second event, a "Bicycle Breakfast" took place on May 15, 2002. More than 200 bicyclists arrived between 7:30 and 9:30 a.m. for a free breakfast at Au Bon Pain. Also during bike week 2002, 32 employees participated in the "Bike Week Commuter Challenge." The third annual "Bicycle Breakfast" was held on May 14, 2003.

Smart Bikes (bike-sharing): Harvard hired a summer intern to investigate the development of a Smart Bikes project in conjunction with the City of Alexandria VA and Hampshire College. The Smart Bike project is a state of the art bicycle-sharing program. An important outcome of this internship was the recommendation that safe bike routes, adequate parking, and bicyclist/motorist education, be made before Harvard invests in bike projects of this magnitude.

Bicycling Information: The Harvard website has links to bicycle paths and routes and a free bicycle map is available upon registration in *CommuterChoice*. Harvard is reviewing incentive programs such as providing financial incentives for walking and biking to work, and classes on basic bicycle repair. Also, Harvard provides information about bicycle maintenance classes and bicycle driver training via the Bicycling link on the *CommuterChoice* website (www.commuterchoice.harvard.edu). Bike education materials and maps are located in the appendix.

Public transit incentives: Harvard University offers a 40 percent MBTA pass cash subsidy with an allowable IRS 132F transportation benefit of \$100 a month, as of January 2002, to employees through an on-site MBTA Corporate Pass program.

Passes are distributed each month at Holyoke Center Information in Cambridge for staff that registers in advance.

Schedules, maps and route information are available for bus, subway and commuter rail. This program is marketed through the *CommuterChoice* website, the weekly staff newspaper, *The Harvard Gazette*, the monthly staff newspaper, *The Resource*, as well as other newsletters and posted announcements.

As of November 2000, 3,078 employees took advantage of the transit pass subsidy. This is a significant increase of 19 percent over 2,503 in April 1999 the last time the numbers were requested. In addition, Harvard University has a high rate of overall transit users with 28.3 percent of its employees and students taking public transit. This represents an 18 percent increase since the April 1999 Rideshare Base Report, and is consistent with the increase in T pass sales.

In October 2000, Harvard raised its MBTA subsidy from 10 percent to 40 percent consistent with other employers. Because of this, Harvard has been paying 1.3 million dollars or more each year to subsidize its employee passes. Harvard will continue to sell T passes at a 40 percent discount, and plans to implement a payroll program that will treat the employee payment as pre-tax, resulting in a net after tax benefit that exceeds 50 percent of the cost of the T pass when Harvard's payroll system capabilities change. Harvard believes that with the implementation of a Sodexo Pass Program sometime in the late fall of 2003, (with a pilot roll out planned for the summer of 2003 depending on the successful implementation of Harvard's new payroll software system) there will be an increase in Harvard's MBTA pass program. Harvard will be tracking this project and will share with the City of Cambridge PTDM Officer results of its effectiveness on mode split. Therefore at this time an additional T pass subsidy is not necessary.

Harvard University selected Sodexo Pass as the vendor, which will deliver a web-based transit pass program to eligible Harvard affiliates and offer monthly T Passes by mail. The new pass program simplifies the process of purchasing transit passes at Harvard and significantly removes the current convenience barrier to purchasing and accessing passes at Holyoke Center. Harvard's *CommuterChoice* program has formed a working group to oversee the progress of the configuration of the electronic payroll system to accommodate transit deductions on a pre-tax basis. The new transit benefit program will also reduce the overall cost of transit passes.

Sodexo Pass will process employee enrollment, deliver transit passes, track employee participation and generate reports, provide customer service, provide a secure data-sharing environment, and work closely with a designated Harvard University team, to ensure that eligibility data and payroll updates are current. Further, Sodexo Pass will assist in the marketing of these new benefits to eligible Harvard Affiliates, in order to ensure a high level of participation in the transportation benefits program.

Harvard has a Semester Pass program among other initiatives for students and recently conducted a substantial investigation into enhancing various student transit pass programs, benefits and incentives beyond the current MBTA Semester Pass program's 11 percent discount. The research project included all of Harvard's graduate schools. All graduate schools located in Cambridge participate in the MBTA Semester Pass Program. (For a complete updated listing of the schools please go to the MBTA website: www.mbta.com/traveling_t/passes_semesterpass_college_directory.asp.)

The Semester Pass subsidy research project was conducted over six months and provided an opportunity for all graduate schools to review the program in its entirety. The results were presented to the Administrative Deans recommending centralizing the Semester Pass program. Harvard continues to be proactive in adding other incentives for using public transit. For example: the Faculty of Arts and Sciences has extended the MBTA semester pass program to all its undergraduates, and Harvard is committed to waiving the security deposit for Harvard graduate student's who wish to be a member of Zipcar. This initiative would go a long way to removing a financial barrier for graduate students wanting to use a Zipcar. Harvard is committed to work with all graduate schools in the future to seek full participation and to identify future funding. Harvard also regularly conducts Graduate Student Quality of Life surveys. Therefore Harvard believes its SOV goal can be met with the current programs and measures identified in this PTDM Plan.

Transportation Management Association (TMA)

The *CommuterChoice* manager meets regularly with the CRTMA Director and Assistant on a variety of issues and programs. Harvard is committed to cooperating with Charles River and other TMAs and to sharing information on programs of mutual benefit. However, Harvard has investigated joining the Charles River TMA although this is not specifically required in the ordinance. In comparison to CRTMA Harvard has a GRH program, a web-based Ride Matching service, among other University specific programs that are more enhanced than what the CRTMA currently offers. To reiterate, as a part of Harvard's relationship to other business, it is committed to cooperating with the Charles River TMA and to sharing information on programs of mutual benefit. An example of this mutual sharing and cooperation is the recent review of a North Station shuttle service and the investigation into sharing the EZRide service. The results of this investigation indicated that shuttle sharing is neither cost effective nor time saving for the customer.

Currently, Harvard's priority is establishing a first class *CommuterChoice* program. In fact on April 12, 2002, Harvard University's *CommuterChoice* program was voted into the EPA's National Commuter Choice Leadership Initiative. Harvard is also exploring the possibility of developing its own TMA.

Alternative Fueled Vehicles (LEV/ZEV)

Harvard has investigated the use of these vehicles in its fleet in cooperation with the City of Cambridge and the Ford Foundation. The outcome of this investigation can be reviewed by logging on to www.greencampus.harvard.edu/greenprojects/afvp/alt. Harvard has hired a student intern to expand on the results of last summer's study, and to recommend a project for implementation in 2003. Harvard is also working with the City of Cambridge on possible collaboration on alternative fuels and transit. In addition, Harvard is experimenting with bio-diesel fuels for its buses.

Alternative Work Schedules

Educational institutions are naturally geared toward flexible work and class schedules. This is the nature of a college campus. In fact, the 2000 DEP Rideshare Report statistics confirm that 1.8 percent of the employees travel to work before 6:00 a.m. and 11.1 percent after 9:30 a.m., and 10.2 percent leave work before 4:00 p.m. and 5.2 percent after 8:00 p.m. This helps reduce the number of trips being made on area streets during periods of peak congestion.

Telecommuting, Compressed Work (CWW), Flexible Hours and Job Sharing. To increase the participation of this effective strategy that eliminates vehicle trips, Harvard University has not only has a Human Resources policy on telecommuting, CWW, flexible hours and job sharing, which is offered by each department as work function and workload permit, but also offers regular training for managers and department heads provided by the Office of Work and Family. Harvard's Flexible Work Schedule policy is in the Appendix.

According to the survey, 2.7 percent of the employees telecommute or participate in CWW.

Marketing and Outreach

- *Website and on line registration:* www.commuterchoice.harvard.edu. The *CommuterChoice* website enables employees to have fast, easy access to information about the services offered through the *CommuterChoice* Program. Employees can easily register with the office and request information on carpools, vanpools, transit and cycling. The convenience of website registration allows employees to contact *CommuterChoice* with a minimum of effort and disruption to their workday.
- *Kiosks.* The *CommuterChoice* Office posts schedules, rates and routes at each of the Graduate Schools, the College and other buildings such as libraries and offices. Currently five major areas have specified *Commuter*

Kiosks that have posters and commute information. (Pictures of the Kiosks are in the Appendix).

- ❑ *Commuter-of-the-Month (Rideshare and Public Transit)*. Employees who register with *CommuterChoice* are eligible for various prizes related to commuting. This promotion gives the *CommuterChoice* Program an opportunity to "sell" its services while generating a level of interest among commuters who are newly registering with the program. The *CommuterChoice* office offers a variety of contests for employees who rideshare to Harvard. Some examples of prizes given away are: mini-flashers for bicycling or walking, special books, Harvard T shirts and sweatshirts, etc.
- ❑ *Articles in Harvard Newspapers*. Communication with various campus newspapers and publications is on going. Campus publications are an important vehicle for educating the Harvard commuting public about new initiatives the University is undertaking to benefit commuters. *CommuterChoice* articles appear regularly in the Harvard Resource among others. Exhibits are in the Appendix.
- ❑ *Transportation Fairs*. Harvard has held five Transportation Events for three consecutive years. In addition, mini-events at each of the seven schools will be held throughout the next year (2003-2004) where marketing materials will be distributed and employees and students encouraged to sign up for *CommuterChoice* options.
- ❑ *New Employee Packets*. The *CommuterChoice* Manager presents all programs and options to new employees and packets are handed out to employees along with posters and brochures.
- ❑ *Transportation Coordinators*. Harvard has recruited and trained 141 Transportation Coordinators to help collect and disseminate materials concerning all aspects of transportation and parking services. An extensive Transportation Coordinator's Resource Manual was specially developed for the Transportation Coordinator program. The Table of Contents is in the Appendix and a copy of the TRCM can be made available to the City of Cambridge.

Additional exhibits of marketing, promotional materials, and articles are in the Appendix.

Workforce Development

Harvard supports the Workforce Development Program in many ways. Through its Community Outreach manager in the Office of Human Resources and the program manager for Harvard's Summer Teen Employment Program (STEP) more than 100 Cambridge and Boston teenagers found work this summer. Teen job programs have been in existence at Harvard for many years.

Additionally and through the same department, a new weekly Employment Office information session titled "How to Job-Hunt Effectively at Harvard" is being held every Wednesday evening from 5:30 to 6:30 p.m. at the Harvard Information Center in the Holyoke Center arcade. The sessions are primarily for host communities, Cambridge and Boston and they provide information about Harvard and the HIRES job bank, as well as tips on resume writing and interviewing. More information can be obtained by calling 617.495.2772.

In order to move toward a possible further reduction in SOV and increase its walk and bicycling modes, Harvard University is committed to working with the Cambridge Office of Workforce Development to identify additional Cambridge residents who may qualify for job opportunities at Harvard. Currently 2,549 Harvard University employees or 34 percent of the total population, who work in Cambridge, live in Cambridge.

Additional TDM Strategies

To assist the *CommuterChoice* staff and to better understand how to influence the SOV rate over time, the following questions will be explored as they relate to increasing TDM measures and strategies:

- What additional employee participation in alternatives can be expected considering the current low SOV rate?
- What parking pricing levels are required to make additional mode use changes? Are they feasible, practical?
- Under what conditions can the least diversion from transit, walking or bicycling to car-pooling be expected?
- What other factors might influence higher HOV use, such as where employees live in relation to public transit or other Harvard employees for carpooling?
- How does the availability of uncontrolled parking supplies (non Harvard) e.g. neighborhood streets, city lots and garages, vacant lots, utility and train-right of-way, where commuters may be currently parking effect Harvard's SOV rate?
- What strategies could the University in cooperation with the City of Cambridge under-take to influence the MBTA to deliver better service?

Section IV. Monitoring

The PTDM plan presents the TDM and Parking Management measures Harvard currently has in place, and documents the results of the measures used to reduce the number of SOV trips and to increase the use of HOVs.

The PTDM Plan establishes a statistical baseline with additional descriptive content that indicates Harvard's commitment to achieving a reasonable effort to reducing the baseline SOV rate established for the plan.^o

Harvard considers yearly surveys for an employer as large as Harvard overly burdensome and in our opinion unreasonable, and Harvard also appreciates the PTDM Officer's effort to lessen the number of surveys overtime, however Harvard will commit to yearly surveys starting a year from the approved plan. In addition, regardless of the surveys, Harvard is committed to providing a variety of TDM measures and incentives because it is a benefit to its employees and students and to the community at large.

Harvard will conduct driveway counts on parking lots/garages with 20 or more spaces every 2 years (on consecutive days for 24 hours each day) starting a year from the approved plan.

Harvard will conduct parking utilization counts for all lots/garages with 100 or more spaces for reporting in 2004, for all lots/garages of 40 or more spaces beginning in 2006 and thereafter. This represents 85 percent of all non-commercial, non-leased spaces.

Harvard will submit an annual inventory update, including layouts, for all lots and garages in institutional use to the Department of Traffic, Parking and Transportation. This inventory will include changes within the previous year and to the extent that spaces were taken offline temporarily, due to construction. The annual inventory will include a description of how many spaces are offline, where they have been removed from, where they are expected to be restored, and when they are expected to be back online.

Harvard will also submit an annual inventory summary sheet, showing the names and locations of all lots and garages, the number of spaces in each and the number of spaces currently offline, and each time a change was made to the inventory.

As stated herein, under this plan, Harvard's total parking space inventory is 4,536 spaces.

In the event that Harvard seeks to increase its total parking space inventory beyond the 4,536 spaces, it must file and obtain the Planning Officer's approval

^o Revised September 2003 to remove reference to Cambridge Only.

of an Amended PTDM Plan. Review and approval of any submitted Amended PTDM Plan shall be based upon an analysis by the Planning Officer of the impact of an increase in the University's parking space inventory in the context of the then existing use of the parking inventory. The Planning Officer's review of the Amended PTDM Plan shall be performed in accordance with the procedures set forth in Chapter 10.18.050 (c)-(h).

Monitoring, tracking and evaluation of the various components of the *CommuterChoice* and parking programs occurs on a regular basis throughout the year. The University will use data collected to assist in determining the need for additional Transportation Demand Management measures should it become necessary. Some of the additional measures Harvard might consider include:

- An increase in yearly parking rates.
- Additional MBTA monthly pass incentives or programs.

For additional positive local and regional impacts on transportation demand management, the City of Cambridge could assist Harvard in its efforts by advocating with the MBTA and improving the commuting environment for cyclists and walkers. Some suggestions include:

MBTA

- More extensive and direct public transit service to Harvard Square.
- Lengthened peak-service hours to the campus area.
- Decreased bus headways.
- Additional parking capacity at MBTA stations.
- Clean well-maintained and safe MBTA stations.

Cyclist and Walkers

- Secured bicycle storage at public transit stations.
- Bicycle racks on buses, such as those on the C1, C2, and C3 lines.
- Bicycle-lane and crosswalk striping.
- Improved roadway surfaces.
- Improved sidewalk conditions.

Section V. Certification

"I hereby certify that a commercial parking permit has been obtained for each parking space being used for commercial parking. None of the other existing or proposed parking spaces at this parking facility have been or will be available as commercial parking spaces until a commercial parking permit therefore had been obtained".

Signature

Date

Name: John W. Nolan, MS, CAPP
Title: Director, Transportation Services

Harvard University
University Operations Services
175 North Harvard Street
Boston, Massachusetts 02134

Section VI. Appendix